

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES	
				1 2	
2. AMENDMENT/MODIFICATION NO. W9127824B0001-0003		3. EFFECTIVE DATE 22 MARCH 2024		4. REQUISITION/PURCHASE	
5. PROJECT NO. (If applicable) CHC22012		6. ISSUED BY CODE		7. ADMINISTERED BY(If other than item 6) CODE	
Corps of Engineers 109 St. Joseph St. Mobile, AL 36602					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP code)		<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. W9127824B0001		9B. DATED (SEE ITEM 11) 16 FEABRUARY 2024	
		<input type="checkbox"/> 10A. MODIFICATION OF CONTRACT/ORDER NO.			
		10B. DATED (SEE ITEM 13)			
CODE		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (if required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
<input type="checkbox"/> A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A					
<input type="checkbox"/> B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO AUTHORITY OF FAR 43.103(b)					
<input type="checkbox"/> C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
<input type="checkbox"/> D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)					
The subject solicitation for: MOBILE HARBOR, ALABAMA, DEEPENING AND WIDENING – PHASE 6 MOBILE, ALABAMA Is modified in the following: REFER TO THE ENCLOSED REVISED SPECIFICATIONS FOR AMENDMENT NO. 0003					
Except as provided herein, all terms and conditions of the document reference in item 9A or 10A, as Heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICE (Type or print)			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA BY	
(Signature of person authorized to sign)				(Signature of contracting officer)	
16C. DATE SIGNED					
NSN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE					
30-105					
STANDARD FORM 30 (REV. 10-83) Prescribed by GSA					

PART I - REVISIONS MADE BY ADDED AND/OR REPLACEMENT PARAGRAPHS/PAGES/SECTIONS

The items listed below are to be replaced by the corresponding added and/or revised paragraphs/pages or sections. Added and/or revised paragraphs/pages or sections are indicated by a note in bottom right hand corner of each paragraph or page. Added sections are hereby made a part of the contract and are to be inserted in the specification in the proper numerical/alphabetical sequence.

Within the specifications, deletions from the specifications are indicated by strikethrough, e.g.: ~~deletions are marked with strikethrough~~ and additions to the specifications including revisions/substitutions are indicated in bold, italic and underlined, e.g.: **additions are indicated thus.**

<u>SECTION</u>	<u>Corresponding Added or Revised Paragraph Page, and/or Section</u>
Table of Contents	Revised as indicated herein.
Bid Schedule	Revised Bid Item Nos. 2 & 6 as indicated herein.
Explanation of Bid Items	Revised Bid Item Nos. 2 & 6 as indicated herein.
01 00 00	Revised Paragraph 1.3 as indicated herein.
01 00 01	Revised Paragraph 1.29 as indicated herein
35 20 23	Revised Paragraph 3.3.6.1 as indicated herein.
Appendix C	Revised Deer River Area Placement Volumes
Appendix D	Added in its entirety.

PART II - The files listed below are provided as supplemental information to the solicitation.

PHASE_6_DEER_RIVER_PLACEMENT_AREA_20240314_HYDRO.xyz
PHASE_6_DEER_RIVER_PLACEMENT_AREA_20240314_RTK.xyz

Encl as stated

Replaced pages of the specifications as indicated in Part I.

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-- END OF TABLE OF CONTENTS --

BIDDER'S NAME: _____

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
1.	Mobilization and Demobilization	1	Job	XXX	

AMENDMENT 0003

2.	Dredging of Mobile Upper Bay Channel and Turning Basin	1,052,000	<u>1,122,000</u>	CY	
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AMENDMENT 0003

3.	Placement at Deer River Beneficial Use Site Marsh Fill Area	82,360	SY		
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4.	Construction of Sand Berm at the Dauphin Island Causeway Beneficial Use Site	9,310	LF		
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5.	Placement at Dauphin Island Causeway Beneficial Use Site Marsh Fill Area	345,870	SY		
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AMENDMENT 0003

AMENDMENT 0002

6.	Dredging and Placement in the Relic Shell Placement Site	2,239,858	<u>2,169,858</u>	CY	
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AMENDMENT 0002

AMENDMENT 0003

Total Bid _____

MOBILE HARBOR, ALABAMA, DEEPENING AND WIDENING - PHASE 6
MOBILE, ALABAMA

W9127824B0001
CHC22012

OFFEROR ELECTS TO WAIVE THE PRICE EVALUATION PREFERENCE
FOR HUBZONE SMALL BUSINESS CONCERNS: () NO () YES

(SEE BIDDING SCHEDULE NOTE NOS. 6 AND 7)

NOTES FOR BIDDING SCHEDULE

NOTE NO. 1. To better facilitate the public bid opening process, all modifications to bids are to be submitted on copies of the latest bid schedules as published in the solicitation or the latest amendment thereto. In lieu of indicating additions/deductions to bid items, all bidders should state their revised prices for each item. The company name should be indicated on the face of the bidding schedule to preclude being misplaced.

NOTE NO. 2. Bidders must insert a price on all numbered items of the bidding schedule by the Government. Failure to do so will disqualify the bid.

NOTE NO. 3. All extensions of the unit prices shown will be subject to verification by the Government. In case of variation between the unit price and extension, the unit price will be considered to be the bid.

NOTE NO. 4. If a modification to a bid is submitted and provides for a job adjustment to the total estimated cost, the application of the job adjustment to each unit price and/or job price in the bid schedule must be stated or, if it is not stated, the bidder agrees that the job adjustment shall be applied on a pro rata basis to every bid item in the bid schedule.

NOTE NO. 5. CONDITIONS GOVERNING EVALUATION OF BIDS AND AWARD OF CONTRACTS.

Only one contract will be awarded on this Bid Schedule and award will be made to the low bidder on the Total Bid.

NOTE NO. 6. IMPORTANT NOTICE: Due to the suspension of the utilization of the price adjustment for small disadvantaged businesses (FAR Clause 52.219-23) by the Under Secretary of Defense on March 12, 2010, effective until further notice, said FAR Clause is not included in or made a part of this RFP. FAR Clause 52.219-4, relating to a 10% price evaluation preference for HUB ZONE small business concerns, is included in and made a part of this RFP. PLEASE NOTE HOWEVER that paragraph (b) (3) of the preceding clause is inapplicable also due to the referenced suspension of FAR Clause 52.219-23.

Consequently, if you are a small business qualified as a HUB ZONE and as an SDB, you will only receive the HUB ZONE 10% price evaluation preference in the evaluation process of this RFP.

NOTE NO. 7. This procurement is not restricted to Hubzone Small Business Concerns. However, offerors certifying as a Hubzone Small Business Concern must be certified by the SBA on or prior to date set for receipt of offers.

END OF BID SCHEDULE

EXPLANATION OF BID ITEMS

GENERAL: This section comprises an explanation of the bid items identified in the bid schedule for each item of work. The bid schedule and the contract drawings shall be worked together to identify the various items of work to which each bid item will apply. The Contractor shall bid the work under the applicable bid item for the specific areas identified in the bid schedule. All work specified herein shall be accomplished in accordance with the requirements of the technical provisions of the specifications and the contract drawings. Payment described for the various bid items will be full compensation for all labor, materials, and equipment required to complete the work. Compensation for any item of work described in the contract but not listed in the bid schedule shall be included in the payment for the item of work to which it is made subsidiary.

Bid Item No. 1 - Mobilization/Demobilization:

(a) All costs associated with initial mobilization to the work site at the Upper Bay and Turning Basin portion of the Mobile Harbor Shipping Channel in Mobile County, Alabama and final demobilization of all dredge plant, dredge attendant plant, and support equipment will be included in the contract lump sum price for Mobilization and Demobilization, Bid Item No. 1. This shall include all costs to (1) construct the necessary features to access and prepare the work site and (2) adapt, modify, reconstruct, and/or reconfigure the dredge plant and/or other equipment to a configuration capable of performing this contract work. No other separate payment shall be made for any such configuration preparations, and payment of this bid item is considered complete compensation for such actions. Sixty percent (60%) of the lump sum price will be paid after completion of the Contractor's mobilization at the work sites. The remaining forty percent (40%) will be paid after completion of demobilization.

(b) The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraph (a) above do not bear a reasonable relation to the cost of the work in this contract. Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined by the Contracting Officer, of -

- (i) Actual mobilization costs at completion of mobilization;
- (ii) Actual demobilization costs at completion of demobilization; and
- (iii) The remainder of this item in the final payment under this contract.

The Contracting Officer's determination of the actual costs in paragraph (b) of this clause is not subject to appeal.

AMENDMENT 0003

Bid Item No. 2 - Dredging of Mobile Upper Bay Channel and Turning Basin

Payment for Bid Item No. 2 will include all costs associated with the excavation of approximately ~~1,052,000~~ **1,122,000** cubic yards of material to the grades and tolerances shown on the contract plans. Payment will be based on the volume of material dredged within the limits shown in the contract drawings and the transportation of the dredged material to the Deer River and Dauphin Island

Causeway Beneficial Use sites. The contractor shall submit their own dredge cuts in the workplan, similar to Table 1 in section 35 20 23, which may be used for acceptance purposes in lieu of acceptance sections by channel stationing, if approved by the Contracting Officer or their representative. The quantity of material dredged for payment shall be calculated as the difference between the before- and after-dredging surveys of the cut areas within the dredge prism. Partial payments can be made on individual cuts prior to final acceptance. Final acceptance will be made when the individual dredge cuts are constructed to the lines and grades shown on the contract drawings. As the contractor progresses, after-dredge surveys used to calculate partial payments will also serve as the before-dredge surveys for subsequent partial payments.

The contract clause VARIATIONS ON ESTIMATED QUANTITIES will only be applicable to the quantity required to construct the dredge area to the lines and grades shown, excluding the allowable overdepth, on the contract drawings. Subsidiary features of work including surveying turbidity monitoring shall also be included in this bid item. Details of the surveying requirements are provided in Section 01 00 00 - ADDITIONAL SPECIAL CONTRACT REQUIREMENTS, paragraph SURVEY REQUIREMENTS as well as Section 35 20 23.00 36 - DREDGING. Details of the turbidity monitoring are provided in section 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS, paragraph PROTECTION OF FISH AND WILDLIFE.

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Bid Item No. 3 - Placement at Deer River Beneficial Use Site Marsh Fill Area

Payment for Bid Item No. 3 will include all costs associated with the placement of approximately 82,360 square yards of marsh to the grades and tolerances shown on the drawings. The material to be placed should come from the dredge cuts designated for this site, as detailed in section 35 20 23 - DREDGING, paragraph ORDER OF WORK. Payment will be based on the square yardage of marsh placed within the limits shown in the contract drawings. The quantity of material placed for payment shall be calculated as the difference between the before- and after-placement surveys of the area within the placement prism. The contractor shall place fill material in accordance with the approved deposition plan to the grades and tolerances shown. No material shall be placed outside the placement sites detailed in the contract plans. Material placed outside of the placement site will be considered misplaced material and will not be paid for under this bid item. Any material placed outside of the placement site violates environmental requirements, including the Department of the Army permit, and the contractor shall be required to remove it at their full expense. The government reserves the right to accept a template below the tolerances shown in the drawings if the contractor encounters in-situ water bottoms in the placement site that are unsuitable for efficient fill operations. The contract clause VARIATIONS ON ESTIMATED QUANTITIES will only be applicable to the quantity required to construct the placement area to the lines and grades shown on the contract drawings, excluding the allowable tolerances, stated in the contract. Subsidiary features of work including surveying and turbidity monitoring shall also be included in this bid item. Details of the surveying requirements are provided in Section 01 00 00 - ADDITIONAL SPECIAL CONTRACT REQUIREMENTS, paragraph SURVEY REQUIREMENTS as well as Section 35 20 23 - DREDGING. Details of the turbidity monitoring are provided in section 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS, paragraph PROTECTION OF FISH AND WILDLIFE.

Bid Item No. 4 - Construction of Sand Berm at the Dauphin Island Causeway
Beneficial Use Site

Payment for Bid Item No. 4 will include the cost for placement of approximately 9,310 linear feet of sand berm in the Dauphin Island Causeway placement sites. Approximately 5,947 linear feet of sand berm will be placed at the Northern site and 3,363 linear feet will be placed in the Southern site. The material to be placed in the Dauphin Island Causeway sand berms should come from the dredge cuts designated for this site, as detailed in section 35 20 23 - DREDGING, paragraph ORDER OF WORK. Payment will be based on the linear foot of sand berm placed within the template detailed in the contract plans and specifications. The contractor shall place fill material in accordance with the approved deposition plan to the grades and tolerances shown. All material placed within the tolerance range will be paid for at the unit price for this bid item. No material shall be placed outside the placement sites detailed in the contract plans. Material placed outside of the placement site will be considered misplaced material and will not be paid for under this bid item. Any material placed outside of the placement site violates environmental requirements, including the Department of the Army permit, and the contractor shall be required to remove it at their full expense. The government reserves the right to accept a template below the tolerances shown in the drawings if the contractor encounters in-situ water bottoms in the placement site that are unsuitable for efficient fill operations. The contract clause VARIATIONS ON ESTIMATED QUANTITIES will only be applicable to the quantity required to construct the dredge area to the lines and grades shown, excluding the allowable tolerances, stated in the contract. Subsidiary features of work including surveying and turbidity monitoring shall also be included in this bid item. Details of the surveying requirements are provided in Section 01 00 00 - ADDITIONAL SPECIAL CONTRACT REQUIREMENTS, paragraph SURVEY REQUIREMENTS as well as Section 35 20 23 - DREDGING. Details of the turbidity monitoring are provided in section 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS, paragraph PROTECTION OF FISH AND WILDLIFE.

Bid Item No. 5 - Placement at Dauphin Island Causeway Beneficial Use Site Marsh
Fill Area

Payment for Bid Item No. 5 will include all costs associated with the placement of approximately 345,870 square yards of marsh to the grades and tolerances shown on the drawings. Approximately 288,282 square yards of marsh will be placed in the northern site and 57,588 square yards will be placed in the southern site. The material to be placed should come from the dredge cuts designated for this site, as detailed in section 35 20 23 - DREDGING, paragraph ORDER OF WORK. Payment will be based on the square yardage of marsh placed within the limits shown in the contract drawings. The quantity of material placed for payment shall be calculated as the difference between the before- and after-placement surveys of the area within the placement prism. The contractor shall place fill material in accordance with the approved deposition plan to the grades and tolerances shown. No material shall be placed outside the placement sites detailed in the contract plans. Material placed outside of the placement site will be considered misplaced material and will not be paid for under this bid item. Any material placed outside of the placement site violates environmental requirements, including the Department of the Army permit, and the contractor shall be required to remove it at their full expense. The government reserves the right to accept a template below the tolerances shown in the drawings if the contractor encounters in-situ water bottoms in the placement site that are unsuitable for efficient fill operations. The contract clause VARIATIONS ON ESTIMATED QUANTITIES will only be applicable to the quantity required to construct the placement area to the

lines and grades shown on the contract drawings. Subsidiary features of work including surveying and turbidity monitoring shall also be included in this bid item. Details of the surveying requirements are provided in Section 01 00 00 - ADDITIONAL SPECIAL CONTRACT REQUIREMENTS, paragraph SURVEY REQUIREMENTS as well as Section 35 20 23 - DREDGING. Details of the turbidity monitoring are provided in section 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS, paragraph PROTECTION OF FISH AND WILDLIFE.

AMENDMENT 0003

AMENDMENT 0002

Bid Item No. 6 - Dredging and Placement in the Relic Shell Placement Site

Payment for Bid Item No. 6 will include all costs associated with the dredging and placement of approximately ~~2,239,858~~ **2,169,858** cubic yards of material. The quantities reported above were derived using the survey data from October and November 2023 (see APPENDIX C for Volume Report). The quantity of material includes ~~2,029,024~~ **1,959,024** cubic yards of new work and O&M material with an additional 210,834 cubic yards added for projected shoaling. Payment will be based on the volume of material dredged within the limits shown in the contract drawings. The contractor shall submit their own dredge cuts in the workplan, similar to Table 1 in section 35 20 23, which may be used for acceptance purposes in lieu of acceptance sections by channel stationing, if approved by the Contracting Officer or their representative. The quantity of material dredged for payment shall be calculated as the difference between the before- and after-dredging surveys of the area within the acceptance prism. The acceptance prism shall be defined as the lines and grades shown on the drawings. Payment will not be made for any volume dredged that exceeds the acceptance prism. The contractor shall place fill material in the Relic Shell Placement Site in accordance with the approved deposition plan to the grades and tolerances detailed in the contract plans and specifications. No material shall be placed outside the placement sites detailed in the contract plans. Material placed outside of the placement site will be considered misplaced material and will not be paid for under this bid item. Any material placed outside of the placement site violates environmental requirements, including the Department of the Army permit, and the contractor shall be required to remove it at their full expense. Subsidiary features of work including surveying, utility location verification, and turbidity monitoring shall also be included in this bid item. Details of the surveying requirements are provided in Section 35 20 23 - DREDGING, paragraph DREDGING SURVEYS. Details of the turbidity monitoring are provided in section 01 57 19 - ENVIRONMENTAL PROTECTION, paragraph PROTECTION OF FISH AND WILDLIFE.

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-End of Section-

SECTION 01 00 00

ADDITIONAL SPECIAL CONTRACT REQUIREMENTS

PART 1 GENERAL

1.1 SUBMITTALS

See the technical sections for approval and detail requirements for submittals. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES and the required technical section:

SD-11 Closeout Submittals

Contractor Prepared As-Built Drawings; G, OP

1.2 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS

(a) The Contractor will be furnished with one CD-ROM containing a reproducible copy of the advertised solicitation, including all contract clauses, drawings, and specifications. Paper copies of the specifications and drawings will be the responsibility of the Contractor. The work shall conform to the technical provisions outlined in the specifications and the contract drawings.

(b) Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work, but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

(c) The Contractor shall check all drawings furnished them immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large scale drawings shall in general govern small scale drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

(d) The list of drawings and maps provided in the Index Sheet of the Plans for this solicitation are hereby incorporated by reference into these specifications.

NOTE: Refer to the folio of drawings for the index of drawings in this solicitation.

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AMENDMENT 0001

1.3 PHYSICAL DATA

Data and information furnished or referred to below is for the Contractor's information. The Government will not be responsible for any interpretation or conclusion drawn from the data or information by the Contractor.

(a) General: The indications of physical conditions on the drawings and in the specifications are the result of site investigations and surveys.

(b) Location: The work to be done under these specifications is located in the northern most reach of the Mobile Bay, Alabama at the mouth of the Mobile River within and along the Mobile Harbor Federal Navigation Channel and turning basin from Stations 226+16 to 337+00.

The in bay Relic Shell placement sites A and B for the project are located in the Mobile Bay, southeast of the channel work, approximately 4 miles to the closest point, and approximately 8.5 miles from the furthest point.

The beneficial use Deer River and Dauphin Island Causeway North and South placement sites are located in the middle and lower portions of Mobile Bay southwest of the channel work, roughly 13.5 miles and 25 miles from the Mobile Harbor Turning Basin.

(c) Contractor's Investigation Responsibility: The Contractor should investigate submerged, surface, and overhead structures in the work areas and other locations which may be necessary to traverse. The exact location, depths, and heights of various structures to including, but not limited to submarine cables, pipes, highlines, docks, piers, bulkheads, and bridges etc. (as applicable), are not known. It will be necessary for the Contractor to ascertain interference problems and notify the respective owners in advance of dredging and placement operations. The Contractor shall make all arrangements with the respective owners of the structure to assure satisfactory completion of dredging and dredge material placement in the vicinity with a minimum interruption of service, and shall perform operations in such a manner as will avoid damage to these facilities.

(d) Weather Conditions: The sites of the work are exposed to local weather conditions which may cause suspension of the work for short unknown periods of time. During tropical storms and hurricanes which may occur from June to November, the project channels do not afford a safe refuge for floating plants. There are no unusual currents except during floods, when velocities of 2 to 4 miles per hour may be expected; however, the Contractor should investigate all sites of work and determine for themselves the requirements of the work. Under ordinary conditions, the Mean Tidal Range is 1.2 feet. The working season extends over the entire year. Tides in Mobile Harbor are affected by extended periods of strong north or south winds.

(e) Transportation Facilities: The work areas are accessible by water via the Gulf Intracoastal Waterway and the Gulf of Mexico. The Contractor shall investigate any limitations imposed by bridges or other structures on water access to the project site. Highway access (Federal, state, and local) is available to the near vicinity of all work areas. Rail and highway transportation is available to Mobile, Alabama. Water transportation is available to the site of the work. The Contractor shall

make their own investigation of available roads for transportation, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the work sites.

(f) Channel Traffic: The traffic using the Mobile, Alabama Federal Navigation Channel is considered to be a combination of heavy and large commercial vessels, and various sized recreational craft, respectively. The type of traffic consists of general container ships, bulk carriers, fuel tankers, tow boats, Navy ships, charter fishing boats, passenger boats, and pleasure craft. CAUTION: When navigation conditions become hazardous due to inclement weather (fog, storm, etc) or other circumstances, the Contractor shall maintain appropriate communication with project traffic. The Contractor shall particularly comply with all U.S. Coast Guard regulations pertaining to proper activation of fog (and any other) signaling devices (sound, light, etc).

(g) Obstruction of Navigation Channels: The Government will not undertake to keep the work areas and navigation channels free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the Rivers and Harbors Act approved 8 August 1917. The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs any navigation channel as to make difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon the completion of the work the Contractor shall promptly remove their plant, including ranges, buoys, piles, and other marks placed by them under the contract in navigable waters or on shore.

(h) The Dauphin Island Causeway construction schedule estimates the end of May for substantial completion. The Dauphin Island Causeway contractor is to maintain the approach channel until final acceptance of channels based on as-built surveys, which may be conducted up to 30 days prior to the end of the contract. Dates are subject to change.

(i) The Deer River construction schedule estimates beginning of April for substantial completion. Deer River contractor is not required to maintain access channels. Dates are subject to change. Contractor to bid based on provided data.

(j) Approximate pipeline routes to be used by the Phase 5 Contractor for placement in the Relic Shell are shown in Appendix D of these specifications. The placement locations to be used by the Phase 5 Contractor are located south of the Relic Shell sites A and B. The pipeline route is subject to change and the Contractor shall coordinate with the Phase 5 Contractor.

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1.4 TIME EXTENSIONS

Notwithstanding any other provisions of this contract, it is mutually understood that the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages under the new completion schedule. Change orders involving time extensions must be obtained in writing from the Government's Representative.

1.5 CONTRACTOR PREPARED AS-BUILT DRAWINGS

(a) General: In accordance with SPECIAL CONTRACT REQUIREMENT paragraph: CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS, the Government will furnish the Contractor on CD-ROM one electronic set of solicitation drawing files and any amendments for use in preparation of as-built drawings by the Contractor. Copies of the drawings will be the responsibility of the Contractor. The as-built drawings shall be a record of the construction as completed by the Contractor. They shall include all the information shown on the contract set of drawings and a record of all deviations, modifications, or changes from those drawings, however minor, which were incorporated in the work, all additional work not appearing on the contract drawings, and all changes which are made after final inspection of the contract work. In the event the Contractor accomplishes additional work which changes the as-built conditions after submission of the as-built drawings, the Contractor shall furnish revised and/or additional drawings as required to depict as-built conditions. The requirements for these additional drawings will be the same as for the as-built drawings included in the original submittal.

(b) Red line as-built drawings: The Contractor shall have on their staff, personnel to mark up a set of paper copy construction drawings to show the as-built conditions. These as-built marked copies shall be kept current and available on the job site at all times. All changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded, as the events occur, by means of details and notes. The Contractor shall call attention to entries by red lining areas affected. The red line as-built drawings will be jointly inspected for accuracy and completeness by the Contracting Officer's Representative and a responsible representative of the Contractor prior to submittal of each request for payment. The Contracting Officer Representative's approval of the current status of the as-built drawings shall be a prerequisite to the approval of request for progress payment and request for final payment under the contract. The drawings shall show the following information, but not be limited thereto:

(1) The location and description of any utility lines or other installations of any kind or description known to exist within the construction area that are not already shown on the contract drawings. The location includes dimensions to permanent features.

(2) The location and dimensions of any changes within the construction area.

(3) All changes or modifications which result from the final inspection.

(c) Submittal of as-built drawings for review and approval: The Contractor shall participate in monthly review meetings with the Contracting Officer's Representative to show the progress made the preceding month and make all required changes. At time of final construction inspection, the Contractor shall submit one copy of the red lined as-built drawings to the Contracting Officer's Representative for his review and approval. The as-built drawings shall be certified as to their correctness by the signature of an authorized representative of the Contractor. Upon Government approval of the Contractor's red lined copy of the as-built drawings, the Contractor shall prepare and provide two electronic sets of as-built drawings by incorporating the red line marked up notations on the construction drawings into the electronic set of solicitation drawings and amendments. In addition to the electronic sets of as-built drawings which shall be submitted on a CD-ROM, the Contractor shall also submit a full size set of as-built paper drawings. Submittals are to be to the Contracting Officer's Representative not later than ten (10) calendar days after project completion date.

(d) Final Drawing Format:

(1) The solicitation drawing files and any amendments thereto will be furnished to the Contractor in electronic format. The solicitation drawing files have been prepared using MicroStation. The Contractor shall utilize a file format that is compatible with the latest version of MicroStation to revise/redraft each solicitation drawing and/or amendment drawing to reflect all changes made during construction as indicated by the red line marked up notations on the construction drawings. Revisions/redrafting shall match the font styles, sizes, and formats; line weights/thicknesses and styles/types; and all other drafting elements used on the solicitation drawing/amendments. All elements must be incorporated into each as-built drawing file; the use of reference files shall not be permitted.

(2) All revisions made to the solicitation drawings and/or amendment drawings to reflect changes made during construction shall be flagged and shall have the revision block completed as follows. The entry in the description column of the revision block shall read "AS-BUILT". The date of the revision and one approving initial from a responsible person within the Contractor's Firm shall also be included in the revision block. Above the drawing title block the drawing will be labeled in bold letters "AS-BUILT". The flagged changes and revision block format shall be in accordance with the examples shown in the Mobile District Design Manual located on the Internet at

<http://www.sam.usace.army.mil/Missions/MilitaryMissions/Engineering/Engineering-Design-Manual/>

The Contractor shall also furnish a revised index of drawings to match the actual design drawings. The drawing title blocks shall be in a uniform format to match the requirements as specified in the Design Manual.

(3) The two electronic sets of as-built drawing files shall be submitted in a format that is compatible with the latest version of MicroStation.

(4) The hard copy reproducible set of as-built drawings shall be

submitted unbound on paper. The drawings shall be the full size.

(e) Payment: No separate payment will be made for preparation of the as-built drawings required under this contract. All costs will be considered a subsidiary obligation of the contract.

1.6 ATTENDANT PLANT

(a) Attendant plant shall be composed of such barges, fuel, water, pipe derrick, anchor, etc., floating, submerged, and slip joint discharge pipe, and other attendant or auxiliary plant as may be required for operations under these specifications whether or not these items are specifically mentioned. The auxiliary and attendant plant shall be in good condition and of sufficient size and capability to efficiently serve the dredge.

(b) Radio Telephone: The Contractor shall furnish and maintain the following radios for communication with the Corps of Engineers, United States Coast Guard, and other vessels: Radio(s) must be certified as being operable on the specified frequencies and powers by a licensed radio technician. A copy of the certification must be furnished to the Contracting Officer prior to final acceptance of the dredging plant.

(1) A Marine VHF Radio, FCC type accepted with the following channels: Channel 16 (156.8 MHZ), Channel 13 (156.65 MHZ), Channel 12 (156.6 MHZ), Channel 14 (156.7 MHZ), and Channels 26 and 28 for public correspondence. A separate receiver must be provided on Channel 13 (156.65 MHZ) in compliance with Public Law 92-63.

(2) In addition to the above-mentioned radios, the Contractor shall provide additional space in the inspector's office as specified in the paragraph entitled "Inspector's Office" for placement of one VHF marine radio. The radio shall be able to receive all VHF marine channels and scan two channels continuously. The radio will be furnished at the expense of the Contractor.

(c) Transport Vessel: The Contractor shall provide one transport vessel, with twin propellers, not less than 40 feet in overall length, with enclosed space for three passengers, to adequately operate in all areas included in the scope of work. This vessel must have an operator on site at all times; be capable of traveling at a speed of 20 knots (23 MPH) or greater in good weather and capable of traveling safely at night and in intense fog; (such vessel shall meet or exceed the appropriate US Coast Guard regulation for a vessel of its size); and the vessel shall have a Certificate of Inspection by the US Coast Guard, or at least from a Marine Surveyor. This vessel shall be for the primary use of the Government Inspector. The use of this vessel for Contractor's crew changes, or any other use of this vessel by the Contractor shall be secondary to the Government Inspector shift changes. This vessel shall be equipped with the following at a minimum: built-in fuel tanks with correctly operating fuel gauges; marine and company radios; windshield wipers; running and spot lights; and all required survey equipment. The Contractor shall secure satisfactory landing location for this vessel.

AMENDMENT 0002

1.7 ~~Sub Title~~ INSPECTOR'S OFFICE

~~Text~~ An Inspector's office shall be provided by the Contractor for use by the Government at the Deer River and Dauphin Island Causeway Beneficial Use sites. The office shall be located within 2 miles of the placement sites for the duration of placement activities at the individual sites. The office shall also have wifi access and a bathroom.

AMENDMENT 0002

1.8 PRECONSTRUCTION CONFERENCE

(a) A preconstruction conference will be arranged by the Government's representative after award of contract and before commencement of work. The Government's representative will notify the Contractor of the time and date set for the meeting. At this conference, the Contractor shall be oriented with respect to Government procedures and line of authority, contractual, administrative, and construction matters. Additionally, a schedule of required submittals will be discussed.

(b) The Contractor shall bring to this conference the submittals listed in Section 01 33 00 Paragraph entitled Preconstruction Submittals in either completed or draft form.

1.9 PROJECT SIGN

The Contractor shall furnish and install a project sign and a safety performance sign at the location designated by the Contracting Officer's Representative within 60 calendar days after notice to proceed. The signs shall be constructed as indicated on the figures bound herein. Size, lettering, color, and paint shall conform to the details shown in Figure 5B "Construction Sign," Figure 5C "Fabrication and Mounting Guidelines," and Figure 5D "Safety Performance Sign," bound herein. All parts of frames and signs shall be given a primer coat of oil paint and a minimum of two finish coats of white semi-gloss paint. The Contractor shall maintain the sign in a "like new" condition throughout the life of the project, repainting and replacing members as necessary to accomplish this requirement. No direct payment will be made for the signs or maintenance of the signs. All project signs shall be removed after construction is physically complete.

1.10 DATUM AND BENCHMARKS

The plane of references of Mean Lower Low Water (MLLW) and North American Vertical Datum of 1988 (NAVD88) as used in these specifications is that determined by National Oceanic and Atmospheric Administration (NOAA) and the benchmark and tide gage data as on file at the U.S Army, Corps of Engineers, Mobile District Office and the Irvington Site Office. The Contractor can obtain such data from the Project Engineer, Irvington Site Office, telephone (251)957-6019.

1.11 FINAL EXAMINATION AND ACCEPTANCE

The Contractor or their authorized representative will be notified when soundings and/or sweepings are to be made for final examination and acceptance, and will be permitted to accompany the survey party. When the original or unacceptable area(s) is found to be in a satisfactory condition, it will be accepted finally. Should more than two sounding or sweeping

operations by the Government over an area be necessary by reason of work for the removal of unacceptable shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent sounding or sweeping operations will be charged against the Contractor at the rate of \$2,200.00 per day for each day in which the Government (or Government A-E Contractor) plant is engaged in sounding or sweeping and/or is enroute to or from the site or held at or near the said site for such operations.

Final acceptance of the whole or part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

AMENDMENT 0001

1.11.1 Mobile Harbor Federal Navigation Channel and Turning Basin

(a) As soon as practicable (within 14 calendar days or less if agreed to by the Contracting Officer) after completion of the entire work or any designated section thereof (if the work is divided into Contractor and COR agreed upon sections), as in the opinion of the Contracting Officer, the work in this section will not be subject to damage by further operations under the contract, such work (required dredging prism) will be thoroughly examined at the cost and expense of the Government by sounding or by sweeping, or both, as determined by the Contracting Officer, for determination of ACCEPTABILITY of PERFORMANCE by the Contractor. Should any shoals, lumps, or other lack of contract required dredging prism depth, width, or slope (i.e. lack of acceptable contract performance) be disclosed by this examination, the Contractor will be required to remove same by dragging or dredging the affected surface until the acceptable condition is corrected. Before-dredging and after-dredging quantity computations will be made using the contract specified 1V:5H slope. Acceptance of the Mobile Harbor Federal Navigation Channel will be based on the required dredging prism only. The contract drawings include typical sections showing the existing channel dimensions, the required O&M dredging prism, the required new work dredging prism, and the allowable overdepth. If the unacceptable shoal (work) area(s) of the channel bottom/slope is soft and the shoal (work) area(s) is small and forms no material obstruction to navigation, the removal of such shoal(s) may be waived at the discretion of the Contracting Officer. If re-dredging is required to correct the unacceptable work, the dredging will be paid at the current unit price for dredging, however, the maximum payment quantity (original and re-dredgings) will not exceed the original computed pay quantity in the required dredging prism (plus any applicable allowable overdepth quantity, as applicable) based on the original before-dredging surveys.

For the purpose of acceptance for the Mobile Harbor Federal Navigation Channel, the work to be done will be divided into one 1,384, ~~nine~~ eight 1,000-foot sections, and one 1,700 foot section, as defined below, unless otherwise specified in the approved workplan. The contractor shall submit their own dredge cuts in the workplan, similar to Table 1 in section 35 20 23, which may be used for acceptance purposes in lieu of acceptance sections by channel stationing, if approved by the Contracting Officer or their representative. The quantity of material dredged for payment shall be calculated as the difference between the before- and after-dredging surveys of the cut areas within the dredge prism. Partial payments can be

made on individual cuts prior to final acceptance. Final acceptance will be made when the individual dredge cuts are constructed to the lines and grades shown on the contract drawings:

Dredging Reach No.	From Station	To Station
1	226+16	240+00
2-11 <u>9</u>	240+00	320+00
12 <u>10</u>	320+00	337+00

(b) After acceptance by the Government, of the whole or part of the work, but before the Contractor has effected demobilization, should any shoals, lumps, or other lack of required contract depth be disclosed by an examination made by the Government, the Contractor may be requested to remove any such shoal by using the on-site dredging plant and process, to be paid at the original contract rate for dredging in this location. This additional dredging is subject to a supplemental agreement under the contract and is only activated by the Contracting Officer (and if funds are available).

(c) Shoaling in the dredging prism, which occurs in the whole or part of the work not yet offered by the Contractor as candidate for acceptance examination by the Government, is the responsibility of the Contractor (notwithstanding other clauses or provisions of this contract). The Contractor should order the accomplishment of all the work of this contract in such a manner that causes the least exposure to such in-process shoaling.

AMENDMENT 0001

1.11.2 Dredge Material Placement Sites

Acceptance of the dredged material placement areas will be based on placement to the lines, grades and elevations within the specified placement tolerances.

No dredged material shall be deposited at locations or elevations other than those shown on the contract plans and designated. Misplacement violates environmental compliance and/or Regulatory permit(s). Should any misplacement occur, the Contractor shall remove and/or redeposit material at his expense. Misplaced material will be quantified by volumes calculated from Lidar and/or hydrograph surveys and/or DQM measurements. Required removal and redeposit of the misplaced material and any necessary dredged material placement sites restoration work shall not be the basis for a time extension or additional compensation under this contract.

AMENDMENT 0001

1.11.2.1 Deer River Dredge Material Placement Site

As soon as practicable (within 14 calendar days or less if agreed to by the Contracting Officer) after completion of the entire work of the Deer River Placement Site or any designated section thereof (if the work is divided into sections), as in the opinion of the Contracting Officer, the

work in this section will not be subject to damage by further operations under the contract, such work (required placement template) will be thoroughly examined at the cost and expense of the ~~Government~~Contractor by sounding, as determined by the Contracting Officer, for determination of ACCEPTABILITY of PERFORMANCE by the Contractor. Acceptance of the Deer River Placement Site will be based on dredged material placement to the lines, grades and elevations within the specified placement tolerances. Final acceptance will be based on at least 90% (by percentage of point elevations) within the Contractor and Contracting Officer agreed upon acceptance sections meeting the specified tolerance. The Contracting Officer or their representative may require the contractor to fill deficit or remove excesss dredge material placement areas that fall outside of the specified minimum and maximum tolerances.

AMENDMENT 0001

1.11.2.2 Dauphin Island Causeway North and South Segement Placement Sites

As soon as practicable (within 14 calendar days or less if agreed to by the Contracting Officer) after completion of the entire work of the Dauphin Island Causeway North and South Segement Placement Sites or any designated section thereof (if the work is divided into sections), as in the opinion of the Contracting Officer, the work in this section will not be subject to damage by further operations under the contract, such work (required placement template) will be thoroughly examined at the cost and expense of the Contractor by sounding, as determined by the Contracting Officer, for determination of ACCEPTABILITY of PERFORMANCE by the Contractor. Acceptance of the Dauphin Island Causeway North and South Segement Placement Sites will be based on dredged material placement to the lines, grades and elevations within the specified placement tolerances.

Final acceptance of the marsh creation areas will be based on at least 90% (by percentage of point elevations) within the Contractor and COR agreed upon acceptance sections meeting the specified tolerance. The COR may require the contractor to fill deficit or remove excesss dredge material placement areas that fall outside of the specified minimum and maximum tolerances.

1.11.2.3 Relic Shell Mine Placement Sites A and B

As soon as practicable (within 14 calendar days or less if agreed to by the Contracting Officer) after completion of the placement within Relic Shell Mine Placement Sites A and B or any designated section thereof (if the work is divided into sections), as in the opinion of the Contracting Officer, the work in this section will not be subject to damage by further operations under the contract, such work (required placement template) will be thoroughly examined at the cost and expense of the Contractor by sounding, as determined by the Contracting Officer, for determination of ACCEPTABILITY of PERFORMANCE by the Contractor. Acceptance will be based on dredged material placement within the specified placement tolerances.

1.12 PERFORMANCE EVALUATION OF CONTRACTOR

As a minimum, the Contractor's performance will be evaluated upon final acceptance of the work. However, interim evaluation may be prepared at any time during the contract performance when determined to be in the best interest of the Government.

The evaluation will be completed in the Contractor Performance Assessment Reporting System (CPARS), and the Contractor will be rated either exceptional, very good, satisfactory, marginal, or unsatisfactory in the areas of Quality, Schedule, Cost Control, Management, Small Business, Regulatory, and Other Areas. The Contractor will be advised of any unsatisfactory rating, either in an individual element or in the overall rating, prior to completing the evaluation, and all Contractor comments will be made a part of the official records. Performance Evaluation Reports will be available to all DOD Contracting offices for their future use in determining Contractor responsibility, in compliance with DFARS 36.201(c)(1).

-- End of Section --

SECTION 01 00 01

GENERAL CONTRACT REQUIREMENTS

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1. BOARD OF CONTRACT APPEALS

The agency board of contract appeals having jurisdiction over all appeals from final decisions of the Contracting Officer under the Contract Disputes Act of 1978 is the Armed Services Board of Contract Appeals, Skyline Six, 5109 Leesburg Pike, 7TH Floor, Falls Church, Virginia 22041.

End of Paragraph

AMENDMENT 0001

2. REQUESTS FOR INFORMATION

Any questions about this solicitation, including technical questions about plans and specifications, shall be submitted via the Bidder Inquiry Portal in ProjNet at <https://www.projnet.org>. To submit and review inquiry items, prospective vendors will need to use the Bidder Inquiry Key presented below and follow the instructions listed below the key for access. A prospective vendor who submits a comment /question will receive an acknowledgement of their comment/question via email, followed by an answer to the comment/question after it has been processed by our technical team. All timely questions and approved answers will be made available through ProjNet.

Questions shall be submitted no later than **4 /8 MARCH 2024** at 2:00 p.m. Central Time to allow time for a response, and amendment to the solicitation if necessary. On this date and time the portal will be closed.

For technical questions, no other means of communication, e-mail, fax, or telephone will be accepted. Oral exchanges between Offerors or Bidders and the government prior to award of the contract will not be binding. In addition to information available to Offerors or Bidders on the Bidder Inquiry Portal, any information concerning this solicitation will be furnished to all Offerors or Bidders as an amendment to the solicitation if the information is necessary to the submittal of offers or bids.

The Solicitation Number is: W9127824B0001
The Bidder Inquiry Key is: F7XNRG-28TZK8

Specific Instructions for ProjNet Bid Inquiry Access:

1. From the ProjNet home page linked above, click on **Quick Add** on the upper right side of the screen.
2. Identify the Agency. This should be marked as **USACE**.
3. Key. Enter the **Bidder Inquiry Key** listed above.
4. Email. Enter the email address you would like to use for communication.
5. Click Continue. A page will then open saying that a user account was not found and will ask you to create one using the provided form.
6. Enter your First Name, Last Name, Company, City, State, Phone, Email, Secret Question, Secret Answer, and Time Zone. Make sure to remember your Secret Question and Answer as they will be used from this point on to access the ProjNet system.
7. Click Add User. Once this is completed you are now registered within ProjNet and are currently logged into the system.

Specific Instructions for Future ProjNet Bid Inquiry Access:

1. For future access to ProjNet, you will not be emailed any type of password. You will utilize your Secret Question and Secret Answer to log in.
2. From the ProjNet home page linked above, click on **Quick Add** on the upper right side of the screen.

3. Identify the Agency. This should be marked as **USACE**.
4. Key. Enter the **Bidder Inquiry Key** listed above.
5. Email. Enter the email address you used to register previously in ProjNet.
6. Click Continue. A page will then open asking you to enter the answer to your Secret Question.
7. Enter your Secret Answer and click Login. Once this is completed you are now logged into the system.

Note: Questions/comments should be entered in the system one at a time. Lists of questions uploaded into ProjNet, regardless of the format, will not be answered.

Offerors are requested to review the solicitation and amendments in their entirety, as well as to review the Bidder Inquiry Portal for previous questions and responses, prior to submission of a new inquiry on the Portal.

CAUTION: ANY INQUIRY SUBMITTED AND ANSWERED WITHIN THIS SYSTEM, WILL BE ACCESSIBLE TO VIEW BY ALL INTERESTED OFFERORS OR BIDDERS ON THIS SOLICITATION.

The call center for the ProjNet operates weekdays from 8 AM to 5 PM U.S. Central Time Zone. The telephone number is 1-800-428-HELP.

End of Paragraph

AMENDMENT 0001

3. DESCRIPTION OF WORK

In general, the work for Phase 6 of the Mobile Harbor, Alabama Project shall consist of deepening and widening portions of the Upper Bay Channel and the Upper Bay Turning Basin (Choctaw Pass Turning Basin).

NOTE: The above general outline of features of the work does not in any way limit the responsibility of the Contractor to perform all work and furnish all plant, labor, equipment and materials required by the specifications and the drawings referred to therein. The cost of this work is estimated to be between \$25,000,000 and \$100,000,000.

End of Paragraph

4. PREAWARD INFORMATION

Each bidder shall furnish either with his bid or within 3 days after a request is made for submittal of preaward data a statement of whether he is now or ever has been engaged in any work similar to that covered by the specifications herein, the dollar value thereof, the year in which such work was performed, and the manner of its execution, and giving such other information as will tend to show the bidder's ability to prosecute the required work. The "such other information" referred to above shall include but is not limited to the following:

- a. The name and address of the office or firm under which such similar work was performed. Include names and telephone numbers of personnel within each organization who are familiar with the prospective contractor's performance.

- b. A list of key personnel available for the instant project and their qualifications.
- c. A copy of bidder's latest financial statement, including the names of banks or other financial institutions with which the bidder conducts business. If the financial statement is more than 60 days old, a certificate should be attached stating that the financial condition is substantially the same, or if not the same, the changes that have taken place. Such statements will be treated as confidential.
- d. A list of present commitments, including the dollar value thereof, and name of office under which the work is being performed. Include names and telephone numbers of personnel within each organization who are familiar with the prospective contractor's performance.
- e. If the bid exceeds \$1,000,000 and the prospective contractor is a large business concern, he must submit a subcontracting plan in compliance with the Contract Clause entitled SMALL BUSINESS SUBCONTRACTING PLAN.

End of Paragraph

5. CONTRACT PRICES - BIDDING SCHEDULE

Payment for the various items listed in the Bidding Schedule shall constitute full compensation for furnishing all plant, labor, equipment, appliances, materials and bonds (performance and payment), and for performing all operations required to complete the work in conformity with the drawings and specifications. All costs for work not specifically mentioned in the Bidding Schedule shall be included in the contract prices for the items listed.

End of Paragraph

6. REQUIRED INSURANCE

The Contractor shall procure and maintain during the entire period of his performance under this contract, the following minimum insurance in accordance with the Contract Clause entitled "Insurance-Work on a Government Installation." Workmen's Compensation and Employers' liability Insurance:

Workmen's Compensation and Occupational Disease Coverage in accordance with statutory limits.
Employers' Liability Coverage with a minimum limit of \$100,000.

Comprehensive Automobile Liability Insurance:

Bodily injury coverage with minimum limits of \$200,000 per person and \$500,000 per occurrence. Property Damage Coverage with a minimum limit of \$20,000 per occurrence.

Comprehensive General Liability Insurance:

Bodily injury coverage with minimum limits of \$500,000 per occurrence.

End of Paragraph

7. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE

(a) This clause does not apply to terminations.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule," Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retrospective pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, "Contract Pricing Proposal Cover Sheet."

End of Paragraph

8. U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385- 1-1

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at <http://www.usace.army.mil/Safety-and-Occupational-Health/EM-385-1-1-2008-Being-Revised/>. The Contractor shall be responsible for complying with the current edition and all changes posted on the web through the date that is 10 calendar days prior to the date offers are due. If the solicitation is amended to extend the time set for receipt of offers, the 10 calendar days rule stated above shall be applied against the amended date. (For example, if offers are due on 10 April, all changes posted on or before 31 March shall apply to the contract. If the time for receipt of offers is extended from 10 April to 20 April, all changes posted on or before 10 April shall apply to the contract.)

End of Paragraph

9. AFFILIATED BIDDERS

(a) Business concerns are affiliates of each other when, either directly or indirectly, (1) one concern controls or has the power to control the other, or (2) a third party controls or has the power to control both.

(b) Each bidder shall submit with its bid an affidavit stating that it has no affiliates, or containing the following information.

(1) The names and addresses of all affiliates of the bidder.

(2) The names and addresses of all persons and concerns exercising control or ownership of the bidder and any or all of its affiliates, and whether they exercise such control or ownership as common officers, directors, stockholders, holding controlling interest, or otherwise.

Please check when applicable:

_____ The offeror certifies that it has no affiliates.

_____ The offeror certifies that it is affiliated with the concerns designated on an attached affidavit.

End of Paragraph

10. MANUALS AND PUBLICATIONS

Engineering manuals and Concrete Research Division Publications may be obtained from the addresses given below.

Engineering Manuals:

U. S. Army, Corps of Engineers
Publications Depot
2803 -52nd Avenue
Hyattsville, MD 20781-1102

Concrete Research Division Publications:

U.S. Army Engineer Waterways Experiment Station
ATTN: Publications Distribution Unit
P.O. Box 631
Vicksburg, MS 39180

End of Paragraph

11. BULLETIN BOARD

Immediately upon beginning of work under this contract, the Contractor shall provide at the job site a weatherproof glass-covered bulletin board for displaying the fair employment poster, wage rates, and safety bulletins and posters. Emergency telephone numbers and reporting instructions for ambulance, physician, hospital, fire and police shall be posted. The bulletin board shall be located in a conspicuous place easily accessible to all and legible copies of the aforementioned data shall be displayed until work under the contract is completed. No direct payment will be made for the bulletin board.

End of Paragraph

12. LABOR REPORTS

The Contractor shall promptly furnish and shall cause any subcontractors to furnish in like manner within 7 days after the regular payment date of each weekly payroll to the Contracting Officer, a copy of such payroll together with a statement of compliance with respect to the wages paid each of its employees (which shall not be deemed to apply to persons in classifications higher than laborers and mechanics and those who are the immediate supervisors of such employees) engaged on the work. If the Contractor or any of his subcontractors fail to furnish copies of such payrolls, the Contracting Officer may disapprove all or part of any progress payment estimate for the period covered by such payrolls until they are received by him. The Contractor shall also prepare and furnish such labor reports as may be required by the Department of Labor.

End of Paragraph

13. PROTECTION OF MATERIAL AND WORK

The Contractor shall at all times protect and preserve all materials, supplies and equipment of every description (including property which may be Government-furnished or owned) and all work performed. All reasonable requests of the Contracting Officer to enclose or specially protect such property shall be complied with. If, as determined by the Contracting Officer, material, equipment, supplies, and work performed are not adequately protected by the Contractor such property may be protected by the Government and the cost thereof may be charged to the Contractor or deducted from any payments due him.

End of Paragraph

14. ENGLISH-SPEAKING REPRESENTATIVE

At all times when any performance of the work at any site is being conducted by any employee of the Contractor or his subcontractors, the Contractor shall have a representative present at each site who has the capability of receiving instructions in the English language, fluently speaking the English language and explaining the work operations to persons performing the work in the language that those performing the work are capable of understanding. The Contracting Officer shall have the right to determine whether the proposed representative has sufficient technical and bilingual capabilities, and the Contractor shall immediately replace any individual not acceptable to the Contracting Officer.

End of Paragraph

15. PROHIBITION AGAINST CONTRACTING WITH INDIVIDUALS OR ENTITIES DESIGNATED AS SIGNIFICANT NARCOTICS TRAFFICKERS

Pursuant to Executive Order 12978 entitled "Blocking Assets and Prohibiting Transactions with Significant Narcotic Traffickers" dated October 21, 1995, the offeror certifies that it has not and will not be involved in business transactions with individuals or business entities designated as significant narcotics traffickers under this Executive Order. For a current listing of specially designated nationals and blocked persons, contact the Office of Foreign Assets Control, Department of the Treasury, Washington, DC 22201; telephone 202/622-2420.

End of Paragraph

16. CONTRACTOR PAYMENT REQUEST

A copy of CESAM Form 1151 entitled PROMPT PAYMENT CERTIFICATION AND SUPPORTING DATA FOR CONTRACTOR PROGRESS PAYMENT INVOICE is included hereinafter, with instructions, following the Wage Rates. This form will be used in conjunction with the CONTRACT CLAUSE entitled PAYMENTS UNDER FIXEDPRICE CONSTRUCTION CONTRACTS. The contracting Officer will provide copies of the form to the Contractor upon request. The Contractor shall complete the form, sign the certification and submit it with each progress payment invoice.

End of Paragraph

17. PARTNERING

In order to most effectively accomplish this contract, the Government proposes to form a cohesive partnership with the Contractor and its subcontractors. This partnership would strive to draw on the strengths of each organization in an effort to achieve a quality project done right the first time, within budget and on schedule. This partnership would be bilateral in make-up and participation will be totally voluntary. Any cost associated with implementing this partnership will be agreed to by both parties and will be shared equally with no change in contract price.

End of Paragraph

18. POTABLE WATER

Testing of all potable water storage facilities and dispensing systems with a storage capacity of ten or more gallons, will be conducted by an independent testing laboratory approved by the Contracting officer as follows:

- (1) Prior to the commencement of work.
- (2) Minimum of monthly, after start of work for the duration of the contract.
- (3) After any repairs or modifications are made to the potable water storage or dispensing systems.
- (4) After any intake of potable water into the storage system.

All samples shall meet state and local water quality standards for potable water. A copy of all test results will be forwarded to the Contracting Officer within seven working days for his review.

In the event a tested sample fails to meet state and local water quality standards, all dispensing outlets connected to the failing water storage shall be labeled as non-potable and other means of potable water shall be obtained until water quality can be provided to meet the required standards.

To insure potable water maintains water quality standards all portable potable water dispensing units shall be checked daily for cleanliness. All hoses used in the transfer of potable water shall be conspicuously marked and kept in such a manner as to keep them from being contaminated. These hoses shall be used for potable water transfer only.

End of Paragraph

19. PRESERVATION OF HISTORICAL, ARCHEOLOGICAL AND CULTURAL RESOURCES

(a) If known historical, archeological and cultural resources exist within the Contractor's work area, they have been designated on the contract drawings. The Contractor shall install protection for these resources as shown on the drawings and shall be responsible for their preservation during the contract.

(b) If, during construction activities, the Contractor observes items that might have historical or archeological value, such observations shall be reported immediately to the Contracting Officer so that the appropriate authorities may be notified and a determination can be made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from trespassing on, removing, or otherwise damaging such resources.

End of Paragraph

20. WORK IN QUARANTINED AREA

The work called for by this contract involves activities in counties quarantined by the Department of Agriculture to prevent the spread of certain plant pests which may be present in the soil. The Contractor agrees that all construction equipment and tools to be moved from such counties shall be thoroughly cleaned of all soil residues at the construction site with water under pressure and that hand tools shall be thoroughly cleaned by brushing or other means to remove all soil. In addition, if this contract involves the identification, shipping, storage, testing, or disposal of soils from such a quarantined area, the Contractor agrees to comply with the provisions of ER 1110-1-5 and attachments, a copy of which will be made available by the Contracting Officer upon request. The Contractor agrees to assure compliance with this obligation by all subcontractors.

End of Paragraph

21. KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS

Any key in-house personnel, subcontractors and outside associates or consultants required by the Contractor in connection with the services covered by the contract will be limited to individuals or firms that were

specifically identified and agreed to during negotiations. The Contractor shall obtain the Contracting Officer's written consent before making any substitution for these designated key personnel, subcontractors, associates, or consultants.

End of Paragraph

22. ACCOMMODATIONS AND MEALS FOR INSPECTORS

a. The Contractor shall furnish regularly to inspectors on board the dredge or other craft upon which they are employed, a suitable separate room for office purposes. The room shall be fully equipped and maintained to the satisfaction of the Contracting Officer; it shall be properly heated, ventilated, and lighted, and shall have a desk which can be locked, a chair for each inspector, and washing conveniences. The entire cost to the Contractor for furnishing, equipping, and maintaining the foregoing accommodations shall be included in the contract price. If the Contractor fails to meet these requirements, the facilities referred to above will be secured by the Contracting Officer, and the cost thereof will be deducted from payments to the Contractor.

b. If the Contractor maintains on this work an establishment for the subsistence of his own employees, he shall, when required, furnish the inspectors employed on the work, and to all Government agents who may visit the work on official business, meals of a quality satisfactory to the Contracting Officer. The Contractor will be responsible for collecting from all inspectors and other Government agents the following amount per person for each meal: Breakfast - \$2.25, Lunch - \$3.25 and Dinner - \$3.50.

End of Paragraph

23. SEAGOING BARGE ACT

The Seagoing Barge Act (46 U.S. C. 395 et seq.) applies to this project. In the event the low bidder contemplates using plant that requires U.S. Coast Guard certification to comply with this Act, the low bidder shall within 15 calendar days after bid opening submit a copy of said certificate to the Contracting Officer. Failure to produce the certificate within the required time shall subject the bidder to a determination of nonresponsibility.

End of Paragraph

24. DELIVERY, PROSECUTION AND TERMINATION

(a) The dredge and attendant plant shall be delivered by and at the expense of the Contractor to the Mobile District's navigation projects located in Mobile County, Alabama.

(b) The Contractor shall prosecute the work assigned him with faithfulness and energy, and at all times endeavor to meet the schedule of dredging operations as determined by the Contracting Officer.

(c) Upon termination of the lease, the plant will be released to the Contractor.

End of Paragraph

25. SUNDAYS, HOLIDAYS AND NIGHTS

Due to the nature of the work, a twenty-four (24) hour operation will be performed on a seven (7) day week schedule. Work shall be performed on days declared by Congress as holidays for per diem employees that fall within the work described above. Deviation from the work week contracted for will be subject to the approval of the Contracting Officer. -

Operation Day. The dredge, together with the necessary attendant plant and with adequate crew, shall be operated 24 hours per day on an optional shift basis.

End of Paragraph

26. RETAINAGE--SMALL BUSINESS SUBCONTRACTING REPORTING

Reference is made to contract clause(s) 252.219-7003, Small Business Subcontracting Plan (DoD Contracts) and 52.219-16, Liquidated Damages--Small Business Subcontracting Plan. In order to ensure compliance with these clauses, retainage will be withheld from progress payments due the contractor in an amount sufficient to protect the Government's ability to assess Liquidated Damages for failure to submit timely SF 294 and SF 295 reports.

The formula for retainage is as follows:

"Total dollar amount proposed for subcontracting to small business multiplied by percentage of actual progress on the contract, up to a maximum of 10% of the given progress payment, shall be withheld from the next progress payment due after a contractor fails to submit a required report. If one or more reports have been submitted before such failure, formula for determining the amount of retainage will be adjusted by deducting any amounts reported as subcontracted to small business from the total dollar amount proposed to be subcontracted and the difference multiplied by the percent of actual progress, up to a maximum of 10% of the given progress payment."

End of Paragraph

27. JOINT VENTURE BID REQUIREMENTS

When bidding as a Joint Venture, all members of the Joint Venture must sign all contract documents and must complete the Representations and Certifications unless a written agreement by the Joint Venture is furnished with the bid designating one firm with the authority to bind the other member(s) of the Joint Venture. In addition, a copy of the Joint Venture Agreement fully executed by both parties must be submitted with the bid. Failure to comply with the foregoing requirements may render the bid non-responsive. For 8(A) Joint Ventures, the Joint Venture shall also submit evidence that it has notified and discussed the proposed joint venture with its SBA Servicing Agency. Additionally, for 8(A) Set-aside procurements, all prospective Joint Ventures must comply with Title 13 Code of Federal Regulations (CFR) Part 124.513. Award to an 8(A) Joint Venture shall be contingent upon SBA approval of the 8(A) Joint Venture Agreement. For HubZone Set-Aside procurements, and awards to HUBZone small business concerns, a HUBZone Joint Venture must comply with 13 CFR 126.616.

End of Paragraph

28. SMALL BUSINESS SUBCONTRACTING PLAN

(a) This clause does not apply to small business concerns.

(b) Offerors who are large businesses, upon request by the Contracting Officer, shall submit a subcontracting plan in accordance with the contract clause in Section 00 70 00, FAR 52.219-9, Small Business Subcontracting Plan.

(c) Approval of subcontracting plan by the Contracting Officer will be contingent upon providing a plan that includes realistic goals and makes a good faith effort to acquire services and supplies from small businesses

End of Paragraph

AMENDMENT 0003

29. PROCEDURES FOR SUBMISSION OF BIDS AND VIRTUAL BID OPENING

In accordance with FAR 14.202-8 and FAR Part 4.5, bidders will be required to submit their bids in response to this IFB solicitation by 2:00 pm CST on ~~19 March~~ 2 April 2024 via electronic means, to include bid bonds. Physical copies of bid bonds will not be required to be submitted unless otherwise requested by the Contracting Officer at a later date. Bidders that are interested in submitting bids will use the U.S. Army Corps of Engineers via Procurement Integrated Enterprise Environment (PIEE) website (<https://piee.eb.mil/xhtml/unauth/home/login.xhtml> OR- <https://wawf.eb.mil> -OR- <https://piee.eb.mil>). Emailed submissions of bids are not permitted and will not be accepted under any circumstances. The Government must receive your bid no later than the time and date specified in Block 13 of SF 1442. The PIEE system notification must show the bid submission prior to the specified time. Any and all amendments to the solicitation shall be acknowledged by signing on each amendment (SF30) and by completing Block 19 of the SF 1442. Offerors shall confirm bid receipt by emailing the Points of Contact listed on the SF1442.

The public bid opening will be held virtually on ~~19 March~~ 2 April 2024 at 2:45 pm CST. Interested parties are welcome to participate by joining the teleconference call via WebEx. The details of the teleconference are provided below:

Phone Number: 844-800-2712

Access Code: 1990707194

Security Code: 1111

End of Paragraph

AMENDMENT 0003

SECTION 35 20 23

DREDGING
08/20

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

This Section covers furnishing all suitable labor, materials, plant, equipment, tools, skills, services, incidentals and performing all work required to excavate the specified materials from within the prescribed Mobile Harbor Federal Navigation Channel Improvements deepening and widening dredge area limits. In addition, this section covers the transport and placement of the dredge material as indicated in the Contract drawings to attain the surface area and fill height for the respective beneficial use at the Deer River, Dauphin Island Causeway and Relic Shell Areas A and B dredge material placement areas. The dredge material will be placed to create tidal marsh habitat and restore sediment to open water bay bottoms.

1.2 REFERENCES

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements
Manual

AMENDMENT 0002

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance with Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Unless otherwise indicated below, Preconstruction Submittals shall be submitted no later than 20 calendar days after Notice of Award or 5 calendar days after Notice to Proceed, whichever is later.

Notice Of Intent to Dredge; G, OP

Order Of Work Plan; G, OP

Quality Control Plan; G, OP

Deposition Plan; G, OP

Survey Plan; G, OP

Accident Prevention Plan (App); G, OP

SD-05 Design Data

Pre-Construction Surveys; G, OP

Post-Construction Surveys; G, OP

Construction Surveys; G, OP

Before-Dredging Condition Surveys; G, OP

After-Dredging Condition Surveys; G, OP

Aerial Photographs Of Deer River And Dauphin Island Causeway
Placement Sites; G, OP

SD-06 Test Reports

Dredge Progress Report; G, OP

Daily Reports; G, OP

SD-11 Closeout Submittals

Project Completion Report; G, OP

AMENDMENT 0002

1.4 DEFINITIONS

1.4.1 Maintenance Material

Maintenance material is defined as that comprising shoaling which has occurred since the channel areas were last dredged.

1.4.2 New Work Material

New work material is defined as previously undredged material.

1.4.3 Mobile Harbor Upper Bay Deepening

Is the dredging to achieve a 5 foot deepening of the existing maintained Upper Mobile Harbor Channel between Stations 226+16 and 267+72.58

1.4.4 Mobile Harbor Turning Basin Deepening and Expansion

Is the dredging to achieve a 5 foot deepening and 250 foot southward expansion of the existing maintained Mobile Harbor turning basin located between stations 245+00 and 271+26.85.

1.4.5 Mobile Harbor Upper Bay Widening

Is the dredging to achieve a 100 foot widening of the existing maintained Upper Mobile Harbor Channel between Stations 267+72.58 to Station 337+00.

1.4.6 Deer River Marsh Creation Fill

Is marsh platform constructed by placement of sandy dredged fill material mixed with silts and clay from the specified Mobile Harbor Federal Navigation Channel behind the existing Deer River Containment Berm within the lines, grades, and elevations shown in the Plans.

1.4.7 Relic Shell Mine Site A and B

Is the open water placement of finer silts and clay dredged material from the specified Mobile Harbor Federal Navigation Channel within the specified limits of the bay shown on the contract Plans to restore sediment to the system.

1.4.8 Dauphin Island Causeway North Sand Berm

Is the placement of coarser sandy fill material from the specified Mobile Federal Navigation Channel behind the existing segmented breakwaters at the Dauphin Island Causeway North dredge placement area located north of Heron Bay Cutoff within the lines, grades, and elevations shown in the contract Plans.

1.4.9 Dauphin Island Causeway North Marsh Creation Fill

Is marsh platform constructed by placement of sandy dredged fill material mixed with silts and clays from the specified Mobile Harbor Federal Navigation Channel behind the Dauphin Island Causeway North Sand Berm located north of Heron Bay Cutoff within the lines, grades, and elevations shown in the contract Plans.

1.4.10 Dauphin Island Causeway South Sand Berm

Is the placement of coarser sandy dredged fill material from the specified Mobile Federal Navigation Channel behind the existing segmented breakwaters at the Dauphin Island Causeway South dredge placement area located south of Heron Bay Cutoff within the lines, grades, and elevations shown in the contract Plans.

1.4.11 Dauphin Island Causeway South Marsh Creation Fill

Is marsh platform constructed by placement of sandy dredged fill material mixed with finer silts and clays from the specified Mobile Harbor Federal Navigation Channel behind the Dauphin Island Causeway South Sand Berm located south of Heron Bay Cutoff within the lines, grades, and elevations shown in the contract Plans.

1.5 METHOD OF COMMUNICATION

Project coordination with the Contracting Officer/Representative (KO/COR) and Quality Assurance Representative (QAR) is to occur during all phases of construction. The area adjacent and West of the channel deepening and widening between stations 267+72.53 and 337+00 will be dredged under a separate Phase 5 Contract. The Contractor shall ensure close coordination regarding their order of work with the Contracting Officer to ensure clear coordination between contractors. Provide a system of communication between the dredge crew and the crew at the placement area. A portable two-way radio is acceptable. Coordination also includes but is not limited to publication of the notice of intent to dredge and coordination with local officials including police, public, US Coast Guard, and others as

agreed during coordination meetings. The Contractor shall submit a bi-weekly Dredge Progress Report in Adobe PDF format to the Contracting Officer. The Dredge progress reports shall include but not be limited to the following:

- a. Summary table of excavated sediments, dredge positions and cut depths for the reporting time period obtained from applicable production reports 4267 or 27
- b. Overview of the project showing the cumulative dredge positions for the reporting time period
- c. Excavation graphs showing depth versus time for each dredge for the reporting time period
- d. A color-coded plot, in the project reference datum, of the draghead, cutterhead, or other hydraulic or mechanical dredging device depicting the vertical and horizontal limits of the material dredged each day. Any horizontal or vertical dredge violations shall be clearly defined
- e. Hopper dredges shall submit dredge track lines with draghead depths that shall indicate dredge status: dredging, transiting, unloading, and loading
- f. Daily reports for the reporting time period
- g. Update of the construction progress, including estimated volumetric production rates from dredge areas (both cumulative and for the reporting period)
- h. Hopper Dredge Turtle Observer Reports (if applicable) for the reporting time period
- i. Incidental Take Observer Reports (if applicable) for the reporting time period

1.6 NOTICES

1.6.1 Start of Work

The Contractor shall give the Contracting Officer's Representative five (5) days written advance notice of the date they plans to begin dredging work in order that required Government actions, such as the installation of baselines and other survey controls, can be started sufficiently in advance of the Contractor's operations.

1.6.2 Notice of Intent to Dredge

Prior to commencement of work on this contract, the Contractor will be required to notify the Commander, Eighth Coast Guard District of their intent to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least 30 calendar days prior to project commencement. A copy of the notification shall be provided to the Contracting Officer.

1.6.3 Work Hours

Should the Contractor elect to work on Sundays, holidays, or at night, advance notice of this intent shall be given the Contracting Officer's Representative within a reasonable time, specifying both the dates and hours of the proposed work. Notification is not meant to restrict the Contractor, but to allow the government time to coordinate quality assurance inspections. Adequate lighting to facilitate thorough inspection of night operations shall be provided by the Contractor at no additional cost to the Government.

1.6.4 Order or Work Changes

The Contractor shall give the Contracting Officer's Representative ten (10) days written advance notice of the date of any plans to modify the order of work in order that required Government actions may be started sufficiently in advance of the Contractor's operations, including the installation of baselines and other survey controls.

1.7 GENERAL SAFETY REQUIREMENTS

The requirements of this paragraph shall be made part of the Contractor's Accident Prevention Program submittal. The Contractor shall provide specific details of actions proposed to fulfill these requirements.

1.7.1 Accident Prevention Plan

An accident prevention program incorporating safety features and procedures from Engineer Manual EM 385-1-1, which are applicable to all aspects of the Contractor's dredging operations, is required. An Accident Prevention Plan (APP) describing the Contractor's accident prevention program shall be provided. In addition to these features, the safety requirements outlined in the following paragraphs shall be incorporated into the Contractor's accident prevention program.

1.7.2 Plant Fleeting Area

The Contractor shall designate a plant fleeting area within which all idle components of plant equipment shall be stored. The fleeting area plan shall be contained within the Order of Work Plan. The area shall be marked by "hazardous area" buoys, properly placed and marked with reflective tape to give adequate nighttime warning to mariners. In addition to these buoys, a lighted warning sign, as specified in Section 8.A. of EM 385-1-1, shall be prominently displayed on the equipment in the fleeting area. This sign shall be well lighted and have reflective borders. Multiple lengths of floating pipeline may be placed side-by-side within this fleeting area only if protected by a barge at each end, and shall not be placed in a manner so as to extend outside the barges. Floating pipeline within this fleeting area, not protected at each end by barges, may be placed in single rows and end-to-end only. The requirement for buoys and a lighted warning sign, as specified above, also applies to this configuration.

1.7.3 Dredge Pipeline Markings (Submerged and Floating)

Pipelines, for the purpose of critical markings, are defined as submerged and floating only. Submerged pipelines are defined as those that rest on, are positioned on, or are anchored to, the water column bottom at all times. Other pipelines are defined as floating for purposes of these

markings requirements. These definitions apply whether there is dredge slurry flowing through the pipeline or not. Stored pipeline is covered elsewhere in this Section.

1.7.3.1 Submerged Pipeline Markings

The location or position of the entire length of submerged pipeline shall be marked with signs, buoys, lights, or flags as required by the U.S. Coast Guard (USCG) and as approved by the Contracting Officer's Representative. Signs, bouys, and flags shall be constructed of, or coated with, reflective material that can be detected by marine radar and is easily visible when illuminated by a spotlight beam. The local USCG and U.S. Army Corps of Engineers (USACE) have agreed that the following marking elements are sufficient:

One row of signs, buoys, lights of constant yellow color and of intensity sufficient to be visible for at least one mile on a clear night, flags, or an appropriate combination of these, more or less equally spaced along the submerged pipeline length in sufficient number to define the alignment (length and course) of the pipeline.

1.7.3.2 Floating Pipeline Markings

The position of the entire length of floating pipeline, both rubber and metallic, shall be marked with lights as required by the USCG and approved by the Contracting Officer's Representative. The local USCG and USACE have agreed that the following marking elements are sufficient and in accordance with 33 CFR 88.15:

a. one row of yellow lights, more or less equally spaced, which:

- (1). flash 50 to 70 times per minute;
- (2). are visible all around the horizon for at least 2 miles on a clear night;
- (3). are not less than 1 meter nor more than 3.5 meters above the water surface;
- (4). are sufficient in number to clearly show the pipeline's alignment (length and course). The lights shall be spaced not more than 10 meters apart where a pipeline crosses a navigable channel (see paragraph below for further lighting requirements of channel crossings).

b. two red lights at each end of the pipeline length, which are:

- (1). visible all around the horizon for at least 2 miles on a clear night;
- (2). stacked 1 meter apart in a vertical line with the lower light at the same distance above the water as the flashing yellow lights along the rest of the pipeline.

1.7.4 Pipelines Crossing Navigable Channels

At navigable channel crossings, pipelines may be either of two types, submerged or floating (floating crossings are further defined as fixed and non-fixed opening types):

1.7.4.1 Submerged pipeline crossings

Submerged pipeline crossings shall meet the following requirements.

a. The pipeline shall be configured in such a fashion (joints, bends, etc.) that it allows a safe passageway to usual vessel traffic with dimensions equal to or greater than the project channel dimensions (bottom width, side slopes and depth);

b. The pipeline must have two lights at each side of the safe passageway, which are:

(1). visible all around the horizon for at least 2 miles on a clear night;

(2). stacked 1 meter apart in a vertical line with the lower light not less than 1 meter nor more than 3.5 meters above the water surface; and

(3). of red color matching the standard USCG channel marking convention.

1.7.4.2 Floating Pipeline Crossings

Floating pipeline crossings shall meet the following requirements:

Fixed, non-opening, drop loop crossings shall have two red lights stacked at each side of the safe passageway which meet the requirements of 1.7.4.1.b.(1)., 1.7.4.1.b.(2) and 1.7.4.1.b.(3) above, and have depth and width of the loop equal to or greater than the channel project dimensions.

Non-fixed, opening type crossings shall have two stacked red lights at each side of the to-be-presented safe passageway, which meet the criteria of 1.7.4.1.b.(1) and 1.7.4.1.b.(2) above, and have the capability to be quickly disconnected (opened), on proper notice by approaching traffic, to allow safe vessel passage.

1.7.5 Plant Inspection

All plants, in use or idle, shall be inspected at least once per shift by the Contractor'S inspector to assure that buoys, signs, and lights are in place and that all lights are operating properly. Daily reports by the Contractor shall identify inspection personnel and indicate the time of inspection of plant in use and in storage within the fleeting area. An adequate number of reserve batteries and lights shall be stored on the dredge(s) or on other readily accessible plant equipment at all times in order that non-functioning lights can be repaired or replaced.

1.7.6 Public Awareness

The Contractor shall facilitate public awareness of potential navigation hazards presented by dredge operation and plant storage within the fleeting area by ensuring that announcement of the beginning of work is carried by local newspapers, radio and television stations, and waterway user association publications. Details provided in the announcement shall include beginning date, work schedule, work location, fleeting area location, and recommended boat operation in the vicinity of work areas.

Periodic work updates and/or status announcements shall be made whenever necessary and at least on a monthly basis throughout the term of this contract. The Contractor shall provide and maintain sturdy and prominently displayed "Warning Signs" at all public boat marinas within ten (10) miles of the dredging operations and plant fleeting area. The warning signs shall be constructed as prescribed on the drawing entitled "Warning Sign" bound herein. The signs shall have red lettering and castles on a white background with a red reflective border. The information provided on the signs shall be similar to that indicated on the drawing and shall include locations of dredging operations and plant fleeting areas, as applicable. The Contractor shall be responsible for keeping the warning signs updated with appropriate information identifying all active work sites under this contract.

1.8 SPECIAL SAFETY REQUIREMENTS

The requirements of this paragraph shall be made part of the Contractor's Accident Prevention Program submittal. The Contractor shall provide specific details of actions proposed to fulfill these requirements.

1.8.1 General

As a part of the Accident Prevention Program submittal, the Contractor shall provide documentation of the "indoctrination" safety briefing for the particular job to be performed by each employee as referenced in Sections 01.B. of EM 385-1-1. This documentation shall include the employee's name, job title, date(s) of safety briefing, and subject(s) of each briefing. When an employee changes jobs, another "indoctrination" safety briefing for the new job shall occur, with the documentation appropriately updated. The Contractor shall ensure that every employee receives appropriate "on-the-job" safety briefings on the first day the employee returns from off-tour time, and regular safety briefings at least every seven (7) days for all on-tour employees. Applicable portions of Sections 01.B. of EM 385-1-1 are referenced. All such briefings shall be documented on the daily Contractor's Quality Control Report (QCR). The Contractor shall ensure that every supervisor located at the job site(s) attends a "staff" safety meeting held at least monthly. The purpose of these safety meetings shall be to review, plan, and establish safety activities for this project. Applicable portions of Sections 01.B. of EM 385-1-1 are referenced. Documentation of these meetings shall include the employees' names, job titles, dates of meetings, topics covered, summary of actions, and other appropriate information. All such meeting documentation shall be furnished as an attachment to the daily Contractor's Quality Control Report within three (3) days after the meeting. The Contracting Officer's Representative shall be notified of all safety briefings and meetings, and may attend any "indoctrination" safety briefing, "on-the-job" safety briefings or "staff" safety meetings. These briefings and meetings shall be conducted throughout all phases of this contract and shall include the Contractor and subcontractors.

1.8.2 Accident/Incident Investigation and Reporting

The Contractor shall designate a specific company officer as the investigating official referenced by Section 1 of EM 385-1-1. The investigation official shall attend the pre-construction conference. The investigating official's name and other pertinent information including company position, qualifications, experience, and training shall be listed in the Contractor's Accident Prevention Program when submitted for

approval. All accidents and incidents shall be personally investigated by this official in accordance with the requirements of EM 385-1-1, and the requirements specified herein and at the pre-construction conference. The investigation official shall sign Block 1.d. of the ENG Form 3394 attesting to his or her personal participation in the accident or incident investigation process, the accident or incident cause analysis, and the accident or incident cause elimination plans anticipated or recommended. The completed, typed original of ENG Form 3394 shall be submitted to the Contracting Officer's Representative within 24 hours of the accident or Incident. All accidents and incidents shall be immediately reported to the Designated Government Representative. Accident and incident management shall be emphasized and will be further discussed at the Pre-Construction Conference.

1.8.3 Critical Lift Operations with Hoisting Equipment

All hoisting equipment used on this contract shall be performance- and operation-tested in accordance with EM 385-1-1. The planning and conduct of these tests shall be documented using the CRITICAL LIFT PLAN in accordance with EM 385-1-1. These tests shall be conducted for any CRITICAL LIFT OPERATION, i.e., when any one of the following conditions exists:

- (a) Load to be lifted exceeds the original TEST LOAD (TEST LOAD or PERFORMANCE LOAD TEST is made at the beginning of the particular hoisting equipment's start-of-work on this contract).
- (b) The operator will lose sight of the load during lift operation
- (c) The lift operation requires two or more signal persons.
- (d) The rigging procedures to be used on the lift operation are considered unusual.
- (e) The operator or supervisor believes the lift operation should be considered CRITICAL.

The Contractor shall ensure that hoisting equipment operators have been proven competent prior to employment on this contract. A Resume' of each operator's competence (experience, training, etc.) shall be made part of the Contractor's Quality Control Plan referenced elsewhere in this specification. Hoisting equipment performing duty cycle activities shall undergo the critical lift operation testing procedure for each distinct type of duty cycle activity (dragline activity, clamshell activity, etc.) involved. When any of the conditions under which the original critical lift operation test was conducted for a piece of hoisting equipment changes, another critical lift operation test shall be planned, conducted and documented for that equipment. All documentation for critical lift operation tests shall become part of the permanent contract safety files. All actions specified in the paragraph entitled "General Safety Requirements" shall be part of the Contractor's Accident Prevention Program submittal. The Contractor shall provide specific details of actions proposed to fulfill these requirements.

1.9 REPORTING REQUIREMENTS

The Contractor shall prepare and submit a Report of Operations and a Contractor's Quality Control (CQC) Report daily. The reports shall be developed in accordance with SECTION 01 45 00.15 10. The Contractor reports

shall be prepared for all dredging work activities. A sample of each form for recording the required information is bound herein. In addition to the two daily dredging reports required, the Contractor shall submit a monthly report of operations covering each month or partial month's work on the ENG No. 4267 and/or 27a. The monthly reports shall be submitted to the Contracting Officer's Representative on or before the seventh (7th) day of each month, consolidating the previous month's work. Upon completion of the contract, the Contractor shall submit a consolidated job report, combining the monthly reports. These reports shall be submitted in duplicate, the original and one copy. The Contractor shall complete a narrative completion report combining all reports (696's, 4267's, etc.). The report shall be maintained throughout the life of the project. A draft shall be submitted bi-monthly, with the final narrative completion report being submitted at the end of the contract. The draft and final versions shall be submitted in electronic and hardcopy forms.

1.10 OTHER OPERATIONS

The Contractor should anticipate the possibility of concurrent marine construction and aquaculture operations, adjacent to or nearby the dredge and placement areas in this contract. Locations of known aquaculture subtidal reefs in the vicinity of the work areas are shown on the Contract drawings. Delays should be anticipated in transiting to, and through, the dredging and placement areas during dredging and placement operations. Coordination with other operations in the vicinity of the dredge and placement areas is required.

The Contractor shall so conduct their operations such that they shall not close any thoroughfare nor interfere in any way with traffic on railway, highways, or on water, without the written consent of the Contracting Officer. 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, Department of Interior, Alabama Department of Transportation, Alabama Law Enforcement Agencies, county and municipal.

1.11 PROTECTION OF EXISTING STRUCTURES

The Contractor shall be responsible for determining and documenting the pre-construction condition of existing structures within the project area including staging site(s) and work access. The Contractor shall take appropriate measures to prevent damage to any structures during construction, and for performing a post-construction verification inspection of those structures previously inspected.

1.12 DAMAGES TO ADJACENT PROPERTY AND STRUCTURES

Any damage to private or public property within the project boundaries, including staging site(s) and work access areas/roads, shall be repaired promptly by the Contractor. Any damage as a result of the Contractor's operations shall be repaired at no cost to the Government.

1.13 PROJECT FINAL CLEANUP

Final cleanup, as stated in the paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK of Section 00700 CONTRACT CLAUSES, shall include the removal of all of the Contractor's plant and equipment either for disposal or reuse. Plant and/or equipment to be disposed of shall ONLY be disposed of in a manner and at locations approved by the COR. Unless otherwise

approved in writing by the COR, the Contractor will not be permitted to abandon pipelines, pipeline supports, pontoons, or other equipment in the work area, pipeline access areas, water areas, or other areas adjacent to the work site. Pilings and any other debris removed or created as a result of the execution of this contract shall be disposed of in a manner and at locations approved by the COR.

1.14 ENVIRONMENTAL COMPLIANCE AND PROTECTION

Comply with conditions and requirements of State and Federal permits. See Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS for additional details. During the life of the contract, provide and maintain environmental protective measures. Also, environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations, must be provided. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution.

1.14.1 Pumping of Bilges

Contractors are warned that pumping oil or bilge water containing oil into navigable waters, or into areas which would permit the oil to flow into such waters, is prohibited by Section 13 of the River and Harbor Act of 1899, approved 3 March 1899 (30 Stat. 1152; 33 U.S.C. 407). Violation of this prohibition is subject to penalties provided under the referenced Act.

1.14.2 Fuel Oil Transfer Operations

In accordance with 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 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 operator shall be submitted to the Contracting Officer for each refueling operation. The U.S. Coast Guard shall also be notified prior to any refueling. Submittal of the Declaration of Inspection is described in SD-03 Product Data

1.14.3 Turbidity

Excavation, transport, and filling operations shall be performed in a manner that will minimize turbidity. The Contractor shall meet the requirements to maintain the quality of the State's waters as contained in Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. The Contractor will be required to make inspections, measurements and observations required by those regulations in the vicinity of the dredge, and the dredge material placement areas(s). During dredging and placement operations the Daily Report shall clearly note the daily turbidity measurements, including: brand and model of the turbidity meter, Easting and Northing of the Compliance and Background points, the water depth of the collection location, the water temperature, the date and time of the measurements, the dredge status, the name of the collector, the wind velocity and direction, the current velocity and direction, and other appropriate weather conditions.

1.14.4 Cultural Resources Protection

No known cultural resources exist within the project area. However, if any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered,

located, and/or recovered, the Contractor acknowledges that:

- a. The site(s), articles, or other materials are the property of the State or Federal Government.
- b. Shall immediately notify the QAR, the archaeological monitor, and the Project Archaeologist.

1.15 BASIS FOR BIDS

See the EXPLANATION OF BID ITEMS.

PART 2 PRODUCTS

2.1 CHARACTER OF MATERIAL

2.1.1 Logs of Borings and Laboratory Data

The boring logs and lab data for this project are located in Appendix A of this specification. Locations of borings are shown within the contract drawings. The borings represent conditions at the time of drilling operations. The Contractor shall make their own interpretation(s) of this information in determining the character of materials to be dredged and understand how the character of the materials may affect the placement. All classifications of soils, both visual and laboratory, are in accordance with the Unified Soil Classification System, sompatible with ASTM D 2487.

2.1.2 Materials to Be Removed

Material to be removed under this contract (within the required dredging prisms) includes mainteance material and new work, previously undredged material. Additionally, some large and small debris, not indicated on the boring logs or contract drawings, may exist within the limits of the required work. The Contractor may also find that the material to be removed contains various non-soil substances such as fibrous debris (trees, roots, snags, stumps, etc.), metal cables, wire, rubble, etc.

Records of previous dredging, consisting of cross sections, history cards and/or general data on past contract dredging, are available at the Irvington Site Office of the Mobile District, Corps of Engineers, 7861 13th Street, Irvington, AL 36544, (251) 957-6019.

PART 3 EXECUTION

3.1 INSPECTION

Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in place and usable for the intended purpose. Provide, at the request of the Contracting Officer, boats, boatmen, laborers, and materials necessary for inspecting, supervising, and surveying the work. When required, provide transportation for the Contracting Officer and inspectors to and from the placement area and between the dredging plant and adjacent points on shore.

3.1.1 Plant Inspection

The dredge plant will be inspected by the Contractor and Contracting Officer, or their representative, prior to beginning work to ensure total dredging plant is in safe working condition. Before any machinery or

mechanized equipment is placed in service, it must be inspected and tested by the Contractor and certified to be in safe operating condition.

3.1.1.1 Contractor's Obligation to Inspect

Mechanized equipment shall be inspected and tested by the Contractor and certified to be in safe operating condition using the Safety Survey Checklist for Floating Plant and the Safety Inspection Checklist for Mobile Construction Equipment forms as prescribed by EM 385-1-1. Records of these tests and inspections shall be provided to the Government prior to Government inspection and shall be maintained at the site by the Contractor.

All plants, in use or idle, shall be inspected at least once per shift by the Contractor inspector to assure that buoys, signs, and lights are in place and that all lights are operating properly. Daily reports by the Contractor shall identify inspection personnel and indicate the time of inspection of plant in use and in storage within the fleeting area. An adequate number of reserve batteries and lights shall be stored on the dredge(s) or on other readily accessible plant equipment at all times in order that non-functioning lights can be repaired or replaced.

3.1.1.2 Government Safety Inspection

Upon completion of mobilization, before starting work, and after the checklist forms are provided to the Government, a safety inspection will be conducted by the Government. The safety inspection will be conducted using the checklists as a guide to denote any deficiencies. Inspections performed by the Government do not relieve the Contractor of their responsibility to perform their own inspections of plant to assure a safe working environment at all times in accordance with contract specifications, EM 385-1-1 and the Accident Prevention Plan. Checklists are provided in Appendix D.

3.1.1.3 Hopper Leakage Test

During the safety inspection, the dredge will be required to take on water equivalent to the hopper capacity. In order for the dredge to begin work, it must have no more than a 5% loss in a one hour period. This test may be performed again at any time during the contract when an indication of leakage exists. Should the dredge fail said test, no dredging will take place until the leakage is repaired.

3.1.1.4 Clearance to Begin Work

Upon completion of the Government's safety inspection, a list of deficiencies, if any, will be given to the Contractor for corrective action. If, in the opinion of the Contracting Officer's Representative, the plant is unsafe or does not meet the terms of the specifications, clearance to begin work will be withheld. In the absence of deficiencies.

3.1.1.5 USCG Operator's License

If Dredge (or other marine construction) Plant operation support workboat operators are moving dredge equipment, supplies, personnel, etc. in/at the immediate dredging site, i.e., from one side of the channel to the opposite side, or to/from a shore staging area located not more than approximately ½ mile from the dredge work location/operation and always within sight of the dredge operator, then the work boat operator need not be the holder of a

USCG Operator's license. However, if the workboat moves equipment, personnel, supplies, etc., or proceeds "light boat", any significant distance beyond the immediate dredge work location/site, particularly over congested, busy waterways and/or out of sight of the dredge operator, an appropriate licensed operator (must possess a current USCG Operator's License) must be in control of the vessel operation. References: EM 385-1-1 Section 19 Paragraph 19.A.02 b., Volume III of the USCG Marine Safety Manual Section 24.B.3, 46 USC 8904.

3.2 DREDGING

3.2.1 Order of Work

The Contractor shall submit a Order of Work Plan describing all methods, materials, equipment, and personnel to be utilized during dredge and placement operations including submerged pipelines and pipeline routes and staging and access areas. The order of dredging will be dependent on the placement features to be created with the dredge material. Dredging of the Mobile Harbor Federal Navigation Channel Improvements for this contract has generally been divided into 7 separate horizontal (A-G) and 13 vertical cuts based on material types for best matching with the placement. The associated placement location of each cut is provided in table 1 below. The contractor shall make their own determination of the existing conditions and propose the dredge cuts and placement feature order of construction within the work plan to be approved by the Contract Officer. The Government reserves the right to change the order of work at any time.

Table 1: Dredge Cuts and Dredge Material Placement Areas

Dredge Cut	Dredge Material Placement Area	Material
Turning Basin Cut A above -33 ft MLLW	Deer River and/or Dauphin Island Causeway Sand Berm	Coarser Sandier Materials
Turning Basin Cut A below -33 and above -50 ft MLLW	Dauphin Island Causeway Marsh Creation	Finer Clay Materials
Turning Basin Cut A below -50 and above -56 ft MLLW	Dauphin Island Causeway Sand Berm and/or Dauphin Island Causeway Marsh Creation	Coarser Sandier Materials
Turning Basin Cut B above -28 ft MLLW	Dauphin Island Causeway Sand Berm	Coarser Sandier Materials
Turning Basin Cut B below -28 and above -42 ft MLLW	Dauphin Island Causeway Marsh Creation	Finer Silts and Clay Materials
Turning Basin Cut B below -42 and above -56 ft MLLW	Dauphin Island Causeway Sand Berm and/or Dauphin Island Causeway Marsh Creation	Coarser Sandier Materials
Turning Basin Cut C above -52 ft MLLW	Relic Shell A and/or B	Finer Silts and Clays Materials

Dredge Cut	Dredge Material Placement Area	Material
Turning Basin Cut C below -52 ft and above -56 ft MLLW	Deer River Marsh and Dauphin Island Causeway Sand Berm	Sands and Finer Silts and Clay Materials
Turning Basin Cut D above -56 ft MLLW	Dauphin Island Causeway Marsh Creation	Finer Clay Materials
Upper Bay Channel Deepening Cut F above -50 ft MLLW Station (226+16 to 260+00)	Relic Shell A and/or B	Finer Silts and Clay Materials
Upper Bay Channel Deepening Cut F below -50 and above -54 ft MLLW Station (226+16 to 260+00)	Deer River and/or Dauphin Island Causeway Berm	Coarser Sandier Materials
Upper Bay Channel Deepening Cut E above -54 ft MLLW Station (260+00 to 267+72.58)	Dauphin Island Causeway Marsh	Finer Silts and Clay Materials
Upper Bay Channel Widener Cut G above -54 ft MLLW Station (267+72 to 335+00)	Relic Shell A and/or B	Finer Silts and Clay Materials

The preferred dredged material placement order of work is to fill the Deer River and Dauphin Island Causeway North dredge material placement sites to the specified lines, grades and elevations prior to placement in Dauphin Island Causeway South dredge material placement site.

Dredged material placement in the Dauphin Island Causeway North and South dredge material placement sites shall be performed in a continuous and consecutive manner. Placement of material will generally proceed where the coarser sandier material is used to construct sand berm features first to help contain the finer silts and clay material placed behind in the marsh creation areas. For the Dauphin Island Causeway North and South Sand Berm the preferred placement is from south to north. The Contractor may elect to construct the sand berms beginning at the approach channels/pipeline corridor landing areas and advancing towards the south and north; however, the portion from the landing area to the southern end must be completed before advancing northward from the landing area. If the Contractor elects to begin material placement at the landing area proceeding southward at the Dauphin Island Causeway South Sand Berm, then the sand berm must tie-in to the existing shoreline with an internal containment berm between station 64+00 and 74+00 to create a partially filled area behind the completed berm sections to receive fill for the marsh creation.

3.2.1.1 Work Plan

A Work Plan is to be submitted by the Contractor for review and approval by the Contracting Officer. The work plan is to cover all aspects of dredging, transport, and placement operations and shall include, but not be limited to, the following:

a. Deposition Plan: A Deposition Plan is to be submitted by the Contractor to the Contracting Officer for approval prior to placement of any dredged material under this contract. The Contractor's Deposition Plan is to be

completely explanatory and include all assumptions, statements of fact, computations and a narrative to fully explain the procedures that the Contractor will follow during the contract. The Contractor's Deposition Plan will address each different placement situation, including but not limited to, contingencies to correct any excess displacement of in-situ water bottoms, non-compliant turbidity, placement of varying material types, and/or slope failures that may occur during placement of material. The Deposition Plan is also to address weir structures (if needed) and the means and methods for surveying and monitoring the placement of fill to meet required slopes and grades, i.e. grade stakes, settlement plates, topographic surveys, etc.

b. Survey Plan: The Survey Plan shall present the project survey effort from start to completion. The plan shall cover, as a minimum, layout work including baseline control, progress surveys, and monitoring surveys. The plan shall include details of all equipment used for surveying as well as a step by step process of survey efforts. This plan shall coincide with the order of work plan required by the paragraph entitled "Order of Work." The Contractor's survey plan shall show a percentage breakdown of each type of survey phase (baseline control, progress surveys, etc.) of the total survey effort for the project.

c. Progress Schedule Map: Provide a progress schedule map of the contractor's work. The progress schedule map shall be a plan view drawing depicting the dredge limits, dredge material placement and access areas to be used on the project. The map shall show all acceptance sections (AS), access/staging areas, and pipeline landings anticipated to be used on the project. For each acceptance section, the information shall list the following: Anticipated quantity of material per acceptance section, projected dates for satisfactory channel dredging and fill to be placed and completed. The map will be color coordinated with the following color scheme: Red depicting an area not ready for construction; Orange depicting an area currently being worked, and Green meaning an area accepted by the Contracting Officer. The map shall be updated at least weekly and whenever significant changes occur to the projected dates. Since the map will be used by the Government for coordination with the sponsor(s) to track progress, the update shall be provided prior to the weekly project progress meeting.

d. Buoy Log: The Contractor shall develop a method of inventory for all anchors, buoys, and buoy cables used in the construction of the project. This record shall be used by the Contractor to recover all buoys and anchoring equipment at the completion of the project.

e. Grade Stake Log and Recovery Plan: If the Contractor intends to use grade stakes in the project work area, they shall submit a Construction and Grade Stakes Recovery Plan. The plan will outline the steps that the Contractor will implement to recover all the stakes used on the project. A sample Grade Stake Log is to be provided indicating how the log will be prepared and maintained to inventory the grade stakes used on the project. The log is to include information concerning the location, installation, and recovery of all grade stakes. This log is to be available for review by the appropriate Government personnel upon request.

f. Staging and Access Areas: The Contractor shall indicate how they plan on accessing each site for their construction operations. The Contractor shall submit proposed drawings depicting the areas, photo-documentation of the condition of the access location prior to disrupting the site,

dimensions of access channels, location of placement for excavated access channel material, and any support facilities for Contracting Officer approval.

g. Public Protection: Provide a Contractor's plan for ensuring public and worker safety. Submit means and methods for public protection during fill operations for review and approval by the Contracting Officer. Submit product information and methods of installation for orange safety fencing for safety measures. Submit methods of staking in place and maintenance of system for duration of construction. If required submit an off-road trucking operation safety plan.

3.2.2 Interference with Navigation

Minimize interference with the use of channels and passages. The Contractor is responsible for shifting or moving of dredges or the interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary. Adhere to Coast Guard Regulations for passing vessels.

3.2.3 Lights

Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, pipelines, ranges, and markers. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting must conform to United States Coast Guard requirements for visibility and color.

3.2.4 Navigation Warnings

Furnish and maintain navigation warning signs along the pipeline. Provide notice to increase public awareness of potential hazards presented by dredge plant equipment by stating the location, date of construction, equipment mooring, marshaling areas, using local newspapers, radios, television, waterway users associations, or other appropriate area specific communication networks. Ensure that an announcement is made through the same networks at the beginning of the dredging operation. Make periodic updates/status announcements at intervals of not more than a month throughout the contract life.

Display a sturdy and prominent warning sign at all public boat marinas within 10 miles of dredging operations or moored equipment. The warning signs shall be constructed as prescribed on the drawing entitled "Warning Sign" bound herein. The signs shall have red lettering and castles on a white background with a red reflective border. The information provided on the signs shall be similar to that indicated on the drawing and shall include locations of dredging operations and plant. The Contractor is responsible for keeping this sign current with respect to the dredging operations or equipment.

3.2.5 Ranges, Gages, and Lines

Provide, set, and maintain ranges, buoys, and markers needed to define the work and to facilitate inspection. Establish and maintain gages in locations observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be seen or followed. The Contracting Officer will furnish, upon request by the

Contractor, survey lines, points, and elevations necessary for the setting of ranges, gages, and buoys.

3.2.6 Navigation Aids

If necessary, navigation aids located within or near the areas required to be dredged will be removed by the USCG in advance of dredging operations. Relocation of navigation aids shall be discussed and scheduled with the USCG at the pre-construction conference.

3.2.7 Dredge Plant and Equipment

- a. The Contractor has an option to use clamshell, hydraulic cutter head, and/or trailing suction hopper dredge to perform all dredging work under this contract.
- b. The Contractor may elect to operate more than one dredge or dredge type under this Contract at a time. Should the Contractor employ more than one dredge unit on the project, concurrent work locations shall be approved by the Contracting Officer's Representative.
- c. Maintain all dredge plant and associated equipment such as, but not limited to, scows, coamings, barges, and pipelines, to meet the requirements of the work. Promptly repair leaks or breaks along pipelines.

3.2.8 Staging and Fabrication Areas

The Contractor shall determine the requirements for staging and fabrication areas for dredging equipment based on his their proposed operational methods. Acquisition of real estate interests in any such area and/or required permits for the particular type land use shall be the sole responsibility of the Contractor, the Government being held harmless from any liability or legality of procurement, use, or restoration.

3.2.9 Dredging Requirements

Dredging limits shown on the contract drawings were determined based on surveys current during the development of these specifications. The following web site links contain files of the most recent hydrographic surveys for the channel. These surveys and data are provided for information only and may not reflect the current conditions. Mobile Ship Channel:

<https://www.arcgis.com/apps/opsdashboard/index.html#/4b8f2ba307684cf597617bf1b6d2f85d>

3.2.9.1 Upper Bay Channel Deepening

Dredging of the Upper Bay Channel Deepening consist of the removal of both maintenance and new work material within the horizontal and vertical limits displayed on the contract drawings. Dredging of the Upper Bay Channel Deepening has generally been divided into 2 separate horizontal and 3 vertical cuts based on general material types and placement locations described in section 3.2.1 Order of Work. Dredging for acceptance will be satisfactory removal of material down to -52 feet MLLW including paid overdepth, unless otherwise stated in the layout drawing

3.2.9.2 Turning Basin Deepening and Expansion

Dredging of the turning basin consist of the removal of both maintenance

and new work material within the horizontal and vertical limits displayed on the contract drawings. Dredging of the turning basin has been divided into 4 separate horizontal and 9 vertical cuts based on general material types and placement locations described in section 3.2.1 Order of Work. Dredging for acceptance will be satisfactory removal of material down to -54 feet MLLW including paid overdepth, unless otherwise stated in the layout drawing.

3.2.9.3 Upper Bay Channel Widening

Dredging of the Upper Bay Channel Widening consist of the removal of new work material within the horizontal and vertical limits displayed on the contract drawings between Stations 271+00 to Station 335+00. Dredging for acceptance will be satisfactory removal of material down to -52 feet MLLW including paid overdepth, unless otherwise stated in the layout drawing.

3.2.10 Required Dredging

Required dredging under this contract includes all material lying within the designated side slopes of one foot vertical to five feet horizontal (1V to 5H) originating at the plane of elevation -52 feet MLLW from Station 2226+16 to Station 337+00, and -54 feet MLLW within the Mobile Harbor Turning Basin at the widths shown on the contract drawings.

3.2.10.1 Allowable Overdepth

To accommodate the imprecision of the dredging process, material removed from within the Mobile Ship Channel alignment limits to a depth of 2 feet below the depth of required dredging will be estimated and paid for at the contract unit price for new work dredging. Side slopes for allowable overdepth will be 1V:0H. The Contractor shall not exceed 2 feet of allowable overdepth dredging.

3.2.10.2 Side Slopes

Side slopes in the dredge areas within this contract will be measured and paid based on a 5 feet horizontal to 1 foot vertical ratio. Material that is actually removed, within the required dredging limits to provide for final side slopes no flatter than as designated, but not in excess of the amount originally lying above this required dredging limiting side slope, will be estimated and paid for (as applicable), whether dredged in the original position or by dredging "storage space" below the required side slope plane, at the bottom of the slope, for upslope material capable of falling into the cut. This "storage space", excavated in anticipation of upslope face material falling thereinto, is not subject to the above depth and width overdredging restrictions (if applicable), as long as it is reasonable. The Contractor should refer to the typical section included in the contract drawings for the required dredging, allowable overdepth, and allowable maintenance limits.

3.2.10.3 Dredge Overflow

Overflow will be limited to forty-five minutes, per load, for hopper dredges only, unless otherwise approved by the COR. Overflow will only be allowed for material that is predominantly sand. This slurry shall not overflow transport vessel sidewalls while in transit, nor shall it be dumped (or pumped) from the vessel except when placed directly at an authorized dredge material placement area. Mechanical dredge bucket dripping occurring between the excavation point and deposition into dump

scows will not be considered overflow

3.2.10.4 Excessive Dredging

Material removed from beyond the dredging limits shown on the contract drawings shall be considered excessive dredging for which payment will not be made. Payment will be made for removal of shoals performed in accordance with the applicable provisions of the Additional Special Contract Requirements paragraph entitled "FINAL EXAMINATION AND ACCEPTANCE".

3.2.11 Obstructions and Debris

The Government has no knowledge of cables, pipes, or other artificial obstructions or of any wrecks, wreckage, or other material that would necessitate the use of explosives or the employment of additional equipment for economical removal. Contractors should however exercise due diligence in determining the existence of any obstructions within proposed work areas during bid preparation.

The Government has knowledge of debris such as, but not limited to, metal bands, pallets, pieces of broken cable, rope, fire hose, and broken piles. The Contractor is responsible for the disposal of the removed debris. This disposal must occur outside the limits of government property, and done so in accordance with all federal, state, and municipal regulations.

The Government has no knowledge of existing wrecks, wreckage, or other material of such size or character as to require the use of explosives or special or additional plant for its economical removal.

3.2.12 Quality Control

Establish and maintain quality control for operations to assure compliance with contractual requirements and maintain records of this quality control for dredging operations.

While performing all dredging work control the horizontal positioning of the dredge with electronic positioning.

3.2.13 Skimming of Hoppers

Skimming of hoppers must be performed in compliance with environmental requirements and ABS/USCG load line marks.

3.2.14 Salvaged Material

Anchors, chains, firearms, and other articles of value, which are brought to the surface during dredging operations, must remain or become the property of the Government and will be placed on shore at a convenient location near the site of the work, as directed.

3.2.15 Safety of Structures

The prosecution of work must ensure the stability of piers, bulkheads, and other structures lying on or adjacent to the site of the work, insofar as structures may be jeopardized by dredging and/or placement operations. Repair damage resulting from dredging operations is the responsibility of the Contractor, insofar as such damage may be caused by variation in

locations or depth of dredging, or both, from that indicated or permitted under the contract. The Contractor is responsible for coordinating with the owner of the structure for any necessary repairs.

3.3 PLACEMENT OPERATIONS

3.3.1 Placement of Excavated Materials

Provide for safe transportation and placement of dredged materials. Transport and placement of dredged material in the Deer River, Dauphin Island Causeway North and South and the Relic Shell Areas A and B dredge material placement areas. The Contractor shall provide equipment and operators satisfactory to manipulate dredge material and move the outflow pipe to ensure the placement of material does not cause the excessive displacement of in-situ water bottoms. The contractor shall also ensure adjacent areas outside of the fill template are not adversely impacted by the contractor's placement operations. This includes but is not limited to adversely affecting adjacent oyster beds, marshes, roadways, etc. The Contractor will be responsible for any damage resulting from their dredge material placement operations, inside or outside of the dredge material placement area. The contractor shall furnish sufficient crew at the dredge material placement areas to ensure the correct placement of material is maintained throughout the contract.

3.3.2 Method of Placement

For dredged material pumped through a pipeline, the Contractor is responsible to select a pipeline route within the boundaries outlined in the contract drawings to the placement sites and methodology of construction (type of pipeline and installation) and/or plant equipment layout that will not cause a hazard to existing navigation nor undue restriction to marine traffic, particularly in the marked navigation channels and the adjacent private docking/mooring/sailing fairways. Particular attention should be given to the pipeline route or other plant layout as related to the existing accesses of the businesses along the project banks. These accesses should not be blocked or restricted to those businesses. If the Contractor's pipeline or equipment is found to be blocking or restricting any business's access or use area, it will be the Contractor's responsibility to coordinate with the business to bring a solution to that restriction problem, even if the Contractor's pipeline or equipment has to be moved or relocated (all at no increase to contract price). Care shall be taken to avoid damaging private structures.

3.3.3 Natural Drainage

The Contractor will be required to maintain the natural drainage within the placement areas. Dredging operations shall be suspended should the Contractor fail to immediately restore to its normal condition any drainage system, either natural or artificial, which was damaged as a result of dredging operations.

3.3.4 Weir Box Maintenance

Dredged material shall be placed in the dredge material placement sites within containment areas sufficient in volume to effectively settle solids. At no time shall any material be allowed to enter the weir boxes of any of the placement sites. Any material escaping the dredge material placement areas will be considered misplaced material and cleanup provisions as stated in paragraph entitled OBSTRUCTION OF NAVIGABLE

WATERWAYS, of SECTION 00700 will be enacted. Adequate settling time shall be maintained by raising the elevation of the weirs crest at the drainage structure as necessary. Sufficient size overflow boards shall be furnished by the Contractor to fill the slotted columns on all open sides of the weir box. Overflow boards shall not exceed six (6) inches in height. The Contractor shall be responsible for the maintenance of all weirs and drainage structures until completion and acceptance of work. Prior to dredging operations, discharge pipes through containment dikes should be inspected for obvious displacement due to settlement, and joints in the discharge pipes shall be sealed to prevent seepage through joints. Polyethylene may be used and supplied by the Contractor around the weir box as an additional safeguard against seepage. The polyethylene will be supplied and installed at no additional cost to the Government.

3.3.5 Access Channels and Staging Areas

Access channels are shown on the Contract Drawings. Dredging of the channels are to be done under separate contracts. Given the dynamic nature of the project area, the final limits of access shall be field-verified by the Contractor and approved by the Contracting Officer, prior to commencement of construction. Should any access channel need to be dredged as part of this contract for access for placement the excavation shall be restricted to the limits shown on the Contract Drawings. No other areas are cleared for disturbance. Dredged material from the excavation of access channels may be sidecast to the east of the access channels with final limits of placement to be approved by the COR. Contractor will not be required to back fill the access channels following construction.

The Contractor is responsible for locating a staging areas for equipment. The Contractor shall include the proposed location of the staging area(s) in the Work Plan. The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in an area approved by the COR. The COR shall approve all temporary movement or relocation of Contractor facilities.

Optional Temporary Laydown Area is located at Cedar Point east of the Dauphin Island Parkway Right of Way that the Contractor may use for a material laydown area, equipment staging, field office, etc. during construction.

Should the Contractor require additional staging or laydown areas, these additional areas are the responsibility of the Contractor. Contractor is responsible for all permitting and costs associated with additional staging and laydown areas.

For access and staging the contractor shall ensure the following:

- a. The staging areas are be kept neat, orderly and in a safe manner.
- b. Staging areas are cordoned off and/or fenced to secure all staging areas from the public.
- c. Access and staging areas are restored to the pre-construction condition upon project completion, at cost to the Contractor, unless otherwise directed by this contract or the COR.
- d. Water and land access routes are provided and maintained as necessary

for their equipment and plant to and from the work sites.

e. Environmental conditions, which can affect water and land access, such as climate, terrain, winds, current, waves, swells, depths, shoaling, and scouring tendencies are ascertained.

3.3.6 Placement in Indicated Site(s)

In placing excavated material for fill, uniformly grade and allow for shrinkage.

Provide and maintain necessary bulkheads, dikes, ditches, weirs, spillways, and other construction necessary to confine and retain the fill in the dredge placement areas.

In order to most efficiently use the available fill material, the COR may make alterations in the plan dimensions or slopes of the sand berm fill or marsh creation area fill area elevations in order to increase or decrease the volume of fill placed.

AMENDMENT 0003

3.3.6.1 Deer River Marsh Creation Area

An estimated ~~164,000~~**214,000** cubic yards of inplaced ~~predominately sandy~~ material, dredged from the COR approved dredge cuts, shall be used to fill the Deer River Marsh Creation site to the lines, grades and elevations shown on the Contract drawings. Approximately 82,360 square yards of material shall be placed within this placement site. **The Contractor is allowed to mix the fine-grained maintenance material designated for the Relic Shell placement sites, but the inplaced material shall not exceed 50% fines content. Mixing of fine-grained maintenance material shall be specified in the dredge plan and is subject to COR approval.**

Discharge of dredge material slurry will only be allowed within the existing containment berm shown on the contract drawings.

The target fill elevation range is +2.5' to +3.5' NAVD 88.

Should the estimated 164,000 cubic yards of inplaced dredge material exceed the site capacity as determined by the maximum target fill elevation, Contractor may delineate a stockpile area furthest from the weir locations for COR approval.

AMENDMENT 0003

AMENDMENT 0001

3.3.6.2 Dauphin Island Causeway North Sand Berm

An estimated 109,000 cy of inplaced predominately sandy coarser material from the COR approved dredge cuts shall be used to fill the sand berm fill to the lines, grades, and elevations indicated in the Contract documents. Approximately 5,947 linear feet of sand berm shall be placed within this placement site. Discharge of dredge material slurry will only be allowed within sand berm fill area shown on the contract drawings. Additionally the

dredge discharge point must always be located at least 25 feet away from the existing shoreline. To the extent practical, the fill placement must be uniform with minimal ridges, humps and depressions. The Contractor may construct interal training dikes, at their own discretion, at locations within the sand berm fill area. Spreader and pocket pipe or other measures may be used as necessary to prevent gullyng and erosion.

The target constructed sand berm elevation is +3.5' NAVD 88. The vertical fill tolerance is $\pm 0.5'$. The sand berm target fill elevation range is therefore +3.0' to +4.0' NAVD 88. The sand berm crest shall have a maximum width of 15' and a minimum width of 5'. The sand berm landward slope shall have a grade no shallower than 30:1 (H:V) with no limits on the maximum grade (i.e. maximum steepness) of the slope. The Contractor is encouraged to minimize the volume of sand material placed in the sand berm section within the defined template to maximize the length of sand berm that can be constructed with available sandy fill material and to ensure that sufficient length of sand berm is constructed prior to the placement of the marsh creation fill areas.

On portions of the sand berm landward slope below Mean Low Water (MLW), the Contractor may place material to the natural angle of repose if different from the design slope of the placement section. The Contractor shall ensure that there are no undrained areas or abrupt mounds within the completed segments. The Contractor is not required to perform grading on portions of the sand berm landward slope below MLW.

Should the estimated 109,000 cys of inplaced dredge material exceed the sand berm capacity as determined by the target fill crest width and elevation the Contractor with COR approval may place excess material within the north marsh creation fill area.

3.3.6.3 Dauphin Island Causeway North Marsh Creation Fill

An estimated 167,000 cy of inplaced predominately finer sands, silts and clay materials from the COR approved dredge cuts shall be used to fill the marsh creation fill to the lines, grades, and elevations indicated in the Contract documents. Approximately 288,282 square yards of material shall be placed within this placement site. Discharge of dredge material slurry will only be allowed within marsh creation fill area shown on the contract drawings.

Additionally the dredge discharge point must always be located at least 25 feet away from the existing shoreline. To the extent practical, the fill placement must be uniform with minimal ridges, humps and depressions. The Contractor may construct interal training dikes, at their own discretion, at locations within the sand berm fill area. Spreader and pocket pipe or other measures may be used as necessary to prevent gullyng and erosion.

At no point shall fill be placed on the existing wetlands or within the Dauphin Island Parkway Right of Way. Fill shall be placed in such a way so as to not erode or damage the existing shoreline including any natural or armored shorelines.

The target constructed Dauphin Island Causeway marsh creation elevation is +2' NAVD88. The vertical fill tolerance is $\pm 0.5'$. The marsh creation fill elevation range is therefore +1.5' to +2.5' NAVD88.

Should the estimated 167,000 cys of inplaced dredge material exceed the marsh fill capacity as determined by the maximum fill tolerance elevation the COR may make adjustments to the marsh creation fill elevation or

direct the contractor to place excess within the Dauphin Island Causeway South Marsh.

3.3.6.4 Dauphin Island Causeway South Sand Berm

An estimated 77,569 cy of inplaced predominately sandy coarser material from the COR approved dredge cuts shall be used to fill the sand berm fill to the lines, grades, and elevations indicated in the Contract documents. Approximately 3,363 linear feet of sand berm shall be placed within this placement site. Discharge of dredge material slurry will only be allowed within sand berm fill area shown on the contract drawings. Additionally the dredge discharge point must always be located at least 25 feet away from the existing shoreline. To the extent practical, the fill placement must be uniform with minimal ridges, humbs and depressions. The Contractor may construct interal training dikes, at their own discretion, at locations within the sand berm fill area. Spreader and pocket pipe or other measures may be used as necesssary to prevent gullyng and erosion.

The target constructed sand berm elevation is +3.5' NAVD 88. The vertical fill tolerance is $\pm 0.5'$. The sand berm target fill elevation range is therefore +3.0' to +4.0' NAVD 88. The sand berm crest shall have a maximum width of 15' and a minimum width of 5'. The sand berm landward slope shall have a grade no shallower than 30:1 (H:V) with no limits on the maximum grade (i.e. maximum steepness) of the slope. The Contractor is encouraged to minimize the volume of sand material placed in the sand berm section within the defined template to maximize the length of sand berm that can be constructed with available sandy fill material and to ensure that sufficient length of sand berm is constructed prior to the placement of the marsh creation fill areas.

On portions of the sand berm landward slope below Mean Low Water (MLW), the Contractor may place material to the natural angle of repose if different from the design slope of the placement section. The Contractor shall ensure that there are no undrained areas or abrupt mounds within the completed segments. The Contractor is not required to perform grading on portions of the sand berm landward slope below MLW.

Should the estimated 77,569 cy of dredge material exceed the sand berm capacity as determined by the target fill crest width and elevation between station 64+00 and 97+62.82 the Contractor may elect with COR approval to place excess material within the South marsh creation fill area and/or within additional South Sand berm to the north of station 64+00.

3.3.6.5 Dauphin Island Causeway South Marsh Creation Fill

An estimated 43,000 cy of inplaced predominately finer sands, silts and clay materials from the COR approved dredge cuts shall be used to fill the marsh creation fill to the lines, grades, and elevations indicated in the Contract documents. Approximately 57,588 square yards of material shall be placed within this placement site. Discharge of dredge material slurry will only be allowed within marsh creation fill area shown on the contract drawings. Additionally the dredge discharge point must always be located at least 25 feet away from the existing shoreline. To the extent practical, the fill placement must be uniform with minimal ridges, humbs and depressions. The Contractor may construct interal training dikes, at their own discretion, at locations within the sand berm fill area. Spreader and pocket pipe or other measures may be used as necesssary to prevent gullyng and erosion.

The target constructed Dauphin Island Causeway marsh creation elevation is +2.5' NAVD88. The vertical fill tolerance is +/- 0.5'. The marsh creation fill elevation range is therefore +2' to +3' NAVD88.

Should the estimated 43,000 cys of inplaced dredge material exceed the marsh fill capacity as determined by the maximum fill tolerance elevation the COR may make adjustments to the marsh creation fill elevation or direct the contractor to place excess within additional South Sand berm to the north.

AMENDMENT 0001

AMENDMENT 0002

3.3.6.6 Relic Shell Mine A and B Dredge Material Placement Areas

The Contractor shall delineate limits of the Relic Shell Mine Areas A and B as shown on the Contract drawing that will be used for placement of dredged material from this work that is not specified to go to the Deer River or Dauphin Island Causeway North or South sites. **Should the Deer River and Dauphin Island Causeway Sites be constructed to the full lines and grades, within the tolerances detailed in the Section, then excess material designated for these sites, as detailed in Table 1 of the paragraph 3.2.1 Order of Work, may be placed in the Relic Shell sites.** The Contractor shall ensure deposition is within the limits of the COR approved Contractor delineated dredge material placement boundary.

Dredge material placed within the Relic Shell Mine sites A and B shall be on an average no greater than 1.5 feet in thickness over each placement site and in no instance shall the placement exceed a +3 foot tolerance.

The Contractor should note the water depths between the dredge channel limits and the relic shell mine placement areas are known to be shallower than the elevations shown on the contract plans. Some areas may be shallower than -5 feet MLLW. The Contractor should also note areas alongside the Mobile Harbor channel are subject to change as they are authorized open water dredged material placement sites for maintenance material. The Contractor is responsible for ensuring routes provide adequate depths for all necessary equipment needed to complete this work and is advised to perform surveys to verify.

AMENDMENT 0002

3.3.7 Misplaced Dredged Material

Any dredged material deposited at locations other than in dredge material placement sites shown in the drawings will be considered misplaced material and will not be paid for until the Contractor, at their own expense, removes and redeposits the misplaced material. Any material deposited in excess of tolerances described in the plans and specifications shall be removed by the Contractor at their own expense with no increase in contract price or time. This required removal and redeposit of the misplaced material and any necessary placement site restoration work is not the basis for a time extension or additional

compensation under this contract.

3.3.8 Submerged Pipelines

If a leak occurs in the discharge pipeline, immediately discontinue using the line until leaks are repaired. Following a leak, the Contractor should conduct, or request the Government to conduct, a hydrosurvey to ensure that any dredged material discharged through the leak did not accumulate or cause mounding. If accumulation did occur, the Contractor must coordinate with the Government to remove the accumulated material, if deemed necessary. The Contractor is responsible for any resulting costs of repair and restoration.

3.4 DREDGE AND PLACEMENT AREA SURVEYING

3.4.1 General

The Government will furnish survey and dredging layout data for each dredging tangent and placement areas prior to any dredging. The data will be discussed at the pre-construction conference. The Contractor shall perform all necessary pre-construction, acceptance, and post-construction surveys of channel and dredge material placement sites. Additionally, the Contractor shall provide all construction progress surveys performed prior to acceptance to the Government for the record.

The survey work to be performed includes: Preconstruction surveys, construction surveys and post Construction surveys.

Preconstruction surveys are required to be conducted prior to the commencement of Work.

Construction surveys are required for progress surveys, payment applications and also for the layout and staking of the work to be completed where applicable.

Post-Construction surveys include as-built surveys of the completed Work.

3.4.2 Survey Plan

The Contractor shall prepare and submit for approval of the Contracting Officer's Representative, a written survey plan, presenting the project survey effort from start to completion. The plan shall cover, as a minimum, layout work including baseline control, progress surveys, and monitoring surveys. The plan shall include details of all equipment used for surveying as well as a step by step process of survey efforts. This plan shall coincide with the order of work plan required by the paragraph entitled "Order of Work." The Contractor's survey plan shall show a percentage breakdown of each type of survey phase (baseline control, progress surveys, etc.) of the total survey effort for the project.

3.4.3 Layout of Work

All surveys for baselines, hydrographic survey ranges, cutting ranges, and other necessary survey work shall be performed by standard survey methods. All baselines and markers, whether land or water based, shall be related to existing land based survey markers using coordinate positions furnished by the Government. All such survey work shall be clearly and completely recorded in standard bound field books, and shall be made available for inspection and verification by representatives of the

Government. Upon or before completion of the requirements of this contract, the field books and computations shall become the property of the Government. The Contractor shall furnish all electronic positioning and surveying equipment, stakes, poles, flagging, field books, compact discs, and other survey materials and engineering work required for the layouts. Costs associated with the required layout of work and positioning surveys, and all data compilation and computations shall be included in the Bidding Schedule contract unit price for dredging.

3.4.4 Quality Control

The Contractor shall establish and maintain a Quality Control Plan for surveying operations to assure compliance with contractual requirements. The Contractor shall maintain records of quality control qualifications for survey personnel. These records shall include, but not be limited to, the following requirements:

(a) Survey work shall be performed in accordance with the USACE Hydrographic Surveying Engineering Manual, EM 1110-2-1003. The manual can be found at the following link:

<https://www.publications.usace.army.mil/USACE-Publications/Engineer-Manuals/u43544q/687964726F67726170686963/>

Sole responsibility for accuracy, completeness, and verification of all survey work performed during execution of this contract, with the exception of the initial and final quantity surveys performed by the Government, shall rest with the Contractor.

(b) The Contractor shall maintain complete and accurate field notes, sketches, recordings, and computations required in establishing the necessary horizontal and vertical control. All survey data shall be recorded in accordance with accepted standards and as approved by the Contracting Officer or his/her designated representative. All the above data shall be available at all times during the progress of the work for ready examination and use by the Contracting Officer or his/her designated representative. Upon request of the Contracting Officer or his/her designated representative, the Contractor shall furnish a copy of above survey data.

(c) Survey personnel. All quantity surveys required by the Contractor shall be made by personnel of a professional engineer and/or land surveyor experienced in the practice of such work including Global Positioning Systems (GPS) surveys. The survey personnel shall have the following minimum qualifications.

(1) Each party chief shall be a Professional Land Surveyor and shall be proficient in the operation of precise and semi-precise instruments. They shall be capable of running horizontal and vertical control of 2nd order accuracy. In the event it is considered advantageous to employ a party chief who is not a Professional Land Surveyor, detailed qualifications of the individual shall be submitted to the Contracting Officer for review and approval.

(2) Instrument personnel shall be proficient in the operation of precise and semi-precise instruments and shall prepare all survey notes in a firm and legible manner.

(3) Surveying technicians shall be familiar with all phases of surveys

and the Alabama plane coordinate system. They shall also be well versed in the computation and adjustment of horizontal and vertical control of 2nd and 3rd order survey.

(d) Daily reports shall be submitted by the Contractor for days when surveying activity is required. The reports shall be prepared and signed by the Contractor's authorized representative. Report submittal to the Contracting Officer's Representative shall be on the duty day following the surveying activity. The reports shall include, but not be limited to, the following: equipment used; location, description, and type of work performed; inspection(s) of work; verbal instructions received and action(s) taken; safety procedures; and cause(s) of delays. All daily reports shall be prepared on SAM Form No. 696 (copy attached hereto).

(e) The Contractor shall be responsible for protection of all vegetation and property within surveying areas. Should any portion of the survey work area require tree trimming or cutting, or use of private property or facilities for any purpose, the Contractor shall obtain specific written consent from the affected property owner(s) prior to commencing any survey work within that area. The Contractor shall save and hold harmless the Government from any liability in connection with required survey activities.

(f) All survey work shall be subject to periodic inspection and/or verification by the Government, both during and after completion of such work. Should any portion of the surveys be found in error, it shall be the responsibility of the Contractor to correct such error at no cost to the Government. In the event that dredging operations have proceeded based on erroneous survey information, any necessary redredging shall be done at the Contractor's expense. The Contractor should perform verification calculations and calibrations of the survey data furnished by the Government prior to using that data for dredging purposes. All verification and calibration calculations shall be the sole responsibility of the Contractor. Presence of the Government representative at the work site shall not relieve the Contractor of responsibility for providing quality control of the required survey work and shall not relieve the Contractor from the responsibility of taking necessary corrective action should errors be discovered that necessitate redredging. The final determination of acceptable and unacceptable dredged channel sections will be made by the Contracting Officer's Representative.

(g) For lidar data the contractor shall ensure overlapping lines and datasets shall be compared to each other and to cross lines. All systematic errors shall be identified and eliminated, and remaining errors should have a normal distribution. Differences between a DEM and bare earth ground truth data will be unbiased and within 5 cm (RMSE) in flat terrain. A binned surface of standard deviation (within each bin) generated from topographic lidar data will not exceed 5 cm in flat areas for > 5% of the grid cells.

3.4.5 Equipment and Data

3.4.5.1 Real Time Kinematic (RTK) Global Positioning System (GPS)

Survey data for the Deer River and the Dauphin Island Causeway North and South beneficial use sites shall be collected using RTK GPS technology.

3.4.5.2 Sounding Equipment

Sounding equipment shall consist of an electronic sounding machine/device capable of providing updated soundings on not more than 1/20 second intervals and have accuracy rating of not more than +/-0.5 feet. Sounding device shall have analog charting (real time) within the device and shall have all the capabilities of calibrating to a bar check utilizing the Norfolk Method of bar checking. The sounding device will be similar and equal to the Odom MKIII Echo Sounder. All depths acquired will consist of dual frequency soundings utilizing a high operating 208 Khz frequency transducer and a low operating 41 Khz or 28 Khz frequency transducer. All digitally acquired sounding data for the borrow area surveys shall be those acquired with the high frequency survey (any frequencies other than those listed must be approved by the Government prior to use). Both the high and low frequency soundings shall be shown on the analog chart of the sounding device. All soundings shall be acquired on a continuous basis with plotting of data based on the scale and size of the plot.

3.4.5.3 Spacing, Coverage, and Datum

Surveyed points, including easting, northing, and elevation for each point, shall be collected along cross section lines with spacing not to exceed 200 feet. Spacing between points along the cross section lines shall not exceed 3 feet nor be less than 0.3 feet for hydrographic surveys. Spacing between points along the cross section lines for topographic surveys shall not exceed 10 feet and shall include points at each sharp change in slope. The easting and northing values shall be relative to the State Plane Coordinate System, Alabama West zone, NAD 1983 in U.S. survey feet. Elevations shall be relative to Mean Lower Low Water for the Navigation channel and relic shell A and B placement area and NAVD88 for the Deer River and Dauphin Island Causeway placement areas. Each survey line shall extend a minimum of 200 feet beyond the limits shown on the contract drawings.

3.4.5.4 Lidar Requirements

If surveys are collected using Lidar, the collection and mapping shall be in compliance with USACE EM- 1110-1-1000 for Photogrammetric and Lidar Mapping. Collection methods shall comply with the American Society for Photogrammetry and Remote Sensing (ASPRS) Vertical Accuracy for Lidar Data Guidelines. UAS operations shall be conducted in compliance with APL 95-1-1.

3.4.5.5 Survey Data Submittal Requirements

The Contractor shall submit all pre- and post-construction plan view and cross-section plots of the channel and dredge material placement acceptance sections, along with a breakdown of quantities removed from and placed at the respective locations. If the Contractor is utilizing HYPACK to perform required surveys, the Contractor shall submit the HYPACK project files for the specific survey performed. These files contain all the files that make up the survey including raw and edited data, line files, tide files, etc. associated with each survey. Otherwise, the Contractor shall utilize a system capable of acquiring or converting all, unedited raw data (horizontal and vertical) to an ASCII compatible format prior to submittal to the Government. Sounding files shall contain single line records. Each record shall contain the easting, northing, elevation, date, and time for one sounding. Each item in the record shall be separated by a space character, and the record shall be terminated by a line feed with carriage

return. Sounding files shall be no greater than 1.2 MB in size and shall contain the data for no more than 99 section lines. All records shall conform to the format shown below.

East	North	Elevation	Date	Time
123456.78	876543.21	-42.3	10/15/91	14:22:13.3

Data acquired by the Contractor for each survey shall be furnished to the Government on computer disks in the form of CADD drawing files in Microstation format and additionally in ASCII XYZ format digital files. Each digital XYZ file shall be accompanied with information stating the surveyor's name, collection date, horizontal datum and units, and vertical datum and units of the survey, and all other field notes. The contractor shall provide a metadata file compliant with the latest version of the Federal Geographic Data Committee (FGDC) Standards/ ISO 19115. The metadata file shall contain methods, procedures, control information, datum, and other data necessary to properly describe the origin of the data.

LiDAR data shall be provided in Classified Point Data (LAS) and Digital Terrain Model and Digital Surface Model (GeoTiff) formats, unless otherwise approved by COR. Complete metadata shall be provided for each of these data products. The metadata will be provided in xml format and will adhere to an FDGC-endorsed metadata standard (i.e. ISO 19115-2). At a minimum, the core elements of the FGDC-endorsed metadata standard will be completed. In addition to the core metadata elements, process steps, including software packages and version numbers, will be provided with sufficient detail to allow reproduction of the product file

AMENDMENT 0002

3.4.6 Channel Surveys

~~The Contractor shall perform Pre-Construction surveys and Post-Construction surveys in accordance with Section 01 00 00, paragraph 1.10 FINAL EXAMINATION AND ACCEPTANCE, of the project excavation limits.~~

~~The contractor shall perform Construction Surveys for quality checks on the dredging depth and width behind the dredge as work progresses. The Contractor will take progress soundings or sweepings.~~ **The Government shall perform Before-dredging Condition Surveys and After-Dredging Condition Surveys in accordance with Section 01 00 00, paragraph 1.11 FINAL EXAMINATION AND ACCEPTANCE, of the project excavation limits.**

3.4.7 Dredge Material Placement Areas Surveys

The Contractor shall perform Pre-Construction surveys and Post-Construction surveys along repeatable ranges covering the portion of the placement area to be used for this contract and adjacent bottom within the limits specified herein. The required pre construction surveys shall be referenced to NAVD88 for the Deer River and Dauphin Island Causeway Sites and MLLW for the Relic Shell Mine Areas. Pre- surveys shall be performed within 14 days prior to commencement placement operations. The surveys shall generally be oriented with ranges (cross sections) spaced no greater than five hundred (500) feet apart and extending one hundred (100) feet beyond the approved placement area limits for this contract.

The contractor shall perform Construction Surveys for progress, quality checks on placement lines, grades, and elevation and pay applications.

All poles, stakes, flagging, books, compact discs, and/or other survey materials shall be furnished by the Contractor. The Contractor shall submit the survey data in "raw" hardcopy form (fathometer charts, books, scrolls, etc.), plotted form, and in digital form on compact discs within five (5) working days of completion of the surveys. The data furnished on compact discs shall include Microstation CADD drawing files from which hardcopy drawing plots were made. These books and/or compact discs shall, upon or before completion of the requirements of this contract, become the property of the Government. All costs associated with the required surveys and data compilation shall be included in the unit price for dredging.

The Contractor will perform final acceptance surveys of the Deer River and Dauphin Island Causeway North and South Placement sites in accordance with Section 01 00 00, paragraph 1.10 FINAL EXAMINATION AND ACCEPTANCE, of the project placement limits.

The Contractor shall provide Aerial Photographs of Deer River and Dauphin Island Causeway Placement Sites on a weekly basis for the duration of placement activities at the sites. Photography should continue until final acceptance of the site is obtained.

AMENDMENT 0002

3.5 PLANT REMOVAL

Upon completion of the work, remove all dredging plant and placement equipment, including ranges, buoys, piles, and other markers or obstructions within 10 days. Plant and/or equipment to be disposed of shall ONLY be disposed of in a manner and at locations approved by the Contracting Officer. Unless otherwise approved in writing by the Contracting Officer, the Contractor will not be permitted to abandon pipelines, pipeline supports, pontoons, or other equipment in the work area, pipeline access areas, water areas, or other areas adjacent to the work site. Pilings and any other debris removed or created as a result of the execution of this contract shall be disposed of in a manner and at locations approved by the Contracting Officer.

3.6 PROJECT COMPLETION REPORT

The Contractor shall submit a project completion report in Adobe PDF format to the Contracting Officer within 30 days following project completion. The Project Completion Report shall include but not be limited to the following:

- (a) Names and titles of the project managers overseeing the effort, including contact information (telephone numbers, mailing addresses, and email addresses)
- (b) Location and description of the project, including the final total volume of material extracted from the Mobile Harbor Channel the volume of material actually placed into each placement site (including a description of the volume calculation method used to determine these volumes)

- (c) Files containing the x, y, z and time stamp of the dredge locations (if applicable)
 - (d) Narrative describing the final, as-built features, boundaries
 - (e) A table, showing the various items of work construction, final quantities, and monetary amounts
 - (f) A listing of construction and construction oversight information, including the prime and subcontractor(s), contract costs, etc;
 - (g) A list of all major equipment used to construct the project
 - (h) A narrative discussing the construction sequences and activities, and, if applicable, any problems encountered and solutions
 - (i) A list and description of any construction change orders issued (if applicable)
 - (j) A list and description of any safety-related issues or accidents reported during the life of the project
 - (k) A narrative and any appropriate tables describing any environmental or compliance surveys or efforts associated with the project and costs associated with these surveys or efforts
 - (l) A table listing significant construction dates beginning with bid opening and ending with final acceptance of the project
 - (m) Digital appendices containing the as-built drawings, cross-sections, and survey data
- End of Section --

APPENDIX C

DREDGING QUANTITIES

APPENDIX C
PHASE 6 MOBILE HARBOR DEEPENING AND WIDENING
DREDGE VOLUMES

Dredge Template				O&M Template			Phase 6 New Work		
Baseline Station	Cut Area (S.F.)	Cut Volume (C.Y.)	Cumulative Volume (C.Y.)	Cut Area (S.F.)	Cut Volume (C.Y.)	Cumulative Volume (C.Y.)	Cut Area (S.F.)	Cut Volume (C.Y.)	Cumulative Volume (C.Y.)
226+16.00	8554.07	0		3051.92	0		5502.15	0.00	0.00
230+00.00	5670.52	101152.63	101152.63	949.09	28451.61	28451.6	4721.43	72701.02	72701.02
235+00.00	4288.25	92210.85	193363.48	189.64	10543.8	38995.4	4098.61	81667.05	154368.07
240+00.00	3908.97	75900.22	269263.7	212.93	3727.59	42723.0	3696.04	72172.63	226540.70
245+00.00	7455.96	105230.82	374494.52	1143.27	12557.44	55280.4	6312.69	92673.38	319214.08
248+35.70	12366.16	123227.51	497722.03	2617.23	23377.79	78658.2	9748.93	99849.72	419063.80
249+91.69	12724.74	72479.62	570201.65	2501.29	14785.78	93444.0	10223.45	57693.84	476757.64
250+00.00	12641.29	3904.13	574105.78	2465.74	764.48	94208.5	10175.55	3139.65	479897.29
255+00.00	10118.94	210742.9	784848.68	2213.11	43322.7	137531.2	7905.83	167420.20	647317.49
259+55.20	28354.26	324314.8	1109163.48	2249.23	37615.85	175147.0	26105.03	286698.95	934016.44
260+00.00	30962.13	49210.63	1158374.11	1870.31	3417.69	178564.7	29091.82	45792.94	979809.38
261+29.00	33923.90	155005.51	1313379.62	1253.08	7461.44	186026.2	32670.82	147544.07	1127353.45
262+62.14	29368.08	156044.14	1469423.76	1298.32	6290.38	192316.6	28069.76	149753.76	1277107.21
265+00.00	16938.89	203977.83	1673401.59	256.63	6849.4	199166.0	16682.26	197128.43	1474235.64
267+72.58	12488.33	148542.07	1821943.66	0	1295.42	200461.4	12488.33	147246.65	1621482.29
270+00.00	6874.15	81544.74	1903488.4	0	0	200461.4	6874.15	81544.74	1703027.03
271+23.27	4419.89	25782.25	1929270.65	0	0	200461.4	4419.89	25782.25	1728809.28
275+00.00	4509.19	62293.15	1991563.8	0.08	0.56	200461.9	4509.11	62292.59	1791101.87
280+00.00	4736.25	85605.86	2077169.66	0.25	3.04	200465.0	4736.00	85602.82	1876704.69
285+00.00	4322.14	83873.91	2161043.57	0	2.3	200467.3	4322.14	83871.61	1960576.30
290+00.00	4180.24	78725.7	2239769.27	0.03	0.29	200467.6	4180.21	78725.41	2039301.71
295+00.00	4103.95	76705.47	2316474.74	0	0.29	200467.9	4103.95	76705.18	2116006.89
300+00.00	4417.77	78904.78	2395379.52	0.02	0.2	200468.1	4417.75	78904.58	2194911.47
305+00.00	5468.38	91538.35	2486917.87	0	0.2	200468.3	5468.38	91538.15	2286449.62
306+99.67	6046.64	42577.2	2529495.07	20.71	76.57	200544.8	6025.93	42500.63	2328950.25
310+00.00	6171.20	67952.18	2597447.25	0	115.2	200660.0	6171.20	67836.98	2396787.23

315+00.00	6065.36	113301.4	2710748.65	0	0.04	200660.1	6065.36	113301.36	2510088.59
320+00.00	5849.41	110321.93	2821070.58	0	0	200660.1	5849.41	110321.93	2620410.52
325+00.00	5093.21	101320.62	2922391.2	0	0	200660.1	5093.21	101320.62	2721731.14
330+00.00	3835.06	82669.21	3005060.41	0	0	200660.1	3835.06	82669.21	2804400.35
335+00.00	2564.54	59255.61	3064316.02	0	0.01	200660.1	2564.54	59255.60	2863655.95
337+00.00	1946.49	16707.53	3081023.55	1079.34	3997.56	204657.6	867.15	12709.97	2876365.92
Total :				Total O&M:			Total New Work:		
3081023.6				204657.6			2876365.92		

DEER RIVER PLACEMENT AREA PLACEMENT VOLUMES
FILL TO +2.5 FEET NAVD88

STATION	AREA (SF.)	FILL VOLUME (CY.)	CUMULATIVE VOLUME (C.Y)
0+73.76	74.99	0.0	0.0
1+00.00	607.58	331.6	331.6
2+00.00	2394.05	5558.6	5890.2
3+00.00	2510.26	9082.1	14972.3
4+00.00	2196.46	8716.1	23688.4
5+00.00	2284.91	8298.8	31987.2
6+00.00	2112.57	8143.5	40130.7
7+00.00	2139.04	7873.3	48004.0
8+00.00	2023.27	7708.0	55712.0
9+00.00	2048.62	7540.5	63252.5
10+00.00	2141.46	7759.4	71012.0
11+00.00	2033.79	7732.0	78743.9
12+00.00	2217.51	7872.8	86616.7
13+00.00	2160.48	8107.4	94724.1
14+00.00	2199.80	8074.6	102798.7
15+00.00	2303.29	8339.0	111137.7
16+00.00	2058.56	8077.5	119215.2
17+00.00	2203.42	7892.6	127107.7
18+00.00	2168.02	8095.3	135203.0
19+00.00	2087.69	7880.9	143083.9
20+00.00	2241.89	8017.7	151101.7
21+00.00	2035.07	7920.3	159022.0
22+00.00	2123.95	7701.9	166723.9
23+00.00	2035.49	7702.7	174426.6
24+00.00	1875.78	7243.1	181669.7
25+00.00	1989.04	7157.1	188826.8
26+00.00	1769.69	6960.6	195787.4
27+00.00	1919.33	6831.5	202618.9
28+00.00	2152.94	7541.2	210160.1
29+00.00	0.00	3986.9	214147.0
29+10.52	0.00	0.0	214147.0
TOTAL:		214147.0	

DEER RIVER PLACEMENT AREA PLACEMENT VOLUMES
FILL TO +3.5 FEET NAVD88

STATION	AREA (SF.)	FILL VOLUME (CY.)	CUMULATIVE VOLUME (C.Y)
0+73.76	129.43	0.0	0
1+00.00	729.82	417.5	417.5
2+00.00	2,649.63	6258.2	6675.7
3+00.00	2,749.13	9997.7	16673.4
4+00.00	2,447.80	9623.9	26297.3
5+00.00	2,537.50	9232.0	35529.4
6+00.00	2,367.27	9082.9	44612.3
7+00.00	2,389.30	8808.5	53420.8
8+00.00	2,271.60	8631.3	62052.1
9+00.00	2,299.00	8464.1	70516.1
10+00.00	2,404.30	8709.8	79225.9
11+00.00	2,312.70	8735.2	87961.1
12+00.00	2,490.37	8894.6	96855.7
13+00.00	2,431.52	9114.6	105970.3
14+00.00	2,468.14	9073.4	115043.7
15+00.00	2,578.19	9345.1	124388.8
16+00.00	2,332.61	9094.1	133482.9
17+00.00	2,480.03	8912.3	142395.2
18+00.00	2,441.14	9113.3	151508.4
19+00.00	2,358.84	8888.9	160397.3
20+00.00	2,493.28	8985.4	169382.7
21+00.00	2,282.21	8843.5	178226.2
22+00.00	2,377.17	8628.5	186854.7
23+00.00	2,295.28	8652.7	195507.4
24+00.00	2,117.42	8171.7	203679.0
25+00.00	2,227.35	8045.9	211724.9
26+00.00	2,005.55	7838.7	219563.6
27+00.00	2,145.69	7687.5	227251.1
28+00.00	2,390.20	8399.8	235650.9
29+00.00	0.00	4426.3	240077.2
29+10.52	0.00	0.0	240077.2
TOTAL:		240077.2	

DAUPHIN ISLAND CAUSEWAY PLACEMENT AREA
PLACEMENT VOLUMES

North Sand Berm

Station	Volume [CY]	Cumulative Volume [CY]
59+46.43	0	0
	20447	20447
42+33	18798	39245
37+31	10382	49627
32+55	10156	59783
27+54	10275	70058
22+53	9733	79791
17+35	9088	88879
12+35	11701	100581
0+00	8295	108875
Total [kCY]		109

North Marsh Fill

Station	Volume [CY]	Cumulative Volume [CY]
59+46.43	0	0
	22457	22457
42+33	29976	52432
37+31	16538	68970
32+55	12380	81350
27+54	16101	97451
22+53	18822	116274
17+35	18756	135030
12+35	20950	155980
0+00	11487	167466
Total [kCY]		167

South Sand Berm

Station	Volume [CY]	Cumulative Volume [CY]
97+62.82	0	0
96+04	3957	3957
92+33	10653	14610
86+50	11380	25990
81+50	13109	39099
76+62	11758	50856
71+61	10547	61404
66+75	10260	71663
64+00	5906	77569
61+86	4603	82172
56+86	11145	93317
51+82	10878	104195
49+82	11218	115414
41+89	11235	126649
37+00	11203	137852
32+00	11108	148960
27+00	10564	159524
22+00	12415	171938
17+00	12968	184906
12+00	14253	199159
6+51	14404	213563
0+00	2908	216471
Total [kCY]		216

South Marsh Fill

Station	Volume [CY]	Cumulative Volume [CY]
97+62.82	0	0
96+04	2510	2510
92+33	12792	15302
86+50	13480	28782
81+50	11220	40002
76+62	5916	45919
71+61	3688	49606
66+75	3226	52832
64+00	2613	55445
61+86	2037	57482
56+86	7831	65313
51+82	10576	75889
49+82	10895	86784
41+89	12495	99280
37+00	16749	116029
32+00	19763	135792
27+00	20563	156356
22+00	28245	184601
17+00	28535	213136
12+00	27219	240355
6+51	16289	256644
0+00	1658	258302
Total [kCY]		258

APPENDIX D

PHASE 5 DREDGING PIPELINE CORRIDORS

SCALE: 1" = 1800'