

April 2, 2021

**PRE-CONSTRUCTION SURVEY OF R-MONUMENTS
BEACH NOURISHMENT & NORTH END STRUCTURAL
STABILIZATION PROJECT
TOWN OF LONGBOAT KEY, FLORIDA
SARASOTA COUNTY & MANATEE COUNTY, FLORIDA**

Survey QA/QC Report

This report is being delivered with the data and drawing for the Pre-construction survey performed on the profile lines of the R-monuments located in the Town of Longboat Key, Florida.

Survey was performed by McKim & Creed between March 2 and March 30, 2021 as part of the Beach Nourishment & North End Structural Stabilization Project.

QA/QC Report

Quality Assurance and Quality Control

Professionals and technical staff with experience in beach monitoring/nourishment survey were assigned to this project. Planning meeting was held prior to the beginning of field work to discuss Florida survey standards and local conditions (access to the area, weather, tide cycles) required to perform the job.

A project “kick-off” meeting and periodic progress meetings were held to ascertain that the project is running smoothly and resolve any issues.

Quality Control in the Field

- Recovery of control monuments provided in the construction plans.
- Daily RTK-GPS calibration (control checks).
- Daily echosounder bar-checks and SOS (speed of sound) profiles.
- Detailed field notes.
- Data backup.
- Tide checks.
- Redundant positioning systems (RTK-GPS and INS).
- Redundant heave corrections (RTK-GPS and IMU).
- Data overlap between hydro inshore-offshore, and hydro-wade data, unless condition were unsafe.

Quality Control in the Office

- Daily data review.
- Comparison of tide with multiple sources.
- Use of software graphical tools (3D viewing and contouring of data), such as Hypack, AutoCAD, and Trimble Terramodel, to check overlapping points and remove outliers.
- Comparison with historical data.
- Final data review by PLS (Professional Land Surveyor) and ACSM/THSOA Certified Hydrographer.