

**INDIAN RIVER COUNTY, FLORIDA  
BOARD MEMORANDUM**

**CONSENT**

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**TO:** Jason E. Brown, County Administrator

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

**THROUGH:** Eric Charest, Natural Resources Manager

**SUBJECT:** Work Order No. 18 - Morgan & Eklund, Inc.  
2022 Beach Profile Monitoring Surveys (SUMMER)

**DATE:** November 17, 2021

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**DESCRIPTION AND CONDITIONS**

On October 4, 2016, 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. The Board amended the Contract on October 18, 2016. The contract was renewed for a two-year term on October 4, 2018, and then again on October 4, 2020 for an additional 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. 18 provides summer-time countywide hydrographic surveying (beach profile) services for the Sectors 3, 5, and 7 Beach Nourishment Projects and additional surveying to complete a 2022 countywide 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 40 feet offshore (cross-shore). Due to the anticipated Sector 7 Beach and Dune Restoration project construction anticipated to begin in November 2022, additional intermediate profiles lines are also being performed during this Summer 2022 survey. For project tracking purposes, Work Order No. 18 is divided into four (4) separate tasks.

**Task 1: Summer 2022 Sector 3, Phase 1 Physical Monitoring Survey (R-15 to R-45, 31 Onshore/Offshore Profile Lines)**

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. Hydrographic survey data collected from this task is required for post construction monitoring for Phase 1 of the Sector 3 project. Task 1 includes surveying (approx. 5.9 miles) required to provide post construction physical monitoring data for Phase 1 of the Sector 3 Beach and Dune Nourishment Project area. The survey area is larger than the estimated 3.6 miles of beach nourished under Phase 1 of the Sector 3 nourishment project due to monitoring requirements. Task 1 totals a lump sum amount of \$18,322.50.

Task 2: Summer 2022 Sector 3, Phase 2 Physical Monitoring Survey (R-46 to R-60, 15 Onshore/Offshore Profile Lines)

Task 2 involves surveying of the Sector 3, Phase 2 project area (approx. 2.8 miles) as required to provide immediate post-construction physical monitoring data for Phase 2 of the Sector 3 Beach and Dune Nourishment Project which is anticipated to be completed in April 2022. Task 2 totals a lump sum amount of \$8,752.50.

Task 3: Summer 2022 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 summer semi-annual monitoring of the Sector 5 Beach and Dune Nourishment Project area. Task 3 totals a lump sum amount of \$15,455.00.

Task 4: Summer 2022 Sector 7 Physical Monitoring Survey (R-97 to R-108, together with R99.5, 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 Onshore/Offshore lines)

Hydrographic surveys of the project area must continue semi-annually to determine the long-term performance of the beach and if infrastructure may be vulnerable to storm damage during years in between recommended beach projects identified in the Beach Preservation Plan. Hydrographic survey data collected from this task is required for updates to the design of the upcoming Nourishment Project. Task 4 includes surveying (approx. 2 miles) required for the summer semi-annual monitoring of the Sector 7 Beach Nourishment Project area and for design updates for the upcoming nourishment project. Task 4 totals a lump sum amount of \$18,322.50.

Task 5: Summer 2022 Countywide Beach Monitoring (R-61 to R-64, R-92 to R-96, and R-109 to R-119, 20 Onshore/Offshore lines)

For the shoreline outside of the Sectors 3, 5, and 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 Nourishment Projects. Task 5 includes the remaining countywide (approx. 4 miles) beach profile surveys. Task 5 totals a lump sum amount of \$12,122.50

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 2022 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 \$72,975.00. Funding for the individual tasks are as follows:

Task 1: Summer 2022 Sector 3, Phase 1 Physical Monitoring Survey (R-15 to R-45, 31 Onshore/Offshore Profile Lines)

Funding for Task 1 is budgeted and available for physical monitoring of Phase 1 of the Sector 3 Beach Nourishment Project area in the Beach Restoration Fund/ Sector 3 Post-Construction Monitoring, Account No. 12814472-033490-05054. Task 1 totals a lump sum amount of \$18,322.50.

Task 2: Summer 2022 Sector 3, Phase 2 Physical Monitoring Survey (R-46 to R-60, 15 Onshore/Offshore Profile Lines)

Funding for Task 2 is budgeted and available for physical monitoring of Phase 2 of the Sector 3 Beach Nourishment Project area in the Beach Restoration Fund/Sector 3 Beach Renourishment/Hurricane Matthew, Hurricane Irma and Hurricane Dorian, Account No. 12814472-066514-17001. Task 2 totals a lump sum amount of \$8,752.50.

Task 3: Summer 2022 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 Beach Restoration Fund/ Sector 5 Post-Construction Monitoring, Account No. 12814472-033490-15021. Task 3 totals a lump sum amount of \$15,455.00.

Task 4: Summer 2022 Sector 7 Physical Monitoring Survey (R-97 to R-108, together with R99.5, 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 Onshore/Offshore lines)

Funding for Task 4 is budgeted and available for design of the Sector 7 Beach Nourishment Project area in the Beach Restoration Fund/Sector 7 Beach Renourishment/Hurricane Matthew, Hurricane Irma and Hurricane Dorian, Account No. 12814472-066512-17001. Task 4 totals a lump sum amount of \$18,322.50.

Task 5: Summer 2022 Countywide Beach Monitoring (R-61 to R-64, R-92 to R-96, and R-109 to R-119, 20 Onshore/Offshore lines)

Funding for Task 5 is budgeted and available for physical monitoring of non-project areas in the Beach Restoration Fund/Other Professional Services, Account No. 12814472-033190. Task 5 totals a lump sum amount of \$12,122.50.

Account Name	Account No.	Amount
Beach Restoration Fund/Sector 3 Post-Construction Monitoring	12814472-033490-05054	\$18,322.50
Beach Restoration Fund/Sector 3 Beach Renourishment	12814472-066514-17001	\$8,752.50
Beach Restoration Fund/ Sector 5 Post-Construction Monitoring	12814472-033490-15021	\$15,455.00
Beach Restoration Fund/Sector 7 Beach Renourishment	12814472-066512-17001	\$18,322.50
Beach Restoration Fund/Other Professional Services	12814472-033190	\$12,122.50

**RECOMMENDATION**

The recommendation of staff is for the BCC to approve Work Order No. 18 to the Professional Land Surveying and Mapping Services contract with Morgan and Eklund, Inc., in the amount of \$72,975.00 and authorize the Chairman to sign two (2) copies of the Work Order on behalf of the County.

**ATTACHMENTS**

1. Morgan and Eklund IRC Summer 2022 WO No. 18
2. Work Order No. 18 Agreement Execution

**APPROVED AGENDA ITEM FOR: December 7, 2021**