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

Section A. Proposer Information

Legal Name: Southern Earth Sciences, Inc.	
Main Administrative Address: 6352 Piccadilly Square Drive	
City & State: Mobile, AL	**Zip Code:** 36609
Telephone Number: (251) 445-4354	**Fax Number:** N/A
E-mail Address: jcobena@soearth.com	**Web Site:** soearth.com
CEO/Executive Officer: Lewis Copeland, Jr.	**Office Phone Number:** (251) 445-4354
Chief Financial Officer: Bill Brenner	**Office Phone Number:** (251) 445-4354
Contact Person's Name: Joe Cobena	**Phone Number Including Area Code:** (225) 751-1727
Mailing Address, City, State, Zip Code, Email: 11638 Sun Belt Court, Baton Rouge, LA 70809	jcobena@soearth.com
Type of Entity (check all that apply): ☒Private-for-Profit Entity ☐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.

Joe Cobena, P.E.	Baton Rouge Branch Manager
Print Authorized Official's Name	Authorized Official's Title
	11/20/2020
Authorized Official's Signature	Date

Figure 1

SOUTHERN EARTH SCIENCES
Geotechnical | Environmental | Materials Testing

BATON ROUGE OFFICE
11638 Sun Belt Court
Baton Rouge, LA 70809

Tel: (225) 751-1727
Fax: (225) 752-1467
www.soearth.com

November 20, 2020

UNIVERSITY LAKES LLC
Baton Rouge, LA

SUBJECT: Proposed University Lakes Project
Geotechnical Data Collection and Sediment Sampling Services
Baton Rouge, LA
SESI Proposal No: 20-0842

To Whom It May Concern:

SOUTHERN EARTH SCIENCES, INC. appreciates the opportunity to provide this cost estimate to perform geotechnical data collection and sediment sampling services for the above referenced project. Outlined below is our proposed scope of work for the project along with our unit prices and estimated fees for performing the outlined services.

We appreciate this opportunity to be of service. Please do not hesitate to contact us if you have any questions.

Sincerely,

SOUTHERN EARTH SCIENCES, INC.

Leigh E. Brister, E.I.
Project Manager
Registered, Louisiana 33949

Joe Cobena, P.E.
Branch Manager
Registered, Louisiana 42069

LB/JC

University Lakes LLC
Proposed University Lakes Project
Geotechnical Data Collection and Sediment Sampling Services
November 20, 2020

Attachments:
Schedule C - Certification Statement
Addendum 1 Acknowledgement
Addendum 2 Acknowledgement

STANDARD FORM November 20, 2020	Project Name: University Lakes Geotechnical Data Collection and Sediment Sampling	Project Number: N/A	Acknowledgement of Addendum: Addendum 1 - Issued 11/06/20 Addendum 2 - Issued 11/23/20

Firm (as registered with the Louisiana Secretary of State) and official mailing address of the primary office to perform work:

SOUTHERN EARTH SCIENCES
Geotechnical | Environmental | Materials Testing

Southern Earth Sciences, Inc.
11638 Sun Belt Court Baton
Rouge, LA 70809

Name, Title, Telephone Number, and E-mail Address of the official with signing authority for this contract:

Joseph Cobena, P.E.
Branch Manager
225-751-1727
jcobena@soearth.com

Name, Title, Telephone Number, E-mail Address, and Registration Number of full-time LA licensed employee in responsible charge of the project:

Joseph Cobena, P.E.
Branch Manager, Registered LA 42069
225-751-1727
jcobena@soearth.com

I certify that the following information is accurate and complete to the best of my knowledge:

Signature: _____

Date: 11/20/20

Full-time personnel on firm's payroll who are located at the primary work location identified in 3a above:

	Accounting/Audit Specialists		Program/Project Directors
2	Administrative/Data Entry		Project Managers
	Architects (Licensed) Document		Project Specialists
	Controls Specialist		Scheduler
	Cost Estimator	1	Other (Sales Manager)
3	Engineers (Licensed) (P.E. and E.I.)	5	Other (Technicians)
	Principal	11	Total Personnel

Full-time personnel on firm's payroll, not located at the primary work location, to be used on this project:

	Accounting/Audit Specialists		Schedulers
	Architects		Other (Title)
	Document Controls Specialist		Other (Title)
3	Engineers/Geologist		Other (Title)
1	Engineers in Training		Other (Title)
	Principals		Other (Title)
	Program/Project Manager	4	Total Personnel

Do you presently have sufficient staff to perform these services? (Yes/No)

YES

Organizational Background and Overview

Southern Earth Sciences, Inc. (SESI) was founded in 1976 and provides geotechnical engineering, construction materials testing and environmental services throughout the southeast on industrial, commercial and government projects. SESI has offices in Baton Rouge, Mandeville and New Orleans, Louisiana. The corporate office is located in Mobile, Alabama with additional branch offices in Alabama (Mobile, Montgomery and Summerdale) and Florida (Panama City, Tallahassee and Destin).

Professional Staff: SESI has a professional staff consisting of nineteen (19) Engineers and four (4) Geologists. The entire professional staff of SESI has extensive experience in performing geotechnical, environmental and hydrogeologic investigations.

Subprofessional Expertise: SESI presently employs approximately ninety (90) inspectors and technicians with field and laboratory testing experience. These technicians are experienced in virtually every aspect of subsurface investigations, construction and environmental services. Our technicians are OSHA safety trained and our personnel conform to strict corporate alcohol, drug and safety policies.

GEOTECHNICAL SERVICES

Geotechnical and Construction Materials Laboratory

All SESI locations have basic laboratory facilities but extensive capabilities exist in Baton Rouge and New Orleans, Louisiana; Mobile, Alabama; and Panama City, Florida. These laboratories are completely outfitted to perform ASTM, AASHTO and Corps of Engineering (COE) testing of soils, concrete, asphalt and metals. Our laboratories hold certifications from the Corp of Engineers, American Association of State Highway Transportation Officials (AASHTO), CMEC in Florida, and LDEQ in Louisiana.

Field Drilling & Site Investigation

Cone Penetration Testing (CPT), 5" Undisturbed Sampling, conventional SPT Testing, Macro Core, Ground Water Monitoring Wells, Vibra Core and Rock Coring are among our areas of expertise.

Our field crews have completed the Hazard Assessment and Response Management Course as required by 29 CFR 1910-120.
All drilling rigs have the ability to drill with flight auger, hollow-stem auger or wet-rotary methods making them very versatile. Our drillers have over 100 years of experience in sampling from a variety of platforms.

The Southern Earth Sciences Cone Penetrometer System is designed to provide high quality geotechnical and hydrogeological in-situ soil properties. Our 20-ton capacity track-mounted and truck-mounted CPT units have an enclosed cabin for worker comfort as well as protection from the environment. Electronic logs can be emailed from the field to our engineers and clients expediting field decisions. All CPT field testing procedures are performed in accordance with ASTM D 5778-95.

The two GeoProbe 6625 units are capable of macro core soil sampling or when anchored, up to 20 tons of pushing capacity for CPT use. These CPT units have also been mounted on a variety of marsh platforms for inaccessible locations.

SESI Vibracore

SESI's vibracore has capabilities to obtain continuous soil samples to depths of up to 20 feet below the mudline in water depths ranging from a couple of feet to as much as 30 feet. Vibracoring is a technique for collecting samples of underwater sediments and wetland soils. A vibracoring apparatus consists of a submersible pneumatic or hydraulic vibrating

motor, an attached four-inch steel casing with a clear acrylic sample tube and a sample retainer. The attached core tube is driven below the mudline into the sediment by the force of gravity, enhanced by vibration energy. The vibrations cause a thin layer of sediment to mobilize along the inner and outer tube wall, reducing friction and easing penetration into the substrate. When the insertion is completed, the vibracore is turned off, and the apparatus is withdrawn with the aid of a hoisting system. The full length, sample retained in the clear acrylic tube is then removed from the steel casing and the ends properly sealed, allowing visual observation of the soil stratification. The sample tube can then be transported to the laboratory for sediment extrusion and laboratory testing.

Engineering Analysis & Design: Representative services include: Slope stability evaluations; Embankment settlement analysis; Site preparation recommendations; Construction monitoring; High Strain Dynamic (PDA) Testing of Deep Pile Foundations; Low Strain Non Destructive Sonic Echo/Impulse Response Pile Integrity Testing; Excavations; Soil Stabilization; Shallow Foundation Systems; Cross Hole Sonic Logging of Drilled Shafts; and Real Time Monitoring and Recording of Vibrating Wire Instrumentation (i.e. Piezometers, Strain Gauges, Settlement Cells).

INDIVIDUAL RIG DESCRIPTIONS:

GEOPROBE 6625 - TRACK-MOUNTED – CPT AND MACROCORE
(SESI has two (2) Geoprobe's)
The Geoprobe 6625 CPT is a self-anchoring multi-purpose push platform. The system has 20 tons of push capacity when anchored even though the equipment weighs less than 5 tons. The system is capable of collecting CPT data or can be switched to conventional "Geoprobe" mode for Macro-Core soil and groundwater sampling.

20 TON CPT - TRACK-MOUNTED
The 20-ton heavy-weight, track-mounted Penetrometer system is a self-propelled hydraulic remote-controlled CPT system designed for rough terrain or areas where low ground pressure is required for vehicle access. It has two double hydraulic cylinders coupled by a platen that pushes and pulls digital cones and other tools. It is powered by a 130 Hp diesel engine. The unit is equipped with hydraulic leveling jacks and a climate-controlled operations center. The contact pressure is approximately 6 psi.

20 TON CPT - TRUCK-MOUNTED
The 20-ton truck CPT rig is an ideal vehicle to provide quick, cost effective mobile platform for high production in geotechnical and environmental soils investigations. This system is equipped with 5 and 10-ton seismic piezo cones and vision cones. The operations center is climate controlled for maximum production, regardless of weather conditions or time of day.

CME 45 - TRUCK-MOUNTED
The CME-45 is mounted on a four-wheel drive vehicle and is equipped with flight augers, hollow stem augers and mud rotary equipment. Typical borehole depths are up to 120 feet.

DIEDRICH D-50 - TRACK-MOUNTED
The Diedrich D-50 is a very versatile drilling rig and has a very low contact pressure of approximately 3 psi. This particular rig can be configured with augers, mud rotary or NQ wireline. In addition, a Gardner Denver displacement pump is utilized for advancing large diameter boreholes to depths of 200 feet for 5" diameter by 4.5' long tube samples required for COE levee projects.

DIEDRICH D-50 ON TWO-WHEEL DRIVE VEHICLE
This rig is mounted on a two-wheel drive vehicle and is equipped with flight augers, hollow stem augers, mud rotary equipment and NQ wireline. Typical borehole depths are up to 120 feet.

DIEDRICH D-50 ON FOUR WHEEL DRIVE VEHICLE
This rig is mounted on a four-wheel drive vehicle and is equipped with flight augers, hollow stem augers and mud rotary equipment. Typical borehole depths are up to 120 feet.

BARGE MOUNTED (35'X12') DIEDRICH D-50
SESI's 35 foot by 12-foot barge mounted drilling equipment is utilized for projects requiring subsurface investigations over the water. The Diedrich D-50 mounted on the barge is capable of borings in excess of 200 feet.

SESI BATON ROUGE LABORATORY

Our primary soil laboratories are located in Mobile, Alabama; **Baton Rouge, Louisiana**; and Panama City, Florida. The laboratories are completely outfitted to perform ASTM, AASHTO and U.S. Army Corps of Engineers procedures. Our laboratories hold certification from the U.S. Army Corps of Engineers and American Association of State Highway Transportation Officials (AASHTO). A representative list of major equipment follows.
The SESI Baton Rouge laboratory includes four Casagrande lever arm's and one Geojac loading device for consolidation testing; four load frames for compression testing; two hydraulic panels for backpressure saturation and triaxial consolidation; four flexible wall triaxial chambers; and miscellaneous apparatuses for conducting routine classification and index tests. Automated data collection and reduction are utilized for compression and consolidation tests.

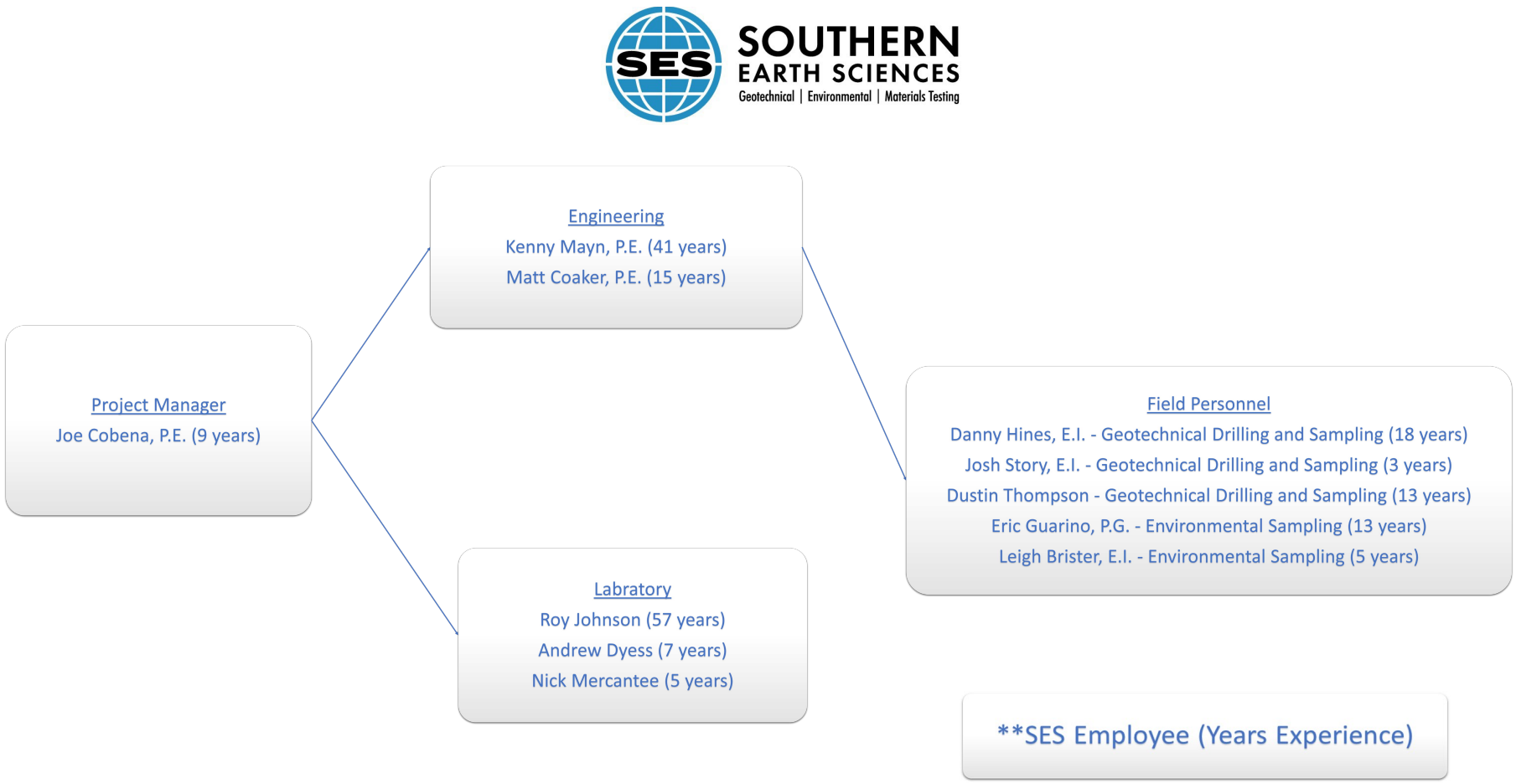
Laboratory Equipment

SESI has GeoJac Digital Load Actuators for automated testing, T100000 series Triaxial Cell system for measuring strength in cylindrical soil specimens, and M100000 Standard Panel for permeability and Triaxial Testing.

The GeoJac Digital Load Actuators are part of an advanced line of automated testing systems. These systems are lightweight and have a load capacity of 2000 pounds and a 1.5-inch stroke. These actuators can meet a wide variety of testing needs for unconfined compression, triaxial and consolidation tests. Used as a basis for most other triaxial cells, the Triaxial Cell measures strength of cylindrical soil specimens. Features include double drainage at sample ends; flow-through valves, tubing and fittings; linear ball bushings; and removable endcaps. The Standard Panel M100000 is an air operated pressure control panel for permeability and triaxial testing. It consists of a control section and three pressure positions. SESI also has in-house extensive soil, aggregate and concrete testing equipment.

The types of tests performed in our laboratory include:
Triaxial compression tests with pore pressure measurements; Consolidation and swell tests; California Bearing Ratio tests; Unconfined compression tests on soil; Direct Shear test; Permeability tests; Soil Suction Tests; Standard and Modified Proctor compaction tests; Atterberg limit tests; Sieve analysis tests; Hydrometer tests; Moisture content tests; Dry density tests; Shrinkage limit tests; and Specific gravity tests.

Staffing Plan – A Diagram showing all personnel assigned to assist on the project, their duties, and immediate supervisors.



Brief résumé of key persons anticipated to work on this project.	
a. Name, title & domicile Joseph "Joe" Cobena, P.E. -- Branch Manager Baton Rouge, LA	b. Position or Assignment for this project Project Manager - Geotechnical Engineer
c. Name of firm by which employed full time Southern Earth Sciences, Inc.	d. Years experience: With this firm: 9 With other firms: 0
e. Education: Degree(s) / Years / Specialization B.S. Civil Engineering Louisiana State University, 2013	f. Active registration: Year registered: _____ Branch: CE State: LA License No.: 42069

Concrete Field-Testing Technician – Grade I (ACI)
Traffic Control Supervisor – LA State Specific (ATSSA)

PROJECT EXPERIENCE

Read Boulevard East, City of New Orleans Public Works – New Orleans, LA – 2012-2014
The purpose of this project was to develop geotechnical engineering recommendations for the existing streets surrounding Read Blvd in New Orleans. The project consisted of improvements to approximately 72,610 linear feet of existing roadway. SESI drilled and sampled 205 borings to a depth of about 10 feet below existing pavement.
Role: Project Engineer, Report Writing

Jesuit Bend Levee Enlargement Project, Plaquemines Parish, LA – October 2018
Plaquemines Parish Government is developing a levee enlargement plan to increase the Jesuit Bend Polder hurricane back levee section between Oakville and LaReusitte, LA, from a 50-year level of flood risk reduction to a 100-year level of flood risk reduction. The current back levee section was designed and constructed in 2012-2013 by the USACE-MVK according to the latest USACE-MVN standards and provides risk reduction for a 50-year (2% AEP) storm event. This 8.3-mile back levee enlargement project seeks to increase protection to the 100-year requirements.
SESI was retained to perform geotechnical field investigations along the section to acquire information necessary to complete the geotechnical analysis for the enlargement project. Investigations will include six (6) oil borings, ranging in depth from 85' to 150', and 49 Cone Penetration Test (CPT) soundings with depths ranging from 50' to 150' to determine soil stratification, shear strengths, unit weights and design soil parameters.
Role: Project Manager responsible for coordinating and successfully completing the field exploration and associated laboratory testing.

Bonnet Carre Spillway Bridge Replacement, Laplace LA – May 2018 - February 2020
Southern Earth Sciences (SESI) had the responsibility of drilling 6,820 feet of soil borings for the Canadian National Railroad over land, marsh, and shallow water. The projects consisted of drilling, laboratory testing, and design recommendations for the new railroad bridges at the Lake Pontchartrain Railroad Bridge over the Bonnet Carre Spillway and the Norco-Macomb Railroad Bridge in Louisiana.
Role: Project Manager

NOPB CPT Soundings, New Orleans LA – July 2018
Southern Earth Sciences (SESI) was hired to provide Cone Penetration Testing (CPT) services in order for the design team to determine the cause of the slope failures occurring along the existing rail alignment near Deckbar Ave. SESI performed six (6) CPT soundings extending to a depth of 50 feet within the existing railway. This required extensive planning and precise execution by SESI. Working closely with NOPB personnel, the field work went as planned with no delays in reopening the rail.
Role: Project Manager / Engineer

River Reintroduction into Maurepas Swamp (PO-29), St. John the Baptist Parish, LA - 2013
The goal of the south Maurepas diversion project is to restore and protect the health and productivity of the swamps south of Lake Maurepas by reintroducing sediment- and nutrient-laden water from the Mississippi River. The projects main structural features will include: two 10x10 box culverts capable of diverting 2,000 cubic feet of water per second; a 100x100 foot receiving pond reinforced with a 20-inch layer of riprap; and a 50-foot wide, 10-foot deep outflow channel roughly 27,500 feet long that will run from the river to Interstate I-10. SESI performed 17 soil borings (5-inch and 3-inch diameter soil borings), and 17 CPT soundings along the proposed alignment. SESI also performed a tremendous amount of laboratory testing that was required to comply with USACE regulations and ASTM standards.
Role: Project Manager

Shell Island East Berm Enhancement/Shell Island West Barrier Island Restoration Project, **Empire, LA** -2012
Overall project objective to construct and reestablish barrier islands to reduce wave energy, reduce shoreline erosion rates and provide ecological habitat benefits to Bastian Bay and surrounding areas. Construction will include approximately 4.0 miles of barrier island restoration, and recreation of approximately 960 acres of marshland. SESI performed drilling and sampling in challenging conditions using a pontoon-mounted drill rig, and an airboat-mounted drill rig. Settlement analyses and slope stability analyses, for both the proposed project were required once the soils information was gathered and analyzed. SESI performed a tremendous amount and a multitude of different laboratory testing including 1-D, low-pressure consolidations, Unconsolidated-Undrained Triaxial strength tests, etc.
Role: Project Manager

LCA Amite River Diversion Canal Modification Study, French Settlement, LA -2012
This primary goal of this challenging project was to allow floodwaters to introduce additional nutrients and sediment into the western Maurepas Swamp by constructing gaps in the existing dredge material banks. Working with CPRA and HNTB, SESI developed a field exploration plan that required establishing ingress/egress routes into the swamp utilizing a marsh buggy style equipment, equipped with a tree/brush cutter. SESI performed numerous soil borings extending to depths of about 50 feet within the existing spoil bank and marsh area. The borings were obtained using marsh buggy mounted drilling equipment. Laboratory testing included extensive and time sensitive testing.
Role: Project Manager

Mid-Barataria Diversion (BA-153), Plaquemines Parish, LA -2013
An ongoing, CPRA project with an overall goal of creating sediment diversion in the Myrtle Grove area intended to maintain existing land and build new land. Once completed, approximately 50,000 to 250,000 c ubic feet per second of Mississippi River water and sediment will flow through the proposed canal and structures. The project will consist of approximately 8,000 LF for 5-inch soil borings and approximately 13,000 LF of CPT soundings. SESI will be responsible for performing 5-inch diameter soil borings and CPT soundings, ranging from 60 feet to 150 feet deep. The field investigations and laboratory testing will be performed in accordance with USACE regulations and ASTM standards.
Role: Project Manager

Brief résumé of key persons anticipated to work on this project.

a. Name, title & domicile	b. Position or Assignment for this project
Matt Coaker, P.E. -- Vice President Mobile, AL	Geotechnical Engineer
c. Name of firm by which employed full time	d. Years experience:
Southern Earth Sciences, Inc.	With this firm: 15 With other firms: 0
e. Education: Degree(s) / Years / Specialization B.S. Civil Engineering - Geotechnical University of South Alabama, 2004	f. Active registration: Year registered: _____ Branch: CE State: LA License No.: 36498

Mr. Coaker's experience includes coordinating geotechnical explorations, performing foundation analyses and preparing foundation reports for various types of projects including bridges, roads, communication towers, multi-story hotel and condominium structures, maritime facility infrastructure (i.e. bulkheads, piers, moorings, dolphins, wharfs, etc.) and various other commercial and industrial building structures. Training and expertise includes: ASCE – Design and Construction of MSE Walls; Geopier – Designing with Rammed Aggregate Pier Systems; Pile Driving Contractors Association/Pile Dynamics – High Strain Dynamic Pile Testing Workshop; Federal Highway Admin/Highway Institute – Design and Construction of Driven Pile Foundations; Drilled Shaft Construction and Design Procedures; Micropile Design and Construction; LRFD for highway Bridge Structures; and Rock Slopes

PROJECT EXPERIENCE

New Bridge on (CR-63) Wilmer-Georgetown Rd over SR-42 (US-98) with Jughandle Interchange onto SR-42 (US-98), ALDOT, Mobile County, AL – 2017-2019
ALDOT CN Project No: NHF-0042 (535) | ALDOT PE Project No: BP-049-042-104
The project consists of constructing a new two-lane bridge on (CR-63) Wilmer-Georgetown Rd over SR-42 (US-98), reconstruction and improvements to CR-63 as required to facilitate construction of the bridge will be made, including construction of a Jughandle Interchange Ramp. SESI performed forty-four (44) soil test borings and four (4) asphalt cores. Borings were advanced from depths ranging from 10 to 60 feet below ground surface. Foundation considerations including slope analyses, were provided along with pavement design and recommendations. In support of the new planned bridge, SESI performed an additional five (5) soil test borings to provide foundation and subsurface considerations, drive pile installation considerations and the recommendation of a test pile program.
Role: Project Manager

SR-182 Bridge Replacements over White Creek Canal and over Little Black Creek (Bridge No. 122.1 and 122.4) - Webster County, MS - MDOT Project No: SP-0730-00(003)/106976/301000 – 2016-2017 Southern Earth Sciences, Inc was retained by the Mississippi Department of Transportation to perform field investigation services and geotechnical design services for replacement of Bridges No. 122.1 and 122.4. The project consisted of replacing existing two-lane bridge structures currently servicing traffic on SR-182 over White Creek Canal (Bridge 122.1) and over Little Black Creek (Bridge 122.4). SESI crews utilized a combination of conventional SPT drilling and CPT testing to complete a total of four (4) soil borings with Standard Penetration Tests (SPT) and two (2) Cone Penetrometer Test (CPT) soundings.

My responsibilities for the project included coordination of all aspects of the project from preparing the scope of work and proposal to issuing the final Geotechnical report. I was specifically responsible for overseeing classification of the collected soil samples, assigning appropriate laboratory soil strength and classification tests, performing and overseeing the engineering analyses (i.e. embankment settlement and slope stability, axial and lateral pile and drilled shaft capacity evaluation, etc.) and coordinating preparation of our geotechnical report presenting our foundation recommendations. I was personally responsible for maintaining open communication with the department during the design and reporting process.
Role: Project Manager/Geotechnical Engineer

MDOT Bridge Replacement on SR-18 over White Oak Creek - 2014
Southern Earth Sciences Inc was retained by the Mississippi Department of Transportation to perform field investigation services and geotechnical design services for the referenced project. The project consisted of a new two lane multi span bridge structure spanning approximately 800 linear feet across the White Oak Creek drainage basin. MDOT required evaluation of shallow foundations, various types of driven piles and drilled shafts for support of the structure. Our crews utilized a combination of conventional SPT drilling and CPT testing to maximize production and to minimize environmental impacts. My responsibilities for the project included classifying the collected soil samples, assigning appropriate laboratory soil strength and classification tests, performing the necessary engineering analyses (i.e. embankment settlement and slope stability, axial and lateral pile and drilled shaft capacity evaluation, etc.) and preparing a geotechnical report presenting our foundation recommendations.
Role: Project Manager

Washington County, AL Bridge Replacements on CR-8 over the Escatawpa River Basin – 2012-2014 The project consisted of three (3) new two lane multi span bridge structures spanning a total of approximately 1,000 linear feet across the Escatawpa River drainage basin. The designers required the evaluation of shallow foundations, various types of driven piles and drilled shafts for support of the structure. Our crews utilized a combination of conventional SPT drilling and CPT testing to maximize production and to minimize environmental impacts. My responsibilities for the project included classifying the collected soil samples, assigning appropriate laboratory soil strength and classification tests, performing the necessary engineering analyses (i.e. embankment settlement and slope stability, axial and lateral pile and drilled shaft capacity evaluation, etc.) and preparing a geotechnical report presenting our foundation recommendations. During construction, SESI engineers performed High Strain Dynamic Testing (PDA) and also reviewed and approved the contractor's hammer submittal by performing Wave Equation Analyses using GRLWEAP software.
Role: Project Manager

Beck's Lake Detour Bridge, Pineville Road Detour Bridge and Juniper Creek Detour Bridge (All FDOT Bridge Replacement/Detour Bridge Projects) – 2014-2015
Southern Earth Sciences, Inc. (SESI) was retained by the contractor to perform geotechnical evaluation of previously collected field data for use in pile design. SESI reviewed the contractor's proposed hammer and driving system and provided recommendations for production pile driving criteria using the Wave Equation Analyses program GRLWEAP. Our reports were reviewed and approved by FDOT engineering personnel.
Role: Project Manager

Shell Island Restoration and Recreation Project, Plaquemines Parish, LA - 2012
The project consists of approximately 4.0 miles of barrier island restoration, and recreation of approximately 960 acres of marshland. The proposed fill area will be filled with dredged material from the Mississippi River and will ultimately be vegetated with trees and marsh grass in order to improve the existing wave berm. SESI is performing 10 borings (ranging from 60 feet to 100 feet deep) from our pontoon mounted drill for the marsh creation areas. Settlement analyses and slope stability analyses, for both the proposed structures and excavations will be required once the soils information is gathered and analyzed.
Role: Geotechnical Engineer

Brief résumé of key persons anticipated to work on this project.	
a. Name, title & domicile Kenny Meyn, P.E. -- New Orleans Branch Manager Kenner, LA	b. Position or Assignment for this project Geotechnical Engineer, Construction Materials Testing, and Special Inspections
c. Name of firm by which employed full time Southern Earth Sciences, Inc.	d. Years experience: With this firm: 34 With other firms: 7
e. Education: Degree(s) / Years / Specialization B.S. Civil Engineering, 1984	f. Active registration: Year registered: _____ Branch: CE State: LA License No.: 24945

Mr. Meyn is the Louisiana Regional Manager for Southern Earth Sciences, Inc. He supervises three (3) welding Inspectors, ten (10) vibration Technicians, three (3) post tension Inspectors, fifteen (15) concrete Technicians, and two (2) roofing Inspectors. Reviews all related QA/QC reports and oversees any problem items which may arise during construction. Visits job sites regularly and attends preconstruction and during construction meetings on major projects.

Mr. Meyn also reviews and approves the Geotechnical Engineering Reports for the Mandeville, and Baton Rouge office locations. Mr. Meyn is directly involved in the geotechnical engineering, especially pertaining to construction considerations and deep foundation systems. Mr. Meyn has extensive experience with deep foundation systems in the New Orleans and North Shore areas as well as construction considerations pertaining to vibration and settlement issues.

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers; The National Society of Professional Engineers; American Welding Society; American Concrete Institute; American Society of Testing Materials – Member of Three (3) Tech. Committees; International Association of Corrosion Engineers; American Institute of Steel Construction

PROJECT EXPERIENCE

Seepage Control OFC-7, New Orleans, LA - 2014-2015
A 13.3 Million CORPS of Engineers Project in New Orleans, LA along the London Ave And 17th St. Canals. This project will stop water seepage through the levee and "I" walls of these two drainage outfall canals which provide drainage and flood protection for New Orleans, LA. SESI performed materials testing including concrete testing, laboratory testing, soil sampling and testing, as well as vibration monitoring. Role: Technician performing testing.

SELA 09 & 07C - Harahan Pump to the River, Harahan, LA - 2011-Current
This project is part of the Southeast Louisiana Urban Flood Damage Risk Reduction Project (SELA). When complete, the project will reduce the risk of damages from a 10-year rainfall event, which is a storm that has a 10 percent chance of happening in a given year and equates to approximately 9 inches of rain over a 24-hour period for our area. This is the first storm water pumping project in the New Orleans area that will be pumped into the Mississippi River in lieu of Lake Pontchartrain. This drainage structure consists of three 84" discharge pipes connecting the new Pumping Station on Dickory Ave. in Harahan, LA and the Mississippi

River including the reconstruction of the Mississippi River Levee. Our clients include M. R. Pittman Construction and B+K Construction.
Role: Project Engineer

West Jefferson Levee Concrete Testing, Marrero, LA - 2016-Current
SESI is performing concrete testing and inspection services for the Southeast Louisiana Flood Protection Authority – West for the West Jefferson Levee project. Individual
Role: Project Manager, oversee technician performing testing.

I-10 Causeway Improvements Phase I and II, Metairie, LA - 2009
This expansion involved the demolition of the existing interchanges and the construction of several interchanges along I-10, Causeway Blvd. and Veterans Memorial Blvd. area.
Role: As part of the quality control team, Mr. Meyn was responsible for monitoring the seismic vibrations during the demolition and pile-driving from the numerous rigs throughout the project. Mr. Meyn was tasked with daily reviews of the seismic vibration data and to perform quality assurance and control for the duration of the project. The field personnel under the supervision of Mr. Meyn, performed seismic monitoring to ensure compliance and maintained a daily project log.

I-510 / I-10 Interchange - Pier Protector Wall - State Project No. 450-90-0226
Provided the concrete testing quality control and quality assurance services for Boh Brothers Construction. ***Role***: Mr. Meyn was in charge of qualifying all data was correct and in compliance with the specifications for this project.

Chalmette Loop Levee, Chalmette, LA - 2010
This is an 8.5-mile-long steel reinforced T-wall built on the existing levee spanning from Verret to Caernarvon. Renovations to existing structure included replacing T-walls to protect St. Mary's Pump Station and the demolition of the existing Creed more Drainage Structure. Southern Earth Sciences, Inc. (SESI) New Orleans' role included pile logging, welding inspections, and concrete testing for over 2,610 concrete placements. Over 41,000 welding inspections were performed, taking approximately 30,000-man hours and generating around 2,500 field reports. As part of the pile logging program, SESI monitored the seismic vibration from the numerous pile-driving rigs.
Role: Mr. Meyn was in charge of all field personnel who performed welding inspections, pile logging, concrete testing. Mr. Meyn also insured the construction material tested was in compliance with the project specifications. Maintained a daily project log as the project progressed for record keeping. As project engineer, Mr. Meyn reviewed the testing results and reports to verify the accuracy and compliance of the test performed and validated the results complied with the specifications provided. Mr. Meyn also maintained a working relationship with the client to ensure project progression.

LA Cancer Research Consortium, New Orleans, LA - 2009
A multi-story cancer research facility providing over 110,000 square feet of space for laboratories as well as clinical services. SESI performed quality control services on every part of the facility, including the parking deck.
Role: Mr. Meyn performed quality control services for the Louisiana Cancer Research Consortium. Mr. Meyn directly supervised the field personnel who performed soil testing, concrete testing, pile monitoring, and welding inspection, rebar inspection and maintained a daily project log. As the Project Manager, Mr. Meyn reviewed the test reports and inspection logs.

Brief résumé of key persons anticipated to work on this project.

a. Name, title & domicile	b. Position or Assignment for this project
Eric A. Guarino, P.G. – Environmental Consulting Department Manager Mobile, AL	Professional Geoscientist
c. Name of firm by which employed full time Southern Earth Sciences, Inc.	d. Years experience: With this firm: 13 With other firms: 7
e. Education: Degree(s) / Years / Specialization B.S. Geology University of South Alabama, 1997	f. Active registration: Year registered: _____ Branch: _____ State: LA License No.: 704

Mr. Guarino has managed the Environmental Consulting Department at Southern Earth Sciences, Inc. (SESI) for over 13 years. He began his career as a mud logger working in the offshore and inland petroleum industry within the outer continental shelf and deep water of the Gulf of Mexico in 1997. Mr. Guarino entered the environmental consulting industry in 1998 as a staff geologist for a worldwide consultant specializing in assessment and remediation of underground storage tank releases. Mr. Guarino managed hundreds of sites in his tenure, including national clients, while mentoring junior staff. Prior to joining the team at Southern Earth Sciences, Inc., Mr. Guarino's performed project manager duties at a midsize, regional engineering company where he contributed to projects involving federal funding, policy implementation and project planning. Mr. Guarino has been a licensed professional geologist since 2004. Mr. Guarino is a member of the National Groundwater Association and is the President of the Southwest Alabama Geological Society. His job responsibilities and experience include coordinating environmental assessments, corrective action planning, risk evaluation and management and regulatory interaction across four states.

PROJECT EXPERIENCE

NuStar Bulk Facility, Blakely Island, AL
SESI performed Sediment Sampling and Analyses for the NuStar facility located on the ease bank of the Mobile River in Mobile, Alabama. Three (3) core samples were collected using a 3-inch diameter acetate tube advanced with a barge-mounted, pneumatic vibratory head advanced to approximately 10 feet below the river bottom. The samples were analyzed for volatiles, semi-volatiles, metals, dioxins, etc. to evaluate the sediment for future placement within the Alabama State Port Authority (ASPA) dredge material disposal area.

Gulf Beach Restoration/Re-nourishment, Gulf Shores, AL
Southern Earth Sciences, Inc. (SESI) particle size distribution of sediment samples for this project. The particle size was to allow for the determination of sediment from offshore areas to compare for texture and color to existing white sand. Particle distribution was performed using standard sieve analyses to determine if sediment would meet specification for grain size and color. Color determination was evaluated using a Munsell Soil Color Book to determine the hue, value and chroma. The sediment samples did not meet the specifications and an alternate source was required for the project.

Mon Louis Island Restoration, Mobile County, AL
Southern Earth Sciences, Inc. (SESI) particle size distribution and textural classification of sediment samples for this project. The testing and textural classification was performed to ascertain if sediment is suitable for the project specifications. The textural classification was evaluated using Robert L. Folk, Petrology of Sedimentary Rocks. The "Folk Classification" involves the detailed evaluation of clastic particles as they were deposited. The classification assigns a classification based on ratios of differing sediment sizes as compared to grain size, induration and structure of the sediment.

Brief résumé of key persons anticipated to work on this project.	
a. Name, title & domicile Roy Johnson -- Lab Supervisor Baton Rouge, LA	b. Position or Assignment for this project Geotechnical Engineering Lab Manager / Laboratory Testing
c. Name of firm by which employed full time Southern Earth Sciences, Inc.	d. Years experience: With this firm: 15 With other firms: 42
e. Education: Degree(s) / Years / Specialization National Institute for Certified Engineering Technicians (NICET) #22541	f. Active registration: Year registered: _____ Branch:_____ State:_____ License No.: _____

PROFICIENCY

Over 55 years' experience in geotechnical investigations, inspections and field testing; OSHA Health and Safety Training; Nuclear Gauge Training

PROJECT EXPERIENCE

1. Field sampling and testing as well as laboratory testing for major Louisiana road and bridge projects.
   - Luling – Destrahan Bridge
   - Pontchartrain Causeway 1970's
   - Natchez – Vidalia
   - Hwy 90 – Raceland – By-Pass
   - Hwy 90 – Houma to Morgan City
   - I-12 Hammond to Baton Rouge
   - I-20 Rayville to Delhi
2. Numerous street and roadway projects for cities and towns throughout Louisiana.
3. Special testing and research into using (man-made) crushed shale for low permeable liner materials.
4. Participation in third party testing for permeability for various clients throughout the United States including landfills in Texas, Oklahoma, Missouri, Arkansas, Tennessee, New York, North Carolina, South Carolina, Georgia, New Jersey, and California.
5. Numerous petrochemical complexes throughout the south.
6. Numerous large structures for several Louisiana colleges.
7. Earthwork control for 1.8 million cubic yards of structural fill at a plant in Pineville, Louisiana.
8. Numerous solid and hazardous waste landfills
   - Olin Chemicals, Lake Charles, LA
   - Schulykill Metals, Baton Rouge, LA
   - Plantation Oaks Landfill, Sibley, MS
   - Pine Ridge Landfill, Meridian, MS

PROJECT SPECIFIC EXPERIENCE

Jesuit Bend Levee Enlargement Project, Plaquemines Parish, LA – October 2018
Plaquemines Parish Government is developing a levee enlargement plan to increase the Jesuit Bend Polder hurricane back levee section between Oakville and LaReusitte, LA, from a 50-year level of flood risk reduction to a 100-year level of flood risk reduction. The current back levee section was designed and constructed in 2012-2013 by the USACE-MVK according to the latest USACE-MVN standards and provides risk reduction for a 50-year (2% AEP) storm event. This 8.3-mile back levee enlargement project seeks to inccrease protection to the 100-year requirements. SESI was retained to perform geotechnical field investigations along the section to acquire information necessary to complete the geotechnical analysis for the enlargement project. Investigations will include six (6) soil borings, ranging in depth from 85' to 150', and 49 Cone Penetration Test (CPT) soundings with depths ranging from 50' to 150' to determine soil stratification, shear strengths, unit weights and design soil parameters.
Role: Lab Supervisor/Laboratory Testing and Analyses

Shell Island East Berm Enhancement/Shell Island West Barrier Island Restoration Project, Empire, LA -2012
Overall project objective was to construct and reestablish barrier islands to reduce wave energy, reduce shoreline erosion rates and provide ecological habitat benefits to Bastian Bay and surrounding areas. Construction will include approximately 4.0 miles of barrier island restoration, and recreation of approximately 960 acres of marshland. SESI performed drilling and sampling in challenging conditions using a pontoon-mounted drill rig, and an airboat-mounted drill rig. Settlement analyses and slope stability analyses, for both the proposed project were required once the soils information was gathered and analyzed. SESI performed a tremendous amount and a multitude of different laboratory testing including 1-D, low-pressure consolidations, Unconsolidated-Undrained Triaxial strength tests, etc.
Role: Lab Supervisor/Laboratory Testing and Analyses

River Reintroduction into Maurepas Swamp (PO-29), St. John the Baptist Parish, LA – 2013
The goal of the south Maurepas diversion project is to restore and protect the health and productivity of the swamps south of Lake Maurepas by reintroducing sediment- and nutrient-laden water from the Mississippi River. The projects main structural features will include: two 10x10 box culverts capable of diverting 2,000 cubic feet of water per second; a 100x100 foot receiving pond reinforced with a 20-inch layer of riprap; and a 50-foot wide, 10-foot deep outflow channel roughly 27,500 feet long that will run from the river to Interstate I-10. SESI performed 17 soil borings (5-inch and 3-inch diameter soil borings), and 17 CPT soundings along the proposed alignment. SESI also performed a tremendous amount of laboratory testing that was required to comply with USACE regulations and ASTM standards.
Role: Lab Supervisor/Laboratory Testing and Analyses

LCA Amite River Diversion Canal Modification Study, French Settlement, LA -2012
This primary goal of this challenging project was to allow floodwaters to introduce additional nutrients and sediment into the western Maurepas Swamp by constructing gaps in the existing dredge material banks. Working with CPRA and HNTB, SESI developed a field exploration plan that required establishing ingress/egress routes into the swamp utilizing a marsh buggy style equipment, equipped with a tree/brush cutter. SESI performed numerous soil borings extending to depths of about 50 feet within the existing spoil bank and marsh area. The borings were obtained using marsh buggy mounted drilling equipment. Laboratory testing included extensive and time sensitive testing. Mr. Johnson was the laboratory supervisor for SESI and performed laboratory testing services.
Role: Lab Supervisor/Laboratory Testing and Analyses

Hero to Oakville – Phase II Geotechnical Investigation, Plaquemines Parish, LA – 2009
SESI performed Eleven (11) soil test borings to depths of 150 feet on land and marsh, and eight (8) Cone Penetration Tests, (CPT) to depths up to 150 feet. Laboratory testing consisted of unconfined compression, unconsolidated undrained triaxial tests, consolidations, particle size analyses, liquid limits, organic content and specific gravity. Role: Lab Supervisor/Laboratory Testing and Analyses

Seabrook Sector Gate, Orleans Parish, LA – 2009
SESI is providing soil investigation services and laboratory testing for the Seabrook Sector Gate project. The laboratory investigation will consist of unconfined compression, unconsolidated undrained triaxial tests, consolidated undrained triaxial tests, direct shear tests, miniature wave shear, consolidation, particle size analysis, liquid limit and organic contents.
Role: Lab Supervisor/Laboratory Testing and Analyses

Brief résumé of key persons anticipated to work on this project.

a. Name, title & domicile	b. Position or Assignment for this project
Danny Hines, E.I. -- Field Investigation Manager Mobile, AL	Coordination of Field Investigations
c. Name of firm by which employed full time	d. Years experience:
Southern Earth Sciences, Inc.	With this firm: 16 With other firms: 2
e. Education: Degree(s) / Years / Specialization B.S. Science/Civil Engineering, 1999 University of South Alabama, Mobile, AL	f. Active registration: Year registered: _____ Branch: CE State: AL License No.: E.I. 12291

WORK EXPERIENCE

2001 to Present - **Southern Earth Sciences, Inc.** -Staff Engineer

1999 to 2001 - **Ben F. Fussell Surveying** – Mobile, AL - Surveyor's Assistant

PROFICIENCY

Proficient with 20-ton truck and track-mounted Hogentogler Digital Systems. Also have experience with jackup barge using anchored Geoprobe 6625 for pushing CPT.

PROJECT EXPERIENCE

Old River Road Bridge Replacement – Baton Rouge, LA - 2016
Replacement of the existing Taylor Creek bridge with a short-span bridge consisting of reinforced concrete slab supported on precast prestressed concrete piles and cast-in-place concrete abutments and approach slabs. SESI performed soil borings at each bridge abutment to develop nominal pile capacities in accordance with AASHTO LRFD and LADOTD design standards for various precast prestressed concrete piles and proposed tip elevations based on service loads. SESI was also tasked with providing temporary bedding recommendations and pavement section for the temporary by-pass road.
Role: Danny served as an engineer and drilling supervisor.

Stennis Space Center – B Stand Tarmac – Hancock County, MS - 2014
Project will consist of replacing roughly 50,000 sq. ft. of reinforced concrete pavement currently serving as the tarmac at the B2 Test Stand at Stennis Space Center (SSC). The project includes design and re-construction of the tarmac to facilitate offloading of the "article" from a barge onto the tarmac.
In support of the project, SESI performed four (4) Cone Penetrometer Test (CPT) Soundings, advanced to depths ranging from approx. 15 to 60 feet below existing ground surface; and three (3) conventional Soil Test Borings with Standard Penetration Tests (SPTs) advanced to depths ranging from 21.5 feet to approximately 60 feet. Laboratory testing included physical examination and general classification testing of samples obtained during the Soil Test Boring operation. Testing included Moisture Content Determination (ASTM D 2216),

No. 200 Sieve Washes (ASTM D1140), Atterberg Limits Tests (ASTM D4318) and Unconfined Compressive Strength Testing (ASTM D5102) and Undrained Unconsolidated Triaxial Shear Tests (ASTM D2850).
Role: Danny served as an engineer and drilling supervisor.

Blackwater River Bridge, ALDOT – Baldwin County, AL – 2008-2011
Project involved performing geotechnical services for two ALDOT bridge projects in Baldwin County. The bridges over Rock Creek and Blackwater River were on the route extending the "Foley Beach Express"
(County Road 83) from Robertsdale north to I-10. The bridges required a total of fourteen (14), 80-ft deep soil test borings in order to develop pile recommendations. Ten of the required locations were virtually inaccessible to track drilling rigs without significant swamp clearing and matting. In order to reduce the SES environmental footprint, it was decided to drill these borings by tri-pod drilling methods. For most drilling locations, the equipment was boated in and a work area established by "flooring" the swamp with plywood. SESI performed additional services in 2010 to facilitate extension of the original bridge design including thirteen (13) soil borings with Standard Penetration Tests (SPT) and seven (7) Cone Penetration Test (CPT) soundings. Soil borings and CPT sounding depths ranged from approximately 80 to 100 feet below ground surface. Laboratory tests were performed on representative samples obtained during the investigation to define soil classification and strength properties. SESI provided complete geotechnical design recommendations including pile foundation evaluation (with consideration of scour), abutment settlement assessment and approach slope stability evaluation.
Role: Engineer/Drilling

Brief résumé of key persons anticipated to work on this project.

a. Name, title & domicile	b. Position or Assignment for this project
Dustin Thompson -- Driller Baton Rouge, LA	Drilling
c. Name of firm by which employed full time	d. Years experience:
Southern Earth Sciences, Inc.	With this firm: 8 With other firms: 5
e. Education: Degree(s) / Years / Specialization Louisiana Water Well Contractor #654	f. Active registration: Year registered: _____ Branch:_____ State:_____ License No.: _____

Sampling Experience
Sampling experience includes 3 ¼" to 5" hollow stem augers, continuous flight augers, 4" to 7" wash borings, 3" and 5" piston sampling, and rock coring.

Drill Rig Experience
Operated Diedrich D50 Track Rig, Diedrich D50 Truck Rig, Geoprobe 6625, Geoprobe DT 5400, Failing 1500, Ardco 1000 ATV Rig, CME 55, and CME 75. Installed numerous water wells via mud rotary and air from 2" to 5" up to 200 ft. Installed monitoring wells from 2" to 3" up to 80 ft. Used 2" and 3" split spoon, cored rock and concrete using 3" up to 30 ft., and Shelby tubes 3" and 4". Experienced in installing Piezometers, Inclinometers, monuments, and deep monitoring wells with proper bentonite seals. Experience in pushing CPT 1" up to 120 ft and 2.25" macro core sampling.

PROJECT EXPERIENCE

Mid-Barataria Diversion (BA-153), Plaquemines Parish, LA - 2013
An ongoing, CPRA project with an overall goal of creating sediment diversion in the Myrtle Grove area intended to maintain existing land and build new land. Once completed, approximately 50,000 to 250,000 cubic feet per second of Mississippi River water and sediment will flow through the proposed canal and structures. The project will consist of approximately 8,000 LF for 5-inch soil borings and approximately 13,000 LF of CPT soundings. SESI will be responsible for performing 5-inch diameter soil borings and CPT soundings, ranging from 60 feet to 150 feet deep. The field investigations and laboratory testing will be performed in accordance with USACE regulations and ASTM standards.
Role: Mr. Thompson was the lead driller for SESI during this project. He will perform the drilling and sampling of the various soil borings.

River Reintroduction into Maurepas Swamp (PO-29), St. John the Baptist Parish, LA - 2013
The goal of the south Maurepas diversion project is to restore and protect the health and productivity of the swamps south of Lake Maurepas by reintroducing sediment- and nutrient-laden water from the Mississippi River. The projects main structural features will include: two 10x10 box culverts capable of diverting 2,000 cubic feet of water per second; a 100x100 foot receiving pond reinforced with a 20-inch layer of riprap; and a 50-foot wide, 10-foot deep outflow channel roughly 27,500 feet long that will run from the river to Interstate I-10. SESI performed 17 soil borings (5-inch and 3-inch diameter soil borings), and 17 CPT

soundings along the proposed alignment. SESI also performed a tremendous amount of laboratory testing that was required to comply with USACE regulations and ASTM standards.
Role: Mr. Thompson was the lead driller for SESI and was responsible for successfully completing a portion of the 5-inch soil borings.

LCA Amite River Diversion Canal Modification Study, French Settlement, LA - 2012
This primary goal of this challenging project was to allow floodwaters to introduce additional nutrients and sediment into the western Maurepas Swamp by constructing gaps in the existing dredge material banks. Working with CPRA and HNTB, SESI developed a field exploration plan that required establishing ingress/egress routes into the swamp utilizing a marsh buggy style equipment, equipped with a tree/brush cutter. SESI performed numerous soil borings extending to depths of about 50 feet within the existing spoil bank and marsh area. The borings were obtained using marsh buggy mounted drilling equipment. Laboratory testing included extensive and time sensitive testing.
Role: Mr. Thompson was one of the drillers for this project and performed several soil borings from the marsh buggy mounted drill rig.

LA Coast Port Fourchon **(Geo Engineers), Port Fourchon, LA - 2010
Dustin Thompson performed drilling and sampling in challenging conditions using an Ardco drill rig. Settlement analyses and slope stability analyses, for both the proposed project were required once the soils information was gathered and analyzed. Geo Engineers performed a tremendous amount and a multitude of different laboratory testing including 1-D, low-pressure consolidations, Unconsolidated-Undrained Triaxial strength tests, etc.
Role: Mr. Thompson was the lead driller for Geo Engineers and performed drilling and sampling of the various soil borings.

**Project not with SESI.

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Joseph Charles Cobena

License/Certificate Type - Number	Expiration Date
PE.0042069	03/31/2022

Status: Active

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Robert Matthew Coaker

License/Certificate Type - Number	Expiration Date
PE.0036498	03/31/2022

Status: Active

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Kenneth John Meyn

License/Certificate Type - Number	Expiration Date
PE.0024945	09/30/2022

Status: Active

LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Ms. Leigh Elizabeth Brister

License/Certificate Type - Number	Expiration Date
EI.0033949	03/31/2021

Status: Active

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(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Josh Ray Story

License/Certificate Type - Number	Expiration Date
EI.0034101	09/30/2021

Status: Active

Alabama Board of Licensure for
Professional Geologists

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Eric A. Guarino

Details

Company: Southern Earth Sciences, Inc.
Phone: 251344-7711
Address: 5460 Rangeline Road, Mobile, AL 36619
License Number: 1101
Effective Date: 1/29/2004
Expiration Date: 1/30/2022

Search Again

Office of Conservation | Department of Natural Resources
STATE OF LOUISIANA

WATER WELL CONTRACTOR'S LICENSE

The Office of Conservation
for the Department of Natural Resource
State of Louisiana

hereby acknowledges that

SOUTHERN EARTH SCIENCES, INC.

Dustin Thompson

has been licensed to drill monitoring wells under the provisions of R.S. 38:3098 and is entitled to practice in the state of Lousiana as a Water Well Contractor.

This License is non-transferable and expires ***June 30, 2020*** unless renewed, revoked or suspended by the licensing authority as prescribed by statue.

Signed and sealed this ***4th*** day of ***October***, ***2019***

RICHARD P. IEYOUB
COMMISSIONER OF CONSERVATION
Office of Conservation
Louisiana Department of Natural Resources

License No. WWC- ***# 654***

Work by firm which best illustrates project experience relevant to the proposed services described in the RFP				
a. Project name & location	b. Project description	c. Nature of firm's responsibility & firm members involved	d. Client's name, address, and telephone number	e. Completion date or Percent Complete & cost in thousands
1. **Zenith Terminal Dredge Samples** Mobile, AL	Sediment Size and Evaluation	Project involved the collection of sediment samples for application to the USACE for maintenance dredging permit along the Mobile River Harbor System. Sediment samples were collected using a piston sampling device. Samples were collected at three locations and composited over a ten (10) foot interval below mudline in water depths of a maximum of thirty (30) feet. As required by the USACE, samples were analyzed for the constituents as identified in the Inland Testing Manual (Green Book). Final report detailing sediment size and chemical distribution was included as part of the permit package. SES Personnel: Eric Guarino	Zenith Energy Terminal Holdings, LLC 835 Cochrane Causeway Mobile, AL 36610 (251) 432-7666	(SESI -- 9/20) $21,500 (SESI)
2. **CN Railroad Bridge Replacement** LaPlace, LA	Replacement of the existing, 3-mile long spillway bridge; new bridge structure to be supported by precast prestressed concrete piles.	Sub-consultant providing drilling and laboratory testing services. Drilling services consisted of 18 soil borings to 120 feet below the mudline at each test location. Laboratory investigations including but not limited to classifications, moistures, atterbergs, grain size analysis, consolidations, and strength testing. SES Personnel: Joe Cobena, Josh Story, Leigh Brister, Dustin Thompson	CN Bridges & Structures Mr. Ray Baker 1 North Buchanan Street Gary, IN 46402 (815) 370-9436	(SESI -- 4/20) $417,789.11 (SESI)
3. **Sediment Sampling** Brewton, AL	Sediment Size and Evaluation	Project consisted of the collection of sediment samples at thirty (30) locations within an existing pond system. Pond system is permitted as part of the wasterwater treatment process prior to effluent discharge to surface water. SESI advanced piston sampler and collected sediment samples to depths of five feet below existing mud line. Water depths ranged from two feet to approximately twelve (12) feet total depth. Cores samples were split and submitted for third party chemical analyses. SES Personnel: Eric Guarino	Georgia Pacific Brewton, LLC 32224 US031 Brewton, AL 36426 (251) 867-3621	(SESI -- 4/20) $11,520 (SESI)
4. **Sediment Testing** Mobile, AL	Sediment Size and Evaluation	Project involved the collection and analyses of sediment in open coastal waters. SESI collected sediment samples at offshore, inland, and island locations. Samples underwent grain size evaluation within SESIs USACE certified soils laboratory. Additionally, samples were evaluated for makeup by X-Ray Diffration and Scanning Electron Microscope (SCEM). SES Personnel: Eric Guarino	Cowles, Murphy, Glover and Associates 457 St. Michael Street Mobile, AL 36602 (251) 433-1611	(SESI -- 4/20) $24,500 (SESI)

Project Understanding and Work Plan

Project Information

SESI understands that the proposed University Lakes Project involves the revitalization of the six lakes around LSU's Campus that comprise the University Lake System. Reportedly, the six lakes (University Lake, City Park Lake, Campus Lake, College Lake, Lake Crest, and Lake Erie) need to be dredged and excavated, and new improvements need to be constructed in and adjacent to the lakes to promote better drainage and flood prevention. Another purpose of the revitalization is to make the lakes more desirable to migratory birds and other wildlife as well as to enhance the lakes as a source of health and recreational activities, and to enhance safety by improving vehicular and pedestrian pathways.

Scope of Services

The proposed scope of work for the University Lakes Project consists of geotechnical data collection and sediment sampling, which are outlined below. It is understood that SESI will be in charge of obtaining any local, state, or federal permit required to complete the work.

Task 1: Geotechnical Data Collection

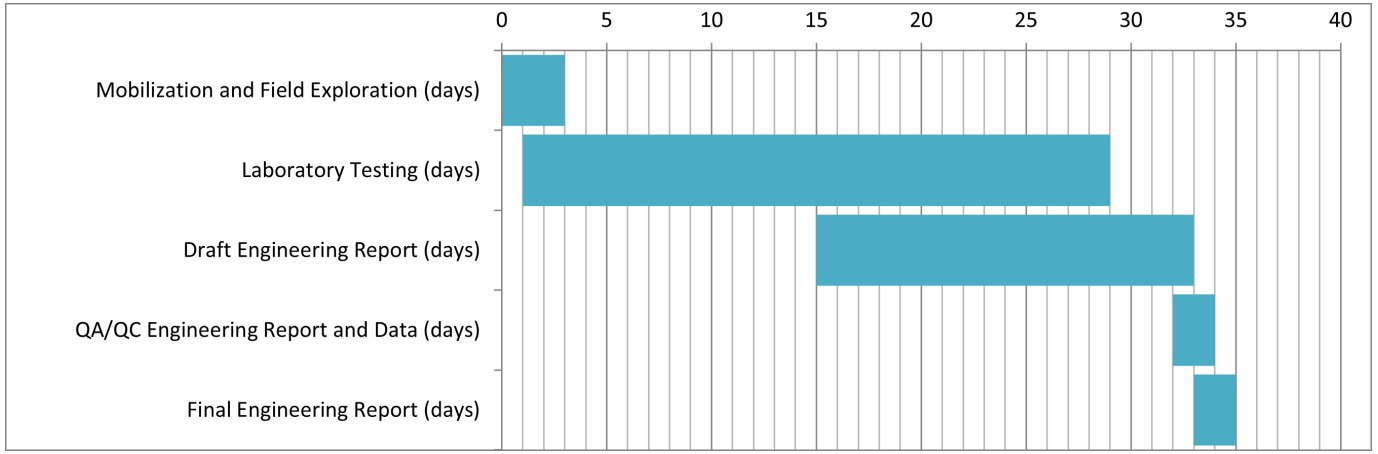
- SESI will perform 20 soil borings within the 6 lakes that consist of the University Lake System in order to capture the low-density fluff suspended above the lake bottom. The 20 borings are planned to extend to depths of approximately 5 feet below the consolidated lake bottom and will be allocated proportionally by lake size. SESI will provide soil classifications (including moisture content and Atterberg Limits/grain size analysis) for each core and a summary of the results for each of these soil borings.
- SESI will perform 6 soil borings within the lakes (1 boring per lake) located approximately 50 feet from the existing banks. Soil borings are planned to extend to an elevation at least 20 feet below the lake bottom and will be sampled continuously.
- SESI will place a stake within 5 feet of each core location, which will be numerically catalogued. The GPS location of each catalogued stake will be recorded.
- Field Exploration: SESI will utilize a single engine airboat drill set (2 airboats, approximately 18 feet in length) with a 2-man crew and a logger, as well as a large support airboat (18 to 20 feet in length) to perform the 20-foot soil borings. In order to obtain the 5-foot borings, we will utilize a flatboat with a 2-man crew; SESI personnel will advance a piston sampler to depths of 5 feet below the existing mudline in order to collect sediment samples.
- Laboratory Testing: Sampled soils, obtained from the soil borings, will be identified in the field by drilling personnel and transported to our laboratory for examination by an engineer. The following tests will be performed on select samples obtained from the soil borings: moisture content, Atterberg Limits, and grain size tests and changes in strata; and strength tests (approximately 20 tests for 6 borings along lake edge) and consolidation tests (approximately 6 tests for 6 borings along lake edge).
- The methodologies used to complete the proposed scope of work and the results of our field and laboratory investigations will be put together in a report prepared and signed by a Registered Professional Engineer in the respective state.

Task 2: Sediment Sampling

- SESI will submit sediment samples from the 20 soil borings previously completed in Task 1 to Pace Analytical for testing (please note that we assume no additional field testing will be required for Task 2). The samples will be analyzed for the following:
    - Pesticides/PCB's (EPA Methods 8081/8082), Herbicides (8151), volatile organics (8260), semi-volatile organics (8270), and lead (6010)
    - It is understood that the parameters listed in the Table on Page 4 of the RFP will also be analyzed and take priority over the above-mentioned list.
- SESI will analyze the cores for appropriate COCs (Constituents of Concern), compare the analytical results to RECAP Screening Standards, and will put together a report to discuss our findings.

Work Plan - Proposed Schedule

SESI plans to mobilize the equipment and field crew to the project site in order to accomplish the proposed field explorations within one (1) week of receipt of Notice to Proceed, which will reportedly be issued on January 11, 2020. SESI anticipates the following schedule:



Please note, each consolidation test will require two (2) weeks to be performed. SESI has developed this schedule based on the assumption that one (1) consolidation test will be deemed necessary per soil boring obtained from the edges of the lakes (6 consolidation tests total).

All work by firm currently being performed (as Prime or Sub-consultant)				
a. Project name, and location	b. Nature of your firm's responsibility (also identify if prime or sub-consultant)	c. Percent complete (by phase/type of work)	d. Contract fees in thousands (by phase/type of work)	
			Total	Remaining
Point Pleasant Relief Wells St. Gabriel, LA (SESI – 7/20- 11/20)	Prime providing drilling and laboratory testing services. Sub-consultant providing CMT services – concrete and soil testing.	99% - SESI	$103,500 (SESI)	
CSAL Elementary School Baton Rouge, LA (SESI – 10/20-11/20)	Prime providing engineering, drilling and laboratory testing services.	95% - SESI	$4,595 (SESI)	
Barriere Asphalt Baton Rouge, LA (SESI – 11/20)	Sub-consultant providing environmental sampling services.	95% - SESI	$3,500 (SESI)	
Neurocare of the South Hammond, LA (SESI – 10/20-11/20)	Prime providing engineering, drilling and laboratory testing services.	85% - SESI	$3,215 (SESI)	
Sugarfield Spirits Gonzales Brewery Gonzales, LA (SESI – 11/20-12/20)	Prime providing engineering, drilling and laboratory testing services.	80% - SESI	$3,225 (SESI)	
455 S Galvez Street New Orleans, LA (SESI – 11/20-12/20)	Prime providing engineering, drilling and laboratory testing services.	50% - SESI	$6,720 (SESI)	
Maple Street Extension St. Tammany Parish, LA (SESI – 11/20-12/20)	Prime providing engineering, drilling and laboratory testing services.	60% - SESI	$2,790 (SESI)	

All work by firm currently being performed (as Prime or Sub-consultant)				
a. Project name, and location	b. Nature of your firm's responsibility (also identify if prime or sub-consultant)	c. Percent complete (by phase/type of work)	d. Contract fees in thousands (by phase/type of work)	
			Total	Remaining
Brooks/Burchfield Residence Berwick, LA (SESI – 11/20-12/20)	Prime providing engineering, drilling and laboratory testing services.	40% - SESI	$4,500 (SESI)	
		Total	**$132,045.00**	

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 11/20/2020 Official Contact Name: Joseph Cobena

A. E-mail Address: jcobena@soearth.com
B. Facsimile Number with area code: (225) 751-1727
C. US Mail Address: 11638 Sun Belt Ct. 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.)
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.

10. There is no open or pending litigation initiated by Proposer or where Proposer is a defendant in a customer matter, or if such proceedings exist, an explanation providing relevant details is attached.
11. Proposer certifies and agrees that the following information is correct: In preparing its response, the Proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminate business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. Proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. UL reserves the right to reject the response of the proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.

Authorized Signature: [signature]
Typed or Printed Name: Joseph Cobena
Title: Branch Manager
Company Name: Southern Earth Sciences, Inc.
Address: 11638 SunBelt Ct.
City: Baton Rouge State: LA Zip: 70809

SIGNATURE of Proposer's Authorized Representative [signature] DATE 11/20/2020

PART II: Acknowledgement of Receipt

This Acknowledgement of Receipt should 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 2 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: Southern Earth Sciences, Inc.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: [signature]

PRINTED NAME: Joseph Cobena TITLE: Branch Manager

DATE: 11/20/2020

End of Addendum

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: Southern Earth Sciences, Inc.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: JCobena

PRINTED NAME: Joseph Cobena TITLE: Branch Manager

DATE: 11/20/2020

End of Addendum