



**US Army Corps
of Engineers®**
New England District

W912WJ-04-B-0004

Seabrook Harbor Section 227 Project National Shoreline Erosion Control Development and Demonstration Program

Seabrook, New Hampshire

**Construction Solicitation
And Specifications**

June 2004

| | | | | |
|---|---|--|-------------------------------|--------------------------|
| SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i> | 1. SOLICITATION NO. W912WJ-04-B-0004 | 2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP) | 3. DATE ISSUED 01-Jun-2004 | PAGE OF PAGES 1 OF 45 |
| | IMPORTANT - The "offer" section on the reverse must be fully completed by offeror. | | | |

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

| | | |
|-----------------|---|----------------|
| 4. CONTRACT NO. | 5. REQUISITION/PURCHASE REQUEST NO. W13G86-3140-0521 | 6. PROJECT NO. |
|-----------------|---|----------------|

| | | |
|---|-------------------|---|
| 7. ISSUED BY U S ARMY ENGR DISTRICT, NEW ENGLAND 696 VIRGINIA RD CONCORD MA 01742-2751 | CODE W912WJ | 8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE See Item 7 |
| TEL: | FAX: 978-318-8207 | TEL: FAX: |

| | | |
|--------------------------|---------------------------|---|
| 9. FOR INFORMATION CALL: | A. NAME RACHAEL RAPOSA | B. TELEPHONE NO. <i>(Include area code)</i> (NO COLLECT CALLS) 978-318-8249 |
|--------------------------|---------------------------|---|

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date):*

SPECIFICATIONS titled, "SEABROOK HARBOR SECTION 227 PROJECT, NATIONAL SHORELINE EROSION CONTROL DEVELOPMENT AND DEMONSTRATION PROGRAM, SEABROOK, NEW HAMPSHIRE" DATED APRIL 2004.

DRAWINGS as listed in SECTION 00800, paragraph titled, "CONTRACT DRAWINGS AND SPECIFICATIONS"

SECTION 00700, CONTRACT CLAUSES, and SECTION 00800, SPECIAL CONTRACT REQUIREMENTS

11. The Contractor shall begin performance within 15 calendar days and complete it within _____ calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. *(See Par1.1-00800 .)*

| | |
|--|------------------------------|
| 12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | 12B. CALENDAR DAYS 15 |
|--|------------------------------|

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 2 copies to perform the work required are due at the place specified in Item 8 by 02:00 PM *(hour)* local time 01 Jul 2004 *(date)*. If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee is, is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

SOLICITATION, OFFER, AND AWARD (Continued)

(Construction, Alteration, or Repair)

OFFER (Must be fully completed by offeror)

| | | |
|---|--|--|
| 14. NAME AND ADDRESS OF OFFEROR <i>(Include ZIP Code)</i> | | 15. TELEPHONE NO. <i>(Include area code)</i> |
| CODE | | 16. REMITTANCE ADDRESS <i>(Include only if different than Item 14)</i> |
| FACILITY CODE | | See Item 14 |

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

| | |
|---------|------------------------|
| AMOUNTS | SEE SCHEDULE OF PRICES |
|---------|------------------------|

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)

| | | | | | | | | | | |
|---------------|--|--|--|--|--|--|--|--|--|--|
| AMENDMENT NO. | | | | | | | | | | |
| DATE | | | | | | | | | | |

| | | |
|---|----------------|-----------------|
| 20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i> | 20B. SIGNATURE | 20C. OFFER DATE |
|---|----------------|-----------------|

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

| | |
|------------|---------------------------------------|
| 22. AMOUNT | 23. ACCOUNTING AND APPROPRIATION DATA |
|------------|---------------------------------------|

| | | |
|--|-------------|--|
| 24. SUBMIT INVOICES TO ADDRESS SHOWN IN <i>(4 copies unless otherwise specified)</i> | ITEM | 25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 41 U.S.C. 253(c) |
|--|-------------|--|

| | | | |
|---------------------|------|------------------------------|------|
| 26. ADMINISTERED BY | CODE | 27. PAYMENT WILL BE MADE BY: | CODE |
|---------------------|------|------------------------------|------|

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

| | |
|---|---|
| <input type="checkbox"/> 28. NEGOTIATED AGREEMENT <i>(Contractor is required to sign this document and return _____ copies to issuing office.)</i> Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract. | <input type="checkbox"/> 29. AWARD <i>(Contractor is not required to sign this document.)</i> Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary. |
|---|---|

| | | | |
|---|-----------|---|-----------------|
| 30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN <i>(Type or print)</i> | | 31A. NAME OF CONTRACTING OFFICER <i>(Type or print)</i> | |
| 30B. SIGNATURE | 30C. DATE | TEL: | EMAIL: |
| | | 31B. UNITED STATES OF AMERICA BY | 31C. AWARD DATE |

Section 00010 - Solicitation Contract Form

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|--|----------|----------|------------|--------|
| 0001 | MOBLIZATION AND DEMOBILIZATION FFP PURCHASE REQUEST NUMBER: W13G86-3140-0521 | 1 | Lump Sum | NA | \$ |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|--|----------|-----------|------------|--------|
| 0002 | REMOVE AND REPLACE FFP STONE RIP RAP AT EAST BULKHEAD WALL | 500 | Gross Ton | \$ | \$ |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|------------------------------|----------|----------|------------|--------|
| 0003 | SHEET PILING BULKHEAD FFP | 1 | Lump Sum | NA | \$ |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|----------------------------------|----------|----------------|------------|--------|
| 0004 | GEOGRID MARINE MATTRESSES FFP | 900 | Square Yard | \$ | \$ |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|---|----------|------------|------------|--------|
| 0005 | DREDGING BLACKWATER RIVER FFP WITH DISPOSAL OF DREDGED MATERIAL IN BULKHEAD | 85,000 | Cubic Yard | \$ | \$ |

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---------|--------------------------|----------|------|------------|--------|
| 0006 | WOOD MARINE PILES FFP | 10 | Each | \$ | \$ |

OPTIONAL BID ITEM

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|----------------|------------------------------------|----------|----------|------------|--------|
| 0007 OPTION | GEOTECHICAL INSTRUMENTATION FFP | 1 | Lump Sum | NA | \$ |

TOTAL ESTIMATED AMOUNT \$ _____

NOTES TO BIDDERS

Note 1: The work will be awarded as a whole to one bidder, including the Optional Item, if exercised. Bidders must bid all items. The low bidder will be determined by the TOTAL ESTIMATED AMOUNT, including the base bid item and the Optional Bid Item. The minimum work awarded will be the base bid.

Note 2: Option Bid Item Number 0007 may, at the option of the Government, be exercised at any time from the date of receipt by the Contractor of the Notice to Proceed to November 15, 2004. If Option Bid Item No. 0007 is exercised by the Government, no additional time will be added to the completion period of the contract.

DELIVERY INFORMATION

| CLIN | DELIVERY DATE | QUANTITY | SHIP TO ADDRESS | UIC |
|----------------|---------------|----------|-------------------------|-----|
| 0001 - 0007 | 28-FEB-2005 | 1 | N/A FOB: Destination | |

PLANT AND EQUIPMENT LIST

The bidder must complete the following plant and equipment list by listing the plant available to the Bidder and proposed to be used on the work of this contract. Add additional pages as necessary. Attach the completed list to the BIDDING SCHEDULE and submit the list with the bid. Failure to complete this list and submit it with the BIDDING SCHEDULE may be cause for the rejection of the bid. Prior to commencement of work at the site, the Contractor will be required to submit for review copies of all applicable current inspections, certificates and surveys for all floating plant

BUCKET DREDGES (Clamshell/Dipper/Excavator/Dragline)

| Dredge Name and Type | Manufacturer and Age | Bucket Size and Swings/Hour | Capacity – Cubic Yards/Month* | Type and HP of Engine |
|----------------------|----------------------|-----------------------------|-------------------------------|-----------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

HYDRAULIC/SUCTION/HOPPER DREDGE

| Dredge Name and Type | Manufacturer and Age | Inside Diameter of Discharge Pipe | Capacity – Cubic Yards/Month* | Type and HP of Pump Engine |
|----------------------|----------------------|-----------------------------------|-------------------------------|----------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

BARGES/SCOWS

| Name And Type | Manufacturer And Age | Length & Beam | Draft - Light | Draft – Loaded | Capacity (Cubic Yards) | Number and Size Of Drills |
|---------------|----------------------|---------------|---------------|----------------|------------------------|---------------------------|
| | | | | | | |
| | | | | | | |
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ATTENDANT PLANT (Give columnar information pertinent to items listed, if to be used)

| | Name | Manufacturer And Age | Type and HP Of Engine | Length & Beam | Remarks |
|--------|------|-------------------------|--------------------------|---------------------|---------|
| Tug | | | | | |
| Tug | | | | | |
| Launch | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
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(*) When working materials similar to those anticipated to be encountered in the performance of work

Section 00100 - Bidding Schedule/Instructions to Bidders

CLAUSES INCORPORATED BY REFERENCE

| | | |
|-----------|--|----------|
| 52.214-4 | False Statements In Bids | APR 1984 |
| 52.214-5 | Submission Of Bids | MAR 1997 |
| 52.214-6 | Explanation To Prospective Bidders | APR 1984 |
| 52.214-7 | Late Submissions, Modifications, and Withdrawals of Bids | NOV 1999 |
| 52.214-12 | Preparation Of Bids | APR 1984 |
| 52.214-18 | Preparation of Bids-Construction | APR 1984 |
| 52.214-19 | Contract Award-Sealed Bidding-Construction | AUG 1996 |
| 52.225-10 | Notice of Buy American Act Requirement--Construction Materials | MAY 2002 |
| 52.232-38 | Submission of Electronic Funds Transfer Information with Offer | MAY 1999 |

CLAUSES INCORPORATED BY FULL TEXT

52.003-4002 BIDS RECEIVING DESK

Bids, if submitted in person or by messenger, shall be delivered to the Bids Receiving Desk (so identified), Building 1, Contracts Branch, Contracting Division, at the above address, prior to the time fixed for opening of bids. Bidders who attend the bid opening may deliver bids directly to the Contracting Officer in the New Hampshire Conference Room.

52.003-4014 INQUIRIES

Telephone inquiries relating to this solicitation should be directed as follows:

New England District, Corps of Engineers
 Procurement of Plans and Specifications,
 Prospective Bidders List, Bid Results,
 and Award Information 978-318-8420

Technical Inquiries on Plans and
 Specifications 978-318-8249

52.003-4015 MAGNITUDE OF PROJECT

The estimated cost of the work is \$1,000,000.00 and \$5,000,000.00.

52.003-4021 PLACE OF BID OPENING

Bids will be publicly opened at the appointed time at the U. S. Army Engineer District, New England, 696 Virginia Road, Concord, MA 01742-2751, in the New Hampshire Conference Room.

52.214-3 AMENDMENTS TO INVITATIONS FOR BIDS (DEC 1989)

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid, (3) by letter or telegram, or (4) by facsimile, if facsimile bids are authorized in the solicitation. The Government must receive the acknowledgment by the time and at the place specified for receipt of bids.

(End of provision)

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Contracting Officer, U.S. Army Corps of Engineer District, New England, 696 Virginia Road, Concord, MA 01742-2751.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:

Name: Duban Montoya

Address: 696 Virginia Road, Concord, MA 01742

Telephone: (978) 318-8086

(End of provision)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>

<http://farsite.hill.af.mil>

<http://www.hq.usace.army.mil/cepr/asp/library/efar.asp>

<http://acqnet.saalt.army.mil/LIBRARY>

(End of provision)

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

“Common parent,” as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

“Taxpayer Identification Number (TIN),” as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN: _____

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it () is a women-owned business concern.

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

(A) Are () are not () presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have () have not (), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are () are not () presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) The Offeror has () has not (), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a

determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 234990.

(2) The small business size standard is \$17,020,000.00.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It () is, () is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It () is, () is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-2 EQUAL LOW BIDS. (OCT 1995)

(a) This provision applies to small business concerns only.

(b) The bidder's status as a labor surplus area (LSA) concern may affect entitlement to award in case of tie bids. If the bidder wishes to be considered for this priority, the bidder must identify, in the following space, the LSA in which the costs to be incurred on account of manufacturing or production (by the bidder or the first-tier subcontractors) amount to more than 50 percent of the contract price.

--

--

(c) Failure to identify the labor surplus area as specified in paragraph (b) of this provision will preclude the bidder from receiving priority consideration. If the bidder is awarded a contract as a result of receiving priority consideration under this provision and would not have otherwise received award, the bidder shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except--

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference;

(ii) Otherwise successful offers from small business concerns;

(iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and

(iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer.

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

___ Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [] is, [] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

| No. of Employees | Avg. Annual Gross Revenues |
|--------------------------------------|--|
| <input type="checkbox"/> 50 or fewer | <input type="checkbox"/> \$1 million or less |
| <input type="checkbox"/> 51 - 100 | <input type="checkbox"/> \$1,000,001 - \$2 million |
| <input type="checkbox"/> 101 - 250 | <input type="checkbox"/> \$2,000,001 - \$3.5 million |
| <input type="checkbox"/> 251 - 500 | <input type="checkbox"/> \$3,500,001 - \$5 million |
| <input type="checkbox"/> 501 - 750 | <input type="checkbox"/> \$5,000,001 - \$10 million |
| <input type="checkbox"/> 751 - 1,000 | <input type="checkbox"/> \$10,000,001 - \$17 million |
| <input type="checkbox"/> Over 1,000 | <input type="checkbox"/> Over \$17 million |

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) () It has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) () It has, () has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (DEC 2001)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans), it has submitted the most recent VETS-100 Report required by that clause.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

(a) Executive Order 13148, of April 21, 2000, Greening the Government through Leadership in Environmental Management, requires submission of this certification as a prerequisite for contract award.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

() (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed in 40 CFR 372.65;

() (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

() (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

() (iv) The facility does not fall within the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

(A) Major group code 10 (except 1011, 1081, and 1094).

(B) Major group code 12 (except 1241).

(C) Major group codes 20 through 39.

(D) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(E) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, et seq.), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

() (v) The facility is not located within the United States or its outlying areas.

(End of clause)

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclose such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

| | | |
|----------------|--|----------|
| 52.202-1 Alt I | Definitions (Dec 2001) --Alternate I | MAY 2001 |
| 52.203-3 | Gratuities | APR 1984 |
| 52.203-5 | Covenant Against Contingent Fees | APR 1984 |
| 52.203-7 | Anti-Kickback Procedures | JUL 1995 |
| 52.203-8 | Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity | JAN 1997 |
| 52.203-10 | Price Or Fee Adjustment For Illegal Or Improper Activity | JAN 1997 |
| 52.203-12 | Limitation On Payments To Influence Certain Federal Transactions | JUN 2003 |
| 52.204-4 | Printed or Copied Double-Sided on Recycled Paper | AUG 2000 |
| 52.209-6 | Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment | JUL 1995 |
| 52.211-13 | Time Extensions | SEP 2000 |
| 52.211-18 | Variation in Estimated Quantity | APR 1984 |
| 52.214-26 | Audit and Records--Sealed Bidding | OCT 1997 |
| 52.214-27 | Price Reduction for Defective Cost or Pricing Data - Modifications - Sealed Bidding | OCT 1997 |
| 52.214-28 | Subcontracting Cost Or Pricing Data--Modifications--Sealed Bidding | OCT 1997 |
| 52.219-8 | Utilization of Small Business Concerns | OCT 2000 |
| 52.219-9 Alt I | Small Business Subcontracting Plan (Jan 2002) Alternate I | OCT 2001 |
| 52.219-16 | Liquidated Damages-Subcontracting Plan | JAN 1999 |
| 52.222-3 | Convict Labor | JUN 2003 |
| 52.222-4 | Contract Work Hours and Safety Standards Act - Overtime Compensation | SEP 2000 |
| 52.222-6 | Davis Bacon Act | FEB 1995 |
| 52.222-7 | Withholding of Funds | FEB 1988 |
| 52.222-8 | Payrolls and Basic Records | FEB 1988 |
| 52.222-9 | Apprentices and Trainees | FEB 1988 |
| 52.222-10 | Compliance with Copeland Act Requirements | FEB 1988 |
| 52.222-11 | Subcontracts (Labor Standards) | FEB 1988 |
| 52.222-12 | Contract Termination-Debarment | FEB 1988 |
| 52.222-13 | Compliance with Davis-Bacon and Related Act Regulations. | FEB 1988 |
| 52.222-14 | Disputes Concerning Labor Standards | FEB 1988 |
| 52.222-15 | Certification of Eligibility | FEB 1988 |
| 52.222-21 | Prohibition Of Segregated Facilities | FEB 1999 |
| 52.222-26 | Equal Opportunity | APR 2002 |
| 52.222-27 | Affirmative Action Compliance Requirements for Construction | FEB 1999 |
| 52.222-35 | Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans | DEC 2001 |
| 52.222-36 | Affirmative Action For Workers With Disabilities | JUN 1998 |
| 52.222-37 | Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans | DEC 2001 |
| 52.223-6 | Drug-Free Workplace | MAY 2001 |
| 52.223-14 | Toxic Chemical Release Reporting | AUG 2003 |
| 52.225-13 | Restrictions on Certain Foreign Purchases | DEC 2003 |

| | | |
|--------------------|---|----------|
| 52.226-1 | Utilization Of Indian Organizations And Indian-Owned Economic Enterprises | JUN 2000 |
| 52.227-1 | Authorization and Consent | JUL 1995 |
| 52.227-2 | Notice And Assistance Regarding Patent And Copyright Infringement | AUG 1996 |
| 52.227-4 | Patent Indemnity-Construction Contracts | APR 1984 |
| 52.228-11 | Pledges Of Assets | FEB 1992 |
| 52.228-12 | Prospective Subcontractor Requests for Bonds | OCT 1995 |
| 52.228-13 | Alternative Payment Protections | JUL 2000 |
| 52.228-14 | Irrevocable Letter of Credit | DEC 1999 |
| 52.228-15 | Performance and Payment Bonds--Construction | JUL 2000 |
| 52.229-3 | Federal, State And Local Taxes | APR 2003 |
| 52.232-5 | Payments under Fixed-Price Construction Contracts | SEP 2002 |
| 52.232-17 | Interest | JUN 1996 |
| 52.232-23 Alt I | Assignment of Claims (Jan 1986) - Alternate I | APR 1984 |
| 52.232-33 | Payment by Electronic Funds Transfer--Central Contractor Registration | OCT 2003 |
| 52.233-1 | Disputes | JUL 2002 |
| 52.233-3 | Protest After Award | AUG 1996 |
| 52.236-2 | Differing Site Conditions | APR 1984 |
| 52.236-3 | Site Investigation and Conditions Affecting the Work | APR 1984 |
| 52.236-5 | Material and Workmanship | APR 1984 |
| 52.236-6 | Superintendence by the Contractor | APR 1984 |
| 52.236-7 | Permits and Responsibilities | NOV 1991 |
| 52.236-8 | Other Contracts | APR 1984 |
| 52.236-9 | Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements | APR 1984 |
| 52.236-10 | Operations and Storage Areas | APR 1984 |
| 52.236-11 | Use and Possession Prior to Completion | APR 1984 |
| 52.236-12 | Cleaning Up | APR 1984 |
| 52.236-13 | Accident Prevention | NOV 1991 |
| 52.236-15 | Schedules for Construction Contracts | APR 1984 |
| 52.236-21 | Specifications and Drawings for Construction | FEB 1997 |
| 52.236-26 | Preconstruction Conference | FEB 1995 |
| 52.242-13 | Bankruptcy | JUL 1995 |
| 52.242-14 | Suspension of Work | APR 1984 |
| 52.243-4 | Changes | AUG 1987 |
| 52.244-6 | Subcontracts for Commercial Items | APR 2003 |
| 52.246-12 | Inspection of Construction | AUG 1996 |
| 52.248-3 | Value Engineering-Construction | FEB 2000 |
| 52.249-2 Alt I | Termination for Convenience of the Government (Fixed-Price) (Sep 1996) - Alternate I | SEP 1996 |
| 52.249-10 | Default (Fixed-Price Construction) | APR 1984 |
| 52.253-1 | Computer Generated Forms | JAN 1991 |
| 252.201-7000 | Contracting Officer's Representative | DEC 1991 |
| 252.203-7001 | Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies | MAR 1999 |
| 252.203-7002 | Display Of DOD Hotline Poster | DEC 1991 |
| 252.204-7003 | Control Of Government Personnel Work Product | APR 1992 |
| 252.204-7004 Alt A | Required Central Contractor Registration Alternate A | NOV 2003 |
| 252.205-7000 | Provision Of Information To Cooperative Agreement Holders | DEC 1991 |

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|--------------|--|----------|
| 252.209-7000 | Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate Range Nuclear Forces (INF) Treaty | NOV 1995 |
| 252.209-7004 | Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country | MAR 1998 |
| 252.219-7003 | Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts) | APR 1996 |
| 252.223-7004 | Drug Free Work Force | SEP 1988 |
| 252.225-7012 | Preference For Certain Domestic Commodities | FEB 2003 |
| 252.236-7000 | Modification Proposals-Price Breakdown | DEC 1991 |
| 252.236-7008 | Contract Prices-Bidding Schedules | DEC 1991 |
| 252.242-7000 | Postaward Conference | DEC 1991 |
| 252.243-7001 | Pricing Of Contract Modifications | DEC 1991 |
| 252.243-7002 | Requests for Equitable Adjustment | MAR 1998 |
| 252.247-7023 | Transportation of Supplies by Sea | MAY 2002 |
| 252.247-7024 | Notification Of Transportation Of Supplies By Sea | MAR 2000 |

CLAUSES INCORPORATED BY FULL TEXT

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

| Goals for minority participation for each trade | Goals for female participation for each trade |
|---|---|
| 4.0% | 6.9% |

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **Seabrook, New Hampshire - Rockingham**

(End of provision)

52.225-9 BUY AMERICAN ACT—CONSTRUCTION MATERIALS (JUN 2003)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

- (1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic construction material means--

- (1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

NONE

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

| Construction material description | Unit of measure | Quantity | Price (dollars)\1\ |
|-----------------------------------|-----------------|----------|--------------------|
| Item 1 | | | |
| Foreign construction material.... | | | |
| Domestic construction material... | | | |
| Item 2 | | | |
| Foreign construction material.... | | | |
| Domestic construction material... | | | |

Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE
MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(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 _____. 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 retroactive 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 clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2003)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation

provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-5001 CONTINUING CONTRACTS (MAR 1995)--EFARS

(a) This is a continuing contract, as authorized by Section 10 of the River and Harbor Act of September 22, 1922 (33 U.S. Code 621). The payment of some portion of the contract price is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors. The responsibilities of the Government are limited by this clause notwithstanding any contrary provision of the "Payments to Contractor" clause or any other clause of this contract.

(b) The sum of 5,000.00 has been reserved for this contract and is available for payments to the contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds together with funds provided by one or more non-federal project sponsors will be reserved for this contract.

(c) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not entitle the contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs (f) and (i) below. No such failure shall constitute a breach of this contract, except that this provision shall not bar a breach-of-contract action if an amount finally determined to be due as a termination allowance remains unpaid for one year due solely to a failure to reserve sufficient additional funds therefore.

(d) The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The contracting officer will promptly notify the contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.

(e) If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the contractor shall give written notice to the contracting officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

(f) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. The contractor shall be entitled to simple interest on any payment that the contracting officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97, as in effect on the first day of the delay in such payment.

(g) Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.

(h) An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds

(i) If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the contractor, by written notice delivered to the contracting officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

(j) If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the contractor, to reduce said reservation by the amount of such excess.

(End of clause)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(a) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.

(b) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.

(c) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(d) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(e) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

(End of Clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far>

<http://farsite.hill.af.mil>

<http://www.hq.usace.army.mil/cepr/asp/library/efar.asp>

<http://acqnet.saalt.army.mil/LIBRARY>

(End of clause)

Section 00800 - Special Contract Requirements

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

02/95**1.1 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984) FAR 52.211-10**

a. The Contractor shall be required to--

- (1) commence work under this contract within 15 calendar days after the date the Contractor receives the notice to proceed,
- (2) prosecute the work diligently, and
- (3) complete the entire work ready for use not later than February 28, 2005. The time stated for completion shall include final cleanup of the premises.

b. Environmental restrictions on this project permit dredging operations at the project only from November 15 through March 15, inclusive, of any year.

1.2 LIQUIDATED DAMAGES - CONSTRUCTION (SEPT 2000) FAR 52.211-12

- (a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$1,300.00 for each calendar day of delay until the work is completed or accepted.
- (b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

1.3 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000) DFARS 252.236-7001

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference. The drawings will be provided to the Contractor in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall-

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

(1) Large-scale drawings shall govern small-scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

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

(e) The work shall conform to the specifications and to the contract drawings. The contract drawings are identified on the index of drawings found on Drawing C-1 (Sheet 2 of 11).

1.4 DESIGNATED BILLING OFFICE

Reference Contract Clause titled "PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS" located in SECTION 00700, CONTRACT CLAUSES. The "designated billing office" will be the Construction Area Engineer, Resident Engineer or project office where the Contracting Officer Representative for this contract is located. The Contractor will be notified of the exact location of this office at the project preconstruction conference specified in Section 01110 SUMMARY OF WORK.

1.5 BID GUARANTEE (SEP 1996) FAR 52.228-1

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) The amount of the bid guarantee shall be twenty percent of the bid price or \$3,000,000, whichever is less.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

1.6 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984) FAR 52.236-1

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty percent (20%) of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

1.7 OBSTRUCTION OF NAVIGABLE WATERWAYS DFAR 252.236-7002(DEC 1991)

(a) The Contractor shall-

- (1) Promptly recover and remove any material, plant, machinery, or appliance which the contractor loses, dumps, throws overboard, sinks, or misplaces, and which, in the opinion of the Contracting Officer, may be dangerous to or obstruct navigation;
- (2) Give immediate notice, with description and locations of any such obstructions, to the Contracting Officer; and
- (3) When required by the Contracting Officer, mark or buoy such obstructions until the same are removed.

(b) The Contracting Officer may-

- (1) Remove the obstructions by contract or otherwise should the Contractor refuse, neglect, or delay compliance with paragraph (a) of this clause; and
- (2) Deduct the cost of removal from any monies due or to become due to the Contractor; or
- (3) Recover the cost of removal under the Contractor's bond.

(c) The Contractor's liability for the removal of a vessel wrecked or sunk without fault or negligence is limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et.seq.).

1.8 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991) DFARS 252.236-7004.

a. The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.

- (1) Sixty percent of the lump sum price upon completion of the Contractor's mobilization at the work site.
- (2) The remaining 40 percent upon 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 paragraphs a(1) and a(2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

- (1) 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.

(2) The Contracting Officer's determination of the actual costs in paragraph b(1) of this clause is not subject to appeal.

1.9 QUANTITY SURVEYS. (APR 1984) ALTERNATE 1 FAR 52.236-16

a) Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

(b) The Government will conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance.

(c) Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

1.10 LAYOUT OF WORK (APR 1984) 52.236-17

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

-- End of Document --

WAGE DETERMINATION

General Decision Number: NH030004 03/05/2004

General Decision Number: NH030004 03/05/2004

Superseded General Decision Number: NH020004

State: **New Hampshire**

Construction Types: Highway

Counties: **New Hampshire** Statewide.

Highway Construction Projects excluding major bridging (for example, bascule, suspension and spandrel arch bridges; those bridging waters presently navigating or to be made navigable; and those involving marine construction in any degree); tunnels, building structures in rest area projects and railroad construction.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0 | 06/13/2003 |
| 1 | 11/14/2003 |
| 2 | 03/05/2004 |

* ENGI0004-016 12/01/2003

ROCKINGHAM and STRAFFORD COUNTIES:

| | Rates | Fringes |
|--------------|----------|---------|
| Backhoe..... | \$ 22.83 | 13.86 |

ENGI0098-011 04/01/2001

HILLSBOROUGH COUNTY:

| | Rates | Fringes |
|---|----------|---------|
| Power equipment operators: BACKHOES..... | \$ 22.00 | 5.65 |

LABO0668-002 06/01/2001

HILLSBOROUGH and STRAFFORD COUNTIES:

| | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

Laborers:
 GUARDRAIL LABORERS.....\$ 15.00 7.15

 LABO0976-001 06/01/2001

ROCKINGHAM COUNTY:

Rates Fringes

Laborers:
 GUARDRAIL LABORERS.....\$ 15.00 7.15

 SUNH2001-001 06/08/2001

Rates Fringes

Carpenter
 CARPENTERS incl FORMWORK
 BELKNAP, CARROLL,
 CHESHIRE, COOS,
 GRAFTON, MERRIMACK,
 AND SULLIVAN COUNTIES:....\$ 14.86 1.33
 HILLSBOROUGH,
ROCKINGHAM AND
 STRAFFORD COUNTIES:.....\$ 14.73 1.02

Ironworker, Reinforcing
 BELKNAP, CARROLL,
 CHESHIRE, COOS,
 GRAFTON, MERRIMACK, AND
 SULLIVAN COUNTIES:
 BELKNAP, CARROLL,
 CHESHIRE, COOS,
 GRAFTON, MERRIMACK,
 AND SULLIVAN COUNTIES:....\$ 13.00 1.70

Structural
 BELKNAP, CARROLL,
 CHESHIRE, COOS,
 GRAFTON, MERRIMACK,
 AND SULLIVAN COUNTIES:....\$ 13.50 1.66

Ironworker, Structural
 HILLSBOROUGH,
ROCKINGHAM AND
 STRAFFORD COUNTIES:.....\$ 13.81

Laborers:
 Flagger
 BELKNAP, CARROLL,
 CHESHIRE, COOS,
 GRAFTON, MERRIMACK,

| | |
|---|------|
| AND SULLIVAN COUNTIES:....\$ 9.05 | 1.15 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 10.18 | |
| Guardrail Laborer | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:....\$ 10.00 | .25 |
| Pipelayer | |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 12.67 | 1.21 |
| Unskilled Laborer | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:....\$ 10.83 | 1.42 |
| Unskilled, Laborer | |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES: CARPENTERS incl FORMWORK.....\$ 11.54 | 1.19 |
| Power equipment operators: | |
| Backhoe | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:....\$ 16.02 | 1.68 |
| Bulldozer | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES.....\$ 14.98 | 1.52 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 18.93 | 3.32 |
| Compactor | |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 12.14 | 1.40 |
| Crane | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:....\$ 16.00 | 1.67 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 17.16 | 1.38 |
| Excavator | |
| BELKNAP, CARROLL, | |

| | |
|--|------|
| CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 15.23 | 1.67 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 16.88 | 1.84 |
| Grader | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 18.70 | 1.09 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 18.96 | 1.67 |
| Loader | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 13.45 | 1.29 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 16.91 | 2.54 |
| Mechanic (Maintenance) | |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 17.69 | 3.50 |
| Paver | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 15.00 | 1.98 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 14.63 | 1.44 |
| Roller | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 12.85 | 2.66 |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 13.89 | 1.43 |
| Truck Driver | |
| 2,3 and 4 Axle | |
| BELKNAP, CARROLL, CHESHIRE, COOS, GRAFTON, MERRIMACK, AND SULLIVAN COUNTIES:.....\$ 11.04 | 1.62 |
| 3 Axle | |
| HILLSBOROUGH, ROCKINGHAM AND STRAFFORD COUNTIES:.....\$ 12.72 | 1.48 |

| | | |
|------------------------------------|------|--|
| Dump | | |
| BELKNAP, CARROLL, | | |
| CHESHIRE, COOS, | | |
| GRAFTON, MERRIMACK, | | |
| AND SULLIVAN COUNTIES:....\$ 10.99 | 1.44 | |
| HILLSBOROUGH, | | |
| ROCKINGHAM AND | | |
| STRAFFORD COUNTIES:.....\$ 12.70 | .97 | |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

PROJECT TABLE OF CONTENTS

DOCUMENTS 00 - INTRODUCTORY, BIDDING, AND CONTRACT REQUIREMENTS

00010 BIDDING SCHEDULE
00320 GEOTECHNICAL DATA
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01270 MEASUREMENT AND PAYMENT
01312 QUALITY CONTROL SYSTEM (QCS)
01330 SUBMITTAL PROCEDURES
01355 ENVIRONMENTAL PROTECTION
01420 SOURCES FOR REFERENCE PUBLICATIONS
01451 CONTRACTOR QUALITY CONTROL
01500 TEMPORARY FACILITIES AND CONTROLS
01525 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS
01545 DREDGING PLANT AND EQUIPMENT
01723 FIELD ENGINEERING FOR DREDGING

DIVISION 02 - SITE CONSTRUCTION

02325 DREDGING
02390 GEOGRID MARINE MATTRESSES
02461 WOOD MARINE PILES
02465 SHEET PILE BULKHEAD CONSTRUCTION
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-- End of Project Table of Contents --

DOCUMENT TABLE OF CONTENTS

DOCUMENTS 00 - INTRODUCTORY, BIDDING, AND CONTRACT REQUIREMENTS

DOCUMENT 00320

GEOTECHNICAL DATA

PART 1 GENERAL

- 1.1 SUMMARY
- 1.2 EXAMINATION OF SAMPLES
- 1.3 INTERPRETATION

-- End of Document Table of Contents --

DOCUMENT 00320

GEOTECHNICAL DATA

PART 1 GENERAL

1.1 SUMMARY

The surface conditions indicated on the contract drawings and in the specifications are the result of site surveys, borings, and laboratory tests. Locations at the site where subsurface investigations were performed are shown on the drawings. Copies of the drilling logs and laboratory test results are attached at the end of this Section.

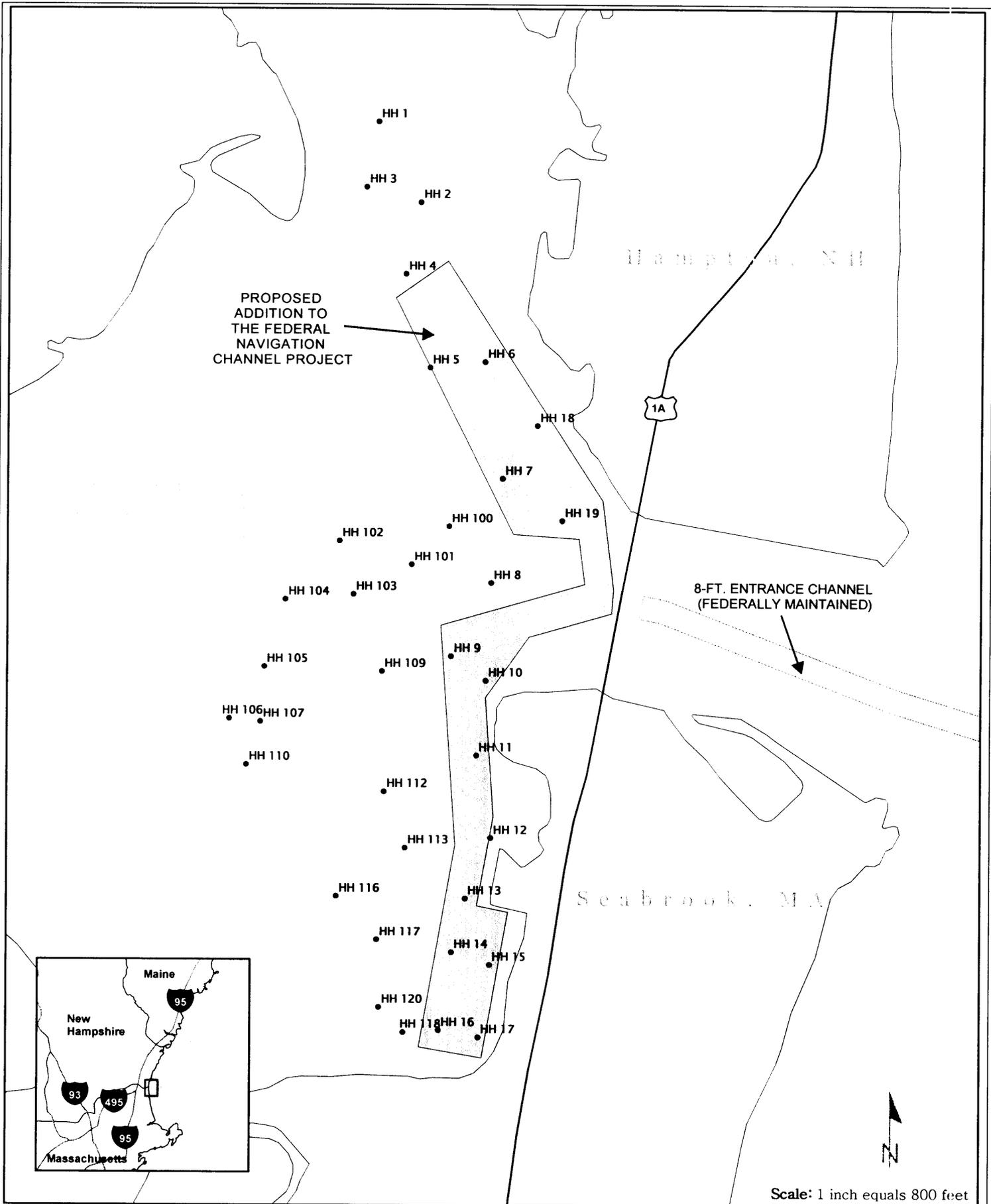
1.2 EXAMINATION OF SAMPLES

Subsurface explorations were performed for the Corps of Engineers. Pertinent subsurface information is shown on the contract drawings and in the Appendix attached to the specifications. Maintenance and native materials obtained from the subsurface explorations are available for examination. Arrangements to view the samples shall be made with Mr. Duban Montoya of the Corps of Engineers, New England District, telephone number 978-318-8086. Two working days prior notice is required in order that samples can be removed from storage and set up for examination.

1.3 INTERPRETATION

Subsurface investigation data are provided for information purposes only and for the convenience of the Contractor. The data shown on the boring logs is for the specific locations indicated only and no assurance is given that these conditions are representative of conditions between borings or areas adjacent thereto. The responsibility lies with the Contractor to interpret subsurface conditions that may affect his work.

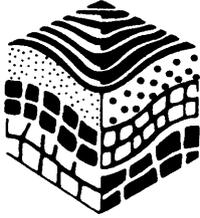
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US Army Corps
of Engineers
New England District

Sediment Sampling Locations
Hampton & Seabrook Harbor, NH
17-18 September 2001

Hampton Harbor
Sediment Grain Size



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GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Filename : HH100

Project No. : GTX-3681

Depth : ---

Elevation : ---

Boring No. : ---

Test Date : 10/13/01

Tested by : MS/JA/SC

Sample No. : HH100

Test Method : ASTM D 422

Checked by : JDT

Location : New Hampshire

Soil Description : Saturated, greenish gray sand

Remarks :

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 7.08 | 7.08 | 98 |
| #20 | 0.033 | 0.84 | 33.80 | 40.88 | 87 |
| #40 | 0.017 | 0.42 | 96.59 | 137.47 | 57 |
| #60 | 0.010 | 0.25 | 104.79 | 242.26 | 24 |
| #100 | 0.006 | 0.15 | 62.40 | 304.66 | 4 |
| #200 | 0.003 | 0.07 | 10.03 | 314.69 | 1 |
| Pan | | | 2.51 | 317.20 | 0 |

Total Dry Weight of Sample = 325.62

D85 : 0.8015 mm

D60 : 0.4532 mm

D50 : 0.3783 mm

D30 : 0.2763 mm

D15 : 0.1992 mm

D10 : 0.1747 mm

Soil Classification

ASTM Group Symbol : SP

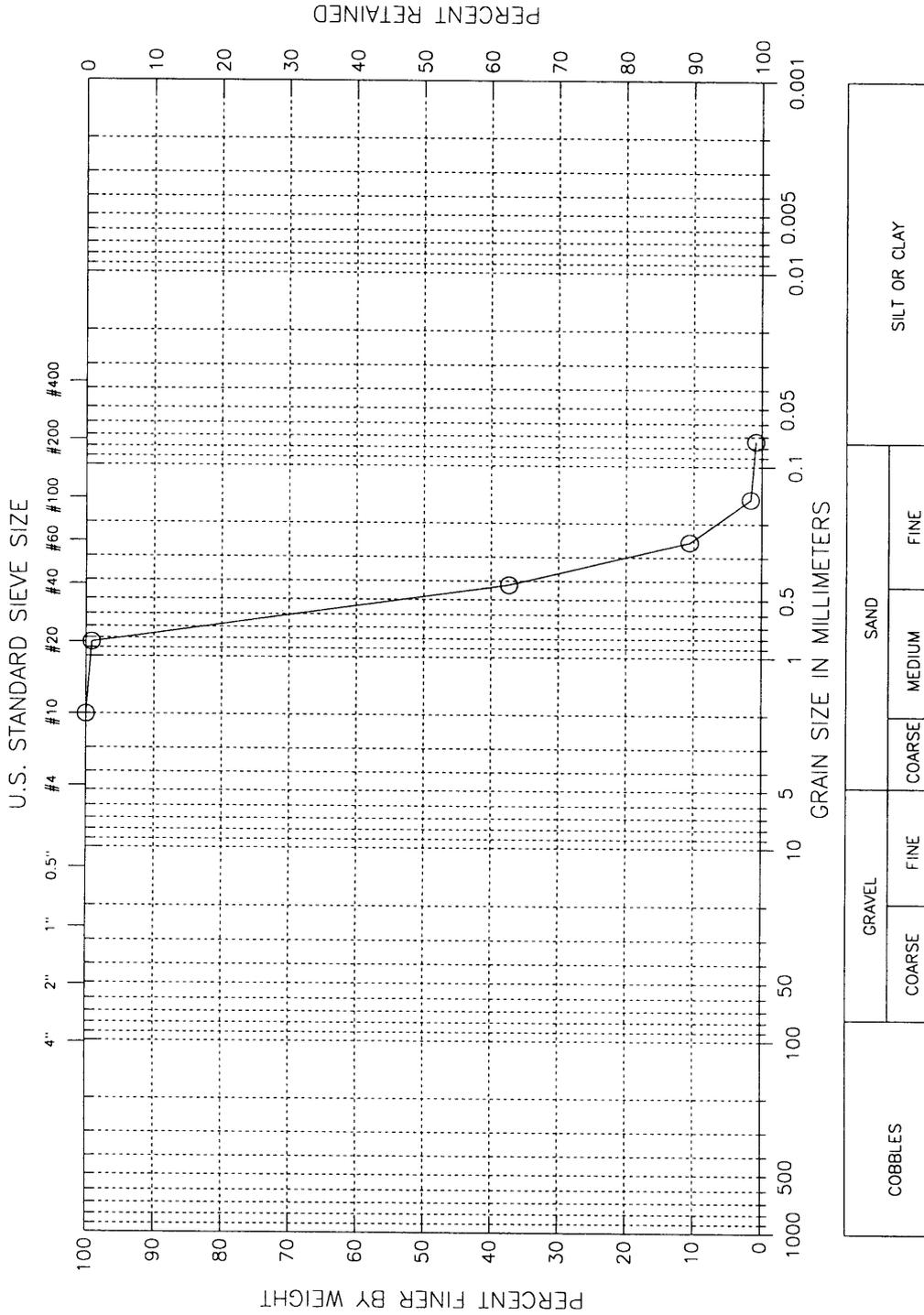
ASTM Group Name : Poorly graded sand

AASHTO Group Symbol : A-3(0)

AASHTO Group Name : Fine Sand

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001

Boring No.: ---
 Sample No.: HH101
 Test Method ASTM D 422
 Filename : HH101



GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Project No. : GTX-3681

Boring No. : ---

Sample No. : HH101

Location : New Hampshire

Soil Description : Saturated, dark greenish gray sand

Remarks :

Depth : ---

Test Date : 10/13/01

Test Method : ASTM D 422

Filename : HH101

Elevation : ---

Tested by : MS/JA/SC

Checked by : JDT

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #10 | 0.079 | 2.00 | 0.00 | 0.00 | 100 |
| #20 | 0.033 | 0.84 | 2.08 | 2.08 | 99 |
| #40 | 0.017 | 0.42 | 154.35 | 156.43 | 37 |
| #60 | 0.010 | 0.25 | 66.76 | 223.19 | 11 |
| #100 | 0.006 | 0.15 | 22.44 | 245.63 | 2 |
| #200 | 0.003 | 0.07 | 1.94 | 247.57 | 1 |
| Pan | | | 2.12 | 249.69 | 0 |

Total Dry Weight of Sample = 257.72

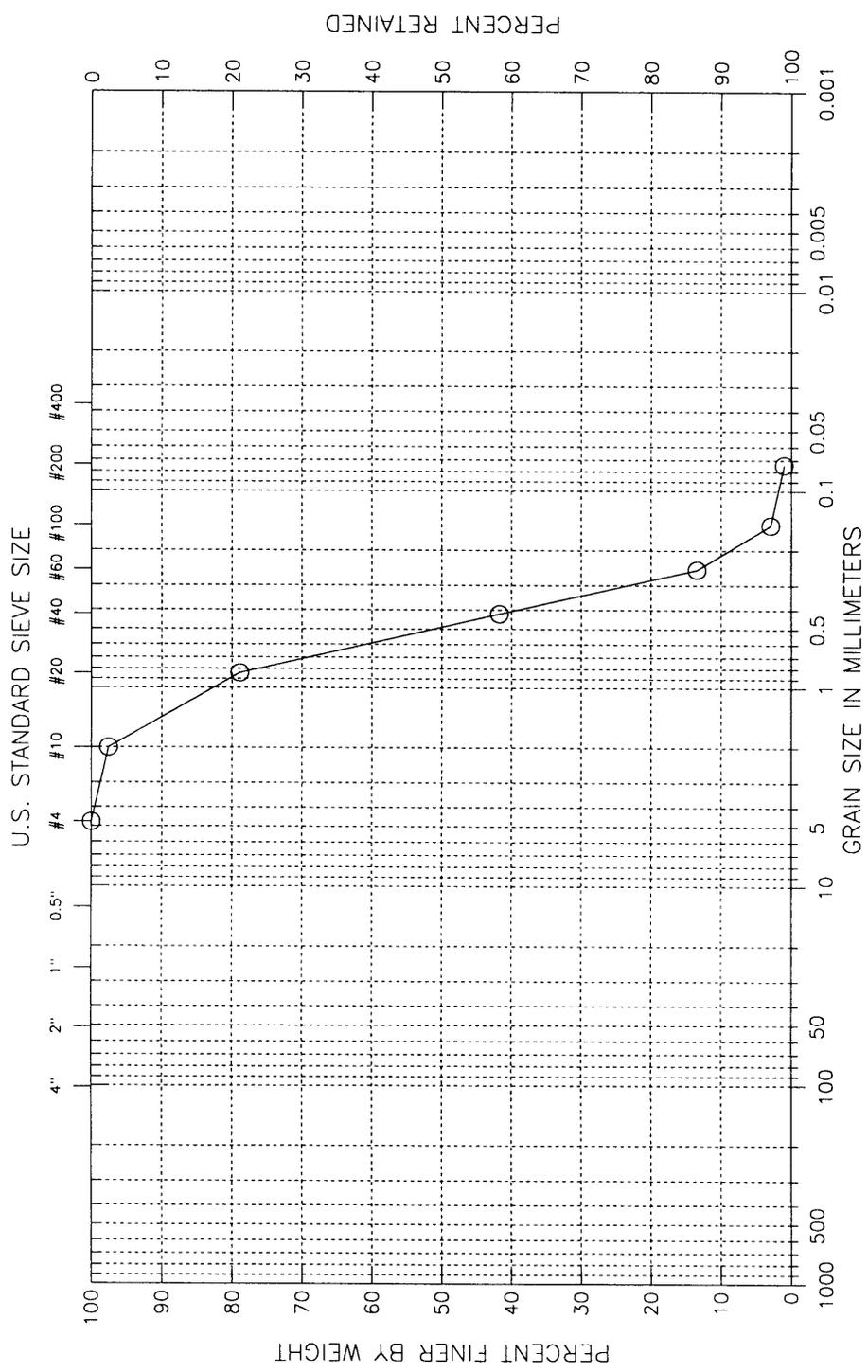
- D85 : 0.7173 mm
- D60 : 0.5417 mm
- D50 : 0.4841 mm
- D30 : 0.3642 mm
- D15 : 0.2722 mm
- D10 : 0.2413 mm

Soil Classification

- ASTM Group Symbol : SP
- ASTM Group Name : Poorly graded sand
- AASHTO Group Symbol : A-1-b(0)
- AASHTO Group Name : Stone Fragments, Gravel and Sand

Boring No.: ---
 Sample No.: HH102
 Test Method ASTM D 422
 Filename : HH102

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001



| | | | | | | |
|---------|--------|------|--------|--------|------|--------------|
| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
| | COARSE | FINE | COARSE | MEDIUM | FINE | |

Classification :
 • (SP) Poorly graded sand
 Visual Description :
 Saturated, dark greenish gray sand

Remarks :

Figure 22

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor
 Project No. : GTX-3681
 Boring No. : ---
 Sample No. : HH102
 Location : New Hampshire
 Soil Description : Saturated, dark greenish gray sand
 Remarks :

Filename : HH102
 Elevation : ---
 Tested by : MS
 Checked by : JDT

Depth : ---
 Test Date : 10/22/01
 Test Method : ASTM D 422

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 8.34 | 8.34 | 98 |
| #20 | 0.033 | 0.84 | 63.76 | 72.10 | 79 |
| #40 | 0.017 | 0.42 | 126.98 | 199.08 | 42 |
| #60 | 0.010 | 0.25 | 96.80 | 295.88 | 13 |
| #100 | 0.006 | 0.15 | 35.95 | 331.83 | 3 |
| #200 | 0.003 | 0.07 | 6.54 | 338.37 | 1 |
| Pan | | | 3.40 | 341.77 | 0 |

Total Dry Weight of Sample = 349.95

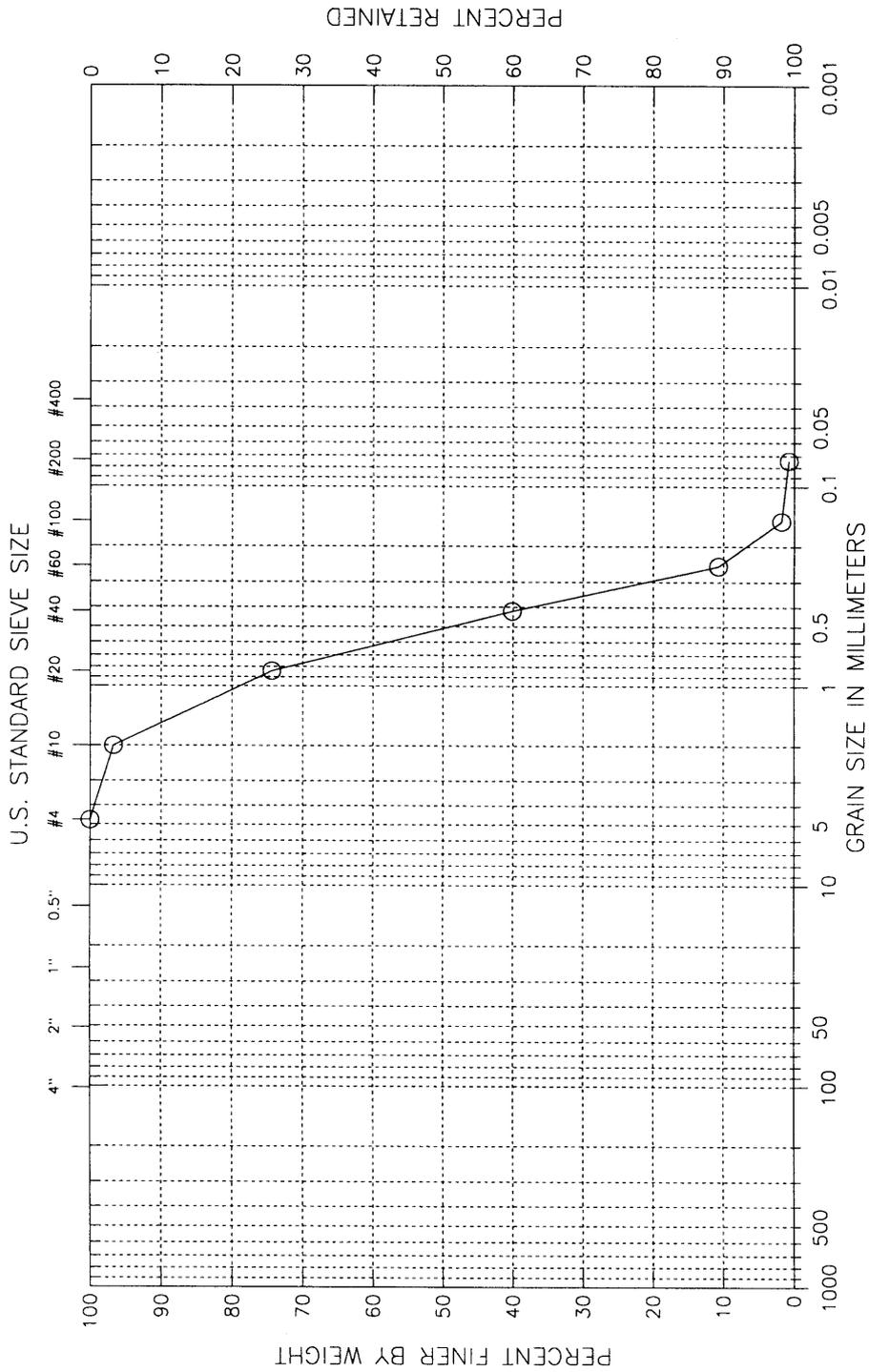
- D85 : 1.1162 mm
- D60 : 0.5907 mm
- D50 : 0.4900 mm
- D30 : 0.3387 mm
- D15 : 0.2573 mm
- D10 : 0.2112 mm

Soil Classification

ASTM Group Symbol : SP
 ASTM Group Name : Poorly graded sand
 AASHTO Group Symbol : A-1-b(0)
 AASHTO Group Name : Stone Fragments, Gravel and Sand

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001

Boring No.: ---
 Sample No.: HH103
 Test Method ASTM D 422
 Filename : HH103



GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Filename : HH103

Project No. : GTX-3681

Depth : ---

Elevation : ---

Boring No. : ---

Test Date : 10/13/01

Tested by : MS/JA/SC

Sample No. : HH103

Test Method : ASTM D 422

Checked by : JDT

Location : New Hampshire

Soil Description : Saturated, greenish gray sand

Remarks :

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 8.66 | 8.66 | 97 |
| #20 | 0.033 | 0.84 | 59.14 | 67.80 | 74 |
| #40 | 0.017 | 0.42 | 90.69 | 158.49 | 40 |
| #60 | 0.010 | 0.25 | 77.79 | 236.28 | 11 |
| #100 | 0.006 | 0.15 | 23.63 | 259.91 | 2 |
| #200 | 0.003 | 0.07 | 2.79 | 262.70 | 1 |
| Pan | | | 1.92 | 264.62 | 0 |

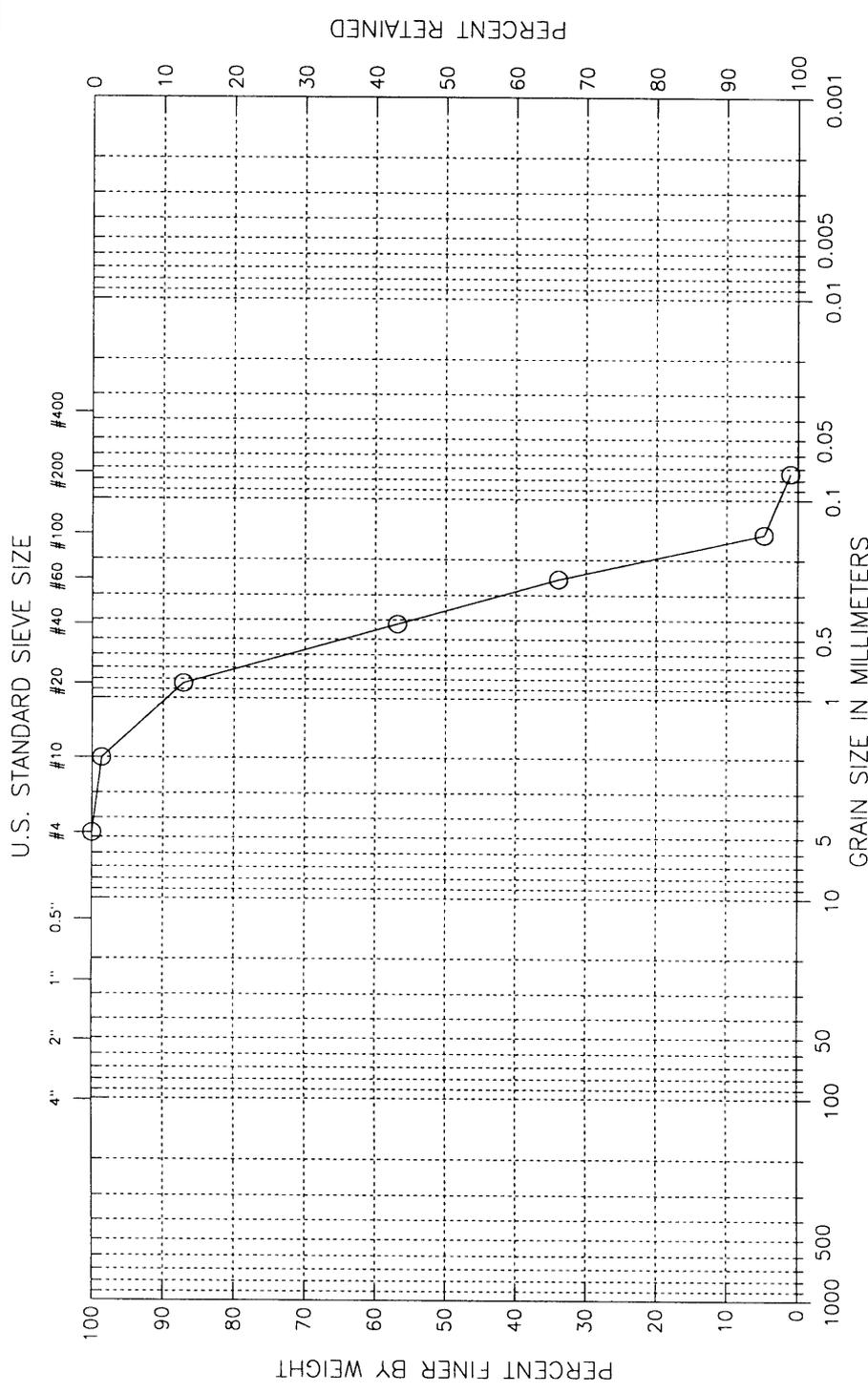
Total Dry Weight of Sample = 274.5

- D85 : 1.2694 mm
- D60 : 0.6285 mm
- D50 : 0.5132 mm
- D30 : 0.3514 mm
- D15 : 0.2697 mm
- D10 : 0.2399 mm

Soil Classification

- ASTM Group Symbol : SP
- ASTM Group Name : Poorly graded sand
- AASHTO Group Symbol : A-1-b(0)
- AASHTO Group Name : Stone Fragments, Gravel and Sand

Boring No.: ---
 Sample No.: HH104
 Test Method ASTM D 422
 Filename : HH104
 Project : Hampton--Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001



| | | | | | | |
|---------|--------|------|--------|--------|------|--------------|
| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
| | COARSE | FINE | COARSE | MEDIUM | FINE | |

Classification :
 (SP) Poorly graded sand
 Visual Description :
 Saturated, greenish gray sand

Remarks :

Figure 24

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor
 Project No. : GTX-3681
 Boring No. : ---
 Sample No. : HH104
 Location : New Hampshire
 Soil Description : Saturated, greenish gray sand
 Remarks :

Depth : ---
 Test Date : 10/13/01
 Test Method : ASTM D 422

Filename : HH104
 Elevation : ---
 Tested by : MS
 Checked by : JDT

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 4.27 | 4.27 | 99 |
| #20 | 0.033 | 0.84 | 36.45 | 40.72 | 87 |
| #40 | 0.017 | 0.42 | 95.89 | 136.61 | 57 |
| #60 | 0.010 | 0.25 | 72.76 | 209.37 | 34 |
| #100 | 0.006 | 0.15 | 92.46 | 301.83 | 5 |
| #200 | 0.003 | 0.07 | 11.74 | 313.57 | 1 |
| Pan | | | 3.23 | 316.80 | 0 |

Total Dry Weight of Sample = 325.02

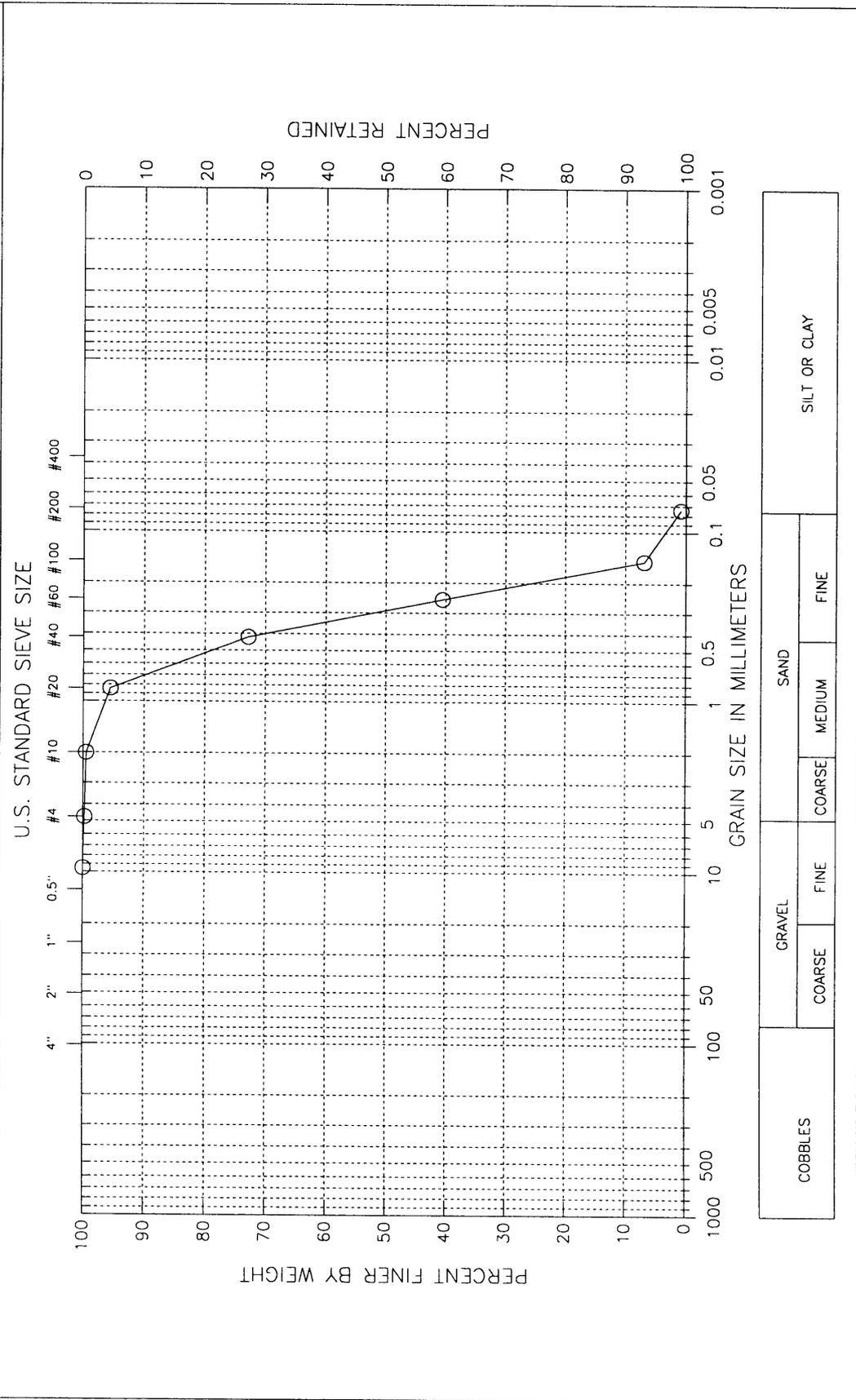
- D85 : 0.8006 mm
- D60 : 0.4512 mm
- D50 : 0.3596 mm
- D30 : 0.2333 mm
- D15 : 0.1788 mm
- D10 : 0.1636 mm

Soil Classification

ASTM Group Symbol : SP
 ASTM Group Name : Poorly graded sand
 AASHTO Group Symbol : A-3(0)
 AASHTO Group Name : Fine Sand

Boring No.: ---
 Sample No.: HH105
 Test Method ASTM D 422
 Filename : HH105

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001



Classification :
 (SP) Poorly graded sand
 Visual Description :
 Saturated, dark greenish gray sand

Remarks :

Figure 25

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor
 Project No. : GTX-3681 Depth : ---
 Boring No. : --- Test Date : 10/13/01
 Sample No. : HH105 Test Method : ASTM D 422
 Location : New Hampshire
 Soil Description : Saturated, dark greenish gray sand
 Remarks :

Filename : HH105
 Elevation : ---
 Tested by : MS/JA/SC
 Checked by : JDT

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| 0.375" | 0.374 | 9.51 | 0.00 | 0.00 | 100 |
| #4 | 0.187 | 4.75 | 0.67 | 0.67 | 100 |
| #10 | 0.079 | 2.00 | 0.75 | 1.42 | 100 |
| #20 | 0.033 | 0.84 | 11.83 | 13.25 | 96 |
| #40 | 0.017 | 0.42 | 67.43 | 80.68 | 73 |
| #60 | 0.010 | 0.25 | 96.02 | 176.70 | 41 |
| #100 | 0.006 | 0.15 | 100.02 | 276.72 | 7 |
| #200 | 0.003 | 0.07 | 18.12 | 294.84 | 1 |
| Pan | | | 2.41 | 297.25 | 0 |

Total Dry Weight of Sample = 305.5

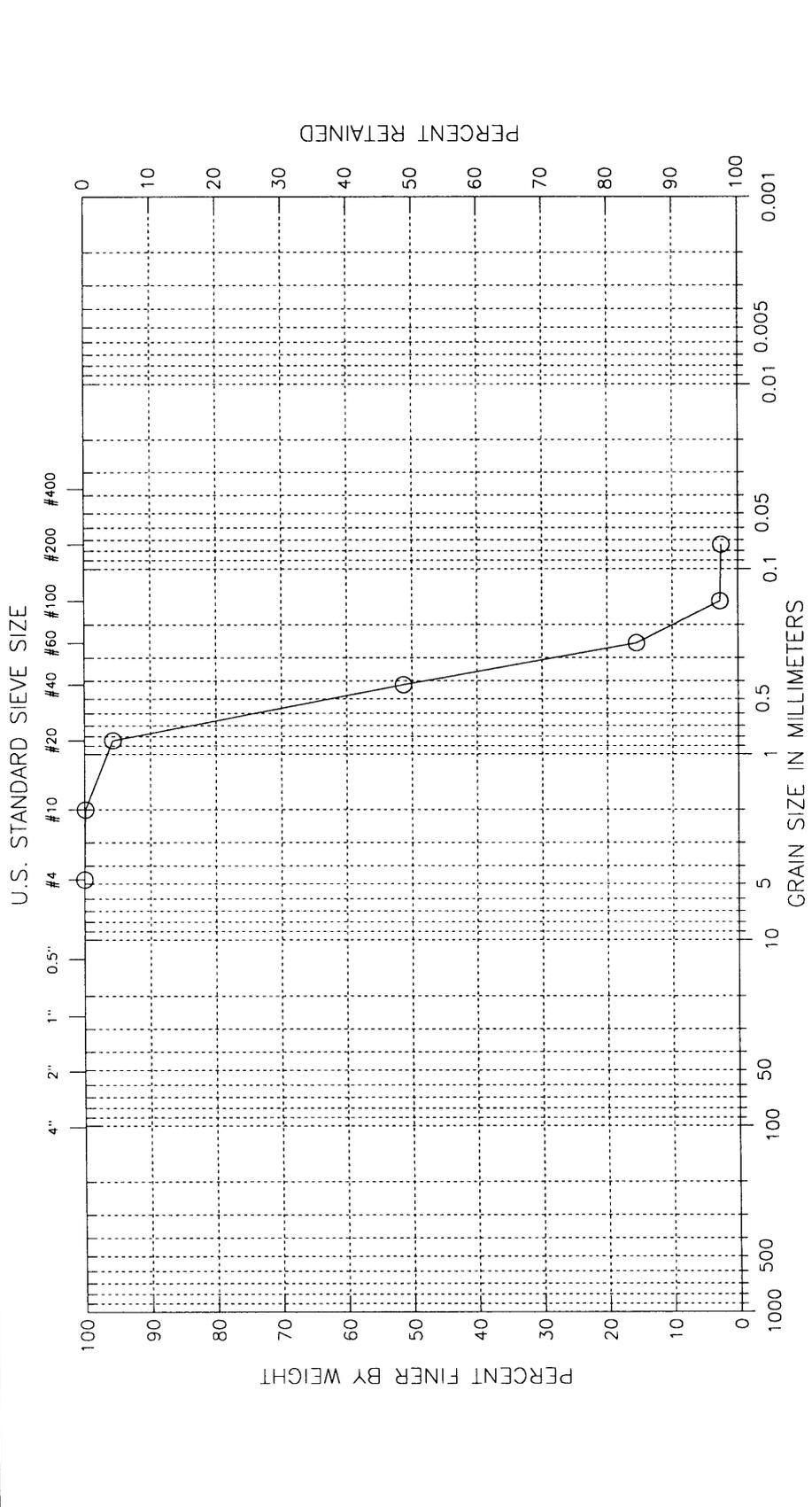
- D85 : 0.6091 mm
- D60 : 0.3416 mm
- D50 : 0.2909 mm
- D30 : 0.2125 mm
- D15 : 0.1688 mm
- D10 : 0.1563 mm

Soil Classification

ASTM Group Symbol : SP
 ASTM Group Name : Poorly graded sand
 AASHTO Group Symbol : A-3(0)
 AASHTO Group Name : Fine Sand

Boring No.: ---
 Sample No.: HH106
 Test Method ASTM D 422
 Filename : HH106

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001



| | | | | | | |
|---------|--------|------|--------|--------|--------------|--|
| COBBLES | GRAVEL | | SAND | | SILT OR CLAY | |
| | COARSE | FINE | COARSE | MEDIUM | FINE | |

Classification :
 (SP) Poorly graded sand
 Visual Description :
 Saturated, greenish black sand

Remarks :

Figure 26

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Filename : HH106

Project No. : GTX-3681

Depth : ---

Elevation : ---

Boring No. : ---

Test Date : 10/13/01

Tested by : MS/JA/SC

Sample No. : HH106

Test Method : ASTM D 422

Checked by : JDT

Location : New Hampshire

Soil Description : Saturated, greenish black sand

Remarks :

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 0.30 | 0.30 | 100 |
| #20 | 0.033 | 0.84 | 9.60 | 9.90 | 96 |
| #40 | 0.017 | 0.42 | 102.00 | 111.90 | 51 |
| #60 | 0.010 | 0.25 | 82.31 | 194.21 | 15 |
| #100 | 0.006 | 0.15 | 29.36 | 223.57 | 3 |
| #200 | 0.003 | 0.07 | 0.42 | 223.99 | 3 |
| Pan | | | 5.78 | 229.77 | 0 |

Total Dry Weight of Sample = 237.87

D85 : 0.7115 mm

D60 : 0.4812 mm

D50 : 0.4122 mm

D30 : 0.3085 mm

D15 : 0.2452 mm

D10 : 0.2003 mm

Soil Classification

ASTM Group Symbol : SP

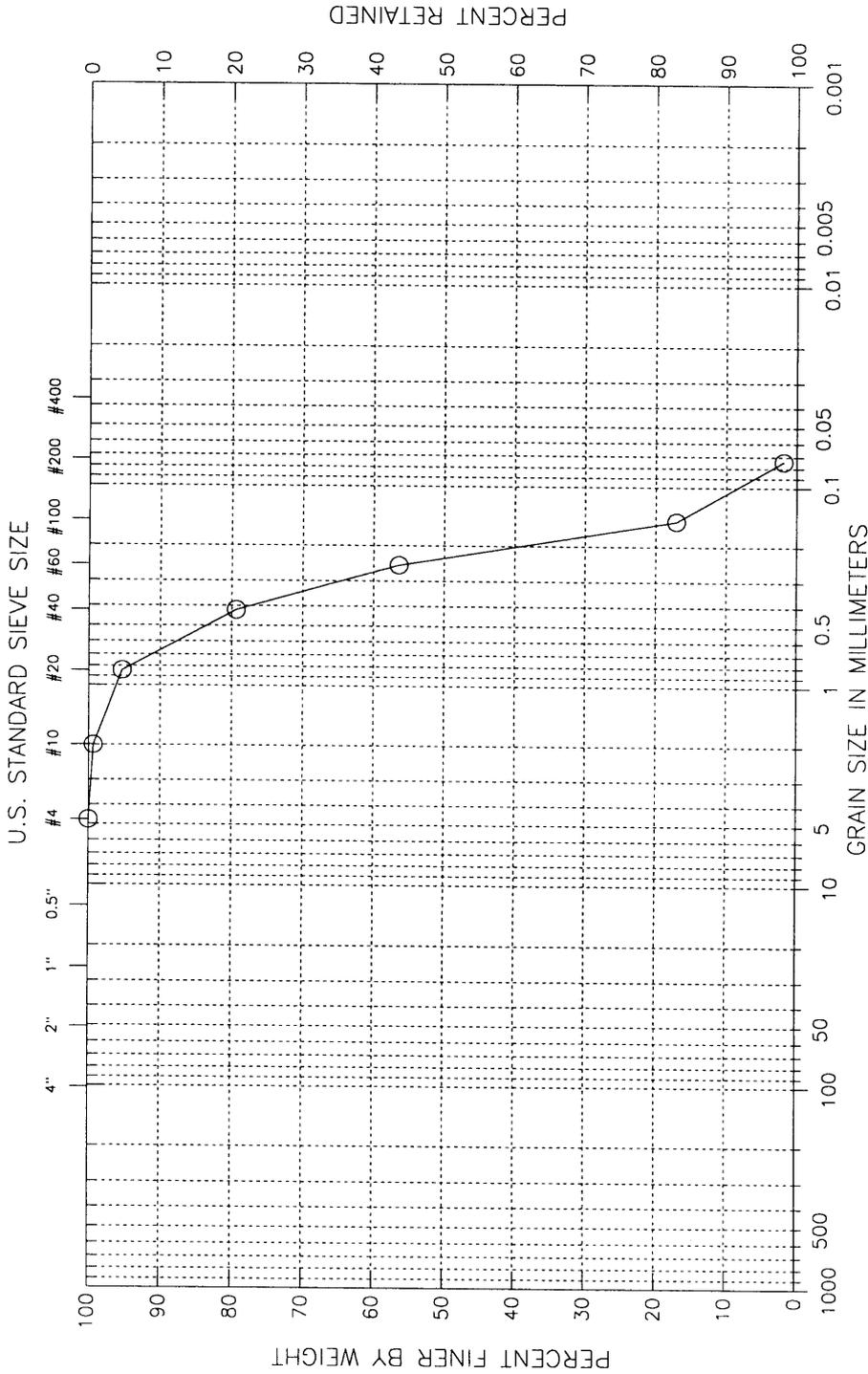
ASTM Group Name : Poorly graded sand

AASHTO Group Symbol : A-3(0)

AASHTO Group Name : Fine Sand

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001

Boring No.: ---
 Sample No.: HH107
 Test Method ASTM D 422
 Filename : HH107



| | | | | | | |
|---------|--------|------|--------|--------|------|--------------|
| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
| | COARSE | FINE | COARSE | MEDIUM | FINE | |

Remarks :

Classification :
 (SP) Poorly graded sand
 Visual Description :
 Saturated, greenish black sand

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Filename : HH107

Project No. : GTX-3681

Depth : ---

Elevation : ---

Boring No. : ---

Test Date : 10/13/01

Tested by : MS/JA/SC

Sample No. : HH107

Test Method : ASTM D 422

Checked by : JDT

Location : New Hampshire

Soil Description : Saturated, greenish black sand

Remarks :

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 1.77 | 1.77 | 99 |
| #20 | 0.033 | 0.84 | 11.03 | 12.80 | 95 |
| #40 | 0.017 | 0.42 | 43.67 | 56.47 | 79 |
| #60 | 0.010 | 0.25 | 62.87 | 119.34 | 56 |
| #100 | 0.006 | 0.15 | 107.77 | 227.11 | 17 |
| #200 | 0.003 | 0.07 | 41.68 | 268.79 | 2 |
| Pan | | | 5.06 | 273.85 | 0 |

Total Dry Weight of Sample = 283.66

D85 : 0.5365 mm

D60 : 0.2711 mm

D50 : 0.2298 mm

D30 : 0.1766 mm

D15 : 0.1355 mm

D10 : 0.1077 mm

Soil Classification

ASTM Group Symbol : SP

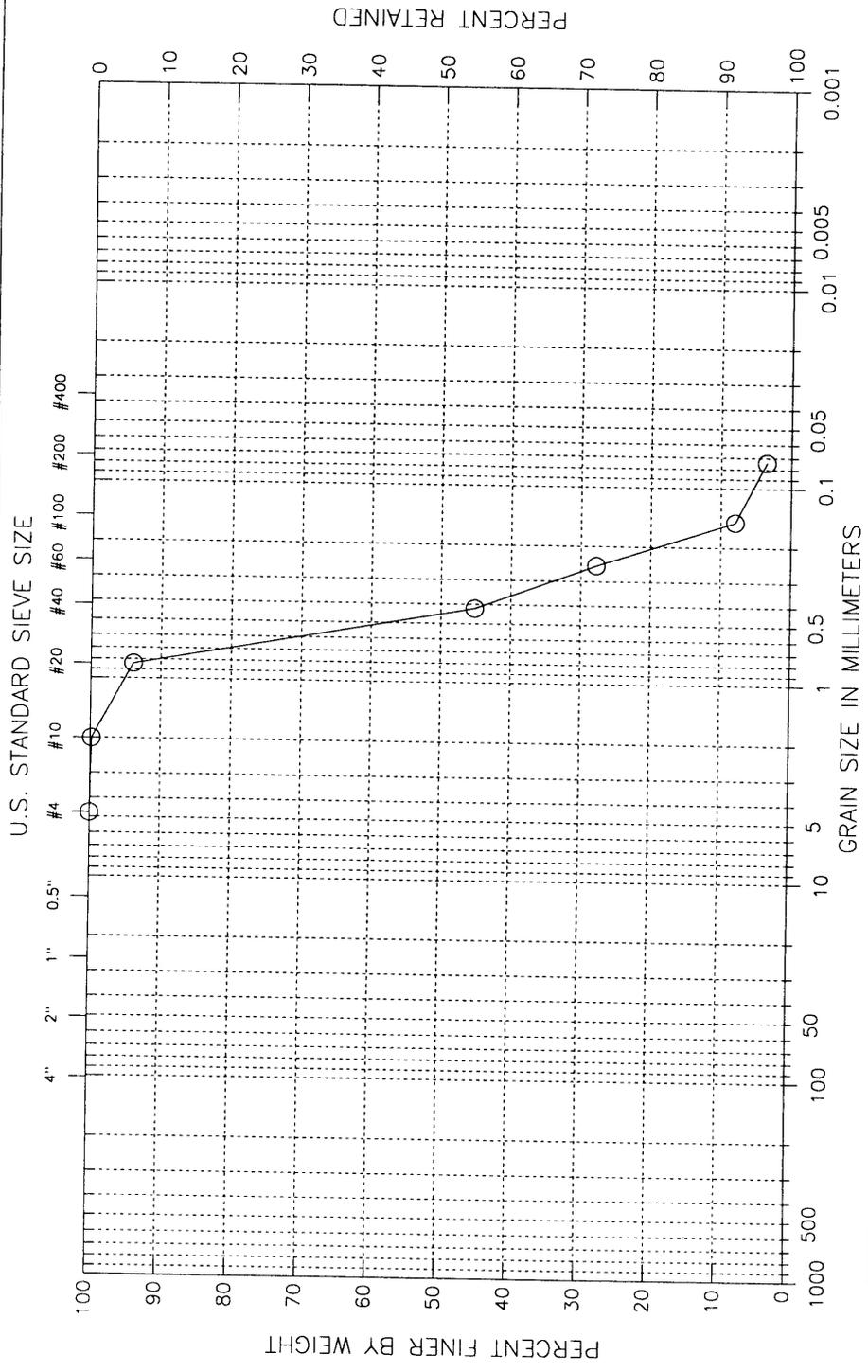
ASTM Group Name : Poorly graded sand

AASHTO Group Symbol : A-3(0)

AASHTO Group Name : Fine Sand

Boring No.: ---
 Sample No.: HH110
 Test Method ASTM D 422
 Filename : HH110

Project : Hampton-Seabrook Harbor
 Project No.: GTX-3681
 Location: New Hampshire
 Date : Tue Oct 30 2001



Classification :
 (SP) Poorly graded sand
 Visual Description :
 Saturated, black sand

Remarks :

Figure 30

GEOTECHNICAL LABORATORY TEST DATA

Project : Hampton-Seabrook Harbor

Project No. : GTX-3681

Boring No. : ---

Sample No. : HH110

Location : New Hampshire

Soil Description : Saturated, black sand

Remarks :

Depth : ---

Test Date : 10/13/01

Test Method : ASTM D 422

Filename : HH110

Elevation : ---

Tested by : MS/JA/SC

Checked by : JDT

| Sieve Mesh | Sieve Openings | | FINE SIEVE SET | | Percent Finer (%) |
|------------------------------------|----------------|-------------|----------------------|---------------------------------|-------------------|
| | Inches | Millimeters | Weight Retained (gm) | Cumulative Weight Retained (gm) | |
| #4 | 0.187 | 4.75 | 0.00 | 0.00 | 100 |
| #10 | 0.079 | 2.00 | 0.57 | 0.57 | 100 |
| #20 | 0.033 | 0.84 | 16.22 | 16.79 | 94 |
| #40 | 0.017 | 0.42 | 135.55 | 152.34 | 45 |
| #60 | 0.010 | 0.25 | 48.25 | 200.59 | 28 |
| #100 | 0.006 | 0.15 | 55.14 | 255.73 | 8 |
| #200 | 0.003 | 0.07 | 12.38 | 268.11 | 3 |
| Pan | | | 9.64 | 277.75 | 0 |
| Total Dry Weight of Sample = 285.9 | | | | | |

- D85 : 0.7404 mm
- D60 : 0.5188 mm
- D50 : 0.4500 mm
- D30 : 0.2671 mm
- D15 : 0.1792 mm
- D10 : 0.1573 mm

Soil Classification

- ASTM Group Symbol : SP
- ASTM Group Name : Poorly graded sand
- AASHTO Group Symbol : A-1-b(0)
- AASHTO Group Name : Stone Fragments, Gravel and Sand

Hampton Harbor - Sediment Sampling

| STATION | TARGET - EASTING | TARGET - NORTHING | ACTUAL - EASTING | ACTUAL - NORTHING | DATE | TIME | PHYSICAL DESCRIPTION |
|---------|------------------|-------------------|------------------|-------------------|-----------|----------|-----------------------------------|
| HH101 | 726424.6559 | 145623.6839 | 726354.1831 | 145655.4133 | 17-Sep-01 | 10:07 AM | Medium brown sand. |
| HH103 | 726041 | 145465 | 725991.4693 | 145466.0712 | 17-Sep-01 | 10:18 AM | Medium brown sand. |
| HH109 | 726194.4211 | 145023.2474 | 726171.1821 | 144979.6262 | 17-Sep-01 | 10:23 AM | Medium brown sand. |
| HH108 | 725827.4729 | 144637.5103 | 725827.4729 | 144637.5103 | 17-Sep-01 | 10:27 AM | Medium brown sand. |
| HH112 | 726152.0716 | 144254.2095 | 726187.3300 | 144217.3727 | 17-Sep-01 | 10:30 AM | Fine brown sand. |
| HH113 | 726329.5681 | 143868.3492 | 726319.9807 | 143858.6463 | 17-Sep-01 | 10:33 AM | Medium gray sand. Shell hash. |
| HH116 | 725898.1537 | 143552.7571 | 725891.1823 | 143551.0790 | 17-Sep-01 | 10:37 AM | Medium gray sand. Shell hash. |
| HH117 | 726132.3501 | 143288.1254 | 726144.9814 | 143275.4769 | 17-Sep-01 | 10:40 AM | Medium gray sand. Shell hash. |
| HH119 | 725916.295 | 142955.8378 | 725916.29495 | 142955.8378 | 17-Sep-01 | 10:43 AM | Medium gray sand. Shell hash. |
| HH120 | 726155.7463 | 142873.5512 | 726159.7799 | 142846.9668 | 17-Sep-01 | 10:46 AM | Medium brown sand with silt. |
| HH118 | 726327.3072 | 142689.4973 | 726311.4934 | 142689.0341 | 17-Sep-01 | 10:51 AM | Medium brown sand. |
| HH16 | 726537.4783 | 142701.8658 | 726532.9012 | 142701.7212 | 17-Sep-01 | 10:56 AM | Medium gray sand. |
| HH17 | 726765.2509 | 142664.5973 | 726781.3062 | 142657.2022 | 17-Sep-01 | 11:01 AM | Medium brown sand. |
| HH15 | 726863.1469 | 143121.1439 | 726849.8018 | 143115.8034 | 17-Sep-01 | 11:04 AM | Medium brown sand. |
| HH14 | 726621.6517 | 143205.5824 | 726612.9595 | 143195.5845 | 17-Sep-01 | 11:07 AM | Black silt / clay. (Odor). |
| HH13 | 726708.5451 | 143532.8177 | 726697.2272 | 143538.0618 | 17-Sep-01 | 11:11 AM | Gray silt with sand. |
| HH12 | 726855.0396 | 143894.52 | 726853.7546 | 143922.0413 | 17-Sep-01 | 11:14 AM | Medium dark brown sand with silt. |
| HH11 | 726790.0971 | 144436.3553 | 726763.0247 | 144448.0778 | 17-Sep-01 | 11:18 AM | Medium grey / black sand. |
| HH10 | 726814.0832 | 144913.2879 | 726819.1859 | 144921.4786 | 17-Sep-01 | 11:21 AM | Coarse brown sand. |
| HH09 | 726641.3841 | 145059.4836 | 726602.7747 | 145076.0990 | 17-Sep-01 | 11:29 AM | Coarse brown sand. |
| HH08 | 726865.2093 | 145528.873 | 726849.9485 | 145539.7489 | 17-Sep-01 | 11:39 AM | Medium brown sand. |
| HH19 | 727304.9561 | 145930.552 | 727291.8992 | 145934.0808 | 17-Sep-01 | 11:44 AM | Medium brown sand. |

Hampton Harbor - Sediment Sampling

| STATION | TARGET - EASTING | TARGET - NORTHING | ACTUAL - EASTING | ACTUAL - NORTHING | DATE | TIME | PHYSICAL DESCRIPTION |
|---------|------------------|-------------------|------------------|-------------------|-----------|----------|--|
| HH07 | 726940.7718 | 146210.411 | 726919.3535 | 146201.0393 | 17-Sep-01 | 11:55 AM | Medium brown sand. (Shells). |
| HH18 | 727145.2069 | 146546.2085 | 727133.9321 | 146537.9682 | 17-Sep-01 | 11:58 AM | Medium brown sand. |
| HH06 | 726845.7614 | 146915.2479 | 726806.5799 | 146944.1458 | 17-Sep-01 | 12:03 PM | Medium brown sand. |
| HH02 | 726402.368 | 147908.3277 | 726400.1920 | 147953.8797 | 17-Sep-01 | 12:10 PM | Medium brown sand. |
| HH01 | 726153.968 | 148456.6906 | 726133.4776 | 148465.4616 | 17-Sep-01 | 12:19 PM | Medium brown sand. |
| HH03 | 726069.4343 | 148029.1761 | 726061.4600 | 148048.7808 | 17-Sep-01 | 12:26 PM | Medium brown sand. |
| HH04 | 726288.0921 | 147530.0972 | 726309.2450 | 147500.9405 | 17-Sep-01 | 12:31 PM | Medium brown sand. |
| HH05 | 726465.56 | 146947.218 | 726461.8269 | 146907.7874 | 17-Sep-01 | 12:34 PM | Medium brown sand. |
| HH100 | 726519.3747 | 145925.4593 | 726587.1849 | 145898.1161 | 17-Sep-01 | 12:44 PM | Medium brown sand. |
| HH102 | 726005.3777 | 145802.561 | 725903.8513 | 145804.7979 | 18-Sep-01 | 10:05 AM | Coarse brown sand. |
| HH104 | 725566.9982 | 145451.6182 | 725567.9740 | 145433.1271 | 18-Sep-01 | 10:15 AM | Coarse brown sand. |
| HH105 | 725442.2792 | 145016.4411 | 725437.7580 | 145007.7722 | 18-Sep-01 | 10:30 AM | Coarse brown sand. 2-grabs; sample from 2nd. |
| HH106 | 725227.3378 | 144702.0556 | 725220.0839 | 144676.4294 | 18-Sep-01 | 10:40 AM | Fine gray sand. Partial odor. |
| HH107 | 725421.1319 | 144679.1527 | 725414.2771 | 144657.7660 | 18-Sep-01 | 10:45 AM | Medium to fine brown sand. |
| HH110 | 725331.1111 | 144397.8311 | 725327.5703 | 144386.6453 | 18-Sep-01 | 10:50 AM | Medium brown sand. Some organic debris. 3-grabs; sample from all. |
| HH111 | 725540.4857 | 144190.5809 | 725540.48571 | 144190.5809 | 18-Sep-01 | 11:00 AM | Medium brown sand. Some organics (worms). |
| HH114 | 725298.2183 | 143795.1464 | 725298.21833 | 143795.1464 | 18-Sep-01 | 11:05 AM | Medium brown / gray sand. Some organics (worms). 2-grabs; sample from all. |
| HH115 | 725422.9007 | 143473.5004 | 725422.90071 | 143473.5004 | 18-Sep-01 | 11:15 AM | Medium brown / gray sand. Some organics (worms). |
| HH121 | 725549.85 | 143092.9607 | 725549.84998 | 143092.9607 | 18-Sep-01 | 11:20 AM | Medium brown / gray sand. Some organics (worms). |
| HH122 | 725395.6969 | 143188.0947 | 725395.69693 | 143188.0947 | 18-Sep-01 | 11:27 AM | Medium brown / gray sand. |

Hampton Harbor - Sediment Sampling

| STATION | TARGET - EASTING | TARGET - NORTHING | ACTUAL - EASTING | ACTUAL - NORTHING | DATE | TIME | PHYSICAL DESCRIPTION |
|---------|------------------|-------------------|------------------|-------------------|-----------|----------|--|
| HH123 | 725221.1417 | 143099.756 | 725221.14168 | 143099.7560 | 18-Sep-01 | 11:33 AM | Medium dark brown sand with silt. |
| HH124 | 725148.5994 | 142818.8822 | 725148.59936 | 142818.8822 | 18-Sep-01 | 11:40 AM | Medium dark brown sand with silt. Some organics (worms). 2-grabs; sample from all. |
| HH134 | 723986.775 | 141658.4211 | 723986.77495 | 141658.4211 | 18-Sep-01 | 11:55 AM | Medium brown sand. Trace of debris. |
| HH133 | 724214.0913 | 141750.957 | 724214.09132 | 141750.9570 | 18-Sep-01 | 12:00 PM | Coarse brown sand. Clean. |
| HH132 | 724451.9312 | 141883.4504 | 724451.93118 | 141883.4504 | 18-Sep-01 | 12:05 PM | Coarse brown sand. Clean. |
| HH131 | 724942.2967 | 142221.1786 | 724942.29665 | 142221.1786 | 18-Sep-01 | 12:10 PM | Coarse brown sand. Trace of debris. |
| HH130 | 725175.3098 | 142474.6074 | 725175.30976 | 142474.6074 | 18-Sep-01 | 12:15 PM | Coarse brown sand. Clean. Cohoug in grab. |
| HH125 | 725615.5908 | 142739.6032 | 725615.59079 | 142739.6032 | 18-Sep-01 | 12:20 PM | Coarse brown sand. |
| HH129 | 725698.1218 | 142557.9421 | 725698.12180 | 142557.9421 | 18-Sep-01 | 12:22 PM | Coarse brown sand. |
| HH126 | 725823.0953 | 142718.7945 | 725823.09527 | 142718.7945 | 18-Sep-01 | 12:25 PM | Coarse brown sand. Muscle shell in grab. |
| HH127 | 726001.0228 | 142579.1065 | 726001.02284 | 142579.1065 | 18-Sep-01 | 12:30 PM | Coarse brown sand. |
| HH128 | 726238.2597 | 142481.7488 | 726238.25967 | 142481.7488 | 18-Sep-01 | 12:35 PM | Coarse brown sand. Some organics. Muscle shell in grab. |



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

04 November 2002

Mr. Scott W. Fisher, Division Manager
Northeast Drilling
104 Harpswell Road
Brunswick, Maine 04011

Subject: Final Geotechnical Investigation
Channel Cutoff
Seabrook Harbor
Seabrook, New Hampshire
RWG&A Project No. 235-828

Dear Mr. Fisher:

R. W. Gillespie & Associates, Inc., (RWG&A) is pleased to present the results of subsurface explorations made for the U.S. Army Corps of Engineers (USACE) Channel Cutoff project in Seabrook Harbor, New Hampshire. This work was performed in accordance with RWG&A's proposal to Northeast Drilling, dated 09 August 2002. Our scope of work included observation of drilling procedures, logging and visual classification of the soils encountered, and preparation of daily activity logs and engineering boring logs.

A draft of this report was submitted on 24 October 2002. This final report incorporates all the USACE review comments provided via e-mail on 30 October 2002.

INTRODUCTION

The proposed channel cutoff is located in Seabrook Harbor, New Hampshire. The project consists of a sheet pile cutoff wall and restoration of a natural sandbar between the Town of Seabrook channel and the USACE navigation channel. The purpose of the explorations was to explore the soils below the harbor bottom, and determine whether obstructions exist which would affect the driving of the sheet pile cutoff wall. Explorations were planned to be terminated at a depth of 40 feet below mudline. Based on conversations with Mr. Siamac Vaghar with USACE, it is understood the maximum depth of sheeting is anticipated to be approximately 30 feet below mudline.

EXPLORATION METHODS

The subsurface exploration program was conducted during the period from 09 through 17 October 2002. The program consisted of three test borings, designated B-1 through B-3, and five probes, designated P-1 through P-5. Coordinates of the exploration locations were provided by USACE in degrees, minutes, and seconds. Exploration locations were determined in the field with a Magellan GPS unit. Coordinates of each location, to the nearest second, are presented in the table within the subsurface conditions section of this letter. Elevations shown on the exploration logs represent the local depth to the harbor bottom below mean low water levels, represented as zero on the tide board on the Seabrook town pier.

Explorations were made with a barge-mounted, rotary drill rig. Borings were cased and advanced with washed boring techniques. Standard penetration tests were conducted at approximately 5-foot intervals using a split-barrel sampler, in accordance with ASTM D1586, *Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*. Samples were recovered for the purpose of soil classification.

The probes were drilled using cased, wash sample methods without split-barrel sampling. The probe holes were advanced prior to driving the casing.

Exploration activities were monitored by an RWG&A Geotechnical Engineer who visually classified the soils in accordance with ASTM D 2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)* and prepared the exploration logs which are included as Appendix A of this report. Stratification lines shown on the exploration logs represent the approximate boundaries between soil types encountered; the actual transitions may be more gradual and will vary over short distances. The Daily Activities Log is included in Appendix B.

SUBSURFACE CONDITIONS

Encountered subsurface soils consisted of sand underlain by silty clay. In most of the explorations, a thin layer of organic silt and/or clayey silt was encountered between the sand and silty clay layers.

Boring B-2 encountered relatively high (i.e., greater than 100 blows per foot) casing and split-barrel sampler driving resistances between the depths of 5 and 26 feet. The cause of the high blow counts was not readily evident. Based on RWG&A experience, the high blow counts could be due to coarse gravel and/or cobbles that could not be flushed to the top of the casing.

Refusal was encountered in probe P-2 at a depth of 38.5 feet. Rock coring was not performed to verify the nature of the refusal. All other explorations were advanced to termination depths of 40 to 45 feet. A summary of materials encountered is presented below.

| Exploration Designation | Total Depth (feet) | Approximate Location | | Encountered Thickness (feet) | | |
|-------------------------|--------------------|----------------------|-------------|------------------------------|--------------|------------|
| | | Latitude | Longitude | Sand | Organic Silt | Silty Clay |
| B-1 | 41 | 42° 53' 17" | 70° 49' 18" | 24.5 | 2.5 | >14 |
| B-2 | 41 | 42° 53' 19" | 70° 49' 22" | 27 | 2.5 | >9 |
| B-3 | 40 | 42° 53' 19" | 70° 49' 28" | 32 | -- | >8 |
| P-1 | 40 | 42° 53' 19" | 70° 49' 19" | 28 | 2 | >10 |
| P-2 | 38.5R | 42° 53' 18" | 70° 49' 18" | 27 | 1 | 10.5 |
| P-3 | 43 | 42° 53' 20" | 70° 49' 28" | 35 | -- | >8 |
| P-4 | 40 | 42° 53' 18" | 70° 49' 30" | 30 | 1 | >9 |
| P-5 | 45 | 42° 53' 14" | 70° 49' 38" | 24 | -- | >21 |

Notes: R- Refusal encountered at depth indicated.
 > - Bottom of layer extends below boring termination depth.

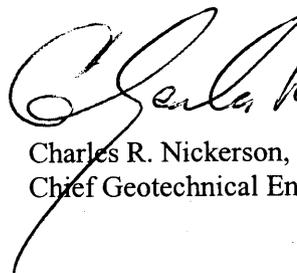
CLOSURE

This report has been prepared to summarize the methods of exploration and general subsurface conditions encountered, as well as transmitting engineering boring logs, for the channel cutoff project in Seabrook Harbor, New Hampshire.

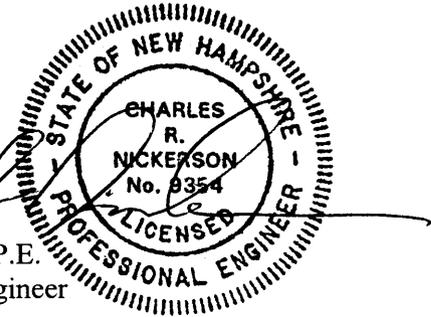
We have enjoyed working with you on this project. If you have any questions or if we may be of further service, please contact us.

Very truly yours,
R. W. GILLESPIE & ASSOCIATES, INC.

Marc R. Grenier, P.E.
Geotechnical Engineer



Charles R. Nickerson, P.E.
Chief Geotechnical Engineer



MRG/CRN:ci
In triplicate

Enclosures:

- Appendix A. Test Boring and Probe Logs
- Appendix B. Daily Activity Log

APPENDIX A

TEST BORING AND PROBE LOGS

Geotechnical Investigation
Channel Cutoff
Seabrook Harbor
Seabrook, New Hampshire

BORING LOG B-1

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -4.5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 11 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|--------|-----------|---|----------------------|--------------|---------------------|--|-----------|
| 0 | | S-1 | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, wet, loose to dense, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | 3 | WOR | | 3 4 6 8 4 | |
| 5 | | S-2 | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, wet, dark brown, organic odor. -SALT-MARSH DEPOSITS- | 24 | WOH | 4 | -- 4 16 26 36 10 | |
| 10 | | S-3 | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, wet, loose to dense, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | 6 | | 33 | 30 33 44 22 30 -- 32 44 | |
| 15 | | S-4 | | 6 | | 25 | 56 10 12 -- 34 47 50 | |
| 20 | | S-5 | | 24 | | 52 | 22 29 -- 98 74 76 | |
| 25 | | S-6 | POORLY GRADED SAND (SP); mostly fine sand, trace fines, wet, gray, maximum particle size is 0.85mm. -SHORE DEPOSITS- | 10 | | 49 | | |
| 30 | | S-7 | SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, medium to high dry strength, and medium toughness, trace sand, wet, gray, glaciomarine deposit, firm to soft. -GLACIAL MARINE DEPOSITS- | 24 | | 21 | | |
| 35 | | S-8 | | 24 | | 4 | | |

BOC AT 28'

BORING LOG B-1

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -4.5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 11 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|---------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 40 | / / / / | | S-9 | | 24 | 2 4 | 8 | | |
| 45 | | | | | | 2 3 5 | | | |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |
| | | | | Bottom of Exploration at 41': not refusal. | | | | | |

BORING LOG B-2

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 09 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|--------|---------|----------|---|----------------------|-----------------------|---------------------|------------------------------------|-----------|
| 0 | | | S-1 | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, wet, loose to dense, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | 7 | 11 7 8 15 | 15 | 22 52 86 97 41 | |
| 5 | | | S-2 | | NR | 12 30 103 53 | 133 | -- 53 38 49 76 92 | |
| 10 | | | S-3 | | 1 | 25 86 132 87 | 218 | 102 107 104 123 56 | |
| 15 | | | S-4 | | 24 | 37 40 53 51 | 93 | -- 59 76 110 115 65 | |
| 20 | | | S-5 | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, wet, loose to dense, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | 24 | 15 29 14 7 | 43 | -- 112 90 | |
| 25 | | | S-6 | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, wet, dark brown, organic odor. -SALT-MARSH DEPOSITS- | 24 | WOR 4 6 52 | 10 | | |
| | | | | POORLY GRADED SAND (SP); mostly fine sand, trace fines, wet, gray, maximum particle size is 0.85mm. -SHORE DEPOSITS- | | | | | |
| 30 | | | S-7 | | 24 | 6 12 18 30 | 30 | | |
| | | | | SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, medium to high dry strength, and medium toughness, trace sand, wet, gray, glaciomarine deposit, firm to soft. -GLACIAL MARINE DEPOSITS- | | | | | |
| 35 | | | S-8 | | 24 | WOR 1 | 4 | | |

BOC AT 27'

BORING LOG B-2

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 09 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|---------------|-------------|----------|--|----------------------|--------------|---------------------|---------------------|-----------|
| 40 | [Hatched Box] | [Solid Box] | S-9 | | 24 | 3 3 | 4 | | |
| | | | | Bottom of Exploration at 41': not refusal. | | 2 2 2 | | | |
| 45 | | | | | | | | | |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |

BORING LOG B-3

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -8'
 Ground Water Depth:

Client: Northeast Drilling

Date: 15 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|---------------|---------|----------|--|----------------------|---------------------|---------------------|---------------------|-----------|
| 40 | [Hatched Box] | | S-9 | | 22 | 20 | 29 | | |
| | | | | Bottom of Exploration at 40': not refusal. | | 9 12 17 20 | | | |
| 45 | | | | | | | | | |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |

BORING LOG P-1

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -1'
 Ground Water Depth:

Client: Northeast Drilling

Date: 16 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 0 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 5 | | | | POORLY GRADED SAND (SP); mostly fine sand, trace fines, gray, maximum particle size is 0.85mm. -SHORE DEPOSITS- | | | | | |
| 10 | | | | | | | | | |
| 15 | | | | | | | | | |
| 20 | | | | | | | | | |
| 25 | | | | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, dark brown, organic odor. -SALT-MARSH DEPOSITS- | | | | | |
| 30 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 35 | | | | SILTY LEAN CLAY (CL); mostly fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |

BORING LOG P-1

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -1'
 Ground Water Depth:

Client: Northeast Drilling

Date: 16 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|-----------|---------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 40 | / / / / / | | Bottom of Exploration at 40.0': not refusal. | | | | | |
| 45 | | | | | | | | |
| 50 | | | Note: Soil descriptions based on materials observed in wash boring return water. No samples taken. | | | | | |
| 55 | | | | | | | | |
| 60 | | | | | | | | |
| 65 | | | | | | | | |
| 70 | | | | | | | | |

BORING LOG P-2

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -2.5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 10 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 0 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 5 | | | | | | | | | |
| 10 | | | | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, dark brown, organic odor. -SALT-MARSH DEPOSITS- | | | | | |
| 15 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 20 | | | | | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |
| 35 | | | | | | | | | |

BORING LOG P-2

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -2.5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 10 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|-----------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 40 | / / / / / | | | Bottom of Exploration at 38.5': refusal. | | | | | |
| 45 | | | | | | | | | |
| 50 | | | | Note: Soil descriptions based on materials observed in wash boring return water. No samples taken. | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |

BORING LOG P-3

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 17 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests | |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|--|
| 0 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 34 | | | | | | | | | | |
| 35 | | | | | | | | | | |

BORING LOG P-3

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -5'
 Ground Water Depth:

Client: Northeast Drilling

Date: 17 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|-----------|---------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 40 | / / / / / | | <p>SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS-</p> | | | | | |
| 45 | | | <p>Bottom of Exploration at 43': not refusal.</p> | | | | | |
| 50 | | | <p>Note: Soil descriptions based on materials observed in wash boring return water. No samples taken.</p> | | | | | |
| 55 | | | | | | | | |
| 60 | | | | | | | | |
| 65 | | | | | | | | |
| 70 | | | | | | | | |

BORING LOG P-4

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -8'
 Ground Water Depth:

Client: Northeast Drilling

Date: 16 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|--------|---------|---|----------------------|--------------|---------------------|---------------------|-----------|
| 0 | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, dark brown, organic odor. -SALT-MARSH DEPOSITS- SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, dark brown, organic odor. -SALT-MARSH DEPOSITS- SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | ORGANIC SILT (OL); mostly fines with low plasticity, trace fine sand, dark brown, organic odor. -SALT-MARSH DEPOSITS- SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |
| 35 | | | | | | | | |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 38 | | | | | | | | |
| 39 | | | | | | | | |

BORING LOG P-4

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -8'
 Ground Water Depth:

Client: Northeast Drilling

Date: 16 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT | Lab Tests |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|---------------------|-----------|
| 40 | | | | Bottom of Exploration at 40': not refusal. | | | | | |
| 45 | | | | | | | | | |
| 50 | | | | Note: Soil descriptions based on materials observed in wash boring return water. No samples taken. | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |

BORING LOG P-5

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -9'
 Ground Water Depth:

Client: Northeast Drilling

Date: 17 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 0 | | | | POORLY GRADED SAND (SP); mostly medium to fine, hard, sand, trace fines, few shell pieces in upper 5 feet, gray, maximum particle size is 5mm. -ESTUARINE DEPOSITS- | | | | | |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | SILTY LEAN CLAY (CL); mostly, fines with low to medium plasticity, trace sand, gray, glaciomarine deposit. -GLACIAL MARINE DEPOSITS- | | | | | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | |
| 26 | | | | | | | | | |
| 27 | | | | | | | | | |
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| 29 | | | | | | | | | |
| 30 | | | | | | | | | |
| 31 | | | | | | | | | |
| 32 | | | | | | | | | |
| 33 | | | | | | | | | |
| 34 | | | | | | | | | |
| 35 | | | | | | | | | |

BORING LOG P-5

Project: Channel Cut Off
 Location: Seabrook Harbor, New Hampshire

Approximate Surface Elevation: -9'
 Ground Water Depth:

Client: Northeast Drilling

Date: 17 October 2002

Project No. 235-828

| DEPTH, FT. | SYMBOL | SAMPLES | SAMPLE # | DESCRIPTION OF MATERIAL | SAMPLE RECOVERY, IN. | BLOWS PER 6" | SPT-N BLOWS PER FT. | CASING BLOWS PER FT. | Lab Tests |
|------------|--------|---------|----------|--|----------------------|--------------|---------------------|----------------------|-----------|
| 40 | | | | | | | | | |
| 45 | | | | Bottom of Exploration at 45': not refusal. | | | | | |
| 50 | | | | Note: Soil descriptions based on materials observed in wash boring return water. No samples taken. | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |
| 65 | | | | | | | | | |
| 70 | | | | | | | | | |

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01110

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SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

The general description below is given to indicate the approximate scope of this project only. It does not limit the work required under the project drawings and specifications.

Description of Work: The work of this project consists of placement of two sheet pile double wall bulkheads, one at each end of a depression in Seabrook Harbor. The area defined by the bulkheads will be filled with dredged material, which will be pumped from adjacent areas in Seabrook-Hampton Harbor. The areas have not been dredged in the past, but the areas have been shoaling over the last few years. No hard digging is expected. Filling the depression is necessary to stop erosion of a nearby clam flat and shore property. Placement of geogrid marine mattresses at the foot of the bulkhead walls will stabilize the walls and protect against erosion.

1.2 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Progress Schedule; G, RO.

In accordance with the contract clauses, the Contractor shall, within five (5) days after receipt of notice to proceed or as otherwise determined by the Contracting Officer, submit for approval a practicable progress schedule. When changes are authorized that result in contract time extensions, Contractor shall submit a modified chart for approval by the Contracting Officer.

1.3 PROJECT/SITE CONDITIONS

1.3.1 Physical Data

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

a. Site Conditions: The indications of physical conditions on the drawings and in the specifications are the result of site investigations and surveys. The conditions represented prevailed at the time the investigations and surveys were made. A pre-dredge survey

will be performed by the Government prior to the start of Contractor dredging operations at the site. Before commencing work at the site, the Contractor shall verify the existing conditions indicated on the drawings and in the specifications. See CONTRACT CLAUSE entitled "SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK."

b. Weather Conditions: The monthly normal mean temperature and the monthly normal mean precipitation for the site may be obtained by the Contractor from the nearest U.S. National Weather Service Office.

c. Conditions of Channel and Blackwater River: Soundings shown on the contract drawings are the results of surveys conducted during the indicated time period and are believed to indicate existing conditions.

d. Channel Traffic: The Harbor areas are mainly used by small recreation and commercial craft, which may cause interference with contract operations. Consult with the Harbor Master to determine the extent of interference with contract operations. The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of applicable regulations. The Contractor will be required to conduct the work in such a manner as to obstruct navigation as little as possible, and in the event the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of any vessels, the plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage.

1.4 SEQUENCING AND SCHEDULING

1.4.1 Hours of Operations

The Contractor will be allowed to perform dredging work 24 hours per day, seven days per week, including holidays, for the entire performance period. Other work, including pile driving, will be permitted only during daylight hours.

1.4.2 Work Sequence

1.4.3 General

There are certain essential criteria relative to the preparation of a work sequence and time schedule which the Contractor will be required to implement and follow during the prosecution of the work. See Sections 02325 and 02495 for the required order of work. Minor variations in the sequence of the items of work as approved may be made by the Contractor, provided such variations do not conflict with critical elements of the schedule. Proposed minor variations shall be noted on the progress charts submittal required by CONTRACT CLAUSE, entitled "SCHEDULES FOR CONSTRUCTION CONTRACTS." Variations shall be approved by the Contracting Officer prior to implementation.

1.4.3.1 Progress Schedule

The progress schedule shall be in the form of a chart graphically indicating the sequence proposed to accomplish each work feature or operation. The chart shall be prepared to show the starting and completion dates of all work features on a linear horizontal time scale beginning with date of Notice to Proceed and indicating calendar days to completion. Contractor shall indicate on the chart the important work features or

operations that are critical to the timely overall completion of the project. Key dates for such important work features and portions of work features are milestone dates and shall be so indicated on the chart. This schedule will be the medium through which the timeliness of the Contractor's construction effort is appraised. Anticipated adverse weather delay days shall be included in the schedule.

1.4.4 Organization at the Site

1.4.4.1 General

The Contractor shall employ ample personnel and sufficient equipment to accomplish the work of this contract in the least amount of time, within the prosecution period specified in SPECIAL CONTRACT REQUIREMENTS, Paragraph 1.

1.4.4.2 Rate of Progress

Should the Contractor fail to maintain a satisfactory rate of progress, the Contracting Officer may require that additional personnel and equipment be placed on the work and weekend and overtime work be performed, in order that the work be brought up to schedule and maintained.

1.5 CONTRACTOR USE OF PREMISES

1.5.1 Storage Areas

See Section 01500 TEMPORARY FACILITIES AND CONTROLS.

1.5.2 Contractor's Receipt of Supplies

The Contractor shall be responsible for all arrangements for the receipt of materials and supplies at the job site. Government personnel are not permitted to receive or sign for items delivered to the site.

1.5.3 Access to Work Site

Access to the project site is limited as shown on the drawings.

1.6 COORDINATION

1.6.1 Coordination With Other Work

The State of New Hampshire may be dredging the State anchorage in Seabrook between November 15, 2004 and March 15, 2004.

The Contractor shall coordinate his construction activities with the Contractor performing the dredging of the State anchorage. In case of dispute regarding work operations or the use of work areas, resolution will be by the Contracting Officer and his decision shall be final.

1.6.2 Public Notice

The Contractor shall notify the public of this dredging project approximately two weeks before commencement of dredging operations at the site. A brief description of the work to be performed and the intended schedule of dredging and disposal operations shall be published in a newspaper of general circulation in the area adjacent to the dredging. The notice shall include the locations where the work is to be performed,

including pumping routes, and the time sequence of events. The notice shall include the Contractor's point of contact and telephone number.

1.6.3 Notice to Mariners

Before beginning construction or dredging operations, the Contractor shall coordinate with the U.S. Coast Guard (USCG) to issue a "Notice to Mariners" regarding the work to be performed and the Contractor's proposed operations.

The Corps of Engineers and the USCG have agreed to phraseology when issuing navigational bulletins and notices. The information furnished shall be consistent with USCG Broadcast Notice to Mariners and Local Notice to Mariners. When requesting local USCG offices to issue navigational information for Corps of Engineers work involving marine construction, the following terminology shall be used, as applicable:

For cautionary areas: "Mariners are urged to use extreme caution in the area."

For dredging and work operations: "Mariners are urged to transit at their slowest safe speed to minimize wake and proceed with caution after passing arrangements have been made."

1.6.4 Aids to Navigation

Aids to navigation have been placed by the Coast Guard. The Contractor shall coordinate with the Coast Guard in advance of any dredging work to provide for any necessary relocation or movement of aids to navigation. The Contractor shall also contact the Coast Guard at the completion of all work and the removal of all dredging plant from the Harbor.

1.6.5 Points of Contact

- a. U.S. Coast Guard, First District, 408 Atlantic Avenue, Boston, MA 02110. USCG Contacts for Aids to Navigation in the First District

John Mauro
jmauro@dl.uscg.mil
or
mswanson@dl.uscg.mil

617-223-8355 or 8356

- b. Harbor Master: Jerry Roe (603) 365-0513.

- c. New Hampshire Division of Ports and harbors (603) 436-8500

1.7 PRECONSTRUCTION CONFERENCE

The Contracting Officer will conduct a preconstruction conference with key Contractor personnel. The purpose of the conference is to review contract requirements and to establish a working relationship between the Contractor's Staff and the Corps Of Engineers personnel who will be closely associated with the project. During the conference, the Contracting Officer will inform the Contractor concerning Job Safety, Quality Control, Labor Relations, and Environmental Protection. The Contractor's Superintendent, site safety officer, and Quality Control Representative shall attend this conference. All submittals which are ready for submission prior to start of work may be brought to the conference for

distribution to the participating reviewers.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES (Not Applicable)

1.2 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-05 Design Data

Quantity Surveys

Submit originals of all field notes and all other records relating to the quantity surveys.

1.3 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.4 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items. Submit originals of all field notes and all other records relating to Quantity Surveys.

1.5 BIDDING SCHEDULE - PAYMENT ITEMS

Payment items for the work of this contract on which the contract progress payments will be based are listed in the BIDDING SCHEDULE and are described below. All costs for items of work, which are not specifically mentioned to be included in a particular Bidding Schedule lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved.

1.5.1 Item No. 0001, "Mobilization and Demobilization"

- a. Payment will be made for costs associated with mobilization and demobilization for dredging operations, as defined in Special Contract Requirements clause "PAYMENT FOR MOBILIZATION AND DEMOBILIZATION."
- b. Unit of measure: lump sum (LS).

1.5.2 Item No. 0002, "Remove and Replace Stone Rip Rap at East Bulkhead Wall"

- a. Payment for removal and replacement of the rip rap at the east bulkhead wall to allow driving of sheeting will be made at the applicable contract unit prices for Item No. 0002, "Remove and Replace Stone Rip Rap at East Bulkhead Wall". Price shall include all costs of removing the stone rip rap to allow driving of the east end of the bulkhead wall and replacing the rip rap following construction of the east end of the bulkhead.
- b. Rip rap removed by the Contractor will be measured and photographed by the on site Contracting Officer Representative, who will calculate the weight of the Rip Rap for payment. No separate measurement or payment will be made for storage of the Rip Rap during the construction of the sheet pile bulkhead. The maximum weight of individual rip rap stones is approximately two tons.
- c. Unit of measure: TON.

1.5.3 Item No. 0003, "Sheet Piling Bulkhead"

- a. Payment will be made for costs associated with operations necessary for construction of the Sheet Piling Bulkhead as specified and as shown on the contract drawings. Payment shall cover all cost of furnishing, handling, storing and installing piling including placing, driving, cutting holes and other materials and work incident thereto.
- b. Unit of measure: lump sum(LS).

1.5.4 Item No. 0004, "Geogrid Marine Mattresses"

- a. Payment for geogrid marine mattresses will be made at the applicable contract unit price for Item No. 0004, "Geogrid Marine Mattresses". Price and payment shall include all costs of furnishing, hauling, placing and maintaining the Geogrid Marine Mattresses. Preparation of the base will not be paid for separately and all costs incidental thereto shall be included in contract prices for other items for which payment will be made. No payment will be made for excess thickness of the marine mattresses.
- b. Geogrid Marine Mattresses will be measured for payment by the square yard accepted in place, using length multiplied by width (not thickness or height of mattress) to arrive at the total square yards. Quantities will be computed to the nearest whole square yard.
- c. Unit of measure: square yard (SY).

1.5.5 Item No. 0005 "Dredging Blackwater River with Disposal of Dredged Material in Bulkhead"

- a. The contract price per cubic yard for Item No. 0005 "Dredging Blackwater River with Disposal of Dredged Material in Bulkhead" shall

include all costs of dredging the areas indicated and transporting the dredged material to the sheet pile bulkhead until the bulkhead is uniformly filled to the elevation of the Middle Ground Sand Flat.

b. The total amount of material removed and paid for under the contract for this Item, will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last pre-dredge survey made before dredging begins and the bottom surface shown by the soundings of a post-dredge survey made as soon as practicable after the removal of the material, including that within the limits of the side slopes and specified borrow area overdepth as described in Section 02325 DREDGING, paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be required for misplaced material described in paragraph DISPOSAL OF EXCAVATED MATERIAL.

c. The contract drawings listed in Special Contract Requirements, Paragraph "Contract Drawings, Maps and Specifications" are believed to accurately represent conditions existing on the date of the last survey shown on the drawings, but the depths and the specific areas to be dredged shown thereon may be verified and corrected by soundings taken by the Government before dredging begins. Determination of quantities removed and the deductions made to determine quantities after having once been made by the Contracting Officer, will not be reopened, except on evidence of collusion, fraud, or obvious error.

d. Monthly partial payments will be based on approximate quantities determined by Contractor quality control surveys. The last pre-dredge survey made before dredging, and the post-dredge survey made as soon as practicable after the removal of the material, will be performed by the Government at no cost to the Contractor.

e. Unit of measure: Cubic Yard (CY).

1.5.6 Item No. 0006, Wood Marine Piles

a. Payment for each acceptably driven pile will be made at the applicable contract price. This price includes all items incidental to furnishing and driving the piles, redriving uplifted piles, the cutting off of all piles at the cutoff elevation, and capping of heads.

b. Unit of measure: Each (EA).

1.5.7 Item No. 0007, "Geotechnical Instrumentation"

a. Payment will be made for costs associated with providing geotechnical instrumentation as specified in Section 02495 GEOTECHNICAL INSTRUMENTATION.

b. Unit of measure: Lump Sum (LS).

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01330, SUBMITTAL PROCEDURES, and Section 01451, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS.

Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 500 MHz Pentium or higher processor
128+ MB RAM for workstation / 256+ MB RAM for server
1 GB hard drive disk space for sole use by the QCS system
3 1/2 inch high-density floppy drive
Compact disk (CD) Reader, 8x speed or higher
SVGA or higher resolution monitor (1024 x 768, 256 colors)
Mouse or other pointing device
Windows compatible printer (Laser printer must have 4+ MB of RAM)
Connection to the Internet, minimum 56 BPS

Software

MS Windows 98, ME, NT, or 2000
Word Processing software compatible with MS Word 97 or newer
Latest version of : Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher
Electronic mail (E-mail), MAPI compatible
Virus protection software that is regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control (CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files

attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch

list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts". This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

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SECTION 01330

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SECTION 01330

SUBMITTAL PROCEDURES

1.1 SUBMITTAL IDENTIFICATION (SD)

Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

SD-02 Shop Drawings

SD-03 Product Data

SD-04 Samples

SD-05 Design Data

SD-06 Test Reports

SD-07 Certificates

SD-11 Closeout Submittals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is

necessary.***

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.6 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.7 SUBMITTAL REGISTER

At the end of this section is a submittal register showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall maintain a submittal register for the project in accordance with Section 01312 QUALITY CONTROL SYSTEM (QCS).

1.8 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 21 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

1.9 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the QCS software that the Contractor is required to use for this contract. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

1.10 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

1.10.1 Procedures for Review Copies

Submit seven (7) copies of each submittal item with an attached ENG FORM 4025 Transmittal Form.

a. Construction/Operations Division ("RO" Reviewer): An "RO" in column "f" indicates that the submittal review action is by New England District Construction/Operations Division, Resident Office. Send all such submittals to the project Resident or Area Engineer, as applicable.

b. Engineering/Planning Division ("EO" Reviewer): An "EO" on the attached submittal register, column "f" indicates that the submittal review action is by the New England District, Engineering/Planning Division. Send all such submittals to the U.S. Army Corps of Engineers, New England District 696 Virginia Road, Concord, Massachusetts 01742-2751.

1.10.2 Information on Submittal Status

All Contractor requests for current status of submittal reviews shall be made through the Resident Engineer.

1.10.3 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.11 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.12 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Five copies of the submittal will be retained by the

Contracting Officer and two copies of the submittal will be returned to the Contractor.

1.13 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.14 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

| |
|---|
| <p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p> |
|---|

-- End of Section --

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- | | |
|---|---|
| A -- Approved as submitted. | E -- Disapproved (See attached). |
| B -- Approved, except as noted on drawings. | F -- Receipt acknowledged. |
| C -- Approved, except as noted on drawings. Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply as noted with contract requirements. |
| D -- Will be returned by separate correspondence. | G -- Other (<i>Specify</i>) |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

SUBMITTAL REGISTER

CONTRACT NO.
W912WJ-04-B-0004

TITLE AND LOCATION
Seabrook Harbor, Section 227 Project

CONTRACTOR

| ACTIVITY NO | TRANSMITTAL NO | SPEC SECT | DESCRIPTION ITEM SUBMITTED | PARAGRAPH | GOVT CLASSIFICATION REVIEWER | CONTRACTOR: SCHEDULE DATES | | | CONTRACTOR ACTION | | APPROVING AUTHORITY | | | | MAILED TO CONTR/ DATE RCD FRM APPR AUTH | REMARKS | |
|-------------|----------------|-----------|-------------------------------------|-----------|------------------------------|----------------------------|--------------------|--------------------|-------------------|----------------|--|----------------------------|----------------------------|-------------|---|---------|----------------|
| | | | | | | SUBMIT | APPROVAL NEEDED BY | MATERIAL NEEDED BY | ACTION CODE | DATE OF ACTION | DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR | DATE FWD TO OTHER REVIEWER | DATE RCD FROM OTH REVIEWER | ACTION CODE | | | DATE OF ACTION |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) | (r) |
| | | 01110 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Progress Schedule | 1.4.3.1 | G RO | | | | | | | | | | | | |
| | | 01270 | SD-05 Design Data | | | | | | | | | | | | | | |
| | | | Quantity Surveys | 1.4 | | | | | | | | | | | | | |
| | | 01355 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Environmental Protection Plan | 1.7 | G RO | | | | | | | | | | | | |
| | | 01500 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Site Plan | 1.2 | G RO | | | | | | | | | | | | |
| | | | SD-02 Shop Drawings | | | | | | | | | | | | | | |
| | | | Temporary Electrical System | | G RO | | | | | | | | | | | | |
| | | 01525 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Accident Prevention Plan (APP) | 1.8 | G RO | | | | | | | | | | | | |
| | | | Activity Hazard Analysis (AHA) | 1.9 | G RO | | | | | | | | | | | | |
| | | | SD-06 Test Reports | | | | | | | | | | | | | | |
| | | | Reports | 1.13 | | | | | | | | | | | | | |
| | | | Accident Reports | 1.13.1 | | | | | | | | | | | | | |
| | | | Monthly Exposure Reports | 1.13.3 | | | | | | | | | | | | | |
| | | | Regulatory Citations and Violations | 1.13.4 | | | | | | | | | | | | | |
| | | | Crane Reports | 1.13.5 | | | | | | | | | | | | | |
| | | | Certificate of Compliance | 1.13.6 | | | | | | | | | | | | | |
| | | 01545 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Plant and Equipment | | | | | | | | | | | | | | |
| | | 01723 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Survey Plans | | G RO | | | | | | | | | | | | |
| | | | Layout Plan | | G RO | | | | | | | | | | | | |

SUBMITTAL REGISTER

CONTRACT NO.
W912WJ-04-B-0004

TITLE AND LOCATION
Seabrook Harbor, Section 227 Project

CONTRACTOR

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|-------------|----------------|-----------|------------------------------------|-----------|----------------------------|----------------------------|--------------------|--------------------|-------------------|----------------|--|----------------------------|----------------------------|-------------|---|---------|----------------|
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| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) | (r) |
| | | 01723 | Charts | | | | | | | | | | | | | | |
| | | | Survey Personnel | 3.1.1 | | | | | | | | | | | | | |
| | | | SD-05 Design Data | | | | | | | | | | | | | | |
| | | | Field Survey Data | | | | | | | | | | | | | | |
| | | 02325 | SD-01 Preconstruction Submittals | | | | | | | | | | | | | | |
| | | | Work Plan | | G RO | | | | | | | | | | | | |
| | | | Debris Management Plan | | | | | | | | | | | | | | |
| | | | SD-05 Design Data | | | | | | | | | | | | | | |
| | | | Daily/Monthly Report of Operations | | | | | | | | | | | | | | |
| | | 02390 | SD-02 Shop Drawings | | | | | | | | | | | | | | |
| | | | Marine Mattress | | G DO | | | | | | | | | | | | |
| | | | SD-04 Samples | | | | | | | | | | | | | | |
| | | | Geogrid | | G DO | | | | | | | | | | | | |
| | | | Matstone | | G DO | | | | | | | | | | | | |
| | | | Braid | | G DO | | | | | | | | | | | | |
| | | | Connector | | G DO | | | | | | | | | | | | |
| | | | SD-08 Manufacturer's Instructions | | | | | | | | | | | | | | |
| | | | Work Plan | | G RO | | | | | | | | | | | | |
| | | | Manufacturer's Instructions | | | | | | | | | | | | | | |
| | | | SD-09 Manufacturer's Field Reports | | | | | | | | | | | | | | |
| | | | Diver's Report | | G RO | | | | | | | | | | | | |
| | | | Marine Mattresses | | G RO | | | | | | | | | | | | |
| | | 02461 | SD-03 Product Data | | | | | | | | | | | | | | |
| | | | Preservative treated piles | 1.4.1 | | | | | | | | | | | | | |

SUBMITTAL REGISTER

CONTRACT NO.
W912WJ-04-B-0004

TITLE AND LOCATION
Seabrook Harbor, Section 227 Project

CONTRACTOR

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| | | 02461 | Preservative treated piles | 2.1.1 | | | | | | | | | | | | | |
| | | | SD-07 Certificates | | | | | | | | | | | | | | |
| | | | MSDS and CIS | 1.4.2 | | | | | | | | | | | | | |
| | | | SD-11 Closeout Submittals records | | | | | | | | | | | | | | |
| | | 02465 | SD-02 Shop Drawings | | | | | | | | | | | | | | |
| | | | Sheet Piling | | G DO | | | | | | | | | | | | |
| | | | Construction Sequence | | G DO | | | | | | | | | | | | |
| | | | Driving | 3.2.2.2 | | | | | | | | | | | | | |
| | | | Pulling and Redriving | 3.2.5 | G DO | | | | | | | | | | | | |
| | | | SD-03 Product Data | | | | | | | | | | | | | | |
| | | | Pile Driving Equipment | 3.2.1 | G DO | | | | | | | | | | | | |
| | | | SD-04 Samples | | | | | | | | | | | | | | |
| | | | Sheet Pile | | G DO | | | | | | | | | | | | |
| | | | SD-07 Certificates | | | | | | | | | | | | | | |
| | | | MSDS and CIS | | | | | | | | | | | | | | |
| | | 02495 | SD-03 Product Data | | | | | | | | | | | | | | |
| | | | Manufacturers' Product Data | | G EO | | | | | | | | | | | | |
| | | | SD-07 Certificates | | | | | | | | | | | | | | |
| | | | Personnel resumes | | G EO | | | | | | | | | | | | |

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SECTION 01355

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

| | |
|------------|--|
| 33 CFR 328 | Definitions |
| 40 CFR 68 | Chemical Accident Prevention Provisions |
| 40 CFR 279 | Standards for the Management of Used Oil |
| 40 CFR 302 | Designation, Reportable Quantities, and Notification |
| 40 CFR 355 | Emergency Planning and Notification |

U.S. ARMY CORPS OF ENGINEERS (USACE)

| | |
|----------------|---|
| EM 385-1-1 | (1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual |
| WETLAND MANUAL | Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 |

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes

management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.5 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.6 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G, RO

The environmental protection plan.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.7.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. Work area plan showing the proposed activity in each portion of the

area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

f. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and the local Fire Department in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
3. Training requirements for Contractor's personnel and methods of accomplishing the training.
4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
6. The methods and procedures to be used for expeditious contaminant cleanup.

g. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction. The Contractor shall attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. The report shall be submitted on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted and shall be for the previous quarter (e.g. the first working day of January, April, July, and October). The report shall indicate the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

1.7.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.8 PROTECTION OF FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the contract.

1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.10 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

This section supplements the Contractor's responsibility under the contract clause PERMITS AND RESPONSIBILITIES to the extent that the Government has

already obtained the listed environmental permits issued for this project. A Wetlands Permit issued by the State of New Hampshire Department of Environmental Services; and a Coastal Zone Consistency Determination issued by the Office of Energy and Planning, New Hampshire Coastal Program, State of New Hampshire have been obtained for this project. The Contractor shall comply with permit terms and conditions that are applicable to this contract. Such applicable terms and conditions have been extracted from the permits and are specified in the various sections of these specifications and on the contract drawings. The above referenced documents shall not be relied on for contract requirements. In the event a discrepancy is discovered between the reference documents and these specifications or the contract drawings, the Contractor shall notify the Contracting Officer for clarification. The Contracting Officer will rely on permit requirements and conditions to resolve perceived conflicts. Copies of the Wetlands Permit and the Coastal Zone Consistency Determination obtained for this project are included at the end of this Section for reference only.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.2.1 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor.

3.3.1 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor

shall be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. The Contractor shall comply with all State and local visibility regulations.

3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.5.1 Solid Wastes

Solid wastes shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.5.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.5.3 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel on the project site shall be accordance with all Federal, State, and local laws and regulations.

3.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination 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 impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.7 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.8 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.9 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.10 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.11 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-2147 FAX (603) 271-6588



March 02, 2004

Pease Development Authority
Division of Ports & Harbors
Geno Marconi, Director
360 Corporate Drive
Portsmouth, NH 03801

RE: Div. Of Ports & Harbors Pease Development Authority - File # 2003-01869 - Seabrook

Dear Director Marconi:

Attached please find Wetlands Permit # 2003-01869 to dredge a total of 742,000 sq. ft. (17 acres) of sandy marine sediments in Hampton-Seabrook Harbor for work associated with the realignment of the Blackwater River channel to abate shoreline and tidal flat erosion which has restricted use of the navigational channel and anchorage.

Dredged material will be disposed of in a containment cell formed by the construction of two (2) driven composite sheet pile walls extending northward from the shoreline at River Street. The west wall will extend 1,100 linear feet with a 35-degree bend at 2/3rds the distance from River Street. The east wall will extend 500 linear feet from River Street.

The decision to approve this application was based on the following findings:

1. This is a major impact project per Administrative Rule Wt 303.02(a), alteration of 742,000 sq. ft. (17 acres), by the dredging of sandy marine sediments, for work associated with the realignment of the Blackwater River channel in Hampton-Seabrook Harbor to abate shoreline and tidal flat erosion which has restricted use of the navigational channel and anchorage.
2. The need for the proposed impacts has been demonstrated by the applicant per Wt 302.01.
3. The applicant has provided evidence which demonstrates that this proposal, with project specific conditions and contingencies for operation, maintenance and monitoring is the alternative with the least adverse impact to areas and environments under the department's jurisdiction per Wt 302.03.
4. The applicant has demonstrated by plan and example that each factor listed in Wt 302.04(a) and (c), Requirements for Application Evaluation, has been considered in the design of the project.
5. DES Wetlands Bureau Staff has conducted field inspections at the location of the proposed project on numerous occasions since shoaling in the Blackwater River and the subsequent formation of a new erosional channel running parallel to River Street in Seabrook was first reported in 1995.

6. Recent field inspections have determined that this project is necessary to abate shoreline erosion along River Street and the adjacent tidal flats, to protect the ecological integrity of the benthic communities of the 'middle ground' clam flats and to maintain safe navigation in Hampton-Seabrook Harbor.
7. The public hearing for this project was held on September 11, 2003.
8. On September 30, 2003 DES Wetlands Bureau Staff conducted a peer review of this project before a 12-member volunteer panel consisting of research scientists from the UNH Jackson Estuarine Laboratory, UNH Ocean Engineering Laboratory, and resource managers from the DES Shellfish Program, NH Fish & Game Dept. Region 3 Marine Section, the NH Coastal Program and the NH PDA Division of Ports and Harbors.
9. Information pertinent to the planning, implementation, and environmental monitoring program for this project, derived from the peer review team noted above, has been considered by the NH DES in the permitting process.
10. The USACOE has considered the information generated through the process noted in findings 8 & 9 above in the design of the project.

Any party may apply for reconsideration with respect to any matter determined in this action within 20 days from the date of this letter. A motion for reconsideration must specify all grounds upon which future appeals may be based, and should include information not available to the Department when the decision was made. The department may grant reconsideration if, in its opinion, good reason is provided in the motion.

Your permit must be signed, and a copy must be posted in a prominent location on site during construction. If you have any questions please contact our office at (603) 271-2147.

Sincerely,



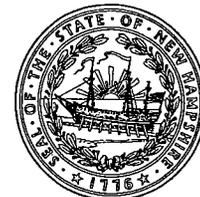
Collis G. Adams, CWS
Administrator
DES Wetlands Bureau

cc: Seabrook Conservation Commission
Seabrook Board of Selectmen
Seabrook Municipal Clerk



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-2147 FAX (603) 271-6588



WETLANDS AND NON-SITE SPECIFIC PERMIT 2003-01869

Permittee: Pease Development Authority
Division of Ports & Harbors
360 Corporate Drive
Portsmouth, NH 03801

Project Location: Seabrook/Hampton Harbors
Adjacent to River Street, Seabrook

Waterbody: Blackwater River/Atlantic Ocean

**NOTE --
CONDITIONS**

APPROVAL DATE: 03/02/2004

EXPIRATION DATE: 03/02/2009

Based upon review of the above referenced application, in accordance with RSA 482-A and RSA 485-A:17, a Wetlands Permit and Non-Site Specific Permit was issued. This permit shall not be considered valid unless signed as specified below.

PERMIT DESCRIPTION: Dredge a total of 742,000 sq. ft. (17 acres) of sandy marine sediments in Hampton-Seabrook Harbor for work associated with the realignment of the Blackwater River channel to abate shoreline and tidal flat erosion which has restricted use of the navigational channel and anchorage.

Dredged material will be disposed of in a containment cell formed by the construction of two (2) driven composite sheet pile walls extending northward from the shoreline at River Street. The west wall will extend 1,100 linear feet with a 35-degree bend at 2/3rds the distance from River Street. The east wall will extend 500 linear feet from River Street.

THIS APPROVAL IS SUBJECT TO THE FOLLOWING PROJECT SPECIFIC CONDITIONS:

1. All work shall be in accordance with final design plans to be submitted to the Department by the US Army Corps of Engineers (USACOE) prior to the start of construction. Preliminary design plans were received by the Department on January 29, 2004.
2. This permit is contingent upon receipt by the Department of the final copy of the USACOE "Operation and Maintenance Manual for the Seabrook Harbor Section 227 Project National Shoreline Erosion Control Development and Demonstration Program - Seabrook New Hampshire". A draft copy of this document was received by the Department on January 24, 2004.
3. Contingencies for events such as failure of the sheet pile wall dredged materials containment cell, invasive marine organisms threatening the ecological integrity of the clam flats and/or other deleterious effects attributable to the installation of this project shall be set forth in the final version of the USACOE "Operation and Maintenance Manual".
4. This permit is contingent on the implementation, by the permittee, of a 5-year monitoring program to assess the environmental impact of the project.
5. The monitoring protocol will examine the site conditions before, during, and for 5 years following construction to evaluate impacts to hydrodynamics, sediment transport, benthic communities, essential fish habitat, invasive marine organisms and other physical, chemical and biological parameters as deemed necessary by the Department.
6. The monitoring program will employ over flights, coinciding with low tide at the site, for aerial photography before, during and for 5 years following construction to document changes in the environs attributable to the project.
7. A semi-annual report shall be submitted by the permittee to the Department, on July 1st and December 1st of each year following completion of construction, documenting the information required by the monitoring program. Each report will contain a suite of aerial photographs documenting site conditions recorded during the reporting period.
8. This permit is contingent on approval by the DES Site Specific Program, if required, in accordance with RSA 485-A:17.

- 9. In accordance with Administrative Rule Wt 304.11(b): "Dredging in tidal waters shall be done between November 15 and March 15, and shall not be permitted during a fish migration or larval setting stage of shellfish."
- 10. Dredged material in excess of that needed to fill the containment cell shall be disposed of at areas outside of the Department's jurisdiction, or at designated beach nourishment and/or sand dune restoration areas in Hampton and Seabrook with prior approval by the Department.
- 11. At least 48 hours prior to the start of construction, a pre-construction meeting shall be held with NHDES Land Resources Management Program staff at the project site or at the DES Office in Concord, N.H. to review the conditions of this wetlands permit and any required NHDES Site Specific Permit. It shall be the responsibility of the permittee to schedule the pre-construction meeting, and the meeting shall be attended by the permittee, the professional engineer(s), wetlands scientist(s), and the contractor(s) responsible for performing the work.

GENERAL CONDITIONS WHICH APPLY TO ALL DES WETLANDS PERMITS:

- 1. A copy of this permit shall be posted on site during construction in a prominent location visible to inspecting personnel;
- 2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others;
- 3. The Wetlands Bureau shall be notified upon completion of work;
- 4. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits that may be required (see attached form for status of federal wetlands permit);
- 5. Transfer of this permit to a new owner shall require notification to and approval by the Department;
- 6. This permit shall not be extended beyond the current expiration date.
- 7. This project has been screened for potential impacts to **known** occurrences of rare species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or have received only cursory inventories, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species.

APPROVED: *Antonio P. Riccio*
DES Wetlands Bureau

BY SIGNING BELOW I HEREBY CERTIFY THAT I HAVE FULLY READ THIS PERMIT AND AGREE TO ABIDE BY ALL PERMIT CONDITIONS.

OWNER'S SIGNATURE (required)

CONTRACTOR'S SIGNATURE (required)



OFFICE OF ENERGY and PLANNING
NEW HAMPSHIRE COASTAL PROGRAM
STATE OF NEW HAMPSHIRE
152 COURT STREET: SUITE 1 - PORTSMOUTH NH 03801
TELEPHONE: 603-431-9366
FAX: 603-431-1438

4 March 2004

Mr. John R. Kennelly
Chief of Planning
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

**Re: Consistency Determination, Section 227 Hampton-Seabrook Harbor
National Shoreline Erosion Control Development and Demonstration
Program Project**

Dear Mr. Kennelly:

New Hampshire Coastal Program has completed its review of your consistency determination pursuant to Section 307 (c) of the Coastal Zone Management Act, 16 U.S.C. § 1456(c)(1). We find it to be consistent, to the maximum extent practicable with the enforceable policies of New Hampshire Coastal Program's federally approved coastal management program.

Please call me at (603) 431-9366 with any questions.

Sincerely,


Brian K. Mazerski
Federal Consistency Coordinator

cc: Geno Marconi, PDA/DPH

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SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

0.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

P.O. Box 5690
Grandbury, TX 76049-0690
Ph: 817-326-6300
Fax: 817-326-6306
Internet: <http://www.awpa.com>

ASME INTERNATIONAL (ASME)

Three Park Avenue
New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: <http://www.asme.org>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
Ph: 617-770-3000
Fax: 617-770-0700
Internet: <http://www.nfpa.org>

U.S. ARMY CORPS OF ENGINEERS (USACE)

Order CRD-C DOCUMENTS from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services

Branch, TIC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Ph: 601-634-2664
Fax: 601-634-2388
Internet: <http://www.wes.army.mil/SL/MTC/handbook/handbook.htm>

Order Other Documents from:
USACE Publications Depot
Attn: CEIM-SP-D
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
Internet: <http://www.usace.army.mil/publications>
or <http://www.hnd.usace.army.mil/techinfo/index.htm>

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
Phone: 866-325-7208
Internet: <http://www.archives.gov>

Order documents from:
Superintendent of Documents
U.S. Government Printing Office
732 North Capitol Street, NW
Washington, DC 20401
Mailstop: SDE
Ph: 866-512-1800 or 202-512-1800
Fax: 202-512-2250
Internet: <http://www.gpo.gov>
E-mail: gpoaccess@gpo.gov

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)
7017 N.E. Highway 99 # 108
Vancouver, WA 98665
Ph: 360-693-9958
Fax: 360-693-9967
Internet: <http://www.wwpinstitute.org>
e-mail: info@wwpinstitute.org

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SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than 15 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all

construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves

the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.3 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 5 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, show drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of 3 years in related work. This CQC System Manager shall be on

the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A review of the appropriate activity hazard analysis to assure safety requirements are met.

- g. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- h. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- i. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Resolve all differences.
- d. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- e. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- f. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 COMPLETION INSPECTION

3.7.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected.

Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.7.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the work is complete. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.7.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 5 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.8 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence

that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- f. Instructions given/received and conflicts in plans and/or specifications.
- g. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager.

3.9 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

Contractor/Sub. Name _____

DAILY CONSTRUCTION QUALITY CONTROL REPORT

Date: _____

Day: _____

Contract No: _____

Description and Location of Work: _____

Tide: (high) _____ (low) _____ (high) _____ (low) _____ Sea Condition: _____

Weather: Temp: _____ Cloud condition _____ Wind speed/direction _____

Environmental Protection: _____

| Management | Area of responsibility |
|------------------------------|------------------------|
| a. Consultant - _____ | _____ |
| b. Contractor - _____ | _____ |
| c. Subcontractor - _____ | _____ |
| d. Purveyor - _____ | _____ |
| e. Supplier - _____ | _____ |
| f. Technical Support - _____ | _____ |

1. WORK PERFORMED TODAY (Indicate location and description of work performed. Refer to work performed by individuals listed by letter above.) _____

2. Results of Surveillance (Include satisfactory work completed, or deficiencies with action to be taken.)

a. Preparatory Inspection: _____

b. Initial Inspection: _____

c. Follow-up Inspection: _____

3. Tests Required by Specifications, Performed, and the Results:

a. _____

b. _____

c. _____

4. Verbal Instruction Received; (List any instructions given by Government personnel on construction deficiencies, retesting required, etc. and action.)

5. Remarks: (Cover all conflicts in plans, specifications, or instructions.)

6. Safety Inspection (Report violations, corrective instruction given; and corrective actions taken.)

7. Quantities Completed;

| | |
|-----------|-----------|
| Item # | Item # |
| Quantity: | Quantity: |
| ----- | |
| Item # | Item # |
| Item # | Quantity: |
| ----- | |

8. Time

| # | <u>LABOR</u> | <u>HOURS</u> | <u>EQUIPMENT</u> |
|-------|--------------|--------------|------------------|
| ----- | ----- | ----- | ----- |
| ----- | ----- | ----- | ----- |
| ----- | ----- | ----- | ----- |
| ----- | ----- | ----- | ----- |
| ----- | ----- | ----- | ----- |
| ----- | ----- | ----- | ----- |

9. Additional Comments:

Contractor's Verification: The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

Contractor Quality Control Representative
-- End of Section --

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PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Site Plan; G, RO.

Sketch of the proposed location and dimensions of any area to be used by the Contractor for storage and staging, the number of trailers to be used, avenues of ingress/egress to the areas and details of improvements.

SD-02 Shop Drawings

Temporary Electrical System; G, RO.

Sketch of the proposed temporary electrical system.

1.2 SITE PLAN

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any storage and staging areas to be used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the areas and details of fence installation if used. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.3 EMPLOYEE PARKING

Contractor employees shall park privately owned vehicles in an area approved by the Contracting Officer. Contractor employee parking shall not interfere with existing and established parking requirements of the facility.

1.4 AVAILABILITY OF UTILITIES

Provide service required for construction operations. All water and electricity that may be required in the prosecution of the work shall be furnished by the Contractor at his own expense. There will be no Government furnished water and electricity at the project site.

1.5 SANITATION

Adequate sanitary conveniences of a type approved for the use of persons

employed on the work shall be provided, properly secluded from public observation, and maintained by the Contractor in such a manner as required or approved by the Contracting Officer. These conveniences shall be maintained at all times without nuisance. Upon completion of the work, the conveniences shall be removed by the Contractor from the premises, leaving the premises clean and free from nuisance.

1.6 TELEPHONE SERVICE

Provide telephone service to field offices. Provide and maintain a telephone or equal means of communication which will be in an easily accessible location at each of the large construction areas on the project. Such means of communication shall be accessible during all work hours.

1.7 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

1.8 CONTRACTOR'S TEMPORARY FACILITIES

1.8.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site.

1.8.2 Storage Areas

Area is available for use by the Contractor, for work, storage of equipment, materials and trailers during the life of this contract. A site is indicated on the drawings. The Contractor shall confine his storage areas to the limits as designated or approved by the Contracting Officer and shall be responsible for the security of the areas. Upon completion of the contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Contracting Officer at no additional cost to the Government.

1.8.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site. The Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

1.8.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

1.8.5 Maintenance of Storage Area

Fencing, if used or required, shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion.

1.8.6 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment.

1.9 GOVERNMENT FIELD OFFICE

1.9.1 Resident Engineer's Office

The Contractor shall provide the Government Resident Engineer with an office, approximately 200 square feet in floor area, located where directed and providing space heat, electric light and power, and toilet facilities consisting of one lavatory and one water closet complete with connections to water and sewer mains. A portable toilet may be substituted for the water closet. Provide three telephone lines for telephone, fax, and computer. A mail slot in the door or a lockable mail box mounted on the surface of the door shall be provided. At completion of the project, the office shall remain the property of the Contractor and shall be removed from the site. Utilities shall be connected and disconnected in accordance with local codes and to the satisfaction of the Contracting Officer.

1.9.2 Trailer-Type Mobile Office

The Contractor may, at its option, furnish and maintain a trailer-type mobile office acceptable to the Contracting Officer and providing as a minimum the facilities specified above. The trailer shall be securely anchored to the ground at all four corners to guard against movement during high winds.

1.10 CLEANING DURING CONSTRUCTION

1.10.1 Daily Cleaning

Execute daily cleaning to keep the work, the site, and adjacent properties free from accumulation of waste materials, rubbish, and windblown debris, resulting from construction operations.

1.10.2 On-Site Container

Provide on-site containers for the collection of waste materials, debris, and rubbish.

1.10.3 Removal of Waste

Remove waste materials, debris, and rubbish from the site periodically and dispose of off Government property in accordance with applicable laws and regulations.

1.10.4 Burning

No burning of brush or debris will be permitted at the site.

1.11 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.12 RESTORATION OF STORAGE AREA

Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the areas restored to their original condition, including top soil and seeding as necessary.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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SECTION 01525

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SECTION 01525

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASME INTERNATIONAL (ASME)

| | |
|-------------|--|
| ASME B30.5 | (2000) Mobile and Locomotive Cranes |
| ASME B30.8 | (2000) Floating Cranes and Floating Derricks |
| ASME B30.22 | (2000) Articulating Boom Cranes |

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

| | |
|-----------------|---|
| 29 CFR 1910.94 | Ventilation |
| 29 CFR 1910.120 | Hazardous Waste Operations and Emergency Response |
| 29 CFR 1926 | Safety and Health Regulations for Construction |
| 29 CFR 1926.65 | Hazardous Waste Operations and Emergency Response |
| 29 CFR 1926.500 | Fall Protection |

U. S. ARMY CORPS OF ENGINEERS (USACE)

| | |
|------------|--|
| EM 385-1-1 | (1996) Safety and Health Requirements Manual |
|------------|--|

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

| | |
|----------|---|
| NFPA 10 | (1998) Portable Fire Extinguishers |
| NFPA 241 | (2000) Safeguarding Construction, Alteration, and Demolition Operations |

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as

otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Pre-construction

Accident Prevention Plan (APP); G, RO

Activity Hazard Analysis (AHA); G, RO

SD-06 Test Reports

Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

Monthly Exposure Reports

Regulatory Citations and Violations

Crane Reports

Certificate of Compliance (Crane)

1.3 DEFINITIONS

a. Certified Safety Professional (CSP). An individual who is currently certified by the Board of Certified Safety Professionals.

b. Certified Safety Trained Supervisor (STS). An individual who is currently certified by the Board of Certified Safety Professionals.

c. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.

d. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

e. Multi-Employer Work Site (MEWS). A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

f. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

g. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

- (1) Death, regardless of the time between the injury and death, or the length of the illness;

- (2) Days away from work;
- (3) Restricted work;
- (4) Transfer to another job;
- (5) Medical treatment beyond first aid;
- (6) Loss of consciousness; or
- (7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

h. Site Safety and Health Officer (SSHO). The superintendent or other qualified or competent person who is responsible for the on-site safety and health required for the project.

i. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).

1.4 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1, and the federal, state, and local, laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.5 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Contracting Officer upon request.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The SSHO shall meet the following requirements:

Level 2:

- A minimum of 3 years safety work on similar project.
- 30-hour OSHA construction safety class or equivalent within last 3 years.
- Competent person training as needed.

1.6.1.2 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Appendix G.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)/Superintendent

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily quality control report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

- a. The Contractor will be informed, in writing, of the date of the

preconstruction conference. The purpose of the preconstruction conference is for the Contractor and the Contracting Officer's representatives to become acquainted and explain the functions and operating procedures of their respective organizations and to reach mutual understanding relative to the administration of the overall project's APP before the initiation of work.

b. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the AHAs and special plans, program and procedures associated with it).

c. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated activity hazard analyses (AHAs) that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.

d. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.

1.6.3.2 Weekly Safety Meetings

Conduct weekly safety meetings at the project site for all employees. The Contracting Officer will be informed of the meeting in advance and be allowed attendance. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

1.6.3.3 Work Phase Meetings

The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection. The analysis should be used during daily inspections to ensure the implementation and effectiveness of safety and health controls.

1.7 TRAINING

1.7.1 New Employee Indoctrination

New employees (prime and sub-contractor) will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with USACE EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

1.7.3 Training on Activity Hazard Analysis (AHA)

Prior to beginning a new phase, training will be provided to all affected employees to include a review of the AHA to be implemented.

1.8 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan". Where a paragraph or subparagraph element is not applicable to the work to be performed indicate "Not Applicable" next to the heading. Specific requirements for some of the APP elements are described below. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. The Contracting Officer reviews and comments on the Contractor's submitted APP and accepts it when it meets the requirements of the contract provisions.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSSHO and quality control manager. Should any unforeseen hazard become evident during the performance of work, the project superintendent shall inform the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

Copies of the accepted plan will be maintained at the resident engineer's office and at the job site. The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.8.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be used such as CSPs, CIHs, STSs, CHSTs. The duties of each position shall be specified.

b. Qualifications of competent and of qualified persons. As a minimum, competent persons shall be designated and qualifications submitted for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.

c. Alcohol and Drug Abuse Plan

(1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."

(2) Description of the on-site prevention program

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1, Section 01.A10 and Figure 1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHA as amendments to the APP. An AHA will be developed by the Contractor for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase of work. At a minimum, define activity being performed, sequence of work, specific safety and health hazards anticipated, control measures (to include personal protective equipment) to eliminate or reduce each hazard to acceptable levels, equipment to be used, inspection requirements, training requirements for all involved, and the competent person in charge of that phase of work. For work with fall hazards, including fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include requirements for safeguarding excavations. An activity requiring an AHA shall not proceed until the AHA has been accepted by the Contracting Officer's representative and a meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activity, including on-site Government representatives. The Contractor shall document meeting attendance at the preparatory, initial, and follow-up phases of quality control inspection. The AHA shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

Activity hazard analyses shall be updated as necessary to provide an effective response to changing work conditions and activities. The on-site superintendent, site safety and health officer and competent persons used to develop the AHAs, including updates, shall sign and date the AHAs before they are implemented.

1.10 DISPLAY OF SAFETY INFORMATION

Within 10 calendar days after commencement of work, erect a safety bulletin board at the job site. The following information shall be displayed on the safety bulletin board in clear view of the on-site construction personnel, maintained current, and protected against the elements and unauthorized removal:

- a. Map denoting the route to the nearest emergency care facility.
- b. Emergency phone numbers.
- c. Copy of the most up-to-date APP.
- d. AHA(s).
- e. OSHA 300A Form.
- f. A sign indicating the number of hours worked since last lost workday accident.
- g. OSHA Safety and Health Protection-On-The-Job Poster.
- h. Safety and Health Warning Posters.

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.13 REPORTS

1.13.1 Accident Reports

- a. For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Report Form 3394 and provide the report to the Contracting Officer within 2 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

b. For a weight handling equipment accident the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report form and provide the report to the Contracting Officer within 30 calendar days of the accident. The Contracting Officer will provide a blank copy of the accident report form.

1.13.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident involving a overturned crane, collapsed boom, or any other major damage to the crane or adjacent property. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on site and Government investigation is conducted.

1.13.3 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

1.13.4 Regulatory Citations and Violations

Contact the Contracting Officer immediately of any OSHA or other regulatory agency inspection or visit, and provide the Contracting Officer with a copy of each citation, report, and contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

1.13.5 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

1.13.6 Certificate of Compliance

The Contractor shall provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. The Contractor shall also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). These certifications shall be posted on the crane.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, and other related submittals and activity fire and safety regulations.

3.1.1 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.2 Unforeseen Hazardous Material

If material that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 5 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 EQUIPMENT

3.2.1 Weight Handling Equipment

b. The Contractor shall notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.

c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturer's recommended procedures.

d. The Contractor shall comply with ASME B30.5 for mobile cranes, ASME B30.22 for articulating boom cranes and ASME B30.8 for floating cranes and floating derricks.

e. The presence of Government personnel does not relieve the Contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.

- f. Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. Christmas-tree lifting (multiple rigged materials) is not allowed.
- h. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.
- i. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.
- j. A fire extinguisher having a minimum rating of 10BC and a minimum nominal capacity of 5lb of extinguishing agent shall be available at all operator stations or crane cabs. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- k. All employees shall be kept clear of loads about to be lifted and of suspended loads.
- l. A weight handling equipment operator shall not leave his position at the controls while a load is suspended.
- m. Only Contractor crane operators who have met the requirements of 29 CFR 1910.94, 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.500, USACE EM 385-1-1, ASME B30.5, and ASME B30.22 and other local and state requirements shall be authorized to operate the crane.
- n. The Contractor shall use cribbing when performing lifts on outriggers.
- o. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- p. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
- q. A substantial and durable rating chart containing legible letters and figures shall be provided with each crane and securely mounted onto the crane cab in a location allowing easy reading by the operator while seated in the control station.
- r. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.
- s. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.
- t. The Contractor shall certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

3.2.2 Equipment and Mechanized Equipment

a. Equipment shall be operated by designated qualified operators. Proof of qualifications shall be kept on the project site for review.

b. Manufacture specifications or owner's manual for the equipment shall be on site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Such additional safety precautions or requirements shall be incorporated into the AHAs.

c. Equipment and mechanized equipment shall be inspected in accordance with manufacturer's recommendations for safe operation by a competent person prior to being placed into use.

d. Daily checks or tests shall be conducted and documented on equipment and mechanized equipment by designated competent persons.

3.3 HOUSEKEEPING

3.3.1 Clean-Up

All debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

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PART 3 EXECUTION (Not Used)

-- End of Section Table of Contents --

SECTION 01545

DREDGING PLANT AND EQUIPMENT

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

CORPS OF ENGINEERS (COE)

EM 385-1-1 (1996) Safety and Health Requirements Manual

1.2 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Plant and Equipment

Submit a schedule of the plant and equipment the Contractor will employ in the performance of the work of this contract. Submit also copies of all applicable inspections and certifications for all floating plant and equipment.

1.3 PLANT AND EQUIPMENT

1.3.1 Sufficient Capacity

The Contractor shall keep on the job sufficient plant and equipment to meet the requirements of the work. The plant and equipment shall be in satisfactory operating condition and be capable of safely and efficiently performing the work. The plant and equipment shall be subject to inspection by the Contracting Officer and/or his representatives at all times.

1.3.2 Minimum Capacity

The plant and equipment listed on the Plant and Equipment Schedule submitted with the Contractor's bid is the minimum which the Contractor shall place and keep on the job unless otherwise determined by the Contracting Officer. The listing of plant and equipment is not to be construed as an agreement on the part of the Government that the equipment is adequate to perform the required work.

1.3.3 Reduction in Capacity

No reduction in the capacity of the plant and equipment employed on the work shall be made except by written permission of the Contracting Officer.

The measure of the capacity of the plant and equipment shall be its actual performance on the work covered by this contract.

1.3.4 Inspections and Certifications

Prior to commencement of work at the site, the Contractor shall make available to the Contracting Officer Representative for review, copies of all applicable inspections and certifications of floating plant and equipment as required by Federal, State and local laws and regulations. See also EM 385-1-1, Sections 16, 19, and 20. Such inspections and certifications shall be current and maintained in force for the duration of this contract. Each item of floating plant and equipment shall have on board a waste oil management plan which details the intended disposal method for waste oil.

1.4 LICENSE REQUIREMENTS

Each vessel exceeding twenty-six feet in length, excluding sheer, which is used for pushing, hauling alongside, or any other method of towing, and not required by law to have a valid Certificate of Inspection by the U.S. Coast Guard, shall be under the actual direction and control of a person licensed for towing in the geographic area of the work by the U.S. Coast Guard. Licensed persons shall not perform command or other duties in excess of twelve hours in any consecutive twenty-four hour period except in an emergency.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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SECTION 01723

FIELD ENGINEERING FOR DREDGING

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Engineering Services

The Contractor shall furnish the required personnel, equipment, instruments, and transportation, as necessary to accomplish the required surveys. Reports and other data together with supporting material developed during the prosecution of the work shall be furnished to the Government. The Contractor shall also provide adequate professional supervision and quality control to assure the accuracy, quality, completeness, and progress of the work.

The Contractor shall provide and pay for the following field engineering services for the project:

- a. Hydrographic and other survey work specified or required in execution of this project, except for surveys performed by the Government, as indicated in these specifications.
- b. Civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.

1.2 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referenced in the text by basic designation only. The Army Corps of Engineers references below may be viewed or downloaded free of charge via the Internet (<http://www.hnd.usace.army.mil/techinfo/>).

U.S. ARMY CORPS OF ENGINEERS

| | |
|----------------|--|
| EM 1110-1-1002 | (1996) SURVEY MARKERS AND MONUMENTATIONS |
| EM 1110-2-1003 | (2002) HYDRGGRAPHIC SURVEYING |

1.3 DEFINITIONS

1.3.1 Survey Datum

The Government will and the Contractor shall perform all surveys using the datum indicated on the drawings. The Contractor shall calibrate GPS equipment to the Corps of Engineers existing horizontal control net indicated on the drawings.

1.4 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Survey Plans; G, RO.

The Contractor shall submit, as part of the Quality Control Plan, a detailed plan describing the survey methods to be used during the work. The plan shall include the equipment to be utilized, tidal data, general site plan map, line designation map, calibration procedures to be used, expected horizontal and vertical accuracies, and pertinent information to describe the methods, and results to be obtained. Field surveys shall not begin until these plans are approved.

Layout Plan; G, RO.

A complete plan of the dredging areas showing the horizontal layout of all physical and electronic ranges to be used for horizontal control. The drawings shall be drawn at a scale sufficiently large to show all pertinent details. The drawings shall be submitted as blue or black lines on a white background.

Charts..

Current and tide charts to be used for the area(s) being dredged shall be submitted.

Survey Personnel.

Furnish a listing of the personnel who will perform the survey work required by this contract. The listing shall include a brief summary of the hydrographic survey experience of each person. The list shall be submitted prior to the preconstruction conference.

SD-05 Design Data

Field Survey Data.

Submit field data; depth sounder rolls, corrected for tide, and corresponding boat plots; daily logs; and quantity computations. Submit data sufficient for the Government to reproduce the Contractor's survey plot by referring only to this field data.

The electronic field data, including XY coordinates (points), and Z depths (elevations) in ASCII file format, shall be submitted on a daily basis with the CQC reports. Deficiencies shall be corrected and a re-survey of the area shall be performed, as necessary to ensure correction has been achieved. Data shall be submitted in a readable and usable format, utilizing industry recognized standard file formats and extensions. Data shall be submitted with a commercially available software program and technical support to provide the on-site capability to read and print the data.

1.5 GENERAL HYDROGRAPHIC SURVEY REQUIREMENTS

All hydrographic surveys for this project shall follow the mandatory criteria given in EM 1110-2-1003 for the "Navigation and Dredging Support Surveys" class of survey as a minimum.

Survey lines may be run either perpendicular to the channel limits at 50 foot offsets or longitudinal at 25 foot offsets. The lines shall clearly identify the toe and extend out to a minimum of three times the project depth to accurately depict the side slope.

1.6 HORIZONTAL POSITIONING PROCEDURES AND ACCURACIES

a. Vessel positioning systems utilized on this contract shall conform with the allowable horizontal positioning criteria in EM 1110-2-1003. The positioning system used shall be capable of meeting or exceeding the accuracy requirements and shall not exceed the allowable ranges where indicated. The Contractor may be required to demonstrate to the Government that its positioning system is capable of meeting or exceeding the accuracy requirements in EM 1110-2-1003.

1.7 REFERENCE HORIZONTAL CONTROL DATA

At the preconstruction conference, the Government will provide project control from which hydrographic surveys may be extended. This control shall be presumed to meet the accuracy requirements in EM 1110-2-1003. The Contractor shall immediately notify the Contracting Officer if existing control points have been disturbed. In the event new station monumentation is required to perform the work, new stations shall be monumenteted in accordance with EM 1110-1-1002 criteria, and an equitable adjustment will be made to the contract.

1.8 DEPTH MEASUREMENT PROCEDURES AND CALIBRATION

1.8.1 Depth Measurement Precision and Accuracy

Depth measurements including depth observation precision and resolution shall meet the vertical accuracy standards prescribed in EM 1110-2-1003.

1.9 VERTICAL REFERENCE DATUMS

Depth measurements shall be reduced to the specified datum using concurrent staff/gage readings, as described in EM 1110-2-1003. Tide staffs/gages shall be constructed, referenced, maintained, stilled, and read in accordance with the criteria in EM 1110-2-1003.

1.10 FIELD DATA RECORDING, REDUCTIONS, ARCHIVING, AND PLOTTING REQUIREMENTS.

The data format fields for submitting reduced hydrographic data to the District is x y z. The topographic and feature data shall conform to the intergraph general 3D design file formats specified in the reference. Digital data shall be contained on a 3.5 inch floppy disk or CD-ROM.

1.11 VOLUME COMPUTATIONS

The Contractor shall have the capability to compute excavation quantities from work performed under this contract. The Government will furnish construction templates and limits from which volumes are to be computed using any of the techniques given in EM 1110-2-1003. Section drawings

shall be made at the horizontal and vertical scales given in EM 1110-2-1003.

1.12 MISCELLANEOUS QUALITY CONTROL PROCEDURES

1.12.1 Automated System Synchronization Checks

Each automated hydrographic survey system shall be checked to insure adequacy of correlation between position and depth. Methods for performing this check are given in EM 1110-2-1003.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CONTRACTOR SURVEYS

3.1.1 Survey Personnel

The Contractor survey work to be performed under this contract shall be accomplished by, or reviewed and approved by a surveyor familiar with and having personal experience with hydrographic surveys. In addition, the survey personnel shall also be familiar with and have personal experience with hydrographic surveys.

3.1.2 Contractor Quality Control Surveys

The Contractor shall examine his work by conducting hydrographic surveys at no more than 30-day intervals, upon completion of separable portions of the work, and upon completion of the entire work. Contractor quality control surveys shall also be performed and submitted to the Contracting Officer prior to any request for a Government survey for final acceptance. The Contractor shall prepare survey maps based on the results of these surveys.

These maps shall be used, by the Contractor, to satisfy himself of the effectiveness of his operations. Attainment of contract depth shall be verified, and a comparison of actual progress and in-place quantities dredged with scheduled progress shall be performed. Contractor surveys will not be used for final payment or acceptance. See Section 02325 DREDGING for additional Contractor survey requirements.

3.1.3 Contractor Progress Payment Surveys

The Contractor shall conduct surveys for any periods for which progress payments are requested. The Contractor will make the computations based on these surveys. All surveys accomplished by the Contractor shall be conducted under the direction of the Contracting Officer, unless the Contracting Officer waives this requirement for each specific instance. Promptly upon completing a survey, the Contractor shall furnish the all data relating to the survey to the Contracting Officer, who will use the data as necessary to determine the amount of progress payments.

3.2 GOVERNMENT SURVEYS

3.2.1 Government Quantity Surveys

The Contracting Officer will conduct the original and final surveys for all dredging areas and make all quantity computations based on those surveys. The surveys will be performed at no expense to the Contractor. The Contractor shall give a minimum of 3 days notice before completion of a portion of the work requiring a post-dredge survey. A minimum of 2 days

will be required by the Government for completion of each of the post-dredge surveys at the site and another 10 to 15 days for calculation of quantities removed and verification of completion of work.

All quantity estimates for dredged material removed will be determined using either single beam or multi-beam survey technology. If single beam technology is used, all edited sounding information obtained from Government pre and post dredge surveys will be used in determining the payable quantity of dredged material removed. If multi-beam survey technology is used, then a 3-foot by 3-foot matrix using the sounding closest to cell center (shot depth) will be generated from the edited multi-beam data and used in determining the payable quantity of dredged material removed. A Digital Terrain Model (DTM) will be created from each of the pre and post dredge surveys. A channel design template will be created at the required dredging depth and at the total allowable overdepth. Each of the channel design templates will be compared with the pre dredge DTM to determine the available quantity of required dredge material and available quantity of overdepth material. The same channel design templates will be compared to the post dredge DTM to determine the quantity of material remaining above the required dredging depth and the quantity of material remaining above the total allowable overdepth. The quantity of required dredged material removed will be derived from these comparisons. In all cases, the same channel design templates will be used to determine both the pre and post dredge quantities. Material removed below the total allowable overdepth will not be included in the payable quantity of material.

3.2.2 Final Examination by the Government

a. Submission of all Contractor quality control survey data, including plots, is required prior to performance of final examination and acceptance surveys by the Government.

b. As soon as practicable after completion of the entire work or any section thereof such work will be thoroughly examined at the expense of the Government by sounding or sweeping, or both, as determined by the Contracting Officer. The Contractor will be notified when soundings and/or sweepings are to be made, and may be permitted to accompany the survey party, if approved by the Contracting Officer.

3.2.3 Final Acceptance by the Government

Final acceptance of the whole or any 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.

-- End of Section --

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

1.1.1 Environmental Protection Requirements

Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution. See Section 01355 ENVIRONMENTAL PROTECTION.

1.1.2 Underwater Diving Operations

In the event that underwater diving operations become necessary due to the work of this contract, such operations shall be conducted in accordance with Section 02490 UNDERWATER WORK

1.2 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Work Plan; G, RO.

The Contractor shall submit a work plan for accomplishing the dredging work of this contract. The following items shall be considered, at a minimum, for inclusion in the work plan:

- a. Anticipated plant and equipment;
- b. proposed means and methods for removal of derelict moorings and similar large items, if encountered;
- c. expected coordination requirements;
- d. survey requirements;
- e. proposed measures for avoiding damage to adjacent structures and banks of the Harbor;
- f. proposed measures to avoid overdredging;
- g. proposed equipment and methods for transport of dredge material to the disposal site;
- h. a plan for monitoring and repairing leaks in the disposal pipe; and
- i. proposed methods to prevent the discharge pipe from freezing in cold weather.

Debris Management Plan.

A debris management plan shall be developed as specified in this section and submitted to the Contracting Officer for review.

SD-05 Design Data

Daily/Monthly Report of Operations

The Contractor shall prepare and submit two (2) copies of the Daily Report of Operations, using ENG Form No. 4267, for each dredge. This report shall be submitted on a daily basis. A copy of this form is appended to the end of this Section. In addition to the daily report, the Contractor shall prepare a Monthly Report of Operations for each month or partial month's work on ENG Form No. 4267. The monthly report shall be submitted to the Contracting Officer on or before the 7th of each month, consolidating the previous month's work. Upon completion of the project, the Contractor shall submit a consolidated project report, combining the monthly reports.

Additionally, one copy of the reports shall be maintained by the Contractor on the dredge(s) for the Contracting Officer's inspection purpose. Further instructions on the preparation of the reports will be furnished at the Preconstruction Conference.

1.3 NOTIFICATIONS

1.3.1 Notice of Misplaced Material

The Contractor shall notify the Contracting Officer and the U.S. Coast Guard Marine Safety Office of any misplaced material.

1.3.2 Notice of Need for Dredging Survey

The Contractor shall give advance notice to the Contracting Officer of the need for a after-dredging survey for final acceptance for each acceptance section. See Section 01723 FIELD ENGINEERING FOR DREDGING, Article GOVERNMENT SURVEYS.

1.3.3 Relocation of Navigation Aids

The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The Contractor shall notify the Coast Guard District Commander, in writing, with a copy to the Contracting Officer, 30 days in advance of the time he plans to dredge adjacent to any aids which require relocation to facilitate the dredging operation. A copy of the notification shall be provided to the Contracting Officer.

1.4 MATERIAL TO BE REMOVED

1.4.1 Character of Materials to be Removed

Samples have been taken by the Government to determine the character of materials to be removed. Although the results of such explorations are representative of subsurface conditions at their respective locations, local minor variations in the subsurface materials are to be expected and, if encountered, will not be considered materially different within the purview of the contract. Analysis of samples taken by GeoTesting Express Inc. and a map of the locations where the samples were taken are attached

at the end of Section 00320 GEOTECHNICAL DATA. Analysis of samples taken by R. W. Gillespie and Associates, Inc are attached at the end of Section 00320 GEOTECHNICAL DATA, and the locations where the samples were taken are shown on the drawings. The material to be removed to accomplish the specified dredging work is anticipated to be fine sand. The Contractor is expected to examine the site of the work and decide the character of the material for himself.

1.5 WORK AREA

1.5.1 Access

The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the work site, any mooring areas, and the disposal area. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies.

1.5.2 Protection of Existing Waterways

The Contractor shall conduct his operations in such a manner that material or other debris are not pushed outside of dredging limits or otherwise deposited in existing side channels, basins, docking areas, or other areas being utilized by vessels. The Contractor will be required to change his method of operations as may be required to comply with the above requirements. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, the material must be promptly removed at no expense to the Government.

1.5.3 Adjacent Property and Structures

The Contractor shall conduct the dredging operation such that it does not undermine, weaken or otherwise impair existing structures located in or near the areas to be dredged. The Contractor shall investigate the existing structures at the site and plan the dredging work accordingly.

Damage to private or public property or structures resulting from the disposal or dredging operations shall be repaired promptly by the Contractor at his expense. Damage to structures resulting from the Contractor's negligence will result in suspension of dredging and require prompt repair at the Contractor's expense as a prerequisite to the resumption of dredging.

1.5.4 Artificial Obstructions

The Contractor may encounter bottom debris such as, but not limited to, pieces of broken cable, rope, miscellaneous metal, and broken and derelict moorings. The Government has no knowledge of existing wrecks, wreckage, or other artificial obstructions of such size or character as to require the use of explosives for its removal. However, special or additional plant may be required for economical removal of some items, such as derelict moorings. During dredging operations, the Contractor shall remove all debris encountered. Floating debris removed from the dredging area shall be separated and stockpiled for disposal. Disposal in accordance with local, Federal, and State laws and regulations shall be the responsibility of the Contractor. In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time of completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions."

1.6 QUANTITY OF MATERIAL

The total estimated amount of material to be removed from within the specified limits, including side slopes and allowable overdepths is shown on the Bidding schedule. The estimated quantity for bidding purposes and for application of the "FAR 52.212-11, Variation in Estimated Quantity" shall be the total quantity, including overdepth. The quantities listed are estimates only.

1.7 OVERDEPTH AND SIDE SLOPES

1.7.1 Allowable Overdepth

To cover unavoidable inaccuracies of dredging processes, material removed to the overdepth shown on the drawings and within the dredging limits will be measured and paid for at full contract price.

1.7.2 Side Slopes

Material dredged to provide for final indicated side slopes will be measured and paid for at the applicable unit price. The material may be dredged from the original position or by dredging the space below the indicated slope plane at the bottom of the slope for upslope material capable of falling into the cut. Payment will not be made for material in excess of the amount originally lying above the pay slope plane. The limiting amount of side-slope overdepth will be measured vertically.

1.7.3 Excessive Dredging

Material taken from beyond the limits as extended in the Article "OVERDEPTH AND SIDE SLOPES" above will be deducted from the total amount dredged as excessive overdepth dredging, or excessive side-slope dredging for which payment will not be made.

1.8 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. See Section 01451 CONTRACTOR QUALITY CONTROL.

1.8.1 Method of Communication

Provide a system of communication between the dredge crew, the disposal inspector, and the Contracting Officer. Portable two-way marine radios are acceptable.

1.8.2 Transportation

The Contractor shall furnish, at the request of the Government Representative the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the equipment or marine plant as may be reasonably necessary in inspecting and monitoring the work. The Contractor shall furnish, on the request of the Government Representative, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and the work site.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 CONDUCT OF DREDGING WORK

3.1.1 Order of Work

a. The Contractor shall start dredging from the northeast end of the borrow area channel and proceed southward, dredging the full channel prism to the depth indicated. See Sections 01110 and 02465 for additional requirements relative to project coordination and sequence of work. The Government reserves the right to change the order of work at any time. The Contractor shall fully coordinate all work with the Harbormaster.

b. The Contractor shall prepare and submit to the Contracting Officer for review and approval a progress schedule in accordance with Section 01110, Paragraph "Work Sequence."

3.1.2 Method of Dredging

All dredging under this contract shall be performed using a hydraulic type of dredge.

3.1.3 Method of Disposal

Hydraulically removed material from the channel borrow area indicated shall be pumped to the sheet pile bulkhead, constructed in accordance with Section 02465 SHEET PILE BULKHEAD CONSTRUCTION. Pumping into the bulkhead area shall be controlled and restricted to prevent overtopping the bulkhead area with dredged material. Dredging shall continue until the bulkhead is uniformly filled with sand to the elevation shown.

3.1.4 Floating Pipeline

Should the Contractor's pipeline not rest on the bottom, it will be considered a floating pipeline and shall be visible on the surface and clearly marked. In no case will the Contractor's pipeline be allowed to fluctuate between the surface and the bottom, or lie partly submerged. Lights shall be installed on the floating pipeline as required in paragraph Signal Lights below. The lights shall be supported either by buoys or by temporary piling, provided by the Contractor and approved by the Contracting Officer. Where the pipeline does not cross a navigable channel, the flashing yellow all-around lights shall be spaced not over 200 feet apart, unless closer spacing is required by U.S. Coast Guard personnel, in which case the requirements of the U.S. Coast Guard shall govern, at no additional cost to the Government.

3.1.5 Misplaced Material Disposal

Material that is deposited elsewhere than in locations designated or approved by the Contracting Officer will not be paid for and the Contractor shall be required to remove such misplaced material and deposit it where directed at his expense.

3.1.6 Interference with Navigation

Minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of dredges or the

interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary. The Contractor shall comply with all requests from the Contracting Officer to move or interrupt dredging operations for a reasonable time period at on no additional cost to the Government.

3.1.7 Ranges, Gages, and Lines

Furnish, 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. Minimize interference to navigation.

3.1.8 Debris Management

Debris removed from the bottom during dredging operations, which is not suitable for disposal at the beach disposal site, shall be collected and removed from the site. Unsuitable materials include large items such as timbers, pilings, sections of piers, and metallic debris. A debris management plan shall be developed, reviewed by the Contracting Officer and followed by the Contractor. Each day during dredging operations, the Contractor shall use a boat to collect and remove floating debris resulting from project activities. Containers for temporary storage of the collected debris shall be maintained on the dredge or support barge.

3.1.9 Signal 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 shall conform to United States Coast Guard requirements for visibility and color.

3.1.10 Bulkhead Construction/Disposal Area Markers

The Contractor shall mark the bulkhead construction areas, including the limits of the disposal area, with markers that are visible a distance of 500 yards, day or night. All markers shall be of the proper color and shape, and be lighted with lights of the proper color and intensity in accordance with U.S. Coast Guard regulations. The Contractor shall obtain approval from the Coast Guard for the proposed marker plan. After completion of all disposal operations and installation of the permanent 12 inch diameter piling by the Contractor, and with signage provided by others, the Contractor shall remove all temporary markers.

3.2 SHOALING

If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished channel because of the natural lowering of the side slopes, redredging at contract price, within the limits of available funds may be done if agreeable to both the Contractor and the Contracting Officer.

3.3 FINAL CLEANUP

Final cleanup shall include the removal of all the Contractor's plant and equipment either for disposal or reuse. Plant, equipment, and materials to be disposed of shall only be disposed in a manner and at locations approved by the Contracting Officer. Unless otherwise approved by the Contracting Officer, the Contractor will not be permitted to abandon any equipment in the disposal area or other areas adjacent to the worksite.

Failure to promptly remove all plant, equipment, and materials upon completion of the dredging will be considered a delay in the completion of the final cleanup and demobilization work. In such case, the Government will exercise its right to remove any plant, equipment, and materials at the Contractor's expense.

-- End of Section --

QUALITY CONTROL REPORT- BUCKET/PIPELINE DREDGE

| | | | | | | | |
|--------------------------|--|-------------|------------------|-----------------------|-------|---------------|----------------|
| CONTRACT NO. | CONTRACT TITLE | CONTRACTOR | DATE | REPORT NO. | | | |
| CHARACTER OF WORK | <input type="checkbox"/> MAINTENANCE <input type="checkbox"/> NEW WORK <input type="checkbox"/> ENVIROMENTAL | | | | | | |
| DREDGE | NAME | SIZE | PIPELINE | DIPPER OR BUCKET SIZE | | | |
| | HORSEPOWER OF | DREDGE PUMP | SUCTION PIPE JET | CUTTER OR BUDGET | | | |
| | NO. OF CREW MEMBERS | DREDGE | SHORE | OTHER PLANT | TOTAL | WORK SCHEDULE | SHIFTS PER DAY |

LOCATION/CHANNEL OF WORK

| | | | | | |
|----------------------------------|-----------------------------------|--------------------|--------------------------|--|---------------|
| LOCATION OF WORK | REACH DREDGED STATION. TO STATION | DISPOSAL AREA USED | QTY DEPOSITED GROSS (CY) | CUMULATIVE AND QTY DEPOSIT FOR DA (CY) | |
| | GRAVEL_____ | SAND_____ | CLAY_____ | MUD_____ | SILT_____ |
| CHARACTER OF MATERIAL (%) | HARDPAN_____ | STONE_____ | SHELL_____ | OTHER_____ | |
| | CHANNEL CONDITION | AVERAGE DEPTH | BEFORE DREDGING _____ | AFTER DREDGING _____ | |
| RIVER/TIDE STAGE | MIN | TIME | MAX | TIME | GAGE LOCATION |
| | MIN | TIME | MAX | TIME | GAGE DATUM |
| WEATHER CONDITION | WEATHER | TEMP | VISIBILITY | WIND | |

WORK PERFORMED

DISTRIBUTION OF WORK

| ITEM | UNIT | QUANTITY | EFFECTIVE WORKING TIME (CHARGEABLE TO COST OF WORK) | HR. | MIN. |
|---|---------------------|----------------------|---|-----|------|
| AVERAGE WIDTH OF CUT | FT | | PUMPING OR DREDGING | | |
| TOTAL ADVANCE THIS PERIOD | FT | | PCT OF EFFECTIVE TIME | % | |
| TOTAL ADVANCE PREVIOUSLY | FT | | BOOSTER (IN LINE) | | |
| TOTAL ADVANCE TO DATE | FT | | NON-EFFECTIVE WORKING TIME (CHARGEABLE COST TO WORK) | | |
| FLOATING PIPE _____ | SHORE PIPE _____ | SUBMERGED PIPE _____ | HANDLING PIPE LINES | | |
| TOTAL LENGTH OF DISCHARGE PIPE | | | HANDLING ANCHOR LINES | | |
| _____ FT | | | CLEARING PUMP AND PIPE LINES | | |
| _____ H.P. BOOSTER ADDED @ _____ FT TO DA _____ | | | CLEARING CUTTER OR SUCTION HEAD | | |
| _____ H.P. BOOSTER ADDED @ _____ FT TO DA _____ | | | WAITING FOR SCOWS | | |
| CUBIC YARDS REMOVED | GROSS | CREDITED | TO AND FROM WHARF OR ANCHORAGE | | |
| AMOUNT DREDGED THIS DATE | | | CHANGING LOCATION OF PLANT ON JOB | | |
| AMOUNT PREVIOUSLY REPORTED | | | LOSS DUE TO OPPOSING NATURAL ELEMENTS | | |
| TOTAL AMOUNT DREDGED TO DATE | | | SHORE LINE AND SHORE WORK | | |
| AMOUNT DREGGED PER PUMPING/CUTTING HR | | | WAITING FOR BOOSTER | | |
| OPERATING SUPPLIES | | | MINOR OPERATING REPAIRS (EXPLAIN IN REMARKS) | | |
| COMMODITY | CONSUMED | CREDITED | WAITING FOR ATTENDENT PLANT | | |
| ITEM | UNIT | QUANTITY | PREPARATION AND MAKING UP TOW | | |
| FUEL | BBL | | TRANSFERRING PLANT BETWEEN WORKS | | |
| ELECTRICITY | KW | | LAY TIME OFF SHIFT AND SATURDAYS | | |
| LUBRICANTS | GAL | | SUNDAYS AND HOLIDAYS | | |
| MOB DATE: _____ | DREDGE START: _____ | DEMOB DATE: _____ | FIRE DRILL | | |
| | | | MOVING OUT OF WAY OF TRAFFIC | | |
| | | | MISCELLANEOUS (EXPLAIN IN REMARKS) | | |
| | | | TOTAL NON-EFFECTIVE TIME | | |
| | | | PCT. OF NON-EFFECTIVE | % | |
| | | | TOTAL EFFECTIVE AND NON-EFFECTIVE TIME (CHARGEABLE TO COST OF WORK) | | |

QUALITY CONTROL REPORT-PIPELINE DREDGE

| CONTRACT NO. | CONTRACT TITLE | CONTRACTOR | DATE | REPORT NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|----------------|------------|-------|---|------------------|--|----------------------------------|--|-------------------------------|--|-----------|--|------------|--|---------------|--|-----------------|--|--------------------------|---|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|
| ATTENDANT PLANT | | | | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align:center;">LOST TIME</th> </tr> <tr> <td align="center" colspan="2">(NOT CHARGEABLE TO COST OF WORK)</td> </tr> <tr> <td>MAJOR REPAIRS AND ALTERATIONS</td> <td style="width:10%;"></td> </tr> <tr> <td>CESSATION</td> <td></td> </tr> <tr> <td>COLLISIONS</td> <td></td> </tr> <tr> <td>MISCELLANEOUS</td> <td></td> </tr> <tr> <td>TOTAL LOST TIME</td> <td></td> </tr> <tr> <td>PERCENTAGE OF TOTAL TIME</td> <td style="text-align:center;">%</td> </tr> <tr> <td>TOTAL TIME IN PERIOD</td> <td></td> </tr> <tr> <td> </td> <td></td> </tr> </table> | LOST TIME | | (NOT CHARGEABLE TO COST OF WORK) | | MAJOR REPAIRS AND ALTERATIONS | | CESSATION | | COLLISIONS | | MISCELLANEOUS | | TOTAL LOST TIME | | PERCENTAGE OF TOTAL TIME | % | TOTAL TIME IN PERIOD | | | | | | | | | | | |
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| MAJOR REPAIRS AND ALTERATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| PERCENTAGE OF TOTAL TIME | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL TIME IN PERIOD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| ITEM | NAME OR NUMBER | H.P. | HOURS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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NARRATIVES

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SECTION 02390

GEOGRID MARINE MATTRESSES

PART 1 GENERAL

1.1 1.1 SUMMARY

The work covered by this section consists of furnishing all labor, materials, plant and equipment and performing all operations required to provide geogrid marine mattresses at the locations shown on the drawings.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 4759 (1988; R 1996) Determining the Specification Conformance of Geosynthetics

ASTM D 1388 (2002) Standard Test Methods for Stiffness of Fabrics

Geosynthetics Research Institute (GRI)

GRI GG2 (1987) Geogrid Junction Strength

CORPS OF ENGINEERS (COE)

COE EM 385-1-1 (2003) Safety & Health Requirements Manual

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Marine Mattress; G, DO

Contractor shall provide shop drawings showing the fabrication of the marine mattresses including all braiding and connections.

SD-04 Samples

Geogrid; G, DO.

Matstone; G, DO

Braid; G, DO

Connector; G, DO

The Contractor shall furnish physical examples of the geogrid (3-ft. by 3-ft., minimum), matstone (50-lb. sample, minimum), and connectors that are physically identical to the materials to be used in the contract work. The Contractor shall also submit physical and engineering performance test data as specified in Subpart "Structural Geogrid". Deliver samples to the New England District Office at 696 Virginia Road, Concord, MA 01742.

SD-08 Statements

Work Plan; G, RO

Prior to the commencement of work under this section, the Contractor shall submit for approval his proposed plan for fabricating and filling the marine mattresses and for placing the mattresses. Include as a minimum, the equipment, labor, materials, and methods to be used for all tasks.

Manufacturer's Instructions

Contractor shall provide manufacturer's recommendations for fabrication, filling, installation and repair of the marine mattresses.

SD-09 Reports

Diver's Report; G, RO.

The Contractor shall submit the diver's report within 48 hours of completion of placement of the marine mattresses. The report shall include a description of the placed mattresses to include their location, the presence any damaged geogrid, and the amount of overlap or gap between each mattress. The Government will review this submittal and provide approval/disapproval within 48 hours of receipt of the submittal.

SD-13 Certificates

Marine Mattresses; G, RO

The Contractor shall furnish the Contracting Officer, manufacturer's certificates or affidavit signed by a legally authorized official from the company manufacturing the mattresses, that all materials contained within that shipment meet the composition, physical, and manufacturing requirements stated in this specification.

1.4 DESCRIPTION

The non-metallic compartmental rectangular mattresses, comprised of structural geogrid, shall be filled with stone. The required width and depth of the mattress units shall be as shown on the drawings. The mattress units may be fabricated and filled off-site or on-site, for lifting into place.

Mattresses, larger than shown on the contract drawings, may be utilized, if approved by the manufacturer. The final approval for the use of larger mattresses shall be obtained from the Contracting Officer. The Contractor shall have the proper lifting equipment (including spreader bar) to lift and place the larger mattresses.

1.5 STORAGE

The geogrids shall be stored in conditions above -20 degrees F (-29 degrees C) and not greater than 140 degrees F (60 degrees C).

1.6 ON-SITE TECHNICAL ASSISTANCE

The Contractor shall coordinate with the mattress manufacturer for a qualified representative of the mattress system to be present at the job site during the first week of installation to provide technical assistance as needed. The Contractor shall remain solely responsible for the quality of installation of the mattresses.

PART 2 PRODUCTS

2.1 GEOGRID MARINE MATTRESSES

2.1.1 Structural Geogrid

The structural geogrid shall be an integrally formed grid structure manufactured of a stress resistant polypropylene or high density polyethylene material with molecular weight and molecular characteristics which impart high resistance to loss of load capacity or structural integrity when the geogrid is subjected to mechanical stress in installation and/or long-term environmental stress.

MD/XMD¹
(Min. Values)

Load Capacity

| | | |
|--|-------|---------------|
| True Initial Modulus at 1% Strain ² | lb/ft | 18,160/29,470 |
|--|-------|---------------|

Structural Integrity

| | | |
|----------------------------------|-----------|--------------|
| Junction Strength ³ | lb/ft | 11,432/1,233 |
| Flexural Stiffness ⁴ | mg-cm | 750,000/ |
| Torsional Stiffness ⁵ | kg-cm/deg | 4.8/ |

Dimensions

| | | |
|-----------------------------------|-----|---------|
| Aperture Size | in. | 1.0/1.3 |
| Percent Open Area | % | 70 |
| Minimum Thickness (any dimension) | in. | 0.045 |

The geogrid product shall also meet the following durability requirements:

| | |
|---|------|
| Ultraviolet Stability ⁶ | 98% |
| Resistance to installation damage (GP) ⁷ | 71% |
| Resistance to long term degradation ⁸ | 100% |

Notes:

¹ MD dimension is along roll length. XMD dimension is across roll width. Unless indicated otherwise, values shown are determined in accordance with ASTM D 4759. Brief descriptions of test procedures are given in the following notes.

² True resistance to elongation when initially subjected to a load measured via ASTM D 6637 without deforming test materials under load before measuring such resistance or employing "secant" or "offset" tangent methods of measurement so as to overstate tensile properties.

³ Load transfer capability measured via GRI GG2.

⁴ Resistance to bending force measured via ASTM D 1388.

⁵ Resistance to in-plane rotational movement measured by applying a 20 cm-kg moment to the central junction of a 9" x 9" specimen restrained at its perimeter.

2.1.2 Braid

The braid material shall be a hollow-core polyethylene braid and shall have a minimum diameter of 3/16 inch (nominal) with a breaking strength of not less than 400 lb load on a test specimen 36 inches in length. For UV stability, the braid material shall have a minimum carbon black content of 2.0% throughout.

2.1.3 Connectors

Bodkin connector rods shall be 3/8" diameter, round and composed of high density polyethylene.

2.1.4 Matstone

2.1.4.1 Quality

Matstone may be crushed stone. The stone shall be sound, durable and of suitable quality to ensure suitable performance in the mattresses and the climate at the work site. Stone shall be free from cracks, seams, and other defects that would tend to increase its deterioration in the mattresses. The inclusion of objectionable quantities of dirt, sand, clay, and rock fines shall not be permitted.

2.1.4.2 Gradation

Stone fill used in the mattresses shall be a well-graded mixture with the following gradation:

| Sieve Size | % , by Weight, Passing (inches) |
|------------|---------------------------------|
| 3 | 100 |
| 2-1/2 | 90-100 |
| 2 | 35-70 |
| 1-1/2 | 0-15 |

3/4

0-5

PART 3 EXECUTION

3.1 ASSEMBLY OF MARINE MATTRESSES

3.1.1 Assembling Individual Mattresses

Empty mattress units shall be assembled as recommended by the manufacturer and as indicated on the contract drawings. The joints where the ends and baffles of each unit join the top or bottom of the unit shall be made with a mechanical connection between geogrid elements. All cut ends of braid material shall be knotted within 1 inch to 2 inch of the end to prevent raveling of the braid material. The braid material shall be securely knotted to the geogrid at all ends of all stitched seams, and at a spacing not to exceed 6 feet along any stitched seam. Pieces of braid material may be spliced end to end by securely knotting. The stitches along each seam shall be sufficiently tight to close the gap between the adjacent pieces of geogrid. The braid material shall be stitched through each pair of apertures along each seam at least once. The spacing of stitches shall be reasonably uniform at approximately 6 (minimum) stitches per foot along the entire length of each seam. Lifting hoops shall be formed by joining the top and bottom layers of grid from each unit by means of approved mechanical connections.

3.1.2 Filling with Stone

The mattresses shall be pre-filled with stone prior to placement as specified below. The stone shall be carefully placed in the mattress. Stone filling operations shall carefully proceed with placement by hand or machine to assure a minimum of voids between the stones, and to avoid deformation throughout the filling process. Undue bulging of the geogrid shall be avoided. The maximum height from which the stone may be dropped into the basket units shall be 1 foot. The stone shall be leveled with the top of the mattress to allow for proper closing of the lid. The mattresses shall be closed over the stone as recommended by the manufacturer.

3.2 INSTALLATION OF MATTRESSES

During movement and placement of the pre-filled mattresses the Contractor shall insure that the mattresses are supported throughout their entire length and that the mattress and fasteners are protected from being damaged. All adjoining mattresses shall be butted as tightly as practicable along their contact surfaces in order to obtain a monolithic structure. Adjoining mattresses shall be set to the required lines and grades as shown on the contract drawings. The units shall be placed at the proper elevation, alignment and orientation as shown on the drawings. The procedure used in placement of the units shall be in accordance with the recommendations of the system supplier and as approved by the Contracting Officer. For lifting of each unit, a spreader beam and/or spreader bars shall be used in a manner that the unit is not subjected to severe bending or distortion and that the top and bottom layers of geogrid are tensioned uniformly across their width. Units should generally be lifted from a horizontal position. Personnel shall stay clear of the area beneath units and rigging during lifting.

3.3 REPAIRS OF MARINE MATTRESSES

Damaged geogrid shall be repaired by placing a geogrid patch over the

damaged area such that it overlaps onto the acceptable geogrid material by at least one foot in all directions; the perimeter edges of the patch shall be attached to the mattress in accordance with the seaming requirements, above. Damaged braid shall be repaired by installing a new braided seam in accordance with above, and extending at least one foot in either direction beyond the location of the damaged braid.

3.4 UTILIZATION OF DIVERS

To confirm proper placement of the marine mattresses, the Contractor shall utilize "surface air supplied" divers.

3.4.1 Diver's Inspection

The Contractor shall utilize divers to ensure that the mattresses are placed as specified herein. The diving inspection shall require submittals and be conducted in accordance with COE EM 385-1-1 as specified in Section 02490 UNDERWATER WORK. The Contractor shall submit a diving report as specified in the Submittals requirements of this section within 24 hours of the completion of the marine mattresses inspection. The Government will review this submittal and provide approval/disapproval within 24 hours of receipt of the submittal.

3.5 SURVEYS

To confirm the proper placement of the marine mattresses, the Contractor shall also conduct hydrographic surveys as specified in Section 01723 FIELD ENGINEERING.

3.6 CONTRACTOR QUALITY CONTROL

The Contractor shall conduct an inspection of each assembled mattress prior to and after filling with stone. The results of these inspections shall be documented in the daily Quality Control reports required under Section 01451 CONTRACTOR QUALITY CONTROL.

-- End of Section --

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SECTION 02461

WOOD MARINE PILES

PART 1 GENERAL

1.1 SUMMARY

This section covers the requirements for furnishing all plant, labor, materials, and equipment and for performing all operations in connection with the installation of round (treated) timber piles for the placement of warning signs around the perimeter of the sheet pile bulkhead. The piles shall be driven at the locations and depths indicated on the drawings. Warning signs will be furnished and installed on the piles by others.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B 209 (2000) Aluminum and Aluminum-Alloy Sheet and Plate

ASTM D 25 (1999) Round Timber Piles

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

AWPA C1 (2001) All Timber Products, Pressure Treatment

AWPA C3 (1999) Piles, Pressure Treatment

AWPA M4 (2001) Care of Pressure-Treated Wood Products

AWPA M6 (1996) Brands Used on Forest Products

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)

WWPI Mgt Practices (1996) Best Management Practices for Treated Wood in Aquatic Environments

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Preservative treated piles

A certified test assay analysis from an approved testing organization attesting that the piles to be used in the work have been given the preservative treatment required by these specifications shall be submitted prior to commencement of the work.

SD-07 Certificates

MSDS and CIS, as detailed in this Section.

SD-11 Closeout Submittals

Job piles driving records

Submit pile driving records within 15 calendar days after completion of driving.

1.4 QUALITY ASSURANCE

1.4.1 Preservative Treated Piles - Timber

The Contractor shall be responsible for the quality of treated wood products. The Contractor shall provide the Contracting Officer with the inspection report, approved by the Contracting Officer, that offered products comply with applicable AWPA standards. Identify treatment on each piece by the quality mark of an agency accredited by the Board of Review of the American Lumber Standard Committee. Inspect all preservative-treated wood visually to ensure there are no excessive residual materials or preservative deposits. Materials shall be clean and dry or it will be rejected because of environmental concerns.

1.4.2 MSDS and CIS

Provide Materials Safety Data Sheets (MSDS) and Consumer Information Sheets (CIS) associated with timber pile preservative treatment. Contractor shall comply with all safety precautions indicated on MSDS and CIS.

1.5 DELIVERY, STORAGE, AND HANDLING

Handle and store piles in accordance with AWPA M4. Comply with paragraph entitled "MSDS and CIS." Special care shall be taken in supporting piles to prevent the including of excessive bending stresses in the piles. Piles shall be carefully handled without dropping, breaking of outer fibers, and penetrating the surface with tools. Peaveys, cant hooks, pikes, and other pointed tools shall not be used in handling treated piles.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Preservative Treated Piles

Provide Douglas fir or Southern pine clean-peeled, treated piles conforming to ASTM D 25 and other requirements as specified. Piles shall be in one piece of the length as shown. Splices will not be permitted. Each treated pile shall be branded by the producer, in accordance with AWPA M6. Pile

circumference shall be the minimum indicated on the drawings.

2.1.2 Preservative Treatment

Treat piles by the full-cell pressure process in accordance with AWPA C1 and AWPA C3 to the retention and penetration for marine piling and produce in accordance with WWPI Mgt Practices, as follows:

Waterborne preservative for marine piles (ACA - Ammoniacal Copper Arsenate, ACZA - Ammoniacal Copper Zinc Arsenate, CCA - Chromated Copper Arsenate).

2.1.3 Pile Caps

Provide 0.040 inch aluminum alloy sheet, Alclad 3003, 3004, or 3005 in accordance with ASTM B 209.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Pile Driving Equipment

Pile driving equipment shall meet the following requirements.

3.1.1.1 Pile Driving Hammers

Pile driving hammers shall be steam, air or diesel drip, single-action, double-acting, differential-acting, or vibratory type. The use of vibratory hammers is dependent upon satisfactory driving. The size or capacity of hammers shall be as recommended by the manufacturer for the pile weights and solid formation to be penetrated. The pile hammer shall be of sufficient weight and energy to install the specified pile without damage into the soils as indicated. The maximum driving energy of hammers shall be 12,000 foot-pounds for piles for any length. Diesel powered hammers shall be operated at the rate recommended by the manufacturer throughout the entire driving period. Sufficient pressure shall be maintained at the hammer so that:

- a. For double-acting hammers, the number of blows per minute during and at the completion of driving of a pile is equal approximately to that at which the hammer is rated;
- b. For single-acting hammers, there is a full upward stroke of the ram; and,
- c. For differential-type hammers, there is a slight rise of the hammer base during each upward stroke.

3.1.1.2 Leads

Leads are required and shall be fixed at the top and adjustable at the bottom. Swinging leads may be allowed if site conditions merit their use and are approved.

3.1.1.3 Driving Cap or Helmet and Cushion Block

Driving cap or helmet shall be an approved design and shall be capable of protecting pile heads, minimizing energy absorption, and transmitting

hammer energy uniformly and consistently to piles. Place driving helmet or cap and cushion block combination between top of pile and the ram. Driving cap shall fit snugly on the top of piles and shall employ a cushion block to prevent impact damage to piles. The cushion block may be a solid or laminated softwood block with the grain parallel to the pile axis and enclosed in a close-fitting steel housing. The thickness of the block shall be suitable for the length of pile to be driven and the character of subsurface material to be encountered. If block is damaged, split, highly compressed, charred or burned, or has become spongy or deteriorated, replace with new block. Under no circumstances will the use of small wood blocks, wood chips, rope, or other material permitting excessive loss of hammer energy be permitted.

3.1.1.4 Pile Collars

Collars or bands for protecting pile butts against splitting, brooming, and other damage while being driven shall be of an approved design.

3.1.1.5 Jetting Equipment

Jetting equipment shall have not less than two removable or fixed, water or combination air-water type jets. Equipment shall be designed so that the discharge volume and pressure are sufficient to freely erode the material under and adjacent to the piles.

3.1.2 Piles

Inspect piles when delivered and when in the leads immediately before driving. Secure piles in their proper alignment and cut piles at cutoff grade with pneumatic tools by sawing or other approved method. Pile heads at cutoff shall be sound. Piles shall have tops beveled outboard.

3.1.2.1 Driving Piles

Pile hammers shall be air, steam, or diesel powered, and of an approved type with a capacity at least equal to the hammer manufacturer's recommendation for the total weight of pile and character of subsurface material to be encountered.

3.1.2.2 Tolerances in Driving

Piles shall be driven in the locations indicated. Remove and replace with new piles those damaged, mislocated, driven below the design cutoff, or driven out of alignment.

3.1.3 Jetting of Piles

Water jets will be permitted to assist in driving. Discontinue jetting when the pile tip is approximately 5 feet above the indicated pile tip elevation. Drive pile the final 5 feet of penetration to the maximum penetration per blow established by the Contracting Officer. Jetting method and equipment shall be approved by the Contracting Officer prior to commencing jetting operations.

3.2 PROTECTION

3.2.1 Damaged Piles

Driving of piles shall not subject them to damage. Piles which are

damaged, split, broomed, or broken by reason of internal defects or by improper driving below cutoff elevation so as to impair them for the purpose intended shall be removed and replaced. Minor damaged areas of treated piles shall be brush-coated with the same preservative used to treat the piles.

3.3 FIELD QUALITY CONTROL

3.3.1 Inspections

When Government inspections result in product rejection, the Contractor shall promptly segregate and remove rejected material from the premises. The Government may also charge the Contractor an additional cost of inspection or test when prior rejection makes reinspection or retest necessary.

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SECTION 02465

SHEET PILE BULKHEAD CONSTRUCTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

| | |
|-------------------|--|
| ASTM A 36 | (1996) Carbon Structural Steel |
| ASTM A 123/A 123M | (1997; Rev. A) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A 153/A 153M | (1995) Zinc Coating (Hot-Dip) on Iron and Steel Hardware |
| ASTM A 307 | (1994) Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength |
| ASTM D 638 | (2002) Tensile Properties of Plastics |
| ASTM D 790 | (1998) Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials |
| ASTM D 4226 | (2000) Standard Test Methods for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products |

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

| | |
|---------|---|
| AWPA C2 | (2001) Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes |
| AWPA M6 | (1997) Brands Used on Forest Products |

1.2 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. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Sheet Piling; G, DO

Detail drawings for sheet piling including fabricated sections shall show complete piling dimensions and details, splices and location of installed piling. Detail drawings shall include details and dimensions of templates and other temporary guide structures for installing piling. Detail drawings shall provide details of the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

Construction Sequence; G, DO; G

A detailed construction sequence of installation of the Bulkheads shall be submitted for Government approval.

Driving;

Records of the sheet piling driving operations shall be submitted after driving is completed. These records shall provide a system of identification which shows the disposition of approved piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations of installed piling. The format for driving records shall be as directed.

Pulling and Redriving; G, DO

The proposed method of pulling and redriving sheet piling shall be submitted and approved prior to pulling any piling.

SD-03 Product Data

Pile Driving Equipment; G, DO

Complete descriptions of sheet piling driving equipment including hammers, vibratory equipment, jetting equipment, extractors, protection caps and other installation appurtenances shall be submitted for approval prior to commencement of work.

SD-04 Samples

Sheet Pile; G, DO

Within 20 calendar days of Notice to Proceed, the Contractor shall submit samples of proposed sheet pile and corner pieces. The submitted materials shall be manufactured in accordance with the requirements of this specification and shall be standard commercial products. Additional or better features which are not specifically prohibited by this specification, but which are a part of manufacturer's standard commercial product, shall be included in the material being furnished. A standard commercial product is one that has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs or brochures, and represents the latest production model. The submittal shall include all testing and certifications, as specified herein.

Certified materials tests reports showing that sheet piling and appurtenant materials meet the specified requirements shall be submitted for the approval of the Contracting Officer prior to

ordering, shipping and installing materials. Tests, as detailed herein, shall be performed by an independent third party testing agency. Test data over one year old will not be accepted. The submitted test data will be accompanied by a notarized certificate of compliance from the manufacturer attesting that the data reflects the characteristics of their product as it is currently being produced.

SD-07 Certificates

MSDS and CIS

Provide Material Safety Data Sheets (MSDS) and Consumer Information Sheets (CIS) associated with sheet piles. Contractor shall comply with all safety precautions indicated on MSDS and CIS.

1.3 QUALITY CONTROL

The manufacturer shall have in place a Quality Assurance Program that will ensure the sheet pile is in conformance with the ASTM and other specifications cited in this document

1.3.1 Examination

Each delivered section of sheet pile shall be examined by an inspector of Contractor's designation for compliance with the appropriate requirements of this specification. This inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirements or presence of one or more major defects preventing or lessening maximum efficiency shall constitute cause for rejection.

1.4 DELIVERY, STORAGE AND HANDLING

Materials delivered to the site shall be new and undamaged and shall be accompanied by certified test reports. Sheet piling shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks.

1.5 RECOMMENDED SEQUENCE OF WORK

The Contractor shall arrange its construction sequence in compliance with the following requirements:

- a. minimize unbalanced lateral loads on sheeting;
- b. complete construction of the West Bulkhead before starting construction of the East Bulkhead;
- c. work from the north to south when constructing each Bulkhead;
- d. and ensure that no vertical pressures on the finished surface of the Bulkhead, due to loads such as construction equipment and temporary stockpiles of materials, exceeds 100 pounds per square foot.

A recommended sequence of construction is presented below based on the above requirements. All proposed variations to the recommended sequence of construction shall be submitted to the Contracting Officer for approval.

- a. Mobilize to start construction of the West Bulkhead at the north

end, Sta. 11+00W.

- b. Drive temporary support piles and install the driving template (wales) for sheeting.
- c. Construct a length of the Bulkhead, as determined by the Contractor, and install the interior cross-wall as shown on the drawings.
- d. Connect wales and tie rods in the completed section of the Bulkhead.
- e. Place dredged sand material within the completed section of the Bulkhead to Elevation +3.5.
- f. Remove the temporary support piles and advance the pile driving operation.
- g. Repeat the above steps "b" through "f" until construction of the West Bulkhead is complete at Sta. 1+00W.
- h. Place the geogrid marine mattress at the toe of the West Bulkhead.
- i. Mobilize to start construction of the East Bulkhead at the north end, Sta. 6+60E.
- j. Remove existing rip rap at south end.
- k. Repeat the above steps "b" through "f" until construction of the East Bulkhead is complete at Sta. 1+00E.
- l. Place the geogrid marine mattress at the toe of the East Bulkhead
- m. Replace rip rap at south end.

PART 2 PRODUCTS

2.1 VINYL SHEET PILING

2.1.1 General Configuration

Vinyl sheet piling shall be a "Z" Section extruded plastic manufactured from rigid, impact modified, UV-inhibited, weatherable vinyl that meets or exceeds the requirements set out in Tables I and II below. The interlocks of the sheet piling shall be free-sliding, allowing a swing angle of not less than 5 degrees when threaded, and maintain continuous interlocking when installed. Steel sheet piling will not be accepted as a substitute for vinyl sheet piling.

Table I - Vinyl Sheeting Mechanical Properties (minimum)

| Property | ASTM Test | Value |
|-------------------------------|--------------|-----------------|
| Tensile Strength | ASTM D 638 | 6,300 psi |
| Modulus of Elasticity | ASTM D 790 | 380 ksi |
| Impact resistance | ASTM D 4226* | 15,000 in-lb/in |
| *Procedure B, Impactor C.125. | | |

Table II - Vinyl Sheeting Dimensions and Weight (minimum)

| Specification | Value |
|---------------------------------------|-------|
| Width (inches) | 18.00 |
| Depth (inches) | 11.00 |
| Thickness (inches) | 0.60 |
| Weight (lbs/sq ft) | 8 |
| Section Modulus (in ³ /ft) | 55 |

2.1.2 Manufacturers Experience Requirements

All sheet piles to be provided under this Section shall be furnished only by manufacturers having experience in the design and manufacture of the type of sheet pile product proposed. Manufacturers shall have a minimum of 5 years experience with the production of vinyl sheet piles. If requested, the manufacturers shall demonstrate an experience record of at least three (3) previous, separate, similar successful installations in the last five (5) years.

2.2 STEEL WALES

Wales shall be fabricated from ASTM A 36 steel, hot-dip galvanized after fabrication.

2.3 WOOD WALES AND BLOCKING

2.3.1 Solid Sawn

Provide solid sawn lumber and timbers for wales of stress-rated Southern Pine or Douglas Fir-Larch, and identified by the grade mark of a recognized association or independent inspection agency using the specific grading requirements of an association recognized as covering the species used. The association or independent inspection agency shall be certified by the Board of Review, American Lumber Standards Committee, to grade the species used. Use commercial grade lumber for secondary members such as decking, joists and railings.

2.3.2 Preservative Treatment

Fabricate lumber and timbers for wales before preservative treatment. Each piece of treated lumber or timber shall be branded, by the producer, in accordance with AWPA M6. Treat wood to be used in contact with salt water or salt water splash in accordance with AWPA C2. Treat wood products with water-borne preservative. The Contractor shall be responsible for the quality of treated wood products.

2.4 APPURTENANT METAL MATERIALS

Metal plates, shapes, bolts, nuts, tie rods, turn buckles, and other appurtenant fabrication and installation materials shall be as specified on the drawings. All materials shall be hot-dip galvanized after fabrication.

2.4.1 Hardware

Unless otherwise specified on the drawings, bolts with necessary nuts and washers shall conform to ASTM A 307. Provide hot-dip galvanize hardware as shown.

2.4.1.1 Zinc-Coating

Galvanize steel specified or indicated by the hot-dip process in accordance with ASTM A 123/A 123M or ASTM A 153/A 153M, as applicable.

PART 3 EXECUTION

3.1 REMOVAL AND REPLACEMENT OF STONE RIP RAP AT EAST BULKHEAD WALL

The existing rip rap located where the end of the East Bulkhead will be constructed shall be removed to allow driving of the sheeting. The rip rap may be stockpiled below the high water line adjacent to the Bulkhead wall construction. Following construction of the East Bulkhead, the rip rap shall be relocated against the end of the Bulkhead as directed.

3.2 INSTALLATION

3.2.1 Pile Driving Equipment

Pile driving equipment shall conform to the following requirements.

3.2.1.1 Driving Hammers

Hammers shall be steam, air, or diesel drop, single-acting, double-acting, differential-acting, or vibratory type, and of sufficient size as recommended by the sheet pile manufacturer. The driving energy of the hammers shall be as recommended by the manufacturer for the piling weights and subsurface materials to be encountered.

3.2.1.2 Jetting Equipment

Jetting equipment may be necessary in order to facilitate the installation of the sheet piles, as soil conditions warrant. The jet shall have not less than two removable or fixed jets of the water or combination air-water type. Water jets shall be designed so that the discharge volume and pressure are sufficient to freely erode the material under and adjacent to the piling. When jetting is utilized, all displaced material shall be backfilled to the original elevation after final installation of the sheets. All work associated with the jetting and backfilling shall be at no cost to the Government.

3.2.2 Placing and Driving

3.2.2.1 Placing

Any excavation required within the area where sheet pilings are to be installed shall be completed prior to placing sheet pilings. Pilings shall be picked up and completely threaded to demonstrate that they slide freely in interlock. Pilings shall be carefully located as shown. Pilings shall be placed plumb with out-of-plumbness not exceeding 1/8 inch per foot of length and true to line. Temporary bracing, templates, current deflectors or guide structures shall be provided to insure that the pilings are placed and driven to the correct alignment. Pilings properly placed and driven shall be interlocked throughout their length with adjacent pilings to form a continuous diaphragm throughout the length or run of piling wall.

3.2.2.2 Driving

Prior to driving pilings in water a horizontal line shall be painted on

both sides of each piling at a fixed distance from the bottom so that it shall be visible above the water line after installation. This line shall indicate the profile of the bottom elevation of installed pilings so that potential problem areas can be identified by abrupt changes in its elevation. The Contractor shall also keep a log of sheet cutoffs to figure the embedment of each pile. Pilings shall be driven with the proper size hammer and by approved methods so as not to subject the pilings to damage and to ensure proper interlocking throughout their lengths. Driving hammers shall be maintained in proper alignment during driving operations by use of leads or guides attached to the hammer. Caution shall be taken when a hard driving condition is encountered to avoid interlock-melt or damage. A protecting cap shall be employed in driving to prevent damage to the tops of pilings. Pilings damaged during driving or driven out of interlock shall be removed and replaced at the Contractor's expense. Jetting, when employed, shall be performed on both sides of the pilings simultaneously and must be discontinued at least 2 feet before final seating of pilings. Adequate precautions shall be taken to insure that pilings are driven plumb. If at any time the forward or leading edge of the piling wall is found to be out-of-plumb in the plane of the wall the piling being driven shall be driven to the required depth and tapered pilings shall be provided and driven to interlock with the out-of-plumb leading edge or other approved corrective measures shall be taken to insure the plumbness of succeeding pilings. The maximum permissible taper for any tapered piling shall be 1/8 inch per foot of length. Pilings in each run or continuous length of piling wall shall be driven alternately in increments of depth to the required depth or elevation. No piling shall be driven to a lower elevation than those behind it in the same run except when the pilings behind it cannot be driven deeper. If the piling next to the one being driven tends to follow below final elevation it may be pinned to the next adjacent piling. If obstructions restrict driving a piling to the specified penetration the obstructions shall be removed or penetrated with a chisel beam. If the Contractor demonstrates that removal or penetration is impractical the Contractor shall make changes in the design alignment of the piling structure as directed to insure the adequacy and stability of the structure. Pilings shall be driven to depths shown and shall extend up to the elevation indicated for the top of pilings. A tolerance of 1 inch above the indicated top elevation will be permitted.

3.2.3 Cut-Offs

All piles shall be driven to the indicated elevations. Should piles encounter difficulty or refusal above the indicated elevations, the Contractor shall employ whatever means necessary to drive the piles to the indicated elevation. Pilings driven to final elevation which are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation at no additional cost to the Government. Piling cut-offs shall become the property of the Contractor and shall be removed from the site. The Contractor shall cut holes in pilings for bolts, rods, and drains as shown or as directed. All cutting shall be done in a neat and workmanlike manner. Bolt holes in piling shall be drilled and reamed by approved methods which will not damage the surrounding material. Holes other than bolt holes shall be reasonably smooth and the proper size for rods and other items to be inserted.

3.2.4 Inspection of Driven Piling

The Contractor shall inspect the interlocked joints of driven pilings extending above ground. Pilings found to be out of interlock shall be removed and replaced at the Contractor's expense.

3.2.5 Pulling and Redriving

In the pulling and redriving of piles as directed, the Contractor shall pull selected pilings after driving to determine the condition of the underground portions of pilings. Any piling so pulled and found to be damaged to the extent that its usefulness in the structure is impaired shall be removed and replaced at the Contractor's expense. Pilings pulled and found to be in satisfactory condition shall be redriven when directed. Piles whose ends have been damaged shall be trimmed before redriving in order to reduce the likelihood of cracks propagating up the sheets. total trimming shall not exceed two inches so as not to reduce the effective length of the piles.

3.3 REJECTION OF SHEETS DUE TO DAMAGE

Crushing or shearing of sheets and the interlocks in any area due to excessive clamp pressure or driving equipment shall be unacceptable. Cracks propagating through the sheet piles as well as hairline cracks longer than 1 inch in any area of the sheet piling shall be unacceptable.

The Contractor may elect, at its own cost, to supply sheet piles longer than those identified in the contract documents in order to avoid the total rejection of sheet piles due to damage which may occur locally at the top or bottom few inches of the piles. All costs associated with this additional length, cut-off of damaged areas, cut-off to obtain final elevation, additional driving, and disposal shall be included in the the Contractor's original bid and shall be at no cost to the Government.

3.4 WALE AND TIEBACK CONSTRUCTION

3.4.1 Bolts, Hardware, Wales, Tiebacks

As shown on the drawings.

3.4.2 Wales

Steel wales shall be provided as shown on the drawings.

3.4.3 Framing

Cut and frame wales so that joints will fit over contact surface. Secure wales in alignment. Open joints are unacceptable. Shimming is not allowed.

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PART 3 EXECUTION (Not Used)

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SECTION 02490

UNDERWATER WORK

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Underwater Work

Provide necessary services and equipment to perform underwater work in support of this project. Divers may be required to attach rigging equipment for repositioning of geogrid marine mattresses, connecting sheet pile tie rods underwater, and other underwater operations for the prosecution of the work.

1.1.2 Time of Year and Weather

Diving operations may be conducted year round and under most weather conditions. The monthly normal mean temperature and the monthly normal precipitation for the site may be obtained by the Contractor from the nearest U.S. National Weather Service Office. The Contractor shall also make his own investigation of the conditions at the site which may impact on his diving operations, including site access, water access, tide and current conditions, and water temperature.

1.1.3 Depths of Diving Operations and Visibility

Depths of diving operations may range from four (4) feet to twelve (20) feet, and may include both clear and limited visibility conditions.

1.1.4 Types of Diving Operations

The surface supplied air mode of diving shall be used for all underwater work.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

CORPS OF ENGINEERS (COE)

COE EM 385-1-1

(2003) Safety & Health Requirements Manual

The Manual may be viewed or downloaded free of charge via the Internet at the New England District Homepage <http://www.nae.usace.army.mil/> under "Advertised Solicitations."

1.3 SUBMITTALS

The items listed in Article "Submittal Items" below shall be submitted to the Contracting Officer for review and acceptance by the New England

District Diving Coordinator.

1.3.1 Accepted Submittals

The acceptance of submittals by the District Diving Coordinator shall not be construed as a complete check, but will indicate only that the submittal generally complies with regulatory requirements. Acceptance will not relieve the Contractor of the responsibility for compliance with COE EM 385-1-1, Section 30. After submittals have been accepted by the District Diving Coordinator or his designated representative, no resubmittal will be given consideration unless accompanied by an explanation as to why changes are necessary.

1.3.2 Unaccepted Submittals

The Contractor or his designated representative shall make all corrections required by the District Diving Coordinator and promptly furnish a corrected submittal in the form and number of copies as specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, notice shall be given promptly to the Contracting Officer and the District Diving Coordinator.

1.3.3 Submittal Procedure

Submittals shall be made as follows:

1.3.3.1 Procedures

Submit three (3) copies of each submittal item to the Contracting Officer for review by the District Diving Coordinator. For work of an urgent nature, FAX or hand carry a copy of a complete dive plan. In extreme situations, review actions may take place at the dive site, just prior to the dive operation.

1.3.3.2 District Diving Coordinator Review

Review action on all submittals is by the New England District Diving Coordinator, Mr. George Norton, Telephone Number 978-318-8870, FAX Number 978-318-8606, EMAIL george.h.norton@usace.army.mil.

1.3.3.3 Information on Submittal Status

All Contractor requests for current status of submittal reviews shall be made through the Project Resident Engineer.

1.3.3.4 Deviations

For submittals which include proposed deviations requested by the Contractor, the Contractor shall set forth in writing the reason for the deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.3.4 Government Accepted Submittals

Upon completion of review of submittals requiring District Diving Coordinator acceptance, the submittals will be identified as having received acceptance by being so noted and dated. Two copies of the

submittal will be retained by the District Diving Coordinator and one copy of the submittal will be returned to the Contractor.

1.3.5 Information Only Submittals

Normally submittals for information only will not be returned. Acceptance of the District Diving Coordinator is not required on information only submittals. These submittals will be used for information purposes. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to comply with these specifications and will not prevent the Contracting Officer from requiring contract compliance.

1.3.6 Submittal Items

The Contractor shall submit all items listed below. The District Diving Coordinator may request submittals in addition to those listed when deemed necessary to adequately describe the underwater. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and shall be stamped, signed, and dated by the CQC representative certifying that the submittal complies with the contract requirements. Proposed deviations from the contract requirements shall be clearly identified.

1.3.6.1 Contractor Safe Practices Manual

The Contractor shall develop and maintain a safe practices manual. The safe practices manual shall contain all of the information required by 29 CFR 1910.420 and the additional information as specified below. This manual shall encompass the Contractor's entire diving program and be available at all times at the dive location to each dive team member and the Government representative. The safe practices manual shall include the items listed in COE EM 385-1-1, Section 30, and verification of dive team qualifications and experience. Verification of dive team qualifications and experience includes divers, diving supervisor, and tenders. Evidence that each dive team member has current certification in cardiopulmonary resuscitation (CPR) and first aid shall be submitted. A lack of experience or qualifications to perform the tasks stated in the scope of work will be cause for rejection or cessation of operations.

1.3.6.2 Site Specific Diving Operational Plans

A site specific diving operations plan shall be developed for each separate diving operation. This plan shall be submitted to the District Diving Coordinator for review and acceptance, prior to commencement of diving operations. The accepted plan shall be at the diving location at all times and be made available to the Government diving inspector upon request. As a minimum, the plan shall contain the information required by COE EM 385-1-1, Section 30.

1.4 REGULATORY REQUIREMENTS

All diving operations performed under this contract shall comply with COE EM 385-1-1, Section 30.

1.4.1 Policy

It is the policy of the Corps of Engineers that all contract diving operations be conducted in a prudent manner that will provide for maximum efficiency and minimize the potential for personal injury, loss of life, occupational illness and/or property damage.

1.5 DIVING INSPECTION AND MONITORING

All Contractor diving operations will be inspected or monitored by the New England District Diving Coordinator or a designated representative who holds a current Corps of Engineers diving inspection certification. Diving shall not be permitted unless a Corps of Engineers certified diving inspector is present on-site, unless the District Diving Coordinator has granted permission for off-site monitoring. The Contractor shall provide a boat large enough to safely accommodate the boat operator, the dive team and dive equipment, and a Corps of Engineers Dive Inspector. Off-site monitoring will only be granted after an initial on-site inspection to verify the Contractors compliance with COE EM 385-1-1, Section 30. Dive operation monitoring consists of occasional telephone contact with the Contractor's on-site dive supervisor and occasional site inspections. Failure to adhere to these requirements will be considered a serious violation of this contract and cause for an immediate stop-work order issued by the Contracting Officer.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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SECTION 02495

GEOTECHNICAL INSTRUMENTATION

PART 1 GENERAL

1.1 SUMMARY

The Work of this Section includes furnishing, installing and maintaining geotechnical instrumentation, protecting instrumentation from damage, monitoring instruments, and providing access to Government employees to monitor the instruments. The purpose of the Geotechnical Instrumentation Program is to provide verification of deformation performance of the sheet pile bulkhead and the placed fill material.

1.1.1 Contractor Requirements

- a. Furnish components of instrumentation that are to be installed during construction.
- b. Install instruments.
- c. Protect from damage and maintain instruments.
- d. Repair or replace damaged or inoperative instruments.
- e. Monitor instruments and report readings.
- f. Provide safe access to Government employees for data collection.

1.2 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 Corps of Engineers office that will also review the submittal. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Manufacturers' Product Data; G, EO

- a. At least 30 days prior to start of installation of the first of each type of instrument, the Contractor shall submit manufacturers' product data for approval.
- b. At least 15 days prior to commencing installation of the first of each type of instrument, the Contractor shall submit to the Contracting Officer for review, the following items pertaining to that instrument type:

Detailed step-by-step procedure for installation, together with a sample installation record sheet. The procedures shall be bound and

indexed. The installation procedures shall include:

1. Method for conducting post-installation acceptance test.
 2. Method for protecting instruments from damage.
 3. A schedule indicating the proposed time sequence of instrument installation.
- c. Within 2 workdays of receipt of each instrument at the site, the Contractor shall submit a copy of factory calibration, manufacturer's test equipment certification, completed copy of quality assurance checklist, and warranty for each portable readout unit.
- d. Within 7 days of receipt of each instrument at the site, the Contractor shall submit to the Contracting Officer completed pre-installation acceptance test record form for that instrument.
- e. Within 5 days of installing each instrument, the Contractor shall submit the installation record sheet for that instrument, including as-built instrument location as specified.

SD-07 Certificates

Personnel resumes; G, EO

At least 30 days prior to commencing installation of any instrument, the Contractor shall submit the resume of the personnel who will perform the instrument installations. The personnel shall include a superintendent who has documented evidence of experience of at least three years of field installation of instruments of the type specified .

1.3 QUALITY CONTROL

- a. A factory calibration shall be conducted on the loadcell portable readout unit prior to shipment. Certification shall be provided to indicate that the test equipment used for this purpose is calibrated and maintained in accordance with the test equipment manufacturer's calibration requirements and that, where applicable, calibrations are traceable to the National Institute of Standards and Technology.
- b. A final quality assurance inspection shall be made prior to shipment. During the inspection, a checklist shall be completed to indicate each inspection and test detail. A completed copy of the checklist shall be supplied with each instrument.
- c. The Contractor shall provide the manufacturer's warranty for each portable readout unit.

1.4 STORAGE OF INSTRUMENTS

All instrumentation materials, after receipt at the site and prior to installation, shall be stored in an indoor, clean, dry and secure storage space. Instrumentation materials shall not be exposed to temperatures outside the manufacturer's stated working temperature range.

PART 2 PRODUCTS

2.1 GENERAL

a. Whenever a product is specified by brand name and model number, such specifications shall be deemed to be used for the purpose of establishing a standard of quality and facilitating the description of the product desired. The term "acceptable equivalent" shall be understood to indicate that the "acceptable equivalent" product is the same or better than the product named in the Specifications in function, performance, reliability, quality, and general configuration. This procedure is not to be construed as eliminating from competition other suitable products of equal quality by other manufacturers. The Contractor may, in such cases, submit complete comparative data to the Contracting Officer for consideration of another product. Substitute products shall not be ordered, delivered to the site, or used in the Work unless accepted by the Contracting Officer in writing. The Contracting Officer will be the sole judge of the suitability and equivalency of the substituted product.

b. A request from the Contractor for consideration of a substitution shall clearly state the nature of the deviation from the product specified.

c. Specified load cell readout unit, together with associated calibration devices and software, shall be furnished to the Contracting Officer no later than one week before commencing installation of the first load cell. In addition to the specified readout unit for the Contracting Officer's use when collecting data, the Contractor shall provide his own readout unit as needed for making pre-installation and post-installation acceptance tests, for taking any required readings during installation, and for taking the Formal Initial and subsequent readings, as specified herein. Such readout unit shall be identical to the specified readout unit.

d. The Contractor shall furnish all installation tools, materials and miscellaneous instrumentation components.

e. For load cells, provide an instruction manual which shall include the following:

1. A description of the purpose of the instrument.
2. Theory of operation.
3. Step-by-step procedures for:
 - (a). Pre-installation acceptance test when instruments are received on site, to ensure the instruments are functioning correctly prior to installation.
 - (b). Calibration of readout units.
4. A list of calibration equipment required, and recommended frequency of calibration.
5. Step-by-step instrument installation procedure including materials, tools, spare parts and any borehole requirements, and post-installation acceptance tests.
6. Maintenance procedure.

f. All graduations shall be in U.S. Customary Units, for example feet, inches, pounds.

2.2 DEFORMATION MONITORING POINTS

Deformation monitoring points (DMPs) will be used to monitor vertical and horizontal deformation of the sheet pile bulkheads at selected locations shown on the drawings. Each DMP shall consist of an observable point punchmarked on the top horizontal surface of sheeting or a waler. The point shall also be clearly identified using waterproof fluorescent spray paint adjacent to the point.

2.2 LOAD CELLS

a. Load cells shall be Model 4900 Vibrating Wire Load Cell (3 gage, 6" OD, 400 KIPs, minimum), manufactured by Geokon Inc. of Lebanon, NH, Model VH-2500 Vibrating Wire Load Cell manufactured by RocTest LTD of Plattsburgh, NY, or acceptable equivalent.

b. Provide cable. Cable shall be from the same commercial source as the load cell. Cable shall be 4 conductor, 22 gage, with two shielded twisted pairs, a common drain wire, and a sheath of 0.065 inches thick pressure extruded vinyl with an outside diameter of 0.25 inch.

c. Provide a readout unit from the same commercial source as the load cell for the sole use of the Contracting Officer. Provide an identical unit for the Contractor's monitoring program. Terminal units shall be clearly marked with each strain gage number. Portable readout unit and jumper cable shall be capable of reading both the vibrating wire and thermistor reading, shall have a minimum of 64K RAM memory, and shall display readings in engineering units.

d. Provide a waterproof terminal box, 8"x8" minimum, bolted onto the installed vinyl sheets or wales. The box shall be fitted with vibrating wire and temperature readout terminals to enable readings to be obtained by directly attaching the portable readout unit. The protective box shall be capable of preventing moisture entry during high tides, when the entire assembly will be submerged under water. One box shall be provided for each load cell location, for a total of four boxes.

2.3 FACTORY CALIBRATION

A factory calibration shall be conducted on all instruments at the manufacturer's facility prior to shipment. Each factory calibration shall include a calibration curve with data points clearly indicated, and a tabulation of the data. Each instrument shall be marked with a unique identification number. Quality assurance procedures during factory calibration shall be as specified herein.

PART 3 EXECUTION

3.1 PRE-INSTALLATION ACCEPTANCE TESTS

a. When instruments are received at the site, the Contractor's instrumentation personnel shall perform pre-installation acceptance tests to ensure that the instruments and readout units are functioning correctly prior to installation. Pre-installation acceptance tests shall include relevant items from the following list:

1. Examine factory calibration curve and tabulated data, to verify completeness.
2. Examine manufacturer's final quality assurance inspection check list, to verify completeness.
3. Check cable length.
4. Check tag numbers on instrument and cable.
5. Check, by comparing with procurement document, that model, dimensions, materials, etc. are correct.
6. Bend cable back and forth, at point of connection to instrument, while reading the instrument, to verify connection integrity.
7. Perform resistance and insulation testing, in accordance with criteria provided by the instrument manufacturer, using a gage insulation or circuit tester that applies 2 volts or less for resistance testing and 15 volts or less for insulation testing.
8. Verify that all components fit together in the correct configuration.
9. Check all components for signs of damage in transit.
10. Check that quantities received correspond to quantities ordered.

b. During pre-installation acceptance testing of each instrument the Contractor shall complete a pre-installation acceptance test record form.

c. An instrument that fails the specified pre-installation acceptance test shall be repaired such that it passes a subsequent pre-installation acceptance test, or shall be replaced by an identical instrument at no additional cost to the Government.

3.2 INSTALLATION - GENERAL

a. The Contractor shall install instruments, following the guidelines included in the manufacturers' instruction manuals, and as detailed in the reviewed submittal.

b. The Contractor shall notify the Contracting Officer at least 24 hours prior to installing each instrument.

C. As each instrument is installed, an installation record sheet shall be prepared, including appropriate items from the following list:

1. Project name.
2. Contract name and number.
3. Instrument type and number, including readout unit.
4. Planned location in horizontal position and elevation.
5. Personnel responsible for installation.
6. Plant and equipment used.

7. Date and time of start and completion.
 8. Spaces on record sheet for necessary measurements or readings required at hold points during installation to ensure that all previous steps have been followed correctly, including instrument readings made during installation.
 9. As-built location in horizontal position and elevation, including:
 - (a). Elevation referenced to the project datum, together with the location of the point used for the elevation measurement.
 - (b). Horizontal position referenced both to New Hampshire State Plane Grid Coordinates and to project baseline station and offset, together with the location of the point used for the horizontal position measurement.
 - (c). A location sketch showing the instrument number and the taped horizontal distances to the instrument, measured to an accuracy of ± 1 ft, from permanent physical features in the field. A sufficient number of taped measurements shall be included on the sketch to establish a unique horizontal position for the instrument. If such features are removed, the Contractor shall provide a new sketch, prior to removal, with taped measurements to other features.
 10. Result of post-installation acceptance test.
 11. Weather conditions at the time of installation.
 12. A space on record sheet for notes, including problems encountered, delays, unusual features of the installation, and details of any events that may have a bearing on instrument behavior.
- d. Instruments that fail the specified post-installation acceptance test shall be replaced by an identical instrument at no additional cost to the Government.
- e. The Contractor shall submit updated as-built instrument location plans to the Contracting Officer. The location plans shall be reproducible composite plans of all installed instruments plotted on 24 in. x 36 in. sheets at a scale of 1 inch = 100 ft. The first plans shall be submitted within one week after completion of the first instrument installation, regardless of instrument type. Updated plans shall be submitted every subsequent two weeks. Updated plans need not be submitted for periods during which no instruments have been installed.
- ### 3.3 INSTALLATION OF DEFORMATION MONITORING POINTS
- a. Deformation monitoring points (DMPs) shall be installed at the locations shown on the Plans.
 - b. After installation, determine the horizontal position to an accuracy of ± 0.03 foot. The least count (without estimation) of the rod and level combination shall read to 0.003 foot or less, such that the accuracy of an elevation measurement shall be ± 0.01 foot (at 95 percent level of confidence).

3.4 DATA COLLECTION

a. The Contractor shall collect readings of all instruments for a continuous period of three weeks following installation of all of the instruments, at the direction of the Contracting Officer, in accordance with the following schedule:

Deformation Monitoring Points: Horizontal and vertical monitoring daily at low tide

Load Cells: Daily at low tide, when water elevation is below wale level.

b. The Government may collect its own data, generally weekly but occasionally daily or more often.

c. The Contractor shall provide and facilitate safe access to the Work at all times for the Government to collect data from specified instruments. Safe access shall include, but not be limited to, cessation of work activities, temporary relocation of obstructing materials and equipment, provision of ladders and boats, working platforms and hoisting services, and any other needs that, in the opinion of the Contracting Officer, are necessary to ensure the safety of data collection personnel. The Contractor shall furnish two sets of personal safety equipment, as appropriate, for use by the Government when collecting data.

d. Formal Initial Readings in each instrument shall be taken jointly with the Government, using the Contractor's readout unit. The Contractor shall satisfy itself on the validity of formal initial readings, and shall sign its agreement to such readings. The Contracting Officer shall be the sole judge of the acceptability of the formal initial readings, and no instrument will be accepted or paid for until formal initial readings are agreed upon as specified herein.

e. For vertical deformation monitoring, runs shall be performed by a single run beginning and ending on two different deep benchmarks. Deformation monitoring points shall be used as turning points or as intermediate foresights from two different turning points, allowing elevations to be adjusted and eliminating significant observational errors. The maximum length of line of sight shall be 230 feet, and the imbalance between backsight and foresight shall not exceed 30 feet. Allowable level loop misclosure shall not exceed ± 0.033 times the square root of M feet (where M is the distance of the level run in miles) for a single run between two deep benchmarks. A formal initial reading on a deformation monitoring point will consist of the average of three elevations, from three independent level runs which meet the closure specified herein. Elevations established subsequent to a formal initial reading shall be determined as specified herein, and to an accuracy of 0.005 ft. Vertical bench marks to be used in DMP monitoring shall be established by the Contractor in stable ground, to the satisfaction of the Contracting Officer.

For horizontal deformation monitoring, if a theodolite is used, the direction measurements shall be made in two sets of direct and reverse pointings, changing the circle setting by 90 degrees between sets. Reduced directions shall be rejected if they deviate from the mean by more than 5 arc seconds. The theodolite shall be plumbed over the occupied point by a high precision optical plummet or mechanical centering device. When distances are measured with a tape, each distance shall be measured independently two separate times and shall be corrected for the temperature and tension of the tape. A formal initial reading on a deformation

monitoring point will consist of the average of three readings, from three independent set-ups, each as specified herein. Each reading other than the formal initial reading shall consist of a single set of readings, as specified herein. All readings shall be referenced to stable horizontal control points. Reading accuracy shall be ± 0.03 foot. Horizontal control points shall be established by the Contractor.

f. A formal initial set of load cell readings shall consist of three readings of load (average strains and calculated load) and temperature at each of the following five times:

1. Upon initial assembly.
2. With the tieback in place and ready for tensioning.
3. No less than 1 hour, and no more than two hours after tieback tensioning.
4. One day after installation, at low tide.
5. One day after completion of backfilling adjacent to the load cell location, at low tide.

Each subsequent reading after the formal initial reading shall consist of a single reading of load and temperature, taken at the direction of the Contracting Officer.

3.5 PRESENTATION OF DATA

- a. Raw and reduced data shall be reported to the Contracting Officer within 24 hours of field collection.
- b. All data shall be reported in both paper and electronic formats. Electronic monitoring data shall be reported in Microsoft Excel spreadsheets on CD-ROMs.
- c. For load cells report strain reading in each gage and load (average of 3 gages) in KIPs, corrected for temperature.

3.6 DISCLOSURE OF DATA

The Contractor shall not disclose any instrumentation data to third parties and shall not publish data without prior approval and written consent of the Contracting Officer.

3.7 DAMAGE TO INSTRUMENTATION

- a. The Contractor shall protect all instruments and appurtenant fixtures from damage due to tidal waters, construction operations, weather, traffic, and vandalism.
- b. If an instrument is damaged or inoperative, the Contractor's personnel shall repair or replace the damaged or inoperative instrument within 72 hours, at no additional cost to the Government. The Contractor shall notify the Contracting Officer at least 24 hours prior to repairing or replacing a damaged or inoperative instrument. The Contracting Officer shall be the sole judge of whether repair or replacement is required. The Contracting Officer may impose a work stoppage in the vicinity of the damaged or inoperative instrument until it is again operational, at no

additional cost to the Government.

3.8 DISPOSITION OF INSTRUMENTS

The load cell portable readout unit furnished to the Government shall become the property of the Government upon receipt. The load cell portable readout unit used for the Contractor's monitoring program shall remain the property of the Contractor.

-- End of Section --