

CONTRACT DOCUMENTS
FOR
DARE COUNTY
BEACH NOURISHMENT PROJECT

Prepared by:

PROJECT ENGINEER

Coastal Planning & Engineering
of North Carolina, Inc.
4038 Masonboro Loop Rd.
Wilmington, NC 28409

Prepared for:

OWNER

Dare County
954 Marshall C Collins Dr. Room 286
Manteo, NC 27954

February 24, 2016

**PROJECT MANUAL
FOR
DARE COUNTY
BEACH NOURISHMENT PROJECT**

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**Great Lakes
Dredge & Dock
Company, LLC**

2122 York Road
Oak Brook, Illinois 60523
630.574.3000

April 19, 2016

Mr. Robert Outten
County Manager
County of Dare
954 Marshall C. Collins Drive
Manteo, NC 27954

Send via Fed Ex

Re: Contract Number 154521
Dare County Beach Nourishment Project

Dear Mr. Outten,

Enclosed is a signed original of the construction contract of the referenced project. Please let me know if you require any additional information at this time.

Sincerely,
Great Lakes Dredge & Dock Company, LLC

A handwritten signature in blue ink that reads "Russell F. Zimmerman".

Russell F. Zimmerman
Vice President, Area Manager – South Atlantic

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR FOR
CONSTRUCTION CONTRACT (STIPULATED PRICE)**

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

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Endorsed by



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This Agreement has been prepared for use with the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 Edition). Their provisions are interrelated, and a change in one may necessitate a change in the other. The language contained in the Suggested Instructions to Bidders (EJCDC C-200, 2007 Edition) is also carefully interrelated with the language of this Agreement. Their usage is discussed in the Narrative Guide to the 2007 EJCDC Construction Documents (EJCDC C-001, 2007 Edition).

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**AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between _____ Dare County, NC _____ (“Owner”) and

Great Lakes Dredge & Dock Company, LLC _____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Coastal Planning & Engineering of North Carolina, Inc. (Engineer), which is to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Dates for Substantial Completion and Final Payment*

A. The Work will be substantially completed on or before December 31, 2017, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before January 31, 2018. The Owner will issue a notice to award the construction contract to the selected contractor contingent on Local Government Commission (LGC) approval, within 15 days of bid opening.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified

DARE COUNTY BEACH NOURISHMENT PROJECT

in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner **\$4,000** for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$0 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraph 5.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

BASE BID

Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
I. Towns of Duck, Kitty Hawk and Kill Devil Hills				
A. Mobilization/Demobilization	1	L.S.	\$8,150,000.00	\$8,150,000.00
B. Performance and Payment Bond	1	L.S.	\$300,000.00	\$300,000.00
C. Compliance Surveys of the Borrow Area	1	L.S.	\$64,000.00	\$64,000.00
D. Sea Turtle Abundance Trawling	5	Day	\$4,600.00	\$23,000.00
II. Town of Duck				
A. Hydraulic Beach Fill	1,180,000	C.Y.	\$8.60	\$10,148,000.00
A-1. Optional Additional 20% Beach Fill if only Borrow Area C is used to Construct Town of Duck	236,000	C.Y.	\$0.00	\$0.00
B. Staging Area Beach Access Mats	1,120	L.F.	\$105.00	\$117,600
III. Town of Kitty Hawk				
A. Hydraulic Beach Fill	1,765,000	C.Y.	\$7.65	\$13,502,250.00
IV. Town of Kill Devil Hills				
A. Hydraulic Beach Fill	840,000	C.Y.	\$7.40	\$6,216,000.00

Total of all Base Bid Prices (Unit Price Work) \$38,520,850.00

DARE COUNTY BEACH NOURISHMENT PROJECT

ADDITIVE BID

Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
V. Additive Bid Items				
A. Sand Fencing to be Installed within The Town of Kitty Hawk Per Individual 10' Unit of Fencing Installed	1,900	10 ft Section	\$40.00	\$76,000.00

Total of all Additive Bid Prices (Unit Price Work)

\$76,000.00

DISCRETIONARY BID ITEMS

	Estimated Quantity	Units	Unit Price	Subtotal
VI. Addressing Potential Unsuitable Fill Material				
A. Mobilization/Demobilization for Beach Discharge Screening	1	L.S.	\$70,000.00	\$70,000.00
B. Beach Discharge Screening	100	Day	\$3,500.00	\$350,000.00
C. Removal of Screened Beach Discharge Material	40,000	C.Y.	\$11.50	\$460,000.00
D. Dredge Intake Screening	1,500,000	C.Y.	\$2.30	\$3,450,000.00
E. Mobilization for Removal of Oversized Material from Constructed Beach	1	L.S.	\$8,000.00	\$8,000.00
F. Removal of Oversized Material from Constructed Beach	100	Day	\$3,200.00	\$320,000.00
VII. Environmental Protection				
A. Turbidity Monitoring	100	Day	\$2,250.00	\$225,000.00
B. Mobilization/Demobilization for Beach Tilling	1	L.S.	\$5,500.00	\$5,500.00
C. Beach Tilling	100	Acre (ac)	\$585.00	\$58,500.00
D. Sea Turtle Relocation Trawling	100	Day	\$4,550.00	\$455,000.00
E. Hopper Dredge Standby Rate (Per Dredge)	1	Day	\$210,000.00	\$210,000.00
F. Cutterhead Dredge Standby Rate (Pre Dredge)	1	Day	\$177,500.00	\$177,500.00
VIII. Sand Fencing				
A. Sand Fencing to be Installed within the Town of Kill Devil Hills Per Individual 10' Unit of Fencing Installed	1,300	10 ft Section	\$40.00	\$52,000.00
B. Sand Fencing to be Installed within the Town of Duck Per Individual 10' Unit of Fencing Installed	800	10 ft Section	\$40.00	\$32,000.00
IX. USACE FRF Nearshore Berm Feature – Town of Duck Plan Set (Sheet 7A of 12)				
A. Additional Mobilization/Demobilization	1	L.S.	\$475,000.00	\$475,000.00
B. Hydraulic Beach Fill	10,000	C.Y.	\$66.00	\$660,000.00

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the **20th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

- 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

- a. **95** percent of Work completed (with the balance being retainage).

- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **100** percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less **100** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 – INTEREST (DELETED)

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data."
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 00520-1 to 00520-9, inclusive).
2. Performance bond (pages 00610-1 to 00610-3, inclusive).
3. Payment bond (pages 00615-1 to 00615-3, inclusive).
4. General Conditions (pages 00700-1 to 00700-40, inclusive).
5. Supplementary Conditions (pages 00800-1 to 00800-12, inclusive).
6. Specifications as listed in the Table of Contents of the Project Manual.
7. Drawings consisting of 12 (Town of Duck), 18 (Town of Kitty Hawk) and 14 (Town of Kill Devil Hills) sheets with each sheet bearing the following general title: Towns of Duck, Kitty Hawk and Kill Devil Hills Beach Nourishment Project.
8. Addenda (numbers 1 to 1, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages 00300-1 to 00300-10, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (pages ___ to ___, inclusive).
 - c. *Compliance Statement (RD 400-6)*
 - d. *Iran Divestment Act*
10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages 1 to 1, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to

establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *North Carolina Local Government Commission Approval*

- A. Notwithstanding any provisions to the contrary, the obligations, duties and liabilities of both Parties under the terms of this agreement are contingent, and only become effective, upon receipt of approvals by the North Carolina Local Government Commission of the financing packages for Dare County, Town of Duck, Town of Kitty Hawk and Town of Kill Devil Hills (the necessary approvals). Should receipt of the necessary approvals from North Carolina Local Government Commission not be received prior to July 10, 2016, Great Lakes Dredge & Dock Company, LLC (GLDD) may, with the consent and agreement of Dare County, make adjustments to its obligations, duties, and liabilities based upon the actual impact of the late provision of such necessary approvals to commence work. If GLDD and Dare County cannot agree on such adjustment, GLDD shall have the right to terminate the agreement and neither party shall have any obligation or liability to the other.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the

Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

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19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for

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Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater,

storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will

be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any

conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

**ARTICLE 4 – AVAILABILITY OF LANDS;
SUBSURFACE AND PHYSICAL CONDITIONS;**

**HAZARDOUS ENVIRONMENTAL CONDITIONS;
REFERENCE POINTS**

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

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1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

5. then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities,

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including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data;

b. locating all Underground Facilities shown or indicated in the Contract Documents;

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been

expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

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B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a

deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

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B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

a. Such insurance shall remain in effect for two years after final payment.

b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all

other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees,

agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or

"or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed

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substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services; and

4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs

of redesign and claims of other contractors affected by any resulting change.

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in

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Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but

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not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work.

However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such

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owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation

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made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others;
or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors

of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

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B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's

consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by

Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any

Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable

bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;
2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

**ARTICLE 11 – COST OF THE WORK;
ALLOWANCES; UNIT PRICE WORK**

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with

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Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances:

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance:

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

**ARTICLE 12 – CHANGE OF CONTRACT PRICE;
CHANGE OF CONTRACT TIMES**

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who

actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the

performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

**ARTICLE 13 – TESTS AND INSPECTIONS;
CORRECTION, REMOVAL OR ACCEPTANCE OF
DEFECTIVE WORK**

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's

safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or

relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by

Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress

payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

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e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after

submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially

complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by

Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

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B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial

pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. C-700, 2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

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SC-1.01 Defined Terms: Add the following text to the end of paragraph 1.01 A:

The terms used in the Supplementary Conditions, which are defined in the General Conditions, have the meanings assigned to them in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

SC-2.05.A Preliminary Schedules: Add the following new paragraph 2.05.A.4 Preliminary Schedules immediately after Paragraph 2.05.A.3

4. Five (5) days after Notice of Award is given, Contractor shall submit a preliminary schedule to the Engineer, detailing the Contractor's plans for completing the project within the windows identified in Article 4 of the Standard Form of Agreement. Engineer and Owner require five business days to examine, comment on, and return the preliminary schedule to the Contractor. Any delays in the project, which are the result of delays in Contractor delivering a preliminary schedule showing completion of the work within the environmental window, will be the sole responsibility of the Contractor and will be considered Avoidable Delays. Owner reserves the right to withhold Notice to Proceed until schedule has been delivered and examined.

SC-4.01 Availability of Lands: Delete paragraph 4.01.B and Replace with the following text:

Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current list of beachfront property owners and easements, but OWNER will not be performing a title search.

SC-4.02 Subsurface and Physical Conditions: Delete Paragraphs 4.02.A and 4.02.B in their entirety and insert the following:

A. Other than the Geotechnical report, including Appendices 1-18, located on Dare County's website (<http://www.darenc.com/beachnourishmentproject>), Appendix A of the Contract Documents – "Site Inspection Report Duck Target Facility, USACE," and Appendix B of the Contract Documents – "Former Duck Target Facility Munitions Response Site," no reports or explorations or tests of

subsurface conditions at or contiguous to the Site are known to the Owner or Engineer.

SC-4.06 Hazardous Environmental Condition at Site: Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings of Hazardous Environmental Conditions at or contiguous to the Site are known to the Owner or Engineer.

B. Not used.

SC-5.04 Contractor's Insurance: Add the following new paragraph immediately after Paragraph 5.04.B:

C. The limits of liability for insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoremen's) 2,000,000
- c. Employer's Liability 2,000,000

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of the Contractor:

General Aggregate \$ 5,000,000

b. Products - Completed Operations Aggregate \$ 5,000,000

c. Personal and Advertising Injury \$ 2,000,000

d. Each Occurrence (Bodily Injury and Property Damage) \$ 2,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverage's where applicable.

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f. Excess or Umbrella Liability
(This coverage is not in addition to the limits in other coverage's. Any combination that provides \$5,000,000 coverage per individual and \$5,000,000 in aggregate will fulfill this condition.)

- 1) General Aggregate \$ 5,000,000
- 2) Each Occurrence \$ 5,000,000

3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:

- a. Bodily Injury:
 - Each person \$ 1,000,000
 - Each Accident \$ 2,000,000
- b. Property Damage:
 - Each Accident \$ 1,000,000
- c. Combined Single Limit of \$ 1,000,000

Watercraft Liability under paragraph 5.04.A.6 of the General Conditions:

- a. Bodily Injury:
 - Each person \$ 2,000,000
 - Each Accident \$ 2,000,000
- b. Property Damage:
 - Each Accident \$ 2,000,000
 - Annual Aggregate \$ 2,000,000

4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

- Each Accident \$ 2,000,000
- Annual Aggregate \$ 5,000,000

The Engineer (Coastal Planning & Engineering of North Carolina, Inc.) and Owner (Dare County) shall be named as additionally insured.

SC-6.02 Labor; Working Hours: Delete paragraph 6.02B and Replace with the following:

OWNER will not be responsible for CONTRACTOR's overtime, holiday pay, or weekend pay. CONTRACTOR agrees to hold OWNER harmless from any and all violations of state or federal labor laws caused directly or

indirectly by CONTRACTOR's actions in performance of this Contract and further agrees to indemnify OWNER for any fines, penalties, fees, or other monies assessed against OWNER for such violations.

SC-6.05.C Engineer's Evaluation: Amend the paragraph by making two subparagraphs under the title C. Engineer's Evaluation. The paragraph text is retitled, 6.05.C.2 After Effective Date of Agreement. A new paragraph is added before this paragraph to read as follows:

1. During Bidding. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or "or-equal" item. Request for Engineer's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

SC-6.06 Concerning Subcontractors, Suppliers, and Others: Add a new paragraph 6.06.H immediately after Paragraph 6.06.G:

The Contractor shall not award work valued at more than fifty (50%) percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC-6.08 Permits: Add the following text to the end of Paragraph 6.08:

Owner has obtained the North Carolina CAMA Permit and U.S. Army Corps of Engineers Permit for the project. CONTRACTOR is required to abide by the permit conditions. The Special Conditions listed in those two permits are appended to these Supplementary Conditions.

SC-6.09 Laws and Regulations: Add the following paragraph 6.09.D immediately after Paragraph 6.09.C:

Owner is a municipal corporation subject to North Carolina statutory and Constitutional restraints which prevent it from expending amounts in excess of that budgeted and financed by general obligation bonds approved for this Project by voter referendum. For this reason, notwithstanding any other provisions herein, it is the express intent of the parties hereto to comply with all relevant North Carolina Constitutional restrictions and general statutes. No provision of this Contract shall be construed or interpreted as creating a pledge of the faith and credit of the Owner within the meaning of any constitutional debt limitation except for any funding which may have been budgeted for this contract from general obligation bond revenues specifically related to the Project. No provision of this Contract shall be construed or interpreted as creating a delegation of Governmental powers nor as a donation by or a lending of credit of the Owner within the meaning of the Constitution of the State of North Carolina. This Contract shall not directly or indirectly or contingently obligate the Owner to make any payments beyond those budgeted for this Contract from revenues to be from special obligation bonds specifically issued for the Project or as may be appropriated from other revenues in the sole discretion of the Owner for any fiscal year in which this Contract shall be in effect. Beyond the amount approved by the Local Government Commission, the taxing power of the Owner is not and may not be pledged directly or indirectly or contingently to secure any monies due under this Contract. No provisions of this Contract shall be construed to pledge or create a lien on any class or source of the Owner's monies nor shall any provision of this Contract restrict the future issuance of any of the Owner's bonds or obligations payable from any class or source of the Town's monies. To the extent of any conflict between this Section and any other provision of the Contract, this Section shall take priority.

SC-6.12 Record Documents: Add the following text to the end of Paragraph 6.12:

The Contractor must have available; during all hours the Contractor is working, copies of the NC CAMA and USACE permits and USACE construction placard for inspection by Owner, Engineer, and permitting agencies.

SC-7.02 Coordination: Delete paragraphs 7.02.A.1-3 in their entirety and insert the following:

1. The Dredge Contractor shall have the authority and be responsible for coordination of the activities among the other prime contractors and subcontractors on the Site to ensure a safe, efficient working environment. This authority covers scheduling delivery of materials, storage of materials, sequencing of construction involving different crafts, resolving interface issues between crafts, scheduling testing, and all other aspects of the Work that do not impact the design or function of the Work.

SC-7.04 Claims Between Contractors: Add following new paragraph immediately after Paragraph 7.03:

Should CONTRACTOR cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of CONTRACTOR's performance of the Work at the Site be made by any separate contractor against CONTRACTOR, OWNER, or ENGINEER, CONTRACTOR shall promptly attempt to settle with such separate contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

B. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER, and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER or ENGINEER to the extent said claim is based on or arises out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage

to the Work or property of CONTRACTOR or should the performance of work by any separate contractor at the Site give rise to any other Claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or Claim.

C. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor, and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER or ENGINEER for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER or ENGINEER for activities that are their respective responsibilities.

SC-8.09.B Personal Liability: Add a new paragraph titled 8.09.B immediately after 8.09.A:

No officer or agent of the OWNER, while acting within the scope of his/her authority, shall be subject to any personal liability or accountability by reason of his/her execution of this Contract or any other documents related to the transactions contemplated hereby. Such officers or agents shall be deemed to execute such documents in their official capacities only, and not in their individual capacities.

SC-8.09.C Owner's Site Representative: Add the following new paragraph titled 8.09C Owner's Site Representative immediately after paragraph 8.09.B:

SC-8.09.C *Owner's Site Representative*

The Owner's Site Representative or his designee shall reserve the right to periodically audit the Contractor's job site(s) to ensure compliance with applicable safety regulations, rules, and standards.

The Owner's Site Representative shall reserve the right to stop the work, if a hazardous situation is

observed that, in the opinion of the Representative, is immediately dangerous to life or health. The job shall remain closed until such time as the unsafe condition is corrected to the satisfaction of the Representative. In all cases, the Representative shall make every effort to contact the Contractor's designated safety representative. The Representative does not have to allow a condition to persist in order to satisfy any requirement to contact the Contractor's designated safety representative. No additional compensation shall be added to the Contract Price, and the Owner shall not be liable for any expenses or damages incurred by the Contractor as a result of stopping work to correct a condition that is immediately dangerous to life or health. No additional time shall be added to the Contract Time as a result of stopping work by the Owner's Site Representative to correct a condition that is immediately dangerous to life or health.

SC-9.03 Project Representative: Add the following language at the end of paragraph 9.03.A:

A Resident Project Representative shall be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Resident Project Representative will also report to the Engineer and Contractor whenever materials or Work fail to comply with the Contract. The Resident Project Representative is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Resident Project Representative is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Resident Project Representative shall not manage or perform duties for the Contractor.

SC-11.03 Unit Price Work: Add the following language at the end of paragraph 11.03.B.1:

1. The OWNER may request a 25% increase or 25% decrease in

quantities for Bid items II-A, II-A-1, III-A, IV-A and V-A without a change in unit price. Changes beyond 25% may be negotiated in good faith.

2. There shall be no change in any Unit Price of the contract for the discretionary bid items regardless of the change in quantity.

SC 13.03 Tests and Inspections: Add the following new paragraph titled 13.03.G immediately after paragraph 13.03.F:

If required by the permits or elsewhere in the Contract Documents, Owner shall employ and pay for Engineer to perform sediment quality testing, including, but not limited to:

- Compaction
- Grain-size analysis
- Mud content
- Carbonate content

Any dispute that Contractor has with the results of such tests will be based on results of testing performed by an independent qualified laboratory, paid for by the Contractor, at no additional compensation.

SC-14.02.A Application for Payments: Add the following text to the end of the Paragraph 14.02A.1:

Additional documentation that must accompany Applications for Payments is specified in the Technical Specifications and the Supplemental General Conditions.

SC-14.02. Application for Payments: Add the following language at the end of paragraph 14.02.A.3:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC-14.02.C Payment Becomes Due: Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

1. The Application for Payment with Engineer's recommendations will be presented to the Owner for consideration. If the Owner finds the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 14.02.D will become due ten days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-14.04 Substantial Completion: Add the following new paragraph 14.04.F immediately after 14.04.E.

Substantial Completion will occur once all material called for in the Agreement has been excavated and placed in accordance with the Contract Documents, prior to 12 months from the date of the signed Agreement.

Final Grading operations on the beach may continue after Substantial Completion, but must also be concluded by 12 months from the date of the signed Agreement.

SC-16.02 Mediation, Dispute, Resolution: Add the following new paragraph titled 16.02 immediately after 16.01:

OWNER and CONTRACTOR agree that they shall first make a good faith effort to resolve any issues which may arise between the parties during regarding this Agreement and the business relationship created thereby and to submit any and all unsettled claims, counterclaims, disputes and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("disputes"), to mediation prior to either of them seeking recourse by legal process. The above notwithstanding, nothing shall limit the right of any party to this Agreement: (1) to seek judicial equitable relief, or other equitable relief available to it under applicable statutory and/or case law including, but not limited to, injunctive relief and the appointment of a receiver; or (2) to exercise any self-help rights or any other rights or remedies available to it by contract or applicable statutory or case law (including but not limited to the filing of an involuntary petition in bankruptcy, the right of set off, attachment, recoupment, foreclosure, or repossession) with respect to its extension of credit, the protection and preservation of collateral, the liquidation and realization of collateral, the protection, continuation and preservation of lien

rights and priorities, the collection of indebtedness, and the processing and payment or return of checks, whether such occurs before, during or after the pendency of any negotiation or mediation proceeding. The institution and maintenance of an action for judicial relief or pursuit of provisional or ancillary rights or remedies or exercise of self-help remedies, all as provided herein, and the pursuit of any such rights or remedies, shall not constitute a waiver of the right or obligation of any Party, including the plaintiff seeking judicial relief or remedies, to submit a dispute to negotiation and mediation, including disputes that may arise from the exercise of such rights. The costs of the mediation, including the fees and expenses of the mediator, shall be borne by the parties to the mediation in equal shares, each party to this agreement bearing the expense of its own counsel, experts, witnesses, and preparation and presentations at the mediation. The mediation process is non-binding and shall conform with the following rules and procedures:

A. Request for Mediation

When a dispute between the parties is not resolved by informal negotiations, any party shall serve upon the other(s) a request for mediation which shall contain a brief statement of the nature of the dispute and the names, addresses, and telephone numbers of all parties to the dispute and those who will represent them, if any, in the mediation. Upon service of the request for mediation, the parties shall have ten (10) days to select a mediator.

B. The Mediator

The parties shall select a mediator from the following list of eastern North Carolina Certified Mediators:

A certified Mediator as licensed with the State of North Carolina

The mediator must remain neutral and impartial in all aspects of the mediation. The mediator will control the procedural aspects of the mediation. The parties agree to cooperate fully with the mediator throughout the proceeding. During the mediation, the mediator is free to meet and communicate separately with each party or groupings of parties. The mediator will not transmit information which has been disclosed to him or her in confidence by any party to another party without the former party's express

authorization. The mediator may freely express his or her views to the parties on the legal issues of the dispute, however, each party, shall rely exclusively on its own counsel for legal representation and advice. The mediator shall be compensated by payment of a one-time administrative fee and an hourly rate which represents the mediator's standard rates for such services and as agreed upon by the parties with the mediator. Each party shall bear an equal share of the mediator's compensation.

C. Pre Mediation Submissions

Prior to the date that mediation is scheduled to begin, each party shall cooperate with each other in exchanging all documents that are relevant to the dispute and in permitting reasonable review of each other's contract files. Not later than ten (10) days prior to mediation, each party will send to the mediator with copies to each other, the following documents:

- a) all documents that are relevant to the dispute (parties will cooperate in selecting documents to avoid duplication between the submissions of each party);
- b) a list of the issues to be determined (the parties will make every effort to submit a joint list of issues in the order that is most logical for presentation);
- c) a list of witnesses and participants in the mediation proceeding.

Within the same time frame, any party may submit to the mediator a written brief of not more than 15 typewritten pages (Times New Roman, 12 pitch), outlining the nature of and basis for its claims and its principal defenses to the claims of others. Each brief will include an analysis by each party of the cause or causes of the damages or other harm based on evidence presently available to it, including the opinions of its own personnel and any independent experts. Each party must send copies of its brief to all other participants in the mediation simultaneously with its submission to the mediator. The mediator may request any party to provide clarification and additional information prior to and during the mediation and may request any party's attorney to brief legal issues.

D. Mediation Conference

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Once the mediator has familiarized himself or herself with the case, the mediator will mediate settlement discussions between and among the representatives of the parties. In addition to party counsel (if any), each party must be represented at the mediation by a person authorized to conclude a settlement of the dispute on behalf of that party, or in the case of a governmental entity, by a person who has authority to negotiate for and make recommendations to the governing board subject to such board's approval. Each representative must participate in the mediation process in good faith toward the settlement of all issues. Each party will notify the mediator of its designated representatives prior to the mediation. The mediation will be conducted at any location selected by the mediator which will facilitate the joint and individual meetings involved in the mediation and otherwise accommodate the needs of the representatives of the parties and the mediator. The mediation process will be conducted expeditiously and privately. Each representative (and counsel, if any) will be available for meetings throughout the entire time period set aside for the mediation. Other persons may attend only with the permission of the parties and with the consent of the mediator. The mediator will decide when to meet or confer separately with each party or parties and when to hold joint meetings.

There shall be no stenographic record of the mediation process. The mediator will fix the time and place of each session and the agenda in consultation with the parties. The mediator may assist the parties in arriving at a settlement in such ways as he or she deems advisable and proper under the circumstances. Efforts to reach a settlement will continue until a settlement is reached or when the mediator concludes and informs the parties that further effort would not be useful. Continuation will be on terms and conditions to which the parties agree.

The mediation proceeding will begin with each party making an opening statement of no longer than fifteen minutes. The first statement will be made by the proponent of the major elements of the dispute. Following opening statements, each issue will be discussed using a round table discussion technique. Each party will make its relevant key employees and consultants available to participate in this discussion. In the discussion, the proponent of the issue will make a brief presentation of its position on the issue. The other party will then make a brief presentation of its defense. The neutral

advisor will then moderate a discussion--calling on participants from each side as they request to address the issues in question. There will be no side discussions and no participant will speak until called on by the neutral advisor. The goal of this discussion is to fully develop all information relevant to the determination of the facts of the dispute and the precise position of each party. All participants will refrain from statements that are unduly argumentative or contentious.

The proceedings will not be recorded and witnesses will not be sworn. However, all participants will be expected to be forthright in their statements and to be fully open and honest in their dealings with each other. Attorneys may participate in the discussion and may call on other personnel when necessary to ensure that they contribute their knowledge to the discussion. Attorneys will not cross-examine witnesses of the other party.

Following the round table discussions, each party may summarize its position in a statement no longer than one-half hour. The parties may, by mutual agreement, waive these statements. Following the summarizations, if any, the parties and mediator will meet to negotiate a settlement that is fair to both parties. The parties may conduct these discussions with or without the mediator. The mediator may present his views on any issues or propose resolution of one or more of the issues in dispute. Either party or the mediator may request a private, confidential meeting with the mediator to discuss possible settlement positions, and the mediator will not reveal any confidential information to the other party, unless authorized to do so. Either party may adjourn the meeting at any time to caucus with his team, but all parties will endeavor to keep the negotiations active until a settlement has been reached.

The entire mediation process is confidential. No record of the proceedings, electronic or otherwise, will be made. The parties and the mediator will not disclose information regarding the process, including settlement terms, to third parties, unless otherwise agreed. The process will be treated as a compromise and settlement negotiation purposes of federal and state Rules of Evidence, and in no case may any conversation or communication originating during the mediation process, whether written or oral, be used as evidence in a court of law. The mediator is disqualified as a witness, consultant, or expert in any pending or future action relating to the subject matter of the

mediation, including those between persons not parties to the mediation.

E. Settlement

If a settlement is reached, the mediator, or counsel for one of the parties at the mediator's request, will draft a written settlement document incorporating all settlement terms. This draft will be circulated among the parties, edited as necessary, and, if acceptable, formally executed. A consent judgment or one or more voluntary dismissals shall be filed with the Court in which any proceedings have been brought before or during mediation as stipulated in the settlement agreement reached by the parties.

SC-17.05 Controlling Law: Add the following text to the end of paragraph 17.05:

The project shall be governed by the law of the State of North Carolina and Dare County shall be the sole venue.

SC-18 Add a new Article 18, "Federal Requirements," after Article 17.

SC 18.03 Add the following language after Article 18.02.B with the title "Conflict of Interest."

A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

SC-18.04 Add the following language after Article 18.03.A with the title "Gratuities."

A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any

official, employee, or agent of Owner in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

B. In the event this Contract is terminated as provided in paragraph 18.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

SC-18.05 Add the following language after Article 18.04.B with the title "Audit and Access to Records."

A. Owner, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Engineer which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all required records for three years after final payment is made and all other pending matters are closed.

SC-18.06 Add the following language after Article 18.05.A with the title "Small, Minority and Women's Businesses."

A. If Contractor intends to let any subcontracts for a portion of the work, Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of: (1) including qualified small, minority and women's businesses on solicitation lists; (2) assuring that small, minority and women's businesses are solicited whenever they are potential sources; (3) dividing total requirements when economically feasible, into small tasks or quantities to permit maximum participation of small, minority, and women's businesses; (4) establishing

delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women's businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

SC-18.07 Add the following after Article 18.06.A with the title "Anti-Kickback."

A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled.

SC-18.08 Add the following after Article 18.07.A with the title "Clean Air and Pollution Control Acts."

A. If this Contract exceeds \$100,000, Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h) and 42 USC 7401et. seq.), section 508 of the Clean Water Act (33 U.S.C. 1368) and Federal Water Pollution Control Act (33 USC 1251 et seq.), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15) is required. Contractor will report violations to the Regional Office of the EPA.

SC-18.09 Add the following after Article 18.08 with the title "State Energy Policy."

A. Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

SC-18.10 Add the following after Article 18.09 with the title "Equal Opportunity Requirements."

A. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

B. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

SC-18.11 Add the following after Article 18.10.C with the title "Restrictions on Lobbying."

A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that

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exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

SC-18.12 Add the following after Article 18.11.A with the title “Environmental Requirements.”

When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:

A. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.

B. Floodplains – When disposing of excess, spoil, or other construction materials on

public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.

C. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner. Construction shall be temporarily halted pending the notification process and further directions issued by Owner after consultation with the State Historic Preservation Officer (SHPO).

D. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner. Construction shall be temporarily halted pending the notification process and further directions issued by Owner after consultation with the U.S. Fish and Wildlife Service.

E. Mitigation Measures – If the project had an Environmental Report, Environmental Assessment, or Environmental Impact Statement to meet the requirements of the National Environmental Policy Act, compliance with the mitigation measures, if any, in that document are hereby included as a condition of this contract.

Advertisement for Bids

Dare County

Owner

954 Marshall C Collins Drive, Room 286

Address

Manteo, NC 27954

A sealed Bid is requested for the construction of a beach nourishment project located on the east coast of North Carolina at the Towns of Duck, Kitty Hawk and Kill Devil Hills within Dare County. The three Towns have entered into a Memorandum of Understanding (MOU) allowing Dare County to act as the OWNER on their behalf.

The project comprises two distinct beach fill placement areas in three Towns, including:

1. The placement of approximately 1,180,000 cubic yards of sand along 1.60 miles of shoreline in the Town of Duck;
2. The placement of approximately 1,765,000 cubic yards of sand along 3.97 miles of shoreline in the Town of Kitty Hawk;
3. The placement of approximately 840,000 cubic yards of sand along 2.74 miles in the Town of Kill Devil Hills.

In total, the project consists of the placement of approximately 3,785,000 cubic yards of sand along 8.31 miles of shoreline.

The project can utilize sand from two (2) existing Outer Continental Shelf (OCS) borrow sites located off of the Towns of Duck and Kill Devil Hills. These borrow areas contain 17,350,000 and 2,049,000 cubic yards, respectively.

The design is based on conditions surveyed during May 2015 and the ENGINEER reserves the right to adjust the fill template to provide a comparable design to the complete shorefront area.

Sealed bids will be received by Sally Defosse, Assistant Finance Director, at Dare County at the office of 954 Marshall C Collins Drive, Manteo, NC 27954 until **2:00 P.M.** (Local Time) **Tuesday, March 8, 2016**, and then publicly opened and read aloud at the Dare County Center, Room 115, located at 950 Marshall C Collins Drive, Manteo, NC 27954. Any bid received after said time will be returned unopened.

The Contract Documents may be examined at the following location(s):

1. Dare County, 954 Marshall C Collins Drive, Room 286, Manteo, NC 27954
2. Coastal Planning & Engineering of North Carolina, Inc. (CPE-NC), 4038 Masonboro Loop Rd. Wilmington, NC 28409

DARE COUNTY BEACH NOURISHMENT PROJECT

Digital copies of the Contract Documents may be obtained at the Dare County website (<http://www.darenc.com/beachnourishmentproject>).

Dare County reserves the right to reject any and all proposals for any reason determined to be in the best interest of the Towns.

Dare County is an Equal Opportunity Employer and does not discriminate. Small, minority and women's businesses and labor-surplus-area firms are encouraged to submit bids.

Instructions to BIDDERS

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ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to BIDDERS will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to BIDDERS have the meanings indicated below:

- A. Issuing Office—Coastal Planning & Engineering of North Carolina, Inc. 4038 Masonboro Loop Road, Wilmington, NC 28409, from which the Bidding Documents are to be issued.

- B. Successful BIDDER – The lowest responsible BIDDER submitting a responsive Bid to whom OWNER (on the basis of OWNER’s evaluation as hereinafter provided) makes an award.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the purchase a sum, if any, stated in the Advertisement for Bids may be obtained from the Dare County website (<http://www.darenc.com/beachnourishmentproject>).
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate BIDDERS qualifications to perform the Work, within five days of OWNER's request, BIDDER shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.
 - A. Each Bid must contain evidence of BIDDERS qualifications to do business in the State of North Carolina or covenant to obtain such qualifications prior to award of the contract.
 - B. List of three (3) similar projects completed within the previous 5 years that entailed hydraulic beach restoration with the use of an ocean certified dredge from an offshore source (including channel maintenance). Information provided shall include contact information for the client and the ENGINEER, the average daily production rate (cubic yards per day placed) for the project, the construction time period, the final contract amount for sand placement, and the name of the hydraulic dredge used for the work.

ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

- 4.01 Subsurface and Physical Conditions
 - A. The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at/or contiguous to the Site that ENGINEER has used in preparing the Bidding Documents.
 - 2. Those drawings of physical conditions in/or relating to existing surface and subsurface structures at/or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Bidding Documents.

- B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by OWNER to any BIDDER on request. They are also available on Dare County website (<http://www.darenc.com/beachnourishmentproject>). Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which BIDDER is entitled to rely as provided in paragraph 4.02 of the Standard General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. BIDDER is responsible for any interpretation or conclusion BIDDER draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at/or contiguous to the Site is based upon information and data furnished to OWNER and ENGINEER by OWNER's of such Underground Facilities, including OWNER, or others.

4.03 Hazardous Environmental Condition

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by OWNER to any BIDDER on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which BIDDER is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of the Supplementary Conditions. BIDDER is responsible for any interpretation or conclusion BIDDER draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERS with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERS with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 4.06 of the General Conditions.

4.05 On request, OWNER will provide BIDDER access to the Site to conduct such examinations, investigations, explorations, tests, and studies as BIDDER deems necessary for submission of a Bid. BIDDER shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. BIDDER shall comply with all applicable Laws and Regulations relative to locating of excavation and utility.

4.06 Additional OWNER Provided Information:

- A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, OWNER will provide to each BIDDER for examination access to, or copies of, Contract Documents (other than portions thereof related to price) for such other work.
- B. Paragraph 6.13.C of the General Conditions states that if an OWNER safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each BIDDER before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. Visit the Site and become familiar with and satisfy BIDDER as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. Become familiar with and satisfy BIDDER as to all Federal, State, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
- D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at/or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at/or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;
- E. Obtain and carefully study (or accept consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at/or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER, including applying any specific means, methods, techniques, sequences, and procedures of construction

expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

- F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- G. Become aware of the general nature of the Work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. Correlate the information known to BIDDER, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- I. Promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to BIDDER; and
- J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that BIDDER has discovered in Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to BIDDER, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 - PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held; however, BIDDERS are encouraged to submit any questions about the meaning or intent of the Bidding Documents in writing to the ENGINEER. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be made available on the Dare County's web address (<http://www.darenc.com/beachnourishmentproject>) no later than five (5) business days (excluding holidays and weekends) prior to the bid opening date. Questions received less than seven (7) days prior to the date for opening of Bids may not be answered.

ARTICLE 6 - SITE AND OTHER AREAS

6.01 The Sites are identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to ENGINEER in writing. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be made available on Dare County's web address <http://www.darenc.com/beachnourishmentproject> no later than five (5) business days (excluding holidays and weekends) prior to the bid opening date. Questions received less than seven (7) days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of BIDDERS maximum Bid price and in the form of a certified check or a Bid bond (EJCDC No. C-430, 2007 Edition) issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions. The maximum Bid price is the total of the Base Bid Total plus the Additive Total and does not include the Discretionary Bid Items.

8.02 The Bid security of the Successful BIDDER will be retained until such BIDDER has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful BIDDER fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that BIDDER will be forfeited. The Bid security of other BIDDERS whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 30 days after the Bid opening, whereupon Bid security furnished by such BIDDERS will be returned.

8.03 Bid security of other BIDDERS whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven (7) days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the ENGINEER and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. Request for ENGINEER's clarification of materials and equipment considered "or-equal" prior to the Effective Date of the Agreement must be received by the ENGINEER at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by ENGINEER as a substitute unless written request for approval has been submitted by BIDDER and has been received by ENGINEER at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the BIDDER. ENGINEER's decision of approval or disapproval of a proposed item will be final. If ENGINEER approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective BIDDERS. BIDDERS shall not rely upon approvals made in any other manner.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful BIDDER, and any other BIDDER so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful BIDDER to submit a substitute, without an increase in the Bid.

- 12.02 If apparent Successful BIDDER declines to make any such substitution, OWNER may award the Contract to the next lowest responsible BIDDER that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any BIDDER. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER and ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 6.06.

ARTICLE 13 - PREPARATION OF BID

- 13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from ENGINEER.
- 13.02 All blanks on the Bid form shall be completed in ink or electronically and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each *{section, Bid item, alternative, adjustment unit price item, and unit price item}* listed therein, or the words “No Bid,” “No Change,” or “Not Applicable” entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be provided on the Bid Form.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be provided on the Bid Form.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.06 A Bid by an individual shall show the BIDDER’s name and business address.

- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be provided on the Bid Form.
- 13.08 All names shall be printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid form.
- 13.10 The postal and email addresses and telephone number for communication regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of BIDDERS authority and qualification to do business in the state or locality where the Project is located or BIDDER shall covenant in writing to obtain such qualification prior to award of the Contract and attach such covenant to the Bid. BIDDERS state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID; COMPARSION OF BIDS

14.01 Unit Price

- A. BIDDERS shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule including the base bid, additive bid and discretionary bid tables.
- B. The total of all bid prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 Allowances

- A. For cash allowances the Bid price shall include such amounts as the BIDDER deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 11.02.B of the General Conditions.

ARTICLE 15 - SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a BIDDER is furnished one separate unbound copy of the **Bid Form**, and the **Bid bond form (C-430 07)**. The unbound copy of the Bid Form is to be completed and submitted with all the attachments outlined in Article 7 of the Bid Form. The complete list of required bid documents can be found in the attached **BIDDER's Checklist**. This checklist shall be the first page of all bids submitted.
- 15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of BIDDER, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "**BID ENCLOSED.**" When using the mail or other delivery system, the BIDDER is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. A mailed Bid shall be addressed to OWNER at address in Article 1.01 of Bid Form.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.02 If within 24 hours after Bids are opened any BIDDER files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that BIDDER may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid or negotiated, that BIDDER will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to BIDDERS errors in judgment in preparing the Bid.

ARTICLE 17 - OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement for Bids and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the Bids and major alternates, if any, will be made available to BIDDERS after the opening of Bids.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but OWNER may, at its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any BIDDER whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful BIDDER.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any BIDDER has an interest in more than one Bid for the Work may be cause for disqualification of that BIDDER and the rejection of all Bids in which that BIDDER has an interest.

19.03 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating BIDDERS, OWNER will consider the qualifications of BIDDERS and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of BIDDERS, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the contract Documents.

19.06 If the Contract is to be awarded, OWNER will award the Contract to the responsible BIDDER whose **BASE PLUS ADDITIVE** Bid, conforming with all the material terms and conditions of the Instructions to BIDDERS, is lowest, price and other factors considered. If detailed in the bid form, factors such as discounts, transportation costs, and life cycle costs may be used to determine which BIDDER, if any, is to be offered the award.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment bonds and insurance. When the Successful BIDDER delivers the executed Agreement to OWNER, it shall be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When OWNER gives a Notice of Award to the Successful BIDDER, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful BIDDER shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within ten days thereafter, OWNER shall deliver one fully signed counterpart to Successful BIDDER with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – WAGE RATE REQUIREMENTS

22.01 The prevailing wage rates of the State of North Carolina apply to this contract as do any requirements of the State of North Carolina associated with the use of these State Prevailing wages.

DARE COUNTY BEACH NOURISHMENT PROJECT

BIDDER'S CHECKLIST

This checklist shall be included as the first page of the submitted bidding documents. As outlined in article 7 of the Bid Form the following items shall be included with the submitted bidding documents:

X	-	Properly Executed Bid Form (Including the acknowledgement of all Addenda)
X	A.	Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided); Bid Bond shall include an executed Power of Attorney.
X	B.	List of Proposed Subcontractors
X	C.	List of Project References
X	D.	Evidence of authority to do business in the state or jurisdiction of the Project; or a written covenant to obtain such license within the time frame for acceptance of Bids
X	E.	<i>[If applicable]</i> Contractor's License No.: <u>61566</u> <i>[or]</i> Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids
X	F.	NON-COLLUSION AFFIDAVIT Required Bidder Qualification Statement with Supporting Data; and
X	G.	Equipment List [Including dredge(s) names and expected production rates (CY per day)]
X	H.	List of 3 similar projects completed within the previous 5 years that entailed hydraulic beach restoration with the use of ocean certified dredge from offshore source or channel maintenance. Information provided shall include contact information for the client and the engineer, the average daily production rate (cubic yards per day placed) for the project, the construction time period, the final contract amount for sand placement, and the name of the hydraulic dredge used for the work.
X	I.	Iran Divestment Act

[Signature]
PER
ADDENDUM
#1

The Contractor shall use their own forms for Item C – List of Project References, Item D – Evidence of authority to do business in the state or jurisdiction, Item E – Contractor's License No. or Evidence of Bidder's ability to obtain State Contractor's License, Item F – Required Bidder Qualification and/or Item H – List of 3 Similar Projects.

DARE COUNTY BEACH NOURISHMENT PROJECT

Bid Form

Project Identification: **Dare County Beach Nourishment Project**

Contract Identification and Number: **154521**

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ARTICLE 1 - BID RECIPIENT

- 1.01 This Bid Is Submitted To: **Dare County**
954 Marshall C Collins Drive
Manteo, NC 27954

- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement and Instructions to Bidders, including without limitations those dealing with the dispositions of Bid security. The Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

DARE COUNTY BEACH NOURISHMENT PROJECT

Addendum No.	Addendum Date
<u>1</u>	<u>2/29/16</u>
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Sites and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in SGC-4.02, and (2) reports and drawings of Hazard Environmental Conditions, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data."
- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of the Work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

DARE COUNTY BEACH NOURISHMENT PROJECT

- J. Bidder will submit written evidence of its authority to do business in the State or other jurisdiction where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of, or on the behalf of, any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of OWNER, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

DARE COUNTY BEACH NOURISHMENT PROJECT

ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**DARE COUNTY NOURISHMENT PROJECT
Schedule of Bid Items**

BASE BID				
	Estimated Quantity	Units	Unit Price	Subtotal
I. Towns of Duck, Kitty Hawk and Kill Devil Hills				
A. Mobilization/Demobilization	1	L.S.	\$ 8,150,000. ⁰⁰	\$ 8,150,000. ⁰⁰
B. Performance and Payment Bond	1	L.S.	\$ 300,000. ⁰⁰	\$ 300,000. ⁰⁰
C. Compliance Surveys of the Borrow Area	1	L.S.	\$ 64,000. ⁰⁰	\$ 64,000. ⁰⁰
D. Sea Turtle Abundance Trawling	5	Day	\$ 4,600. ⁰⁰	\$ 23,000. ⁰⁰
II. Town of Duck				
A. Hydraulic Beach Fill	1,180,000	C.Y.	\$ 8.60	\$ 10,148,000. ⁰⁰
A-1. Optional Additional 20% Beach Fill if only Borrow Area C is used to Construct Town of Duck	236,000	C.Y.	\$ 0. ⁰⁰	\$ 0. ⁰⁰
B. Staging Area Beach Access Mats	1,120	L.F.	\$ 105. ⁰⁰	\$ 117,600. ⁰⁰
III. Town of Kitty Hawk				
A. Hydraulic Beach Fill	1,765,000	C.Y.	\$ 7.65	\$ 13,502,250. ⁰⁰
IV. Town of Kill Devil Hills				
A. Hydraulic Beach Fill	840,000	C.Y.	\$ 7.40	\$ 6,216,000. ⁰⁰
Base Bid Total			\$ 38,520,850. ⁰⁰	

Total Base Bid -	\$ 38,520,850. ⁰⁰
Total Base Bid in words	Thirty eight million five hundred twenty thousand eight hundred fifty dollars

DARE COUNTY BEACH NOURISHMENT PROJECT

ADDITIVE BID				
	Estimated Quantity	Units	Unit Price	Subtotal
V. Additive Bid Items				
A. Sand Fencing to be Installed within The Town of Kitty Hawk Per Individual 10' Unit of Fencing Installed	1,900	10 ft Section	\$ 40. ⁰⁰	\$ 76,000. ⁰⁰
Additive Total			\$ 76,000. ⁰⁰	

Total Base Bid + Additive-	\$ 38,596,850. ⁰⁰
Total Base Bid plus additive in words	Thirty eight million five hundred ninety six thousand eight hundred fifty dollars

DARE COUNTY BEACH NOURISHMENT PROJECT

DISCRETIONARY BID ITEMS				
	Estimated Quantity	Units	Unit Price	Subtotal
VI. Addressing Potential Unsuitable Fill Material				
A. Mobilization/Demobilization for Beach Discharge Screening	1	L.S.	\$ 70,000. ⁰⁰	\$ 70,000. ⁰⁰
B. Beach Discharge Screening	100	Day	\$ 3,500. ⁰⁰	\$ 350,000. ⁰⁰
C. Removal of Screened Beach Discharge Material	40,000	C.Y.	\$ 11.50	\$ 460,000. ⁰⁰
D. Dredge Intake Screening	1,500,000	C.Y.	\$ 2.30	\$ 3,450,000. ⁰⁰
E. Mobilization for Removal of Oversized Material from Constructed Beach	1	L.S.	\$ 8,000. ⁰⁰	\$ 8,000. ⁰⁰
F. Removal of Oversized Material from Constructed Beach	100	Day	\$ 3,200. ⁰⁰	\$ 320,000. ⁰⁰
VII. Environmental Protection				
A. Turbidity Monitoring	100	Day	\$ 2,250. ⁰⁰	\$ 225,000. ⁰⁰
B. Mobilization/Demobilization for Beach Tilling	1	L.S.	\$ 5,500. ⁰⁰	\$ 5,500. ⁰⁰
C. Beach Tilling	100	Acre (ac)	\$ 585. ⁰⁰	\$ 58,500. ⁰⁰
D. Sea Turtle Relocation Trawling	100	Day	\$ 4,550. ⁰⁰	\$ 455,000. ⁰⁰
E. Hopper Dredge Standby Rate (Per Dredge)	1	Day	\$ 210,000. ⁰⁰	\$ 210,000. ⁰⁰
F. Cutterhead Dredge Standby Rate (Per Dredge)	1	Day	\$ 177,500. ⁰⁰	\$ 177,500. ⁰⁰
VIII. Sand Fencing				
A. Sand Fencing to be Installed within the Town of Kill Devil Hills Per Individual 10' Unit of Fencing Installed	1,300	10 ft Section	\$ 40. ⁰⁰	\$ 52,000. ⁰⁰
B. Sand Fencing to be Installed within the Town of Duck Per Individual 10' Unit of Fencing Installed	800	10 ft Section	\$ 40. ⁰⁰	\$ 32,000. ⁰⁰
IX. USACE FRF Nearshore Berm Feature – Town of Duck Plan Set (Sheet 7A of 12)				
A. Additional Mobilization/Demobilization	1	L.S.	\$ 475,000. ⁰⁰	\$ 475,000. ⁰⁰
B. Hydraulic Beach Fill	10,000	C.Y.	\$ 66. ⁰⁰	\$ 660,000. ⁰⁰

1. All items listed must be completed by the Bidder. Base Bid Item II-A-1 "Optional Additional 20% Beach Fill if only Borrow Area C is used to Construct Town of Duck" shall only be filled out if the Contractor elects to utilize Borrow Area C solely for the construction of the Town of Duck project.
2. The low Bidder will be determined on the basis of the Base Bid and the Additive Bid. Discretionary Bid Items will not be utilized to determine the low Bidder.

DARE COUNTY BEACH NOURISHMENT PROJECT

3. Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.
4. No adjustment shall be made in any Unit Price of the Contract for changes ordered by the OWNER that cause an increase or decrease of less than twenty-five (25) percent from the estimated quantity of any specific item included in the base bid and additive bid. There shall be no change in any Unit Price of the contract for the discretionary bid items regardless of the change in quantity.
5. Anticipated Project Schedule shall be filled out. The Schedule is not binding and is meant to provide the Towns with estimated construction times for planning purposes.
6. Discretionary Bid Item VI-D "Dredge Intake Screening" is an incremental cost in addition to Base Bid Items II-A, III-A and IV-A.
7. Payment for Discretionary Bid Item VI "Addressing Potential Unsuitable Fill Material" shall only be paid for if required by OWNER and approved by the ENGINEER.
8. Standby rates will apply to each dredge that is on-site and operational for the project at the time notice is provided to standby.

Anticipated Project Schedule:

Start Town of Duck:	_____	April 1, 2017	_____
End Town of Duck:	_____	June 1, 2017	_____
Start Town of Kitty Hawk:	_____	June 1, 2017	_____
End Town of Kitty Hawk:	_____	August 20, 2017	_____
Start Town of Kill Devil Hills:	_____	August 20, 2017	_____
End Town of Kill Devil Hills:	_____	October 10, 2017	_____

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damage.

ARTICLE 7 - ATTACHEMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of the Bid:
 - A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided);
 - B. List of Proposed Subcontractors;
 - C. List of Project References;

DARE COUNTY BEACH NOURISHMENT PROJECT

- D. Evidence of authority to do business in the state or jurisdiction of the Project; or a written covenant to obtain such license within the time frame for acceptance of Bids;
- E. Contractor's License No.: 61566 [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- F. Required Bidder Qualification Statement with Supporting Data; and
- G. Equipment List [Including dredge(s) names and expected production rates (CY per day)]
- H. Equipment List of 3 similar projects completed within the previous 5 years that entailed hydraulic beach restoration with the use of an ocean certified dredge from an offshore source (including channel maintenance). Information provided shall include contact information for the client and the engineer, the average daily production rate (cubic yards per day placed) for the project, the construction time period, the final contract amount for sand placement, and the name of the hydraulic dredge used for the work.
- I. Iran Divestment Act

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: _____

(Individual's signature)

SEAL, if required by State

Doing business as:

DARE COUNTY BEACH NOURISHMENT PROJECT

A Partnership

Partnership Name: _____ N/A _____

SEAL,
if required
by State

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed):

 LIMITED LIABILITY COMPANY

A Corporation

Corporation Name:

GREAT LAKES DREDGE & DOCK COMPANY, LLC

State or Jurisdiction of Incorporation: ORGANIZED IN THE STATE OF DELAWARE

Type (General Business, Profession, Service, Limited Liability):

LIMITED LIABILITY COMPANY

By:  _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed):

RUSSELL F. ZIMMERMAN

Title: _____
VICE PRESIDENT

CORPORATE
SEAL,
if required by State

Attest  _____
(Signature of Corporate Secretary) ELLEN PARKER BURKE

Date of Qualification to do business in NC [State or other jurisdiction where
Project is located] is 1 / 1 / 16

A Joint Venture

Name of Joint Venture:

N/A

First Joint Venture Name: _____

SEAL,
if required
by State

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

DARE COUNTY BEACH NOURISHMENT PROJECT

Name (typed or printed):

N/A

Title: _____

Second Joint Venture Name:

SEAL,
if required
by State

By: _____

(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed):

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is party to the venture should be in the manner indicated above.)

Bidder's Business address: 2122 YORK ROAD

OAK BROOK, ILLINOIS 60523

Business Phone No. (630) 574-3000

Business FAX No. (630) 574-1515

Business E-Mail Address

RFZIMMERMAN@GLDD.COM

State Contractor License No. 61566 . (If applicable)

Employer's Tax ID No. 20-1354414

Phone and FAX Numbers, and Address for receipt of official communications, if different from Business contact information:

N/A

9.02 Bid submitted on MARCH 8, 2016.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (Name and Address):

Great Lakes Dredge & Dock Company, LLC
2122 York Road
Oak Brook, IL 60523

SURETY (Name and Address of Principal Place of Business):

Fidelity and Deposit Company of Maryland
1400 American Lane, Tower I, 18th Floor
Schaumburg, IL 60196-1056

OWNER (Name and Address):

Dare County
954 Marshall C Collins Drive, Room 286
Manteo, NC 27954

BID

Bid Due Date:

Description (Project Name and Include Location):

Dare County Beach Nourishment Project
Manteo, NC 27954

BOND

Bond Number: Bid Bond

Date (Not earlier than Bid due date): March 8, 2016

Penal sum ONE Million NINE Hundred Thirty FIVE PERCENT (5%) OF BIDDER'S MAXIMUM BID PRICE \$ 1,930,000.00
(Words) THOUSAND dollars (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

Great Lakes Dredge & Dock Company, LLC (Seal)

Bidder's Name and Corporate Seal

By: Russell F. Zimmerman
Signature

Russell F. Zimmerman
Print Name

Vice President
Title

Attest: Lilia Wichert
Signature

Lilia Wichert, Witness
Title

SURETY

Fidelity and Deposit Company of Maryland (Seal)

Surety's Name and Corporate Seal

By: Harold Miller, Jr.
Signature (Attach Power of Attorney)

Harold Miller, Jr.
Print Name

Attorney-in-Fact
Title

Attest: Jodie Sellers
Signature

Jodie Sellers, Witness
Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

PENAL SUM FORM

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

State of Illinois
County of DuPage

I, Karen E Socha, Notary Public of DuPage, County, in the State of Illinois, do hereby certify that Harold Miller, Jr. Attorney-in-Fact, of Fidelity and Deposit Company of Maryland who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person, and acknowledged that he signed, sealed and delivered said instrument, for and on behalf of Fidelity and Deposit Company of Maryland for the uses and purposes therein set forth.

Given under my hand and notarial seal at my office in the City of Itasca in said County, this 26th day of February, 2016.



Notary Public Karen E Socha
My Commission expires: 01/13/2020



**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Sharon A. FOULK, Karen E. SOCHA, William T. KRUMM, Jon A. SCHROEDER, Harold MILLER, JR., Kathleen WEAVER, Jodie SELLERS and Patrick M. GALLAGHER**, all of Itasca, Illinois, EACH its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 27th day of October, A.D. 2015.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: *Eric D. Barnes*
Secretary
Eric D. Barnes

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 27th day of October, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Maria D. Adamski

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019



LIST OF SUBCONTRACTORS

PROJECT: DARE COUNTY BEACH NOURISHMENT PROJECT

The undersigned states that the following is a full and complete list of the proposed subcontractors on this Project and the class of work to be performed by each, and that such list will not be added to or altered without written consent of the Owner. The CONTRACTOR is not obligated to use the subcontractors that are listed.

SUBCONTRACTOR AND ADDRESS	CLASS OF WORK TO BE PERFORMED
1) <u>TL COASTAL</u> <u>9111B MARKET STREET, WILMINGTON, NC 28411</u>	<u>NC LICENSED SURVEYOR</u>
2) <u>REMSA</u>	<u>ENDANGERED SPECIES OBSERVERS/ SEA TURTLE TRAWLING</u>
3) <u>CAROLINA MARINE STRUCTURES</u> <u>8443 CARATOKE HWY, SUITE A</u> <u>POWELLS POINT, NC 27966</u>	<u>SAND FENCE INSTALLATION/ REMOVAL OF OVERSIZED & SCREENED MATERIAL</u>
4) _____ <u>NO OTHER SUBCONTRACTORS ANTICIPATED</u> <u>AT THIS TIME</u>	_____
5) _____	_____
6) _____	_____
7) _____	_____

Dated 3-3-2016

GREAT LAKES DREDGE & DOCK COMPANY, LLC

Bidder

BY Russell F. Zimmerman

RUSSELL F. ZIMMERMAN, VICE PRESIDENT

License Year

2016

License No.

61566

North Carolina

Licensing Board for General Contractors

This is to Certify That:

Great Lakes Dredge & Dock Company, LLC
Oak Brook, IL

is duly registered and entitled to practice

General Contracting

Limitation: Unlimited

Classification: S (Marine Construction)

until

December 31, 2016

when this Certificate expires.

Witness our hands and seal of the Board.

Dated, Raleigh, N.C.

January 1, 2016

This certificate may not be altered.



Wm. Hambl
Chairman

C. Frank Wiener
Secretary-Treasurer

NONCOLLUSION AFFIDAVIT

Each Contractor submitting a bid must fill out the following affidavit:

STATE OF ILLINOIS

COUNTY OF DUPAGE

Affiant, RUSSELL F. ZIMMERMAN makes oath that
he is the (title) VICE PRESIDENT of
GREAT LAKES DREDGE & DOCK COMPANY, LLC and
that the undersigned affiant has not given or donated or promised to give or donate directly or indirectly
to any official or employee of Dare County, Towns of Duck, Kitty Hawk or Kill Devil Hills, North
Carolina, or to anyone else for his benefit any sum of money or other thing of value for aid in assistance
in obtaining this contract.


RUSSELL F. ZIMMERMAN, VICE PRESIDENT

Subscribed and sworn to before me this 3 day of MARCH 2016


Notary Public LILIA WICHERT



My Commission Expires: 04/22/2016



EQUIPMENT LIST

PROJECT: DARE COUNTY BEACH NOURISHMENT PROJECT

In accordance with 00900 Supplemental General Conditions, Clause 28.2
AMERICAN BUREAU OF SHIPPING CERTIFICATION for OPEN OCEAN
OPERATION, we submit the following documentation.

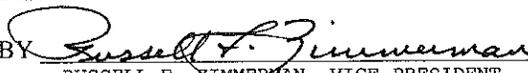
DARE COUNTY BEACH NOURISHMENT PROJECT

EQUIPMENT LIST

The bidder is request to state below the number and types of equipment proposed for use in the project.

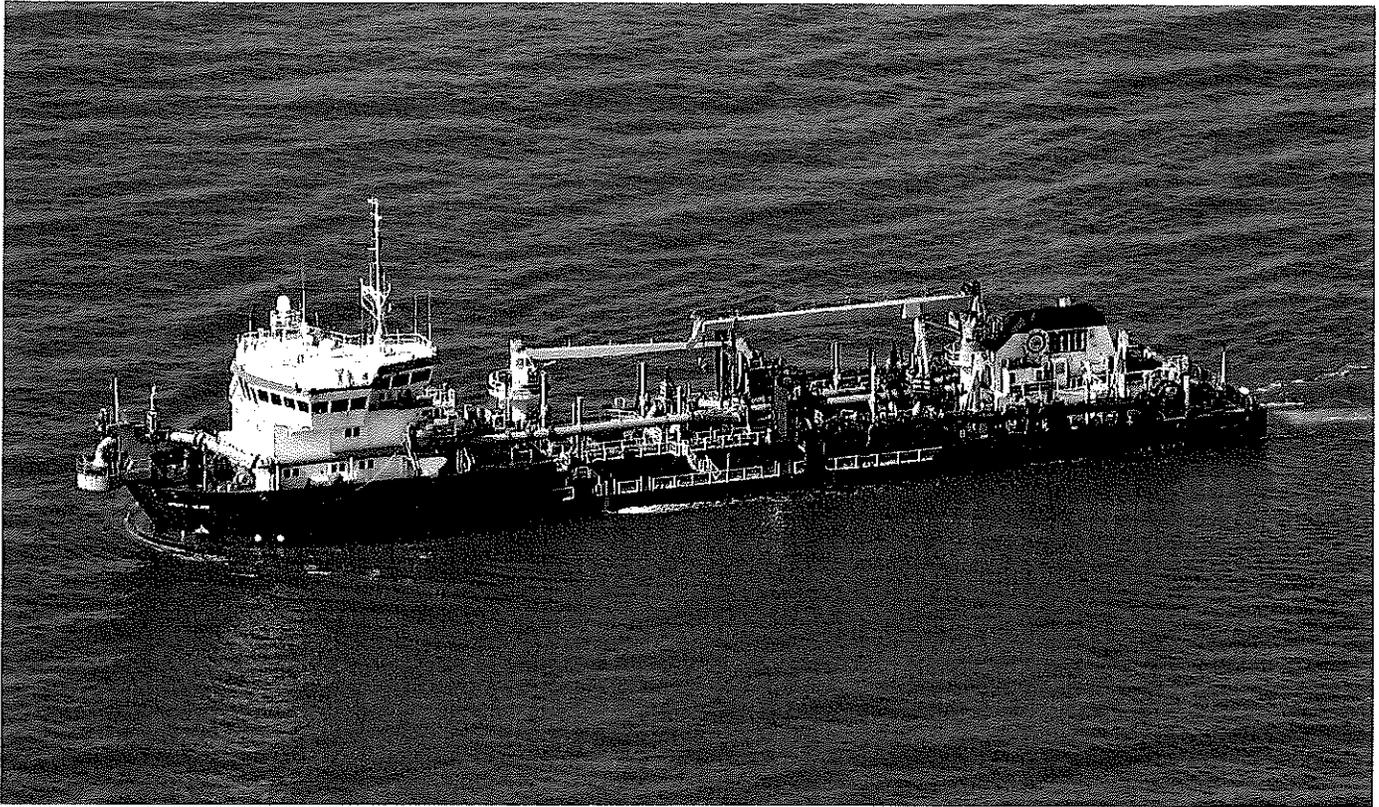
Item	Name	Mfg / Type (Model) / Year	Capacity
Hydraulic Dredge	<u>Liberty Island</u>	<u>Bay Shipbuilding / 6,500 CY</u> <u>Trailing Suction Hopper Dredge / 2001</u>	<u>25,000</u> cy/dy
Hydraulic Dredge	_____	_____	_____ cy/dy
Tug	<u>1 to 2 Assist Tugs</u>	<u>Various Mfg / Twin Screw/ Various</u>	<u>1,200</u> hp
Tug	_____	_____	_____ hp
Tug	_____	_____	_____ hp
Tender Barge	_____	_____	_____ tons
Derrick Barge	<u>GLDD Derrick</u>	<u>110' Boom, 100+ ton capacity, ABS</u>	_____ tons
Yellow Equipment	<u>2 to 3 D7 Dozers</u>	<u>Caterpillar Dozers</u>	_____ hp
Yellow Equipment	<u>1 to 2 CAT996</u>	<u>Caterpillar F.E. Loader</u>	_____ hp
Yellow Equipment	_____	_____	_____ hp
Yellow Equipment	_____	_____	_____ hp
Yellow Equipment	_____	_____	_____ hp

Dated 3/3/2016

GREAT LAKES DREDGE & DOCK COMPANY, LLC
 Bidder
 BY 
 RUSSELL F. ZIMMERMAN, VICE PRESIDENT

DREDGE LIBERTY ISLAND

TRAILING SUCTION HOPPER DREDGE



DIMENSIONS

<i>Hull</i>	315 x 59 x 28 ft	96 x 18 x 8.5 m
<i>Draft</i>	27.9 ft	8.485 m
<i>Suction Diameter</i>	31.5 in	800 mm
<i>Discharge Diameter</i>	30 in	762 mm

PERFORMANCE

<i>Hopper Capacity</i>	6,540 yd ³	5,000 m ³
<i>Nominal Digging Depth</i>	108 ft	32.9 m

MACHINERY & POWER

<i>Propulsion Power</i>	9,923 hp	7,400 kW
<i>Total Installed Power</i>	15,566 hp	11,612 kW
<i>Dumping System</i>	Bottom Doors with Pre-Dump Doors	
<i>Anchoring</i>	One stern anchor, two bow anchors	

Hopper dredges are designed to vacuum material from the sea floor through drag arms that load the material into the hold of the vessel. The cargo of mud or sand can then be sailed to either an ocean disposal site where the material is dropped to the bottom through openings in the bottom of the hull, or alternatively an upland site, such as a beach or reclamation where the material is pumped ashore by the ship.

CERTIFICATION

ABS • A1 Dredger • AMS, ACCU
USCG - Unlimited Oceans



GREAT LAKES DREDGE & DOCK CORPORATION | DREDGING WORLDWIDE

630.574.3000 | INFO@GLDD.COM | GLDD.COM



UNITED STATES OF AMERICA

DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD

NATIONAL VESSEL DOCUMENTATION CENTER

CERTIFICATE OF DOCUMENTATION

VESSEL NAME LIBERTY ISLAND		OFFICIAL NUMBER 1117986	IMO OR OTHER NUMBER 9224831	YEAR COMPLETED 2001	
HAILING PORT NEW YORK NY		HULL MATERIAL STEEL		MECHANICAL PROPULSION YES	
GROSS TONNAGE 5201 GT ITC	NET TONNAGE 1560 NT ITC	LENGTH 302.3	BREADTH 59.0	DEPTH 31.0	
PLACE BUILT STURGEON BAY WI					
OWNERS CEF 2002 LLC			OPERATIONAL ENDORSEMENTS REGISTRY COASTWISE		
MANAGING OWNER CEF 2002 LLC ATTN: MARINE DOCUMENTATION & INSURANCE DEPT 3333 HESPER ROAD BILLINGS MT 59102-6744					
RESTRICTIONS NONE					
ENTITLEMENTS NONE					
REMARKS None					
ISSUE DATE JANUARY 23, 2015		 DIRECTOR, NATIONAL VESSEL DOCUMENTATION CENTER			
THIS CERTIFICATE EXPIRES JANUARY 31, 2016					



This certificate is not valid for operation of the vessel until the vessel is marked with the name, official number, and hailing port as shown on the certificate. The original certificate must be kept aboard the vessel at all times when in operation and must be presented upon the demand of federal, state or local officials for law enforcement purposes. Vessels with only a recreational endorsement may not engage in commercial trade.

Documented vessels may be registered by states for tax and other purposes and may be required to display a state decal. This certificate is valid for one year. Renewal is the responsibility of the owner. This certificate must be surrendered to the National Vessel Documentation Center (NVDC), 792 T J Jackson Drive, Falling Waters, West Virginia 25419, upon a change in ownership, change in state of incorporation, or a change in any other element shown on the certificate other than change of address. This certificate is invalid for any vessel other than one documented solely for recreation when the vessel is placed under the command of a person who is not a citizen of the U.S. The vessel and its equipment are liable to seizure and forfeiture to the U.S. government and the owner is liable for a civil penalty of not more than \$10,000.00 per violation. Each day of a continuing violation is a separate violation.

Any change in address of the managing owner must be reported promptly to the NVDC. You may contact us at (304) 271-2400.

Note: The certificate on the face of this document is not conclusive evidence of title in any proceeding where ownership is in issue. Complete records are on file at the NVDC. The sale or transfer section below is provided for convenience only.

SALE OR TRANSFER OF VESSEL

100% OF THE VESSEL IDENTIFIED HEREIN IS SOLD (TRANSFERRED) BY THE OWNER(S) NAMED ON THE FACE OF THIS CERTIFICATE TO THE FOLLOWING PERSON(S). ADDRESS MUST BE INCLUDED.

IF SOLD (TRANSFERRED) TO MORE THAN ONE PERSON, THE PURCHASER(S)/TRANSFEREE(S) ARE TENANTS IN COMMON, EACH OWNING AN EQUAL UNDIVIDED INTEREST, UNLESS OTHERWISE INDICATED HEREIN: CHECK ONLY ONE OF THE FOLLOWING BLOCKS TO SHOW ANOTHER FORM OF OWNERSHIP.

- JOINT TENANCY WITH RIGHT OF SURVIVORSHIP TENANCY BY THE ENTIRETIES COMMUNITY PROPERTY
 OTHER

SIGNATURE OF SELLER(S)/TRANSFEROR(S) OR PERSONS SIGNING ON BEHALF OF SELLER(S)/TRANSFEROR(S):

DATE SIGNED:

NAME(S) OF PERSON(S) SIGNING ABOVE, AND LEGAL CAPACITY IN WHICH SIGNED (E.G. OWNER, AGENT, TRUSTEE, EXECUTOR)

ACKNOWLEDGMENT (TO BE COMPLETED BY NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED BY A LAW OR A STATE OR THE UNITED STATES TO TAKE OATHS.)

ON _____ THE PERSON(S) NAMED
(DATE)

STATE:

COUNTY:

ABOVE ACKNOWLEDGED EXECUTION OF THE FOREGOING INSTRUMENT
IN THEIR STATED CAPACITY(IES) FOR THE PURPOSES THEREIN CONTAINED.

NOTARY PUBLIC
MY COMMISSION EXPIRES:

PRIVACY ACT STATEMENT

IN ACCORDANCE WITH 5 USC 552(A), THE FOLLOWING INFORMATION IS PROVIDED TO YOU WHEN SUPPLYING PERSONAL INFORMATION TO THE U.S. COAST GUARD:

- AUTHORITY.** SOLICITATION OF THIS INFORMATION IS AUTHORIZED BY 46 USC CHAPTER 313 AND 46 CFR, PART 67.
- THE PRINCIPAL PURPOSES** FOR WHICH THIS INSTRUMENT IS TO BE USED ARE:
 - TO PROVIDE A RECORD, AVAILABLE FOR PUBLIC INSPECTION AND COPYING, OF THE SALE OR OTHER CHANGE IN OWNERSHIP OF A VESSEL WHICH IS DOCUMENTED, WILL BE DOCUMENTED, OR HAS BEEN DOCUMENTED PURSUANT TO 46 USC, CHAPTER 121.
 - RETENTION FOR EXAMINATION BY GOVERNMENTAL AUTHORITIES AND MEMBERS OF THE GENERAL PUBLIC.
- THE ROUTINE USE** WHICH MAY BE MADE OF THIS INFORMATION INCLUDES DEVELOPMENT OF STATISTICAL DATA CONCERNING DOCUMENTED VESSELS.
- DISCLOSURE OF THE INFORMATION REQUESTED ON THIS FORM IS VOLUNTARY. HOWEVER, FAILURE TO PROVIDE THE INFORMATION COULD PRECLUDE FILING OF A BILL OF SALE AND DOCUMENTATION OF THE VESSEL NAMED HEREIN PURSUANT TO 46 USC CHAPTER 121. MOREOVER, BILLS OF SALE WHICH ARE NOT FILED ARE NOT DEEMED TO BE VALID AGAINST ANY PERSON HAVING ACTUAL KNOWLEDGE OF THE SALE. (46 USC 31321 (A)).

AN AGENCY MAY NOT CONDUCT OR SPONSOR, AND A PERSON IS NOT REQUIRED TO RESPOND TO A COLLECTION OF INFORMATION UNLESS IT DISPLAYS A VALID OMB CONTROL NUMBER.

THE COAST GUARD ESTIMATES THAT THE AVERAGE BURDEN FOR THIS FORM IS 20 MINUTES FOR COMPLETING AND 5 MINUTES FOR FILING. YOU MAY SUBMIT ANY COMMENTS CONCERNING THE ACCURACY OF THIS BURDEN ESTIMATE OR ANY SUGGESTIONS FOR REDUCING THE BURDEN TO: U.S. COAST GUARD, NATIONAL VESSEL DOCUMENTATION CENTER, 792 T J JACKSON DRIVE, FALLING WATERS, WEST VIRGINIA 25419 OR OFFICE OF MANAGEMENT AND BUDGET, PAPERWORK REDUCTION PROJECT (1625-0027), WASHINGTON, DC 20503.

AO 454508422419



United States of America
Department of Homeland Security
United States Coast Guard

Certification Date: 24 Feb 2012
Expiration Date: 24 Feb 2017
IMO Number: 9224831

Certificate of Inspection

For ships on international voyages this certificate fulfills the requirements of SOLAS 74 as amended, regulation V/14, for a SAFE MANNING DOCUMENT.

Vessel Name LIBERTY ISLAND	Official Number 1117966	Call Sign WDFP	Service Industrial Vessel
Hailing Port NEW YORK NY	Hull Material Steel	Horsepower 9924	Propulsion Diesel Reduction
Place Built STURGEON BAY WI, UNITED STATES	Delivery Date 12Dec2001	Date Keel Laid 23Oct2000	Gross Tons R-4898
			Net Tons R-1469
			DWT L-296
			Length R-296
			L-296
Owner CEF 2002, LLC 300 E JOHN CARPENTER FWY SUITE 207 IRVING TX 75062-2712 UNITED STATES	Operator GREAT LAKES DREDGE & DOCK COMPANY, LLC 2122 YORK ROAD OAK BROOK IL 60523-1981 UNITED STATES		

This vessel must be manned with the following licensed and unlicensed personnel. Included in which there must be 6 certified lifeboatmen, 0 certified tankermen, 0 HSC type rating, and 4 GMDSS Operators.

1 Master	0 Master & 1st Class pilot	0 Radio Officer(s)	1 Chief Engineer	0 QMED/Rating
0 Chief Mate	0 Mate & 1st Class Pilot	6 Able Seamen/ROANW	0 1st Asst. Engr/2nd Engr.	3 Oilers
0 2nd Mate/OICNW	3 Lic. Mate/OICNW	0 Ordinary Seamen	0 2nd Asst. Engr/3rd Engr.	
0 3rd Mate/OICNW	0 1st Class Pilot	0 Deckhands	0 3rd Asst. Engr.	
			2 Lic. Engr.	

In addition, this vessel may carry 0 passengers, 2 other persons in crew, 1 persons in addition to crew, and no others. Total persons allowed: 19

Route Permitted and Conditions of Operation:

---Oceans---

For voyages of less than 400 miles the following manning level applies:

- | | |
|--------------------|-------------------------|
| (1) MASTER | (1) CHIEF ENGINEER |
| (2) LICENSED MATES | (2) LICENSED ENGINEERS. |
| (4) ABLE SEAMEN | (3) OILERS |

In addition, the vessel may carry four (4) other persons in the crew and two (2) persons in addition to the crew.

When the vessel is on a voyage of 3 days or less in duration, the hospital space may be

SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION

With this Inspection for Certification having been completed at Norfolk, VA, the Officer in Charge, Marine Inspection, Sector Hampton Roads certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Quarterly Reinspections				Signature	This certificate issued by:
Date	Zone	A/P/Q			
9 APR 13	SEC MIA	A		<i>[Signature]</i> LT J. K. EDWARDS	J. R. BARNES Officer in Charge, Marine Inspection Sector Hampton Roads Inspection Zone
2 FEB 14	SEC ST PKR	A		<i>[Signature]</i>	
12 JAN 15	SEC ST PKR	A		<i>[Signature]</i>	



Department of Homeland Security
United States Coast Guard

Certificate of Inspection

Certification Date:
24Feb2012

LIBERTY ISLAND

used as a berth and the total number of persons allowed may be increased to 20.

This vessel has been inspected and certificated in accordance with the terms and conditions specified in the Coast Guards Alternate Compliance Program (ACP). Date of ACP enrollment: 11/12/98

The vessels class ID Number is P37037RC.

When Government, State, Local and/or company safety personnel are required to be onboard during dredging operations, the Persons in Addition to Crew may be increased to 16. These additional persons shall only be allowed onboard temporarily, on domestic voyages, during daylight hours, and on Rivers Voyages, Lakes, Bays and Sounds Voyages, or Great Lakes Voyages, or within 20 NM of a harbor of safe refuge for Coastwise Voyages. When additional persons are onboard the vessel shall have life-jackets and immersion suits for all personnel onboard. The vessel shall carry two additional 25 person life-rafts to meet the alternate requirements for survival craft.

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
-----------	-----------	-----------	------------

---Inspection Status---

Lifesaving

Number of Davits/2	Lifeboat/Raft ID	Full Wgt Test	Light Wgt Test	Falls Rnwd	Falls End/End
2		-	-	-	-
1		-	-	-	-

---Lifesaving Equipment---

	Number	Persons	Required
Total Equipment for	20	Life Preservers(Adult)	30
Lifeboats(Total)	2	Life Preservers(Child)	0
Lifeboats(Port)*	1	Ring Buoys(Total)	12
Lifeboats(Starbd)*	1	With Lights*	8
Motor Lifeboats*	2	With Line Attached*	2
Lifeboats W/Radio*	0	Other*	2
Rescue Boats/Platforms	1	Immersion Suits	30
Inflatable Rafts	3	Portable Lifeboat Radios	3
Life Floats/Buoyant App	0	Equipped with EPIRB?	Yes
Inflatable Bouyant App(IBA)	0	(* included in totals)	

---Fire Fighting Equipment---

Number of Fireman Outfits/ 2	Number of Fire Pumps/ 2
------------------------------	-------------------------

Hose information

Qty	Diameter	Length
14	2.5	Other
38	1.5	Other

Fixed Extinguishing Systems

Capacity	Agent	Space Protected
3500	Carbon Dioxide	ENGINE & STEERING ROOM



Department of Homeland Security
United States Coast Guard

Certificate of Inspection

Certification Date:
24Feb2012

LIBERTY ISLAND

100	Carbon Dioxide	PAINT LOCKER
200	Carbon Dioxide	EMERGENCY GENERATOR SPACE
100	Carbon Dioxide	INCINERATOR SPACE

Fire Extinguishers - Hand portable and semi-portable

Qty	Class Type
2	A-II
37	B-II
1	C-II

END

INTERNATIONAL LOAD LINE CERTIFICATE

Issued under the provisions of
the International Convention on Load Lines, 1966,
as modified by the Protocol of 1988 relating thereto
under the authority of the Government of

UNITED STATES OF AMERICA

Commandant, U.S. Coast Guard

by American Bureau of Shipping

Particulars of Ship

Name of Ship		Distinctive Number or Letters	
LIBERTY ISLAND		1117966 WDFP	
Port of Registry	Length(L) as defined in Article 2(8)	IMO Number ¹	
New York, NY	92.367 m	9224831	

Freeboard Assigned as: New

Type of Ship: Type B - 100 Reduced

Freeboard from Deck Line:

Load Line

Freeboard from Deck Line:	Freeboard (mm)	Letter	Freeboard (mm)	Position
Tropical	1793	(T)	156	above (S)
Summer	1949	(S)	Upper edge of line through center of ring	
Winter	2105	(W)	156	below (S)
Winter North Atlantic	2155	(WNA)	206	below (S)
Timber Tropical	N/A	(LT)	N/A	above (LS)
Timber Summer	N/A	(LS)	N/A	above (S)
Timber Winter	N/A	(LW)	N/A	below (LS)
Timber Winter North Atlantic	N/A	(LWNA)	N/A	below (LS)

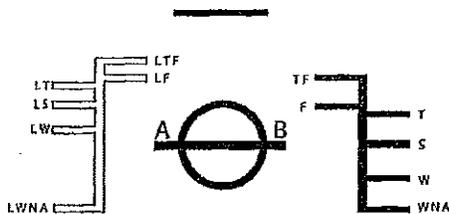
Allowance for fresh water for all freeboards other than timber: 176 mm

For timber freeboards: N/A

The upper edge of the deck line from which these freeboards are measured is:

Opposite The Top of Upper Steel

deck at side.



This certificate is valid only so long as the operating restrictions in the vessel's stability letter issued by ABS Americas and dated 24 February 2015, are observed. When making an international voyage, only seawater is permitted in the ship's hopper.

¹ In accordance with the IMO Ship Identification Number Schema, adopted by resolution A.600(15).

Certificate No.: 0137037-3018942-001

Deadweight: 6559.45 MT

**ENDORSEMENT WHERE THE RENEWAL SURVEY HAS
BEEN COMPLETED AND ARTICLE 19(4) APPLIES**

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(4) of the Convention, be accepted as valid until _____

Signed: _____

Surveyor, American Bureau of Shipping

Place: _____

Date: _____

**ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT
OF SURVEY OR FOR A PERIOD OF GRACE WHERE ARTICLE 19(5) OR 19(6) APPLIES**

This certificate shall, in accordance with article 19(5)/19(6)³ of the Convention, be accepted as valid until _____

Signed: _____

Surveyor, American Bureau of Shipping

Place: _____

Date: _____

**ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE
WHERE ARTICLE 19(8) APPLIES**

In accordance with article 19(8) of the Convention, the new anniversary date is _____

Signed: _____

Surveyor, American Bureau of Shipping

Place: _____

Date: _____

In accordance with article 19(8) of the Convention, the new anniversary date is _____

Signed: _____

Surveyor, American Bureau of Shipping

Place: _____

Date: _____



ABS

³ Delete as appropriate

ENDORSEMENT FOR ANNUAL SURVEYS

THIS IS TO CERTIFY that, at an annual survey required by article 14(1)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:	Signed:	<u>SURVEY PREVIOUSLY COMPLETED</u> <i>Surveyor, American Bureau of Shipping</i>
	Place:	_____
	Date:	_____
Annual Survey:	Signed:	<u>SURVEY PREVIOUSLY COMPLETED</u> <i>Surveyor, American Bureau of Shipping</i>
	Place:	_____
	Date:	_____
Annual Survey:	Signed:	<u>SURVEY PREVIOUSLY COMPLETED</u> <i>Surveyor, American Bureau of Shipping</i>
	Place:	_____
	Date:	_____
Annual Survey:	Signed:	_____ <i>Surveyor, American Bureau of Shipping</i>
	Place:	_____
	Date:	_____

ANNUAL SURVEY IN ACCORDANCE WITH ARTICLE 19(8)(c)

THIS IS TO CERTIFY that, at a survey in accordance with article 19(8)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed: _____
Surveyor, American Bureau of Shipping

Place: _____

Date: _____

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS WHERE ARTICLE 19(3) APPLIES

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(3) of the Convention, be accepted as valid until _____



ABS

Signed: _____
Surveyor, American Bureau of Shipping

Place: _____

Date: _____

Certificate No.: 0137037-3018942-001

Deadweight: 6559.46 MT

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with the requirements of article 14 of the Convention.
2. That the survey showed that the freeboards have been assigned and load lines shown above have been marked in accordance with the Convention.

This certificate is valid until 31 December 2016²
Subject to the annual surveys in accordance with article 14(1)(c) of the Convention.

Completion date of the survey on which this certificate is based: 29 February 2012

Issued at Brooklyn, NY on 02 November 2015
(Place of issue of certificate) *(Date of issue)*
By: [Signature]
Carbon [Signature] Surveyor American Bureau of Shipping
NEW YORK/NEW JERSEY PORT

NOTES:

1. When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.
2. When a ship is in fresh water of unit density the appropriate load line may be submerged by the amount of fresh water allowance shown above. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.
3. It is the owner's responsibility to furnish the master with approved information and instructions for loading and ballasting this vessel to provide guidance as to stability of the vessel under varying conditions of service and to avoid unacceptable stresses in the vessel's structure, as defined in 46 CFR 42.09-1.
4. The Winter North Atlantic Load Line applies only to vessels of 328 ft. in length or less, which enter any part of the North Atlantic Ocean during the winter months as defined by the Load Line Regulations in 46 CFR 42.30-5 and 42.30-35. The periods during which the other seasonal load lines apply in different parts of the world are sated in the Load Line Regulations 46 CFR 42.30-5 to 42.30-30, inclusive.
5. This Load Line Certificate will be cancelled by the Commandant, U. S. Coast Guard, if...
 - a) The annual surveys have not been carried out with three months either way of each anniversary date of the certificate.
 - b) The certificate is not endorsed to show that the ship has been surveyed as indicated in (a).
 - c) Material alterations have been made to the hull or superstructures such as would necessitate the assignment of an increased freeboard.
 - d) The fittings and appliance for the protection of the openings, guardrails, freeing ports, or the means of access to the crew's quarters have not been in as effective a condition as they were when the Certificate was issued.
 - e) The structural strength of the ship is lowered to such an extent that the ship is unsafe.
6. When this Certificate has expired or been cancelled, it must be delivered to the Assigning Authority.



² insert the date of expiry as specified by the Administration in accordance with article 19(1) of the Convention. The day and the month of this date correspond to the anniversary date as defined in article 2(9) of the Convention, unless amended in accordance with article 19(8) of the Convention.



**Great Lakes
Dredge & Dock
Company, LLC**

2122 York Road
Oak Brook, Illinois 60523
630.574.3000

GREAT LAKES DREDGE & DOCK COMPANY, LLC

SECRETARY'S CERTIFICATE

I, Ellen Parker Burke, DO HEREBY CERTIFY that I am the duly elected, qualified and acting Secretary of Great Lakes Dredge & Dock Company, LLC, a Delaware limited liability company (the "Company"), and in such capacity; and

I FURTHER CERTIFY that pursuant to resolution taken by the Board of Managers of the Company on September 16, 2015, Jonathan W. Berger, David E. Simonelli, Kyle D. Johnson, John F. Karas, Steven W. Becker, James C. Gillespie, William H. Hanson, John T. O'Brien, Steven F. O'Hara, Christopher Roberts, Russell F. Zimmerman, Paul C. Lamourie, Samuel R. Morrison and Steven R. Auernhamer are authorized to execute domestic dredging contracts and all related documents, instruments and agreements such that the same will be legally binding upon the Company, and such resolutions have not been amended, modified, revoked or rescinded since their adoption to and including the date hereof and are now in full force and effect in the form duly adopted by such Board of Managers.

IN WITNESS WHEREOF, the undersigned has executed this Secretary's Certificate on this 1 day of MARCH 2016.

GREAT LAKES DREDGE & DOCK COMPANY, LLC

By: Ellen Parker Burke
Name: Ellen Parker Burke
Title: Secretary

Subscribed and sworn to before me
this 1 day of MARCH 2016

Lilia Wichert
Notary Public



- | | | |
|----|--|--|
| I. | Terra Contracting Services, LLC | 5787 Stadium Drive
Kalamazoo, MI 49009 |
| J. | Great Lakes Dredge & Dock
do Brasil, LTDA | Ave. Almirante Barroso
63 – Grupo 2709
Rio de Janeiro, BR |
| K. | Magnus Pacific LLC | 6558 Lonetree Blvd.
Rocklin, CA 95765 |
| L. | Great Lakes Environmental
& Infrastructure Solutions, LLC | 2122 York Road
Oak Brook, IL 60523 |
| M. | Great Lakes Dredge & Dock
Australia Pty. Ltd. | c/o Norton Rose
Fulbright Australia
Level 39
108 St. Georges Terrace
Perth, WA 6000
Australia |
| N. | Great Lakes Dredge & Dock
(Bahamas) Ltd. | c/o Knowles, McKay
& Culmer
43 Elizabeth Avenue
Nassau / Paradise Island
Bahamas |
| O. | Great Lakes Dredge & Dock India
Private Limited | c/o Varish Associates
106, Peninsula Centre
Dr.S.S. Rao Road
Parel, Mumbai
400012 India |

4. That, Great Lakes Dredge & Dock Corporation is the parent/holding company of the other entities named in paragraph 3 above;
5. That, the affiant has carefully examined this affidavit and asserts that all of the statements and representation contained therein are true to the best of her knowledge, information, and belief.

GREAT LAKES DREDGE & DOCK COMPANY, LLC

Ellen Parker Burke
Ellen Parker Burke, Secretary

Date:

Subscribed and Sworn to, before me,
this 1 day of MARCH 2016

L. Wichert

Notary Public





NORTH CAROLINA
DEPARTMENT OF STATE TREASURER
STATE AND LOCAL GOVERNMENT FINANCE DIVISION
AND THE LOCAL GOVERNMENT COMMISSION

JANET COWELL
TREASURER

GREGORY C. GASKINS
DEPUTY TREASURER

Memorandum # 2016-10

TO: All Local Governments, Public Authorities and Their Independent Auditors
FROM: Sharon Edmundson, Director, Fiscal Management Section
SUBJECT: Iran Divestment Act Notice for Local Governments in North Carolina
DATE: February 17, 2016

The North Carolina Department of State Treasurer is providing this letter to Local Government Units to explain new contracting and procurement compliance obligations created by the Iran Divestment Act of 2015 (N.C.G.S. 143C-6A-1 to 6A-9).^{*} Local Government Units should be aware that effective February 26, 2016, this law imposes new obligations on each new bid process, each new contract, and each renewal or assignment of an existing contract. The specific requirements are as follows:

1. Local Government Units must obtain a one-page mandatory certification under the Act. (See sample "Contract Certification" form below for details.)
2. Local Government Units may not enter into contracts with any entity or individual found on the State Treasurer's Iran Final Divestment List. This list will be posted on the Department of State Treasurer's website on February 26, 2016 and will be updated every 180 days. (See "Contract Restrictions" below for details.)

Background

The Iran Divestment Act's requirements applicable to Local Government Units^{**} will become effective on February 26, 2016, at the time the State Treasurer publishes the first list of prohibited companies and individuals (a "Final Divestment List") under the Act.

^{*}The Iran Divestment Act of 2015 can be found online at:

<http://www.ncleg.net/Sessions/2015/Bills/Senate/PDF/S455v5.pdf>

^{**}The Act's requirements use the term "State agency." G.S. 143C-6A-3(7) provides that in the act, the term "State agency" includes not only State departments, boards, and commissions, but also "any political subdivision of the State" such as a Local Government Unit.

Final Divestment List

The Department of State Treasurer develops the Final Divestment List using data from a research vendor, U.S. federal sanctions lists, and other credible information available to the public. It consists of any individual or company, including parent entities and majority owned subsidiaries, that:

- Provided goods or services of \$20,000,000 or more within any 12-month period in the energy sector of Iran during the preceding five years;
- Extended \$20,000,000 or more in credit, under certain circumstances, to another individual or company that will use the credit to provide goods or services in the energy sector in Iran. (G.S. 143C-6A-3(4).)

The Department of State Treasurer will update the Final Divestment List at least every 180 days. The list will be published on the State Treasurer's website at www.nctreasurer.com/Iran and periodically circulated to Local Government Units.

Requirement 1: Contract Certification

For new procurements and new, renewed, or assigned contracts on or after February 26, 2016, each Local Government Unit must obtain a simple certification from each bidder or vendor. The bidder or vendor must affirm that it is not listed on the State Treasurer's Final Divestment List found at www.nctreasurer.com/Iran as of the date of signature. The certification is due at the time a bid is submitted or the time a contract is entered into, renewed, or assigned. (G.S. 143C-6A-5(a).)

We have attached on the next page a short form that can be used for this certification, but Local Government Units are free to instead use their own form or put the required certification in the text of a contract or purchase order. Each Local Government Unit shall maintain its own records demonstrating these certifications.

Requirement 2: Restriction on Contracting

Individuals or companies on the Final Divestment List are ineligible to contract or subcontract with Local Government Units. (G.S. 143C-6A-6(a).) Any existing contracts with these Iran-linked persons will be allowed to expire in accordance with the contract's terms. (G.S. 143C-6A-6(c).)

Contracts valued at less than \$1,000.00 are exempt from this restriction. (G.S. 143C-6A-7(a).) In addition, a Local Government Unit may contract with a listed individual or company if it makes a good-faith determination that (1) the commodities or services are necessary to perform its functions and (2) that, absent such an exemption, it would be unable to obtain those commodities or services. (G.S. 143C-6A-7(c).) Local Government Units shall enter such exemptions into the procurement record.

Memorandum #2016-10
Iran Divestment Act
February 17, 2016
Page 3

The Act provides that vendors to Local Government Units may not utilize any subcontractor found on the State Treasurer's Final Divestment List. (N.C.G.S. 143C-6A-5(h).) It is each vendor's responsibility to monitor its compliance with this restriction.

Next Steps

The Department of State Treasurer anticipates distributing the first Final Divestment List on February 26, 2016. Once the List has been distributed, all Local Government Units should meet the contract certification requirements.

If you have questions about the Department of State Treasurer's Iran Divestment Policy, please contact Sharon Edmundson at Sharon.Edmundson@nctreasurer.com or 919-814-4289.

RFP Number (if applicable): CONTRACT IDENTIFICATION AND NUMBER: 154521

Name of Vendor or Bidder: GREAT LAKES DREDGE & DOCK COMPANY, LLC
2122 YORK ROAD, OAK BROOK, ILLINOIS 60523

**IRAN DIVESTMENT ACT CERTIFICATION
REQUIRED BY N.C.G.S. 143C-6A-5(a)**

As of the date listed below, the vendor or bidder listed above is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 143-6A-4.

The undersigned hereby certifies that he or she is authorized by the vendor or bidder listed above to make the foregoing statement.

 3/4/14

Signature Date

JOHN F. KARAS SR. VICE PRESIDENT

Printed Name Title

Notes to persons signing this form:

N.C.G.S. 143C-6A-5(a) requires this certification for bids or contracts with the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina. The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

N.C.G.S. 143C-6A-5(b) requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and will be updated every 180 days.

PART 00900

**DARE COUNTY
BEACH NOURISHMENT PROJECT**

SUPPLEMENTAL GENERAL CONDITIONS

PART 00900

**DARE COUNTY
BEACH NOURISHMENT PROJECT
SUPPLEMENTAL GENERAL CONDITIONS**

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PART 00900

**DARE COUNTY
BEACH NOURISHMENT PROJECT**

SUPPLEMENTAL GENERAL CONDITIONS

1. PROJECT DESCRIPTION.

The beach nourishment project is located on the east coast of North Carolina at the Towns of Duck, Kitty Hawk and Kill Devil Hills within Dare County. The project consists of the placement of approximately 1,180,000 cubic yards of sand along 1.6 miles of shoreline at the Town of Duck; the Town of Kitty Hawk project includes placement of approximately 1,765,000 cubic yards of sand along 3.97 miles of shoreline; and the Town of Kill Devil Hills includes placement of approximately 840,000 cubic yards of sand along 2.74 miles. In total, the project consists of the placement of approximately 3,785,000 cubic yards of sand along 8.31 miles of shoreline.

The project will utilize sand from two (2) existing Outer Continental Shelf (OCS) borrow sites located off of the Towns of Duck and Kill Devil Hills to nourish three (3) proposed beach nourishment projects located within the Towns of Duck, Kitty Hawk and Kill Devil Hills. These borrow areas contain 17,350,000 and 2,049,000 cubic yards, respectively. Dare County, Duck, Kitty Hawk, and Kill Devil Hills have entered into a Memorandum of Understanding (MOU) allowing the County to act as the applicant on behalf of the three (3) Towns.

The designs are based on conditions surveyed during May 2015 and the ENGINEER reserves the right to adjust the fill template to provide a comparable design to the complete shorefront area. A vertical tolerance of +/- 0.5 feet shall be provided to the CONTRACTOR to account for construction inaccuracies.

2. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK.

2.1 Beach Fill. The CONTRACTOR shall commence beach fill placement beginning at a location(s) of their discretion. The CONTRACTOR shall prosecute said Work in a diligent and continuous manner as allowed by the project Permits. Construction may occur at any time on or before December 31, 2017, including nighttime, holidays and weekends. The CONTRACTOR shall utilize sufficient equipment to ensure the beach restoration is substantially complete prior to the contract completion date of December 31, 2017, or as amended by Change Order.

2.2 Definition of Work. For the purposes of the Contract Documents, "Work" is defined as any and all obligations, duties and responsibilities necessary for the successful completion of the Project assigned to, or undertaken by, the CONTRACTOR under the Contract Documents, including all labor, materials,

equipment, or other incidentals and the furnishing thereof. Additional definitions are provided at the end of the Supplemental General Conditions, Section 39.

2.3 Pre-Construction Meeting. The CONTRACTOR shall attend a pre-construction meeting to be held with the OWNER, ENGINEER, and regulatory agencies. The conference shall be prior to the initiation of dredging. The meeting shall be attended by at least the following representatives and personnel from the CONTRACTOR:

- Project Manager
- Environmental Protection Officer
- Safety Representative

3. CONTRACT DOCUMENTS.

3.1 The Contract Documents are complementary; what is called for by one is binding as if called for by all. Before undertaking the Work, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report, in writing, to the ENGINEER, any conflict, error, or discrepancy that the CONTRACTOR may discover. If, during the performance of the Work, the CONTRACTOR finds a conflict, error, or discrepancy in the Contract Documents, he/she shall report it to the ENGINEER, in writing, at once and before proceeding with the Work affected thereby. If any party discovers a conflict or discrepancy, the ENGINEER will determine what is technically correct. The CONTRACTOR shall not be liable to the OWNER or ENGINEER for failure to report any conflict, error, or discrepancy in the Contract Documents unless the CONTRACTOR had actual knowledge thereof, or the CONTRACTOR's representatives have demonstrated this by their action, or should reasonably have known thereof.

3.2 Any questions concerning the Contract Documents or Work that may reasonably be inferred shall be provided, in writing, to the ENGINEER prior to the construction of the project. No provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the OWNER, CONTRACTOR or ENGINEER, or any of their agents or employees from those set forth in the Contract Documents. The ENGINEER, in consultation with the OWNER, shall issue clarifications or interpretations of the Contract Documents after timely receipt of written request for clarifications or interpretations from the CONTRACTOR.

- 3.3** Omissions from the Plans or specifications or the mis-description of details of Work which are manifestly necessary to carry out the intent of the Plans and specifications, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or mis-described details of the Work, but they shall be performed as if fully and correctly set forth and described in the Contract Documents. It is the responsibility of the CONTRACTOR to seek clarifications or interpretations from the ENGINEER, in writing, prior to initiating the Work if the CONTRACTOR has any questions concerning the Work. If requests for clarification or interpretations are not submitted in writing, there will be no obligation for the ENGINEER to respond to the question.
- 3.4** Neither the CONTRACTOR nor any subcontractor, manufacturer, fabricator, supplier or distributor shall have or acquire any title to, or ownership rights in, any of the Plans (drawings), specifications or other Contract Documents, whether originals or copies, prepared by the ENGINEER; and the CONTRACTOR or his /her subcontractors shall not reuse any such documents on extensions of this project or any other project.

4. PERFORMANCE OF WORK BY CONTRACTOR.

- 4.1** **Contractor Participation in the Work.** The CONTRACTOR shall perform on the site, and with his own organization, excluding subcontractors, Work equivalent to at least sixty percent (60%) of the total amount of Work to be performed under the Contract. If during the progress of Work hereunder, the CONTRACTOR requests in writing a reduction in such percentage and the OWNER determines that it would be to the OWNER's advantage then the percentage of the Work required to be performed by the CONTRACTOR may be reduced. In this situation, the OWNER will provide written approval of such reduction to the CONTRACTOR. The CONTRACTOR is responsible for providing and maintaining equipment which is in good working order for construction of the shore protection project.
- 4.2** **Continuous Construction.** The OWNER's intention is that the CONTRACTOR will maintain at the project site and on the job, the materials, equipment and personnel required to continuously construct all elements of the project as allowed by Permit. As such, the CONTRACTOR shall not remove their dredge, equipment, materials, subcontractors, and personnel from the project site without the written consent of the TOWN and ENGINEER, unless one or more of the following occurs: the project is complete; weather or sea state conditions require movement from the project site; a condition exists which threatens the safety and welfare of personnel or threatens equipment; repair or fueling of a vessel is required; or the time frame provided for project construction in the CAMA or

Federal permits has expired.

4.2.1 The CONTRACTOR, following a written request to the ENGINEER and OWNER, and with written permission from the ENGINEER, can demobilize from the project site to perform other work following completion of the Town of Duck project area and prior to the start of the Kill Devil Hills and Kitty Hawk project areas, or vice versa. Once the CONTRACTOR has started placing fill in one project area then the CONTRACTOR shall complete the continuous fill section before demobilizing equipment, unless otherwise approved by the OWNER and ENGINEER.

5. SIMULTANEOUS WORK BY OTHERS.

5.1 **Coordination.** Whenever there is interference with Work under contract with the OWNER, the discrepancy shall be handled in accordance with ARTICLE 7 of the Standard General Conditions of the Construction Contract section 00700.

5.2 **Work Damage Claims.**

5.2.1 **Damage by Another Party.** If another party not under the CONTRACTOR's supervision or control damages the CONTRACTOR's Work, the CONTRACTOR shall make its claim directly with the party involved. If a conflict or disagreement develops between the CONTRACTOR and one of the other contractors concerning the responsibility for damage or loss to the CONTRACTOR's Work, the conflict shall be resolved by whatever method both contractors agree upon, but such conflict shall not be cause for delay in the restoration of the damaged Work or in meeting the Work schedule and the CONTRACTOR shall restore the Work immediately.

5.2.2 **Contractor Causes Damage.** Should the CONTRACTOR cause damage to the work or property of any other contractor, the CONTRACTOR shall, upon due notice, promptly attempt to settle with such other contractor by agreement, or otherwise resolve the dispute, as provided herein if the other contractor is under the direction and control for the OWNER, or by such method as the CONTRACTOR determines if the other contractor is not under the direction and control of the OWNER.

5.2.3 **Failure to Comply.** Failure of the CONTRACTOR to comply with Section 5.2 of the Supplemental General Conditions shall entitle the

OWNER to perform or have performed all Work necessary for compliance with this paragraph and withhold or recover from the CONTRACTOR the cost of such Work.

6. SUPERINTENDENT.

The CONTRACTOR shall designate, in writing to the OWNER and ENGINEER, a project superintendent(s) authorized to receive the OWNER's instructions from the ENGINEER. Said instructions, once received by the CONTRACTOR's superintendent(s), will be legally binding on the CONTRACTOR pursuant to this Contract. A superintendent(s) of the CONTRACTOR must be at work area at all times during project construction or otherwise make themselves available to the ENGINEER at all times during project construction. Under no circumstances will any element of project construction occur without the presence of a superintendent at the project site.

7. CHANGES AND EXTRAS.

7.1 Emergencies.

7.1.1 General. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from the OWNER or ENGINEER, is obligated to immediately act to prevent threatened damage, injury or loss. CONTRACTOR shall give the OWNER and ENGINEER prompt written notice if the CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the OWNER and ENGINEER determine that a change in the Contract Documents is required because of the action taken in response to an emergency, a change order will be issued to document the consequences of the changes or variations.

7.2 No Adjustments of Unit Price. No adjustment shall be made in any Unit Price of the Contract for changes ordered by the OWNER that cause an increase or decrease of less than twenty-five (25%) percent from the estimated quantity of any specific item included in the base bid and additive bid. There shall be no change in any Unit Price of the contract for the discretionary bid items regardless of the change in quantity. The final volume of fill sand placed and eligible for payment is dependent upon the condition of the beach at the time of construction.

7.2.1 It is further provided, however, that no adjustments shall be made in the Contract price or time of performance for either lump sum or Unit Price Work if the change is expressly or reasonably implied by the Contract

Drawings and Specifications or is incidental thereto, or if the Work becomes more difficult than the bid price and Contract Documents would reflect, or if CONTRACTOR failed to protest, negotiate, comment or otherwise call to the OWNER's or ENGINEER's attention, in writing, to any omissions, ambiguities or conflicts in the Contract Documents that CONTRACTOR could have discovered prior to the submission of its bid or execution of the Contract.

8. PHYSICAL DATA.

- 8.1** Information and data furnished or referred to in the Contract Documents are furnished for the CONTRACTOR's information. However, it is expressly understood that the OWNER or ENGINEER will not be responsible for any interpretation or conclusion drawn therefrom by the CONTRACTOR. Likewise, the OWNER or ENGINEER will not be responsible for any information provided to the CONTRACTOR by any information agency or other party.
- 8.2** The physical conditions of the beach and sand resources indicated on the drawings and in the specifications are the result of site investigations by remote sensing techniques, bathymetric surveys, jet probes, and vibracore sediment sampler. When the indicated physical conditions are the result of site investigations by vibracore sediment sampler or probes, the sampling and probe locations are shown on the drawings. While the remote sensing survey, bathymetric survey, jet probes, or vibracore sediment samples may be representative of subsurface conditions at their specific respective locations and vertical reaches, variations in the characteristic of the surface or subsurface materials are possible. Should any questions or discrepancies arise, the CONTRACTOR should independently confirm the conditions. Vibracore samples are available for inspection at the ENGINEER's office during normal working hours (Monday through Friday, 9:00 a.m. to 5:00 p.m.). A minimum two (2) day advance notice to the ENGINEER is required to examine the vibracores.
- 8.3** **Weather Conditions.** The project area may be affected by tropical storms and hurricanes primarily from June through November, and by stormy and/or rainy weather, including severe thunderstorms, during any time of the year. The CONTRACTOR shall be responsible for obtaining information concerning rain, wind and wave conditions that could influence safety, dredging, and beach fill operations, prior to making a bid. A partial list of publications containing climatological and meteorological observations and data for the project area is provided below. Other publications or information sources are available in addition to the following:

- 8.3.1 Local Climatological Data-Monthly Summary.** Published by the National Oceanic and Atmospheric Administration (NOAA), Asheville, NC. Subscription price and ordering information available from the National Climatic Data Center, Federal Building, Asheville, NC 22801. This publication gives hourly wind speed and direction observations. The Annual Summary gives a summary of the observations for the period of record.
- 8.3.2 Summary of Synoptic Meteorological Observations: North American Coastal Marine Areas Atlantic and Gulf Coasts.** Produced by National Weather Service, U.S. Department of Commerce. Distributed by National Technical Information Service, U.S. Department of Commerce.
- 8.3.3 Wave Hindcast Data.** is available from "Wave Information Studies of U.S. Coastlines, Atlantic Ocean, Hindcast Wave Information" produced by the U.S. Army Corps of Engineers, Waterways Experiment Station, Coastal Engineering Research Center.
- 8.3.4** Observed Wave data is available from "National Oceanic and Atmospheric Administration's National Data Buoy Center" and globally partnering organizations for select sites on-line at www.ndbc.noaa.gov.
- 8.4 Land Access to the Project Site.** Land access to the barrier islands on which the project beaches are located is by bridges extending from the mainland to Nags Head and to Kitty Hawk. The CONTRACTOR is responsible for adhering to all weight and traffic regulations on all roadways.
- 8.5 Boat Traffic.** Boat traffic in the near vicinity of the beach fill and the borrow areas consists primarily of pleasure, diving, and fishing boats. Oregon Inlet provides small vessel access to the Intracoastal Waterway from the Atlantic Ocean.
- 8.6 Local Inlets and Ports.** Oregon Inlet, located south of the project may be navigable for shallow draft vessels with local knowledge.. A recent survey of the channel may be obtained from the Wilmington District (<http://www.saw.usace.army.mil/Missions/Navigation/HydrographicSurveys/InletsCrossings.aspx>) or by request to the ENGINEER. All inlets and ports are used at the CONTRACTOR's own risk.

8.7 Obstruction to Navigation. The CONTRACTOR shall operate in compliance with pertinent U.S. Coast Guard regulations and conduct the Work in such a manner as to minimize any obstruction to navigation and commercial shipping traffic. If the CONTRACTOR's and/or his subcontractors dredge, barges, tugs, mooring facilities, and/or other floating or submerged equipment so obstructs any navigation channel as to make navigation difficult or endanger the passage of vessels, said dredge, barges, tugs, or other floating or submerged equipment shall be promptly moved to such an extent as may be necessary to afford a practicable passage of any vessel. Upon completion of the Work, the CONTRACTOR shall promptly remove the dredge, barge, tugs, mooring facilities, and/or other floating or submerged equipment, as well as ranges, buoys, piles and other marks or objects placed in navigable waters or on shore.

9. SURVEY STANDARDS and SURVEYOR QUALIFICATIONS.

The CONTRACTOR's surveying personnel shall be duly qualified and experienced to perform all required surveys in a manner satisfactory to the ENGINEER. A surveyor registered in the State of North Carolina shall be responsible for and certify all survey work associated with beach fill and borrow area dredging. All surveys shall be in accordance with professional standards and practices. Hydrographic surveys shall be performed in accordance with the US Army Corps of Engineers EM 1110-2-1003 dated 30 November 2013 entitled "HYDROGRAPHIC SURVEYING". Survey notes shall be reduced to elevations, be neat, legible and in accordance with accepted practices and shall include the date performed, weather conditions, bench marks or monument used, name and title of each member of the survey party, and the name of ENGINEER's representative present. Survey notes lacking information, illegible, or in error, will be returned to the CONTRACTOR for correction. Surveying instruments shall be checked for adjustment at least twice per day by the CONTRACTOR's surveying personnel and such checks shall be recorded in survey notes and on the quality control sheet.

10. PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.

10.1 Description. The Work specified in this Section consists of the preparatory work and operations in mobilizing for beginning work on the project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of temporary offices, buildings, utilities, traffic control, safety equipment and first aid supplies, sanitary and other facilities, as required by the Contract Documents and State and local laws and regulations. The costs of any bonds (other than the Performance Payment bonds listed below) required insurance, and any other pre-construction expense necessary for the start of the Work, excluding the cost of construction materials, shall also be included in this Section.

10.2 All costs connected with the first mobilization and final demobilization of all the CONTRACTOR's equipment and personnel, including the dredge and all other equipment, if used, will be paid for at the Contract lump sum price for this item. Sixty percent (60%) of the lump sum price for Bid Schedule Item Mob / Demob will be paid to the CONTRACTOR after commencement of dredging and placement of a quantity of, at minimum, ten thousand (10,000) cubic yards of material within the beach fill template in a twenty-four (24) hour period. The remaining forty percent (40%) will be paid upon completion of the final demobilization of all equipment and personnel (Final Completion). Payments will be subject to a retainage in accordance with the Contract Documents.

11. PAYMENT FOR PERFORMANCE AND PAYMENT BONDS.

All costs for providing the bonds required for the Project shall be included within Bid Schedule Item I-B "Performance and Payment Bond". Upon completion of the criteria for mobilization specified in Condition 10 "PAYMENT FOR MOBILIZATION AND DEMOBILIZATION" payment shall be made equal to 100%.

12. PAYMENT FOR COMPLIANCE SURVEYS IN THE BORROW AREA.

All costs associated with the pre- and post-dredge compliance surveys required of the borrow area shall be included in the lump sum cost for Bid Item I-C "Compliance Surveys of the Borrow Area". The costs shall include, but are not limited to, submittals and surveying for compliance of the borrow area work area.

12.1 Payment Request

The CONTRACTOR may apply for fifty percent (50%) of the "Compliance Surveys of the Borrow Area" lump sum cost once the pre-construction survey(s) have been submitted to the ENGINEER. The remaining fifty percent (50%) of the borrow area compliance lump sum cost will be paid following submittal of the post-construction borrow area survey(s).

13. PAYMENT FOR SEA TURTLE ABUNDANCE/RELOCATION TRAWLING.

All costs associated with turtle abundance trawling (Supplementary Technical Provisions 8.3) shall be included in the unit cost for Base Bid item I-D "Sea Turtle Abundance Trawling." All costs associated with turtle relocation trawling (Supplementary Technical Provisions 8.3) shall be included in the unit cost for Discretionary Bid Item VII-D "Sea Turtle Relocation Trawling." Payment for sea turtle trawling is paid by the day with the first day that the vessel is on site and is trawling and includes the last day that the vessel is onsite and trawling. Payment will be made for each day that trawling occurs regardless of whether dredging occurs. If weather limits trawling to less than 8 hours per day, then

trawling will be paid for as a partial day with the number of hours trawled divided by 24 hours. If weather limits trawling but more than 8 hours are trawled, then the CONTRACTOR will be paid for a complete day of trawling.

Abundance trawling will be employed five days prior to the commencement of hopper dredging to determine relative abundance of sea turtles in the area (when SST is above 10°C (50°F)). An abundance of a minimum of one turtle captured during preliminary abundance trawling will trigger the need for relocation trawling to be employed during the remainder of the dredging operation. If no turtles are captured during abundance trawling, relocation trawling shall not be required and dredging may proceed. The taking of one sea turtle of any species during hopper dredging will trigger the need for relocation trawling to be enacted for the remainder of the dredge operation. The dredge will shut down until relocation trawling can commence. Dredge standby time due to environmental permitting conditions will be paid for under the added Discretionary Bid Item VII-E and VII-F “Hopper Dredge Standby Rate (Per Dredge)” and “Cutterhead Dredge Standby Rate (Per Dredge)”. Dredge standby time will commence at the time the dredge shuts down due to the take of a sea turtle and end once the CONTRACTOR has been provided approval to resume dredging after the start of relocation trawling.

14. PAYMENT FOR HYDRAULIC BEACH FILL PLACEMENT.

14.1 General. All costs associated with the compliance of all sections and associated subsections of the Technical Provisions, except where specifically noted, shall be included in the contract Unit Price per cubic yard given under Bid Schedule Items II-A, II-A-1, III-A and IV-A “Hydraulic Beach Fill”. The tasks include, but are not limited to submittals, debris removal, site and work area preparation, layout of work, excavating, transporting, surveying for payment, and placement of beach fill, dredge position monitoring, protection of existing structures, damages by CONTRACTOR, noise control, and final site cleanup. The cost shall also include overhead, profit, labor, material and any other costs incident to performing beach fill construction once the CONTRACTOR is mobilized to the project site.

14.2 Payment Surveys. Payments will be based on the result of the comparison of pre-placement (BD) and post-placement (AD) surveys of the beach at the pay profiles and azimuths shown in the Plans for both the pre-placement and post-placement surveys unless otherwise approved by the ENGINEER. The ENGINEER will verify the pay quantities provided by the CONTRACTOR based on pre-placement and post-placement surveys conducted by the CONTRACTOR and accepted by the OWNER. The surveys will be conducted per Technical Provisions, Section 11. The ENGINEER, at its discretion, may verify the post-placement survey results of the CONTRACTOR. The ENGINEER’s survey will be used for payment purposes if, in the ENGINEER’s opinion, a significant difference is

found between the CONTRACTOR's post-placement survey and the ENGINEER's survey.

- 14.3 Acceptance Notification.** The notification of rejection or acceptance of a pay section will be based on written notification provided by the ENGINEER to the CONTRACTOR after the ENGINEER has reviewed the submitted calculations and survey data. After the calculations and survey data have been received by the ENGINEER, the ENGINEER will have four (4) working days to review the data and prepare a written response indicating whether the section(s) have been accepted or rejected, and the reason for rejection, if applicable.
- 14.4 Computation of Payment Volumes.** The volume of material in a pay section shall be the perpendicular distance between pay profiles multiplied by the average of the cross-sectional area of the profile lines enclosing the pay section (average end area method). The perpendicular distance between pay profiles is listed in the Plans. The portions of the profile lines that lie outside the limits of the fill shall NOT be included in this computation. No payment will be provided for fill placed above the upper tolerance. The CONTRACTOR's Bid shall account for any costs associated with the profile selection, the azimuth of profile lines, the stated perpendicular distance between pay profiles, the profile measurement technique, and the payment volume calculation technique. The CONTRACTOR shall provide their calculations of volumes (broken down by pay profile line) along with their invoice to the ENGINEER. Payments will be based on computations made by the ENGINEER of volumes placed.
- 14.5 Fill Tolerances.** Payment shall be for beach and dune fill placed within the construction template and upper tolerance, as shown in the Plans. Any material placed above the upper tolerance may be left in place at the discretion of the ENGINEER; however, this material will not be included in the beach and dune fill pay quantities. The maximum vertical tolerance below and above the template is 0.5 feet. Hydraulic fill placement must at least meet the 0.5 feet tolerance below the template everywhere in the acceptance section and contain the minimum fill volume requirement. The CONTRACTOR shall fill any deficient section to meet, at a minimum:
- 14.5.1** The lower template tolerance everywhere on the constructed cross-section, and
- 14.5.2** Ninety-five percent (95%) of the fill volume for the pay section.

14.6 Acceptance Sections. Acceptance sections are defined as the segment of beach lying between adjacent pay profile lines, as listed in the plans. Unless otherwise directed by the ENGINEER, once fill placement begins in an acceptance section, the CONTRACTOR must complete that acceptance section before moving to an adjacent acceptance section.

14.7 Payment Survey Requirements.

14.7.1 A sufficient number of points shall be surveyed along each profile line to ensure adequate description of all topographic features, and major breaks in slope, including dunes, beach berms, foreshore, and bar trough systems, with a maximum elevation difference of approximately 1 foot between adjacent points and a maximum horizontal distance of 25 feet between adjacent points. All surveys within the pay template shall be performed with a rod and level, total station, or RTK technology. Vertical accuracy shall meet or exceed 0.3 feet and horizontal shall be a maximum of 3.0 feet. Surveys shall extend a minimum distance of 250 ft seaward of the construction toe of fill.

14.7.2 Unless waived by the OWNER or ENGINEER in each specific case, all surveys made by the CONTRACTOR shall be made in the presence of a representative of the OWNER or ENGINEER. The CONTRACTOR shall notify the ENGINEER 24 hours in advance of each survey intended for purposes of payment. Notification by email to the ENGINEER's site representative shall be considered sufficient.

14.7.3 The OWNER reserves the right to make additional surveys as necessary for purposes of verification of surveys made by the CONTRACTOR. The OWNER may also make independent final surveys for acceptance.

14.8 Survey Discrepancy. If there is a discrepancy between surveys conducted by the CONTRACTOR and the OWNER, the respective surveyors will attempt to resolve the survey discrepancy. If the discrepancy cannot be resolved, the post-construction survey conducted by the OWNER will be used to compute the fill volume for payment purposes.

14.8.1 In areas where a dune is proposed within the Town of Kitty Hawk, payment for beach fill placement shall include a centerline survey of the dune. Data points shall be taken at a spacing of not more than 25 feet. The CONTRACTOR shall survey the centerline of the dune along the constructed alignment. No additional payment shall be made for the Kitty Hawk dune centerline survey. The material within the temporary

dune stockpile area shall be included in the pre- and post-placement surveys taken at the pay profiles and azimuths shown in the Plans. To be eligible for payment in areas where a Kitty Hawk dune is proposed, the CONTRACTOR shall place a minimum of 95% of the required volume within an Acceptance Section, meet the minimum required volume within an Acceptance Section, and conduct a centerline survey of the dune. The Kitty Hawk dune shall be constructed to a minimum elevation of +14.0 feet NAVD88 as discussed in Technical Provisions, Section 11.5. The acceptance section shall not be approved unless all portions of the dune are constructed to a minimum elevation of +14.0 feet NAVD88, as confirmed by the centerline survey.

14.9 Compensating Slope Adjustment. It is recognized that it may be difficult to control fill below the mean high water (+1.2 foot NAVD88) line. Payment by application of compensating slope will be allowed for beach fill placed below +1.2 foot NAVD88. Material placed above the template and below +1.2 foot NAVD88 can be used to offset deficiencies in filling the template below +1.2 foot NAVD88. Compensating volume will only be paid up to the volume contained within the template shown in the Plans. Under filling of the template above +1.2 foot NAVD88 will not be compensated for by the placement of additional fill below +1.2 foot NAVD88 and vice-versa. Payment will only be based on fill that can be measured within the limits of the pre-construction and as-built surveys. The CONTRACTOR is responsible for any additional costs incurred (such as, but not limited to, expanded surveys or calculations) required to satisfy compensating slope measurements. Regardless of the compensating slope amendment, the CONTRACTOR is required to make a best effort to meet the slopes shown in the construction Plans. The application of compensating slope will not alter the specification allowing for a one-time request for adjustment of construction slope, as discussed in Supplemental General Conditions, Section 14.10.

14.10 Progress Payments. Monthly progress payments shall be based on completed Acceptance Sections that have been approved by the ENGINEER. The CONTRACTOR will be eligible for the initial progress payment when a minimum of five (5) Acceptance Sections have been completed and approved by the ENGINEER. Progress payments will not be made for partially completed Acceptance Sections. The CONTRACTOR shall submit to the ENGINEER for review, not more often than monthly, an Application for Progress Payment filled out and signed by the CONTRACTOR. The Application shall describe the Work completed and accompanied by such supporting documentation as is required by the Contract Documents and also as may reasonably be required by the ENGINEER.

14.11 Maximum Pay Volume. The pay volume shall not exceed the volumes indicated on the bid form, unless modified by a change order. The tolerance described above should be used by the CONTRACTOR to avoid excessive fill placement, but shall not be the basis for pay volumes in excess of those indicated on the Bid Form.

14.12 Payment Survey Submittals.

14.12.1 The CONTRACTOR shall submit survey field notes to the ENGINEER upon completion of each survey to expedite review of payment requests. All original field notes, volume computations, and other records used by the CONTRACTOR to compute the payment fill quantities shall be furnished to the ENGINEER with the Application for Progress Payment and Final Application for Payment.

14.12.2 The CONTRACTOR shall prepare cross sectional profiles immediately after each section survey of both pre-placement and post-placement conditions and make such drawings available to the ENGINEER, or the OWNER's representative on site. These drawings shall also indicate the required design template and any allowable tolerances. The same scale and datum(s) for the profiles shall be used as in the Plans.

14.12.3 Deliverables to the ENGINEER shall include processed survey data of northing, easting, and elevation (X,Y,Z) for each profile from the baseline Station in digital ASCII format and profiles in a hard copy form (.PDF or printout) through electronic transmission (email) or other acceptable medium. Additional information to be provided to the ENGINEER shall include field notes, profiles compatible with CAD 2012 format with acceptable placement tolerances shown, a 1" = 200' plan view plot showing the baseline and surveyed profile lines. The licensed surveyor shall affix their stamp to the submittal with their signature stating the survey meets the minimum requirements of North Carolina Administrative Code (NCAC) Title 21, Chapter 56.

14.13 Acceptance Timing. The notification of rejection or acceptance of an acceptance section will be based on written notification to the CONTRACTOR and OWNER after the ENGINEER has reviewed the submitted survey data. After the survey data has been received, the ENGINEER will have ten (10) days to review the data, consult with the OWNER, and prepare a written response indicating whether the section(s) have been accepted or rejected, and the reason for rejection, if applicable.

15. PAYMENT FOR STAGING AREA BEACH ACCESS MATS.

All costs associated with the installation of beach access mats for the staging area at the Town of Duck shall be included in the unit cost of Bid Item II-B “Staging Area Beach Access Mats”. Payment for the staging area beach mats shall be paid for based on the unit cost of Bid Item II-B “Staging Area Beach Access Mats” and shall be verified by a survey of the centerline of the mats. The CONTRACTOR shall survey the centerline of the mats along the constructed alignment to determine payment. The CONTRACTOR may also provide substantiating data and specification sheets of the installed mats to determine payment if preferable.

The CONTRACTOR will be eligible for eighty percent (80%) of the linear footage of staging area beach access mats upon installation of the mats. The remaining twenty percent (20%) of the linear footage of mats installed will be eligible for payment upon removal of the mats and restoration of the mat footprint to its pre-construction condition.

16. PAYMENT FOR TURBIDITY MONITORING (OPTIONAL).

All costs associated with turbidity monitoring on an as needed basis, shall be included in the unit cost of Discretionary Bid Item VII-A “Turbidity Monitoring”. The CONTRACTOR shall maintain knowledgeable staff and suitable equipment on-site at all times to conduct the monitoring. All cost associated with maintaining the staff and equipment on site shall be included in the unit cost for bid Items II-A, II-A-1, III-A and IV-A “Hydraulic Beach Fill”. However, all costs associated with conducting the test on a daily basis shall be included Discretionary Bid Item VII-A “Turbidity Monitoring”. The OWNER reserves the right to direct monitoring on a daily basis. No adjustment in unit cost shall be made based on the final quantity of tests required regardless of the variation from the estimated bid amount. The CONTRACTOR will record the number of days that turbidity monitoring is required.

17. PAYMENT FOR BEACH TILLING (OPTIONAL).

All costs associated with the optional beach fill tilling shall be included in the unit cost for the Discretionary Bid Items VII-A and VII-B “Mobilization/Demobilization for Beach Tilling” and “Beach Tilling.” The OWNER reserves the right to authorize the Work after substantial completion and prior to Final Payment. Acceptance of the Work shall be determined by visual observation performed by the ENGINEER. Payment for mobilization, demobilization, labor, materials, equipment, fuel, oil, and all other appropriate costs in connection with beach tilling along the project area shall be paid for at the unit cost price for Discretionary Items Bid Items VII-A and VII-B “Mobilization/Demobilization for Beach Tilling” and “Beach Tilling.” The total acreage to be tilled (if any) shall be calculated as the area between the top of berm and the toe of

dune as shown on the cross-sections of the surveys used for payment.

18. PAYMENT FOR REMEDIAL ACTION FOR UNSUITABLE OVERSIZED MATERIAL (OPTIONAL).

All costs associated with the optional action for unsuitable material and munitions and explosives of concern (MEC) shall be included in the unit cost for Discretionary Bid Item VI "Addressing Potential Unsuitable Fill Material". Discretionary Bid Item VI "Addressing Potential Unsuitable Fill Material" includes both oversized material and MEC. The OWNER reserves the right to authorize the Work at any point up to Final Acceptance. Acceptance of the work shall be determined by visual observation performed by the ENGINEER. Payment for mobilization, demobilization, labor, materials, equipment, fuel, oil, and all other appropriate costs in connection with the remediation shall be paid for at the unit cost price for the applicable item under Discretionary Item VI "Addressing Potential Unsuitable Fill Material". Discretionary Item VI shall only be paid for if required by OWNER and approved by the ENGINEER. Screening for MEC due to the Former Duck Target Facility Munitions Response Site will be conducted at the CONTRACTOR's own expense unless required by OWNER and approved by the ENGINEER. Discretionary Bid Items VI-E and VI-F "Mobilization for Removal of Oversized Material from Constructed Beach" and "Removal of Oversized Material from Constructed Beach" do not include the removal of MEC from the constructed beach. There is no line item for the removal of MEC from the constructed beach. The removal of MEC from the constructed beach, if required, would occur under separate contract.

18.1 Payment for Dredge Intake Screening (Optional)

All costs associated with preventing unsuitable material from being placed on the beach by installing a screening device placed at the dredge intake shall be included in the unit cost for Discretionary Bid Item VI-D "Dredge Intake Screening". The volume of beach fill material placed within the template while a dredge intake screen is installed will be paid at the unit cost for Discretionary Bid Item VI-D "Dredge Intake Screening". Payment for this item will be in addition to payment for hydraulic beach fill included in the contract Unit Price per cubic yard given under Bid Schedule Items II-A, II-A-1, III-A and IV-A "Hydraulic Beach Fill".

18.2 Payment for Beach Discharge Screening (Optional)

All costs associated with preventing unsuitable material from being placed on the beach by installing a screening device placed at the discharge end at the beach fill site shall be included in the unit cost for Discretionary Bid Items VI-A, VI-B and VI-C "Mobilization/Demobilization for Beach Discharge Screening," "Beach

Discharge Screening” and “Removal of Screened Beach Discharged Material.” The CONTRACTOR shall provide and maintain all equipment and personnel required to screen all material discharged onto the beach. The Unit Price shall also include costs to haul and dispose of the rock at an upland site, at the responsibility of the CONTRACTOR. The material retained in the screening device shall be unloaded into a secondary basket, directly into a truck, or some other method approved by the ENGINEER for disposal off-site. At no time shall the unsuitable material be emptied directly onto the beach within the limits of the constructed beach fill area or the existing beach. Payment for this item shall be in addition to payment for hydraulic beach fill included in the contract Unit Price per cubic yard given under Bid Schedule Items II-A, II-A-1, III-A and IV-A “Hydraulic Beach Fill.”

18.3 Payment for Removal of Oversized Material from the Constructed Beach Fill (Optional)

All costs associated with the optional remedial action for unsuitable oversized material shall be included in the unit cost for Discretionary Bid Item VI-E and VI-F “Mobilization for Removal of Oversized Material from Constructed Beach” and “Removal of Oversized Material from Constructed Beach”. Payment for the removal of unsuitable material from the constructed beach (if any) shall be based on the number of days of removal conducted. One (1) day assumes a minimum of 8 hours of removal of unsuitable material and does not include repairs and maintenance. The Unit Price shall also include costs to haul and dispose of the unsuitable material at an upland site, at the responsibility of the CONTRACTOR. The unsuitable material removed shall be unloaded into a secondary basket, directly into a truck, or some other method approved by the ENGINEER for disposal off-site. At no time shall the unsuitable material be emptied directly onto the beach within the limits of the constructed beach fill area or the existing beach.”

19. PAYMENT FOR INSTALLATION OF SAND FENCING (OPTIONAL).

This work shall consist of supplying all sand fence material and installing the sand fence in accordance with the Specifications. All costs associated with the sand fence shall be paid for at the contract Unit Price per linear foot of Sand Fencing (Additive Bid Item V-A; Discretionary Bid Items VIII-E and VIII-B), which payment shall also include all other items of overhead, profit, labor, material, and any other costs incidental to performing the Work. The CONTRACTOR shall be paid at the unit cost for sand fencing listed in Additive Bid Item V-A up to the bid amount of 1,900 – 10 foot sections. The length of sand fence for payment shall be based on installed 10 foot sections of sand fence (i.e. not the roll length by number of rolls installed). The CONTRACTOR may

request payment for the installation of sand fencing on a monthly basis.

20. PAYMENT FOR CONSTRUCTION OF USACE FIELD RESEARCH FACILITY (FRF) BERM FEATURE (OPTIONAL).

All costs associated with the construction of the nearshore berm feature at the USACE Field Research Facility (FRF) located within the Town of Duck shall be included in the cost of Discretionary Bid Items IX-A and IX-B “Additional Mobilization/Demobilization” and “Hydraulic Beach Fill.” Discretionary Bid Item IX-A “Additional Mobilization/Demobilization” consists of the preparatory work and operations in mobilizing for beginning work on the nearshore berm feature, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of temporary offices, buildings, utilities, traffic control, safety equipment and first aid supplies, sanitary and other facilities, as required by the Contract Documents and State and local laws and regulations. Discretionary Bid Item IX-B “Hydraulic Beach Fill” includes, but is not limited to, submittals, layout of work, transporting, surveying for payment, and placement of beach fill, damages by CONTRACTOR. The cost shall also include overhead, profit, labor, material and any other costs incident to performing the berm feature construction once the CONTRACTOR is mobilized to the project site.

If necessary, Environmental Protection requirements shall be paid for at the unit costs detailed in Discretionary Bid Items VII “Environmental Protection.”

With the exception of the area described in Note 4 on Sheet 7 of 12 of the Town of Duck Plans, the CONTRACTOR shall have access to the beach between the Town of Duck project area and the nearshore berm site. The CONTRACTOR may transport equipment under the FRF pier, as long as the CONTRACTOR does not cause any damage to the pier. The CONTRACTOR may also utilize the FRF access located adjacent and immediately to the south of the FRF facility. This access is utilized by the FRF facility on a continuous basis so the CONTRACTOR shall attempt to limit use of this access as best practical. No board roads will be required for the use of this access.

The FRF has several pieces of equipment in the nearshore zone north of the pier. The CONTRACTOR shall not disturb the equipment. The location of the equipment can be viewed on the FRF website (http://www.frf.usace.army.mil/frf_data.shtml).

The nearshore berm feature shall be constructed as shown on Sheet 7A of 12 of the Town of Duck Plans. The volume placed in the berm will be measured for payment purposes by pre- and post-construction hydrographic surveys and only include the volume in the placement area footprint utilizing a vertical exterior box template. The total payment volume shall not exceed 10,000 cubic yards. The CONTRACTOR shall present a

submittal describing the construction technique for the feature for approval prior to construction, per GC-20. The submittal shall specify the expected tolerances for the construction of the nearshore berm feature based on the CONTRACTOR's anticipated construction means and methods in the construction technique submittal.

21. RIGHT TO REFUSE RECOMMENDATION FOR PAYMENT.

The ENGINEER may refuse to recommend the whole or any part of any payment if, in the ENGINEER'S opinion, such representations to the OWNER would be inaccurate. The ENGINEER may also refuse to recommend any payment because of subsequently discovered evidence or the results of subsequent observations, measurements or tests, nullify any such payment previously recommended to such extent as may be necessary in the ENGINEER's opinion to protect the OWNER from loss because:

- 21.1** The Work is defective, or completed Work not accepted by the ENGINEER has been damaged requiring correction or replacement;
- 21.2** Written claims have been made against the OWNER or liens have been filed in connection with the Work;
- 21.3** The Contract price has been reduced because of modifications;
- 21.4** The OWNER has been required to correct defective Work or complete the Work;
- 21.5** The CONTRACTOR has not performed the Work in accordance with the Contract Documents;
- 21.6** The CONTRACTOR has failed to make payment to subcontractors, or for labor, materials, or equipment.
- 21.7** The CONTRACTOR is claiming additional placement of fill volume for payment beyond that measured and calculated using the procedure established in the Contract Documents for computation of fill quantities for payment purposes.
- 21.8** The CONTRACTOR is claiming additional payment for any reason not previously agreed to by the OWNER.
- 21.9** The CONTRACTOR has not repaired damages caused by the CONTRACTOR's operation to the satisfaction of the OWNER and/or affected property owner.
- 21.10** The CONTRACTOR has not complied with Permit terms.

22. SUBSTANTIAL COMPLETION.

Substantial completion shall be determined in accordance with Section 0700 Standard General Conditions of the Construction Contract ARTICLE 14.04 and Section 0800 Supplementary Condition (SC) 14.04 of the Contract documents.

23. FINAL ACCEPTANCE AND PAYMENT.

- 23.1 ENGINEERS's Recommendation for Final Payment.** The ENGINEER's recommendation of final payment for the project will constitute a representation by the ENGINEER to the OWNER that, in the ENGINEER's opinion, the conditions precedent to the CONTRACTOR's being entitled to final payment as set forth in the Contract Documents have been fulfilled.
- 23.2 Completion of Work.** Upon written notice from CONTRACTOR that the Work is complete, the ENGINEER will observe the Work within two (2) days of the receipt of the written notice from the CONTRACTOR and, if required, will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.
- 23.3 Application for Final Payment.** After the CONTRACTOR has completed all such corrections to the satisfaction of the OWNER and ENGINEER and delivered any required quality control reports, water quality reports, data requested by the ENGINEER, guarantees, bonds, certificates of inspection, marked-up record documents and all other documents as required by the Contract Documents or ENGINEER, and after the ENGINEER has indicated that the Work is acceptable to the OWNER and ENGINEER, the CONTRACTOR may make application for final payment. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as ENGINEER may reasonably require, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all liens arising out of, or filed in connection with the Work. In lieu thereof and as approved by the OWNER, the CONTRACTOR may furnish receipts or releases in full; an affidavit of the CONTRACTOR providing warranties, covenants, and representations that the releases and receipts include all labor, services, material and equipment bills, and other indebtedness connected with the Work for which the OWNER or the OWNER's property might in any way be responsible; that all charges have been paid or otherwise satisfied; and consent of the surety to final payment. If any subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, the CONTRACTOR may furnish a bond or other collateral satisfactory to the OWNER to indemnify the OWNER against any lien.
- 23.4 Recommendation for Final Payment.** If, on the basis of the ENGINEER's observation of the Work during construction and post-construction, and the ENGINEER's review of the final Application for Payment and accompanying documentation the ENGINEER is satisfied that the Work has been completed and

the CONTRACTOR has fulfilled all of his/her obligations under the Contract Documents, the ENGINEER will, within seven (7) days after receipt of the final Application for Payment, indicate in writing his recommendation of payment and present the application to OWNER. If the application and accompanying documentation are acceptable as to form and substance, the OWNER shall, within thirty (30) days after receipt of the ENGINEER's recommendation for Final Payment, pay CONTRACTOR the amount recommended by the ENGINEER or other such amounts deemed appropriate by the OWNER in consultation with the ENGINEER. If the ENGINEER is not satisfied that the Work is completed, the ENGINEER will return the application to the CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the application.

23.5 CONTRACTOR's Obligation to Complete Work. The CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any payment by the ENGINEER, nor the issuance of any statement or certificate of completion or substantial completion, nor any payment by the OWNER to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work of any part thereof by the OWNER, nor any act of acceptance by the OWNER nor any failure to do so, nor the issuance of a notice of acceptability by the ENGINEER, nor any correction of defective Work by the OWNER shall constitute an acceptance of Work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

23.6 Access to the Work. The OWNER shall have the right to exclude the CONTRACTOR from the Work after the date of completion, but the OWNER shall allow the CONTRACTOR reasonable access to complete or correct items.

23.7 Making and Acceptance of Final Payment. The making and acceptance of final payment shall constitute:

23.7.1 A waiver of all claims by the OWNER against the CONTRACTOR, except claims arising from unsettled liens, from defective Work appearing after project completion or from failure to comply with the Contract Documents or the terms of any guarantees specified therein; however, it shall not constitute a waiver by the OWNER of any rights in respect to the CONTRACTOR's continuing obligations under the Contract Documents; and,

23.7.2 A waiver of all claims by the CONTRACTOR against the OWNER other than those previously made in writing and still unsettled.

24. CORRECTION PERIOD.

24.1 One Year Correction Period. If within one (1) year after the date of completion or such longer period of time as may be prescribed by law or by the terms of any applicable guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with the OWNER's written instructions, either correct such defective Work, or, if it has been rejected by the OWNER, remove it from the site and replace it with non-defective Work. If the CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by the CONTRACTOR.

24.2 Beach Erosion and Borrow Area Infilling. The OWNER shall not hold the CONTRACTOR responsible for erosion of a beach fill segment after acceptance for payment or changes in the borrow area after acceptance for compliance.

25. STORAGE OF CONSTRUCTION PLANS AND CONTRACT DOCUMENTS.

A minimum of one (1) complete set of construction Plans and Contract Documents (with permits) shall be kept in the construction site field office, the surveyor and survey crew shall have at least one set and at least one set shall be maintained on each dredge at all times during project construction.

26. CONTRACTOR QUALITY CONTROL.

26.1 The CONTRACTOR is responsible for quality control and shall provide and maintain an effective quality control program.

26.2 The CONTRACTOR shall establish a quality control system to perform sufficient inspections and tests of all items of Work, including that of his subcontractors, and to insure conformance to applicable provisions of the Contract Documents and Plans with respect to the materials, workmanship, construction, finish, and functional performance and prevention of damages to natural resources, structures, and infrastructure. This control will be established for all construction except where the Technical Provisions of the Contract provide for specific

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OWNER or ENGINEER control by observation, tests or other means. The CONTRACTOR's quality control program will specifically include the surveillance and tests required in the Technical Provisions.

- 26.3** The CONTRACTOR's quality control system is the means by which the CONTRACTOR is assured that the construction complies with the requirements of the Contract Documents, including all project permits. The controls shall be adequate to cover all construction operations and shall be keyed to the proposed construction sequence.
- 26.4** The CONTRACTOR's job supervisory staff may be used for quality control, supplemented as necessary by additional personnel for surveillance, by special technicians, or by testing facilities with the expertise to provide for the controls required by the Technical Provisions.
- 26.5** Quality Control Reports for the beach fill shall be provided to the ENGINEER and OWNER by 12:00 p.m. (Noon) on a daily basis from the first day of mobilization to the last day of demobilization without exception. The Daily Quality Control Report shall be filled out every day, regardless of whether Work is accomplished, starting on the first day of mobilization and ending on the last day of demobilization. Failure to provide Daily Quality Control Reports to the ENGINEER shall result in delay in payments to the CONTRACTOR until the Daily Quality Control Reports are received and are acceptable to the ENGINEER.
- 26.6** All compliance inspections shall be recorded on the Daily Quality Control Report, including, but not limited to, the specific items required in each technical section of the specifications and the corrective action taken, if necessary.
- 26.7** If reoccurring deficiencies in an item or items indicate that the quality control system is not adequate, or reports are not being provided in a timely manner, the CONTRACTOR shall undertake such corrective actions as directed by the ENGINEER.
- 26.8** The CONTRACTOR shall be responsible for making such inspections, surveys and tests as may be necessary to assure compliance with all the requirements of the Contract Documents and applicable permits. Reports of all inspections, surveys and tests and remedial actions shall be submitted to the ENGINEER in writing.
- 26.9** The ENGINEER reserves the right to utilize the CONTRACTOR's QUALITY control testing laboratory, survey and other equipment to make spot tests and surveys, and to check the CONTRACTOR's testing and survey procedures,

techniques, and results (where applicable).

- 26.10** The CONTRACTOR shall furnish to the ENGINEER at least seven (7) days prior to the pre-construction conference, a written Quality Control Plan that shall include the procedures, instructions, and reports to be used. Unless specifically authorized by the ENGINEER, no construction will be started until the ENGINEER approves the CONTRACTOR's Quality Control Plan.

This document will include as a minimum:

- 26.10.1** The quality control organization.
- 26.10.2** The number and qualifications of personnel to be used for this purpose.
- 26.10.3** Authority and responsibility of quality control personnel.
- 26.10.4** Methods of quality control including that for his/her subcontractor's work. The methods shall include items to be inspected, types of inspections, duties of personnel, and methods the CONTRACTOR proposes to use to assure quality Work.
- 26.10.5** Method of documenting quality control operations, inspection and testing.
- 26.10.6** Safety inspection procedures including employees responsible for supervising accident prevention activities and insuring compliance with safety measures.
- 26.10.7** Medical emergency procedures, including employees responsible for supervision of medical emergencies.
- 26.10.8** Written instructions to the CONTRACTOR's representative responsible for quality control outlining his duties and responsibilities and signed by a responsible officer of the firm.
- 26.10.9** An Activity Hazard Analysis, as described in Section 36.10.
- 26.10.10** A copy of daily quality control report forms and other inspection documents that are to be furnished to the OWNER and ENGINEER. Sample of the "Daily Quality Control Reports" are included as Appendices in the Contract Documents. These reports shall be used by the CONTRACTOR as the Daily Quality Control Report to be provided

to the OWNER and ENGINEER. The CONTRACTOR may substitute a different report format if: (1) it contains, at minimum, the same information and (2) it is approved, in writing, by the ENGINEER.

26.10.11 The Plan shall include methods of quality control for all dredging operations including dredging, transit, turning, material transfer, and clean-up. Specifically the plan will provide the weather conditions in terms of the type of 'seas', 'swells' and current conditions in which the dredge can operate safely.

26.11 No separate payment will be made for CONTRACTOR quality control.

27. ENGINEER.

27.1 Technical Issues. It is agreed by the parties hereto that the ENGINEER in consultation with the OWNER shall decide all technical issues of whatever nature that may arise relative to the interpretation of the technical portions of the Contract Documents, the Plans, and prosecution and fulfillment of this Contract, and as to the character, quality, amount and value of any Work done and materials furnished under this Contract.

27.2 ENGINEER and OWNER Access to the Dredge, Beach Disposal Area, and Field Work Site. The ENGINEER and OWNER shall have unlimited access to the dredge, beach fill disposal site, and field office (including any offsite staging areas). The CONTRACTOR will be required to furnish, at the request of the OWNER or ENGINEER, suitable transportation from the shore to and from the various pieces of water based equipment, including the dredge, as required to administer the Contract Documents and provide proper inspection. The OWNER and ENGINEER or his representative is to have free access to the materials and the Work at all times for laying out, measuring and observing, and the CONTRACTOR is to afford him all necessary facilities, transportation and assistance for doing so. The presence or absence of the ENGINEER shall not relieve the CONTRACTOR of responsibility for the proper execution of the Work in accordance with the specifications.

28. AMERICAN BUREAU OF SHIPPING (ABS) CERTIFIED DREDGE FOR BEACH FILL PLACEMENT.

28.1 Dredge Capacity. The CONTRACTOR agrees to keep on the job sufficient equipment to meet the requirements of the Work. The dredge(s) shall be in satisfactory operating condition, shall be reliable in its performance and capable of safely and efficiently performing the Work as set forth in the Contract

Documents. The dredge(s) shall be of sufficient size and capacity to complete the Work in a timely manner, meeting or exceeding Contract Document requirements for the construction time period. The dredge(s) addressed in the bid questionnaire is the minimum size and capacity which the CONTRACTOR shall place on the job unless a different size and/or capacity dredge is approved by the ENGINEER in writing, and its listing thereon is not to be construed as an agreement on the part of the OWNER that it is adequate for the performance of the Work.

28.2 American Bureau of Shipping Certification for Open Ocean Operation. The CONTRACTOR shall obtain any and all American Bureau of Shipping (A.B.S.) and U.S. Coast Guard dredge certifications and/or approvals required for the project described herein, which allow for the open ocean operation of the dredge(s). A copy of the A.B.S. or U.S. Coast Guard certifications and approvals must be provided to the OWNER and ENGINEER at the time of bid, demonstrating that the plant proposed for use on the project is licensed and certified to conduct open water (Atlantic Ocean) work.

28.3 No Reduction in Dredge Capacity. No reduction in the capacity of the dredge employed on the Work shall be made except by written permission of the ENGINEER. The measure of the "capacity of the dredge" shall be its actual performance on the Work to which these specifications apply. The ENGINEER, at his discretion, may order a field test of the capacity of the dredge at the CONTRACTOR's expense. If the dredge, in the ENGINEER's opinion, is not of sufficient capacity to complete the Work in the contract time period, the ENGINEER may direct the CONTRACTOR to replace the dredge with a larger Capacity dredge or bring an additional dredge. Upon such direction, the CONTRACTOR shall promptly comply with said direction to make available at the site and utilize such dredge plants as necessary to complete the work within the contract time period.

29. NOTICE TO MARINERS.

29.1 The CONTRACTOR shall issue a Notice to Mariners regarding the dredging and fill placement operation immediately after the Notice to Proceed has been received. A copy of the Notice to Mariners shall be provided to the ENGINEER.

29.2 Should the CONTRACTOR, during dredging operations, encounter any objects on the ocean bottom, which could be a hazard to navigation, he will notify the U.S. Coast Guard, any other pertinent agencies and the ENGINEER immediately as to the location of said object and any other pertinent information necessary for the CONTRACTOR to issue a Notice to Mariners.

30. STATE AND FEDERAL PERMITS, EASEMENTS AND LICENSES.

The OWNER has applied for the U.S. Army Corps of Engineers permit and has obtained the NC DENR CAMA Permit 132-15, 133-15 and 134-15. Any other licenses or approvals required for the prosecution of the Work shall be secured and paid for by the CONTRACTOR. The CONTRACTOR shall obtain any and all approvals required to conduct work in the Atlantic Ocean. (The OWNER shall obtain all beach front easements necessary to conduct the work.)

31. LEGAL RESTRICTIONS AND TRAFFIC PROVISIONS.

The CONTRACTOR shall conform to all applicable laws, regulations, or ordinances with regard to labor employed, minimum wage, equipment certification, laws, hours of Work and his general operations. The CONTRACTOR shall so conduct his operations that he shall not close any thoroughfare nor interfere in any way with traffic on railway, highways, or on water, without the written consent of the proper authorities. The regulations the CONTRACTOR shall adhere to are those established by, but not necessarily limited to, the Department of the Navy, U.S. Coast Guard, Department of the Army, American Bureau of Shipping, North Carolina Department of Environment and Natural Resources, North Carolina Department of Transportation, Dare County, Town of Duck, Town of Kitty Hawk and Town of Kill Devil Hills.

32. ELECTRICITY.

All electric current required by the CONTRACTOR shall be furnished at his own expense.

33. FIRE EXTINGUISHER-MOBILE CONSTRUCTION EQUIPMENT.

The CONTRACTOR is specifically required to provide, at minimum, a fire extinguisher on all mobile construction equipment with at least a basic minimum extinguisher rating of 20-B:C; which is equivalent to a 10-15 pound dry chemical extinguisher, compatible to the hazard involved; combustible, flammable liquids and materials used in areas remote to other fire extinguisher equipment.

34. PUMPING OF BILGES AND OTHER OVERBOARD DISCHARGES.

CONTRACTORS are cautioned that pumping oil or bilge water containing oil into navigable water or into areas, which would permit the oil to flow into such waters, is prohibited by Section 13 of the Rivers and Harbors Act of 1899 approved March 3, 1899 (30 Stat. 1152; 33 U.S.C. 407). Violation of this prohibition is subject to penalties provided for under the referenced acts.

35. PROTECTION OF PROPERTY, WORK AND PERSONS.

- 35.1 Protection of Property.** The CONTRACTOR shall, at its own cost and expense, support and protect all public and private property that may be encountered or endangered in the prosecution of the Work herein contemplated. The CONTRACTOR shall repair to its original condition and make good any damage caused to any such property by reason of its operation, to the satisfaction of the OWNER and any OWNER, before the OWNER provides final payment to the CONTRACTOR.
- 35.2 CONTRACTOR Responsibility.** The CONTRACTOR shall at all times guard the Work site or sites and adjacent properties from any damage whatsoever in connection with this Contract whether arising from direct operations under this Contract, theft, vandalism or any cause whatsoever. The CONTRACTOR shall at all times protect its own Work from damage; nevertheless, the CONTRACTOR is not responsible for erosion of beach sections previously accepted by the ENGINEER for payment or filling in of dredge sections previously accepted for compliance. The CONTRACTOR shall make good any and all loss, damage or injury to the Work, whether arising from direct operations under this Contract, weather or sea conditions, theft, vandalism or any cause whatsoever.
- 35.3 Protection of Persons.** The CONTRACTOR shall be accountable for any damages resulting from its operation during the performance of this Contract. The CONTRACTOR shall be fully responsible for the protection and safety of all persons including members of the public, employees of the OWNER, the ENGINEER and his employees, and employees of other contractors or subcontractors, environmental monitoring personnel in the area of the Work; also including people on floating equipment such as the dredge or other vessels.
- 35.4 Risk of Loss.** The Work and everything pertaining thereto shall be performed at the sole risk and cost of the CONTRACTOR from commencement until final payment by the OWNER. Any specific references contained in the Contract Documents, including the Plans, that the CONTRACTOR shall be responsible at its sole risk and cost for the Work or any part thereof are not intended to be, nor shall they be construed to be, an exclusive listing of the circumstances in which the CONTRACTOR bears the risk of loss, but rather they are intended only to be examples. With the exception of the provisions for removal of erosion escarpments as specified in Section 11.10 of Part 01000 – Technical Provision, the CONTRACTOR will not be responsible for restoration of eroded beach segments previously accepted for payment or for dredge sections in the borrow area previously accepted for Compliance by the ENGINEER.

35.5 Risk of Weather Events. All loss or damage arising out of the nature of the Work, or from the action of the elements, or from weather events, hurricanes, tropical storms, or from any unusual obstruction or difficulty, or any other natural or existing circumstances either known or unforeseen, that may be encountered in the prosecution of the Work, shall be sustained and borne by the CONTRACTOR at its own cost and expense, including all fill placement which has not been accepted by the ENGINEER for payment.

35.6 No Claim Against OWNER or ENGINEER. The CONTRACTOR shall have no claim against the OWNER or ENGINEER because of any damage or loss to the Work or CONTRACTOR's materials, equipment or supplies, including no claim for loss or damage due to simultaneous work by others, and the CONTRACTOR shall be responsible for the complete restoration of damaged Work to its original condition complying with the Contract Documents.

Notwithstanding any other provision of this Contract, this obligation shall exist without regard to the availability of any insurance, either of the OWNER, ENGINEER, or the CONTRACTOR.

35.7 Beach Erosion. The CONTRACTOR is not responsible for naturally occurring erosion of any accepted section of the beach fill after the ENGINEER has accepted it for payment, or for the naturally occurring infilling or scouring of the borrow area. The CONTRACTOR is responsible for maintaining the beach fill until it is accepted by the ENGINEER, and to avoid preventable damage to sections that have been accepted by the ENGINEER. The CONTRACTOR is also responsible to grade and eliminate all beach scarps or cliffs in the entire fill area, regardless of ENGINEER acceptance, prior to the overall project being considered complete and eligible for final payment.

36. SAFETY REQUIREMENTS.

36.1 CONTRACTOR Responsibility for Safety. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

OWNER personnel, the ENGINEER and ENGINEER's representatives, County, State and Federal personnel, the public, all employees and subcontractors involved in the Work and all other persons who may be affected thereby;

All the Work and all materials or equipment to be incorporated therein, whether in

storage on or off the site; and,

Other property at the site or adjacent thereto, including trees, shrubs, lawns, natural vegetation, walks, boardwalks, dune walkovers, wooden steps, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

- 36.2 Compliance with Safety Laws.** The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction over the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection, and have at the work site at all times a dedicated safety and flag person. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and the ENGINEER has issued a notice to the OWNER and CONTRACTOR in accordance with Section 23 of the Supplemental General Conditions that the Work is acceptable.
- 36.3 Familiarity with Safety Standards.** The CONTRACTOR shall review the accident prevention clause of the Contract, the Corps of Engineers Manual, General Safety Requirements, EM 385-1-1, dated 03 November 2003 (or most recent version), and all changes and amendments thereto, and the latest Occupational Safety and Hazard Agency (OSHA) standards, to assure himself that he has full knowledge of the personal protective equipment that must be provided workmen and that he is familiar with the safety standards applicable to the prevention of accidents during the construction of this project and shall comply with all applicable provisions.
- 36.4 Diving Plan.** The CONTRACTOR shall submit to the OWNER and the ENGINEER, as part of his written plan for quality control, a diving plan if diving is included as a part of the planned operations, at least seven (7) days prior to the pre-construction conference. The intent of this requirement is to assure safe diving and particularly when emergencies, marine maintenance, or underwater problems occur which require diving. Additionally, the CONTRACTOR is to determine that placement of spuds, anchors, pipes, etc. will not impact hardbottom communities (should any exist); a procedure which may require diving. All diving shall be conducted in accordance with the requirements of the

most recent versions of the following documents:

- 36.4.1** U.S. Navy Diving Manual, Volume I and II (NAVSEA 0994-LP-001-9010 and NAVSEA 0094-LP-001-9020).
- 36.4.2** U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1. Section 30 Contract Diving Operations.
- 36.4.3** U.S. Army Corps of Engineers, Jacksonville District Regulation CESAJR 385-1-1, Appendix O, "Manning Levels for Dive Teams."
- 36.4.4** 29 CFR, Part 1910, Subpart T Commercial Diving Operations, OSHA Regulations.
- 36.4.5** The Dive Operations Plan is to include all the items specified in paragraph 30.A.14 of EM 385-1-1. This plan shall contain information specific to the diving operations to be performed. Submission of the plan does not constitute an endorsement on the part of the OWNER or ENGINEER that the CONTRACTOR's diving procedures are safe. The plan is intended to provide a method by which the CONTRACTOR demonstrates an awareness of diving standards.

36.5 **Accident Prevention Plan.** The CONTRACTOR is required to submit to the ENGINEER an accident prevention plan seven (7) days prior to the pre-construction conference. The accident prevention plan must be in accordance with all Federal safety standards as specified in EM 385-1-1, dated November 2003, entitled "Safety & Health Requirements Manual." Submission of the plan does not constitute an endorsement on the part of the OWNER or ENGINEER of the CONTRACTOR's accident prevention plan. The plan is intended to provide a method by which the CONTRACTOR demonstrates an awareness of Federal safety standards.

36.6 **Hazard Communication.** The CONTRACTOR shall comply with the requirements of OSHA 1910.1200, the Hazard Communication Standard. General requirements are as follows:

- 36.6.1** Provide a written program describing implementation method of the previously referenced standard. This shall be provided to the ENGINEER within seven (7) days prior to the pre-construction conference.

- 36.6.2** Ensure that the CONTRACTOR's personnel are informed about health and physical hazards associated with materials to be used.
- 36.6.3** Ensure that a hazardous material inventory is available to the OWNER upon request.
- 36.6.4** Ensure proper labeling of hazardous material containers.
- 36.6.5** Ensure Availability of a Material Safety Data Sheet on site.

36.7 Oil and Hazardous Material Spills and Containment. The CONTRACTOR shall ensure that all hazardous material spills are immediately reported to the proper authorities and to the ENGINEER. All hazardous material spills shall be immediately cleaned up in accordance with the U.S. Army Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1. In accordance with EM 385-1-1, the CONTRACTOR shall use suitable methods such as dikes or curbs to prevent the spread of hazardous materials from above ground storage tanks and piping in case of leakage.

The CONTRACTOR shall prepare for and take all necessary precautions to prevent discharges of oil and releases of waste and hazardous materials that may impair water quality. In the event of an occurrence, notification and response will be in accordance with applicable requirements of 40 C.F.R. part 300. All dredging and support operations must be compliant with U.S. Coast Guard regulations and the U.S. Environmental Protection Agency's Vessel General Permit, as applicable. BOEM shall be notified of any occurrences and remedial actions and provide copies of reports of the incident and resultant actions at dredgeinfo@boem.gov.”

36.8 Confined Space Entry.

- 36.8.1** The CONTRACTOR shall submit a confined space entry plan as part of his written proposal for accident prevention. This plan shall satisfy the requirements specified in 29 CFR 1910.146, or its most recent version.
- 36.8.2** Confined space is any space having limited openings for entry and exit, not intended for continuous occupancy, and unfavorable natural ventilation which could contain or produce dangerous concentrations of airborne contaminants or asphyxiates. Confined spaces may include, but are not limited to, storage tanks, holds of vessels, manholes, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, trenches, vats, and open top spaces more

than 4 feet in depth such as pits, tubs, vaults and vessels, or any place with limited ventilation.

36.8.3 Prior to entering a confined space, the Work environment shall be tested by a competent person using properly calibrated approved equipment to determine the extent of potential hazards. If the atmosphere cannot be determined by testing, an “Immediately Dangerous to Life or Health” situation shall be assumed (See 29 CFR 1910.146). The evaluation shall consider the potential for evolution of toxic substances as well as oxygen content. Testing for toxic substances shall be performed prior to each entry and on a continuous or frequent (as stipulated in the confined space entry procedure) basis while personnel are working in confined spaces.

36.9 Trench Safety Act (General Statutes Section 532.60 et seq.).

36.9.1 The Occupational Safety and Health Administration's excavation safety standards, 29 C.F.R.s. 1926.650 Subpart P are hereby incorporated as the state standard. The North Carolina Department of Labor may, by rule, adopt updated or revised versions of those standards, provided that the updated or revised versions are consistent with the intent expressed in this act and section, and are not otherwise inconsistent with state law. Any rule adopted as provided in this section shall be complied with upon its effective date.

36.9.2 On all parts of the Work that require trench excavation in which such excavation will exceed a depth of 4 feet, the CONTRACTOR shall submit to the OWNER a reference to the trench safety standards that will be in effect during the period of construction of the project and written assurance by the CONTRACTOR performing the trench excavation that such CONTRACTOR will comply with the applicable trench safety standards.

36.10 Activity Hazard Analysis. The CONTRACTOR is required to submit to the ENGINEER as part of his written plan for quality control an Activity Hazard Analysis. The Activity Hazard Analysis is outlined in EM 385-1-1, Section 01.A., Figure 1-2.

36.11 Safety Person Requirement.

36.11.1 The CONTRACTOR shall employ at the project site a permanent Safety and Occupational Health person (Safety Officer) to manage the CONTRACTOR's accident prevention program. The Safety Officer

shall be on duty during any work of a complex nature including, but not limited to, the relocation of utilities; work on or around structures; work on or around existing disposal area dikes; spoil placement on the beach; or when blasting or other potentially hazardous activities are occurring. The principal Safety Officer shall report to, and work directly for, the CONTRACTOR's superintendent or the corporate safety office. The Safety Officer shall have the authority to take immediate steps to correct unsafe or unhealthful conditions. The presence of the Safety Officer will not abrogate safety responsibilities of other personnel. The Safety Officer may have other work duties, but none shall take precedence over the duty to manage the CONTRACTOR's accident prevention plan.

36.11.2 Qualifications for Safety Officer:

36.11.3 Shall have a degree in a technical or scientific field or safety in a four-year, or longer, program from an accredited school; or

36.11.4 Shall have at least 1 year of experience in safety and occupational health work.

36.11.5 Seven (7) days prior to the pre-construction conference, the CONTRACTOR shall submit to the OWNER, for approval, the name and qualifications of the proposed Safety Officer(s) and a functional description of duties.

36.12 **Storm Contingency Plan.** The CONTRACTOR shall submit a Storm Contingency Plan within seven (7) days prior to the pre-construction conference. The Plan shall describe the CONTRACTOR's planned response to storms (e.g. hurricane, tropical storms, nor'easters, other high-sea conditions, etc.) and operational failures (e.g., breaks in the dredge pipes, movement of sand pump out facility/dredge pipes, etc.). This Plan specifically shall include but not be limited to the following:

36.12.1 A description of severe weather hazards that may potentially occur and steps that will be taken to guard against the hazards.

36.12.2 The time frame of implementing the Plan (using as a reference the number of hours remaining for the storm to reach the work site if it continues at the predicted speed and direction), including the estimated time to move the construction vessels and equipment to safe harbor.

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- 36.12.3** The Plan should be specific as to what weather/wave conditions will require Work shutdown, removal of dredge, removal of the offshore sand pumpout facility, removal of the submerged pipeline, etc.
- 36.12.4** List of the equipment to be used on the job and its ability to handle adverse weather and wave conditions.
- 36.12.5** List of safe harbors or ports and the distance from the Work area to these harbors and the time required to move the equipment to these harbors or ports. Copies of letters of approval for the use of these safe harbors or ports (local authorities, U.S. Coast Guard, etc.) where applicable.
- 36.12.6** Method of securing equipment in these safe harbors or ports.
- 36.12.7** List of equipment to be utilized to make this move to safe harbors or ports (tug boats, work boats, etc.), to include the name and horsepower of this equipment. The Plan will include only equipment capable of making the move to safe harbors or ports in adverse weather or sea conditions.
- 36.12.8** Methods of securing equipment not moved; i.e., pipelines (floating or submerged), pumpout stations, etc.
- 36.12.9** Plan of evacuation to include interim measures; i.e., immediate reaction plans to be taken for all storm occurrences, particularly sudden/flash storms.
- 36.12.10** Operating procedures to be undertaken when critical dredge equipment fails during sudden and severe adverse weather conditions, to include breaking of spuds, swing wires, anchor wires, pipeline breaks or other mooring equipment or facilities, or inability of tugs or similar vessels to secure the dredge.
- 36.12.11** The CONTRACTOR shall continually monitor the NOAA marine weather broadcasts, and avail themselves of such other local commercial weather forecasting services as may be available. Submission of a Hurricane and Severe Storm Plan does not constitute an endorsement on the part of the OWNER or ENGINEER as to the adequacy of the plan.

37. LIENS.

Neither the final payment nor any part of the retained percentage shall become due until the CONTRACTOR has delivered to the OWNER a complete release of all liens arising out of this Contract or receipts acknowledging in full in lieu thereof and an affidavit that so far as he has knowledge or information the release and receipts include all the labor and materials for which a lien could be filed; but the CONTRACTOR may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the OWNER to indemnify the OWNER against any claim. If any claim remains unsatisfied after all payments are made, the CONTRACTOR shall refund to the OWNER all monies that the latter may be compelled to pay in discharging such a claim, including all costs and reasonable attorney's fee.

38. STATUTES, LAWS AND REGULATIONS.

38.1 The CONTRACTOR hereby agrees and shall be solely responsible for ensuring that the CONTRACTOR and any subcontractors, fully comply with the requirements of any applicable ordinances, statutes, laws or regulations which may affect this project or the CONTRACTOR's/subcontractor's Work under this project. The CONTRACTOR further agrees that neither the OWNER nor its ENGINEER shall be responsible for ensuring compliance or notification on any changes or modifications to any such applicable ordinances, laws, statutes, rules or regulations.

38.2 In the exercise of the respective rights and obligations under this Contract, the OWNER and CONTRACTOR agree to comply with all applicable Federal and State laws and regulations, including, but not necessarily limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army" and all applicable federal labor standards requirements including, but not limited to the 40 U.S.C. 3141-3148 and 40 U.S.C.3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 USC 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 USC 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 USC 276c)).

39. DEFINITIONS.

Acceptance Section – Acceptance sections are defined as the segment of beach lying between two immediately adjacent pay profile lines as indicated in the plans.

Addenda – Written or graphic instruments, explanations, interpretations, changes, corrections, additions, deletions or modifications of the Contract Documents issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

Application for Payment – The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Bid – The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed, property signed or guaranteed.

Bonds – Bid, Performance and Payment bonds and other instruments, which protect against loss due to inability, failure or refusal of the CONTRACTOR to perform the work, specified in the contract documents.

Change Order – A document recommended by ENGINEER which is signed by the CONTRACTOR and the OWNER which authorizes an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or Contract Time, issued on or after the execution of the Agreement.

Contract Documents – Invitation to Bid, Information for Bidders, Bid Proposal (*including: Schedule of Bid Items, Plant and Equipment Schedule, Pre-award Information, List of Subcontractors Proposed for Use in this Work, Clarifications and Exceptions*), Bid Bond, Agreement, Performance and Payment Bond, Standard General Conditions, Supplementary General Conditions, Technical and Environmental Provisions, Permits, Plans, and *Addenda and Change Orders executed pursuant to the Contract Documents*.

CONTRACTOR – The person, firm, or corporation with whom the COUNTY has executed the Agreement to furnish the Work called for in the Contract Documents.

Contract Price – The total monies payable by the OWNER to the CONTRACTOR under the terms and conditions of the Contract Documents.

Contract Time – The number of successive calendar days stated in the Contract Documents for the completion of the Work.

Date of Completion – Calendar date when all Work has been completed in compliance

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with Contract Documents, the CONTRACTOR has repaired all damage or injury to the work site, cleaned up the work site, and demobilized all equipment and personnel from the project area.

Day – A period of 24 hours measured from midnight to the next midnight, including Saturdays, Sundays and holidays and regardless of weather.

Defective Work – Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or Work that has been damaged prior to the ENGINEER's recommendation of final payment.

ENGINEER – Coastal Planning & Engineering, Inc. of North Carolina or its authorized agents, inspectors or representatives acting within the scope of duties entrusted to them by the OWNER.

Final Completion – The date when the construction of the project is complete in accordance with the Contract Documents so that the entire project can be utilized for the purposes for which it is intended. All equipment and materials have been removed from the work area. The beach tilling, if required, has been completed and all corrections to the work have been made to the satisfaction of the ENGINEER.

Lump Sum Price Work – Work to be paid for on the basis of a single payment to accomplish a Work task.

Notice to Proceed – The written notice issued by the OWNER, or its agents, to the CONTRACTOR authorizing the CONTRACTOR to proceed with the Work.

OWNER – Dare County, Dare County, 954 Marshall C Collins Dr. Room 286, Manteo, NC 27954 or its authorized agents, representatives, successors, or heirs. Dare County, Town of Duck, Town of Kitty Hawk, and Town of Kill Devil Hills have entered into a Memorandum of Understanding (MOU) allowing the County to act as the representative on behalf of the three (3) Towns.

Permits – State and Federal approvals to conduct the Work, including conditions and requirements which must be adhered to by the CONTRACTOR. The Contract Drawings are the official representation of the Project. The Permit drawings are for depiction purposes only and should not be referred to for the purposes of constructing the Project.

Plans (drawings) – The drawings, plans, maps, profiles, diagrams, and other graphic representations which show character, location, nature, extent and scope of the Work, which have been prepared or approved by ENGINEER and which are considered part of

DARE COUNTY BEACH NOURISHMENT PROJECT

the Contract Documents.

Specifications – Those portions of the Contract Documents consisting of the general requirements and written technical descriptions of products and execution of the Work.

Subcontractor – An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion - The date when all dredging operations, and sand placement operations are complete and satisfactory to the OWNER.

Unit Price Work – Work to be paid for on the basis of unit prices (in-place).

Work – Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by the CONTRACTOR under the Contract Documents, including all labor, materials, equipment and other incidentals and the furnishing thereof.

PART 01000

**DARE COUNTY
BEACH NOURISHMENT PROJECT**

TECHNICAL PROVISIONS

PART 01000

**DARE COUNTY
BEACH NOURISHMENT PROJECT**

TECHNICAL PROVISIONS

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PART 01000

**DARE COUNTY
BEACH NOURISHMENT PROJECT**

TECHNICAL PROVISIONS

PART 1: GENERAL

1. SCOPE.

The CONTRACTOR shall provide the dredge(s) and support vessels, labor, equipment, supplies, and materials to perform all operations in connection with excavating, transporting, placing, dressing, grading, and tilling (if authorized) required for the completion of the PROJECT as indicated in the Plans and required by the Contract Documents.

2. SUBMITTALS and NOTIFICATIONS SUMMARY.

The CONTRACTOR shall provide the following list of submittals and notifications to the ENGINEER and the OWNER in accordance with the timeframes specified in the Contract Documents.

2.1. Order of Work and Project Schedule. The CONTRACTOR shall submit a written order of work and project schedule to the ENGINEER and OWNER as required by Standard General Condition 2.05.

2.2. Dredge Mobilization/Demobilization Notification. The CONTRACTOR shall notify the ENGINEER and OWNER three (3) days in advance of the dates the dredge(s) and all other equipment will be mobilized and demobilized to and from the project area.

2.3. Dredge Positioning Information. The CONTRACTOR shall submit to the ENGINEER and OWNER dredge and equipment positioning information as required by Technical Provisions – 8.7.

2.4. Unsuitable Material. The CONTRACTOR shall notify the ENGINEER of the discovery of any unsuitable material within the work area or fill area as required by Technical Provisions – 8.10.

- 2.5. Cultural Resource Discovery.** The CONTRACTOR shall notify the ENGINEER and OWNER of any discovery of cultural resources as required by Technical Provisions – 8.11.
- 2.6. Misplaced Material.** The CONTRACTOR shall notify the ENGINEER and OWNER of any misplaced material as required by Technical Provisions – 8.14.
- 2.7. Pipeline Leaks.** The CONTRACTOR shall notify the ENGINEER and OWNER of any submerged pipeline leaks as required by Technical Provisions – 9.2.
- 2.8. Survey Control Discrepancies.** The CONTRACTOR shall notify the ENGINEER and OWNER of any discrepancies found during the survey of the project monumentation as required by Technical Provisions – 10.2.
- 2.9. Grade Stake Log and Recovery Plan.** After the Notice to Proceed is issued, the CONTRACTOR shall submit a Grade Stake Recovery Plan acceptable to the ENGINEER and OWNER. The plan shall outline the steps that the CONTRACTOR will implement to recover all the stakes used on the project as required by Technical Provisions – 10.4. This plan shall include the use of an inventory log that will be made available for review by the ENGINEER. Upon completion of the project, the CONTRACTOR shall furnish a final grade stake log to the OWNER.
- 2.10. Pre-Construction and Post- Construction Surveys.** Supplemental General Condition 14 and Technical Provisions - 10.5 require the submittal of pre-construction and post-construction survey data.
- 2.11. Quality Control Reports.** The CONTRACTOR shall prepare and provide a daily quality control report of the progress of the Work as specified in Supplemental General Condition 26.
- 2.12. Quality Control Plan.** The CONTRACTOR shall prepare and provide a Quality Control Plan as specified in Supplemental General Condition 26.
- 2.13. Diving Plan.** The CONTRACTOR shall prepare and provide a Diving Plan as specified in Supplemental General Condition 36.4.
- 2.14. Accident Prevention Plan.** The CONTRACTOR shall prepare and provide an accident prevention plan as specified in Supplemental General Condition 36.5.

2.15. Storm Contingency Plan. The CONTRACTOR shall prepare and provide a Storm Contingency plan as specified in Supplemental General Condition 36.12.

2.16. Environmental Protection Plan. The CONTRACTOR shall prepare and provide an Environmental Protection Plan as specified in Supplemental Technical Provision 6.

2.17. Other Submittals and Notifications. The Contract documents and respective plans outlined above may require other submittals and notifications.

3. NIGHTTIME OPERATIONS.

Nighttime is defined as the period of time from sunset to sunrise. During nighttime operations, the CONTRACTOR shall utilize the minimum lighting that is necessary to accomplish the Work and comply with all OSHA requirements and sea turtle protection requirements, if applicable by permit. The CONTRACTOR shall shield or orient the lights to minimize the amount of light to the Work area. The CONTRACTOR shall minimize noise, in compliance with Technical Provision 4, so as not to disturb residents living along the beach in the project area. Beach dressing, final grading, tilling and re-dressing will be limited to daylight hours only.

4. NOISE CONTROL.

4.1. Hauling and Excavating Equipment. All hauling and excavating equipment, including dredges, shall be equipped with satisfactory mufflers or other noise abatement devices. The CONTRACTOR shall conduct his operations so as to comply with all Federal, State, and local laws pertaining to noise. The use of horns, whistles, signals, and handling of dredge pipelines shall be held to the minimum necessary in order to ensure as quiet an operation as possible while maintaining safety on the job site.

4.2. Booster Pumps Noise Control. Booster pumps used on this Work shall be equipped with satisfactory mufflers and/or other sound abatement devices to reduce engine noise. A sound barrier will be constructed landward of any shore based booster pumps in order to reflect noise waterward. The CONTRACTOR shall conduct his operations so as to comply with all Federal, State, and local laws pertaining to noise.

5. DAMAGES.

The CONTRACTOR at the CONTRACTOR's expense shall repair all damages to private or public property resulting from the CONTRACTOR's operations. The OWNER shall determine if repairs

are required, and the OWNER or owner of the damaged property will determine if the property has been satisfactorily repaired to its previous condition.

6. FINAL CLEAN-UP.

Final clean-up shall include the removal of the CONTRACTOR's plant and all equipment or materials either for disposal or reuse. Plant and/or equipment or materials to be disposed of shall only be disposed of in a manner and at locations approved by the OWNER. Unless otherwise approved in writing by the OWNER, the CONTRACTOR is not permitted to abandon pipelines, anchors, cables, pipeline supports, pontoons, or other equipment or materials in the work area, pipeline access areas, water areas, underwater in the Atlantic Ocean or in any harbors, passes or inlets, or other areas adjacent to the Work site. Any stakes or other markers placed by the CONTRACTOR must be removed as a part of the final clean-up. All stakes, including grade stakes, placed during the fill operation shall be completely removed and shall not be left buried in the fill.

PART 2: MATERIALS

7. CHARACTER OF MATERIAL.

7.1. Character of Material Within Borrow Area. Based on information provided by the available core borings, the material sampled within borrow area A consists of fine to medium grained quartz sand with trace silt, shell hash, and shell fragments. Material within borrow area C is characterized as fine grained quartz sand with trace silt, shell hash, and shell fragments. The borrow areas tend to contain coarser grained sediment grading into finer grained sediments with depth. In many instances, the VIBRACORES contained multiple layers of sediment. The descriptions of the material are based on the site investigations and core borings. Due to the geology of the dredge area and the method of dredging, varying percentages of clay and shell hash should be expected in any dredge cycle. The material descriptions are provided in the appendices of this section and only describe the materials obtained from those investigations. The CONTRACTOR shall be solely responsible for any interpretation or conclusions drawn therefrom.

7.2. Potential Differing Sediment Characteristics. The dredge material may be as generally indicated by the sediment boring logs, granulometric reports, grain size distribution curves, and photographs attached to the Contract Documents. The material found in the core borings (vibracores) is indicative only of the material at that discrete location. The CONTRACTOR should be aware that it is possible for material of differing characteristics to be present within the permitted borrow areas, including material differing from that contained in the vibracores.

7.3. Former Duck Target Facility Munitions Response Site. Borrow area C is located near offshore of a formerly used defense site (FUDES) called the Former Duck Target Facility Munitions Response Site (MRS). The USACE defines a FUDES as property that was owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of Department of Defense that were transferred from the Department of Defense control prior to October 17, 1986. The property is not currently under the Department of Defense control. The Duck Target Facility was used as a practice rocket and bombing range to train Navy pilots between 1941 and 1965, therefore only practice munitions are thought to have been used. Borrow area C is located approximately 2.5 miles east of the seaward extent of the target range fan and does not overlap with the Duck Target Facility.

Previous site investigations and removal efforts in the 1990's and early 2000 have resulted in the removal and/or inspection of over 1,000 tons of munitions at the site. A 2009 Site Inspection (SI) was performed to evaluate the evidence for the presence of (MEC) at the site and elevated levels of munitions constituents in soils, groundwater and surface water along the MRS (Appendix A "Site Inspection Report Duck Target Facility, USACE"). The SI found no imminent threat to the public or the environment, and recommended further action was not immediately needed. A remedial investigation was subsequently conducted at the site and is provided as Appendix B "Former Duck Target Facility Munitions Response Site." To date, these investigations have determined that all munitions present are munitions debris and scrap metal. No munitions and explosives of concern (MEC) have been confirmed. Nonetheless, it is the CONTRACTOR's responsibility to determine if any screening is necessary. However, Discretionary Items VI shall only be paid for if required by OWNER and approved by the ENGINEER. The CONTRACTOR may elect to screen for MEC due to the Former Duck Target Facility Munitions Response Site at their own expense unless required by OWNER and approved by the ENGINEER. The removal of MEC from the constructed beach, if required, would occur under separate contract.

Other than the Geotechnical report, including Appendices 1-18, located on Dare County's website (<http://www.darenc.com/beachnourishmentproject>), Appendix A ("Site Inspection Report Duck Target Facility, USACE") and Appendix B ("Former Duck Target Facility Munitions Response Site)," no reports, explorations or tests of subsurface conditions at or contiguous to the Site are known to the COUNTY or ENGINEER.

PART 3: EXECUTION

8. EXCAVATION.

8.1. General. Two offshore borrow areas have been designated for use in the project. The plans for the borrow areas are referenced to the datum described on the plan sheets. Excavation shall be by cutterhead suction, dustpan suction dredge, hopper dredge, or a method proposed by the CONTRACTOR and approved by the ENGINEER with pumpout. All subsequent specifications referring to a “cutterhead” or “hopper” shall also be applicable to other dredges. Failure to repair leaks or change the method of operations that has resulted in spillage that exceeds turbidity and water quality standards during the loading or any overflow during transport to the placement sites will require suspension of dredging.

8.2. Town of Duck Borrow Area Dredging Order. No more than 33% of the material used to construct the template as shown in the plans for the Town of Duck project shall come from borrow area C. Borrow area C has a mean grain size finer than the recipient beach at the Town of Duck; however, when mixed in a 2:1 ratio (borrow area A: borrow area C) the resulting mean grain size will be comparable to the recipient beach. No section of beach longer than 250 feet shall be constructed using material dredged only from borrow area C if the CONTRACTOR does not elect to place an additional 20% more sand on the beach as allowed by Section 8.2.1. The “Town of Kitty Hawk Allowable Dredge Area” outlined within borrow area A on Sheet 15 of 18 of the Town of Kitty Hawk Plans may be used to construct the Town of Duck only after the construction of Kitty Hawk has been completed.

8.2.1. CONTRACTOR may construct the entire Duck project with material from borrow area C. If the CONTRACTOR plans on building more than 33% of the project with material from borrow area C, the fill template shall be adjusted to account for the need to place an additional 20% more sand on the beach to account for the smaller grain size in the borrow area.

8.3. Town of Kitty Hawk Borrow Area Dredging Order. The material used to construct the template as shown in the plans for the Town of Kitty Hawk shall come solely from the area outlined within borrow area A on Sheet 15 of 18 of the Town of Kitty Hawk Plans.

8.4. Town of Kill Devil Hills Borrow Area Dredging Order. The material used to construct the template as shown in the Plans for the Town of Kill Devil Hills shall come from borrow area A only. The “Town of Kitty Hawk Allowable Dredge Area” outlined within borrow area A on Sheet 15 of 18 of the Town of Kitty Hawk Plans may be used to construct the Town of Kill Devil Hills only after the construction of Kitty Hawk has been completed.

8.5. Borrow Area Excavation Limits. All excavation shall be performed within the horizontal and vertical limits shown in the Plans (The CONTRACTOR shall not be held responsible for material migrating into the borrow area from side slopes of the dredge template). There is a two-foot allowable overdredge specified for all cut depths in the borrow area. The equipment may not extend beneath this overdredge depth. The material located below the indicated “Maximum Disturbance Elevation”, in many cases, may not be suitable for beach placement. Disturbing or removing material below the indicated limits by operation of dredge equipment (cutterheads, dragheads, water jets, etc.) may entrain non compatible sediments into the slurry with subsequent discharge onto the beach. The CONTRACTOR will be required to certify in each Daily Quality Control Report that the excavation occurred within the horizontal and vertical limits of the Plans. The ENGINEER will deduct quantities of sand dredged outside of and/or below the allowable dredge depths from eligible pay quantities.

The CONTRACTOR shall pay any and all costs, fines and/or other expenses related to permit violations due to dredging outside of limits or resulting from CONTRACTOR negligence in complying with the project permits. If the CONTRACTOR does not pay any and all costs, fines and/or other expenses related to dredging outside of the limits and/or for permit violations, the ENGINEER will deduct said cost, fines, and expenses from payments due to the CONTRACTOR by the OWNER, or the expenses may be recovered from the CONTRACTOR's bond.

A permit violation for over-dredging shall be the CONTRACTOR’s responsibility if surveys for compliance of the borrow area confirm depths in the borrow area to be deeper than “Maximum AD Elevation” or that material was removed outside of the horizontal boundary of the borrow area as noted on the drawings. The CONTRACTOR shall not operate the cutterhead or draghead below the “Maximum Disturbance Elevation” as shown on the Plans.

8.6. Compliance Surveys. For the purpose of compliance, the CONTRACTOR shall conduct pre and post-construction surveys of the borrow areas. Profiles shall be conducted along the stationing established by the CONTRACTOR. The pre-dredging survey shall be conducted within the 60 days prior to dredging. The post-dredging survey will be conducted within 60 days after the completion of dredging. Hydrographic surveys will be performed in accordance with the USACE Hydrographic Surveying Manual EM 1110-2-1003, providing 100 percent seamless coverage using interferometric swath or multibeam bathymetry. All bathymetric data will be roll, pitch, heave, and tide corrected using accepted practices. Survey lines of the specific dredge area, within Borrow Area DSS, will be established at intervals necessary to provide 100 percent coverage. Three equidistant cross-tie lines will be established parallel to the principal survey baseline. All survey lines will extend at least 100

meters beyond the edge of the dredge areas. All data will be collected in such a manner that post-dredging bathymetry surveys are compatible with the pre-dredging bathymetric survey data to enable the latter to be subtracted from the former to calculate the volume of sand removed, the shape of the excavation, and nature of post-dredging bathymetric change. Data resolution shall identify all grade breaks sufficiently to describe the bathymetry.

If the CONTRACTOR elects to construct the projects with the use of borrow area A only, pre and post-construction surveys of borrow area C are not required. If any portion of a borrow area is to be dredged, the entire extents of the borrow area shall be surveyed. Compliance surveys of the borrow area throughout construction are not required. If the CONTRACTOR elects to conduct a during construction compliance survey, the ENGINEER may request the processed survey data of northing, easting and elevation (X,Y,Z) for each profile line in digital ASCII format.

- 8.6.1.** Unless waived by the OWNER or ENGINEER in each specific case, all surveys made by the CONTRACTOR shall be made in the presence of a representative of the OWNER or ENGINEER. The CONTRACTOR shall notify the ENGINEER 24 hours in advance of each survey intended for compliance. Notification via email to the ENGINEER'S site representative shall be deemed sufficient.

Survey Submittals

- 8.6.2.** The CONTRACTOR shall submit survey field notes to the ENGINEER upon completion of each survey. All original field notes, and other records used by the CONTRACTOR to compute the volume of material removed from the borrow area shall be furnished to the ENGINEER with the Application for Progress Payment and Final Application for Payment.
- 8.6.3.** The CONTRACTOR shall prepare cross sectional profiles immediately after each grid section survey and make such drawings available to the ENGINEER, or the OWNER'S representative on site. These drawings shall also indicate the required design template and any allowable tolerances. The same scale and datum(s) for the profiles shall be used as in the Plans.
- 8.6.4.** Deliverables to the ENGINEER shall include processed survey data of northing, easting, and elevation, (X,Y,Z) for each profile line in digital ASCII format and profiles in a hard copy form (.PDF or printout) through electronic transmission (email) or other acceptable medium. Additional information to be provided to the ENGINEER shall include field notes, profiles compatible with CAD 2012 format

with acceptable tolerances shown, a 1" = 200' plan view plot showing the baseline and surveyed profile grid lines.

8.7. Dredge Positioning and Monitoring System.

8.7.1. Continuous Electronic Positioning on the Dredge. The CONTRACTOR is required to have in continuous operation on the dredge electronic positioning equipment that will accurately and continuously compute and plot the position of the dredge. A geographic positioning system, Differential Global Positioning System (DGPS), or equivalent, shall be used to maintain precise positioning of the dredge. Whenever dredging operations are underway, the location of the dredge shall be continuously monitored and its position recorded at intervals not to exceed one (1) minute. The CONTRACTOR shall be running a dredge location and management program, such as DREDGEPACK or equivalent. The ENGINEER shall have unrestricted access to the bridge GPS and depth recording units to enable onboard real time review at any time during construction. Plotters shall also record the X, Y, Z (with respect to NAVD) position of the dredge's cutterhead or drag heads at intervals not to exceed one (1) minute). If the CONTRACTOR elects to use a hopper dredge, the slurry velocity through the dragheads shall be submitted along with the X,Y,Z data. Such fixes (T,X,Y,Z), and the accompanying plots depicting the horizontal and vertical borrow area limits with respect to the fixes, shall be furnished to the ENGINEER daily, by 12:00 p.m. the following day, in an electronic format as part of the Daily Contractor Quality Control Reports. All vertical measurements shall be tide corrected, using tides measured along the open coast, and reported in feet NAVD; predicted tides will not be accepted. The dredge operator shall have visual controls that depict the location and depth of the dredge's excavation device within the specified borrow area. The electronic positioning equipment shall be calibrated, maintained, and operated so that the maximum error for the fixes recorded do not exceed the tolerances in the horizontal position (± 3 feet) or vertical position (± 0.1 foot). The location of the master antenna on the dredge and the distance and direction from the master antenna to the dredge's excavation device shall be reported in the Daily Contractor Quality Control Reports.

8.7.2. Dredge Monitoring System Software and Hardware. The CONTRACTOR shall use automated dredge positioning and monitoring system such as DREDGEPACK (Coastal Oceanographics, Inc. software) or equal that has the following features:

8.7.2.1. Is fully functional under Windows 98, Windows 2000, Windows XP, Windows NT, and Windows 7 operating systems.

- 8.7.2.2.** Continuously records accurate time tagged dredge positioning and monitoring data.
- 8.7.2.3.** Provides the dredge operator with real-time display of dredge position and the location and depth of the cutterhead in plan view, cross section view, and three dimensional perspective views.
- 8.7.2.4.** Has sensors, alarms, and visual displays to indicate to the dredge operator when the vessel and or the cutterhead or draghead are located beyond the horizontal and vertical limits allowed by the Contract Document and Permits for the borrow area, turn around zones, pump-out areas, and navigation corridors.
- 8.7.2.5.** Allows users to change the scale and/or customize the display screen to meet project specific monitoring needs.
- 8.7.2.6.** Imports and displays CADD DXF overlays, of all critical features of the project such as, hydrographic survey data, planned lines, the mapping grid, targets, waypoints, navigation corridors, navigation hazards, borrow areas, dredge cut boundaries, buffer zones, pumpout stations, rock disposal areas, reef edges, and other environmental and archeological sites of concern.
- 8.7.2.7.** Allows users to enter the exact shape of the dredge on the display screen and track the position and orientation of the dredge and cutterhead or draghead in relation to the CADD DXF overlays of the critical design features of the project.
- 8.7.2.8.** Imports ASCII XYZ formatted hydrographic survey data to create a color-coded depth matrix file to graphically monitor the digging operations and the position of the cutterhead or draghead in the borrow areas. The software shall automatically re-map the color- coded depth matrix file as the dredging work proceeds, providing a continuous real-time display of dredge position in relation to the cuts made in the dredge area.
- 8.7.2.9.** Calculates, records, and displays the estimated volumes of materials cut or dredged.
- 8.7.2.10.** Interfaces with industry standard sensors commonly found on dredges, such as, NEMA DGPS receivers, USCG and NEMA DGPS correction receivers. The software must be capable of recording data from each sensor at their maximum update rate.
- 8.7.2.11.** Provides a real-time operation log that records important daily events and data such as, but not limited to, position, times of dredging, volume of material dredged, time, equipment problems, and equipment maintenance.

Prior to mobilization, the CONTRACTOR shall submit to the ENGINEER and OWNER a document describing the equipment, methods and past reliability of the automated dredge

monitoring system proposed to be used for this project.

8.7.3. Performance Requirements.

8.7.3.1. The CONTRACTOR shall maintain the electronic positioning and dredge monitoring system in operation at all times the cutterhead or draghead is operational. Dredging operations shall cease immediately in the event that the electronic positioning and/or the dredge monitoring system fails.

The CONTRACTOR shall notify the ENGINEER immediately upon discovery of the software failure to record the cutterhead or draghead position. At no time shall dredging be allowed if the CONTRACTOR cannot confirm the depth and location of the cutterhead or draghead on a real-time basis.

8.7.3.2. The CONTRACTOR shall transmit by e-mail all dredge positioning and monitoring data for each dredge cycle to the ENGINEER and OWNER, in the required format, at the end of each dredge cycle. A “dredge cycle” is defined as a 24-hour time period. The electronic files containing the cutterhead or draghead positioning data shall be compatible with Microsoft Excel 2010 version. The data shall be arranged in spreadsheet format with easting’s, northings, elevation and time for each record positioned in separate columns but the same row. The file shall be titled representative of the day or dredge cycle, the data represents. If multiple dredges are utilized the title shall indicate the source dredge also. No more than one (1) twenty-four (24) hour period shall be included on any single electronic file or spreadsheet. The accuracy for reporting shall be to the nearest tenth for all integers and to the nearest second for all times. Times shall be reported in reference to a 24 hour clock referenced to the local datum.

8.7.3.3. The CONTRACTOR shall submit the dredge positioning data to the ENGINEER at an interval not greater than once per day or as the ENGINEER requests. Gaps in the positioning data may require the CONTRACTOR to conduct hydrographic surveys for compliance of the borrow area at the CONTRACTOR’S expense. The need for the surveys for compliance shall be determined by the ENGINEER.

8.7.4. Positioning and Monitoring Data Archive. The CONTRACTOR shall maintain an archive of all the positioning and monitoring data files for the project. The

CONTRACTOR shall provide the ENGINEER or OWNER a complete copy of these data upon request at any time during the project.

- 8.8. Tides.** CONTRACTOR shall use measured tides for all hydrographic surveying and tidal corrections of cutterhead or drag heads (predicted tides are not acceptable). Measured tides shall be along the open coast of the project area and not within either adjacent navigation channels unless a tide study conducted by the CONTRACTOR and accepted by the ENGINEER supports the use of tide gages in the navigation channels.
- 8.9. Uniform Excavation.** To the greatest extent practicable, all excavation shall be performed in a uniform and continuous manner so as to avoid creating multiple holes, valleys, or ridges within the dredge area.
- 8.10. Rock, Rubble or Unsuitable Material.** The ENGINEER has the authority to determine if the quality of material being placed on the beach is acceptable. If the ENGINEER makes a specific determination that material being placed is poor quality, the CONTRACTOR will adjust his dredging operation to avoid this material.

The CONTRACTOR shall continuously monitor the placement of fill material for the presence of rocks, clay and other unsuitable beach material including that defined by the North Carolina Administrative Code (NCAC) 15A 07H.0312. The CONTRACTOR shall notify the ENGINEER immediately if rock, rubble, shell, coral fragment, or other unsuitable material larger than three (3) inches in diameter is discharged to the beach and report the encounter with rock, rubble or debris on the Quality Control Report, providing location in State Plane Coordinates of the area. The CONTRACTOR shall also notify the ENGINEER if other unsuitable material in the CONTRACTOR's opinion is discharged to the beach.

The CONTRACTOR shall inspect the quality of the discharged material for rock, rubble, clay, and other unsuitable material at a frequency of no less than once per hour of discharge and at each shut down of the dredge. Results shall be noted in the Daily Quality Control Report.

- 8.10.1. Remedial Actions For Unsuitable Oversized Material (Greater Than Or Equal To 3 Inches).** If the number of rocks, rubble, shell, coral fragment, or unsuitable material greater than or equal to three (3) inches in diameter, discharged on the surface of the beach between mean low water (MLW) and the frontal dune toe, exceeds the threshold value of 50 within any 50,000-square-foot area, the unsuitable material in excess of the threshold value shall be removed from the beach fill by the CONTRACTOR.

The ENGINEER shall determine the area of the beach that requires remediation.

Payment for the remedial efforts of material excavated from within the limits of the authorized borrow area shall be made under Discretionary Bid Items VI “Addressing Potential Unsuitable Fill Material” shall only apply if CONTRACTOR can document that unsuitable material was excavated from within the authorized borrow area limits. Any unsuitable material placed on the beach shall be removed from the beach fill at the CONTRACTOR’s own cost if it was determined that the CONTRACTOR dredged the material from outside of the borrow area limits.

If the CONTRACTOR fails to remove the rock, rubble, or unsuitable material to the satisfaction of the OWNER, such material may be removed by the OWNER and the cost of such removal may be deducted from any money due, or to become due, to the CONTRACTOR or may be recovered under his Bond.

8.10.2. Remedial Actions For Unsuitable Material – Screening. The ENGINEER and/or the State of North Carolina have the authority to determine if the quality of material being placed on the beach is acceptable. If the ENGINEER makes a specific determination that material being placed is poor quality due to inclusion of large non-beach compatible material, the installation of a screening device at the dredge intake and/or at the beach fill discharge site may be required. A screening device is not required for dredging operations for either a hopper or cutterhead dredge, unless approved by the OWNER. If approved, the use of a screen at the dredge intake will be paid for based on the incremental Discretionary Bid Items costs. The required screening devices shall meet the following requirements:

8.10.2.1. Beach Discharge Screening - The discharge end Screening device shall be designed to retain all items 1 inch in diameter and larger. The openings on the screening device shall be of uniform dimension (i.e., a grid or a series of round holes; slotted openings will not be permitted).

The screening devices shall be made of rugged steel or composite material, one-piece or welded members. The screening devices to be used shall be demonstrated on site by the CONTRACTOR to meet all requirements as specified and are subject to the approval of the ENGINEER.

The screening devices shall be removable for easy replacement if damaged and shall provide a production rate that allows the CONTRACTOR to complete all dredging and beach fill placement within the contract duration.

The CONTRACTOR shall maintain adequate replacement parts and additional screening devices on site to insure production for the work does not stop due to damaged devices.

Minor adjustments to the beach screening baskets shall be made during standard dredge delays or while baskets are out of rotation and not in use. Any system utilized by the CONTRACTOR that involves the movement of the screening device or removing or re-handling of the oversized material to another location shall ensure there is no loss of oversized material and shall ensure the transfer to a secondary basket be designed.

The CONTRACTOR may not empty material contained by the screening devices directly on to the beach. Material can be emptied into pans or baskets such that the oversized material can be removed from the beach without requiring sieving. CONTRACTOR shall dispose of all oversized material off-site.

8.10.2.2. Dredge Cutterhead Screening Device. If a cutterhead is used to excavate material and a screening device is required on the cutterhead, the screening device on the dredge intake shall prevent the passage of any material greater than one (1-1/4) inches in diameter. The dredge cutterhead screening shall be a device similar to that as provided by Dredging Supply Company, or may be of the CONTRACTOR's own configuration, provided the device satisfies the screen requirements specified above. The CONTRACTOR shall inspect the intake device to ensure its effectiveness.

8.10.2.3. Hopper Dredge Screening Device. If a hopper dredge is used to excavate material and a screening device is required on the draghead, the screening device on the dredge intake shall prevent passage of any material greater than one (1-1/4) inches in diameter. The CONTRACTOR shall make adjustments as necessary in the event projectile shaped objects become trapped in the areas between the draghead teeth or between the draghead teeth and the dredge intake screening device. The CONTRACTOR shall inspect the intake device for hopper dredging, to ensure its effectiveness.”

8.11. Preservation of Historical, Archeological, and Cultural Resources. A cultural resource investigation has been conducted within the dredge area(s). Those areas with magnetic anomalies that have been judged to possibly be of historical, archeological or cultural value have been excluded from the dredge area. Nevertheless, if during project

construction the CONTRACTOR observes items that may have historical, cultural, or archeological value, the CONTRACTOR shall immediately cease all activities that may result in the destruction of these resources and shall prevent his employees and subcontractors from trespassing on, removing, or otherwise damaging such resources. Such observations shall be reported immediately to the ENGINEER so that the appropriate authorities may be notified, a determination made as to their significance and what, if any, special disposition of the finds should be made. The CONTRACTOR shall report any observed unauthorized removal or destruction of such resources by any person to the ENGINEER and the OWNER and appropriate State of North Carolina authorities. The CONTRACTOR shall relocate in the dredge area and resume construction of the project, and not return to the site in question, until State authorities have rendered judgment concerning the artifacts of interest.

8.11.1. Shipwrecks. The project sites are located in an area having a high probability of containing cultural resources, such as shipwreck remains. The CONTRACTOR shall exercise all precautions to avoid damage to any potential historic structures or shipwrecks. If such materials are encountered, the CONTRACTOR shall immediately stop work and notify the N.C. Division of Coastal Management at (252) 264-3901.

8.11.1.1. Town of Duck. The CONTRACTOR shall exercise all available precautions to avoid impacts or damage to wreck fragments within the Town of Duck located near the surf line adjacent to 149 Bufflehead Road and 159 Bufflehead Road.

8.11.1.2. Town of Kitty Hawk. The CONTRACTOR shall avoid routing any pipes over the Steamship Mountaineer shipwreck site within the Town of Kitty Hawk located just beyond the surf, adjacent to the intersection of Luke Street and North Virginia Dare Trail.

8.11.1.3. Town of Kill Devil Hills. The CONTRACTOR shall avoid routing any pipes over the Triangle Wrecks within the Town of Kill Kevil Hills just beyond the surf between 1st Street and 2nd Street beach and adjacent to the Croatan Surf Club at 1325 North Virginia Dare Trail.

8.12. Hardbottom Resource Protection. The CONTRACTOR shall protect all hardbottom resources (nearshore and offshore reefs) during all phases of the project. No hardbottom areas have been identified within the project boundaries. Nevertheless, the CONTRACTOR is encouraged to utilize their own resources to locate and to avoid contact with, or damage to, any possible hardbottom areas that may exist. Specific requirements

regarding hardbottom protection are provided in Supplemental Technical Provision 8 (Part 01100).

8.13. Signal Lights. The CONTRACTOR shall display signal lights and conduct his operations in accordance with the General Regulations of the Department of the Army and of the U.S. Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges and vessels engaged in laying cables or pipes or in submarine or bank protection operations, lights to be displayed on dredge pipeline and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel and the passing by other vessels or floating plant working navigable channels, as approved by the Secretary of the Army and Commandant, U.S. Coast Guard. (33 C.F.R. 80.18 – 8-31a; 33 C.F.R. 95.51 – 95.66; 33 C.F.R. 9.22 – 90.36; 33 C.F.R. 82 and C.G. Pub. 169, Navigation Rules, International-Inland dated May 1, 1977) (DAR 7-603.33).

8.14. Misplaced Material, Plant Machinery, Equipment, or Appliance. Should the CONTRACTOR, during the progress of the Work, lose, discard, throw overboard, sink, or misplace any material, plant, machinery, equipment, or appliance, which in the opinion of the ENGINEER should be removed, the CONTRACTOR shall recover and remove the same with the utmost dispatch. The CONTRACTOR shall give immediate notice, with description and location of such material, plant, machinery, equipment, or appliance, to the ENGINEER or inspector. Should the ENGINEER or the OWNER discover such material, plant, machinery, equipment, or appliance, the ENGINEER or OWNER may locate through electronic means or buoy the material, plant, machinery, equipment, or appliance, and may notify the CONTRACTOR of its location. Removal of the material, plant, machinery, equipment, or appliance, shall be the responsibility of the CONTRACTOR and the CONTRACTOR will pay for cost of the removal. Should the CONTRACTOR refuse, neglect, or delay compliance with the above requirements, such material, plant, machinery, equipment, or appliance may be removed by the OWNER, and the cost of such removal may be deducted from any money due or to become due to the CONTRACTOR or may be recovered under his bond. The liability of the CONTRACTOR for the removal of a vessel wrecked or sunk without fault or negligence shall be limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33-U.S.C. 410 et. seq.), or most recent version, if any.

9. PIPELINE TRANSPORT.

9.1. Pipeline Transport of Fill. The pipeline seaward of the beach landing shall be submerged except at the dredge, monobuoy (if required), and/or boosters (if required). It is the CONTRACTOR's responsibility to ensure that the pipeline is not placed on hardbottom areas (should any exist) or areas in which culturally significant wrecks have been identified (See CAMA Major Permit No. 132-15, 133-15 and 134-15, Conditions 16 and 17). The CONTRACTOR shall install buoys to mark the pipeline location at intervals not to exceed 1000 feet. A minimum of three (3) buoys shall be installed along locations above the -8 feet, NAVD contour zone. The markings shall show guidance as to where pipeline is located in the vicinity of potential swimmers. A sign measuring at least 8-1/2 inches by 11 inches shall be located at the pipeline landing and read "Danger – Submerged Pipe". The CONTRACTOR shall coordinate the placement of the pipeline with the OWNER and ENGINEER in accordance with Section 8.1 of the Supplemental Technical Provisions (Part 01100).

9.2. Pipeline Leaks. The CONTRACTOR is advised that leakage from the pipeline, or pipeline connections (including the dredge, all boosters, and all other equipment involved in the material transport from the borrow area to the fill area) is likely to cause adverse impacts. Inasmuch as the protection of resources is a primary consideration in the implementation of this project, pipeline leaks will not be tolerated. The CONTRACTOR shall keep all pipelines for hydraulic plants in good condition and maintain a tight discharge pipeline at all times. The joints shall be so constructed as to preclude spillage and leakage. Pipeline leaks and breaks shall be promptly reported to the ENGINEER and properly repaired. No discharging shall occur with a leak in the pipeline. The CONTRACTOR shall transport the ENGINEER and the OWNER to the leak repair site for visual inspection if so requested by the ENGINEER or the OWNER. Failure to repair leaks or change the method of operation that is resulting in leakage that creates sedimentation or exceeds turbidity and water quality standards during transport to discharge site will result in suspension of dredging operations and require prompt repair or change of operation to prevent leakage as a pre-requisite to the resumption of dredging.

10. LAYOUT OF WORK FOR HYDRAULIC BEACH FILL PLACEMENT.

10.1 Layout Of Work For Beach Fill Placement. The CONTRACTOR shall provide at his own expense all stakes, templates, platforms, equipment, tools, materials, and labor as may be required in laying out any part of the Work. The CONTRACTOR shall utilize baseline survey monuments and control data shown in the Plans to establish a construction baseline and pay profile locations spaced approximate 100 feet apart.. The CONTRACTOR shall

utilize cross-sections provided by the ENGINEER in order to establish the lines and grades along the pay lines. If the CONTRACTOR elects to establish temporary bench marks (TBMs) through the work site, they shall be established by a closed loop of levels from a permanent bench mark or a line of levels between two permanent bench marks. Work layout may be subject to modifications by the OWNER to meet changed conditions or as a result of other required modifications to the Work. The layout of the Work shall be made from the cross-sections and not the plan views in the Plans. The CONTRACTOR may use any other control and establish any profile cross-sections deemed necessary for the layout of the Work.

10.2 Contractor Acceptance of Survey Control. The Baseline coordinates and elevations for the Work site are indicated on the Plans, but shall be independently verified by the CONTRACTOR and their surveyor. The CONTRACTOR shall immediately contact the ENGINEER if any discrepancies are discovered in any of the information presented concerning the beach survey control. If the CONTRACTOR does not contact the ENGINEER, it is understood that the CONTRACTOR agrees with all information presented in the Plans related to beach monumentation elevation and control information.

10.3 Disturbing Monuments. The CONTRACTOR shall not disturb permanent markers or monuments and shall be responsible to maintain and preserve all monuments, stakes and other markers established by the OWNER unless and until authorized to remove them. If such markers are disturbed and/or destroyed by the CONTRACTOR, or through CONTRACTOR negligence, prior to their authorized removal, they may be replaced at the discretion of the OWNER, and the expense of replacement will be deducted from any amounts due or to become due the CONTRACTOR.

10.4 Grade Stakes. Construction and grade stakes, and any other stakes for any purpose, shall be made of steel pipe that can and will be removed intact after filling to cross sections accepted by or as directed by the ENGINEER. All stakes shall have sufficient height above grade so they may not be accidentally covered by the fill. The CONTRACTOR shall consecutively number each piece of pipe used for grade stakes, shall clearly mark that number upon the pipe, and shall record the location of each numbered pipe in a grade stake log. The removal of each numbered pipe and the length of removed pipe shall be recorded in the grade stake log at the time of the pipe/stake removal. The CONTRACTOR shall use a suitably sensitive metal detector to locate any misplaced grade stakes. At the request of the ENGINEER, all of the grade stake pipes shall be displayed after their removal to demonstrate those pipes that have been removed. The CONTRACTOR shall make this log available for review by the ENGINEER upon request. Upon completion of the project, the CONTRACTOR shall furnish the log to the ENGINEER. It is the CONTRACTOR's

responsibility to track, locate, and completely remove all grade stakes in their entirety to the satisfaction of the ENGINEER. The CONTRACTOR shall also remove all temporary marking stakes used for the work layout upon completion of the project.

10.4.1 Grade Stake Recovery Certification. After completion of the project, the CONTRACTOR shall provide a letter to the ENGINEER certifying that all grade stakes have been recovered in accordance with the CONTRACTOR's approved Construction and Grade Stake Recovery Plan (Technical Provisions – 2.9).

10.5 Additional Surveying Requirements.

10.5.1 Pre-Construction. The pre-construction survey may be used by the OWNER for the purposes of an initial adjustment of the Contract pay volume. The CONTRACTOR shall perform the pre-construction survey at 500 foot spacing for each project. The survey shall be performed no earlier than 6 weeks (42 days) prior to the initiation of fill placement in each of the individual Town project areas unless otherwise approved by the ENGINEER. The survey shall be scheduled so that field notes and computations can be furnished to the ENGINEER a minimum of 3 weeks (21 days) in advance of initiation of fill placement so that control of quantities and adjustments to the berm width and fill volume may be made if deemed necessary by the ENGINEER. The CONTRACTOR shall notify the ENGINEER immediately of any discrepancy between the existing conditions and the Drawings which would involve a five percent (5%) or greater increase in the design quantity.

10.5.2 Post Construction. The CONTRACTOR shall obtain the post construction beach survey prior to final acceptance of Work. The post construction surveys shall be conducted in accordance with Section 14 of the Supplemental General Conditions.

10.5.3 Pre-placement (BD) and Post-placement (AD). Payments will be based on the result of the comparison of pre-placement (BD) and post-placement (AD) surveys conducted on the dressed beach at the pay profiles and azimuths shown in the Plans for both the pre-placement and post-placement surveys unless otherwise approved by the ENGINEER. The CONTRACTOR shall perform the pre-placement survey no earlier than 1 week (7 days) prior to the initiation of fill placement in the respective project area unless otherwise approved by the ENGINEER. The survey shall be scheduled so that field notes and computations can be furnished to the ENGINEER a minimum of three (3) days in advance of initiation of fill placement so that control of quantities and adjustments to the berm width and fill volume may be made if deemed necessary by the ENGINEER. The CONTRACTOR shall notify the ENGINEER

immediately of any discrepancy between the existing conditions and the Drawings which would involve a five percent (5%) or greater increase in the design quantity. The CONTRACTOR shall notify the ENGINEER as to when the surveys will be conducted so that the ENGINEER may observe the survey as it is conducted.

11. HYDRAULIC PLACEMENT OF BEACH FILL

- 11.1 General.** All sand excavated from the dredge activity shall be transported to, and hydraulically deposited on the beach within the lines, grades, and cross-sections shown in the Plans except as may be modified by the provisions Technical Provision 11.11. The CONTRACTOR shall maintain and protect the fill in a satisfactory condition at all times until final completion and acceptance of the Work. CONTRACTOR will receive no payment for any fill (sand), which is not contained within the limits of the hydraulic fill template plus tolerances shown in the Plans. The CONTRACTOR must place a minimum of 95% of the design volume between pay profile lines and achieve the minimum fill tolerance everywhere in the project area in order to be considered for payment of that section, unless otherwise indicated by the ENGINEER in writing.
- 11.2 Removal of All Debris from the Fill Area.** Prior to placement of fill, the CONTRACTOR shall remove from the site of the Work all snags, driftwood, and similar debris lying within the foundation limits of the beach fill section. All materials removed shall be taken from the beach area and disposed of in an appropriate and legal manner and at the expense of the CONTRACTOR. Grading and other construction equipment will not be permitted outside the project limits as shown in the Plans except for ingress or egress to and from the site.
- 11.3 Fill Placement Requirements.** The excavated material shall be placed and brought to rest on the beach to the lines, grades, and cross-sections indicated on the drawings, unless otherwise provided for herein or directed by the ENGINEER. The beach is subject to changes and the elevations on the beach at the time the Work is performed may vary from the elevations shown in the Plans. The CONTRACTOR is to place the hydraulic fill on the beach in such a manner as to establish a uniform beach between adjacent pay profile lines. Sections of beach located between pay profiles shall be fill as described in Section 11.8.
- 11.4 Fill Placement Restrictions.** For beach fill sections that do not include an artificial dune, the fill shall extend landward to the existing elevation contour that matches the berm crest elevation (+6.0 feet NAVD88) unless features such as dunes, vegetation, buildings or bulkheads, for example, prohibit fill placement. If a bulkhead or revetment extends to the design berm elevation or above, the fill shall terminate at the bulkhead or revetment. If the top of a bulkhead or revetment is below the design berm crest elevation, then the fill shall

taper landward (using a 1V on 5H slope) to one (1) foot below the crest of the bulkhead or revetment, to prevent overtopping. For sections that include an artificial dune, the fill shall be constructed to the lines and grades shown on the drawings.

11.5 Kitty Hawk Dune. The CONTRACTOR shall construct a dune within the limits of Kitty Hawk as specified in the Plans. The material for the dune may either be initially placed within the limits of the temporary dune stockpile location as shown in the Plans or placed directly on the beach profile to construct the dune. Placement of the dune material within the temporary dune stockpile location is optional. If the dune material is placed within the temporary dune stockpile location, upon completion of the post-placement survey, and prior to final completion, the material shall be relocated to construct the dune. The temporary dune stockpile limits are larger than the required dune fill volume to provide the CONTRACTOR with flexibility in stockpiling the material within the temporary dune stockpile limits. The CONTRACTOR may stockpile material at their discretion within the temporary dune stockpile limits shown on the plans. If the dune material is placed directly on the beach profile without being first placed within the temporary dune stockpile location, the CONTRACTOR shall include the dune material in the post-placement survey (AD).

Regardless of construction method, the dune shall be constructed within the dune corridor, with a crest elevation of +14 feet NAVD88 and verified by a centerline survey. The dune does not have a minimum crest width. Other dimensions including side slope and base width are at the discretion of the CONTRACTOR provided the structure meets the required minimum crest elevation of +14 feet NAVD88. The dune shall be constructed seaward of the “Landward Limit of Dune” line as shown on the Plans. The horizontal limits of the dune within the dune corridor are at the discretion of the CONTRACTOR as long as it is seaward of the “Landward Limit of Dune” line as shown on the Plans. The dune shall be constructed between the stations provided in the following table:

Station		Effective Distance (ft)	Density (cy/ft)	Volume (cy)
From	To			
7+00	114+00	10,775	5.0	53,875
125+00	130+00	515	5.0	2,575
157+00	171+00	1,405	5.0	7,025
185+00	189+87	495	5.0	2,475
TOTAL		13,190	-	65,950

The CONTRACTOR is eligible for payment for an average stockpile density of up to 5.0 cy/ft along the lengths as defined in the table above. Therefore, the maximum pay volume for the Kitty Hawk Dune shall be 65,950 cubic yards, unless modified by change order. No

additional payment shall be made for the construction of the dune within the Kitty Hawk limits.

- 11.6 Fill Under Structures on Pile.** Fill shall not be placed beneath buildings located on pilings. Fill may be placed up to the seaward edge of any such building but shall not be placed beneath the building. The CONTRACTOR assumes all responsibility and damage resulting from placement of material closer than 10 feet from any structure on pile.
- 11.7 Control of Fill.** The CONTRACTOR shall make every attempt to retain placed fill within the beach fill template. Temporary shore-parallel dikes, and spreader and pocket pipe shall be used to prevent gulying and erosion of the beach and hydraulic fill, to retain the hydraulic fill on the beach within the limits of the hydraulic fill template cross-section, and to control water turbidity. The pipeline discharge will be located no closer than 25 feet, or at a distance deemed safe by the CONTRACTOR, from any structure to avoid potentially undermining the structure. Dikes or mounds shall be constructed along the waterline as necessary to direct the pipeline discharge longitudinally along the beach to avoid transverse gulying direct from the discharge point to the ocean, and to build the construction berm. The ENGINEER may direct the CONTRACTOR to extend dikes, if necessary, to control turbidity or beach erosion. No undrained pockets shall be left on the renourished beach upon completion of the Work. The CONTRACTOR shall not permit spoil water to flow landward of the fill section, underneath pile supported structures, or to pond between the hydraulic fill and the upland. Any material permitted to flow into or restrict the flow of an existing ditch, or canal shall be promptly removed. Structures within the fill section shall be protected by the CONTRACTOR to prevent damage thereto by the CONTRACTOR's operations.
- 11.8 Uniform Beach.** The filled beach between the pay profiles shall be graded, dressed (see Section 11.10) and uniform in dimension. Beach sections between pay profiles shall be filled to a minimum of 95% of the volume based on the fill templates shown in the fill template cross-sections in the Plans, and to the minimum tolerance everywhere. The constructed beach contour lines between pay profiles, including the beach berm break, will be approximately parallel and straight line, indicating that the CONTRACTOR constructed a uniform (non-cusplate) beach between the profile lines to the appropriate elevation and width.
- 11.9 Underfilling Between Pay Profile Lines.** If the ENGINEER or OWNER observe or think they have observed underfilling of the beach between pay profile lines, the ENGINEER or OWNER may request an additional survey be conducted by the CONTRACTOR at the CONTRACTOR's expense. If found to be deficient, the CONTRACTOR shall place

additional hydraulic fill until the beach is uniform in appearance and dimensions between pay profile lines, provides a straight beach berm break between pay profile lines, provides a minimum of 95% of the design hydraulic fill volume and meets the minimum tolerance at all locations in the acceptance section in order to qualify for payment of that section. Fill will not be obtained from adjacent areas of the beach or from upland sources to remedy under filling.

11.10 Dressing the Restored Beach. Upon completion of all filling operations within an acceptance section, and prior to surveying for payment, the fill shall be graded and dressed with a dragged pipe, or similar method so as to eliminate any undrained pockets, ridges, and depressions in the hydraulic beach fill surfaces. The CONTRACTOR is to grade and dress the hydraulic fill on the beach in such a manner as to establish a uniform berm width and slope between adjacent pay profile lines. The bank or scarp caused by wave erosion shall be graded down to a slope not steeper than one (1) foot vertical to ten (10) feet horizontal to the water's edge. The CONTRACTOR shall grade down any and all beach scarps or sand cliffs in the entire restored beach until the CONTRACTOR has demobilized from the project site.

11.11 Right to Vary Beach Design Dimensions. The ENGINEER reserves the right to vary the width or grade of the berm from the lines and grades shown on the Plans due to changes in beach conditions. The hydraulic beach fill cross-sections shown in the Plans are for the purpose of estimating the amount of hydraulic fill needed and will be used by the ENGINEER in making any change in the lines and grades.

11.12 One-Time Beach and Dune Slope Adjustment. Should the CONTRACTOR encounter difficulty attaining the beach and dune slope delineated within the Plans, the CONTRACTOR may request a change in construction slope. This request must be provided to the ENGINEER in writing. The reason for the request for a change in construction slope must be clearly stated and an alternate slope must be provided. Based on this request and at the ENGINEER's discretion, the construction slope may be altered. The placed volume amounts for each payment section will remain unaltered by this change in slope. No additional compensation will be provided to the CONTRACTOR. A request for a change in construction slope may be made only once during the construction of this project, following which the CONTRACTOR will be required to maintain the revised construction slope throughout the remainder of the project. A set of revised construction drawings delineating the change in construction slope and new slope break stationing will be provided to the CONTRACTOR within five (5) working Days of the ENGINEER's Acceptance of the change in construction slope.

- 11.13 Tolerances.** Payment will be for hydraulic fill placed within the construction template and allowable tolerances only, as shown in the Plans. The CONTRACTOR shall not overflow the templates. The ENGINEER may require fill to be removed from overflowed sections at no cost to the OWNER. The maximum vertical tolerance below and above the template is 0.5 feet. Hydraulic fill placement must at least meet the 0.5 feet tolerance below the template everywhere in the fill, and the minimum fill volume requirement. The CONTRACTOR shall refill any deficient section of beach to at least meet the below template tolerance, and to 95% of the fill volume for the acceptance segment. The OWNER will withhold payment for those sections of beach that do not meet the minimum hydraulic fill requirements (including the Kitty Hawk dune requirements) until the appropriate hydraulic fill placement and grading has been completed by the CONTRACTOR.
- 11.14 Misplaced Materials.** If any material is deposited other than in places designated or approved, the CONTRACTOR may be required to remove such misplaced material and redeposit it where directed by the ENGINEER or OWNER, at the CONTRACTOR's expense.
- 11.15 Sand Ramps.** The CONTRACTOR is required to build and maintain sand ramps at least 15 feet wide over the shore pipe at 300-foot intervals throughout the project area to allow public use of completed sections of beach. Additional ramps shall be constructed in front of all lifeguard towers, or at the direction of the ENGINEER or OWNER. Upon removal of the pipe, the beach in the area of the ramps will be leveled and dressed.
- 11.16 Restrictive Barrier.** The CONTRACTOR shall be required to erect, maintain, and move as necessary, a restrictive barrier around the discharge of his hydraulic pipeline (or other mechanical off loader) or any other active area where Work may present a safety hazard to the public. In the vicinity of the discharge, the barrier shall be constructed so as to prevent the public from approaching the discharge from any direction closer than 250 feet, or to provide an area sufficient in size for the safe progression of the Work. The CONTRACTOR shall post signs in a conspicuous manner stating, "**DANGER - HIGH PRESSURE DISCHARGE FROM DREDGE.**"
- 11.16 Dedicated Safety and Flag Person.** The CONTRACTOR shall have a minimum of one (1) dedicated safety and flag person on site at all times, whose sole responsibility is preventing the public from entering the Work area.

12. WORK AREA.

12.1 General. The construction area limits available to the CONTRACTOR for accomplishing the Work are shown in the Plans. The CONTRACTOR shall accomplish the Work in such a manner so as to minimize disruption to road traffic and disruptions to daily activities in the public beach areas. The CONTRACTOR shall exclude the public for safety purposes from the Work areas in the immediate vicinity of the hydraulic fill placement, grading and transporting operations, or any other area that may be dangerous to the public. The CONTRACTOR shall minimize the areas closed to the public.

Construction Access and Staging Areas. The CONTRACTOR shall limit construction access and staging to the locations and extents shown in the Plans or as approved by the OWNER. The CONTRACTOR shall exercise caution when operating in the access, staging and all other Work areas and driving on the beach with vehicles or equipment. The beach and adjacent areas are used heavily by the public throughout the year. The CONTRACTOR shall cordon off and/or fence the access and staging areas to prohibit public access. The access and staging areas shall be kept neat, orderly, and in a safe manner. Outside of emergency vehicle access, the staging areas and construction accesses do not need to remain open to the public while the areas are in use for the Project. It is anticipated that the Contractor would attempt to minimize needless closure of the public access if the Contractor is not actively using the access. All access and staging areas shall be restored to the pre-construction condition upon project completion at the cost of the CONTRACTOR. In the event infrastructure (such as walkways, sidewalks, fences, vegetation, etc.) is temporarily removed or relocated or there is unauthorized damage to vegetation and/or facilities by the CONTRACTOR, the CONTRACTOR shall restore all damage to structures and natural feature to pre-construction conditions or better. The CONTRACTOR will not receive final payment until all damage is restored to the satisfaction of the OWNER. If additional access and staging areas are needed, they shall be procured by and at the expense of the CONTRACTOR.

Outside of emergency vehicle access, the staging areas and construction accesses do not need to remain open to the public while the areas are in use for the Project. It is anticipated that the Contractor would attempt to minimize needless closure of the public access if the Contractor is not actively using the access.

12.1.1 Town of Duck Staging Area. The Town of Duck staging area, as shown on the plans, has approximate dimensions of 60 ft wide x 195 ft deep (USACE Field Research Facility). The CONTRACTOR shall construct an approximate 1,100 ft board road, or equivalent as approved by the

ENGINEER, from the staging area to the dune cut along the entire construction access road to prevent damage to buried cables. Additionally, an approximate 20 ft board road, or equivalent as approved by the ENGINEER, shall be constructed on the existing beach, above the MHW line, at the location where the cross shore array data cables are buried as shown on the plans. The location of cables will be field verified by the USACE FRF prior to commencement of construction. The width of the board roads is at the discretion of the CONTRACTOR but must be wide enough to ensure that all operations within the limits of the board road and do not cause damage to buried cables. Ingress and Egress from the staging area to the dune cut must remain within the limits of the board roads at all times. All operations in mobilizing and demobilizing throughout the duration of the project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, shall utilize the board road construction access between the staging area and the dune cut and the approximate 20 ft board road on the existing beach. No additional construction access shall be utilized without the written approval of the OWNER. The construction access and staging areas shall be utilized only during the construction of the respective Towns. Upon completion of the Town of Duck nourishment project, construction access and staging areas shall be restored as described in Section 12.2 within 30 days upon acceptance of all acceptance sections for the Town of Duck, unless approved by the OWNER. The CONTRACTOR shall be responsible for any damage incurred to buried cables; the CONTRACTOR will pay for the cost to replace and/or repair any cables damaged by the CONTRACTOR during construction.

12.1.2 Town of Kitty Hawk Area. The Town of Kitty Hawk staging areas (2), as shown on the plans, have approximate dimensions of 200 ft wide x 65 ft deep (Byrd Street, near Sta. 13+00) and 150 ft wide x 50 ft deep (Kitty Hawk Road, near Sta. 142+00). The CONTRACTOR shall attempt to minimize the area utilized within the staging areas as best as practical as the beach and adjacent areas are used heavily by the public throughout the year. No additional construction access shall be utilized without the written approval of the OWNER. The construction access and staging areas shall be utilized only during the construction of the respective Towns. Upon completion of the Town of Kitty Hawk nourishment project, construction access and staging areas shall be restored as described in Section 12.2 within 14 days

upon acceptance of all acceptance sections for the Town of Kitty Hawk, unless approved by the OWNER.

12.1.3 Town of Kill Devil Hills Staging Area. The Town of Kill Devil Hills staging area (1), as shown on the plans, has approximate dimensions of 200 ft wide x 115 ft deep (Helga Street, near Sta. 199+95). The CONTRACTOR shall attempt to minimize the area utilized within the staging areas as best as practical as the beach and adjacent areas are used heavily by the public throughout the year. No additional construction access shall be utilized without the written approval of the OWNER. The construction access and staging areas shall be utilized only during the construction of the respective Towns. Upon completion of the Town of Kitty Hawk nourishment project, construction access and staging areas shall be restored as described in Section 12.2 within 14 days upon acceptance of all acceptance sections for the Town of Kill Devil Hills, unless approved by the OWNER.

12.2 Vessel-Shore Transfers. For shore to vessel and vessel to shore transfers of personnel, supplies, etc., the CONTRACTOR shall secure and arrange for all landing sites, transfer areas, or staging areas at his own expense. It is the responsibility of the CONTRACTOR to obtain the required permission and to pay any costs associated with the use of the sites. Furthermore, the CONTRACTOR shall be responsible for any damages caused by the use of any site for landing and transfers, and shall not impede navigation through navigable waterways and boat ramps.

12.3 Crane and Dragline Safety Requirements. All cranes used in performing the Work set forth in these specifications shall be equipped with geared boom hoists which require the application of power to raise and lower the boom or shall be otherwise equipped with mechanisms which will prevent the booms from being lowered by gravity. Cranes that are equipped with booms that can be lowered by either gravity or by power shall have the mechanisms for operating the booms by gravity made inoperative so that the booms cannot be lowered by gravity. The booms of all cranes and draglines shall also be equipped with shock absorbing type backstops to prevent them from overtopping.

13. BEACH TILLING (OPTIONAL).

13.1 Tilling and Dressing the Beach. If so directed by the ENGINEER, the CONTRACTOR shall till the completed beach fill from the landward limit of fill to the mean high water line upon Substantial Completion. The tilling shall be by use of a tracked or wheel vehicle (bulldozer, frontend loader, or equivalent) by pulling (rear mount) a rake with the tines

modified to a length of 24 inches or more and spaced approximately 12 to 18 inches apart. The CONTRACTOR shall conduct additional tilling as necessary to ensure that the entire beach fill above the mean high water line has a compaction of less than 500 cone penetrometer units, as determined by the ENGINEER. Tilling will be to a minimum depth of 24 inches throughout the newly placed beach seaward to the visible high water mark. Following tilling, the beach shall be dressed by dragging a pipe lengthwise over the beach. The pipe may be positioned immediately behind the tilling tines to allow for a single operation of tilling and dressing. The ENGINEER will notify the CONTRACTOR within three (3) days of completion of the beach fill operations in the project area whether tilling will be required.

14. SAND FENCING (OPTIONAL).

14.1 General. Sand Fencing shall be installed per CAMA requirements and as detailed in Appendix C – Sand Fencing – Exhibit “A” through “F”. A single row of sand fencing shall be installed as shown in Exhibit “D”. Sand fencing shall be constructed from evenly spaced thin wooden vertical slats connected with twisted wire, no more than 5 feet in height. Eight-foot (8’) long wooden posts or stakes no larger than 2” X 4” or 3” diameter shall support sand fencing.

14.2 Location. Sand fencing shall be placed as far landward as possible to avoid interference with sea turtle nesting, existing public access, recreational use of the beach, and emergency vehicle access.

14.2.1 Sand fencing shall not be placed on the wet sand beach area.

14.2.2 Sand fencing installed waterward of the crest of the frontal or primary dune shall be installed at an angle no less than 45 degrees to the shoreline. Individual sections of sand fence shall not exceed more than 10 feet in length (except for public access ways) and shall be spaced no less than seven feet apart as measured at an angle perpendicular to parallel fencing, and shall not extend more than 10 feet waterward of the following locations, whichever is most waterward, as defined in 15A NCAC 7H .0305: the first line of stable natural vegetation, the toe of the frontal or primary dune, or erosion escarpment of frontal or primary dune; and

15. PROTECTION OF EXISTING STRUCTURES FROM CONSTRUCTION ACTIVITY.

- 15.1 General.** Bulkheads, revetments, upland structures, cables, ducts, anchor points, and other structures within the fill sections and all Work areas shall be protected by the CONTRACTOR to prevent damage thereto by the CONTRACTOR'S operations.
- 15.2 Pre- and Post-Construction Videos.** The CONTRACTOR shall make pre- and post-construction videos of the project site, and provide copies to the OWNER. The videos will document the pre- and post-project conditions for both beach work and structural inspections from the initial construction start until final acceptance. One complete video shall be made of the entire project before the start of construction and one video shall be made of the completed project. The costs for all video work shall be included in the applicable contract lump sum price for the Mobilization bid item.
- 15.3 Work Stoppage.** The CONTRACTOR shall be responsible for any costs associated with Work stoppage or changes in the CONTRACTOR's means and methods that result from monitoring, inspection, and/or damage avoidance activities.

PART 01100

DARE COUNTY, NC

BEACH NOURISHMENT PROJECT

**SUPPLEMENTARY TECHNICAL PROVISIONS
(ENVIRONMENTAL PROTECTION AND MONITORING)**

PART 01100

**DARE COUNTY, NC
BEACH NOURISHMENT PROJECT**

**SUPPLEMENTARY TECHNICAL PROVISIONS
(ENVIRONMENTAL PROTECTION AND MONITORING)**

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PART 01100

**DARE COUNTY, NC
BEACH NOURISHMENT PROJECT**

**SUPPLEMENTARY TECHNICAL PROVISIONS
(ENVIRONMENTAL PROTECTION AND MONITORING)**

1. SCOPE.

This section addresses the prevention of pollution and other environmental damage as the result of construction operations under this contract and for those measures set forth in the Technical Specifications. For the purpose of this specification, pollution and other environmental damage are defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of pollution and damage requires consideration of air, water, land and the marine environment and includes management of construction activities, visual aesthetics, noise, solid waste, radiant energy, and radioactive materials, as well as other pollutants.

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The CONTRACTOR shall confine activities to areas defined by the Plans and Technical Specifications. The CONTRACTOR shall refrain from the use of any alternate area for staging of equipment, layout of the work, and access to / from the work site without prior written authorization from the ENGINEER. Environmental protection shall be as stated in the following subparagraphs.

2. QUALITY CONTROL.

The CONTRACTOR shall establish and maintain quality control for environmental protection for all items set forth herein. The CONTRACTOR shall record on Daily Quality Control reports any problems in complying with laws, regulations and ordinances, as well as project permits, and corrective action taken.

3. PERMITS.

The CONTRACTOR shall comply with all requirements under the terms and conditions set out in all permits applicable to the work. Project permit copies are provided as appendices to the contract documents. Specifically, the CONTRACTOR will familiarize himself with specific conditions contained in the State of North Carolina Department of Environmental and Natural Resources and Coastal Resources Commission (DENR), referred to as the CAMA permit, and U.S. Army Corps of Engineers (USACE) permits and other State approvals for the project. No other known permits are required to perform the work. Dare County, the Town of Duck, the Town of Kitty Hawk and the Town of Kill Devil Hills have secured all necessary easements from the beach front home owners along the project shoreline unless otherwise noted in the plans or contract documents. Copies of

approved State and Federal permits are provided in the appendices, and are a part of the contract documents.

4. NOTIFICATION.

The ENGINEER will notify the CONTRACTOR and the OWNER of any observed noncompliance with the aforementioned Federal, State, or local laws or regulations, permits and other elements of the CONTRACTOR's environmental protection plan. The OWNER will determine what action will be taken and such response will be transmitted to the CONTRACTOR by the ENGINEER which may include stopping construction of the project until the CONTRACTOR complies with the environmental protection plan. Nevertheless, it remains the sole responsibility of the CONTRACTOR to comply with all applicable Federal, State or Local laws or regulations, permits and all elements of the environmental protection plan. It will also be the CONTRACTOR's responsibility to advise all subcontractors to comply with all applicable laws, regulations, permit requirements and all elements of the environmental protection plan.

5. TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL AND ENVIRONMENTAL PROTECTION.

The CONTRACTOR shall train all subcontractors and personnel in all aspects of environmental protection. All personnel and subcontractors are to be familiar with permit requirements, and with the necessity of protection of all environmental resources, including offshore hardbottom communities (should any exist) and endangered or protected species. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to insure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the CONTRACTOR. Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with this document.

6. ENVIRONMENTAL PROTECTION PLAN.

The CONTRACTOR shall submit in writing an Environmental Protection Plan to the ENGINEER. The Notice to Proceed will not be issued until the Environmental Protection Plan is reviewed and approved by the ENGINEER and the OWNER. Approval of the CONTRACTOR's plan will not relieve the CONTRACTOR of his/her responsibility for adequate and continuing control of pollutants and other environmental protection measures. The Environmental Protection Plan shall include, but not be limited to, the following:

- (a) A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, and abatement that are applicable to the CONTRACTOR's proposed operations and the requirements imposed by those laws, regulations, and permits.

DARE COUNTY BEACH NOURISHMENT PROJECT

- (b) Methods for protection of features and habitats to be preserved within authorized work areas. The CONTRACTOR shall prepare a listing of methods to protect resources needing protection, i.e. all vegetation, trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological and cultural resources, manatees and all marine hardbottom areas (should any exist).
- (c) Procedures to be implemented to provide the required environmental protection and to comply with the applicable permits, laws, and regulations. The CONTRACTOR shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes or failure to follow the procedures set out in accordance with the Environmental Protection Plan.
- (d) Plans showing locations of any proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.
- (e) Environmental monitoring schedule for the project area, including land, water, air and noise monitoring.
- (f) Oil spill prevention.
- (g) Oil spill contingency plan.
- (h) A marine (sea) turtle protection plan.
- (i) A manatee protection plan.
- (j) Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- (k) A statement as to the person who will be responsible for implementation of the Environmental Protection Plan. The CONTRACTOR personnel responsible shall report directly to the CONTRACTOR's top management and shall have the authority to act for the CONTRACTOR in all environmental protection matters. This person shall be referenced as the Environmental Protection Officer in the contract documents.
- (l) A statement acknowledging that the CONTRACTOR is responsible for environmental protection, including all of the CONTRACTOR's personnel and subcontractors.
- (m) The Environmental Protection Plan will be dated and endorsed by the individual of top management in charge of the construction.

7. TURBIDITY CONTROL.

Construction operations are expected to temporarily elevate turbidity levels in the water column at the borrow area and fill sites. Higher turbidity levels are likely to be found in the discharge zone (nearshore swash zone), as well as the active dredge site (borrow areas) during periods of active construction. Turbidity monitoring during construction will be managed by the CONTRACTOR, and visual inspections of turbidity levels will be performed daily. In the event turbidity levels appear to exceed the state water quality standards, measurements will be taken to determine actual turbidity levels, and the CONTRACTOR will be responsible for notifying the ENGINEER. Measures that could be taken to reduce turbidity include moving the dredge to a different location, or asking the CONTRACTOR to extend the berm, which would allow more time for fines to settle out before the water flows back into the ocean.

Turbidity monitoring is not anticipated to be required for this project. However, the regulatory agencies reserve the right to require monitoring at their discretion. In the event monitoring is required, the OWNER may direct the CONTRACTOR to conduct daily Turbidity Monitoring in accordance with the following protocol:

Beach Placement Site – If plume created by sand placement operations extends a distance of 1,500 meters from the point of discharge and visually appears to exceed the 25 NTU permit standard (as determined by the ENGINEER). Under this condition the CONTRACTOR shall sample for Compliance at a point no more than 1,500 meters down current and no more than 150 meters offshore, within the densest portion of any visible plume.

Background samples shall be collected as least 500 meters in the opposite direction, clearly outside of any visible plume created by the project.

Samples shall be collected at the surface and mid-depth for each location and at the same approximate distance off-shore.

Dredge Location - If plume created from dredging operations extends a distance of 1,500 meters from the dredge and visually appears to exceed the 25 NTU permit standard (as determined by the ENGINEER), the CONTRACTOR shall sample for Compliance at a point no more than 1,500 meters down current from the dredge, within the densest portion of any visible plume.

Background samples shall be collected as least 500 meters in the opposite direction, clearly outside of any visible plume created by the project

Samples shall be collected at the surface and mid-depth for each location and at the same approximate distance off-shore.

If any compliance reading is 25 NTU's or greater above the applicable background reading the CONTRACTOR shall cease operations and not resume until corrective actions have been taken or turbidity levels have returned to acceptable values.

Payment for the turbidity monitoring shall be made in accordance with Discretionary Bid Item VII-A "Turbidity Monitoring".

8. PROTECTION OF FISH, BENTHIC, AND WILDLIFE RESOURCES.

In the case of any collision with or injury of a threatened or endangered species, including but not limited to sea turtles, the CONTRACTOR must stop all dredging operations and immediately contact the NMFS's Protected Resources Division (727-824-5312, fax 727-824-5309, or electronic mail takereport.nmfsser@noaa.gov), the local authorized sea turtle stranding/rescue organization (currently the North Carolina Wildlife Resources Commission, but an up-to-date list is provided at <http://www.sefsc.noaa.gov/species/turtles/strandings.htm>) and BOEM (dredgeinfo@boem.gov and 703-787-1215).

8.1 General Protections – All Species. The CONTRACTOR shall keep construction activities under continued surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific consideration and measures for their protection will be addressed in the CONTRACTOR's Environmental Protection Plan. The CONTRACTOR will comply with all CAMA and USACE permit conditions and requirements addressing environmental protection and the protection of species requiring specific consideration. The CONTRACTOR shall abide by the sea turtle, shorebird, and manatee conditions in the CAMA permit. They will be reviewed at the preconstruction conference.

Prior to any nourishment activities occurring between April 1 and October 31 of any year Division of Marine Fisheries Shellfish Sanitation Section shall be notified so that any necessary swimming advisories may be posted.

All derelict concrete, metal, and coastal armoring geotextile material and other debris must be removed from the beach prior to any sand placement to the maximum extent possible. If debris removal activities take place during the sea turtle nesting season, the work must be conducted during daylight hours only and must not commence until completion of the sea turtle nesting survey each day.

Predator-proof trash receptacles must be installed and maintained during construction at all beach access points used for the project construction and any maintenance events, to minimize the potential for attracting predators of piping plovers, red knots, and sea turtles. All CONTRACTORS conducting the work must provide predator-proof trash receptacles for the construction workers. All CONTRACTORS and their employees must be briefed on the importance of not littering and keeping the Action Area free of trash and debris.

A meeting between representatives of the CONTRACTOR(s), the Corps, the Service, the NCWRC, the permitted sea turtle surveyor(s), and other species surveyors, as appropriate, must be held prior

to the commencement of work. At least 10 business days advance notice must be provided prior to conducting this meeting. The meeting will provide an opportunity for explanation and/or clarification of the sea turtle protection measures, as well as additional guidelines when construction occurs during the sea turtle nesting season, such as storing equipment, minimizing driving, and reporting within the work area, as well as follow-up meetings during construction.

The CONTRACTOR is to give the ENGINEER copies of any reports, which may be required by the Biological Opinion.

All work shall be in compliance with the USFWS Biological Opinion

8.2 Benthic Resources Protection. The CONTRACTOR shall not dredge outside the permitted borrow area shown in the contract Drawings. Anchoring, spudding, or other bottom disturbing activities are not authorized outside of the approved borrow area on the OCS (seaward of the three nautical mile line shown in *Appendix I – OBX_Geotechnical_Report_082615*), except for immediate concerns of safety, navigation risks or emergency situations. Should any booster pump, submerged pipelines or anchoring be anticipated outside of the borrow area, the CONTRACTOR must obtain authorization from BOEM. The CONTRACTOR will ensure a marine remote sensing survey is performed at the site of any booster pump, submerged pipeline locations and/or any anchoring locations outside of the borrow area in advance of operations in or along the OCS prior to the activity and will provide the results of the survey to BOEM for review. If markers indicative of prehistoric or historic resources are identified during the survey, a minimum of a 100-ft buffer will be established around each potential prehistoric or historic resource. All bottom disturbing activities, including anchoring or spudding, in the vicinity of any such historic resource will be avoided and the buffer will be strictly maintained. To minimize the risk of inadvertent damage to undiscovered archeological or historic resources, the CONTRACTOR shall ensure that no equipment is dragged outside the borrow area. The CONTRACTOR may contact Brian Jordan – Federal Preservation Officer – (703) 787-1748 for further information on BOEM requirements for disturbances outside the borrow area. The CONTRACTOR shall be responsible for any damage resulting from bottom disturbing activities not authorized outside of the approved borrow area on the OCS. A marine remote sensing survey has been performed from borrow area C to landward of the OCS boundary as shown in *Appendix I – OBX_Geotechnical_Report_082615*. It is the CONTRACTORs responsibility to obtain authorization from BOEM for any booster pump, submerged pipeline or anchoring outside of the approved borrow areas.

Pipeline placement must be coordinated with NCDRCM, the Corps, the Service’s Raleigh Field Office and the NCWRC.

Additionally, pipes transporting sediment to the beach will be maintained without leaks to avoid spreading sediment over the bottom. In order to avoid adverse impacts associated with the transport of fill material to the disposal sites, the pipeline will be monitored during construction. The COUNTY, along with their associated Engineer, will coordinate with the dredgers and have in place a mechanism to cease dredge and fill activities in the event that a substantial leak is detected (leaks resulting in turbidity that exceed State water quality standards or sedimentation). Operations may resume upon appropriate repair of affected couplings or other equipment.

The CONTRACTOR shall also exercise caution in operating all ships and vessels in shallow water. The CONTRACTOR shall use all means necessary to prevent impacts to the hardbottom (should any exist). The CONTRACTOR shall note that significant fines to those who damage hardbottom resources may be levied by appropriate regulatory offices. No hardbottom areas have been identified in the project boundaries. The documents in *Appendix H – Marine Geology Supporting Documentation* were reviewed to conclude that no hardbottom areas have been identified in the project boundaries. The limit of CPE-NC data collection are the beach profile surveys detailed in *Appendix D – Beach Profiles and Borrow Area Survey Data* and the offshore borrow area investigation detailed in *Appendix I – OBX Geotechnical Report 082615 and Appendices 1-19*. Nevertheless, the CONTRACTOR is encouraged to utilize his/her own resources to locate and to avoid contact with, or damage to, any possible hardbottom areas that may exist. Anchoring of any vessel within seagrass beds is prohibited.

All submerged pipeline shall be marked by a buoy or other floating device at a minimum of 1,000 ft spacing's. The CONTRACTOR shall also provide the state plane coordinates of the pipeline position on not to exceed 1,000 ft intervals, and at any bend, curve and terminus. The pipeline location shall be provided to the ENGINEER prior to the commencement of sand placement. The CONTRACTOR shall routinely verify the pipeline position.

8.3 Sea Turtle Protection. During beach disposal of dredged material, if work is done during the sea turtle nesting season, the CONTRACTOR shall make daily visual inspections to check for the existence of nests, mark these nests, and subsequently avoid the nests as required by the permits.

Any signs of turtle nesting activity observed by the CONTRACTOR shall be reported immediately to the ENGINEER and the COUNTY's sea turtle monitoring agent. No construction activity shall occur in the vicinity of nesting turtles, turtle nests or hatching turtles until the nests have been satisfactorily relocated by the COUNTY's agent or the nesting or hatching turtles protected during construction. The CONTRACTOR shall instruct all personnel associated with the construction of the project, including subcontractors, about the presence of sea turtles and sea turtle nests in the area, stressing the need to avoid disturbance of nesting sea turtles, nests or hatchlings.

In order to ensure protection of sea turtles, the permittee shall implement the following survey activities throughout the entire project area from May 1 through November 15 for the duration of the authorized project;

- a) In each case of observation of sea turtles (nesting females, hatchlings or eggs), designated local personnel shall immediately be notified;
- b) If a sea turtle is observed in the project area during the project, all work shall immediately be stopped within 500 feet of the turtle. If the turtle successfully places a clutch of eggs on the beach, work in the area shall not resume until the eggs can be relocated to a safe area. If the turtle returns to the water without nesting, work may resume in the affected area;
- c) If recently emerged hatchlings from an unmarked nest are observed, all work shall immediately stop within 100 feet of the hatchlings, and all artificial lighting shall be

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- extinguished within 500 feet of the emerged nest until authorized sea turtle volunteers can excavate the nest and release any remaining hatchlings into the ocean;
- d) Nests located in areas where beach nourishment material is to be placed prior to nest hatching shall be relocated to typical nesting habitat on the beach outside the project area. Nesting surveys and egg relocations shall be conducted only by Wildlife Resources Commission permitted personnel with prior experience and training. Only nests that will be affected by construction activities may be moved;
 - e) If any nests or eggs are discovered during the project, all project activity shall immediately cease within 50 feet of the location of the eggs or nest. Work in the affected area shall only resume after receiving permission from Wildlife Resources Commission staff;
 - f) During beach nourishment activities, daily monitoring shall be conducted to determine if escarpments have formed. Any escarpments greater than 18 inches that are present between May 1 and August 30 shall be leveled. Monitoring outside the sea turtle nesting season shall be done at least once every two weeks. Leveling activities shall be coordinated with the Wildlife resources Commission prior to implementation. The permittee shall implement the escarpment monitoring and associated leveling for three years post-construction;
 - g) During the sea turtle season (May 1 through November 15), efforts shall be made to minimize impacts to sea turtle access to the beach to the maximum extent possible by storing equipment and materials off of the beach, perpendicular to the beach, or at the landward most area of the beach that does not compromise dune integrity;
 - h) During the sea turtle season (May 1 through November 15), nighttime lighting associated with nourishment activities shall be minimized. Lighting shall be limited to the immediate construction area and shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excess illumination of the water surface and nesting beach.

Upon locating a dead, injured, or sick endangered or threatened sea turtle specimen, the CONTRACTOR must make initial notification to the ENGINEER. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the CONTRACTOR shall not disturb the evidence.

During dredging operations, material placed on the beach shall be inspected daily by the County's representative to ensure compatibility. If during the sampling process non-beach compatible material, including large amounts of shell or rock, is or has been placed on the beach all work shall stop immediately and the NCDCM and the Corps will be notified by the permittee and/or its CONTRACTORS to determine the appropriate plan of action.

From May 1 through November 15, to the maximum extent practicable, excavations and temporary alteration of beach topography (outside of the active construction zone) will be filled or leveled to the natural beach profile prior to 9:00 p.m. each day.

Sea turtle monitoring, nest marking, and relocation efforts will be performed by a representative of Dare County. If any nesting turtles are sighted on the beach during construction, construction activities must cease immediately until the turtle has returned to the water, and the sea turtle permit holder responsible for nest monitoring has marked for avoidance or relocated any nest(s) that may have been laid. If a nesting sea turtle is observed at night, all work on the beach will cease and all

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lights will be extinguished (except for those absolutely necessary for safety) until after the female has finished laying eggs and returned to the water.

During the sea turtle nesting season, the CONTRACTOR must not extend the beach fill more than 750 feet along the shoreline and must confine work activities within this area between dusk and dawn of the following day until the daily nesting survey has been completed and the beach cleared for fill advancement. A permitted sea turtle surveyor must be present on-site to ensure no nesting and hatchling sea turtles are present within the work area. Once the beach has been cleared and the necessary nest relocations have been completed, the CONTRACTOR will be allowed to proceed with the placement of fill and work activities during daylight hours until dusk at which time the 750-foot length limitation must apply. If a nesting sea turtle is sighted on the beach within the immediate construction area, activities must cease immediately until the turtle has returned to the water and the sea turtle permit holder responsible for nest monitoring has relocated the nest.

Direct lighting of the beach and nearshore waters must be limited to the immediate construction area during the nesting season and must comply with safety requirements (see CAMA permit). Lighting on all equipment must be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the water's surface and nesting beach while meeting all Coast Guard, Corps EM 385-1-1, and OSHA requirements. Light intensity of lighting equipment must be reduced to the minimum standard required by OSHA for General Construction areas, in order to not misdirect sea turtles. Shields must be affixed to the light housing and be large enough to block light from all on-beach lamps from being transmitted outside the construction area or to the adjacent sea turtle nesting beach.

Daily (before 9 am) nesting surveys and egg relocation must be conducted if any portion of the sand placement occurs during the period from May 1 through November 15. Sea turtle monitoring surveys will be performed by the County's representative. If sand is placed on the beach at night, a nighttime monitor must survey the beach area that is affected that night, prior to the morning's normal nesting activity survey. No daytime movement of equipment up or down the beach (outside of the active nighttime construction area described in number 5, above) may commence until completion of the sea turtle nesting survey each morning. If nests are constructed in the project area, the nests must be marked and either avoided until completion of the project or relocated. Sea turtle relocation efforts will be conducted by Dare County's representative.

From May 1 through November 15, staging areas for construction equipment must be located off the beach. Nighttime storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities. In addition, all construction pipes placed on the beach must be located as far landward as possible without compromising the integrity of the dune system. Pipes placed parallel to the dune must be 5 to 10 feet away from the toe of the dune if the width of the beach allows. If pipes are stored on the beach, they must be placed in a manner that will minimize the impact to nesting habitat and must not compromise the integrity of the dune systems.

Demobilization of equipment from the beach must be conducted only during daylight hours, after the daily survey for sea turtle nests has been completed. Any nests that are identified must be marked for avoidance as described in number 8.d. above, and avoided during all demobilization activities.

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The CONTRACTOR shall level any scarp greater than 18 inches in height that may occur during project construction.

Sand compaction will be monitored at least twice after each sand placement event by the County's representative. Sand compaction must be monitored in the project area immediately after completion of any sand placement event and one time after project completion between October 1 and May 1. Out-year compaction monitoring and remediation are not required if the placed material no longer remains on the dry beach. Within 7 days of completion of sand placement and prior to any tilling (if needed), a field meeting shall be held with the Service, NCWRC and the Corps to inspect the project area for compaction and determine whether tilling is needed.

- a. If tilling is needed, the area must be tilled to a depth of 36 inches. All tilling activities shall be completed prior to May 1 of any year.
- b. Tilling must occur landward of the wrack line and avoid all vegetated areas that are 3 square feet of greater, with a 3 square foot buffer around all vegetation.
- c. If tilling occurs during the shorebird nesting season (after April 1, shorebird surveys are required prior to tilling per the Migratory Bird Treaty Act.
- d. A summary of the compaction assessments and the actions taken shall be included in the annual report to NCDCEM, the Corps and the Service's Raleigh Field Office.
- e. These conditions will be evaluated and may be modified if necessary to address and identify sand compaction problems.

NMFS-approved protected species observers shall be aboard the hopper dredge to monitor the hopper bin, inflow and overflow screening baskets, and dragheads for sea turtles and their remains. For the proposed action, 100% observer monitoring is required. Beach observers cannot be used in place of shipboard observers for hopper dredging of borrow areas

A project report summarizing the results of the dredging and the sea turtle take (if any) must be submitted to NMFS within 30 working days of completion. Reports shall contain information on project location, start-up and completion dates, cubic yards of material dredged, problems encountered, incidental takings (include photographs, if available) and sightings of protected species, mitigating actions taken (if relocation trawling, the number and species of turtles relocated), screening type (inflow, overflow) utilized, daily water temperatures, name of dredge, names of endangered species observers, percent observer coverage, and any other information the BOEM and/or CONTRACTOR deems relevant. This report must be provided to the Assistant Regional Administrator (Mr. David Bernhart) for NMFS's Protected Resources Division at Southeast Regional Office, 263 13th Avenue South, St. Petersburg, Florida 33701-5505. Notification of take shall be provided to NMFS at the following email address within 24 hours, referencing the present Opinion by NMFS identifier number (SER-2013-11187), title, and date: **takereport.nmfsser@noaa.gov**. BOEM shall provide NMFS's Southeast Regional Office (address provided in RPM No. 1 above) with an end-of-project relocation trawling report within 30 days of completion of relocation trawling. This report may be included within the project report (RPM No. 1).

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Abundance trawling. Abundance trawling will be employed five days prior to the commencement of hopper dredging if SST is above 10°C, to determine relative abundance of sea turtles in the area. An abundance of a minimum of one turtle captured during preliminary abundance trawling will trigger the need for relocation trawling to be employed during the remainder of the dredging operation. If no turtles are captured during abundance trawling, relocation trawling shall not be required and dredging may proceed. The taking of one sea turtle of any species during hopper dredging will trigger the need for relocation trawling to be enacted for the remainder of the dredge operation. The dredge will shut down until relocation trawling can commence. If during subsequent months of relocation trawling no turtles are taken the County may ask BOEM to confer with NMFS for a cessation of relocation trawling (RPM No. 3).

Relocation Trawling. Essentially, this method employs a capture-relocation technique, and is targeted at the active dredging site within the borrow area. If relocation trawling is used, it will begin no later than 24 hours in advance of any hopper dredging at the borrow site(s). Once dredging begins, relocation trawling will continue simultaneous with dredging operations. Relocation trawling will occur ahead of the dredge(s) throughout the duration of dredging. Any turtles captured during relocation trawling will be photographed, measured, biopsied for genetics, tagged, and relocated at least 3 nautical miles (nmi) away. During relocation trawling, 1 trawling vessel per dredge will operate 24 hours/day, 7 days/week. Tow times (i.e., the duration that the trawl net will be in the water and capable of trapping sea turtles) during relocation trawling will be strictly limited to less than 42 minutes total time. If relocation trawling is used then the following conditions must be observed during relocation trawling (RPM No. 5):

- a. *Trawl Time:* Trawl tow-time duration shall not exceed 42 minutes (doors in-doors out) and trawl speeds shall not exceed 3.5 kt.
- b. *Handling During Trawling:* Sea turtles and smalltooth sawfish¹ captured pursuant to relocation trawling shall be handled in a manner designed to ensure their safety and viability, by implementing the measures below.
- c. *Captured Turtle Holding Conditions:* Captured turtles shall be kept moist, and shaded whenever possible, until they are released. They may be held for up to 24 hours if opportunistic, ancillary, “piggy-back” data gathering (e.g., opportunistic satellite tagging) is proposed. This Opinion provides the authority to NMFS-approved observers to satellite tag captured sea turtles without the need for an ESA Section 10 permit.
- d. *Weight and Size Measurements and Tagging:* All turtles shall be measured (standard carapace measurements including body depth), tagged (PIT or Inconel), and weighed prior to release when safely possible; smalltooth sawfish shall be measured (fork length and total length) and, when safely possible, tagged, weighed, and a tissue sample taken prior to release. Only NMFS-approved observers or observer candidates in training under the direct supervision of a NMFS-approved observer shall conduct the tagging/measuring/weighing/tissue sampling operations.

¹ Although smalltooth sawfish trawl captures are not expected, these terms and conditions are included for such an eventuality. Any take of sawfish would require immediate reinitiation of consultation with NMFS.

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Flipper Tagging: All sea turtles captured by relocation trawling shall be flipper-tagged prior to release with external tags that shall be obtained prior to the project from the University of Florida's Archie Carr Center for Sea Turtle Research. This Opinion serves as the permitting authority for any NMFS-approved endangered species observer a relocation trawler to flipper-tag with external tags (e.g., Inconel tags) captured sea turtles. Columbus crabs or other organisms living on external sea turtle surfaces may also be sampled and removed under this authority.

PIT Tagging and Scanning: All sea turtles captured by relocation trawling or dredges shall be thoroughly scanned for the presence of PIT tags prior to release using a scanner powerful enough to read dual frequencies (125 and 134 kHz) and read tags deeply embedded deep in muscle tissue (e.g., manufactured by Biomark or Avid). Turtles which have been previously PIT tagged shall nevertheless be externally flipper-tagged. PIT tagging may only be conducted by observers with PIT-tagging training or experience. This Opinion provides the authority to NMFS-approved observers to PIT tag captured sea turtles without the need for an ESA Section 10 permit. The data collected (PIT-tag scan data and external tagging data) shall be submitted to NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa Belskis at the following email address: Lisa.Belskis@noaa.gov.

e. *Take and Release Time During Trawling - Turtles:* Turtles shall be kept no longer than 12 hours prior to release (except as noted in 5.c. above) and shall be released not less than 3 nmi from the dredge site. Recaptured turtles shall be released not less than 5 nmi away and shall be released over the side of the vessel, away from the propeller, and only after ensuring that the vessel's propeller is in the neutral, or disengaged, position (i.e., not rotating). If it can be done safely, turtles may be transferred onto another vessel for transport to the release area to enable the relocation trawler to keep sweeping the dredge site without interruption.

f. *Take and Release Time During Trawling - Smalltooth Sawfish:* Smalltooth sawfish shall be released immediately after capture, away from the dredge site or into already dredged areas, unless the trawl vessel is equipped with a suitable well-aerated seawater holding tank (e.g., plastic "kiddie pool" not less than 1 ft in depth by 5 ft in diameter), where a maximum of 1 smalltooth sawfish may be held for not longer than 30 minutes before it must be released or relocated away from the dredge site.

g. *Injuries and Incidental Take Quota:* Any protected species injured or killed in federal waters during or as a consequence of relocation trawling shall count toward the incidental take quota. Minor skin abrasions resulting from trawl capture are considered non-injurious. Injured sea turtles shall be immediately transported by Dare County or its CONTRACTOR at its own expense to the nearest sea turtle rehabilitation facility; all rehabilitation costs and sea turtle transportation costs shall be borne by Dare County or its CONTRACTOR. If it is determined that the turtle cannot be released NMFS and the rehab facility will determine the best course of action along with a cost estimate for continued care.

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h. *CMTTP*: External flipper tag and PIT-tag data generated and collected by relocation trawlers shall also be submitted to the Cooperative Marine Turtle Tagging Program (CMTTP), on the appropriate CMTTP form, at the University of Florida's Archie Carr Center for Sea Turtle Research.

i. *Tissue Sampling*: All live or dead sea turtles captured by relocation trawling or dredging shall be tissue-sampled prior to release, according to the protocols described in Appendix II or Appendix III of the November 19, 2003, Gulf of Mexico Regional Biological Opinion on Hopper Dredging, as revised through Revision No. 2, included as Appendix C of this opinion. Tissue samples shall be sent within 60 days of capture to: NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov. A copy of the Protected Species Incidental Take Form should accompany the sample. The present opinion to BOEM serves as the permitting authority for any NMFS-approved endangered species observers aboard relocation trawlers or hopper dredges to tissue-sample live- or dead-captured sea turtles, without the need for an ESA Section 10 permit.

For the proposed action, 100% shipboard observer monitoring of inflow screens is required year-round. If conditions disallow 100% inflow screening, inflow screening can be reduced gradually, but effective, 100% overflow screening is then required, and an explanation must be included in the project report, and NMFS notified beforehand.

If the dredge is not using UXO screening, then the hopper's inflow screens should initially have 4-inch by 4-inch screening, for effective screening and capture of entrained protected species body parts. NMFS believes this is workable for sand mining operations, where a minimum of debris is expected to be encountered. However, if BOEM, in consultation with observers and the draghead operator, determines that the draghead is clogging and reducing production substantially, the mesh size may be increased after prior consultation with and approval by NMFS, to 8-inch by 8-inch; if this still clogs, then 16-inch by 16-inch openings. NMFS believes that this flexible, graduated-screen option is prudent since the need to constantly clear the inflow screens will increase the time it takes to complete the project; therefore, it will increase the exposure of sea turtles to the risk of impingement or entrainment. Inflow screen clogging should be greatly reduced with these flexible options; however, further clogging (e.g., as when encountering heavy clay or debris) may compel removal of the inflow screening altogether, in which case *effective* 100% overflow screening is mandatory.

BOEM shall notify NMFS *beforehand* if inflow screening is going to be reduced or eliminated, and provide details of how effective overflow screening will be achieved. NMFS, in consultation with the dredging company and BOEM, shall determine what constitutes effective overflow screening. All costs associated with the compliance inflow screening, as described above and in the Biological Opinion, shall be included in the contract Unit Price per cubic yard given under Bid Schedule Items II-A, II-A-1, III-A and IV-A "Hydraulic Beach Fill."

In addition, during dredging activities, the applicant has agreed to comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*. As part of these conditions, if a sea turtle is

observed within 100 yards of construction operations, all appropriate precautions shall be implemented to ensure protection of the species, including cessation of operation if an animal moves within 50 feet of any moving equipment. Additionally, the conditions require avoiding collisions with swimming sea turtles, monitoring of siltation barriers for entanglement, operation at “no wake/idle” speeds in the construction area, and reporting any collision with and/or injury to a sea turtle to NMFS’s Protected Resources Division and the local sea turtle stranding/rescue organization.

Hopper dredges will be required to have rigid turtle deflectors installed on all dragheads. (See RPM No. 6). Prior to initiation of dredging, the CONTRACTOR must have the dragheads and turtle deflectors inspected by the USACE Wilmington District, Regulatory Division, Enforcement Section. The CONTRACTOR shall supply to the COUNTY and the ENGINEER a letter from the USACE inspector stating that the dragheads are correctly installed and adjusted in accordance with the Biological Opinion and Standard Hopper Dredging Conditions. The letter must be dated within one month prior to initiation of dredging. The inspection may occur at any location convenient to the USACE Wilmington District and the CONTRACTOR. In addition, BOEM shall ensure that all contracted personnel involved in operating hopper dredges receive thorough training on measures of dredge operation that will minimize sea turtle takes.

To prevent impingement of sea turtles within the water column, every effort will be made to keep the dredge pumps disengaged when the hopper dredge dragheads are not firmly on the bottom. Also, the rotating cutterhead will not be lifted from the sediment surface during operations.

8.4 Marine Mammals. The CONTRACTOR is required to participate in the Right Whale Early Warning System to protect North Atlantic right whales. If a right whale or any other species of whale is reported within the area, then the CONTRACTOR will be required to follow the enclosed NMFS's *Southeast Region Vessel Strike Avoidance Measures and Reporting for Mariners* (revised February 2008) (Appendix B), except where specific measures below are in conflict, in which case the measures in this Opinion govern (e.g., a speed restriction to a maximum of 10 knots at all times in right whale calving areas [i.e., federally-protected areas off the southeastern U.S. coast designated and implemented for the protection of right whales and their calves during their calving/migration season] for vessels 65 feet in length or greater). By law, vessels shall maintain a 500-yard buffer between the vessel and any North Atlantic right whale [as required by federal regulation 50 CFR 224.103 (c)].

Protected species observers will live aboard the dredges, monitoring dredge loads 24 hours a day for evidence of impacts to endangered and threatened species, as well as recording water temperatures, bycatch information, and any sightings of species in the area. Screening will be placed on all points of dredged material inflow into the hopper prior to work beginning, and protected species observers will monitor the screens for evidence of protected species interactions.

8.5 Shorebird Protection (Piping Plovers and Red Knots). All personnel involved in the construction or sand placement process along the beach shall be trained to recognize the presence of piping plovers and red knots prior to initiation of work on the beach. Before start of work each morning. A CONTRACTOR representative authorized to stop or redirect work shall be responsible

for conducting a shorebird survey prior to 9:00 am each day of sand placement activities, to determine if piping plovers or red knots are present. The survey shall cover the work area and any location where equipment is expected to travel. The CONTRACTOR shall note on their Quality Assurance Form for each day any observance of red knots and/or piping plovers; and those forms, verifying the observance of those species, shall be submitted to the USACE Wilmington District Office the next calendar day. If plovers or red knots are present in the work area, careful movement of equipment in the early morning hours should allow those individuals to move out of the area. Construction operations shall not begin until individual plovers or red knots have exited the work area for the day.

The ENGINEER shall provide training documentation to assist the CONTRACTOR's personnel in identifying piping plover and red knot species. The documentation shall consist of laminated photos of each species and shall be required to be kept at the construction site in a location for quick reference. Study and review of the documentation provided by the ENGINEER shall fulfill the permit requirement for training to recognize the species presence.

9. AIR QUALITY.

The CONTRACTOR shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, process, and work operated or performed by the CONTRACTOR in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of North Carolina (General Statutes, Chapter 143 and others) and all Federal emission and performance laws and standards.

10. PROTECTION OF SOUND INTRUSIONS.

The CONTRACTOR shall keep construction activities under surveillance, and control to minimize damage to the environment by noise. If booster pumps are used on the beach, the CONTRACTOR shall provide adequate muffler systems and erect a sound barrier to deflect noise in the waterward direction and away from buildings. Booster pumps shall be located away from residences and hotels and in areas approved by the ENGINEER.

11. DISPENSING OF FUEL.

Secondary containment, which is capable of holding 110% of the tank contents, must be provided by the CONTRACTOR for each fuel storage tank. Fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the CONTRACTOR shall immediately contain the spill and contact the appropriate local authorities. The CONTRACTOR will be solely responsible for any fines, penalties or other legal activities related to fuel spills.

12. TEMPORARY SANITARY FACILITY.

The CONTRACTOR shall supply and maintain, at minimum, one (1) temporary sanitary facility for the use of land based employees and subcontractors at each work site. The facility shall be conveniently located in the vicinity of the sand placement operation, but away from residential buildings along the coastline. The facility shall be removed at the end of the project. Water based equipment shall be outfitted with suitable sanitary facilities to accommodate the employees and subcontractors.

13. STORAGE OF LUBRICANTS.

All lubricants and other potential liquid pollutants shall be stored in sealed, non-corrosive containers. Individual containers shall be stored in metal pans with borders banded up and welded at the corners right below the bibb. Pans shall be deep enough to prevent contamination of the ground. Pans shall be kept clean of all spillage or leakage.

14. POST-CONSTRUCTION CLEAN-UP.

The CONTRACTOR shall clean-up any area used for construction to the satisfaction of the ENGINEER and OWNER. All trash, refuse, and construction debris shall be removed from the work area, regardless of the source, prior to Final Acceptance.

15. RESTORATION OF LANDSCAPE DAMAGE.

The CONTRACTOR shall restore all landscape features damaged or destroyed during construction operations. Such restoration shall be in accordance with a plan submitted for approval by the ENGINEER. This work will be accomplished at the CONTRACTOR's expense. Final payment to the CONTRACTOR shall not occur until the ENGINEER and the OWNER are satisfied with the CONTRACTOR's effort to restore landscape or any other damage caused by the CONTRACTOR or his subcontractors.

16. MAINTENANCE OF POLLUTION CONTROL FACILITIES.

The CONTRACTOR shall maintain constructed facilities and portable pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

All mechanized equipment operated near the surface waters or wetlands will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids or other potential toxic chemicals. In the event of a hydrocarbon or chemical spill, the permittee/CONTRACTOR shall immediately contact the Division of Water Quality, between the hours of 8 am and 5 pm at the Washington Regional Office at 252.946.6481 and after hours and on weekends call (800)858-0368. Management of such spills shall comply with provisions of the North Carolina Oil Pollution and Hazardous Substance Control Act [15A NCAC 02H .0506 (b)(3) and (c)(3), 15A NCAC 02B .0200 (3)(F), and GS 143 Article 21A.”

17. FUEL OIL TRANSFER OPERATIONS.

In accordance with the U.S. Coast Guard regulations (33 CFR 156.120), couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil (or fuel) shall be either a bolted or full-threaded connection; or a quick-connect coupling approved by the Commandant; or an automatic back-pressure shutoff nozzle used to fuel the vessel. An executed fuel oil transfer (Declaration) form signed by the tanker man shall be completed for each refueling operation. The U.S. Coast Guard shall also be notified prior to any refueling.

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ADDENDUM #1 – February 29th, 2016

The following items shall become part of the Contract Documents and shall be as binding as if contained therein. All other terms and conditions shall remain the same.

ITEM 1:

SECTION 00300 - BID FORM; ARTICLE 7 – ATTACHMENTS TO THIS BID & SECTION 00310 - BIDDERS CHECKLIST: DELETED “(Item) F. Required Bidder Qualification Statement with Supporting Data” and **REPLACED** with “(Item) F. Noncollusion Affidavit”.

END OF ADDENDUM #1

BIDDER IS ADVISED ACKNOWLEDGEMENT OF ADDENDUM #1 IS REQUIRED WHEN SUBMITTING A BID. NON-COMPLIANCE MAY RESULT IN BIDDER BEING CONSIDERED NON-RESPONSIVE.