

# Survey Report

New Orleans Landbridge Shoreline Stabilization &  
Marsh Creation Project (PO-169) Additional Sureys  
(Borrow Areas)

St. Tammany Parish, Louisiana

Prepared for the  
State of Louisiana  
Coastal Protection and Restoration Authority

Contract No. 4400005539 (2503-15-21)  
Task Order No. 3



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August 2017

## **Section 1**

### **General Project Description and Background**

This project was conducted by Chustz Surveying, LLC for the State of Louisiana, Office of Coastal Protection and Restoration Authority (CPRA) under contract 4400005539, New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project (PO-169) Additional Surveys, St. Tammany Parish, Louisiana.

#### **1.1 Statement of Work to be Performed**

The required work consists of a comprehensive survey of approximately 2050 acres of marsh and approximately 2.0 linear miles of profile at the designated site. The survey includes 62 cross sections at 98 foot intervals to cover the marsh borrow sites, four centerline profiles for access, reading of gauges three times a day, geophysical survey and cultural resource investigation, and a magnetometer survey.

## **Section 2**

### **Survey Methodology and Data Processing**

#### **2.1 Permission and Access**

No land owners were contacted for this survey as the entirety of the work was performed either on public land or water.

#### **2.2 Horizontal and Vertical Control**

Horizontal control for this job was constrained to DGPS on board the survey vessel and then tied to the Louisiana South State Plane Coordinate System, referencing the North American Datum of 1983 (NAD83-2011). Vertical control was constrained to “TBM 1” which was set for the original PO-169 survey (Reference Appendix A for vicinity map and photo). “TBM 1” is a 16” bolt set by CSI at the south-southeast corner of a concrete pad for handicap parking, located inside the fenced area of the Fort Pike boat landing area. It was surveyed utilizing RTK survey methods with Trimble© R-10 and R-6 receivers, and a TSC3 data collector with the base set on monument “CRMS PO SM 25”. The vertical control references the North American Vertical Datum of 1988 (NAVD88-Geoid 12A).

#### **2.3 Borrow Area and Dredge Pipeline Alignment Bathymetric Survey**

On May 16, 2017, CSI deployed a two person single beam hydrographic survey party to begin the hydrographic survey. First, they located “TBM 1” and ran a level loop to a temporary gauge set at the boat launch and back to establish a water surface elevation. The crew then began the survey at the B1 site, surveying cross sections B1-1 through B1-17 that day. The crew returned the next day and collected the remaining cross sections for the B1 site, along with profile D1. The following day, the crew surveyed cross sections B2-8 through B2-32, B3-1 through B3-8, and profiles D2, D3, and D4. This

completed all of the dredge pipeline alignment profile surveys and the bathymetric survey for the B3 site. The next day, May 19, 2017, the crew returned to the site to complete the job and collected cross sections B2-1 through B2-7. The gauge were read three times a day except for the last day where it was read twice as the final data only took two hours to collect.

## **2.4 Geophysical Survey and Cultural Resource Investigation**

The geophysical survey and cultural resource investigation was conducted by Fugro as a subcontractor of CSI. Reference Appendix B for the Geophysical Survey Report and Cultural Resource Investigation.

## **2.5 Magnetometer Survey**

The magnetometer survey was conducted by Fugro as a subcontractor of CSI. Reference Appendix B for the Magnetometer Survey Report and Drawings.

## **2.6 Office Processing**

The single beam hydrographic survey data for this job was submitted to the CSI office and processed using the latest version of Hypack. Once all the data was processed, it was compiled in Terramodel and QC/QA procedures were conducted. Once complete, the data for the required deliverables was extracted and final deliverables were produced using AutoCAD and Microsoft Office. The preliminary submittal package was delivered on Friday, June 16, 2017.

# **Appendix A**

## **TBM 1 Photos**

New Orleans Landbridge Shoreline Stabilization &  
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St. Tammany Parish, Louisiana



## Vicinity Map



## Photo



# **Appendix B**

## **Geophysical Survey Report, Cultural Resource Investigation, Magnetometer Survey Report and Drawings**

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St. Tammany Parish, Louisiana