

**SCOPE OF SERVICES
FOR
GEOTECHNICAL SERVICES – IDIQ 2020**

I. INTRODUCTION

The Coastal Protection and Restoration Authority (CPRA) is responsible for planning, designing, evaluating, permitting, implementing, maintaining, operating, and monitoring Coastal Restoration and Flood Protection projects in the Louisiana Coastal Zone. The Indefinite Delivery/Indefinite Quantity (IDIQ) contracts will provide for Geotechnical Engineering Services on projects initiated by CPRA, with a primary focus on marsh creation and other coastal restoration projects. These services may be comprised of, but not limited to, geotechnical field investigations, laboratory testing, analyses, and surveying.

II. SCOPE OF WORK

Consultants will perform geotechnical engineering and related services for CPRA projects on an **as needed, Task Order basis**. Consultants will be required to execute a Task Order which will specify the scope of services, task schedule, and compensations. Each Task Order will become a part of the IDIQ Contract.

Consultants will be required to provide some or all of the following services for each Task Order.

A. Technical Services Required

The specific geotechnical engineering services shall follow CPRA's current Geotechnical Standards for Marsh Creation and Coastal Restoration Projects, and Louisiana Flood Protection Design Guidelines (LFPDG) and consist of the following:

- 1) Field Investigations: Consultant shall provide personnel and equipment to conduct field investigations including, but not limited to:
 - Land based exploration, marine/deep water exploration and marsh/shallow water exploration
 - Undisturbed shallow and deep soil borings using fixed piston sampler for 3-inch diameter soil samples
 - Cone Penetrometer Testing (CPT)
 - Sampling (grab samples and vibracores)

- 2) Laboratory Testing: Testing services deliverables shall follow Geotechnical Document Standards. Consultant shall provide personnel and equipment to conduct laboratory testing including, but not limited to:
 - Soil classification testing (e.g., moisture content, organic content, unit weight, Atterberg limits, grain size distribution, and pH testing, etc.)
 - Soil strength testing (e.g., triaxial – UU)
 - Settlement testing (e.g., 1-D consolidation test, settling column test, low stress consolidation test, etc.)

- 3) Analyses: Consultant shall provide personnel and equipment to conduct geotechnical analyses including, but not limited to:
 - Data gap analyses
 - Slope stability analyses
 - Consolidation settlement analysis of both underlying soils and self-weight consolidation of dredge material, estimated settlement curves, construction sequencing, etc.
 - Subsurface soil profiles (e.g., strength profiles, geologic profiles, etc.)
 - Detailed engineering reports with analyses and recommendations

- 4) Construction Monitoring: Consultant shall provide personnel and equipment for construction monitoring services including, but not limited to:
 - Instrumentation
 - Field QA/QC of construction activities
 - Marsh fill sampling

- 5) Surveying: Consultant shall provide personnel and equipment to perform surveys to support geotechnical field investigations including, but not limited to:
 - Topographic Surveys
 - Bathymetric and Hydrographic Surveys
 - Magnetometer Surveys
 - Jet probing
 - Technical reports

B. Personnel and Equipment Requirements

- 1) General. Provide the field personnel, engineers, office staff, and equipment necessary to accomplish the services as tasked by CPRA and outlined in Section A. Project sites are typically located in remote coastal areas (e.g., marsh, barrier island) requiring special access equipment of different size and capability. Typical requirements will include requesting site access from land owners prior to work being performed.

- 2) Field Work. All soil sampling methods accomplished under this Scope of Services shall be performed under the supervision of a Louisiana Licensed Professional Engineer well versed in such work.
- 3) Survey Requirements. Surveying work accomplished under this Scope of Services will be performed in accordance with the laws and rules of the Louisiana Professional Engineering and Land Surveying Board (LAPELS).
- 4) Engineer Requirements. Engineering work accomplished under this Scope of Services will be performed in accordance with the laws and rules of the Louisiana Professional Engineering and Land Surveying Board (LAPELS).
- 5) Equipment. Provide the necessary instruments, vehicles, boats, drill rigs, CPT rigs and other equipment best suited to accomplish the services required by CPRA.

C. Typical Deliverables

- 1) Technical reports and presentations
- 2) Soil Boring logs, CPT logs, and Daily Field Reports
- 3) Laboratory analysis results
- 4) Survey data and interpretation
- 5) Quantity calculations
- 6) Progress reports

A specific list of deliverables, with reporting format requirements, will accompany each Task Order when issued. All deliverables shall be accompanied by a Letter of Transmittal.