

INDIAN RIVER COUNTY, FLORIDA  
MEMORANDUM

**TO:** Board of County Commissioners

**THROUGH:** John A. Titkanich, Jr., County Administrator

**FROM:** Eric Charest, Interim Natural Resources Director

**SUBJECT:** Work Order No. 5 - Morgan & Eklund, Inc., 2024 Beach Profile Monitoring Surveys (WINTER)

**DATE:** October 17, 2023

**DESCRIPTION AND CONDITIONS**

On October 4, 2022, the Board of County Commissioners (BCC) approved a contract with Morgan and Eklund, Inc. (M&E) for Professional Land Surveying and Mapping Services for a two-year term. 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. 5 provides winter-time hydrographic surveying (beach profile) services for the Sectors 3 and 5 Beach Nourishment Projects, the proposed Sector 4 Dune Nourishment Project, and additional surveying to begin a 2024 countywide (22.4 miles) monitoring effort. 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 3,000 feet offshore (cross-shore) to an estimated depth of -40 feet. For project tracking purposes, Work Order No. 5 is divided into four (4) separate tasks.

**Task 1: Winter 2024 Sector 3 Phase 1 Physical Monitoring Survey (R-15 to R-60, 46 Onshore/Offshore Profile Lines)**

The County is required by the FDEP Permit to monitor the physical changes associated with the Sector 3 nourishment project semi-annually to determine the long-term performance of the project and if infrastructure may be vulnerable to storm damage. The hydrographic survey data collected from this task is required for the year 2 post construction monitoring of the Sector 3, Phase 1 Nourishment Project and the year 1 post construction monitoring of the Sector 3, Phase 2 Nourishment Project. Task 1 includes surveying (approx. 7.5 miles) to provide on-going 2024 physical monitoring data for the Sector 3 Beach and Dune Nourishment Project area. Task 1 totals a lump sum amount of \$27,597.50.

**Task 2: Winter 2024 Sector 4 Physical Monitoring Survey (R-61 to R-64, 4 Onshore/Offshore Lines)**

The Sector 4 Dune Nourishment Project is currently in the design and permitting phase and is

anticipated to provide dune restoration to approximately 2.8 miles of coastline from FDEP Range Monument 55 to R-Monument 70. This stretch of coastline has not been previously nourished by the County and sustained significant erosional impacts from Hurricanes Ian and Nicole in 2022 leading to the upcoming dune nourishment project. The permit the County is to receive for the Sector 4 dune nourishment project is expected to contain requirements for the County to monitor the physical changes associated with a nourishment project on a semi-annual basis to determine the long-term performance of the project and if infrastructure may be vulnerable to storm damage. Task 2 includes surveying (approx. 3/4 mile) for the winter semi-annual monitoring of the Sector 4 Dune Nourishment Project area. Task 2 totals a lump sum amount of \$2,434.50.

Task 3: Winter 2024 Sector 5 Physical Monitoring Survey (R-65 to R-91, 27 Onshore/Offshore Lines)

Sector 5 Beach and Dune Nourishment Project was completed in February 2020. The County is required by the FDEP Permit to monitor the physical changes associated with the nourishment project semi-annually to determine the long-term performance of the project and if infrastructure may be vulnerable to storm damage. Task 3 includes surveying (approx. 4.5 miles) required for the winter semi-annual monitoring of the Sector 5 Beach and Dune Nourishment Project area. Task 3 totals a lump sum amount of \$16,381.00.

Task 4: Winter 2024 Countywide Beach Monitoring (R-92 to R-119, 28 Onshore/Offshore lines)

For the shoreline outside of the Sectors 3, 4 and 5 beach project areas, 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 Nourishment Projects. Task 4 includes the remaining countywide (approx. 5.3 miles) beach profile surveys. Task 4 totals a lump sum amount of \$16,565.50.

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 2024 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 \$62,978.50. Funding for the individual tasks are as follows:

Task 1: Winter 2024 Sector 3 Physical Monitoring Survey (R-15 to R-60, 46 Onshore/Offshore Profile Lines)

Funding for Task 1 is budgeted and available for design of the Sector 3 Beach Nourishment Project area in the Coastal Engineering Fund/Sector 3 Post-Construction Monitoring, Account No. 12814472-033490-05054. Task 1 totals a lump sum amount of \$27,597.50.

Task 2: Winter 2024 Sector 4 Physical Monitoring Survey (R-61 to R-64, 4 Onshore/Offshore

Lines)

Funding for Task 2 is budgeted and available for physical monitoring of the Sector 4 Dune Nourishment Project area in the Coastal Engineering Fund/Hurricane Ian – Sector 4 Account No. 12814472-066515-22601, and in the Coastal Engineering Fund/Storm Nicole – Sector 4 Account No. 12814472-066515-23007. Task 2 totals a lump sum amount of \$2,434.50.

Task 3: Winter 2024 Sector 5 Physical Monitoring Survey (R-65 to R-91, 27 Onshore/Offshore Lines)

Funding for Task 3 is budgeted and available for physical monitoring of the Sector 5 Beach Nourishment Project area in the Coastal Engineering Fund/Sector 5 Post-Construction Monitoring, Account No. 12814472-033490-15021. Task 3 totals a lump sum amount of \$16,381.00.

Task 4: Winter 2024 Countywide Beach Monitoring (R-92 to R-119, 28 Onshore/Offshore lines)

Funding for Task 4 is budgeted and available for physical monitoring of non-project areas in the Coastal Engineering Fund/Other Professional Services, Account No. 12814472-033190. Task 4 totals a lump sum amount of \$16,565.50.

Account Name	Account No.	Amount
Coastal Engineering Fund/Sector 3 Post-Construction Monitoring	12814472-033490-05054	\$27,597.50
Coastal Engineering Fund/ Sector 4 – Hurricane Ian	12814472-066515-22601	\$535.59
Coastal Engineering Fund/ Sector 4 – Storm Nicole	12814472-066515-23007	\$1,898.91
Coastal Engineering Fund/Sector 5 Beach Renourishment	12814472-033490-15021	\$16,381.00
Coastal Engineering Fund/Other Professional Services	12814472-033190	\$16,565.50

**RECOMMENDATION**

The recommendation of staff is for the BCC to approve Work Order No. 5 to the Professional Land Surveying and Mapping Services contract with Morgan and Eklund, Inc., in the amount of \$62,978.50 and authorize the Chairman to sign the Work Order on behalf of the County.

**ATTACHMENT**

1. Morgan and Eklund IRC Winter 2024 WO No. 5
2. Work Order No. 5 Agreement Execution

**APPROVED AGENDA ITEM FOR: October 31, 2023**