

**INDIAN RIVER COUNTY, FLORIDA
BOARD MEMORANDUM**

CONSENT

TO: Jason E. Brown, County Administrator

THROUGH: Richard B. Szpyrka, P.E., Public Works Director

THROUGH: James W. Ennis, P.E., PMP, Asst. Public Works Director

FROM: Molly Klinepeter, M.S., Lagoon Plan Environmental Specialist

SUBJECT: Work Order No. 13 - Morgan & Eklund, Inc.
2020 Beach Profile Monitoring Surveys (WINTER)

DATE: January 7, 2020

DESCRIPTION AND CONDITIONS

On October 4, 2016, the Board approved a contract with Morgan and Eklund, Inc. (M&E) for Professional Land Surveying and Mapping Services for a two-year term. The Board amended the Contract on October 18, 2016. The contract was renewed for an additional two-year term on October 4, 2018. M&E is the selected County Consultant for professional onshore/offshore hydrographic surveying services.

The County's Beach Preservation Plan recommends semi-annual beach profile surveys in order to monitor the seasonal, summer and winter, fluctuations of the beach. Proposed Work Order No. 13 provides winter-time countywide hydrographic surveying (beach profile) services for the Sector 3 and Sector 7 Beach Restoration Projects and additional surveying to begin a 2020 countywide (22.4 miles) monitoring effort. Additionally, the winter 2020 Sector 7 beach profile survey will provide necessary data for the design of the upcoming Sector 7 beach re-nourishment project. All onshore and offshore beach profile surveys are conducted along the Florida Department of Environmental Protection (FDEP) Range Monuments at approximately 1,000 foot intervals (alongshore) and extend from the vegetated dune seaward to a location approximately -40 feet offshore (cross-shore). Only Sector 7 has additional quarter and half monument intervals to follow the physical monitoring requirements of the previous Sector 7 beach nourishment project. For project tracking purposes, Work Order No. 13 is divided into three (3) separate tasks.

Task 1: Winter 2020 Sector 3 Beach and Dune Restoration Project Monitoring Survey (R-15 to R-60, 46 Onshore/Offshore Profile Lines)

In 2012, the County completed construction of the Sector 3 Beach Restoration Project, which was subsequently repaired in 2015. The County has completed all Permit required post construction monitoring for the Sector 3 Project. However, hydrographic surveys of the project area must continue semi-annually to determine the long-term performance of the project and if infrastructure may be vulnerable to storm damage during years in between recommended beach projects identified in the Beach Preservation Plan. Task 1 includes all surveying (7.5 miles)

required to provide baseline 2020 physical monitoring data for the upcoming Sector 3 Beach and Dune Project area. Task 1 totals a lump sum amount of \$25,210.

Task 2: Winter 2020 Sector 7 Project Monitoring (R-97-R-108 together with R-99.5, 100.5, 101.25, 101.5, 101.75, 102.25, 102.5, 102.75, 103.25, 103.5, 103.75, 104.25, 104.5, 104.75, 105.25, 105.5, 105.75, 106.5, and 107.5, 31 lines)

In the spring of 2007, the County completed construction of the Sector 7 Beach Restoration Project and has completed all Permit required post construction monitoring for the Sector 7 Project. However, the County is currently under design for a re-nourishment project following three hurricanes leaving Sector 7 with significant storm damages. This area requires additional intermediate survey lines which were a part of the initial Sector 7 monitoring requirements. Task 2 includes all surveying (2 miles) required for annual monitoring of the Sector 7 Beach Nourishment Project area and for design of the re-nourishment project. Task 2 totals a lump sum amount of \$17,030.

Task 3: Winter 2020 Countywide Beach Monitoring (R-61 – R-96 and R-109-R-119, 47 lines)

For the shoreline outside of the Sector 3 and Sector 7 beach projects, countywide beach profile surveys are necessary to identify areas of chronic beach erosion and determine if infrastructure may be vulnerable to storm damage. The beach profile surveys will then be used to determine appropriate projects to mitigate erosion as identified in the County Beach Preservation Plan, including the upcoming Sector 5 Beach Restoration Project. Task 3 includes the remaining countywide (9 miles) beach profile surveys. Task 3 totals a lump sum amount of \$25,870.

Please note:

The Sebastian Inlet District (District), as part of their Inlet Management Plan, conducts semiannual beach profile surveys along the northern 5.6 miles of the County. The District continues to partner with the County and has agreed to provide their certified 2020 beach profile survey data to the County, resulting in a complete 22.4 mile countywide beach profile survey and a combined annual savings of approximately \$30,000 to the County.

FUNDING

Funding for these tasks comes to a total lump sum fee of \$68,110. Funding for the individual tasks are as follows:

Task 1: Winter 20120 Sector 3 Semi-Annual Monitoring Survey (R-15-R-60)

Funding for Task 1 is budgeted and available for physical monitoring of the Sector 3 Beach Restoration Project area in the Sector 3 Post Construction Monitoring fund, Account No. 12814472-033490-05054. Task 1 totals a lump sum amount of \$25,210

Task 2: Winter 2020 Sector 7 Semi-Annual Monitoring (R-97-R-108 together with R-99.5, 100.5, 101.25, 101.5, 101.75, 102.25, 102.5, 102.75, 103.25, 103.5, 103.75, 104.25, 104.5, 104.75, 105.25, 105.5, 105.75, 106.5, and 107.5)

Funding for Task 2 is budgeted and available for physical monitoring of the Sector 7 Beach

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Restoration Project area in the Sector 7 Beach Preservation Monitoring fund, Account No. 12814472-033490-05079. Task 2 totals a lump sum amount of \$17,030.

Task 3: Winter 2020 Countywide Beach Monitoring (R-61 – R-96 and R-109-R-119)

Funding for Task 3 is budgeted and available for physical monitoring of non-project areas in the Beach Restoration Fund/Other Professional Services, Account No. 12814472-033190. Task 3 totals a lump sum amount of \$25,870.

RECOMMENDATION

The recommendation of staff is for the Board to approve Work Order No. 13 to the Professional Land Surveying and Mapping Services contract with Morgan and Eklund, Inc. and authorize the Chairman to sign two (2) copies of the Work Order on behalf of the County.

ATTACHMENT

Morgan and Eklund, Inc. Work Order No. 13

Scope of Work Winter Semi-Annual Coastal Monitoring Survey

APPROVED AGENDA ITEM FOR: JANUARY 21, 2020