

STATEMENT OF QUALIFICATIONS
FOR
SOQ 24-020
COASTAL ENGINEERING CONSULTING
SERVICES AS NEEDED PARISH WIDE
FOR
JEFFERSON PARISH



JULY 16, 2024

SUBMITTED BY:
HORIZON ENGINEERING, LLC



1013 N. CAUSEWAY BLVD., SUITE 201
METAIRIE, LOUISIANA 70001

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

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

B. Firm Name & Address:

Horizon Engineering, LLC
1013 N. Causeway Blvd., Suite 201
Metairie, LA 70001

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:

John Karlin, SE, PE
Co-Founder and Principal
jkarlin@horizonengineeringllc.com
(504) 270-1830

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.

Ben Bartlett, PE, PTOE
bbartlett@horizonengineeringllc.com
(504) 270-1830

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

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

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

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

TEC Professional Services Questionnaire

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

1. N/A

2. N/A

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

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. Eustis Engineering L.L.C. 3011 28 th Street Metairie, LA 70002	Geotechnical Engineering	No*
2. Basin LLC 2811 B Toulouse Street New Orleans, LA 70119	Surveying	No
3. N/A	N/A	N/A

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

1

*Horizon has not worked with Eustis yet as a firm; however, Horizon's principals worked with Eustis on numerous projects while at their previous employer.

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:

Ben Bartlett, PE, PTOE
Co-Founder and Principal

Project Assignment:

Professional-in-Charge, Project Manager, and Civil Engineer

Name of Firm with which associated:

Horizon Engineering, LLC

Years' experience with this Firm:

<1 year (15 years with other firms)

Education: Degree(s)/Year/Specialization:

Master of Civil Engineering, 2010, Civil Engineering
Bachelor of Science, 2008, Civil/Environmental Engineering

Active registration: Year first registered/discipline:

Louisiana PE, License No. 38980, 2014, Civil Engineer
PTOE, License No. 4020, 2016, Professional Traffic Operations Engineer

Other experience and qualifications relevant to the proposed Project:

Work Zone Safety / Temporary Traffic Control Certifications

ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification

Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B)

Owner: SLFPA-E. **Scope:** Fortification of the Lake Pontchartrain seawall and road, drainage, and lighting improvements (5.2 miles long). **Cost:** ≈\$50,000,000. **Role:** Civil Engineer and Construction Engineer. Designed erosion control pavement geometric layout, grading, and drainage pipes, structures, and outfalls; assisted with preparation of permit drawings for SLFPA-E, CPRA, and USACE; performed inspections; reviewed RFIs and submittals; and assisted with review of pay applications and preparation of change orders and project closeout documentation.

Basis of Design Memorandum for the Seawall Erosion Control Paving Project (Reaches 1A, 1C, 2A, 2C, 2D, 3A-3C and 5B)

Owner: SLFPA-E. **Scope:** Conceptual report analyzing multiple alternatives for erosion control measures for the Lake Pontchartrain seawall and roadway, drainage, and lighting improvements (3.8 miles long). **Role:** Civil Engineer. Prepared conceptual report summarizing conceptual roadway, utility and drainage design; erosion control measures (pavement and turf reinforcement); and pedestrian crossings and striping. Prepared conceptual plans and typical sections for the report and public meetings and opinions of probable construction cost for multiple alternatives per phase.

Mandeville Shoreline Protection Study

Owner: City of Mandeville. **Scope:** Modeling and analysis of existing Mandeville drainage system and preparation of flood mitigation recommendations. **Role:** Civil Engineer. Modeled and analyzed existing drainage system considering effects of various Lake Pontchartrain water surface elevations; evaluated potential improvements, such as flood protection structures and pump stations; and prepared report summarizing flooding mitigation recommendations.

TEC Professional Services Questionnaire

Ben Bartlett, PE, PTOE (Continued)

Seabrook Boat Launch Rehabilitation

Owner: Lakefront Management Authority. **Scope:** Replacement of Seabrook Boat Launch along Lake Pontchartrain at IHNC with new boat ramps and floating access piers, rehabilitation of existing parking lot, and other miscellaneous repairs and improvements. **Cost:** ≈\$2,100,000 (est.). **Role:** Lead Civil Engineer. Designed grading and parking lot modifications. Prepared opinions of probable construction cost.

Lake Pontchartrain Causeway Bridge Floodwall Utility Relocations

Owner: Jefferson Parish. **Scope:** Relocation of utilities (drainage, water, sewer, electric, and telecommunications) to facilitate construction of ≈\$43,000,000 floodwall at base of Causeway Bridge at Lake Pontchartrain. **Role:** Civil Engineer. Designed utility relocations to accommodate floodwall construction. Performed inspections; reviewed RFIs and submittals; and prepared change orders and project closeout documentation.

Geisenheimer Canal Improvements (Loumor Outfall Ditch to Hoey's Canal)

Owner: Jefferson Parish. **Scope:** Design of box culvert connecting Loumor Outfall Ditch and Woodvine Ditch to Hoey's Canal (12'x8' precast concrete boxes and 3 cast-in-place concrete junction boxes). **Cost:** ≈\$13,000,000 (est.). **Role:** Lead Civil Engineer. Led hydrologic and hydraulic modeling, analysis, and design. Reviewed Parish-wide drainage master plan and models to determine applicable drainage basin and affected drainage systems; designed geometry of junction box at Hoey's Canal to minimize turbulence; designed drainage pipes, drainage structures, and miscellaneous site features; and prepared opinions of probable construction cost.

St. Charles Parish Drainage System and Ordinances Review

Owner: St. Charles Parish. **Scope:** Evaluation of St. Charles Parish's drainage system and drainage ordinances to determine the impact of various modifications being considered by the Parish Council. **Role:** Civil Engineer. Reviewed the Parish's existing drainage system, the Parish's drainage ordinances, a Parish Attorney's Opinion on drainage, an Attorney General's Opinion on drainage, as well as drainage ordinances and requirements for surrounding areas. Performed hydrologic and hydraulic modeling to illustrate the impacts that would result from proposed modifications to the Parish's drainage ordinances. Evaluated potential consequences associated with modifications to current drainage ordinances. Provided recommendations for modifications to the Parish's drainage ordinances.

W. Esplanade Bridges @ Duncan Canal

Owner: LaDOTD. **Scope:** Replacement of bridges with reinforced concrete box culverts (two 38'x13' cells and two 14'x8' cells). **Cost:** ≈\$14,000,000. **Role:** Lead Civil Engineer. Led hydrologic and hydraulic modeling (updated Jefferson Parish's East Bank drainage model), analysis, and design. Designed geometry of junction between Duncan Canal and Canal No. 2 to minimize turbulence and obtain a "No Rise" certificate; designed apron slab and wingwall geometry and drainage pipe connections; prepared opinions of probable construction cost; reviewed RFIs and submittals; and performed periodic site visits to assist with site specific challenges.

Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)

Owner: Jefferson Parish. **Scope:** Widening of existing 4-lane roadway and area-wide drainage improvements (1.0 miles of roadway and drainage). **Cost:** ≈\$19,000,000 (est.). **Role:** Project Manager and Lead Civil Engineer. Led roadway design, hydrologic and hydraulic design, traffic signal design, and preparation of plans, specifications, and opinion of probable construction cost. Designed 15-inch to 72-inch RCP drainage system, tie-ins to surrounding drainage system, asphalt pavement, concrete curb and gutter, pavement markings, sequence of construction, and temporary traffic control plan while accounting for site-related challenges, such as significant traffic demands, limited right-of-way, congestion of existing drainage and utilities, and the need to sequence construction to minimize disruptions to traffic.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brett Liuzza, PE Co-Founder and Principal
Project Assignment:
Project Manager and Civil Engineer
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (16 years with other firms)
Education: Degree(s)/Year/Specialization:
Bachelor of Science, 2008, Civil Engineering Graduate level coursework in Coastal Engineering
Active registration: Year first registered/discipline:
Louisiana PE, License No. 37753, 2013, Civil Engineer
Other experience and qualifications relevant to the proposed Project:
<p>Work Zone Safety / Temporary Traffic Control Certifications ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification</p> <p>Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B) Owner: SLFPA-E. Scope: Fortification of the Lake Pontchartrain seawall and roadway, drainage, and lighting improvements (5.2 miles long). Cost: ≈\$50,000,000. Role: Project Manager and Lead Civil Engineer. Led hydrologic and hydraulic modeling, analysis, and design; road design; and preparation of plans, specifications, and opinions of probable construction cost. Performed hydrologic and hydraulic modeling, analysis, and design; designed erosion control pavement geometric layout, tree preservation wall geometry, site grading, drainage pipes, drainage structures, drainage outfalls, and miscellaneous features; coordinated with USACE and CPRA; and prepared permit drawings for SLFPA-E, CPRA, and USACE. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.</p> <p>Basis of Design Memorandum for the Seawall Erosion Control Paving Project (Reaches 1A, 1C, 2A, 2C, 2D, 3A-3C and 5B) Owner: SLFPA-E. Scope: Conceptual report analyzing multiple alternatives for erosion control measures for the Lake Pontchartrain seawall and roadway, drainage, and lighting improvements (3.8 miles long). Role: Project Manager and Lead Civil Engineer. Prepared conceptual report summarizing conceptual roadway, utility and drainage design; erosion control measures (pavement and turf reinforcement); and pedestrian crossings and striping. Prepared conceptual plans and typical sections for the report and public meetings and opinions of probable construction cost for multiple alternatives per phase.</p> <p>Hurricane Protection Levee Utility Crossings Owner: Orleans Levee District Non-Flood Protection Asset Management Authority (OLD-NFPAMA). Scope: Installation of electrical conduit, water pipe, and sewer force main over Lake Pontchartrain levee for future use by SLFPA-E. Role: Construction Engineer. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.</p>

TEC Professional Services Questionnaire

Brett Liuzza, PE (Continued)

Independence Park Drainage Pump Station Study

Owner: Jefferson Parish. **Scope:** Feasibility study and conceptual design of drainage pump station and associated intakes, force mains, pipes, structures, and outfalls. **Cost:** ≈\$15,000,000 (est.). **Role:** Project Manager and Lead Civil Engineer. Led hydrologic and hydraulic modeling, analysis, and design. Reviewed Parish-wide drainage master plan and models to determine applicable drainage basin and affected drainage systems; performed preliminary hydrologic and hydraulic modeling and analysis; determined preliminary pump, wet well, intake, force main, and pipe sizes; prepared preliminary layouts of drainage intakes, force mains, pipes, structures, and outfalls; prepared opinions of probable construction cost; evaluated feasibility of multiple conceptual designs; and prepared report summarizing analyses and recommendations.

Chevron North Park

Owner: Private. **Scope:** Construction of site drainage features (surface and subsurface drainage, detention ponds, weirs, etc.). **Role:** Civil Engineer. Performed hydrologic and hydraulic modeling, analysis, and design. Designed site grading, drainage pipes and structures, detention ponds, weirs, utility connections, and miscellaneous site features in accordance with LaDOTD and St. Tammany Parish drainage ordinances.

East Baton Rouge Parish School System Site Development

Owner: East Baton Rouge Parish. **Scope:** Design and construction of multiple schools throughout East Baton Rouge Parish. **Role:** Civil Engineer. Designed site grading, drainage pipes and structures, utility connections, and miscellaneous site features. Prepared Stormwater Management Plans, plans, specifications, and opinions of probable construction cost. Prepared permit applications and supporting documents and performed inspections.

Livingston Parish Planning Commission Drainage Reviews

Owner: Livingston Parish. **Scope:** Review of preliminary and final plats and drainage impact studies for Livingston Parish Planning Commission. **Role:** Civil Engineer. Reviewed site plans and drainage impact studies for commercial sites and residential subdivisions.

St. Charles Parish Library – Paradis Branch

Owner: St. Charles Parish. **Scope:** Site development, including drainage, sewer, and water lines and parking, driveways, curbs, sidewalks, and handicap ramps. **Role:** Civil Engineer. Performed drainage analysis and design and utility design. Designed parking lots and driveway entrances, sidewalk geometric layout, concrete pavement, concrete curb and gutter, 15" to 18" RCP, and sewer and water mains, valves, fittings, and offsets. Prepared plans, specifications, and opinion of probable construction cost. Involved in construction engineering and inspection. Managed inspector; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

Laplace Elementary School

Owner: St. John the Baptist Parish. **Scope:** Site development, including drainage, sewer, and water lines; curbs, driveways, and parking; and sidewalks and handicap ramps. **Role:** Civil Engineer. Performed drainage analysis and design and utility design. Designed parking lots and driveway entrances, sidewalk geometric layout, concrete pavement, concrete curb and gutter, 15" to 24" RCP, and sewer and water mains, valves, fittings, and offsets. Prepared plans, specifications, and opinion of probable construction cost. Involved in construction engineering and inspection. Managed inspector; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John Karlin, SE, PE Co-Founder and Principal
Project Assignment:
Project Manager and Structural Engineer
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (7 years with other firms)
Education: Degree(s)/Year/Specialization:
Master of Science, 2017, Civil (Structural) Engineering Bachelor of Science, 2016, Civil Engineering
Active registration: Year first registered/discipline:
Louisiana PE, License No. 44795, 2020, Civil and Structural Engineer Illinois SE, License No. 081-008511, 2020, Structural Engineer
Other experience and qualifications relevant to the proposed Project:
<p>Work Zone Safety / Temporary Traffic Control Certifications ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; LaDOTD Traffic Engineering Process and Report (TEPR) Certification</p> <p>Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B) Owner: SLFPA-E. Scope: Fortification of the Lake Pontchartrain seawall and road, drainage, and lighting improvements (5.2 miles long). Cost: ~\$50,000,000. Role: Structural Engineer and Construction Engineer. Designed pile and sheet piling layouts, grade beams, tree preservation walls, slabs, expansion joints, retaining walls, drainage outfalls, sheet pile pipe penetrations, and light foundations; assisted with preparation of permit drawings for SLFPA-E, CPRA, and USACE for construction in proximity to existing Bayou St. John floodwalls; performed reinforcement inspections; reviewed RFIs and submittals; and assisted with review of pay applications and preparation of change orders and project closeout documentation.</p> <p>Nashville Avenue Wharf "A" Substructure Repairs Phase 2 (CMAR) Owner: Port of New Orleans. Scope: Structural inspection and rehabilitation of 1960s wharf along Mississippi River (5,375 steel piles, approximately 1,000,000 square foot reinforced concrete deck, and 2,400 foot long reinforced concrete bulkhead). Cost: ~\$25,000,000 (est.). Role: Project Manager and Lead Structural Engineer. Led above water and underwater inspections; structural analysis and design; preparation of plans, specifications, and opinion of probable construction cost; and coordination with CMAR contractor. Managed 10 inspectors and 4 divers. Evaluated CMAR contractor value engineering proposals. Designed pile bracing, coating of steel components, epoxy-grouted pile jackets, pile strengthening, partial and full depth deck repairs, and bulkhead repairs considering site-related challenges, such as fluctuating water levels, limited accessibility for equipment, and the need to sequence construction to minimize disruptions to Port NOLA's operations. Reviewed RFIs and submittals.</p> <p>St. Andrew Street Wharf Erosion Mitigation Project Owner: Port of New Orleans. Scope: Installation of bulkhead consisting of 50-foot long steel sheet pile wall and reinforced concrete pile cap and PCC pavement roadway repairs along the Mississippi River (1,600 feet long). Cost: ~\$3,800,000. Role: Project Manager and Lead Construction Engineer. Led construction engineering and inspection. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared design modifications to accommodate field conditions; prepared change orders; and prepared project closeout documentation.</p>

TEC Professional Services Questionnaire

John Karlin, SE, PE (Continued)

Violet Siphon Intake Structure Repairs (CPRA)

Owner: Louisiana Coastal Protection and Restoration Authority (CPRA). **Scope:** Replacement of damaged siphon intake structure with steel support frame and warning piles in the Mississippi River. **Cost:** ≈\$250,000. **Role:** Lead Structural Engineer and Construction Engineer. Led structural analysis and design and preparation of plans, specifications, and opinions of probable construction cost. Performed inspections of siphon pipes and coordinated CCTV siphon pipe inspections. Designed steel support frame, support cables, steel warning piles, warning signs, navigation lighting, riprap, siphon pipe support repairs on levee, and other miscellaneous repairs considering hydrodynamic, debris impact, and wind forces and assisted CPRA with the preparation of permit applications and coordination with USFWS. Managed inspectors; performed inspections; reviewed RFIs, submittals, and pay applications; prepared change orders; and prepared project closeout documentation.

Belle Chasse Bridge and Tunnel Replacement (Public-Private Partnership Project)

Owner: United States Army Corps of Engineers (USACE)/LaDOTD. **Scope:** Replacement of 2-lane vertical lift Judge Perez Bridge and 2-lane Belle Chasse Tunnel with 4-lane fixed bridge over GIWW. **Cost:** ≈\$134,000,000. **Role:** Safety Assurance Review (SAR) Panel Lead Structural Reviewer. Led structural review in accordance with USACE SAR requirements. Visited site; reviewed plans, specifications, and structural analyses/calculations for vertical lift bridge demolition, tunnel decommissioning, and replacement of tunnel flood gates with permanent floodwalls considering the effect of construction on nearby existing levees and floodwalls; and identified potential public safety issues.

Seabrook Boat Launch Rehabilitation

Owner: Lakefront Management Authority. **Scope:** Replacement of Seabrook Boat Launch along Lake Pontchartrain at IHNC with new boat ramps and floating access piers, rehabilitation of existing parking lot, and other miscellaneous repairs and improvements. **Cost:** ≈\$2,100,000 (est.). **Role:** Project Manager and Lead Structural Engineer. Led conceptual development of potential improvements, preparation of preliminary opinions of probable construction cost, and coordination with LMA board to select final concepts. Led structural analysis and design and preparation of plans, specifications, and opinions of probable construction cost. Designed reinforced concrete boat ramps, floating access piers, erosion control sheet piling and riprap, and parking lot modifications.

South Shore Harbor Finger Pier Repairs

Owner: Lakefront Management Authority. **Scope:** Repair of damaged and/or collapsed timber substructures and miscellaneous repairs. **Cost:** ≈\$1,300,000. **Role:** Project Manager and Lead Structural Engineer. Led structural analysis and design and preparation of plans, specifications, and opinions of probable construction cost. Designed timber substructure repairs and miscellaneous repairs. Performed inspections and reviewed RFIs and submittals.

South Shore Harbor Inspections

Owner: Lakefront Management Authority. **Scope:** Structural inspection of South Shore Harbor marina finger piers and floating docks (229 finger piers and 2 floating docks). **Role:** Project Manager and Lead Structural Engineer. Led structural inspection. Managed 3 inspectors; performed inspections; and prepared inspection reports documenting observations and repair recommendations.

Lakefront Airport Drainage Improvements – Phase 1

Owner: Lakefront Management Authority. **Scope:** Construction of a reinforced concrete reservoir (approximately 123'x43'x28' deep) for a future 600 CFS pump station. **Cost:** ≈\$13,000,000. **Role:** Lead Structural Independent Technical Reviewer for pump station temporary retaining structure (TRS). Reviewed pump station TRS design and calculations and associated plans, specifications, geotechnical report, and construction phase geotechnical investigation information. Prepared independent calculations for approximate TRS force effects and TRS components, including sheeting, walers, and struts. Prepared report summarizing the independent technical review.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jeff Puissegur Senior Inspector
Project Assignment:
Inspector
Name of Firm with which associated:
Horizon Engineering, LLC
Years' experience with this Firm:
<1 year (16 years with other firms)
Education: Degree(s)/Year/Specialization:
Bachelor of Arts, 1999, Social Science Associate of Arts, 1996, Business Management
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Inspection and Work Zone Safety / Temporary Traffic Control Certifications Certified by LaDOTD in Embankment and Base Course and PCC Paving; ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger</p> <p>Seawall Erosion Control Paving Project (Reaches 1A-1C, 2A-2D, 3A-3C, 4, 5, and 5B) Owner: SLFPA-E. Scope: Fortification of the Lake Pontchartrain seawall and roadway, drainage, and lighting improvements (5.2 miles long). Cost: ≈\$50,000,000. Role: Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.</p> <p>LPV-104.01a London Avenue Canal to IHNC Owner: USACE. Scope: Raising of multiple levee ramps in accordance with USACE HSDRRS between London Avenue Canal and IHNC. Cost: ≈\$14,000,000. Role: Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.</p> <p>LPV-113 Michoud Slip/Canal Levee Owner: USACE. Scope: Raising of levee, levee enlargement, channel excavation, foreshore protection works, levee scour protection, and relief wells in accordance with USACE HSDRRS between Michoud Canal and the Michoud Slip. Role: Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; and assisted with the preparation of project closeout documentation.</p> <p>Airline Park Blvd (Camphor – W Napoleon) Owner: Jefferson Parish (LaDOTD LPA project). Scope: Replacement of asphalt roadway and PCC pavement roadway (including curb, driveways, sidewalks, and handicap ramps); drainage, sewer, and water improvements; and installation of drainage pump station and associated canal bank sheeting and riprap. Cost: ≈\$6,000,000. Role: Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.</p>

TEC Professional Services Questionnaire

Jeff Puissegur (Continued)

Jefferson Parish Submerged Roadways Program

Owner: Jefferson Parish. **Scope:** Evaluation of Hurricane Katrina related roadway damage and repair/replacement of deficient roadways (85 PCC pavement streets and 8 miles of asphaltic concrete roadway). **Cost:** ≈\$50,000,000 (est.). **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; and assisted with the preparation of project closeout documentation.

Milneburg Group B (FRC) Streets

Owner: City of New Orleans. **Scope:** Replacement of asphalt roadway and drainage, sewer, and water improvements. **Cost:** ≈\$7,400,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Magazine St (Leake Ave to East Drive)

Owner: City of New Orleans (LaDOTD LPA project). **Scope:** Replacement of asphalt roadway with PCC pavement roadway (including curb, driveways, sidewalks, and handicap ramps) and drainage, sewer, and water improvements. **Cost:** ≈\$4,500,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Grafton Drive Pavement Rehabilitation

Owner: City of Slidell (LaDOTD LPA project). **Scope:** Repair/replacement of deficient PCC pavement panels, curb, driveways, and handicap ramps. **Cost:** ≈\$1,000,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with preparation of project closeout documentation.

Carey St. Pavement Rehabilitation

Owner: City of Slidell (LaDOTD LPA project). **Scope:** Repair/replacement of deficient PCC pavement panels, curb, driveways, and handicap ramps. **Cost:** ≈\$970,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

Lake Forest Boulevard

Owner: City of New Orleans (LaDOTD LPA project). **Scope:** Replacement of roadway with PCC pavement roadway; asphalt roadway milling and overlay; and drainage, sewer, and water improvements. **Cost:** ≈\$490,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with materials sampling and coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to utilities and drop inlets, manholes, and other drainage structures in the roadway; prepared redline as-built plans; and assisted with the preparation of project closeout documentation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Wayne “Dickie” Lemoine Senior Inspector
Project Assignment:
Inspector
Name of Firm with which associated:
Horizon Engineering, LLC
Years’ experience with this Firm:
<1 year (53 years with other firms)
Education: Degree(s)/Year/Specialization:
Coursework at Nicholls State University
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Inspection and Work Zone Safety / Temporary Traffic Control Certifications Certified by LaDOTD in Structural Concrete (previously held certifications in Embankment and Base Course, PCC Paving, Concrete Pipe Installation, and Metal Pipe Installation); ATSSA Certified Traffic Control Supervisor (TCS), Technician (TCT), and Flagger; completed numerous inspection, engineering, and surveying training courses, including LaDOTD Comprehensive Bridge Inspection Training, LaDOTD Comprehensive Movable Bridge Inspection Training, PennDOT Basic Bridge Safety Inspector’s Training, University of Wisconsin-Madison Bridge Inspection Update, University of Wisconsin-Madison Nondestructive Evaluation of Bridge Conditions, and SSPC C-3 Supervisor/Competent Person Training for Deleading of Industrial Structures.</p> <p>LaDOTD District 02 Bridge Inspections Owner: LaDOTD. Scope: Structural inspections of thousands of on-system and off-system fixed bridges, moveable bridges, tunnels, locks, and box culverts throughout LaDOTD District 02. Role: Multiple roles, including District 02 Bridge Maintenance Inspection Supervisor, Bridge Inspector Team Leader, Engineering Specialist, and Engineering Aide. Planned, scheduled, supervised, and performed in-depth and routine structural inspections in accordance with the National Bridge Inspection Standards (NBIS). Estimated bridge damage repair costs; supervised repairs completed by bridge maintenance crews; inspected road construction; surveyed; and sampled and tested soil and concrete. Inspected all moveable bridges in LaDOTD District 02, including swing, bascule, and vertical lift bridges such as:</p> <ul style="list-style-type: none"> • Barataria Bridge (over Bayou Barataria) / Swing Bridge / Jefferson Parish • Chef Menteur Bridge (over Chef Menteur Pass) / Swing Bridge / Orleans Parish • Danziger Bridge (over Inner Harbor Navigation Canal) / Vertical Lift Bridge / Orleans Parish • Harvey Bridge (over Harvey Canal) / Bascule Bridge / Jefferson Parish • Judge Seeber Bridge (over Inner Harbor Navigation Canal) / Vertical Lift Bridge / Orleans Parish • Causeway Bridge NB and SB Bascules (over portions of Lake Pontchartrain) / Bascule Bridge / St. Tammany Parish • Maestri Bridge North and South Draws (over portions of Lake Pontchartrain) / Bascule Bridge / Orleans Parish • Senator Ted Hickey Bridge (over Inner Harbor Navigation Canal) / Bascule Bridge / Orleans Parish <p>Inspected all tunnels in LaDOTD District 02, including:</p> <ul style="list-style-type: none"> • Harvey Tunnel • Belle Chasse Tunnel • Houma Tunnel

TEC Professional Services Questionnaire

Wayne “Dickie” Lemoine (Continued)

Huey P. Long Bridge Widening

Owner: LaDOTD. **Scope:** Widening of the Huey P. Long Bridge while maintaining vehicular traffic (nearly 50,000 ADT), railroad traffic, and marine traffic. **Cost:** ≈\$1,200,000,000. **Role:** Lead Inspector. Managed 22 inspectors. Performed inspections; reviewed quantities; prepared daily work records (DWRs); used rope access techniques to climb and inspect trusses; uploaded documentation to SiteManager; reviewed inspector SiteManager uploads; coordinated with 4 contractors; assisted with coordination of construction materials testing; performed sampling and field testing of concrete; and assisted with the review of RFIs.

Rehabilitation of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive

Owner: Jefferson Parish. **Scope:** Structural inspection and evaluation and rehabilitation of 1950s elevated interchange (2 ramps and 4 lane overpass). **Cost:** ≈\$13,000,000. **Role:** Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; assisted with the review of RFIs; assisted with the development of adjustments to post-installed adhesive anchor and reinforcing bar positions to avoid conflicts with existing reinforcement; assisted with the inspection, coordination, and development of field adjustments for emergency deck repairs to replace failed expansion joint with only weekend road closures; and assisted with the preparation of project closeout documentation.

LA 70: Mississippi River Bridge – Phase II

Owner: LaDOTD. **Scope:** Coating of the Sunshine Bridge and strengthening of steel members for corrosion (22,000 ADT). **Cost:** ≈\$25,000,000. **Role:** Lead Inspector. Managed inspectors. Performed inspections of coating, structural steel, concrete repairs, and temporary traffic control; reviewed quantities; prepared daily work records (DWRs); used SiteManager; assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Lake Pontchartrain Causeway Southbound Bridge Rail Improvements

Owner: GNOEC. **Scope:** Installation of enhanced steel bridge rails and other miscellaneous repairs (48 miles of steel rail) while maintaining ADT of over 20,000. **Cost:** ≈\$40,000,000. **Role:** Lead Inspector. Inspected temporary lane closures of over 10 miles long; performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Demolition of 9-Mile Turnaround Spans

Owner: GNOEC. **Scope:** Demolition of 9-mile turnaround spans of Lake Pontchartrain Causeway Bridge. **Cost:** ≈2,500,000. **Role:** Lead Inspector. Performed inspections of removal of span superstructure and substructure; reviewed quantities; prepared daily work records (DWRs); used SiteManager; assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Violet Siphon Intake Structure Repairs

Owner: Louisiana Coastal Protection and Restoration Authority (CPRA). **Scope:** Replacement of damaged siphon intake structure with steel support frame and warning piles in the Mississippi River. **Cost:** ≈\$250,000. **Role:** Lead Inspector. Performed inspections; reviewed quantities; prepared daily work records (DWRs); assisted with coordination of construction materials testing; and assisted with the review of RFIs.

Erato Street Cruise Terminal Inspection

Owner: Port of New Orleans. **Scope:** Structural inspection of 6-level parking garage precast concrete beam ends, corbels, and bearing pads. **Role:** Inspector. Performed inspections and assisted with preparation of inspection report.

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>Zellwood Station Phase 3 Zellwood, Florida</p> <p>Zellwood Development Group, LLC 2893 Upland Ridge Chuluota, FL 32766</p> <p>Steve MacGeorge (321) 356-1802 stevemacgeorge@smacgeorge.com</p>	<p>The Zellwood Site consists of approximately 10.4 acres and is located on the east side of W. Orange Blossom Trail (US 441). The site will be developed to accommodate multiple commercial properties. Horizon Engineering, LLC (Horizon) prepared a conceptual planning study to investigate the subdivision of the site, drainage requirements, and improvements to access from US 441 and is currently completing the final design. Horizon's duties included:</p> <ul style="list-style-type: none"> • Review of site zoning information/maps, topographic and boundary surveys, traffic studies, and geotechnical investigations and reports. • Preparation of preliminary site plans illustrating potential configurations of commercial lots within the site. • Hydrologic and hydraulic modeling, analysis, and design to determine subsurface drainage and detention pond requirements for multiple configurations of the site. • Coordination with the Florida Department of Transportation (FDOT) and Federal Aviation Administration (FAA). • Investigation of potential improvements to access from US 441, including the feasibility of widening the existing shared driveway and adding new driveways, turn lanes, and/or a signalized intersection. • Coordination and relocation of utilities. • Permitting assistance. • Preparation of final plans and specifications, including site grading, subsurface drainage, detention pond, widening of existing driveway, new driveway, and other miscellaneous features. • Construction support. 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
August 2024 (estimated design completion date)	TBD	\$71,850 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Hogshead Road Temporary Facilities Apopka, Florida</p> <p>S.A. Casey Construction 2822 Commerce Park Drive, Suite 400 Orlando, FL 32819</p> <p>Shawn Casey (407) 240-6775 scasey@sacaseyconstruction.com</p>	<p>Horizon Engineering, LLC prepared site plans for the installation of temporary construction facilities on an approximately 3-acre site, including field office, utilities (including 28,000-gallon water tank), storage, and parking. The site plans were used to facilitate permitting for the project.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2024	TBD	\$2,290 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Independent Technical Review of Lakefront Airport Pump Station Temporary Retaining Structure Design New Orleans, Louisiana</p> <p>RNGD 1730 Tchoupitoulas Street New Orleans, LA 70130</p> <p>Stephen Abadie (504) 620-8022 sabadie@rngd.com</p>	<p>Horizon Engineering, LLC (Horizon) performed an independent technical review (ITR) of the Lakefront Airport pump station temporary retaining structure (TRS) design. The TRS is required to facilitate construction of an approximately 123'x43'x28' deep reinforced concrete reservoir for a future 600 CFS pump station. The TRS is used to stabilize a 45' deep excavation in soft clays outside of flood protection prior to construction of the seal slab and reservoir. Horizon reviewed the TRS design and calculations and associated plans, specifications, geotechnical report, and construction phase geotechnical investigation information. Horizon prepared independent calculations for approximate TRS force effects and TRS components, including sheeting, walers, and struts, and a report summarizing the independent technical review.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
June 2024	≈\$13,000,000	\$5,400 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">Crescent City Brewhouse Structural Inspection for New Water Tank Installation</p> <p style="text-align: center;">New Orleans, Louisiana</p> <p>Crescent City Brewhouse 527 Decatur Street New Orleans, LA 70130</p> <p>Joel Zetzmann (504) 522-0571 joel@ccbno.com</p>	<p>Horizon Engineering, LLC performed a structural inspection and evaluation of the historic Crescent City Brewhouse building in the New Orleans French Quarter to determine whether the existing structure could support the installation of new water tanks on the fourth floor. The structural inspection and subsequent recommendations considered the material type, dimensions, configuration, and current condition of structural components, including timber decking, timber beams, brick masonry walls, steel girders, steel columns, masonry foundations, and reinforced concrete foundations.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
February 2024	N/A	\$875 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5			
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:		
Staff Experience at Previous Employer	<p>We have the available capacity to quickly complete work and will make any awarded project our top priority. Although we have not completed any Jefferson Parish coastal engineering projects yet as a firm, our engineering staff has over 35 years of combined experience delivering successful infrastructure projects across Louisiana, including numerous projects for Jefferson Parish. Additionally, our inspection staff has over 100 years of combined experience. Our staff frequently worked together on major Jefferson Parish projects at their previous employer. Please see the table below for a list of such projects and Sections K and N for additional information regarding the expertise and experience of our staff and the projects that they have worked on.</p>		
PROJECTS WORKED ON BY STAFF AT PREVIOUS EMPLOYER			
PROJECT	OWNER	CONSTRUCTION COST	KEY PERSONNEL INVOLVED
Lake Pontchartrain Seawall Area Erosion Control Paving	SLFPA-E	≈\$50,000,000	Brett Liuzza, Ben Bartlett, John Karlin, and Jeff Puissegur
Geisenheimer Canal Improvements (Loumor Outfall Ditch to Hoey's Canal)	Jefferson Parish	≈\$13,000,000 (est.)	John Karlin and Ben Bartlett
Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)	Jefferson Parish	≈\$19,000,000 (est.)	Ben Bartlett and Brett Liuzza
Jefferson Parish Submerged Roadways Program	Jefferson Parish	≈\$50,000,000	Ben Bartlett, Brett Liuzza, and Jeff Puissegur
Rehabilitation of Ramps 6, 7, and Overpass of Causeway Boulevard at Airline Drive	Jefferson Parish	≈\$13,000,000	John Karlin, Ben Bartlett, and Wayne "Dickie" Lemoine
Rehabilitation of Ramps 4, 5, 8, and Traffic Circle of Causeway Boulevard at Airline Drive	Jefferson Parish	≈\$41,000,000 (est.)	John Karlin and Ben Bartlett
Independence Park Drainage Pump Station Study	Jefferson Parish	≈\$15,000,000 (est.)	Brett Liuzza and Ben Bartlett
W. Esplanade Bridges @ Duncan Canal	LaDOTD	≈\$14,000,000	Ben Bartlett and John Karlin
Lake Pontchartrain Causeway Southbound Bridge Rail Improvements	GNOEC	≈\$40,000,000	Ben Bartlett, John Karlin, and Wayne "Dickie" Lemoine
Completion Date (Actual or estimated):	Estimated Cost:		
	Entire Project:	Work for which Firm was Responsible:	
N/A	N/A	N/A	

TEC Professional Services Questionnaire

M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary. None

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

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

Horizon Engineering, LLC (Horizon) is led by three Louisiana engineers with over 35 years of combined experience delivering successful infrastructure projects across the Gulf Coast region. Our principals have worked together for nearly 10 years and have an extensive and complementary skillset that encompasses civil, structural, and environmental engineering. Horizon is certified as a Small Entrepreneurship with Louisiana Economic Development's (LED) Hudson Initiative and certified by the LED Division of Small and Emerging Business Development as a Small and Emerging Business Enterprise.

Horizon's principals serve as our lead design and construction engineers and are always available to respond to Jefferson Parish's needs. All of our principals were born and raised in southern Louisiana (John Karlin was born and raised in Jefferson Parish) and care deeply about our region. Ben Bartlett and John Karlin are both current Jefferson Parish residents. We have a personal

KEY PERSONNEL

Ben Bartlett, PE, PTOE

Brett Liuzza, PE

John Karlin, SE, PE

connection to our work and are extremely invested in the success of our projects.

We are committed to quality and efficiency. Our goal is to help Jefferson Parish get the most out of their available budget. We leverage technology to minimize our overhead costs and maximize the productivity of our personnel.

Horizon's ability to satisfy each of the evaluation criteria is summarized below.

TEC Professional Services Questionnaire

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

1. Professional training and experience

Horizon's staff consists of highly educated, trained, and experienced civil, structural, and environmental engineers and inspectors. All of our engineers are licensed professional engineers in Louisiana and have completed graduate level coursework. Our personnel have a unique combination of experience in both design and construction, which enables us to identify potential constructability issues during the design phase and reduce the potential for costly change orders during construction.

Our professional development program ensures that our personnel remain up to date with the latest industry advancements, such as software, analysis/design methods, materials, and construction methods. We understand that work zone safety and the maintenance of traffic during construction are essential elements of a successful Jefferson Parish project. Each of our engineers are certified by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS), Technician (TCT), and Flagger and the Louisiana Department of Transportation and Development (LaDOTD) for the Traffic Engineering Process and Report (TEPR).

Ben Bartlett, PE, PTOE will serve as the Professional-in-Charge and as a Project Manager and Civil Engineer and **Brett Liuzza, PE** will serve as a Project Manager and Civil Engineer for this project. They have extensive hydrologic and hydraulic modeling, analysis, and design and permitting experience for projects throughout southeast Louisiana, including in Jefferson Parish and sites outside of flood protection on the Southshore and Northshore of Lake Pontchartrain.

John Karlin, SE, PE will serve as a Project Manager and Structural Engineer for this project. He has experience inspecting, designing, and overseeing construction of various marine and maritime structures, including seawalls, wharves, bulkheads, boat launches, and marinas. His experience includes projects in or adjacent to various local bodies of water, such as the Mississippi River, Lake Pontchartrain, and canals (e.g., IHNC) for agencies such as USACE, SLFPA-E, and CPRA.

2. Size of firm

Horizon has sufficient personnel to perform a variety of tasks, such as:

- Conceptual planning and feasibility evaluation
- Hydrologic and hydraulic modeling and analysis
- Design and preparation of plans and specifications, including seawalls, bulkheads, floodwalls, and other shoreline structures, as well as recreational facilities, such as marinas and boat launches
- Permitting and grant application assistance
- Procurement/bidding assistance
- Construction administration, including Request for Information (RFI), submittal, pay application, and construction schedule review
- Construction engineering and inspection, including resident inspection and structural inspection and evaluation
- Community outreach

3. Capacity for timely completion of newly assigned work

We have the available capacity to quickly complete work and will make any awarded project our top priority.

4. Past performance by person or firm on Parish contracts

Horizon has not completed any Jefferson Parish projects yet as a firm; however, Horizon's personnel have worked on many Jefferson Parish projects, such as:

- Geisenheimer Canal Improvements (Loumor Outfall Ditch to Hoey's Canal)
- Widening of Causeway Boulevard (Airline Drive to West Napoleon Avenue)
- Independence Park Drainage Pump Station Study
- Geisenheimer Canal Drainage Pump Station Study
- West Esplanade Avenue Canal Crossing (Between Williams Boulevard and David Drive)
- Frisco Avenue Drainage Improvements
- W. Esplanade Bridges @ Duncan Canal (LaDOTD project in Jefferson Parish)

TEC Professional Services Questionnaire

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

We are very familiar with Jefferson Parish's requirements. Additionally, Horizon's personnel have successfully completed projects for numerous clients, such as:

- Jefferson Parish
- United States Army Corps of Engineers
- Louisiana Department of Transportation and Development
- New Orleans Regional Planning Commission
- Louisiana Coastal Protection and Restoration Authority
- Southeast Louisiana Flood Protection Authority – East
- Port of New Orleans
- Greater New Orleans Expressway Commission
- Lakefront Management Authority
- Sewerage and Water Board of New Orleans
- St. Charles Parish
- City of New Orleans
- City of Kenner
- City of Slidell
- City of Covington
- City of Mandeville
- Numerous private clients

Please see Sections K and L for additional information regarding the projects our personnel have worked on.

5. Location of the principal office

Horizon is a local small business. Our principal office is centrally located in Jefferson Parish at 1013 N. Causeway Blvd.; therefore, we can be nearly anywhere in the Parish in less than 15 minutes, including project sites, the Yenni Building, and the General Government Building.

6. Adversarial legal proceedings

Horizon is not involved in and has never been involved in any legal proceedings with the Parish.

7. Prior successful completion of projects

Horizon has not completed many projects yet as a firm; however, Horizon's personnel have successfully completed many projects for Jefferson Parish and other clients throughout southeast Louisiana. If selected, our personnel will provide the same expertise and experience that they have on previously completed Parish projects. Please see Criterion 4, Past performance by person or firm on Parish contracts, and Sections K and L for additional information.

WHY SELECT HORIZON ENGINEERING, LLC?

- We have a unique combination of design and construction experience.
- We are local and are very familiar with Jefferson Parish's requirements.
- We have the available capacity to quickly complete work and will make any awarded project our top priority.
- Our low overhead costs will allow us to significantly reduce project costs and ensure that projects remain within budget.
- We have a personal connection to our work and are deeply invested in the success of our projects. We care about our work and understand how important our coastline is to protecting our community.

We appreciate your consideration of our Statement of Qualifications and hope to partner with Jefferson Parish to deliver exceptional coastal infrastructure projects that improve our community.

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

Signature:  Print Name: John Karlin, SE, PE

Title: Co-Founder and Principal 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 28th Street, Metairie, Louisiana 70002

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

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

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

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

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

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

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

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

TEC Professional Services Questionnaire

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

1. Not applicable.

2.

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

YES ☐ NO ☐

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

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

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

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

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

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

Project Assignment:

Project Principal / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

31

Education: Degree(s)/Year/Specialization:

Master of Science / 1992 / Civil Engineering

Bachelor of Science / 1990 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 1997 / Civil Engineering

Mississippi: 2003 / Engineering

Texas: 2020 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

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

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

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

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

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

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

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

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

TEC Professional Services Questionnaire

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

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:**Name & Title:**

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

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

TEC Professional Services Questionnaire

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

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

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

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

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

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

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

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

TEC Professional Services Questionnaire

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

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

TEC Professional Services Questionnaire

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PROJECT NO. 09		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<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>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
07/2024 (E)	Unknown	\$44,000 (to date)

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

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

TEC Professional Services Questionnaire

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

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

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

EVALUATION CRITERIA

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

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

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

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

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

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

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

References:

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

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

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

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

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

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

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

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

ENGINEERING SERVICES

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

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

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

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

Engineering Staffing

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

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

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

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

Cone Penetration Testing Capabilities

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

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

Dynamic Pile Testing Capabilities

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

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

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

Other Non-Destructive Testing Capabilities

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

INSTRUMENTATION

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

Eustis Engineering provides the following instrumentation services:

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

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

DRILLING/FIELD EXPLORATION

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

Field Exploration Personnel

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

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

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

Field Exploration Equipment

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

Other Specialized Soil Sampling Equipment

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

Drone Capabilities

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

LABORATORY SERVICES

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

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

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

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

Laboratory Staffing

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

Laboratory Quality Control

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

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

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

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

CONSTRUCTION MATERIALS TESTING

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

Staffing

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

Services

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


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

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

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

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

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

Signature: 
Title: President

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



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

Statement of Qualifications



BASIN

Engineering & Surveying

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-020 Coastal Engineering Consulting services as needed parish-wide
Resolution 144205

B. Firm Name & Address:

Basin Engineering & Surveying
2811 B Toulouse St.
New Orleans, LA 70119

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:

Wesley R. Eustis, P.E., P.L.S.
Principal
504-766-0526
weustis@basinengllc.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.

Wesley R. Eustis, P.E., P.L.S.
Principal
504-766-0526
weustis@basinengllc.com

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

² Administrative	___ Estimators	___ Specification Writers
___ Architects (Licensed)	___ Geologists	³ Structural Engineers
___ Chemical Engineers	___ Geotechnical Engineers	___ Graduate Engineers
⁴ Civil Engineers	___ Interior Designers	¹ Project Managers
___ Construction Inspectors	___ Landscape Architects	___ Clerical
___ Ecologists	² Land Surveyor	___ Grant/Funding Specialist
___ Electrical Engineers	___ Mechanical Engineers	___ Sanitary Engineers
² Engineer Intern	___ Environmental Engineers	
² Professional Land Surveyors		¹⁶ TOTAL

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

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

TEC Professional Services Questionnaire

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

1.
N/A

2.
N/A

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

YES ☐ NO ☒

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

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

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

8 _____

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:

Wesley R. Eustis, P.E., P.L.S.
Principal

Project Assignment:

Professional Land Surveyor

Name of Firm with which associated:

Basin Engineering & Surveying

Years' experience with this Firm:

3 years

Education: Degree(s)/Year/Specialization:

BS Civil Engineering 2004

Active registration: Year first registered/discipline:

2010 Professional Engineer- Civil Engineering
2019 Professional Land Surveyor

Other experience and qualifications relevant to the proposed Project:

Mr. Eustis is a dual licensed professional land surveyor and professional engineer. He has 20 years of experience in the surveying and engineering industry. In his career, Mr. Eustis has been a licensed surveyor in charge of boundary calculations, field crew scheduling operations, quality control of field work and review of office production of land surveys. Mr. Eustis co-founded Basin Engineering & Surveying in July 2021 and is Principal in charge of all aspects of Basin's Land Surveying Operations. Mr. Eustis has extensive experience of Land and Hydrographic Surveys as shown on his attached resume.



Wesley Eustis, P.E., P.L.S.
Principal
2811 B Toulouse St.
New Orleans, LA 70119
weustis@basinengllc.com
Office: (504) 766-0526
Cell: (504) 202-1246

Education

Louisiana State University
Bachelor of Science in Civil Engineering

December 2004

Experience

Principal - Basin, LLC Engineering & Surveying

July 2021 – Present

- Co-founder and Principal Engineer of Firm providing Civil and Structural Engineering Design along with Land Surveying Services
- Manage all aspects of Civil Design by employees including Civil Site Design, Grading and Drainage Design, and Utility Infrastructure Design
- Manage all aspects of Professional Land Surveying Services by employees including ALTA, Boundary, Topographic, and Hydrographic Surveying

Vice President – Linfield, Hunter & Junius, Inc.,

December 2004-July 2021

- Vice President in charge of a Civil Design Group and Land Surveying Group
- Manage and oversee civil design for public and private clients.
- Review and perform all manners of design including Utility Design, Grading, and Drainage Design
- Perform municipal code research, due diligence, and permitting
- Manage and oversee land surveying operations including field crews, field work, boundary calculations, and quality assurance.

8 Certifications and Relevant Skills

- Registered Professional Engineer in the states of Louisiana, Mississippi, Arkansas, Texas, Alabama, South Carolina, Kentucky, Tennessee, Georgia, Utah, Missouri, Arizona, Colorado, Utah, West Virginia, Nevada and Missouri.
- Registered Professional Land Surveyor in Louisiana
- Past President, American Society of Civil Engineers (ASCE) - New Orleans Branch
- Awarded 2021 ASCE Outstanding Civil Engineer of the Year – New Orleans
- Awarded 2012 ASCE Outstanding Young Civil Engineer of the Year – New Orleans
- Member – Louisiana Society of Professional Surveyors (LSPS)

Relevant Projects

- Multi-beam Sonar of Salt Water Sill – St. Charles Parish, LA
- Side Scan Sonar of Vinyl Sheet Pile wall – Lake Borgne
- Single Beam Sonar – London Avenue Canal Erosion Mitigation – New Orleans, LA
- Magnetometer & Single Sonar Survey – Grand Terre Islands – Grand Isle, LA
- Shoreline Survey – Round Island Coastal Preserve – Mississippi
- Topographic & Single beam Sonar Survey of Jefferson Parish Lakefront
- Survey for Jefferson Parish Waterline Project 2023-033-WRB - Lakeside Shopping Center – N. Causeway Blvd. (Vets to 14th St.)
- Survey for Jefferson Parish Waterline Project 2023-029-WRB – 31st St. between Phoenix & Duncan

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ben R. Homola, PSM Florida LS #3950
Project Assignment:
Project Management
Name of Firm with which associated:
Basin LLC, Engineering & Surveying
Years' experience with this Firm:
6 Months
Education: Degree(s)/Year/Specialization:
General Studies, Western Illinois University, 1973
Active registration: Year first registered/discipline:
Florida License Surveyor & Mapper registered in 1982
Other experience and qualifications relevant to the proposed Project:
<ul style="list-style-type: none">•Advanced GPS Planning and Data Processing•Public Land Surveys and Corner Restoration•Mean High Water Line Surveys•Hydrographic Surveys•AutoCAD Civil 3D



Ben R. Homola, PSM
Project Manager
2811 B Toulouse St.
New Orleans, LA 70119
bhomola@basinengllc.com
Office: (504) 766-0526
Cell: (239) 850-2727

Professional Profile

Mr. Homola has over 50 years of experience in surveying and mapping. He is serving as project manager for a wide range of projects, including boundary, GPS geodetic control, aerial mapping control, engineering design, as-built, right-of-way, construction, and engineering inspection (CEI) surveys. His responsibilities include project planning, estimating, scheduling, field-office coordination, and the application of quality control and assurance procedures. He has full knowledge of and experience with our GPS equipment, electronic data collectors, CAD and coordinate geometry software programs. The combination of his computer expertise, research capabilities, and common-sense approach to survey problems makes him a valuable asset to the firm. He actively participates in the field operations of both geodetic and land surveying activities.

Education

- General Studies, Western Illinois University, 1973

Employment History

- January 2024 – Present: Basin Engineering & Surveying, LLC.
- November 2007 – July 2023: AIM Engineering & Surveying, Inc.
- November 2005 – November 2007: Hole Montes
- March 2004 – October 2005: McKim & Creed
- April 1974 – February 2004: Deni Associates

Training / Certification

- Advanced GPS Planning and Data Processing
- Geodetic Leveling to NGS Standards
- Public Land Surveys and Corner Restoration
- Survey Law
- Mean High Water Line Surveys
- Hydrographic Surveys
- State Plane Coordinates
- Intermediate MOT
- AutoCAD Civil 3D
- MicroStation / GeoPak

Areas of Expertise

- Project Management
- GPS
- Geodetic Control Surveys
- Geodetic Leveling
- Boundary Surveys
- Right of Way Control Surveys
- Right of Way Maps
- Design Surveys



Ben R. Homola, PSM
Project Manager
2811 B Toulouse St.
New Orleans, LA 70119
bhomola@basinengllc.com
Office: (504) 766-0526
Cell: (239) 850-2727

Relevant Projects

- Okeechobee Waterway Monumentation Project from Ft. Myers to Lake Okeechobee, Florida. Project Manager for the boundary survey of forty-four lineal miles of the Caloosahatchee River portion of the Okeechobee Waterway right-of-way through three counties, including sectional retracement, the re-establishment, monumenting and clearing of right-of-way boundary lines and record map preparation.
- RSW Airport - Multiple Topographic and Construction Surveys, including As-built and Volumes for the Extension of Runway 6-24 to 12000 feet, Topographic Data for the Rehabilitation of Runway 6-24, Taxiway "A", Old Terminal and FBO Ramps, 2 Square Miles for the Design of the Midfield Terminal Complex, Tree Top Data in the Runway Clear Zones, Horizontal and Vertical Control Survey for future parallel Runway project, Boundary and Topographic Survey for new Midfield Air Traffic Control Tower.
- Section Restoration Program – Control Survey for Recovery of Government Corners in Two Townships, Lee County, Florida.
- Kissimmee Prairie Ecosystem Boundary Survey, Okeechobee County, Florida. Boundary survey and monumentation of thirty-one linear miles of exterior boundary of the ecosystem site including retracement of the 1919 survey of the southern colonization plat.
- State Road 29 (Barron River) Corridor Aerial Topographic Mapping and Survey Project. The primary purpose of this project is to create photogrammetrically derived topographic maps within the Big Cypress Basin of the South Florida Water Management District. The District will utilize these maps for development of new and enhancement of existing computer-generated watershed and routing models, planning and design of channel improvements and construction of new and/or replacement water control structures within the SR 29 Canal. Additionally, this work will be to determine the location of the SR 29 Canal as it relates to the eastern right-of-way of State Road 29 within the project area and obtain channel cross-sections, accurate locations, sizes and elevations for channel crossings, inflow and outflow connections and water control devices and facilities.
- Topographic & Signal Beam Sonar Survey of the northwest perimeter canal of Lake Okeechobee in Okeechobee, Florida.
- Topographic & Multi Beam Sonar Survey of Big Carlos Pass, Lee County, Florida, for the purpose of dredging channel and checking condition of pilings of bridge.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Connor Glennon, P.E.	
Project Assignment:	
Survey Manager	
Name of Firm with which associated:	
Basin Engineering & Surveying	
Years' experience with this Firm:	
3 years	
Education: Degree(s)/Year/Specialization:	
BS Civil Engineering 2018	
Active registration: Year first registered/discipline:	
2022- Professional Engineer	
Other experience and qualifications relevant to the proposed Project:	
<p>Mr. Glennon has recently completed his 6th year in the surveying and engineering profession. He has recently received his PE license and is currently pursuing dual licensure as a land surveyor. Mr, Glennon acts as survey manager for Basin requiring him to schedule crews, draft surveys, and review boundary and topographic field work for accuracy. In addition, Mr. Glennon is proficient in the use of the RTK GPS, Robotic Total Station, Single Beam Sonar, Drone LIDAR, Drone Photogrammetry, and Automatic Level equipment. Mr. Glennon's resume with relevant projects can be found attached.</p>	



Connor Glennon, P.E.
Project Engineer
2811 B Toulouse St.
New Orleans, LA 70119
cglennon@basinengllc.com
Office: (504) 766-0526
Cell: (504) 330-8866

Education

Louisiana State University
Bachelor of Science in Civil Engineering

May 2018

Experience

Project Engineer - Basin, LLC Engineering & Surveying

July 2021 – Present

- Survey manager responsible for scheduling of survey crews, review of field work and scope of work. Duties also include drafting of surveys and review of field work accuracy.
- Proficient in use of RTK GPS, Robotic Total Station and Automatic Level.
- Design of Civil Engineering projects including both Public and Private clients.
- Duties include design of Utility Infrastructure, Roadways, Commercial Site Design, Stormwater Management Design, and preparation of Engineers Opinion of Probable Cost.

Project Engineer - Linfield, Hunter & Junius, Inc.,

May 2018-July 2021

- Project Engineer reviewing processing survey field work for drafting. Duties included review of field work versus proposed scope of work for missing items, drafting of surveys, FEMA Certificates, Top of form and Top of Slab Certificates.
- Project Engineer working on a variety of public and private design projects.
- Duties include design of Utility Infrastructure, Roadways, Commercial Site Design, Stormwater Management Design, and preparation of Engineers Opinion of Probable Cost.

Relevant Projects

- Topographic and Hydrographic survey of London Avenue Canal at Lake Pontchartrain – Orleans Parish, LA
- Topographic and Boundary survey of a portion of Brazillier Island abutting national wildlife refuge – Orleans Parish, LA
- Topographic and Hydrographic survey of Fausse Point Canal, Ces Bon Canal, Red Eye Canal East, and Red Eye Canal West – Iberia Parish, LA
- Topographic and Hydrographic surveys of Assumption Parish Canal, Jeanerette Lumber & Shingle Canal East Assumption Parish Canal, White Castel South segment 2 Canal, and White Castel Iberville South Segment 2 Canal – Iberville Parish, LA
- Side Scan Sonar Survey of flood protection wall in Lake Borgne near Tower Dupre – St. Bernard Parish, LA
- Topographic survey of Lake Pontchartrain Levee sections from Bonnabel Boat Launch to Zion Street – Jefferson Parish, LA
- Topographic and Hydrographic Survey of Nashville A Wharf Emergency Repairs – Orleans Parish, LA

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Jedidiah Hellmich, P.E. , P.T.O.E.
Project Assignment:
Project Manager
Name of Firm with which associated:
Basin Engineering & Surveying
Years' experience with this Firm:
2 years
Education: Degree(s)/Year/Specialization:
BS Civil Engineering 2008 MS Engineering 2011
Active registration: Year first registered/discipline:
2015-Professional Engineer- Civil Engineer
Other experience and qualifications relevant to the proposed Project:
Mr. Hellmich has 15+ years of civil engineering experience. In addition to being a registered engineer, he is a registered Professional Traffic Operations Engineer. See attached resume.



Jedidiah Hellmich, P.E., PTOE
Senior Engineer
2811 B Toulouse St.
New Orleans, LA 70119
jshellmich@basinengllc.com
Office: (504) 766-0526
Cell: (251) 978-1631

Education

University of New Orleans
Master of Science in Engineering

December 2011

Auburn University
Bachelor of Civil Engineering

December 2008

Experience

Senior Civil Engineer - Basin, LLC Engineering & Surveying

March 2022 – Present

- Senior civil engineer responsible for preparation of plans and specifications for municipal and commercial clients.
- Prepare engineering reports and studies.
- Develop projects scopes, schedules and budgets.
- Provide construction administration services.

Lead Civil Engineer – Phillips 66 Alliance Refinery

March 2020 – March 2022

- Oversee all surveying performed at Allinace Refinery.
- Oversee all civil/structural projects at Alliance Refinery.
- Design, manage and execute a variety of civil/structural and mixed discipline projects. Project and construction management including review of contractor proposals, review of testing lab reports, responses to RFI's, shop drawing review, project scheduling and project cost management.

Senior Civil Engineer - Linfield, Hunter & Junius, Inc.,

January 2009-March 2020

- Design, draft and oversee plan production for municipal, industrial and commercial clients.
- Prepare and oversee preparation of specifications and construction cost estimates.
- Prepare engineering reports and studies.
- Manage junior engineers and sub-consultants to ensure project specifications, budget and schedule are met.
- Formulate proposals for professional engineering services.

Certifications and Relevant Skills

- Registered Professional Engineer in Louisiana
- Professional Traffic Operations Engineer
- Proficient in various civil design software, AUTOCAD, Microstation , LADOTD Hydrwin, Autodesk Storm and Sanitary Analysis, Autodesk Civil 3d
- ACEC Emerging Leader, Fall 2019



Jedidiah Hellmich, P.E., PTOE
Senior Engineer
2811 B Toulouse St.
New Orleans, LA 70119
jshellmich@basinengllc.com
Office: (504) 766-0526
Cell: (251) 978-1631

Relevant Projects

- Canal Street Median Enhancements– Provided civil design of new shared-use path along the Canal Street median in Jefferson Parish. Design consisted of horizontal and vertical geometry, grading/drainage and water line relocation. Provided construction administration services during the construction phase.
- St. Charles Avenue Overlay – Provided civil design for the asphalt overlay of St. Charles Avenue in New Orleans. The project consisted of cold mill and overlay, ADA ramps and pavement markings.
- Storm Sewer Maintenance Program for Phillips 66 Alliance Refinery – Responsible for designing new storm sewer structures and overseeing construction of new subsurface storm sewer repairs at Phillips 66 Alliance Refinery.
- CVS Pharmacies and Dollar Generals – Provide drainage and traffic reports/studies to local municipalities.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Payton McNeil, E.I.
Project Assignment:
Survey and CAD Technician
Name of Firm with which associated:
Basin Engineering & Surveying
Years' experience with this Firm:
2.5 years
Education: Degree(s)/Year/Specialization:
BS Civil Engineering 2021
Active registration: Year first registered/discipline:
Engineering Intern 2021
Other experience and qualifications relevant to the proposed Project:
Mr. McNeil joined Basin in November of 2021 after graduating in Civil Engineering from Louisiana State University. In his time at the firm, Mr. McNeil has spent time in the field as part of a survey crew performing differential level runs, boundary surveys, topographic surveys, hydrographic surveys, and construction layout. In addition, Mr. McNeil has spent time drafting these same surveys he has spent time on the field. Please see attached resume for Mr. McNeil.



Payton McNeil, E.I.
Project Manager
2811 B Toulouse St.
New Orleans, LA 70119
pmcneil@basinengllc.com
Office: (504) 766-0526
Cell: (504) 458-1041

Education

Louisiana State University
Bachelor of Science in Civil Engineering
Minor in Structural Engineering

December 2021

Experience

Engineer Intern - Southeast Louisiana Flood Protection Authority-East July 2021 – October 2021

- Review of plans from design consultants contracted by the Flood Protection Authority
- Perform quality control inspections and review of permits on nearly 200 miles of levee systems and roadways

Project Manager - Basin, LLC Engineering & Surveying November 2021 – Present

- Draft/design all aspects of Civil Design including roadway Civil Site Design, Grading and Drainage Design, and Utility Infrastructure Design
- Design long spanning bridge like precast concrete trenches with HL-93 Truck Loads, analyze pile capacity for foundation design, and analyze/design loading applied to other structure types
- Draft all aspects of Professional Land Surveying Services including ALTA, Boundary, Topographic, and Hydrographic Surveying

Certifications and Relevant Skills

- Registered Engineer Intern in the state of Louisiana
- Member – American Society of Civil Engineers (ASCE)

Relevant Projects

- Survey of S. Genois Street between I-10 & Gravier St., New Orleans, LA
- Survey of Rosehill Construction Office Site – Prairieville, LA
- Survey of Shed 7 – Port of Lake Charles Harbor & Terminal District
- Fire Access Road Schillinger Rd. – Mobile, AL
- Reach 3A Recreational Access Road (Review) – New Orleans, LA

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Brennan Knepper	
Project Assignment:	
Survey and CAD Technician	
Name of Firm with which associated:	
Basin Engineering & Surveying	
Years' experience with this Firm:	
2 years	
Education: Degree(s)/Year/Specialization:	
N/A	
Active registration: Year first registered/discipline:	
N/A	
Other experience and qualifications relevant to the proposed Project:	
<p>Mr. Knepper joined Basin Engineering & Surveying in May of 2022. Since then, Mr. Knepper has become proficient in operation of RTK GPS Equipment, Total Stations, Single Beam Sonar, Drone LIDAR, Drone Photogrammetry, and differential leveling. Mr. Knepper has performed all manners of surveying field work in this short time including boundary, ALTA, FEMA Elevation Certificates, Hydro-graphic surveying, and topographic surveying. Mr. Knepper is also proficient in AutoCAD allowing him to both perform field work and complete the survey with his drafting expertise in the office.</p>	

TEC Professional Services Questionnaire

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

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Jefferson Parish Waterline Project 2023-029-WRB</p> <p>31st St. between Phoenix St. and Duncan St., Kenner, LA</p> <p>Jefferson Parish Water Department Sidney J. Bazley, III, Director 504-736-6744</p>	<p>Basin was selected as the surveying firm for the topographic survey required as part of the Jefferson Parish Waterline Project 2023-029-WRB. Basin is performing a complete topographic survey of the full right of way width of 31st Street between Phoenix St. and Duncan St. in Kenner, LA in preparation of waterline replacement along the roadway. Plan and Profile drawings were produced as part of this survey. Surveying included use of RTK GPS, Robotic Total Station, and differential leveling.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
July 2023	\$3 Million	\$52,198- Survey

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Jefferson Parish Waterline Project 2023-015-WRB</p> <p>26th Street (N. I-10 Service Rd. to Ridgelake Dr.) 27th & 28th Streets (N. I-10 Service Rd. to Metairie Lawn Dr.) Ridgelake Dr. (W. Napoleon Ave. to 26th St.) Veterans Memorial Blvd. (N. Causeway Blvd. to Metairie Lawn Dr.) Metairie Lawn Dr. (N. I-10 Service Rd. to End of 1st Apartment exit)</p> <p>Jefferson Parish Water Department Sidney J. Bazley, III, Director 504-736-6744</p>	<p>Basin was selected as the surveying firm for the topographic survey required as part of the Jefferson Parish Waterline Project 2023-015-WRB. Basin is performing a complete topographic survey of the full right of way width of portions of 26th Street, 27th Street, Ridgelake Dr., Veterans Memorial Blvd., and Metairie Lawn Dr. in preparation of waterline replacement within the survey area. Plan and Profile drawings were produced as part of this survey. Surveying included use of RTK GPS, Robotic Total Station, and differential leveling.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
September 2023	\$6,133,900.28	\$114,870 - Survey

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
<p>Jefferson Parish Waterline Project 2023-033-WRB</p> <p>Lakeside Shopping Center - N. Causeway Blvd. (Vets to 14th St.)</p> <p>Jefferson Parish Water Department Sidney J. Bazley, III, Director 504-736-6744</p>	<p>Basin was selected as the surveying firm for the topographic survey required as part of the Jefferson Parish Waterline Project 2023-033-WRB. Basin is performing a complete topographic survey of the full right of way width of Causeway Blvd. and Severn Ave., as well as a full topographic survey of the Lakeside Mall Shopping Center surface parking lot. The survey is being performed in preparation of waterline replacement along the roadway. Plan and Profile drawings were produced as part of this survey. Surveying included use of RTK GPS, Robotic Total Station, and differential leveling.</p>	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
September 2023	\$6,051,803.02	\$179,908 - Survey

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Topographic Survey for design</p> <p>Industrial East Warehouse Expansion</p> <p>Lake Charles Harbor & Terminal District Nick Pestello, P.E. 337-493-3627</p>	<p>Basin performed a topographic survey for the Port of Lake Charles Harbor & Terminal District of the Industrial East Warehouse and Vicinity. The survey was done in preparation of warehouse expansion. Existing rail spurs, pavement, existing warehouse, existing visible and non-visible utilities were located in preparation of the expansion. RTK GPS in combination with total station equipment were used to perform this survey.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
January 2022	\$1 Million	\$1 Million - Survey & Structural

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Topographic Survey for design Shed 7 - New Construction Lake Charles Harbor & Terminal District Nick Pestello, P.E. 337-493-3627	Basin performed a topographic survey for the Port of Lake Charles Harbor & Terminal District of the proposed location of a new Shed 7. Shed 7 is an approximately 137,000 sf new warehouse building. Existing improvements on site were located including existing slabs, anchor bolts, trenches, wharves, utilities, etc. RTK GPS in combination with total station equipment were used to perform this survey. Differential leveling was performed to establish elevations at the project site.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
August 2022	\$18 Million	\$18 Million - Survey & Structural

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Boundary Survey Sam's Club 3900 Airline Dr. Metairie, LA Carlson Consulting Engineers, INC. 901-384-0404	Basin performed a Boundary Survey of the entire 10 Acre Sam's Club Property in Metairie, LA. The survey was performed in conjunction with proposed improvements to the gas pump operations. Basin located existing boundary monumentation, performed title research and boundary calculations for the survey.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
March 2022	\$500,000	\$25,000 - Survey

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Boundary, Topographic, and Re-subdivision Survey Floor and Decor 3609 Veterans Blvd. Metairie, LA 70002 Floor and Decor Construction Design 404-471-1634	Basin was the surveyor of record for all survey related items for the Floor and Decor project at 3609 Veterans Blvd. in Jefferson Parish. Basin performed an ALTA survey which included a boundary, topographic Survey of the 4.3 Acre Parcel. In addition, Basin performed a major re-subdivision survey of the tract combining all separate parcels into one single parcel. Combination plat was done in accordance with Jefferson Parish standards and received approval from both Jefferson Parish Planning Advisory Board and Council.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
March 2023	\$4.9 Million	\$1.2 Million - Civil & Survey

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
S. Genois St. & I-10 Intersection Right of Way & Easement Survey New Orleans, LA ADB Companies John Messina 636-303-9301	Basin approved a right of way and topographic survey of S. Genois St. between Gravier St. and Interstate 10. Survey included location of Amtrak railroad that crosses through this area. Survey to be used in installation of new Fiber Optic utilities along S. Genois St. and under Interstate 10. Existing right of way of S. Genois St., Amtrak, and Interstate 10 were established with this survey to aid in the acquisition of an easement by the utility company in order to bore across the railroad and interstate rights of way.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
March 2022	\$250,000	\$24,000

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Boundary, Topographic, Bathymetric, and LIDAR Survey Squares A,C,D & Brazilier Island Survey - New Orleans, LA Bryce French 504-427-2090	Boundary and Topographic Survey of 112 Acres containing Brazilier Island and Squares A,C & D adjacent to Chef Pass in New Orleans, LA. Project involved surveys of Brazilier Island, Carter Canal, Jahncke Canal as well as remainder of subject property. Duties included location of canal banks, shore of Brazilier Island and Chef Pass. RTK GPS was used in combination with fixed wing aircraft to perform LIDAR of the subject property. Bathymetric Surveying RTK GPS Survey Surveying services for new construction	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
January 2022	\$1 Million	\$250,000

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Topographic & Hydrographic Survey London Ave. Canal Erosion Mitigation New Orleans, LA	Basin is currently providing Hydrographic & Topographic Surveying support to the contractor responsible for the erosion mitigation project in a portion of the London Ave. Canal. Basin is performing pre-construction and asbuilt single beam sonar of the existing canal bottom. In addition, it is quantifying rock placed for erosion purposes and performing pre-construction and asbuilt cross sections of the levee.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
August 2024	\$2 Million	\$35,000

TEC Professional Services Questionnaire

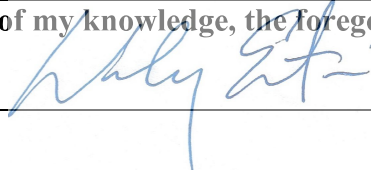
M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. N/A		Basin Engineering & Surveying does not have any prior litigation, nor does it have any on-going litigation between the Firm and Jefferson Parish.
2. N/A		
3. N/A		
4. N/A		

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

- 1) Basin's Principal Land Surveyor has 20 years of experience in the Surveying industry.
- 2) Basin's capacity is increased by its employee's ability to perform multiple functions. Many of its employees as highlighted in their resumes have the ability to perform field work, draft surveys, as well as understand what is needed for a survey from a design perspective. This ability allows Basin's principals to combine any number of employees in order to successfully complete any newly assigned work.
- 3) The firm's offices are located at 2811 B. Toulouse St., New Orleans, LA 70119.
- 4) Basin Engineering & Surveying does not have any prior litigation, nor does it have any on-going litigation between the Firm and Jefferson Parish.
- 5) Basin as a firm as well as its employees individually have successfully completed many land surveying projects as highlighted in our project examples and our key personnel resumes attached to this SOQ.
- 6) Basin currently employs a total of 18 people. The firm's combination of youth and experience has it positioned to provide timely completion of Parish projects. The firm's principals are intimately involved in the review and completion of projects providing its surveyors and support staff with the guidance necessary to manage workload and complete projects on time.
- 7) Basin employees as evidenced by their attached resumes have provided superior performance of previous Parish projects, ensuring projects were performed on time and within budget.

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

Signature:  Print Name: Wesley Eustis
 Title: Principal Date: July, 16, 2024