



## Statement of Qualifications/Proposal

**University Lakes LLC, LSU Real Estate and Facilities Foundation**

Geotechnical Data Collection and Sediment Sampling Services

November 20, 2020

11955 Lakeland Park Blvd., Suite 100  
Baton Rouge, Louisiana 70809

Telephone: 225.293.2460  
[www.geoengineers.com](http://www.geoengineers.com)

Contact: David S. Eley, PE  
[deley@geoengineers.com](mailto:deley@geoengineers.com)

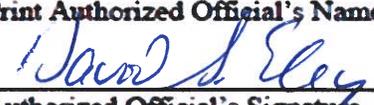
**1. PROPOSER COVER SHEET  
(INCLUDE AS PART OF RESPONSE UNDER TAB 1)**

**Section A. Proposer Information**

<b>Legal Name:</b> GeoEngineers, Inc.	
<b>Main Administrative Address:</b> 11955 Lakeland Park Boulevard, Suite 100	
<b>City &amp; State:</b> Baton Rouge, LA	<b>Zip Code:</b> 70809
<b>Telephone Number:</b> 225.293.2460	<b>Fax Number:</b> 225.293.2463
<b>E-mail Address:</b> deley@geoengineers.com	<b>Web Site:</b> www.geoengineers.com
<b>CEO/Executive Officer:</b> Mike E. Hutchinson	<b>Office Phone Number:</b> 425.861.6000
<b>Chief Financial Officer:</b> Jon Rodriguez	<b>Office Phone Number:</b> 253.383.4940
<b>Contact Person's Name:</b> David S. Eley, PE	<b>Phone Number Including Area Code:</b> 225.663.1508
<b>Mailing Address, City, State, Zip Code, Email:</b> 11955 Lakeland Park Boulevard, Suite 100, Baton Rouge, LA 70809; deley@geoengineers.com	
<b>Type of Entity (check all that apply):</b> <input checked="" type="checkbox"/> Private-for-Profit Entity <input type="checkbox"/> Nonprofit	

**Section B. Certification of Accuracy and Compliance**

I do hereby certify that all facts, figures, and representations made in the Proposal Response(s) are true and correct. Furthermore, all applicable statutes, terms, conditions, regulations, and procedures for program compliance and fiscal control, including but not limited to, those contained in the Proposal Package will be implemented to ensure proper accountability of contracts. I have been duly authorized to act as the representative for this Proposal.

David S. Eley, PE  
Print Authorized Official's Name  
  
Authorized Official's Signature

Principle Geotechnical Engineer  
Authorized Official's Title  
November 20, 2020  
Date

Figure 1

**GeoEngineers, Inc.**

11955 Lakeland Park Boulevard, Suite 100  
Baton Rouge, Louisiana 70809

T: 225.293.2460

F: 225.293.2463

## Letter of Transmittal

November 20, 2020

LSU Real Estate and Facilities Foundation, University Lakes, LLC  
6767 Perkins Rd., Suite 200  
Baton Rouge, LA 70808  
Attention: Project Advisor  
B&D/CSRS  
Email: Lakesinfo@csrsinc.com

### **Re: Proposal for Geotechnical Data Collection and Sediment Sampling Services**

Dear Project Advisor -

GeoEngineers, Inc. began its relationship with LSU in 1965 when it first provided geotechnical recommendations for one of the sorority houses along University Lake. Since then, we have worked on such notable LSU projects as City Park and University Lakes, Alex Box Stadium, the Business Education Center, Science Education Center, the Football Operations Center, multiple parking areas across campus and the 2009 American Institute of Architects Baton Rouge Chapter's Rose Award Winning LSU softball complex. With 30 campus projects on our resume, GeoEngineers already knows many leaders across campus, and LSU knows it can trust our geotechnical services.

We have proven in the past that investing upfront in a thorough geotechnical investigation by a firm with more than 50 years of geotechnical experience in the area—GeoEngineers—can provide real savings where they are most significant—in the construction costs and schedule. With this track record, GeoEngineers has shown it can bring workable solutions to the geotechnical challenges of Louisiana's soft soils.

Based on the information provided by LSU Real Estate and Facilities Foundation and knowledge of the LSU campus and project site, we understand the factors involved with this project and will address them in our design through specific site exploration, laboratory testing and engineering analysis. Our laboratory testing program will include several consolidation tests to develop settlement parameters for evaluation of potential foundation movements.

Most importantly, GeoEngineers is invested in this project and sustaining the preservation of University Lakes. We are committed to the Baton Rouge communities in which we work, play and live in. We are devoted to creating a stable community built on solid foundations that enable communities to thrive.

Thank you for considering our submittal. If there are any questions, please call me at 225.293.2460.

Sincerely,

**GeoEngineers, Inc.**



David S. Eley, PE  
Principal Geotechnical Engineer  
deley@geoengineers.com



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GeoEngineers specializes in crafting unique environmental, ecological and geotechnical solutions for the water and natural resource, energy, transportation, federal, and development sectors. For more information, visit GeoEngineers on the web at [www.geoengineers.com](http://www.geoengineers.com).

## INTRODUCTION

GeoEngineers is pleased to provide this qualifications, workplan, and pricing submittal for the University Lakes Project Geotechnical Data Collection and Sediment Sampling Services Request for Proposals (RFP) dated October 16, 2020 and subsequent Addendum 1 dated November 6, 2020. We have responded to each of the RFP requirements in this document, but if there are additional questions, please contact us at 225.293.2460.

The Proposal Cover Sheet, Letter of Transmittal, and Table of Contents have been presented in the three previous pages, respectively. As detailed in the Table of Contents, this portion of our submittal contains the following sections

- Organizational Background and Overview,
- Firm and Key Staff Experience,
- Project Understanding and Work Plan Approach,
- Current Backlog and Ability to Conform to Schedule, and
- Certification Statement.

We have also included three appendices. Appendix A is a detailed draft workplan to be finalized if GeoEngineers is selected, and Appendix B is a signed copy of Addendum 1 acknowledging receipt. Appendix C is the Cost Proposal Template, which is separate from this document to comply with the Item 4 under Section II – Rules for Process, in the RFP.

## ORGANIZATIONAL BACKGROUND AND OVERVIEW

GeoEngineers, an employee-owned firm, has performed geotechnical exploration, laboratory testing and engineering in the Gulf Coast since established in 1965 under Louis J. Capozzoli and Associates. In 2007, Louis J. Capozzoli and Associates merged with GeoEngineers. We currently have 21 offices nationwide with over 330 employees, of which 41 are local full-time employees based out of our Baton Rouge office.



Here at GeoEngineers, we are proud to deliver the following unique attributes to our clients and projects:

**Over 50 years of subsurface data.** We can tap into our in-house extensive databases on the geologic, hydrogeologic and geotechnical framework, based decades of geotechnical exploration services.

**Diversity, equity and inclusion are at the forefront of our vision for success.** We have a formal Inclusive Contracting Program to better engage with woman-owned, minority-owned, small and disadvantaged businesses.

**In-house equipment.** We own and operate a fleet of field exploration equipment and we specialize in accessing some of the most challenging environments for geotechnical exploration.

**Nationally accredited laboratories.** Our Baton Rouge laboratory is accredited by the American Association of State Highway and Transportation Officials (AASHTO), American Society for Testing and Materials (ASTM), United States Army Corps of Engineers (USACE), and Louisiana Department of Environmental Quality (LDEQ).

**Culture of safety.** We believe safety is the responsibility of everyone, and annually we renew our commitment to our safety program, Home Safe Every Day.

As a firm, we have a commitment to putting people first—both our clients and employees—as demonstrated by three core values: empathy, mastery and grit. We strive to practice empathy. By seeking to understand our clients we can anticipate their needs, advocate on their behalf, and genuinely appreciate what we can accomplish together. An empathetic approach paves the way toward mastery of ourselves and our profession, and we push ourselves to grow and improve each step of the way. And when things get tough, we recognize the need for grit—the courage, passion and tenacity to achieve our clients' goals and our own. With these principles animating our staff, we can give our clients a unique experience and guide them toward success.

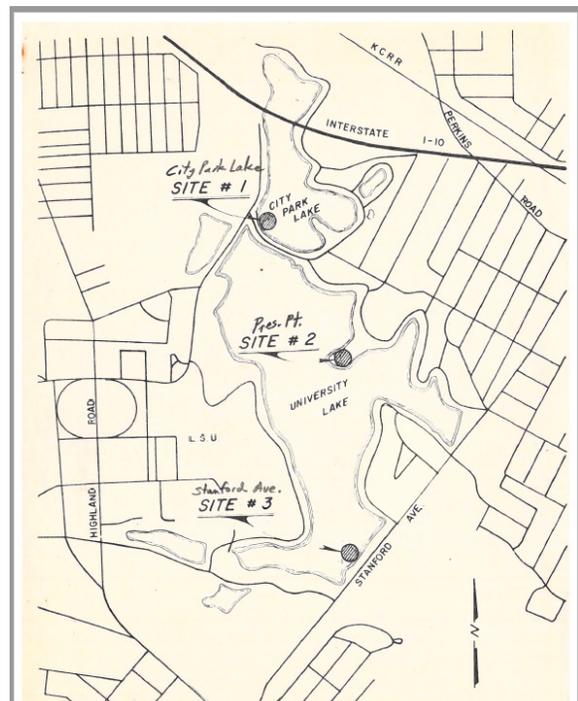
## FIRM AND KEY STAFF EXPERIENCE

GeoEngineers knows the landscape and has the expertise and experience to execute the work. We have performed many projects in the capital region involving slope stabilization, erosions, soft soils borings, and sediment samples. Three similar representative projects, as well some of our people's experiences are summarized below.

### City Park and University Lakes - Erosion Control and Shore Stabilization of Spoil Areas Baton Rouge, Louisiana Client Contact: Henry Schott, 225.389.3000 (now deceased)

These lakes were man-made approximately 96 years ago by constructing a dam along Stanford Avenue and impounding water in a low area. During their lifetime, sediment in storm water filled the lakes considerably. There was dredging performed to deepen the lakes around 1982. Studies of old topographic maps indicated that City Park, President's Point and Stanford Avenue spoil areas were placed along the lake shorelines during the dredging operations. The areas were first enclosed by levees constructed using a dragline on a barge and whatever materials were available on the lake bottom. There was little to no effort made to clean the levee area of soft soil or to get stiff clay for the levee. Subsequent to levee construction, the areas were filled with a hydraulic dredge. The materials dredged were usually very soft clays and very loose silts, typical of the lake bottom.

Since the spoil areas were constructed, considerable loss of ground had occurred along the edges. The continued loss of the spoil areas put the soil back into the lakes negating the beneficial results of the dredging operations. Louis J. Capozzoli and Associates, Inc, which was later acquired by GeoEngineers, work was to determine what was causing the loss of ground along the edges of the spoil areas and then recommend means of stopping the ground loss.



We provided geotechnical engineering services — performing field borings operations, laboratory analyses, and investigations including the waterline edges of all three spoil area sites. The observations indicated the edges of the fill were eroding and sloughing due to wave action and surface runoff. We provided slope stability analyses and reporting along with our recommendations of dressing the banks at a 1 on 3 horizontal slope and then revetting the area. We also evaluated settlement and provided recommendations for paving over these sediments. This evaluation was completed two years after the sediments had been placed in these areas by dredging and our report states the following:

“Some of the areas have developed a drying crust of about 1 foot thick. During our work, some of this crust was removed by excavation operations. The underlying soil was still the consistency of the dredge spoil, not much more than a thick liquid. After a week or so of exposure to air, it also formed a drying crust.”

This assessment of conditions and the associated soil borings and laboratory data will be useful to evaluate proposed future dredging spoil management options.

### **Terrebonne Basin Ridge & Marsh Restoration – Bayou Terrebonne Increment (TE-0139) Terrebonne Parish, Louisiana**

**Client Contact: Micaela Corner, 225.342.1952, Micaela.Corner@la.gov**

Terrebonne Bay supports approximately 155,000 acres of swamp and almost 574,000 acres of marsh, grading from fresh marsh inland to brackish and saline marsh near the bays and Gulf of Mexico. The project will restore approximately 5,000 acres of marsh and ridge habitat and will be implemented in four increments through multiple design and construction phases. The Bayou Terrebonne increment, which includes both ridge restoration and marsh creation, is discussed herein. GeoEngineers is currently working as a sub-consultant to HDR on this large CPRA project.



The Bayou Terrebonne Increment is a ridge restoration and marsh creation project located in western Terrebonne Parish. The ridge restoration portion of this project will restore about 126 acres of earthen ridge for a ridge length of about 8.5 miles. Sediment from Bayou Terrebonne will be dredged to create the ridge. The marsh creation portion of this project will utilize dredged sediment from offshore to create about 1,370 acres of marsh. GeoEngineers has completed the field geotechnical investigation for the project, including 27 soil borings and 69 cone penetration test (CPT) soundings, and associated laboratory testing including consolidation tests for very soft coastal sediment. Much like the 1982 dredge spoil management activities for the University Lakes, marsh creation for this project will consist of building containment dikes around the perimeter of the proposed fill area, then hydraulically dredging sediments and pumping them into the fill area to create marsh in areas that are currently open water. This a common design method for costal marsh creation projects, and GeoEngineers has been the geotechnical design engineer for 23 marsh creation projects with thousands of acres of marsh where we estimated settlement for hydraulically placed fill within containment dikes. Many of these have been constructed and exist as restored marsh. In addition to marsh creation projects, GeoEngineers has also performed geotechnical design for numerous shoreline protection projects.

**Port of Anacortes, Former Scott Paper Mill Waterfront Cleanup**  
**Anacortes, Washington**  
**Client Contact: Teri Switalski, 360.293.3134, [teri@portofanacortes.com](mailto:teri@portofanacortes.com)**

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GeoEngineers provided technical and strategic support to the Port of Anacortes for this waterfront (upland and sediment) cleanup site. The scope of work included preparation of a site investigation, corrective action plan, remedial design documents, construction bid documents (including plans and specifications), engineering cost estimate, and permit application documents. GeoEngineers also assisted the Port with contractor bidding and selection, and provided construction management and oversight, and post-construction monitoring and reporting. Construction support included reviewing and responding to contractor submittals, requests for information, change orders, pay requests, etc.

GeoEngineers played an instrumental role in coordinating with different design consultants, navigating the Port through the regulatory process and acquiring regulatory grants for the cleanup. The selected cleanup action for this site included excavation and landfill disposal of approximately 82,000 cubic yards of contaminated soil/wood debris from upland and shoreline areas. Approximately 50,000 cubic yards of sediment/wood debris was dredged from intertidal and subtidal areas and processed in the upland to segregate sediment from rocks. The rocks were reused on site. Dredged sediment that was not eligible for in-water disposal was disposed in the upland. Remaining contaminated sediment was capped, and eelgrass was planted to restore habitat. Habitat elements were sufficient to offset mitigation requirements associated with impacts from the remedy itself and resulted in a thriving marine community that provides a major park amenity, as well as an educational resource for local schools.

A wave attenuator was an important component of the sediment remedy. This feature protected the cap from erosion to allow more habitat-friendly materials to be used in the final constructed cap surface. The marine engineering firm and GeoEngineers worked together to provide coastal engineering and geotechnical services, respectively, for the wave attenuator. The project design included not only the cleanup action but final construction of the cleanup site as a public waterfront park.



## KEY PERSONNEL BACKGROUND

Independently and as a partnership, GeoEngineers along with our subconsultants - Specialized Environmental Resources, Inc., Element Material Testing and Entek Environmental Laboratories, Inc. have a successful and proven track record of crafting cost-effective solutions. We also understand the importance of partnering with small and minority owned business enterprises. We have a company-wide Inclusive Contracting Program and have identified Entek Laboratories as a potential subcontractor for this project.

The following highlights our key personnel's qualifications, experience and proposed responsibilities:



### *David S. Eley, PE, Principal Geotechnical Engineer*

#### Proposed Responsibilities

Principal, overseeing all components including field investigations, sampling, laboratory testing, engineering analyses, construction monitoring, and surveying.

#### Experience

David Eley is a GeoEngineers principal with 29 years of experience in geotechnical engineering, construction management and project management. David has been performing geotechnical investigations for shoreline protection and marsh creation projects throughout Louisiana for 15 years. David's geotechnical engineering experience includes hydraulic fill, slope stability and settlement, which are all common to these projects. David has managed and/or provided geotechnical engineering on a number of similar projects, including:

- Confidential Client, Plaquemines Parish, LA – Engineering design and construction support services for a river bank remedial excavation and restoration. Design included river bank stability and a large cofferdam to allow dewatering for the excavation.
- Northwest Turtle Bay Marsh Creation (BA-125), Jefferson Parish, LA - Sediment characterization and engineering for containment construction and hydraulically placed fill to create marsh.
- DRC Emergency Services, LLC – Retained to evaluate bank failures along a canal that was dredged to help determine failure cause. Historical imagery showed past failures, prior to dredging, and engineering indicated low factors of safety prior to dredging as well.
- Alligator Bend Shoreline Protection (PO-34), Orleans Parish, LA - Investigation, Testing & Engineering in soft coastal sediments to design shoreline protection.

#### Education

M.S., Civil Engineering  
University of Massachusetts

B.S., Civil/Environmental  
Engineering,  
Clarkson University

#### Registrations

Professional Engineer:  
LA (#26373), TX (#92444),  
AL (#27330)



### *Jennifer Aguetant, PE, Senior Geotechnical Engineer*

#### Proposed Responsibilities

Project Manager, organizing all components including field investigations, sampling, laboratory testing, engineering analyses, construction monitoring, and surveying. Lead on the delivery of detailed engineering reports.

#### Experience

Jennifer Aguetant will serve as a project manager for this contract, bringing 14 years of engineering experience and project management at sites across Louisiana. Her combination of market expertise from oil and gas to development to all facets of coastal geotechnical engineering contributes to her outstanding project management performance. She plays a key role in large and complex projects with her organizational skills and by maintaining

**Education**

M.S., Civil Engineering, The University of Texas at Austin

B.S., Civil Engineering, Louisiana State University

**Registrations**

Professional Engineer:  
LA (#35077)

constant communication with all parties involved in a project. A few projects Jennifer has worked on include the following:

- Confidential Client, Plaquemines Parish, LA - Engineering design and construction support services for a river bank remedial excavation and restoration. Design included river bank stability and a large cofferdam to allow dewatering for the excavation.
- West Belle Pass Barrier Headland Restoration (TE-0052), Lafourche Parish, LA - Geotechnical Services including site investigation, laboratory testing, and engineering to restore a coastal headland by building dikes and hydraulically filling within the dikes,
- East Timbalier Island Restoration (TE-118), Lafourch Parish, LA - Geotechnical Services including site investigation, laboratory testing and engineering to evaluate restoration of a barrier island.
- Island Road Marsh Creation and Nourishment (TE-117), Terrebonne Parish, LA - Geotechnical Services including site investigation, laboratory testing, and engineering to restore a coastal marsh area by building dikes and hydraulically filling within the dikes.

**Alicia Sellers, PE, Geotechnical Engineer****Proposed Responsibilities**

Manager, organizing all components including field investigations, sampling, laboratory testing, engineering analyses, construction monitoring, and surveying. Lead on the delivery of detailed engineering reports. Perform engineering analyses for the contract including but not limited to slope stability, data gap, settlement, and subsurface soil profiles.

**Experience**

Alicia Sellers is a geotechnical engineer whose aptitude for analyzing complex geotechnical problems and excellent organizational and communication skills come together to effectively manage coastal projects. Since joining GeoEngineers in 2015, Alicia has worked on many coastal protection geotechnical evaluations in various capacities including performing site visits, soil sampling, laboratory testing, engineering analyses and reporting. Her breadth of experience and geotechnical understanding has gained her a project management role at GeoEngineers, coordinating coastal and land-based projects throughout Louisiana. She has experience in obtaining permits from various levee boards and government agencies, including Coastal Use Permits (CUPs). During her GeoEngineers career, Alicia has worked on the following coastal protection and restoration projects and more:

- Golden Triangle Marsh Creation (PO-163), Orleans Parish, LA - Geotechnical Services including site investigation, laboratory testing, and engineering to restore a coastal marsh area by building dikes and hydraulically filling within the dikes.
- East Timbalier Island Restoration (TE-118), Lafourche Parish, LA - Geotechnical Services including site investigation, laboratory testing and engineering to evaluate restoration of a barrier island.
- Caminada Headlands Back-Barrier Marsh Creation (BA-171), Lafourche Parish, LA - Geotechnical Services including site investigation, laboratory testing, and engineering to restore a coastal marsh area by building dikes and hydraulically filling within the dikes.
- East Leeville Marsh Creation and Nourishment (BA-194), Lafourche Parish, LA - Geotechnical Services including site investigation, laboratory testing, and engineering to restore a coastal marsh area by building dikes and hydraulically filling within the dikes.

**Education**

M.S., Civil Engineering, Louisiana State University

B.S., Civil Engineering, Louisiana State University

**Registrations**

Professional Engineer:  
LA (#44275)



#### Education

B.S., Wildlife and Fisheries Management, Louisiana State University

### **Brandon Muller, Senior Environmental Scientist**

#### Proposed Responsibilities

Environmental Professional with wetland delineation experience. Brandon would oversee and manage all environmental permitting on the project.

#### Experience

Brandon Muller is a senior environmental scientist with 16 years of industrial, environmental, planning and permitting experience. His expertise includes soil and groundwater remediation; installation, operation and maintenance of remediation systems; scheduling and system installation management; soil and groundwater sampling; and waste transportation and disposal. He has significant experience collaborating with regulatory agencies and industries, including petrochemical, railroad, oil and gas (upstream, midstream and downstream), state and military. Brandon's relevant project experience includes the following:

- Confidential Client, St. James Parish, Louisiana to St. Bernard Parish, LA
- Florida Gas Transmission, Pipeline Maintenance Project, Calcasieu Parish, LA
- Chevron Environmental Management Company, Multiple Projects, Coastal Louisiana Parishes
- USACE – New Orleans District, Caernarvon and Davis Pond Freshwater Diversion, Environmental Impact Statement – Recreational Resources, St. Bernard, Plaquemine, and St. Charles Parish, LA



#### Education

B.S., Natural Resource Ecology and Management, Louisiana State University

#### Registrations

US Army Corps of Engineers Wetland Delineation 38-Hour Training Program, LA

### **Hunter Falcon, Staff Environmental Scientist**

#### Proposed Responsibilities

Perform field investigations under the scope of the contract including but not limited to land-based exploration, marsh/shallow water exploration and perform sampling methods including undisturbed shallow and deep soil borings. Provide field and construction monitoring services for the contract including instrumentation, field QA/QC of construction activities, marsh fill sampling.

#### Experience

Hunter has field research and investigation experience in Louisiana and Gulf South states. His passion for nature led him to obtain his degree in natural resources so he can continue to understand the natural environment and ecosystems of the Gulf Coast. He is a Louisiana native and is familiar with the terrain and environment.

- Confidential Client, Plaquemines Parish, LA - Construction support services, geotechnical instrumentation to monitor soil stability during a project where a cofferdam was driven along the river bank, then dewatered so sediments could be excavated under dry conditions. Hunter was responsible for installing instrumentation, monitoring sediment removal/backfill, interaction with the contractor, and field documentation.
- Barataria Waterway Maintenance (BA-23), Jefferson Parish, LA - Field sampling and preservation of soft sediments and logging boreholes from floating equipment.
- Island Road Marsh Creation and Nourishment (TE-117), Terrebonne Parish, LA - Field sampling and preservation of soft sediments and logging boreholes from floating equipment.
- Northwest Turtle Bay Marsh Creation (BA-125), Jefferson Parish, LA - Field sampling and preservation of soft sediments and logging boreholes from airboat-mounted equipment.

## **Subconsultant**

### **Specialized Environmental Resources, Inc. (SER)**

As a geotechnical, environmental and seismic drilling company, SER specializes in providing equipment and operators to access logistically difficult areas such as transition zones in and near coastal areas, shallow lakes and bays, marshlands and swamps.

#### **Darrel Boudreaux; Senior Geotechnical Driller – Crew Chief**

##### *Experience*

Darrel Boudreaux has 21 years experience operating drill rigs in soft soil and marsh creation areas. As a crew chief, he will oversee all soil borings, field explorations, and sample handling and transport from the boring location. His experience includes:

- Bayou La Loutre Ridge Restoration and Marsh Creation Project (PO-178), St. Bernard Parish, LA
- Bayou Eau Noire, Plaquemine Parish, LA
- Geotechnical Investigation Services, Chemin Metairie Parkway and Détente Road Roundabout, City of Youngsville, LA
- Driller – Crew Chief, Various Projects for Former Employer(s)

#### **Marcus Girouard; Geotechnical Driller – Crew Chief**

##### *Experience*

Marcus Girouard has 10 years experience operating drill rigs in soft soil and marsh creation areas. As a crew chief, he will assist with all soil borings, field explorations, and sample handling and transport from the boring location. His experience includes:

- Mitigation Plan for Port Arthur Project, Confidential Client, Port Arthur, TX
- Driller – Crew Chief, Various Projects for Former Employer(s)

## **Subconsultant**

### **Element Material Testing (Element)**

Element specializes in providing a comprehensive range of Bioassay, GLP compliant toxicity testing, RCRA, wastewater, NPDES, UST, ground water, RECAP, 29-B test methods and procedures and air/emissions testing. They are a single source for full-service environmental testing services to environmental remediation contractors, state and federal governmental agencies, engineering consultants, municipalities and industrial clients across the globe. Element is the only laboratory on the Gulf Coast, and one of only a few in the US, able to offer all of the testing needed for NPDES GMG 290000 under one roof and is certified through The NELAC Institute (TNI) in Louisiana and Texas and also holds similar accreditations in Arkansas.

## **DBE Subconsultant**

### **Entek Environmental Laboratories, Inc. (Entek)**

Entek has been providing analytical and environmental services to the industry since 1985. Entek is local, minority-owned and operated business providing services to most of the petrochemical industrial plants in Louisiana. They are fully accredited for most of the environmental testing required for many Louisiana companies. All environmental testing is performed by EPA and/or by the Louisiana Department of Environmental Quality approved procedures. Entek has been and will remain committed to providing high quality services to our customers.

## PROJECT UNDERSTANDING AND WORK PLAN APPROACH

### *Overall Project Management*

We understand the importance of maintaining good communication between project team members. One of the first tasks for this project will be to work with the University Lakes team to develop a site investigation plan considering the conceptual plans already in place for the lakes. These plans were developed with multiple groups of people in mind and to provide the lakes with multi-use areas. We plan to meet with the University Lakes advisory team and other involved parties to identify potential dredge and fill areas, that will be the basis upon which we develop our exploration plan. Once the investigation locations have been agreed upon, then it is a matter of execution.

The geotechnical data collection and sediment sampling scope consists of two separate but closely related overall tasks. We understand the lakes were originally cypress swamp areas excavated to be approximately 9 feet deep with a few deeper “Step-off” holes up to 20 feet deep. We expect to encounter cypress stumps remaining from when the lakes were first developed. Over the years, the lakes have filled with sediments and in many areas the water depth is 3 feet or less.

Based on this general understanding, GeoEngineers has identified the following challenges that we believe are critical to developing and executing a successful geotechnical data collection and sediment sampling program.

1. As noted in the request for proposals, the accumulated sediments are likely to be very soft and difficult to sample in a manner that preserves the sample in its natural state for testing.
2. There are cypress stumps present. An ideal sampling location will extend through sediment into underlying native soil to capture the full sediment profile. Abandoned stumps that may be at or above the original lake bottom may interfere with sampling the oldest sediments.
3. The lakes were constructed in the 1930s. The production and use of various chemicals and regulation of such chemicals as well as stormwater runoff has changed over time. It is logical to expect the characteristic of sediment and any potential chemicals present in the sediment to vary over the depth of the deposits.
4. The present depth of the lakes, especially around the perimeters, will limit the equipment that can access preferred sediment sampling locations.
5. Lastly, this is a high visibility project with historic importance to Baton Rouge.

### *Our Approach*

Besides some of the basic qualifications that GeoEngineers offers including a robust staff of engineers and scientists based in Baton Rouge, a certified geotechnical laboratory, and a Baton Rouge history going back to our predecessor company Louis J. Capozzoli and Associates, we address each of the challenges above with specific approaches detailed in the following table. Also, please see Appendix A which contains a detailed draft workplan.

CHALLENGE	SOLUTION
<p><b>Sampling soft sediments to preserve their natural state for testing</b></p>	<p>We have sampled a lot of very soft soil for coastal restoration and other projects in Louisiana; literally thousands of samples. To obtain undisturbed samples that best preserve sample characteristics we recommend using a 3-inch diameter Shelby tube and more importantly an Osterberg piston sampler for the 6 geotechnical borings. The Shelby tube dimensions are in accordance with ASTM D1587 requirements for thin-walled samplers and are designed to minimize changes to the sample dimensions and characteristics. The piston sampler creates a vacuum at the top of the tube while the tube is pushed holding even very soft sediments (low-density fluff) in the tube when the tube is retrieved.</p> <p>For the 20 sediment borings, we propose to use vibracore sampling techniques. This technique involves vibrating a continuous 3-inch metal tube through the sediment and recovering the entire core from the top of the low-density fluff through sediments into underlying native soil. These cores do not meet the requirements for undisturbed sampling for geotechnical sampling, but are well suited to sampling sediments for projects such as this.</p>
<p><b>Cypress stumps</b></p>	<p>To avoid starting a soil boring, and having to stop short of underlying native soil due to a stump, we propose to probe the desired soil boring location with a rod to feel for a hard bottom potentially associated with a stump. If we encounter a hard bottom, we will move the location 5 to 10 feet away and probe again, until we find a location where we believe we can sample to native soil.</p>
<p><b>Variation in sediment profile characteristics</b></p>	<p>We typically sample continuously at 2-foot intervals (0-2, 2-4, 4-6, etc.), resulting in 10 samples for a 20-foot deep geotechnical soil boring. For vibracores, we will cut the tube lengthwise and classify the sediments with depth. In either case, we will have a continuous profile of the sediments from which we can evaluate changes in the sediment profile. We also propose to screen samples in the field for volatile organic compounds (VOCs) using a photoionization detector (PID) in 2-foot increments, or less. Field screening will help determine if there are zones or layers that have VOCs, which are typically associated with contamination. If field screening identifies the presence of VOCs, the sample with the highest field screening will be sampled for chemical testing. If field screening does not identify the presence of VOCs, we propose to prepare a composite by mixing an equal volume from each 2-foot interval representative of accumulated sediment, then testing the composite sample for the required chemical constituents.</p>
<p><b>Shallow water</b></p>	<p>Our proposed method to address the shallow lake depths is to use an airboat mounted drill rig. This rig will be able to access any area where there is some water and a soft bottom, provided there are no cypress knees within 2 feet of the water surface. If there are cypress knees, we will have to cut the knees below grade for airboat access. The one potential drawback is that airboats are loud and produce an intense wind with water mist in their immediate wake. Precautions will be taken to avoid negatively affecting pedestrians and surrounding residents.</p>
<p><b>High visibility</b></p>	<p>We think using an airboat-mounted drill rig to help restore the University Lakes is consistent with Louisiana traditions and will be a potential source of positive publicity. We will work closely with University Lakes LLC to develop a plan, schedule, and choreography that tell a story of progress with ties to tradition. GeoEngineers is the oldest surviving geotechnical practice in Baton Rouge. Approximately half of our engineers and scientists are LSU graduates, but we also have attracted talent from outside of Louisiana. We represent a diverse, technology driven, Baton Rouge based firm capable of delivering results for this project.</p>

## CURRENT BACKLOG AND ABILITY TO CONFORM TO SCHEDULE

GeoEngineers has 41 people based in Baton Rouge. We envision that primarily 3 people will be working on this project with intermittent support from others. The three people will be the person leading/performing the field investigation, a project manager in the office coordinating all activities in the field, lab and office, and a staff engineer performing much of the evaluations. These 3 people represent less than 10 percent of our available resources on any given day, and considering this is only an 8-week project, approximately 1 percent of our capacity on an annual basis if these people were 100 percent utilized on this project for the full 8 weeks, which will not be the case. We have the resources to perform this project well.

Probably the most critical resources for this project are the airboat drill rig and the equipment to perform the 6 proposed consolidation tests. We have worked with SER on many projects using airboat-mounted drill rigs and have not had to delay field work due to availability. In addition, the energy sector typically subcontracts SER's equipment; however, the major oil companies are cutting costs and SER's workload has dropped off significantly and they have great availability as a result. With regard to the 6 consolidation tests, these tests can take up to 2 weeks to perform. GeoEngineers has the equipment to perform 10 consolidation tests at the same time, so we are not equipment limited and do not have to use subcontractors for geotechnical lab testing.

In our attached draft workplan (Appendix A), we have a schedule discussion detailing how we propose to meet the 8-week schedule required.

Lastly, while we have the capacity, the size of our firm makes this a very attractive project for us. At 330 employees nationwide, we are a mid-size firm. While we can, and do, perform projects much larger than this, our day-to-day projects are typically less than \$50,000. This is an important project for us that will receive our full attention.

**SCHEDULE C to UL RFP for Geotechnical Data Collection and Sediment Sampling Services –  
CERTIFICATION STATEMENT**

The undersigned hereby acknowledges she/he has read and understands all requirements and specifications of the Request for Proposals (RFP), including attachments.

**OFFICIAL CONTACT.** UL requests that the Proposer designate one person to receive all documents and the method in which the documents are best delivered. Identify the contact name and fill in the information below: (Print Clearly)

Date: November 20, 2020      Official Contact Name: David S. Eley, PE

A. E-mail Address: [deley@geoengineers.com](mailto:deley@geoengineers.com)

B. Facsimile Number with area code:      ( 225 ) 293.2463

C. US Mail Address: 11955 Lakeland Park Boulevard, Suite 100, Baton Rouge, LA 70809

Proposer certifies that the above information is true and grants permission to UL to contact the above named person or otherwise verify the information provided.

By its submission of this proposal and authorized signature below, Proposer certifies that:

1. The information contained in its response to this RFP is accurate.
2. Proposer complies with each of the mandatory requirements listed in the RFP and will meet or exceed the functional and technical requirements specified therein.
3. Proposer accepts the procedures, evaluation criteria, mandatory contract terms and conditions, and all other administrative requirements set forth in this RFP.
4. Proposer's quote is valid for at least *180 calendar* days from the date of the proposal submission deadline specified in the RFP.
5. Proposer understands that if selected as the successful Proposer, he/she will have *15 business days* from the date of delivery of final Contract in which to complete contract negotiations, if any, and execute the final contract document.
6. Proposer certifies, by signing and submitting a Proposal for \$25,000 or more, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in 2 CFR 200. (A list of parties who have been suspended or debarred can be viewed via the internet at [www.sam.gov](http://www.sam.gov).)
7. There is no litigation or any suspension or debarment proceedings that could affect the services to be supplied in any contract resulting from this RFP, or a list of such litigation/ proceedings is attached to this Certification.
8. In the last ten (10) years, the Proposer has not filed (or had filed against it) any bankruptcy or insolvency proceeding, whether voluntary or involuntary, or undergone the appointment of a receiver, trustee, or assignee for the benefit of creditors, or if such proceedings exist, an explanation providing relevant details is attached.
9. There are no pending Securities Exchange Commission investigations involving the Proposer, or, if such are pending or in progress, an explanation providing relevant details and an attached opinion of counsel as to whether the pending investigation(s) will impair the Proposer's performance in a contract under this RFP is attached.



The background of the page is a dark blue topographic map with white contour lines. A dashed white line is drawn across the lower portion of the map. In the center, the text 'Appendix A - Draft Workplan' is displayed in white. This text is enclosed within a white dotted-line frame that consists of two vertical lines and a horizontal line extending to the left edge of the page.

Appendix A -  
Draft Workplan

**Draft Work Plan**

University Lakes Sediment Sampling  
Baton Rouge, Louisiana

*for*

**University Lakes LLC**

November 20, 2020



11955 Lakeland Park Boulevard, Suite 100  
Baton Rouge, Louisiana 70809  
225.293.2460

**Draft Work Plan**  
**University Lakes Sediment Sampling**  
**Baton Rouge, Louisiana**

**File No. 24892-001-00**

**November 20, 2020**

Prepared for:

University Lakes LLC  
[Client Address]  
[Client City, State Zip]

Attention: [Client Primary Contact]

Prepared by:

GeoEngineers, Inc.  
11955 Lakeland Park Boulevard, Suite 100  
Baton Rouge, Louisiana 70809  
225.293.2460

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Brandon C. Muller, PE  
Senior Environmental Scientist

---

David S. Eley, PE  
Principal

BCM:DSE:cc

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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DRAFT

## 1.0 INTRODUCTION

This is a draft plan addressing some of the major components of our proposed investigation. This document will be finalized with review by University Lakes LLC prior to the start of field activities, if GeoEngineers is selected.

Our workplan is broken down into five sections as follow:

- Health and Safety
- Geotechnical Investigation
- Sediment Investigation
- Schedule
- Assumptions

## 2.0 HEALTH AND SAFETY

There are several health and safety issues related to this project that will be addressed in detail in the finalized workplan. They include:

- Work over water,
- Handling soil and sediments, and
- Work in public areas and protection of the public.

## 3.0 GEOTECHNICAL INVESTIGATION

The geotechnical investigation consists of three components:

- Field investigation,
- Laboratory testing, and
- Engineering

### 3.1. Field Investigation

We will work closely with the University Lakes considering the draft development plans and our experience with shoreline stabilization at these same lakes in 1984 to identify candidate sediment placement locations for our investigation. An estimated six soil borings approximately 20 feet deep below the top of the sediment will be drilled to collect sediment/soil samples.

The soil boring locations will be selected with the University Lakes advisors if GeoEngineers is selected for this project. After drilling, the location of each soil boring will be recorded based on a hand-help GPS reading, and the location will be marked with a labeled stake.

### 3.1.1. Equipment

GeoEngineers proposes to use an airboat mounted drill rig to access the soil boring locations. Given that the goal is to build sediment placement areas from the existing shoreline out into the lakes at several locations, the area we recommend sampling is in the lakes within the proposed placement areas. Given the shallow depth of the lakes due to sedimentation, we have proposed an airboat-mounted drill rig for access. We also have 19 soil borings from 3 sites (1 on City Park Lake and 2 on University Lake) with 5 consolidation tests from land-based work we completed in 1984.

To facilitate sample recovery, we will use a Osterberg piston sampler with 3-inch diameter Shelby tubes to collect samples. GeoEngineers has collected thousands of samples in similar soft sediments for coastal restoration projects and projects in lakes and rivers; and we believe the piston sampler is essential for sample recovery. The piston keeps a vacuum on the top of the sample tube, significantly reducing the chance for very soft sediments to fall out of the tube upon extraction.

### 3.1.2. Methods

Based on information we have reviewed and our experience, we expect there to be significant cypress tree stump obstructions underwater. To give us a better chance of drilling the full 20-foot depth desired, we will use a probe rod to check around the perimeter of the locations we plan to drill to check for obstructions prior to drilling.

Actual drilling will be accomplished using rotary wash drilling techniques that are standard practice for geotechnical sampling in Louisiana soil. We propose to continuously sample from the surface of the sediment to a depth of approximately 20 feet below the sediment surface in 2-foot increments. Samples will be kept in the sample tubes and sealed both top and bottom for transport to our laboratory for testing to preserve sample integrity. Drilling, sampling, and sample preservation/transportation will be in accordance with applicable ASTM standards.

## 3.2. Laboratory Testing

Laboratory testing will be completed in GeoEngineers Baton Rouge, Louisiana laboratory, which is approximately 9 miles away from the lakes. Our laboratory has multiple accreditations including American Association of State Highway and Transportation Officials (AASHTO), United States Army Corps of Engineers (USACE), and Louisiana Department of Environmental Quality (LDEQ). Table 3-1 identifies the tests proposed and frequency of testing.

**Table 3-1 – Geotechnical tests and Expected Quantities for Geotechnical Borings**

Test	Quantity (Per boring/Total)
Moisture Content with Classification (ASTM D2216)	5/30
#200 Sieve Wash (ASTM D1140)	2/12
Atterberg Limits (ASTM D4318)	2/12
Organic Content (ASTM D2974)	1/6
UU Triaxial Compression Strength Test (ASTM D2850)	2/12
Consolidation Test (ASTM D2435)	1/6

Consolidation test samples will be selected based on review of the soil boring logs, and sediment vibracores (if available), such that we cover the range of materials encountered with weight towards the more

prevalent materials and conditions. For example, if half of the soil encountered is very soft organic clay, and a quarter is silt, and the other quarter is a muck mixture of vegetation and soil, we will attempt to proportion our testing accordingly. We also typically plot test results vs. moisture and dry density, and there is typically a relationship. This should allow us to project properties for conditions between the tested samples.

### **3.3. Engineering**

Results from field logging and laboratory testing from both the current investigation and our 1984 investigation will be used to generate soil boring logs and characterize the sediments and subsurface soil for the soil borings. This information will be used to evaluate settlement and slope stability for sediment fill material placed in these areas.

Based on our work in 1980s for these same lakes, we expect that sediments, as they exist in the lakes, will not be suitable for fill material without some type of stabilization. We will provide conceptual recommendations, but detailed design of such options will require coordination with the design civil engineer to evaluate costs and volumes and is not included in this estimate. Conceptual options include geotextile reinforcement, drying sediments in geotextile bags on land, spreading and working sediments to dry them to a workable consistency on dry land, and stabilizing sediments with lime, fly ash or cement.

## **4.0 SEDIMENT INVESTIGATION**

Sediment investigation also consists of three components:

- Field investigation,
- Laboratory testing, and
- Reporting

### **4.1. Field Investigation**

We will work closely with the University Lakes considering the draft development plans to locate 20 sediment sampling locations representative of the areas to be dredged. We expect to sample sediments to a depth of approximately 10 feet below the water surface.

The sediment sampling locations will be selected with the University Lakes advisors if GeoEngineers is selected for this project. After completion, the location of each vibracore will be recorded based on a hand-held GPS reading, and the location will be marked with a labeled stake.

#### **4.1.1. Equipment**

GeoEngineers proposes to use an airboat mounted vibracore rig to access the soil boring locations with very shallow water depths or vegetation cover. We considered using the same rotary wash method proposed for drilling; however, vibracoring is much faster and has much less chance for cross contamination between sample depths, if contamination is present.

We plan to field screen soil cores as described below using a photoionization detector (PID) as part of logging the cores.

#### 4.1.2. Methods

As previously stated, we expect there to be significant cypress tree stump obstructions underwater and we plan to use a probe rod to check around the perimeter of the locations we plan to vibracore to check for obstructions.

Vibracore samples will be collected by vibrating a 13-foot long, 3-inch diameter aluminum pipe through the entire sediment profile until refusal, or the limit of the pipe. The pipe, with sample inside is removed in one piece using a winch. These samples are not suitable for consolidation or strength testing; however, they are suitable for classification and other soil properties.

We plan to have two airboats; one will perform vibracore activities, and the second will transport collected vibracores to a field logging station onshore where the samples will be processed. At the field logging station, we will cut the 3-inch metal tubes in half down its length and split the tube into two halves. One half of the sample will be covered with plastic immediately to minimize evaporation. We will then photograph and log the uncovered sediment core; recording the length of sample recovered and field soil classification of the sediments. Within 20 minutes of opening the sample, we will collect representative portions of sediment from approximately 2-foot intervals (or smaller if necessary), place this material in a glass mason jar, and cover the jar with aluminum foil using a ring lid to seal the foil. This sealed jar will be allowed to sit for no less than 5 minutes (time will depend on temperature and other conditions), then the PID will be used to screen the headspace in the jar for the presence of volatile organic compounds (VOCs). Volatile organic compounds are light hydrocarbon compounds typically associated with contamination. If we detect VOCs, we will identify the interval where they were detected for sampling.

If PID readings do not identify any VOCs, a representative composite sample will be collected from the sediment by mixing equal portions, by volume, from 2-foot intervals over the depth of the sediment in the vibracore from the covered sample. If there is a PID detection, a sample will be collected from the interval with the highest PID reading, as well as a composite over the entire core length. Samples will be composited by placing the equal volume portions in a stainless-steel bowl and thoroughly mixing the sediment, then filling the appropriate sample containers for the desired tests. The excess portion of the composite sample, and the remainder of the sample core will be preserved in 2-foot increments in sealed plastic bags to preserve moisture content for possible geotechnical laboratory testing. Any samples with VOCs detections based on PID readings will be clearly labeled as possibly contaminated and segregated from other samples. Upon completion of sampling activities, all sampling equipment will be decontaminated by thoroughly washing with soap and water prior to collecting the next vibracore.

Samples collected for chemical testing will be immediately labeled with the following information, placed in a sealed plastic bag, and placed in an ice chest on ice.

- Project identification (number and/or name)
- Sample identification number/name,
- Initials of sampler,
- Date and time,
- Preservative (if any).

Samples will be delivered under chain-of-custody control to Element and/or ENTEK Laboratories.

#### 4.1.3. Quality Assurance/Quality Control (QA/QC)

QA/QC procedures and methods will be provided if GeoEngineers is selected for this project. Some additional samples envisioned include:

- Trip blanks to make sure contamination is not coming from other sources (expect 4),
- Duplicate samples to check test result repeatability (expect 2),
- Matrix spike/matrix spike duplicate samples to test for test method interferences from the sample (expect 2), and
- Rinsate samples to check for cleanliness of sampling equipment (expect 2).

Additionally, this section will address the level of reporting required by the laboratory.

#### 4.2. Laboratory Testing

Chemical laboratory testing will be completed by Element and/or ENTEK Laboratories. Table 4-1 identifies proposed testing parameters included in this scope.

**Table 4-1. Proposed Chemical Testing and Frequency for Vibracores**

Test	Quantity (Per boring/Total + QA/QC)
Pesticides/PCBs (Method 8081/8082)	Not Included
Herbicides (Method 8151)	Not Included
Volatile Organics (8260) including <ul style="list-style-type: none"> <li>■ Benzene</li> <li>■ Ethylbenzene</li> <li>■ m&amp;p-Xylene</li> <li>■ o-xylene</li> <li>■ Toluene</li> </ul>	1.1/22 + 10 QA/QC = 32
Semi-volatile organics (Method 8270) <ul style="list-style-type: none"> <li>■ 2-Methylnaphthalene</li> <li>■ Acenaphthene</li> <li>■ Acenaphthylene</li> <li>■ Anthracene</li> <li>■ Benzo(a)anthracene</li> <li>■ Benzo(a)pyrene</li> <li>■ Benzo(b)fluoranthene</li> <li>■ Benzo(k)fluoranthene</li> <li>■ Chrysene</li> <li>■ Dibenz(a,h)anthracene</li> <li>■ Fluoranthene</li> <li>■ Fluorene</li> <li>■ Indeno(1,2,3-cd)pyrene</li> <li>■ Naphthalene</li> <li>■ Phenanthrene</li> <li>■ Pyrene</li> </ul>	1.1/22 + 6 QA/QC = 28
Lead (Method 6010)	1.1/22 + 6 QA/QC = 28

Test	Quantity (Per boring/Total + QA/QC)
Total Petroleum Hydrocarbons GRO	1.1/22 + 6 QA/QC = 28
Total Petroleum Hydrocarbons DRO	1.1/22 + 6 QA/QC = 28
Total Petroleum Hydrocarbons ORO	1.1/22 + 6 QA/QC = 28
Extractable Petroleum Hydrocarbons <ul style="list-style-type: none"> <li>■ Aliphatic (&gt;C10-C12)</li> <li>■ Aliphatic (&gt;C12-C16)</li> <li>■ Aliphatic (&gt;C16-C35)</li> <li>■ Aromatic (&gt;C10-C12)</li> <li>■ Aromatic (&gt;C12-C16)</li> <li>■ Aromatic (&gt;C16-C21)</li> <li>■ Aromatic (&gt;C21-C35)</li> </ul>	1.1/22 + 6 QA/QC = 28
Total Petroleum Hydrocarbons <ul style="list-style-type: none"> <li>■ Aliphatic (&gt;C06-C08)</li> <li>■ Aliphatic (&gt;C08-C10)</li> <li>■ Aromatic (&gt;C08-C10)</li> </ul>	1.1/22 + 6 QA/QC = 28

The final parameter list and test methods will be determined if GeoEngineers is selected for this project.

In addition to chemical testing, GeoEngineers has allowed for testing a composite sample from approximately half of the vibracores for characterization of sediment properties as shown in Table 4-2.

**Table 4-2 – Proposed Geotechnical Testing for Sediment Vibracores**

Test	Quantity (Per boring/Total)
Moisture Content with Classification (ASTM D2216)	0.5/10
#200 Sieve Wash (ASTM D1140)	0.5/10
Atterberg Limits (ASTM D4318)	0.5/10
Organic Content (ASTM D2974)	0.5/10

### 4.3. Reporting

GeoEngineers will prepare a report summarizing chemical testing results, compared to appropriate screening standards from the current Louisiana Risk Evaluation and Corrective Action Program (RECAP), and identify constituent exceeding these screening standards (if any). No additional site-specific RECAP evaluation is included within this proposed scope.

This report will provide a log for each vibracore identifying our field classification of sediments and results from any geotechnical testing. Cross sections showing estimated sediment intervals across the lake based on the 20 vibracores and 6 geotechnical borings will also be provided.

## 5.0 SCHEDULE

We expect to meet with the University Lakes if we are selected for this project after authorization, to review this draft workplan, discuss investigation locations, and resolve any outstanding issues. We will finalize this workplan within 1 week of this meeting and have assumed the plan is acceptable at this point for field work to start.

We plan to start the vibracores 1 week after submittal of the finalized workplan for review and expect vibracore sampling to last 4 days. We will start the geotechnical borings either the day following completion of the vibracores, or the following week and expect the borings to be completed in 2 days.

Geotechnical and chemical laboratory testing are expected to be complete 3 weeks after the last day of field exploration activity, and we plan to provide a draft report 3 weeks after that.

Our total estimated schedule starting with the meeting to review this draft workplan is 8 weeks to provide a draft report for review.

## 6.0 ASSUMPTIONS

This workplan is based on the following assumptions

- Louisiana One-Call will be sufficient for utility clearance. We have not included a magnetometer survey or any other method to identify utilities or other obstructions, other than the probe method proposed to check for stumps/obstructions.
- We can launch and use airboat-mounted sampling equipment on the lakes and set up a field processing station for the vibracore samples. GeoEngineers will set up a working perimeter with barricade tape, or other physical markers to keep pedestrian traffic from interfering with our sampling activities.
- No contaminated samples will be taken to the geotechnical lab. GeoEngineers can safely test contaminated samples for geotechnical tests, as additional scope and budget.
- Due to stumps, likely debris (shopping carts, metal/wood debris, etc.), and limited placement area space, it doesn't seem likely that hydraulic dredging is a viable option to remove sediment. We have not included a settling column test or low-stress consolidation test to model hydraulic slurry mixtures.
- Work will be performed during daylight hours. No other restrictions are imposed.
- GeoEngineers will not have to pay any permitting or access fees, or prepare permit documents.
- All sediment not retained for testing will be returned to the lakes. Decontamination liquids used vibracore tubes and other non-sediment waste materials will be correctly disposed of offsite by GeoEngineers.
- As previously stated, GeoEngineers geotechnical evaluation will consist of evaluating existing conditions based on data collected to determine if sediment, in its present form, can be placed as desired to form new recreational land areas. Additional measures to stabilize sediment with extra materials (geotextiles, chemical additives, drying, etc.) will be considered and evaluated with the rest of the design team as additional scope and budget. We will recommend options for evaluation.

- Our RECAP report will consist of comparing test results to appropriate existing RECAP screening standards. No site-specific evaluations are included in this proposed workplan.

DRAFT

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Appendix B -  
Addendum 1

November 6, 2020

**ADDENDUM NO. 1**

**TO: ALL BIDDERS**

**SUBJECT: UNIVERSITY LAKES PROJECT**

**REQUEST FOR PROPOSALS FOR GEOTECHNICAL DATA COLLECTION  
AND SEDIMENT SAMPLING SERVICES by**

**UNIVERSITY LAKES LLC, a single-member entity created and controlled by  
LSU Real Estate and Facilities Foundation (“REFP”)**

**BID DATE: Friday, November 20, 2020 at 12:00 P.M. CT**

This addendum shall be part of the Contract Documents in accordance with the Instructions to Bidders. The following revisions shall be incorporated and take precedence over any conflicting part of the original contract documents. These items are issued to add to, modify and clarify the Contract Documents.

**ADDENDUM:**

This Addendum No. 1 consists of 6 pages including all attachments. **PLEASE INCLUDE THE SIGNED ACKNOWLEDGEMENT OF THIS ADDENDUM WITHIN PROPOSER’S RESPONSE. ELECTRONIC OR SCANNED SIGNATURES ARE ACCEPTABLE.** The signed Acknowledgement of Receipt will not count towards the proposal page limit.

**PART I: Pre-Proposal Conference Call Participants List:**

List of participants from Non-Mandatory Pre-Proposal Conference Call on October 28, 2020.

**PART II: Proposers Questions:**

Proposers Questions and Owners Responses.

**PART III: Acknowledgement of Receipt:**

Acknowledgement of Receipt of this Addendum to be signed and submitted with Proposer’s response. Electronic or scanned signatures are acceptable.

---

**PART I: Pre-Bid Conference Participant List:**

**UNIVERSITY LAKES PROJECT**  
**GEOTECHNICAL DATA COLLECTION AND SEDIMENT SAMPLING SERVICES**  
Wednesday, October 28, 2020 at 1:00 P.M. CT

**PARTICIPANT LIST**

The list below includes information submitted by participants when registering for the Pre-Proposal Conference Call.

<b>Name</b>	<b>Company</b>	<b>Email</b>
Mark Goodson	B&D/CSRS	mark.goodson@csrsinc.com
Seth Mosby	Quality Engineering & Survey (QES)	smosby@qesla.com
Deborah Jones		
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Lauren Ortego	Fenstermaker	lauren@fenstermaker.com
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Kelly Rhodes		
Julian Sagastume	B&D/CSRS	
Brandon Hebron	Atlas	brandon.hebron@oneatlas.com

**End of Section**

---

## PART II: Proposers Questions:

### COMMENTS & QUESTIONS: As points of clarification

1. QUESTION: What is the average depth of the lakes?  
RESPONSE: Please refer to [www.csrinc.com/lakes](http://www.csrinc.com/lakes) for the “Master Plan Info” link.
2. QUESTION: Two lakes are accessible by existing boat ramps. How do you access the other lakes?  
RESPONSE: All lakes are accessible by public roads and right of way servitudes.
3. QUESTION: Are limitation caused by landowners foreseen?  
RESPONSE: No, Lease agreement will provide the consulting team with proper access.
4. QUESTION: On page 4 under “Requirements” is the list or table priority?  
RESPONSE: Table
5. QUESTION: Will the results of the bathymetric and stumps findings be available prior to the survey?  
RESPONSE: The bathymetric and stumps findings will not be available prior to the RFP submittal date of November 20, 2020. Please include a workplan outlining the preferred timing and methodology.
6. QUESTION: How will the geotechnical services be conducted without the engineer?  
RESPONSE: The existing program management team will provide necessary coordination.
7. QUESTION: Are we stamping the design drawings?  
RESPONSE: No
8. QUESTION: Will placement areas be identified along the edges?  
RESPONSE: No, the consulting team will need to provide recommended placement areas within the workplan. Placement areas will be determined during the contract negotiation phase.
9. QUESTION: It was stated during the call that University Lakes LLC (UL) would obtain a lease for all 6 lakes that it would hold throughout the duration of the project. What permits will need to be obtained and with who would coordination need to be conducted? Similarly, with who would coordination for access need to be conducted?  
RESPONSE: The existing program management team will provide permitting coordination. The consulting team is expected to provide necessary documents to support permitting efforts.
10. QUESTION: Can you confirm that the testing schedule listed in the narrative (page 4, Requirements Item 2) is the ruling schedule and not the table listed below Item 2?  
RESPONSE: Please see question 4 of this addendum.
11. QUESTION: The table lists additional hydrocarbon parameters that are not mentioned in the narrative (page 4, Requirements Item 2) DRO, ORO, GRO, Aliphatic and Aromatic. Are those parameters included in the COC also?  
RESPONSE: Please see question 4 of this addendum. Final parameters will be determined during the contract negotiation phase.
12. QUESTION: We plan to use a local laboratory in Baton Rouge, however they only perform lead analysis by Method 6020. Would that be acceptable?  
RESPONSE: All the disposal materials will have to comply with applicable local, state and federal environmental regulations.
13. QUESTION: For the sediment samples will Encores or Terracore kits be required?

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RESPONSE: Please include a workplan outlining the appropriate sampling to comply applicable local, state and federal environmental regulations.

14. QUESTION: For the RECAP Report, do you need a “Level 4” data package?

RESPONSE: To be determined based on data points and collaboration with LDEQ.

15. QUESTION: Would a phased approach be considered in which the bathymetric and stump survey results be delivered ahead of mobilization for the geotechnical data collection task? Survey results could help further refine the Geotech scope?

RESPONSE: Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.

16. QUESTION: Will the surveyor be performing a magnetometer survey in boring locations? This would require Geotech to mobilize after the mag survey?

RESPONSE: Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.

17. QUESTION: Can the number of sampling locations for the lake bottom fluff be increased?

RESPONSE: Responses to the RFP shall be based on the suggested number of sampling locations. Additional sampling may be required throughout the lifecycle of the project. Rates and prices for additional sampling will be determined during the contract negotiation phase.

18. QUESTION: What type of dredging equipment will be used? Cutter-head, dragline, excavator?

RESPONSE: To be determined.

19. QUESTION: Are there any suggested placement areas or more importantly, are there any placement areas that are off limits? This may help better select the deeper boring locations?

RESPONSE: Please see question 8 of this addendum.

20. QUESTION: What is the desired placement methodology? E.g. building containment dikes to dewater, disposing of offsite?

RESPONSE: To be determined.

21. QUESTION: What is the desired end use? E.g. compacted and used for a park, vegetative plantings, additional beach spaces?

RESPONSE: Please refer to [www.csrinc.com/lakes](http://www.csrinc.com/lakes) for the “Master Plan Info” link.

22. QUESTION: Will the lakes be excavated/dredged to a certain uniform elevation? Or will 5’ of material be removed everywhere? Is this the same for all lakes?

RESPONSE: Please refer to [www.csrinc.com/lakes](http://www.csrinc.com/lakes) for the “Master Plan Info” link.

23. QUESTION: Regarding questions 10-14 above: Will coordination with the selected design firm be allowed to better refine the geotechnical investigation plan?

RESPONSE: Yes. The existing program management team will provide coordination services.

24. QUESTION: On the Geotechnical data and sediment sampling scope, is the final report intended to be strictly a data summary or do you intend to include any preliminary engineering design recommendations? As I interpret the RFP, there is not a specific request for strength profiles or other information beyond a summary of test results and possibly boring logs?

RESPONSE: A complete report complete with profiles, summary test results, boring logs and recommendations will be required.

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25. **QUESTION:** As I interpret the suggested scope, the six 20-ft borings are intended to evaluate temporary dredge spoil placement locations. Are there locations already in mind for placement or should we locate the borings based on presumed locations to be revised through consultation with the advisory team subsequent to award?  
**RESPONSE:** Please see question 8 of this addendum.
26. **QUESTION:** It is my understanding that a series of bridges and manmade fill and greenspace features are part of the overall plan. These would of course require a more in-depth geotechnical exploration and design scope. Will those be packaged together in subsequent solicitations to a turnkey team or is there a plan for future stand-alone geotechnical contracts to meet the design requirements of those anticipated features?  
**RESPONSE:** Responses to the RFP shall be based on the suggested number of sampling locations. Additional sampling may be required throughout the lifecycle of the project. Rates and prices for additional sampling will be determined during the contract negotiation phase.
27. **QUESTION:** RFP specifies drilling 6 borings within 50 feet of the bank and within the lakes for settlement analyses. Curious as to what is proposed that would create settlement within the lakes? Should these borings be performed on the banks - on land – and not in the lakes?  
**RESPONSE:** Please refer to [www.csrinc.com/lakes](http://www.csrinc.com/lakes) for the “Master Plan Info” link.
28. **QUESTION:** For all borings, what sample interval is expected – continuous full depth, continuous upper 10 feet and then 5 foot centers, 5 foot centers full depth, etc?  
**RESPONSE:** Continuous full depth.
29. **QUESTION:** How many consolidation tests are expected to be performed within the 6 “near shore” borings? One per boring?  
**RESPONSE:** Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.
30. **QUESTION:** For 3, what sample depth is needed for the consolidation tests?  
**RESPONSE:** Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.
31. **QUESTION:** Is only one chemical test per boring from the 20 “lake borings” required?  
**RESPONSE:** Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.
32. **QUESTION:** For 5, what depth for testing is required?  
**RESPONSE:** Please include a workplan outlining the preferred methodology and include the cost within the unit cost per boring.

End of Section

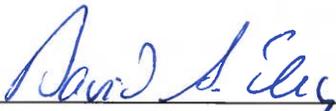
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**PART III: Acknowledgement of Receipt**

**This Acknowledgement of Receipt must be signed by an Authorized Representative of the Proposer and included in Proposer's response to this Request for Proposals.**

**I HEREBY CERTIFY THAT I HAVE ACKNOWLEDGED RECEIPT OF THIS ADDENDUM 1 TO THE REQUEST FOR PROPOSALS FOR MASTER DESIGN SERVICES AND HAVE INCLUDED A COPY OF THIS ACKNOWLEDGEMENT WITH PROPOSAL AS EVIDENCE OF RECEIPT.**

COMPANY NAME: GeoEngineers, Inc.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: 

PRINTED NAME: David S. Eley TITLE: Principle Geotechnical Engineer

DATE: November 20, 2020

End of Addendum



Appendix C -  
Cost Proposal Template  
Submitted Separately