Indian River County Purchasing Division
purchasing@ircgov.com

ADDENDUM NO. 3

Issue Date: August 28, 2020

Project Name: Sector 7 Beach and Dune Restoration

Bid Number: 2020054

Bid Opening Date: September ~~3~~9, 2020

This addendum is being released to provide answers to questions received, extend the deadline for receipt of bids and modify the plans and specifications.

The information and documents contained in this addendum are hereby incorporated in the invitation to bid. **This addendum must be acknowledged where indicated on the bid form, or the bid will be declared non-responsive.**

NO ADDITIONAL QUESTIONS WILL BE ACCEPTED OR ANSWERED.

Attachments:
Updated Bid Schedule – Addendum 3
Updated Construction Plan Sheet 3 (design depth to Cross-Section C-C' & D-D' Borrow Area is added and hardbottom within the pipeline corridor added to the Legend and Pipeline Corridor/Location Map)
Draft FDEP Permit with Attachments (updated and provided as a full package)
Geotechnical Report prepared by ATM

Questions and Answers

Question 1. Bidding the Sector 3 & Sector 7 projects individually, but on the same day at the same time, does not allow the contractors to apply any mobilization and demobilization savings to the County, as well as other cost-saving synergies. Additionally, if both contracts are awarded to different dredging firms, various issues will arise in the shared borrow area, impacting both schedule and cost.

a. Multiple dredges working in a small borrow area is a safety concern, but is further compounded with restrictions on sailing outside the borrow area, exclusion zones and strict corridors. This will result in delays to both contractors.

b. There is limited quantity of suitable material available in the borrow area. In order to avoid over digging and possibly encountering unsuitable material, the contractor has to frequently monitor the depths of the borrow area and plan dredge locations. Having another contractor working in the same borrow area at the same time will make it extremely difficult to manage the borrow area and increase the contractors risk of overdigging.

c. If the projects are not performed at the same time the contractor that performs the work first may deplete areas of the borrow area or reduce the face significantly. The second contractor will find a borrow area with less available suitable material and different contours than in the bid documents. It is highly likely that this change in the borrow area will have an adverse effect on the contractor's production.

Response 1. If both the Sector 3 and Sector 7 Projects are constructed by offshore dredges concurrently, Sector 7 will utilize the SubArea 2 of the borrow area, and Sector 3 will utilize the SubArea 3 of the borrow area. There is sufficient sand fill within the borrow area to construct the Sector 3 and 7 projects.

Question 2. We recommend these projects be bid separately, which would allow contractors to apply cost-savings, in lieu of pricing costly stand-alone bids and avoid costly risk impacts.

Response 2. The County has reviewed this option and has determined it is in the best interest of the County to bid the projects separately.

Question 3. Please provide some additional details on the intent and the anticipated scope of the Force Account line item.

Response 3. See Article 13.14 of the Section 00200 Instruction to Bidders.

Question 4. Please confirm that dredging and discharging onshore can take place 24 hours per day, 7 days per week.

Response 4. Dredging and discharging onshore can take place 24 hours per day, 7 days per week consistent with Section 27 Nighttime Operations of the Offshore Technical Specifications. The CONTRACTOR must adhere to local noise ordinances. A project schedule must be provided to the County at the pre-construction conference for approval and coordination for compliance with local noise ordinances.

Question 5. Are hopper dredges constrained to sailing within the noted access corridors, or will they be allowed to sail more direct routes, as long as hard bottoms are not disturbed? If constrained, is it a violation of a permit or other regulation if the contractor inadvertently sails outside of the area because of weather, small boat traffic or other unplanned events?

Response 5. Per Sections 4.7 and 6.6 of the Offshore Technical Specifications, hopper dredges are constrained to sailing from the borrow area to the discharge area within the sail/pipeline corridor. If the Contractor proposes a consequential deviation from the sail corridor, a revised sail corridor shall be provided by the CONTRACTOR and will be subject to the acceptance of the County and regulatory agencies. A consequential deviation is a modification that has the potential to impact hardbottom.

Question 6. Will any/all required onshore sea turtle nest monitoring, including nighttime monitoring, be performed by the County and/or their representative(s)?

Response 6. Yes, all required shorebird and onshore sea turtle nest monitoring, including nighttime monitoring, if required, will be performed by the County per Attachment 2: Environmental Protection Section 8.2.2.1 "Nesting Activity. Monitoring sea turtle nesting activity shall be performed by the COUNTY during the nesting season."

Question 7. Will any/all required hard bottom monitoring be performed by the County and/or their representative(s)?

Response 7. All hardbottom monitoring will be performed by the County with the exception of the pipeline corridor monitoring identified in Technical Specification Section 5.1, the Post-Placement

Pre-pumping Pipeline Survey required by Section 3.3 of the Biological Monitoring Plan, and Pipeline Corridor Monitoring required by Section 3.4 of the Biological Monitoring Plan which shall be performed by the CONTRACTOR.

Question 8. Is the contractor responsible for verifying pipeline corridors or performing periodic and/or post-construction inspections(s)?
Response 8. **Yes. All hardbottom monitoring will be performed by the County with the exception of the pipeline corridor monitoring identified in Technical Specification Section 5.1, the Post-Placement Pre-pumping Pipeline Survey required by Section 3.3 of the Biological Monitoring Plan, and Pipeline Corridor Monitoring required by Section 3.4 of the Biological Monitoring Plan which shall be performed by the CONTRACTOR.**

Question 9. The document Attachment 4: Environmental Permits appears to only be a Title Page. Given the environmental permit conditions contained therein could impact contractor's pricing, when does the County anticipate issuing the relevant permit(s)?
Response 9. Please see the attached draft FDEP permit. The Final Permit is expected to be issued on 8/31/2020. USACE regulatory staff identified that the USACE permit is expected to be issued by the end of September.

Question 10. The chart shown on Plan Sheet 3 differs dramatically from the survey soundings shown on the same. We note that the chart has a publication date of 2/1/2011. Has this borrow area been dredged since 2/1/2011?
Response 10. The borrow area was last dredged in conjunction with the prior Sector 7 project in 2007. The Survey Soundings shown on the Plan View Borrow Area and Cross-section C-C' & D-D' Borrow Area were collected in December 18 to 19, 2018 and January 3 to 7, 2019 per note 2 on Sheet 3. The Pipeline Corridor/Location Map shown on Plan Sheet 3 is from a NOAA Navigational Chart #11474 and is referenced to MLLW per note 3 and the legend on Plan Sheet 3. The County will conduct a pre-construction survey of the borrow area as required by the FDEP permit.

Question 11. In reference to Attachment 1: Sediment Quality Assurance / Quality Control Plans and Offshore Sand Technical Provisions TP-4.8 regarding unsuitable and/or unacceptable materials, if the contractor executes the work within the limits of the County's designated borrow areas and in accordance with the County's specifications, any encounter of unsuitable material should not have punitive consequences to the contractor. The inclusion of remediation measures without establishing compensation rates for the work places an undue risk on the Contractor to perform remediation of material that is found within the contract dredge limits of the borrow areas that are defined by the County.
Please consider the addition of an optional bid items for remediation of unsuitable material on the beach, such as screening and disposal of unsuitable material for nominal quantities to establish a rate for this work if it becomes necessary.
Response 11. **The County reviewed the Attachment 1: Sediment Quality Assurance / Quality Control Plans and Offshore Sand Technical Provisions Section TP-4.8 and confirmed that no changes to these items are warranted.**

Question 12. The AIS Easement Map posted on the County's website indicates that there have been some denials and various lots are still pending. How does the County intend to deal with gaps in fill, due to easement denials? What restrictions will be placed on the contractor in these areas? Will contractors still be able to pipe across any gaps in fill above MHW, to ensure a continuous fill operation? Will the contractor be allowed to travel through the area with equipment? Does the County anticipate any delays to the project before or during construction resulting from easement issues?

Response 12. No sand will be placed landward of ECL, if present, or MHW in areas where no easement has been obtained. Pipeline or equipment can only be placed or be in transit seaward of ECL, if present, or MHW on properties with no easements. No delays due to easements are anticipated during construction.

Question 13. Specifications cite a Geotechnical Investigation performed by Applied Technology; however, we did not find this report in the documents provided. Please provide said report to bidders for review.
Response 13. Please see the attached referenced report by Applied Technology and Management, Inc.

Question 14. Is contractor allowed to sail over the exclusion for the magnetic anomaly within the borrow areas limits depicted on sheet on BA-PV?
Response 14. Yes. The contractor can sail over the exclusion for the magnetic anomaly within the borrow area limits depicted on sheet 3. The Contractor shall not disturb the seafloor within the magnetic anomaly dredge buffer as indicated by the shading of the Sub-Areas vs the magnetic anomaly dredge buffer in the Plan View Borrow Area figure on sheet 3.

Question 15. It was stated that the contractor was responsible for the burying or damage to the hard bottom. Please confirm that the contractor is not responsible for hard bottom that is buried, covered or damaged due to project related turbidity that falls within the levels outlined in the permit. Please also confirm that the contractor is not responsible for any hard bottom that may be buried or covered as a result of sand migrating from the within the beach template.
Response 15. The CONTRACTOR will not be responsible for impacts allowed for by the permits. The CONTRACTOR will be responsible for impacts resulting from direct burial due to gross overfill and negligence. See section 4.7 Hardbottom Communities of the Technical Specifications.

Question 16. The No Damage for Delay clause in Paragraph 35.1 of the Offshore Sand Technical Specifications attempts to put all monetary risk of delays outside of the Contractor's control on the Contractor, even delays caused directly by the County. Such conditions are, in general, contrary to public policy because they seek to excuse an owner from the legal consequences of its injury causing conduct. This condition has the unintended consequence of increasing project costs as a prudent Contractor must allocate contingency costs in his bid to protect against the risk of delays that may never come to pass. We request this language be removed from the specification.
Response 16. The County reviewed Paragraph 35.1 of the Offshore Sand Technical Specifications and sees no changes that are warranted.

Question 17. With regards to Section 00800 Supplemental Condition to the General Conditions SC-15.01.A OWNER May Suspend Work, while we understand the need for the County to have the authority to suspend work, the language in this condition attempts to put all monetary risk of suspensions outside of the Contractor's control on the Contractor, including suspensions caused directly by the County. This condition also has the unintended consequence of increasing project costs, as a prudent Contractor must either decide against bidding or include widely varying contingency costs in their bids to protect against the risk of suspensions that may never occur.
For these reasons, we request this condition be revised to provide the contractor compensation for suspensions resulting from actions of the County, its representative(s), agents and/or contractors.
Response 17. The County has reviewed the request and has determined that no changes are warranted.

Question 18. I am reaching out for information regarding the process to become an approved upland sand source for beach sand. We have tested our material and found that it meets the specs called out in the IRC beach projects, just need to know where to go from here.
Response 18. Alternate sand sources and associated permitting are the responsibility of the contractor. A bidder may propose an alternate upland sand source for the project by submitting the following with their bid: written documentation from resource agency (FDEP and USACE) indicating approval as a beach sand source, and an independent assessment showing compliance with the sand quality requirements specified for this project, supported by adequate and appropriate geotechnical evaluations, all subject to County approval.

County may elect not to consider alternate sources due to the potential impact to project commencement. Should the County elect to consider an alternate source, the Contractor will be responsible for providing all necessary supporting evidence required for a permit modification. For future projects, the County may put out another RFQ for additional potential sand sources.

Question 19. Sheet 3 states the available volume in Sub Area 2 is the primary borrow source and Sub Area 3 is secondary. Since this project and the Sector 3 project require a total of 964,000 cubic yards be placed, if the contracts are performed by a dredging contractor both areas must be utilized. Given the shallow depths in Sub Area 3 we recommend the County allow the contractor to dredge both areas simultaneously. This will allow the contractor to optimize operations result in a lower unit cost.

Response 19. If a single CONTRACTOR is awarded both projects, both borrow areas may be dredged concurrently.

Question 20. The cross sections provided on Sheet 3 note the Maximum Depth of Cut is -29.5 feet NAVD. Please confirm that material can be removed to -29.5 feet NAVD.
Response 20. Yes. Material can be removed to -29.5 feet NAVD but for practical purposes the design dredge depth is -27.5 ft NAVD with a 2 ft buffer allowing dredging to a maximum depth of -29.5 ft NAVD. Please see the addition of the design depth of -27.5 ft NAVD on the construction drawings.

Question 21. Are collars required for the entire submerged pipeline length or just through the areas that pass through the confirmed hard bottom areas?
Response 21. For hardbottom resources that cannot be avoided within the pipeline corridors, minimization measures (collars or risers or floating pipeline) must be used to limit impacts to the resources.

Question 22. We request the bid date be extended to allow the contractors to review the responses to the outstanding questions.
Response 22. The bid date shall be amended to reflect an opening date of September 9, 2020.

Question 23. Please confirm that the dredging and associated beach operation will be allowed to progress on a 24 hours a day, 7 days a week schedule for the Sector 7 beach fill project.
Response 23. Dredging and discharging onshore can take place 24 hours per day, 7 days per week consistent with Section 27 Nighttime Operations of the Offshore Technical Specifications. The CONTRACTOR must adhere to local noise ordinances. A project schedule must be provided to the County at the pre-construction conference for approval and coordination for compliance with local noise ordinances.

Question 24. Please clarify how the contractor will be compensated for waiting time if 2 separate contractors or working from the same borrow area concurrently.
Response 24. If both the Sector 3 and Sector 7 Projects are constructed by offshore dredges concurrently, Sector 7 will utilize the SubArea 2 of the borrow area, and Sector 3 will utilize the SubArea 3 of the borrow area. There is sufficient sand fill within the borrow area to construct the Sector 3 and 7 Projects. Consistent with Technical Specification Section 35.1, the CONTRACTOR will not be compensated for waiting time if two separate contractors are working from the same borrow area concurrently.

Question 25. Please confirm that if a hopper dredge is used for this project, that it will have to remain in the Sail – Pipeline corridor even when not conducting dredging operations.
Response 25. Hopper dredges are currently restricted to the access corridors. Seaward of the borrow area, dredge vessels can sail without limitations when not conducting dredging operations. Hopper dredges actively working on the project must adhere to the access corridors illustrated in the construction plans. If the Contractor proposes a consequential deviation from the Work Area identified in Section 6.6, this deviation shall be submitted by the CONTRACTOR in writing and subject to acceptance of the County and regulatory agencies. A consequential deviation is a modification that has the potential to impact hardbottom.

Question 26. Please confirm that a hopper dredge will be allowed to transit outside of the borrow area limits for purposes of turning and maneuvering, as long as no excavation is conducted outside the limits.
Response 26. Yes, a hopper dredge will be allowed to transit outside of the borrow area limits for purposes of turning and maneuvering, as long as no excavation is conducted outside the borrow area limits. If the Contractor proposes a consequential deviation from the Work Area identified in Section 6.6, this deviation shall be submitted by the CONTRACTOR in writing and subject to acceptance of the County and regulatory agencies. A consequential deviation is a modification that has the potential to impact hardbottom.

Question 27. Can you tell me if you will accept a Digitally Signed Bid Bond by the Attorney-In-Fact?
Response 27. Yes, we will accept.

ITEMIZED BID SCHEDULE
PROJECT NAME: SECTOR 7 BEACH AND DUNE RESTORATION PROJECT - *ADDENDUM 3

PROJECT NO. IRC-1926 **BID NO. 2020054**

BIDDER'S NAME:_____

Item No.	Description	Quantity	Unit	Unit Price	Amount
1	MOBILIZATION/DEMOBILIZATION	1	LS		
2	FURNISH & INSTALL SAND	294,496	CY		
3	PAY PROFILES	1	LS		
4	PERMIT COMPLIANCE / TURBIDITY MONITORING	1	LS		
5	BEACH TILLING	32*	AC		
6	FURNISH & INSTALL NATIVE PLANTS	53,000	EA		
SECTOR 7 BEACH AND DUNE RESTORATION SUB TOTAL					
FORCE ACCOUNT					$990,000.00
TOTAL AMOUNT OF BID (INCLUDING FORCE ACCOUNT)					

LS=Lump Sum AC=Acre EA=Each CY = Cubic Yard

NOTE: IF THERE IS A DISCREPANCY BETWEEN THE PLANS (SUMMARY OF PAY ITEMS) AND THE ITEMIZED BID SCHEDULE, THE BID SCHEDULE WILL BE UTILIZED FOR BIDDING PURPOSES.

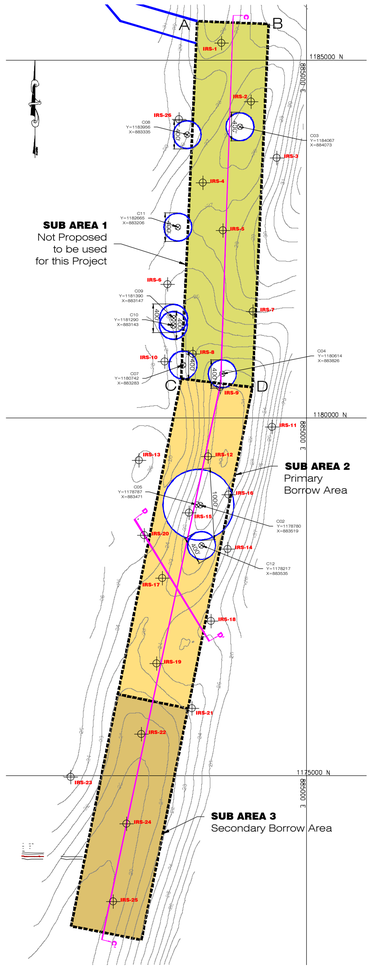
TOTAL PROJECT BID AMOUNT IN WORDS_____

_____

BID ITEM NOTE: ITEM #1 MOBILIZATION/DEMOBILIZATION SHALL INCLUDE ALL THE COSTS ASSOCIATED WITH THE CONTRACTORS SELECTED METHODOLOGY FOR SAND PLACEMENT

BID ITEM NOTE: ITEM #4 PERMIT COMPLIENCE/TURBIDITY MONITORING: SHALL INCLUDE ALL THE COSTS ASSOCIATED WITH THE CONTRACTORS SELECTED METHODOLOGY FOR SAND PLACEMENT

Plan View Borrow Area



Notes:

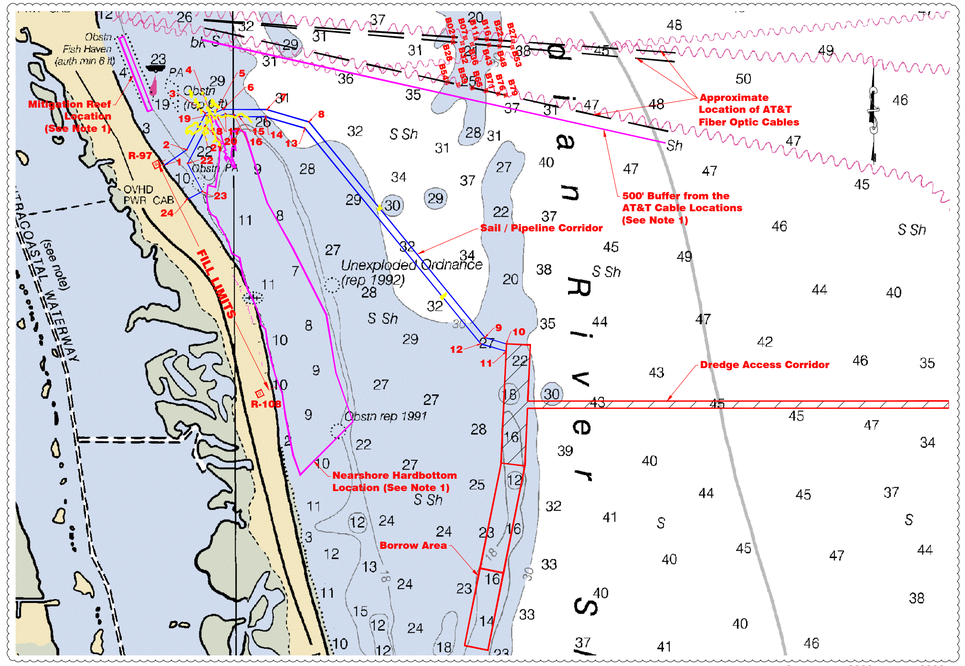
1. All elevations indicated are in feet, referenced to NAVD88 (North American Vertical Datum of 88).
2. Contours are from a survey by Aptim Environmental & Infrastructure, LLC dated December 18-19, 2018 & January 3-7, 2019.
3. All horizontal values are referenced to NORTH AMERICAN DATUM of 1983, FLORIDA STATE PLANE, EAST ZONE
4. Magnetometer survey conducted by Morgan & Eklund dated May 10-12, 2000 & by Great Lakes Dredge & Dock dated January 2008.
5. Descriptive classification of borrow material modified from unified soils classification.

LEGEND

- Vibracore Location 1999
- Magnetic Anomalies
- Borrow Area Limits
- Magnetic Anomaly Dredge Buffer
- Sub Area 1 Borrow Area
- Sub Area 2 Borrow Area
- Sub Area 3 Borrow Area

Coordinates of Borrow Area Corners		
Corners	Northing	Easting
A	1185543	883477
B	1185503	884473
C	1180547	883214
D	1180426	884248
E	1176135	882367
F	1175939	883350
G	1172896	881715
H	1172702	882697

Pipeline Corridor / Location Map



Notes:

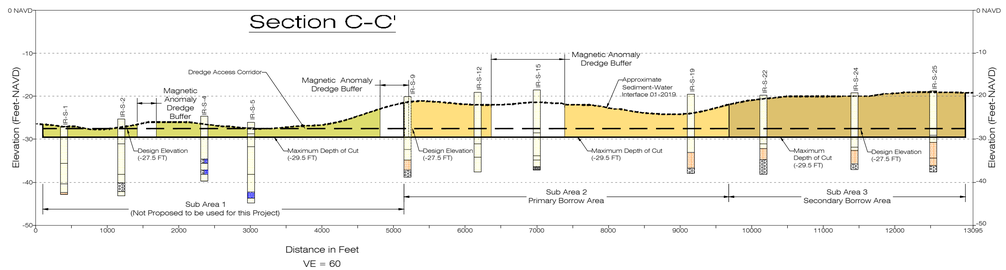
1. Contractor's vessel or equipment should not enter this Restricted Zone.
2. Horizontal Datum is NAD '83, State Plane Coordinates, Florida East Zone.
3. Map from NOAA Chart #11474 Florida - East Coast Bethel Shoal to Jupiter Inlet.
4. Mitigation Reef, Nearshore Hardbottom, and Corridors location are from Drawings by Applied Technology & Management, Inc., titled "Sector 7 - Beach Restoration Project Construction Set" dated January 04, 2007.
5. The Contractor is to use the Dredge Access Corridor to access the Borrow Area from deep water.
6. The Contractor is to use the Sail / Pipeline Corridor for offloading of material onto the beach.

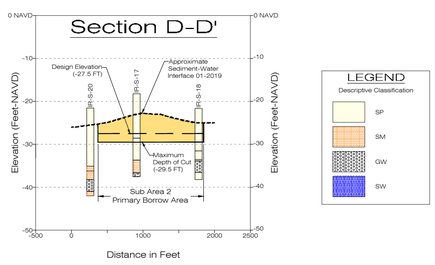
LEGEND

- 16 — Sail / Pipeline Corridor Point
- 12 — Depth MLLW
- Magnetometer Hit (Morgan & Eklund May, 2000)
- Dredge Access Corridor
- Sail / Pipeline Corridor
- Restricted Zones
- R-108 — Reference Monument
- Hardbottom

Sail / Pipeline Corridor Coordinate Table		
Point #	Easting	Northing
1	869131.01	1193044.60
2	870077.16	1193681.04
3	870868.15	1195214.50
4	871043.96	1195299.83
5	871285.92	1195261.52
6	871597.20	1195377.85
7	873436.34	1195369.91
8	875206.41	1194848.42
9	882574.71	1185808.24
10	883476.69	1185542.50
11	883462.86	1185233.83
12	882400.86	1185546.71
13	875031.88	1194586.22
14	873391.71	1195069.44
15	872279.61	1195074.65
16	872046.84	1195151.75
17	871699.68	1195184.32
18	871359.09	1195072.28
19	871019.99	1195149.19
20	870852.55	1194661.22
21	870804.70	1194437.09
22	870120.23	1193110.11
23	870734.61	1191934.10
24	870092.44	1191598.61

Cross-section C-C' & D-D' Borrow Area





Note:

1. Vibracore locations are from report by ATM dated 2001titled "Indian River County Beach Restoration Projects: Geotechnical Investigation of Offshore Sand Sources", which contains core logs, gradation analysis results, and other details of the borrow area; this report is available from the County.
2. Geological Cross-Sections and contours are developed from a Survey by Aptim Environmental & Infrastructure, LLC dated December 18-19, 2018 & January 3-7, 2019.
3. Magnetic Anomalies are determined from magnetometer surveys conducted by Morgan & Eklund dated May 10-12, 2000 & by Great Lakes Dredge & Dock dated January 2008.

COASTAL TECH GEC
COASTAL · ENVIRONMENTAL · CIVIL ENGINEERING AND PLANNING
Certificate of Authorization Number: 00004195
3625 20th Street, Vero Beach, FL 32960 (772) 562-8580
CHARLES T. FONTAINE III, P.E. DATE
FLORIDA P.E. LICENSE NUMBER 70042

Borrow Area Details & Pipeline Corridor / Location Map

Sector 7 (Porpoise Point)
Beach and Dune Restoration Project
Indian River County

Rev.	Date:	Notes:
1	08/26/2020	Added Design Elevation / HB

Drafter: AON
Date Drawn: 07/17/2020
Checked By: MPW
Project No. 2018C.007

SHEET 3
OF 6 SHEETS

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

DRAFT

CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE:
Indian River County
Attn: Richard Szpyrka
1801 27th Street, Building A
Vero Beach, Florida 32960
rszpyrka@ircgov.com

AGENT:
Coastal Tech – G.E.C. Inc.
Attn: Tem Fontaine, P.E.
3625 20th Street
Vero Beach, Florida 32960
tfontaine@coastaltechcorp.com

PERMIT INFORMATION:
Permit Number: 0215960-005-JC

Project Name: Indian River County Sector 7 Beach and Dune Nourishment Project

County: Indian River

Issuance Date: **DRAFT**

Expiration Date: **DRAFT**

REGULATORY AUTHORIZATION:

This permit is issued under the authority of Chapter 161 which includes consideration of the provisions contained in Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). Pursuant to Operating Agreements executed between the Department of Environmental Protection (Department) and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

PROJECT DESCRIPTION:

The project is to nourish the beach and dunes along approximately 2 miles of shoreline in Sector 7 of Indian River County. Sand for the project will either be hydraulically dredged from the offshore South Borrow Area or truck hauled from an approved upland sand source. The approved upland sand sources are the Vulcan Materials' Diamond and Witherspoon mines; the

Jahna Industries' Independent South and Greenbay mines; and the Stewart Materials Capron Trail mine.

The design template features a berm varying in width between 22.4 feet and 169 feet at an elevation of +8.0 feet NAVD and an 8H:1V (Horizontal:Vertical) foreslope from the seaward edge of the berm to existing grade. The design template also features a dune with a maximum crest height of +10.73 feet NAVD, a 5H:1V slope on the landward dune face and a 3H:1V slope on the seaward face. Salt-tolerant native dune vegetation will be planted on the dune following nourishment.

PROJECT LOCATION:

The beach and dune nourishment site is located between Department Reference Monuments R-97 and R-108 in Indian River County, Sections 16, 21 and 22, Township 33 South, Range 40 East, Atlantic Ocean, Class III Waters.

The South Borrow Area is located 10,000 feet offshore of the project area, positioned between R-105 and R-119, just north of the Indian River County/St. Lucie County border.

PROPRIETARY AUTHORIZATION:

This activity also requires a proprietary authorization, as the activity is located on sovereign submerged lands held in trust by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), pursuant to Article X, Section 11 of the Florida Constitution, and Sections 253.002 and 253.77, F.S. The activity is not exempt from the need to obtain a proprietary authorization. The Board of Trustees delegated, to the Department, the responsibility to review and take final action on this request for proprietary authorization in accordance with Section 18-21.0051, F.A.C., and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C. This proprietary authorization has been reviewed in accordance with Chapter 253, Chapter 18-21 and Section 62-330.075, F.A.C., and the policies of the Board of Trustees.

The Department has also determined that the beach and dune renourishment activity qualifies for a Letter of Consent to use sovereign, submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. Therefore, consent is hereby granted, pursuant to Chapter 253.77, F.S., to perform the activity on the specified sovereign submerged lands.

As staff to the Board of Trustees, the Department has reviewed the project described above, and has also determined that dredging of the borrow area requires a public easement for the use of those lands, pursuant to Chapter 253.77, F.S. The Department intends to modify the existing public easement, subject to the conditions outlined in the previously issued *Consolidated Intent to Issue* and in the Recommended Proprietary Action (entitled *Delegation of Authority*).

The final documents required to execute the modification of Public Easement No. 40034 will be sent to the Department's Division of State Lands. The Department intends to issue the easement upon satisfactory execution of those documents. **You may not begin construction of this activity on state-owned, sovereign submerged lands until the easement has been executed to the satisfaction of the Department.**

COASTAL ZONE MANAGEMENT:

This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

WATER QUALITY CERTIFICATION:

This permit constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341.

OTHER PERMITS:

Authorization from the Department does not relieve you from the responsibility of obtaining other permits (Federal, State, or local) that may be required for the project. When the Department received your permit application, a copy was sent to the U.S. Army Corps of Engineers (Corps) for review. The Corps will issue their authorization directly to you or contact you if additional information is needed. If you have not heard from the Corps within 30 days from the date that your application was received by the Department, contact the nearest Corps regulatory office for status and further information. Failure to obtain Corps authorization prior to construction could subject you to federal enforcement action by that agency.

AGENCY ACTION:

The above-named Permittee is hereby authorized to construct the work that is outlined in the Project Description and Project Location of this permit and as shown on the approved permit drawings, plans and other documents attached hereto. This agency action is based on the information submitted to the Department as part of the permit application, and adherence with the final details of that proposal shall be a requirement of the permit. **This permit and authorization to use sovereign submerged lands are subject to the General Conditions, General Consent Conditions, Specific Conditions, and attached Plans which are a binding part of this permit and authorization.** Both the Permittee and their Contractor are responsible for reading and understanding this permit (including the permit conditions and the approved permit drawings) prior to commencing the authorized activities, and for ensuring that the work is conducted in conformance with all the terms, conditions and drawings.

GENERAL CONDITIONS:

1. All activities authorized by this permit shall be implemented as set forth in the project description, permit drawings, plans and specifications approved as a part of this permit, and all conditions and requirements of this permit. The Permittee shall notify the Department in writing of any anticipated deviation from the permit prior to

implementation so that the Department can determine whether a modification of the permit is required pursuant to Rule 62B-49.008, F.A.C.

2. If, for any reason, the Permittee does not comply with any condition or limitation specified in this permit, the Permittee shall immediately provide the Department and the appropriate District office of the Department with a written report containing the following information: a description of and cause of noncompliance; and the period of noncompliance, including dates and times; and, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

3. This permit does not eliminate the necessity to obtain any other applicable licenses or permits that may be required by federal, state, local or special district laws and regulations. This permit is not a waiver or approval of any other Department permit or authorization that may be required for other aspects of the total project that are not addressed in this permit.

4. Pursuant to Sections 253.77 and 373.422, F.S., prior to conducting any works or other activities on state-owned submerged lands, or other lands of the state, title to which is vested in the Board of Trustees, the Permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees shall not be considered received until it has been fully executed.

5. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.

6. This permit does not convey to the Permittee or create in the Permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the Permittee. The issuance of this permit does not convey any vested rights or any exclusive privileges.

7. This permit or a copy thereof, complete with all conditions, attachments, plans and specifications, modifications, and time extensions shall be kept at the work site of the permitted activity. The Permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

8. The Permittee, by accepting this permit, specifically agrees to allow authorized Department personnel with proper identification and at reasonable times, access to the premises where the permitted activity is located or conducted for the purpose of ascertaining compliance with the terms of the permit and with the rules of the Department

and to have access to and copy any records that must be kept under conditions of the permit; to inspect the facility, equipment, practices, or operations regulated or required under this permit; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

9. At least 48 hours prior to commencement of activity authorized by this permit, the Permittee shall electronically submit to the Department, by email at JCPCompliance@dep.state.fl.us, and the appropriate District office of the Department a written notice of commencement of construction indicating the actual start date and the expected completion date and an affirmative statement that the Permittee and the contractor, if one is to be used, have read the general and specific conditions of the permit and understand them.

10. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, shipwreck remains or anchors, dugout canoes or other physical remains that could be associated with Native American cultures, or early Colonial or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The Permittee, or other designee, shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at (850)245-6333 or (800)847-7278, as well as the appropriate permitting agency office. Project activities shall not resume without verbal and/or written authorization from the Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, F.S.

11. Within 30 days after completion of construction or completion of a subsequent maintenance event authorized by this permit, the Permittee shall electronically submit to the Department, by email at JCPCompliance@dep.state.fl.us, and the appropriate District office of the Department a written statement of completion and certification by a registered professional engineer. This certification shall state that all locations and elevations specified by the permit have been verified; the activities authorized by the permit have been performed in compliance with the plans and specifications approved as a part of the permit, and all conditions of the permit; or shall describe any deviations from the plans and specifications, and all conditions of the permit. When the completed activity differs substantially from the permitted plans, any substantial deviations shall be noted and explained on as-built drawings electronically submitted to the Department, by email at JCPCompliance@dep.state.fl.us.

GENERAL CONSENT CONDITIONS:

1. Authorizations are valid only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that

activity or use shall constitute a violation. Violation of the authorization shall result in suspension or revocation of the grantee's use of the sovereignty submerged land unless cured to the satisfaction of the Board.

2. Authorizations convey no title to sovereignty submerged land or water column, nor do they constitute recognition or acknowledgment of any other person's title to such land or water.

3. Authorizations may be modified, suspended or revoked in accordance with their terms or the remedies provided in Sections 253.04 and 258.46, F.S., or Chapter 18-14, F.A.C.

4. Structures or activities shall be constructed and used to avoid or minimize adverse impacts to sovereignty submerged lands and resources.

5. Construction, use or operation of the structure or activity shall not adversely affect any species that is endangered, threatened or of special concern, as listed in Rules 68A-27.003, 68A-27.004 and 68A-27.005, F.A.C.

6. Structures or activities shall not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity shall be modified in accordance with the court's decision.

7. Structures or activities shall not create a navigational hazard.

8. Structures shall be maintained in a functional condition and shall be repaired or removed if they become dilapidated to such an extent that they are no longer functional. This shall not be construed to prohibit the repair or replacement subject to the provisions of Rule 18-21.005, F.A.C., within one year, of a structure damaged in a discrete event such as a storm, flood, accident or fire.

9. Structures or activities shall be constructed, operated and maintained solely for water dependent purposes, or for non-water dependent activities authorized under paragraph 18-21.004(1)(f), F.A.C., or any other applicable law.

SPECIFIC CONDITIONS:

1. Unless otherwise specified in the specific conditions of this permit all submittals required herein (e.g., progress reports, water-quality reports etc.) shall be electronically submitted (via e-mail, file transfer site or hard drive). Email submittals shall be sent to the Department's JCP Compliance Officer (e-mail address: JCPCompliance@dep.state.fl.us). If a file transfer site is used, a link shall be e-mailed to the JCP Compliance Officer. If data are too large to be submitted via e-mail or file transfer site, the Permittee may submit

the data via an external hard drive, provided by the Permittee. The external hard drive shall be mailed to:

Department of Environmental Protection
Office of Resilience and Coastal Protection
Attn: JCP Compliance Officer
2600 Blair Stone Road, Mail Station 3566
Tallahassee, FL 32399-2400

2. The Permittee shall not store or stockpile tools, equipment, or materials within littoral zones or elsewhere within surface waters of the state without prior written approval from the Department. Storing, stockpiling, or accessing equipment on, in, over, or through areas with benthic biological resources (including beds of submerged aquatic vegetation, wetlands, oyster reefs, or hardbottom) is prohibited unless it occurs within a work area or ingress / egress corridor that is specifically approved by this permit and is shown on the approved permit drawings. Anchoring or spudding of vessels and barges within areas with benthic biological resources (including beds of aquatic vegetation, oyster reefs, or hardbottom) is also prohibited.

3. The Permittee shall not conduct project operations or store project-related equipment in, on or over dunes, or otherwise impact dune vegetation, outside the approved staging, beach access and dune restoration areas designated in the permit drawings.

4. The terms, conditions and provisions of the required easement (No. 40034) shall be met. Construction of this activity shall not commence on sovereign submerged lands, title to which is held by the Board of Trustees, until all easement documents have been executed to the satisfaction of the Department.

5. For each construction event under this permit, no work shall commence until the Permittee has satisfactorily submitted all information noted in this condition. At least **45** days prior to commencement of construction, the Permittee shall submit the following items for review by the Department. Unless otherwise notified by the Department within 15 days of receipt of all information specified below, the Permittee shall assume the submittals are satisfactory:

    a. An electronic copy of detailed ***final construction plans and specifications*** for all authorized activities. The plans and specifications must be consistent with the project description, conditions and approved drawings of this permit. These documents shall be certified by a professional engineer (P.E.), who is registered in the State of Florida. The Permittee shall point out any deviations from the Project Description of this permit (as stated above) or the approved permit drawings (attached to this permit), and any significant changes that would require a permit modification. The plans and specifications shall include a description of the dredging and construction methods to

be utilized and drawings and surveys that show all biological resources and work spaces (e.g., anchoring areas, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project.

b. ***Turbidity Monitoring:*** In order to assure that turbidity levels do not exceed the compliance standards established in this permit, construction at the project site shall be monitored closely by an independent third party with formal training in water quality monitoring and professional experience in turbidity monitoring for coastal construction projects. Also, an individual familiar with beach construction techniques and turbidity monitoring shall be present at all times when turbidity generating activities are occurring. This individual shall have authority to alter construction techniques or shut down the dredging or beach construction operations if turbidity levels exceed the compliance standards established in this permit.

    i. ***Qualifications***: The names, credentials (demonstrating experience and qualifications) and 24-hour contact information of those individuals performing these functions;

    ii. A ***Scope of Work*** for the turbidity monitoring to ensure that the right equipment is available to conduct the monitoring correctly at any location, and under any conditions;

    iii. ***Draft turbidity sampling map.*** An example of the geo-referenced map that will be provided with turbidity reports, including aerial photography and the boundaries of biological resources (pursuant to Specific Condition 28)

c. **Fish & Wildlife Monitoring Qualifications:** To ensure that individuals conducting monitoring of fish and wildlife resources have appropriate qualifications, the Permittee shall provide documentation demonstrating expertise/experience in surveying the types of resources that are present in the project. The Department and the Florida Fish and Wildlife Conservation Commission (FWC) will review this information for confirmation that the monitors are capable of meeting the requirements in this authorization. This documentation shall include the following:

    i. ***Marine Turtle Protection****:* Monitoring plan, including a list of the names and permit numbers for the Marine Turtle Permit Holders.

    ii. ***Shorebird Protection****:* Monitoring plan, including a list of Bird Monitors with their contact information, summary of qualifications including bird identification skills and avian survey experience, proposed locations of shorebird survey routes, and the locations of travel routes.

d. **Biological Monitoring*:***

i. ***Qualifications.*** At least 30 days prior to conducting any surveys or monitoring, the Permittee shall submit the names and qualifications of the individuals performing biological surveys and monitoring via email to the JCP Compliance Officer for review by the Department (see Section 4.0 of the Biological Monitoring Plan). Individuals that will be performing biological surveys and monitoring shall be certified SCUBA divers, shall have a BS degree or higher in the study of marine biology or a comparable field, shall have scientific knowledge of local benthic marine hardbottom habitats and their flora and fauna, and shall have professional experience in conducting hardbottom monitoring surveys. If additional monitoring team(s) are subcontracted, or new staff are added to the monitoring team, proposed changes as well as names and qualifications of individuals shall be submitted by the Permittee to the JCP Compliance Officer for Department review at least 30 days prior to conducting any surveys or monitoring. The Permittee shall instruct, and is responsible for ensuring, that their selected biological monitoring firm provides training for new staff members and subcontractors on required survey and monitoring procedures and conducts QA/QC verification of their work;

ii. Prior to the initial (first) fill placement event ONLY, the Permittee shall submit ***Baseline Nearshore Hardbottom Monitoring Results***. The results of the full pre-construction (baseline) survey of nearshore hardbottom (see Sections 2.0 and 6.2.1 of the Biological Monitoring Plan).

iii. Prior to each construction event in which the borrow area will be the sand source and pipelines will be used to transport fill material to the placement area, the Permittee shall submit:

(1) ***Pipeline Corridor Hardbottom Survey Results***. All pre-construction pipeline corridor hardbottom survey data collected for the upcoming construction (nourishment) event (see Sections 3.1 and 6.2.2 of the Biological Monitoring Plan).

(2) ***Pipeline Corridor Hardbottom Survey Report***. A detailed pre-construction pipeline corridor survey report for the upcoming construction event (see Sections 3.2 and 6.2.2 of the Biological Monitoring Plan and Specific Condition 29 of this permit).

(3) ***Post-Placement Pre-Pumping Pipeline Survey Results***. When required (see Section 3.3 of the approved Biological Monitoring Plan and see Specific Condition 29 of this Permit), post-placement pre-pumping pipeline survey data shall be submitted to the JCP Compliance officer 72 hours prior to the intended or actual start of

pumping. See Section 6.2.3 of the Biological Monitoring Plan for reporting requirements.

e. Documentation from the U.S. Fish and Wildlife Service (FWS) that this work will be covered under a Statewide Programmatic **Biological Opinion** or a Biological Opinion(s) (BO) issued for construction on this project site. If the BO contains conditions that are not already contained herein, a permit modification may be required prior to construction to include those additional conditions.

f. Documentation confirming that the approved upland source is currently producing the quantity and quality of the authorized sand product required for the upcoming event, as required by Specific Condition 7.

g. Documentation that the modification to ***Public Easement*** No. 40034 has been executed to the satisfaction of the Department.

h. ***Pre-Construction Conference.*** **After all items required by a through g above have been submitted to the Department,** the Permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with the Permittee's contractors, the engineer of record, those responsible for turbidity monitoring, those responsible for protected species monitoring, staff representatives of the Fish and Wildlife Conservation Commission (FWC) and the JCP Compliance Officer (or designated alternate) prior to each construction event. In order to ensure that appropriate representatives are available, at least twenty-one (21) days prior to the intended commencement date for the permitted construction, the Permittee is advised to contact the Department, and the other agency representatives listed below:

DEP, JCP Compliance Officer
e-mail: JCPCompliance@dep.state.fl.us

FWC, Imperiled Species Management Section
e-mail: marineturtle@myfwc.com

FWC, Regional Biologist
Contact list: http://myfwc.com/conservation/you-conserve/wildlife/shorebirds/

The Permittee is also advised to schedule the pre-construction conference at least a week prior to the intended commencement date. At least seven (7) days in advance of the pre-construction conference, the Permittee shall provide written notification, advising the participants of the agreed-upon date, time and location of the meeting, and also provide a meeting agenda and a teleconference number.

If the actual construction start date is different from the expected start date proposed during the preconstruction conference, at least 48 hours prior to the commencement of each construction event, the Permittee shall ensure that notification is sent to the FWC, at marineturtle@myfwc.com, indicating the actual start date and the expected completion date. The Permittee shall also ensure that all contracted workers and observers are provided a copy of all permit conditions.

6. When discharging slurried sand onto the beach from a pipeline, the Permittee shall employ best management practices (BMPs) to reduce turbidity. At a minimum, these BMPs shall include the following:

   a. Use of shore-parallel sand dike to promote settlement of suspended sediment on the beach before return water from the dredged discharge reenters the Atlantic Ocean; and

   b. The pipeline discharge location shall be a minimum of 50 feet landward from open water. If 50 feet is not attainable due to a narrow beach berm, the pipeline discharge location shall be placed as far landward on the beach berm as possible without disturbing the dune.

7. Sediment quality shall be assessed as outlined in the offshore and upland Sediment QA/QC Plans (as appropriate for the source), dated May 26, 2020. Placement of material that is not in compliance with the Plan shall be handled according to the protocols set forth in the Sediment QA/QC Plan. The sediment testing result shall be submitted to The Department within 90 days following the completion of beach construction. The following requirements are included in the Sediment QA/QC Plan:

   a. If, during construction, the Permittee determines that the beach fill material does not comply with the sediment compliance specifications, the Permittee shall take measures to avoid further placement of noncompliant fill, and the sediment inspection results shall be reported to the Department.

   b. The Permittee shall submit post-construction sediment testing results and an analysis report as outlined in the Sediment QA/QC plan to the Department within 90 days following beach construction. The sediment testing results will be certified by a P.E. or P.G. from the testing laboratory. A summary table of the sediment samples and test results for the sediment compliance parameters as outlined in Table 1 of the Sediment QA/QC plan shall accompany the complete set of laboratory testing results. A statement of how the placed fill material compares to the sediment analysis and volume calculations from the geotechnical investigation shall be included in the sediment testing results report.

c. A post-remediation report containing the site map, sediment analysis, and volume of noncompliant fill material removed and replaced shall be submitted to the Department within 7 days following completion of remediation activities.

8. The following upland sand source products were reviewed and authorized for use in this project: (1) Beach Sand product from the Vulcan Materials' Diamond and Witherspoon mines; (2) Product BCH450 from the Stewart Mining Industries' Capron Trail mine; and (3) Beach Sand product from Jahna Industries' Independent – South, and Greenbay mines. Any additional upland sand sources will require review and authorization through the permit modification process.

9. Prior to each construction event using an upland sand source, the Permittee (or Permittee's Representative) shall submit documentation confirming that the authorized upland sand source(s) is currently producing both the quantity and quality of the authorized sand product(s) to meet the needs of the upcoming event. The documentation shall be signed and sealed by a Registered Professional in the State of Florida (i.e., a P.E. or P.G.) and shall indicate the name(s) of the product(s), the upland sand source(s) and the approximate volume (per product per source) needed for the upcoming event. The Permittee shall submit the documentation to the Department as a preconstruction submittal item no later than 45 days prior to construction. *Note: If the upland source(s) is no longer producing a product consistent with the approved Sediment QA/QC plan, a permit modification will be required to authorize an alternate source.*

10. **In-water Activity.** The Permittee shall adhere to the following requirements for all in-water activity:

a. The Permittee shall instruct all personnel associated with the project about the presence of marine turtles and manatees, and the need to avoid collisions with (and injury to) these protected marine species. The Permittee shall be responsible for harm to these resources and shall require their contractors to advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees or marine turtles, which are protected under the Endangered Species Act, the Marine Mammal Protection Act, the Marine Turtle Protection Act and the Florida Manatee Sanctuary Act.

b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate project area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels shall follow routes of deep water whenever possible.

c. Siltation or turbidity barriers (if used) shall be made of material in which manatees and marine turtles cannot become entangled, shall be properly secured, and shall be

regularly monitored to avoid manatee entanglement or entrapment. Barriers shall not impede manatee or marine turtle movement or travel.

d. The Permittee is responsible for all on-site project personnel and shall require them to observe water-related activities for the presence of marine turtles and manatee(s). All in-water operations shall be immediately shall be shut down if a marine turtle or manatee comes within 50 feet of the operation. For unanchored vessels, operators shall disengage the propeller and drift out of the potential impact zone. If drifting would jeopardize the safety of the vessel then idle speed may be used to leave the potential impact zone. Activities shall not resume until the animal(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the animal(s) has not reappeared within 50 feet of the operation. Animals shall not be herded away or harassed into leaving.

e. Any collision with (or injury to) a marine turtle or manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922, and to FWC at ImperiledSpecies@myFWC.com. Any collision with (and/or injury to) a marine turtle shall also be reported immediately to the Sea Turtle Stranding and Salvage Network (STSSN) at SeaTurtleStranding@myfwc.com.

f. Temporary signs concerning manatees shall be prominently posted prior to and during all in-water project activities, at sufficient locations to be regularly and easily viewed by all personnel engaged in water-related activities. Two temporary signs, which have already been approved for this use by the FWC, shall be posted at each location. One sign shall read “Caution Boaters – Watch for Manatees”. A second sign measuring at least 8 ½" by 11", shall explain the requirements for “Idle Speed/No Wake” and the shutdown of in-water operations. All signs shall be removed by the Permittee upon completion of the project. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to ImperiledSpecies@myFWC.com.

11. **Construction Area Project Lighting. No temporary lighting of the construction area is authorized at any time during the main portion of marine turtle nesting season (May 1 through October 31).** During early and late nesting season, direct lighting of the beach and nearshore waters shall be limited to the immediate area of active construction while meeting safety requirements as required by law. Lighting on offshore and onshore equipment shall be minimized by reducing the number of fixtures, shielding, lowering the height and appropriately placing fixtures to avoid excessive illumination of the water’s surface and nesting beach. The intensity of lighting shall be reduced to the minimum standard required for general construction area safety. Shields shall be affixed to the light housing on dredge and land-based lights and be large enough to block lamp light from being transmitted outside the construction area or to the adjacent marine turtle nesting beach. (Figure 1 below).

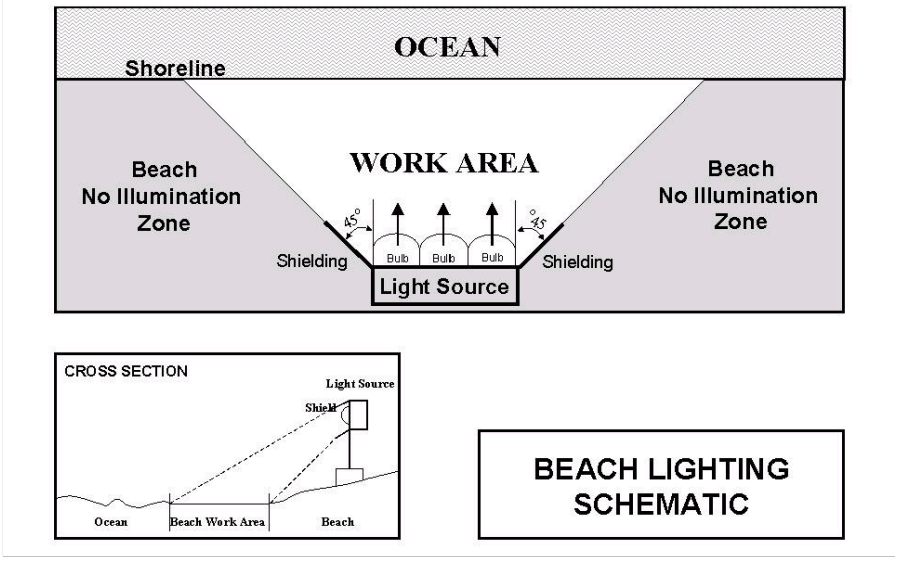


Figure 1

12. **All Beach Related Activities.** The Permittee shall adhere to the following requirements for all beach-related activities during marine turtle and shorebird nesting/breeding seasons (March 1 through October 31) in Indian River County.

    a. The Permittee shall require their contractor and protected species monitors to inspect all work areas that have excavations and temporary alteration of beach topography to determine which areas have deviations (such as depressions, ruts, holes and vehicle tracks) capable of trapping flightless shorebird chicks or marine turtle hatchlings each day. If so, the deviations shall be filled or leveled from the natural beach profile prior to 9:00 p.m. each day. The beach surface shall also be inspected after completion of the project, and all tracks, mounds, ridges or impressions, etc. left by construction equipment on the beach shall be smoothed and leveled.

    b. If any debris, including derelict construction or coastal armoring material, concrete and metal occurs on the beach placement site, it shall be removed from the beach to the maximum extent practicable prior to any placement of fill material. If debris removal activities will take place during protected species nesting seasons, the work shall be conducted during daylight hours only, and shall not commence until completion of daily monitoring surveys.

    c. Equipment Storage and Placement. Staging areas and temporary storage for construction equipment and pipes shall be located off the beach to the maximum extent practicable during March 1 through October 31. Nighttime storage of construction equipment that is not in use shall be located off the beach. All

construction pipes that are in use on the beach shall be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system, and if placed parallel to the dune shall be 5 to 10 feet away from the toe of the dune.

d. If it is necessary to extend construction pipes past a known shorebird nesting site, then those pipes shall be placed landward of the site before birds are active in that area. No pipe or sand shall be placed seaward of a shorebird nesting site during the shorebird nesting season. If such placement is not feasible for the project, FWC's Regional Biologist shall be contacted for alternative measures. See contacts available at http://myfwc.com/conservation/you-conserve/wildlife/shorebirds/contacts.

e. Beach Driving. All vehicles shall be operated at speeds less than 6 mph and run at or below the high-tide line. All personnel associated with the project shall be instructed about the potential presence of onsite protected species, and the need to avoid injury and disturbance to these species. In addition, all vehicles operated on the beach shall operate in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (http://myfwc.com/conservation/you-conserve/wildlife/beach-driving/). *Note: when flightless chicks are present within or adjacent to travel corridors, construction-related vehicles shall not be driven through the corridor unless a Bird Monitor is present.*

13. **Dune Planting Conditions.** Planting of dune vegetation is encouraged outside of marine turtle nesting season. However, planting activities may occur during the marine turtle nesting season March 1 through October 31 under the following conditions:

a. It is the responsibility of the Permittee to ensure that the project area and access sites are surveyed for marine turtle nesting activity. All nest surveys and activities involving marine turtles shall be conducted only by persons with a valid FWC permit issued pursuant to Florida Administrative Code 68E-1. For information regarding marine turtle permit holders, contact the FWC at MTP@myfwc.com. a. Marine turtle nest surveys shall be initiated at the beginning of the nesting season or 65 days prior to installation of plants (whichever is later). Surveys shall continue until completion of the project or through September 15 (whichever is earliest). Surveys shall be conducted throughout the project area and all beach access sites.

b. Any nests deposited in the area shall be left in place. The marine turtle permit holder shall install an on-beach marker at any nest site and a secondary marker located at a point as far landward as possible to ensure that future location of the nest will be possible should the on-beach marker be lost. A series of stakes and survey ribbon or string shall be installed to establish an area of 3 feet radius surrounding the nest. No planting or other activity shall occur within this area nor shall any activity occur

which might cause indirect impacts within this area. Nest sites shall be inspected daily to ensure nest markers have not been removed.

c. The use of heavy equipment (including vehicles such as trucks) is not authorized in marine turtle nesting habitat. A lightweight (ATV style) vehicle, with tire pressures of 10 p.s.i. or less can operate on the beach if required.

d. Any vegetation planting shall be installed by hand labor/tools only.

e. All activity shall be confined to daylight hours and shall not occur prior to the completion of all necessary marine turtle surveys and conservation activities within the project area. Nighttime storage of equipment or materials shall be off the beach.

f. In the event a nest is disturbed or uncovered during planting activity, the Permittee shall cease all work and immediately contact the marine turtle permit holder responsible for marine turtle conservation measures within the project area. If a nest(s) cannot be safely avoided during construction, all activity within the affected project area shall be delayed until complete hatching and emergence of the nest.

g. All planting related activities must avoid marked marine turtle nests including those that may be on the beach before and after the marine turtle nesting season dates (March 1 through October 31). Any impacts to nests or marine turtles that inadvertently occur shall be immediately reported the Florida Fish and Wildlife Conservation Commission (FWC) at MarineTurtle@myfwc.com, and all work shall stop until authorized to continue by the Department and FWC.

h. All irrigation lines for the dune restoration planting, if proposed, will be temporarily installed along the landward side of the dune only and will be removed once the plants have become established. Any watering necessary along the seaward side of the dune will be done by hand on an “as needed” basis.

14. **Marine Turtle Protection Conditions. Beach nourishment shall occur outside of the main part of marine turtle nesting season, starting after October 31 and completed before May 1**. During the May 1 through October 31 period, no construction equipment shall be placed or stored on the beach. Temporary approvals of work to extend into marine turtle nesting season may be authorized on a case by case basis. Such authorizations shall be in writing from the Department with FWC approval and accompanied by proof the extension is covered under a valid Biological Opinion. If such an authorization is granted all conditions below shall be followed.

15. Construction-related activities are authorized to occur on the nesting beach (seaward of existing coastal armoring structures or dune crest and all sandy beach areas such as those

used for beach access during the early nesting season (March 1 through May 1) and late nesting season (November 1 through November 30) under the following conditions:

a. Daily early morning marine turtle nest surveys shall start at the beginning of marine turtle nesting season (March 1). Daily nesting surveys shall continue through November 30, or until two weeks after the last crawl in the project area, whichever is earlier.

b. Daily nesting surveys shall be conducted beginning ½ hour prior to sunrise, and no construction activity may commence until completion of the marine turtle survey each day.

c. The Permittee shall ensure that marine turtle nesting surveys are conducted as required in this authorization, and only conducted by personnel with a valid FWC Marine Turtle Permit, that covers all project activities as required by Chapter 68E-1, F.A.C. If needed, contact FWC at MTP@myfwc.com for information on the authorized Marine Turtle Permit Holders in the project area.

d. Only those nests laid in the area where sand placement will occur shall be relocated, and nest relocation shall cease after the sand placement is completed. Nests requiring relocation shall be moved no later than 9 a.m., the morning following deposition (no longer than 12 hours from the time the eggs are laid), to a nearby self-release beach site in a secure setting, where artificial lighting will not interfere with hatchling orientation. The relocation site shall be determined in conjunction with and approved by FWC prior to nest relocations. Relocated nests shall not be placed in organized groupings. Relocated nests shall be randomly staggered along the length and width of beach settings that are not expected to experience any of the following: inundation by high tides; severe erosion; previous egg loss; or illumination by artificial lighting.

e. Nests deposited within areas where construction activities will not occur for 65 days, or nests laid in the nourished berm prior to tilling, shall be marked and left in place. The Marine Turtle Permit Holder shall install on-beach markers at the nest site and shall also install a secondary marker at a point as far landward as possible to assure that the nest can be located should the on-beach marker be lost. No activity shall occur within the marked area, nor shall any activities occur that could result in impacts to the nest. Nest sites shall be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the project activity.

f. Beginning March 1, daytime surveys shall be conducted for leatherback marine turtle nests. Nighttime surveys for leatherback marine turtles shall begin when the first leatherback crawl is recorded within the project or adjacent beach area through April 30, or until completion of the project, whichever is earliest. Nightly nesting surveys shall be conducted from 9 p.m. until 6 a.m. The project area shall be surveyed at 1-

hour intervals and eggs shall be relocated per the preceding requirements. Since leatherbacks require at least 1.5 hours to complete nesting, the1-hour interval will ensure that all nesting leatherbacks are encountered.

16. **Fill Restrictions.** During the marine turtle nesting season, the contractor shall not advance the beach fill more than 500 feet along the shoreline between dusk and the following day, until the daily nesting survey is completed, and the beach has been cleared for fill advancement. If the 500-foot advancement limitation is not feasible for the project, an alternative distance shall be established during the preconstruction meeting, if a distance can be agreed upon in consultation with FWC. If the work area is extended, nighttime nesting surveys are required, and a Marine Turtle Permit Holder is required to be present on-site to ensure that no nesting and hatching marine turtles are present. If any nesting turtles are sighted on the beach within the immediate construction area, activities shall cease immediately until the turtle has returned to the water and the Marine Turtle Permit Holder responsible for nest monitoring has relocated the nest.

17. **Marine Turtle or Nest Encounters.** Upon locating a dead or injured marine turtle, a hatchling, or egg that may have been harmed or destroyed as a result of the project, the Permittee shall be responsible for notifying FWC Wildlife Alert at 1-888-404-FWCC (3922). Care shall be taken in handling injured marine turtles or exposed eggs to ensure effective treatment or disposition, and in handling dead specimens to preserve biological materials for later analysis. If a marine turtle nest is excavated during construction activities, but not as part of the authorized nest relocation process outlined in these specific conditions, the permitted person responsible for egg relocation for the project shall be notified immediately so the eggs can be moved to a suitable relocation site.

18. **Tilling, Compaction and Escarpment Remediation Requirements.** For the years after the first-year sand placement (out-year), compaction monitoring, tilling and escarpment monitoring are not required if placed material no longer remains on the dry beach.

    a. **Compaction Sampling.** Sand compaction shall be monitored in the area of sand placement immediately after completion of the nourishment event, and two weeks prior to marine turtle nesting season, for three (3) subsequent years. If the average value for any depth exceeds 500 pounds per square inch (psi) for any two or more adjacent stations, then that area shall be tilled prior to the beginning of marine turtle nesting season. If a few values exceeding 500 psi are present randomly within the project area, tilling will not be required. Compaction monitoring shall be in accordance with the following protocol:

        i. Compaction sampling stations shall be located at 500-foot intervals along the project area. One station shall be at the seaward edge of the dune/bulkhead line (when material is placed in this area), and one station shall be midway between the dune line and the high-water line (normal wrack line).

ii. At each station, the cone penetrometer shall be pushed to depths of 6, 12 and 18 inches three times (i.e., three replicates at each depth). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lie over less compact layers. Replicates shall be located as close to each other as possible, without interacting with the previous hole and/or disturbed sediments. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports shall include all 18 values for each transect line, and the final 6 averaged compaction values.

iii. If values exceeding 500 psi are distributed throughout the project area, but do not exist at two adjacent stations at the same depth, then the Permittee shall consult with the FWC to determine if tilling is required. A tilling waiver based on these compaction values shall be submitted to the FWC at marineturtle@myfwc.com.

b. **Tilling Requirements.** If tilling is performed regardless of post-construction compaction levels or tilling is required based on compaction measurements, the area shall be tilled to a depth of 36 inches.

i. All tilling activity shall be completed prior to the marine turtle nesting season. If the project is completed during the marine turtle nesting season, tilling shall not be performed in areas where nests have been left in place or relocated.

ii. Each pass of the tilling equipment shall be overlapped to allow thorough and even tilling. A relatively even surface, with no deep ruts or furrows, shall be created during tilling. To do this, chain-linked fencing or other material shall be dragged over those areas as necessary after tilling.

iii. Tilling shall occur landward of the wrack line and shall avoid all naturally vegetated areas that are at least 3 square feet in size, as well as any planted areas that have been authorized by the Department. A 3-foot-wide No-Tilling buffer shall be maintained around vegetated areas. The slope between the mean high-water line and the mean low water line shall be maintained to approximate natural slopes.

c. **Escarpment Surveys.** Visual surveys for escarpments along the project area shall be made immediately after completion of sand placement, two weeks prior to marine turtle nesting season, and weekly for three (3) subsequent years, each year placed sand remains on the beach. Escarpment remediation shall be as follows:

i. Prior to marine turtle nesting season, escarpments that interfere with marine turtle nesting or that exceed 18 inches in height for a distance of at least 100 feet shall

be leveled to the natural beach contour or the beach profile shall be reconfigured to minimize scarp formation. Any escarpment removal shall be reported relative to R- monument location to FWC at marineturtle@myfwc.com, with a copy sent to the JCP Compliance Officer.

ii. If weekly surveys during the marine turtle nesting season document escarpments that exceed 18 inches in height for a distance of at least 100 feet and have persisted for more than two weeks, the FWC shall be contacted immediately to determine the appropriate action to be taken. Submitted information shall include locations and measurements of the escarpments and marine turtle nests located within 20 feet of the escarpments, with photographs when possible. Upon written notification, the Permittee shall level escarpments in accordance with methods that minimize impacts to any existing nest in coordination with the FWC and the marine turtle permit holder. An annual summary of escarpment surveys and actions taken shall be submitted electronically to FWC (marineturtle@myfwc.com).

d. If compaction sampling, tilling or escarpment removal occurs during shorebird breeding season, the Shorebird Conditions (including surveys) included in this authorization shall be followed. No heavy equipment shall operate, and no compaction sampling or tilling shall occur within 300 feet of any shorebird nest. If flightless shorebird chicks are present within the work zone or equipment travel corridor, a Bird Monitor shall be present during the operation to ensure that no heavy equipment operates within 300 feet of the flightless young. It is the responsibility of the Permittee to ensure that their contractors avoid tilling, scarp removal or dune vegetation planting in areas where nesting birds are present.

19. **Post-Construction Monitoring and Reporting Marine Turtle Protection Conditions**

a. For each sand placement event, reports for all required marine turtle nesting surveys shall be provided for the post construction (partial or remaining) nesting season and for two full nesting seasons post construction in accordance with the Table 1 (below). If nesting and reproductive success is less than the criteria in the table below, an additional year of monitoring and reporting may be required. If criteria are not met, additional conditions prior to the next sand placement on this beach may be required by the Department and FWC.

b. Data shall be reported and summarized for the nourished areas in accordance with Table 1 (below). Reports shall summarize all crawl activity, hatching success of a representative sampling of nests left in place (if any) by species, project name and applicable project permit numbers and dates of construction. Data shall be submitted in electronic format (Excel spreadsheets) which are available upon request from marineturtle@myfwc.com. Reports shall be sent to the FWC Imperiled Species

Management section at marineturtle@myfwc.com and **copied to** JCPCompliance@dep.state.fl.us. All summaries should be submitted by January 15th of the following year.

Table 1. Marine Turtle Monitoring for Beach Placement of Material

Date	Duration	Variable	Criterion
Nesting Success	Year of in-season construction and two entire nesting seasons post construction, with possible additional year[1 & 2]	Number of nests and non-nesting emergences by day by species	40 percent or greater
Hatching success	Year of in-season construction and one entire nesting season post construction, with possible additional year[1 & 2]	Number of hatchlings by species to hatch from egg	60 percent or greater (a statistically valid number of loggerhead and green nests, and all leatherback nests)
Emergence Success	Year of in-season construction and one entire nesting season post construction, with possible additional year[1 & 2]	Number of hatchlings by species to emerge from nest onto beach	Average must not be significantly different than the average hatching success
Disorientations	Year of in-season construction and two entire nesting seasons post construction[1]	Number of nests and individuals that misorient or disorient	
Nests affected by erosion or inundation	Year of construction and two years post construction if placed sand remains on the beach	Number of nests lost and/or affected, by species	
Lighting Surveys	Two in-season surveys the year following construction; First survey between May 1 and May 15 and second survey between July 15 and August 1[1]	Number, location and photographs of lights visible from nourished berm, corrective actions and notifications made	Lighting survey and meeting resulting with plan for reduction in lights visible from nourished berm
Compaction	Three nesting seasons beginning with the year of construction. Not required if the beach is tilled prior to nesting seasons[1]	Shear resistance	Less than 500 psi

Date	Duration	Variable	Criterion
Escarpment Surveys	Weekly during nesting season for three years beginning with year of construction[1]	Number of scarps 18 inches or greater extending for more than 100 feet that persist for more than 2 weeks	Successful remediation of all persistent scarps as needed
1 If placed sand remains on the beach 2 Additional years may be required if variable does not meet criterion based on previous year			

20. **Post-Construction Lighting Surveys.** The Permittee shall ensure that lighting surveys be conducted from the nourished berm and the following actions taken to address potential adverse impacts expected with artificial lights visible from any dry portion of the newly elevated beach. The surveys shall be conducted from the top of the foreshore slope (i.e., the seaward edge of the filled berm before it slopes into the water), facing landward. The survey shall follow standard techniques for such a survey, such as including the number and type of visible lights, location of lights, and photo documentation (see additional techniques as per the 2015 USFWS Statewide Programmatic Biological Opinion).

    a. The first survey shall be conducted between May 1 and May 15 for the first nesting season following construction. For each visible light source, the Permittee shall document that the property owners have been notified and has been provided with recommendations for correcting the light as soon as possible. Recommendations shall be in accordance with local lighting ordinances. A report summarizing all visible lights and the recommendations for correcting the light shall be forwarded to local code enforcement. If no lighting ordinances exist, the recommendations to the property owners shall be consistent with FWC lighting guidelines, which include no lights or light sources shall be visible from the newly elevated beach. The second survey shall be conducted between July 15 and August 1 to assess any remaining visible lights requiring corrective action.

    b. A summary report of the surveys and what corrective actions or local enforcement actions have been taken shall be submitted to FWC at marineturtle@myfwc.com and copied to JCPCompliance@dep.state.fl.us by December 31 of the year in which surveys are conducted. Upon request by the FWC, the Permittee shall set up and hold a meeting with the those responsible for code enforcement (when applicable), FWC and the USFWS to discuss the report and potential additional corrective action needed, as well as any documented marine turtle disorientations in or adjacent to the project area.

21. **Shorebird Protection.** The term “shorebird” refers to all solitary nesting shorebirds and colonial nesting seabirds. If any project activities as described below are conducted, the following shorebird protection conditions are required during the shorebird breeding cycle, which includes nesting. The following conditions are intended to avoid direct

impacts associated with the construction of the project and may not address all potential take incidental to the operation and use related to this authorization.

a. Shorebird breeding season dates for this project area are March 1 through September 1. Note that while most species have completed the breeding cycle by September 1, flightless young may be present through September and must be protected if present.

b. Any parts of the project where "project activities" on the beach take place entirely outside the breeding season, do not require shorebird surveys. The term "project activities" includes operation of vehicles on the beach, movement or storage of equipment on the beach, sand placement or sand removal, and other similar activities that may harm or disturb shorebirds. Bird survey routes must be established and monitored throughout the entire breeding season in any parts of the project area where: 1) potential shorebird breeding habitat occurs, and 2) project activities are expected to occur at any time within the breeding season.

c. Bird surveys shall be conducted in all potential beach-nesting bird habitats within the project boundaries that may be impacted by construction or pre-construction activities. One or more shorebird survey routes shall be established by the Permittee to cover project areas which require shorebird surveys. These routes must be approved by the FWC Regional Biologist as part of the Environmental Protection Plan approval process. Routes shall not be modified without prior FWC approval.

d. During the pre-construction and construction phases of the project, the Permittee shall ensure that surveys for detecting breeding activity and the presence of flightless chicks shall be completed on a daily basis by a qualified bird monitor prior to movement of equipment, operation of vehicles, or other activities that could potentially disrupt breeding behavior or cause harm to the birds or their eggs or young. If all project activities are completed and all personnel and equipment have been removed from the beach prior to the end of the breeding season, route surveys shall continue to be conducted at least weekly through the end of the breeding season. If breeding or nesting behavior is confirmed by the presence of a scrape, eggs or young, the Permittee (or their designee) shall establish a 300-foot buffer around the site and notify the FWC Regional Biologist within 24 hours.

e. The Bird Monitor shall conduct a shorebird education and identification program (and/or provide educational materials) with the on-site staff to ensure protection of precocial (mobile) chicks. All personnel are responsible for watching for shorebirds, nests, eggs and chicks. If the Bird Monitor finds that shorebirds are breeding within the project area, a bulletin board shall be placed and maintained in the construction staging area with the location map of the construction site showing the bird breeding areas and a warning, clearly visible, stating that "NESTING BIRDS ARE PROTECTED BY LAW INCLUDING THE FLORIDA ENDANGERED AND

THREATENED SPECIES ACT AND THE STATE and FEDERAL MIGRATORY BIRD ACTS".

f. **Bird Monitor Requirements.** The Permittee shall ensure that shorebird surveys are conducted by trained, dedicated individuals (Bird Monitor) with proven shorebird identification skills and avian survey experience. Bird Monitors shall review and become familiar with the general information, employ the data collection protocol, and implement data entry procedures outlined on the FWC's FSD website (http://www.flshorebirddatabase.org or Florida Shorebird Database). The Permittee shall submit a list of Bird Monitors, with their contact information and a summary of qualifications, including bird identification skills and avian survey experience to the FWC Regional Biologist for approval. The Permittee shall submit the names and contact information of the Bird Monitors who have been approved by FWC to JCPCompliance@dep.state.fl.us, prior to any construction or shorebird surveys. In order to be approved, the Bird Monitors must meet the following minimum qualifications:

i. Has previously participated in beach-nesting bird surveys in Florida (provide references or resume). Experience with previous projects must document the ability to 1) identify all species of beach-nesting birds by sight and sound, 2) identify breeding/territorial behaviors, and find nests of shorebirds that occur in the project area, and 3) identify habitats preferred by shorebirds nesting in the project area.

ii. Have a clear working knowledge of, and adhere to, the Breeding Bird Protocol for Florida's Seabirds and Shorebirds.

iii. Have completed full-length webinars: Route-Surveyor Training and Rooftop Monitoring Training, including the annual refresher training. Training resources can be found on the Florida Shorebird Database (FSD) website.

iv. Familiar with FWC beach driving guidelines.

v. Experience posting beach-nesting bird sites, consistent with Florida Shorebird Alliance (FSA) Guidelines.

vi. Has registered as a contributor to the FSD.

22. **Shorebird Survey Protocols.** Shorebird survey protocols, including downloadable field data sheets, are available on the FSD website. All breeding activity shall be reported to the FSD website within one week of data collection. If the use of this website is not feasible for data collection, the FWC Regional Biologist must be contacted for alternative

methods of reporting. The Permittee shall ensure that the Bird Monitors use the following survey protocols:

a. Surveys shall be conducted by walking the length of all survey routes and visually surveying for the presence of shorebirds exhibiting breeding behavior, shorebird chicks or shorebird juveniles, as outlined in the FSD Breeding Bird Protocol for Shorebirds and Seabirds. Use of binoculars (minimum 8x40) is required and use of spotting scope may be necessary to accurately survey the area. If an ATV or other vehicle is needed to cover large survey routes, the Bird Monitor shall stop at intervals of no greater than 600 feet to visually inspect for breeding activity.

b. Once breeding is confirmed by the presence of a scrape, eggs or young, the Permittee (or their designee) shall notify the FWC Regional Biologist within 24 hours.

23. **Shorebird Buffer Zones and Travel Corridors.** The Permittee shall require the Bird Monitor(s) and Contractor(s) to meet the following:

a. The Bird Monitor(s) shall establish a disturbance-free buffer zone around any location within the project area where the Bird Monitor has observed shorebirds engaged in breeding behavior, including territory defense. A 300-foot buffer shall be established around each nest or around the perimeter of each colonial nesting area. A 300-foot buffer shall also be placed around the perimeter of areas where shorebirds are seen digging nest scrapes or defending nest territories. All construction activities, movement of vehicles, stockpiling of equipment, and pedestrian traffic are prohibited in the buffer zone. **Smaller, site-specific buffers may be established if approved in writing by the FWC Regional Biologist.** Travel corridors shall be designated and marked outside the buffer areas for pedestrian, equipment or vehicular traffic.

b. The Bird Monitor(s) shall keep breeding sites under sufficient surveillance to determine if birds appear agitated or disturbed by construction or other activities in adjacent areas. If birds do appear to be agitated or disturbed by these activities, then the Bird Monitor(s) shall immediately widen the buffer zone to a sufficient size to protect breeding birds.

c. The Bird Monitor(s) shall ensure that where breeding birds will tolerate pedestrian traffic, traditional pedestrian access will not be blocked. This is generally the case with lateral movement of beach-goers walking parallel to the beach at or below the highest tide line. Pedestrian traffic may also be allowed when breeding was initiated within 300 feet of an established beach access pathway.

d. The Bird Monitor(s) shall ensure that the perimeters of designated buffer zones shall be marked according to FSA Posting Guidelines: (http://flshorebirdalliance.org/resources/instructions-manuals.aspx) with posts, twine

and FWC-approved signs stating "Do Not Enter, Important Nesting Area" or similar language around the perimeter (see example of signage for marking designated buffer zones at http://myfwc.com/conservation/you-conserve/wildlife/shorebirds/). Posts shall not exceed 3 feet in height once installed. Symbolic fencing (twine, string or rope) should be placed between all posts at least 2.5 feet above the ground and rendered clearly visible to pedestrians. If pedestrian pathway and/or equipment travel corridor modifications are approved by the FWC Regional Biologist, these shall be clearly marked. **Posting shall be maintained in good repair until no active nests, eggs, or flightless young are present.** Although solitary nesters may leave the buffer zone temporarily with their chicks, the posted area continues to provide a potential refuge for the family until breeding is complete. Breeding is not considered to be completed until all chicks have fledged.

e. The Permittee shall ensure that the Bird Monitor(s) designate and mark travel corridors outside the buffer areas so as not to cause disturbance to breeding birds. Heavy equipment, other vehicles, or pedestrians may transit past breeding areas in these corridors. Stopping or turning heavy equipment and vehicles shall be prohibited within the designated travel corridors adjacent to the breeding site. When flightless chicks are present within or adjacent to travel corridors, movement of vehicles shall be adequately monitored by the Bird Monitor(s), who shall advise the contractor whose responsibility it is to ensure no chicks are in the path of the moving vehicle. In addition, tracks, ruts, or holes capable of trapping flightless chicks shall be smoothed or leveled after the Bird Monitor(s) inspect them for the presence of flightless young.

f. Any injury or death of a shorebird (including crushing eggs or young) resulting from project activities shall be reported immediately to the FWC Regional Biologist.

24. Subarea 2 of the South Borrow Area shall be used for the initial construction event. Subarea 2 shall be completely used prior to dredging Subarea 3. The borrow areas shall be dredged in such a manner that the material remaining shall be practicable and feasible to dredge in the subsequent event should an entire subarea not be used for a single dredge event.

25. Subarea 1 of the South Borrow Area shall be reserved for use as a sand source for emergency beach repair in the event that a storm or other event causes damage to the beach within the authorized project area.

MONITORING REQUIRED:

26. Water Quality - Turbidity shall be monitored as follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: Monitoring shall be conducted 3 times daily, approximately 4 hours apart, and at any other time that there is a likelihood of an exceedance of the turbidity standard, during all dredging and sand placement operations. At the dredge site, sampling shall be conducted after overflow from the hopper begins and the associated turbidity plume has reached the edge of the mixing zone. At the fill placement site, sampling shall be conducted after discharge from the hopper begins and the associated turbidity plume has reached the edge of the mixing zone.

Sampling shall be conducted **while the highest project-related turbidity levels are crossing the edge of the mixing zone**. Since turbidity levels can be related to pumping rates, the dredge pumping rates shall be recorded, and provided to the Department upon request. The compliance samples and the corresponding background samples shall be collected at approximately the same time, i.e., background sample shall immediately follow the compliance sample.

Location: Background: Sampling shall occur at surface (approximately one foot below the surface), mid-depth (for sites with depths greater than 6 feet), and bottom (approximately 6 feet-above the bottom for sites with depths greater than 25 feet). All background sampling shall occur clearly outside the influence of any artificially generated turbidity plume or the influence of an outgoing inlet plume.

Borrow Site: Samples shall be collected at least 300 meters up-current from the source of turbidity at the dredge site.

Beach Site: Samples shall be collected at least 300 meters up-current from any portion of the beach that has been, or is being, filled during the current construction event, at the same distances offshore as the associated compliance samples.

Compliance: Sampling shall occur at surface (approximately one foot below the surface), mid-depth (for sites with depths greater than 6 feet), and bottom (approximately 6 feet above the bottom for sites with depths greater than 25 feet).

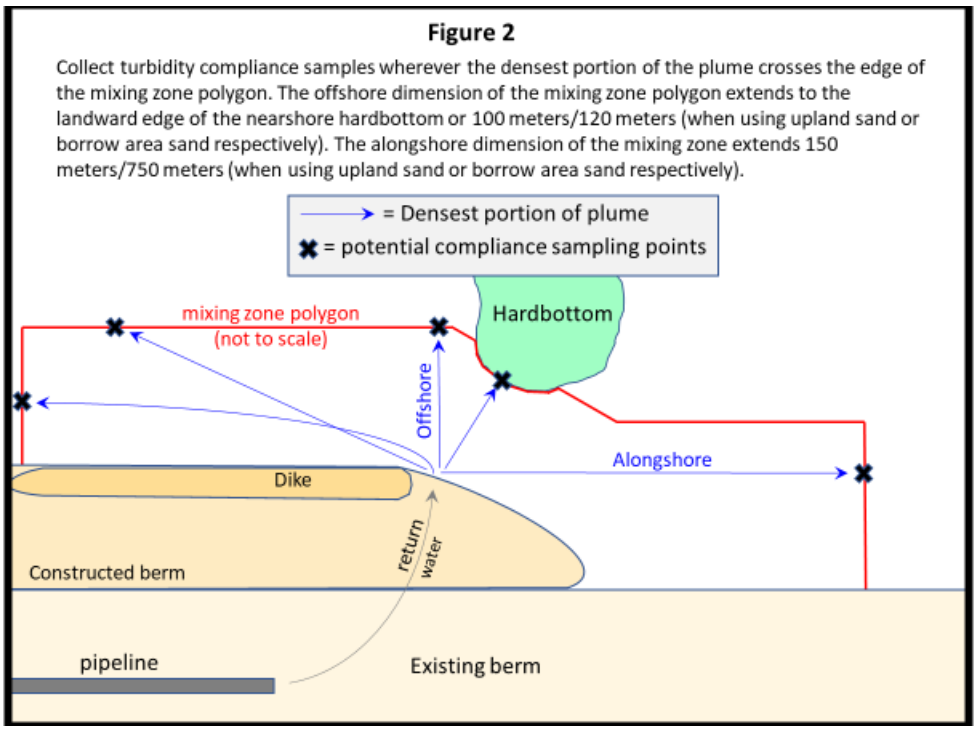
Borrow Site: Samples shall be collected 150 meters down-current from the cutterhead or the hopper dredge overflow point, or at the edge of the nearest seagrass bed/hardbottom in the downcurrent direction, whichever is closest to the cutterhead or overflow point **and** from any other source of turbidity generated by the dredge, in the densest portion of any visible turbidity plume. If no plume is visible, follow the likely direction of flow.

Beach Site (when placing sand from upland source): Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone polygon, which measures up to 100 meters offshore or to the landward edge of the nearshore hardbottom, whichever is closer, and up to 150 meters alongshore from the point where the return water from the dredged discharge reenters the Atlantic Ocean. *Note: If the plume flows parallel to the shoreline, the densest portion of the plume may be close to shore, in shallow water. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat. See Figure 2 (below).*

Beach Site (when placing sand from offshore source): Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone polygon, which measures up to 120 meters offshore or to the landward edge of the nearshore hardbottom, whichever is closer, and up to 750 meters alongshore from the point where the return water from the dredged discharge reenters the Atlantic Ocean. *Note: If the plume flows parallel to the shoreline, the densest portion of the plume may be close to shore, in shallow water. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat. See Figure 2 (below).*

Figure 2

Collect turbidity compliance samples wherever the densest portion of the plume crosses the edge of the mixing zone polygon. The offshore dimension of the mixing zone polygon extends to the landward edge of the nearshore hardbottom or 100 meters/120 meters (when using upland sand or borrow area sand respectively). The alongshore dimension of the mixing zone extends 150 meters/750 meters (when using upland sand or borrow area sand respectively).



Calibration: The instruments used to measure turbidity shall be fully calibrated with primary standards within one month of the commencement of the project, and at least once a month throughout the project. Calibration with secondary standards shall be verified each morning prior to use, after each time the instrument is turned on, and after field sampling using two secondary turbidity "standards" that bracket the anticipated turbidity samples. If the post-sampling calibration value deviates more than 8% from the previous calibration value, results shall be reported as estimated and a description of the problem shall be included in the field notes.

Analysis of turbidity samples shall be performed in compliance with DEP-SOP-001/01 FT 1600 Field Measurement of Turbidity:
http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf
If the turbidity monitoring protocol specified above prevents the collection of accurate data, the person in charge of the turbidity monitoring shall contact the JCP Compliance Officer to establish a more appropriate protocol. Once approved in writing by the Department, the new protocol shall be implemented through an administrative permit modification.

27. The **compliance** locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the **compliance** sites that are greater than 29 NTUs above the corresponding background turbidity levels, construction activities shall **cease immediately** and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. Any such occurrence shall also be immediately reported to the JCP Compliance Officer via email at JCPCompliance@dep.state.fl.us and include in the subject line, "TURBIDITY EXCEEDANCE", and the Project Name and Permit Number. Also notify the Department's Southeast District office.

Any project-associated turbidity source other than dredging or fill placement for beach nourishment (e.g., scow or pipeline leakage) shall be monitored as close to the source as possible. If the turbidity level exceeds 29 NTUs above background, the construction activities related to the exceedance shall **cease immediately** and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. This turbidity monitoring shall continue every hour until background turbidity levels are restored or until otherwise directed by the Department. The Permittee shall notify the Department, by separate email to the JCP Compliance Officer, of such an event within 24 hours of the time the Permittee first becomes aware of the discharge. The subject line of the email shall state "OTHER PROJECT-ASSOCIATED DISCHARGE, TURBIDITY EXCEEDANCE".

a. When reporting a turbidity exceedance, the following information shall also be included:

i. the Project Name;

ii. the Permit Number;

iii. location and level (NTUs above background) of the turbidity exceedance;

iv. the time and date that the exceedance occurred; and

v. the time and date that construction ceased.

b. Prior to re-commencing the construction, a report shall be emailed to the Department with the same information that was included in the "Exceedance Report", plus the following information:

i. turbidity monitoring data collected during the shutdown documenting the decline in turbidity levels and achievement of acceptable levels;

ii. corrective measures that were taken; and

iii. cause of the exceedance.

28. **Turbidity Reports:** All turbidity monitoring data shall be submitted within one week of analysis. The data shall be presented in tabular format, indicating the measured turbidity levels at the compliance sites for each depth, the corresponding background levels at each depth and the number of NTUs over background at each depth. Any exceedances of the turbidity standard (29 NTUs above background) shall be highlighted in the table. In addition to the raw and processed data, the reports shall also contain the following information:

a. time of day samples were taken;

b. dates of sampling and analysis;

c. GPS location of sample and source. *When possible, coordinates should be provided in decimal degrees with a 5 decimal level of precision (i.e., 0.00001). Please also indicate the datum*;

d. depth of water body;

e. depth of each sample

f. antecedent weather conditions, including wind direction and velocity;

g. tidal stage and direction of flow;

h. water temperature;

i. a geo-referenced map, overlaid on an aerial photograph, indicating the sampling locations (background and compliance), location of active construction, the visible plume pattern and direction of flow. The map shall also include the boundaries of any benthic resources. A sample map shall be submitted to and reviewed by the Department prior to construction (Specific Condition 5);

j. a statement describing the methods used in collection, handling, storage and analysis of the samples;

k. a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, calibration of the meter, accuracy of the data and precision of the GPS measurements;

l. When samples cannot be collected, include an explanation in the report. If unable to collect samples due to severe weather conditions, include a copy of a current report from a reliable, independent source, such as an online weather service.

Monitoring reports shall be submitted by email to the Department's JCP Compliance Officer. In the subject line of the reports, include the Project Name, Permit Number and the dates of the monitoring interval. Failure to submit reports in a timely manner constitutes grounds for revocation of the permit. When submitting this information to the Department's JCP Compliance Officer, on the cover page to the submittal and at the top of each page, please state: **"This information is provided in partial fulfillment of the monitoring requirements in Permit No. 0215960-005-JC, for the Indian River County Sector 7 Beach and Dune Nourishment Project"**

29. **Biological Monitoring**

a. The Permittee shall adhere to the current, Department-approved **Biological Monitoring Plan (BMP)** (dated July 13, 2020), which is a binding part of this permit. The Permittee is responsible for ensuring that their selected contractor(s) / subcontractor(s) are knowledgeable of all permit conditions pertaining to monitoring requirements (including the BMP); not just the scope of work in the contract prepared by the Permittee / contractor. The Permittee shall acquire written approval from the Department prior to implementing any revisions to the BMP. Table 2 (below), titled "Hardbottom Monitoring Summary", summarizes surveys, monitoring events, and tasks required by the Biological Monitoring Plan; these are described in detail in the Biological Monitoring Plan itself.

No impacts to hardbottom resources are authorized by this permit. Biological monitoring shall be conducted to provide the Department with reasonable assurance that any unpermitted, project-related, persistent or temporary, negative impacts (direct or indirect) to hardbottom resources will be documented, if they occur. Unpermitted project-related impacts shall be mitigated for. Impacts and their mitigation may be handled through compliance and enforcement action, and the amount of mitigation may be determined according to the Department's UMAM assessment.

b. **Nearshore Hardbottom Monitoring**. Nearshore hardbottom adjacent to the fill template, beyond the ETOF, shall be monitored (see Section 2.0 of the BMP). A single pre-construction monitoring event shall be conducted prior to the initial fill placement event conducted under this Permit (see Specific Condition 5.d.ii of the permit). This pre-construction monitoring event shall serve as the baseline for all post-construction monitoring conducted under this Permit. An immediate post-construction monitoring event (within six months of project completion) and three annual post-construction monitoring events (Years 1, 2, and 3 post-construction) shall be conducted following each fill placement event (i.e., each fill placement event shall trigger a complete round of post-construction monitoring). Unless otherwise approved in writing by DEP staff, all monitoring events shall be conducted during summer months (May through September), as close as practicable to the date the baseline survey was conducted. Standard operating procedures shall be used during each monitoring event to provide consistent and repeatable collection of data. Monitoring data and reports are required to be submitted following each monitoring event, according to the Plan.

c. **Pipeline Corridor Monitoring**. Prior to each fill placement event in which the borrow area will be the sand source and pipelines will be used to transport fill material to the placement area, Pre-Construction Pipeline Corridor Surveys shall be conducted to determine the current presence or absence of hardbottom resources and, if present, to determine the current distribution and condition of hardbottom resources within the authorized pipeline corridor and the area 25 meters to the right and left of the pipeline corridor (see Section 3.1 of the BMP).

For survey areas documented as currently containing hardbottom resources, the Permittee shall use the results of the Pre-Construction Pipeline Corridor Surveys to determine where hardbottom resources can be avoided when placing and using pipelines. For hardbottom resources that cannot be avoided within the pipeline corridor, the Permittee shall, to the greatest extent practicable, use the results of the Pre-Construction Pipeline Corridor Surveys to determine the least impactful placement for each pipeline within each corridor and the locations along each pipeline where Minimization Measures (e.g., collars or risers or floating pipeline) can be used to limit impacts to resources. Following survey completion and data analysis, the Permittee shall submit all raw data and a written Pre-Construction Pipeline Corridor

Survey Report to the DEP (see Section 3.2 of the BMP and Specific Conditions 5.d.iii.(1) and (2) of the permit).

Results of the current Pre-Construction Pipeline Corridor Surveys as well as the avoidance and minimization measures that will be employed by the Permittee shall determine whether additional surveys, monitoring of hardbottom resources, or activities to provide assurance are required within project areas. If monitoring is required, the type of monitoring that shall be conducted will be based on current survey results, as specified below:

i. If results of the current Pre-Construction Pipeline Corridor Surveys demonstrate that hardbottom resources are currently absent within the pipeline corridor and the 25-meter buffer to either side of the corridor, then no additional surveys or monitoring will be required for the corridor for the current construction event.

ii. If results of the Pre-Construction Pipeline Corridor Surveys demonstrate that hardbottom resources are currently present within the pipeline corridor or the 25-meter buffer to either side of the corridor, and if the Permittee will avoid hardbottom resources documented within the pipeline corridor and corridor buffer during construction (e.g., during pipeline placement and use), then the Department will require reasonable assurance that resources within the corridor have successfully been avoided. The Permittee shall conduct a Post-Placement Pre-Pumping Pipeline Survey and provide the results (data) of the survey to the Department (see Section 3.3 of the BMP and see Specific Condition 5.d.iii.(3) of the permit). To meet the Department's reasonable assurance requirement for Avoidance, results of the Post-Placement Pre-Pumping Pipeline Survey must demonstrate that hardbottom resources are absent within 25-meter to either side of the placed pipeline. Hardbottom resources that have not been avoided shall be Monitored (see Section 3.4 of the BMP for monitoring methods).

iii. If hardbottom resources within the pipeline corridor and corridor buffer area cannot be avoided during construction (e.g., during pipeline placement and use), then resources within close proximity to placed pipelines (i.e., present within 25-meter to either side of a pipeline) shall be monitored. The Permittee shall conduct a Post-Placement, Pre-Pumping Pipeline Survey and provide the results of the survey to the Department (see Section 3.3 of the BMP and Specific Condition 5.d.iii.(3) of the permit). The type of monitoring required for each hardbottom patch/feature in close proximity to the pipeline shall depend on whether the pipeline, once placed, runs adjacent to or across/through hardbottom resources (see Section 3.4 of the BMP for required monitoring methods). Reports are required to be submitted following each survey, according to the Plan.

a. **Reporting Requirements for Biological Monitoring.** See Section 6.0 of the BMP for reporting requirements.

e. **Hardbottom Monitoring Summary.** All pre-construction survey tasks shall be completed prior to the start of any and all related construction activities, respectively. Post-placement pipeline surveys and initial corridor monitoring events shall be completed prior to the initiation of pumping activities. Other pre- and post-construction monitoring shall be conducted as specified in each individual section of the approved Biological Monitoring Plan. Surveys, monitoring, and tasks required for nearshore hardbottom and pipeline corridors are summarized in Table 2, below. See the Biological Monitoring Plan for details.

Table 2. Hardbottom Monitoring Summary

Project Area	Survey	Survey Type	Survey Period & Number of Events	Deliverables
Nearshore Hardbottom	18 Permanent Transects outside of ETOF (N=11 Biological and N=7 Sediment Only; 70 m long each; and Permanent Quadrats (0.5 m^2)	Line-Intercept (all transects)	**Pre-Construction** (N=1): Once prior to initial fill placement (Baseline). **Post-Construction** (N=4 per fill placement event): Immediately (within 6 months) and annually for 3 years (years 1, 2, and 3).	Excel spreadsheet, PDF of field sheets
		Interval Sediment Depth (all transects)		Excel spreadsheet, PDF of field sheets
		Video (all transects)		Video
		Quadrat Sampling (only biological transects)		Excel spreadsheet, PDF of field sheets
	Hardbottom Edge	In-situ Delineation of Edge (from R-99 to R-110)		Shapefiles
Pipeline Corridor	Pre-Construction Corridor Area Surveys	Sonar Survey	**Pre-Construction** (N=1 full survey of the corridor prior to each fill placement event)	Sonar survey data
		Diver Verification Survey		PDF of field sheets, Photos/Video
		Hardbottom Mapping		Shapefiles
	Post-Placement Pipeline Survey	Mapping	**Pre-Pumping** (N=1 corridor survey per fill placement event): Prior to pumping	Shapefiles
	Corridor Monitoring – All Monitoring Types (1 & 2)	Transect Video Survey	**Pre-Pumping** (N=1 corridor survey per fill placement event): Prior to pumping **Post-Construction** (N=1 corridor survey per fill placement event)	Video
	Type 1 Corridor Monitoring Only	Transect Video Survey	**During-Construction** (Weekly – multiple events per fill placement)	Video

30. **Physical Monitoring**

Monitoring and reporting of the permitted project shall be conducted in accordance with the Physical Monitoring Plan dated January 21, 2019, and the conditions of this permit. The plan specifies a greater density of beach and offshore profile surveys than typically collected to monitor the performance of beach nourishment. For this project, the additional survey profiles are acceptable to better understand the equilibration of the beach fill. However, if the engineering report for the second annual post-construction monitoring event demonstrates the additional surveys are not necessary, then the Permittee may request that only survey profiles taken at each DEP reference monument shall be conducted.

The approved Monitoring Plan can be revised at any later time by written request of the Permittee and with the written approval of the Department. If subsequent to approval of the Monitoring Plan there is a request for modification of the permit, the Department may require revised or additional monitoring requirements as a condition of approval of the permit modification.

As guidance for obtaining Department approval, the plan shall generally contain the following items:

a. Topographic and bathymetric profile surveys of the beach and offshore shall be conducted prior to commencement of construction, immediately following completion of construction, and annually thereafter for three years following completion of construction. A pre-construction survey of the project area to receive beach fill may use surveys conducted for purposes of construction bidding, contracting or construction management. The post-construction survey of the beach fill may use surveys and other information collected periodically during construction for purposes of construction management and payment. Alternatively, the post-construction survey may consist of a single beach-offshore profile survey event of the project monitoring area conducted within 60 days after completion of beach fill placement.

   The monitoring surveys shall be conducted during a spring or summer month and repeated as close as practicable during that same month of the year. If the time period between the post-construction survey and the first biennial monitoring survey is less than six months, then the Permittee may at their discretion postpone the first monitoring survey until the following spring/summer.

   The monitoring area shall include profile surveys at each of the Department of Environmental Protection's reference monuments within the bounds of the beach fill area and along at least 5,000 feet of the adjacent shoreline on both sides of the beach fill area (see comment above). All work activities and deliverables for the biennial monitoring surveys shall be conducted in accordance with the latest update of the

Department's *Monitoring Standards for Beach Erosion Control Projects, Sections 01000 and 01100.*

b. Bathymetric surveys of the offshore borrow area(s) used for construction shall be conducted within 60 days following completion of construction of the project. Alternatively, the post-construction survey of the borrow area may consist of surveys and other information collected during construction for purposes of construction management.

   Survey grid lines across the borrow area(s) shall be spaced to provide sufficient detail for accurate volumetric calculations but spaced not more than a maximum of 500 feet apart, and shall extend a minimum of 500 feet beyond the boundaries of the borrow site. In all other aspects, work activities and deliverables shall be consistent with the Department's *Monitoring Standards for Beach Erosion Control Projects, Section 01200.*

c. Aerial photography of the beach shall be taken concurrently with the post-construction survey and each annual monitoring survey required above, as close to the date of the beach profile surveys as possible. The limits of the photography shall include the surveyed monitoring area as described above. All work activities and deliverables shall be conducted in accordance with the latest update of the Department's *Monitoring Standards for Beach Erosion Control Projects, Section 02100 – Environmental Aerial Photography Acquisition*.)

d. The Permittee shall submit an engineering report and the monitoring data to the JCP Compliance Officer within 90 days following completion of the construction and each biennial monitoring survey.

   The report shall summarize and discuss the data, the performance of the beach fill project, and identify erosion and accretion patterns within the monitored area. Results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction. In addition, the report shall include a comparative review of project performance to performance expectations and identification of adverse effects attributable to the project.

   The report shall include computations, tables and graphic illustrations of volumetric and shoreline position changes for the monitoring area. An appendix shall include superimposed plots of the two most recent beach profile surveys, the design profile, and pre- and post-construction beach profile at each individual monument location.

e. An electronic copy of the monitoring report and the survey data shall be submitted to the JCP Compliance Officer. Failure to submit reports and data in a timely manner constitutes grounds for revocation of the permit. When submitting any monitoring

information to the Department, please include a transmittal cover letter clearly labeled with the following at the top of each page: **"This monitoring information is submitted in accordance with the approved Monitoring Plan for Permit No. [0215960-005-JC] for the monitoring period [XX].**

31. If the Permittee is unable to complete two maintenance events within the 15-year life of the permit, the Permittee may request (prior to the expiration date of the permit), and the Department shall grant, an extension of the permit expiration date in order to allow completion of the second maintenance event. The extension would be documented through an administrative modification.

32. **Post-Construction Meeting.** Within 60 days following each construction activity authorized by this permit, the Permittee shall hold a post-construction conference. Attendees shall include at minimum, the Permittee, Agent, Department representative, and FWC representative.

FLAWAC Review
The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review
Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT

_____
Gregory W. Garis.
Program Administrator
Beaches, Inlets and Ports Program
Office of Resilience and Coastal Protection

Attachments: Approved Permit Drawings (27 pages)
Upland Sediment QA/QC Plan (approved on June 2020)
Offshore Sediment QA/QC Plan (approved June 2020)
Biological Monitoring Plan (approved July 2020)
Physical Monitoring Plan (approved June 2020)

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this permit and all attachments were sent on the filing date below.

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

_____ _____
Clerk **Date**