



# ***Routine Engineering Services for Streets Projects***

SOQ No. 24-020 | Resolution No. 144205  
July 16, 2024



Lakeshore Dr. Erosion Control





July 16, 2024

Jefferson Parish Purchasing Department  
c/o Mark Buttery  
Purchasing Specialist II  
General Government Building  
200 Derbigny Street, Suite 4400  
Gretna, Louisiana 70053

Re: Qualification Statement  
Providing Coastal Engineering Consulting Services  
Resolution No. 144205

Dear Mr. Buttery:

In response to your Public Notice requesting qualification statements from engineering firms interested in providing routine engineering services for Coastal Engineering Consulting Services on an as-needed basis for miscellaneous projects throughout Jefferson Parish, Design Engineering, Inc. is pleased to submit the enclosed TEC Professional Services Questionnaire for your consideration.

Design Engineering, Inc. (DEI) has assembled the following design team to work on this project:

1. Eustis Engineering, LLC will provide any geotechnical work required for this project.
2. Bryant Hammett & Associates, LLC will provide any surveying work required for this project.

The principals and technical staff members of Design Engineering, Inc. (DEI) have years of experience in the design of various projects for Jefferson Parish as well as other local agencies.

Design Engineering, Inc. is a local firm with its office in Jefferson Parish. Accordingly, all civil engineering work will be designed and supervised by a firm whose staff has years of experience designing projects for Jefferson Parish and is

familiar with their procedures and criteria. We would appreciate the opportunity to demonstrate these capabilities on these projects.

As you will observe from the resumes, the staff members of the firm are experienced in local and state design procedures. Through many local engineering projects, this firm has established an excellent working relationship with the Jefferson Parish Department of Public Works and all private utility companies in the area and will coordinate all work with these agencies.

With respect to our current workload, our firm has the staff and capabilities presently available to complete this project in the most expeditious manner possible.

Design Engineering, Inc. is a Louisiana firm, domiciled in Jefferson Parish for over 40 years, and is in close proximity to the project sites.

We look forward to being of service to Jefferson Parish and respectfully submit this qualification statement for your review and hope you will consider our firm for this work.

With best regards, I remain

Sincerely,  
Design Engineering, Inc.



Jim Martin, Ph.D., P.E.  
President

## TEC Professional Services Questionnaire

### A. Project Name and Advertisement Resolution Number:

Coastal Engineering Consulting Services as needed Parish Wide- Resolution No. 144205

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



Design Engineering, Inc.  
3330 W. Esplanade Avenue, Suite 205  
Metairie, Louisiana, 70002

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

Jim Martin, Ph.D., P.E., President  
(504) 836-2155  
[jmartin@dei-engr.com](mailto:jmartin@dei-engr.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.

Jim Martin, Ph.D., P.E., President  
(504) 836-2155  
[jmartin@dei-engr.com](mailto:jmartin@dei-engr.com)

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

<u>4</u> Administrative	<u>   </u> Estimators	<u>   </u> Specification Writers
<u>   </u> Architects (Licensed)	<u>   </u> Geologists	<u>2</u> Structural Engineers
<u>   </u> Chemical Engineers	<u>   </u> Geotechnical Engineers	<u>   </u> Graduate Engineers
<u>4</u> Civil Engineers	<u>   </u> Interior Designers	<u>1</u> Project Managers
<u>10</u> Construction Inspectors	<u>   </u> Landscape Architects	<u>2</u> Clerical
<u>   </u> Ecologists	<u>   </u> Land Surveyor	<u>   </u> Grant/Funding Specialist
<u>   </u> Electrical Engineers	<u>   </u> Mechanical Engineers	<u>   </u> Sanitary Engineers
<u>4</u> Engineer Interns	<u>   </u> Environmental Engineers	
<u>   </u> Professional Land Surveyors		<u>27</u> <b>TOTAL</b>

### 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  N/A

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. <b>Eustis Engineering, L.L.C.</b> 3011 28 <sup>th</sup> St. Metairie, LA 70002	Geotechnical Services	Yes
2. <b>Bryant Hammet &amp; Associates, L.L.C. (BHA)</b> 6885 Hwy 84 West Ferriday, LA 71334	Surveying	Yes
3.		

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

\*1 personnel not listed in Section E (drafters) will also work on the project.

## TEC Professional Services Questionnaire

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

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

Jim Martin, Ph.D., P.E., President

**Project Assignment:**

Professional In Charge/Principal

**Name of Firm with which associated:**

Design Engineering, Inc.

**Years' experience with this Firm:**

10

**Education: Degree(s)/Year/Specialization:**

Old Dominion University – Coastal Engineering Certificate, 2010  
 Tulane University – Doctor of Philosophy, 2003  
 Tulane University – Master of Science in Environmental Engineering, 2000  
 University of Alabama – Bachelor of Science, Civil Engineering, 1998

**Active registration: Year first registered/discipline:**

2004, Civil Engineering, Louisiana License #31281

**Other experience and qualifications relevant to the proposed Project:**

**Seawall Area Erosion Control Paving Project, New Orleans, Louisiana:** Design Engineering, Inc. is responsible for the design, construction administration, and inspection of the Seawall Area Erosion Control Paving Project and Seawall Stabilization. This project includes removing existing drainage structures and utilities; installing subsurface drainage, lighting, traffic control, and landscaping; and constructing pile supported concrete erosion control monoliths for the new Plaza Area Paving between the seawall and Lakeshore Drive (for 5.2 linear miles). Part of the erosion control system included the installation of vinyl sheet piling, joint sealing, and seawall penetrations. This was all undertaken to stabilize the Lake Pontchartrain Seawall constructed in the 1930s.

**Lake Charles H & H Urban Drainage Study, Lake Charles, Louisiana:** Dr. Martin was responsible for multiple HEC-HMS and HEC-RAS models for multiple streams and watersheds. The HEC-RAS models were unsteady. All data was assembled via HEC GEO-RAS to assure a seamless integration with flood mapping tools on both the input and output sides of the models and interoperability of geo spatial data.

**Bayou Liberty Hydrologic and Hydraulic Model, St. Tammany, Louisiana:** Dr. Martin was responsible for multiple HEC-HMS and HEC-RAS models for various storms and alternatives for this major basin in St. Tammany Parish. Results were compiled, and inundation maps were developed in an ARC GIS framework. The HEC-RAS models were steady state.

**Expansion of US-167 Hydraulic Study, New Orleans, Louisiana:** Dr. Martin was responsible for sizing drainage structure for several miles of rural roadway as part of the expansion of US167 in central and western Louisiana. He was also tasked with developing plans and specifications for bidding and construction of the project.

**St. Andrew Street Wharf Erosion Mitigation Project:** As Principal-in-Charge, Dr. Martin was responsible for supervising the production of preliminary designs, final designs, and bid documents; the bidding and construction processes; and resident inspection services for the St. Andrew Street Wharf Erosion Mitigation Project. The project work generally encompasses the construction of approximately 1600 feet long by 50 feet deep steel sheet pile wall with a reinforced concrete pile cap along the roadway side of the St. Andrew Street Wharf, as well as associated earthwork, roadway, fencing, and incidental concrete paving.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
John Holtgreve, P.E. Executive Vice President
<b>Project Assignment:</b>
Chief Engineer
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
40
<b>Education: Degree(s)/Year/Specialization:</b>
MCE, 1975, Civil Engineering, Tulane University BS, 1970, Civil Engineering, Tulane University
<b>Active registration: Year first registered/discipline:</b>
1976, Civil Engineering, Louisiana License #16383
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>USACE Algiers Pumping Stations Project (Planters Pump Station), Jefferson Parish, Louisiana:</u></b> This project involved the extension of nine (9) steel drainage discharge pipes, installation of discharge pipe valves and associated electrical work, construction of a 610-foot-long concrete flood protection T-Wall and concrete scour protection for a total cost of 35 million dollars. In addition to providing all design services, DEI also performed the Engineering During Construction (EDC) contract, during which shop drawings, design submittals, and Requests for Information (RFI's) by the Contractor were processed during the construction of the pumping station in coordination with other design firms. Resident inspection was also conducted during construction and inspection reports were submitted to USACE. The construction has been completed and this project received an award from the American Concrete Institute (ACI) - Best Concrete Project award for 2012.</p> <p><b><u>Seawall Area Erosion Control Paving Projects, New Orleans, Louisiana:</u></b> Design Engineering, Inc. is responsible for the design, construction administration, and inspection of the Seawall Area Erosion Control Paving Project and Seawall Stabilization. When complete, this project will consist of 5 miles of erosion control improvements on the front line of New Orleans Hurricane Protection System. Several phases have already been completed. The project includes removing existing drainage structures and utilities; installing subsurface drainage, lighting, traffic control, and landscaping; and constructing sealed pile supported concrete erosion control slabs between the 1930s seawall and Lakeshore Drive. Part of the erosion control system included the installation of vinyl sheet piling, joint sealing, and seawall penetrations. This was undertaken to stabilize the aging Lake Pontchartrain Seawall. The project also included providing erosion/scour protection for behind the Lakeshore Drive Seawall across from Mardi Gras Fountain. The entire area between the seawall and Lakeshore Drive was paved utilizing a pile-supported two-way drop panel slab. DEI worked with the OLD to not only create an erosion/scour protection slab, but also a recreational plaza area. Portions of the project were completed prior to Hurricane Katrina and survived the high waters and intense wave action. Since Katrina, several more phases have been completed and survived additional hurricanes and tropical storms. The remaining phases of the project are either under construction or under design.</p> <p><b><u>USACE Lake Pontchartrain And Vicinity (LPV) 105 and (LPV) 106 – New Orleans Lakefront T-Walls, New Orleans, Louisiana:</u></b> The LPV 105.01 project included the replacement of the existing I-wall adjacent to the Lakefront Airport and floodgate L-15 with an approximately 1,800 LFT-Wall and two (2) vehicular gates at Downman Road in a new alignment south of the airport. Also included were drainage modifications and associated utility relocations. The LPV 106 project included raising approximately five (5) miles of flood protection of the existing levee along Hayne Boulevard adjacent to Lake Pontchartrain in New Orleans East by adding an I-wall to the top of levee. Also included in the design was overtopping armor consisting of concrete paving.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Taylor Hebert, P.E. Civil Engineer
<b>Project Assignment:</b>
Civil Engineer
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
1
<b>Education: Degree(s)/Year/Specialization:</b>
BS, 2016, Civil Engineering, Minor in Spanish, University of Georgia
<b>Active registration: Year first registered/discipline:</b>
2020, Civil Engineering, Louisiana License No. 44720
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Lafitte Tidal Protection Levee – Crown Point Basin:</u></b> Mr. Hebert contributed to the design team for the tidal flood protection system in Crown Point, handling design engineering, property owner coordination, and design analysis. Mr. Hebert coordinated with property owners and assisted with the analysis of design alternatives for consideration by CPRA.</p> <p><b><u>MSY New Orleans International Airport Stormwater Pumping Facility:</u></b> Mr. Hebert served as the project field engineer and QC Manager for the NOAB MSY International Airport Storm Water Pumping Facility. His responsibilities include generating submittals, managing RFIs, change orders, and pay applications, and updating project schedules using P6 software. Mr. Hebert also drafted contracts, coordinated work processes among various subcontractors, and played a vital part in design elements, quality control, and procurement, while providing essential surveying and layout services using total station and AutoCAD software for project drawings.</p> <p><b><u>Permanent Canal Closures and Pumps (PCCP):</u></b> Mr. Hebert assisted with the PCCP storm surge barrier and pump station project as a Field Engineer and Closeout QC Manager. His responsibilities included verifying project features, coordinating training sessions for officials, and overseeing testing and training for the storm surge barriers. Mr. Hebert also managed daily work crew activities, ensured safety compliance, and utilized AutoCAD and Excel for project documentation, contributing significantly to the project's success.</p> <p><b><u>WSLP 105 and 108 – Westshore Lake Pontchartrain USACE:</u></b> Mr. Hebert assisted with the Westshore Lake Pontchartrain (WSLP 105 and WSLP 108) flood protection project, which included the comprehensive design of drainage complex structures, t-walls, and earthen levee sections. His responsibilities encompassed various civil design tasks, technical report editing, and AEQR review of project plans, specifications, and cost estimates. Mr. Hebert assisted in designing a broad spectrum of projects, managed bidding phases, ensured compliance with project specifications, and facilitated public meetings to explain project designs, contributing significantly to the success of this crucial flood protection initiative.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Brady Pechon, PE Civil Engineer
<b>Project Assignment:</b>
Civil Engineer
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
BS, 2016, Civil Engineering, Louisiana State University
<b>Active registration: Year first registered/discipline:</b>
2024, Civil Engineering, Louisiana License No. 48579
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Relocation of East St. Bernard Highway and Associated Utilities for the LIT:</u></b> Mr. Pechon serves as a civil engineer on the \$1.8 billion Port of New Orleans LIT project. Located in Violet, St Bernard Parish, the project involves relocating East St. Bernard Highway, constructing a new bridge, and addressing utility relocation across 400 acres. Responsibilities include detailed reviews of project information, participating in design and constructability review meetings, and ensuring the project adheres to high standards and specifications.</p> <p><b><u>Lake Pontchartrain Causeway Southbound Bridge Rail Improvements:</u></b> Mr. Pechon performed inspection oversight, quality assurance, and construction administration for the installation of safety rails along the Southbound bridge. Responsibilities included evaluation of construction operations/work for conformance with the Plans and Specifications; coordination of daily field notes and acceptance of work with up to ten inspectors; and assistance in the response to RFIs, submittals, and monthly project progress summaries.</p> <p><b><u>Causeway Blvd. Overpass at Airline Drive:</u></b> Mr. Pechon assisted the project engineer with the oversight of the rehabilitation of bridge spans of this 1950s-era structure to meet AASHTO and LaDOTD standards. Responsibilities included conducting structural analysis of existing girders according to modern standards to determine adequacy in terms of safety and serviceability, designing cover plates for failing girders and their connections to strengthen spans at a lower cost than replacement, coordinating the removal and replacement of a corroded portion of the girder to reduce costs compared to replacing the entire girder and designing flange and web splice plates and their connections to safely transfer loads between the existing and new portions of the girder.</p> <p><b><u>Frisco Ave. Drainage Improvements:</u></b> Mr. Pechon assisted with the modeling and design improvements along Frisco Avenue in Old Metairie. This project includes upgrading approximately 1200' of drain lines ranging from 15" diameter to 42" diameter pipes at Frisco Avenue, and relocating existing utilities such as waterlines and fiber optic lines along 1000' parallel to an operating railroad. The project also includes the closure of an existing 300' long ditch. Responsibilities include project quantity estimating, preparation of plans for bidding, preparation of specifications for bidding, and construction administration. This project also includes coordination with the Norfolk Southern Railroad for permitting, design, and throughout the proposed construction.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Collin Gillen, PE Civil Engineer
<b>Project Assignment:</b>
Civil Engineer
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
BS, 2020 Civil Engineering, Louisiana State University
<b>Active registration: Year first registered/discipline:</b>
2020, Civil Engineering, Louisiana License #49017
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Nashville Wharf Front Apron Substructure Repairs:</u></b> Mr. Gillen performed inspections of the Nashville Avenue Wharf "A" substructure and deck as well as develop repair recommendations. The inspection was performed in accordance with ASCE MOP No. 130, Waterfront Facilities Inspection and Assessment, and consisted of: a detailed visual inspection of visible and accessible substructure structural components including above-water portions of steel piles, pile jackets, bracing, drop panels, pile caps, the bulkhead, the top and bottom of the deck; limited tactile inspection of accessible substructure structural components, including underwater portions of steel piles, pile jackets and bracing; limited thickness measurement of steel piles; and limited general visual inspection of visible and accessible above water portions of timber fender piles. DEI is currently performing structural analysis and will develop rehabilitation plans and specifications while coordinating with the CMAR contractor.</p> <p><b><u>Lake Pontchartrain Causeway Southbound Bridge Rail Improvements:</u></b> Mr. Gillen performed inspection oversight, quality assurance, and construction administration for the improvement of the existing bridge railing system to MASH Test Level 4, the repair of damaged concrete railing, replacement of impact attenuators, relocation of signs and supports, modification of call boxes, installation of pavement markings, and installation of access platforms. CE&amp;I: construction administration includes organization of progress meetings, review of submittals (e.g. Construction Schedules, RFIs, Plan Changes, and Materials), and processing partial pay estimates. Resident inspection includes observation of construction activities (e.g. 48 miles of bridge rail fabrication and installation, 138,000 epoxied anchor rods, and repair of damaged concrete rail), production of daily reports, review of TTC installation/removal, and review of on-site safety. Responsibilities included evaluation of construction operations/work for conformance with the Plans and Specifications; coordination of daily field notes and acceptance of work with up to ten inspectors; and assistance in the response to RFIs, submittals, and monthly project progress summaries.</p> <p><b><u>Geisenheimer Canal Improvements:</u></b> Mr. Gillen performed modeling and drainage calculations on existing canals to quantify and represent the current drainage patterns. Analyzed pumping station and force main capacities to divert water from the basin. Designed and analyzed a box culvert performing as a detention pond. This project consists of assessing alternative improvements to those recommended in the 2006 Study of the Geisenheimer Drainage Basin to the Geisenheimer Canal, Loumor Outfall Ditch, and Woodvine Ditch.</p>

## TEC Professional Services Questionnaire

**Causeway Blvd. Overpass at Airline Drive:** Mr. Gillen assisted the project engineer with the oversight of the rehabilitation of bridge spans of this 1950s-era structure to meet AASHTO and LaDOTD standards. Responsibilities included conducting structural analysis of existing girders according to modern standards to determine adequacy in terms of safety and serviceability, designing cover plates for failing girders and their connections to strengthen spans at a lower cost than replacement, coordinating the removal and replacement of a corroded portion of the girder to reduce costs compared to replacing the entire girder and designing flange and web splice plates and their connections to safely transfer loads between the existing and new portions of the girder.

**Canal Blvd. (R.E. Lee-Amethyst):** Mr. Gillen assisted with the reconstruction of an existing four-lane divided boulevard. This project involved grading, drainage structures, milling asphalt pavement, pavement patching, Class II base course, scarifying and compacting the roadbed, asphalt concrete pavement, Portland Cement Concrete Pavement, cofferdams, stormwater pumping station, pavement striping, signs, legends, and symbols. Mr. Gillen's responsibilities on this project included responding to RFIs, conducting periodic site visits, considering and negotiating change orders, performing substantial completion inspections, and quickly responding to limit the effects of often encountered unforeseen site conditions. The entire construction contract administration and construction engineering and inspection for this project were managed through the LADOTD SiteManager Program.

**Frisco Ave. Drainage Improvements:** Mr. Gillen assisted with the modeling and design improvements along Frisco Avenue in Old Metairie. This project includes upgrading approximately 1200' of drain lines ranging from 15" diameter to 42" diameter pipes at Frisco Avenue and relocating existing utilities such as waterlines and fiber optic lines along 1000' parallel to an operating railroad. The project also includes the closure of an existing 300' long ditch. Responsibilities include project quantity estimating, preparation of plans for bidding, preparation of specifications for bidding, and construction administration. This project also includes coordination with the Norfolk Southern Railroad for permitting, design, and throughout the proposed construction.

**Independence Park Drainage Improvements:** Mr. Gillen performed a drainage analysis on existing drainage structures to understand the current drainage capacities. Modeled and performed drainage analysis on proposed drainage structure upgrades and studied its effect on the project area. Analyzed pumping station and force main capacities to divert water from the affected area.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Ted Hemelt Senior CAD Technician
<b>Project Assignment:</b>
Senior CAD Technician
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
30
<b>Education: Degree(s)/Year/Specialization:</b>
Associates, 1985, Civil/Structural Drafting, Nunez Community College
<b>Active registration: Year first registered/discipline:</b>
1978, Civil Engineering, Louisiana License No. 17008
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Seawall Area Erosion Control Paving Project - Reach 1B:</u></b> Senior CAD Technician. Design Engineering, Inc. was responsible for the design, construction administration and resident inspection for the Seawall Area Erosion Control Paving Project with safety lighting and seawall stabilization. This project included removing existing drainage structures and utilities; installing subsurface drainage improvements and street lighting; installing traffic control devices and landscaping; constructing pile supported concrete plaza slabs; site filling; and other work as required by the plans and specifications for the new Plaza Area Paving between the seawall and Lakeshore Drive from west of Shelter No. 1 to just beyond the Mardi Gras Fountain Plaza. Also included was the removal of seawall light standards, construction of new pile supported plain and stamped color concrete plaza slab along the seawall with tree planters, benches, handrails; and non-lighted bollards; installation of decorative light fixtures, concrete isolation pads, installation of vinyl sheet piling, new subsurface drainage lines and structures; palm trees, sodding and bollards.</p> <p><b><u>Seawall Area Erosion Control Paving Project – Reach 4 &amp; 5:</u></b> Senior CAD Technician. Design Engineering, Inc. was responsible for the design of a plaza area paving between Franklin Avenue and Shelter No. 4 (3,525 LF in length), which included a pile supported reinforced concrete paved surface between the seawall and north curb of Lakeshore Drive. This project also includes removing existing drainage structures and utilities; installing subsurface drainage improvements and street lighting; installing traffic control devices and landscaping; constructing pile supported concrete plaza erosion control pavement; site filling; and other work as required by the plans and specifications for the Plaza Area Paving between the seawall and Lakeshore Drive.</p> <p><b><u>St. Andrew Street Wharf Erosion Mitigation Project, Port Of New Orleans:</u></b> Senior CAD Technician. The project included the design, bidding, and construction of a 1600-foot long and 50-foot-deep steel sheet pile wall with a reinforced concrete pile cap along the roadway side of the St. Andrew St. Wharf, an abandoned pile-supported concrete wharf on the MS River in the Irish Channel area of New Orleans. The project required the removal and replacement of a portion of a roadway to install the sheet pile wall. Supervised the design team throughout plan specification development and the bidding process.</p> <p><b><u>USACE Lake Pontchartrain and Vicinity (LPV) 105 and (LPV) 106 – New Orleans Lakefront T-Walls, New Orleans, Louisiana:</u></b> The LPV 105.01 project included the replacement of the existing I-wall adjacent to the Lakefront Airport and floodgate L-15 with an approximately 1,800 LFT-Wall and two (2) vehicular gates at Downman Road in a new alignment south of the airport. Also included were drainage modifications and associated utility relocations. The LPV 106 project included raising approximately five (5) miles of flood protection of the existing levee along Hayne Boulevard adjacent to Lake Pontchartrain in New Orleans East by adding an I-wall to the top of levee. Also included in the design was overtopping armor consisting of concrete paving.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Jay Rafferty Construction Manager
<b>Project Assignment:</b>
Construction Manager
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
BS, 1997, Industrial Technology, Southeastern University
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Inner Harbor Navigational Canal (HNC):</u></b> Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for fifty (50) plus employees. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. Mr. Rafferty's responsibilities included interviewing, training, drug screening, background checking, hiring, and termination of field personnel.</p> <p><b><u>Hurricane Protection Project Algiers Canal Pumping Station (Planters):</u></b> Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling &amp; coordinating field activities for more than fifty (50) field personnel. He was also the QC Manager representative for the US Army Corp of Engineers for this project. He was responsible for Interviewing, training, drug screening, background checks, hiring and termination of field personnel.</p> <p><b><u>Hurricane and Storm Damage Risk Reduction Program – Floodwall LPV 149:</u></b> Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for fifty (50) plus employees. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. Mr. Rafferty's responsibilities included interviewing, training, drug screening, background checking, hiring, and termination of field personnel.</p> <p><b><u>Lake Pontchartrain and Vicinity 106 Citrus Lake Floodwall:</u></b> Mr. Rafferty was the Construction Project Manager/Project Coordinator for this project. Mr. Rafferty's responsibilities consisted of managing, scheduling, and coordinating field activities for fifty (50) plus employees. He was also the QC Manager Representative for the US Army Corp of Engineers for this project. His responsibilities included interviewing, training, drug screening, background checking, hiring, and termination of field personnel.</p> <p><b><u>St. Andrews St. Wharf Erosion Mitigation Project:</u></b> Mr. Rafferty was responsible for preparing daily reports, inspecting the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications, and attending all project meetings. This project encompassed the construction of an approximately 1600-foot-long and 50-foot-deep steel sheet pile wall with a reinforced concrete pile cap along the roadway side of the St. Andrew Street Wharf and associated roadway construction.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Jeff Puissegur Inspector
<b>Project Assignment:</b>
Resident Inspector
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
12
<b>Education: Degree(s)/Year/Specialization:</b>
Tulane University: Bachelor of Arts, Major in Business Management, Minor in Arts & Business Certifications: LaDOTD Embankment and Base Course Inspector, ATSSA Work Zone Traffic Control Technician, Supervisor, and Flagger
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Grafton Drive Pavement Rehabilitation:</u></b> Mr. Puissegur was the Resident Inspector for this roadway reconstruction project consisting of the removal of curbs, concrete pavement, grading, Class II base course, Portland cement concrete pavement, and related work. The scope of work also entails addressing issues related to traffic maintenance, joint sealing, and curb ramp improvements to enhance the overall safety and accessibility of Grafton Drive. Mr. Puissegur prepared daily reports, inspected the progress of the work to ensure that the Contractor complied with the requirements of the plans and specifications, and attended all the progress meetings. Further, Mr. Puissegur wrote in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor. The entire construction contract administration and construction engineering and inspection for this project is managed through LaDOTD SiteManager.</p> <p><b><u>Magazine St. (Leake Ave to East Dr):</u></b> Mr. Puissegur was the Resident Inspector for this roadway rehabilitation project consisting of the removal of existing pavement, excavation/embankment, base course, PCC paving, drainage structures, concrete curb, sidewalks &amp; handicap ramps, water &amp; sewer lines, pavement markings, and related work. Mr. Puissegur prepared daily reports, inspected the progress of the work to ensure that the Contractor complied with the requirements of the plans and specifications, and attended all the progress meetings. Further, Mr. Puissegur wrote in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor. The entire construction contract administration and construction engineering and inspection for this project is managed through LaDOTD SiteManager.</p> <p><b><u>Airline Drive Drainage Crossing (St. Peter's Ditch):</u></b> Mr. Puissegur was responsible for the quality assurance in the construction of <b>365 feet of drainage improvements</b> adjacent to and across Airline Drive, including the construction of large drainage junction boxes, micro-tunneling or hand tunneling large diameter drain line across Airline Drive, reinforced concrete box culverts and transition structures. Mr. Puissegur prepared daily reports through LaDOTD SiteManager, inspected the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications, and attended all project meetings.</p>

## TEC Professional Services Questionnaire

**Airline Park Blvd. (Camphor-W Napoleon):** Mr. Puissegur prepared daily reports which were recorded through LADOTD Site Manager, inspected the progress of the work to ensure that the Contractor complies with the requirements of the plans and specifications and attends all the progress meetings. Further, Mr. Puissegur wrote in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor. This project included the construction of 0.390 miles of roadway which includes grading, drainage structures, milling asphalt pavement, pavement patching, class ii base course, scarifying and compacting roadbed, asphalt concrete pavement, Portland Cement Concrete Pavement, cofferdams, storm water pumping station, and related work on Airline Park Boulevard from north of its intersection with Camphor St. to its junction with W. Napoleon Ave.

**Lake Forest Blvd. Eastover Blvd. to I-510:** Mr. Puissegur prepared daily reports which were recorded through LADOTD Site Manager, inspected the progress of the work to ensure that the Contractor complies with the requirements of the plans and specifications, and attended all the progress meetings. Further, Mr. Puissegur wrote in his daily diary items of work performed for the day and the comparison of quantities installed with the Contractor. This project included the construction of approximately 638 LF of Portland Cement Concrete Pavement with barrier curb, barrier rails, and retaining wall, including drainage pipes and structures and tie-in to the existing Westbound concrete pavement at Lake Forest Boulevard. Also, approximately 624 LF of the existing Eastbound asphaltic concrete pavement on Lake Forest Boulevard was removed by milling and overlaid with 2" asphaltic concrete wearing course, to develop a 2.5% cross slope. Pavement striping, sign and legends and symbols were included.

**Jefferson Parish Submerged Roadway Program:** Mr. Puissegur prepared daily reports through LaDOTD SiteManager, inspected the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications, and attended all project meetings. This project included damage evaluation due to Hurricane Katrina and roadway reconstruction of eighty-five (85) concrete streets and eight (8) miles of asphalt roadway repair within Council District 3. Design Engineering's responsibilities included Site Evaluations, Preliminary Plans, Final Plans, Construction Administration, and Resident Inspection. During site evaluations, DEI noted settlement and surface condition and verified the degree and severity of damage described in FEMA Project Work Sheets. Considerations during the design phase were tree root impacts on the existing roadway, addition and/or repair of sidewalks, driveways and handicap ramps, and adjustment of all drainage structures within the roadway limits.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Wayne Lemoine Inspector
<b>Project Assignment:</b>
Resident Inspector
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
Certifications: LaDOTD Structural Concrete Inspector, Basic Bridge Safety Inspector's Training, Bridge Inspection Update, Nondestructive Evaluation of Bridge Conditions, Bridge Inspector, Movable Bridge Inspection Training Course, ATSSA Flagger, ATSSA Traffic Control Supervisor, Prager Gear Seminar, Pump and Seal School, Stream Stability and Scour at Highway Bridges for Bridge Inspectors, Hazwoper, Industrial Hydraulics, Deleading of Industrial Structures, Inspection of Fracture Critical Bridge Members
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b><u>Southbound Causeway Safety Rail Improvements (CE&amp;I):</u></b> Mr. Lemoine performed inspections for the improvement of the existing bridge railing system to MASH Test Level 4, the repair of damaged concrete railing, replacement of impact attenuators, relocation of signs and supports, modification of call boxes, installation of pavement markings, and installation of access platforms. Construction administration included the organization of progress meetings, review of submittals (e.g., Construction Schedules, RFIs, Plan Changes, and Materials), and processing of partial pay estimates. Resident inspection included the observation of construction activities (e.g., 48 miles of bridge rail fabrication and installation, 138,000 epoxied anchor rods, and repair of damaged concrete rail), production of daily reports, review of TTC installation/removal, and review of on-site safety.</p> <p><b><u>La 70 Mississippi River Bridge, Phase II CE&amp;I, Painting Inspection, and Environmental Monitoring, St. James Parish, LA:</u></b> Mr. Lemoine performed structural steel inspection, traffic control inspection, structural concrete repair inspection, and contract administration for the LA 70 Bridge over the Mississippi River. He coordinated the painting and environmental operations with SiteManager Reports and Daily Work Reports. This project included strengthening steel members, repairing end dams and roadway joints, and painting the steel approaches.</p> <p><b><u>Sunshine Bridge, Donaldsonville, LA:</u></b> Mr. Lemoine performed inspections on repairs to the expansion joints on the Sunshine Bridge. Mr. Lemoine also inspected the placement of epoxy in the roadway repair. He was responsible for preparing the daily report and attending all project meetings. Mr. Lemoine also reviewed and processed Contractors' invoices.</p> <p><b><u>Repairs &amp; Replacement of the 9-Mile Turnaround Spans on Lake Pontchartrain Causeway, St. Tammany and Jefferson Parishes, LA.:</u></b> Mr. Lemoine served as the inspector for pile driving and structural concrete placement. He maintained all the SiteManager records and performed sampling and testing for concrete placements on the decks. The project cost \$2M.</p>

## TEC Professional Services Questionnaire

**Causeway Bridge, Metairie, LA: Mr.** Lemoine held the position of Senior Bridge Inspector and Coordinator with the Greater New Orleans Expressway Commission. He inspected the installation of the dynamic boards at the Causeway bridge. Additionally, he inspected the reconstruction of the electrical system of the North Toll Plaza Building and the reconstruction of the exit road and parking lot at the North Toll Plaza.

**Louisiana Timed Program (LTM), Statewide, LA.:** Mr. Lemoine was the lead inspector assigned to the Huey P. Long Bridge widening project. He managed and inspected the widening of the current bridge to include three 11-foot travel lanes in each direction, along with inside and outside shoulders. Instead of adding pier foundations for the main river bridge, the construction plans called for the widening of pier shafts above the existing caisson foundations and the addition of two new parallel trusses to accommodate the widened roadway along the main bridge. For the approaches, new parallel structures were built to accommodate the new roadways. The construction cost \$5.2B.

**Mr. Lemoine was the Maintenance and Inspection Supervisor for the following:**

- Bayou Sarah Swing Bridge
- Judge Perez Bridge
- Claiborne Avenue Bridge (Judge Seeber Bridge)
- Danziger Bridge
- US 11 North Draw
- Chef Menteur Pass
- Houma Navigation Bridge
- Bayou Dularge Bridge
- Raceland Vertical Lift Bridge
- Kerner Swing Bridge
- Kraemer Vertical Lift Bridge
- La 24 Company Canal Bridge
- LaRose Vertical Lift Bridge
- Lockport Swing Bridge
- Bayou Black Bridge
- LA-661 Bayou LaCarpe Bridge
- Bayou La Loutre Bridge

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Gary Conerly Inspector
<b>Project Assignment:</b>
Resident Inspector
<b>Name of Firm with which associated:</b>
Design Engineering, Inc.
<b>Years' experience with this Firm:</b>
1
<b>Education: Degree(s)/Year/Specialization:</b>
Certifications: LaDOTD Structural Concrete Inspector, Troxler Nuclear Gauge Safety Certification, Toxler Hazmat Certification, ACI Concrete Strength Testing Technician, ACI Concrete Field-Testing Technician – Grade I, ATSSA National Flagger Certification.
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p><b>Power Blvd. Median improvements (West Esplanade Ave. – Vintage Dr.):</b> Mr. Conerly is currently performing inspections for approximately 4,800 LF of the creation of a bike/pedestrian path along the median area of Power Blvd. between West Esplanade Ave. and Vintage Drive. The project includes clearing and grubbing, grading, drainage structures, pavement patching, class ii base course, precast concrete piles, lighting, concrete walks, landscaping, pedestrian bridge, and related work. Mr. Conerly prepares daily reports, which are recorded through the LADOTD site manager system, inspects the progress of the work to ensure that the contractor complies with the requirements of the plans and specifications, and attends all the progress meetings. Mr. Conerly writes in his daily diary items of work performed for the day and the comparison of quantities installed with the contractor.</p> <p><b>Macarthur Drive Interchange Completion:</b> Mr. Conerly served as the resident inspector for the Macarthur interchange project, overseeing critical aspects of construction. Mr. Conerly's role focused on concrete maturity, density, and strength inspections. His responsibilities included monitoring the demolition, pile installations, and coordination with geotechnical engineers. Mr. Conerly's expertise contributed significantly to ensuring the project's compliance with LADTOD and FHWA requirements.</p> <p><b>Huey P. Long Bridge:</b> Mr. Conerly oversaw the inspection of the Huey P. Long Bridge widening project, executed in multiple phases. The project transformed the two-lane bridge into three 11-foot travel lanes in each direction, with inner and outer shoulders. The construction plans avoided additional pier foundations for the main bridge, opting for the widening of pier shafts above existing caisson foundations. Two new parallel trusses were added to support the expanded roadway on the main bridge, while new parallel structures were built for the approaches. Mr. Conerly prepared daily reports, recorded through the project management system, ensuring compliance with plans and specifications. His daily diary documented work progress, including a detailed comparison of installed quantities with contractual specifications.</p> <p><b>Severn Avenue: Veterans - W. Esplanade:</b> Mr. Conerly provided resident inspection for the removal and replacement of roadway, sidewalks, ADA ramps, pedestrian crosswalks, and the installation of cross signals of Severn Ave. As part of the statewide transportation improvement program (STIP), the project aimed to enhance pedestrian safety in response to increased traffic. Mr. Conerly conducted concrete inspections, soil testing, compaction testing, and vibration monitoring. Mr. Conerly inspected the progress of the work to ensure that the contractor complied with the requirements of the plans and specifications.</p>

## TEC Professional Services Questionnaire

**Louis Armstrong International Airport:** Mr. Conerly provided resident inspection for the \$1 billion MSY Airport project. The project included constructing a new terminal, parking facilities, and a third concourse dedicated to international flights. Managing an on-site facility. Mr. Conerly's responsibilities include concrete, steel, strength, and pile inspections, ensuring strict adherence to project specifications and plans. Mr. Conerly prepared daily reports, recorded through the project management system, ensuring compliance with plans and specifications. His daily diary documented work progress, including a detailed comparison of installed quantities with contractual specifications.

**Thibodaux Regional Cancer Center:** Mr. Conerly served as the resident inspector for the Thibodaux Regional Cancer Center, a significant \$35 million project featuring a five-story building spanning nearly 100,000 square feet. This facility expansion aimed to accommodate the growth of the hospital's cancer program. Mr. Conerly supervised various aspects, including geo-lab and field activities, concrete inspections, pile inspections, and vibration monitoring, ensuring the project's compliance with specifications.

**New Orleans Youth Study and Juvenile Justice Center:** Mr. Conerly provided resident inspection for the replacement of the 54-year-old youth study center. This \$35 million New Orleans Juvenile Justice Center project includes 40 beds, courtrooms, offices, medical spaces, classrooms, and social service areas. Mr. Conerly's responsibilities included pile, concrete, steel, and density inspections, ensuring strict adherence to project specifications and plans.

**Lake Lery Marsh Creation & Rim Restoration:** Mr. Conerly provided resident inspection for the creation of 177 acres of marsh, nourishment of an additional 209 acres, and the construction of a protective embankment along Lake Leary's northwestern shoreline. Mr. Conerly's responsibilities included managing geotechnical engineering, overseeing soil borings, and ensuring strict adherence to project specifications and plans.

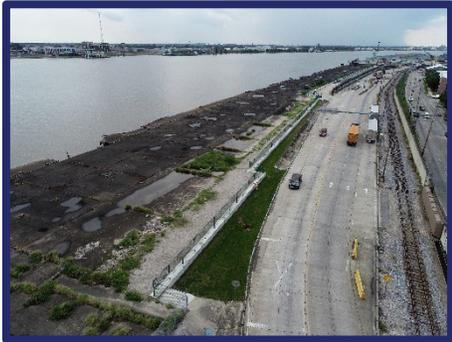
## TEC Professional Services Questionnaire

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

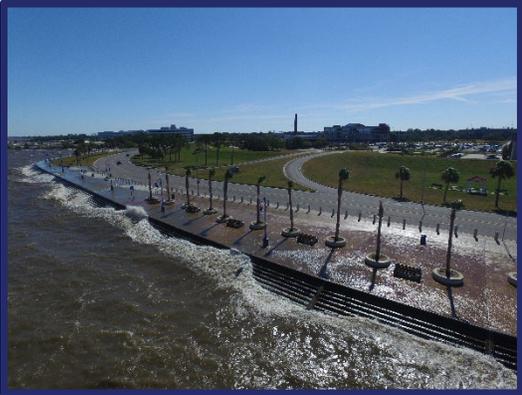
### PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:					
<p><b>Algiers Canal Pumping Station Project (Planters Pumping Station)</b> Jefferson Parish, Louisiana</p> <p>Craig Waugaman USACE 7400 Leake Avenue New Orleans, LA 70118 (504) 862-2673</p>	<p><b>Jefferson Parish Pumping Station (Planters Pumping Station):</b> This project received the following <b>American Concrete Institute awards in November 2012:</b></p> <ul style="list-style-type: none"> <li>• <b>Overall Best Project</b></li> <li>• <b>Best Concrete Sustainability</b></li> <li>• <b>Award of Excellence (Best Project of 2012)</b></li> </ul> <p>This U.S. Army Corps of Engineers' project involved the <b>extension of nine (9) steel drainage discharge pipes</b> (eight-84 in. diameter and one-36 in. diameter), installation of discharge pipe valves and associated electrical and mechanical work, construction of a concrete flood protection T-Wall (consisting of pile foundation, wall and base slab) within the existing discharge basin, concrete scour protection at the location where the required T-wall ties into an existing earthen levee system at both ends of the improvement and a concrete dolphin protection system. In addition, miscellaneous work required for this project included placement and compaction of earthen backfill material and lightweight aggregate, construction of concrete paving between the pump station's existing I-wall and required T-wall, construction of a steel walkway for the pipe extensions, and installation of a storm drain line behind the required T-wall. This project was a part of the Army Corps of Engineers work for the New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS).</p> <p>The majority of this project required the utilization of cast-in-place concrete made of Type I cement with 20% Class F Flyash replacement, precast concrete piles made of Type I cement concrete, and a combination of cast-in-place and precast concrete pile bents made of high early strength Type III cement concrete. DEI utilized cast-in-place concrete for the required concrete T-wall constructed in the discharge basin of the pump station, the required concrete scour protection slope paving at the tie-in locations with the existing earthen levee, concrete paving between the existing pump station I-wall and required T-wall, and a limited number of concrete pile bents. Precast concrete piles and precast bents were utilized to construct the new walkway and the discharge pipe supports.</p> <p>DEI designed the entire project and constructed as per the U.S. Army Corps of Engineers Hurricane and Storm Drainage Risk Reduction System Design Guidelines of 2008. All structural loads resulting from stormwater at still water level, low water level, and up to the top of T-wall, structural fill, storm surge wave action, barge impact, construction surcharge, and wind were incorporated in the design of the concrete T-wall. In addition, the cofferdams required for the construction of T-walls had concrete wing wall elements which were designed for temporary loads resulting from construction and water drawdown conditions. DEI also provided temporary concrete pipe supports when necessary to facilitate pump discharging operations. DEI designed the permanent pipe supports to carry the discharge pipes and all associated loads. The Dolphin system was designed for 100 kips of barge impact load.</p>					
	<div style="border: 1px solid black; padding: 5px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Flood protection</li> <li>✓ Shoreline protection</li> <li>✓ Seepage cutoff</li> <li>✓ Concrete scour protection</li> <li>✓ Floodwall penetrations</li> <li>✓ Backfill behind flood protection</li> <li>✓ Special concrete pours</li> <li>✓ Cofferdam and de-watering during construction</li> <li>✓ Special Cement Mixes</li> <li>✓ Storm surge design</li> <li>✓ Wave impact design</li> <li>✓ Barge Impact design</li> <li>✓ Wind design</li> </ul> </div>					
<p><b>Completion Date (Actual or estimated):</b></p> <p style="text-align: center;">2012</p>	<p><b>Estimated Cost:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%; text-align: center;">Entire Project:</th> <th style="width: 35%; text-align: center;">Work for which Firm was Responsible:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">\$35,000,000.00</td> <td style="text-align: center;">\$8,750,000.00</td> </tr> </tbody> </table>		Entire Project:	Work for which Firm was Responsible:	\$35,000,000.00	\$8,750,000.00
Entire Project:	Work for which Firm was Responsible:					
\$35,000,000.00	\$8,750,000.00					

## TEC Professional Services Questionnaire

<b>PROJECT NO. 2</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>St. Andrew Street Wharf Erosion Mitigation</b> <b>New Orleans, Louisiana</b></p> <p>Chris Gilmore Port of New Orleans 1350 Port of New Orleans Place New Orleans, LA 70130 (504) 528-3293</p>	<p>Design Engineering, Inc. (DEI) was contracted by the Port of New Orleans to provide preliminary and final design, bid documents, and bidding, construction, administrative, and resident inspection services for the St. Andrew Street Wharf Erosion Mitigation project.</p> <p>The project work generally encompasses the construction of an approximately 1600 feet long by 50 feet deep steel sheet pile wall with a reinforced concrete pile cap along the roadway side of the St. Andrew Street Wharf, as well as associated earthwork, roadway, fencing, and incidental concrete paving.</p> <p>The project activities that were performed by DEI consisted of the following:</p> <ol style="list-style-type: none"> <li>a. Design of a sheet pile wall along the edge of the St. Andrew St. Wharf, and develop the design into plans and specifications.</li> <li>b. Develop a procurement package and specification for the Port of New Orleans to procure the sheet piling under separate contract.</li> <li>c. Provide plans for the purpose of permit application and assist the Port of New Orleans in permit application. Meet with permit stakeholders as needed.</li> <li>d. Develop and update a design schedule and preliminary construction schedule.</li> <li>e. Provide an Opinion of Probable Construction Cost (OPCC).</li> <li>f. Assist with bidding, review submitted contractor bids and provide recommendations.</li> <li>g. Construction Administration services.</li> <li>h. Resident Project Representative (RPR) services.</li> </ol>	
<div style="border: 1px solid black; padding: 5px;">   </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Erosion Protection</li> <li>✓ Civil and Structural Design</li> <li>✓ Plans and Specifications</li> <li>✓ Engineering During Construction</li> <li>✓ Resident Inspection</li> </ul> </div>		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
2020	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
	\$3,735,000.00	\$3,735,000.00

## TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
<p><b>Lakefront Seawall Area Erosion Control Paving Project – Reach 1B New Orleans, Louisiana</b></p> <p>Gerry Gillen Orleans Levee District 6920 Franklin Avenue New Orleans, LA 70122 (504) 286-3100</p>	<p>Design Engineering, Inc. was responsible for the planning, design, bidding, construction administration and resident inspection for the <b>Lakefront Seawall Area Erosion Control Paving Project – Reach 1B</b>. This project involves constructing a pile-supported concrete erosion control slab, drainage and landscaping between the seawall and the back of curb along Lakeshore Drive. DEI also provided public outreach.</p> <p>Currently under construction, the project was designed to <b>stabilize the seawall, control erosion, improve drainage, and create a pedestrian walk between the seawall and Lakeshore Drive</b>. To ensure drainage of Lakeshore Dr., a system was designed to transfer runoff from the roadway through the seawall, a complex task because portions of the seawall are constructed below the lake surface. The seawall was initially construction in 1931 and is quite robust.</p> <p><b>DEI originally developed the concept for Reach 1B by designing and constructing the plaza located at the Mardi Gras Fountain along Lakeshore Drive</b>. This design is the only solution that withstood Hurricane Katrina along the entire lakeshore.</p> <p>The plaza area was raised above the road and seawall with a five (5) foot wide crest to assist in deflecting overtopping wave action. Research performed by DEI led to immerse the selection of polyethylene foam backer rods, and saturated in the joint sealant, NSL 8, and installed in the joints to prevent loss of fill through the joints.</p> <p>Construction of the project included:</p> <ul style="list-style-type: none"> <li>• Driving rigid, high-impact, UV-inhabited, weatherable vinyl sheet pilings fifteen (15) feet deep behind the ninety-six (96) seawall monoliths to eliminate loss of fill</li> <li>• 1336 (45') treated timber piles to withstand OLD maintenance vehicle loads</li> <li>• Removal of twenty-one (21) existing drainage outfalls/pipes between the seawall and back of curb.</li> <li>• Cutting through the seawall at five (5) 30" ø sections</li> <li>• Sealing the connection between the wall and 30" ø HDPE pipe using polyethylene foam as well as a flowable fill slurry during construction</li> </ul> <p><b>This project received an Award of Excellence and an Award for Most Improvement to the Public from the American Concrete Institute in 2014.</b></p>	
		
<p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Joint fill for 40' wide concrete sections</li> <li>✓ Seepage and degradation of soils</li> <li>✓ Excavation and de-watering</li> <li>✓ Cutting through existing seawall</li> <li>✓ Sustainable pile foundations</li> <li>✓ Wave-overtopping</li> <li>✓ Seepage analysis</li> </ul>		
<p><b>Completion Date (Actual or estimated)</b></p>	<p><b>Estimated Cost:</b></p>	
2014	<p><b>Entire Project:</b></p>	<p><b>Work for which Firm was Responsible:</b></p>
	\$6,285,000.00	\$6,285,000.00

## TEC Professional Services Questionnaire

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Lakefront Seawall Protection Project – Reach 2</b>  <b>New Orleans, Louisiana</b></p> <p>Gerry Gillen                      Orleans Levee District                      6920 Franklin Avenue                      New Orleans, LA 70122                      (504) 286-3100</p>	<p>This project included the replacement of the existing I-wall adjacent to the Lakefront Airport and flood gate L-115 with an approximately 1,800 LF T-Wall and two (2) vehicular gates at Downman Road in a new alignment south of the airport. Drainage modifications and associated utility relocations were also included. The design provided a high level of hurricane protection to the 1% project design elevations contained in the "Elevation for Design of Hurricane Protection Levees and Structures".</p> <p>Design Engineering Inc. provided all civil and structural engineering under a USACE contract. DEI was responsible for preparing FAA permit applications, coordinating with FAA representatives, and provided engineering during construction. Throughout the design process DEI continuously maintained communication and coordinated with adjacent project team members to ensure an accurate interface at LPV 105.02 East.</p> <p>The Scope of Work included:</p> <ul style="list-style-type: none"> <li>• Site visits and meetings with OLD, USACE and others as required to produce the designs and plans.</li> <li>• Civil and structural designs and plans as required by the scope of work for west reach of project more precisely described as follows: all T-wall and vehicular gates from Railroad Gate No. 1 to Railroad Gate No. 2.</li> <li>• Assistance in preparation of right-of-way and relocation plans, construction specifications, quantities for cost estimates and surveys.</li> <li>• Prepared documents for FAA permit applications, continued coordination with the FAA.</li> <li>• Performed all QA/QC activities as required by the USACE contract and USACE task orders.</li> </ul>	
		
<p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Seal Seawall Joints</li> <li>✓ Steel Sheet Piling</li> <li>✓ Cutting through existing seawall</li> <li>✓ Installation of utilities adjacent to large bodies of water</li> <li>✓ Sustainable pile foundations &amp; Stabilization</li> <li>✓ I-Wall Design</li> <li>✓ Underwater Surveys</li> <li>✓ Cofferdam</li> </ul>		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
1999	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
	\$7,012,000.00	\$7,012,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 5</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Lake Pontchartrain Vicinity (LPV) 105 – New Orleans Lakefront Airport T-Walls New Orleans, Louisiana</b></p> <p>Mark Wheeler USACE 7400 Leake Avenue New Orleans, LA 70118 (504) 862-2670</p>	<p>This project included the replacement of the existing I-wall adjacent to the Lakefront Airport and flood gate L-115 with an approximately 1,800 LF T-Wall and two (2) vehicular gates at Downman Road in a new alignment south of the airport. Drainage modifications and associated utility relocations were also included. The design provided a high level of hurricane protection to the 1% project design elevations contained in the "Elevation for Design of Hurricane Protection Levees and Structures".</p> <p>Design Engineering Inc. provided all civil and structural engineering under a USACE contract. DEI was responsible for preparing FAA permit applications, coordinating with FAA representatives, and provided engineering during construction. Throughout the design process DEI continuously maintained communication and coordinated with adjacent project team members to ensure an accurate interface at LPV 105.02 East.</p> <p>The Scope of Work included:</p> <ul style="list-style-type: none"> <li>• Site visits and meetings with OLD, USACE and others as required to produce the designs and plans.</li> <li>• Civil and structural designs and plans as required by the scope of work for west reach of project more precisely described as follows: all T-wall and vehicular gates from Railroad Gate No. 1 to Railroad Gate No. 2.</li> <li>• Assistance in preparation of right-of-way and relocation plans, construction specifications, quantities for cost estimates and surveys.</li> <li>• Prepared documents for FAA permit applications, continued coordination with the FAA.</li> <li>• Performed all QA/QC activities as required by the USACE contract and USACE task orders.</li> </ul>	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Civil and Structural Design</li> <li>✓ Plans and Specifications</li> <li>✓ FAA Permit Applications</li> <li>✓ Engineering During Construction</li> </ul> </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2012	\$1,396,000.00	\$1,396,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Lake Pontchartrain Vicinity (LPV) 106 – Citrus Lakefront Levee New Orleans, Louisiana</b></p> <p>Mark Wheeler USACE 7400 Leake Avenue New Orleans, LA 70118 (504) 862-2670</p>	<p>The LPV 106 project included raising the flood protection portion of the existing levee along Hayne Blvd. adjacent to Lake Pontchartrain in New Orleans East. To provide a higher level of flood protection an I-wall was constructed along the upper flood side levee slope to an elevation of 14.5'. The improved levee crown was constructed to an elevation (El.) of 12.5'. Also included in the design was overtopping armoring. The total length of LPV 106 is approximately 21,755 feet (3.74 miles).</p> <p>DEI was responsible for all civil and structural design, preparation of construction documents (Plans, Specifications, etc.), coordinating with railroad companies and the Orleans Levee District to design a flood side slope paving to accommodate maintenance and develop a plan to prevent seepage.</p> <p><b>Existing Conditions:</b> The existing levee consisted of an embankment with an average crown elevation at El. 12.5. The levee had an approximate top width of 8 feet with an approximate flood side slope of 2.5 H to 1 V and an approximate protected side slope of 3 H to 1 V. Two pump stations, Citrus and Jahncke, are located within the limits of the project and provided drainage for the area on the protected side of the levee. The discharge pipes of the pump stations run under Hayne Blvd, the levee, the railroad tracks, and then discharge into Lake Pontchartrain. Gate structures located on top of the levee crest were used to provide access and isolate the lake from the pump stations when necessary.</p> <p><b>Required Work:</b> An I-wall was constructed along the upper flood side levee slope for 21,287 linear feet. The I-wall consisted of sheetpiling and a non-structural concrete cap. The top of sheetpiling was to be at El. 14.0 and the top of the concrete cap was to be at El. 14.5. The levee crown was to be at El. 12.0 and a six-inch thick concrete scour protection was constructed on the levee crown to El. 12.5. The scour protection was to have a width of 9.0 feet and to provide protection from overtopping and also serve as a levee crown road surface for maintenance vehicles. Slope paving was constructed on the flood side of the levee. Two levee ramps were constructed at each end of the project to allow access for levee maintenance vehicles.</p> <p>A T-wall was constructed to tie in the required I-wall to the adjacent LPV 108 levee.</p> <p>Modifications to Citrus Pump Station and Jahncke Pump Station were also undertaken as part of this project.</p>	
	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Shoreline Protection</li> <li>✓ Flood Protection</li> <li>✓ Civil Engineering Design</li> <li>✓ Structural Engineering Design</li> <li>✓ Plans and Specifications</li> <li>✓ Construction Management</li> <li>✓ Resident Inspection</li> </ul> </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2012	\$1,695,000.00	\$1,695,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 7</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Lake Pontchartrain Vicinity (LPV) 111 – New Orleans East Back Levee (CSX Railroad to Michoud Canal)</b> <b>New Orleans, Louisiana</b></p> <p>Mark Wheeler USACE 7400 Leake Avenue New Orleans, LA 70118 (504) 862-2670</p>	<p>Design Engineering, Inc.'s Project Engineer and Construction Management personnel worked closely with URS, the designer of record, for the USACE to develop a cost saving system to construct access roads, water distribution system, electrical power distribution system, land bridges and structural pads for large silo and soil mixing facilities for LPV 111. The road required daily access of heavy equipment including over 400 (D400 John Deere type) off-road heavy dump trucks. The site is located next to the environmentally sensitive Bayou Sauvage Wildlife refuge and adjacent to the GIWW waterway paralleling it for over 5 miles. The temporary access roadway required over 1.3 million tons of crushed limestone and included electrical and water distribution systems to carry power and water for the entire six (6) miles.</p> <p>DEI worked closely with URS and the contractor (Archer/Weston – Alberici) to create a system that had sufficient useful life through the completion of construction reinforcing our goals of Quality Control along with Quality Assurance. The LPV 111 project has received awards for the application of deep soil mixing. We believe this is a testament to our ability to understand the needs of unusual construction requirements and effective implementation of a Construction Managed Solution.</p> <p>The LPV 111.01 project used the Contractor Early Involvement method and consisted of 5.3 miles of earthen levee and 1800 LF of concrete T-wall. This project was the largest deep soil mixing project in the country. Design Engineering, Inc. also designed 5.3 miles of temporary access roads, 5.3 miles of a HDPE water distribution and reinforced concrete shallow mat foundations that support two (2) forty-five (45') foot tall vertical silos. DEI design element details consisted of the following:</p> <ul style="list-style-type: none"> <li>✓ Drainage Plan – Designed cross drain system to ensure project access.</li> <li>✓ Temporary Access Road – The access road consisted of geogrid material over laid by geomembrane fabric and covered by compacted granular material for six (6) miles.</li> <li>✓ Water Distribution System – 5.3 miles of 6" HDPE water main that supplied the entire project with required water supply, which included serving (12) twelve different locations for deep soil mixing rigs with batch plants and 10,000 sq. ft. of temporary facilities.</li> <li>✓ Electrical Distribution System – Designed area lighting along the entire project, power supply for twelve (12) different deep soil mixing rigs locations and 10,000 sq. ft. of office locations.</li> <li>✓ Timber Mat Bridges – Designed numerous timber mat bridges that supported a live load of 270 kips.</li> </ul>	
		
<div style="border: 1px solid black; padding: 5px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Drainage System</li> <li>✓ Temporary Access Road</li> <li>✓ Water Distribution System</li> <li>✓ Electrical Distribution System</li> <li>✓ Timber Mat Bridges</li> <li>✓ Contractor Site Layout</li> <li>✓ Concrete Silo Foundation</li> </ul> </div>		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2010	\$5,602,000.00	\$5,602,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 8</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>New Orleans Lakefront Airport – Southwest Retaining Wall Replacement and Mitigation New Orleans, Louisiana</b></p> <p>Gerry Gillen Orleans Levee District 6920 Franklin Avenue New Orleans, LA 70122 (504) 286-3100</p>	<p>Design Engineering, Inc. was responsible for the planning, design, bidding, construction administration, and resident inspection for the New Orleans Lakefront Airport– Southwest Retaining Wall Project. This \$1.61 million dollar project is located at the southwest corner of New Orleans Lakefront Airport at the Inner Harbor Navigation Canal and is approximately four hundred (400) feet long.</p> <p>Construction of the project included:</p> <ul style="list-style-type: none"> <li>• 318 linear feet of new concrete pile cap</li> <li>• 7 steel batter piles, each 75 feet long</li> <li>• 10 concrete batter piles</li> <li>• 39 tie-back “dead men”</li> <li>• Sealing cracks in the existing concrete sheet pile wall with epoxy</li> <li>• Backfill material between the existing maintenance building and the seawall.</li> </ul> <p>Steel H-piles were used for most of the retaining wall support batter piling since proximity to an adjacent maintenance building required the batter piling to be driven on the tension side of the retaining wall. Outside the limits of the maintenance building the batter piles were driven on the compression side of the retaining wall. A two pile tie-back system with tie-rod was installed.</p> <p>Building drainage, roof drainage and surface drainage were collected at several outfall locations that penetrated the sheet piling with 10" ø steel pipe. A unique shape was used by DEI on the lake side of the pile cap to reflect waves impacting along the wall to reduce spray onto the maintenance building</p> <p>The wall was designed to EL 10.5 NAVD.</p> <p>DEI won an Award of Merit from the American Concrete Institute for its work on this project.</p>	
	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Sheet Pile Penetrations</li> <li>✓ Flood and Erosion Protection</li> <li>✓ Sheet Pile Crack Fill</li> <li>✓ Backfill of Voids Behind Seawall</li> <li>✓ Wave Impact Analysis</li> <li>✓ Seepage Analysis</li> <li>✓ Award Winning Project</li> </ul> </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2001	\$1,610,000.00	\$1,610,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 9</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Oakville to LaReussite Pump Station (Ollie Pumping Station) Fronting Protection Plaquemines Parish, Louisiana</b></p> <p>Ben Caldwell USACE 7400 Leake Avenue New Orleans, LA 70118 (504) 862-2673</p>	<p>This project included conceptual development of civil and structural designs for site development and hurricane protection system for the Ollie Drainage Pump Station located in Plaquemines, LA. DEI developed alternatives and provided support to the USACE for the determination of a recommended plan to raise and bring existing Non-Federal Levees into the federal system as part of the NOV Hurricane Protection Project. DEI's responsibilities included civil/site layout, utility relocation, structural design and alignment of concrete T-wall. DEI's work also included relocation and extension of existing pump station discharge tubes.</p> <p>Design Engineering, Inc.'s (DEI) work on this project was the Engineering During Construction (EDC) for this project. The EDC included reviewing of shop drawing submittals, answering of Request for Information (RFI) and regular site visits by the design Engineers of Record. The site visits are performed bi-weekly to verify that construction was proceeding according to the intent of the design. A site visit report was issued after every visit, and it detailed the progress of the work and noted any questions or concerns about the construction project.</p> <p>In previous phases of the project, DEI provided an alternative study for two options of flood protection at this Ollie Pump Station. After the study, DEI provided the pump station protection, including:</p> <ol style="list-style-type: none"> <li>1. 350 LF of pile-supported T-walls and I-wall/levee tie-ins at each side of the T-walls.</li> <li>2. Preliminary design for constructability and cost analysis for the T-walls.</li> <li>3. A 75 LF precast concrete bridge for site access.</li> <li>4. Extension of six (6) discharge drainage tubes through the T-walls</li> <li>5. Demolition of the unused pump station building. Associated site drainage and grading.</li> </ol>	
 <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Civil/Site Layout</li> <li>✓ Utility Relocation</li> <li>✓ Structural Design and Alignment of Concrete T-Walls</li> <li>✓ Engineering During Construction</li> </ul> </div>		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2012	\$3,017,000.00	\$3,017,000.00

## TEC Professional Services Questionnaire

<b>PROJECT NO. 10</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Orleans Avenue Canal: T-Walls, I-Walls, Bridges and Levees</b>  <b>New Orleans, Louisiana</b></p> <p>Gerry Gillen                      Orleans Levee District                      6920 Franklin Avenue                      New Orleans, LA 70122                      (504) 286-3100</p>	<p>DEI prepared the General Design Memorandum for the Orleans Avenue Canal flood protection system which included T-walls, I-walls earthen levees and sealed bridges. DEI also prepared plans and specification for T-walls, I- walls and earthen levees for construction by the USACE. These features are now part of the Lake Pontchartrain Hurricane Protection System. DEI and, a famous New Orleans artist, Enrique Alvarez, provided the specialized Architectural Treatment on the floodwall surfaces.</p> <p>The Orleans Avenue Canal Flood protection system required:</p> <ul style="list-style-type: none"> <li>The preparation of a General Design Memorandum for flood control design alternatives including the hydraulic analysis and effect on the water flow in the canal.</li> <li>A feasibility study for closures at each bridge crossing, including but not limited to a comparison of floodgates, box culverts, high-rise bridges, and the final accepted design, i.e., sealed bridges.</li> <li>Plans and specifications approved by the USACE and Geotechnical consultant for a pile test program for public bidding were prepared; the purpose was to determine the pile capacity for the design of the T-walls and Bridges.</li> <li>Alternative flood wall design criteria versus levees for public presentations. Design for the T-walls, I-walls and earthen levees using soil and load parameters as determined by a pile test program.</li> <li>Contract documents, (i.e., plans and project specifications for construction of T-walls, I-walls and levees).</li> </ul> <p>The Orleans Avenue Canal Protection System consisted of two parallel flood protection systems each 6,800 feet in length. Earthen levees were used between Robert E. Lee Blvd. and Lakeshore Drive. In the most restrictive right-of-way length, a concrete pile supported inverted T-wall was designed. The project consisted of 4,000 linear feet of earthen levees, 6,000 linear feet of I-walls and 2,000 linear feet of T-walls.</p>	
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  </div> <div style="border: 1px solid black; padding: 5px;"> <p><b>KEY PROJECT ELEMENTS</b></p> <ul style="list-style-type: none"> <li>✓ Civil and Structural Design</li> <li>✓ Plans and Specifications</li> <li>✓ FAA Permit Applications</li> <li>✓ Engineering During Construction</li> <li>✓ Construction Administration</li> <li>✓ Resident Inspection</li> </ul> </div>		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
2004	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
	\$2,200,000.00	\$2,200,000.00

## TEC Professional Services Questionnaire

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

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

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



**Design Engineering, Inc. (DEI)**, a Jefferson Parish Woman Owned Small Business, is a highly qualified professional engineering services firm and has been engaged in the engineering business in Jefferson Parish for over 40 years.

Since 1984, DEI has focused its efforts on various coastal engineering projects in Southeast Louisiana, including several reaches of the Lakefront Seawall Erosion Control Project, the St. Andrew Street Wharf Erosion Mitigation Project, and the Citrus Lakefront Levee. DEI maintains excellent daily working relationships with the Jefferson Parish Administration and has the technical expertise available to successfully produce an outstanding project for Jefferson Parish.



**Lakefront Seawall Erosion Control**



When **Eustis Engineering** opened its first office in Vicksburg,

Mississippi, in 1946, it housed its entire operation in less than 500 square feet of space. Seventy-three years later, Eustis's personnel and equipment occupy more than 40,000 square feet of space in six locations. Eustis Engineering is the third oldest continually operating geotechnical firm in the United States. From a two-man office to its current staffing, the firm has grown to house accounting, administrative, drilling, engineering, laboratory, and construction materials testing departments. These departments work together to provide our clients with the quality work desired in a cost-efficient and timely manner. There is no better geotechnical resource for coastal engineering projects than Eustis.

## TEC Professional Services Questionnaire



**Bryant Hammett & Associates, LLC** is a Louisiana-based Limited Liability Corporation multi-disciplinary consulting civil engineering, land surveying, disaster management, and construction supervision firm that provides services for various governmental and private concerns throughout the Gulf South region. BHA has been in business since August 1, 1984. BHA is comprised of highly qualified, experienced, and licensed surveyors, engineers, GIS technicians, certified floodplain managers, construction managers, administrators, inspectors, CADD operators, and clerical support. BHA has an extensive network of professionals, from structural engineers to hydraulic engineers, to help solve their clients' challenges on any project.

### MINIMUM REQUIREMENTS FOR SELECTION

**1. One principal who is a professional engineer who shall be registered as such in Louisiana.**

Design Engineering, Inc. has several personnel that meet this requirement. For the sake of brevity, we have included only our President. **Jim Martin, Ph.D., P.E.** has over 20 years of design and management experience with Civil Engineering projects and is a Registered Professional Engineer in the State of Louisiana and a lifelong resident of Jefferson Parish.

**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.**

Design Engineering, Inc. has several personnel that meet this requirement. For the sake of brevity, we have included only Mr. Holtgreve. **John Holtgreve, P.E.** has over 50 years of design and management experience with Civil Engineering Roadway projects and is a Registered Professional Engineer in the State of Louisiana with vast experience in roadway design, highway design, drainage improvements, water and sewer systems, flood control projects, underground utilities, and bridge design projects.



Ollie Pumping Station

**3. One employee who is a professional engineer registered as such 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.)**

Design Engineering, Inc. (DEI) has six (6) full-time professional engineers registered in the State of Louisiana with over 135 years of combined experience in coastal projects. DEI will make available as many as all six (6) professional engineers for this project.

### EVALUATION CRITERIA

**1) PROFESSIONAL TRAINING AND EXPERIENCE (35 POINTS):**

DEI has served as project coordinator for a major hurricane and flood protection project that involved more than 80 projects totaling over \$400 million. DEI is capable of providing the management and engineering services required for any task that Jefferson Parish could assign under this contract.

## TEC Professional Services Questionnaire

The personnel who will be assigned to this project have decades of combined experience with shoreline stabilization and protection, erosion control of levees, and flood control projects in Coastal Louisiana. Familiarity with construction techniques and local conditions in the State of Louisiana will provide a solid basis for design and construction management. The principals and personnel of our team have established long term relationships with federal, local, and state agencies that will allow successful and cooperative project development. Our staff has worked with the Department of Natural Resources as a subcontractor for several years and with local levee districts and the USACE for over 40 years.



Orleans Avenue Canal

As previously indicated, the DEI team includes engineers capable of providing Jefferson Parish with project management; project initiation and planning; compilation, review, and analysis of existing data; topographic and hydrographic surveys; geotechnical investigations; numerical wave modeling; water quality analysis; environmental investigations; permit development; and bid document development. Opinions of probable construction costs; technical evaluations; living shoreline design; hydrologic and hydraulic modeling, design analysis and reports; field investigations.

Through DEI's Quality Assurance Program, we identify, organize, and perform the necessary tasks to ensure the highest quality product is delivered to the client. With the knowledge and experience of our personnel, we create a detailed workflow diagram to establish an efficient design schedule. Interim project meetings evaluate the progress of the project, review the design approach, and collect project feedback. DEI monitors quality by using an independent checker as each facet of the project is completed. At least once a month a Quality Assurance review is made to assure the proper procedures are being followed.

We can assure you that this team presently has on staff sufficient technical, supervisory, and administrative personnel to provide consultant services for Jefferson Parish projects and can guarantee expeditious handling of the work.



Lakefront Airport T-Walls

We have pointed out some of our significant projects to which we have provided important design. Our engineering and management staff has designed and constructed all of the projects presented. We list some of the personnel below who have been significantly involved in the process.

**Jim Martin, Ph.D., P.E.,** is President of DEI and has over 20 years of experience throughout the State of Louisiana and is a recognized **expert in the field of hydraulics and hydrology**. He has completed graduate course work and research in the fields of hydraulics, hydrology, modeling, and **coastal engineering**. Dr. Martin has performed steady and unsteady hydraulic and hydrologic modeling for various clients throughout the region. In addition, he has worked on design of heavy complex structural projects, including levees, floodwalls, seawalls, bridges, and roadways. Dr. Martin has completed the **Coastal Engineering curriculum at Old Dominion University**. In the process he has completed work on **sediment transport, wave hydrodynamics, coastal processes, rubble mounded structural design**, and other critical coastal engineering topics. Dr. Martin holds an undergraduate degree in Civil Engineering from the University of Alabama, a Masters from Tulane University in Environmental Engineering, and a Doctorate from Tulane (primarily based on hydraulics research); he also received a Coastal Engineering Certification from Old Dominion University. Dr. Martin is a registered Professional Engineer in Louisiana, Mississippi, Alabama, and Georgia.

## TEC Professional Services Questionnaire

**John W. Holtgreve, P.E.** is Executive Vice President of Design Engineering, Inc. and will serve as *Project Manager* for DEI and as a *Civil Engineer* for this project. Mr. Holtgreve has over 50 years of professional consulting engineering experience and has worked as Project Manager and Principal-in-Charge for numerous civil and structural engineering projects including drainage improvements, water and sewer systems, flood control projects, roadway design, highway design, underground utilities and bridge design projects. (Please note the projects in his resume contained herein.) Mr. Holtgreve holds a BS and a MS in Civil Engineering from Tulane University and is a Registered Professional Engineer in the State of Louisiana. Mr. Holtgreve's past professional experience include American Society of Civil Engineering (Past State Board Member), American Consulting Engineers Council/Louisiana (Past President and Board Member), and American Consulting Engineers Council (National Director).

**Taylor Hebert, P.E.**, brings over 7 years of professional engineering experience to his role as Civil Engineer for this project. With a Bachelor of Science in Civil Engineering from the University of Georgia, Mr. Hebert is a licensed Professional Civil Engineer in the state of Louisiana. He has extensive experience in designing and managing a variety of civil projects, **including hurricane and flood protection**, drainage improvements, water and sewer systems, and roadway improvements. Additionally, Mr. Hebert is certified in the ATSSA Traffic Control Technician, and ATSSA Traffic Control Supervisor and Flagger Course as required by the LADOTD.

**Brady Pechon, P.E.**, has 6 years of professional engineering experience and will serve as a Civil Engineer for this project. Holding a Bachelor of Science in Civil Engineering from Louisiana State University, Mr. Pechon is a licensed Professional Civil Engineer in the state of Louisiana. His expertise includes drainage improvements, water and sewer systems, roadway, site, and quantity calculations, along with adept handling of complex permitting issues concerning Railroad Rights-of-way. Additionally, Mr. Pechon is certified in the ATSSA Traffic Control Technician and ATSSA Traffic Control Supervisor and Flagger Course, ensuring compliance with essential regulations.



Lakefront Airport Retaining Wall

**Collin Gillen, P.E.**, brings 4 years of professional engineering experience and will serve as a Civil Engineer for this project. Mr. Gillen holds a Bachelor of Science in Civil Engineering from Louisiana State University and is a licensed Professional Civil Engineer. His expertise in the field of civil engineering has been invaluable in the design and construction of several multi-million-dollar projects, including bridges, roads, drainage improvements, water and sewer systems. He is certified in the ATSSA Traffic Control Technician, and ATSSA Traffic Control Supervisor and Flagger Course as required by the LADOTD.

### **2) SIZE OF FIRM (10 POINTS):**

DEI has excess staff on hand at the time of submittal. The addition of this project will be welcomed as we could use the work to maintain current staffing levels.

DEI utilizes its most senior professionals and executives as actual engineers; engineers with 40 years' experience rarely perform the engineering work on a hands-on basis at other firms. All of DEI's engineers in this submittal will participate in the details of the engineering required for this project.

DEI presently has sufficient technical, supervisory, and administrative personnel to provide the required services and can assure the successful and swift completion of this project.

### **3) CAPACITY FOR TIMELY COMPLETION OF NEWLY ASSIGNED WORK (20 POINTS):**

We have the capacity to provide the engineering services for this project and will be able to complete it in a timely manner and within budget. Based on our past working experience with Jefferson Parish, DEI has been very successful in completing projects on time. Our staff has repeatedly demonstrated that the goals of timeliness and quality are met on a daily basis. We have the capacity to expedite any project assigned to us. In

## TEC Professional Services Questionnaire

fact, we have a reach-back capability of additional personnel beyond those listed herein should the situation demand such action.

#### **4) PAST PERFORMANCE BY PERSON OR FIRM ON PROJECTS OF OR SIMILAR SIZE, SCOPE, AND SCALE (10 POINTS):**

DEI has established management procedures for coordinating and executing work among in-house staff and subcontractors to ensure the work is performed on schedule and without budgeting overruns. DEI will be a safe and low-cost provider to Jefferson Parish.

Design Engineering, Inc. has over 40 years of experience in providing engineering services to southeast Louisiana clients. DEI maintains the highest quality list of projects in its portfolio of any firm in the region. Over the course of almost four decades, DEI has received many awards and accolades for the professional services it has provided. We have included some of the project awards for your review. Design Engineering, Inc. designed and performed engineering services for successful erosion control, flood control, water, and drainage projects. DEI designed projects have stood the test of time and endurance in all conditions including nature's most severe weather. Two (2) of our projects (Orleans Canal and Mardi Gras Plaza) were on the front lines of the New Orleans Lakefront during Hurricane Katrina & performed excellently. They were some of the only features in this area that performed as intended and survived as designed.



Design Engineering, Inc. has designed and administered the construction contracts for award winning projects. No distinction better supports Design Engineering's qualifications for the proposed project than the series of awards it received for the Planters Pumping Station Frontal Protection Project. The American Concrete Institute honored DEI with the **2012 Award for Overall Best Project, Best Public Works Concrete Project Award of Excellence**, and the **Award of Concrete Sustainability for 2012** for its work on Planters Pumping Station Frontal Protection Project. This Jefferson Parish pumping station included the extension of nine (9) steel drainage discharge pipes, installation of discharge pipe valves and associated electrical work, construction of a 610-foot-long concrete flood protection T-wall and concrete scour protection for a total cost of \$38 million. **DEI also won the ACI Louisiana Award of Excellence and Best Public Improvement Project for its work on the Lakefront Seawall Area Erosion Control Project in 2014.** DEI was awarded the **ACI Louisiana Award for Overall Best Concrete Project** of 2016 and **Award of Excellence** in 2016 for its work on the MacArthur Drive Interchange Project.

The Lakefront Airport Bridge (East Approach) has won several awards including **Best Project of the Year in the State of Louisiana** by the ACI Louisiana Chapter. The project also received awards from the Precast/Prestressed Concrete Institute including **Best Project of the Year in Louisiana** and second overall for the Southern Region. The London Avenue and Orleans Avenue Canal Bridges have received Awards of Merit in use of concrete structures. The retaining wall Restoration at the New Orleans Airport has been acknowledged for its Excellence in Design. The Lakefront Seawall Plaza Concrete Design to preserve the Lakeshore Drive Seawall is recognized for its innovation and excellence in design.

- Our firm has completed each task assigned in a timely manner.
- We have remained within budget.
- We have been singled out on numerous occasions for local and regional awards.

#### **5) LOCATION OF OFFICE (15 POINTS):**

Design Engineering, Inc. maintains its office in Jefferson Parish at 3330 West Esplanade Avenue, Suite 205, Metairie, Louisiana and has done so for 40 years.

## TEC Professional Services Questionnaire

Our Firm knows the territory.

- We are headquartered in Jefferson Parish and have outstanding geographic proximity to serve Jefferson Parish under this assignment.
- We have worked with all facets of federal, state, and local governments as well as local communities and private industry in excess of 40 years as individuals and in excess of 38 years as a firm.
- All of our proposed project personnel work in Jefferson Parish (and most of them live here as well).
- We can and will provide responsive services to Jefferson Parish as demanded for this project.

### **6) ADVERSARIAL LEGAL PROCEEDINGS (15 POINTS):**

Design Engineering, Inc. is not now, nor has it ever been, involved in any adversarial legal proceedings between the Parish and any related parties.

### **7) PRIOR SUCCESSFUL COMPLETION OF PROJECTS OF THE TYPE AND NATURE OF THE ENGINEERING SERVICES (15 POINTS):**

DEI and the DEI Team have completed dozens of successful coastal engineering projects in Greater New Orleans that required shoreline stabilization & protection, hydraulic/hydrologic modeling, design analysis, cost estimates, etc. Many are shown herein, and a brief listing is shown below:

- **St. Andrew St. Wharf Erosion Control Project:** 1600 feet of sheet pile wall construction, earthwork, roadway, fencing, and concrete paving
- **Algiers Canal Pumping Station Project (Planters Pumping Station):** Drainage improvements, flood protection T-Wall construction, concrete scour protection, placement of backfill material
- **Lakefront Seawall Area Erosion Control Paving Project, Reach 1B:** Erosion protection, drainage, landscaping, seawall stabilization, excavation & dewatering, wave overtopping, seepage analysis
- **Lakefront Seawall Area Erosion Control Paving Project, Reach 2:** Seal seawall joints, sustainable sheet piling, I-Wall design, underwater survey, cofferdams
- **Lake Pontchartrain Facility (LPV) 105: New Orleans Lakefront Airport T-Walls:** T-Wall design, utility relocations, FAA permit application
- **Oakville to LaReussite Pump Station (Ollie Pumping Station) Fronting Protection:** T-Wall design, utility relocations, civil/site layout
- **Violet Canal Siphon:** visual inspection

### **Closing Statement:**

**We are extremely interested in this solicitation.**

**Design Engineering, Inc. has extensive experience in the design of drainage improvement projects in Jefferson Parish and throughout the New Orleans Metropolitan Area.**

**Design Engineering, Inc. has the capacity to easily absorb this project assignment.**

**Please give us your serious consideration.**

## TEC Professional Services Questionnaire

### AWARDS

- Award of **Excellence** in Historic Preservation from The La Landmarks Society for The Mary Beth Hotel, 310 S. Rampart St.(2024)
- **Overall Best Concrete** Project in Louisiana from ACI Louisiana Chapter for Causeway Blvd. Overpass at Airline Dr. (2023)
- Award of **Excellence** from ACI Louisiana Chapter for Causeway Blvd. Overpass at Airline Dr. (2023)
- Award of **Excellence** in Historic Preservation from The La Landmarks Society for 315 Girod/Ironworks Building Project (2023)
- Award of **Excellence** from the ACI, Louisiana Chapter for Seawall Erosion Control Paving (2022)
- Award for the **Best Place to Work** from the City Business (2022)
- Award of **Merit** from the ACI, Louisiana Chapter for St. Andrew Street Wharf Erosion Mitigation (2022)
- Award for the **Top Engineering Firm** from the City Business (2021)
- Award for the **Top Engineering Firm** from the City Business (2020)
- Award of **Excellence** in Construction and Real Estate from City Business (2019)
- Award of **Excellence** in Historic Preservation from The La Landmarks Society for 419 Carondelet Project (2019)
- Award of **Excellence** in Historic Preservation from The La Landmarks Society for 822 Howard Project (2017)
- **Overall Best Concrete** Project in Louisiana from ACI Louisiana Chapter for MacArthur Interchange Completion Project –Phase 1B (2016)
- Award of **Excellence** from ACI Louisiana Chapter for MacArthur Interchange Completion Project – Phase 1B (2016)
- Award of **Excellence** from the ACI, Louisiana Chapter for the **OLD** Seawall Erosion Control Paving Project – Reach 1B (2014)
- **Most Improvement to the Public Award** from the ACI, Louisiana Chapter for the **OLD** Seawall Erosion Control Paving Project – Reach 1B (2014)
- **Overall Best Project** in Louisiana from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)
- Award for **Concrete Sustainability** from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)
- Award of **Excellence** from the ACI, Louisiana Chapter for Planter's Pump Station Frontal Protection (2012)
- **USACE – New Orleans District Certificate of Appreciation**, for Exceptional Achievement in support of the Mississippi Valley Division's New Orleans District and the Execution of the Hurricane and Storm Damage Risk Reduction System (2012)
- **Exceptional Project Rate**, for LPV 106, US Army Corps of Engineers Hurricane Protection Office (2012)
- Award of **Merit** from ACI for the **OLD** Plaza Area Paving at Stepped Seawall on Lakeshore (2007)
- Award of **Excellence** from ACI for the **OLD** Lakeshore Drive – London Avenue Canal Bridge Replacement (2004)
- Award of **Merit** from ACI for the **OLD** Retaining Wall Restoration at the New Orleans Lakefront Airport (2002)
- **Creative Design Utilizing Precast and Prestressed Concrete** from PCI for the **OLD** East Approach to Stars and Stripes Boulevard (1999)
- Concrete Project Award from G.S.P.C.A. for **Best Project** for the **OLD** Stars and Stripes Boulevard East and West Approach (1997-98)
- **Best Project of the Year** in Louisiana award from ACI, Louisiana Chapter for the **OLD** East Approach to Stars and Stripes Boulevard (1997)
- Award of **Excellence** from the ACI, Louisiana Chapter for the **OLD** East Approach to Stars and Stripes

# TEC Professional Services Questionnaire



**BEST OVERALL CONCRETE PROJECT & AWARD OF EXCELLENCE  
MACARTHUR INTERCHANGE COMPLETION PROJECT –  
PHASE 1B**



**OVERALL BEST PROJECT, AWARD OF CONCRETE  
SUSTAINABILITY & AWARD OF EXCELLENCE  
PLANTER'S PUMP STATION FRONTAL PROTECTION**



**AWARD OF EXCELLENCE & AWARD FOR BEST PROJECT  
EAST AND WEST APPROACH TO STARS AND STRIPES  
BLVD.**

## REFERENCES

(1) Anthony Evett  
Chief of Infrastructure  
Port of New Orleans  
New Orleans, LA  
(504) 528-3309

(2) Nelson Capote  
West Bank Area Engineer  
LaDOTD – District 02  
Jefferson, LA  
(504) 736-6400

(3) Carlton Dufrechou  
General Manager  
GNOEC  
Metairie, LA  
(504) 835-3118

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

Signature: \_\_\_\_\_

Print Name: **Jim Martin, Ph.D., P.E.**

Title: **President**

Date: **July 16, 2024**

**TEC Professional Services Questionnaire**

**A. Project Name and Advertisement Resolution Number:**

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

**B. Firm Name & Address:**

**Eustis Engineering L.L.C.**

3011 28<sup>th</sup> Street, Metairie, Louisiana 70002

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

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / [gsanders@eustiseng.com](mailto:gsanders@eustiseng.com)

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

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / [gsanders@eustiseng.com](mailto:gsanders@eustiseng.com)

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

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

**F. Is this submittal is a JOINT-VENTURE? Please check: YES  NO**

**If marked "No," skip to Section I. If marked "Yes," complete Sections G-H.**

**TEC Professional Services Questionnaire**

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

1. Not applicable.

2.

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

YES  NO

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

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

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

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

## TEC Professional Services Questionnaire

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

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

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

**Project Assignment:**

Project Principal / Limited Liability Corporation Member

**Name of Firm with which Associated:**

**Eustis Engineering L.L.C.**

**Years' Experience with This Firm:**

31

**Education: Degree(s)/Year/Specialization:**

Master of Science / 1992 / Civil Engineering

Bachelor of Science / 1990 / Civil Engineering

**Active Registration: Year First Registered/Discipline:**

Louisiana: 1997 / Civil Engineering

Mississippi: 2003 / Engineering

Texas: 2020 / Civil Engineering

**Other Experience and Qualifications Relevant to the Proposed Project:**

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

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

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

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

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

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

**PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

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

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

## TEC Professional Services Questionnaire

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

**KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**

**Name & Title:**

James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)

- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana (23325.00-.11)
- Jefferson Parish - Upper Barataria Terracing Project, Jefferson Parish, Louisiana (25108)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grande Cheniere Ridge Marsh Creation Area, Plaquemines Parish, Louisiana (24364)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.00 -.02)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00-.01 & 24762)
- State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00-.01 and 25239)
- State of Louisiana – Department of Wildlife and Fisheries, Marsh Island Refuge Water Control Structure Replacements, Belly Dam, Joe Aucoin, and Northeast Bird Island, Iberia Parish, Louisiana (24170.00- .01)

## TEC Professional Services Questionnaire

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

## KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

### Name & Title:

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

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

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

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

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

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

## TEC Professional Services Questionnaire

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

**KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**

**Name & Title:**

James M. Williams, P.E. / Geotechnical Project Engineer

- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana (23325.00-.11)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.00 -.02)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00 - .01 & 24762)
- State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00-.01 & 25239)
- State of Louisiana – Department of Wildlife and Fisheries, Marsh Island Refuge Water Control Structure Replacements, Belly Dam, Joe Aucoin, and Northeast Bird Island, Iberia Parish, Louisiana (24170.00 - .01)

## TEC Professional Services Questionnaire

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

**PROJECT NO. 01**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana  
Coastal Protection and Restoration Authority  
(CPRA)  
Bayou DuLarge Ridge, Marsh, and Hydrologic  
Restoration Project  
Terrebonne Parish, Louisiana  
Eustis Engineering Project Nos. 23970.00 - .01**

**Contact Information:**  
USDA – NRCS Through  
Sigma Consulting Group, Inc.  
10305 Airline Highway  
Baton Rouge, Louisiana 70816  
Robert Lear, P.E. @ 225-298-0800  
[rlear@sigmacg.com](mailto:rlear@sigmacg.com)

This restoration project in Terrebonne Parish is located on the lower end of Bayou DuLarge between Lake Merchant and Caillou Lake. The project will use borrow material from Lake Merchant to create and nourish marsh on the southern side of Bayou DuLarge, restore the ridge along the southern bank line of Bayou DuLarge, and reestablish historic hydrologic and salinity conditions by installing a structure that reduces the cross-section of Grand Pass and the intrusion of Gulf marine waters into the project area.

Eustis Engineering's role in this project included obtaining 45 undisturbed soil borings and cone penetration tests (CPTs) using airboat-mounted equipment and truck-mounted equipment positioned on a jack-up barge. The borings and CPTs extended to depths of 40 to 50 feet below the mudline for the marsh and ridge locations and 120 to 150 feet below the mudline for the Grand Pass structure. The airboat was used whenever possible to minimize detrimental impacts to the marsh environment.

Samples obtained from the soil borings were subjected to soil mechanics laboratory tests in accordance with ASTM standards. Testing consisted primarily of classification tests. Beyond these tests, bulk samples of soil dredged from the borrow source were used to conduct settling column tests and self-weight consolidation tests.

Eustis Engineering published a geotechnical data report (GDR) on 17 March 2020. Based on the GDR, Eustis Engineering performed engineering design and analyses, published two geotechnical engineering reports, and contributed to the 30% and final designs considering the following project features.

**Grand Pass Closure:** Eustis Engineering performed slope stability and settlement analyses to evaluate rock embankment closure concepts and evaluate alternatives using sheetpiles and driven piles for the closure.

**Earthen Containment Dikes:** Eustis Engineering's team performed stability analyses for three marsh fill elevations to evaluate the geometry required for a stable dike configuration. Analyses included estimates of dike fill consolidation during and after construction, recommendations for setup time required for the newly placed material before dredged fill slurry was placed, sequencing recommendations, and bearing capacity recommendations.

**Marsh Creation Fill Area Design:** Settlement analyses were performed for five marsh fill elevations projecting settlement over the 25-year project life. Eustis Engineering's analyses considered settlement during and after construction for scenarios of single-stage, two-stage, and three-stage dredging.

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

**PROJECT NO. 02**

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

**PROJECT NO. 03**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana  
Coastal Protection and Restoration  
Authority (CPRA)  
Mid-Barataria Sediment Diversion Project  
Mississippi River Mile 60.7 AHP  
Vicinity of Ironton and Lafitte  
(Plaquemines and Jefferson Parishes),  
Louisiana  
CPRA Project No. BA-53  
CPRA Contract No. 4400013603  
Eustis Engineering Project No. 23325.00-.11**

**Contact Information:**  
State of Louisiana – CPRA  
Through AECOM  
1515 Poydras Street, Suite 2700  
New Orleans, Louisiana 70112  
Mark Gonski @ 504-799-1332  
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The Mid-Barataria Sediment Diversion (MBSD) project is being designed to strategically reintroduce sediment and nutrients from the Mississippi River into the Barataria Basin. MBSD is an estimated \$1.3 billion project and the Coastal Protection and Restoration Authority's (CPRA) signature project of the 2017 and 2023 Coastal Master Plans. It is a Construction-Manager-At-Risk (CMAR) project delivery method where the engineering and design (E&D) team is co-located with the CMAR and CPRA throughout the E&D process. Eustis Engineering L.L.C. is the lead geotechnical engineer for the E&D team. The MBSD project will sustainably create approximately 15,000 acres of land in the Barataria Basin over the long term. The CPRA proposes to construct the diversion intake and control structure through the Mississippi River levee on the western side of the Mississippi River at approximate River Mile 60.7 AHP in Plaquemines Parish, Louisiana. The diversion outfall will be constructed through the future New Orleans to Venice (NOV) levee into the Barataria Basin, allowing sediment-laden water from the Mississippi River to flow into the Barataria Basin. Key project features include a river inlet and diversion control structure, a conveyance channel, an outfall transition feature, site forced drainage including siphon and sluice gate structures, LA Highway 23 bridge and approaches, and the New Orleans and Gulf Coast Railroad bridge and approaches.

The 15% Basis of Design phase was completed in October 2018. The 30% Design phase was completed in November 2019 which included issuing a Design Documentation Report and a Geotechnical Engineering Report. After the 30% submittal, the CPRA initiated a Value Engineering phase that began in January 2020. The 60% and 90% designs were submitted in July 2021 and July 2022, respectively. The 100% design and Section 408 application was submitted in May 2023. Eustis Engineering's activities throughout these phases have included: serving as the permitting agent for the CPRA and obtaining a Coastal Use Permit and Section 10/404 Permits from the U.S. Army Corps of Engineers (USACE) for performing soil borings and cone penetration tests (CPTs); developing a detailed project design criteria document; participating in a semi-quantitative risk assessments (SQRA) and workshop with the design team, CMAR, the CPRA, and the USACE; writing a SQRA Risk Report; helping develop and update the project risk register; obtaining CPTs and borings; soil laboratory testing including advanced shear strength testing (direct simple shear); and engineering analyses/design of the various project features. Eustis Engineering obtained 162 borings (3-in. and 5-in. diameter) and 98 CPTs for the three exploration phases (15%, 30% and 60%) in the river, land, and Barataria Bay environments. The field program was performed safely over several years and with hundreds of thousands of man-hours, one of the most impressive field exploration programs completed in the firm's 78-year history.

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

**PROJECT NO. 04**

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

**PROJECT NO. 05**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana -  
Coastal Protection and Restoration  
Authority (CPRA)  
Grande Cheniere Ridge Marsh Creation Area  
Plaquemines Parish, Louisiana  
CPRA Contract No. 4400015385  
CPRA Project No. BA-0240  
CPRA Task No. 2  
Eustis Engineering Project No. 24364**

**Contact Information:**

State of Louisiana – CPRA  
The Water Campus  
150 Terrace Avenue  
Baton Rouge, Louisiana 70802  
Tye Fitzgerald, P.E. @ 225-342-7308  
[Tye.fitzgerald@la.gov](mailto:Tye.fitzgerald@la.gov)

The purpose of the Grande Cheniere Ridge Marsh Creation Project (BA-0240) is to create 600 acres of marsh and 10,820 linear feet of coastal ridge habitat by hydraulically dredging material from the Mississippi River borrow source. Significant marsh loss has occurred in this area due to construction of numerous oil and gas canals, subsidence, and sediment deprivation. The hope is marsh creation areas will be formed with the construction of earthen containment dikes around the boundaries of each proposed area using material excavated from adjacent borrow canals.

Five undisturbed soil borings and twelve cone penetration tests were performed within the marsh creation area (MCA). The soil borings extended to depths of 20 and 40 feet below the mudline. The CPTs were performed to depths of 36 to 40 feet below the mudline. Before our field operations, Eustis Engineering subcontracted T. Baker Smith, LLC, to perform a magnetometer survey at each boring and CPT location to ensure no pipelines or obstructions existed at the exploration points. Access for the MCA was via marsh buggy and air boat. Eustis Engineering also completed marine borings from a jack-up-barge within the Mississippi River (under a separate task order) to evaluate the proposed borrow source to be hydraulically dredged and pumped to the MCA. Once the field operations were completed, soil mechanics laboratory tests were performed on select, representative samples from the MCA. Testing included natural water content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg limits determinations, organic content tests, specific gravity, grain size analysis, percent passing the U.S. Standard No. 200 sieve, and consolidation tests. These results were transmitted as a Geotechnical Data Report.

Our engineering scope of work included evaluation of the marsh creation fill cells, earthen containment dikes design, ridge design, estimates of settlement, and slope stability analyses. Engineering analyses were performed using soil boring and laboratory test data from the current and previous explorations [October 2007 (BA-0042) and December 2015 (BA-0173)]. We also provided recommendations regarding site preparation and general construction recommendations relevant to our geotechnical design assumptions.

More specifically, our engineering analyses of the MCA have included settlement estimates and settlement curves for furnished marsh fill elevations which project settlement over a 20-year project life. Engineering analyses for the earthen containment dikes and the earthen ridge included slope stability analysis with and without marsh fill to evaluate the geometry required for stable configurations (construction elevation, acceptable side slopes, and acceptable crown width), geotextile requirements, estimates of dike fill consolidation during construction, construction sequencing recommendations, and

**PROJECT NO. 05**

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

**PROJECT NO. 06**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana –  
Coastal Protection and Restoration  
Authority (CPRA)  
Grande Bayou Ridge and Marsh Restoration  
Plaquemines Parish, Louisiana  
CPRA Contract No. 4400015385  
CPRA Project No. BA-0217  
Eustis Engineering Project No. 24365**

**Contact Information:**  
State of Louisiana – CPRA  
150 Terrace Avenue  
Baton Rouge, Louisiana 70802  
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The Grand Bayou Ridge and Marsh Restoration Project (BA-0217) will create approximately 344 acres of marsh; 25,000 linear feet of terraces; and 10,657 linear feet of coastal ridge habitat by hydraulically dredging material from a Mississippi River borrow source and utilizing in-situ materials from Grand Bayou. The marsh creation areas will be formed by constructing earthen containment dikes around the boundaries of each proposed area using material excavated from adjacent borrow canals. The project will adhere to CPRA's Geotechnical Standards, Marsh Creation and Coastal Restoration Projects (Version 1.0) engineering and design standards.

Thirty-one locations were identified for drilling and testing in the project area. Six of the locations were designated as co-located soil borings and cone penetration tests (CPTs). These locations also correspond to those identified in a Coastal Use Permit obtained by CPRA. The borings and CPTs varied between 20 and 40 feet in depths. The borings were made using drilling equipment mounted onto a marsh buggy and the CPTs were made using an airboat. Mobilization for this task order was combined with the nearby BA-0240 project to provide economy. As part of our field investigation, Eustis Engineering's personnel coordinated with landowners, the U.S. Army Corps of Engineers, and appropriate levee boards. Eustis Engineering teamed with T. Baker Smith, LLC, to complete a hazard survey and provide locations and elevations for each boring/CPT. In the laboratory, samples were classified using the Unified Soil Classification System. Testing included moisture content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg limits determinations, organic content, sieve and hydrometer analyses, and consolidation tests. Field and laboratory test results were summarized in a Geotechnical Data Report (GDR). Note, samples of the Mississippi River borrow source were obtained and tested under a separate task order to provide soil characteristics for design.

Our staff performed engineering analyses for the earthen containment dikes, earthen ridge feature, earthen terrace design, and marsh creation fill area. These analyses include stability analyses to evaluate the geometry required for stable configurations of the dike, ridge, and terrace designs; estimates of fill consolidation settlement during construction of these same features; settlement curves (including immediate and consolidation settlement) of the subsurface soils; and construction sequencing recommendations. Marsh creation fill area designs require engineering analyses associated with evaluation of both primary and secondary consolidation settlement of the subsurface soils due to placement of sand as well as the projected settlement during construction and up to 20 years after construction. All data were presented in accordance with the Louisiana Sand Resource Database's Standard Operating Procedures for Geo-Scientific

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

**PROJECT NO. 07**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana -  
Coastal Protection and Restoration  
Authority (CPRA)  
Maurepas Diversion and  
West Shore of Lake Pontchartrain  
St. John the Baptist Parish, Louisiana  
Eustis Engineering Project Nos. 24384.00-.02**

**Contact Information:**  
State of Louisiana – CPRA  
Through AECOM Technical Services, Inc.  
59100 Industrial Boulevard  
Building 3502  
Plaquemine, Louisiana 70764  
Clay Loyless, P.E. @ 504-799-1324

Eustis Engineering L.L.C.'s scope of service for the 15% design included review of existing geotechnical data, development of a geotechnical data collection plan, collection of new geotechnical data, laboratory analyses, development of geotechnical soil design reaches, and preparation of geotechnical design recommendations for the future flood protection and freshwater diversion. Our services focused on the freshwater diversion and the flood protection features associated with the U.S. Army Corps of Engineers' (USACE's) West Shore of Lake Pontchartrain (WSP) alignment. The WSP geotechnical exploration and analyses need to meet requirements for a 1% storm. Thus, all designs will be performed in accordance with the interim Hurricane and Storm Damage Risk Reduction System Design Guidelines (HSDRRSDG) as modified by WSP project specific post-summit memoranda developed by the USACE, New Orleans District. The geotechnical exploration work to date was completed to define soil and foundation conditions along the future WSP levee alignment as well as information for the diversion beyond the area of the WSP.

AECOM Technical Services, Inc. furnished available historical data, analyses, and reports to Eustis Engineering for review. In addition to the furnished data, Eustis Engineering performed additional field exploration to provide current soil conditions at the site to meet HSDRRSDG for the future levee and structural foundations. The field exploration comprised twelve, 5-in. diameter soil borings and eight cone penetration tests (CPTs). The 4-ft undisturbed sample tubes were extruded in the laboratory, divided, and tested in general accordance with standards followed by the USACE for the other portions of the WSP alignments. Our soil mechanics laboratory tests comprised unconfined compression shear, one and three-point unconsolidated undrained triaxial compression shear, direct simple shear, consolidation, Atterberg limits determinations, organic content determinations, and sieve and hydrometer analyses.

Using these data, the Maurepas Diversion was separated into three soil design reaches by our engineering staff. Subsurface conditions and design parameters were included in the initial draft report. Ongoing efforts will comprise deep-seated global stability analyses; unbalanced force determinations for T-walls; piping cutoff designs; uplift analyses; allowable pile load capacity estimates per the HSDRRSDG for T-wall structures; allowable pile load capacity estimates per the State of Louisiana, Department of Transportation and Development (LaDOTD) for Airline Highway; development of lateral load soil design parameters for foundation piles (e.g., subgrade moduli, LPILE® parameters, etc.) subject to unbalanced loading; preparation of Geotechnical Design Reports and supporting information for the Design Documentation Report; levee stability analyses with estimates of strength gain during and after construction; reinforcing geotextile strength and width based on the 2070 design elevations; settlement curves to year 2070;

**PROJECT NO. 07**

<b>Project Name, Location, and Owner's Contact Information:</b>	<b>Nature of Firm's Responsibility:</b>	
	<p>estimates of settlement induced bending moments at multiple future tie-in locations along with recommendations for mitigating such effects; ground improvement programs by use of wick drain fields and preload/surcharge embankments at multiple sites; conceptual temporary retaining structure designs at each future structure location; utility relocation design recommendations pertaining to geotechnical requirements; Maurepas Diversion channel stability designs; LaDOTD standard pavement designs; and development and coordination of submittals for 35%, 95%, and 100% design stages including comment review and resolution. The Geotechnical Engineering Report to support the 35% level design was issued in December 2022. Some advancement of a 65% design alternative was made in 2023.</p> <p>We have recently completed a Geotechnical Data Report for a borrow area study. We conducted a supplemental geotechnical exploration that included the performance of ten soil borings to assess the diversion site as a potential borrow source for the proposed levees.</p>	
<b>Completion Date (Actual or Estimated)</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for Which Firm Was Responsible:</b>
Ongoing	Unknown	\$581,000 (to date)

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

**PROJECT NO. 09**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana  
Grand Isle State Park  
Phase I and II Improvements  
Jefferson Parish, Louisiana  
Eustis Engineering Project  
Nos. 24093.00-.01 & 25239**

**Contact Information:**  
State of Louisiana – CPRA  
Through GIS Engineering, L.L.C.  
Post Office Box 820  
Galliano, Louisiana 70354  
Laura L. Barnes, P.E. @ 985-219-1048

This project consists of repairs and upgrades to existing roads and parking lots damaged by repeated flooding. For the existing three-mile park roadway system, the repairs would include milling, overlaying, and full depth patching of pavement areas where sections had failed. In the three parking areas, repairs would include pulverizing the existing asphalt parking areas, and adding base course and an asphalt overlay to raise the parking area grades to above normal tide elevations.

Eustis Engineering L.L.C.'s field investigation for Phase I included the performance of seven direct-push type borings and two pavement cores using one of our Geoprobe® rigs to identify the subsurface soils, stratifications, and pavement conditions at the site, and to obtain samples of the various strata encountered. The borings were performed to depths varying between 8.5 and 9.0 feet below the asphalt surface, and the pavement cores were performed to depths of 2.5 and 3.3 feet. Laboratory testing services included the performance of visual classification and natural water content determinations to aid in the classification of the soil samples.

Engineering analyses were performed and recommendations developed for groundwater management including temporary and permanent drainage; site preparation including demolition and removal of existing slabs or pavements; subgrade preparation; structural fill and its compaction; and flexible pavement components and thicknesses meeting Section 502 of the Louisiana Standard Specifications for Roads and Bridges.

Phase II of the project focused on the proposed reconstruction of a rock jetty and deep foundation design for the planned extension of a fishing pier at the Grand Isle Park. Eustis Engineering's field exploration for this phase comprised two marine-based soil borings to obtain samples of the various strata encountered at the rock jetty and fishing pier. The borings extended to depths of 50 and 100 feet below the mudline.

Soil mechanics laboratory tests included natural water content, unit weight, unconfined compression shear, unconsolidated undrained triaxial compression shear, Atterberg limits determinations, and grain size distributions.

Proposed fishing pier upgrades comprise an extension of the existing pier into the Gulf of Mexico by approximately 400 feet. Eustis Engineering developed estimates of allowable axial and lateral pile load capacity to support the new pier foundations. We also provided estimates of allowable soil bearing capacity, deep-seated stability assessments, and general construction recommendations for the reconstruction of a rock jetty at the site.

In November 2023, further improvements to Grand Isle State Park's fishing pier were proposed, featuring a new structure of approximately 1,300 feet in the Gulf of Mexico. Eustis Engineering was asked to perform geotechnical services for this effort. We are utilizing data from Boring B-1 of the geotechnical exploration conducted during Phase II at the fishing pier under

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

**PROJECT NO. 10**

**Project Name, Location, and Owner's Contact Information:**

**Nature of Firm's Responsibility:**

**State of Louisiana  
Department of Wildlife and Fisheries  
Marsh Island Refuge Water Control  
Structure Replacements  
Belly Dam, Joe Aucoin, and  
Northeast Bird Island  
Iberia Parish, Louisiana  
Ducks Unlimited Project No. DU-LA-198-1  
Eustis Engineering Project Nos. 24170.00, .01**

**Contact Information:**  
State of Louisiana Through  
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John Hetherwick @ 832-595-0063  
[jhetherwick@ducks.org](mailto:jhetherwick@ducks.org)

The project consists of the construction of three new flood control structures within the existing Marsh Island Refuge in Iberia Parish, Louisiana. The exact site was positioned on the northern side of Marsh Island, just south of the New Iberia, Louisiana coast. The Joe Aucoin West Weir and Belly Dam Weir flood control structures will replace existing structures with reported scour areas, and the Northeast (NE) Unit Structure on the Northeast Bird Island Unit will comprise new construction. Eustis Engineering L.L.C. was contracted to perform a geotechnical exploration and subsequent analyses, based on specific hydraulic design criteria, for the proposed design features.

Three borings were drilled to depths of 50 feet below the existing mudline in open water channels and bayous. These borings were completed with the use of a drill rig mounted onto a pontoon boat owned and operated by Specialized Environmental Resources, Inc. as subcontracted through Eustis Engineering. We provided the soil technician to log the boreholes and retain the samples. Once the field/marine operations were completed, we selected samples to be subjected to soil mechanics laboratory tests in our in-house facilities. Testing performed included natural water content, total unit weight, and unconsolidated undrained triaxial compression shear. Additionally, Atterberg limits determinations were performed on selected samples.

Engineering analyses performed and evaluations made, based on the soil borings and laboratory tests, consisted of:

- site preparation recommendations regarding the demolition of the existing structures;
- sheetpile wall (PVC, vinyl, or steel) foundation recommendations for the Joe Aucoin West Weir, NE Unit Structure, and Belly Dam Weir;
- results of local and global slope stability analyses and respective factors of safety;
- flood control structure analyses and recommendations;
- deep foundation recommendations including allowable load capacity for treated ASTM D25 timber piles and pile group capacity and spacing considerations;
- settlement estimates due to structural loads of deep foundations; and
- deep foundation installation and testing recommendations for driven piles.

**PROJECT NO. 10**

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

**TEC Professional Services Questionnaire**

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

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

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

**EVALUATION CRITERIA**

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

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

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

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

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

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

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

**References:**

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

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

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

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

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

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

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

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

### ENGINEERING SERVICES

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

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

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

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

## Engineering Staffing

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

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

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

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

### Cone Penetration Testing Capabilities

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

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

### Dynamic Pile Testing Capabilities

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

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

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

### **Other Non-Destructive Testing Capabilities**

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

### **INSTRUMENTATION**

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

Eustis Engineering provides the following instrumentation services:

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

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

### **DRILLING/FIELD EXPLORATION**

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

### **Field Exploration Personnel**

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

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

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

### Field Exploration Equipment

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

### Other Specialized Soil Sampling Equipment

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

### **Drone Capabilities**

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

### **LABORATORY SERVICES**

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

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

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

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

### **Laboratory Staffing**

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

## Laboratory Quality Control

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

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

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

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

## **CONSTRUCTION MATERIALS TESTING**

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

### Staffing

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

### Services

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

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

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

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

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

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

**Signature:**   
**Title:** President

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

**TEC Professional Services Questionnaire**

**A. Project Name and Advertisement Resolution Number:**

Coastal Engineering Consulting Services As-Needed  
Resolution 144205

**B. Firm Name & Address:**

Bryant Hammett & Associates, LLC  
1104 Dealers Avenue  
Suite A  
Harahan, LA 70123



**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:**

Bryant O. Hammett, Jr. PE/PLS  
Owner/Manager  
504-733-8004  
bhammett@bha-engineers.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.**

Hugh 'Bud' McCurdy, III, PLS  
Professional Land Surveyor  
504-733-8004  
hmccurdy@bha-engineers.com

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

- |                                      |                             |                              |
|--------------------------------------|-----------------------------|------------------------------|
| <u>3</u> Administrative              | <u>1</u> Estimators         | ___ Specification Writers    |
| ___ Architects (Licensed)            | ___ Geologists              | ___ Structural Engineers     |
| ___ Chemical Engineers               | ___ Geotechnical Engineers  | ___ Graduate Engineers       |
| <u>1</u> Civil Engineers             | ___ Interior Designers      | <u>2</u> Project Managers    |
| <u>4</u> Construction Inspectors     | ___ Landscape Architects    | <u>2</u> Clerical            |
| ___ Ecologists                       | <u>6</u> Land Surveyor      | ___ Grant/Funding Specialist |
| ___ Electrical Engineers             | ___ Mechanical Engineers    | ___ Sanitary Engineers       |
| ___ Engineer Intern                  | ___ Environmental Engineers | <u>8</u> Other               |
| <u>3</u> Professional Land Surveyors |                             | <u>30</u> TOTAL              |

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

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

**TEC Professional Services Questionnaire**

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

1. NA

2.

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

YES  NO

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. No subcontractors for BHA		
2.		
3.		

**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:**

Hugh 'Bud' McCurdy, III, PLS  
Survey Manager

**Project Assignment:**

Mr. McCurdy will be the professional in charge of the project who is a registered professional land surveyor in Louisiana and has more than 50 years of surveying experience..

**Name of Firm with which associated:**

Bryant Hammett & Associates, LLC

**Years' experience with this Firm:**

6 years

**Education: Degree(s)/Year/Specialization:**

Non-degreed

**Active registration: Year first registered/discipline:**

1991/Professional Land Surveyor, LA

**Other experience and qualifications relevant to the proposed Project:**

Hugh 'Bud' McCurdy, III is a registered land surveyor in Louisiana with over 45 years' experience in land surveying, beginning his career as a rodman in 1973. He is involved in all aspects of boundary/property surveys for real estate transfer and the surveying required for engineering, rights-of-way acquisition, and construction projects, and is responsible for courthouse research and coordination of work. McCurdy has provided surveying services for oyster leases; pre- and post- dredging; construction projects, pipelines, accident sites, and boundary establishment. He recently oversaw the surveying for a Beneficial Use of Dredged Material project in Jefferson Parish, as well as the topographic and hydrographic surveying for the future construction of a flood wall in the Lower Barataria Basin.

Since 1978, Mr. McCurdy has worked on oyster leases for local fishermen and has exhaustively surveyed most all bays and bayous in Jefferson, Plaquemines and St. Bernard Parishes. In the late 1970's and early 1980's, he worked on pipelines and well locations in Venice, LA and in the Barataria Basin. Hydrographic surveys include pre-dredging and post-dredging, as well as dredge volume calculations.

He is responsible for supervision of all field crew activities, drafting, property descriptions, plats, and all surveying-related operations. Mr. McCurdy has extensive experience in all aspects of surveying, including but not limited to property boundary surveys for real estate transfer; subdivision and re-subdivision of properties; topographic and hydrographic/bathymetric survey for engineering and construction; and preparation of legal descriptions for attorneys. He is registered with the courts in Orleans, Jefferson, St. Tammany and Plaquemines Parishes.

## TEC Professional Services Questionnaire

### KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

<b>Name &amp; Title:</b>
Jeff Carey, PLS, CFM Professional Land Surveyor
<b>Project Assignment:</b>
Survey field manager; Certified Floodplain Manager
<b>Name of Firm with which associated:</b>
Bryant Hammett & Associates, LLC
<b>Years' experience with this Firm:</b>
12 years
<b>Education: Degree(s)/Year/Specialization:</b>
BS/2009/Disaster Management
<b>Active registration: Year first registered/discipline:</b>
2024/Professional Land Surveyor 2010/ASFPM Certified Floodplain Manager US-10-05305 2012/Contractor's License: Residential Construction 2012/FEMA Substantial Damage Estimator (SDE) 1.1 2010/EMI-273 Managing Floodplain Development through NFIP 2022/ATSSA Traffic Control Technician, Supervisor, and Flagger 2012/Certified Construction Inspector, National Stormwater Center
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Carey manages boundary, topographic, hydrographic and magnetometer surveys and all surveying activity required for engineering, rights-of-way and construction projects. He is involved in all aspects of land surveying projects, including legal descriptions and elevation certificates. Mr. Carey leads the surveying required the Jefferson Parish's Hazard Mitigation Grant Program through providing elevation data and plot plans.</p> <p>Mr. Carey has managed many hydrographic survey projects using RTK GPS and SonarMite Echosounders, and he is adept at magnetometer surveying. He is responsible for client liaison, directing field crews, supervising CADD operators, equipment calibration and maintenance, and communicating with field and office personnel. Mr. Carey was recently licensed as a Professional Land Surveyor.</p> <p>He has completed surveying on the following relevant surveys:</p> <hr style="width: 40%; margin-left: 0;"/> <p>Hydrographic/Magnetometer Survey, Jonathan Davis Consolidated Force Main, Jefferson Parish            BUDMAT Barataria Waterway Survey, Jefferson Parish            Long Distance Sediment Pipeline, Phase 2, Jefferson Parish            New River Weir Removal and Channel Improvements, Ascension Parish            MROV BUDMAT TP-10, Plaquemines Port            Bayou Eau Noire Vegetative Ridge and March Creation Project, Plaquemines Parish            Lower Lafitte Basin, Lafitte Tidal Protection Project, Jefferson Parish            Lower Jefferson Waterway Debris Removal, Jefferson Parish            Goose Bayou Hydrographic Survey, Jefferson Parish            Bayou Conway/Panama Canal Channel Improvements, Ascension Parish            Hurricane Storm Damage Risk Reduction Levee Lifts Prior to Armoring, Plaquemines Parish            Outfall Canal Surveys, New Orleans, LA            MRL Encroachment Surveys, Jefferson Parish            Lake Borgne Surge Barrier Levee Floodwall Surveys, Orleans Parish</p>

## TEC Professional Services Questionnaire

### KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

**Name & Title:**

Paul Schiele  
CADD Draftsman

**Project Assignment:**

Provide computer-aided design and drafting.

**Name of Firm with which associated:**

Bryant Hammett & Associates, LLC

**Years' experience with this Firm:**

16 years

**Education: Degree(s)/Year/Specialization:**

B.Arch/2008/Architecture

**Active registration: Year first registered/discipline:**

NA

**Other experience and qualifications relevant to the proposed Project:**

Paul Shiele provides CADD services for all survey projects, including: drainage projects; state highway, road, and bridge projects; levee surveys; hydrographic and topographic surveys; magnetometer/pipeline surveys; rights-of-way maps; accident investigation layouts; crime scene layouts; and survey plats.

Schiele is trained in use of AutoCAD and Carlson computer drafting software. Mr. Schiele has served as a civil draftsman and CADD technician at BHA since graduating college in 2008. He prepares topographic drawings and maps used in major construction projects such as highways, buildings, bridges, pipelines, flood control structures, roadways, and water and sewerage systems.

He provides right-of-way plats, topographic drawings (including horizontal and vertical control) and design services. Has been involved in the computer drafting of several subdivisions, levee analysis, sanitary sewer systems, and street and drainage projects.

Recent Projects:

BUDMAT Barataria Waterway Survey  
 Encroachment Surveys along MRL  
 OLD IHNC Surge Barrier Visitor and Learning Center  
 Bayou Conway/Panama Canal Channel Improvements  
 Jesuit Bend Flood Protection Improvements  
 PPHTD: MROV BUDMAT TP-10  
 Mississippi Long Distance Sediment Pipeline Phase 2 Survey (Barataria)  
 Hurricane and Storm Damage Risk Reduction Systems, NOV-NFL-05: La Reussite to Myrtle Grove  
 South Louisiana Submerged Road Program-FEMA Eligible Repairs  
 Hurricane Storm Damage Risk Reduction Levee Lifts Prior to Armoring  
 Lafitte Tidal Protection Levee, Goose Bayou/The Penn Levee Basin  
 Lower Jefferson Waterway Debris Removal  
 Crown Point Drainage Improvements

## TEC Professional Services Questionnaire

### KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

**Name & Title:**

Bryant O. Hammett, Jr, PE/PLS  
Owner/Manager

**Project Assignment:**

Hammett will serve as the principal and professional in charge of the project and will be the main point of contact

**Name of Firm with which associated:**

Bryant Hammett & Associates, LLC

**Years' experience with this Firm:**

40 years

**Education: Degree(s)/Year/Specialization:**

BSCE/1978/Civil Engineering

**Active registration: Year first registered/discipline:**

1983/Civil Engineer/LA  
1985/Professional Land Surveyor/LA  
1996/ Environmental Engineer/LA  
1985/Civil Engineer/MS

**Other experience and qualifications relevant to the proposed Project:**

Bryant Hammett, Jr., PE/PLS, has been the sole proprietor of Bryant Hammett & Associates, L.L.C., since 1984. He leads a team of highly qualified, experienced, and licensed engineers, surveyors, technicians, cost estimators, GIS managers, certified floodplain managers, administrators, disaster recovery subject matter experts, inspectors, CADD operators and clerical support. Hammett has over 40 years of experience in the land surveying and engineering fields.

Hammett has been the surveyor and engineer of record for numerous types of projects including: wastewater collection and treatment; water treatment, transmission and distribution; natural gas distribution and transmission; electrical transmission; oil transmission; off-system bridges; levee systems; construction servitudes and roadway and drainage.

As infrastructure manager for the Louisiana Office of Community Development's Disaster Recovery Unit, Hammett performed and oversaw professional civil, structural and/or transportation engineering work related to the planning, design, development, construction and maintenance of projects funded under the Louisiana Community Development Block Grant/Disaster Recovery Programs. Such projects included capital improvements, storm water and drainage systems, wastewater systems, potable water systems, natural gas systems, fire protection systems, roads, bridges and utility systems. He managed complex engineering programs; provided professional assistance and technical advice to state and local officials; coordinated project development and implementation with contractors, other departments and other agencies; administered professional services contracts; evaluated requests for changes and/or additional work; directed the work of subordinate professional staff; and performed related work as required. Hammett oversaw the development of programs to rebuild schools damaged by Hurricane Katrina ineligible for FEMA assistance. He oversaw disbursements of more than \$178 million for infrastructure projects in the state related to Hurricanes Katrina and Rita.

## TEC Professional Services Questionnaire

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

### PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Barataria Waterway Beneficial Use of Dredged Material (BUDMAT)</p> <p>Jefferson Parish, LA</p> <p>Jefferson Parish Ecosystem and Coastal Management Department</p> <p>Michelle Gonzales  <a href="mailto:Mgonzales@jeffparish.com">Mgonzales@jeffparish.com</a></p>	<p>BHA performed a topographic and bathymetric survey of 181 acres of marshland of the Barataria Waterway in support of a BUDMAT project to aid in the analysis and evaluation of selected project alternatives.</p> <p>Elevations in the four-marsh creation and nourishment areas were be taken on a 200-foot grid. Elevation information was referenced to North American Datum of 1983 (NAD83) and North American Vertical Datum of 1988 (NAVD88) with northings and easting coordinates shown as State Plane Coordinates. Pipeline information from USACE data was included in the mapping exercise.</p> <p>For approximately 14 miles of water way, BHA collected water depth information to aid in the determination of the best route for barge access to the proposed dredging areas. In any water segment where +8' of water exists, water depths were collected at approximate 2000' intervals; in other water depths, data was collected at approximate 500' intervals, depending on depth and professional judgement. As field evidence was collected, BHA made adaptations as necessary to provide information requested. BHA used a SonarMite Singlebeam Echosounder for this portion.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018 (A)	Unknown	\$46,000

## TEC Professional Services Questionnaire

### PROJECT NO. 2

PROJECT NO. 2		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Bayou Eau Noire Vegetative Ridge Restoration and Marsh Creation</p> <p>Plaquemines Parish, LA</p> <p>Plaquemines Parish Government Ken Dugas <a href="mailto:kdugas@ppgov.net">kdugas@ppgov.net</a></p>	<p>BHA performed a topographic, bathymetric, and magnetometer survey in the marsh area between Port Sulphur and Empire in southern Plaquemines Parish, which encompasses approximately 26,400 linear feet of ridge restoration and 505 acres of marsh creation.</p> <p>Cross sections were surveyed across the alignment of the proposed ridge Reaches A and B. Sections were taken at 200-foot intervals. The width is approximately 150 feet on the Mississippi River side and of sufficient width to cover the proposed pipeline access corridor on the other.</p> <p>Elevations in the 4 marsh creation and nourishment areas were taken on a 100-foot grid, bottom elevations were taken in open-water areas, approximately 2,200 locations for which data was collected.</p> <p>The shoreline surrounding the entire marsh creation and nourishment areas was located, providing X, Y, and Z coordinates.</p> <p>To obtain approximate locations of pipelines and metallic structures and that may hinder construction, the magnetometer survey covered the entire length along the alignment of both proposed ridges as well as the marsh creation and nourishment areas</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2020 (A)	unknown	\$145,000

## TEC Professional Services Questionnaire

<b>PROJECT NO. 3</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility</b>	
<p>Lower Lafitte Basin (Orange Street) Basin, Lafitte Tidal Protection Project</p> <p>Jefferson Parish, LA</p> <p>Lafitte Area Independent Levee District Timothy Kerner <a href="mailto:jeanlafittetownhall@yahoo.com">jeanlafittetownhall@yahoo.com</a></p>	<p>BHA provided the necessary surveying for the design of the proposed Tidal Protection Levee and Floodwall that encompasses approximately 300 acres of land in Jefferson Parish. The project includes installation of approximately 31,500 cubic yards of levee fill to elevation 8.5 MSL along several sections of the existing earthen levee along the northern, eastern, and southern perimeter.</p> <p>BHA provided topographic and hydrographic surveying, including acquiring adequate bathymetry to define the bottoms of the borrow canals on both the protected side and flood side of the existing earthen levee and take readings across the bottom of the main channel sections, as well as top of bank locations. All linear features of the levee system (bottom of canal, top of bank, toe of levee, top of levee, etc.) were acquired as continuous break lines and existing ground spot elevations adequate to create a reasonable continuous ground surface model.</p>	
<b>Completion Date (Actual or estimated)</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2018 (A)	unknown	\$165,000
<b>PROJECT NO. 4</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Mississippi Long Distance Sediment Pipeline Phase 2 (Barataria) and Alternate Route</p> <p>Jefferson Parish, LA</p> <p>Jefferson Parish Ecosystem and Coastal Management Department Michelle Gonzales <a href="mailto:Mgonzales@jeffparish.com">Mgonzales@jeffparish.com</a></p>	<p>BHA provided surveying services for the LDSP project in Jefferson Parish, which aims to construct an efficient sediment delivery pipeline system from a renewable resource in the Mississippi River to strategic locations in Barataria Basin by facilitating large-scale marsh creation and providing immediate restoration to natural landscape features.</p> <p>BHA provided cross section surveys, hydrographic surveys, and topographic surveys for approximately 12.5 miles of marsh land and shore line. Topographic features included structures that may impact the location of the pipeline such as fishing camps, bulkheads, piers, spoil banks, ridge lines, large trees, etc. Any pipeline markers encountered in the survey area were collected in the field.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2022 (A)	unknown	\$250,000

## TEC Professional Services Questionnaire

### PROJECT NO. 5

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Lafitte Tidal Protection-Goose Bayou Basin, Frontal Levee, Bayou Barataria</p> <p>Jefferson Parish, LA</p> <p>Lafitte Independent Area Levee District</p> <p>Gene Gillen, P.E. APTIM Program Manager (504) 832-4881</p>	<p>Goose Bayou Basin is located on the eastern bank of Bayou Barataria in Jefferson Parish, LA. The West Jefferson Levee District constructed sections of earthen levee along the eastern perimeter of the project area at the west shore of The Penn, which, in conjunction with the existing ridge on the east bank of Bayou Barataria, provided limited protection.</p> <p>Subsequently, steel sheet pile was driven into the crown of the Penn Levee to increase the tidal flood protection in that reach of the project to +8.0 feet. The project area is bounded on the north by Goose Bayou, south by Reservoir (Pump) Canal, east by the western shoreline of The Penn, and west by the eastern bank of Bayou Barataria (Barataria Bay Waterway).</p> <p>As part of the larger Lafitte-area 100-year Flood Protection Ring Levee System, BHA has been providing surveying services since 2016 for this project, including:</p> <ul style="list-style-type: none"> <li>• Establishing baselines</li> <li>• Topographic surveys on either side of existing banks</li> <li>• Locating property lines, existing servitudes</li> <li>• Locating all utilities</li> <li>• Locating all structures including roads/bridges</li> </ul> <p>In 2021, BHA provided a topographic survey of the Western half of the new bridge on Highway 45 that crosses Goose Bayou. The limits of the survey The survey included the area between the centerline of Highway 45 to the face of the houses on the West side of the highway.</p> <p>In 2022, BHA provided topographic and utility surveying for a New Wall Alignment extending from right-of-way to right-of-way along Highway 45. The survey also included the area between Highway 45 and Bayou Barataria. BHA also conducted the necessary research and field work to identify the DOTD right-of-way along Highway 45.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2022 (A)	unknown	\$147,000

## TEC Professional Services Questionnaire

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>MROV BUDMAT TP-10</p> <p>Plaquemines Parish, LA</p> <p>Plaquemines Port Harbor &amp; Terminal District</p> <p>David St. Marie  <a href="mailto:dstmarie@coastalengsolutions.net">dstmarie@coastalengsolutions.net</a></p>	<p>Bryant Hammett &amp; Associates, LLC (BHA) provided a topographic and bathymetric survey in the marsh area of the Mississippi River Outlet in Venice, Louisiana in support of the Beneficial Use of Dredged Material Program (BUDMAT) to aid in the analysis and evaluation of selected project alternatives. The four survey areas included 226 acres of marshland, detailed as TP-10, along with three route surveys to help determine the best route for the dredge pipe access.</p> <p>Elevations in the TP-10 marsh creation and nourishment were taken on a 200-foot grid. Adequate elevation top bank shots were collected to identify the elevation of the adjacent marsh land. Elevations were also taken at 50-ft intervals across the marshland between Tante Phine Pass and the open bay to the east of TP-10.</p> <p>Bathymetric survey: BHA collected sufficient water depth information to aid in the determination of the best route for dredge pipe access along the Southernmost route. Elevations were collected at 50-foot intervals and at any abrupt changes in elevation along the route.</p> <p>Any pipeline markers showing a potential pipeline crossing the survey route were identified with a Northing and Easting coordinate and noted on the drawing. BHA used a SonarMite Singlebeam Echosounder compatible with GPS mounted to a flat-bottom boat for portions of the survey. When water depths were not conducive to use the Sonarmite, BHA collected rod soundings along the route to obtain elevations.</p> <p>Magnetometer Survey: To obtain locations of pipelines and metallic structures, a magnetometer survey was conducted within the TP-10 site. The magnetometer survey covered the entire TP-10 area from Tante Phine Pass to the Open Bay to the East and identified all existing pipelines and wells within the site. A G882 magnetometer was used to locate these approximate locations. Once located, BHA probed the pipeline to obtain elevations on the top of the pipe. BHA contacted various pipeline owners to investigate information relative to pipeline material and sizes.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2020 (A)	Unknown	\$85,000

## TEC Professional Services Questionnaire

### PROJECT NO. 7

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
Encroachment Surveys along Mississippi River Levee  Jefferson Parish, LA  Southeast Louisiana Flood Protection Authority-East Chris Humphreys <a href="mailto:chumphreys@floodauthority.org">chumphreys@floodauthority.org</a>	BHA performed the necessary surveying work to confirm encroachments on the Mississippi River Levee System in Jefferson Parish (East Bank) and to determine property ownership and property lines for specific features. BHA performed complete boundary surveys, including: <ul style="list-style-type: none"> <li>Courthouse research;</li> <li>Recovering or establishing existing USACE MRL baseline;</li> <li>Calculating existing rights-of-way; Performing boundary surveys;</li> <li>Locating levee toe to established property lines</li> <li>Locating topography within right-of-way;</li> <li>Calculating boundary lines.</li> </ul> BHA prepared individual plats for each property detailing property boundaries, encroachment items and their relationship to the subject property and existing MRL baseline.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2018 (A)	Unknown	\$50,400

## TEC Professional Services Questionnaire

<b>PROJECT NO. 8</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Lower Jefferson Waterway Debris Removal</p> <p>Jefferson Parish, LA</p> <p>Jefferson Parish Public Works 1221 Elmwood Park Blvd. Suite 904 Jefferson, LA 70123</p> <p>504-736-6783</p>	<p>BHA provided a hydrographic and sonar survey of 8 canals in Lafitte, LA along Arthur Lane, Jenic Lane, Denice LeBlanc Lane, Kaylee Lane, Fran Lane, Joan Marie Drive, Deborah Ann Drive, and Lisa Ann Drive in support of a debris removal project after Hurricane Ida.</p> <p>A hydrographic survey was performed within the limits utilizing High Resolution Side Scan Sonar technology. The water bottoms were surveyed and elevations collected to help identify foreign objects and any potential impacts to marine navigation. Cross sections on each end of the canals and every 50-feet were collected.</p> <p>A drone survey to produce current aerial imagery of the survey area.</p> <p>BHA collected a water surface elevation during each day of the field survey. Water surface data was collected in the morning and afternoon to help determine depths at low tide.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2022 (A)	Unknown	\$36,480

## TEC Professional Services Questionnaire

### PROJECT NO. 9

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Surveying/Mapping Goose Bayou Hydrographic Survey for Vehicle Recovery</p> <p>Jefferson Parish, LA</p> <p>John Sullivan DRC Emergency Services <a href="mailto:jsullivan@drcusa.com">jsullivan@drcusa.com</a></p>	<p>BHA performed a hydrographic survey within Goose Bayou to locate sunken vehicles and debris after Hurricane Ida. BHA utilized High Resolution Side Scan Sonar technology. A Trittech Starfish 990F unit was used to perform the survey of the seafloor within the Goose Bayou limits to help identify foreign objects and any potential impacts to marine navigation.</p> <p>BHA utilized HYPACK software to process the data from the Side Scan Sonar. Any anomalies found on the bottom were identified with imagery from the sonar. The locations of all anomalies were staked in the field with a buoy marking each location.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021 (A)	unknown	\$15,300

### PROJECT NO. 10

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Lake Borgne Surge Barrier Levee Floodwall Survey</p> <p>Orleans Parish, LA</p> <p>Orleans Levee District and Lake Borgne Basin Levee District Chris Humphreys <a href="mailto:chumphreys@floodauthority.org">chumphreys@floodauthority.org</a></p>	<p>Over the past several years, Orleans Levee District conducted RTK surveys on most of the earthen levees. In 2020, OLD required surveying of the hard structures (floodwalls, surge barriers, gates, etc). BHA performed a survey of the Lake Borgne Surge Barrier Settlement Markers in 2020. The Flood Protection Authority – East identified 50 settlement markers that required surveying, along with 3 monoliths. BHA is currently performing this survey on 193 settlement markers on the Surge Barrier Wall across the Intercoastal Canal and the MRGO Canal. Data will be compared to prior data in order to determine the amount of subsidence.</p> <p>A main control point, which will be used as the base station, was tied into the NGS monument "Waste Well 2". LSU's Geomatics Center has converted the Waste Well 2 NGS monument to a CORS site, so it could not be occupied as a base station for the survey.</p> <p>BHA collected data on the 50 and then 193 settlement markers identified by the Flood Protection Authority and 3 monoliths identified as SL1, SL2, and SL3. Northings, Eastings, and Elevations were collected at each marker and monolith to help determine if any settlement has occurred since construction.</p> <p>BHA will report three sets of elevations for each settlement marker. One set of elevations will be based on the most up to date OPUS elevation and the second set of elevations will be based on the 2004.65 elevation published from the Waste Well 2 control at the time of construction. Within each set of elevations, three elevations were recorded and compared: data from 2013, 2020, and 2024.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2024 (E)	Unknown	\$52,280

## TEC Professional Services Questionnaire

**M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary. NOT APPLICABLE**

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. NA		

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

**Bryant Hammett & Associates, LLC (BHA)** is a Louisiana-based Limited Liability Corporation specializing in land surveying, civil engineering, and disaster response. The firm which provides professional services for various governmental and private concerns. BHA was first organized in Concordia Parish in August 1984, starting as a small 4-member firm providing civil engineering and land surveying services to surrounding municipalities. Since then, the firm has grown to operate offices in Plaquemines, Jefferson, East Baton Rouge, and Concordia parishes. Work to perform the required services outlined in the scope of work will be headquartered out of the Harahan, LA office location.

BHA maintains a staff of highly qualified, experienced and licensed engineers, surveyors, technicians, cost estimators, GIS managers, certified floodplain managers, administrators, disaster recovery subject matter experts, inspectors, CADD operators and clerical support. Our central locations allow us to work easily throughout Louisiana and in neighboring states.

BHA is a **HUBZone** business certified by the U.S. Small Business Administration and is certified under the Small Entrepreneurship Program as a **Hudson Initiative Certified Firm** by the Louisiana Department of Economic Development.

### SURVEYING

BHA has been providing land surveying services in Louisiana for 35 years. BHA surveyors are registered in Louisiana and each have over 40 years of professional experience in the field. BHA offers a wide range of surveying services:

- boundary and control surveys •ALTA surveys• hydrographic surveys •topographic surveys •right-of-way determination •control for photogrammetric surveys and aerial photography •establishing benchmarks •accident site surveys •wetlands delineation •construction surveys/construction layout •utility layout •pipeline surveys
- elevation certificates •magnetometer surveys

**DRAFTING:** Our CADD technicians have over 30 years of combined experience in producing 3D planimetric drawings, topographic and contour maps, right-of-way maps, boundary plats, cross section diagrams and field data points; BHA utilizes AutoCAD, Intellicad, and Microstation, drafting software to meet the deliverable format required by any client.

**GPS TECHNOLOGY:** BHA's association and membership with the LSU's Center for GeoInformatics (C4G) GULFNet system allows us to provide our services efficiently, accurately and in a relatively short time span. LSU's GULFNet is a Real-Time Network (RTN) that presently consists of over 70 Continuously Operating Reference Stations (CORS), 26 of which are National CORS providing the data that ties Louisiana into the National Spatial Reference System (NSRS) defined and managed by the National Geodetic Survey (NGS). The NSRS is a consistent national coordinate system that specifies latitude, longitude, height, scale, gravity, and orientation throughout the Nation, as well as how these values change with time. The network extends from east Texas across to Alabama and up into northern Louisiana. BHA also utilizes TopNET+ by TopCon, which is a

## TEC Professional Services Questionnaire

duel-constellation network solution providing GPS+GLONASS satellite tracking. BHA uses the newest data collectors and most up-to-date software which includes on-board surveying calculations, engineering calculation abilities, and will work with a total system, robotic total station, or a GPS-systems.

**SONAR SURVEYING:** BHA utilizes a Single Beam Echo Sounder (SBES) when applicable for hydrographic surveying, which collects accurate water depth and bottom contour information in shallow waters such as lakes, small rivers, channels, canals, harbors, and ditches. The SBES produces an echogram of the water's floor at a point directly below the transducer. This identifies the seabed features and determines whether the echo sounder has picked up the actual water bed or another feature such as debris. The SBES that BHA uses is comprised of a dual frequency transducer. The two frequencies are made up of a high frequency and low (typically 200kHz & 30kHz). The high frequency will generate a first return on the signal and depict the seabed, sea grass, rock etc. The low frequency has some penetrating properties, for example in areas of silt, it can penetrate the material to the harder layers below. Multi-Beam Sonar is be used for collecting numerous soundings across a wide swath of seabed, more appropriately used for major rivers or in the Gulf of Mexico. BHA also utilizes multi-beam side scan sonar equipment as the project requires.

**MAGNETOMETER SURVEYING:** BHA is adept in the use of magnetometers for the detection and mapping of all sizes of ferrous objects including pipelines, debris, and any other magnetic objects. Magnetometer data is acquired through passively measuring the local variations in the earth's magnetic field. BHA utilizes the G-882 Marine Magnetometer, which is particularly well suited for the detection and mapping of all sizes of ferrous objects. This includes anchors, chains, cables, pipelines, ballast stone and other scattered debris, munitions of all sizes (UXO), aircraft, engines and any other object with magnetic expression. The G-882 magnetometer's digital output can be recorded with any serial data logger to log, display, and print GPS positioned measurement results.

In addition to surveying, BHA offers the following professional services:

- Civil Engineering
- Construction Management and Resident Inspection
- Cost Estimating and Closeout Services
- Construction Supervision for HMGP
- Disaster Management & Recovery
- CBGC Expertise

### **LOCATIONS**

1104 Dealers Ave., Suite A • Harahan, LA • 70123  
830 North Street, Suite B • Baton Rouge, LA • 70802  
6885 Highway 84 West • Ferriday, LA • 71334  
8649 Hwy 23 • Belle Chasse, LA • 70037

[www.bha-engineers.com](http://www.bha-engineers.com)

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

Signature:  \_\_\_\_\_ Print Name: Bryant O. Hammett, Jr.

Title: owner/manager Date: 07/03/2023