T. BAKER SMITH
A CENTURY OF SOLUTIONS

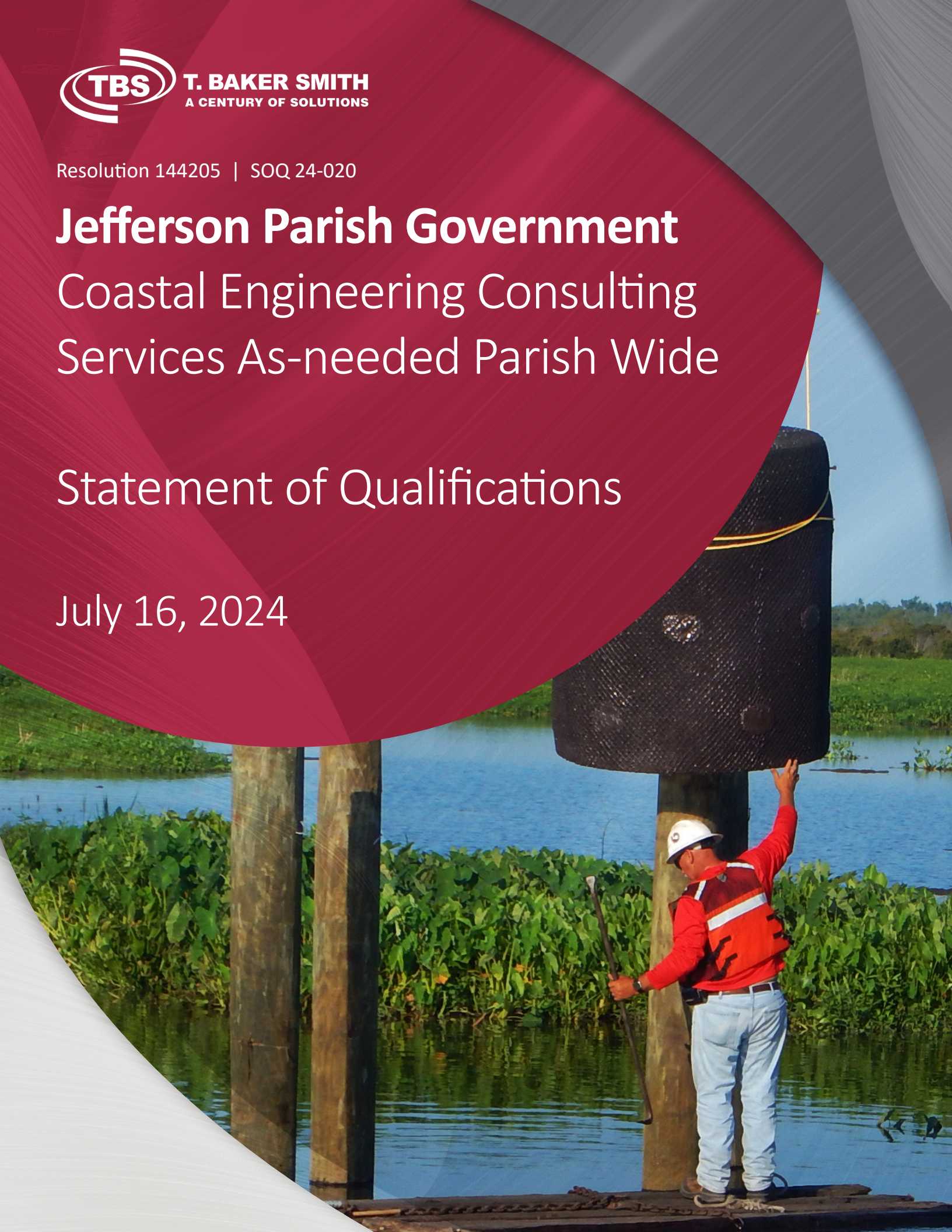
Resolution 144205 | SOQ 24-020

Jefferson Parish Government

Coastal Engineering Consulting Services As-needed Parish Wide

Statement of Qualifications

July 16, 2024



TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

COASTAL ENGINEERING CONSULTING SERVICES AS-NEEDED PARISH WIDE

SOQ #24-020 | Resolution 144205

B. Firm Name & Address:

T. Baker Smith, LLC
6660 Riverside Drive, Suite 101
Metairie, LA 70003

T. BAKER SMITH
A CENTURY OF SOLUTIONS

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:

Kenneth Wm. Smith, PE, PLS, FACEC
Chief Executive Officer
985.223.9248
Kenneth.Smith@tbsmith.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.

Jason Chauvin, PE
Lead Professional, Coastal Engineering
985.223.9265
jason.chauvin@tbsmith.com

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

49	Administrative		Estimators		Specification Writers
	Architects (Licensed)		Geologists	1	Structural Engineers
1	Chemical Engineers		Geotechnical Engineers	8	Graduate Engineers
27	Civil Engineers		Interior Designers	20	Project Managers
4	Construction Inspectors	1	Landscape Architects	2	Clerical
10	Ecologists	29	Land Surveyor		Grant/Funding Specialist
	Electrical Engineers	2	Mechanical Engineers		Sanitary Engineers
5	Engineer Intern	2	Environmental Engineers	117	Other
14	Professional Land Surveyors				
				292	**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.

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

N/A

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):
COAST & HARBOR ENGINEERING **Coast & Harbor Engineering** **PO Box 202737** **Austin, TX 78720**	**Modeling**	**No**
ADAPTIVE MANAGEMENT AND ENGINEERING **Adaptive Management & Engineering** **11429 Pennywood Avenue** **Baton Rouge, LA 70809**	**Geotechnical**	**Yes**

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

292 (All personnel, primary and support, will be available to work on all assigned projects.)

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:

Jason Chauvin, PE
Lead Professional, Coastal Engineering

Project Assignment:

Professional in Charge of Project

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

13 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Master of Science/2018/Coastal and Ecological Engineering
Bachelor of Science/2011/Civil Engineering

Active registration: Year first registered/discipline:

LA PE 39979/2015/Civil Engineering

Other experience and qualifications relevant to the proposed Project:

Jason is the lead professional of engineering and coastal practice with experience in surveying, civil, maritime, and coastal engineering projects. He is primarily responsible for providing leadership, project management, and advanced technical support in the development, design and implementation of engineering projects. He is capable of successfully administering projects through planning, data collection, design, bidding, construction administration, and monitoring phases. Project experience includes topographic, hydrographic, and geophysical surveying; land development; pipeline; roadway; structural; barrier island and headland restoration; beach and dune nourishment; marsh creation and nourishment; living shorelines, shoreline protection; wetland mitigation; beneficial use of dredged material; dredging; gravity and forced drainage; and flood protection.

Project Experience

Mid-Barataria Sediment Diversion Project (BA-153); CPRA; Plaquemine Parish, LA – Project Manager, Engineer of Record. Captain of the design team for the monitoring plan and beneficial use of dredged material design. Jason was tasked with coordinating the development and executing the sediment monitoring plan, utilities coordination, marsh creation design utilizing beneficial use of dredged material, design of the outfall transition from the conveyance channel into the basin, design of the Horizontal Directional Drill (HDD) 20" water main relocation, and structural design of wing walls at the intake and back gate structures.

Terrebonne Parish Oyster Bed Surge Protection System; Terrebonne Parish Consolidated Gov.; Terrebonne Parish, LA – Project Manager, Engineer of Record. Jason oversaw the engineering and design of 3.4 miles of a living shoreline protection system in northern Terrebonne Bay.

Barataria Marsh Creation Project; Lafourche Parish Government; Lafourche Parish, LA – Design Engineer, Engineer of Record. Jason was responsible for coordinating internal meetings; engineering drawings; pipeline investigations, project review, feasibility reporting; and QA/QC of deliverables. He was responsible for a data gap analysis, scope, budget and landowner/parcel data, and agency coordination with Lafourche Parish and the CPRA.

Bayou Dularge Marsh, Ridge, & Hydrologic Restoration; CPRA; Terrebonne Parish, LA – Project Engineer, Engineer of Record. Jason was directly involved with the hydrodynamic monitoring and the engineer of record for the hydrodynamic data collection report. He was responsible for crew coordination, as well as data collection and processing. Jason put together specifications and drawings for the client. He provided QA/QC for all deliverables to the client.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Denton Graham, PE
Project Manager

Project Assignment:

Coastal Engineer

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

4 with this firm | 1 with other firms

Education: Degree(s)/Year/Specialization:

Master of Science/2021/Coastal and Ecological Engineering
Bachelor of Science/2016/Biological Engineering

Active registration: Year first registered/discipline:

LA PE 46385/2017/Civil Engineer

Other experience and qualifications relevant to the proposed Project:

Denton is a Project Manager with experience in physical modeling, hydrologic and hydraulic instrumentation and monitoring, laboratory testing management, cost estimating, report drafting, and plan drawing experience in both laboratory and professional settings. He is primarily responsible for providing technical support in the development, design and implementation of engineering projects. Project experience includes river diversion modeling and design, marsh creation and nourishment, shoreline protection, wetland mitigation, dredging, flood protection, and civil site design.

Project Experience

Mid-Barataria Sediment Diversion; CPRA; Plaquemines Parish, LA- Project Engineer. Denton has been involved in numerous phases throughout the project including designing dredged material placement areas (DMPAs), utility coordination, and development of the project monitoring plan. For the DMPA design, he produced a Data Collection Plan, placement area design, and volume calculations.

Bayou De Cade Restoration CE&I; CPRA; Terrebonne Parish, LA – Project Engineer. Denton's duties included reviewing construction progress deliverables, as-built deliverables, reviewing change orders and RFIs, and serving as an owner's project representative. As a project representative he is also documenting daily progress, generating daily and weekly reports, and attending bi-weekly progress meetings.

Mid-Barataria Sediment Diversion, River Monitoring Phase; CPRA; Plaquemines Parish, LA- Engineering Intern. Denton aided in the collection and data processing of numerous isokinetic, bed grab, CTD, and ADCP samples in support of the Mid-Barataria Sediment Diversion. He collaborated in designing the necessary means of sample processing and performed QA/QC on processed sample results.

Reach I Levee Enlargement Phase I; Terrebonne Levee & Conservation District; Chauvin, LA – Engineer of Record. Primarily responsible for preparing the Engineering Design, Plans and Specifications for the construction of the Morganza to the Gulf of Mexico, Hurricane Protection Project, Lower Reach I Levee Lift Phase I. Denton is also assisting the owner in coordinating the work, coordinating and/or prepare engineering reports and geotechnical investigations.

Lakeside Flood Control Structure and Bulkheads; St. Mary Parish Levee District; Morgan City, LA – Project Engineer. He assisted in the design and cost estimation of approximately 3,000 linear feet of rip-rap breakwater to aide in protecting the Lakeside Neighborhood from hurricane wind generated waves and storm surge. Numerous layouts and breakwater elevation scenarios were generated, and their results analyzed. Input from Lakeside residents was also taken into consideration to provide the optimal protection.

ATF Marsh Mitigation Assessment; Entergy; Lafourche Parish, LA - Engineering Intern. Denton is providing QA/QC on a previously performed marsh mitigation assessment for Entergy. He analyzes design documents, environmental permits, and cost estimates provided to Entergy for environmental impact mitigation. He runs QA/QC on these documents and assisted supervising Professional Engineers in drafting an alternate mitigation plan, design methodology, and accompanying cost estimate.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Brian E. Moldaner, PE, MBA
Chief Growth Officer

Project Assignment:

Client Liaison

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

13 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Master of Business Administration/2019
Bachelor of Science/2011/Civil Engineering

Active registration: Year first registered/discipline:

LA PE 40075/2015/Civil Engineer

Other experience and qualifications relevant to the proposed Project:

Brian is the Chief Growth Officer, formerly the Engineering Lead Professional and the Public Works Market Sector Leader. He has proven experience leading large, complex, multi-disciplined projects to successful outcomes. He performs various project management duties, including developing service fee proposals, creating project management plans, public outreach communication planning, coordinating sub-consultants, and coordinating survey and environmental field crews. Brian leverages his engineering, business, communication, and project management skills to engage with project stakeholders (internal and external), understand concerns, and develop solutions to benefit clients and the community Brian is a lifelong resident of Jefferson Parish and takes pride in serving his community through his profession.

Project Experience

Lake Villa Pond Hydrologic Improvements; Jefferson Parish Government; Jefferson Parish, LA – Lead Professional. This project consists of hydrologic improvements to Lake Villa Pond including the reshaping, grading, and terracing of the existing Lake Villa Pond and establishing a hydraulic connection via a channel from the pond to adjacent pump station discharge channel. Surveying, environmental, and engineering design tasks are currently ongoing.

Bucktown Harbor Park Shoreline Zeta Assessment & Storm Mitigation Alternatives; Jefferson Parish Government; Jefferson Parish, LA – Lead Professional. TBS performed aerial LiDAR survey, topographic survey, bathymetric survey and engineering analysis to determine the volume/areas of land loss and assess the cost to repair the shoreline back to the pre-storm state.

Reach E Environmental Water Control Structures; Terrebonne Levee and Conservation District; Terrebonne Parish, LA – Engineering Design. Prepared the engineering design, plans and specifications for the construction of the Morganza to the Gulf Reach E- Environmental Water Control Structures which consists of two (2) 9-barrel 6-foot by 6-foot (6' x 6') concrete culvert water control structures to be built across Falgout Canal Marsh Road at two locations within the Terrebonne Parish Morganza to the Gulf Hurricane Protection System.

Lockport Co. Canal South Bank Levee; Lafourche Parish Government; Lafourche Parish, LA – Engineering Design. Prepared design drawings, bid coordination, construction administration, topographic surveying, environmental permitting, geotechnical engineering and periodic observation of construction for the elevation of 1630 linear feet of levee from the existing +6' elevation to +7.5' elevation through placement of suitable material, grading and shaping to ensure proper levee sustainability, and armoring of levee by placement of rip-rap along the flood side toe to prevent scouring and erosion from wave action caused by storm surge and high marine traffic.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Will Bane, PE
Lead Professional, Engineering

Project Assignment:

Project Manager

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

3 with this firm | 16 with other firms

Education: Degree(s)/Year/Specialization:

Master of Science/2005/Civil Engineering
Bachelor of Science/2003/Civil Engineering

Active registration: Year first registered/discipline:

LA PE 36709/2011/Civil Engineer

Other experience and qualifications relevant to the proposed Project:

Will has 19 years of experience in the design and construction of civil engineering projects and is a graduate of Tulane University and the University of Illinois Urbana-Champaign. He has a successful history as a project manager, having managed multifaceted projects, including regional drainage projects, green infrastructure, water main improvements and sewer collection system improvements, street construction, site development, and flood protection projects. He has been a designer for sewer, water, and drainage projects for individual lots up to the neighborhood scale. He has experience in design, construction estimates, scheduling, permitting, bidding, and construction administration. He has successfully executed many multifaceted projects, from problem identification to project completion. His experience includes large civil works for private developers and public municipalities.

Project Experience

Lake Villa Pond Hydrologic Improvements; Jefferson Parish Government; Jefferson Parish, LA – Project Manager. Providing engineering consulting services to improve the Lake Villa Pond. The project consist of hydrologic improvements to Lake Villa Pond. Proposed improvements will include the reshaping, grading, and terracing of the existing Lake Villa Pond and establishing a hydraulic connection via a channel from the pond to adjacent pump station discharge channel.

Jefferson Hwy. Waterline Replacement; Jefferson Parish Government; Jefferson Parish, LA – Project Manager. Responsible for the project management, sub-consultant management and design of waterline replacement project in Jefferson Parish. Project consists for replacement of roughly 9,500 ft of 12" waterline along Jefferson Highway as part of Parish's 20-year replacement program. Designed horizontal and vertical location of new waterline to provide continuous service and to minimize impacts to residents and traffic. Investigated and proposed alternative installation methods including pipe-bursting and directional drilling to provide cost efficient solutions. Site investigations performed to verify existing features and to avoid potential construction conflicts.

Causeway Area Waterline Improvements; Jefferson Parish Government; Jefferson Parish, LA – Project Manager. Responsible for the project management, sub-consultant management and design of waterline replacement project in Jefferson Parish. Project consists for replacement of roughly 10,000 ft of 8" waterline in the Causeway area to the north and south of I-10. Coordinated with sub-consultant to produce topographic survey ensuring proper information was gathered. Designed horizontal and vertical location of new waterline to provide continuous service and to minimize impacts to residents, businesses, and traffic. Investigated and proposed alternative installation methods including pipe-bursting and directional drilling to provide cost efficient solutions. Site investigations performed to verify existing features and to avoid potential construction conflicts. Area includes tight corridors for utilities within the right-of-way as well as existing trees which are desired to be unimpacted.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Robert Karam, PE
Lead Professional, Engineering

Project Assignment:

Project Engineer

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

8 with this firm | 1 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2014/Civil Engineering

Active registration: Year first registered/discipline:

LA PE 43854/2019/Civil Engineering

Other experience and qualifications relevant to the proposed Project:

Robert is a project engineer for clients that are primarily in the public sector including local municipalities, drainage districts, levee districts, and state agencies. His design experience focuses heavily on stormwater management and includes drainage pump stations and food risk reduction projects along the gulf coast. He has been involved with design including concept planning, preliminary and final design, cost estimating, development of detailed technical specifications and contract documents for compliance with local bidding requirements, and engineering services during construction.

Project Experience

Houma Navigation Canal Lock Complex; APTIM; Terrebonne Parish, LA - Design Engineer. Robert helped design the civil components for the HNC Lock Complex, including the design for levee tie-ins, dredging, scour protection, and operations area.

Bayou Chene Flood Control Structure; APTIM; St. Mary Parish, LA - Design Engineer/Project Manager. Robert provided design for Dredging and Levee Tie Ins, plan and profile design, Tennessee Gas Pipeline Crossing Details, Shoreline Protection Plan view and cross-sections. Shoreline Protection Quantities, and calculations. He was responsible for creating and compiling ITR packets for the levee embankment, general excavation, temporary silt fence, and seeding & fertilizing, and addressing comments from various agencies, clearing and grubbing design. Robert revised plan set and quantities, and created plan and sections for additional levee fill, he calculated an estimated quantity for the 2' maintenance lift, and reviewed pre-construction survey submittal to ensure it follows specifications. Robert estimated avoided costs by performing the proposed additional dredging by determining an approximate quantity of dredge material it took to complete the first lift of disposal. He also revised the geo-textile technical specification to include reinforcement geo-textile for hauled in levee embankment installation.

Reach E - Environmental Water Control; Terrebonne Levee & Conservation District; Terrebonne Parish, LA - Project Representative. Robert Inspected construction of two fresh water diversion structures as part of the Reach E levee system in Terrebonne Parish.

Falgout Canal Wetlands Modeling; Terrebonne Parish Consolidated Government; Terrebonne Parish, LA – Project Representative. Robert provided on-site project representation, observed unloading of removed debris from structure removal. He went on site visits to observe Dupre Brothers Construction working on structures and M&N dredging channel. Robert was also responsible for observing dredging operations.

Morgan City Levee & Drainage Improvements; Drainage District No. 2 of St. Mary Parish; St. Mary Parish, LA – Project Engineer. Robert is providing engineering plans for a new 1600 CFS pump station which features the relocation and re-installation of 6-54" vertical pumps with diesel engines and 1-24" electric vertical pump, relocation and re-installation of existing fuel tank, 60" discharge pipes, concrete outfall protection flume, and intake channel improvements.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Lauren Averill, PE
Coastal Planning & Development Lead

Project Assignment:

Public Outreach, Grant Development, and Marketing

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

>1 with this firm | 23 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2001/Civil Engineering

Active registration: Year first registered/discipline:

LA PE 37108/2012/Civil Engineering

Other experience and qualifications relevant to the proposed Project:

Lauren has over 23 years of experience in coastal, environmental, and civil engineering, and serves as the Coastal Planning and Development Lead. Her diverse skill set includes geotechnical engineering; water resources; water remediation; diversions; well sampling for environmental studies and analysis; marsh creations; hydrologic engineering, restoration, and field assessments; planning and permitting required for future road and building construction; utility relocation; geotechnical engineering; landfill engineering; and construction permits for stormwater and wastewater management. Additionally, she plays a pivotal role in securing funding for various initiatives, including coastal, recreational, and green infrastructure projects. Lauren actively engages in presentations to local, state, and technical society agencies, emphasizing the historical context, technical design, and overall significance of projects. Notably, she championed the creation of a living shoreline as a buffer, aligning with the Federal Hurricane Storm Risk Reduction System (HSDRRS). Lauren also collaborates on USACE 408 permits when projects intersect with the HSDRRS System. Her strong working relationships extend to various agencies, including Parish Public Work Departments, as well as local, state, and federal entities such as the Southeast Louisiana Flood Protection Authority East, Louisiana Coastal Protection Restoration Authority, Louisiana Department of Wildlife and Fisheries, Department of Transportation, USACE, and NOAA. She leverages various grant programs, including the RESTORE Act, GOMESA, and CWPPRA. Lauren oversaw the Coastal Zone Management Program for Jefferson Parish, providing crucial support to residents, including services such as Coastal Use Permits, Parish PIER permits, Coastal Project Management, and Coastal Protection Management. Furthermore, Lauren spearheaded the Coastal 101 outreach event, designed to inform the public about coastal restoration, resiliency, and protection. Her tireless efforts have also secured over $4 million in grants for designing and constructing coastal restoration projects in the Pontchartrain and Barataria Basins.

Project Experience

Jefferson Parish Coastal Strategic Action Plan; Jefferson Parish Government; Jefferson Parish, LA – Coastal Management Director. Lauren developed the first comprehensive planning strategy to review nearly one hundred projects accumulated through the years. She reviewed each project for overall feasibility, value engineering, and construction sustainability, narrowed the list down to 32 feasible projects, and grouped them by project budget for those ranging on the small end of $1M to state size projects of $100M. Due to the ever-changing coastal habitats due to climate change, extreme weather events, and man-made actions, projects are updated regularly because of the extremely dynamic morphology, subsidence and erosion in the Barataria Basin.

Western Closure Complex; USACE - New Orleans District; Plaquemines Parish, LA – Lauren managed the complicated utility relocations, for the Western Closure Complex, including a high pressure gas line directly under the footprint of this essential component of the HSDRRS west bank system. This included extensive environmental permitting and approvals through a federally authorized environmentally protected area. The project involved coordination with the National State Parks, pipeline companies, environmental reviews and a pipeline directional drill to prevent project delays.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Rene Hebert, PLS, PMP
Lead Professional, Survey

Project Assignment:

Lead Professional, Survey

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

17 with this firm | 2 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2008/Geomatics

Active registration: Year first registered/discipline:

LA PLS 5070/2011/Land Surveyor
LA PMP 3150916/2021/Project Management Professional

Other experience and qualifications relevant to the proposed Project:

As a lead professional and project manager at TBS, Rene is directly involved in the oversight and execution of the technical aspect of surveying projects including producing and revising drawings, sketches, plans, etc. for contract documents and QA/QC of surveying services. He coordinates work among project technicians, field crew coordinator, field survey personnel, and other required professionals working on the project. For the past 15 years, Rene has gained valuable experience surveying the environment of south Louisiana including topographic, boundary and GPR surveys and underwater acoustic hydrographic surveys including multi-beam, single beam, side scan sonar, acoustical soundings, magnetometry and other bathymetric surveys for industrial, government and private clients.

Project Experience

Bayou Dularge Marsh, Ridge, & Hydrologic Restoration; CPRA; Terrebonne Parish, LA – Project Surveyor. The project will create 660 acres of marsh, 4+ miles of ridge and a partial closure of Grand Pass. Rene was responsible for hydrodynamic monitoring; topographic, bathymetric, magnetometer, and UAS surveys.

Barataria Marsh Creation Project; Lafourche Parish Government; Lafourche Parish, LA – Project Surveyor. This project utilized local RESTORE funds for performing a Cost Feasibility Study on borrow material versus fill sites for approximately 20,000 acres. Rene was responsible for all survey aspects of the project.

Mid-Barataria Sediment Diversion; CPRA; Plaquemines Parish, LA – Project Surveyor. As a coastal sub-consultant on the Mid-Barataria Sediment Diversion (MBSD) Project, TBS assisted with developing the Sediment Monitoring Plan and execution of the Plan, marsh creation design utilizing Beneficial Use of Material, design of the outfall transition from the conveyance channel into the basin, and structural design of wing walls at the intake and back gate structure.

DNR Contract No. 2503-10-10: Topographic and Bathymetric Surveys for Raccoon Island Shoreline Protection/ Marsh Creation (TE-48) Project; CPRA; Terrebonne Parish, LA – Survey Technician/Project Surveyor. Assisted with underwater acoustic hydrographic surveys, data processing and QA/QC of field survey data including single-beam bathymetric survey data & GPS topographic survey data for the shoreline protection project. Created a combined surface model of the survey data collected using bathymetric survey methods and topographic survey methods.

Colonial Club Pump Station; Jefferson Parish Government; Jefferson Parish, LA – Survey Lead Professional. Coordinated the collecting of all the required survey data, verified the collected data for accuracy, and produced the final survey deliverables.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Matt Stevens
Sr. Project Manager

Project Assignment:

Hydrographic Surveyor

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

19 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Associate of Science/2005/Drafting and Design Technology

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Matt serves as senior project manager and party chief on both inshore and offshore vessels. He serves as the senior drafter for the marine survey group. He also possesses a thorough understanding of the Hypack® Survey software program, including all aspects of navigation and field collection. He has spearheaded the processing and drafting portion of many high profile projects at TBS. As a project manager at TBS, Matt is involved in a wide range of project management activities from pipeline inspections, bathymetric surveys, and hazard and archaeological surveys.

Project Experience

Biloxi Marsh Living Shoreline Project (PO-174); CPRA; St. Bernard Parish, LA – Senior Project Technician/Field Surveyor. The primary goal of this project is to provide shoreline protection by using the living shoreline products to attenuate the wave energy that reaches the shore. TBS will provide survey data collection tasks and monitoring of near-shore waves at set locations near the different breakwater configurations.

Mid-Barataria Sediment Diversion; CPRA; Plaquemines Parish, LA – Senior Project Technician/Field Surveyor. This project includes engineering and design of beneficial use of excess material from the Mid Barataria Sediment Diversion Project, structural design of wing walls and flood walls, sediment monitoring in the Mississippi River and Barataria Basin.

Whiskey Island Monitoring Project (TE-0100); CPRA; Terrebonne Parish, LA – Hydrographic Surveyor. Performed bathymetric surveys of Whiskey Island and the surrounding area, which will serve as the first monitoring survey post-construction of the NRDA Caillou Lake Headlands Project (TE-100).

SWAMP Phase II - Chandeleur Sound & MRGO; CPRA; St. Bernard Parish, LA – Senior Project Technician/Field Surveyor. Phase II of the System Wide Assessment and Monitoring Program (SWAMP). Data collection for Bathymetric and Geophysical Data in conjunction with basic habitat classification collecting 1,225 nautical miles of transects located on the Chandeleur Sound and along the MRGO.

Bayou Dularge Marsh, Ridge, & Hydrologic Restoration; CPR-A; Terrebonne Parish, LA – Hydrographic Survey Manager. The project will create 660 acres of marsh, 4+ miles of ridge and a partial closure of Grand Pass. Responsible for hydrodynamic monitoring; topographic, bathymetric, magnetometer, and UAS surveys; oyster surveys; and coastal engineering support for the project.

Salvage Hydrographic Survey in the Mississippi River; Couvillion Group, LLC; Plaquemines Parish, LA – Hydrographic Surveyor. Performed a salvage survey to locate and identify a probable anchor in the Mississippi River. Acted as party chief in the field as well as handling all aspects of project management. The anchor was located, and its positioning was given to the client for removal.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Kim Knight, PLS
Sr. Project Manager

Project Assignment:

Professional Land Surveyor

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

13 with this firm | 16 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2019/Geomatics
Associate of Science/1995/Drafting and Design

Active registration: Year first registered/discipline:

LA PLS 5249/2011/Land Surveyor

Other experience and qualifications relevant to the proposed Project:

Kim is a senior project manager at TBS and has worked in the industry his entire career. He coordinates work among the project team including project technicians, field crew coordinators, field survey personnel, and other required professionals working on the project and is also manages the transfer of field information from the field crews to survey technicians for preparation of final deliverables. He has experience in topographic, hydrographic, and magnetometer surveys, construction layout of projects, remediation projects, property boundary surveys, preparation of right of way plats and servitude agreements, ALTA/ACSM Land Title surveys, and surveys defining the volumes of containment levees, borrow areas, and fill areas, landowner coordination, access route surveys, and computations for all aspects of land surveying projects. Kim has extensive knowledge in the organizing, analyzing, and processing GPS data, post processing the static GPS data that requires both minimal and fully constrained adjustments. He also prepares project schedules and periodically trains both office and field personnel in the survey discipline.

Project Experience

Bay Raccourci Marsh Creation Project TE-0156/TE-0166; CPRA; Terrebonne Parish, LA – Project Manager. Provided planning and coordination of surveys, project oversight, data processing, and preparation of deliverables. TBS is providing professional services in support of topographic, bathymetric, magnetometer, and other professional land surveying surveys of Bay Raccourci Marsh Creation and Ridge Restoration Project.

Elevation Survey Update of CRMS Sites & Associated Secondary Monuments for the Thibodaux Regional Office; CPRA; Assumption, Terrebonne, Lafourche, St. Mary, St. Martin Parishes, LA – Project Manager. TBS is providing elevation survey updates of CRMS Sites & Associated Secondary Monuments for the Thibodaux Regional Office.

Biloxi Marsh Living Shoreline Project (PO-174); CPRA; St. Bernard Parish, LA – Survey Project Manager. Supervised and coordinated field and office personnel, logistics to and from project site, and field data collection obtained by conventional, hydrographic, and Unmanned Aerial Survey crews. QA/QC of field data by reviewing the datasets collected and used to aid in the design of Bank Stabilization. Assisted in the merging of datasets collected by field personnel for topographic, bathymetric, LiDAR and photogrammetry data, and project deliverables.

Island Road Marsh Creation and Nourishment Project (TE-117); CPRA; Terrebonne Parish, LA – Survey Manager. This project will hydraulically dredge sediment from a borrow area in Lake Felicity to the marsh creation area near Isle de Jean Charles. TBS provided topographic, infrastructure, bathymetric, hazard, magnetometer, and pipeline investigation surveys for the marsh creation area in support of the design of this project. Average healthy marsh elevation surveys were also performed.

Raccoon Island Shoreline Protection; CPRA; Terrebonne Parish, LA -- Project Surveyor. TBS performed topographic and bathymetric surveys as well as updated horizontal and vertical datum for the Raccoon Island Shoreline Protection/Marsh Creation Project for the Office of Coastal Protection and Restoration.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Eric Deroche
UAS Group Leader

Project Assignment:

Lead- Unmanned Aerial Survey

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

22 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Associate of Applied Science/2001/Drafting and Design

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Eric's responsibilities include developing and maintaining an efficient "Field to Finish" process catering to our clients' needs. He serves as the Group Leader of Unmanned Aerial Solutions (UAS) for TBS. With seven years of experience in this field, he offers our clients professional and reliable unmanned aerial system solutions. Eric's expertise in survey software, LiDAR equipment, UAV's, and project management enables him to conduct field surveys personally and process the data efficiently under the direction of a professional land surveyor.

Project Experience

Raccoon Island TE-48 Restoration Survey; CPRA; Terrebonne Parish, LA – UAS Project Manager. Oversaw aerial survey was completed to assist the conventional surveyors on the ground and to gather an abundance of data on the entire island to be used for erosion monitoring on an annual basis. TBS was hired to perform a post-restoration survey on the restored part of the island and the breakers. The UAS department acquired high resolution aerial imagery, as well as a high density/high accuracy point cloud to generate a surface model of the island.

Topographic, Bathymetric, and Magnetometer Surveys, Contract No. 2503-15-33, Survey Services for Coastal Restoration Projects (TE-117); CPRA; Coastal LA – UAS Project Manager. Managed project that included drone flight operations to capture aerial ortho images with high spatial resolution in order to quickly and accurately map the islands. TBS was tasked with mapping the existing marsh island inside a proposed marsh creation cell for CPRA.

Bayou Lafourche- Reintroduction Phase 2; Bayou Lafourche Fresh Water District; Lafourche Parish, LA – UAS Project Manager. TBS performed construction monitoring and administration which helped the project become ahead of schedule and be under budget. This assisted the Freshwater District office in obtaining four million additional dollars to continue the dredging project an extra 2.4 miles.

Houma Navigation Canal; APTIM; Terrebonne Parish, LA – Group Lead of Unmanned Aerial Solutions. Managed aerial LiDAR to aid in getting accurate locations of existing steel piles on the structure. Positioning had to be precise due to plans to set additional steel piles inside existing piles.

Bayou Dularge Ridge and Marsh Creation (TE-0170); CPRA; Lafourche Parish, LA – Survey Party Chief/Project Manager. Eric provided field surveys, processed LiDAR data, and reviewed data for accuracy checks for the purpose of creating marsh on the south side of Bayou Dularge; restoring the ridge along the southern bank line of Bayou Dularge; and reestablishing 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.

Bay Raccourci Marsh Creation TE-0156/TE-0166; CPRA; Terrebonne Parish, LA – Survey Party Chief/Project Manager. Eric reviewed the survey flight plan, field surveying, and helped to process data for restoration of marsh habitat in the open water and degraded marsh areas via marsh creation and to restore the forested ridged habitat along Bayou Decade.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Ryan LeBoeuf
UAS Data Analyst

Project Assignment:

Unmanned Aerial Surveyor

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

17 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2015/Geomatics
Associate of Applied Science/2007/Drafting and Design Technology

Active registration: Year first registered/discipline:

FAA Licensed Remote Pilot, 4102978
FAA Licensed Private Pilot, 850941

Other experience and qualifications relevant to the proposed Project:

Ryan is an FAA licensed pilot and serves as chief pilot of unmanned aerial solutions (UAS) at TBS. With fifteen years of experience in this area, he adds extensive knowledge of FAA regulations to further enhance the commercial operations of our UAS solutions. Ryan provides UAS solutions in the field and analyzes the data in the office.

Project Experience

Bayou Dularge Marsh, Ridge, & Hydrologic Restoration; CPRA; Terrebonne Parish, LA – UAS Licensed Pilot. The project will create 660 acres of marsh, 4+ miles of ridge and a partial closure of Grand Pass. TBS is responsible for hydrodynamic monitoring; topographic, bathymetric, magnetometer, and UAS surveys; oyster surveys; and coastal engineering support for the project.

Biloxi Marsh Living Shoreline Project (PO-174)CPRA; St. Bernard Parish, LA – Chief Pilot/UAS Data Analyst. Directly involved in conducting and processing LIDAR surveys. The primary goal of this project is to provide shoreline protection by using the living shoreline products to attenuate the wave energy that reaches the shore. TBS will provide survey data collection tasks and monitoring of near-shore waves at set locations near the different breakwater configurations.

Terrebonne Parish Oyster Bed Surge Protection System; Terrebonne Parish Consolidated Government; Terrebonne Parish, LA – Chief Pilot/UAS Data Analyst. TBS is tasked with the engineering and design of 3.4 miles of a living shoreline protection system in northern Terrebonne Bay. This project will directly provide benefits to north shorelines of Lake Tambour and Chien by reducing marsh edge erosion. Ryan is tasked with providing UAS field surveys.

Raccoon Island TE-48 Restoration Survey; CPRA; Terrebonne Parish, LA – UAS Licensed Pilot. TBS was hired to perform a post-restoration survey on the restored part of the island and the breakers. The Unmanned Aerial Systems department acquired high resolution aerial imagery, as well as a high density/high accuracy point cloud to generate a surface model of the island. This aerial survey was completed in order to assist the conventional surveyors on the ground and to gather an abundance of data on the entire island to be used for erosion monitoring on an annual basis.

Island Road Marsh Creation (TE-117), Topographic, Bathymetric, and Magnetometer Surveys; CPRA; Terrebonne Parish, LA – UAS Licensed Pilot. TBS was tasked with mapping the existing marsh island inside a proposed marsh creation cell for CPRA. The UAS department conducted the necessary drone flight operations to capture aerial ortho images with high spatial resolution in order to quickly and accurately map the islands.

Marsh Impact Analysis due to Emergency Repairs of Damaged Distribution Electrical Lines due to Hurricane Gustav; Entergy Louisiana, LLC; St. Bernard, and Lafourche Parishes, LA – UAS Licensed Pilot. Provided pre and post repair aerial photography and marsh impact calculations using ArcGIS interpretation and classification methods.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Brady Trahan, PWS
Lead Professional, Environmental

Project Assignment:

Environmental Lead Professional

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

19 with this firm | 5 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/1998/Microbiology

Active registration: Year first registered/discipline:

Professional Wetland Scientist, #2722

Other experience and qualifications relevant to the proposed Project:

Brady serves as the firm's Lead Professional of environmental operations and is primarily involved in regulatory and ecological compliance for pipeline and utility corridor transmission activities, oil and gas exploration and production activities, land resource and wetland mitigation management, and commercial and large scale residential developments. He is a Professional Wetland Scientist with experience in wetland delineations and mitigation, Section 10/404 permitting, Coastal Zone Management permitting, oyster assessments, and environmental site assessments. Brady also has experience in coordinating the efforts of subcontractors, endangered species surveys, wildlife management plans, large-scale wetland and vegetation mapping projects, wading bird rookery surveys and general environmental permitting for oil and gas activities and commercial real estate development. He has been involved in several LNG projects along the Louisiana and Texas coast. Brady routinely provides clients with permitting assistance with the U.S. Department of the Army Corps of Engineers (USACE), U.S. Environmental Protection Agency, Federal Energy Regulatory Commission, U.S. Department of Interior Fish and Wildlife Service, Louisiana Department of Natural Resources, Louisiana Department of Wildlife and Fisheries, and other state and local agencies.

Project Experience

Mid-Barataria Sediment Diversion, BA-0153; CPRA; Plaquemines & Jefferson Parishes, LA – Lead Professional. TBS is assisting with developing the Sediment Monitoring Plan and execution of the Plan, marsh creation design utilizing Beneficial Use of Material, design of the outfall transition from the conveyance channel into the basin, and structural design of wing walls at the intake and back gate structure. The project has a proposed design flow capacity of 75,000 cfs and is expected to build and nourish up to 30,000 acres of wetlands over 50 years. The project will utilize the alternative delivery method Construction Management at Risk. TBS is tasked with developing and executing the sediment monitoring plan, marsh creation design utilizing beneficial use of dredged material, design of the outfall transition from the conveyance channel into the basin, and structural design of wing walls at the intake and back gate structures.

Bolivar Peninsula Tarpon Project; Hilcorp Energy Co.; Galveston Bay, TX – Project Manager. Wrote mitigation plan for the project. Coordinated with engineering group on design of mitigation area. This project will impact existing wetlands at the site, and as part of the Permute Responsible Mitigation (PRM) requirement from the USACE Galveston District, material generated from the access channel dredging will be used to create 9.4 acres of mitigation marsh. TBS is providing topographic, bathymetric, geophysical, and hazard surveys; conceptual design development; mitigation plan; permitting support; marsh inundation assessment; dredge/coastal engineering; ABM shoreline protection design; and construction plans & specifications.

Wetland Delineation and Regulatory Assistance for the Port Arthur LNG Terminal; Port Arthur LNG; Jefferson County, TX – Project Manager. Conducted wetland delineation, threatened and endangered species surveys, mitigation planning, and associated regulatory permitting for a proposed LNG facility near Port Arthur, TX.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Cy Toups, PE
Lead Professional, Environmental

Project Assignment:

Environmental Professional

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

17 with this firm | 4 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2002/Environmental Engineering

Active registration: Year first registered/discipline:

LA PE 33966/2011/Environmental Engineer

Other experience and qualifications relevant to the proposed Project:

Cy is an environmental professional and a Louisiana licensed professional environmental engineer. His environmental experience includes over seven years NEPA experience as well as Section 404/10 permitting, Coastal Use Permitting, endangered species surveys, U.S. Environmental Protection Agency (EPA) compliance, regulatory compliance, Phase I ESA's, wetland delineations, Recognized Environmental Conditions (RECs), and preparing NEPA documents for a multitude of agencies including Federal Highway Administration (FHWA), the United States Army Corps of Engineers (USACE), Federal Emergency Management Agency (FEMA) and the Federal Aviation Administration (FAA). His environmental experience ranges from private developments to local, state and federal public works and transportation projects. Cy has led many of TBS' Categorical Exclusions (CE) and Environmental Assessment (EA) documents for various roadway and bridge projects.

Project Experience

Gulf Intracoastal Waterway (GIWW) Shoreline Protection; CPRA; LA – Environmental Engineer. Provided environmental permitting services. TBS designed this shoreline protection project using EcoBales, manufactured by Martin Ecosystems. This product is made up of recycled plastic is a green alternative to standard shoreline protection materials. It collects sediment and supports aquatic ecosystems, thus classified as a living shoreline alternative. TBS provided the following professional services for this project: topographic and bathymetric surveying, environmental permitting, engineering design, and bidding.

I-10/Loyola Interchange Improvement; LADOTD; Jefferson Parish, LA -- Environmental Professional. Prepared an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), and other applicable laws for the proposed project. Evaluated the social, economic, and environmental consequences of the alternatives (including the no-build) and presented this information in the EA document. In addition to the formal EA document and Finding of No Significant Impact (FONSI), the Consultant was required to develop separate reports such as Wetland Delineations, Phase I Environmental Site Assessment, Phase I Cultural Resources Survey Reports, and Noise analysis.

Nine Mile to Barataria; Entergy; Jefferson Parish, LA -- Environmental Professional. Prepared an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality regulations to implement NEPA (40 Code of Federal Regulations Parts 1500-1508), and the U.S. Department of the Interior (DOI) regulations implementing NEPA (43 CFR Part 46). Evaluated the social, economic, and environmental consequences of the alternatives (including the no build) and presented this information in the EA document. In addition to the formal EA document and Finding of No Significant Impact (FONSI), TBS was required to develop separate reports such as Wetland Statement of Findings and apply for the Special Use Permit through the DOI National Park Service.

Phase I Environmental Site Assessment; McDonough Marine; Terrebonne Parish, LA – Environmental Professional. Phase I Environmental Assessment of the four (4) tracts totaling +/-18 acres of heavy industrial property. The property had historically been utilized for marine barge and vessel repair, and maintenance operations.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Michael Trahan, Jr.
Lead Professional, Environmental

Project Assignment:

Environmental Permitting

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

12 with this firm | 0 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2012/Environmental Biology

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Michael assists senior professionals and project managers in the development and coordination of public works projects. He collects environmental data, including environmental assessments, threatened and endangered species surveys, environmental research, and environmental monitoring studies. Additionally, he prepares reports and completes field work necessary to complete documentation for projects, including wetland delineations, noise and air modeling, wildlife identification, endangered species/habitat biological assessments and surveys, plant identification/tree surveys, and land use studies. Michael submits and coordinates approximately 50+ permit applications per year to the U.S. Army Corps of Engineers and Louisiana Department of Natural Resources. These applications range from public works capital improvement projects to private utility and infrastructure programs. Permits include Section 404, 10, and 408, Section 401 Water Quality Certifications, local levee board, CPRA, and DOTD. He coordinates with many different agencies including the Louisiana Department of Wildlife and Fisheries, Louisiana Office of State Lands, Louisiana Department of Environmental Quality, U.S. Fish and Wildlife Service, NOAA, and various other local, state, and federal agencies.

Project Experience

Bayou Verret & Napoleon Dredging; Lafourche Basin Levee District and St., James Parish Government; St. James Parish, Ascension, Assumption and St. James Parishes, LA - Permit Manager. Oversight of permit drawing preparation, prepared permit applications, submitted follow-up information, agency coordination and responses, and assisted with procurement of wetlands mitigation via mitigation bank to obtain agency permits (LADNR CUP, USACE Section 404 and Section 10, WQC- LDEQ) for the dredging of 97,000 cubic yards of material from Bayou Verret and Bayou Napoleon south of Donaldsonville, LA.

Bayou Lassene Dredging; St. James Parish Council; St. James Parish, LA - Permit Manager. Oversight of permit drawing preparation, prepared permit applications, submitted follow-up information, agency coordination, and responses to obtain agency permits (LADNR CUP, USACE Nationwide) for the dredging of 21,723 cubic yards of material from Bayou Lassene near Vacherie, LA.

Bayou Gardens Blvd. Extension (LA 660 to LA 316); Terrebonne Parish Consolidated Government; Terrebonne Parish, LA – Permit Manager. Prepared permit applications, agency coordination, responses, follow-up, and prepared revised wetland delineation report and wetland mitigation via mitigation bank to obtain agency permits (LADNR CUP, USACE Section 10/404, LDEQ WQC) for the 1.6 mile, 4-lane roadway extension including 180' bridge over St. Louis Bayou.

Morgan City Pump Station and Drainage Improvements, SPN TE-116; Consolidated Gravity Drainage District No. 2; St. Mary Parish, LA - Environmental Project Manager. Provided design services to St. Mary Levee District and Consolidated Gravity Drainage District No. 2 for the construction of a new pump station to replace two older pump stations in Morgan City, LA. The proposed pump station will have approximately 1,600 CFS capacity and will be relocated from the present location on the inside of the city to the outer limits of where the flood protection levees are located.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Adam Trahan
Environmental Professional

Project Assignment:

Oyster Biologist

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

3 with this firm | 14 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/2008/Biology

Active registration: Year first registered/discipline:

US Coast Guard License 3403144/2012
LA DNR Certified Oyster Lease Damage Evaluation Board Oyster Biologist/2009

Other experience and qualifications relevant to the proposed Project:

Adam is an Environmental Professional with experience in estuarine data collection. Adam is knowledgeable in the operation, maintenance, and calibration of a vast array of hydrologic instrumentation. Adam provides scientific dive support for benthic organism collection for population density distribution calculations on identified benthic communities. Adam is the OLDEB oyster biologist of the oyster resource assessment team that works closely with oil and gas companies to evaluate oyster resources on public water bottoms and private leases. The surveys are performed according to protocols established by the Louisiana Department of Wildlife and Fisheries and the Department of Natural Resources Oyster Lease Damage Evaluation Board to define the bottom types according to protocol. Reports detailing the findings are filed with LDWF, CPRA, and the client. Adam has performed water bottom assessments in the Calcasieu/Sabine, Mermentau, Atchafalaya, Barataria, and Breton Sound basins. By being a part of an environmental team, Adam has assisted with wetland delineation efforts for multiple projects for local development, mitigation banks, and infrastructure developments. Adam has provided permitting assistance, wetland delineation assistance, GIS assistance, and culture resource assistance for many other projects.

Project Experience

Little Bayou Pierre and Lake Fortuna Oyster Cultch Project; St. Bernard Parish Government; St. Bernard Parish, LA – Project Manager/Scientist. Provided permitting and oyster monitoring services for two oyster cultch projects in St. Bernard Parish. Served as the oyster scientist and provided monitoring services with the St. Bernard Parish Government to monitor the projects contractors and that all protocols and permit requirements were followed.

Oyster Reef Cores; The Texas A&M University System; St. Charles Bay Areas, TX - Project Manager and Environmental Professional. Provided professional services to collect vertical core samples through the center of artificial and natural bottom oyster reefs from selected locations within the St. Charles Bay areas of Texas. Mr. Trahan was tasked with project setup and field logistics, along with assisting in field operations and collections of the sample cores.

TNC-NRDA Restoration of Copano Bay Reef; The Nature Conservancy of Texas; Copano Bay, TX - Environmental Professional. Services were provided for the oyster and bay bottom substrate surveys conducted in Copano Bay, Aransas County, Texas. Adam was tasked with data review and comparison, as well as overall final reporting of survey data collected from field operations.

Texas Gas Transmission, LLC Pipeline Abandonment Biological Oyster Survey, Providence Engineering and Environmental Group, LLC– Scientist III/Scientific Sampling Diver. Served as the Oyster Lease Damage Evaluation Board (OLDEB) Certified Oyster Biologist and Scientific Sampling Diver for a 1500 ft. radius oyster assessment Involved with all assessment activities, sampling methodologies, and insured the OLDEB protocols. M Oyster density and mortality calculations were derived from utilizing square meter sampling protocols. Water quality and bathymetric data was also collected and analyzed for the project area.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Philip Chauvin
Sr. Construction Manager

Project Assignment:

Bidding & Construction Administration Lead

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

18 with this firm | 11 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/1995/Construction Management

Active registration: Year first registered/discipline:

LA CPRA/2023/Certified Levee Inspector
USACE/2019/Construction Quality Management for Contractors

Other experience and qualifications relevant to the proposed Project:

Philip is TBS' Sr. Construction Manager, he handles managing and inspecting construction phase projects for clients. Philip has focused his career on construction management and project representation experience, which includes coordinating and managing construction projects for public and private clients to ensure that they are built to specifications. He also leads and takes part in pre-bid construction activities. He has the overall responsibility for the quality assurance of construction projects for which TBS provides construction administration and representation. He supervises the TBS construction projects' inspectors and representatives and provides technical support to them.

Project Experience

Terrebonne Bay Shoreline Protection Demonstration Project TE-45; LDNR; Terrebonne Parish, LA – Construction Manager. The purpose of the Terrebonne Bay Shoreline Protection and Oyster Reef Demonstration project is to reduce shoreline erosion and promote oyster reef formation while testing the cost-effectiveness of several experimental techniques designed to protect shorelines in areas where unconsolidated, organic, and easily eroded soil types prevent the use of traditional rock dike structures. Three reaches were selected, and three techniques were chosen based on anticipated effectiveness and cost—gabion mats, concrete onshore armor units, and foreshore triangle units. TBS provided construction observation.

New Cut Dune and Marsh Restoration Project TE-37; Louisiana Department of Natural Resources; Terrebonne Parish, LA – The project created barrier island dunes and marsh habitat, and lengthened the structural integrity of the eastern Isles Dernieres by restoring the littoral drift and adding sediment into the near-shore system. TBS provided quality assurance and quality control during construction by providing construction administration and on-site project observation. TBS' scope of services included conducting the pre-construction meeting; reviewing shop drawings, submittals, and pay requests; and facilitating the pre-construction and bi-weekly site progress meetings during dredging activities. Supervised on-site project representatives daily.

Project Management, Contract Management and Construction Inspection for FEMA Hazard Mitigation Grant Program Funds to Elevate Repetitive Loss Structures; Terrebonne Parish Consolidated Government; Terrebonne Parish, LA – Philip served as construction project manager for this project in which TBS provided project management, contract management and construction inspection for the purpose of reducing or eliminating the long-term risk of flood damage to residential structures insured under the National Flood Insurance Program (NFIP) by elevating the structures above the FEMA base flood elevation.

Gulf Intracoastal Waterway (GIWW) Bank Restoration of Critical Areas (EB-10); CPRA; Terrebonne Parish, LA – Construction Project Manager. The goal of the project was to restore critical lengths of deteriorated channel banks with hard shorelines through stabilization/armoring. TBS acted as the on-site representative throughout construction. TBS' scope of services included conducting the pre-construction meeting; reviewing shop drawings, submittals, and pay requests; and facilitating the pre-construction and bi-weekly site progress meetings during dredging activities and stone armament.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Robert Chauvin
Sr. Project Representative

Project Assignment:

Resident Inspector

Name of Firm with which associated:

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Years' experience with this Firm:

4 with this firm | 27 with other firms

Education: Degree(s)/Year/Specialization:

Bachelor of Science/1989/Business Administration

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Robert has more than 31 years of inspection experience, during which he has served as a fire marshal and construction inspector. He has performed construction inspection services for marsh creation and restoration projects as well as pump station construction and roadway improvement projects. His duties have included monitoring construction activities, submitting daily work reports, quality assurance inspection of installed work items, measuring and calculating quantities for pay, monitoring contractor's work schedules, and monitoring contractor's adherence to quality control plans and schedules. He also participates in pre-construction meetings, conducts preparation meetings for work activity transitions, and construction progress meetings.

Project Experience

Bayou Chene Flood Control, St. Mary Parish, LA – Served as a Construction Project Representative on this project to build a large flood control structure for the Coastal Protection Restoration Authority in St Mary Parish, LA. In this role, he provided construction monitoring and inspection services for the owner. He recorded daily reports, took photographs, and monitored construction activities and schedules. He conducted quality assurance inspection of installed work items, measured and calculated quantities for pay, and monitoring contractor's adherence to quality control plans and schedules. He also participated in pre-construction meetings, conducted preparation meetings for work activity transitions, and attended construction progress meetings.

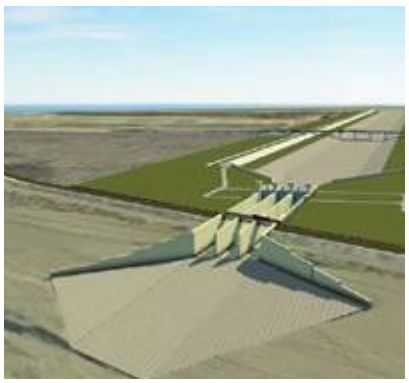
Houma Navigation Canal Lock Complex, Terrebonne Parish, LA – Served as a Construction Project Representative on this project to build a new lock system on the Houma Navigation Canal in Terrebonne Parish, LA. In this role, he provided construction monitoring and inspection services for the owner. He recorded daily reports, took photographs, and monitored construction activities and schedules. He conducted quality assurance inspection of installed work items, measured and calculated quantities for pay, and monitoring contractor's adherence to quality control plans and schedules. He also participated in pre-construction meetings, conducted preparation meetings for work activity transitions, and attended construction progress meetings.

Amelia 2/2A Drainage Improvements, Terrebonne Parish, LA – Served as a Construction Project Representative on this project to build a new pump station and enhance stormwater drainage in Amelia, LA. Provided construction monitoring and inspection services for the owner. Conducted site visits to monitor test pile loading and contractor mobilization. Recorded daily reports, took photographs, monitored construction activities and schedules. Conducted quality assurance inspection of installed work items, measured and calculated quantities for pay, and monitoring contractor's adherence to quality control plans and schedules. He also participated in pre-construction meetings, conducted preparation meetings for work activity transitions, and attended construction progress meetings.

Morgan City Pump Station and Drainage Improvements, St. Mary Parish, LA – Served as a Construction Project Representative on this project to build a new pump station and enhance stormwater drainage in Morgan City, LA. Provided construction monitoring and inspection services for the owner. Conducted site visits to monitor test pile loading and contractor mobilization. Recorded daily reports, took photographs, monitored construction activities and schedules.

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:
Mid-Barataria Sediment Diversion Project (BA-153) Plaquemines Parish, LA Coastal Protection and Restoration Authority P.O. Box 44027 Baton Rouge, LA 70804 Brad Barth 225.342.7308  Mid-Barataria Rendering	The Mid-Barataria Sediment Diversion Project (BA-153) has been identified as a large-scale, long-term restoration project recommended for implementation in Louisiana's Comprehensive Master Plan for a Sustainable Coast. The Project is the largest proposed sediment diversion that will reconnect the Mississippi River to the Barataria Basin. Sediment and freshwater will be transported into the nutrient-starved basin while maintaining the current level of flood protection in the area. The project proposes to have a design flow capacity of 75,000 CFS while maximizing the sediment-to-water ratio. The project aims to reestablish deltaic processes to build, sustain, and maintain land. As a major sub-consultant, TBS provided engineering design services, including the design of the beneficial use of excess material, Mississippi River levee tie-in flood walls, NOV Levee tie-ins, highway LA-23 flood walls, intake wing walls, and outfall channel. TBS also is performing utility relocation coordination and developing the MBSD monitoring plan. Regarding data collection, TBS performed magnetometer survey services and Mississippi River sediment monitoring surveys. The project will utilize an alternative delivery method called Construction Management at Risk (CMAR). The Design Team will work with the CMAR contractor to incorporate constructability into the project's design. TBS has submitted the construction plans and construction has begun. **TBS provided the following services:** • Magnetometer Surveys • Mississippi River Sediment Monitoring Surveys • Mississippi River Levee Tie in Flood walls • NOV Levee Tie in • LA 23 Flood walls • Wing Wall Design (Intake) • Outfall Channel Design • Utility Relocation Coordination • Beneficial Use of Excavated Materials • MBSD Monitoring Plan

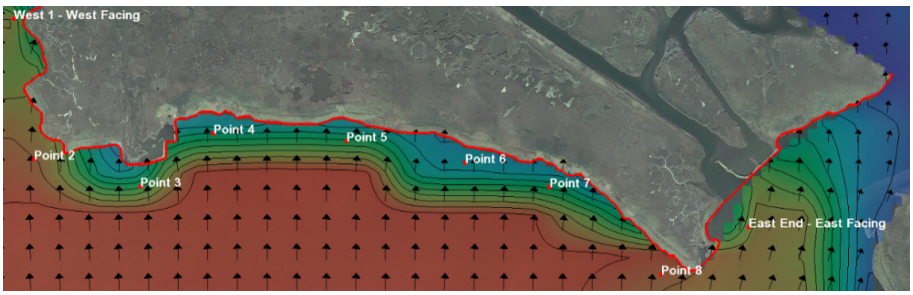
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2027 (estimated)	$2,920,000,000	$3,000,000 (fees)

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. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Terrebonne Oyster Bed Surge Protection System Terrebonne Parish, LA Terrebonne Parish Consolidated Government P.O. Box 6097 Houma, LA 70361 Jennifer Gerbasi 985.873.6433	TBS was selected by TPCG to provide coastal engineering services for the design and permitting of the Terrebonne Oyster Bed Surge Protection System Project. TBS provided surveying, environmental, and habitat data along the 3.5 miles' of shoreline of the Project. Shoreline protection for the Project is located at two sites. Site 1 is approximately 1-mile-long across the north bank of Lake Chien, and Site 2 is approximately 2.5 miles along the northern bank of Lake Tambour. TBS will used this data to analyze coastal processes, prepare engineering plans, and provide supporting environmental documents and permit applications for the Project. **TBS is providing the following services:** 1. Data Collection Services • Existing Gap Analysis • Data Collection Plan • Topographic, Bathymetric, Magnetometer and UAS Survey • Geotechnical Investigation 2. Basis of Design (BOD) Phase • TE-45 Project Review • Coastal Analysis / Numerical Modeling • BOD Report 3. Engineering Design Services • 30 Percent Design and Plans • 95 Percent Design and Plans • 100% Construction Documents 4. Environmental Services • Environmental Surveys • Permitting TBS has completed all tasks through the 95% design milestone. Construction is estimated to begin in the 4th quarter of 2024.

Terrebonne Oyster Bed Project Site



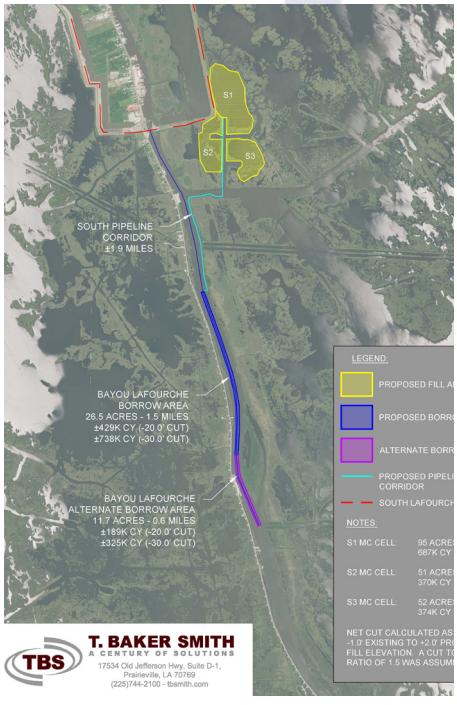
Terrebonne Oyster Bed Project Site

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 (estimated)	$5,200,000 (estimated)	$5,200,000 (estimated)

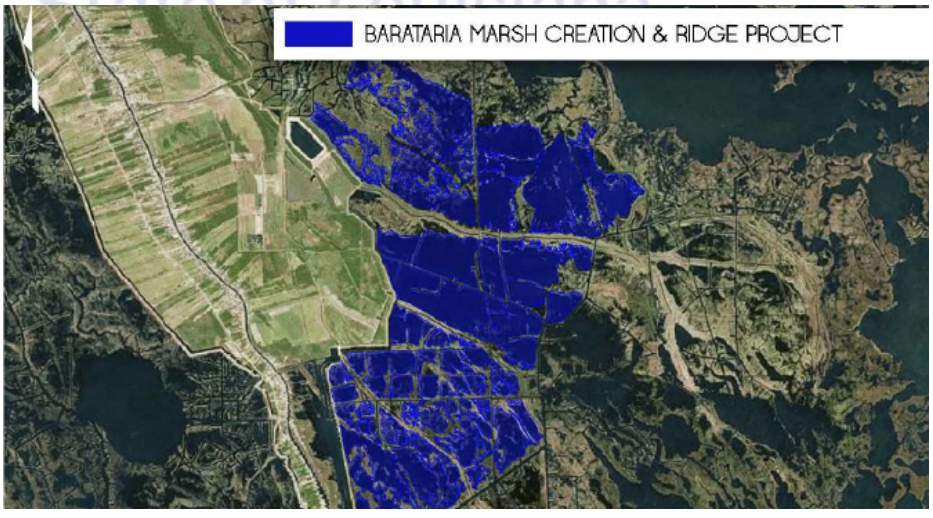
L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 3

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Barataria Marsh Creation & Ridge Restoration Project (Lafourche Parish RESTORE) Lafourche Parish, LA Lafourche Parish Government P.O. Drawer 5548 Thibodaux, LA 70301 Amanda Voisin 985.493.6616	The Lafourche Parish Government (LPG) utilized their "local" RESTORE funds in support of the Barataria Marsh Creation and Ridge Restoration Project. The area targeted for marsh creation was experiencing some of the most catastrophic land loss in Louisiana and was in need of a plan to restore the area. As part of initial scope of work, TBS was tasked with a Feasibility Study to identify various marsh creation projects and borrow sites within the 23,000-acre study area. The four (4) borrow areas consisted of two (2) long distance sediment pipelines utilizing both the Mississippi River and Port Fourchon and two (2) local sediment sources using nearby material from Little Lake and Bayou Lafourche. Each alternative was evaluated based on the size of the project and the cost per acre. Due to the extreme distances for the long-distance sediment pipelines, the two local sediment sources were the most economical and the Bayou Lafourche Marsh Creation Project was recommended for advancement due to its location being within the 2017 Master Plan. In the second phase of the project, TBS was tasked with data collection services and preliminary design of a 197-acre marsh creation project within three cells just south of the Larose to Golden Meadow Hurricane Protection System. The project consisted of dredging approximately 1.4 million cubic yards of material from Bayou Lafourche and hydraulically pump the sediment to the fill locations. This project was studied and preliminarily designed for application into the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) program.



Barataria Project Map



Barataria Project Area

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019 (actual)	N/A	$434,760 (fees)

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. 4

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Gulf Intracoastal Waterway (GIWW) Shoreline Protection Terrebonne Parish, LA Coastal Protection and Restoration Authority 1440 Tiger Dr., Suite B Thibodaux, LA 70301 Brian Babin 985.447.0956	Increased Atchafalaya River flow and marine traffic through the Gulf Intracoastal Waterway (GIWW) has resulted in breaches along the shoreline bank and subsequent scouring of the interior marshes. The project intends to address these causes of land loss by stabilizing the most severely degraded areas of the bank. Due to very poor soil conditions in this area, a large portion of the originally constructed dike has experienced significant settlement in several areas. Several areas of concern have been identified that could potentially create conditions that would allow for floating marsh behind the structure to move into the GIWW in addition to increased erosion. The intent of this maintenance event is to provide a structure that is approximately 300 linear feet in length that would protect these areas and prevent further erosion. Due to the poor soil conditions, recapping the existing structure with additional rip-rap was ruled out and a unique solution was required. TBS designed this shoreline protection project using EcoBales, manufactured by Martin Ecosystems. This product is made up of recycled plastic is a green alternative to standard shoreline protection materials. It collects sediment and supports aquatic ecosystems, thus classified as a living shoreline alternative. **TBS provided the following services:** • Topographic and Bathymetric Surveying • Environmental Permitting • Engineering Design • Bidding This project was studied and preliminarily designed for application into the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) program.  GIWW

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021 (actual)	$500,000	$500,000

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.

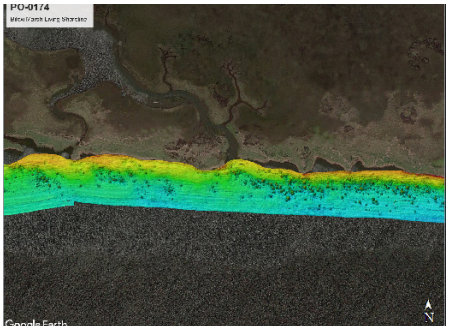
PROJECT NO. 5

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Bayou Dularge Marsh, Ridge & Hydrologic Restoration Project Terrebonne Parish, LA Natural Resources Conservation Service 3737 Government St. Alexandria, LA 71302 Brandon Samson 318.473.7751  Bayou Dularge Project Site	The major objective of this restoration project is to use borrow material from Lake Mechant to create and nourish marsh on the south 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. Sediments will be hydraulically excavated from Lake Mechant and placed to create marsh habitat in current open water and to nourish existing fragmented marsh. The marsh creation areas will utilize earthen containment dikes, existing marsh and/or partial containment features to control hydraulically excavated material. A project map showing preliminary marsh creation / nourishment areas, preliminary borrow area, structure location, and ridge restoration area can be found in the government furnished information. This preliminary layout avoids known cultural resource sites, avoids oyster seed grounds, and minimizes disturbance to oyster leases, and attempts to reduce conflicts with known pipelines. Preliminary features are as follows: • Ridge Restoration- Approximately 33,208 feet in length. • Marsh Creation- create/nourish 661 acres. • Water Control Structure- Reduce Grand Pass from 45 feet deep and 900 feet wide to 15 feet deep and 125 feet wide. TBS services included topographic, hydrographic, geophysical, hazard investigation, and LiDAR surveying services across the project area. In addition, TBS is providing coastal engineering support, hydrodynamic monitoring, and oyster surveys on the project. **TBS provided the following services:** • Topographic Survey • Hydrographic Survey • Geophysical • Hazard Investigation • LiDAR Survey • Coastal Engineering Support • Hydrodynamic Monitoring • Oyster Surveys

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2026 (estimated)	$60,000,000 (estimated)	$537,700 (fees)

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.

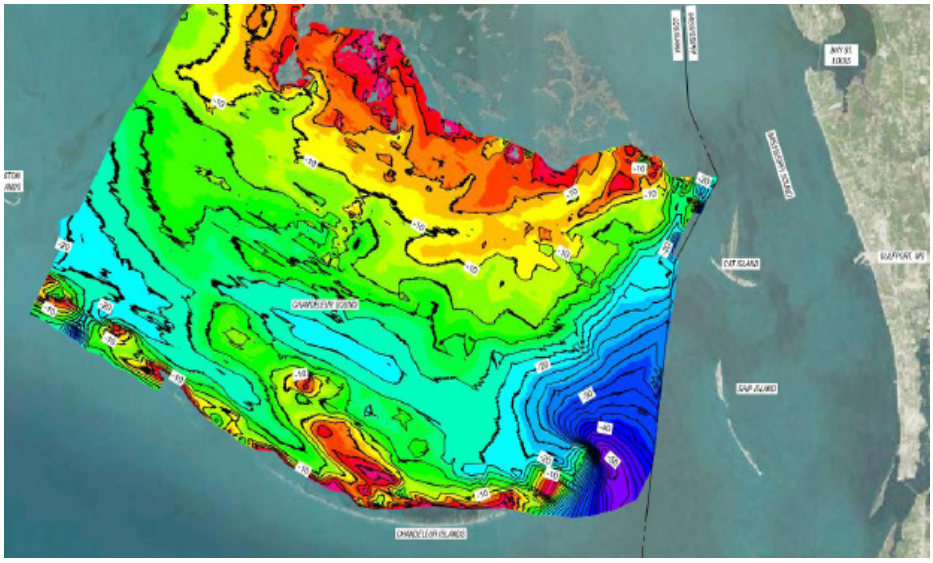
PROJECT NO. 6

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Biloxi Marsh Living Shoreline Project (PO-174) St. Bernard Parish, LA Coastal Protection and Restoration Authority 150 Terrace Avenue Baton Rouge, LA 70802 Micaela Coner 225.342.6307  Biloxi Marsh Living Shoreline Project Site  Biloxi Marsh Living Shoreline LiDAR Map	The Biloxi Marsh Living Shoreline Project is located along the eastern shore of Biloxi Marsh, off the shoreline of Eloi Bay and Eloi Point, near the mouth of Bayou la Loutre in St. Bernard Parish, Louisiana. The goals of this project were to reduce shoreline erosion due to natural waves and enhance local oyster production through the implementation of marsh-fringing, bio-engineered oyster reefs to promote the formation of self-sustaining living shoreline protection structures. This project created approximately thirteen miles of oyster barrier reef. PO-0174 was sponsored by the Coastal Protection and Restoration Authority and is funded by the Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act). The project considered the results, performance, and cost of the adjacent Biloxi Marsh Living Shoreline Demonstration Project (PO-0148) which finished construction in the fall of 2016. TBS provided project control, topographic, bathymetric, hydrographic, magnetometer, and underwater obstruction surveying services for this project along with magnetic anomaly probing investigations. TBS was a sub-consultant to Mott McDonald and provided data collection tasks in support of the design of this project. TBS also provided surveying services for the design of PO-0148, which was the original project. TBS collected wave and WSEL data. TBS deployed wave gages on the protected and unprotected sides of the different types of oyster breakwater structures constructed for the PO-0148 project. These gages collect raw wave data that is processed to determine water period. TBS deployed additional gages to collect WSEL data for the project. Several innovative surveying techniques were utilized on this project to support the design process. The project area had multiple sunken stumps that were difficult to identify using standard surveying techniques. The multi-beam echo sound survey was able to clearly define these underwater obstructions. This project was flown using unmanned aerial vehicles (UAV). The UAV's are capable of collecting high quality aerial videos, aerial infrared images, and LIDAR data.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018 (actual)	$67,000,000	$550,000 (fees)

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.

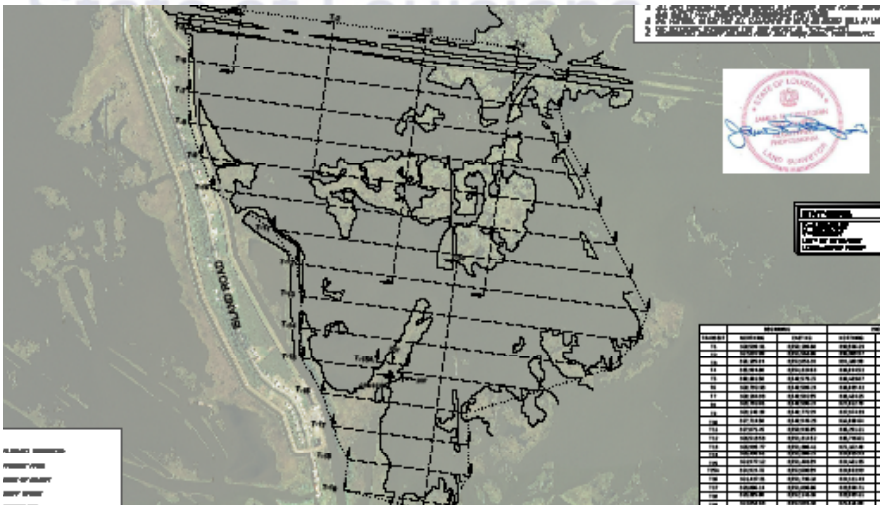
PROJECT NO. 7

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
System Wide Assessment and Monitoring Program (SWAMP) Phase II Orleans & St. Bernard Parishes, LA Coastal Protection and Restoration Authority P.O. Box 44027 Baton Rouge, LA 70804 Dona Weifenbach 225.342.6307	TBS was selected to perform bathymetric and geophysical data collection along with basic habitat classification along 1,225 nautical miles of transects located in Chandeleur Sound and the Mississippi River Gulf Outlet. Data collection tasks included establishment of project control, bathymetric surveys, magnetometer surveys, and oyster resource surveys using a combination of side scan sonar and manual ground truthing. The remote location of this project required unique data collection methods. Much of the project area is in remote areas where typical RTK GPS and cell phone (C4Gnet) communication methods could not be used. For these areas, RTK GPS was used with a Broadband Global Area Network (BGAN) satellite communications system paired with Trimble Pivot Real-Time Networks Software on the hydro vessels to receive RTK data coverage across the project area. Where the BGAN satellite communications system was not applicable, Post-Processed Kinematic (PPK) survey methods were used. **TBS provided the following services:** • Fathometer Surveys (bathy) • Magnetometer Surveys (geophysical) • Side Scan Sonar (geophysical) • Oyster Resource (geophysical)  SWAMP Project Map

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018 (actual)	N/A	$537,000 (fees)

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. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Island Road Marsh Creation and Nourishment (TE-0117) Terrebonne Parish, LA Coastal Protection and Restoration Authority P.O. Box 44027 Baton Rouge, LA 70804 Jason Curole 225.342.6307	TBS was selected to perform topographic, bathymetric, and magnetometer surveying services to support the design of 364 acres of marsh creation and 19 acres of marsh nourishment. Specific surveying tasks included installation of a staff gauge, transects of the marsh fill and nourishment areas, hazard/ magnetometer transects, pipeline location surveys, surface features and infrastructure surveys, and healthy marsh elevation surveys. TBS utilized innovated survey technology with in-house aerial drones to assist the CPRA project team with planning and developing locations to perform the healthy marsh elevation survey. Both video photography and infrared aerials were collected and used in analyzing healthy marsh and detailing the containment dike alignment. Marsh bank lines were derived from the infrared data with accurate horizontal positioning. The bank line data was utilized in creating a 3D surface model for performing volumetric calculations of the fill area. **TBS provided the following services:** • Surveying services provided: • Marsh Creation and Nourishment Surveys (topo & bathy) • Hazard/Magnetometer Surveys (geophysical) • Pipeline Location Surveys (geophysical) • Infrastructure Surveys (topo) • Marsh Elevation Surveys (topo)  Island Road Marsh Creation Project Map

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 (actual)	N/A	$145,000 (fees)

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. 9

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Bayou Dupont Sediment Delivery – Marsh Creation Phase III (BA-154) Lafourche Parish, LA Coastal Protection and Restoration Authority P.O. Box 44027 Baton Rouge, LA 70804 Cathrine Ricks 225.342.6307	TBS provided the required surveying services, including topographic, bathymetric, and magnetometer surveys, to support the design of three (3) marsh creation cells which total approximately 415 acres in Plaquemines Parish and Jefferson Parish. The project is adjacent to the CPRA Mississippi River Sediment Delivery System – Bayou Dupont (BA-39) project, a project for which TBS also provided surveying services. Within the western most marsh creation area, TBS analyzed existing data collected during the Mississippi River Long Distance Sediment Pipeline Project (BA-43EB) surveyed in 2011 and compared the elevations within this area to the data collected as a part of BA-164. Since survey transects differ in location between these two projects, TBS created a 3D surface model of the BA-43EB project and cut cross sections from this model along the proposed transects being surveyed for BA-164. TBS performed hazard/magnetometer surveys. All anomalies were investigated using a magnetic gradiometer and probing techniques to determine if metallic objects were present. All findings were listed in table format in the plans showing point number, northing, easting, latitude, longitude, top elevation, and material that are found as well as described in the survey report as a part of the final deliverable. **TBS provided the following services:** • Right of Entry • Marsh Creation Surveys (topo & bathy) • Hazard/Magnetometer Surveys (geophysical) • Access Route Surveys (topo & bathy) • Marsh Elevation Surveys (topo)  Bayou Dupont Project Map

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015 (actual)	N/A	$168,000 (fees)

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. 10

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Lake Villa Pond Jefferson Parish, LA Jefferson Parish Government 9243 Gulf Beach Hwy. Cameron, LA 70631 Catherine Mayhew 713.375.5417 	TBS has performed consulting services and construction plan design to improve the Lake Villa Pond ecosystem and to also provide recreational enhancements to the site. In the conceptual design stage of the project, TBS prepared options for the site and provided identifying features, a conceptual rendering of the site options, and a conceptual construction cost of each site option. Goals of the project include restoration of the pond and marsh, water quality improvement, recreational site improvements and general site improvements. The project was split into a hydraulic connectivity project and a recreational improvement project to allow a staged construction and implementation of the improvements. The hydraulic design included a model of the pond in the existing state and with options for connectivity design to maximize water quality improvements. The model included tidal, wind, and rainfall variables that predicts dissolved oxygen over a month-long study period. Based on the results, a connection channel was designed to maximize environmental improvement while limiting the future maintenance and costs. TBS performed the construction drawing preparation and design and is assisting with the permitting. The proposed project will more than double the volume of the ponds, create a 10 foot wide connection to Lake Pontchartrain, establish new wetlands, and protect existing vegetation. The recreational improvements are aimed at creating a destination for interaction and education with the wetlands and lakeside environment. A new trail is proposed around the redesigned pond with two educational pavilions. A pedestrian bridge crosses over the new lake connection channel to improve accessibility. Additional trees and landscaping will improve the aesthetics of the site, increase the shaded areas, and reduce the maintenance burden by specifying native plant species. TBS' conceptual design deliverables were leveraged to identify and secure funding from the Flood Protection Authority and the Environmental Protection Agency Pontchartrain Restoration Program. TBS also performed the topographic and hydrographic surveying of the site for plan production and hydraulic model creation. ***This project is in the final design stage and will be bid when total construction funding has been secured.***

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 (estimated)	$1,095,700 (estimated)	$1,095,700 (estimated)

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:	
Jefferson Parish Government	**Swift Energy Operating, LLC; Double Eagle Marine, LLC; Tommie Vizier and Sons Towing Co, LLC; Premier Tugs, LLC; Daigle Towing Service, LLC; T. Baker Smith, LLC**	Because TBS held a portion of the liability, Jefferson Parish offered a settlement, which we negotiated with them and which was approved by Jefferson Parish Council on April 30, 2014. Jefferson Parish prevailed in this litigation, which was settled out of court.

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

FIRM HISTORY

T. Baker Smith, LLC (TBS), an *Engineering News Record* Top 500 Design Firm, has provided professional engineering, environmental, surveying, and construction management services in Louisiana for over a century. TBS was founded in Houma, LA in 1913 and has since expanded to additional offices throughout the state of Louisiana as well as Texas and Mississippi. In 1936, our founder, T. Baker Smith, engineered the first paved road in Houma, LA. In the decades since then, the mission of "turning ideas into reality" for clients continues to challenge TBS' professionals to remain on the cutting edge of technology, so that we can provide the most economically viable solutions to our clients.

TBS is dedicated to providing innovative civil engineering and design services for our clients. Our experience covers a broad range of public works, land development, industrial, pipeline, and facility projects. Our civil engineering and design services include flood protection and drainage systems, pump stations, hydraulic and hydrologic studies, water and sanitary sewer design, treatment facilities, earthwork and site developments, erosion control structures, and earthen levees.

PROFESSIONAL TRAINING AND EXPERIENCE

Our Training. Our professionals hold degrees in civil, mechanical, structural, environmental, and coastal engineering; landscape architecture; mechanical engineering technology; geomatics; industrial technology; drafting and design technology, etc. All of our professionals have proper state licenses, registrations, and certifications to provide professional services for our clients. The resumes in Section K of this TEC Professional Services Questionnaire include the professional training and experience of our carefully curated team selected for this contract.

Our Experience. For over a century, TBS has provided engineering, surveying, and environmental consulting services along the Gulf Coast. Headquartered in south Louisiana, TBS is dedicated to protecting and restoring our coast. TBS has provided consulting services on coastal projects in Louisiana for over three decades. The critical synergy between flood protection and coastal restoration is our solution for survival. With nine offices and over 290 associates living in our coastal Louisiana parishes, TBS brings a sense of urgency to these efforts with integrated project plans utilizing top-of-the-line technology. Our staff has been working closely with federal, state, and local stakeholders on state and local projects that enhance our coast and protect our communities. TBS has the experience, resources, local knowledge, and perhaps most importantly, the passion and sense of urgency to preserve our communities and to provide Jefferson Parish with solutions to protecting and restoring our coast.

Jason Chauvin, PE | Coastal Engineering Lead Professional

Jason will provide expertise for marsh and ridge restoration, shoreline stabilization and protection, beneficial use of dredge material, living shoreline design, design analysis and reports. Jason has 13 years of experience with maritime and coastal engineering projects, as well as surveying and civil projects. He oversees projects through planning, data collection, design, bidding, construction administration, and monitoring phases.

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

Brady Trahan, PWS | Professional Wetland Scientist

Brady will provide expertise for biological and environmental assessments of wetlands, technical evaluations, cost estimates, opinions of probable construction cost and field investigations. He is primarily involved in regulatory and ecological compliance for pipeline and utility corridor transmission activities, oil and gas exploration and production activities, land resource and wetland mitigation management, and commercial and large scale residential developments. Brady has fourteen years of experience in wetland delineations and mitigation, Section 10/404 permitting, Coastal Zone Management permitting, oyster assessments, and environmental site assessments.

Lauren Averill, PE | Coastal Planning & Development Lead

Lauren will provide coastal grant writing, outreach and educational support and development of associated marketing materials. She is experienced with coastal government funding strategies, project development, and has a proven track record in grant awards. She was previously an in-house contractor for the New Orleans District Corps of Engineers, including coastal restoration and hurricane restoration projects.

FIRM SIZE

In addition to your dedicated project team, TBS has over 290 staff members firm-wide including civil, structural, and environmental engineers, land surveyors, planners, landscape architecture, environmental scientists, biologists, construction administrators and project representatives. TBS has the quality and quantity of professionals to meet all of your needs, including delivering a high quality project in a compressed time period.

CAPACITY FOR TIMELY COMPLETION OF PROJECTS

TBS is committed to continuously improving project completion time and schedules. With over 290 associates and nine office locations firm-wide, we have sufficient staff and resources to handle the tasks associated with this project. Our associates range from discipline leaders and lead professionals overseeing the quality of work to project managers managing the project's progress to project technicians and assistants providing advanced technical support to get the job done. Our integral approach to projects allows us to communicate, manage, and use resources from various office locations daily. Additionally, TBS continues to recruit and employ highly qualified professionals to ensure the continued growth of the quality services we provide to our communities.

PAST PERFORMANCE

Since establishing our office in Metairie, LA, in 2015, ***TBS has successfully completed 38 projects for the Jefferson Parish Government, including engineering, surveying, and environmental tasks***. TBS has successfully completed a significant number of coastal projects in the parishes of South Louisiana, including barrier island and headland restoration, beach and dune nourishment, marsh creation and nourishment, ridge restoration, living shorelines, shoreline protection, wetland mitigation, dredging, beneficial use of dredged materials, and flood protection projects including levees, flood walls, and gravity and forced drainage projects. The key TBS personnel listed in section K possess decades of experience in the preliminary planning, design, permitting, bidding, construction administration, and monitoring of coastal restoration and protection projects.

LOCATION OF THE PRINCIPAL OFFICE

TBS will manage and execute projects resulting from this request from our Metairie, LA office located at 6660 Riverside Drive, Suite 101, Metairie, LA 70003. Additional support can be provided from our other office locations as needed.

LEGAL PROCEEDINGS

As described in Section M above, TBS was involved in a legal matter with Jefferson Parish that was settled in April of 2014. TBS was named an additional party to the suit. This legal matter was not related to any parish project or contract between TBS and the parish, nor was it related to any substandard or negligent work by TBS on a parish project or contract.

PRIOR SUCCESSFUL COMPLETION OF PROJECTS

Since 1913, TBS has provided public works solutions that improved the quality of life in the communities we helped build. From master planning and sustainable design to complete project management and government regulation, our public works solutions are targeted to fit each project scope. TBS has built long-term relationships with repeat clients in the public market sector. In the past five years, TBS has worked on more than 500 projects in the public sector.

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

The projects highlighted in Section L above showcase our ability to complete coastal projects of varying scales and complexity.

MINIMUM REQUIREMENTS

Requirement	TBS Associate
1. The persons or firms under consideration shall have at least one (1) principal who is a licensed, registered architect or a professional engineer in the State of Louisiana.	Kenneth Wm. Smith, PE, PLS, FACEC Chief Executive Officer LA PE 24642
2. A professional in charge of the project who is a professional engineer who shall be registered as such in Louisiana with a minimum of five (5) years' experience in the disciplines involved.	Jason Chauvin, PE, MS Lead Professional, Coastal Engineering LA PE 39979
3. One employee who is a professional engineer registered in Louisiana in the field or fields of expertise required for the project (A sub-consultant may meet the requirement only if the advertised project involves more than one discipline.)	Denton Graham, PE Coastal Engineer LA PE 46385

CONCLUSION | EXPERIENCE WITH COASTAL IMPROVEMENT PROJECTS

For over a century, TBS has provided professional design and consulting solutions in south Louisiana. Our experience, resources, enthusiasm, and commitment to excellence uniquely qualify us to provide the high level of service required for this type of project. While evaluating TBS' qualifications, please consider the following unique qualities of our firm that will be an asset to Jefferson Parish:

- TBS has the resources and equipment to perform the services requested, plus additional innovative technology.
- TBS is a fully integrated firm with coastal engineers, environmental professionals, and surveyors working together to execute task orders successfully.
- TBS is a Louisiana-owned and operated consulting firm with professionals and field staff in six coastal parishes, including Jefferson Parish.

TBS Local Public Agency Clients

- Acadiana Planning Commission
- Ascension Parish Government
- Bayou Lafourche Fresh Water District
- Bayou L'Ourse Gravity Drainage District #1
- City of Alexandria
- East Baton Rouge Parish
- City of Central
- City of Covington
- City of Kenner
- City of Mandeville
- City of Harahan
- City of New Orleans
- City of Thibodaux
- City of West Monroe
- Consolidated Gravity Drainage District No. 2 of St. Mary Parish
- Flood Protection Authority-East
- Houma-Terrebonne Airport Commission
- Lafayette Consolidated Government
- Lafayette Parish School System
- Lafourche Parish Government
- Lafourche Parish Water District No. 1
- Morgan City Harbor and Terminal District
- North Lafourche Conservation, Levee, and Drainage District
- Plaquemines Port Harbor & Terminal District
- Port of Brownsville
- Port of Corpus Christi Authority
- Port of Galveston
- Port of Houston Authority
- Port of New Orleans
- Port of South Louisiana
- St. Charles Parish
- St. James Parish Council
- St. Mary Levee District
- St. Mary Parish Government
- St. Mary Parish Water & Sewer Commission No. 1
- St. Mary Parish Water & Sewer Commission No. 4
- St. Tammany Parish Government
- Tangipahoa Parish Government
- Terrebonne Levee & Conservation District
- Terrebonne Parish Consolidated Government
- Terrebonne Port Commission
- Town of Grand Isle
- Town of Lockport
- Jefferson Parish Government

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

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

Signature: Brian E Moldaner Print Name: Brian E. Moldaner, PE, MBA

Title: Chief Growth Officer Date: 07.16.2024

T. BAKER SMITH
A CENTURY OF SOLUTIONS

Sub-Consultant TEC Forms

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:

___ Administrative	___ Estimators	___ Specification Writers
___ Architects (Licensed)	___ Geologists	___ Structural Engineers
___ Chemical Engineers	___ Geotechnical Engineers	___ Graduate Engineers
___ Civil Engineers	___ Interior Designers	___ Project Managers
___ Construction Inspectors	___ Landscape Architects	___ Clerical
___ Ecologists	___ Land Surveyor	___ Grant/Funding Specialist
___ Electrical Engineers	___ Mechanical Engineers	___ Sanitary Engineers
___ Engineer Intern	___ Environmental Engineers	12 Other (Coastal Engineers)
___ Professional Land Surveyors		**12 TOTAL**

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

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

TEC Professional Services Questionnaire

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

1. **N/A**

2. **N/A**

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

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. 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:

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:

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 combing 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:

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.

Selected experience

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.

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.

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.

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:

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.

Selected experience

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.

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.

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.

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.

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:

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.

Selected experience

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).

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.

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.

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:

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.

Selected experience

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.

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.

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.

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.

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.

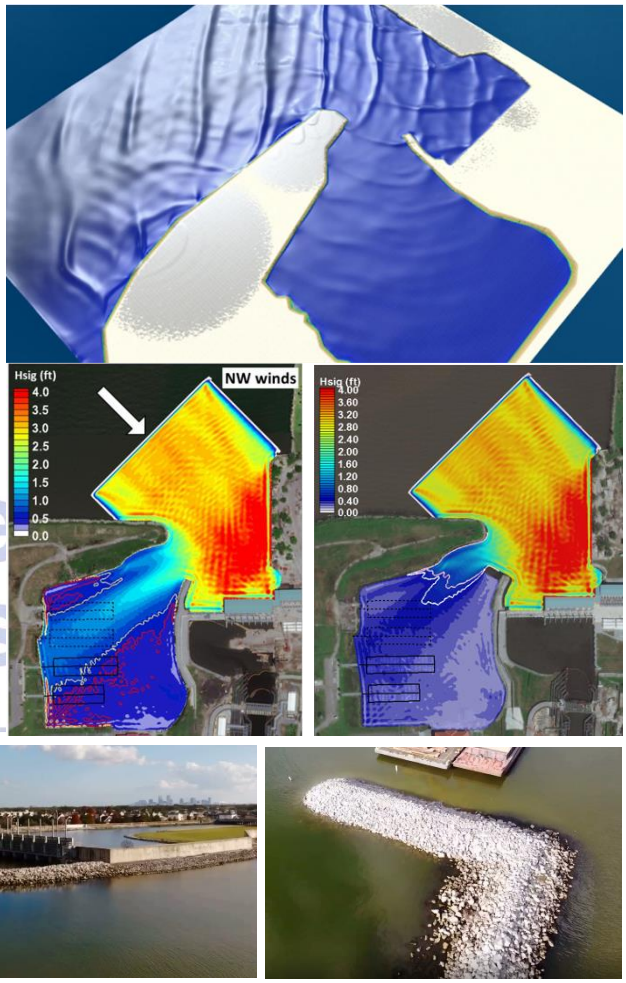
PROJECT NO. 1

Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**
Bucktown Harbor Marina Entrance Improvement Project Jefferson Parish Ecosystem and Coastal Management, Michelle Gonzales: (504)736-6653	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.*

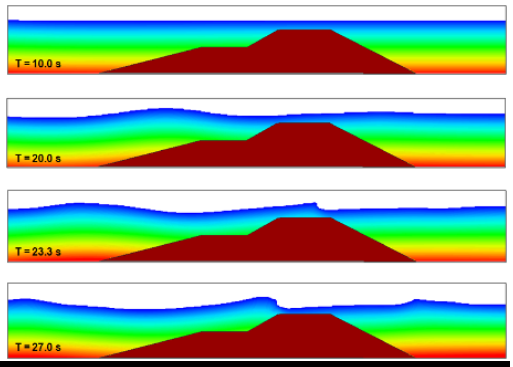
Completion Date (Actual or estimated)	**Estimated Cost:**	
	Entire Project:	Work for which Firm was Responsible
March 2021	Construction: $15M	Engineering and Construction Admin: $500k

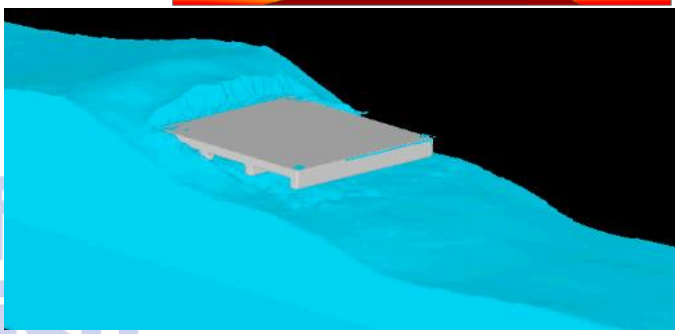
TEC Professional Services Questionnaire

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.

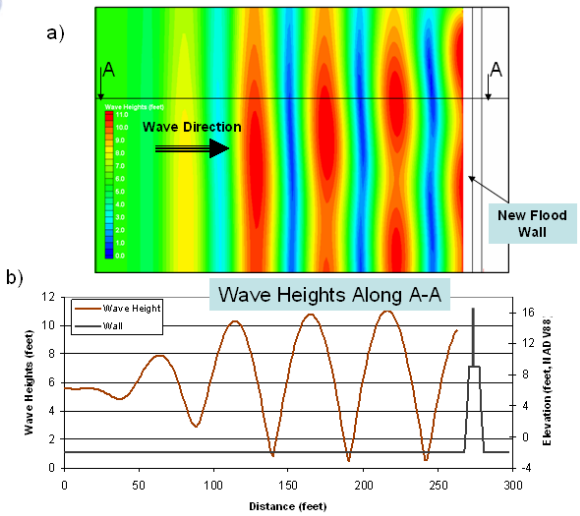
We conducted an analysis to determine the effects of the existing floodwall on waves during the design hurricane event. Hurricane wave forces and moments about the trailing edge were evaluated using AASHTO Guide Specifications. We used 2-D and 3-D computational fluid dynamics (CFD) models to evaluate 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.





Existing conditions water surface elevation from CFD modeling results

** 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.*



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.

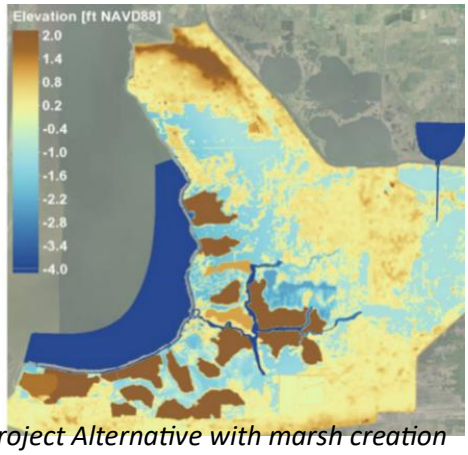
**CHE staff provided services as part of Mott MacDonald for CPRA from 2014-2024, and former CHE staff re-formed CHE in February 2024 and continue to provide services to CPRA as CHE.*

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.



Project Alternative with marsh creation

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.


Flow paths of hydraulic conveyance in the Cameron-Creole Watershed for preferred

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.*

Completion Date (Actual or estimated)	**Estimated Cost:**	
	Entire Project:	Work for which Firm was Responsible
2022	Est. $160M	$250k

TEC Professional Services Questionnaire

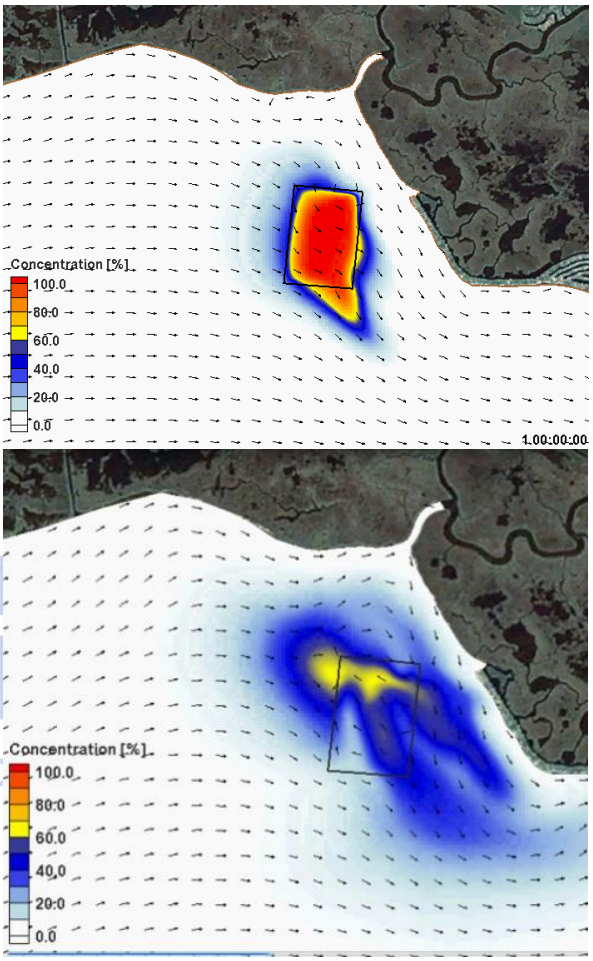
PROJECT NO. 7	
Project Name, Location and Owner's contact information: **Bayou Bonfouca Marsh Creation - Modeling St. Tammany Parish, LA** CPRA, Shannon Haynes (225) 342-9424	**Nature of Firm's Responsibility:** See below

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

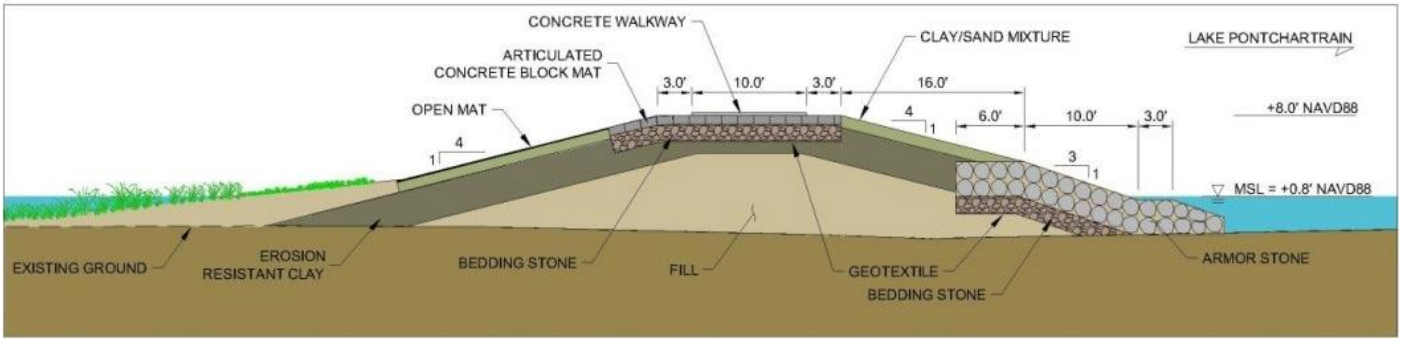
TEC Professional Services Questionnaire

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.

About us

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.

Our expertise

- 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

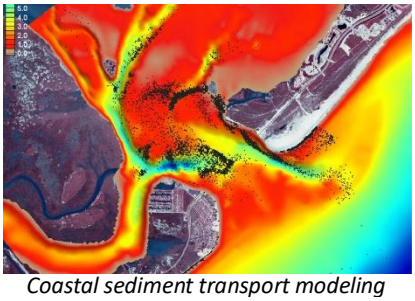
CHE was originally formed in 2003 and provided specialty hydraulic and coastal engineering services across the US and worldwide. In 2014, CHE was acquired by Mott MacDonald, where CHE staff led the coastal discipline and hydraulic and coastal design aspects of small to multi-billion dollar projects. 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.

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.

Evaluation Criteria

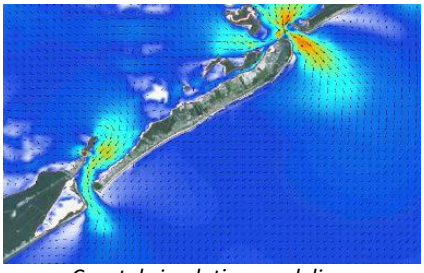
1. Professional training and experience in relation to coastal engineering

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.



Coastal sediment transport modeling

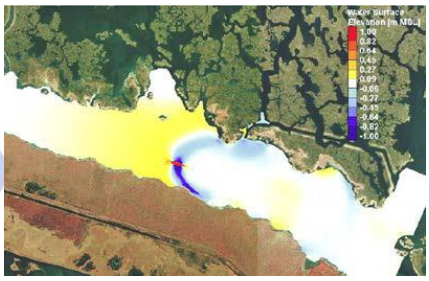
CHE is recognized as a leader in the field of coastal engineering through advanced certification, participation in professional organizations, and numerous papers and lectures presented by our staff. Two of our principals are Board Certified in Coastal Engineering by the Academy of Coastal Ocean Ports 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.



Coastal circulation modeling

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.



Vessel hydrodynamics modeling

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.

Wave growth and transformation
- SWAN
- HWAVE
- 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


Biloxi Marsh Living Shoreline Project, St. Bernard Parish, LA

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.


Bluewater Highway Shoreline Protection, Brazoria County, TX

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


La Quinta Aquatic Habitat Creation Corpus Christi, TX

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.


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.


Carancahua Boat Ramp, Jackson County, TX

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


Bucktown Harbor Marina Entrance Jefferson Parish, LA

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 a 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 eingineering services. We regularly evaluate project feasiblity, 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: _____ **Print Name:** Josh Carter, PE, BC.CE

Title: Principal **Date:** 7/8/2024

Technical Evaluation Committee (TEC) Questionnaire Instructions

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

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24–020 Coastal Engineering Consulting Serivces As Needed Parish Wide (Resolution No. 144205)

B. Firm Name & Address:

Adaptive Management and Engineering, LLC
11429 Pennywood Avenue
Baton Rouge, Louisiana 70809

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:

Venu Tammineni, P.E.
Principal
11429 Pennywood Avenue
Baton Rouge, Louisiana 70809
Ph: 225-424-7869
www.amesouth.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.

Gregory Mattson, II, P.E.
Engineering Manager
11429 Pennywood Avenue
Baton Rouge, Louisiana 70809
Ph: 225-424-7869
www.amesouth.com

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

1 Administrative	___ Estimators	___ Specification Writers
___ Architects (Licensed)	___ Geologists	___ Structural Engineers
___ Chemical Engineers	3 Geotechnical Engineers	1 Graduate Engineers
___ Civil Engineers	___ Interior Designers	1 Project Managers
___ Construction Inspectors	___ Landscape Architects	___ Clerical
___ Ecologists	___ Land Surveyor	___ Grant/Funding Specialist
___ Electrical Engineers	___ Mechanical Engineers	___ Sanitary Engineers
___ Engineer Intern	___ Environmental Engineers	
___ Professional Land Surveyors		6 **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:
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:

4

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:

Venu Tammineni, P.E.
Principal

Project Assignment:

Coastal Engineering & Design, Dredging / Beneficial Use

Name of Firm with which associated:

Adaptive Management and Engineering, LLC

Years' experience with this Firm:

5

Education: Degree(s)/Year/Specialization:

Master of Science/2005/Civil Engineering (Geotechnical Engineering)

Active registration: Year first registered/discipline:

LA PE. 0036864 - 2012/Civil Engineer

Other experience and qualifications relevant to the proposed Project:

Total Experience: 19 years
Mr. Tammineni is a registered professional engineer in the States of Louisiana, Texas and Ohio. He specializes in providing geotechnical design in soft soil sediments and is passionate about protecting and restoring the Gulf coast. He has experience with permitting, providing geotechnical design for marsh and ridge restoration, shoreline stabilization and protection, beneficial use of dredge material, and living shoreline. Mr. Tammineni has experience in instrumentation and monitoring of hydraulically dredged and placed marsh fill sediments and has been involved with developing methods on accounting for dredging activities in geotechnical design. He has completed over thirty (30+) coastal protection and marsh creation projects in Louisiana. He has provided training to agencies (CPRA and others) for geotechnical design of marsh creation using PSDDF.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Gregory Mattson, II, P.E. Engineering Manager
Project Assignment:
Coastal Engineering & Design, Dredging / Beneficial Use
Name of Firm with which associated:
Adaptive Management and Engineering, LLC
Years' experience with this Firm:
3
Education: Degree(s)/Year/Specialization:
Master of Science/2014/Civil Engineering
Active registration: Year first registered/discipline:
LA PE.0042397 - 2018/Civil Engineer(Geotechnical)
Other experience and qualifications relevant to the proposed Project:
Total Experience: 10 years Mr. Mattson is a registered professional engineer in the Louisiana. He specializes in designing marsh creation and restoration projects and is very knowledgeable in the areas of coastal and geotechnical engineering. With six years of experience with marsh creation design prior to working for AME, he is proficient in project planning, analyzing project data, performing and overseeing design analyses, preparing construction permit applications, reviewing contract documents, and developing construction cost estimates. He has successfully completed projects for various public agencies and private sector clients. He is well versed with the Coastal Protection and Restoration Authority's (CPRA) Marsh Creation Guidelines and United States Army Corp of Engineer's (USACE) Engineering and Design Manual (EM 1110-2-5025) for Dredging and Dredged Material. His Master's thesis focused on analyzing the effects of dredged slurry concentration, salinity, and particle size distribution on settling and consolidation properties. He worked for the CPRA for five years to begin his career designing and managing numerous marsh creation, hydrologic restoration, salinity control, and flood protection projects.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ryan Williamson, P.E.
Project Assignment:
Coastal Engineering & Design, Dredging / Beneficial Use
Name of Firm with which associated:
Adaptive Management and Engineering, LLC
Years' experience with this Firm:
3
Education: Degree(s)/Year/Specialization:
Bachelor of Science/2017/Civil Engineering
Active registration: Year first registered/discipline:
LA PE.0048866 - 2024/Civil Engineering
Other experience and qualifications relevant to the proposed Project:
Total Experience: 6 years Mr. Williamson is a driven young engineer licensed in the state of Louisiana. He joined Adaptive Management and Engineering (AME) in 2021 with 3 years of geotechnical experience, with a strong emphasis on coastal soils. He has experience conducting geotechnical field investigations on land, over water, and in marsh; performing laboratory testing and QA/QC; generating project maps, cross sections, heat maps, and other drawings; designing geotechnical projects; and implementing geotechnical instrumentation and monitoring programs.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
N/A
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
N/A
Project Assignment:
Name of Firm with which associated:
Years' experience with this Firm:
Education: Degree(s)/Year/Specialization:
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:

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 Living Shoreline Project, Jefferson Parish, LA Jefferson Parish – Ecosystem and Coastal Management Michelle M. Gonzales, CFM 1221 Elmwood Pk Blvd, Suite 310 Jefferson, LA (504) 736-6653 MGonzales@jeffparish.net	Working as subconsultant on construction monitoring and inspection team. AME installed geotechnical instrumentation at four locations within the project marsh creation portion of the project, behind the constructed breakwaters. The intent is to excavate a kayak channel post-contruction. The instrumentation data will help inform when to excavate the material.	
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2024 (estimated)	$15.5 million	$47,000

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Caminada Headland Back Barrier Marsh Creation (BA-171) Project, Lafourche Parish, LA CPRA Renee Bennet, PMP 150 Terrace Avenue Baton Rouge, LA 70802 (225) 342-4592 renee.s.bennett@la.gov	Working as a subconsultant on installation of Instrumented Settlement Plates (ISPs) and HDPM fill monitoring during and post-construction. This included providing an updated rate of settlement with time charts for post-construction behavior of HDPM fill.	
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2022 (actual)	N/A	$175,000

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility**	
Lake Villa Pond Improvements Project, Jefferson Parish, LA Jefferson Parish – Ecosystem and Coastal Management Michelle M. Gonzales, CFM 1221 Elmwood Pk Blvd, Suite 310 Jefferson, LA (504) 736-6653 MGonzales@jeffparish.net	AME assisted in obtaining a Jefferson Parish/CPRA/USACE permit to conduct the field exploration program, which includes soil borings on land and sampling in the existing pond. A full laboratory testing program and geotechnical analyses were completed to support the USACE levee analysis, material excavation, deep foundations, and other geotechnical recommendations for the project.	
Completion Date (Actual or estimated)	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**
2022 (AME's portion)	N/A	$31,000

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	**Nature of Firm's Responsibility:**	
N/A		
Completion Date (Actual or estimated):	**Estimated Cost:**	
	Entire Project:	**Work for which Firm was Responsible:**

TEC Professional Services Questionnaire

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

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

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

Adaptive Management and Engineering, LLC (AME) is a small business, 8(a) certified, and Hudson Initiative firm headquartered in Louisiana. AME provides full-scale geotechnical services (including drilling and laboratory testing), coastal engineering and design, and instrumentation and monitoring services to various public and private sector clients. AME's staff have a combined experience of 60 years working in soft soils of Gulf Coast. They are well versed in planning and providing geotechnical recommendations for coastal, industrial, commercial, and transportation projects. AME prides themselves in the due diligence they perform prior to the start of any project including detailed desktop analysis of any available data as well as any safety requirements to perform the job efficiently and safely. As with any project, while meeting or exceeding industry standards, it is critical for the design to take construction means and methods and practical constraints into consideration to provide for a viable, economical, and efficient design. AME's planning and geotechnical design aims to accomplish this on every project.

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

Signature: Gregory A. Mattson, II, P.E. Digitally signed by Gregory A. Mattson, II, P.E. Date: 2024.07.01 16:50:29 -05'00' **Print Name:** Gregory A. Mattson, II, P.E.

Title: Engineering Manager **Date:** 7/1/2024