

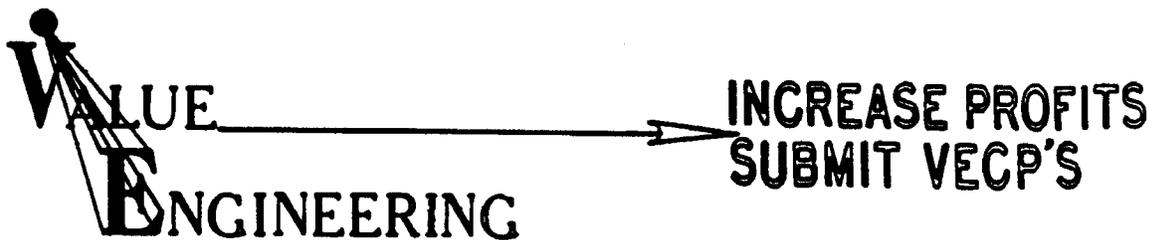
IFB No. DACW17-02-B-0011

**US Army Corps
of Engineers
Jacksonville District**

San Juan Harbor, Puerto Rico;

**Project Modifications for
Improvement of the Environment at
La Esperanza Peninsula, Catano, Puerto Rico**

**Construction Solicitation
and Specifications**



16 July 2002



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Contracting Division
A-E and Construction Branch

SUBJECT: Notice of Award – Contract No. DACW17-02-C-0028, San Juan Harbor, Puerto Rico; Project Modification for Improvement of the Environment at La Esperanza Peninsula, Catano, Puerto Rico

LRV Environmental, Inc.
Ave. Esmeralda #53, Suite 199
Guaynabo, Puerto Rico 00969-4429

Gentlemen:

In accordance with the terms and conditions of Solicitation No. DACW17-02-B-0011, the Government has awarded your firm Contract No. DACW17-02-C-0028 for San Juan Harbor, Puerto Rico; Project Modification for Improvement of the Environment at La Esperanza Peninsula, Catano, Puerto Rico. A copy of the contract is enclosed.

Your attention is directed to our dredge safety initiative. The enclosed letters emphasize the importance the U.S. Army Corps of Engineers attaches to dredge safety and confirms our commitment to improving safety and reducing the number of accidents occurring on our dredging contracts.

As required by the solicitation, you must submit acceptable performance and payment bonds within ten calendar days of the day you receive this notice.

This notice does not constitute authorization to commence work under the contract. A separate notice to proceed will be issued when all pre-work conditions specified in the solicitation have been satisfied.

You must acknowledge receipt of this notice in the space provided below and send your acknowledgment to this office as soon as possible. The date of acknowledgment must match the date entered in the delivery service's delivery log.

If you have any questions, please contact Pamela Owens at (904) 232-1443 or pamela.j.owens@usace.army.mil.

Sincerely,

A handwritten signature in black ink that reads "Wanda I. Cruz".

Wanda I. Cruz
A-E and Construction Branch
Contracting Officer

Enclosures

ACKNOWLEDGMENT

Date:

Name/Title:

Signature

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Reference: Notice of Award – Contract No. DACW17-02-C-0028, San Juan Harbor, Puerto Rico; Project Modification for Improvement of the Environment at La Esperanza Peninsula, Catano, Puerto Rico



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

SEP 24 2001

**Safety and Occupational
Health Office**

Dear U. S. Army Corps of Engineers Dredging Contractor:

I would like to add my commitment to General Anderson's in identifying ways to achieve our mutual goal of zero accidents. Since FY 99, Jacksonville District has experienced two fatalities and fifteen lost time accidents on dredging projects. Our dredging accident rate has also risen to the present unacceptable rate of 6.15 times that of non-dredging construction projects during this period:

The Corps Safety and Health Requirements Manual, EM 385-1-1 dated 3 September 1996, dictates minimum safety requirements. If you have other successful safety program initiatives, I would be very interested in receiving information on those initiatives. My point of contact for this important topic is Mr. James W. Woodey, my Chief of Safety and Occupational Health. Mr. Woodey may be reached by phone at 904-232-2564, or you may contact him by e-mail at james.w.woodey@usace.army.mil.

We look forward to an accident-free project!

Sincerely,

James G. May
Colonel, U. S. Army
District Engineer

Enclosure



DEPARTMENT OF THE ARMY
SOUTH ATLANTIC DIVISION, CORPS OF ENGINEERS
ROOM 9M15, 60 FORSYTH ST., S.W.
ATLANTA, GEORGIA 30303-8801

APR 6 2001.

REPLY TO
ATTENTION OF
Safety and Occupational
Health Office

Dear U. S. Army Corps of Engineers Dredging Contractor:

Although many of our dredging contracts are completed without an accident, last year dredging contracts had a lost time frequency rate six times that of our construction contractors and our only fatality was on a dredging contract. This is unacceptable. The purpose of this letter is to request that you assure that your personnel and subcontractors on this contract understand and are doing their best to achieve our mutual goal of zero accidents for this contract.

As you know accident free work reduces insurance premiums and legal liabilities while improving worker morale and often worker productivity. The Corps Safety Manual contains minimum safety requirements. With the potential for fatalities and serious accidents in the dredging industry, many contractors find it necessary and in their best interest to have safety programs, initiatives, and safety professionals that far exceed our basic contract requirements. We hope that your programs are exemplary and that we will be able to share your safety initiatives and successes with others.

Our experience indicates that contractors who fully comply with the Corps' Safety Manual, have top management's full commitment to safety, have knowledgeable supervisors who enforce safety requirements, provide safety training for their employees, and implement an effective quality control program will have accident free contracts. If you have identified other keys to a successful safety program, I would be interested in hearing your thoughts.

~~We look forward to working with you to achieve a safe and successful project.~~

Sincerely,

Phillip R. Anderson
Major General, U. S. Army
Division Engineer

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. DACW17-02-B-0011	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 16-Jul-2002	PAGE OF PAGES 1 OF
ORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO. DACW17-02-C-0028	5. REQUISITION/PURCHASE REQUEST NO. W32CS520546395	6. PROJECT NO.
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7. ISSUED BY USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412	CODE DACW17	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> ANTILLES OFFICE U.S. ARMY CORPS OF ENGINEERS (CESAJ-DS) 400 FERNANDEZ JUNCOS AVENUE SAN JUAN PR 00901-3299	CODE ANTILLES
TEL:	FAX:	TEL:	FAX:

9. FOR INFORMATION CALL:	A. NAME PAMELA J OWENS	B. TELEPHONE NO. <i>(Include area code)</i> (NO COLLECT CALLS) 904-232-1443
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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):*

SAN JUAN HARBOR, PUERTO RICO; PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA, CATANO, PUERTO RICO.

DRAWING FILE NO. 102-38, 205 DATED JUNE 2001.

DESCRIPTION OF WORK: SEE ATTACHED PAGE 00010-3.

AMOUNT OF CONSTRUCTION IS BETWEEN \$1,000,000.00 AND \$5,000,000.00.

THIS IS AN UNRESTRICTED PROCUREMENT BEING ISSUED PURSUANT TO THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM. ALL BUSINESSES ARE ENCOURAGED TO PARTICIPATE.

YOU MUST BE REGISTERED IN THE CENTRAL CONTRACTOR REGISTRATION IN ORDER TO BE ELIGIBLE TO RECEIVE AND AWARD FROM THIS SOLICITATION. CALL 1-888-227-2423 FOR MORE INFORMATION.

NOTE: BLOCK 13.A., BID OPENING WILL BE AT THE ANTILLES OFFICE, 400 FERNANDEZ JUNCOS AVENUE, SAN JUAN, PUERTO RICO. THE BID BOX IS LOCATED ON THE FIRST FLOOR (CONFERENCE ROOM).

11. The Contractor shall begin performance within 30 calendar days and complete it within 210 calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. (See Section 00700 _____.)

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 10
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copies to perform the work required are due at the place specified in Item 8 by 11:00:00 (hour) local time 8/15/02 (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.
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.

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

DUPLICATE ORIGINAL

SOLICITATION, OFFER, AND AWARD (Continued)

(Construction, Alteration, or Repair)

OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*
 LRV ENVIRONMENTAL, INC.
 AVE. ESMERALDA #53 SUITE 199
 GUAYNABO, PR 00969-4429

15. TELEPHONE NO. *(Include area code)*
 787-706-0248

16. REMITTANCE ADDRESS *(Include only if different than Item 14)*
 See Item 14

CODE _____ FACILITY CODE _____

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 60 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

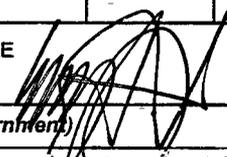
18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of

AMENDMENT NO.	1	2	3	4					
DATE	8/15/02	8/16/02	8/19/02	8/21/02					

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)* Luis Rosado-Viana/President

20B. SIGNATURE 

20C. OFFER DATE
 08-29-02

AWARD (To be completed by Government)

21. ITEMS ACCEPTED: Funded: 96 NA X 3122.0000 K3 X 08 2444 096131 96083 3230 9FCFC6
SEE SCHEDULE Total Amount: \$1,000.00 Remain to be funded: \$1,591,020.00

22. AMOUNT
 \$1,592,020.00

23. ACCOUNTING AND APPROPRIATION DATA
 96 NA X 3122.0000 K3 X 08 2444 096131 96083 3230 9FCFC6

24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)*

ITEM
 26

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO
 10 U.S.C. 2304(c) 41 U.S.C. 253(c)

26. ADMINISTERED BY CODE K360EC0
 ANTILLES - SAN JUAN OFFICE
 USA CORPS OF ENGINEERS ((CESAJ-CO-DS)
 400 FERNANDEZ JUNCOS AVENUE
 SAN JUAN, PR 00901-3299

27. PAYMENT WILL BE MADE BY CODE t0b200
 USACE FINANCE CENTER
 5722 INTEGRITY DRIVE
 ATTN: CEFC-AO-P
 MILLINGTON, TN 38054-5005

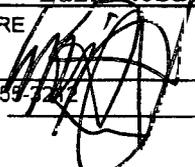
CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return 1 copies to issuing office.)* 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.

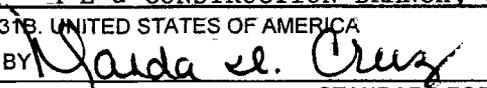
29. AWARD *(Contractor is not required to sign this document.)*
 Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*
 Luis Rosado-Viana/President

31A. NAME OF CONTRACTING OFFICER *(Type or print)*
 WANDA I. CRUZ
 A-E & CONSTRUCTION BRANCH, CONTRACTING OFFICER

30B. SIGNATURE 

30C. DATE
 8-29-02

31B. UNITED STATES OF AMERICA
 BY 

31C. AWARD DATE
 9/27/02

DESCRIPTION OF WORK:

The project modifications will include the dredging of a flow channel through the peninsula and the removal, by dredging, of the tip of the peninsula. The required dredging depth will be -3 feet N.G.V.D and the total quantity of material to be dredged will be approximately 51,000 cubic yards. All dredged material will be placed in a cove located along the interior shoreline of the peninsula. The required final elevation of the material placed in the cove will be between 0.0 feet N.G.V.D. and +1.0 feet N.G.V.D. with a 0.5 foot allowable tolerance below the required elevation. Also required will be the installation of approximately 500 linear feet (24,200 SF) of steel sheet pile to stabilize the shoreline of the peninsula.

LINE ITEMS AND PRICING SCHEDULE

**SAN JUAN HARBOR, PUERTO RICO;
PROJECT MODIFICATIONS FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA,
CATANO, PUERTO RICO**

<u>LINE ITEM</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
0001	MOBILIZATION AND DEMOBILIZATION (SEE SECTION 00700)	1	LUMP SUM		\$ 110,000.00
0002	CLEARING AND GRUBBING (ESTIMATED QUANTITY)	3.4	ACRE	\$ 15,000.00	\$ 51,000.00
0003	EXCAVATION AND PLACEMENT (ESTIMATED QUANTITY)	51,000	CUBIC YARD	\$ 10.00	\$ 510,000.00
0004	ENDANGERED SPECIES MONITORING (SEE SECTION 01355: ENVIRONMENTAL PROTECTION)	1	LUMP SUM		\$ 35,000.00
0005	TURBIDITY MONITORING (SEE SECTION 01411: TURBIDITY MONITORING)	1	LUMP SUM		\$ 85,000.00
0006	STEEL SHEET PILING (ESTIMATED QUANTITY)	24,200	SQUARE FOOT	\$ 33.10	\$ 801,020.00
TOTAL BID (LINE ITEMS 0001 THROUGH 0006)					\$ 1,592,020.00

NOTES:

- (1) BIDDERS MUST BID ON ALL LINE ITEMS. SEE SECTION 00100, PROVISION 52.214-8.
- (2) FAILURE TO COMPLETE AND RETURN ALL REQUIRED SUBMISSIONS (SF 1442, SECTION 00010, AND SECTION 00600) COULD RENDER YOUR BID NONRESPONSIVE.
- (3) SEE SECTION 00100, "INSTRUCTIONS TO OFFERORS / EVALUATION FACTORS FOR AWARD".

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SECTION 00700
CONTRACT CLAUSES

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (DEC 2001) --ALTERNATE I (MAY 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) "Commercial component" means any component that is a commercial item.

(c) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that--

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;

(2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;

(3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for--

(i) Modifications of a type customarily available in the commercial marketplace; or

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;

(4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;

(5) Installation services, maintenance services, repair services, training services, and other services if--

(i) Such services are procured for support of an item referred to in paragraph (c)(1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and

(ii) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;

(6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates

without an established catalog or market price for a specific service performed. For purposes of these services--

(i) Catalog price means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and

(ii) Market prices means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.

(7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or

(8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

(d) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(e) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(End of clause)

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

(End of clause)

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before 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 in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.

(2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.

(3) A special Government employee, as defined in section 202, Title 18, United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay 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 in connection with any of the following covered Federal actions: 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; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure 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 in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

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

"Postconsumer material" means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material." For paper and paper products, postconsumer material means "postconsumer fiber" defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

"Printed or copied double-sided" means printing or reproducing a document so that information is on both sides of a sheet of paper.

"Recovered material," for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as "recovered fiber" and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 30 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **210 calendar days**. The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(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 \$1,286.00 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.

(End of clause)

52.211-18 VARIATION IN ESTIMATED QUANTITY (APR 1984)

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon the receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, in the judgement of the Contracting Officer, is justified.

52.214-26 AUDIT AND RECORDS--SEALED BIDDING. (OCT 1997)

(a) As used in this clause, records includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with the pricing of any modification to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

(1) The proposal for the modification;

(2) The discussions conducted on the proposal(s), including those related to negotiating;

(3) Pricing of the modification; or

(4) Performance of the modification.

(c) Comptroller General. In the case of pricing any modification, the Comptroller General of the United States, or an authorized representative, shall have the same rights as specified in paragraph (b) of this clause.

(d) Availability. The Contractor shall make available at its office at all reasonable times the materials described in reproduction, until 3 years after final payment under this contract, or for any other period specified in Subpart 4.7 of the Federal Acquisition Regulation (FAR). FAR Subpart 4.7, Contractor Records Retention, in effect on the date of this contract, is incorporated by reference in its entirety and made a part of this contract.

(1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement.

(2) Records pertaining to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to the performance of this contract shall be made available until disposition of such appeals, litigation, or claims.

(e) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (e), in all subcontracts expected to exceed the threshold in FAR 15.403-4(a)(1) for submission of cost or pricing data.

52.214-27 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - MODIFICATIONS - SEALED BIDDING. (OCT 1997)

(a) This clause shall become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for the submission of cost or pricing data at FAR 15.403-4(a)(1), except that this clause does not apply to a modification if an exception under FAR 15.403-1(b) applies.

(1) Based on adequate price competition;

(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(3) Set by law or regulation.

(b) If any price, including profit, negotiated in connection with any modification under this clause, was increased by any significant amount because

(1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data;

(2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(3) any of these parties furnished data of any description that were not accurate, the price shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) above.

(c) Any reduction in the contract price under paragraph (b) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which:

(1) the actual subcontract; or

(2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made:

(1) the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted;

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer;

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract; or

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2) Except as prohibited by subdivision (d)(2)(ii) of this clause:

(i) an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if:

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if:

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or (B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid:

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

(2) A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

52.214-28 SUBCONTRACTOR COST OR PRICING DATA - MODIFICATIONS - SEALED BIDDING.
(OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall:

(1) become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for submission of cost or pricing data at (FAR) 48 CFR 15.403-4(a)(1); and

(2) be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1), on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modifications involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1), the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1(b) applies.

(1) Based on adequate price competition;

(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

(3) Set by law or regulation.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in subsection 15.406-2 of the Federal Acquisition Regulation that, to the best of its knowledge and belief, the data submitted under paragraph (b) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(d) The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that, when entered into, exceeds the threshold for submission of cost or pricing data at FAR 15.403-4(a)(1).

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)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for

major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

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 small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

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; and

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

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002) ALTERNATE I (OCT 2001)

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

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

Commercial item means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

Commercial plan means a subcontracting plan (including goals) that covers the offeror's fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (e.g., division, plant, or product line).

Individual contract plan means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror's planned subcontracting in support of the specific contract, except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

Master plan means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

Subcontract means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) The apparent low bidder, upon request by the Contracting Officer, shall submit a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns. If the bidder is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be submitted within the time specified by the Contracting Officer. Failure to submit the subcontracting plan shall make the bidder ineligible for the award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns;

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;

(v) Total dollars planned to be subcontracted to HUBZone small business concerns;

(vi) Total dollars planned to be subcontracted to small disadvantaged business concerns; and

(vi) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to--

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) Service-disabled veteran-owned small business concerns;

(iv) HUBZone small business concerns;

(v) Small disadvantaged business concerns; and

(vi) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, (iii) Service-disabled veteran-owned small business concerns; HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—

- (i) Small business concerns;
- (ii) Veteran-owned small business concerns;
- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUBZone small business concerns;
- (v) Small disadvantaged business concerns; and
- (vi) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.

(10) Assurances that the offeror will--

- (i) Cooperate in any studies or surveys as may be required;
- (ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;
- (iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.
- (iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated)

(i) Source lists (e.g., PRO-Net), guides, and other data that identify small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating--

(A) Whether small business concerns were solicited and, if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;

(D) Whether HUBZone small business concerns were solicited and, if not, why not;

(E) Whether small disadvantaged business concerns were solicited and, if not, why not;

(F) Whether women-owned small business concerns were solicited and, if not, why not; and

(G) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact--

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through--

(A) Workshops, seminars, training, etc.; and

(B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owner small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owner small business, HUBZone small, small disadvantaged, or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided--

(1) the master plan has been approved,

(2) the offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer, and

(3) goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with (1) the clause of this contract entitled "Utilization Of Small Business Concerns," or (2) an approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) Standard Form 294, Subcontracting Report for Individual Contracts. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) Standard Form 295, Summary Subcontract Report. This report encompasses all of the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)

(a) Failure to make a good faith effort to comply with the subcontracting plan, as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

(b) Performance shall be measured by applying the percentage goals to the total actual subcontracting dollars or, if a commercial plan is involved, to the pro rata share of actual subcontracting dollars attributable to Government contracts covered by the commercial plan. If, at contract completion or, in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled "Small Business Subcontracting Plan," the Contractor shall pay the Government liquidated damages in an amount stated. The amount of probable damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made and to discuss the matter. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial plans, the Contracting Officer who approved the plan will perform the functions of the Contracting Officer under this clause on behalf of all agencies with contracts covered by the commercial plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may have.

(End of clause)

52.222-3 CONVICT LABOR (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(a)(1) The worker is paid or is in an approved work training program on a voluntary basis;

(2) Representatives of local union central bodies or similar labor union organizations have been consulted;

(3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and

(4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (SEP 2000)

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any

lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

52.222-26 EQUAL OPPORTUNITY (FEB 1999)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) of this clause. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of \$10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all

facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may

be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA AND OTHER ELIGIBLE VETERANS (DEC 2001)

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

All employment openings means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

Executive and top management means any employee--

(1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;

(2) Who customarily and regularly directs the work of two or more other employees;

(3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;

(4) Who customarily and regularly exercises discretionary powers; and

(5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs (1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

Other eligible veteran means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Positions that will be filled from within the Contractor's organization means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Qualified special disabled veteran means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Special disabled veteran means--

(1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability--

(i) Rated at 30 percent or more; or

(ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (i.e., a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or

(2) A person who was discharged or released from active duty because of a service-connected disability.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.

(b) General. (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rate of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) Listing openings. (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) Postings. (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

(2) The employment notices shall--

(i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and

(ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) Subcontracts. The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of special disabled veterans, the number of veterans of the Vietnam era, and other eligible veterans in the workforce of the Contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of the total, the number of special disabled veterans, the number of veterans of the Vietnam era, and the number of other eligible veterans; and

(3) The maximum number and the minimum number of employees of the Contractor during the period covered by the report.

(b) The Contractor shall report the above items by completing the Form VETS-100, entitled "Federal Contractor Veterans" Employment Report (VETS-100 Report)".

(c) The Contractor shall submit VETS-100 Reports no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date--

(1) As of the end of any pay period between July 1 and August 31 of the year the report is due; or

(2) As of December 31, if the Contractor has prior written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The Contractor shall base the count of veterans reported according to paragraph (a) of this clause on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all special disabled veterans, veterans of the Vietnam era, and other eligible veterans who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that--

(1) The information is voluntarily provided;

(2) The information will be kept confidential;

(3) Disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and

(4) The information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of \$25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

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

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract where employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(2) 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);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under 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);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

52.225-9 BUY AMERICAN ACT--BALANCE OF PAYMENTS PROGRAM--CONSTRUCTION MATERIALS (FEB 2002)

(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 end product (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 and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

(b) Domestic preference. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) and the Balance of Payments Program 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. For determination of unreasonable cost under the Balance of Payments Program, the Contracting Officer will use a factor of 50 percent;

(ii) The application of the restriction of the Buy American Act or Balance of Payments Program 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 or Balance of Payments Program.

(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 or Balance of Payments Program 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 or Balance of Payments Program applies, use of foreign construction material is noncompliant with the Buy American Act or Balance of Payments Program.

(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)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)

(a) The Contractor shall not acquire, for use in the performance of this contract, any supplies or services originating from sources within, or that were located in or transported from or through, countries whose products are banned from importation into the United States under regulations of the Office of Foreign Assets Control, Department of the Treasury. Those countries are Cuba, Iran, Iraq, Libya, North Korea, Sudan, the territory of Afghanistan controlled by the Taliban, and Serbia (excluding the territory of Kosovo).

(b) The Contractor shall not acquire for use in the performance of this contract any supplies or services from entities controlled by the government of Iraq.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101 to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

52.228-1 BID GUARANTEE (SEP 1996) (CESAJ ADAPTATION)

(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. If the bid guarantee is in the form of a bid bond, in accordance with FAR 28.106-1 the bidder shall use Standard Form 24, Bid Bond. Use of any other form may not firmly bind the bidder and sureties to the United States of America and may, therefore, be cause for rejection of the bid. If the bid guarantee is secured by assets owned by individual sureties, the bidder and sureties shall comply with the Pledges Of Assets clause (FAR 52.228-11) of this solicitation. 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 20 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.

(f) Bid bonds on their face must unequivocally bind the bonding company or the bid will be nonresponsive. The Contracting Officer has authority to decide whether there is adequate evidence of authority to unequivocally bind the bonding company. Evidence of intent to be bound may not be submitted after bid opening. Therefore, in order for a power of attorney accompanying a bid bond to be acceptable, it must be (i) an original (not facsimile) power of attorney, (ii) a copy of a power of attorney (or power of attorney with facsimile signatures) accompanied by an original (not facsimile) signature by the secretary of the company certifying that the power of attorney remains in full force and effect and has not been revoked, or (iii) a copy of a power of attorney with facsimile signatures which indicates on its face that the surety intends to be bound by facsimile signatures AND has a RAISED corporate seal.

(g) In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror."

(End of clause)

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other

acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

52.228-3 WORKERS' COMPENSATION INSURANCE (DEFENSE BASE ACT) (APR 1984)

The Contractor shall (a) provide, before commencing performance under this contract, such workers' compensation insurance or security as the Defense Base Act (42 U.S.C. 1651, et seq.) requires and (b) continue to maintain it until performance is completed. The Contractor shall insert, in all subcontracts under this contract to which the Defense Base Act applies, a clause similar to this clause (including this sentence) imposing upon those subcontractors this requirement to comply with the Defense Base Act.

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS. (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. \$_____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States \$_____. This draft is drawn under Irrevocable Letter of Credit No.

_____.

[Beneficiary Agency]

By: _____

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

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

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

52.229-5 TAXES--CONTRACTS PERFORMED IN U.S. POSSESSIONS OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

(End of clause)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (MAY 1997)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

(Name)

(Title)

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the

work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of

becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986) - ALTERNATE I (APR 1984)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence. Unless otherwise stated in this contract, payments to an assignee of any amounts due or to become due under this contract shall not, to the extent specified in the Act, be subject to reduction or setoff.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (FEB 2002)

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 payment or that the Government has otherwise overpaid on an invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-34 PAYMENT BY ELECTRONIC FUNDS TRANSFER--OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999) (CESAJ ADAPTATION)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend payment due dates until such time as the Government makes payment by EFT (but see paragraph (d) of this clause).

(b) Mandatory submission of Contractor's EFT information. (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (j) of this clause). The Contractor shall provide this information directly to the office designated in this contract to receive that information (hereafter: "designated office") by no later than 15 days prior to submission of the first request for payment. If not otherwise specified in this contract, the payment office is the designated office for

receipt of the Contractor's EFT information. If more than one designated office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. (1) The Government is not required to make any payment under this contract until after receipt, by the designated office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the updated EFT information is implemented by the payment office. If such suspension would result in a late payment under the prompt payment terms of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(e) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

- (i) Making a correct payment;
- (ii) Paying any prompt payment penalty due; and
- (iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

- (i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or
- (ii) If the funds remain under the control of the payment office, the Government shall not make payment and the provisions of paragraph (d) shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall provide the EFT information required by paragraph (j) of this clause to the designated office, and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information provided by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method

of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address in the contract.

(j) EFT information. The Contractor shall provide the following information to the designated office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause.

(1) The contract number (or other procurement identification number).

(2) The Contractor's name and remittance address, as stated in the contract(s).

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(5) The Contractor's account number and the type of account (checking, saving, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the Contractor's financial agent.

(7) If applicable, the Contractor shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the Contractor's financial agent is not directly on-line to the Fedwire Transfer System; and, therefore, not the receiver of the wire transfer payment.

A form and instructions for submission of EFT information may be obtained at <http://www.fc.usace.army.mil/adobe/pub/directdep.pdf>.

(End of clause)

52.233-1 DISPUTES. (DEC 1998)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

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

The Contractor shall perform on the site, and with its own organization, work equivalent to at least thirty (30) percent 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.

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

(1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or

(2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

52.236-4 PHYSICAL DATA (APR 1984) (CESAJ ADAPTATION)

Data and information furnished or referred to below are 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) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by (See Section 01000 of this contract).

(b) Weather conditions (See Section 01000 of this contract).

(c) Transportation facilities (See Section 01000 of this contract).

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

52.236-13 ACCIDENT PREVENTION (NOV 1991) – ALTERNATE I (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) Before commencing the work, the Contractor shall-

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

52.236-16 QUANTITY SURVEYS (APR 1984)

(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 shall 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.

52.236-17 LAYOUT OF WORK (APR 1984)

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.

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from

responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2)

unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of the work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

- (1) the date, circumstances, and source of the order and
- (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

52.244-2 SUBCONTRACTS (AUG 1998)

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

Approved purchasing system means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

Consent to subcontract means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

Subcontract means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) This clause does not apply to subcontracts for special test equipment when the contract contains the clause at FAR 52.245-18, Special Test Equipment.

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

None

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.

(g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

None

(End of clause)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2001)

(a) Definitions. As used this clause--

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of clause)

52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the

Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This

restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996)
- ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998) (CESAJ ADAPTATION)

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):

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

For DFARS: <http://www.acq.osd.mil/dp/dars/dfars.html>

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense FAR Supplement (48 CFR **Chapter 2**) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-
CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) “Arising out of a contract with the DoD” means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) “Conviction of fraud or any other felony” means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of nolo contendere, for which sentence has been imposed.

(3) “Date of conviction” means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

- (1) The person involved;
 - (2) The nature of the conviction and resultant sentence or punishment imposed;
 - (3) The reasons for the requested waiver; and
 - (4) An explanation of why a waiver is in the interest of national security.
- (g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.
- (h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION.(NOV 2001)

(a) Definitions.

As used in this clause--

- (1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.
 - (2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.
 - (3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.
 - (4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.
- (b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of

any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

(End of clause)

252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

(a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

252.219-7003 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 1996)

This clause supplements the Federal Acquisition Regulation 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, clause of this contract.

(a) Definitions. Historically black colleges and universities, as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institutions, as used in this clause, means institutions meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

(b) Except for company or division-wide commercial items subcontracting plans, the term small disadvantaged business, when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions, in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small, small disadvantaged, and women-owned small businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are not small, small disadvantaged, or women-owned small businesses for the firms listed in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

(End of clause)

252.222-7000 RESTRICTIONS ON EMPLOYMENT OF PERSONNEL (MAR 2000)

(a) The Contractor shall employ, for the purpose of performing that portion of the contract work in Puerto Rico, individuals who are residents thereof and who, in the case of any craft or trade, possess or would be able to acquire promptly the necessary skills to perform the contract.

(b) The Contractor shall insert the substance of this clause, including this paragraph (b), in each subcontract awarded under this contract.

(End of clause)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employees has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2..1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (AUG 2000)

(a) The Contractor agrees to deliver under this contract only such of the following articles that have been grown, reprocessed, reused, or produced in the United States, its possessions, or Puerto Rico --

(1) Food;

(2) Clothing;

(3) Tents, tarpaulins, or covers;

(4) Cotton and other natural fiber products;

(5) Woven silk or woven silk blends;

(6) Spun silk yarn for cartridge cloth;

(7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics;

(8) Canvas products;

(9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles);
or

(10) Any item of individual equipment (Federal supply Classification 8465) manufactured from or containing such fibers, yarns, fabrics, or materials.

(b) This clause does not apply --

(1) To supplies listed in FAR section 25.104(a), or other supplies for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To foods which have been manufactured or processed in the United States, its possessions, or Puerto Rico;

(3) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(4) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--

(i) The fabric is to be used as a component of an end item that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--

(a) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);

(B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;

(C) Upholstered seats (whether for household, office, or other use); and

(D) Parachutes (Federal Supply Class 1670); or

(ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.

(End of clause)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (JUN 1992)

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

(1) "Foreign person" means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).

(2) "United States person" is defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concerns, as determined under regulations of the President.

(b) Certification. By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.

(End of clause)

252.226-7001 Utilization of Indian Organizations and Indian-Owned Economic Enterprises-DoD Contracts (Sep 2001)

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

“Indian” means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any “Native” as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

“Indian organization” means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17.

“Indian-owned economic enterprise” means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

“Indian tribe” means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452 (c).

“Interested party” means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contract shall use its best efforts to give Indian organizations and Indian-owned economic enterprises the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless and interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer. No incentive payment will be made--

(1) Within 59 working days of subcontract award;

(2) While a challenge is pending; or

(3) If a subcontractor is determined to be an ineligible participant.

(e)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an adjustment under the Indian Incentive Program to the following:

- (i) The estimated cost of cost-type contract.
- (ii) The target cost of a cost-plus-incentive-fee contract.
- (iii) The target cost and ceiling price of a fixed-price incentive contract.
- (iv) The price of a firm-fixed-price contract.

(2) The amount of the adjustment that may be made to the contract is 5 percent of the estimated cost, target cost, or firm-fixed price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(3) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(4) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor.

(5) If the Contractor requests and receives an adjustment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the adjustment.

(f) The Contractor shall insert the substance of this clause, including this paragraph (f), in all subcontracts that--

- (1) Are for other than commercial items; and
- (2) Are expected to exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(End of clause)

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

- (i) Material;
- (ii) Labor;
- (iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

252.236-7001 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (AUG 2000)

(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, 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 the contract drawings identified on the following index of drawings:

Title	File	Drawing No.
San Juan Harbor, Puerto Rico; Project Modifications for Improvement of the Environment, La Esperanza Peninsula, Catano, Puerto Rico	102-38,205 Dated June 2001	9 Sheets + Cover

(End of clause)

252.236-7002 OBSTRUCTION OF NAVIGABLE WATERWAYS. (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.).

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

(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) 60 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 (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.

252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES. (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for --

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

252.242-7000 POSTAWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any postaward conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

(End of clause)

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

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

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information --

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor agrees to provide with its final invoice under this contract a representation that to the best of its knowledge and belief --

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
_____	_____	_____
_____	_____	_____
_____	_____	_____
TOTAL	_____	_____

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) The Contractor shall include this clause, including this paragraph (h), in all subcontractors under this contract that--

(1) Exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation; and

(2) Are for a type of supplies described in paragraph (b)(3) of this clause.

(End of clause)

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

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SECTION 00800
SPECIAL REQUIREMENTS

CLAUSES INCORPORATED BY FULL TEXT

52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)
(CESAJ ADAPTATION)

(a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract (see Note 1 below). The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material	Identification No.
(If none, insert "None") (See Note 2 below)	

_____	_____
_____	_____
_____	_____

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.
(End of clause)

Notes:

1. The phrase "to be delivered under this contract" shall be interpreted to include hazardous materials to be consumed in the performance of the work even though such materials may not be delivered to the Government as end items.

2. The use (or consumption) of some kind of hazardous material is required for the performance of almost every construction (including dredging) contract and in many service contracts. Therefore, the offeror should not enter "none" without first evaluating the work and making a positive determination that no such materials will be introduced to the job site. If the offeror is not sure of the identity of hazardous materials that may be used during the performance of the work, the offeror should enter "unknown at this time." Regardless of the offeror's entry, the successful offeror (the Contractor) will be required to submit material safety data sheets prior to introducing any hazardous materials to the job site.

(End of notes)

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

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Termination Settlement 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 XI. 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)

(CESAJ paragraph number 998.231-1)

EFARS 52.232-5002 CONTINUING CONTRACTS (ALTERNATE) (MAR 1995)

(a) Funds are not available at the inception of this contract to cover the entire contract price. The sum of \$5,000.00 has been reserved for this contract and is available for payment 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. The liability of the United States for payments beyond the funds reserved for this contract is contingent on the reservation of additional funds.

(b) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not be considered a breach of this contract, and shall not entitle the contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs (e) and (h) below.

(c) 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.

(d) 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 this 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.

(e) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. If and when sufficient additional funds are reserved, the contractor shall be entitled to simple interest on any payment that the contracting officer determines was actually earned under the terms of this 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.

(f) 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 a Suspension of Work or similar clause or in any other manner under this contract.

(g) 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.

(h) If, upon the expiration of 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 at no cost to the Government, except that, to the extent that additional funds to make payment therefore are allocated to this contract, it may be treated as a termination for the convenience of the Government.

(i) 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 this 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.

(j) The term "Reservation" means monies that have been set aside and made available for payments under this contract.

(End of clause)

(CESAJ paragraph number 998.232-3)

EFARS 52.249-5000 BASIS FOR TERMINATION SETTLEMENT 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 termination settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(1) 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.

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

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

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

(5) 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)

(CESAJ paragraph number 998.249-1)

UNAUTHORIZED INSTRUCTIONS FROM GOVERNMENT OR OTHER PERSONNEL

The Contractor shall not accept any instructions issued by any person, employed by the Government or otherwise, other than the Contracting Officer or the Contracting Officer's Representative (COR) acting within the limits of the COR's authority. See the Contracting Officer's Representative clause of this contract.

(End of paragraph number 999.201-4002)

DFARS 203-70 – CONTRACTOR STANDARDS OF CONDUCT

The following excerpt from DFARS subpart 203.70 is presented as a reminder:

203.7000 Policy. Government contractors must conduct themselves with the highest degree of integrity and honesty. Contractors should have standards of conduct and internal control systems that--

(1) Are suitable to the size of the company and the extent of their involvement in Government contracting;

(2) Promote such standards;

(3) Facilitate timely discovery and disclosure of improper conduct in connection with Government contracts; and

(4) Ensure corrective measures are promptly instituted and carried out.

203.7001 Procedures.

(a) A contractor's system of management controls should provide for--

(1) A written code of business ethics and conduct and an ethics training program for all employees;

(2) Periodic reviews of company business practices, procedures, policies, and internal controls for compliance with standards of conduct and the special requirements of Government contracting;

(3) A mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports;

(4) Internal and/or external audits, as appropriate;

(5) Disciplinary action for improper conduct;

(6) Timely reporting to appropriate Government officials of any suspected or possible violation of law in connection with Government contracts or any other irregularities in connection with such contracts; and

(7) Full cooperation with any Government agencies responsible for either investigation or corrective actions.

(End of paragraph number 999.203-4000)

VARIATION IN ESTIMATED QUANTITY -- DREDGING

(a) Read this paragraph in conjunction with the Variation in Estimated Quantity clause of this contract. This paragraph only applies to line items for excavation.

(b) The estimated quantities contained in the excavation line item(s) of this contract include material from both the required dredging prism and an area of allowable overdepth. The Contractor is not required

to excavate the material in the area of allowable overdepth. However, as a precondition for requesting an equitable adjustment in the event the actual quantity is less than 85 percent of the estimated quantity, the Contractor shall have excavated 100 percent of the available material in the required prism and at least 75 percent of the available material in the area of allowable overdepth.

(End of paragraph number 999.211-4008)

RETAINAGE FOR FAILURE TO COMPLY WITH SUBCONTRACTING PLAN REPORTING REQUIREMENTS

(a) Read this paragraph in conjunction with Liquidated Damages--Small Business Subcontracting Plan (FAR 52.219-16) clause of this contract.

(b) Should the Contractor fail to submit SF 294 and/or SF 295 reports in a timely manner, the Government will consider this failure as evidence of possible failure to make a good faith effort to achieve goals contained in the Contractor's subcontracting plan. In order to protect the Government's ability to assess liquidated damages in the event the Contractor does fail to meet the goals and such failure results from a lack of good faith effort, the Contracting Officer will retain from progress payments an amount deemed sufficient to satisfy the Contractor's liability. The amount of the retainage will be determined in accordance with the following formula:

Total dollar amount proposed for subcontracting to small business multiplied by the percentage of actual progress on the contract, up to a maximum of 10% of the progress payment, will be withheld from the next progress payment that is due after the Contractor's failure to submit a required report. If one or more reports have been submitted before a failure to submit a required report, this formula will be adjusted by deducting any amounts reported as subcontracted to small business from the total dollar amount proposed to be subcontracted. See examples below.

Example 1 (No previous reports submitted)			
Total proposed subcontracting	\$500,000	Current progress payment	\$100,000
Percent of work completed	x .10	Maximum retainage percentage	x .10
Retainage	\$50,000	Retainage	\$10,000
Maximum that can be retained is \$10,000			

Example 2 (Previous reports submitted)			
Total proposed subcontracting	\$500,000	Current progress payment	\$100,000
Subcontracting previously reported(\$100,000)		Maximum retainage percentage	x .10
Percent of work completed	x .10	Retainage	\$10,000
Retainage	\$40,000		
Maximum that can be retained is \$10,000			

(c) Contracting Officer's Representative (COR). In addition to any other COR appointments that may be made under this contract, Debra K. Overstreet, Deputy for Small Business, is appointed COR for matters relating to enforcement of the Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan clause of this contract. In this regard, she is authorized to conduct reviews of the Contractor's records; correspond with the Contractor (both verbally and in writing); and, in accordance with subparagraph (b) above, authorize retainage for failure to achieve goals.

(End of paragraph number 999.219-4001)

LABOR LAWS

(a) The Davis-Bacon Act is not applicable to contract work performed in the Commonwealth of Puerto Rico or the U.S. Virgin Islands and the Service Contract Act has been held not to apply to construction contracts.

(b) If a DOL wage determination is included in this contract, the Contractor shall pay not less than the wages and fringe benefits specified in the wage determination.

(c) In accordance with the Permits and Responsibilities clause of this contract, the Contractor shall be responsible for complying with any local labor laws, codes, and regulations that apply to the work performed under this contract.

(d) If work under this contract is performed in the Commonwealth of Puerto Rico, the Contractor is advised to consult with the Commonwealth's Department of Labor for the purpose of reviewing applicable local labor laws which may contain specific rules for computing overtime and the amount of overtime pay laborers and mechanics must be paid. Any such applicable local labor law imposing stricter overtime rules than those contained in the Contract Work Hours and Safety Standards Act -- Overtime Compensation clause of this contract (i.e., provides greater benefits to laborers and mechanics) may apply in lieu of the rules contained in that clause.

(e) If this contract is a NAFI contract and includes DA Form 4075-R, the clauses that relate to implementation of the Davis-Bacon Act (e.g., I-22, I-23, I-37, I-38, I-59, I-60, I-63, I-64, I-65, and I-66) are hereby deleted from the form and the contract.

(End of paragraph number 999.222-4005)

SAFETY REQUIREMENTS -- CONSTRUCTION CONTRACTS

(a) The Contractor's attention is directed to the Accident Prevention clause of this contract, the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, dated 3 September 1996, and all changes and amendments thereto (copies available upon request), the Jacksonville District Safety and Occupational Health Program, CESAJR 385-1-1, dated 1 September 1998 (copies available upon request), and the latest OSHA standards, and applicable Coast Guard safety regulations, to assure himself that he has full knowledge of the personal protective equipment that must be provided workmen and that he is familiar with the safety standards applicable to the prevention of accidents during the construction of this project and shall comply with all applicable provisions.

(b) The Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, is consistent with OSHA Construction Safety and Health Regulations 29 CFR 1926, and will be complied with for all construction activities. When an operation is identified as not being covered under EM 385-1-1, applicable OSHA standards will be complied with. Those operations not covered by EM 385-1-1, CESAJR 385-1-1, or OSHA standards, will comply with appropriate DA, DOD, or National Concensus Standards.

(c) Contractor's operations shall not commence until all plant and equipment for the work are in compliance with the safety requirements referenced in the specifications.

(End of paragraph number 999.223-4002)

SAFETY SCOREBOARD

Within 15 calendar days after commencement of work, the Contractor shall erect and maintain a safety scoreboard at job sites, including dredges. The safety scoreboard shall contain current data and shall be placed in an area at the jobsite conspicuous to all workers. The safety scoreboard shall be of the format and style indicated on the sketch appended to Section 01000. The poster "Safety and Health Protection On The Job" required by OSHA, Department of Labor, for all private industrial operations shall be posted with safety posters, and literature as provided by the Contractor's insurance company and the Contracting Officer's representative. Such posting shall be in a weatherproof bulletin case, easily legible, adequately protected against the elements, and protected against removal by unauthorized persons.

(End of paragraph number 999.223-4004)

FUEL OIL TRANSFER OPERATIONS

In accordance with U.S. Coast Guard regulations (33 CFR 156.120), couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil shall be either a bolted or full-threaded connection; or a quick-connect coupling approved by the Commandant; or an automatic back-pressure shutoff nozzle used to fuel the vessel. An executed fuel oil transfer (Declaration) form signed by the tanker operator shall be submitted to the Contracting Officer for each refueling operation. The U.S. Coast Guard shall also be notified prior to any refueling. A sample copy of this form is appended to the end of Section 01000: General Requirements.

(End of paragraph number 999.223-4007)

CONTRACTOR SAFETY PERSONNEL REQUIREMENT -- CONSTRUCTION CONTRACTS

(a) The Contractor shall employ at the project site at least one Safety and Occupational Health person (Safety Officer) to manage the Contractor's accident prevention program. A Safety Officer shall be on duty during all hours of work. Duties which are not germane to the safety program shall not be assigned to the Safety Officer. The principal Safety Officer shall report to and work directly for the Contractor's on-site top manager (or a higher level official), or the corporate safety office. The Safety Officer shall have the authority to take immediate steps to correct unsafe or unhealthful conditions. The presence of the Safety Officer will not abrogate safety responsibilities of other personnel.

(b) Qualifications for Safety Officers:

(1) Shall have a degree in engineering or safety in a four-year, or longer, program from an accredited school; or

(2) Shall have legal registration as a Professional Engineer or a Certified Safety Professional and, in addition, shall have at least one year of experience in safety and occupational health work (see note below); or

(3) Shall have a degree other than that specified in (1) above and, in addition, shall have at least 3 years experience in safety and occupational health work (see note below); or

(4) In lieu of a degree, shall have at least 5 years of experience in safety and occupational health work (see note below).

(Note: In order to be creditable toward satisfying the experience requirements specified in (2), (3), and (4) above, at least 50 percent of the time during each year must have been devoted to safety and occupational health work. First aid work is not creditable.)

(c) Prior to the pre-work conference, the Contractor shall submit to the Contracting Officer, for approval, the name and qualifications of the proposed Safety Officer(s) and a functional description of duties.

(End of paragraph number 999.223-4011)

HAZARD COMMUNICATION

(a) The Contractor shall comply with the requirements of OSHA 1910.1200, the Hazard Communication Standard.

(b) General requirements are as follows:

(1) Provide a written program describing implementation method of the above referenced standard.

(2) Ensure that Contractor's personnel are informed about health and physical hazards associated with materials to be used.

(3) Ensure that a hazardous material inventory is available to the Government upon request.

(4) Ensure proper labeling of hazardous material containers.

(5) Ensure availability of a Material Safety Data Sheet on site.

(End of paragraph number 999.223-4020)

CONFINED SPACE ENTRY

(a) The Contractor shall submit a confined space entry plan as part of his written proposal for accident prevention, as specified in the Accident Prevention clause of this contract. This plan shall satisfy the requirements specified in EM 385-1-1.

(b) Confined space is any space having limited openings for entry and exit, not intended for continuous occupancy, and unfavorable natural ventilation which could contain or have produced dangerous concentrations of airborne contaminants or asphyxiants. Confined spaces may include but are not limited to storage tanks, holds of vessels, manholes, process vessels, vaults, tunnels, pipelines, trenches, vats, and open top spaces more than 4 feet in depth such as pits, tubs, vaults, and vessels, or any place with limited ventilation.

(c) A confined space entry permit system shall be established. A permit shall be developed for each confined space and renewed at the beginning of each shift. Permits (initial and renewal) shall be posted at all openings of every confined space.

(1) Permits shall include but not be limited to location of work, description of work, employees assigned, entry date and time, isolation checklists, hazardous work, hazards expected, fire safety precautions, personnel safety, results of atmospheric tests performed, and person performing them, authorization and permit expiration time.

(2) Permits shall be forwarded to the Contracting Officer's Representative prior to commencement of work.

(End of paragraph number 999.223-4021)

OIL AND HAZARDOUS MATERIAL SPILLS AND CONTAINMENT

(a) The Contractor shall ensure that all hazardous material spills are immediately reported to the Government.

(b) All hazardous material spills shall be immediately cleaned up in accordance with EM 385-1-1.

(c) In accordance with EM 385-1-1, the Contractor shall use suitable methods such as dikes or curbs to prevent the spread of hazardous materials from above ground storage tanks and piping in case of leakage.

(End of paragraph number 999.223-4022)

DIVING PLAN

The Contractor shall submit as part of his written plan for accident prevention, as required by the Accident Prevention clause of this contract, a diving plan, whether or not diving is planned as a part of the operations. The intent of this requirement is to assure safe diving and particularly when emergencies, marine maintenance, or underwater problems occur which require diving. The diving plan shall cover all requirements as stated in the Safety and Health Requirements Manual, EM 385-1-1, latest edition; and in the latest edition of the Appendix entitled "Contract Diving Operations" to Jacksonville District Safety and Occupational Health Program, CESAJR 385-1-1. In addition to the requirements of these regulations, the diving plan must contain specific statements, with copies of supporting documents, certificates, affidavits, etc., to document annual inspection and hydrostatic testing of diving air compressors, receivers, etc., for surface-supplied air operations; semi-annual testing of the breathing air for both surface-supplied and SCUBA operations; and 5-year hydrostatic testing of SCUBA air tanks. Furthermore, the Activity Hazard Analysis for the diving operation shall specifically include discussions of all work of any kind under the contract that interfaces with or could affect the diving operations, including but not limited to: communications procedures between the other work and the dive team, tag out/lock out/safe clearance procedures for any equipment or machinery at the job site that could adversely affect the divers if energized, and specific methods and procedures for equipment protection, grounding, operation, etc., for any power tools, cutting and burning equipment, etc., utilized by the divers. Any special deep or hazardous diving operations planned and equipment to be utilized should be reported in detail. All routine dives whether for construction, maintenance, or inspection shall be discussed, indicating the schedule of diving events. If no operational diving is planned, then so state but continue the plan on the basis that a diving situation may develop. The diving plan shall be approved by the District Diving Coordinator prior to commencement of any diving operations.

(End of paragraph number 999.223-4024)

SIGNAL LIGHTS

The Contractor shall display signal lights and conduct operations in accordance with the General Regulations of the Department of the Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels of floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard Instruction M16672.2, Navigation Rules: International-Inland (COMDTINST M16672.2), or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 33 CFR 89 (Inland) as applicable.

(End of paragraph number 999.223-4025)

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

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil>. (At the HQ homepage, select Safety and Occupational Health.) The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the date the solicitation for this contract/purchase order was issued.

(End of paragraph number 999.223-4026)

DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in the Permits And Responsibilities clause of this contract. However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane, or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to the CHANGES clause of this contract will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

(End of paragraph number 999.236-4012)

CONTINUITY OF WORK

No payment will be made for work done in any area designated by the Contracting Officer until the full depth required under the contract is secured in the whole of such area, unless prevented by ledge rock, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured, except by decision of the Contracting Officer. Should any such nonadjacent area be excavated to full depth during the operations carried on under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening. The Contractor may be required to suspend dredging at any time when, for any reason, the gauges or ranges cannot be seen or properly followed.

(End of paragraph number 999.236-4013)

NOTICE TO MARINERS -- CONSTRUCTION CONTRACTS

Should the Contractor, during operations, encounter any objects on the channel bottom which could be a hazard to navigation, the Contractor shall immediately notify the Contracting Officer as to the location of said object and shall provide any other pertinent information necessary for the Contracting Officer to prepare and issue a Notice to Mariners.

(End of paragraph number 999.236-4030)

ITEMS OF WORK TO BE PERFORMED BY THE CONTRACTOR

Attention is invited to the requirements of the Performance Of Work By The Contractor clause of this contract. The Contractor must furnish the Contracting Officer, within 5 days after award, a listing of the items of work that will be performed by the Contractor's own forces and the estimated cost of those items unless the information was submitted with the offer.

(End of paragraph number 999.236-4059)

ENGLISH SPEAKING REPRESENTATIVE

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

(End of paragraph 999.242-4001)

CONTRACTING OFFICER'S PROJECT BUSINESS ADDRESS

Once the contract is awarded, all communication, submittals, and inquiries by the Contractor regarding the project shall be directed and addressed to **Antilles Construction Office, U.S. Army Corps of Engineers, 400 Fernandez Juncos Avenue, San Juan, Puerto Rico 00901-3299**. All communications to be in the English language.

(End of paragraph number 999.242-4005)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01000

GENERAL REQUIREMENTS

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SECTION 01000

GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publication listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by basic designation only.

ENGINEERING MANUALS (EM)

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

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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

Hurricane and Severe Storm Plan; G|COR.

Refer to paragraph HURRICANE AND SEVERE STORM PLAN below.

SD-02 Shop Drawings

Construction Drawings; G|COR.

Contractor shall furnish 6 copies each of Construction Drawings consisting of Excavation Plan.

SD-07 Certificates

Critical Lift Plan; G|COR.

Submit a Plan for non-routine crane lifts whenever crane loads meet or exceed 75 percent of crane load capacity in any configuration to comply with EM 385-1-1. Refer to paragraph CRITICAL LIFT PLAN OPERATION below.

1.3 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

Refer to Clause COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.211-10) of Section 00700 CONTRACT CLAUSES.

1.4 LIQUIDATED DAMAGES-CONSTRUCTION

Refer to the Clause LIQUIDATED DAMAGES-CONSTRUCTION (SEP 2000) (FAR 52.211-12) of Section 00700 CONTRACT CLAUSES.

1.5 PHYSICAL DATA

Read this paragraph in conjunction with the Clause PHYSICAL DATA (FAR 52.236-4) of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

1.5.1 Physical Conditions

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and/or by core borings. When the indicated physical conditions are the result of site investigations by core borings, the core boring logs and laboratory data are appended to the end of this Section and the core boring locations are shown on the drawings. While the Government's borings are representative of subsurface conditions at their respective locations and vertical reaches, local variations characteristic of the rocks and subsurface materials of this region are to be expected. The material recovered from the core borings is available for inspection by prospective bidders at the U.S. Army Corps of Engineers' Building, 400 Fernandez Juncos Avenue, Stop 7 1/2, San Juan, Puerto Rico, 00901-3299, during the entire bid period, and prospective bidders are strongly urged to examine the material and assure themselves that they have made the best possible evaluation of the subsurface conditions. Prospective bidders shall notify the Jacksonville District Explorations Manager at (904) 232-3295 at least four (4) working days before the visit with the following information: (1) the project title; (2) the specific core borings or entire set which are to be viewed; (3) the date, time, and duration of the visit; (4) the name of the person(s) and company to view the borings; and, (5) a point of contact and phone number regarding the visit. Bidders shall form their own conclusions from this examination prior to submission of their bids. Bidders shall record their core examination visit in a record book maintained at the inspection site.

1.5.2 Location

The project is located in the vicinity of San Juan, Puerto Rico.

1.5.3 Weather Conditions

The project area is subject to tropical storms and hurricanes from June through November, and to windy and/or rainy weather during any time of the year. The climate of the area is essentially subtropical and temperatures below freezing are rare. The wet season in the project area is from May through October. In general, the winter months constitute the dry season and rainfall is usually associated with mid-latitude systems (fronts and low pressure systems) and is distributed in a spatially uniform pattern. The summer months comprise the wet season and rainfall is closely associated with convective activity. These rainfall events are normally of short duration and amounts are quite variable spatially. Occasionally, daily rainfall in the dry season can be quite heavy as mid-latitude systems penetrate into Puerto Rico.

It shall be the Contractor's responsibility to obtain information concerning rain, wind and wave conditions that could influence his construction, dredging and fill operations. Reference is made to the following publication Local Climatological Data - Monthly Summary. This publication gives hourly wind speed and direction observations for Luis Munoz Marin International Airport, San Juan, Puerto Rico. The Annual Summary gives a summary of the observations for the period of record. This report is published by NOAA, Asheville, North Carolina. Subscription price

and ordering information are available from the National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.

1.5.3.1 Wind and Wave Data

The following publications and sources include wind and wave information and are available for review in the Jacksonville District Office or can be purchased or accessed through the agencies indicated:

- a. U.S. Coast Pilot, Atlantic Coast: Gulf of Mexico, Puerto Rico and Virgin Islands, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service.

This publication supplements the navigational information shown on the nautical charts. It also provides miscellaneous meteorological data. This publication is available through NOAA.

- b. Hindcast Wave Information for the U.S. Atlantic Coast, Wave Information Studies of U.S. Coastlines, WIS Report 30, Waterways Experiment Station, March 1993.

This report presents 20-year wave hindcast summaries at various stations located along the U.S. Atlantic Ocean shoreline, including a location offshore of the project area. Available data includes wave height, period, and direction tables for two 20-year periods: 1956-1975 (excludes tropical disturbances/hurricanes), and 1976-1995 (includes tropical disturbances/hurricanes), summary wind speed and wind direction tables, summary tables of mean wave heights by month and year, largest wave heights by month and year, and a table of extreme wave events. The project site is protected from direct impact from ocean waves, but other meteorological data contained in this publication may be useful. This publication is available from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Time series listings of wave data for both 20-year periods and some summary information are available at the Waterways Experiment Station website:
<http://chl.wes.army.mil/research/wave/wavesprg/>.

- c. National Data Buoy Center (NDBC) Website.

The National Data Buoy Center (NDBC), a part of the National Weather Service (NWS), develops, operates, and maintains a network of about 60 buoys and 60 Coastal-Marine Automated Network (C-MAN) stations. All stations measure wind speed, direction, and gust; barometric pressure; and air temperature. In addition, all buoy stations, and some C-MAN stations, measure sea surface temperature and wave heights and periods. All data is updated on an hourly basis. This wide range of meteorological and oceanographic data collected can be accessed through their website:
<http://www.ndbc.noaa.gov/index.html>.

The Contractor can determine site conditions relative to the operational limits of his equipment from the above references.

1.5.4 Transportation Facilities

1.5.4.1 Major Highways, Airports, Port Facilities, and Rail Access

The project site is accessible via water.

1.5.4.2 Contractor Investigation

In addition to the information given in the contract drawings, the Contractor shall make his own investigation of available roads for transportation, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the site. The Contractor shall investigate the availability of railroad sidings, and shall make all arrangements for use of any sidings for the delivery of any materials and equipment to be used on the work.

1.5.5 Maritime Traffic

Traffic in the project area consists of small recreational vessels.

1.5.6 Local Conditions - Water Stages and Tides

1.5.6.1 Water Fluctuations

The below stated water fluctuations are for information only and are not to be utilized in conjunction with any contract related hydrographic surveying. Reference should be made to the water level datum for surveying purposes as noted on the control drawings(s) of the contract plans.

1.5.6.2 Water Stages

Wind and tidal fluctuations of the Atlantic Ocean mainly affect water levels in the project area, which are diurnal. The project area is also subject to storm surges from hurricanes and tropical storms from June through November. Surges from extratropical storms may affect the area during any time of the year. Data collected by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS) at a tide gage near the project area are provided in the following table:

PUERTO RICO 975 5371

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDAL BENCH MARKS

SAN JUAN, LA PUNTILLA, SAN JUAN BAY

LATITUDE: 18 degrees 27.7 minutes N
LONGITUDE: 66 degrees 7.0 minutes W
NOAA CHART: 25670 USGS QUAD: SAN JUAN

Tidal datums at SAN JUAN, LA PUNTILLA, SAN JUAN BAY are based on the following:

LENGTH OF SERIES	=	10 YEARS
TIME PERIOD	=	1978-1987
TIDAL EPOCH	=	1960-1978
CONTROL TIDE STATION	=	KEY WEST (872 4580)

Elevations of tidal datums referred to Mean Lower Low Water (MLLW) are as follows:

HIGHEST OBSERVED WATER LEVEL (11/03/1982)	=	2.64 FEET
MEAN HIGHER HIGH WATER (MHHW)	=	1.60 FEET

PUERTO RICO 975 5371

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDAL BENCH MARKS

SAN JUAN, LA PUNTILLA, SAN JUAN BAY

MEAN HIGH WATER (MHW)	=	1.33 FEET
MEAN TIDE LEVEL (MTL)	=	0.77 FEET
MEAN LOW WATER (MLW)	=	0.21 FEET
MEAN LOWER LOW WATER (MLLW)	=	0.00 FEET
LOWEST OBSERVED WATER LEVEL (12/20/1968)	=	-0.90 FEET

Data collected by the National Ocean Service can be found at their website:
<http://www.nos.noaa.gov/>.

Daily tidal predictions at locations along the coastline of North and South America, including locations in the vicinity of the project can be found in the publication East Coast of North and South America Tide Tables, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service. In addition to daily tidal predictions, this publication provides mean and spring tide ranges and mean tide levels. Some astronomical data is also included in this publication, such as time of sunrise, sunset, moonrise, and moonset. This publication is available through NOAA.

1.5.7 Subsurface Investigations

Refer to core boring logs and laboratory data appended to the end of this Section.

1.5.8 Obstruction of Channel

The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the River and Harbor Act approved 8 August 1917.

The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of any vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon completion of the work the Contractor shall promptly remove his plant, including ranges, buoys, piles, and other marks placed by him under the contract in navigable waters or on shore.

1.6 LAYOUT OF WORK

1.6.1 Established Monuments

The Government has established monuments, control data and elevations for the work site(s) as indicated on the contract drawings. Control monument descriptions are appended to the end of this Section.

1.6.2 Layout

From the monuments, control data and elevations established by the

Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

1.6.3 Survey

The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the monuments, control data and elevations established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.7 CRITICAL LIFT PLAN OPERATION

1.7.1 Definition of a Critical Lift

A non-routine crane lift which requires detailed planning and additional or unusual safety precautions. Critical lifts include lifts made when the load weight is 75 percent of the rated capacity of the crane; lifts which require that the load will be lifted, swung, or placed out of the operator's view; lifts made with more than one crane; lifts involving a non-routine or technically difficult rigging arrangement; or, any lift which the crane operator believes should be considered critical.

1.7.2 Critical Lift Plan Submittal

In such a case, the Contractor shall submit a Critical Lift Plan, hereinafter referred to as "Plan", prior to making a critical lift. The Plan shall be prepared by the crane operator, lift supervisor, and rigger. All personnel involved in the lift shall review and sign the Plan. The Plan shall be documented and a copy provided to the Contracting Officer for approval. The Plan shall be submitted at the Preconstruction Conference to permit time for review and shall contain the following information:

- a. The Plan shall specify the exact size and weight of the load to be lifted as well as all crane and rigging components which add to the weight.
- b. The Plan shall specify the lift geometry and procedures, including the crane position, height of the lift, the load radius, the boom length, and angle for the entire range of the lift.
- c. The Plan shall designate the crane operator, lift supervisor, and rigger, and state their qualifications.
- d. The Plan shall include a rigging plan which shows the lift points, describes rigging procedures, and hardware requirements.

e. The Plan shall describe the ground conditions, outrigger or crawler track requirements, and if necessary, the design of mats necessary to achieve a level, stable foundation of sufficient bearing capacity for the lift. For floating cranes or derricks, the plan shall describe the operating base (platform) condition.

f. The Plan shall list environmental conditions under which lift operations are to be stopped.

g. The Plan shall specify coordination and communication requirements for the lift operation.

h. For tandem or tailing crane lifts, the Plan shall specify the make and model of the cranes, the line, boom and swing speeds, and requirements for an equalizer beam.

1.8 UNITS OF MEASURE

The standard U.S. system or the metric systems of measure may be utilized by the Contractor in the performance of his work. All survey records, official documentation, engineering data, and all correspondence, including any submittals and shop drawings, shall clearly denote which system of measure is being utilized, referenced or discussed. Any omission, unprofessional or inaccurate use of a unit of measure on the part of the Contractor shall not relieve him of his responsibilities under the contract terms. The unit of measure used in this specification is the standard U.S. system. The contract drawings denote both standard U.S. system and metric system where appropriate. If no unit of measure is indicated on the drawing such as on ranges, stations, slope elevations, and distance numbers, then they are to be considered the standard U.S. system.

1.9 HURRICANE AND SEVERE STORM PLAN

1.9.1 Plan Contents

Within 20 calendar days after the Notice of Award, the Contractor shall submit as an attachment to his Accident Prevention Plan, a Hurricane and Severe Storm Plan for review and acceptance. This plan shall include but not be limited to the following:

a. Types of storms anticipated (Winter storm, Hurricane, Tornado).

b. Time intervals before storms when action will be taken and details of the actions taken.

c. List of the equipment to be used on the job and its ability to handle adverse weather.

d. List of safe harbors and the distance from the work area to these harbors and the time required to move the equipment to these harbors. Copies of letters of approval for the use of these safe harbors (local authorities, U.S. Coast Guard, etc.) where applicable.

e. Method of securing equipment in these safe harbors.

f. List of equipment to be utilized to make this move to safe harbors (tug boats, work boats, etc.), to include the name and horsepower of this equipment.

g. Methods of securing equipment not moved; i.e., pipelines (floating or submerged), pumpout stations, etc.

h. Plan of evacuation to include interim measures, i.e., immediate reaction plans to be taken for all storm occurrences, particularly sudden/flash storms.

i. Operating procedures to be undertaken when critical dredge equipment fails during sudden and severe adverse weather conditions, to include breaking of spuds, swing wires, anchor wires, or other mooring equipment or facilities.

1.9.2 Sample Plan

Appended to the end of this Section is a sample Hurricane and Severe Storm Plan to be used for illustrative purposes only.

1.9.3 Monitoring of Weather

The Contractor shall maintain full-time monitoring of the NOAA marine weather broadcasts, and avail themselves of such other local commercial weather forecasting services as may be available. These information broadcasts shall be the Contractor's primary source in the decision process to implement action under the approved storm plan.

1.10 SAMPLE - HURRICANE AND SEVERE STORM PLAN

See APPENDIX 01000-A at the end of this Section (4 pages).

1.11 CONTROL MONUMENT DESCRIPTIONS

See APPENDIX 01000-B at the end of this Section (4 pages).

1.12 CORE BORING LOGS AND LABORATORY DATA

See APPENDIX 01000-C at the end of this Section (16 pages).

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

"S A M P L E"

HURRICANE AND SEVERE STORM PLAN

A. WINTER STORM AND HURRICANE PREPAREDNESS PLAN

The following is a standardization of our weather classification, in order to better facilitate an orderly sequence of events, should Nature and her elements constitute a threat.

For continuity, we have categorized specific WEATHER PHENOMENA into four (4) distinct categories, called "CONDITIONS". Each condition, as it occurs, can be identified by its physical characteristics, time intervals, and actions.

The following will be banded on the weather conditions forecasted as follows: SUSTAINED WINDS OF 35 KNOTS, OR ABOVE, AND/OR GUST OF 35 TO 40 KNOTS, OR ABOVE. MAY CONTAIN RAIN AND/OR RAIN SQUALLS ACCOMPANIED BY HIGH WINDS.

C O N D I T I O N "4"

PHYSICAL CHARACTERISTICS: Possible threat of storm within seventy-two (72) hours.

ACTION: All non-essential gear and equipment should be stowed. Priority repairs should be made immediately, and a six (6) hour weather watch initiated. (Weather reports - bulletins - notices - and other pertinent weather information should be carefully checked every six (6) hours.)

C O N D I T I O N "3"

PHYSICAL CHARACTERISTICS: Storm in general area. (Within forty-eight (48) hours of location.)

ACTION: All non-essential equipment shall be moved to safe harbor. Movable equipment, i.e., drums, tanks, barrels, reels, spools, couplings, etc., shall be securely lashed and made fast to the vessel or structure. A three (3) hour weather watch initiated. ALL PERSONNEL INSTRUCTED TO WEAR LIFE VESTS. Derrick barges, work barges, pontoons, etc., shall be moved to safe harbor. Contact shall be made with a tug of adequate horsepower to handle the floating plant and equipment when the storm is within forty-eight (48) hours of the location or when the United States Weather Bureau issues a Hurricane Alert for our work area. Dredge shall be made ready to get underway within three (3) hours. (Weather: See Condition 4 for weather watch responsibility.)

C O N D I T I O N "2"

PHYSICAL CHARACTERISTICS: Storm in near vicinity (50 to 75 miles-- possibility that it will pass over location, or very near to location). (At this time the fringe effects of the storm may be experienced.)

ACTION: Vessel must be in or very near to safe harbor. All non-essential personnel evacuated to land based installations, unless deemed otherwise by the Captain or Supervisor. ALL PERSONNEL SHALL HAVE ON LIFE VESTS. Hatches, watertight doors, portals, etc., shall be made fast and secured. A check of pumps, radio communication, etc., shall be made. All personnel shall be instructed to keep movement to a minimum, in order to prevent accidents as a result of slips or falls. No man shall be permitted on deck without the expressed consent of the Captain. A CONSTANT WEATHER WATCH AND VESSEL DAMAGE CONTROL WATCH SET UP AND MAINTAINED.

C O N D I T I O N "1"

PHYSICAL CHARACTERISTICS; Storm is imminent and will pass directly over, or very near to location within three (3) to six (6) hours.

ACTION: All personnel remaining on board shall be assigned to specific locations and remain in constant contact with the Captain or Supervisor. The Damage Control Watch shall stay in constant contact with the wheelhouse, lever room, or assigned control central. ALL PERSONNEL SHALL BE INSTRUCTED TO KEEP LIFE VESTS ON UNTIL AFTER THE STORM HAS PASSED. Personnel shall again be instructed to keep movement to a minimum, in order to prevent accidents as a result of slips or falls. There shall be no operation of stoves, coffee pots, or electrical devices that are non-essential. At this time the only operating devices should be equipment necessary to maintain the integrity and sea worthiness of the vessel.

After the storm has passed, all hands shall turn to and remove any and all debris from the vessel and equipment. The vessel shall be made ship-shape as rapidly as possible.

In the public interest, any refugees and/or survivors shall be assisted if and where possible.

This directive is intended as a minimum, with recommendation that it can and should be improved upon in each location.

NOTE: THIS DIRECTIVE IS WRITTEN PRIMARILY FOR THE HYDRAULIC DREDGES, BUT IS EASILY ADAPTABLE TO YOUR LOCATION.

It is the intent of the Safety Department that the superintendent, captain, and/or department heads made the CONDITION determinate based on the physical conditions listed. Once the Condition is determined, this should trigger the immediate implementation of the recommended procedures listed under ACTION in each condition.

Due to our geographical location, we shall operate under a CONDITION "4" between fifteen (15) June and fifteen (15) October of each year.

B. WINTER STORM 7 HURRICANE PREPAREDNESS PLAN

Addendum No. 1

1. The free board of the Gator Point is 12". The Gator Point can safely work in no more than one-foot seas and can safely stay at standby to three-foot seas.
2. The nearest safe harbor is at Cedar Island which is located at the beginning of this project's channel. The dredge will be no more than 13,000 feet from Cedar Island during the dredging of this channel.
3. The dredge will be towed by a workboat that belongs to Florida Dredge and Dock, Inc. The workboat is powered by a 150-hp diesel engine and will be stationed at this project for its entirety. It will take approximately 1/2 hour to move the dredge from the farthest part of the channel to the safe harbor.

C. TORNADO ALERT

Due to the rapid movement and brief warning time associated with TORNADOES, the following shall be Standard Operational Procedure during a TORNADO ALERT.

When the Weather Bureau issues a Tornado Alert, for your area, an immediate check of all radio equipment is to be made, and a visual weather watch initiated.

Tornadoes and Severe Thunderstorms are associated with a Cumulonimbus Cloud. (Thunderstorms occur most frequently and reach their greatest intensity in the summer.)

They strike at any time over land, over rivers, and over inland lakes. They prefer the late afternoons or early evening. (They can occur at any time.)

A thunderstorm (Cumulonimbus Cloud) is an individual weather factory and has four (4) distinct characteristics.

1. An Anvil Top (a layer of Cirrus (white) Clouds shaped like a Blacksmith's Anvil). It will lean in the direction of the upper wind and generally tells the direction the storm is moving. (Cirrus Clouds are composed of ice crystals--not water droplets.)

2. The main body of the cloud is a large Cumulus of great height with cauliflower sides. (The Cumulus is capable of rising to 35,000 feet and above.)
3. A Roll Cloud is formed along the leading edge of the base of the Cumulus Cloud. (This is caused by violent air currents.)
4. There is a dark area within the storm extending from the base of the cloud to the earth. (Usually there is rain in the center with hail and rain at the edges.)

These storms move at about 25 miles per hour and usually travel from the southwest to the northeast. Probably, in an east, northeast direction. However, there is no guarantee to this.

The above is intended as a guide to what physical characteristics might be seen in a thunderstorm (Cumulonimbus Cloud).

Tornadoes are closely associated with Cumulonimbus Clouds for these clouds are their spawning ground. (Tornadoes occur most frequently in the spring.)

a. On Vessels quartering personnel:

When the alert is given, all hands are to be awakened. They are to put on their life jackets and assemble in the galley.

b. Attendant equipment:

Shall either head into the bank and tie up or tie up alongside the parent vessel. Engines shall be left running and the clutch placed in neutral position. All hands including operator to put on life jackets (work vests).

c. Pontoon lines, etc.:

During the storm, no one will be allowed on the pontoon line, derrick barge, etc.

d. Miscellaneous:

All loose equipment shall be stowed immediately and all movables secured.

Even though Tornadoes and Severe Thunderstorms are limited as to duration and size, they should command your attentive observation and action, for they are vicious and unpredictable.

As with the Hurricane Procedure--this information is intended as a minimum and with minor adaptation is applicable to all locations.

Monument ID: PR PRG 0245 GPS

Locality-Project : CATANO, P.R.
Latitude : 0° 0' 0.00000"
X(E) :
Zone : PR
Horizontal Datum : NAD-83
Order : GPS
State : PR
Monument Set By : ARC S&M

Monument Type : DISK
Longitude : 0° 0' 0.00000"
Y(N) :
Elevation :
Vertical Datum : NGVD-29
Linear Units : FEET
Date Set : 2001
County : PR

Date Added : 020110

Date Changed : 020111

Recovered By :
Company (1) ARC S&M
Person (1) FR.SAWYER
Date (1) 04/01
Condition (1) GOOD (NEW)

(2)
(2)
(2)
(2)

STATION IS LOCATED N CATANO, PUERTO RICO.

TO REACH STATION FROM INTERSECTION OF HIGHWAY NO. 165 WEST AND 888;
PROCEED EAST ON RAMP AND GO 0.25 MILES TO A "T" INTERSECTION. GO NORTH
(LEFT) 0.10 MILES TO STATION LOCATION ON THE RIGHT.

STATION IS LOCATED 24 DEGREES AZ AND 125 FEET FROM THE NORTHEAST EDGE OF
PAVEMENT OF CALLE PARQUE AND OCEAN DRIVE, 252 DEGREES AZ AND 13.0 FEET
FROM THE TOP OF RIP RAP, 200 DEGREES AZ AND 24.4 FEET FROM THE END OF A
6.0 FEET CHAIN LINK FENCE (ON SHORELINE) 94 DEGREES AND 90 FEET FROM THE
END OF A 8.0 FOOT CONCRETE WALL.

STATION IS A STANDARD USACOE BRONZE DISK SET IN 8 INCH P.V.C. FILLED WITH
CONCRETE AND FLUSH WITH GROUND. STATION IS STAMPED "PRG 245 GPS, 2001
JACKSONVILLE, FLORIDA".

Monument ID: PR PRG 0246 GPS

Locality-Project : CATANO, P.R.
Latitude : 0° 0' 0.00000"
X(E) :
Zone : PR
Horizontal Datum : NAD-83
Order : GPS
State : PR
Monument Set By : ARC S&M

Date Added : 020110

Recovered By :
Company (1) ARC S&M
Person (1) FR.SAWYER
Date (1) 04/01
Condition (1) GOOD (NEW)

Monument Type : DISK
Longitude : 0° 0' 0.00000"
Y(N) :
Elevation :
Vertical Datum : NGVD-29
Linear Units : FEET
Date Set : 2001
County : PR

Date Changed : 020111

STATION IS LOCATED IN CANTANO, PUERTO RICO.

TO REACH STATION FROM INTERSECTION OF HIGHWAY NO. 165 WEST AND NO. 888;
PROCEED EAST ON RAMP AND GO 0.20 MILES TO A 4-WAY STOP AND P.R. 888. GO
NORTH (LEFT) 0.40 MILE TO STATION LOCATION ON THE RIGHT.

THE STATION IS LOCATED 60 DEGREES AZ AND 23.0 FEET FROM THE BACK OF CURB
ON A ROAD THAT MERGES ONTO P.R. 888, 141 DEGREES AZ AND 77.0 FEET FROM THE
2ND WOOD POLE WITH LIGHT, SOUTH OF DIRT BOAT RAMP AND 240 DEGREES AZ AND
8.0 FEET FROM THE TOP OF BANK OF LAGOON, 355 DEGREES AZ AND 67.0 FEET FROM
THE 3RD WOOD POWER POLE WITH LIGHT SOUTH OF DIRT BOAT RAMP.

STATION IS A STANDARD USACOE BRONZE DISK SET IN 8 INCH P.V.C. FILLED WITH
CONCRETE AND FLUSH WITH GROUND. STATION IS STAMPED "PRG 246 GPS, 2001
JACKSONVILLE, FLORIDA".

Monument ID: PR PRG 0247 GPS

Locality-Project : CATANO, P.R.
Latitude : 0° 0' 0.00000"
X(E) :
Zone : PR
Horizontal Datum : NAD-83
Order : GPS
State : PR
Monument Set By : ARC S&M

Date Added : 020110

Recovered By :
Company (1) ARC S&M
Person (1) FR.SAWYER
Date (1) 04/01
Condition (1) GOOD (NEW)

STATION IS LOCATED IN CANTANO, PUERTO RICO.

TO REACH STATION FROM INTERSECTION OF HIGHWAY 165 WEST AND THE 2ND EXIT TO P.R 888; GO SOUTH ON 888 0.20 MILES TO A PARK PARQUE RECREATIVO LAS ESPARANZA JOSE! ALVAREZ BOUNET, CATANO, PUERTO RICO. PROCEED NORTH INTO PARK 0.40 MILES TO A SMALL PAVED ROAD ON RIGHT. PROCEED NORTHEAST ALONG ROAD 0.10 MILES TO A PAVED BLACKTOP ROAD, GO NORTHEAST 0.35 MILES TO A SHARP RIGHT HAND TURN. CONTINUE SOUTHEAST ALONG DIRT ROAD 0.05 MILES TO STATION LOCATION ON LEFT.

THE STATION IS LOCATED 85 DEGREES AZ AND 37.5 FEET FROM A CONCRETE POLE AND 136 DEGREES AZ AND 168 FEET FROM THE END OF CORAL ROCK WALL (RIP-RAP) AND 226 DEGREES AZ AND 16 FEET TO THE TOP OF A GRANIT ROCK (RIP-RAP) AND 40 DEGREE AZ AND 13.0 FEET FROM THE CENTERLINE OF A DIRT ROAD.

STATION IS A STANDARD USACOE BRONZE DISK, SET IN 8 INCH P.V.C. FILLED WITH CONCRETE AND FLUSH WITH THE GROUND. STATION IS STAMPED "PRG 247 GPS 2001, JACKSONVILLE, DISTRICT".

Monument Type : DISK
Longitude : 0° 0' 0.00000"
Y(N) :
Elevation :
Vertical Datum : NGVD-29
Linear Units : FEET
Date Set : 2001
County : PR

Date Changed : 020111

(2)
(2)
(2)
(2)

Monument ID: PR PRG 0248 GPS

Locality-Project : CATANO, P.R.
Latitude X(E) : 0° 0' 0.00000"
Zone : PR
Horizontal Datum : NAD-83
Order : GPS
State : PR
Monument Set By : ARC S&M

Date Added : 020110

Recovered By :
Company (1) ARC S&M
Person (1) FR.SAWYER
Date (1) 04/01
Condition (1) GOOD (NEW)

STATION IS LOCATED IN CANTANO, PUERTO RICO.

TO REACH THE STATION FROM INTERSECTION OF HIGHWAY NO. 165 WEST AND THE 2ND RAMP TO PR 888; GO SOUTH ON PR 888 0.20 MILES TO A PARK (PARQUE RECREATIVO LAS ESPARANZA JOSE' ALVAREZ BOUNET CATANO, P.R., CONTINUE NORTH INTO PARK 0.40 MILES TO A SMALL PAVED ROAD ON RIGHT. CONTINUE NORTHEAST ALONG ROAD 0.10 MILES TO A PAVED BLACKTOP ROAD CONTINUE NORTHEAST ALONG ROAD 0.35 MILES TO A SHARP TURN TO THE RIGHT. CONTINUE SOUTHEAST ALONG DIRT ROAD 0.20 MILES TO STATION LOCATION ON RIGHT.

STATION IS LOCATED 320 DEGREES AZ AND 51.0 FEET FROM A CONCRETE POLE WITH LIGHT AND 220 DEGREES AZ AND 30.0 FEET FROM THE TOP OF GRANITE ROCK RIP RAP AND 65 DEGREES AZ AND 47.5 FEET FROM THE HIGH WATER LINE OF THE LAGOON.

STATION IS A STANDARD USACE BRONZE DISK SET IN 8 INCH P.V.C. FILLED WITH CONCRETE AND SET FLUSH WITH THE GROUND. STATION IS STAMPED "PRG 248 GPS, 2001 JACKSONVILLE, FLORIDA".

Monument Type : DISK
Longitude : 0° 0' 0.00000"
Y(N)
Elevation :
Vertical Datum : NGVD 29
Linear Units : FEET
Date Set : 2001
County : PR

Date Changed : 020111

(2)
(2)
(2)
(2)

CORE BORING NOTES

1. BORING LOCATIONS ARE SHOWN ON THE DRAWINGS.
2. ELEVATIONS ARE IN FEET AND TENTHS OF FEET AND REFER TO THE MEAN SEA LEVEL IN THE CB-ESP BORE HOLE SERIES AND TO MEAN LOW WATER IN THE CB-ESP01 BORE HOLE SERIES.
3. THE MEAN LOW WATER IS 0.55 FT. BELOW THE MEAN SEA LEVEL.
4. BLOWS/5 FT. REFERS TO THE NUMBER OF HAMMER BLOWS REQUIRED TO ADVANCE A 2 INCH (I.D) SPLIT SPOON SAMPLER OR A 5 FOOT SAMPLER ONE HALF FOOT. THE HAMMER IS 140# AND HAS A 30 INCH DROP.
5. (SC), (SP), (CL), AND (ML) REFER TO THE UNIFIED SOILS CLASSIFICATION SYSTEM AS ADOPTED BY THE CORPS OF ENGINEERS. MATERIALS SHOWN ON THE CORE LOGS HAVE BEEN CLASSIFIED ON THE BASIS OF FIELD VISUAL EXAMINATION. LABORATORY CLASSIFICATIONS ARE BASED ON LABORATORY TESTING AND TAKE PRECEDENCE OVER VISUAL FIELD CLASSIFICATION.
6. ORIGINAL FIELD LOGS ARE AVAILABLE FOR INSPECTION AT THE JACKSONVILLE DISTRICT OFFICE.
7. CORE SAMPLES TAKEN DURING THE DRILLING OPERATIONS ARE AVAILABLE FOR INSPECTION AT THE CORPS OF ENGINEERS ANTILES CONSTRUCTION OFFICE IN SAN JUAN, PUERTO RICO.

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2
1. PROJECT La Esperanza Peninsula, Catano		10. SIZE AND TYPE OF BIT See Remarks	
2. LOCATION (Coordinates or Station) X=760,388 Y=881,773 (NAD 83)		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY GEO CIM, INC.		12. MANUFACTURER'S DESIGNATION OF DRILL CME-45	
4. HOLE NO. (As shown on drawing title and file number) CB-ESP-1		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 14 undisturbed: 0	
5. NAME OF DRILLER EVARISTO SANTIAGO		14. TOTAL NUMBER OF CORE BOXES 1	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		15. ELEVATION GROUND WATER -0.61 FT.	
7. THICKNESS OF BURDEN 21.0 Ft.		16. DATE HOLE STARTED COMPLETED 7/31/96 7/31/96	
8. DEPTH DRILLED INTO ROCK 0 Ft.		17. ELEVATION TOP OF HOLE 4.39 Ft.	
9. TOTAL DEPTH OF HOLE 21.0 Ft.		18. TOTAL CORE RECOVERY FOR BORING 71% %	
19. SIGNATURE OF ENGINEER CARLOS GARCIA ECHEVARRIA, P.E.			

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/ft.
4.4	.0					4.4	
			SAND, fine to medium grained, trace silt, little small shell fragments, medium dense, gray to brown. (SW)	77.7	1	SPLIT SPOON	1
			-same as above, no silt, brown.	72.2	2	SPLIT SPOON	5
1.4	3.0					2.9	6
			Silty SAND, fine to coarse grained, trace shell and coral fragments, medium dense, dark gray. (SM)	88.8	3	SPLIT SPOON	5
						1.4	9
-1	4.5					-1	6
			CLAY, trace sand, very soft, dark gray (CH)	66.6	4	SPLIT SPOON	3
			-same as above.	77.7	5	SPLIT SPOON	0
						-1.6	1
-3.1	7.5					-3.1	1
			Clayey SAND, fine to medium grained, trace shell fragments. (SC)	66.6	6	SPLIT SPOON	0
						-4.6	0
-4.6	9.0					-4.6	0
			Silty CLAY, very soft, dark gray. (CL-ML)	66.6	7	SPLIT SPOON	0
			-same as above.	83.3	8	SPLIT SPOON	0
						-6.1	0
-7.6	12.0					-7.6	0
			Silty SAND, fine to medium grained (mostly fine-grained), trace shell fragments, very loose, dark gray. (SM)	66.6	9	SPLIT SPOON	0
			-same as above	55.5	10	SPLIT SPOON	1
						-9.1	1
			-same as above.	61.1	11	SPLIT SPOON	0
						-10.6	1
-12.1	16.5					-12.1	1
			Silty CLAY, trace sand, very soft, dark gray. (CL-ML)	66.6	12	SPLIT SPOON	1
						-13.6	0
-13.6	18.0					-13.6	1
			Silty SAND, very loose, dark gray. (SM)	72.2	13	SPLIT SPOON	1
			-same as above, trace shell fragments.	72.2	14	SPLIT SPOON	0
						-15.1	1
-16.6	21.0					-16.6	2
			END OF BORING CB-ESP-1 AT 21.0 FEET DEPTH.				2
			(CONTINUED NEXT PAGE)				
						(continued)	

DRILLING LOG (Cont. Sheet)			ELEVATION TOP OF HOLE 4.39 Ft.		SHEET 2 OF 2																					
PROJECT La Esperanza Peninsula, Catano			INSTALLATION Jacksonville District																							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC #	SAMPLE NUMBER	REMARKS Bit or Barrel																				
-18.1	22.5																									
			<p>Notes: Soils are field visually classified in accordance with the Unified Soils Classification System.</p> <p>140# Hammer with 30" drop used on 2.0 foot split spoon (1-3/8" I.D. x 2" O.D.)</p>			<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">Sample No.</td> <td style="text-align: left;">Moisture Content%</td> <td style="text-align: left;">Sp.G.</td> <td style="text-align: left;">Att. Limits L.L.</td> <td style="text-align: left;">P.I.</td> </tr> <tr> <td>3</td> <td>47.6</td> <td>2.80</td> <td>46.5</td> <td>19.1</td> </tr> <tr> <td>5</td> <td>72.0</td> <td>2.78</td> <td>77.1</td> <td>43.1</td> </tr> <tr> <td>9</td> <td>43.8</td> <td>-</td> <td>N/P</td> <td>N/P</td> </tr> </table>	Sample No.	Moisture Content%	Sp.G.	Att. Limits L.L.	P.I.	3	47.6	2.80	46.5	19.1	5	72.0	2.78	77.1	43.1	9	43.8	-	N/P	N/P
Sample No.	Moisture Content%	Sp.G.	Att. Limits L.L.	P.I.																						
3	47.6	2.80	46.5	19.1																						
5	72.0	2.78	77.1	43.1																						
9	43.8	-	N/P	N/P																						
						-22.5																				
						-25																				
						-27.5																				
						-30																				
						-32.5																				
						-35																				
						-37.5																				
						-40																				
						-42.5																				
						-45																				
						-47.5																				
						-50																				

Hole No. CB-ESP-2

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1
1. PROJECT La Esperanza Peninsula, Catano		10. SIZE AND TYPE OF BIT See Remarks	
2. LOCATION (Coordinates or Station) X=761,615 Y=880,736 (NAD 83)		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY GEO CIM, INC.		12. MANUFACTURER'S DESIGNATION OF DRILL TRIPOD	
4. HOLE NO. (As shown on drawing title and file number) CB-ESP-2		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 7 undisturbed: 0	
5. NAME OF DRILLER EVARISTO SANTIAGO		14. TOTAL NUMBER OF CORE BOXES 1	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		15. ELEVATION GROUND WATER 1.20 FT.	
7. THICKNESS OF BURDEN 10.5 Ft.		16. DATE HOLE STARTED COMPLETED 7/31/96 8/01/96	
8. DEPTH DRILLED INTO ROCK 0 Ft.		17. ELEVATION TOP OF HOLE 4.20 Ft.	
9. TOTAL DEPTH OF HOLE 10.5 Ft.		18. TOTAL CORE RECOVERY FOR BORING 80.9% %	
19. SIGNATURE OF ENGINEER CARLOS GARCIA ECHEVARRIA, P.E.			

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/5'
4.2	.0					4.2	0
2.7	1.5		SAND, fine trace to medium grained, trace shell fragments, some roots and plant fragments, loose, brown. (SP) -same as above, trace root.	88.8	1	SPLIT SPOON	1 2 3
1.2	3.0		-same as above, trace silt.	100	2	SPLIT SPOON	4 4 7
-.3	4.5		-same as above.	100	3	SPLIT SPOON	4 2 3
-1.8	6.0		-same as above.	44.4	4	SPLIT SPOON	2 3 4
-3.3	7.5		CLAY, trace sand, trace shell fragments, very soft, dark gray. (CH) -same as above.	88.8	5	SPLIT SPOON	0 0 1
-4.8	9.0		-same as above.	100	6	SPLIT SPOON	0 0 0
-6.3	10.5		-same as above.	44.4	7	SPLIT SPOON	0 0 1
			END OF BORING CB-ESP-2 AT 10.5 FEET DEPTH. NOTES: Soils are field visually classified in accordance with the Unified Soils Classification System. 140# Hammer with 30" drop used on 2.0 foot split spoon (1-3/8" I.D. x 2" O.D.)			Sample No. Moisture Content% Sp.G. Att. Limits L.L. P.I.	
						3 24.1 2.75 N/P N/P	12.5
						6 75.7 2.78 78.9 47.4	

Hole No. CB-ESP01-4

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2
1. PROJECT LA ESPERANZA		10. SIZE AND TYPE OF BIT See Remarks	
2. LOCATION (Coordinates or Station) X=604,435 Y=224,182		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW, Horizontal Datum: PR/VI NAD27	
3. DRILLING AGENCY Corps of Engineers		12. MANUFACTURER'S DESIGNATION OF DRILL Tripod Acker on Barge	
4. HOLE NO. (As shown on drawing title and file number) CB-ESP01-4		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 8 undisturbed: 0	
5. NAME OF DRILLER D. HEWETT		14. TOTAL NUMBER OF CORE BOXES 2	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		15. ELEVATION GROUND WATER TIDAL	
7. THICKNESS OF BURDEN 0 Ft.		16. DATE HOLE STARTED COMPLETED 1 FEB 01 1 FEB 01	
8. DEPTH DRILLED INTO ROCK 0 Ft.		17. ELEVATION TOP OF HOLE -4.3 Ft.	
9. TOTAL DEPTH OF HOLE 29.0 Ft.		18. TOTAL CORE RECOVERY FOR BORING 74 %	
19. SIGNATURE OF GEOLOGIST C. PAPIERNIK			

NAD 83
X = 760736
Y = 879635

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/5'
-4.3	0.0					-4.3	0
			SAND, silty, mostly medium angular quartz, trace angular carbonate, trace clay, trace gravel size whole and broken shells, weak HCl reaction, wet, gray (SM)	20	1	5' SAMPLER	WOR WOR WOR WOH
						-6.8	2.5
-7.3	3.0		CLAY, fat, medium plasticity, very soft, little silt, wet, organic odor, dark gray (CH)	100		SPT	4 0
						-8.3	0
				100	2 D-2	SPT	WOR WOR
						-9.8	5
				100		SPT	WOR WOR
						-11.3	7.5
				75	3	5' SAMPLER	WOR WOR WOR WOR WOR
			From -14.8' to -15.8', fine silty sand			-15.3	10
				100		SPT	1 0
			At -16.8', soft, increasing silt and organic content, brown			-16.8	12.5
				100	4 D-4	SPT	WOR WOH
						-18.3	15
				100		SPT	WOH WOH
						-19.8	17.5
				100	5	SPT	WOH WOH
						-22.8	20
				67		SPT	4 WOH
			At -24.3', less soft, sandy, gray			-24.3	1
							3
				14	N/S	SPT	2
						-25.8	3
				80	6	SPT	2
							3
(continued)							22.5

DRILLING LOG (Cont. Sheet)		ELEVATION TOP OF HOLE		SHEET 2 OF 2			
PROJECT		INSTALLATION					
LA ESPERANZA		Jacksonville District					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/ft.
-26.8	22.5						
-27.3	23.0			80	6	-27.3 SPT	3
			SAND, clayey, low plasticity, mostly medium angular quartz, trace silt and shells, weak HCl reaction, wet, dark gray (SC)	100	7	SPT	3
			At -28.8', clay and silt content decreasing	67	D-7	-28.8 SPT	2
							3
							3
			At -31.8', some coarse sand sized shell fragments, brown	53	8	SPT	2
							3
							3
							2
							3
							2
							2
-33.3	29.0			53		-33.3 SPT	2
			Soils are field visually classified in accordance with the Unified Soils Classification System.			140# hammer with 30" drop used on 2' split spoon (1 3/8" ID X 2" OD); 5' sampler used on soft clay material	

Hole No. CB-ESP01-5

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2
1. PROJECT LA ESPERANZA	10. SIZE AND TYPE OF BIT See Remarks		
2. LOCATION (Coordinates or Station) X=604,231 Y=224,550	11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW, Horizontal Datum: PR/VI NAD27		
3. DRILLING AGENCY Corps of Engineers	12. MANUFACTURER'S DESIGNATION OF DRILL Tripod Acker on Barge		
4. HOLE NO. (As shown on drawing title and file number) CB-ESP01-5	13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 11 undisturbed: 0		
5. NAME OF DRILLER D. HEWETT	14. TOTAL NUMBER OF CORE BOXES 2		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED	15. ELEVATION GROUND WATER TIDAL		
7. THICKNESS OF BURDEN 0 Ft.	16. DATE HOLE STARTED COMPLETED 31 JAN 01 31 JAN 01		
8. DEPTH DRILLED INTO ROCK 0 Ft.	17. ELEVATION TOP OF HOLE -3.8 Ft.		
9. TOTAL DEPTH OF HOLE 29.5 Ft.	18. TOTAL CORE RECOVERY FOR BORING 48 %		
	19. SIGNATURE OF GEOLOGIST C. PAPIERNIK		

NAD 83
 N = 760532
 Y = 380003

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/.5'
-3.8	0.0					-3.8	0
		[Hatched Pattern]	CLAY, fat, medium plasticity, very soft, trace silt, wet, organic odor, dark gray (CH)	50	1 D-1 D-2	5' SAMPLER	WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
						-8.8	5
		[Dotted Pattern]	At -11.8', soft, trace fine sand and shells, light gray	30	2 D-1 D-2	5' SAMPLER	WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
							WOR
-13.8	10.0					-13.8	10
		[Dotted Pattern]	GRAVEL, silty, mostly coarse coral gravel, some cobble and boulder sized coral, coral pieces in a matrix of very soft silty clay, strong HCl reaction, wet, no cementation, possible fill material, gray/white (GM)	7	N/S	SPT	1
							1
							2
							1
							3
							2
							3
							1
							2
							12
						-15.3	12.5
		[Dotted Pattern]	SAND, well-graded, mostly medium angular quartz, little silt, trace angular carbonate, trace clay, weak HCl reaction, wet, gray/green (SW)	56	3	SPT	3
							2
							7
							N/S
							SPT
							1
							2
							12
							6
							6
						-18.3	15
		[Dotted Pattern]	At -25.3', trace gravel size shell	47	4	SPT	1
							2
							1
							2
							1
							1
							2
							2
							1
							2
-21.3	17.5					-21.3	17.5
		[Dotted Pattern]	SAND, well-graded, mostly medium angular quartz, little silt, trace angular carbonate, trace clay, weak HCl reaction, wet, gray/green (SW)	0	N/S	SPT	2
							1
							1
							2
							1
							1
							1
							2
							2
							1
						-22.8	20
		[Dotted Pattern]	At -25.3', trace gravel size shell	67	6	SPT	1
							1
							2
							2
							2
							1
							1
							2
							2
							1
						-24.3	20
		[Dotted Pattern]	SAND, well-graded, mostly medium angular quartz, little silt, trace angular carbonate, trace clay, weak HCl reaction, wet, gray/green (SW)	73	7	SPT	2
							2
							1
							2
							1
							1
							2
							2
							1
							2
						-25.8	22.5
		[Dotted Pattern]	At -25.3', trace gravel size shell	80	8	SPT	3
							3
							3
							3
							3
							3
							3
							3
							3
							3

Hole No. CB-ESP01-5

DRILLING LOG (Cont. Sheet)		ELEVATION TOP OF HOLE		SHEET 2 OF 2			
PROJECT			INSTALLATION				
LA ESPERANZA			Jacksonville District				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/5'
-26.3	22.5			80		SPT	2
					8	-27.3	1
				67		SPT	3
							2
-28.8	25.0					-28.8	1
			SAND, poorly-graded, mostly medium angular quartz, few gravel size shell, trace angular carbonate, weak HCl reaction, wet, gray (SP)	53	9 D-9	SPT	7
						-30.3	10
				47	10	SPT	5
						-31.8	9
							12
				33	11	SPT	5
-33.3	29.5					-33.3	6
							9
			Soils are field visually classified in accordance with the Unified Soils Classification System.			140# hammer with 30" drop used on 2' split spoon (1 3/8" ID X 2" OD); 5' sampler used on soft clay material	

Hole No. CB-ESP01-6

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 3
1. PROJECT LA ESPERANZA		10. SIZE AND TYPE OF BIT See Remarks	
2. LOCATION (Coordinates or Station) X=604,387 Y=226,183		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MLW, Horizontal Datum: PR/VI NAD27	
3. DRILLING AGENCY Corps of Engineers		12. MANUFACTURER'S DESIGNATION OF DRILL Failing 1500	
4. HOLE NO. (As shown on drawing title and file number) CB-ESP01-6		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN disturbed: 20 undisturbed: 0	
6. NAME OF DRILLER D. HEWETT		14. TOTAL NUMBER OF CORE BOXES 2	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		15. ELEVATION GROUND WATER 4.5 Ft.	
7. THICKNESS OF BURDEN 0 Ft.		16. DATE HOLE STARTED COMPLETED 2 FEB 01 3 FEB 01	
8. DEPTH DRILLED INTO ROCK 0 Ft.		17. ELEVATION TOP OF HOLE 7.0 Ft.	
9. TOTAL DEPTH OF HOLE 60.0 Ft.		18. TOTAL CORE RECOVERY FOR BORING 75 %	
		19. SIGNATURE OF GEOLOGIST C. PAPIERNIK	

NAD 83
N = 760688
Y = 881636

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS / 5'
7.0	0.0					7.0	
		[Symbol: Circle with dot]	SAND, well-graded, mostly fine subangular quartz, some subrounded carbonate, trace broken shells, weak HCl reaction, moist, light brown (SW) At 4.5', wet, gray	53	1 D-1	SPT	3 12
				67		SPT	14 14
3.5	3.5	[Symbol: Circle with dot]	SAND, poorly-graded, mostly fine subangular silica, trace rounded carbonate, trace silt, trace medium broken shells, weak HCl reaction, wet, dark gray (SP)	73	2 D-2	SPT	8 12
				80		SPT	14 4
		[Symbol: Circle with dot]	From 0.5' to 0.0', silty sandy clay		N/S	SPT	8 6
0.0	7.0			33		SPT	2
		[Symbol: Diagonal lines]	CLAY, fat, high plasticity, soft, some silt, wet, gray (CH)	100	3 D-3	SPT	1 WOH
				100		SPT	WOH
				100		SPT	WOH
				100		SPT	WOH
-6.0	13.0	[Symbol: Diagonal lines]	SILT, inorganic-L, low placticity, trace fine to medium sand, trace clay, trace coral and broken/whole shell, trace organic debris, weak HCl reaction, wet, dark gray (ML)	67	4	SPT	1 WOH
				67		SPT	WOH
		[Symbol: Diagonal lines]	At -10.0', sand and clay content varies with depth		5 D-5	SPT	4 1
				67		SPT	1
				33		SPT	2 1
				100		SPT	2 WOH
		[Symbol: Diagonal lines]		60	6	SPT	1 2
				60		SPT	2 3
		[Symbol: Diagonal lines]		20	N/S	SPT	4 6
				20		SPT	2 2
		[Symbol: Diagonal lines]		53	7	SPT	3 2
				53		SPT	1 2
-15.5	22.5					-15.5	3

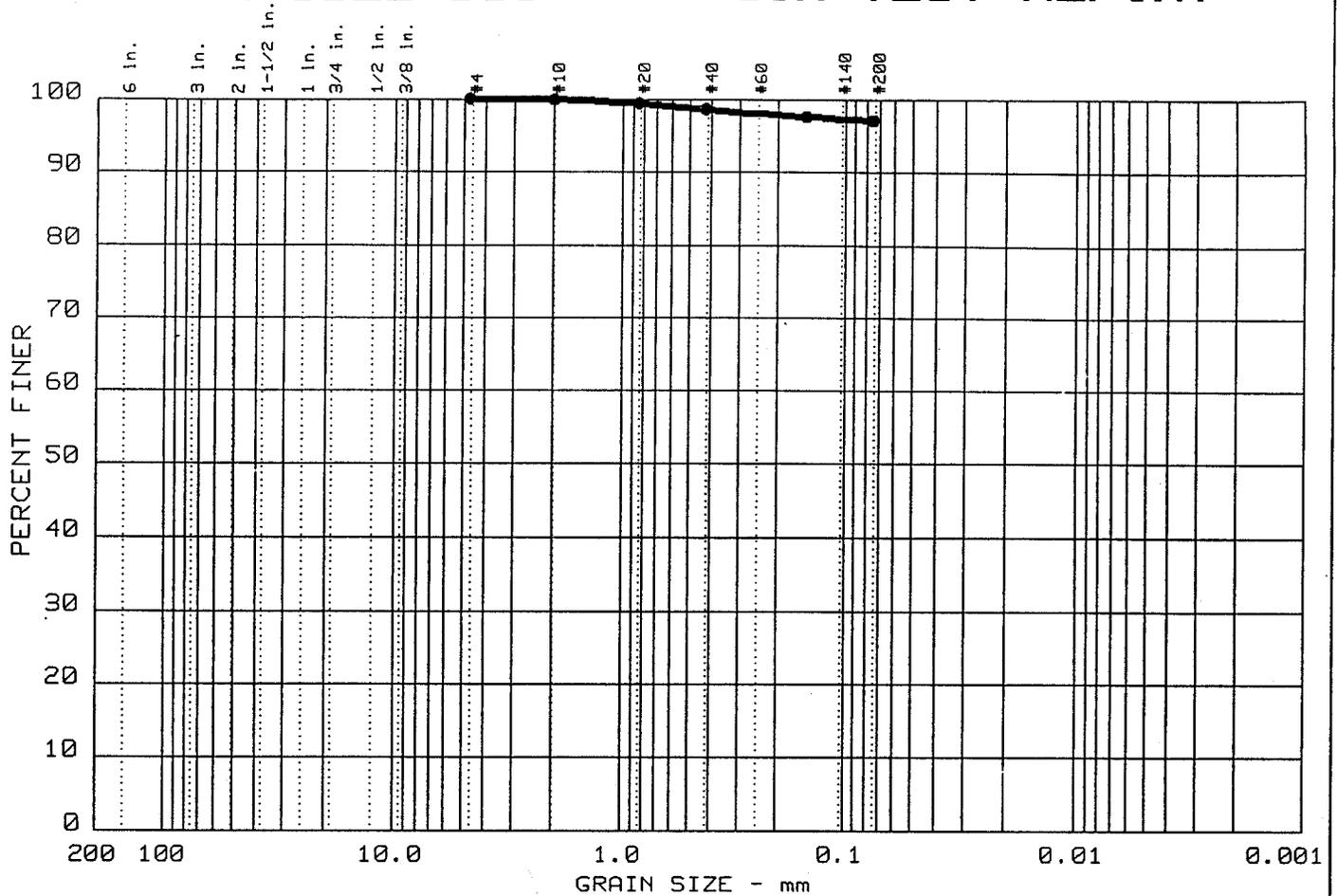
(continued)

DRILLING LOG (Cont. Sheet)		ELEVATION TOP OF HOLE		PROJECT		INSTALLATION		SHEET 2 OF 3				
		7.0 Ft.		LA ESPERANZA		Jacksonville District						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/ft ²					
-15.5	22.5					-15.5						
			SAND, silty, mostly fine subangular silica, trace carbonate, trace whole/broken shell, trace clay, weak HCl reaction, wet, gray (SM)	47	8 D-8	SPT	2		22.5			
										2		
								-17.0	4			
									5			
						47		SPT	7			
-18.5	25.5							-18.5	10			
					SAND, poorly-graded, mostly fine subangular silica, trace silt, trace shell, weak HCl reaction, wet, occasional thin clay lenses, light gray (SP)	53	9 D-9	SPT	6			
												16
										-20.0	16	
											12	
								67		SPT	16	
							At -21.0', sand cleaner with depth			-21.5	20	
									10			
						67		SPT	25			
								-23.0	28			
						73	10	SPT	18			
								-24.5	24			
									18			
				67		SPT	28					
						-26.0	36					
							18					
				80	11	SPT	43					
			At -27.0', more coarse, yellow			-27.5	50@0.3					
							43					
				53		SPT	50@0.4					
						-29.0	N/A					
							42					
				67	12 D-12	SPT	32					
						-30.5	21					
							28					
				80		SPT	18					
-31.5	38.5					-32.0	14					
			CLAY, fat, high plasticity, hard, trace silt, moist, homogenous, rusty brown (CH)				18					
									21			
					At -33.0, slickensided			-33.5	27			
									18			
						87	13 D-13	SPT	14			
					From -35.0', increasing silt content, decreasing clay content			-35.0	28			
									10			
						93	14	SPT	17			
					From -36.5' to -38.5', high silt content, carbonate nodules			-36.5	29			
									10			
						100	15 D-15	SPT	17			
								-38.0	17			
							6					
				100		SPT	17					
						-39.5	30					
							9					
				100	16	SPT	14					
						-41.0	38					
							14					
			From -41.0' to -42.5', slickensided			-42.5	26					
				100	17	SPT	28					
							16					
				80		SPT	16					
(continued)												

Hole No. CB-ESP01-6

DRILLING LOG (Cont. Sheet)		ELEVATION TOP OF HOLE		PROJECT		INSTALLATION		SHEET 3 OF 3	
		7.0 Ft.		LA ESPERANZA		Jacksonville District			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS Bit or Barrel	BLOWS/ft ²		
-43.0	50.0								50
-44.0	51.0		At -43.5', limestone lens	80	17	SPT	26		
						-44.0	17		
			SAND, clayey, medium plasticity, mostly medium angular carbonate, some clay and silt, weak HCl reaction, moist, brown (SC)	73		SPT	16		
					18	-45.5	21		52.5
					100		12		
			At -46.5', more silica sand, trace carbonate gravel, sand and clay content varies with depth			SPT	21		
						-47.0	25		
					100	SPT	28		
						-48.5	50		55
					19	SPT	27		
						-50.0	16		
					100	SPT	22		
						-51.5	12		57.5
					20	SPT	14		
						-53.0	17		
-53.0	60.0				100	SPT	12		
							14		60
			Soils are field visually classified in accordance with the Unified Soils Classification System			140# hammer with 30" drop used on 2' split spoon (1 3/8" I.D. 2.0' O.D.)	20		
									62.5
									65
									67.5
									70
									72.5
									75
									77.5

GRAIN SIZE DISTRIBUTION TEST REPORT



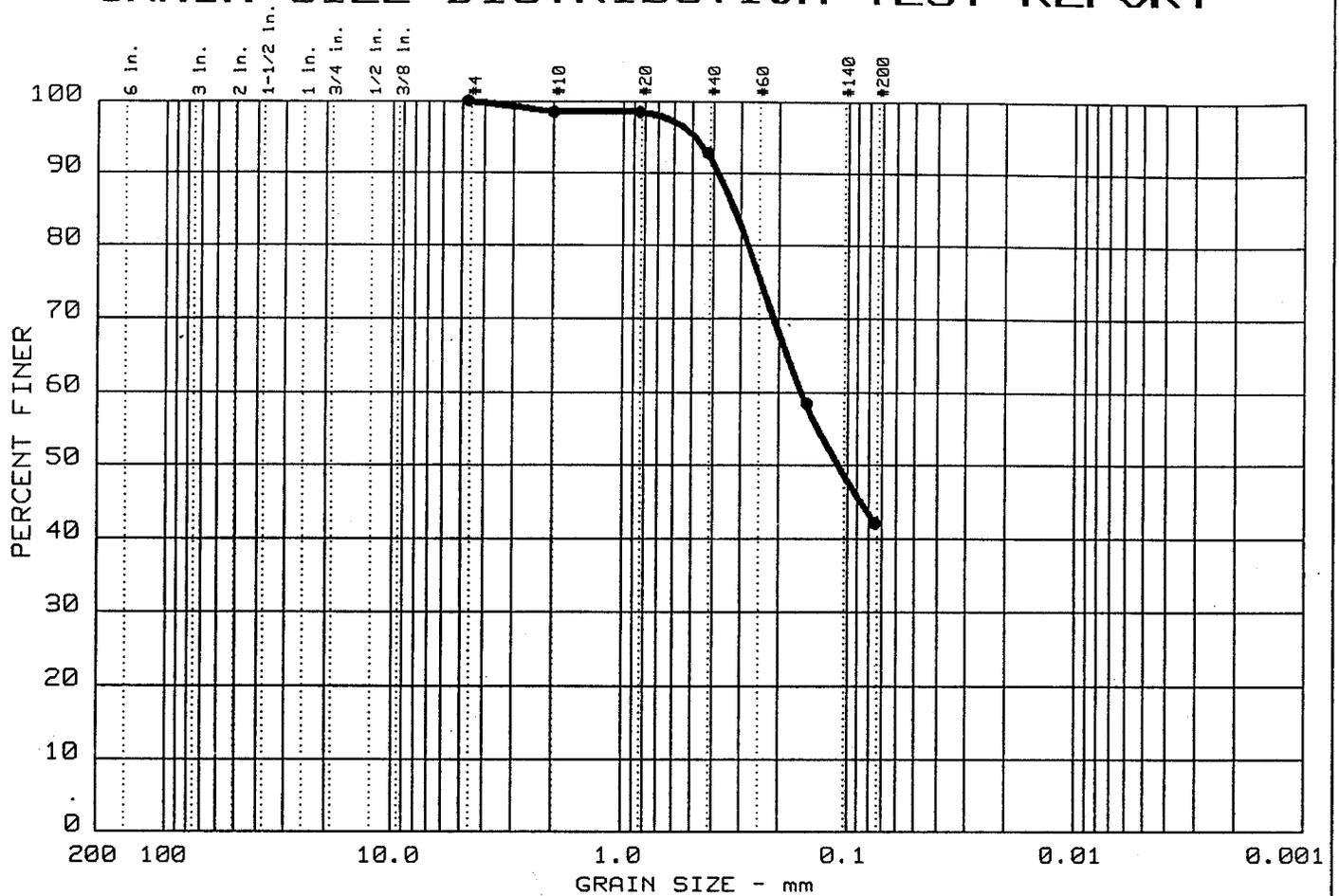
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 12	0.0	0.0	3.0	97.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● 77.1	43.1								

MATERIAL DESCRIPTION	USCS	AASHTO
● CLAY, trace sand, dark gray.	CH	A-7-5

<p>Project No.: 1835-96 Project: La Esperanza Peninsula ● Location: Catano, P.R. Date: September 16, 1996</p>	<p>Remarks: U.S.A. Corps of Engineers Boring No.: CB-ESP-1 Sample No.: 5 Sample Depth: 6.0'-7.5'</p>
GRAIN SIZE DISTRIBUTION TEST REPORT GEO CIM, INC.	
Figure No. 2	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 13	0.0	0.0	57.9	42.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● N/P	N/P	0.319	0.158	0.109					

MATERIAL DESCRIPTION	USCS	AASHTO
● Silty SAND, dark gray.	SM	A-4

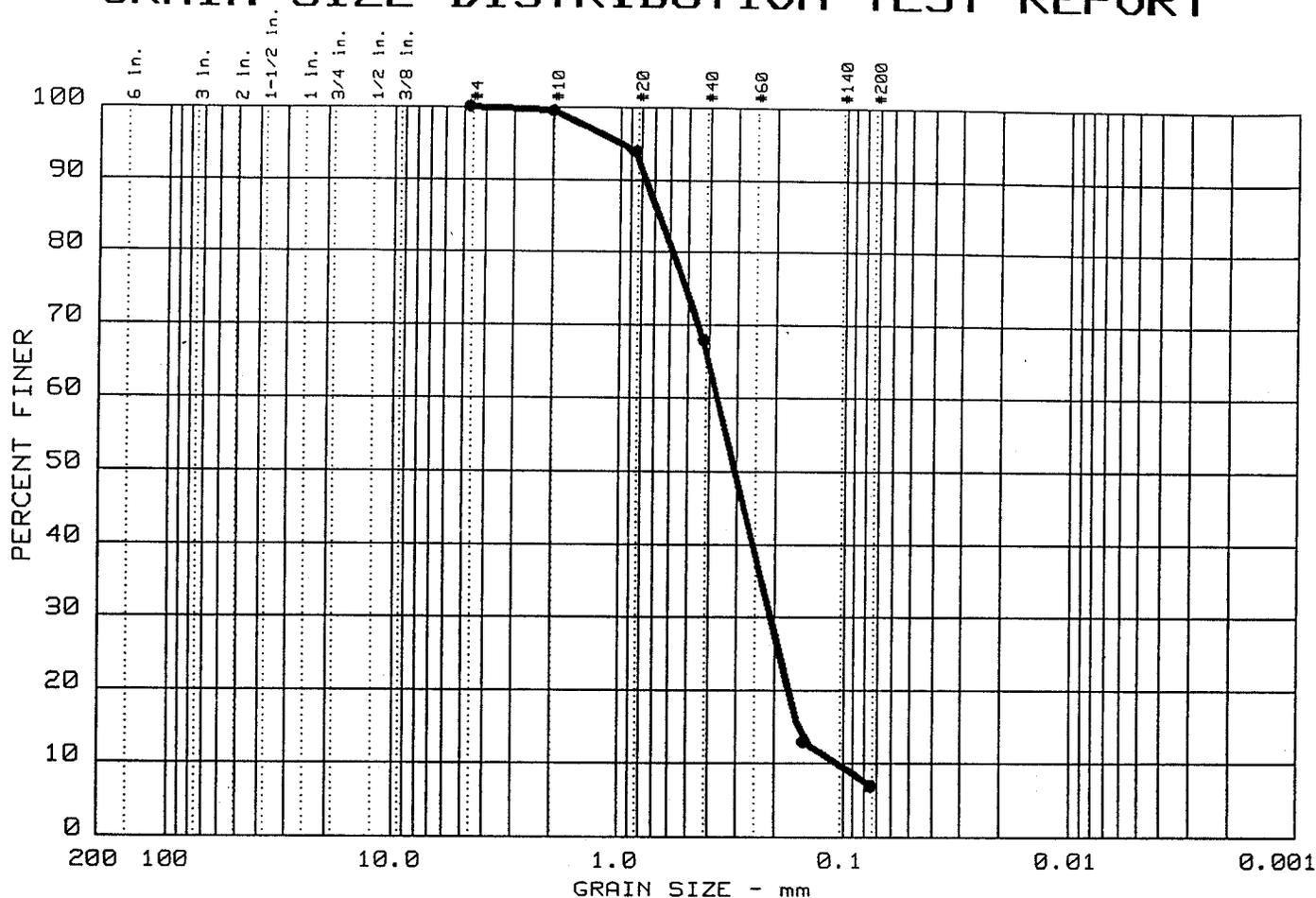
Project No.: 1835-96
 Project: La Esperanza Peninsula
 ● Location: Catano, P.R.
 Date: September 16, 1996

Remarks:
 U.S.A. Corps of Engineers
 Boring No.: CB-ESP-1
 Sample No.: 9
 Sample Depth: 12.0'-13.5'

GRAIN SIZE DISTRIBUTION TEST REPORT
GEO CIM, INC.

Figure No. 3

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 14	0.0	0.0	93.1	6.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● N/P	N/P	0.665	0.366	0.303	0.207	0.156	0.105	1.11	3.5

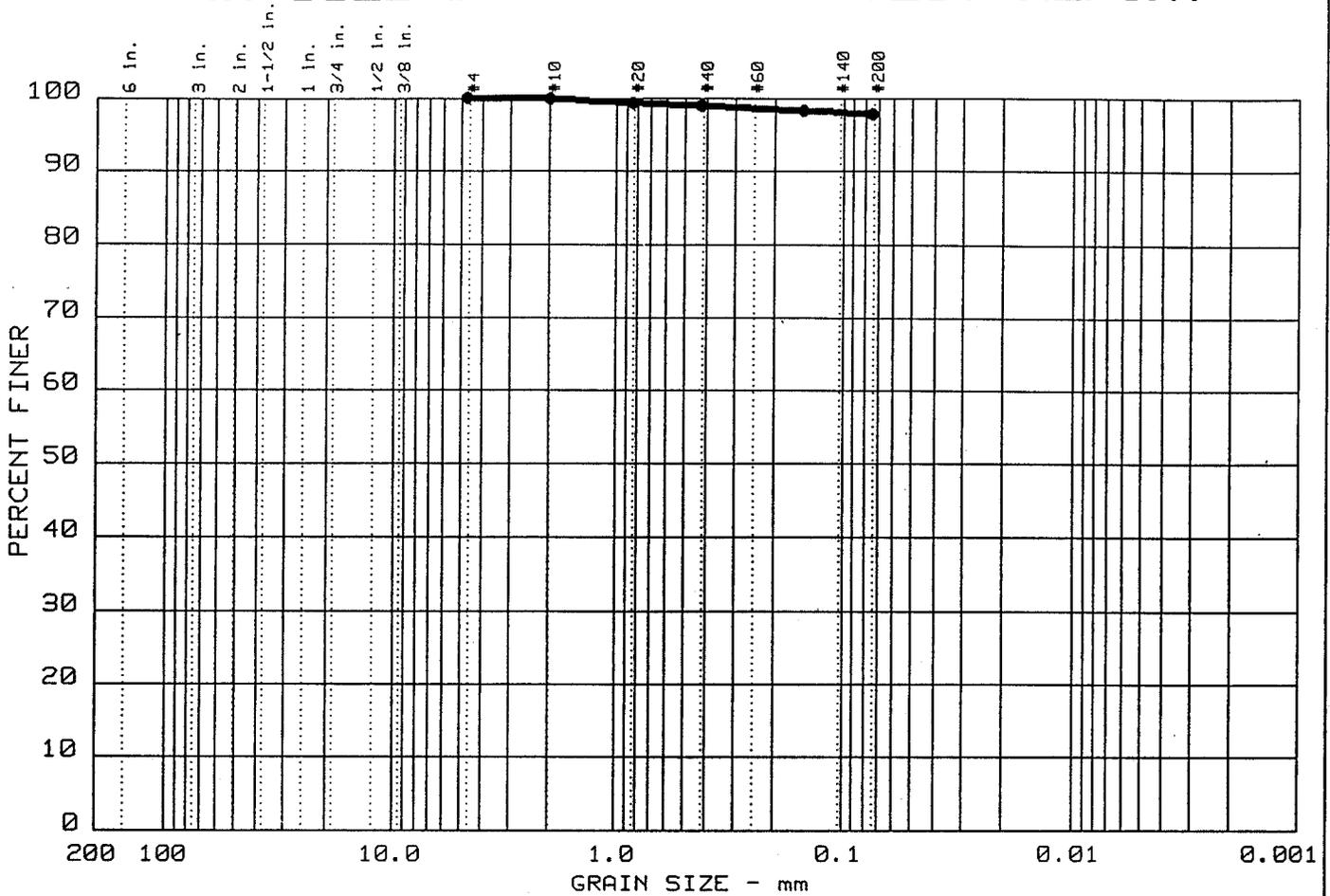
MATERIAL DESCRIPTION	USCS	AASHTO
● SAND, trace silt, brown.	SP-SM	A-3

Project No.: 1835-96
 Project: La Esperanza Peninsula
 ● Location: Catano, P.R.
 Date: September 16, 1996

Remarks:
 U.S.A. Corps of Engineers
 Boring No.: CB-ESP-2
 Sample No.: 3
 Sample Depth: 3.0'-4.5'
 Figure No. 4

GRAIN SIZE DISTRIBUTION TEST REPORT
GEO CIM, INC.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 15	0.0	0.0	2.2	97.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● 78.9	47.4								

MATERIAL DESCRIPTION	USCS	AASHTO
● CLAY, trace sand, dark gray.	CH	A-7-5

Project No.: 1835-96
 Project: La Esperanza Peninsula
 ● Location: Catano, P.R.
 Date: September 16, 1996

Remarks:
 U.S.A. Corps of Engineers
 Boring No.: CB-ESP-2
 Sample No.: 6
 Sample Depth: 7.5'-9.0'

GRAIN SIZE DISTRIBUTION TEST REPORT

GEO CIM, INC.

Figure No. 5

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

- 1.1.1 Mobilization and Demobilization (Line Item 0001)
- 1.1.2 Endangered Species Monitoring (Line Item 0004)
- 1.1.3 Turbidity Monitoring (Line Item 0005)

1.2 UNIT PRICE PAYMENT ITEMS

- 1.2.1 Excavation and Placement (Line Item 0003)
 - 1.2.1.1 Payment
 - 1.2.1.2 Measurement
 - 1.2.1.3 Unit of Measure
- 1.2.2 Clearing and Grubbing (Line Item 0002)
 - 1.2.2.1 Payment
 - 1.2.2.2 Measurement
 - 1.2.2.3 Unit of Measure
- 1.2.3 Sheet Pile (Line Item 0006)
 - 1.2.3.1 Payment
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 - 1.2.3.3 Unit of Measure

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section Table of Contents --

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 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. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. 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.

1.1.1 Mobilization and Demobilization (Line Item 0001)

a. Payment will be made for costs associated with or incidental to mobilization and demobilization and establishment of initial project management and coordination. See Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION of Section 00700 CONTRACT CLAUSES and Section 01310 ADMINISTRATIVE PROCEDURES.

1.1.2 Endangered Species Monitoring (Line Item 0004)

Payment will be made for costs associated with or incidental to endangered species observers. See Section 01355 ENVIRONMENTAL PROTECTION.

1.1.3 Turbidity Monitoring (Line Item 0005)

Payment will be made for costs associated with or incidental to obtaining, analyzing, and reporting the results of monitoring for turbidity. See Section 01411 TURBIDITY AND DISPOSAL MONITORING.

1.2 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.

1.2.1 Excavation and Placement (Line Item 0003)

1.2.1.1 Payment

a. Payment will be made for costs associated with or incidental to

excavation, transportation, and placement of materials; providing and maintaining access to the work site(s) and placement area(s); noise control; and debris removal. See Sections 02325 DREDGING and 01355 ENVIRONMENTAL PROTECTION.

b. Insofar as consistent with the paragraph CONTINUITY OF WORK of Section 00800 SPECIAL CONTRACT REQUIREMENTS, monthly partial payments will be based on approximate quantities determined by soundings or sweepings performed by the Contractor behind the dredge. The term "area designated by the Contracting Officer" as used in the CONTINUITY OF WORK paragraph, is defined as "acceptance section".

1.2.1.2 Measurement

a. The maps and/or drawings already prepared (paragraph CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS of Section 00700 CONTRACT CLAUSES) are believed to represent accurately average existing conditions, but the depths shown thereon may be verified and corrected by soundings taken before dredging. Determination of quantities removed and the deductions made therefrom to determine quantities by place measurement to be paid for in the area specified, after having once been made, will not be reopened, except on evidence of collusion, fraud, or obvious error.

b. The total amount of material removed, and to be paid for under the contract, will be measured by the cubic yard in place and be determined by the average end area method. The volume computed shall be between the bottom surface shown by soundings taken within 3 weeks before dredging and the bottom surface shown by the soundings taken within 3 weeks after the work specified in each acceptance section indicated on the drawings has been completed. The Contractor shall give 3 weeks advance notice, in writing, to the Contracting Officer's Representative of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section. The quantity shall include the volume within the limits of the side slopes described in subparagraph "Side Slopes" of paragraph REQUIRED DEPTH, ALLOWABLE TOLERANCE, AND SIDE SLOPES of Section 02325 DREDGING, less any deductions that may be required for misplaced material described in subparagraph "Misplaced Materials" of paragraph DISPOSAL OF EXCAVATED MATERIAL of Section 02325 DREDGING.

1.2.1.3 Unit of Measure

Cubic yard.

1.2.2 Clearing and Grubbing (Line Item 0002)

1.2.2.1 Payment

Payment will be made for costs associated with or incidental to clearing and grubbing. See Sections 02230 CLEARING AND GRUBBING.

1.2.2.2 Measurement

The amount paid for will be the number of acres of clearing and grubbing in the accepted work. No payment will be made for deficient areas until corrected.

1.2.2.3 Unit of Measure

Acre.

1.2.3 Sheet Pile (Line Item 0006)

1.2.3.1 Payment

Payment will be made for costs associated with or incidental to installation of sheet pile. See Section 02464 STEEL SHEET PILES and Section 09965 PAINTING: STEEL SHEET PILES.

1.2.3.2 Measurement

The amount paid for will be the number of square feet of installed and painted sheet pile used in the accepted work. No payment will be made for defective areas until corrected.

1.2.3.3 Unit of Measure

Square Foot.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01310

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- 1.3 SUBMITTALS
- 1.4 PROJECT COORDINATION
 - 1.4.1 Resident Management System (RMS)
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 - 1.6.2 Preconstruction Conference Submittals
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- 1.7 PARTNERING
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 - 1.9.1 Progress Meeting Participants
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- 3.2 PROGRESS MEETING AGENDA
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INDOCTRINATION (ESHI)

-- End of Section Table of Contents --

SECTION 01310

ADMINISTRATIVE PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

The Contractor shall manage the project and coordinate the activities of its own employees, subcontractors, suppliers and offsite fabricators. The Contractor will be required to use computers, E-mail, and internet resources for work described in this Section. The Contractor shall notify the Contracting Officer of important meetings, schedule events and critical construction activities. The Contractor shall furnish experienced and trained persons, sufficient labor and materials and equipment required for planning and execution of project management functions and coordination activities. The Contractor shall coordinate construction activities and manage project resources to construct the project conforming to contract requirements, on time and within budget. Related Sections are 01321 CONSTRUCTION PROGRESS DOCUMENTATION; and, 01452 DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

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.

ENGINEERING MANUALS (EM)

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

Corps of Engineers publications internet location is:
<http://www.usace.army.mil/inet/usace-docs/>

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES. Bring following administrative submittal items to Preconstruction Conference:

SD-01 Preconstruction Submittals

Standard Form 100; FIO.

Equal Employment Opportunity Commission - Employer Information Report EEO-1, OMB - Standard Form 100. Submit for Contractor and applicable subcontractors. See Clause EQUAL OPPORTUNITY of Section 00700 CONTRACT CLAUSES. A sample copy of SF 100 is appended to the end of this Section.

Affirmative Action Plan; FIO.

Documentation of compliance with Clause AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION of Section 00700 CONTRACT CLAUSES. (See subparagraph (g) items 1 through 16 for Affirmative Action Plan format.)

List of Subcontractors; FIO.

Submit a list of proposed subcontractors. Include company name, person to contact, street address, mail address, phone number, type of specialty and estimated subcontract quote. See Clauses SUBCONTRACTS (LABOR STANDARDS) and LIMITATIONS ON SUBCONTRACTING of Section 00700 CONTRACT CLAUSES.

Signature Authority; FIO.

A power of attorney or a notarized letter of authority from Contractor identifying local representatives authorized to sign contract documents.

Drug-Free Work Place Record; FIO.

A record to demonstrate compliance with Clause DRUG-FREE WORKPLACE of Section 00700 CONTRACT CLAUSES (see subparagraphs (b)(1) through (b)(7)).

Accident Prevention Plan; G|COR.

Within 20 calendar days after the date of Notice of Award, the Contractor shall submit Accident Prevention Plan with additional plans required by EM 385-1-1. Additional plans may include, but are not limited to, Activity Hazards Analysis; Hazard Communication Program (refer to Clause HAZARD COMMUNICATION of Section 00800 SPECIAL CONTRACT REQUIREMENTS); Confined Space Entry Plan (refer to Clause CONFINED SPACE ENTRY of Section 00800 SPECIAL CONTRACT REQUIREMENTS); and, Employee Safety and Health Indoctrination (ESHI) (sample ESHI appended to the end of this Section).

Diving Plan (including Activity Hazards Analysis); G|COR.

Diving Plan is required on all projects with work on or over water and comply with EM 385-1-1. Refer to Clause DIVING PLAN of Section 00800 SPECIAL CONTRACT REQUIREMENTS.

1.4 PROJECT COORDINATION

1.4.1 Resident Management System (RMS)

Contractor shall use Contracting Officer furnished Resident Management System (RMS) software for construction information management (CIM). RMS will be latest version of "RMS-QC" which is personal computer based. See Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS).

1.4.2 Coordination with Other Contracts

See Clause OTHER CONTRACTS of Section 00700 CONTRACT CLAUSES.

1.5 PROJECT MEETINGS

Contracting Officer requires following types of project meetings:

- Preconstruction Conference
- Partnering Meeting

- Partnering Regroup Meetings
- Coordination Meeting
- Preparatory and Initial Phase meeting for each feature of work
- Project Progress Meetings
- Alternate Dispute Resolution

Project meetings are described in detail in subparts below.

1.6 PRECONSTRUCTION CONFERENCE

Contracting Officer will conduct a Preconstruction Conference for this project in accordance with Clause PRECONSTRUCTION CONFERENCE of Section 00700 CONTRACT CLAUSES. Preconstruction Conference will be after Notice of Award (NOA) but prior to Notice to Proceed (NTP). Contracting Officer will notify Contractor of time, place, and agenda. Contractor shall notify key subcontractors and suppliers to attend. Contracting Officer will discuss contract "ground rules" and general issues including:

- Lines of Contracting Officer authority
- Lines of Contractor authority
- 00700 Contract Clauses
- 00800 Special Contract Requirements
- Contract Administration
- Progress Payment
- Correspondence Procedures
- Project Schedule
- Submittal Register
- Labor requirements
- General Site Safety

1.6.1 Preconstruction Conference Minutes

Contracting Officer will take detailed minutes of Preconstruction Conference discussions and may use an audio or video tape. Copies of typed minutes will be provided to the Contractor to review for accuracy, sign and return. Signed minutes become part of the contract file. Audio or video tapes if used will be made available for Contractor to review or copy at Area Office.

1.6.2 Preconstruction Conference Submittals

Submittals required by this Section are described in paragraph SUBMITTALS above.

1.6.2.1 Other Division 01 Submittals

Bring listed Division 01 submittals in draft form to Preconstruction Conference:

- Construction Schedule - See Section 01321 CONSTRUCTION PROGRESS DOCUMENTATION
- Submittal Register - See Section 01330 SUBMITTAL PROCEDURES
- Environmental Protection Plan - See Section 01355 ENVIRONMENTAL PROTECTION
- Quality Control Plan - See Section 01452 DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL
- Temporary Facilities Plan - See Section 01500 TEMPORARY CONSTRUCTION FACILITIES

Contracting Officer reviews submitted draft plans to prepare Coordination Meeting agenda and understand Contractor procedures.

1.6.2.2 Divisions 02 through 16 Submittals

Bring submittal items for materials, workmanship, plans or events required early in project schedule which are ready for transmittal to Contracting Officer. Prepare transmittal of submittal items in accordance with Section 01330 SUBMITTAL PROCEDURES.

1.7 PARTNERING

Contracting Officer wants to have a bilateral project partnership with Contractor that draws on strengths of both organizations to identify and achieve common goals. Typical partnering goals include:

- Effective and efficient contract performance
- Project completion on time and within budget
- Construction completed according to plans and specifications
- Development of cooperative management teams
- Project success with customer (stakeholders) satisfaction
- Improved Project communication

1.7.1 Initial Partnering Meeting

Contractor, key subcontractors and suppliers shall attend a one-day project "Partnering Meeting". The Partnering Meeting is a project team building workshop facilitated by trained persons. Contracting Officer attendees and invited persons may include:

Administrative Contracting Officer Representative (Area Engineer)
Construction Quality Assurance Representatives
Jacksonville District - Construction Branch persons
Jacksonville District - Design Branch Designers
Local Sponsor (Owner)

Goal of initial Partnering Meeting is to build trust, identify common goals, and understand individual project members expectations and organizational values. Usual results include better communication between contract parties, shortened project learning curve and a cohesive two party contract partnership. Participants usually sign a voluntary partnering agreement generally describing mutual obligation to cooperate to achieve project goals and maintain effective communication. Contracting Officer will pay costs for workshop site rental and facilitator fees.

1.7.2 Partnering Regroups

After initial Partnering Meeting participation will be voluntary in accordance with a signed Partnering Agreement. After initial Partnering Workshop, costs will be agreed to by both partners and split shared equally, without changing contract price. Partnering Agreements include provisions for Contracting Officer and Contractor to request "Partnering Regroups" when needed. A "Partnering Regroup" is usually a short (4 hours - 1 day) informal partnering session where senior level Contractor and Contracting Officer project members and other interested parties review project issues of concern. Issues of conflict are reviewed, attempt to affirm common project goals and understand concerns of other partner.

1.8 COORDINATION MEETING

Coordination Meeting is scheduled, convened and conducted by Contracting Officer after a Preconstruction Conference and prior to starting physical construction. Draft plans submitted after NOA (i.e., Quality Control Plan, Environmental Protection Plan and Accident Prevention Program) will have been reviewed. Coordination Meeting is primarily for on-site Contractor Quality Control staff, including subcontractor and supplier employees performing quality control, to meet and discuss the project in detail with Contracting Officer's Quality Assurance Representatives. Purposes of Coordination Meeting are:

- Achieve mutual understanding with Contractor of required Quality Control
- Jointly review submitted draft plans; resolve issues of concern
- Discuss project plans and specifications, schedule, documentation
- Establish a good working relationship between the Contractors Quality Control Staff and Quality Assurance Representatives

1.9 PROGRESS MEETINGS

The Contractor shall schedule, convene and preside over progress meetings as required. As project activities increase ("ramp up"), a minimum of one progress meeting per week is typical of a project of this scope. The Contractor shall convene additional meetings as required, or when requested by the Contracting Officer. The Contractor shall notify persons needed to be present to discuss agenda issues. The Contracting Officer may direct attendance by key Contractor suppliers, or fabricators as needed. A sample meeting agenda is provided in paragraph GENERAL MEETING REQUIREMENTS below.

1.9.1 Progress Meeting Participants

Typical participants include:

- Contracting Officer or Contracting Officer's Representative
- Contractor's Site Superintendent
- Contractor's Quality Control Manager
- Contractor's Safety Coordinator
- Subcontractors, as appropriate to the agenda
- Suppliers, as appropriate to the agenda
- Others as appropriate to the agenda

1.10 ALTERNATE DISPUTE RESOLUTION (ADR)

Contracting Officer wants disputes resolved in a timely, professional, and non-adversarial manner. ADR is a voluntary, non-binding procedure available for use in this contract. ADR combines business administration methods of issue clarification and problem solving techniques. ADR is used in place of formal dispute resolution procedures to promote and maintain amicable working relationships.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL MEETING REQUIREMENTS

See Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL for Preparatory and Initial Phase meeting checklists. Contractor

is responsible for phase and progress meetings to include:

- Meeting notification to participants
- Prepare agenda for meetings
- Use phase checklists for Preparatory and Initial Phase meetings
- Physical arrangements for meetings
- Preside at meetings
- Record minutes recording proceedings and decisions
- Copy and send minutes to:
 - Meeting participants
 - Project parties affected by decisions
 - Contracting Officer (No later than 3 working days)

3.2 PROGRESS MEETING AGENDA

Modify agenda as needed for on-going work.

- Review minutes from previous progress meetings
- Review work progress since previous meeting
- Review current definable features of work:
 - Identify phases of current features of work
 - Identify pending phase changes
 - Identify features for discussion in next scheduled meeting
- Discuss problem prevention:
 - Field observations
 - Deficiencies and tracking
 - Procedures working well
 - Problems, conflicts
 - Methods to improve
- Review construction schedule:
 - Identify delays
 - Discuss proposed corrective actions to regain schedule
- Submittals and RFIs:
 - Review submittal register
 - Identify submittals to expedite as required
- Review off-site activities:
 - Fabrications
 - Material and equipment delivery schedule
- Review Testing:
 - Type, Schedule
 - Received Results
- Review changes to construction schedule:
 - Planned progress during succeeding work period
 - Coordination of various schedules
 - Effect of changes on construction and completion date
- Review site safety
- Discuss maintaining contract quality for materials and workmanship
- Discuss pending modifications, changes and substitutions
- Discuss other business, as appropriate

3.3 SAMPLE - EMPLOYER INFORMATION REPORT EEO-1 (STANDARD FORM 100)

See APPENDIX 01310-A at the end of this Section (2 pages).

3.4 SAMPLE - GUIDE FOR EMPLOYEE SAFETY AND OCCUPATIONAL HEALTH INDOCTRINATION (ESHI)

See APPENDIX 01310-B at the end of this Section (2 pages).

-- End of Section --

Joint Reporting Committee

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER INFORMATION REPORT EEO-1

Standard Form 100
(Rev. 3/87)

O.M.B. No. 3046-0007
EXPIRES 10/31/99
100-214

- Equal Employment Opportunity Commission
- Office of Federal Contract Compliance Programs (Labor)

Section A—TYPE OF REPORT

Refer to instructions for number and types of reports to be filed.

1. Indicate by marking in the appropriate box the type of reporting unit for which this copy of the form is submitted (MARK ONLY ONE BOX).

(1) Single Establishment Employer Report

Multi-establishment Employer:

- (2) Consolidated Report (Required)
- (3) Headquarters Unit Report (Required)
- (4) Individual Establishment Report (submit one for each establishment with 50 or more employees)
- (5) Special Report

2. Total number of reports being filed by this Company (Answer on Consolidated Report only)

Section B—COMPANY IDENTIFICATION (To be answered by all employers)

1. Parent Company

a. Name of parent company (owns or controls establishment in item 2) omit if same as label

Address (Number and street)

City or town

State

ZIP code

2. Establishment for which this report is filed. (Omit if same as label)

a. Name of establishment

Address (Number and street)

City or Town

County

State

ZIP code

b. Employer Identification No. (IRS 9-DIGIT TAX NUMBER)

c. Was an EEO-1 report filed for this establishment last year? Yes No

Section C—EMPLOYERS WHO ARE REQUIRED TO FILE (To be answered by all employers)

- Yes No 1. Does the entire company have at least 100 employees in the payroll period for which you are reporting?
- Yes No 2. Is your company affiliated through common ownership and/or centralized management with other entities in an enterprise with a total employment of 100 or more?
- Yes No 3. Does the company or any of its establishments (a) have 50 or more employees AND (b) is not exempt as provided by 41 CFR 60-1.5, AND either (1) is a prime government contractor or first-tier subcontractor, and has a contract, subcontract, or purchase order amounting to \$50,000 or more, or (2) serves as a depository of Government funds in any amount or is a financial institution which is an issuing and paying agent for U.S. Savings Bonds and Savings Notes?

If the response to question C-3 is yes, please enter your Dun and Bradstreet identification number (if you have one):

NOTE: If the answer is yes to questions 1, 2, or 3, complete the entire form, otherwise skip to Section G.

Section D—EMPLOYMENT DATA

Employment at this establishment—Report all permanent full-time and part-time employees including apprentices and on-the-job trainees unless specifically excluded as set forth in the instructions. Enter the appropriate figures on all lines and in all columns. Blank spaces will be considered as zeros.

JOB CATEGORIES	NUMBER OF EMPLOYEES										
	OVERALL TOTALS (SUM OF COL. B THRU K)	MALE						FEMALE			
		WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	HISPANIC	ASIAN OR PACIFIC ISLANDER	AMERICAN INDIAN OR ALASKAN NATIVE	WHITE (NOT OF HISPANIC ORIGIN)	BLACK (NOT OF HISPANIC ORIGIN)	HISPANIC	ASIAN OR PACIFIC ISLANDER	AMERICAN INDIAN OR ALASKAN NATIVE
A	B	C	D	E	F	G	H	I	J	K	
Officials and Managers	1										
Professionals	2										
Technicians	3										
Sales Workers	4	SAMPLE									
Office and Clerical	5										
Craft Workers (Skilled)	6										
Operatives (Semi-Skilled)	7										
Laborers (Unskilled)	8										
Service Workers	9										
TOTAL	10										
Total employment reported in previous EEO-1 report	11										

NOTE: Omit questions 1 and 2 on the Consolidated Report.

1. Date(s) of payroll period used: _____ 2. Does this establishment employ apprentices?
 1 Yes 2 No

Section E—ESTABLISHMENT INFORMATION (Omit on the Consolidated Report)

1. What is the major activity of this establishment? (Be specific, i.e., manufacturing steel castings, retail grocer, wholesale plumbing supplies, title insurance, etc. Include the specific type of product or type of service provided, as well as the principal business or industrial activity.)	OFFICE USE ONLY
	8.

Section F—REMARKS

Use this item to give any identification data appearing on last report which differs from that given above, explain major changes in composition of reporting units and other pertinent information.

Section G—CERTIFICATION (See Instructions G)

- Check one All reports are accurate and were prepared in accordance with the instructions (check on consolidated only)
 This report is accurate and was prepared in accordance with the instructions.

Name of Certifying Official	Title	Signature	Date
Name of person to contact regarding this report (Type or print)		Address (Number and Street)	
Title	City and State	ZIP Code	Telephone Number (Including Area Code) Extension

All reports and information obtained from individual reports will be kept confidential as required by Section 709(e) of Title VII. WILLFULLY FALSE STATEMENTS ON THIS REPORT ARE PUNISHABLE BY LAW, U.S. CODE, TITLE 18, SECTION 1001.

SAMPLE GUIDE FOR EMPLOYEE SAFETY AND OCCUPATIONAL
HEALTH INDOCTRINATION

This information is intended only to serve as a guide to assist in preparing an Employee Safety and Occupational Health Indoctrination that will be acceptable for work to be performed under this contract. It is probable that all of the below areas will not apply to this contract. By the same token, there probably are other items that have not been listed in this guide that will apply to work under this contract.

NOTE: It is imperative that the Indoctrination be signed and dated by the employee and supervisor giving the Indoctrination.

- _____ 1. Contractor safety policy.
- _____ 2. Pertinent provisions of EM 385-1-1.
- _____ 3. Employee's responsibilities for property and the safety of others.
- _____ 4. Location of medical facilities and emergency phone numbers.
- _____ 5. Procedures for reporting or correcting unsafe conditions, practices, and for reporting accidents.
- _____ 6. Safe Clearance Procedures.
- _____ 7. Fire fighting and other emergency procedures.
- _____ 8. Alcohol/drug abuse policy.
- _____ 9. Segregation of vehicular and pedestrian traffic.
- _____ 10. Drinking water sanitation policy.
- _____ 11. Daily housekeeping requirements.
- _____ 12. Policy on use of Ropes, Slings, and Chains.
- _____ 13. Hazards of floor and wall openings.
- _____ 14. Policy on use of Personal Protective Equipment.
- _____ 15. Requirements when working around hot substances.
- _____ 16. Precautions with welding, cutting and grounding of machinery.
- _____ 17. Temporary electrical requirements.
- _____ 18. Proper use of hand tools and power tools.

- _____ 19. Proper precautions with compressed gas cylinders.
- _____ 20. Requirements for ramps, runways, platforms, and scaffolds.
- _____ 21. Requirements for excavation.
- _____ 22. Discuss appropriate Material Safety Data Sheets.
- _____ 23. Job Hazard Analyses. (Major Activity, Locations, Hazards, Controls)
- _____ 24. Activity Hazard Analyses. (Name of Activity, Potential Hazards, Recommended Controls)
- _____ 25. Other:
- _____ 26. Other:
- _____ 27. Other:
- _____ 28. Other:
- _____ 29. Other:
- _____ 30. Other:

Employee signature

Supervisor signature

Date: _____

Date: _____

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01312

RESIDENT MANAGEMENT SYSTEM (RMS)

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SECTION 01312

RESIDENT MANAGEMENT SYSTEM (RMS)

PART 1 GENERAL

1.1 REFERENCES

The publication listed below forms a part of this specification to the extent referenced. The publication is referenced in the text by basic designation only.

ENGINEERING REGULATIONS (ER)

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

1.2 GENERAL REQUIREMENTS

The Government will use the Resident Management System for Windows (RMS-W) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS-Windows, referred to as RMS-QC (QC for Quality Control), to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS-W and RMS-QC will facilitate electronic exchange of information and overall management of the contract. RMS-QC 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

1.2.1 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.

1.2.2 Other Factors

Particular attention is directed to Clauses SCHEDULES FOR CONSTRUCTION CONTRACTS and PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES; and, Sections 01321 CONSTRUCTION PROGRESS DOCUMENTATION, 01330 SUBMITTAL PROCEDURES, and 01452 DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through RMS-QC. Also, there is no separate payment for establishing and maintaining the RMS-QC database; all costs associated therewith shall be included in the contract pricing for the work.

PART 2 PRODUCTS

2.1 RMS-QC SOFTWARE

RMS-QC 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 RMS-QC software to the Contractor after award of the construction contract. Prior to the Preconstruction Conference, the Contractor shall be responsible to download, install and use the latest version of the RMS-QC software from the Government's RMS Internet website: <http://winrms.usace.army.mil>. Upon specific justification and request by the Contractor, the Government can provide RMS-QC on 3-1/2" high-density diskettes or CD-ROM. Any program updates of RMS-QC will be made available to the Contractor via the Government RMS Website as they become available.

2.2 SYSTEM REQUIREMENTS

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

2.2.1 Hardware

- a. IBM-compatible PC with 200 MHz Pentium or higher processor
- b. 32+ MB RAM
- c. 4 GB hard drive disk space for sole use by the RMS-QC system
- d. 3-1/2 inch high-density floppy drive
- e. Compact disk (CD) Reader
- f. Color monitor
- g. Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory
- h. Connection to the Internet, minimum 28 BPS

2.2.2 Software

- a. Microsoft (MS) Access 97 or newer version database software
- b. MS Windows 95 or newer version operating system (MS Windows NT 4.0 or newer is recommended)
- c. Word Processing software compatible with MS Word 97 or newer
- d. Internet browser
- e. The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract
- f. Electronic mail (E-mail) compatible with MS Outlook

PART 3 EXECUTION

3.1 RELATED INFORMATION

3.1.1 RMS-QC User Guide

After contract award, the Contractor shall download instructions for the installation and use of RMS-QC 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.

3.1.2 Contractor Quality Control (CQC) Training

The use of RMS-QC will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

3.1.3 Video Training for RMS-QC

After contract award, the Contractor will be provided with a CD containing a training video on the use of RMS-QC.

3.2 CONTRACT DATABASE

Prior to the Preconstruction Conference, the Government shall provide the Contractor with basic contract award data to use for RMS-QC. 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.

3.3 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the RMS-QC database throughout the duration of the contract. The Contractor shall establish and maintain the RMS-QC 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 RMS-QC database typically shall include current data on the following items:

3.3.1 Administration

3.3.1.1 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 RMS-QC software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

3.3.1.2 Subcontractor Information

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

3.3.1.3 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".

3.3.1.4 Requests for Information

RMS-QC includes a means for the Contractor to enter, log, and transmit requests for information (RFI) to the Government. RFIs can be exchanged electronically using the import/export functions of RMS-QC. The Contractor shall also provide the Government with a signed, printed copy of each RFI. All RFIs from the Contractor to the Government shall have the prefix "RFI" and shall be numbered sequentially beginning with RFI-0001.

3.3.1.5 Equipment

The Contractor's RMS-QC 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.

3.3.1.6 Corps of Engineers Safety Manual and RMS Linkage

Upon request, the Contractor can obtain a copy of the current version of EM 385-1-1 on CD. Refer to paragraph RMS-QC SOFTWARE above for website address. Data on the CD will be accessible through RMS-QC, or in stand-alone mode.

3.3.1.7 Management Reporting

RMS-QC 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 RMS-QC. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

3.3.2 Finances

3.3.2.1 Pay Activity Data

The RMS-QC 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.

3.3.2.2 Payment Requests

All progress payment requests shall be prepared using RMS-QC. 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 RMS-QC. 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.

3.3.3 Quality Control (QC)

RMS-QC 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 RMS-QC generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01452 DREDGING/BEACH FILL PLACEMENT - 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.

3.3.3.1 Daily Contractor Quality Control (CQC) Reports

RMS-QC 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 RMS-QC shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the RMS-QC-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01452 DREDGING/BEACH FILL PLACEMENT - 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.

3.3.3.2 Deficiency Tracking

The Contractor shall use RMS-QC to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC Comments. The Contractor shall maintain a current log of its QC comments in the RMS-QC database. The Government will log the deficiencies it has identified using its QA comments. The Government's QA comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA comments.

3.3.3.3 Three-Phase Control Meetings

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

3.3.3.4 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 RMS-QC 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.

3.3.3.5 Features of Work

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

3.3.3.6 QC Requirements

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

3.3.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns as described in Section 01330 SUBMITTAL PROCEDURES. 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 RMS-QC to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register, ENG Form 4288, shall be produced using RMS-QC. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

3.3.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Clause SCHEDULES FOR CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES and Section 01321 CONSTRUCTION PROGRESS DOCUMENTATION, as applicable. This schedule shall be input and maintained in the RMS-QC database manually. The updated schedule data shall be included with each pay request submitted by the Contractor.

3.3.6 Import/Export of Data

RMS-QC 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.

3.4 IMPLEMENTATION

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

3.5 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 RMS-QC built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

3.5.1 File Medium

The Contractor shall submit required data on 3-1/2" 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.

3.5.2 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 RMS-QC file name, full contract number, project name, project location, data date, name and telephone number of person responsible for the data.

3.5.3 File Names

The Government will provide the file names to be used by the Contractor with the RMS-QC software.

3.6 MONTHLY COORDINATION MEETINGS

The Contractor shall update the RMS-QC 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 Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES, 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 RMS-QC export file is received.

3.7 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.

-- End of Section --

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SECTION 01321

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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

Construction Schedule; G|COR.

1.2 CONSTRUCTION SCHEDULE

Within 21 days after receipt of the Notice of Award, prepare and submit to the Contracting Officer for approval a construction schedule in the form of a progress chart in accordance with the terms in Clause SCHEDULES FOR CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES, except as modified in this contract. The Contractor shall indicate on the progress chart the bid items contained in the contract, showing the amount of the item and its relative weighted percentage of the total contract. The Contractor may separate features of work under each item to show salient work elements such as procurement of materials, plant and equipment, and supplemental work elements such as excavation, reinforcing steel, backfill, etc. These salient features shall total to the cost and weighted percentages shown for the major bid item. When quantity variations impact the weighted percentage of a separate item by five percent or more, the Contractor shall revise the contract progress charts to accurately reflect the impact of such variations. Sample Construction Schedule (ENG Form 2454) is appended to the end of this Section.

1.3 EQUIPMENT DELIVERY SCHEDULE

1.3.1 Initial Schedule

Within 30 calendar days after approval of the proposed construction schedule, submit for Contracting Officer approval a schedule showing procurement plans for materials, plant, and equipment. Submit in the format and content as prescribed by the Contracting officer, and include as a minimum, the following information:

- a. Description.
- b. Date of the purchase order.
- c. Promised shipping date.
- d. Name of the manufacturer or supplier.

e. Date delivery is expected.

f. Date the material or equipment is required, according to the current construction schedule.

1.4 UPDATED SCHEDULES

Update the construction schedule at monthly intervals or when schedule has been revised. Reflect any changes occurring since the last update.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 CONSTRUCTION SCHEDULE, ENG FORM 2454

See APPENDIX 01321-A at the end of this Section (1 page).

-- End of Section --

CONSTRUCTION PROGRESS CHART

1. CONTRACTOR		3. PROJECT		5. CONTRACT DESCRIPTION												REPORT CONTROL SYMBOL			
2. CONTRACT NUMBER		4. LOCATION														LEGEND			
PRINCIPAL CONTRACT FEATURE		LINE ITEM	WT	ESTIMATED COST													BARS:		
																		</	

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Terminology

Submittals are items for Contractor quality control review and Contracting Officer quality documentation (For Information Only -- "FIO") or quality assurance review and approval (Government -- "G"). Contract contains a submittal register (SUBMITTAL FORM, Jan 96) to be used by Contractor to identify, schedule and track submittal items. Submittal Register is a scheduling device that is dynamic and constantly updated. A transmittal is a contract correspondence action using contract transmittal form (ENG Form 4025) that sends submittal items to Contracting Officer and back to Contractor. A copy of ENG Form 4025 is appended to the end of this Section. ENG Form 4025 is used by both Contractor and Contracting Officer to record submittal item routing and record submittal review and action coding. Submittal Register and ENG Form 4025 work together for submittal information.

1.1.2 Government-Furnished Information

Appended to the end of this Section is a Submittal Register listing items of products, equipment, materials and procedures for submittals as required by contract. Contractor will also be furnished an electronic data file after Notice of Award with the following columns completed:

Column (c) -- "SPEC. SECT.": Lists specification section numbers in which submittal is required.

Column (d) -- "DESCRIPTION - ITEM SUBMITTED": Lists each submittal description (SD No. and type; e.g., SD-04 Drawings) required in each specification section.

Column (e) -- "PARAGRAPH #": Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in Column (e) as limiting project submittal requirements.

Column (f) -- "CLASSIFICATION GOVT OR A/E REVWR": Indicates reviewer for each submittal. Approving authority for all submittals remains the Contracting Officer. A "G" indicates approval by Contracting Officer and may include a review by Design A/E contracted to the Contracting Officer. A designation following the "G" identifies the office that will review the submittal for the Contracting Officer. Submittal designation codes identifying the office that will review the submittal for the Contracting Officer are identified as follows:

COR -- Construction-Operations Area/Resident/Project Engineer
(Contracting Officer's Representative)

ED -- Engineering Division

A/E -- Architect Engineer Contractor providing engineering during
construction

PD -- Planning Division

SO -- Safety Office

1.1.2.1 Government-Furnished Software and Forms

Contractor shall use Resident Management System - Quality Control module (RMS-QC) to run the submittal register. Refer to Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS). Contractor will be given a password to download RMS-QC from the following website: <http://winrms.usace.army.mil>. ENG Form 4025 and other useful forms are located at Jacksonville District Construction Branch website:
http://www.saj.usace.army.mil/conops/construction/construction_forms.

1.2 SUBMITTALS

Submit the following in accordance with the requirements of this Section:

SD-01 Preconstruction Submittals

Submittal Register; G|COR.

Within 10 calendar days after the Preconstruction Conference, submit a proposed submittal register and RMS computer data file with data filled in for the following: Column (a) -- "ACTIVITY NO."; Column (h) -- "APPROVAL NEEDED BY"; and, Column (i) -- "MATERIAL NEEDED BY".

1.3 DEFINITIONS

1.3.1 Submittal

Shop drawings, product data, samples, and administrative submittals presented for review and approval. The following Clauses MATERIAL AND WORKMANSHIP, paragraph (b) and SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, paragraphs (d), (e), and (f) of Section 00700 CONTRACT CLAUSES apply to all "submittals".

1.3.2 Types of Submittals

All submittals are classified with a SD number and Title as indicated in paragraph SUBMITTAL IDENTIFICATION (SD) below. Submittals also are grouped as follows:

a. Shop drawings: As used in this Section, drawings, schedules, diagrams, and other data prepared specifically for this contract, by Contractor or through Contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier Contractor, to illustrate portion of work.

b. Product data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate portion of work but not prepared exclusively for this

contract.

c. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to portion of work, illustrating portion of work or establishing standards for evaluating appearance of finished work or both.

d. Administrative submittals: Data presented for reviews and approval to ensure that administrative requirements of project are adequately met and in compliance with contract.

1.3.3 Approving Authority

Contractor Quality Control (CQC) System Manager shall be approving authority or "FIO" submittals. Contracting Officer's Representative, usually Area/Resident/Project Engineer, is Contracting Officer's approving authority. Jacksonville District employees, contracted Architect-Engineers, or employees from other USACE Districts who may review "G" submittal items and provide action codes act in capacity of technical advisors to Contracting Officer's Representative.

1.3.4 Work

As used in this Section, on- and off-site construction required by contract documents, including labor necessary to produce construction and materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.3.5 Streamlined "G" Submittals

A Jacksonville District submittal procedure where the Government review approval process is streamlined for high priority "G" submittals to prevent delay. Concurrent with processing and handling of paper copies of submittals, a lesser number of copies of the submittal item may be overnight mailed, faxed, or scanned and sent via E-mail. Reviewer comments and recommended submittal review codes are E-mailed from reviewers to Contracting Officer.

1.3.6 Request for Information (RFI) Submittals

RFIs are Contractor inquiries for clarification of contract documents and are not considered submittals. Contractor proposed methods to control RFIs shall be described as part of Contractor's Quality Control Plan. Refer to Section 01452 DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

1.4 SUBMITTAL IDENTIFICATION

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

SD-01 Preconstruction Submittals

Administrative submittals, after Notice of Award and prior to Preconstruction Conference -- Refer to Sections 01310 ADMINISTRATIVE PROCEDURES; 01321 CONSTRUCTION PROGRESS DOCUMENTATION; 01355 ENVIRONMENTAL PROTECTION; and 01500 TEMPORARY CONSTRUCTION FACILITIES.

Administrative submittals during construction; i.e., public notices, detailed work plans, etc.

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

SD-05 Design Data

Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accordance with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily checklists.

Final acceptance test and operational test procedure.

SD-07 Certificates

Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Data, records, reports from Contractor documenting the construction, production, or regulatory compliance.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

Factory test reports.

SD-10 Operation and Maintenance Data

Data intended to be incorporated in operations and maintenance manuals.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

As-built drawings.

Special warranties.

Posted operating instructions.

Training plan.

1.5 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.5.1 Government Approved "G"

Governmental 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 Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION of Section 00700 CONTRACT CLAUSES, they are considered to be "shop drawings." Government approval submittal items are designated with a "G".

1.5.2 Information Only

All submittals not requiring Government approval will be for "FIO". They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above. "FIO" submittals are used as documentation of contract compliance. "FIO" submittals transmitted to Contracting Officer will be "spot checked" for contract compliance and coded "F -- Receipt acknowledged" or "FX -- Receipt acknowledged, does not comply as noted with contract requirements" (see instructions on the back of ENG Form 4025). Retransmit submittal items coded "FX" for Government approval "G" submittal item. Order products or materials from fabricators or suppliers after an information only submittal has received an "F" code.

1.6 APPROVED SUBMITTALS

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. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. 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.

1.7 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 Clause CHANGES of Section 00700 CONTRACT CLAUSES shall be given promptly to the Contracting Officer.

1.8 WITHHOLDING OF PAYMENT

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

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

Contractor shall furnish submittals required by contract and transmit them to the Contracting Officer using ENG Form 4025 as contract transmittal form. Transmit all submittals to:

Mr. Edwin Cuebas, Resident Engineer
San Juan Resident Office
San Juan, Puerto Rico

Contracting Officer may request additional submittal items when necessary to describe work covered in respective contract sections. Units of weights and measures used on submittal items shall be the same as those used in the contract drawings. Each submittal item shall be identified with contract number, stamped, signed, and dated by the CQC System Manager (see paragraph CONTRACTOR REVIEW STAMP below). Each submittal shall be complete and in sufficient detail to allow reviewer determination of contract compliance. Prior to transmitting submittal items to Contracting Officer, Contractor's Quality Control (CQC) System Manager shall review, provide appropriate code and certify listed submittal items meet contract or are a requested variation. Submittal items requiring Government approval "G" shall be scheduled and approved (Contracting Officer's action code of "A" or "B") prior to acquisition of material or equipment covered thereby. Samples remaining upon completion of 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.

3.2 SUBMITTAL REGISTER

At the end of this section is a Submittal Register listing items of equipment and materials for which submittals are required by the contract. Contractor will also be given an electronic data file as specified in subparagraph "Government-Furnished Information" above. Upon receiving contract, including submittal register and data file, Contractor shall complete columns (a), (g), (h), and (i) and submit for Government approval.

This list may not be all inclusive and submittal items found during Contractor's preconstruction review shall be added. Contractor shall maintain project submittal register up-to-date. Submit an updated copy to the Contracting Officer with each pay request. Maintain project submittal register using Resident Management System in accordance with Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS).

3.2.1 Instructions for Completing Submittal Register (SUBMITTAL FORM, JAN 96)

Contractor to complete Columns (a), (b), and (g) through (r):

Column (a) -- "ACTIVITY NO.": Assign an event number and show on Critical Path Method (CPM) schedule; or identify "submittal item" with a control number for use in ENG Form 4025 column (a). Using a numbering system allowing for additions (e.g., 050,010, 015) is useful.

Column (b) -- "TRANSMITTAL NO.": Transmittal number should match ENG Form 4025 transmittal number used to transmit submittal item to Contracting Officer.

Column (g) -- "SUBMIT": Contractor scheduled date for transmitting submittal item to Contracting Officer.

Column (h) -- "APPROVAL NEEDED BY": Planned date for needed Contracting Officer review actions to prevent delay.

(For "G" submittal items, "A" or "B" action codes are required. For "FIO" submittal items, "F" code is required. Initially schedule Column (h) dates allowing float for disapproved submittal items and retransmittal for review (approximately 45-60 days).

Column (i) -- "MATERIAL NEEDED BY": Date material is needed for use at

the project site.

Column (j) -- "ACTION CODE": Contractor's Quality Control reviewer code from list of action codes. See subparagraph "ENG Form 4025 Reviewer Action Codes" below.

Column (k) -- "DATE OF ACTION": Date of QC review and signing certification on ENG Form 4025.

Column (l) -- "DATE FWD TO APPR AUTH/DATE RCD FROM CONTR": Date submittal item transmitted to Contracting Officer.

Columns (m) -- "DATE FWD TO OTHER REVIEWER";

(n) -- "DATE RCD FROM OTHER REVIEWER";

(o) -- "ACTION CODE";

(p) -- "DATE OF ACTION"; and,

(q) -- "MAILED TO CONTR/DATE RCD FROM APPR AUTH": Record dates and action codes as shown on ENG Form 4025 received back from Contracting Officer.

Column (r) -- "REMARKS": Used by Contractor or Contracting Officer as needed. Ensure submittal items transmitted as variations are identified in column (r).

3.2.2 Personal Computer or Manual Submittal Registers

Prepare submittal register and maintain it current as work progresses. Contractor may find using color codes (i.e., "green" - accepted; "yellow" - pending; "red" - rejected) for tracking submittal status useful. Contractor has option to use a personal computer based submittal register or a manual submittal register. At Jacksonville District internet site, http://www.saj.usace.army.mil/conops/construction/construction_forms.htm there is a computer file (Microsoft Excel(TM)), available for Contractor download and use. Contractor may furnish his own commercial software having a Submittal Register. If Contractor selects a commercial software, furnish a licensed copy for use by Contracting Officer. In place of a computer file Submittal Register, Contractor has an option to use a manual Submittal Register. When manual Submittal Register is used, all entries shall be in pencil.

3.3 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 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for Government "G" review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. An additional 10 calendar days shall be allowed and shown on the register for review and approval of "G" submittals requiring extra review time as noted (e.g., A/E or review from other Corps District).

3.3.1 Avoiding Delay

Contracting Officer wants to avoid project delays due to late transmittal of a "G" submittal item or untimely Contracting Officer review. When Contractor identifies possible construction delays due to a submittal, notify the Contracting Officer immediately.

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this Section shall be used for submitting both Government approved "G" and "FIO" submittal items. A ENG Form 4025 computer file in versions of Microsoft Word(tm) .doc file and Adobe Acrobat(tm) .pdf file are available for Contractor downloading and contract use at:
http://www.saj.usace.army.mil/conops/construction/construction_forms.htm.
ENG Form 4025 is included in the RMS-QC software that the Contractor is required to use for this contract.

3.4.1 ENG Form 4025 Reviewer Action Codes

Contractor shall use action codes to document submittal item review of shop drawings, materials and product received from subcontractors, suppliers and fabricators. Contracting Officer will use same codes for his review. Action codes for contract use are:

- A -- Approved as submitted.
- B -- Approved, except as noted on drawings. (Make minor corrections; resubmission not required.)
- C -- Approved, except as noted on drawings. (Refer to review comments for required corrections; resubmission is required.)
- D -- Will be returned by separate correspondence with detailed comments. Resubmittal is required.
- E -- Disapproved; resubmittal required.
- F -- Receipt acknowledged (for Government use for "FIO" items).
- FX -- Receipt acknowledged, does not comply with contract; resubmittal required as "G" submittal item.
- G -- Other (Reviewer shall specify the action in detail).

Contractor shall enter appropriate action code in ENG Form 4025 Column (g) -- "FOR CONTRACTOR USE CODE" and Submittal Register Column (j) -- "CONTRACTOR ACTION - ACTION CODE".

Contracting Officer will enter "G" submittal item reviewer action code in ENG Form 4025 Column (i) -- "FOR CE USE CODE".

Contractor will enter review codes received from Contracting Officer in Submittal Register Column (o) -- "APPROVING AUTHORITY - ACTION CODE".

Approval action codes of "F", "A", and "B" given to submittal items by Contracting Officer does not relieve Contractor from complying with contract requirements. Contracting Officer reserves right to rescind inadvertent submittal item approvals that do not comply with contract.

3.4.2 ENG Form 4025 Transmittal Instructions

Attach a copy of ENG Form 4025 to each copy of a set of submittal items transmitted to Contracting Officer. Instructions located on the reverse side of ENG Form 4025, May 91 are obsolete. Revised instructions for Jacksonville District use are listed below. This revision describes ENG Form 4025 use with Submittal Register "SUBMITTAL FORM, Jan 96" used by other Government agencies.

REVISED ENG FORM 4025 INSTRUCTIONS:

1. Block -- "DATE": Enter the date transmitted to the Contracting Officer. Corresponds with Submittal Register Column (1) -- "DATE FWD TO APPR AUTH". For "G" submittals this date, plus actual mailing time, starts Contracting Officer review period.

2. Block -- "TRANSMITTAL NO.": A transmittal is an action that combines required submittal items from one Section (e.g., Section 02300 EARTHWORK) and transmits them from Contractor to Contracting Officer. ENG Form 4025 Transmittal Numbers shall be numbered consecutively and should be tracked as separate contract correspondence. Enter each ENG Form 4025 Transmittal Number in the Submittal Register Column (b -- "TRANSMITTAL NO.").

3. Blocks -- "TO", "FROM", and "CONTRACT NUMBER": Self-explanatory.

4. Block -- "CHECK ONE":

THIS IS A NEW TRANSMITTAL -- Self-explanatory.
THIS IS A RESUBMITTAL OF TRANSMITTAL _____.

When a submittal item has been coded "C", "D", "E", "FX", "G" insert the original Transmittal No. (This helps reviewers locate submittal items from contract files for comparison to original submittal.)

5. Block -- "SPECIFICATION SEC. NO.": Enter the five digit Section number from Submittal Register Column (c) -- "SPEC SECT." where submittal items are required. Contractor shall organize transmittals so that all items sent under one transmittal number are from the same Section. When Contractor adds a submittal item called for in a drawing note, assign the specification Section number that most closely covers the work.

6. Column (a.) -- "ITEM NO.": Contractor has options to identify submittal item.

Contracting Officer has seen various successful systems to control submittal items. Contracting Officer recommends to assign a unique number to each submittal item that does not change. Assigning a unique number for each submittal item helps when computer interrelational databases or spreadsheets are used. Consider using a numbering system (e.g., 005, 010, 015, 020) that leaves spaces for additional submittal items.

7. Column (b.) -- "DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)": Enter a complete description of each submittal item being transmitted to the Contracting Officer.

Submittal Register and ENG Form 4025 are used together to identify, schedule and track all required items to be submitted for Contractor or Contracting Officer review. For some specification sections having many sub-component items for submittal, the entry in Submittal Register Column (d) -- "DESCRIPTION ITEM SUBMITTED" provided to Contractor has a general class of products. For example, Section 15110 VALVES, may have SD-03 Product Data - "Valves" listed for a submittal item. In example case, Contractor shall list and track each valve that requires a separate review and action code as a separate submittal item. This may require additional entries in both Submittal

Register and assigning additional item numbers.

8. Column (c.) -- "MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO.": This entry requirement has been eliminated from use in Jacksonville District submittal procedures.

9. Column (d.) -- "NO. OF COPIES": Enter the number of copies transmitted to the Contracting Officer.

10. CONTRACT REFERENCE DOCUMENT:

Column (e.) -- "SPEC. PARA. NO.": Enter the Section subpart number that specified each submittal item. Most of these are provided by Contracting Officer on Submittal Register Column (e) -- "PARAGRAPH #"; however, during Contractor preconstruction review there may be additional submittal items found in specification text; or,

Column (f.) -- "DRAWING SHEET NO.": Occasionally during Contractor's preconstruction review, Contractor may discover a drawing note that requires a submittal item to be added to the submittal register. Identify Drawing No. and alpha-numeric matrix zone designation where item is required for submittal (e.g., 6/2,H-2).

11. Column (g.) -- "FOR CONTRACTOR USE CODE": Enter action codes given by Contractor's approving authority (CQC System Manager) to items furnished by subcontractor, supplier, or fabricators for transmittal to Contracting Officer. Items coded other than "A" or "B" should be immediately returned to subcontractor, supplier, or fabricator and forwarded to Contracting Officer.

12. Column (h.) -- "VARIATION": Place an "X" when transmitting a submittal item that is a variation. Column (h.) is to be used only for submittal items that do not meet contract requirements, however, are being proposed for use as "variations" from contract requirements. Variations require Contracting Officer approval pursuant to Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION of Section 00700 CONTRACT CLAUSES. Submittal items proposed as a variation become "G" submittals.

13. Column (i.) -- "FOR CE USE CODE": Leave Blank. This column is for use by Contracting Officer to provide action code to Contractor.

14. Block -- "REMARKS": Used by Contractor or Contracting Officer to provide additional information on transmitted submittal items. When Column (h.) has an "X", Contractor shall make a mandatory remark to note variation is submitted. ENG Form 4025 "REMARKS" block and attachments are used as needed to fully describe variations or Contracting Officer action codes.

15. Block -- "CERTIFICATION": Self-explanatory. Contractor's approving authority shall sign and certify transmittals sent to Contracting Officer. (For electronic versions, use "/S/ and name" to officially indicate paper version has been signed.

16. Block -- "SECTION II - APPROVAL ACTION": Reserved for Contracting Officer use.

3.5 SUBMITTAL PROCEDURES

Submittals shall be made as follows:

3.5.1 Procedures

Transmit 8 copies of "G" submittal items and 5 copies of "FIO" submittals to Contracting Officer.

3.5.2 Variations

Variations are described in Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION of Section 00700 CONTRACT CLAUSES. Variations are Contractor proposed changes to contract quality for those submittal items identified and transmitted as variations. "FIO" submittal items become "G" submittal items for Government review and approval. Ensure ENG Form 4025 Column (h.) has an "X" and variation is described in writing in "REMARKS" block. Once approved by Contracting Officer, variations modify contract requirements. Approved variations may require adjustments to contract price for increased cost ("change order") or decreased costs ("Owner's credit") and construction period. Contracting Officer reserves right to rescind inadvertent approval of submittal items containing unnoted variations.

3.6 CONTROL OF SUBMITTALS

Carefully control procurement operations to ensure that each submittal item is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register".

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, submittals will be identified as having received approval by being so stamped and dated. Five (5) copies of the submittal will be retained by the Contracting Officer and three (3) copies of the submittal will be returned to the Contractor. For streamlined "G" submittals, action coding and comment response are returned via a standard format E-mail to Contracting Officer's Representative for transmittal back to Contractor. Contractor shall attach a copy of Contracting Officer review action to the file copies of the submittal item.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for "FIO" are approved by Contractor. "FIO" submittals will be spot-checked by Contracting Officer for contract compliance. "FIO" submittal items are not usually returned and Contractor will be notified by Contracting Officer that they have received an "F" action code. Submittal items found not to comply with contract requirements will be given an action code of "FX" and returned to the Contractor. Contractor shall resubmit submittal items coded as "FX" for Government "G" approval. Government reserves right to require Contractor to resubmit items later found not to comply with 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 Contracting Officer laboratory or for check testing by Contracting Officer in those instances required by the contract.

3.9 CONTRACTOR REVIEW STAMP

Prior to transmitting a submittal to Contracting Officer, Contractor CQC System Manager shall stamp top sheet of each copy of a submittal item to certify that submittal item meets contract requirements. Stamp shall be similar to the following:

(CONTRACT NUMBER: DACW17-0X-C-00XX) (Contractor NAME)	
_____	"A" - Approved as Noted
_____	"B" - Approved with corrections as noted on submittal item or attached sheet(s)
SIGNATURE:	_____
TITLE:	_____
DATE:	_____ PHONE: _____

3.10 SUBMITTAL REGISTER

See APPENDIX 01330-A at the end of this Section (5 pages).

3.11 TRANSMITTAL OF SHOP DRAWINGS, ENG FORM 4025

See APPENDIX 01330-B at the end of this Section (2 pages).

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION La Esperanza Peninsula, Catano, Puerto Rico						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					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)
		01000	SD-01 Preconstruction Submittals Hurricane and Severe Storm Plan		G COR												
			SD-02 Shop Drawings Construction Drawings		G COR												
			SD-07 Certificates Critical Lift Plan		G COR												
		01310	SD-01 Preconstruction Submittals Standard Form 100 FIO Affirmative Action Plan List of Subcontractors Signature Authority Drug-Free Work Place Record Accident Prevention Plan Diving Plan (including Activity Hazards Analysis)		G COR G COR												
		01321	SD-01 Preconstruction Submittals Construction Schedule		G COR												
		01330	SD-01 Preconstruction Submittals Submittal Register		G COR												
		01355	SD-01 Preconstruction Submittals Environmental Protection Plan SD-11 Closeout Submittals Logs/Final Summary Report FIO		G PD												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION						CONTRACTOR											
La Esperanza Peninsula, Catano, Puerto Rico																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					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		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01355	Project Environmental Summary Sheet														
		01411	SD-03 Product Data Calibration Standard FIO														
			SD-06 Test Reports Turbidity Monitoring FIO														
		01452	SD-01 Preconstruction Submittals Quality Control Plan		G COR												
			Personnel Qualifications		G COR												
			Letter of Authority FIO														
		01500	SD-01 Preconstruction Submittals Mobilization/Demobilization Plan FIO														
			Security Plan														
			SD-02 Shop Drawings Site Layout FIO														
			Temporary Electric Drawings														
			SD-07 Certificates Boat Operator's License FIO														
		01780	SD-02 Shop Drawings As-Built Drawings	1.2.1	G COR												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION						CONTRACTOR											
La Esperanza Peninsula, Catano, Puerto Rico																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					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		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02230	SD-03 Product Data														
			Materials Other Than Salable Timber	3.3.1	G RE												
		02325	SD-01 Preconstruction Submittals														
			Notice of Intent to Dredge FIO														
			Relocation of Navigation Aids														
			SD-07 Certificates														
			Notification of Discovery of Historical Period Shipwreck Sites														
			FIO														
			Notice of Need for Dredging Survey														
			Daily/Monthly Report of Operations														
			Notice of Misplaced Material														
		02464	SD-02 Shop Drawings														
			Steel Sheet Piles	2.1	G												
			SD-06 Test Reports														
			Materials Tests	2.3.1													
			SD-07 Certificates														
			Pile Pulling Method														
			Material Certificates														
			Pile Driving Equipment														
			Interlock Tension Test Procedure														
			SD-11 Closeout Submittals														

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION La Esperanza Peninsula, Catano, Puerto Rico						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	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)
		02464	Pile Driving Records														
		05055	SD-02 Shop Drawings														
			Detail Drawings		G												
			SD-03 Product Data														
			Welding Procedures of Structural Steel		G												
			Structural Steel Welding Repairs	2.3.3	G												
			Materials Orders	2.1.1	G												
			Materials List	2.1.2	G												
			Shipping Bill		G												
			SD-06 Test Reports														
			Tests, Inspections, and Verifications	2.3	G												
			SD-07 Certificates														
			Qualification of Welders, Welding Operators and Certification of NDT Operators		G												
			SD-11 Closeout Submittals														
			Materials Disposition Records														
		09965	SD-03 Product Data														
			Accident Prevention Plan		G SO												
			Confined Space Procedures		G SO												
			Respiratory Protection Program		G SO												
			Airborne Sampling Plan		G SO												
			Ventilation Assessment		G SO												
			Medical Surveillance Plan		G SO												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION						CONTRACTOR											
La Esperanza Peninsula, Catano, Puerto Rico																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	DATE OF ACTION	DATE RCD FRM APPR AUTH		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		09965	Worker Protection Plan		G SO												
			Environmental Compliance Plan		G SO												
			Waste Classification, Handling, and Disposal Plan		G SO												
			Containment Plan		G ED												
			Visible Emissions Monitoring Plan		G SO												
			Ambient Air Monitoring Plan		G SO												
			SD-04 Samples														
			Specification and Proprietary Paints		G COR												
			Thinners		G COR												
			SD-06 Test Reports														
			Airborne Sampling Report		G SO												
			Inspection and Operation Records		G COR												
			SD-07 Certificates														
			Qualifications and Experience		G SO												
			Qualified Painting Contractor		G ED												
			Qualified Coating Thickness Gages		G COR												

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

Reverse of ENG FORM 4025

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SECTION 01355

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 - 1.2.2 Publication Reference(s)
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-- End of Section Table of Contents --

SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 SCOPE

This Section covers prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other Technical Requirements of these specifications. For the purpose of this specification, environmental damage is defined as the presence of hazardous, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; affect other species, biological communities, or ecosystems; or degrade the quality of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 REFERENCES

1.2.1 Miscellaneous Environmental Laws And Regulations

There are numerous environmental laws and regulations. At the Federal level, the applicable laws and regulations include compliance with the Clean Water Act (CWA); Clean Air Act (CAA); Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Marine Protection, Research, and Sanctuaries Act (MPRSA); National Environmental Policy Act (NEPA); National Historic Preservation Act (NHPA); National Pollution Discharge Elimination System (NPDES); Research and Sanctuaries Act; Native American Graves Protection and Repatriation Act (NAGPRA); Resource Conservation and Recovery Act (RCRA); Rivers and Harbors Act (R&H); Safe Drinking Water Act (SDWA); Toxic Substance Control Act (TSCA); Wild and Scenic Rivers Act (WSRA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Code of Federal Regulations (CFRs); Executive Orders; and, Environmental Protection Agency (EPA) requirements. NEPA compliance measures specified in an Environmental Assessment (EA) or Environmental Impact Statements (EIS) are also applicable with regard to compliance.

1.2.2 Publication Reference(s)

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

ENGINEERING MANUALS (EM)

EM 385-1-1	(1996) Safety and Health Requirements
EM 1110-1-1003	(1996) NAVSTAR Global Positioning System Surveying

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

1.4 PERMITS AND AUTHORIZATIONS

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

In addition to the above, the Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) and authorization(s) obtained by the Corps of Engineers listed below. These permit(s) and authorization(s) are available for review by contacting the Jacksonville District, Programs and Project Management Division at 904-232-32278.

Puerto Rico Environmental Quality Board Water Quality Certificate
Dated: May 09, 2001, No Expiration Date.

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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|PD.

Within 20 calendar days after the date of Notice of Award, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan no later than 30 calendar days after receipt of Notice to Proceed. Acceptance of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. Acceptance of the plan is conditional and predicated on satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes to the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The Environmental Protection Plan shall include but not be limited to the following:

- a. A list of Federal, Commonwealth, and local laws, regulations, and permits concerning environmental protection, pollution control, and abatement that are applicable to the Contractor's proposed operations

and the requirements imposed by those laws, regulations, and permits.

b. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.

c. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.

d. A permit or license for and the location of the solid waste disposal area.

e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossing, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.

g. Traffic control plan.

h. Methods of protecting surface and ground water during construction activities.

i. Spill prevention. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions to be taken to meet Federal, Commonwealth, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.

j. Spill contingency plan for hazardous, toxic, or petroleum material.

k. 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.

l. A statement as to the person who shall be responsible for implementation of the Environmental Protection Plan. The Contractor personnel responsible shall report directly to the Contractor's top management and shall have the authority to act for the Contractor in all environmental protection matters.

m. Recycling and Waste Management Plan. Executive Order 12873 of 20 October 1993 requires a number of considerations in planning a project. Fallen trees should not be burned or buried. Mulching, composting, and other uses for trees should be considered. Also, recovery of metals at the job site, including aluminum cans, should be considered with proceeds to be retained by the Contractor. Non-Federal recycling

and waste minimization efforts shall also be incorporated into this plan.

SD-11 Closeout Submittals

Logs/Final Summary Report; FIO.

Contractor shall submit as specified, logs and final summary report of sightings and incidents with endangered species.

Project Environmental Summary Sheet; FIO.

Contractor shall submit within 30 days following completion of the project, a written report of the absence or occurrence of environmental incidents. In addition, for construction activities whose anticipated duration is more than one calendar year, the Contractor shall complete a sheet each May 31st (plus/minus 14 days).

1.6 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors shall be the responsibility of the Contractor.

1.7 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, Commonwealth, or local 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 proposed corrective action and take such action as may be approved. If the Contractor fails 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 time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

Additionally, the Contractor shall notify the Contracting Officer, in writing, of the absence or occurrence of environmental incidents, as required on the Project Environmental Summary Sheet, copy appended to the end of this Section. (Refer to paragraph SUBMITTALS above.)

1.8 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and careful installation and monitoring of the project to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of Federal, Commonwealth, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the Contractor. Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with Section 01452 DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

For contract work, the Contractor shall comply with all applicable Federal, Commonwealth, or local laws and regulations. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected at least during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Deviations from drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, and alternate access routes) could result in the need for the Government to reanalyze and re-approve the project from an environmental standpoint. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 General Project Environmental Design and Installation Criteria

Some project sites have features that shall not be impacted in any way, including cultural, historic, or archeological features. At all sites, project plans should minimize disturbance to existing features at the site to the extent possible, including vegetative, topographic, and drainage pattern features. Wetland impacts (temporary access, detours, staging areas, and other work area impacts) to project sites should be avoided and may require separate permitting action. Any wetlands temporarily impacted shall have its soil restored upon project completion. Expansion of previously permitted project footprints may likewise require separate permitting action.

In all cases, the design and/or installation of project system shall provide for protection of the environment during handling, installing, storing, utilizing, transporting, servicing, testing, refilling, transferring, pumping, processing, removing waste products, repairing and maintaining systems and their components. Necessary design protection shall also be considered that would prevent contamination of the environment from impacts to the system caused by storm water runoff and flooding. Retrofit of connected systems on project sites to modern environmental protection design standards shall also be considered.

In the event environmental protection measures fail, the Contractor shall implement procedures to control and correct environmental damage.

3.1.2 Protection of Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved or avoided within the Contractor's work area. Materials displaced into uncleared areas shall be removed. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. The Contractor shall engage a qualified tree surgeon to perform all tree surgery. The Contractor shall be responsible to repair injuries to bark, trunk, branches, and roots of protected trees by dressing, cutting, and painting as specified for Class I Fine Pruning, of the National Arborist Association Pruning Standards for Shade Tree or as per State's Agricultural Extension Agency Guidelines, immediately as occurrences arise. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. The Contractor shall protect from damage all existing trees designated to remain. Protection of tree roots shall be provided against noxious materials in solution caused by run-off or spillage. Fires shall be located outside the canopy of protected trees. No materials, trailers, or equipment shall be stored within the drip line of any protected tree. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the U.S. Department of Agriculture (USDA) regarding additional cleaning requirements that may be necessary.

3.1.2.2 Protection of Landscape

Trees and their roots, shrubs, vines, grasses, land forms, and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified and protected by fencing or any other approved techniques. Protection of trees shall be as illustrated in the Tree Protection Plan Detail appended to the end of this Section. Tree protection fencing shall be placed before excavation or grading is begun and maintained in place until construction is complete. Branches of protected trees, if required, shall be removed to clear for construction and pruning shall subsequently be performed to restore the natural shape of the entire tree. Branches or roots, if required, shall be cut with sharp pruning instruments and not broken or chopped. Protected trees shall be fertilized to compensate for root loss with 6-6-6 as per manufacturer's application direction. Any damage to tree crowns or roots shall be repaired promptly after damage occurs.

a. Trench or Bore Under Trees

Where trenching for utilities is required within tree driplines, the Contractor shall hand dig under and around roots or bore under them. The Contractor shall protect roots from drying and cover exposed roots within an hour as specified in subparagraph "Excavation for Structures" below. No lateral roots which interfere with new construction shall be cut. Boring is permitted.

b. Excavation for Structures

Where excavating for new construction is required within tree drip lines, the Contractor shall hand excavate to minimize damage to root systems. The Contractor shall use narrow tine pitchforks and comb soil to expose roots. The Contractor shall relocate roots in backfill areas. If large, main lateral roots are encountered that are exposed beyond the excavation limits, the Contractor shall bend and relocate these roots without breaking or girdling. If roots are encountered immediately adjacent to new construction such that relocation is not practical, the Contractor shall

saw roots approximately 3" back from the new construction, seal with tree wound dressing, and protect any exposed embankment of roots from drying by covering with straw and black plastic. The Contractor shall irrigate affected areas daily until final grade conditions are established and the exposed roots are backfilled properly for continued plant growth.

c. Replacement

The Contractor shall remove dead or damaged protected trees determined, by the Government, to be incapable of restoration to normal health growth. The Contractor shall replace each removed tree up to 4" caliper with tree of equal specie and size. For each tree removed larger than a 4" caliper, the Contractor shall replace the tree with one 4" caliper tree per 4" caliper increment or fraction thereof.

3.1.2.3 Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

3.1.2.4 Disturbed Areas

The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

a. Retardation and Control of Runoff

Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of diversion ditches, benches, and by any measures required by area wide plans approved under paragraph 208 of the Clean Water Act.

b. Erosion and Sedimentation Control Devices

The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as directed by the Contracting Officer. Temporary velocity dissipation devices shall be placed along drainage courses so as to provide for non-erosive flows. Temporary erosion and sediment control measures such as berms, dikes, drains, sediment traps, sedimentation basins, grassing, mulching, baled hay or straw, and silt fences shall be maintained until permanent drainage and erosion control facilities are completed and operative. For silt fences, the filter fabric is to be of nylon, polyester, propylene, or ethylene yarn of at least 50 lb/in strength and able to withstand a flow rate of at least 0.3 gal/ft sq/minute. The fabric should contain ultraviolet ray inhibitors and stabilizers and be a minimum of 45 inches in width. The toe of the fence shall be buried at least 8 inches deep to prevent undercutting and shall be secured to posts by suitable staples, tie wire, or hog rings. Posts shall have a cross section of at least 2"x4" and a minimum of 4 foot in length. Fence shall be overlapped to the next post if fabric joints are necessary.

c. Sediment Basins

Sediment from construction areas shall be trapped in temporary or permanent sediment basins in accordance with basin plans shown on the drawings. The basins shall accommodate the runoff of a local 24-hour storm. After each storm, the basins shall be pumped dry and accumulated sediment shall be removed as necessary to maintain basin effectiveness. Overflow shall be controlled by paved weir or by vertical overflow pipe, draining from the surface. The collected topsoil sediment shall be reused for fill on the construction site, and/or conserved (stockpiled) for use at another site(s). The Contractor shall institute effluent quality monitoring programs as required by Commonwealth and local environmental agencies.

3.1.2.5 Contractor Facilities and Other 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 when approved by the Contracting Officer. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment. If there is suspicion that sediment may be unsuitable for disposal at a specified location, the Contractor shall immediately take measures to contain the suspect sediment and notify the Contracting Officer.

3.1.2.6 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. Solid waste materials shall be hauled to an approved solid waste disposal site designated by the Contracting Officer. The Contractor shall comply with Federal, Commonwealth, and local regulations pertaining to the use of the solid waste disposal site.

3.1.2.7 Fuel, Oil, and Lubricants

Fuel, oil, and lubricants shall be managed so as to prevent spills and evaporation. To prevent spills, fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area. Petroleum waste generated shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with 40 CFR 279, Commonwealth, and local regulations.

3.1.2.8 Hazardous Waste

Hazardous wastes are defined in 40 CFR 261. The Contractor shall ensure that hazardous wastes are stored and disposed of in accordance with 40 CFR

261 and Commonwealth and local regulations. The Contractor shall ensure that hazardous wastes are packed, labeled, and transported in accordance with 49 CFR 173 and Commonwealth and local regulations.

3.1.2.9 Hazardous Materials

The Contractor shall ensure that hazardous materials are labeled, stored, and transported in accordance with 49 CFR 173, Commonwealth, and local regulations.

3.1.2.10 Disposal of Other Materials

Other materials than previously discussed (Construction and Demolition, vegetative waste, etc.) shall be handled as directed.

3.1.3 Preservation and Recovery of Historic, Archeological, and Cultural Resources

3.1.3.1 Applicable Law

A number of Federal laws require protection of cultural resources. Two laws, in particular, can be potentially involved with dredging activities: (1) the National Historic Preservation Act, as amended; and, (2) the Abandoned Shipwreck Act.

3.1.3.2 Known Resources

Known historic, archeological and cultural resources within the Contractor's work area(s) are designated as a "sensitive environmental area" on the contract drawings or other documents. If so designated, the Contractor shall install protection for these resources and shall be responsible for their preservation during the contract's duration. The Contractor shall not distribute maps or other information on these resource locations except for distribution among the Contractor's staff with a "need to know" technical responsibility for protecting the resources.

3.1.3.3 Inadvertent Discoveries

If, during or other construction activities, the Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to the Contracting Officer so that the appropriate Corps staff may be notified and a determination for what, if any, additional action is needed. Examples of historic, archeological and cultural resources are bones, remains, artifacts, shell, midden, charcoal or other deposits, rocks or coral, evidences of agricultural or other human activity, alignments, and constructed features. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from further removing, or otherwise damaging, such resources.

The possibility of encountering submerged cultural resources is inherent in dredging and snagging operations. Such findings could include shipwrecks, shipwreck debris fields (such as streamed engine parts), prehistoric watercraft (such as log "dugouts"), and other structural features intact or displaced. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. Suspected cultural materials inadvertently gathered from a water-saturated context should be kept moist by re-immersion, spraying, or some other expedient means of wetting until the appropriate Corps staff provide further

directives. No interviews or other contact with media shall occur without clear authorization from the Contracting Officer or the appropriate Corps representative.

3.1.3.4 Claims for Downtime due to Inadvertent Discoveries

Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident, such delays shall be coordinated with the Contracting Officer.

3.1.4 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface, ground waters, and wetlands. The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. The Contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. There shall be no storage or stockpiling of equipment, tools, or materials within wetlands or along the shoreline within the littoral zone unless specifically authorized.

3.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water. Analysis shall be performed and results reviewed and approved by Corps staff before water in retention ponds is discharged.

3.1.4.2 Cofferdam and Diversion Operations

Construction for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

3.1.4.3 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment without violating water pollution control standards of the Federal, Commonwealth, or local government.

3.1.4.4 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.1.4.5 Turbidity

The Contractor shall conduct his dredging and disposal operations in a manner to minimize turbidity and shall conform to all water quality standards as prescribed by the Puerto Rico Water Quality Standards Regulation of the Puerto Rico Environmental Quality Board.

3.1.4.6 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

The Contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, local bodies of water, or wetlands. This shall be accomplished by design and procedural controls. In the event that a spill occurs despite the design and procedural controls, the following shall occur:

- (1) Immediate action shall be taken to contain and cleanup any spill of oil, fuel or other hazardous substance.
- (2) Spills shall be immediately reported to the Contracting Officer.
- (3) Spill contingency planning shall be strictly in accordance with the criteria of 40 CFR, Part 109.
- (4) To control the spread of any potential spill, absorbent materials shall be readily available and capable of absorbing the contents of the single largest tank.
- (5) To control the spread of any potential spill, the Contractor shall provide a written certification of commitment of manpower, equipment, and materials required to expeditiously cleanup and dispose of spill materials.

a. Spill Preventive Systems

System design and installation requirements have been discussed at the beginning of this Section. Temporary or portable tanks shall conform to applicable Federal, Commonwealth, and local codes and requirements and shall not be placed where they may be affected by storm, flooding, or washout. Diversionary structures for spills shall be put in place in advance where practical. Both spill preventive systems and any deviations from associated requirements must be approved by the Contracting Officer prior to implementation.

b. Liabilities

The Contractor shall be liable in the amounts established in 40 CFR, Part 113 when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. The penalty for failure to report the discharge of oil shall be in accordance with the provision of 33 CFR, Part 153.

3.1.5 Protection of Fish and Wildlife Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.

3.1.5.1 Endangered Species Protection

The Contractor shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees.

a. Civil and Criminal Penalties

All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Commonwealth of Puerto Rico Endangered Species Regulation. The Contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.

b. Siltation Barriers

If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

c. Vessel/Boat Operation

All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom, and vessels shall follow routes of deep water whenever possible. Boats used to transport personnel shall be shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits.

d. Manatee Sighting

If a manatee(s) is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the Contractor to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease within the waterway to ensure protection of the manatee. Construction activities shall not resume until the manatee has departed the project area. If construction activity shall cease, notify the Contracting Officer.

e. Manatee Signs

Prior to commencement of construction, each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8-1/2" x 11" reading, "CAUTION: MANATEE HABITAT/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA." In the absence of a vessel, a temporary 3' x 4' sign reading "CAUTION: MANATEE AREA" will be posted adjacent to the issued construction permit. A second temporary sign measuring 8-1/2" x 11" reading "CAUTION: MANATEE HABITAT. EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION" shall be posted at the dredge operator control station and at a location prominently adjacent to the issued construction permit. The Contractor shall remove the signs upon completion of construction. Sample Manatee Caution Signs are appended to the end of this Section.

f. Manatee Sighting Reports

Any collisions with a manatee or sighting of any injured or incapacitated manatee shall be reported immediately to the Corps of Engineers. The order of contact within the Corps of Engineers shall be as follows:

Order of Contact of Corps Personnel for Dredging
Contractor to Report Manatee Death or Injury

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector Mr. Edwin Cuebas, Antilles Engineer, CESAJ-DS-CO-C	On site 787-729-3001	Lodging Location To be Provided
Acting Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-2202	To be Provided
Mr. Charles McGehee, Chief, Construction Branch, Construction-Operations Division (CESAJ-CO-C)	904-232-1122	To be Provided
Mr. Gordon M. Butler, Jr., Chief, Construction-Operations Division (CESAJ-CO)	904-232-3765	To be Provided

The Contractor shall also immediately report any collision with and/or injury to a manatee to the Boqueron Field Office at 787-851-7273 for Puerto Rico.

g. Report Submission

The Contractor shall maintain a log detailing sightings, collisions, or injuries to manatees occurring during the contract period. The data shall be recorded on forms provided by the Contracting Officer (sample Daily Manatee Reporting Log is appended to the end of this Section). All data in original form shall be forwarded directly to the Acting Chief, Environmental Branch, P. O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of collection and copies of the data shall be supplied to the Contracting Officer. Following project completion, a report summarizing the above incidents and sightings shall be submitted to the following:

Acting Chief, Environmental Branch
U.S. Army Corps of Engineers (CESAJ-PD-E)
P.O. Box 4970
Jacksonville, Florida 32232-0019

Antilles Engineer, Mr. Edwin Cuebas
U.S. Army Corps of Engineers (CESAJ-DS-CO-C)
400 Fernandez Juncos
San Juan, Puerto Rico 00901-3299

U.S. Fish and Wildlife Service
P. O. Box 491
Boqueron, Puerto Rico 00622-0491

The Contractor shall instruct all personnel associated with the project of the potential presence of manatees, sea turtles, and whales in the area, and the need to avoid harming these animals. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, sea turtles, or whales which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The Contractor shall be held responsible for any manatee, sea turtle, or whale harmed, harassed, or killed as a result of construction activities.

In addition, the Contractor shall instruct all personnel associated with the project of the potential presence of any other known endangered or threatened species in the area, and the need to avoid harming these animals. The Contractor shall be held responsible and liable for any of the above-mentioned animals that are harmed, harassed, or killed as a result of construction activities. In the event that a threatened or endangered species is harmed as a result of construction activities, the Contractor shall cease all work and notify the Contracting Officer. The order of contact of Corps of Engineers personnel shall be the same as for Bird Nesting Activities.

a. Siltation Barriers

If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

b. Special Operating Conditions

(1) All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom, and vessels shall follow routes of deep water whenever possible. Boats used to transport personnel shall be shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits. Mooring bumpers shall be placed on all barges, tugs, and similar large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet.

(2) If a manatee(s) is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the Contractor to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease within the waterway to ensure protection of the manatee. Construction activities shall not resume until the manatee has departed the project area.

3.1.5.2 Hardground/Reef Protection

Existing hardground/reef areas within the Contractor's work area will be so designated by the Contracting Officer and precaution will be taken to preserve these resources as they existed at the time they were pointed out to the Contractor. The Contractor shall install all protection for these

resources so designated on the drawings and shall be responsible for their preservation during this contract. Pipelines will be placed only in approved areas and anchoring will be permitted in sandy areas only. Pipeline will be monitored for leaks. Any leaks that develop shall be repaired immediately, especially over hardgrounds/reefs, and the pumpout operations shall be shutdown until repairs are completed.

3.1.6 Seagrass and Hardbottom Protection Measures

a. The Contractor shall instruct all personnel associated with the project of the presence of seagrasses, especially the Federally-listed threatened Johnson's Seagrass (*Halophlia johnsonii*), and the need to avoid contact with seagrasses.

b. All construction personnel shall be advised that there are civil and criminal penalties for harming or destroying seagrasses, especially Johnson's Seagrass which is protected under the Endangered Species Act of 1973, as amended. The Contractor may be held responsible for any seagrasses harmed or destroyed due to construction activities.

c. The Contractor shall not anchor, place pipeline, or stage equipment in a manner that will cause any damage to seagrasses or hardbottoms. Anchoring, placing pipeline, or staging equipment shall avoid these sensitive areas. If such activities cannot be done without affecting these sensitive areas, the activities shall cease and the Contracting Officer and the Acting Chief, Environmental Branch (904-232-1685) shall be immediately notified (no later than the morning following the next working day if the incident occurs after normal working hours). Any actual or potential incident involving damage to, or disturbance of, seagrasses or hardbottoms shall be reported.

3.1.7 Protection of Air Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the Commonwealth and all Federal emission and performance laws and standards, including the U.S. Environmental Protection Agency's Ambient Air Quality Standards.

3.1.7.1 Particulates

Particulates, such as dust, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

3.1.7.2 Burning

All burning shall be subject to Commonwealth and local requirements, including requirements for burn permits and bans during certain conditions such as droughts.

3.1.7.3 Odors

Odors shall be controlled at all times for all construction activities.

3.1.8 Protection of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise.

3.2 POSTCONSTRUCTION CLEANUP

The Contractor shall clean up any area(s) used for construction.

3.3 PRESERVATION AND RESTORATION OF LANDSCAPE AND MARINE VEGETATION DAMAGES

The Contractor shall restore all landscape features and marine vegetation damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be a part of the Environmental Protection Plan as defined in subparagraph "Environmental Protection Plan" of paragraph SUBMITTALS above. This work shall be accomplished at the Contractor's expense.

3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

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

3.5 TREE PROTECTION PLAN DETAIL

See APPENDIX 01355-A at the end of this Section (1 page).

3.6 SAMPLE - MANATEE CAUTION SIGNS

See APPENDIX 01355-B at the end of this Section (2 pages).

3.7 SAMPLE - DAILY MANATEE REPORTING LOG

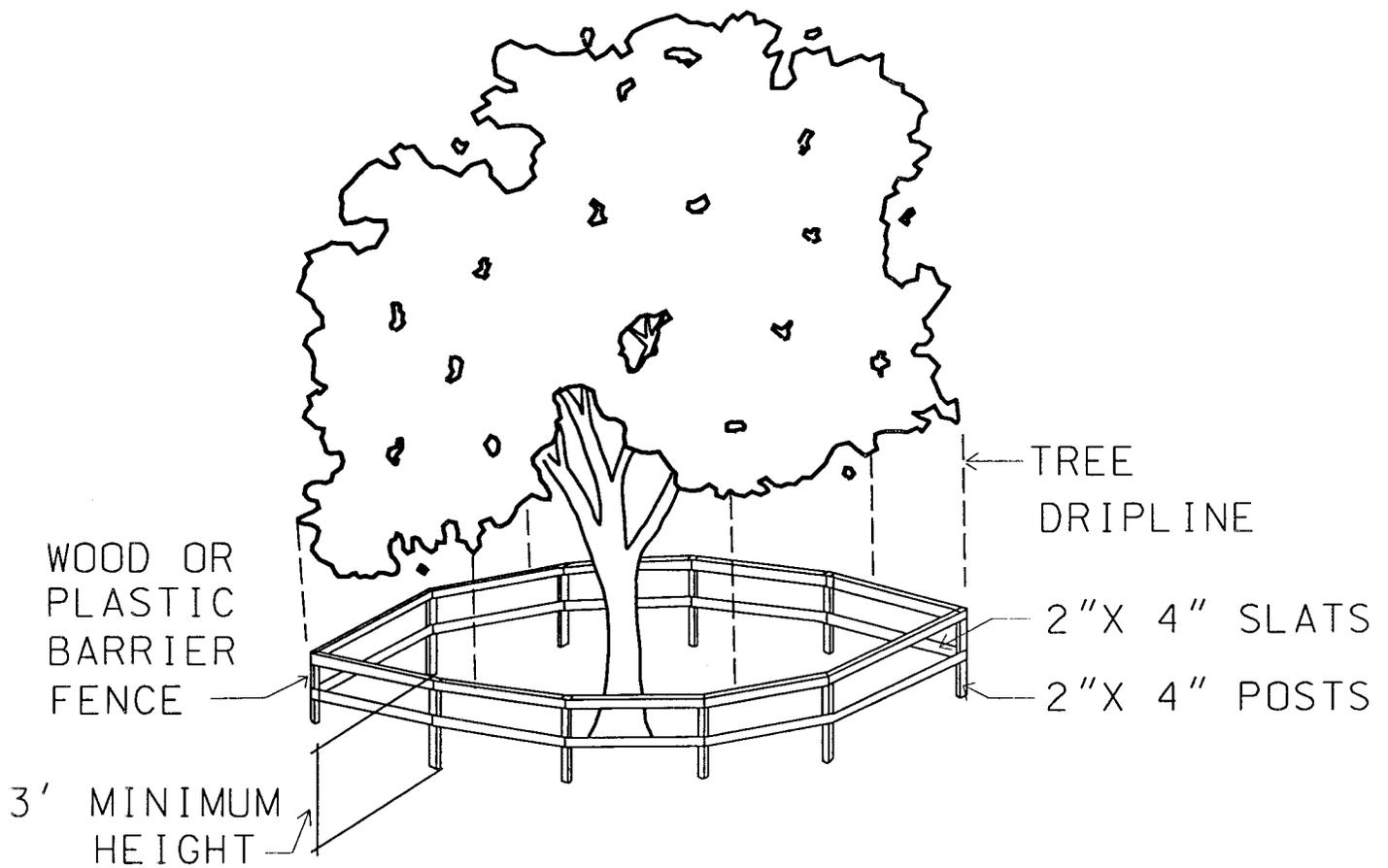
See APPENDIX 01355-C at the end of this Section (1 page).

3.8 PROJECT ENVIRONMENTAL SUMMARY SHEET

See APPENDIX 01355-D at the end of this Section (2 pages).

-- End of Section --

TREE TO BE PRESERVED DURING CONSTRUCTION



TREE PROTECTION PLAN

NOT TO SCALE

CAUTION

MANATEE HABITAT

**IDLE SPEED IS REQUIRED IF OPERATING A
VESSEL IN THE CONSTRUCTION AREA.**

**ALL EQUIPMENT MUST BE SHUTDOWN IF A
MANATEE COMES WITHIN 50 FEET OF
OPERATION.**

**ANY COLLISION WITH AND/OR INJURY TO A
MANATEE SHALL BE REPORTED IMMEDIATELY
TO THE CARIBBEAN STRANDING NETWORK
AT 787-380-0025**

CAUTION

MANATEE HABITAT

**ALL EQUIPMENT MUST BE SHUTDOWN IF A
MANATEE COMES WITHIN 50 FEET OF
OPERATION.**

**ANY COLLISION WITH AND/OR INJURY TO A
MANATEE SHALL BE REPORTED IMMEDIATELY
TO THE CARIBBEAN STRANDING NETWORK AT
787-380-0025**

DATE: _____

MANATEE REPORTING LOG

1. PROJECT: _____

2. DEP WATER QUALITY CERTIFICATE #: _____

3. MANATEES SIGHTED: YES _____ NO _____

IF "NO", PROCEED TO NO. 10

4. TIME: _____

5. NUMBER OF MANATEES SIGHTED: ADULT _____ JUVENILE _____

6. NUMBER OF MANATEES INJURED:

ADULT _____ JUVENILE _____ WORK RELATED: YES _____ NO _____

7. NUMBER OF MANATEES KILLED:

ADULT _____ JUVENILE _____ WORK RELATED: YES _____ NO _____

8. LOCATION:

9. REMARKS:

10. SIGNATURE: _____

11. TITLE: _____

Project Environmental Summary Sheet

Note: This sheet shall be submitted within 30 days following completion of the project. In addition, for construction activities whose anticipated duration is more than one calendar year, a sheet shall be completed each May 31st (\pm 14 days). The Contractor will prepare this sheet so as to include all Subcontractor information also. Original data will be forwarded via the ACOR to the Chief of the Environmental Branch, Planning Division, P.O. Box 4970, Jacksonville, FL 32232-0019. Use additional sheets as necessary.

Today's date: _____

Page: ___ of ___

Project Name: _____

Project Notice to Proceed Date: _____

Project Solicitation Number: _____

Project Contract Number: _____

1. Project activities that have occurred:

Permit Condition/ Activity	% Completion	Date of Anticipated Completion	Date of Actual Completion
-------------------------------	--------------	-----------------------------------	------------------------------

2. Describe project survey benchmark if a structure is involved:

3. Check whether the following environmental incidents occurred:

Yes*:

No:

- a. Spill of petroleum or hazardous substance
- b. Surface water or ground water contamination event
- c. Air pollution event
- d. Monitoring sample outside limit
- e. Required sampling or monitoring not conducted
- f. Event which threatened or actually harmed:
 - i. Vegetation, habitat, or wetland
 - ii. Human, fish, bird, or other wildlife species
 - iii. Protected soil or water bottom
 - iv. Historic, archeological, or cultural resources
- g. Regulatory violation, regulatory warning, permit violation, newsworthy event, or other (describe):

4. For each asterisked (*) 'Yes' item:

- a. Describe incident and how discovered:
- b. Describe how, when, and if incident reported (initially and subsequently):
- c. Describe act which resulted in incident:
- d. Describe any failures of containment systems, contingency plans, or emergency procedures:
- e. Describe severity or extent of incident and landowner(s) affected:
- f. Describe how situation corrected and verified:

g. List and describe costs involved with incident correction (\$_____):

h. Additional sheets, sketches, pertinent photographs with annotations and dates, daily reports, or other items attached? Yes___ No___

Contractor Signature: _____

Typed or Handwritten Name:

Position:

Company Name, Address, and Telephone Number:

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SECTION 01411

TURBIDITY MONITORING

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- 1.2 SUBMITTALS

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-- End of Section Table of Contents --

SECTION 01411

TURBIDITY MONITORING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all work required to obtain, analyze, and report the results of turbidity and disposal monitoring.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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-03 Product Data

Calibration Standard; FIO.

The Contractor shall furnish to the Contracting Officer a copy of the operating instructions and standards used in calibrating equipment used in collecting samples for turbidity.

SD-06 Test Reports

Turbidity Monitoring; FIO.

All required turbidity test reports shall be submitted (preferably by electronic mail) to the Contracting Officer, the Environmental Branch (CESAJ-PD-E), and the Puerto Rico Environmental Quality Board within 24 hours after completion of each test.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 MONITORING REQUIREMENTS

3.1.1 General

Nearshore or inland water samples shall be obtained and analyzed for turbidity. Sampling shall be conducted in accordance with techniques described in the latest edition of "Standard Methods" published by the American Public Health Association (APHA), American Waterworks Association (AWWA), and Water Pollution Control Federation (WPCF), and other current techniques recognized by the scientific community and approved by the Jacksonville District, Corps of Engineers. Samples obtained for turbidity analysis shall be analyzed within 30 minutes of collection. Samples shall be taken with a sampler obtaining samples uncontaminated by water from any other depth.

3.1.1.1 Turbidity Monitoring Equipment

Monitoring required for turbidity shall be measured in Nephelometric Turbidity Units (NTU) using a standard Nephelometer. Global Positioning System (GPS) is also required to record sampling stations.

3.1.2 Dredging and Disposal Locations

Routine monitoring shall occur at the following locations:

3.1.2.1 Station Descriptions

a. Station 1 (Compliance Turbidity)

No more than 150 meters downcurrent of the dredge or point of discharge and in the direction of any visible plume.

b. Station 2 (Background Turbidity)

At least 500 meters upcurrent from the dredge or point of discharge and outside of any turbidity generated by the project.

3.1.2.2 Turbidity

Samples to be analyzed for turbidity shall be taken twice daily (one between the hours of 12 midnight and 12 noon and the other between 12 noon and 12 midnight) at least 4 hours apart at surface and mid-depth at the following locations. Additional sampling shall be performed when the Contracting Officer determines that there may be non-compliance with water quality standards.

- a. Dredging Site Compliance at Station 1
- b. Dredging Site Background at Station 2
- c. Disposal Site Compliance at Station 1
- d. Disposal Site Background at Station 2

3.2 TURBIDITY TESTS

3.2.1 Testing

The Contractor shall provide the Government with a certification, attesting to the accuracy of his testing equipment and procedure. The Contractor shall also provide the Contracting Officer with a duplicate of the standard used to calibrate his testing instrument as well as a complete set of operating instructions for the turbidity testing equipment. The Contractor and the Contracting Officer will use this standard throughout the project to maintain the calibration of the equipment. Whenever there is doubt as to the adequacy of the testing or validity of the results, the Contracting Officer may direct that additional tests be performed at no additional cost to the Government.

3.2.2 Reporting

The monitoring data shall be recorded on summary forms that contain the pertinent information in the following paragraphs. Example forms are

appended to the end of this Section. Other data shall be submitted in the form supplied by the laboratory chosen to do the analysis. All data shall be forwarded (preferably electronically) to the Contracting Officer, Environmental Branch (CESAJ-PD-E), within 7 days of collection. Electronic mail addresses of the Corps personnel to receive these reports are provided below. Reports shall be provided in a common format such as Excel Spreadsheet (.xls) files, Word (.doc) files, and Web Graphics (Joint Photographic Group or .jpg) files.

NAME	ORGANIZATION	E-MAIL ADDRESS
Edwin Cuebas	USACE COR	edwin.cuebas@usace.army.mil

3.2.2.1 Report Contents

- a. Permit application number.
- b. Dates of sampling and analysis.
- c. A statement describing the methods used in collection, handling, storage, and quality control methods used in the analysis of the samples.
- d. A map indicating the sampling location and plume configuration, if any (example map appended to the end of this Section).
- e. A map plotting the dredge location during each traverse through the borrow area. This map can be combined with the map indicating the sampling location.
- f. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, and accuracy of the data.
- g. Results of the analyses.
- h. A description of any factors influencing the dredging or disposal operation or the sampling program. Reports shall be furnished daily even when no sampling is conducted. When sampling is not conducted, a brief statement shall be given in the report explaining the reason for not conducting the sampling, such as "dredge not working due to mechanical problems" or "no sampling taken due to high seas".
- i. State plane coordinates (X and Y) shall be provided for all sampling stations along with the coordinates of the dredge and discharge pipe and the distance between the sampling station and dredge/discharge pipe for each sampling event.

3.2.2.2 Monitoring Reports

Monitoring reports shall also include the following information for each day that samples are taken:

- a. Time of day and date samples were taken.
- b. Depth of water body.
- c. Depth of sample.

- d. Antecedent weather conditions.
- e. Tidal stage and direction of flow.
- f. Salinity (provided for heavy metal and ammonia analysis only).
- g. pH (provided for heavy metal and ammonia analysis only).
- h. Water temperature, C degrees (heavy metal and ammonia analysis only).
- i. Dredge or disposal location (station location and map).
- j. Water sample location.
- k. Wind direction and velocity.

3.2.2.3 Notification

If turbidity exceeds background levels by more than 29 NTU, the Contractor shall immediately notify the Chief, CESAJ-PD-E, at 904-232-2202 and the Contracting Officer, or on the morning of the following work day if it occurs after normal work hours. In addition, all dredging or disposal activity shall cease immediately and all measures to reduce turbidity shall be taken. Dredging or disposal shall not resume until corrective measures have been taken and turbidity has returned to acceptable levels as determined by proper testing described in subparagraph "Dredging and Disposal Locations" above.

3.3 WORK DELAY

Delays in work due to the fault or negligence of the Contractor or the Contractor's failure to comply with this specification shall not be compensable. Any adjustments to the contract performance period or price that are required as a result of compliance with this section shall be made in accordance with the provisions of the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES.

3.4 SAMPLE - TURBIDITY MONITORING TEST REPORT

See APPENDIX 01411-A at the end of this Section (with example location map appended) (4 pages).

-- End of Section --

PROJECT:
DEP PERMIT NUMBER:

DAILY TURBIDITY MONITORING REPORTS

CALIBRATION DATE _____

DATE: _____; TIME: _____; COLLECTOR:

LOCATION INFORMATION: _____ Dredge or _____ Disposal Site
Dredging in progress? _____ Yes _____ No
Disposal in progress? _____ Yes _____ No
Station: _____ Range: _____ Cut:

WEATHER AND WATER OBSERVATIONS

Wind velocity: _____, Wind direction from: _____, Current direction to:
Tidal stage: _____ Predicted tidal stage (EST): High _____ Low

WEATHER CONDITIONS:

<u>COMPLIANCE STATION DATA:</u>	<u>SURFACE</u>	<u>MID-DEPTH</u>	<u>ONE FOOT ABOVE BOTTOM</u>
Collection Depth			
Depth of Water Body			
Collection Time			
Analysis Time			
Turbidity (NTU)			
Analysis Date			
GPS XY _____			

BACKGROUND STATION DATA:

Collection Depth
Depth of Water Body
Collection Time
Analysis Time
Turbidity (NTU)
Analysis Date
GPS XY _____

TURBIDITY REVIEW:

Compliance minus Background (NTU)

Compliance NTU ____ did ____ did not exceed background NTU by more than 29 NTU.

COMMENTS ON SAMPLING EVENT (describe the methods used in collection, handling, storage, and analysis or other remarks regarding the sampling):

STATION LOCATIONS AND PLUME CONFIGURATION IF ANY, ARE PRESENTED ON A MAP ATTACHED.

STATEMENT OF AUTHENTICITY AND ACCURACY:

Signature/Date

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SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 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. The designations "AOK" and "LOK" are for administrative purposes and should not be used when ordering publications.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1819 L Street, NW, 6th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
Internet: www.ansi.org/

Acoustical Society of America
Standards and Publications Fulfillment Center
P. O. Box 1020
Sewickley, PA 15143-9998
Ph: 412-741-1979
Fax: 412-741-0609
Internet: <http://asa.aip.org>
General e-mail: asa@aip.org
Publications 3 e-mail: asapubs@abdintl.com
AOK 5/01
LOK 6/00

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
Internet: www.astm.org
AOK 5/01
LOK 3/01

AMERICAN WELDING SOCIETY (AWS)
550 N.W. LeJeune Road
Miami, FL 33126
Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
Internet: www.amweld.org
AOK 5/01
LOK 3/01

ASME INTERNATIONAL (ASME)
Three Park Avenue
New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: www.asme.org
AOK 5/01
LOK 6/00

MASTER PAINTERS INSTITUTE (MPI)
4090 Graveley Street
Burnaby, BC CANADA V5C 3T6
PH: 888-674-8937
Fx: 888-211-8708
www.paintinfo.com/mpi
AOK 9/01
LOK 0/00

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: www.nfpa.org
AOK 5/01
LOK 8/00

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)
Mail Stop C-13
4676 Columbia Parkway
Cincinnati, OH 45226-1998
Ph: 800-356-4674
Fx: 513-533-8573
Internet: www.cdc.gov/niosh/homepage.html
To order pubs for which a fee is charged, order from:
Superintendent of Documents
U.S. Government Printing Office
732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
AOK 5/01
LOK 6/00

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)
40 24th Street, 6th Floor
Pittsburgh, PA 15222-4656

Ph: 412-281-2331
Fax: 412-281-9992
Internet: www.sspc.org
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LOK 6/00

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: www.wes.army.mil/SL/MTC/handbook/handbook.htm

Order Other Documents from:

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2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
Internet: www.usace.army.mil/publications
or www.hnd.usace.army.mil/techinfo/index.htm
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U.S. DEPARTMENT OF DEFENSE (DOD)

Order DOD Documents from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-605-6000
FAX: 703-605-6900
Internet: www.ntis.gov

Order Military Specifications, Standards and Related Publications
from:

Department of Defense Single Stock Point for (DODSSP)
Defense Automation and Production Service (DAPS)
Bldg 4D
700 Robbins AV
Philadelphia, PA 19111-5094
Ph: 215-697-2179
Fax: 215-697-1462
Internet: www.dodssp.daps.mil
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LOK 6/00

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

500 C Street, SW
Washington, D.C. 20472
Phone: 202-646-4600
website: fema.gov
AOK 8/01

LOK 0/00

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)
Office of Highway Safety (HHS-31)
400 Seventh St., SW
Washington, DC 20590-0001
Ph: 202-366-0411
Fax: 202-366-2249
Internet: www.fhwa.dot.gov
Order from:

Superintendent of Documents
U. S. Government Printing Office
732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
AOK 5/01
LOK 6/00

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

Order from:
General Services Administration
Federal Supply Service Bureau
470 E L'Enfant Plaza, S.W., Suite 8100
Washington, DC 20407
Ph: 202-619-8925
Fx: 202-619-8978
Internet: fss.gsa.gov/pub/fed-specs.cfm
AOK 5/01
LOK 6/00

U.S. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
website: nasa.gov

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
Phone: 800-234-8861
website: nara.gov

Order documents from:
Superintendent of Documents
U.S. Government Printing Office
732 North Capitol Street, NW
Washington, DC 20401
Mailstop: SDE
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
E-mail: gpoaccess@gpo.gov
AOK 5/01

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
1510 Gilbert St.
Norfolk, VA 23511-2699

Ph: 757-322-4200
Fax: 757-322-4416
Internet: www.efdlant.navfac.navy.mil/LANTOPS_15
AOK 5/01
LOK 6/00

U.S. NAVAL FACILITIES ENGINEERING SERVICE CENTER (NFESC)
1100 23rd Avenue
Port Hueneme, CA 93043-4370
Ph: 805-982-4980
Internet: www.nfesc.navy.mil
AOK 5/01
LOK 6/00

WATER ENVIRONMENT FEDERATION (WEF)
601 Wythe St.
Alexandria, VA 22314-1994
Ph: 703-684-2452
Fax: 703-684-2492
Internet: www.wef.org
AOK 5/01
LOK 6/00

WATER QUALITY ASSOCIATION (WQA)
4151 Naperville Rd.
Lisle, IL 60532
Ph: 630-505-0160
Fax: 630-505-9637
Internet: www.wqa.org
e-mail: info@mail.wqa.org
AOK 5/01
LOK 6/00

WEST COAST LUMBER INSPECTION BUREAU (WCLIB)
P.O. Box 23145
Portland, OR 97281
Ph: 503-639-0651
Fax: 503-684-8928
internet: www.wclib.org
e-mail: info@wclib.org
AOK 5/01
LOK 6/00

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)
7017 N.E. Highway 99 # 108
Vancouver, WA 98665
Ph: 360-693-9958
Fax: 360-693-9967
Internet: www.wwpinstitute.org
e-mail: wwpi@teleport.com
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WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)
Yeon Bldg.
522 SW 5th Ave.
Suite 500
Portland, OR 97204-2122
Ph: 503-224-3930

Fax: 503-224-3934
Internet: www.wwpa.org
e-mail: info@wwpa.org
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LOK 6/00

WINDOW AND DOOR MANUFACTURERS ASSOCIATION (WDMA)
1400 East Touhy Ave., Suite 470
Des Plaines, IL 60018
Ph: 847-299-5200 or 800-223-2301
Fax: 708-299-1286
Internet: www.wdma.com
e-mail: admin@wdma.com
AOK 5/01
LOK 6/00

WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMPA)
507 First Street
Woodland, CA 95695
Ph: 916-661-9591
Fax: 916-661-9586
Internet: www.wmpa.com
AOK 5/01
LOK 6/00

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SECTION 01452

DREDGING / FILL PLACEMENT - CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 DEFINITIONS

Project Manager/Superintendent - highest level manager located onsite and responsible for construction and related activities, including but not limited to the following, production, quality control, safety, turbidity monitoring, endangered species monitoring and environmental protection.

Quality Control System Manager - a person assigned duties to manage Contractor's Quality Control (CQC) system. CQC System Manager shall have written delegated authority sufficient to stop work not in compliance with contract.

Safety Officer - person assigned responsibility for site safety management.

Endangered Species Monitor - person assigned for identifying regulatory protected wildlife and advising Contractor in modifying operations to protect identified species or damage to their habitat. Required to have acceptable qualifications and demonstrated ability. Refer to Section 01355 ENVIRONMENTAL PROTECTION

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.

ENGINEERING REGULATIONS (ER)

ER 1180-1-6 (1995) Construction Quality Management

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Quality Control Plan; G|COR.

Refer to paragraph QUALITY CONTROL PLAN below.

Personnel Qualifications; G|COR.

Submit personnel qualifications for Project Manager/Superintendent, CQC System Manager, Safety Officer, Endangered Species Monitor, Surveyor, Professional Surveyor and Mapper, in resume form.

Letter of Authority; FIO.

Letter to CQC System Manager signed by an authorized Contractor official which describes responsibilities and delegates sufficient authorities to perform functions of the CQC System Manager, including authority to stop work not in compliance with contract.

1.4 PAYMENT

No separate payment will be made for Contractor Quality Control. Include costs in bid items contained on Bidding Schedule.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible to plan and execute quality control in accordance with ER 1180-1-6 and establish and maintain an effective quality control system in compliance with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. Project Manager/Superintendent is responsible for quality of work and is subject to removal by the Contracting Officer for non-compliance with contract quality requirements. The Project Manager/Superintendent shall be on site at all times, except as otherwise approved by the Contracting Officer.

3.2 QUALITY CONTROL PLAN

3.2.1 General

Within 20 calendar days of Notice of Award, submit a written CQC Plan for review by Contracting Officer. CQC Plan submittal will be reviewed by Contracting Officer and discussed in detail at a Coordination Meeting (see paragraph COORDINATION MEETING below). CQC Plan shall identify organization chart, personnel, procedures, control methods, instructions, tests, records, and forms to be used. Contracting Officer may accept an "interim CQC Plan" under a "conditional acceptance" for first 30 calendar days of operation. Contractor shall furnish, not later than 30 calendar days after commencement of work, an acceptable overall CQC Plan.

3.2.1.1 CQC Plan Resubmittal

No construction will be allowed to start until an interim CQC Plan is "conditionally accepted". When an interim CQC Plan is "conditionally accepted", revise and resubmit overall project CQC Plan for Contracting Officer's acceptance. When Contractor is working under an interim CQC Plan, until Contractor submits an acceptable final CQC Plan, Contracting Officer may retain funds from progress payments in accordance with Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES. When no acceptable CQC Plan is resubmitted within a reasonable time, as determined by Contracting Officer, Contracting Officer may order Contractor to stop work until such time as a CQC Plan is accepted. Such a directed stop work order shall not be considered a suspension of work under Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES. No pay or construction period adjustments will be allowed as a result of a directed

stop work order based on Contractor inability to plan quality control in a manner acceptable to Contracting Officer.

3.2.1.2 Failure

Failure to comply with above requirements within time prescribed will be considered a condition endangering contract performance and may be considered grounds for termination of contract in accordance with Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES.

3.2.2 Content of the CQC Plan

a. Describe Quality Control Organization

Include an organization chart with lines of authority and reporting. Project Manager/Superintendent may have dual roles as CQC System Manager or Safety Officer. See Section 01355 ENVIRONMENTAL PROTECTION for Endangered Species Monitor qualifications. Fill placement quantity survey by Contractor requires qualified Registered Land Surveyor or Professional Surveyor and Mapper.

b. Definable Features of Work

Provide a list to be agreed upon during the Coordination Meeting.

c. Qualifications

Names, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

d. Letter of Authority

Copy of letter of authority to CQC System Manager. The CQC System Manager shall issue letters of direction to other quality control staff describing duties, authorities, and responsibilities.

e. Submittal Control

Procedures for scheduling, reviewing, certifying, and managing submittals. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

f. Testing

Control, verification, turbidity monitoring, and field testing procedures. Provide a list of specific instruments and tests. Provide information including work being tested, test frequency, and identify who (Contractor, Subcontractor) is responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

g. Three Phase Control

Procedures to implement three phase quality control and inspection system. Procedures to plan and document preparatory, initial, and follow-up control phases.

h. Deficiency Tracking

Procedures for tracking construction deficiencies from identification

through acceptable corrective action. Establish procedures to verify that deficiencies have been corrected and document correction.

i. Reports and Forms

Reporting procedures, including proposed reporting formats and sample forms.

3.2.3 Acceptance of Plan

"Conditional acceptance" of the Contractor's interim CQC Plan is required prior to starting dredging or other construction activities. Contracting Officer's acceptance is conditional and is contingent on satisfactory performance during construction. The Contracting Officer reserves the right to require the Contractor to make changes in his CQC Plan and construction operations, including removal of personnel.

3.2.4 Notification of Changes

Notify Contracting Officer in writing a minimum of 7 calendar days prior to proposed personnel or CQC Plan procedure changes. Proposed changes are subject to Contracting Officer acceptance.

3.3 COORDINATION MEETING

Refer to Section 01310 ADMINISTRATIVE PROCEDURES. Contracting Officer will schedule a Coordination Meeting where Contractor personnel and Contracting Officer personnel will develop a mutual understanding of how Contractor's Quality Control works with Contracting Officer's Quality Assurance. CQC Plan will be discussed in detail, including forms for recording CQC operations, control activities, testing, and administration of the system for both onsite and offsite work. Contractor quality control for production, measurement and payment, safety, turbidity monitoring, plant and equipment location, monitoring, endangered species monitoring, environmental protection and supervision by Quality Control personnel will be discussed. Meeting minutes will be prepared by Contracting Officer and signed by Contractor and Contracting Officer. The minutes 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 requiring corrective action.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

CQC organization shall have a CQC System Manager and sufficient number of additional qualified personnel to ensure contract quality control for workmanship and materials, including safety and environmental protection compliance. Designate Safety Officer and qualified Endangered Species Monitor who shall serve as a member of CQC staff. Designate qualified surveyor for quantity measurement. Provide office space, computer hardware and software, filing systems and other resources as necessary to maintain an effective CQC organization. CQC organization shall be responsible to maintain documentation and records onsite, unless approved by the Contracting Officer.

3.4.2 CQC System Manager

Identify an individual, employed by Contractor, within onsite organization who shall be responsible for CQC management. CQC System Manager shall have

authority to act in all CQC matters for the Contractor. CQC System Manager shall be an experienced dredging or construction person with a minimum of 3 years in similar work. Identify an alternate person to serve as CQC System Manager during actual CQC System Manager's absences. CQC System Manager or a designated alternate shall be onsite during construction. CQC System Manager may have dual roles as Project Manager or Safety Officer, or if qualified, Surveyor or Endangered Species Monitor.

3.4.3 CQM-C Training Requirement

CQC System Manager shall have completed U.S. Army Corps of Engineers (COE) course "Construction Quality Management For Contractors" within the previous five years. A completion certificate from any Corps District or Naval Facilities Command is acceptable. In event proposed CQC System Manager has not completed CQM-C training, he or she will have 60 days after Notice of Award to do so. This course is periodically offered by Jacksonville District. Information regarding CQM-C course can be obtained from the following website:
<http://www.saj.usace.army.mil/conops/construction> or by contacting Chief, Quality Assurance Section at 904-232-1128.

3.4.4 Surveyor

Survey, topographic survey, and hydrographic survey shall be performed by persons working under direct supervision of a Registered Land Surveyor registered in State of Commonwealth of Puerto Rico. Perform pre- and post-construction survey for each acceptance section and provide supporting data to Contracting Officer. RLS shall certify field notes, computations, and other records relating to quantity survey.

3.4.5 Organizational Changes

When CQC staff changes are needed, revise CQC Organization Chart in CQC Plan to reflect changes and submit the changes to Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals shall be prepared and transmitted as specified in Section 01330 SUBMITTAL PROCEDURES. CQC organization shall certify submittals comply with contract requirements. Items delivered to Contracting Officer shall be controlled, packaged, transported and stored in a manner to prevent damage or loss.

3.6 CONTROL

Contractor's Quality Control is the means by which Contractor ensures construction, including that of subcontractors, complies with contract. Conduct Preparatory Phase and Initial Phase meetings for each definable feature of work (refer to Section 01310 ADMINISTRATIVE PROCEDURES). Perform three phases of control for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work. Notify Contracting Officer at least 24 hours in advance of beginning Preparatory Control Phase. Ensure proposed plans, activity hazard analyses, permits and submittals, are approved and copies are

onsite. Conduct a Preparatory Phase meeting headed by CQC System Manager and attended by Superintendent, other CQC personnel, and foreman responsible for supervising workmanship for definable feature of work. Document Preparatory Phase actions using "Preparatory Phase Checklist" and meeting minutes prepared by CQC System Manager. Preparatory Phase checklist is appended to the end of this Section. Attach checklist and minutes to Contractor's Quality Control (CQC) report (sample CQC form appended to the end of this Section). Preparatory Phase actions include:

- a. Review each paragraph of specifications. Make copies available for use by Contracting Officers personnel and Contractor CQC staff at Preparatory Phase meeting. Maintain copies available until final acceptance of the work.
- b. Review of contract drawings.
- c. Check to assure that plant and/or equipment have been inspected, tested, submitted, and approved.
- d. Review provisions that have been made to provide required quality control inspection and testing.
- e. Examine work area to assure required preliminary work is complete and in compliance with contract.
- f. Review of activity hazard analysis to assure safety requirements are met.
- g. Discuss procedures for controlling quality of work. Document construction tolerances and workmanship standards for that feature of work.
- h. Check to ensure that portion of CQC Plan for new work to be performed has been accepted by Contracting Officer.
- i. Check that previous work or acceptance sections required to start new work have been completed.
- j. Review requirements under permits, environmental protection and protection of environmental species.
- k. Discuss initial control phase (workmanship).

3.6.2 Initial Phase

Notify Contracting Officer at least 24 hours in advance of beginning the Initial Phase. Initial Phase is workmanship oriented and shall be accomplished at beginning physical work on each acceptance section. Following shall be accomplished:

- a. Check preliminary work to ensure that complies with contract. Review minutes of preparatory meeting.
- b. Verify adequacy of turbidity monitoring, survey control to ensure contract compliance. Verify required inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable contract workmanship standards and review allowable tolerances.

- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review activity analysis with each worker.
- f. Initial phase shall be repeated for new crews working onsite and when contract workmanship quality standards are not being met.

3.6.3 Follow-up Phase

Follow-up Phase consists of daily checks performed to quality control activities, including survey and testing, to provide continuous compliance with contract requirements. Record inspection and checking results in CQC documentation. Record both quality control activities, plant and equipment performance on Report of Operations. Report of Operations forms are appended to the end of Section 02325 DREDGING. Complete follow-up checks and inspections and correct deficiencies prior to starting acceptance sections which may be affected by deficient work.

3.6.4 Additional Preparatory and Initial Phases

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

3.7 TESTS/TESTING PROCEDURE

Perform specified tests and required monitoring instrumentation or tests to verify control measures are adequate and provide an end product conforming to contract. When requested, Contractor shall furnish Contracting Officer duplicate samples of test specimens for possible testing by Contracting Officer. The Contractor shall perform following activities and record and provide the following data:

- a. Verify that testing standard or procedures comply with contract requirements.
- b. Verify that facilities, instruments, and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of tests and monitoring instruments, both passing and failing, shall be recorded and reported for date taken. If approved by Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports or maintain adequate monitoring testing may result in nonpayment for related work performed.

3.8 COMPLETION INSPECTION

3.8.1 Post-Construction Measurement and Inspection

Near end of work on each acceptance section notify Contracting Officer to conduct post-construction survey and inspection to ensure contract conformance. Contracting Officer reserves right to witness contractor performed survey to conduct quality assurance or pay on Contracting Officer conducted survey. Submit certified survey data and correct contract drawings to show as-built information. Notify Contracting Officer to schedule a joint inspection of each acceptance section once deficiencies have been corrected.

3.8.2 Pre-Final Inspection

Near completion of project Contracting Officer and Contractor will conduct a Pre-Final Inspection. In addition to completion of quantity survey, Contracting Officer will inspect for demobilization of temporary facilities and clean-up of staging areas used to ensure contract conformance. Contracting Officer will perform Pre-Final Inspection to verify work is complete and ready for Owner acceptance. Contracting Officer Pre-Final Inspection may result in additional work to be done. Contractor's CQC System Manager shall ensure items are corrected before notifying Contracting Officer so that a Final Inspection with the Customer can be scheduled. Any items noted on Pre-Final Inspection shall be corrected in a timely manner. Pre-Final Inspection and deficiency corrections shall be accomplished within project completion period.

3.8.3 Final Inspection

Final Inspection will be scheduled by Contracting Officer based upon results of Pre-Final Inspection. Notify Contracting Officer when ready for Final Inspection and Contracting Officer will schedule a Final Inspection with Owner to be performed within 14 working days. Provide assurance that work will be complete and acceptable by scheduled Final Inspection date. Contracting Officer will notify, Owner, local sponsor, to attend a Final Inspection. Contractor, Project Manager/Superintendent, CQC System Manager shall attend the Final Inspection. In addition to Contracting Officer and Owner, persons from local government or other agencies may attend. Contractor's failure to have contract work completed for this inspection will be cause for Contracting Officer to bill the Contractor for Contracting Officer's additional inspection cost in accordance with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES.

3.9 DOCUMENTATION

Maintain current records as required in Sections 01355 ENVIRONMENTAL PROTECTION, 01411 TURBIDITY MONITORING, and 02325 DREDGING. Document quality control activities and tests have been performed using Daily Report of Dredge Operations and Daily Quality Control Reports.

3.10 NOTIFICATION OF COMPLIANCE

Upon Contracting Officer's notification to Contractor of noncompliance with contract requirements, Contractor shall take immediate corrective action. Contractor personnel notified at work site is sufficient purpose of Contractor notification. If Contractor fails to comply within 1 calendar day, Contracting Officer may issue an order stopping all or part of work until satisfactory corrective action has been taken. Such stop orders

shall not be made basis of Contractor claim for time extension or other damages to Contractor.

3.11 SAMPLE FORMS

Sample forms are appended at the end of this Section. The Contracting Officer's Representative will instruct the Contractor in the preparation of these forms during the Preconstruction Conference as specified in Section 01310 ADMINISTRATIVE PROCEDURES.

3.12 SAMPLE - PREPARATION AND INITIAL PHASE CHECKLISTS

See APPENDIX 01452-A at the end of this Section (3 pages).

3.13 SAMPLE - CONTRACTOR'S QUALITY CONTROL (CQC) REPORT

See APPENDIX 01452-B at the end of this Section (4 pages).

-- End of Section --

PREPARATORY PHASE CHECKLIST

Date Preparatory Held: _____

Contract No.: _____ Spec. Sect. & Para.: _____

Title: _____ Dwg. No.: _____

MAJOR DEFINABLE SEGMENT OF WORK: _____

A. PERSONNEL PRESENT:

	<u>NAME</u>	<u>POSITION</u>	<u>COMPANY</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____

(List additional personnel on attached sheet)

B. HAS EACH SPEC. PARAGRAPH AND DRAWING AND SHOP DRAWING DETAIL BEEN STUDIED:

Yes _____ No _____

C. TRANSMITTALS INVOLVED:

Yes _____ No _____

	<u>NUMBER & ITEM</u>	<u>CODE</u>	<u>CONTRACTOR/GOVT. APPROVAL</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

C-I. Have all items involved been approved? Yes _____ No _____

If No, list items: _____

D. ARE ALL MATERIALS ON HAND? Yes _____ No _____

D-I. Have all materials been checked for contract compliance against approved shop drawings? Yes _____ No _____

D-II. Items not on hand or not in accordance with transmittals:

1. _____
2. _____
3. _____
4. _____

E. TESTS REQUIRED IN ACCORDANCE WITH CONTRACT REQUIREMENTS:

<u>TEST</u>	<u>PARAGRAPH</u>
1. _____	_____
2. _____	_____
3. _____	_____

F. ACCIDENT PREVENTION PREPLANNING - HAZARD CONTROL MEASURES:

F-I. Applicable Outlines (Attach completed copies):

1. _____
2. _____
3. _____
4. _____

F-II. Operational Equipment Checklists:

ATTACHED FOR:

1. _____
2. _____
3. _____

ON FILE FOR:

1. _____
2. _____
3. _____

G. HAVE PROCEDURES FOR ACCOMPLISHING WORK BEEN REVIEWED WITH APPROPRIATE PEOPLE? Yes _____ No _____

H. HAS ALL PRELIMINARY WORK BEEN ACCOMPLISHED IN ACCORDANCE WITH CONTRACT REQUIREMENTS AND IS THIS SEGMENT OF WORK READY TO START? Yes _____ No _____

H-I. Explain any problems: _____

Quality Control Representative

INITIAL PHASE CHECKLIST

Contract No. _____ Date: _____

Spec. Para: _____

Description and Location of Work Inspected: _____

REFERENCE CONTRACT DRAWINGS: _____

A. PERSONNEL PRESENT:

	<u>NAME</u>	<u>POSITION</u>	<u>COMPANY</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

B. MATERIALS BEING USED ARE IN STRICT COMPLIANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. Yes _____ No _____

If not, explain: _____

C. PROCEDURES AND/OR WORK METHODS WITNESSED ARE IN STRICT COMPLIANCE WITH THE REQUIREMENT OF THE CONTRACT SPECIFICATIONS. Yes _____ No _____

If not, explain: _____

D. WORKMANSHIP IS ACCEPTABLE. Yes _____ No _____

State areas where improvement is needed: _____

E. SAFETY VIOLATIONS AND CORRECTIVE ACTION TAKEN: _____

Quality Control Representative

CONTRACTORS QUALITY CONTROL Report (QCR)		Report Number ____
DAILY LOG OF CONSTRUCTION		Page 1 of ____
		Date
PROJECT		Contract DACW17-02-C-00
Contractor	Weather	
QC NARRATIVES		
Did anything develop that may lead to a Change Order/Claim?		
-		
Activities In Progress:		
-		
Were there any Delays in Work Progress today?		
-		
General Comments:		
-		
Verbal Instructions given by Government:		
-		
Safety Inspection / Safety Meetings:		
-		
Safety: (Inspections Made, Deficiencies noted):		
-		
PREP/INITIAL DATES (Preparatory and initial meetings held or advance notice)		
-		
ACTIVITY STAR/FINISH		
-		
QC REQUIREMENTS		
-		
QA/QC PUNCH LIST		
-		
CONTRACTORS ON SITE (Report subcontractor's first and last day on site)		
LABOR HOURS		
EQUIPMENT HOURS		
ACCIDENT REPORTING		
Contractor Certification : On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.		
QC Representative's Signature and Date	Superintendent's Initials and Date	

DEFICIENCY MANAGEMENT RECORD

CONTRACT NO. _____ PROJECT _____ CONTRACTOR _____

Date	Deficiency No.	Category	Discipline	Deficiency Description	Date	Corrected CQC Init.	QA Init
------	----------------	----------	------------	------------------------	------	---------------------	---------

01452-B2

Category: 1- Urgent; 2, Significant, 3 Requires Written Letter of Non-compliance

Receipt Acknowledged:

Signature QC Staff, Date



US Army Corps
of Engineers

Punch List Items by QC

28 Feb 2002

Sample Project
DACW17-02-C-00XX

Project Location

Item Number	Description	Location	Status	Date Issued	Age (days)
-------------	-------------	----------	--------	-------------	------------

#12	See QC Report 25 2 pallets of brick rejected	Removed from site	Not Corrected	Day 25	53
-----	--	-------------------	---------------	--------	----

SAMPLE FORM – Actually generated by QCS Database

Status: All

Range: All Locations

Sort: Item No

Page 1 of 1

01452-B3

ACTIVITY _____ ANALYZED BY/DATE _____ REVIEWED BY/DATE _____

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS

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DIVISION 01 - GENERAL REQUIREMENTS

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-- End of Section Table of Contents --

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

In addition to Construction Facilities this Section covers:

Temporary Utilities
Construction Aids
Vehicular Access and Parking
Project Identification

See Section 01355 ENVIRONMENTAL PROTECTION for requirements including silt control, trailer placement, fueling restrictions, dust control, solid waste, and clean-up. Upon completion of project, clean-up and restore area in accordance with Clause CLEAN-UP of Section 00700 CONTRACT CLAUSES.

a. Construction Facilities include, but are not limited to, the following:

- (1) Contractor Offices
- (2) Information Bulletin Board
- (3) Material and Equipment Storage Area
- (4) Fueling Area
- (5) Secured Storage Area
- (6) Employee Parking Area
- (7) Debris Container (dumpster)
- (8) Construction Signage to include Project Sign; Safety Sign; and, Construction Warning Signs

b. Temporary Utilities include, but are not limited to, the following:

- (1) Water
- (2) Electric
- (3) Sewage
- (4) Communications
- (5) Lighting

1.2 REFERENCES

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

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT)

FDOT

(2000) Standard Specifications for Road
and Bridge Construction

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" designation are for information only. Within 30 days following date of receipt of Notice to Proceed and prior to mobilization to site submit following in accordance with Section 01330
SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Mobilization/Demobilization Plan; FIO.

Plan shall include, but not be limited to, the following:

a. Mobilization Requirements:

- (1) Methods, equipment and materials
- (2) Connection of utilities
- (3) Placement of site facilities and temporary controls
- (4) Construction of facilities

b. Demobilization Requirements:

Methods, equipment and materials required to clean-up and restore site at project conclusion:

- (1) Collection, recycle and disposal of solid waste
- (2) Contract-generated material
- (3) Utility disconnection
- (4) Removal of Contractor facilities
- (5) Repair and restoration of site (i.e., fences, roads, or permanent facilities)

Security Plan; FIO.

Prepare a Security Plan describing site security as follows:

- a. Day and night security
- b. Weekend and holiday security
- c. General security duties

SD-02 Shop Drawings

Site Layout; FIO.

General layout sketch of temporary site facilities shall include, but not be limited to, the following:

- a. Trailer locations
- b. Parking areas
- c. Material storage
- d. Equipment lay down area
- e. Areas for gravel
- f. Fuel areas
- g. Supplemental or other staging area
- h. Temporary well, water supply
- i. Septic field or holding tanks, port-a-lets
- j. Contaminated water handling
- k. Concrete cleaning area and methods of disposal
- l. Fences -- location and dimensions, entrance and exit points, and

details of installation
m. Explosives storage

Temporary Electric Drawings; FIO.

Electricity supply and lighting - from transformer source sketch layout locations, fixtures, and materials, to include outdoor lighting as described in paragraph ELECTRIC POWER below.

SD-07 Certificates

Boat Operator's License; FIO.

Within 30 calendar days after date of receipt of Notice to Proceed, the Contractor shall furnish proof of the operator's license.

1.4 UTILITIES

Contractor is responsible for furnishing all utilities that may be required.

1.4.1 Water

In addition to the above, the Contractor shall provide and maintain at his own expense an adequate supply of water for his use for construction, and to install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. The Contractor shall also provide and maintain his own temporary toilet and washing facilities. Toilet and washing facilities shall be installed and maintained in a location approved by the Contracting Officer. Refer to paragraph AVAILABILITY AND USE OF UTILITY SERVICES below.

1.4.2 Electricity

In addition to the above, all electric current required by the Contractor shall be furnished at his own expense. All temporary lines will be furnished, installed, connected, and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer and shall be removed by the Contractor in like manner at his expense prior to completion of the construction. Refer to paragraph AVAILABILITY AND USE OF UTILITY SERVICES below.

1.5 RESIDENT MANAGEMENT SYSTEM (RMS)

Contractor shall use Contracting Officer furnished Resident Management System (RMS) software for construction information management (CIM). RMS will be the latest version of "RMS-QC" which is personal computer based. Additional information will be provided to the Contractor at the Preconstruction Conference. Refer to Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS).

PART 2 PRODUCTS

2.1 CONSTRUCTION PROJECT SIGNS

Refer to paragraph BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN below and APPENDIX 01500-A at the end of this Section.

2.1.1 Construction Warning Signs

1/2 inch HDO plywood, or aluminum sheet, conforming to FDOT Section 700 Uniform Traffic Manual Standard Signs, non-standard signage high visibility orange with black lettering. Orange fabric mesh acceptable for temporary survey crew use.

2.2 RMS-QC HARDWARE AND SOFTWARE REQUIREMENTS

Refer to Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS).

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Contracting officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

3.1.2 Employee Parking

Park employee's vehicles in areas designated by Contractor, away from construction traffic, within reasonable walking distance of site. Maintain area free of ruts, mud holes and puddles. Place gravel where required by deteriorated conditions.

3.1.3 On-Site Information

Keep copy of contract drawings, specifications, and other contract documents at Contractor's Office on site, available for use at all times.

3.2 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

3.2.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

3.2.2 Project and Safety Signs

The requirements for the signs, their content, and location shall be as indicated in APPENDIX A appended to the end of this Section. The signs shall be erected within 15 days after receipt of the Notice to Proceed. The data required by the safety sign shall be corrected daily, with light colored metallic or non-metallic numerals. The sample Safety Scoreboard

sign appended to the end of this Section shall be used on board the dredge in lieu of the safety performance sign. This applies only to the dredge. Upon completion of the project, the signs shall be removed from the site.

3.3 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

3.3.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

3.3.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

3.4 HAUL ROADS

Whenever practical, one-way haul roads shall be used on this contract. Haul roads built and maintained for this work shall comply with the following:

- a. One-way haul roads for off-the-road equipment; e.g., belly dumps, scrapers, and off-the-road trucks shall have a minimum usable width of 25 ft. One-way haul roads for over-the-road haulage equipment only (e.g., dump trucks, etc.) may be reduced to a usable width of 15 feet. When the Contracting Officer determines that it is impractical to

obtain the required width for one-way haul roads (e.g., a road on top of a levee), a usable width of not less than 10 feet may be approved by the Contracting Officer, provided a positive means of traffic control is implemented. Such positive means shall be signs, signals, and/or signalman and an effective means of speed control.

b. Two-way haul roads for off-the-road haulage equipment shall have a usable width of 60 feet. Two-way haul roads for over-the-road haulage equipment only may be reduced to a usable width of 30 feet.

c. Haul roads shall be upgraded and otherwise maintained to keep the surface free from potholes, ruts, and similar conditions that could result in unsafe operation.

d. Grades and curves shall allow a minimum sight distance of 200 feet for one-way roads and 300 feet for two-way roads. Sight distance is defined as the centerline distance an equipment operator (4.5 feet above the road surface) can see an object 4.5 feet above the road surface. When conditions make it impractical to obtain the required sight distance (e.g., ramps over levees), a positive means of traffic control shall be implemented.

e. Dust abatement shall permit observation of objects on the roadway at a minimum distance of 300 feet.

f. Haul roads shall have the edges of the usable portion marked with posts at intervals of 50 feet on curves and 200 feet maximum elsewhere. Such markers shall extend 6 feet above the road surface, and for nighttime haulage, be provided with reflectors in both directions.

3.5 CONTRACTOR'S TEMPORARY FACILITIES

3.5.1 Contractor Field Office

Provide on-site field office of sufficient size and staff capability to manage project activities. Provide communications and computer capabilities to manage the work, including implementing RMS-QC (refer to Section 01312 RESIDENT MANAGEMENT SYSTEM (RMS)), facsimile, electronic mail, reproduction, to schedule and cost tracking. Contractor's field office should include a conference area with table and chairs to accommodate a minimum of 8 people. Provide handicap access with a 1 on 12 ramp and gravel parking spot marked with handicap parking sign.

3.5.2 Appearance of Trailer(s)

Trailer(s), used for both office and material storage purposes, shall be clean, neat exterior appearance and in good repair. Trailer(s) requiring exterior painting or maintenance will not be allowed on site until determined satisfactory by Contracting Officer.

3.5.3 Storage Area

Provide temporary six-foot high chain link fence for storage containers, trailers or sheds containing Government property. Fence posts may be driven. Ground chain link fence against lightning. Store Contracting Officer's property, owned materials and equipment within fenced storage area. Store small size Government property, equipment, tools, materials in locked steel containers. No Government property and materials shall be stockpiled outside fence in preparation for next day's work. Park mobile

equipment, tractors, wheeled lifting equipment, cranes, trucks, and like equipment, within fenced areas on weekends.

3.5.3.1 Maintenance of Storage Area

Fencing 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. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

3.5.4 Waste Storage

Provide dumpsters or suitable debris containers. Prevent wind blown trash; cover as needed. Dispose of offsite when needed. Refer to Section 01355 ENVIRONMENTAL PROTECTION.

3.5.5 Fuel Storage and Fueling Operations

Refer to Section 01355 ENVIRONMENTAL PROTECTION. Provide light when fueling at night.

3.6 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

3.7 CONSTRUCTION FENCING AND DANGER SIGNS

a. The Contractor shall furnish, install, and maintain barbed wire fencing along the entire right-of-way lines. The fence shall be installed prior to construction. The fence shall contain a minimum of four strands of barbed wire and be at least 4 feet in height. Access gates (size and quantity determined by the Contractor) shall be provided to permit movement of machinery and equipment. The fence shall be grounded to reduce possibilities of electrical shock. The fence shall be maintained to restrain the public until completion of construction.

b. The Contractor shall furnish 28 danger signs, as indicated on the sketch appended to the end of this Section, and post them on the fence at locations directed by the Contracting Officer. The signs shall be of the format, style, and minimum size indicated, shall be neatly and sturdily constructed, and shall be securely erected in a workmanlike manner to support the sign properly for the life of the contract. For work in Puerto Rico and the Virgin Islands, Contractor is required to

post both the English and Spanish version of the sign. The signs shall be posted together.

c. Upon completion of construction and when so directed by the Contracting Officer, the fencing and signs shall be removed by the Contractor during the final cleanup process. The fencing and signs shall be disposed of by the Contractor in a manner satisfactory to the Contracting Officer.

3.8 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. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored. Refer to Section 01355 ENVIRONMENTAL PROTECTION for solid waste and post construction clean-up.

3.9 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. 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 area restored to its original condition, including top soil and seeding as necessary.

3.10 CONSTRUCTION PROJECT SIGNS

See APPENDIX 01500-A at the end of this Section (7 pages).

3.11 TEMPORARY FENCING AND DANGER SIGNS

See APPENDIX 01500-B at the end of this Section (2 pages).

-- End of Section --

The use of signs to identify Corps managed or supervised design, construction, and rehabilitation projects—both for military and civil works, is an important part of efforts to keep the public informed of Corps work. For this purpose, a construction project sign package has been adopted. This package consists of two signs; one for project identification and the other to show on-the-job safety performance of the contractor.

These two signs are to be displayed side by side and mounted for reading by passing viewers. Exact placement location will be designated by the Contracting Officer Representative.

The panel sizes and graphic formats have been standardized for visual consistency throughout all Corps operations.

Panels are fabricated using HDO plywood with dimensional lumber uprights and bracing. The sign faces are non-reflective vinyl.

All legends are to be die-cut or computer-cut in the sizes and typefaces specified and applied to the white panel background following the graphic formats shown on pages 16.2 and 16.3. The Communications Red panel on the left side of the construction project sign with Corps signature (reverse version) is screen printed onto the white background.

A display of these two signs is shown on the following two pages. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division Sign Program Manager.

Below are two samples of the construction project identification sign showing how this panel is adaptable for use to identify either military (top) or civil works projects (bottom). The graphic format for this 4'x 6' sign panel follows the legend guidelines and layout as specified below. The large 4'x 4' section of the panel on the right is to be white with black legend.

The 2'x 4' section of the sign on the left with the full Corps Signature (reverse version) is to be screen printed Communications Red on the white background. The designation of a sponsor in the area indicated is optional with Military or Civil Works construction signs. Signs may list one sponsoring entity. If agreement on a sponsor designation cannot be achieved,

the area should be left blank.

This sign is to be placed with the Safety Performance sign shown on the following page. Mounting and fabrication details are provided on page 16.4.

Special applications or situations not covered in these guidelines should be referred to the District/Division Sign Program Manager.

Legend Group 1: One- to two-line description of Corps relationship to project.

Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" reverse Signature (6" Castle).

Color: White
Typeface: 1.25" Helvetica Regular

Legend Group 2a: One- to three-line identification of Military or Civil Works sponsor (optional). Place below Corps Signature to cross-align with Group 5a-b.

Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.

Color: Black
Typeface: 3" Helvetica Bold
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).

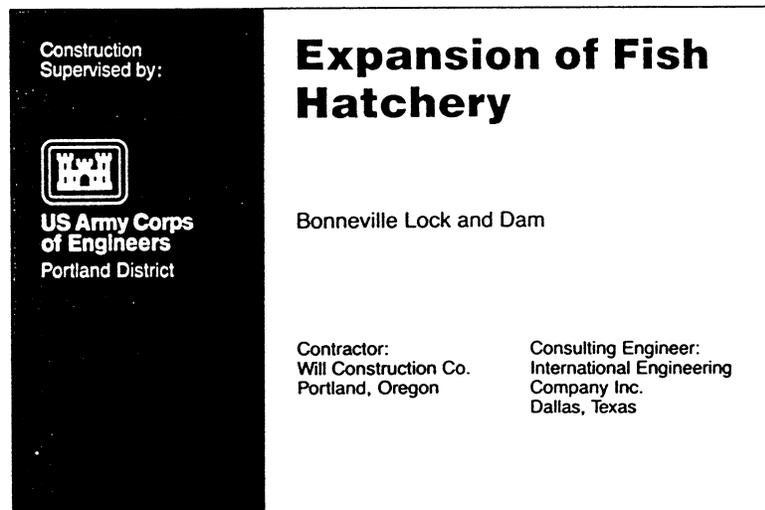
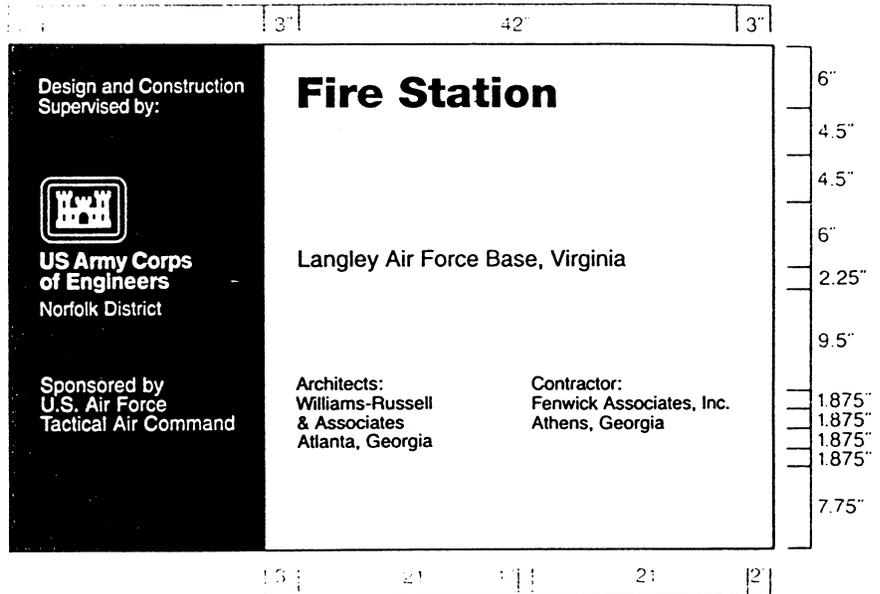
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.

Color: Black
Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4' x 6'	4" x 4"	HDO-3	48"	WH-RD/BK

Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the construction project identification sign specified on page 16.2.

The graphic format, color, size and type-faces used on the sign are to be reproduced exactly as specified below.

Legend Group 1: Standard two-line title "Safety is a Job Requirement" with (8" od.) Safety Green First Aid logo.
 Color: To match PMS 347
 Typeface: 3" Helvetica Bold
 Color: Black

Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project.
 Color: Black
 Typeface: 1.5" Helvetica Regular
 Maximum line length: 42"

Legend Group 3: One- to two-line identification: name of prime contractor and city, state address.
 Color: Black
 Typeface: 1.5" Helvetica Regular
 Maximum line length: 42"

Legend Group 4: Standard safety record captions as shown.
 Color: Black
 Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background.
 Color: Black
 Typeface: 3" Helvetica Regular
 Plate size: 2.5" x 4.5"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps standards as specified in Appendix D.

The title with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

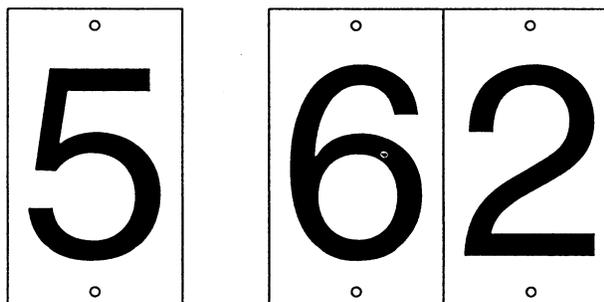
Safety record numbers are mounted on individual metal plates and are

screw-mounted to the background to allow for daily revisions to posted safety performance record.

Special applications or situations not covered in these guidelines should be referred to the District/Division Sign Program Manager.



Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4' x 4'	4" x 4"	HDO-3	48"	WH/BK-SG



01500-A3

All Construction Project Identification signs and Safety Performance signs are to be fabricated and installed as described below. The signs are to be erected at a location designated by the Contracting Officer Representative and shall conform to the size, format, and typographic standards shown on pages

16.2-3. Detailed specifications for HDO plywood panel preparation are provided in Appendix B. Shown below the mounting diagram is a panel layout grid with spaces provided for project information. Photocopy this page and use as a worksheet when preparing sign legend orders.

For additional information on the proper method to prepare sign panel graphics, contact the District/Division Sign Program Manager.

The sign panels are to be fabricated from .75" High Density Overlay Plywood. Panel preparation to follow HDO specifications provided in Appendix B.

Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing.

All graphics except for the Communications Red background with Corps signature on the project sign are to be die-cut or computer-cut non-reflective vinyl, pre-spaced legends prepared in the sizes and typefaces specified and applied to the background panel following the graphic formats shown on pages 16.2-3.

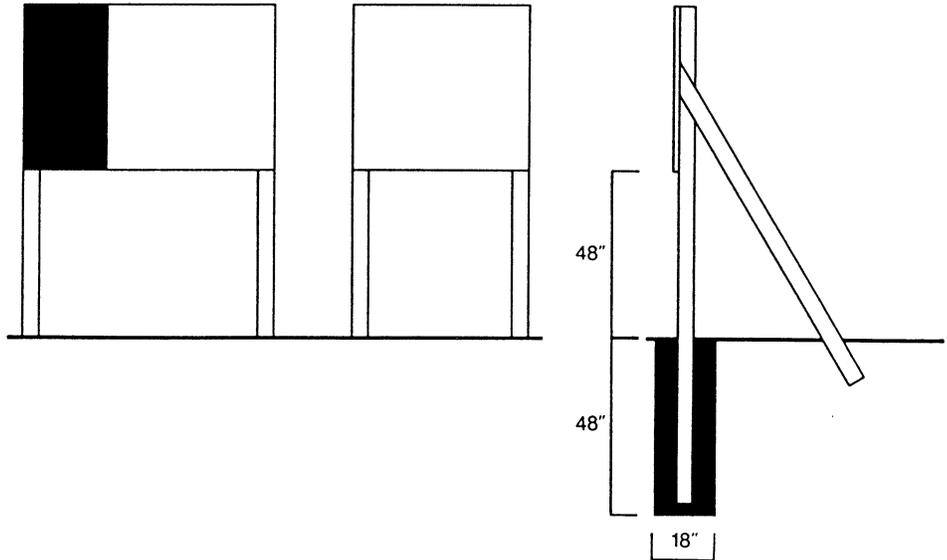
The 2' x 4' Communications Red panel (to match PMS-032) with full Corps signature (reverse version) is to be screen printed on the white background. Identification of the district or division may be applied under the signature with white cut vinyl letters prepared to Corps standards. Large scale reproduction artwork for the signature is provided on page 4.8 (photographically enlarge from 6.875" to 10.5").

Drill and insert six (6) .375" T-nuts from the front face of the HDO sign panel. Position holes as shown. Flange of T-nut to be flush with sign face.

Apply graphic panel to prepared HDO plywood panel following manufacturers' instructions.

Sign uprights to be structural grade 4" x 4" treated Douglas Fir or Southern Yellow Pine, No.1 or better. Post to be 12' long. Drill six (6) .375" mounting holes in uprights to align with T-nuts in sign panel. Countersink (.5") back of hole to accept socket head cap screw (4" x .375").

Assemble sign panel and uprights. Imbed assembled sign panel and uprights in 4' hole. Local soil conditions and/or wind loading may require bolting additional 2" x 4" struts on inside face of uprights to reinforce installation as shown.



Construction Project Sign
Legend Group 1: Corps Relationship

1. _____
2. _____

Legend Group 2: Division/District Name

1. _____
2. _____

Legend Group 3: Project Title

1. _____
2. _____
3. _____

Legend Group 4: Facility Name

1. _____
2. _____

Legend Group 5a: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Legend Group 2a: Military/Civil Works Sponsor

1. _____
2. _____

Legend Group 5b: Contractor/A&E

1. _____
2. _____
3. _____
4. _____
5. _____

Safety Performance Sign
Legend Group 1: Project Title

1. _____
2. _____

Legend Group 2: Contractor/A&E

1. _____
2. _____

SAFETY SCOREBOARD

(CONSECUTIVE SAFE DAYS WITHOUT RECORDABLE INJURY,
ILLNESS OR PROPERTY DAMAGE OF \$2,000 OR GREATER)

NUMBER OF CALENDAR DAYS
ON THE JOB STARTING DATE

CURRENT RECORD
STARTING DATE

(USE CHALK ONLY)

SAFETY LITERATURE

1"
2"
2 1/4"
2"
1"
3/4"
1"
3/4"
1"
3/4"
1"
3/4"
1"
3/4"
1"
3/4"
6"
25"
1"

48"

36"

In cooperation with



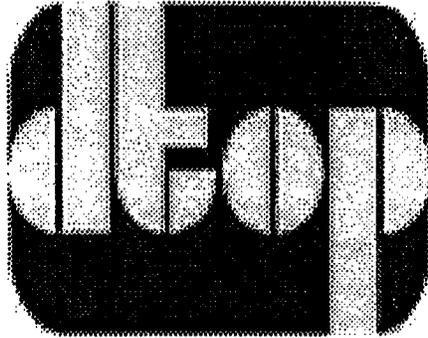
Legend Group 2a: One- to two-line identification of the sponsor's relationship to the project. Place below Corps Signature to cross align with Group 5a-b.

(DRNA logo) 6 inches in height

Color: Black Lettering on White Background; Inner/Outer Circles - Black; White Fish outlined in Black on Blue Water; Bird on Tree Limb outlined in Black on Green Background; Area Depicting Land hatched in Black on Tan and Dark Brown Backgrounds.

Typeface: 1.25" Helvetica Regular

In cooperation with

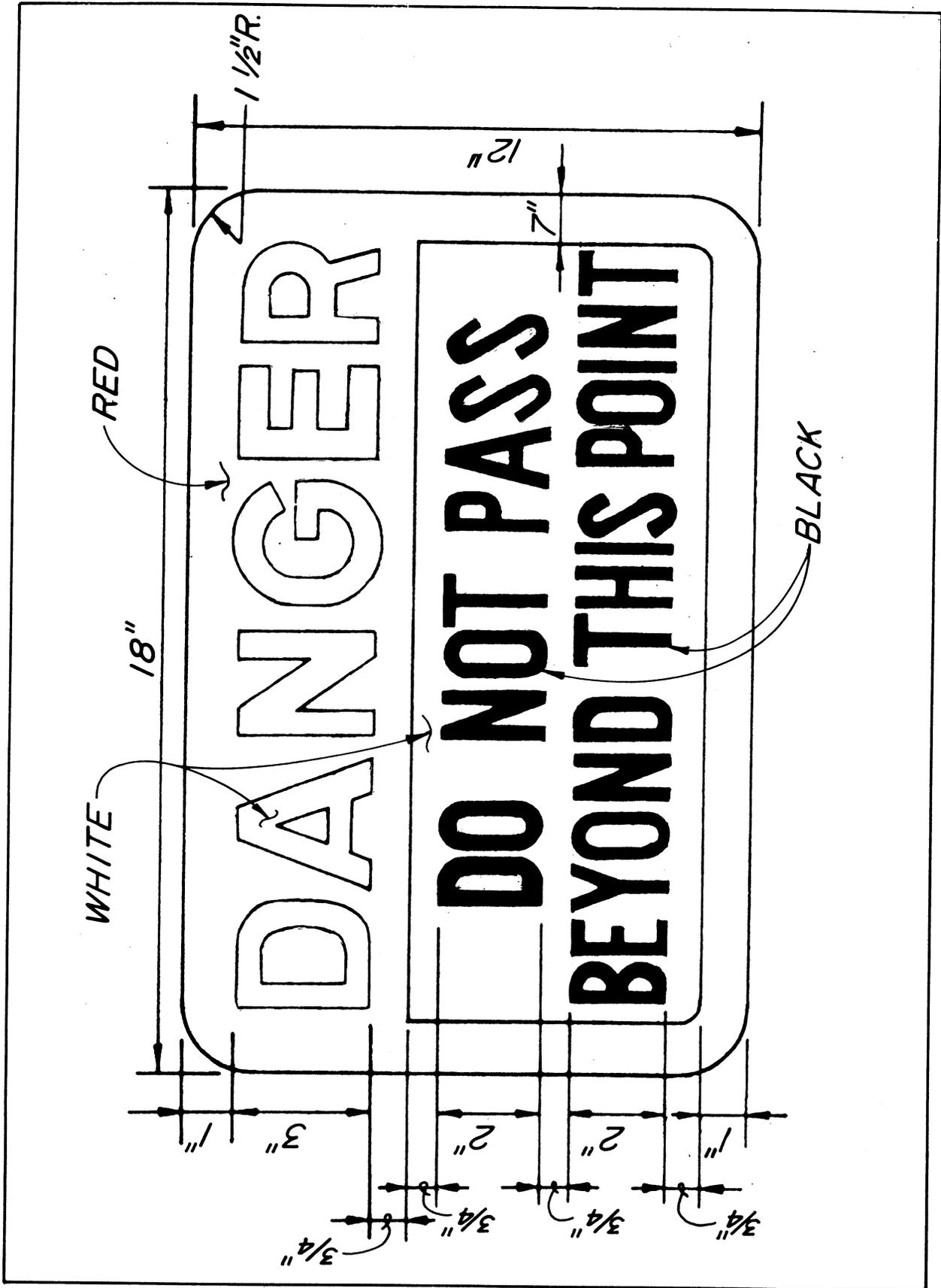


Legend Group 2a: One- to two-line identification of the sponsor's relationship to the project. Place below Corps Signature to cross align with Group 5a-b.

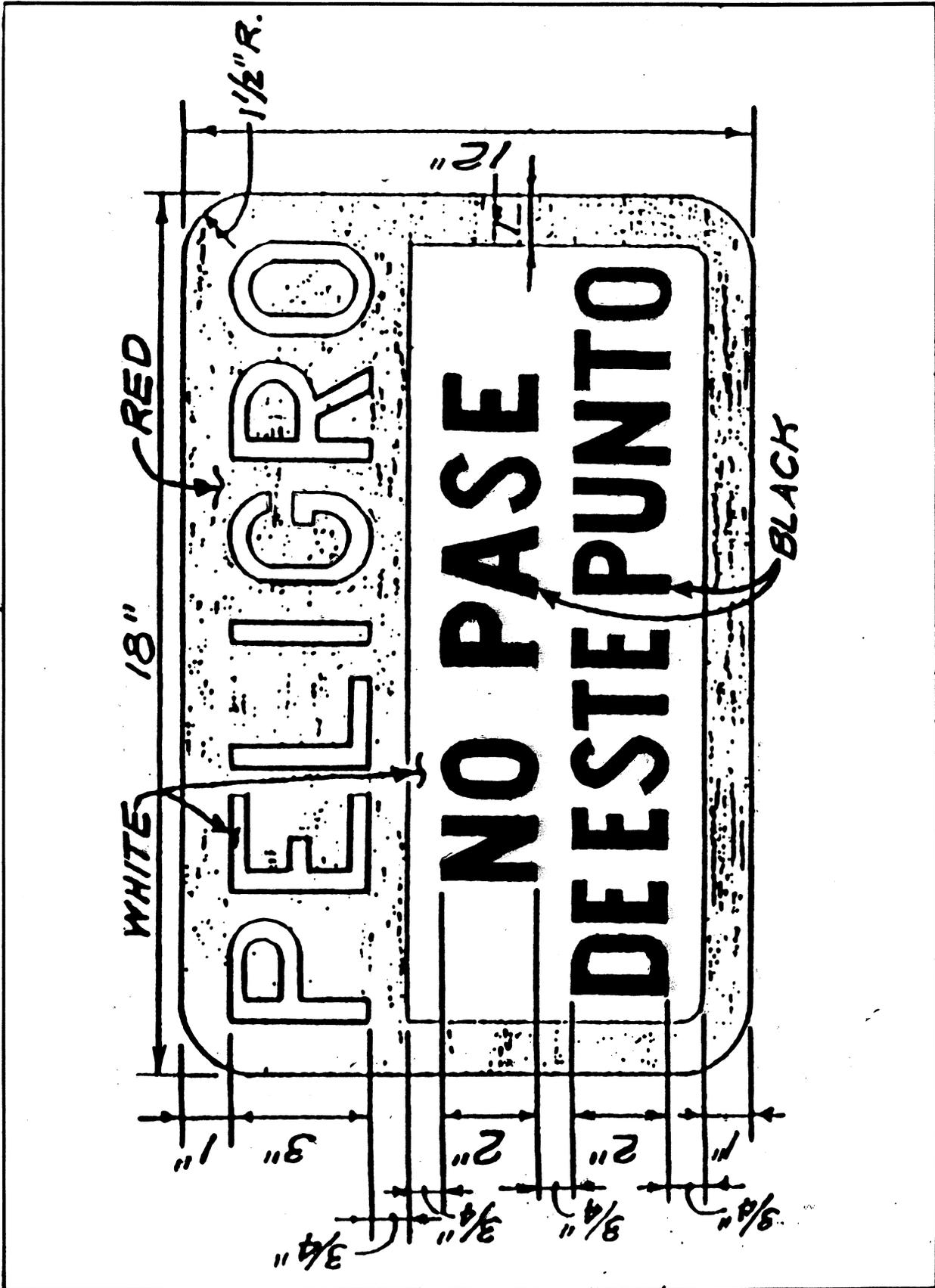
(DTOP logo) 6 inches in height

Color: Yellow Lettering on Blue Background

Typeface: 1.25" Helvetica Regular



SKETCH DB-2



SKETCH DB-2

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01780

CLOSEOUT SUBMITTALS

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PART 3 EXECUTION (NOT USED)

-- End of Section Table of Contents --

SECTION 01780

CLOSEOUT SUBMITTALS

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-02 Shop Drawings

As-Built Drawings; G|COR

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of 4 sets of electronic CADD drawing files in the specified format, 1 set of mylar drawings, 2 sets of blue-line prints of the mylars, 1 set of the approved working as-built drawings, and 2 CD-ROMs containing scanned .tif files scanned from the approved working as-built drawings.

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings.

1.2.1.1 Government-Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government at the Preconstruction Conference for projects requiring CADD file as-built drawings.

1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall revise 2 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes.

All mechanical and electrical changes due to field Request for Information (RFI) process, equipment shop drawings reflecting modified data due to submittal and approval process, and contract field and design modifications

shall be incorporated in the as-built mark-up drawings. Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. The working and final as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all subsurface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor; such as, but not limited to, HVAC controls, fire alarm, fire sprinkler, irrigation systems, pumping equipment, hydraulic operating system, fuel system, electrical controls, one-line diagram telemetry and SCADA system, conduit and piping layout, etc.

j. Modifications (change order price shall include the Contractor's cost to change working and final as-built drawings to reflect modifications) and compliance with the following procedures.

(1) Directions in the modification for posting descriptive changes shall be followed.

(2) A Modification Circle shall be placed at the location of each deletion.

(3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.

(4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).

(5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.

(6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.

(7) The Modification Circle size shall be [] [1/2 inch] diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished by incorporating the same CADD program/system used to prepare the contract design set. The Contractor will be furnished Microstation design files. The electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall use the electronic design files provided by the Government at the Preconstruction Conference to prepare changes and additions to the electronic as-constructed drawings. New drawings added to the original set of drawings shall be prepared in the same CADD format used to create the original files provided by the Government. The Contractor shall not translate or change the Government-furnished files from original formats. As-built record changes shall be recorded using the manufacturer's program

in which the original files were created. The Contractor shall be responsible for providing all programs and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. The Contract Drawing files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Preconstruction Conference. Marked-up changes shall be made only to those renamed files. The renamed files corrected to reflect the "as-built" condition are hereafter referred to as "as-constructed" design files.

b. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 3/16 inch high. All other contract drawings shall be marked either "AS-BUILT" drawing denoting no revisions on the sheet or "REVISED AS-BUILT" denoting one or more revisions. Original contract drawings shall be dated in the revision block. The Contractor shall sign the cover sheet of the marked-up drawings in the following manner: "I CERTIFY THAT THESE CORRECTED DRAWINGS INDICATE CONSTRUCTION AS ACTUALLY PERFORMED AND ARE AN ACCURATE REPRESENTATION OF THE SPECIFIED WORK. THESE CORRECTED DRAWINGS ARE APPROVED FOR PREPARATION OF AS-BUILT CONSTRUCTION DRAWINGS."

c. Within 30 days after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 7 days the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 10 days of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project. The submittal shall consist of 4 sets of "as-constructed" design files in Microstation format on compact disc, read-only memory (CD-ROM); 1 set of mylars; 2 sets of blue-line prints; 1 set of the approved working as-built drawings; and, 2 CD-ROMs containing scanned .tif files scanned from the approved set of working as-built drawings. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Scanned .tif files produced from the approved working as-builts shall be of high resolution and quality which is easily readable. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final as-built drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.2.2 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days

after transfer of the completed facility.

1.2.3 Construction Contract Specifications

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

PART 2 PRODUCTS (NOT USED)

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-- End of Section --

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SECTION 02230

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Clearing

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, and rubbish occurring in the areas to be cleared.

1.1.2 Grubbing

Grubbing shall consist of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas.

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-03 Product Data

Materials Other Than Salable Timber; G|RE

The Contractor shall provide a suitable disposal area for logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations. Written permission to dispose of such products on private property shall be filed with the Contracting Officer.

1.3 MEASUREMENT

1.3.1 Measured Clearing and Grubbing

Clearing and grubbing shall be measured in acres of clearing and grubbing actually performed.

1.4 PAYMENT

1.4.1 Paid Clearing and Grubbing

Payment will be made at the contract unit price for clearing and grubbing, and this price shall constitute full compensation for all labor, equipment, tools, and incidentals necessary to complete the work specified herein.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING

Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface. Clearing shall also include the removal and disposal of structures that obtrude, encroach upon, or otherwise obstruct the work.

3.2 GRUBBING

Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed.

3.3 DISPOSAL OF MATERIALS

3.3.1 Materials Other Than Salable Timber

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations shall be disposed of in areas provided by and at the expense of the Contractor and approved by the Contracting Officer.

-- End of Section --

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all excavation and disposal of all material as specified herein or indicated on the drawings. This scope also includes all necessary measures for protection of the environment. Environmental protection requirements under this contract are as important to overall completion of the work as other technical aspects. Failure to meet the requirements of these specifications for environmental protection may result in work stoppages or termination for default. No part of the time lost due to any such work stoppages shall be made the subject of claims for extensions of time or for excess costs or damages by the Contractor. If the Contractor fails or refuses to promptly repair any damage caused by violation of the provisions of these specifications, the Contracting Officer may have the necessary work performed and charge the cost thereof to the Contractor.

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.

ENGINEERING MANUALS (EM)

EM 1110-1-1000	(1993) Photogrammetric Mapping
EM 1110-1-1002	(1990) Survey Markers and Monumentation
EM 1110-1-1003	(1996) NAVSTAR Global Positioning System Surveying
EM 1110-1-1004	(1994) Deformation Monitoring and Control Surveying
EM 1110-1-2909	(1998; Chg 2) Geospatial Data and Systems
EM 1110-2-1003	(1994) Hydrographic Surveying

FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS (FBPSM)

FBPSM	Minimum Technical Standards, Chapters 177, 472, 61G17
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TRI-SERVICE STANDARDS (TSS)

TSS	(1999) A/E/C CADD Standards
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1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals having an "FIO" 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

Notice of Intent to Dredge; FIO.

Prior to commencement of work on this contract, the Contractor shall notify the Commander, Seventh Coast Guard District of his intended operations to dredge and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least two weeks prior to the commencement of this dredging operation. A copy of the notification shall be provided to the COR.

Relocation of Navigation Aids; FIO.

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 Commander, Seventh Coast Guard District, Miami, Florida, 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 dredging. The Contractor shall contact the U.S. Coast Guard for information concerning the position to which the aids will be relocated. A copy of the notification shall be provided to the COR.

SD-07 Certificates

Notification of Discovery of Historical Period Shipwreck Sites; FIO.

The Contractor shall immediately notify the Contracting Officer if any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered.

Notice of Need for Dredging Survey; FIO.

The Contractor shall give 10 days advance notice, in writing, to the Contracting Officer of the need for a pre-dredging survey or after-dredging survey for final acceptance for each acceptance section.

Daily/Monthly Report of Operations; FIO.

The Contractor shall prepare and submit two (2) copies of the Daily Report of Operations, using either ENG Form No. 27A or ENG Form No. 4267, for each dredge and/or unloader working. This report shall be submitted on a daily basis and not in groups (groups = multi-days reports packaged together at one time) except as noted in subparagraph a. below. A copy of these forms are 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 either ENG Form No. 27A or ENG Form No. 4267. The monthly report shall be submitted on or before the 7th of each month, consolidating the previous month's work. Upon completion of the job, the

Contractor shall submit a consolidated job report, combining the monthly reports. The Contractor shall distribute one copy of each report to the District Engineer; ATTN: CESAJ-EN-C; U.S. Army Engineer District, Jacksonville, P.O. Box 4970; Jacksonville, Florida 32232-0019. Reports shall be submitted on a monthly basis with daily reports accompanying the monthly report and job report.

Additionally, one copy of these 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.

Notice of Misplaced Material; FIO.

The Contractor shall notify the U.S. Coast Guard Marine Safety Office of any misplaced material as stated in the Clause OBSTRUCTION OF NAVIGABLE WATERWAYS of Section 00700 CONTRACT CLAUSES.

1.4 DREDGING RESTRICTIONS

1.4.1 Order of Work

No dredging shall be permitted in areas adjacent to sheet pile installation until after the sheet pile walls are in place.

1.4.2 Transportation of Material

Water and dredge material shall not be permitted to overflow or spill out of barges or hopper dredges during transport to the dredged material placement area.

1.5 PUMPING OF BILGES

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

1.6 HISTORICAL PERIOD SHIPWRECK SITES

If any shipwreck, artifact, or other objects of antiquity that have scientific or historical value, or are of interest to the public, are discovered, located, and/or recovered, the Contractor acknowledges that:

- a. The site(s), articles, or other materials are the property of the Commonwealth of Puerto Rico; and that,
- b. He will immediately notify the Contracting Officer.

1.7 UTILITY CROSSINGS

1.7.1 General

It is the Contractor's responsibility to investigate the location of all utility crossings. The Contractor shall take precautions against damages which might result from his operations in the vicinity of the utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is

repaired and approved by the Contracting Officer. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

1.8 PERMITS

The Contractor's attention is directed to the Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES and the paragraph PERMITS AND AUTHORIZATIONS of Section 01355 ENVIRONMENTAL PROTECTION.

1.9 FINAL CLEANUP

Final cleanup, as stated in the paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK of Section 00700 CONTRACT CLAUSES, shall include the removal of all the Contractor's plant and equipment either for disposal or reuse. Plant and/or equipment and/or 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.

a. Failure to promptly remove all plant, pipeline, 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 as stated in Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES to remove any plant and/or equipment and/or materials at the Contractor's expense.

1.10 WORK VIOLATIONS

Work done in violation of these specifications or a verbal or written stop order of the Contracting Officer will be considered as unsatisfactory progress for purposes of progress payments in accordance with Clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES.

PART 2 PRODUCTS

2.1 CHARACTER OF MATERIALS

The materials to be excavated are sands, silts, and clays. The sands are fine to coarse grained, silty or clayey in many places and have a varying shell and/or coral content. The silts are low plastic, with some sand and/or clay with traces of corals and whole or broken shells. The clays are soft to fat with some silt, sand and in some places carbonate nodules are also seen.

PART 3 EXECUTION

3.1 NOTIFICATION OF COAST GUARD

3.1.1 Navigation Aids

Navigation aids located within or near the areas required to be dredged will be removed, if necessary, by the U.S. Coast Guard in advance of dredging operations. The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid of navigation.

3.1.2 Dredging Aids

The Contractor shall obtain approval from the U.S. Coast Guard for all buoys, dredging aid markers to be placed in the water, and dredging aid markers affixed with a light prior to the installation. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids.

3.2 WORK AREA

The Contractor will be permitted to exclude the public from the work area. Enforcement shall be the Contractor's responsibility at no additional cost to the Government. The enforcement shall be coordinated with local enforcement agencies and will be subject to approval of the Contracting Officer.

3.2.1 Access

The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the work site, mooring area, and dredged material placement area. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies. As shown on the drawings, existing dense vegetation (which the Contractor shall not disturb) covers portions of the La Esperanza Peninsula from one shoreline to the other. Consequently, equipment access to the tip of the peninsula can be by water only.

3.2.2 Dredging Area

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 outside of the dredging limits. The Contractor will be required to change his method of operations as may be required to comply with the above requirement. Should any bottom material or other debris be pushed into areas described above, as a result of the Contractor's operations, the same must be promptly removed by and at the expense of the Contractor to the satisfaction of the Contracting Officer. The Contractor is specifically prohibited from using a drag bar to push material from the dredging area into deeper water.

3.2.3 Adjacent Property and Structures

Any 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. Any damage to structures as a result of 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.

3.2.4 Subaqueous Cable Crossings

The Contractor shall be responsible for verifying the locations and depths of all utility crossings and take precautions against damages which might result from his operations, especially the sinking of dredge spuds and/or anchors into the channel bottom, in the vicinity of utility crossings. If any damage occurs as a result of his operations, the Contractor will be required to suspend dredging until the damage is repaired and approved by

the Contracting Officer. Costs of such repairs and downtime of the dredge and attendant plant shall be at the Contractor's expense.

3.3 PLACEMENT OF EXCAVATED MATERIAL

3.3.1 General

Material excavated shall be transported to and deposited in the dredged material placement area designated on the drawings. The average distance that the material will have to be transported is approximately 1000 feet and the maximum distance is approximately 2000 feet.

3.3.2 Order of Placement

a. Prior to placement of fill, the Contractor shall remove all snags, driftwood, and similar debris lying within the limits of the dredged material placement area. All materials removed shall be disposed of in areas provided by and at the expense of the Contractor and approved by the Contracting Officer.

b. The excavated material shall be placed and brought to rest in the dredged material placement area according to the lines, grade, and cross sections indicated on the drawings, unless otherwise provided for herein or directed by the Contracting Officer.

3.3.3 Grading

3.3.3.1 Debris Removal

Prior to final grading, the Contractor shall clean and remove from the dredged material placement area all debris from the surface of the required fill. The debris will be disposed of in a location provided by the Contractor and accepted by the Contracting Officer.

3.3.3.2 Grade Tolerance

A tolerance of plus or minus 0.25 foot will be permitted in the final elevation of the required fill shown on the drawings.

3.3.3.3 Slope

The required fill shown on the drawings shall slope gently from the existing shoreline towards the water. There shall be no depressions or undrained pockets in the final graded surface.

3.3.3.4 Grade Stakes

Grade stakes shall be metal pipes that shall be completely removed intact by the Contractor after placement of the fill. Grade stakes shall be of sufficient length to protrude above the final fill elevation and facilitate their extraction.

3.3.4 Dredge Pipelines

3.3.4.1 Dredge Discharge Pipeline

The Contractor shall plainly mark the pipeline access routes with conspicuous stakes, targets and/or buoys to be maintained throughout the contract operations. A tight dredge discharge pipeline shall be maintained

to prevent spilling of dredged material or dredge water outside of the dredged material placement area. The Contractor shall provide and maintain radio communication between the dredge and the dredged material placement area and the dredge and the Contracting Officer. The pipeline shall be inspected at least twice daily for leaks. Failure to immediately repair leaks in the discharge pipeline will result in suspension of dredging operations and require prompt repair of pipeline as a prerequisite to the resumption of dredging. Any damage to private or public property resulting from the Contractor's operations shall be repaired by the Contractor at his expense.

3.3.4.2 Submerged Pipeline

In the event the Contractor elects to submerge his pipeline in a navigation channel, the pipeline shall rest on the bottom, and the top of the submerged pipeline and any anchor securing the submerged pipeline shall be no higher than the required project depth for the channel in which the submerged pipeline is placed. Should the Contractor elect to use a pipeline material which is buoyant or semi-buoyant, such as PVC pipe or similar low density materials, the Contractor shall securely anchor the pipeline to prevent the pipeline from lifting off the bottom under any conditions. The Contractor shall make daily underwater inspections of the submerged pipeline to ensure buoyancy has not loosened the anchors. The Contractor shall remove all anchors when the submerged pipeline is removed. The location of the entire length of submerged pipeline shall be marked with signs, buoys, lights, and flags conforming to U.S. Coast Guard regulations.

3.3.4.3 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 of Section 00800 SPECIAL CONTRACT REQUIREMENTS. 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.

3.3.5 Mislplaced Materials

Materials deposited outside of the dredged material placement area will be classified as misplaced material and will result in a suspension of dredging operations and require the removal of such materials as a prerequisite to the resumption of dredging.

3.4 REQUIRED DEPTH, ALLOWABLE TOLERANCE, AND SIDE SLOPES

3.4.1 Required Depth

The material actually removed from the designated areas to be dredged, to a depth of not more than the required depth shown on the drawings, will be estimated and paid for in accordance with the provisions contained in the subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT AND PAYMENT.

3.4.2 Allowable Tolerance

To cover the inaccuracies of the dredging process, material actually removed from the designated areas to be dredged, to a depth below the required depth of not more than the allowable tolerance shown on the drawings, will be measured and paid for in accordance with the provisions contained in the subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT AND PAYMENT.

3.4.3 Side Slopes

Although dredging of side slope material may be necessary to provide the required project channel dimensions (depth and width), the side slopes shown on the drawings are provided for payment purposes only. Side slopes may be formed by box cutting, step cutting, or dredging along the side slope. Material actually removed, within the limits approved by the Contracting Officer, to provide for final side slopes not flatter than that shown on the contract drawings, but not in excess of the amount originally lying above this limiting side slope, will be measured and paid for in accordance with the provisions contained in subparagraphs "Measurement" and "Payment" of Section 01270 MEASUREMENT and PAYMENT. Such amount will be estimated and paid for whether dredged in original position or by box cut dredging whereby a space is dredged below the allowable side slope plane on the bottom of the slope for upslope material capable of falling into the cut. End slopes and transition slopes will not be estimated or paid for under this contract. In such cases, a 0 horizontal on 1 vertical will be used with no upslope allowance provision applied outside the required prism.

3.4.4 Excessive Dredging

Material taken from beyond the limits as described in subparagraphs "Allowable Tolerance" 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. Nothing herein shall be construed to prevent payment for the removal of shoals performed in accordance with the applicable provisions of the paragraphs FINAL EXAMINATION AND ACCEPTANCE or SHOALING of this Section.

3.5 SURVEYS

3.5.1 General

The Contracting Officer shall be notified, in writing, 10 days in advance of the need for pre-dredging and after-dredging surveys. Surveys will be performed in accordance with the paragraph QUANTITY SURVEYS of Section 00700 CONTRACT CLAUSES; paragraph LAYOUT OF WORK of Section 01000 GENERAL REQUIREMENTS; Section 01452 DREDGING/FILL PLACEMENT - CONTRACTOR QUALITY CONTROL; EM 1110-1-1000, EM 1110-1-1002, EM 1110-1-1003, EM 1110-1-1004, EM 1110-1-2909, and EM 1110-2-1003; FBPSM; and, TSS. A copy of the EM's can be downloaded from the following website:
<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. A copy of the TSS can be downloaded from the following website:
<http://tsc.wes.army.mil>.

3.5.2 Contractor Representative

All in-place measurement surveys and final acceptance sweep surveys will be performed with a representative of the Contractor on board the Government

platform during the full execution of the survey. No in-place measurement or final acceptance sweep survey will be performed without a representative of the Contractor on board the survey vessel. The Contractor's representative shall be fully knowledgeable in offshore construction subsurface surveying procedures, techniques, equipment, and horizontal and vertical calibration methods, and state-of-the-art horizontal and vertical accuracy limitations. The Contractor's representative shall observe and review, in progress, the adequacy and accuracy of the survey for in-place payment purposes, and for the potential existence of collusion, fraud, or obvious error in the data.

3.5.3 Survey Certification

a. Immediately upon completion of any survey, the Contractor's representative shall, based on his on-site review of the survey execution, determine that the survey contains no evidence of collusion, fraud, obvious error, and that subsequent horizontal and vertical corrections are accurately annotated on the subsurface record.

b. The Contractor's authorized representative shall bring aboard the survey vessel a blank copy of the Certification Statement and shall attest to an acceptable survey by signing the Certification Statement before leaving the vessel. Sample copy of the Certification Statement is appended to the end of this Section.

c. In the event the Contractor's authorized representative observes (and quantifies) specific documentary evidence of either fraud, collusion, or obvious error, the survey will be immediately rerun. Resurveys will totally supersede any previously run survey and will be run over the full reach of any particular Acceptance Section.

d. If acceptability is not acquired after performing one resurvey of an Acceptance Section, a meeting shall be held between the Contractor and the COR to expeditiously resolve the issue causing rejection of the survey. Contractor equipment and personnel standby time to resolve acceptability of the survey shall be at the Contractor's expense.

e. In no case shall a previously unacceptable survey be later judged acceptable by the Contractor; unless such a reassessment/reevaluation is performed within 24 hours after the original survey, and prior to initiating any resurvey action based upon identifiable collusion, fraud, or obvious error.

f. Should the Contractor or his authorized representative refuse to certify to the acceptability of a survey for contract payment without identifiable collusion, fraud, or obvious error, then the following actions will follow:

(1) Preconstruction (pre-dredging) Survey

Excavation shall not commence until representatives of the Contractor and Contracting Officer have met and resolved the basis for refusal of certification. Should the Contractor commence excavation prior to obtaining an acceptable survey, he shall be liable for any excavation performed. If a resurvey is performed, and accepted, prior excavation will not be measured, estimated, or paid for.

(2) Post-construction (after-dredging) Survey

The 3-week survey window allowed under subparagraph "Measurement" of Section 01270 MEASUREMENT AND PAYMENT will be indefinitely extended until a final survey is accepted. Any material accretion which might occur due to such a time extension will neither be measured, estimated, or paid for.

(3) Refusal to Certify

Contractor equipment and personnel standby time to resolve his refusal to certify to the acceptability of a survey when there is no identifiable collusion, fraud, or obvious error shall be at the Contractor's expense and resultant delays shall not be the basis for time extensions of the contract.

g. Intermediate surveys taken between the pre-dredging and post-dredging surveys will not be considered for the purposes of determining quantities for final payment and acceptance of the area dredged.

3.6 INSPECTION

3.6.1 Quality Assurance Representative (QAR)

The QAR shall be notified prior to the establishment of horizontal control work (baseline layout, ranges, station flags, shore-based control for EPS/RPS, etc.) and vertical control work (tide staff(s), upland cross sections, construction elevations top/invert, maximum/minimum elevations of dredged materials within disposal area(s), etc.), but the presence or absence of the QAR shall not relieve the Contractor of his responsibility for proper execution of the work in accordance with the specifications. The Contractor will be required:

a. To furnish, on the request of the Contracting Officer or any QAR, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work. [However, the Contractor will not be required to furnish such facilities for the surveys prescribed in the paragraph FINAL EXAMINATION AND ACCEPTANCE of this Section.]

b. To furnish, on the request of the Contracting Officer or any QAR, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and to and from the [disposal area] [beach placement].

3.6.2 Failure to Comply

In conjunction with the Clause INSPECTION OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES, should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer and the cost thereof will be deducted from any amounts due or to become due the Contractor.

3.7 FINAL EXAMINATION AND ACCEPTANCE

3.7.1 Final Examination of Work

As soon as practicable and no later than three (3) weeks after the

completion of the entire work or any section thereof (if the work is divided into sections) as in the opinion of the Contracting Officer will not be subject to damage by further operations under the contract, such work will be thoroughly examined at the cost and expense of the Government by sounding or by sweeping, or both, as determined by the Contracting Officer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor will be required to remove same by dragging the bottom or by dredging at the contract rate of dredging. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than two sounding or sweeping operations by the Government over an area be necessary by reason of work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent soundings or sweeping operations will be charged against the Contractor at the rate of \$5,500 per day for each day in which the Government plant is engaged in sounding or sweeping and/or is enroute to or from the site or held at or near the said site for such operation.

3.7.2 Final Acceptance

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

3.8 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.

3.9 NOISE CONTROL

All equipment used on this work shall be equipped with satisfactory mufflers or other noise abatement devices. The Contractor shall conduct his operations so as to comply with all Federal, Commonwealth and local laws pertaining to noise. The use of horns and whistle signals shall be held to the minimum necessary in order to ensure as quiet an operation as possible.

3.10 DAILY REPORT OF OPERATIONS

See APPENDIX 02325-A at the end of this Section (4 pages).

3.11 CERTIFICATION STATEMENT

See APPENDIX 02325-B at the end of this Section (1 page).

3.12 DECLARATION OF INSPECTION FOR REFUELING

See APPENDIX 02325-C at the end of this Section (3 pages).

-- End of Section --

REPORT OF OPERATIONS—PIPELINE, DIPPER OR BUCKET DREDGES

REPORTS CONTROL SYMBOL
ENGW-0-13

THRU:		TO:		FROM:		REPORT NO.				
CHARACTER OF REPORT	<input type="checkbox"/> MAINTENANCE <input type="checkbox"/> NEW WORK <input type="checkbox"/> DAILY <input type="checkbox"/> STATUS <input type="checkbox"/> COMPLETION <input type="checkbox"/> ANNUAL						DATE OR PERIOD			
	NAME AND TYPE			SIZE → PIPELINE <i>in. dia. disch.</i>		DIPPER OR BUCKET <i>cu. yds. cap.</i>				
DREDGE	HORSEPOWER OF		DREDGE PUMP		SUCTION PIPE JET		CUTTER OR BUCKET		PROPULSION	
	NUMBER OF CREW MEMBERS →		DREDGE	SHORE	OTHER PLANT	TOTAL	WORK SCHEDULE →	SHIFTS PER DAY	DAYS PER WEEK	
PROJECT AND BAR	NAME			AUTH DIMENSIONS →		WIDTH		DEPTH	OVERDEPTH	
	LOCATION (include station numbers)									
CHARACTER OF MATERIAL	ABSOLUTE DENSITY <i>GMS/liter</i>			IN PLACE DENSITY <i>GMS/liter</i>			VOIDS RATIO			
	GRAIN SIZE <i>D₂₀ M.M. D₄₀ M.M. D₆₀ M.M.</i>			GEOLOGICAL CLASSIFICATION						
CONTRACT OR DREDGING ORDER	NUMBER			<input type="checkbox"/> CONTRACTOR <input type="checkbox"/> HIRED LABOR		TOTAL NO. OF DAYS ON WHICH WORK WAS DONE				
CHANNEL CONDITION	AVERAGE DEPTH →	BEFORE DREDGING		AFTER DREDGING		MINIMUM SOUNDING →	BEFORE DREDGING		AFTER DREDGING	
	RIVER STAGE	MINIMUM	TIME	MAXIMUM	TIME	GAGE LOCATION				
WEATHER CONDITION	(clear, cloudy, rain, snow, and fog)					VISIBILITY <i>miles</i>		WIND (maximum velocity & direction)		
	WORK PERFORMED					DISTRIBUTION OF TIME				
ITEM			UNIT	QUANTITY		EFFECTIVE WORKING TIME <i>(chargeable to cost of work)</i>			HOURS MIN.	
AVERAGE WIDTH OF CUT			FEET			PUMPING OR DREDGING				
TOTAL ADVANCE THIS PERIOD			FEET			PCT. OF EFFECTIVE RENTAL TIME			%	
TOTAL ADV. PREVIOUS TO THIS PERIOD			FEET			BOOSTER (in line)			<i>Hrs. Min.</i>	
TOTAL ADVANCE TO DATE			FEET			NON-EFFECTIVE WORKING TIME <i>(chargeable to cost of work)</i>				
FLOATING PIPE:			SHORE PIPE:							
TOTAL LENGTH OF DISCHARGE PIPE			FEET			HANDLING PIPE LINES				
AVERAGE LIFT			FEET			HANDLING ANCHOR LINES				
AVERAGE PUMP SPEED			R.P.M.			CLEARING PUMP AND PIPE LINE				
AVG. DREDGED PER PUMP. HR, GROSS			CU.YDS.			CLEARING CUTTER OR SUCTION HEAD				
SCOWS LOADED			NUMBER			WAITING FOR SCOWS				
AVERAGE LOAD PER SCOW			CU.YDS.			TO AND FROM WHARF OR ANCHORAGE				
CUBIC YARDS REMOVED					CHANGING LOCATION OF PLANT ON JOB					
AMOUNT DREDGED THIS PERIOD:					LOSS DUE TO OPPOSING NATURAL ELEMENTS					
(1) GROSS (computed amount)					LOSS DUE TO PASSING VESSELS					
(2) CREDITED (pay place)					SHORE LINE AND SHORE WORK					
AMOUNT PREVIOUSLY REPORTED:					WAITING FOR BOOSTER					
(1) GROSS (computed amount)					MINOR OPER. REPAIRS (explain in remarks)					
(2) CREDITED (pay place)					WAITING FOR ATTENDANT PLANT					
TOTAL AMOUNT DREDGED TO DATE:					PREPARATION AND MAKING UP TOW					
(1) GROSS (computed amount)					TRANSFERRING PLANT BETWEEN WORKS					
(2) CREDITED (pay place)					LAY TIME OFF SHIFT AND SATURDAYS					
ATTENDANT PLANT					SUNDAYS AND HOLIDAYS					
ITEM	NAME OR NUMBER			HOURS		FIRE DRILL				
						MISCELLANEOUS (explain in remarks)				
						TOTAL NON-EFFECTIVE WORKING TIME				
						PCT. OF NON-EFFECTIVE RENTAL TIME			%	
						TOTAL EFFECTIVE AND NON-EFFECTIVE TIME <i>(chargeable to cost of work)</i>				
						PCT. OF TOTAL TIME IN PERIOD			%	
						LOST TIME <i>(not chargeable to cost of work)</i>				
						MAJOR REPAIRS AND ALTERATIONS				
						CESSATION				
						COLLISIONS				
						MISCELLANEOUS (explain in remarks)				
NUMBER OF INSPECTIONS	BY DISTRICT PERSONNEL		BY DIV & OCE PERSONNEL		TOTAL LOST TIME					
					PERCENTAGE OF TOTAL TIME			%		
CONTRACT USE ONLY	HAS ANYTHING DEVELOPED WHICH MIGHT LEAD TO A CHANGE ORDER OR CLAIM? <input type="checkbox"/> NO <input type="checkbox"/> YES (If "YES", explain under remarks on back)				TOTAL TIME IN PERIOD					

ENG FORM
JAN 70

4267

REPLACES ENG FORM 28 (Coast), 1 MAR 53, AND ENG FORM 29 (Coast), 1 JAN 62, WHICH ARE OBSOLETE. (ER1125-2-304)

(Signature and Remarks required on reverse side.)

SUMMARY OF COSTS

ITEMS	COST
DIRECT PLANT OPERATING COSTS	
UNIFORM DAILY RATE BASIS <i>(To be completed when submitting Status and Completion reports.)</i>	
CHARGES: _____ DAYS AT \$ _____ PER DAY <i>(Item 19, ENG Form 22 (Costs) - adjusted to exclude plant increment cost.)</i>	
▶ OR ◀	
ACTUAL PLANT COSTS <i>(To be completed when submitting Annual report.)</i>	
PAYROLLS (gross).....	\$ _____
SUBSISTENCE & QUARTERS OR PER DIEM & MILEAGE.....	\$ _____
FUEL _____ BARRELS AT \$ _____ PER BARREL.....	\$ _____
WATER.....	\$ _____
LUBRICANTS.....	\$ _____
PLANT OWNERSHIP COSTS <i>(as computed below)</i>	\$ _____
INSURANCE.....	\$ _____
ATTENDANT PLANT.....	\$ _____
MISCELLANEOUS.....	\$ _____
SUBTOTAL—UNIFORM DAILY RATE OR ACTUAL COSTS.....	\$ _____
SUBTOTAL—PLANT UNIT COST \$ _____ PER CUBIC YARD.	_____
SHORE WORK	
SUBTOTAL—SHORE WORK COSTS.....	\$ _____
SUBTOTAL—SHORE WORK UNIT COSTS \$ _____ PER CUBIC YARD.	_____
OTHER COSTS	
SURVEYS.....	\$ _____
INSPECTION AND SUPERVISION.....	\$ _____
OVERHEAD.....	\$ _____
OTHER INDIRECT COSTS.....	\$ _____
SUBTOTAL—OTHER COSTS.....	\$ _____
SUBTOTAL—OTHER UNIT COST \$ _____ PER CUBIC YARD.	_____
GRAND TOTAL—ALL COSTS.....	
GRAND TOTAL—ALL UNIT COSTS \$ _____ PER CUBIC YARD.	

OPERATING SUPPLIES					ANNUAL REPORT DATA <i>(complete when submitting Annual report)</i>	
COMMODITIES	CONSUMED		INVENTORY		COST PER RENTAL MINUTE <i>(Based on total operating cost)</i>	per min.
	UNIT	QUANTITY	QUANTITY	VALUE		
FUEL (oil)	BOLS				\$ _____	
LUBRICANT (oil)	GAL				TOTAL COST OF PLANT <i>(End of F.Y. reporting period)</i>	\$ _____
LUBRICANT (grease)	LBS				BOOK VALUE <i>(End of F.Y. reporting period)</i>	\$ _____
WATER	GAL				BALANCE IN PLANT ACCOUNT <i>(End of F.Y. reporting period)</i>	\$ _____
					PLANT OWNERSHIP COSTS <i>(Actual for F.Y. reporting period):</i>	
					DEPRECIATION.....	\$ _____
					REPAIRS (Adjusted).....	\$ _____
					CESSATION OF WORK.....	\$ _____
					SMALL TOOLS, ETC.....	\$ _____
SUBSISTENCE SUPPLIES.....						
MISCELLANEOUS SUPPLIES.....						
TOTAL.....				\$ _____	TOTAL.....	\$ _____

REMARKS

SUBMITTED BY <i>(Name, title, and signature)</i>	RECOMMENDED BY <i>(Name, title, and signature)</i>	APPROVED BY <i>(Name, title, and signature)</i>
--	--	---

DAILY REPORT OF OPERATIONS—HOPPER DREDGES

REPORTS CONTROL SYMBOL
ENG-CWO-13

DISTRICT		DREDGE	
EXACT LOCATION OF WORK		<input type="checkbox"/> MAINTENANCE	DATE
		<input type="checkbox"/> NEW WORK	NUMBER OF PERSONS IN CREW
AV. LENGTH OF CUT	FT.	CHARACTER OF MATERIAL	HOPPER CAPACITY
AV. WIDTH OF CUT	FT.	DENSITY OF MAT. IN PLACE	GMS/LITER
AV. DIST. TO DUMP	MILES	DENSITY OF WATER	GMS/LITER AT °F
			CU. YDS.
			CU. YDS.
			CU. YDS.

NAVIGATION AND OTHER DREDGING AIDS (Describe and include statement on adequacy and recommendations)

WORK PERFORMED				DRAFT FOR LOAD NO. <small>(for one load only)</small>		
DREDGING AND HAULING			AGITATING	FORWARD	LIGHT	LOADED
NO. OF LOADS	TOT. CU. YDS.	DISPOSAL AREA	TOT. CU. YDS.		AFT	
				DRAG DEPTH	MAX.	MIN.
				INDICATORS LAST CHECKED ON		
				GAS EJECTORS USED		
						% OF PUMPING TIME

DISTRIBUTION OF TIME AND MILES RUN

	AGITATING (Minutes)	DREDGING AND HAULING (Minutes)	MILES RUN (Stat. Miles)
EFFECTIVE WORKING TIME			
PUMPING			
TURNING			
TO DUMP			
DUMPING			
TO CUT			
TOTALS			
NON-EFFECTIVE WORKING TIME			
TAKING ON FUEL AND SUPPLIES			
TO AND FROM WHARF OR ANCHORAGE			
LOSS DUE TO NATURAL ELEMENTS			
LOSS DUE TO TRAFFIC AND BRIDGES			
MINOR OPERATING REPAIRS			
TRANSFERRING BETWEEN WORKS			
LAY TIME			
FIRE AND BOAT DRILLS			
MISCELLANEOUS			
TOTALS			
LOST TIME			
MAJOR REPAIRS AND ALTERATIONS			
CESSATION			
COLLISIONS			
TOTAL LOST TIME			
TOTAL TIME IN PERIOD			

AVERAGE SPEED OF DREDGE		MINUTES RADAR IN USE	
LOADING	FEET/MINUTE	TIDE DATA WAS OBTAINED BY MEANS OF	
AGITATING		WEATHER	
GALS. OF FUEL OIL CONSUMED		NUMBER OF INSPECTIONS BY SUPERVISORY PERSONNEL	
GALS. OF WATER CONSUMED		FIELD	OFFICE

REMARKS

SUBMITTED BY

(SEE REVERSE SIDE)

CERTIFICATION STATEMENT

CONTRACT: _____

ACCEPTANCE SECTION/SURVEY: _____

REFERENCED SOURCE DOCUMENT: _____

I have fully observed the performance of the subject survey and have determined, based on my review of the referenced source document record, that the data contains no evidence of collusion, fraud, or obvious error. The recorded data, including calibration corrections thereto, have been obtained in accordance with the systematic/procedural methods and techniques described under Section 02325 DREDGING of the contract specifications, that all known and unknown systematic and random errors have been minimized consistent with: (1) The relative precision levels of the equipment utilized; and, (2) Absolute accuracies expected (or likely) given current (state-of-the-art) horizontal and vertical measurement limitations associated with offshore survey systems, procedures, and related variables; and, as such, the observed/recorded data are fully and finally acceptable for determining and measuring contract performance and payment.

AUTHORIZED REPRESENTATIVE: _____

/s/ _____

TITLE: _____

DATE: _____

CF: Contractor Representative Area Office

DECLARATION OF INSPECTION

To Meet Requirement of 33 CFR 156.150

Facility Name: _____ Facility Address: _____

Vessel Name: _____ Date of Transfer: _____

MOORINGS: Yes No

Are mooring lines strong enough to hold vessel under all expected conditions of surge, current and weather? _____

Are mooring lines long enough to allow adjustment for changes in draft, drift, and tide? _____

LOADING EQUIPMENT:

Are hoses or loading arms long enough to allow vessel to move to the limits of its moorings? _____

Maximum movement will not place strain on hose, loading arm, or transfer piping system? _____

Is each hose supported in a manner that prevents strain on its coupling? _____

Is each part of the transfer system properly lines up as necessary to allow the intended flow of oil? _____

Has each part of the transfer system, not being used in the transfer operation, been checked to see that it is securely blanked off or shut off? _____

Is the transfer system connected to a fixed piping system on the receiving vessel or facility? _____

(NOTE: For fueling vessels the use of flush deck fittings is approved when serviced by fuel hoses fitted with an automatic back pressure shut-off nozzle.)

Is each coupling one of the following types:

1. Full threaded connection? _____

2. Bolted coupling? _____

3. Quick-connect coupling approved by USCG? _____

DECLARATION OF INSPECTION (Continued)

	<u>Yes</u>	<u>No</u>
DISCHARGE CONTAINMENT SYSTEM:		
Are discharge containment systems in place on both facility and vessel?	_____	_____
Are scupper and drains closed?	_____	_____
Is oil leaking from any transfer equipment?	_____	_____
Will containment system handle leak?	_____	_____
COMMUNICATIONS:		
Has two-way voice communications system between vessel and facility been tested?	_____	_____
Has emergency shutdown system been tested and found ready to operate?	_____	_____
PERSONNEL:		
Are persons required by Facility Operations Manual on duty?	_____	_____
Are personnel required by the Vessel Oil Transfer Procedure on duty?	_____	_____
Are any language problems involved?	_____	_____
If so, is a person present who can fluently speak the common languages used on the vessel and shore facility?	_____	_____
CONFERENCE OF PERSONS-IN-CHARGE:		
Did Person-in-Charge on Facility and Person-in-Charge on vessel hold a conference?	_____	_____
Were the following points discussed and understood by both:		
1. Identity of product to be transferred?	_____	_____
2. Sequence of transfer operation?	_____	_____
3. Transfer rate?	_____	_____
4. Name, title and stations of all persons participating in transfer?	_____	_____
5. Particulars of transferring and receiving systems?	_____	_____

DECLARATION OF INSPECTION (Continued)

	<u>Yes</u>	<u>No</u>
CONFERENCE OF PERSONS-IN-CHARGE (Continued):		
6. Critical stages in transfer operation?	_____	_____
7. Federal, State, and local rules that apply to transfer?	_____	_____
8. Emergency procedures?	_____	_____
9. Discharge containment procedures?	_____	_____
10. Discharge reporting procedures?	_____	_____
11. Watch or shift arrangements?	_____	_____
12. Transfer shutdown procedures?	_____	_____

LIGHTING:

If transfer operations occur between sunset and sunrise:
are lights on vessel and facility working? _____

Does lighting adequately cover all transfer connection
and working areas? _____

AGREEMENT TO START TRANSFER:

Are both Persons-in-Charge present? _____

Do both Persons-in-Charge agree to begin transfer? _____

The undersigned do certify that they have personally inspected or checked the items listed above and that their initials opposite each item indicate the regulations have been complied with.

PERSON-IN-CHARGE FACILITY

Signature and Title

Date and Time

PERSON-IN-CHARGE VESSEL

Signature and Title

Date and Time

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DIVISION 02 - SITE WORK

SECTION 02464

STEEL SHEET PILES

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- 1.3 DELIVERY, STORAGE AND HANDLING

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- 2.2 STEEL PLATES
- 2.3 TESTS, INSPECTIONS, AND VERIFICATIONS
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- 3.3 INSPECTION
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 - 3.3.2 Pulling and Redriving
- 3.4 INSTALLATION RECORDS

-- End of Section Table of Contents --

SECTION 02464

STEEL SHEET PILES

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 6/A 6M	(2000) General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
ASTM A 572/A 572M	(200) High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM A 690/A 690M	(1994) High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments

AMERICAN WELDING SOCIETY, INC. (AWS)

AWS D1.1	(2000) Structural Welding Code - Steel
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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

Steel Sheet Piles; G

Submit drawings for approval prior to start of the work or ordering materials. Include details of top protection, special reinforcing tips, tip protection, lagging, and fabricated additions to plain piles and driving, cut-off method, and corrosion protection. Drawings for sheet piling including fabricated sections shall show complete dimensions including minimum section properties and details of piling and the driving sequence and location of piling. Include details and dimensions of templates and other temporary guide structures for installing the piling. Provide details of the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

SD-06 Test Reports

Materials Tests

Interlock tension strength test conform to the piling manufacturer's standard test, include testing at least two 3 inch long coupons taken randomly from different as-produced pilings of each heat and must be approved by the Contracting Officer.

SD-07 Certificates

Pile Pulling Method

Material Certificates

Submit for each shipment certificates and identified with specific lots prior to installing piling. Identification data should include piling type, dimensions, chemical composition, mechanical properties, section properties, heat number, and mill identification mark.

Pile Driving Equipment

Submit descriptions of pile driving equipment to be employed in the work to the Contracting Officer for approval. Descriptive information includes manufacturer's name, model numbers, capacity, rated energy, hammer details, cushion material, helmet and templates.

Interlock Tension Test Procedure

Submit the procedure for testing the tension strength of piling interlocks as required herein for approval prior to testing sheet piling.

SD-11 Closeout Submittals

Pile Driving Records

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.

1.3 DELIVERY, STORAGE AND HANDLING

Handle piles using handling holes or lifting devices. Handle long length piles with care to prevent damage. Support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Supports between multiple lifts shall be in a vertical plane. Protect piling to prevent damage to coatings and to prevent corrosion prior to installation.

PART 2 PRODUCTS

2.1 STEEL SHEET PILES

Steel sheet piles should meet the requirements specified herein. Heavy gage hot-rolled sheet piling shall conform to ASTM A 572/A 572M, Grade 50, or ASTM A 690/A 690M. The interlock of sheet piling shall be free-sliding, allow a swing angle of at least 0.09 rad/ 5 degrees when threaded and maintain continuous interlocking when installed. Sheet piling including special fabricated sections shall be full-length sections of the dimensions shown. Fabricated sections shall conform to the requirements herein and the piling manufacturer's recommendations for fabricated sections. Provide sheet piling with standard pulling holes. Metalwork fabrication for sheet piling sections shall conform to the requirements of Section 05055, "Metalwork Fabrication".

2.2 STEEL PLATES

Structural steel plates for splices and other fabrication appurtenances shall conform to ASTM A 572/A 572M, Grade 50.

2.3 TESTS, INSPECTIONS, AND VERIFICATIONS

Requirements for material tests, workmanship and other measures for quality assurance shall be as specified and in Section 05055 METALWORK FABRICATION.

2.3.1 Materials Tests

Materials tests shall conform to the following requirements. Sheet piling and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of sheet piling shall meet the requirements of ASTM A 6/A 6M.

2.3.2 Interlocked Joint Strength in Tension Test

The interlocked joint strength in tension test shall conform to the piling manufacturer's standard test, include testing at least two 3 inch long coupons taken randomly from different as-produced pilings of each heat and must be approved.

PART 3 EXECUTION

3.1 GRADING

Where indicated, work will be divided into grading areas within which satisfactory excavated material shall be placed in embankments, fills, and required backfills. The contractor shall not haul satisfactory material excavated in one grading area to another grading area except when so directed in writing. Pre-excavation or dredging will not be permitted. Backfill as indicated.

3.2 INSTALLATION

3.2.1 Pile Driver

Use a pile driver having a delivered force or energy suitable for the total weight of the pile and the character of subsurface material to be encountered. Operate the driver at the rate recommended by the manufacturer throughout the entire driving period. Repair damage to piling caused by use of a pile driver with excess delivered force or energy.

3.2.2 Pile Protection

Prior to driving, provide template or driving frame suitable for aligning, supporting, and maintaining sheet piling in the correct position during setting and driving. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved. Provide at least two levels of support, at third points (not less than 20 feet apart). Templates shall not move when supporting sheet piling. Fit templates with wood blocking to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment. Mark template for the location of the leading edge of each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means must be used to keep the sheet pile vertical along its leading edge.

3.2.3 Pile Driving

Maintain piling vertical during driving. Drive piles in such a manner as to prevent damage to the piles and to provide a continuous closure. Where possible, drive Z-pile with the ball end leading. If an open socket is leading, a bolt or similar object placed in the bottom of the interlock will minimize packing material into it and ease driving for the next sheet.

Incrementally sequence driving of individual piles such that the tip of any sheet pile shall not be more than 4 feet below that of any adjacent sheet pile. When the penetration resistance exceeds five blows per inch, the tip of any sheet pile shall not be more than 2 feet below any adjacent sheet pile.

3.2.4 Cutting and Splicing

Piles driven to refusal or the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Piles driven below the required top elevation and piles damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed by the Contracting Officer. Unless absolutely required, splicing of sheet piles should be avoided. If directed by the Contracting Officer, splice piles as required to drive them to depths greater than shown on the drawings and extend them up to the required top elevation. Piles adjoining spliced piles shall be full length unless otherwise approved. If splices are allowed in adjoining piles, the splices must be spaced at least 20 feet apart in elevation. Welding of splices shall conform to the requirements of Section 05055, "Metalwork Fabrication." Ends of piles to be spliced shall be squared before splicing to eliminate dips or camber. Splice piles with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks. Spliced piles shall be free sliding and able to obtain the maximum swing with contiguous piles. Trim the tops of piles excessively battered during driving, when directed at no cost to the Government. Pile cut-offs shall become the property of the Contractor and shall be removed from the site. Use a straight edge in cutting by burning to avoid abrupt nicks. Bolt holes shall be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes shall be reasonably smooth and of the proper size for rods or other items to be

inserted. Do not use explosives for cutting.

3.2.5 Welding

Shop and field welding, qualification of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1.

3.2.6 Tolerances in Driving

Drive all piles with a variation from vertical of not more than 1/4 inch per foot. Place the pile so the face will not be more than 6 inches from vertical alignment at any point. Top of pile at elevation of cut-off shall be within 1/2 inch horizontally and 2 inches vertically of the location indicated. Manipulation of piles to force them into position will not be permitted. Check all piles for heave. Redrive all heaved piles to the required tip elevation.

3.2.7 Corrosion Protection

Coat sheet piling in accordance with Section 09965, "PAINTING: STEEL SHEET PILES".

3.3 INSPECTION

Perform continuous inspection during pile driving. Inspect all piles for compliance with tolerance requirements. Bring any unusual problems which may occur to the attention of the Contracting Officer.

3.3.1 Inspection of Driven Piling

The Contractor shall inspect the interlocks of the portion of driven piles that extend above ground. Remove and replace piles found to be out of interlock.

3.3.2 Pulling and Redriving

The Contractor may be required to pull selected piles after driving to determine the condition of the underground portions of piles. The pile pulling method must be approved by the Contracting Officer. Remove and replace at the Contractor's expense any pile pulled and found to be damaged to the extent that its usefulness in the structure is impaired. Re-drive piles pulled and found to be in satisfactory condition.

3.4 INSTALLATION RECORDS

Maintain a pile driving record for each sheet pile. Indicate on the installation record installation dates and times, type and size of hammer, rate of operation, total driving time, dimensions of driving helmet and cap used, blows required per foot for each foot of penetration, final driving resistance in blows for final 6 inches, pile locations, tip elevations, ground elevations, cut-off elevations, and any re-heading or cutting of piles. Record any unusual pile driving problems during driving. Submit complete records to the Contracting Officer.

-- End of Section --

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SECTION 05055

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 - 3.1.1 Delivery and Inspection of Sheet Piles
 - 3.1.2 Storage

-- End of Section Table of Contents --

SECTION 05055

METALWORK FABRICATION

PART 1 GENERAL

1.1 SCOPE OF WORK

The work covered by this specification consists of the contractor splicing, when absolutely required, by welding two pieces of steel sheet piles to achieve the required height of the sheet pile wall. The walls will be located at La Esperanza Peninsula, Catano, Puerto Rico.

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.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 165 (1995) Liquid Penetrant Examination
Inspection Method

ASTM E 709 (1995) Magnetic Particle Examination

ASME INTERNATIONAL (ASME)

ASME BPV IX (1995) Boiler and Pressure Vessel Code;
Section IX, Welding and Brazing
Qualifications

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (1994) Structural Welding Code - Steel

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Drawings; G

Detail shop drawings for metalwork shall be submitted and approved prior to fabrication.

SD-03 Product Data

Welding Procedures of Structural Steel; G

Schedules of welding procedures for steel structures shall be submitted and approved prior to commencing fabrication.

Structural Steel Welding Repairs; G

Welding repair plans for steel shall be submitted and approved prior to making repairs.

Materials Orders; G

Copies of purchase orders, mill orders, shop orders and work orders for materials shall be submitted prior to the use of the materials in the work.

Materials List; G

Materials list for fabricated items shall be submitted at the time of submittal of detail drawings.

Shipping Bill; G

Shipping bill shall be submitted with the delivery of finished pieces to the site.

SD-06 Test Reports

Tests, Inspections, and Verifications; G

Certified test reports for materials shall be submitted with all materials delivered to the site.

SD-07 Certificates

Qualification of Welders, Welding Operators and Certification of NDT Operators; G

NOTE: All three of the codes permitted for qualification should be retained except where the requirements or a particular structure require being more restrictive. Certifications for welders, welding operators and NDT operators shall be submitted prior to commencing fabrication.

SD-11 Closeout Submittals

Materials Disposition Records:

Materials disposition records shall be submitted before completion of contract.

1.4 METALWORK DETAIL DRAWINGS

Detail drawings for metalwork shall include catalog cuts, templates, fabrication and assembly details and type, grade and class of material as appropriate. Elements of fabricated items inadvertently omitted on contract drawings shall be detailed by the fabricator and indicated on the detail drawings.

1.5 QUALIFICATION OF WELDERS, WELDING OPERATORS AND NDT OPERATORS

The Contractor shall certify that the qualification of welders and welding operators and tack welders who will perform structural steel welding have been qualified for the particular type of work to be done in accordance with the requirements of Section 5 of ASME BPV IX, Section IX or Section 4 of AWS D1.1:2000 prior to commencing fabrication. The certificate shall list the qualified welders by name and shall specify the code and procedures under which qualified and the date of qualification. Prior qualification will be accepted if welders have performed satisfactory work under the code for which qualified within the preceding three months. The Contractor shall require welders to repeat the qualifying tests when their work indicates a reasonable doubt as to proficiency. Those passing the re-qualification tests will be re-certified. Those not passing will be disqualified until passing. All expenses in connection with qualification and re-qualification shall be borne by the Contractor. The NDT Operators or Personnel shall be qualified per AWS D1.1 subsection 6.14.6 Part D.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Materials Orders

The Contractor shall furnish copies of purchase orders, mill orders, shop orders and work orders for all materials orders and items used in the work.

Where mill tests are required purchase orders shall contain the test site address and the name of the testing agency.

2.1.2 Materials List

The Contractor shall furnish a materials list of the materials to be used in the fabrication of each item.

2.2 FABRICATION

2.2.1 Structural Fabrication

Material must be straight before being laid off or worked. If straightening is necessary it shall be done by methods that will not impair the metal. Sharp kinks or bends shall be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Bends shall be made by approved dies, press brakes or bending rolls. Where heating is required, precautions shall be taken to avoid overheating the metal and it shall be allowed to cool in a manner that will not impair the original properties of the metal. Proposed flame cutting of material other than structural steel shall be subject to approval and shall be indicated on detail drawings. Shearing shall be accurate and all portions of the work shall be neatly finished. Corners shall be square and true unless otherwise shown. Re-entrant cuts shall be filleted to a minimum radius of 19 mm or 3/4 inch unless otherwise approved. Finished members shall be free of twists, bends and open joints. Bolts, nuts and screws shall be tight.

2.2.1.1 Dimensional Tolerances for Structural Work

Dimensions shall be measured by an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit shall be within the tolerances indicated on the drawings or as specified in the particular

section of these specifications for the item of work. Where tolerances are not specified in other sections of these specifications or shown, an allowable variation of 1/32 inch is permissible in the overall length of component members with both ends milled and component members without milled ends shall not deviate from the dimensions shown by not more than 1/16 inch for members 30 feet or less in length and by more than 1/8 inch for members over 30 feet in length.

2.2.1.2 Structural Steel Fabrication

Structural steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Surfaces and edges to be welded shall be prepared in accordance with AWS D1.1, Subsection 3.2. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Hand-guided cuts which are to be exposed or visible shall be chipped, ground or machined to sound metal.

2.2.2 Welding

2.2.2.1 Welding of Structural Steel

a. Welding Procedures for Structural Steel - Welding procedures for structural steel shall be prequalified as described in AWS D1.1 Subsection 3.1 or shall be qualified by tests as prescribed in AWS D1.1 Section 4 or ASME BPV IX. Properly documented evidence of compliance with all requirements of these specifications for previous qualification tests shall establish a welding procedure as prequalified. For welding procedures qualified by tests, the test welding and specimen testing must be witnessed and the test report document signed by the Contracting Officer. Approval of any welding procedure will not relieve the Contractor of the responsibility for producing a finished structure meeting all requirements of these specifications. The Contractor will be directed or authorized to make any changes in previously approved welding procedures that are deemed necessary or desirable by the Contracting Officer. The Contractor shall submit a complete schedule of welding procedures for each steel structure to be welded. The schedule shall conform to the requirements specified in the provisions AWS D1.1, Sections 2, 3, 4 and 5. The schedule shall provide detailed procedure, specifications and tables or diagrams showing the procedures to be used for each required joint. Welding procedures must include filler metal, preheat, interpass temperature and stress-relief heat treatment requirements. Each welding procedure shall be clearly identified as being prequalified or required to be qualified by tests. Welding procedures must show types and locations of welds designated or in the specifications to receive nondestructive examination.

b. Welding Process - Welding of structural steel shall be by an electric arc welding process using a method which excludes the atmosphere from the molten metal and shall conform to the applicable provisions of AWS D1.1, Sections 2 through 5. Welding shall be such as to minimize residual stresses, distortion and shrinkage.

c. Welding Technique

(1) Filler Metal - The electrode, electrode-flux combination and grade of weld metal shall conform to the appropriate AWS

specification for the base metal and welding process being used or shall be as shown where a specific choice of AWS specification allowables is required. The AWS designation of the electrodes to be used shall be included in the schedule of welding procedures. Only low hydrogen electrodes shall be used for manual shielded metal-arc welding regardless of the thickness of the steel.

(2) A controlled temperature storage oven shall be used at the job site as prescribed by AWS D1.1, Subsection 5.3.2.1 to maintain low moisture of low hydrogen electrodes.

(3) Preheat and Interpass Temperature - Preheating shall be performed as required by AWS D1.1 Subsection 3.5 or as otherwise specified except that the temperature of the base metal shall be at least 70 degrees F (20 degrees C). The weldments to be preheated shall be slowly and uniformly heated by approved means to the prescribed temperature, held at that temperature until the welding is completed and then permitted to cool slowly in still air.

(4) Stress-Relief Heat Treatment - Where stress relief heat treatment is specified or shown, it shall be in accordance with the requirements of AWS D1.1, Subsection 5.8 unless otherwise authorized or directed.

d. Workmanship - Workmanship tolerances for welding shall be in accordance with AWS D1.1 Section 5 and other applicable requirements of these specifications.

(1) Preparation of Base Metal - Prior to welding the Contractor shall inspect surfaces to be welded to assure compliance with AWS D1.1, Subsection 5.15.

(2) Temporary Welds - Temporary welds required for fabrication and erection shall be made under the controlled conditions prescribed for permanent work. Temporary welds shall be made using low-hydrogen welding electrodes and by welders qualified for permanent work as specified in these specifications. Preheating for temporary welds shall be as required by AWS D1.1 for permanent welds except that the minimum temperature shall be 50 degrees C, 120 degrees F in any case. In making temporary welds arcs shall not be struck in other than weld locations. Each temporary weld shall be removed and ground flush with adjacent surfaces after serving its purpose.

(3) Tack Welds - Tacks welds that are to be incorporated into the permanent work shall be subject to the same quality requirements as the permanent welds and shall be cleaned and thoroughly fused with permanent welds. Preheating shall be performed as specified above for temporary welds. Multiple-pass tack welds shall have cascaded ends. Defective tack welds shall be removed before permanent welding.

2.3 TESTS, INSPECTIONS, AND VERIFICATIONS

The Contractor shall have required material tests and analyses performed and certified by an approved laboratory to demonstrate that materials are in conformity with the specifications. These tests and analyses shall be performed and certified at the Contractor's expense. Tests, inspections,

and verifications shall conform to the requirements of the particular sections of these specifications for the respective items of work unless otherwise specified or authorized. Tests shall be conducted in the presence of the Contracting Officer if so required. The Contractor shall furnish specimens and samples for additional independent tests and analyses upon request by the Contracting Officer. Specimens and samples shall be properly labeled and prepared for shipment.

2.3.1 Nondestructive Testing

When doubt exists as to the soundness of any material part such part may be subjected to any form of nondestructive testing determined by the Contracting Officer. This may include magnetic particle, dye penetrant, or any other test that will thoroughly investigate the part in question. The cost of such investigation will be borne by the Government. Any defects will be cause for rejection and rejected parts shall be replaced and retested at the Contractor's expense.

2.3.2 Inspection of Structural Steel Welding

The Contractor shall maintain an approved inspection system and perform required inspections in accordance with contract clause CONTRACTOR INSPECTION SYSTEM and welding shall be subject to inspection to determine conformance with the requirements of AWS D1.1 or ASME BPV, the approved welding procedures and provisions. Nondestructive examination of designated welds will be required. Supplemental examination of any joint or coupon cut from any location in any joint may be required.

2.3.2.1 Visual Examination

All completed welds shall be cleaned and carefully examined by visual examination for insufficient throat or leg sizes, cracks, undercutting, overlap, excessive convexity or reinforcement and other surface defects to ensure compliance with the requirements of AWS D1.1, Section 4, sub section 4.8.1 and Section 6, sub section 6.9.

2.3.2.2 Nondestructive Examination

Examination Procedures - Examination procedures shall conform to the following requirements.

(1) Magnetic Particle Inspection - Magnetic particle inspection of welds shall conform to the applicable provisions of ASTM E 709.

(2) Dye Penetrant Inspection - Dye penetrant inspection of welds shall conform to the applicable provisions of ASTM E 165.

a. Acceptability of Welds - Welds shall be unacceptable if shown to have defects prohibited by AWS D1.1, subsection 5.24 or possess any degree of incomplete fusion, inadequate penetration or undercutting.

2.3.2.3 Test Coupons

The Government reserves the right to require the Contractor to remove coupons from completed work when doubt as to soundness cannot be resolved by nondestructive examination. Should tests of any two coupons cut from the work of any welder show strengths less than that specified for the base metal it will be considered evidence of negligence or incompetence and such welder shall be removed from the work. When coupons are removed from any

part of a structure the members cut shall be repaired in a neat manner with joints of the proper type to develop the full strength of the members. Repaired joints shall be peened as approved or directed to relieve residual stress. The expense for removing and testing coupons, repairing cut members and the nondestructive examination of repairs shall be borne by the Government or the Contractor in accordance with the Contract Clauses INSPECTION AND ACCEPTANCE.

2.3.2.4 Supplemental Examination

When the soundness of any weld is suspected of being deficient due to faulty welding or stresses that might occur during shipment or erection the Government reserves the right to perform nondestructive supplemental examinations before final acceptance. The cost of such inspection will be borne by the Government.

2.3.3 Structural Steel Welding Repairs

Defective welds in the structural steel welding repairs shall be repaired in accordance with AWS D1.1, Subsection 5.26. Defective weld metal shall be removed to sound metal by use of air carbon-arc or oxygen gouging. The surfaces shall be thoroughly cleaned before welding. Welds that have been repaired shall be re-tested by the same methods used in the original inspection. Except for the repair of members cut to remove test coupons and found to have acceptable welds, costs of repairs and re-testing shall be borne by the Contractor.

2.3.4 Identification Signs

The existing identification signs shall be removed prior to painting and reattached by bolts after all the painting work has been completed. The signs shall also be painted with colors to match the existing colors.

PART 3 EXECUTION

3.1 DELIVERY, INSPECTION, AND STORAGE OF SHEET PILES

3.1.1 Delivery and Inspection of Sheet Piles

After delivery, the Contracting Officer shall inspect all the sheet piles prior to final installation. The Contractor will be responsible for all metal work damage repairs during transportation, including damage to the paint systems. Therefore, the Contractor should exercise care in avoiding damage to painting system during transportation.

3.1.2 Storage

After acceptance by the Contracting Officer, the Contractor should store the sheet piles on Contractor furnished chocks to prevent any damage prior to installation. The Contractor has to make all the necessary arrangements for transporting, off-loading and storing the sheet pile.

The Contractor shall contact Mr. Edwin Cuebas, at San Juan, Puerto Rico, phone no. 787-729-6880, for all inquiries concerning site visit, delivery and storage.

-- End of Section --

**La Esperanza Peninsula
Steel Sheet Pile Walls- Quantities**

	Description	Length In Ft	Wt/Ft In Lbs	Total No Required	Surface Area Sq.ft/Ln.ft of pile	Total Wt In Tons	Total surface Area In Sq.ft	Remarks
1	PZ-27	35	40.5	144	4.48	102.06	22579.2	Wall No.1
2	PZ-27	35	40.5	131	4.48	92.85	20540.8	Wall No.2
3	PZ-35	45	66	111	5.37	164.835	26823.15	Wall No.3
4	Corners for PZ-27 With L3 1/2x3 1/2x3/8	35	48.5	2	3.00	1.70	210.11	Wall No.1
5	Corners for PZ-27 With L3 1/2x3 1/2x3/8	35	48.5	2	3.00	1.70	210.11	Wall No.2
6	Corners for PZ-35 With L4x4x1/2	45	52.8	2	3.60	2.38	323.81	Wall No.3
					Total	365.51	70687.185	Surface Area For Painting

Bolted Connection with 7/8" Dia A 325 bolt with nut and washer

Location	Length	No Req'd	Wt. In lbs
PZ 27	2 1/2"	536	538
PZ 35	2 3/4"	348	365
Total		884	903

Note: Bolts are centered at 6" spacing starting 1' from the top and 6" from the bottom.

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PAINTING: HYDRAULIC STRUCTURES

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 NATIONAL STANDARDS INSTITUTE (ANSI)
ANSI Z87.1 (1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection
ANSI Z358.1 (1990) Emergency Eyewash and Shower Equipment

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
ASTM D 12 (1988; R 1998) Raw Tung Oil
ASTM D 153 (1986; R 1996e1) Specific Gravity of Pigments
ASTM D 235 (1999) Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)
ASTM D 281 (1995) Oil Absorption of Pigments by Spatula Rub-Out
ASTM D 304 (1995; R 1999) n-Butyl Alcohol (Butanol)
ASTM D 520 (1984; R 1995e1) Zinc Dust Pigment
ASTM D 561 (1982; R 1999) Carbon Black Pigment for Paint
ASTM D 740 (1994; R 1997) Methyl Ethyl Ketone
ASTM D 841 (1997) Nitration Grade Toluene
ASTM D 962 (1981; R 1999) Aluminum Powder and Paste Pigments for Paints
ASTM D 1045 (1995) Sampling and Testing Plasticizers Used in Plastics
ASTM D 1152 (1989; R 1997) Methanol (Methyl Alcohol)
ASTM D 1153 (1994; R 1997) Methyl Isobutyl Ketone
ASTM D 1186 (1993) Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base
ASTM D 1200 (1994; R 1999) Viscosity by Ford Viscosity Cup
ASTM D 1210 (1996) Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage
ASTM D 1308 (1987; R 1998) Effect of Household Chemicals on Clear and Pigmented Organic Finishes
ASTM D 1400 (1994) Nondestructive Measurement of Dry

Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base

ASTM D 1475 (1998) Density of Paint, Varnish, Lacquer, and Related Products

ASTM D 1640 (1995; R 1999) Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

ASTM D 2369 (1998) Volatile Content of Coatings

ASTM D 2917 (1991; R 1998) Methyl Isoamyl Ketone

ASTM D 3721 (1983; R 1999) Synthetic Red Iron Oxide Pigment

ASTM D 4206 (1996) Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus

ASTM D 4417 (1993; R 1999) Field Measurement of Surface Profile of Blast Cleaned Steel

ASTM E 1347 (1997) Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.20 Access to Employee Exposure and Medical Records

29 CFR 1910.94 Ventilation

29 CFR 1910.134 Respiratory Protection

29 CFR 1910.146 Permit-required Confined Spaces

29 CFR 1910, Subpart I Personal Protective Equipment

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.62 Lead

40 CFR 50.6 National Primary and Secondary Ambient Air Quality Standards for Particulate Matter

40 CFR 50.12 National Primary and Secondary Ambient Air Quality Standards for Lead

40 CFR 50, App B Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere

40 CFR 58, App E Probe Siting Criteria for Ambient Air Quality Monitoring

40 CFR 60, App A, Mtd 22 Visual Determination of Fugitive Emissions

from Material Sources and Smoke Emissions from Flares

40 CFR 117 Determination of Reportable Quantities for Hazardous Substances

40 CFR 122 EPA Administered Permit Programs: The National Pollutant Discharge Elimination System

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 261, App III Chemical Analysis Test Methods

40 CFR 261, App II, Mtd 1311 Toxicity Characteristic Leaching Procedure (TCLP)

40 CFR 262 Standards Applicable to Generators of Hazardous Waste
40 CFR 262.22 Number of Copies
40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
40 CFR 302 Designation, Reportable Quantities and Notification
40 CFR 355 Emergency Planning and Notification
49 CFR 171, Subchapter C Hazardous Materials Regulations

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-3130 Paint (For Application to Wet Surfaces)
CID A-A-3132 Coating System: Epoxy Primer/Urethane Topcoat, For Minimally Prepared Atmospheric Steel
CID A-A-50542 (Rev A) Coating System: Reflective, Slip-Resistant, Chemical-Resistant Urethane for Maintenance Facility Floors

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

FEDERAL STANDARDS (FED-STD)

FED-STD-595 (Rev B, Notice 1) Colors Used in Government Procurement

MASTER PAINTERS INSTITUTE (MPI)

MPI #9 Exterior Alkyd Enamel
MPI #46 Interior Enamel Undercoat
MPI #47 Interior Alkyd, Semi-Gloss
MPI #48 Interior Alkyd, Gloss
MPI #49 Interior Alkyd, Flat
MPI #50 Interior Latex Primer Sealer
MPI #51 Interior Alkyd, Eggshell
MPI #52 Interior Latex, Gloss Level 3
MPI #53 Interior Latex, Flat
MPI #54 Interior Latex, Semi-Gloss
MPI #114 Interior Latex, High Gloss (Acrylic)

MILITARY SPECIFICATIONS (MS)

MS MIL-DTL-24441 (Rev C, Supplement 1) Paint, Epoxy-Polyamide

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
(NIOSH)
NIOSH Pub No. 98-119 (1998, 4th Ed., 2nd Supplement) NIOSH
Manual of Analytical Methods

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SECTION 09965 Page 9.CEGS
SSPC Guide 6 (1995) Containing Debris Generated During
Paint Removal Operations
SSPC QP 1 (1998) Standard Procedure for Evaluating
Qualifications of Painting Contractors

SSPC QP 2 (1995) Standard Procedure for Evaluating the
Qualifications of Painting Contractors to Remove Hazardous
Paint

SSPC Paint 16 (1991) Coal Tar Epoxy-Polyamide Black (or
Dark Red) Paint

SSPC Paint 20 (1991) Zinc-Rich Primers (Type I - "Inorganic"
and Type II - "Organic")

SSPC Paint 25 (1991) Red Iron Oxide, Zinc Oxide, Raw
Linseed Oil and Alkyd Primer (Without Lead and Chromate
Pigments)

SSPC Paint 27 (1991) Basic Zinc Chromate-Vinyl Butyral Wash
Primer

SSPC Paint 33 (1995) Coal Tar Mastic, Cold-Applied

SSPC PS 26.00 (2000) Aluminum-Pigmented Coating System for
Steel Surfaces, Performance-Based

SSPC SP 1 (1982) Solvent Cleaning

SSPC SP 3 (1995) Power Tool Cleaning

SSPC SP 5/NACE 1 (1994) White Metal Blast Cleaning

SSPC SP 6/NACE 3 (1994) Commercial Blast Cleaning

SSPC SP 7/NACE 4 (1994) Brush-Off Blast Cleaning

1.3 SUBMITTALS

Government approval is required for submittals with a "G"
designation; submittals not having a "G" designation are
for information only. When used, a designation following
the "G" designation identifies the office that will review
the submittal for the Government. The following shall be
submitted in accordance with Section 01330 SUBMITTAL

PROCEDURES:

SD-03 Product Data

Accident Prevention Plan; G, [Safety Office]

The Contractor shall submit an Accident Prevention Plan in

accordance with the requirements of Section 01 of EM 385-1-1. The plan shall include, but is not limited to, each of the topic areas listed in Appendix A therein and the requirements of paragraph SAFETY AND HEALTH PROVISIONS; each topic shall be developed in a concise manner to include management and operational aspects.

Confined Space Procedures; G, [Safety Office]

The Contractor shall submit detailed written standard operating procedures for confined spaces in accordance with 29 CFR 1910.146 and EM 385-1-1, Section 6I, and as further described in this paragraph.

a. The procedures shall include certificates of calibration for all testing and monitoring equipment. The certificates of calibration shall include: type of equipment, model number, date of calibration, firm conducting calibration, and signature of individual certifying calibration.

b. The procedures shall include methods of inspection of personal protective equipment prior to use.

c. The procedures shall include work practices and other engineering controls designed to reduce airborne hazardous chemical exposures to a minimum.

d. The procedures shall include specification of the design and installation of ventilation systems which shall provide adequate oxygen content and provide for the dilution of paint solvent vapor, lead, and other toxic particulates within the confined space. In addition, the contractor shall include plans to evaluate the adequacy of air flow patterns.

Respiratory Protection Program; G, [Safety Office]

The Contractor shall submit a comprehensive written respiratory protection program in accordance with 29 CFR 1910.134, 29 CFR 1926.62, and Section 05.E of EM 385-1-1.

Airborne Sampling Plan; G, [Safety Office]

The contractor shall submit an Airborne Sampling Plan detailing the NIOSH Pub No. 98-119, Factory Mutual, or Underwriters Laboratories approved equipment, equipment calibration procedures, sampling methods, sampling to be performed, and analytical procedures to be used based on the type of work to be performed and anticipated toxic contaminants to be generated. The contractor shall include the name of the accredited laboratory, listed by the American Industrial Hygiene Association (AIHA), to be used to conduct the analysis of any collected air samples.

Ventilation Assessment; G, [Safety Office]

The contractor shall submit a plan to provide ventilation assessment as required by paragraph PAINT APPLICATION, subparagraph VENTILATION.

Medical Surveillance Plan; G, [Safety Office]

The Contractor shall submit a Medical Surveillance Plan as required in paragraph MEDICAL STATUS and provide a statement from the examining physician indicating the name of each employee evaluated and any limitations which will preclude the employee from performing the work required. The statement shall include the date of the medical evaluation, the physician's name, signature, and telephone number.

Worker Protection Plan; G, [Safety Office]

The Contractor shall submit a Worker Protection Plan in accordance with the requirements of 29 CFR 1926.62. The plan shall address all necessary aspects of worker protection and shall include activities emitting lead, means to achieve compliance, alternative technologies considered, air monitoring program, implementation schedule, work practice program, administrative controls, multicontractor site arrangements, and jobsite inspections.

Environmental Compliance Plan; G, [Safety Office]

The Contractor shall submit an Environmental Compliance Plan.

The plan shall incorporate the submittals for, Ambient Air Monitoring Plan and Visible Emissions Monitoring Plan. The submitted plan shall also address all aspects of establishing and demarcating regulated areas, ventilation/containment system performance verification, and reporting of accidental releases.

Waste Classification, Handling, and Disposal Plan; G, [Safety Office]

The contractor shall submit a Waste Classification, Handling, and Disposal Plan in accordance with the requirements of 40 CFR 261 and 40 CFR 262 and paragraph Waste Classification, Handling, and Disposal.

Containment Plan; G, [EN]

The Contractor shall submit a plan for containing debris generated during paint removal operations in accordance with the requirements of paragraph Containment. The plan

shall include drawings, load-bearing capacity calculations, and wind load calculations. When the design is such that the spent abrasive is allowed to accumulate in quantities greater than 1,000 pounds, and/or impart a significant wind load on the structure, the contractor shall have the drawings approved by a registered structural engineer. The drawings and calculations shall be stamped with the engineer's seal. The contractor shall also identify the type and placement of water booms, methods for anchoring the booms, and the procedures for removing debris.

Visible Emissions Monitoring Plan; G, [Safety Office]
The Contractor shall submit a Visible Emissions Monitoring Plan in accordance with the paragraph Visible Emissions Monitoring. The plan shall include the provisions for halting work and correcting the containment in the event unacceptable emissions are observed. General statements shall not be used; specific methods, procedures, and details are required.

Ambient Air Monitoring Plan; G, [Safety Office]
The Contractor shall submit a plan for monitoring emissions of particulate matter 10 microns or less in size (PM-10). The plan shall comply with the requirements of EPA regulation 40 CFR 50.6 and paragraph PM-10 Monitoring. The plan shall also include provisions for halting work and correcting the containment in the event unacceptable emissions occur. The Contractor shall submit a plan for monitoring emissions of Total Suspended Particulates (TSP). The plan shall comply with the requirements of EPA regulation 40 CFR 50.12 and paragraph TSP Monitoring. The plan shall also include provisions for halting work and correcting the containment in the event unacceptable emissions occur.

SD-04 Samples

Specification and Proprietary Paints; G, [Area Office]
The Contractor shall submit samples of all special paint formula, Military, Master Painter Institute, Commercial Item Description, and SSPC paints. For products that are specified to be applied in accordance with the manufacturer's recommendations. The Contractor shall submit the paint producers product data sheet or other written instructions for those products. When the required quantity of any type is 50 gallons or less, the

Contractor shall submit in lieu of the liquid paint sample:

- a. A certified test report showing the results of required tests made on the material and a statement that it meets all of the specification requirements.
- b. A certified test report showing the results of required tests made on a previous batch of paint produced by the same firm using the same ingredients and formulation except for minor differences necessitated by a color change and a statement that the previous batch met all of the specification requirements. A report of tests on the proposed batch showing the following properties applicable to the material specifications shall be furnished: color, gloss, drying time, opacity, viscosity, weight per gallon, and fineness of grind.

Thinners; G, [Area Office]

Samples shall be submitted of the thinners which are those solvents used to reduce the viscosity of the paint.

SD-06 Test Reports

Airborne Sampling Report; G, [Safety Office]

The Contractor shall submit reports of airborne sampling tests as required by paragraph Airborne Sampling.

Inspection and Operation Records; G, [Area Office]

The Contractor shall submit records of inspections and operations performed in accordance with paragraph INSPECTION.

Submittals shall be made on a daily basis.

SD-07 Certificates

Qualifications and Experience; G, [Safety Office]

The Contractor shall submit certification pursuant to paragraph QUALIFICATIONS for all job sites. Submittal of the qualifications and experience of any additional qualified and competent persons employed to provide on-site environmental, safety, and health shall also be provided. Acceptance of this submission must be obtained prior to the submission of other required environmental safety, and health submittal items.

Qualified Painting Contractor; G, [EN]

The Contractor shall submit a copy of their current SSPC QP 1 certification.

Qualified Coating Thickness Gages; G, [Area Office]

Documentation of manufacturer's certification shall be submitted for all coating thickness gages.

1.3 QUALIFICATIONS

Qualifications and experience shall comply with the following:

1.3.1 Certified Professional

The Contractor shall utilize a qualified and competent person as defined in Section 01 of EM 385-1-1 to develop the required safety and health submittal and to provide on-site safety and health services during the contract period. The person shall be a Certified Industrial Hygienist (CIH), with a minimum of 3 years of demonstrated experience in similar related work. The Contractor shall certify that the Certified Industrial Hygienist (CIH) holds current and valid certification from the American Board of Industrial Hygiene (ABIH). The CIH may utilize other qualified and competent persons, as defined in EM 385-1-1, to conduct on-site safety and health activities as long as these persons have a minimum of 2 years of demonstrated experience in similar related work and are under the direct supervision of CIH.

1.3.2 Certified Laboratory

The Contractor shall provide documentation which includes the name, address, and telephone number of the laboratories to be providing services. In addition, the documentation shall indicate that each laboratory is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that each is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT) and will document the date of current accreditation. Certification shall include accreditation for heavy metal analysis, list of experience relevant to analysis of lead in air, and a Quality Assurance and Quality Control Program.

1.3.3 Qualified Painting Contractor

The Contractor shall be a certified SSPC-QP 1 Painting Contractor.

1.3.4 Qualified Paint Applicator

Documentation of certification shall be submitted for all paint applicators. Prior to the initiation of any work all paint applicators shall be tested and certified as meeting the requirements of the qualified paint applicator. Certification shall be administered by the government

approved independent third party Test Agency. Applicators failing the certification test shall not be permitted to apply any paint on the project.

1.3.4.1 Test Plate

The test plate shall consist of a 6 feet by 6 feet steel plate with a 3/8 inch minimum thickness. The test plate shall have at least six bolts, three with bolt heads exposed and three with threads exposed, a 12-inch wide flange and a 6-inch diameter pipe each 18-inches long welded perpendicular to the test panel and a 6-inch deep T-beam with sealed ends welded horizontal across the test panel one foot up from the bottom all within the area to be painted on one side. Bolts shall be one-inch minimum in diameter.

1.3.4.2 Certification Test Procedure

Certification testing of paint applicators shall be conducted at the job site in coordination with the Contracting Officer. The Contractor shall supply the fabricated test plates to be used for the tests and shall provide crane service, rigging, and any other work necessary to provide accessibility for the certification testing and inspection. In preparation, the Contractor shall clean and prepare the test plates in accordance with the requirements of the contracted work. Abrasive blasting shall be performed with the blast media to be used in the contract. The paints to be applied shall be the Contractor supplied materials and shall be those previously tested and approved for use on the contract. Paints shall be applied as specified in the contract. The painter being tested shall mix and thin the paints to be used in the test and shall set up and adjust the application equipment for use. Each painter shall apply each of the types of paint comprising the specified system. The test plate shall be painted in a near vertical position.

1.3.4.3 Certification Criteria

The paint applicator shall be evaluated based on the conformance of the applied paint system to the requirements of the specifications. Deficiencies in the coatings, improper mixing or improper application methods are basis for failure. The Test Agency shall be the sole judge as to the acceptability of each paint applicators performance.

1.3.5 Coating Thickness Gage Qualification

Documentation of certification shall be submitted for all coating thickness gages. Magnetic flux thickness gages as described in ASTM D 1186 shall be used to make all coating thickness measurements on ferrous metal substrates. Eddy current thickness gages as described in ASTM D 1400 shall be used to measure coating thickness on all nonferrous metal substrates. Gages shall have an accuracy of +/- 3 percent or better. Gages to be used on the job shall be certified by the manufacturer as meeting these requirements.

1.4 SAMPLING AND TESTING

The Contractor shall allow at least 30 days for sampling and testing. Sampling may be at the job site or source of supply. The Contractor shall notify the Contracting Officer when the paint and thinner are available for sampling. Sampling of each batch shall be witnessed by the Contracting Officer unless otherwise specified or directed. A 1-quart sample of paint and thinner shall be submitted for each batch proposed for use. The sample shall be labeled to indicate formula or specification number and nomenclature, batch number, batch quantity, color, date made, and applicable project contract number. Testing will be performed by the Government. Costs for retesting rejected material will be deducted from payments to the Contractor at the rate of [\$1000.00] dollars for each paint sample retested and [\$750.00] dollars for each thinner retested.

1.5 SAFETY AND HEALTH PROVISIONS

Work shall be performed in accordance with the requirements of 29 CFR 1910, 29 CFR 1926, EM 385-1-1, and other references as listed herein. Matters of interpretation of the standards shall be submitted to the Contracting Officer for resolution before starting work. Where the regulations conflict, the most stringent requirements shall apply. Paragraph SAFETY AND HEALTH PROVISIONS supplements the requirements of EM 385-1-1, paragraph (1). In any conflict between Section 01 of EM 385-1-1 and this paragraph, the provisions herein shall govern.

1.5.1 Abrasive Blasting

The Contractor shall comply with the requirements in

Section 06.H of EM 385-1-1.

1.5.1.1 Hoses And Nozzles

In addition to the requirements in Section 20 of EM 385-1-1, hoses and hose connections of a type to prevent shock from static electricity shall be used. Hose lengths shall be joined together by approved couplings of a material and type designed to prevent erosion and weakening of the couplings. The couplings and nozzle attachments shall fit on the outside of the hose and shall be designed to prevent accidental disengagement.

1.5.1.2 Workers Other Than Blasters

Workers other than blasting operators working in close proximity to abrasive blasting operations shall be protected by utilizing MSHA/NIOSH-approved half-face or full-face air purifying respirators equipped with high-efficiency particulate air (HEPA) filters, eye protection meeting or exceeding ANSI Z87.1 and hearing protectors (ear plugs and/or ear muffs) providing a noise reduction rating of at least 20 dBA or as needed to provide adequate protection.

1.5.2 Cleaning with Compressed Air

Cleaning with compressed air shall be in accordance with Section 20.B.5 of EM 385-1-1 and personnel shall be protected as specified in 29 CFR 1910.134.

1.5.3 Cleaning with Solvents

1.5.3.1 Ventilation

Ventilation shall be provided where required by 29 CFR 1910.146 or where the concentration of solvent vapors exceeds 10 percent of the Lower Explosive Limit (LEL). Ventilation shall be in accordance with 29 CFR 1910.94, paragraph (c)(5).

1.5.3.2 Personal Protective Equipment

Personal protective equipment shall be provided where required by 29 CFR 1910.146 and in accordance with 29 CFR 1910, Subpart I.

1.5.4 Pretreatment of Metals and Concrete with Acids

1.5.4.1 Personal Protective Equipment Personnel shall be protected in accordance with 29 CFR 1910, Subpart I.

1.5.4.2 Emergency Equipment

In addition to the requirements of Section 05 of EM 385-1-1, the Contractor shall provide an eyewash in accordance

with ANSI Z358.1, paragraph (6).

1.5.5 Mixing Epoxy and Polyurethane Resin Formulations

1.5.5.1 Exhaust Ventilation

Local exhaust ventilation shall be provided in the area where the curing agent and resin are mixed. This ventilation system shall be capable of providing at least 100 linear fpm of capture velocity measured at the point where the curing agent and resin contact during mixing.

1.5.5.2 Personal Protective Equipment

Exposure of skin and eyes to epoxy resin components shall be avoided by wearing appropriate chemically resistant gloves, apron, safety goggles, and face shields meeting or exceeding the requirements of ANSI Z87.1.

1.5.5.3 Medical Precautions

Individuals who have a history of sensitivity to epoxy or polyurethane resin systems shall be medically evaluated before any exposure can occur. Individuals who are medically evaluated as exhibiting a sensitivity to epoxy resins shall not conduct work tasks or otherwise be exposed to such chemicals. Individuals who develop a sensitivity shall be immediately removed from further exposure and medically evaluated.

1.5.5.4 Emergency Equipment

A combination unit, comprised of an eyewash and deluge shower, within close proximity to the epoxy or polyurethane resin mixing operation shall be provided in accordance with ANSI Z358.1, paragraph (9).

1.5.6 Paint Application

1.5.6.1 Ventilation

When using solvent-based paint in confined spaces, ventilation shall be provided to exchange air in the space at a minimum rate of 5,000 cubic feet per minute per spray gun in operation. It may be necessary to install both a mechanical supply and exhaust ventilation system to effect adequate air changes within the confined space. All air-moving devices shall be located and affixed to an opening of the confined space in a manner that assures that the airflow is not restricted or short circuited and is supplied in the proper direction. Means of egress shall not be blocked. Ventilation shall be continued after completion of painting and through the drying phase of the operation. If the ventilation system fails or the

concentration of volatiles exceeds 10 percent of the LEL (except in the zone immediately adjacent to the spray nozzle), painting shall be stopped and spaces evacuated until such time that adequate ventilation is provided. An audible alarm that signals system failure shall be an integral part of the ventilation system. The effectiveness of the ventilation shall be checked by using ventilation smoke tubes and making frequent oxygen and combustible gas readings during painting operations. Exhaust ducts shall discharge clear of the working areas and away from possible sources of ignition.

1.5.6.2 Explosion Proof Equipment

Electrical wiring, lights, and other equipment located in the paint spraying area shall be of the explosion proof type designed for operation in Class I, Division 1, Group D, hazardous locations as required by the NFPA 70. Electrical wiring, motors, and other equipment, outside of but within 20 feet of any spraying area, shall not spark and shall conform to the provisions for Class I, Division 2, Group D, hazardous locations. Electric motors used to drive exhaust fans shall not be placed inside spraying areas or ducts. Fan blades and portable air ducts shall be constructed of nonferrous materials. Motors and associated control equipment shall be properly maintained and grounded. The metallic parts of air-moving devices, spray guns, connecting tubing, and duct work shall be electrically bonded and the bonded assembly shall be grounded.

1.5.6.3 Further Precautions

- a. Workers shall wear nonsparking safety shoes.
- b. Solvent drums taken into the spraying area shall be placed on nonferrous surfaces and shall be grounded. Metallic bonding shall be maintained between containers and drums when materials are being transferred.
- c. Insulation on all power and lighting cables shall be inspected to ensure that the insulation is in excellent working condition and is free of all cracks and worn spots. Cables shall be further inspected to ensure that no connections are within 50 feet of the operation, that lines are not overloaded, and that they are suspended with sufficient slack to prevent undue stress or chafing.

1.5.6.4 Ignition Sources

Ignition sources, to include lighted cigarettes, cigars,

pipes, matches, or cigarette lighters shall be prohibited in area of solvent cleaning, paint storage, paint mixing, or paint application.

1.5.7 Health Protection

1.5.7.1 Air Sampling

The Contractor shall perform air sampling and testing as needed to assure that workers are not exposed to contaminants above the permissible exposure limit. In addition, the Contractor shall provide the Contracting Officer with a copy of the test results from the laboratory within five working days of the sampling date and shall provide results from direct-reading instrumentation on the same day the samples are collected.

1.5.7.2 Respirators

During all spray painting operations, spray painters shall use approved SCBA or SAR (air line) respirators, unless valid air sampling has demonstrated contaminant levels to be consistently within concentrations that are compatible with air-purifying respirator Assigned Protection Factor (APF). Persons with facial hair that interferes with the sealing surface of the face piece to face seal or interferes with respirator valve function shall not be allowed to perform work requiring respiratory protection. Air-purifying chemical cartridge/canister half- or full-face piece respirators that have a particulate prefilter and are suitable for the specific type(s) of gas/vapor and particulate contaminant(s) may be used for nonconfined space painting, mixing, and cleaning (using solvents). These respirators may be used provided the measured or anticipated concentration of the contaminant(s) in the breathing zone of the exposed worker does not exceed the APF for the respirator and the gas/vapor has good warning properties or the respirator assembly is equipped with a NIOSH-approved end of service life indicator for the gas(es)/vapor anticipated or encountered. Where paint contains toxic elements such as lead, cadmium, chromium, or other toxic particulates that may become airborne during painting in nonconfined spaces, air-purifying half- and full-face piece respirators or powered air-purifying respirators equipped with appropriate gas vapor cartridges, in combination with a high-efficiency filter, or an appropriate canister incorporating a high-efficiency filter, shall be used.

1.5.7.3 Protective Clothing and Equipment

All workers shall wear safety shoes or boots, appropriate gloves to protect against the chemical to be encountered, and breathable, protective, full-body covering during spray-painting applications. Where necessary for emergencies, protective equipment such as life lines, body harnesses, or other means of personnel removal shall be used during confined-space work.

1.6 MEDICAL STATUS

Prior to the start of work and annually thereafter, all Contractor employees working with or around paint systems, thinners, blast media, those required to wear respiratory protective equipment, and those who will be exposed to high noise levels shall be medically evaluated for the particular type of exposure they may encounter. Medical records shall be maintained as required by 29 CFR 1910.20. The evaluation shall include:

a. Audiometric testing and evaluation of employees who will work in a noise environment with a time weighted average greater than or equal to 90 dBA.

b. Vision screening (employees who use full-face piece respirators shall not wear contact lenses).

c. Medical evaluation shall include, but shall not be limited to, the following:

(1) Medical history including, but not limited to, alcohol use, with emphasis on liver, kidney, and pulmonary systems, and sensitivity to chemicals to be used on the job.

(2) General physical examination with emphasis on liver, kidney, and pulmonary system.

(3) Determination of the employee's physical and psychological ability to wear respiratory protective equipment and to perform job-related tasks.

(4) Determination of baseline values of biological indices for later comparison to changes associated with exposure to paint systems and thinners or blast media, which include: liver function tests to include SGOT, SGPT, GGPT, alkaline phosphates, bilirubin, complete urinalysis, EKG (employees over age 40), blood urea nitrogen (bun), serum creatinine, pulmonary function test, FVC, and FEV, chest x-ray (if medically indicated), blood lead and ZPP (for individuals where it is known there will be an exposure to materials containing lead), other criteria that may be deemed necessary by the Contractor's physician, and Physician's statements for individual employees that medical status would permit specific task performance.

(5) For lead-based paint removal, the medical requirements of 29 CFR 1926.62 shall also be included.

1.7 CHANGE IN MEDICAL STATUS

Any employee whose medical status has changed negatively due to work related chemical and/or physical agent exposure while working with or around paint systems and thinners, blast media, or other chemicals shall be evaluated by a physician, and the Contractor shall obtain a physicians statement as described in paragraph MEDICAL STATUS prior to allowing the employee to return to those work tasks. The Contractor shall notify the Contracting Officer in writing of any negative changes in employee medical status and the results of the physicians reevaluation statement.

1.8 ENVIRONMENTAL PROTECTION

In addition to the requirements of section 01354 the Contractor shall comply with the following environmental protection criteria.

1.8.1 Waste Classification, Handling, and Disposal

The Contractor shall be responsible for assuring the proper disposal of all hazardous and nonhazardous waste generated during the project. Hazardous waste shall be placed in properly labeled closed containers and shall be shielded adequately to prevent dispersion of the waste by wind or water. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken. Nonhazardous waste shall be stored in closed containers separate from hazardous waste storage areas. All hazardous waste shall be transported by a licensed transporter in accordance with 40 CFR 263 and 49 CFR 171, Subchapter C. All nonhazardous waste shall be transported in accordance with local regulations regarding waste transportation. In addition to the number of manifest copies required by 40 CFR 262.22, one copy of each manifest will be supplied to the Contracting Officer prior to transportation.

1.8.2 Containment

The Contractor shall contain debris generated during paint removal operations in accordance with the requirements of SSPC Guide 6, Class [_2A_]. Where required the minimum air movement velocity shall be 100 fpm for cross-draft ventilation or 60 fpm for downdraft ventilation.

1.8.3 Visible Emissions Monitoring

The time of emissions shall be measured in accordance with 40 CFR 60, App A, Mtd 22. Visible emissions shall be monitored for not less than 15 minutes of every hour. Visible emissions for each hour shall be calculated by extrapolation. In no case shall visible emissions extend greater than 150 ft in any direction horizontal from the containment. In no case shall visible emissions be observed in the area of any sensitive receptor. If such emissions occur the job shall be shut down immediately and corrective action taken. The foreman shall be notified whenever visible emissions exceed 200 seconds in a 1 hour period. The foreman shall be notified and the job shall be shut down and corrective action taken whenever visible emissions exceed 300 seconds in a 2 hour period. Total observed visible emissions from the containment shall not exceed 5 percent of the work day. Shutdown and corrective action shall be taken by the Contractor to prevent such an occurrence. The Contractor shall document each time that the work is halted due to a violation of the visible emissions criteria. Documentation shall include the cause for shutdown and the corrective action taken to resolve the problem.

1.9 PAINT PACKAGING, DELIVERY, AND STORAGE

Paints shall be processed and packaged to ensure that within a period of one year from date of manufacture, they will not gel, liver, or thicken deleteriously, or form gas in the closed container. Paints, unless otherwise specified or permitted, shall be packaged in standard containers not larger than 5 gallons, with removable friction or lug-type covers. Containers for vinyl-type paints shall be lined with a coating resistant to solvents in the formulations and capable of effectively isolating the paint from contact with the metal container. Each container of paint or separately packaged component thereof shall be labeled to indicate the purchaser's order number, date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name, and formula or specification number of the paint together with special labeling instructions, when specified. Paint shall be delivered to the job in unbroken containers. Paints that can be harmed by exposure to cold weather shall be stored in ventilated, heated shelters. All paints shall be stored under cover from the elements and in locations free

from sparks and flames.

PART 2 PRODUCTS

2.1 SPECIAL PAINT FORMULAS

Special paints shall have the composition as indicated in the formulas listed herein. Where so specified, certain components of a paint formulation shall be packaged in separate containers for mixing on the job. If not specified or otherwise prescribed, the color shall be that naturally obtained from the required pigmentation.

2.2 PAINT FORMULATIONS

Special paint formulas shall comply with the following:

2.2.1 Formula V-102e, Vinyl-Type Ready-Mixed Aluminum Impacted Immersion Coating

INGREDIENTS PERCENT BY MASS

Vinyl Resin, Type 3 18.2

Aluminum Powder 8.3

Diisodecyl Phthalate 3.1

Methyl Isobutyl Ketone 33.8

Toluene 36.6

INGREDIENTS PERCENT BY MASS

100.0

a. The paint shall be furnished with the aluminum pigment mixed into the vehicle.

b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.

2.2.2 Formula V-766e, Vinyl-Type White (or Gray) Impacted Immersion Coating

INGREDIENTS PERCENT BY MASS

Vinyl Resin, Type 3 5.6

Vinyl Resin, Type 4 11.6

Titanium Dioxide and (for Gray)

Carbon Black 13.0

Diisodecyl Phthalate 2.9

Methyl Isobutyl Ketone 32.0

Toluene 34.7

Ortho-Phosphoric Acid 0.2

100.0

- a. The dispersion of pigment shall be accomplished by means of pebble mills or other approved methods to produce a fineness of grind (ASTM D 1210) of not less than 7 on the Hegman scale. Grinding in steel-lined or steel-ball mills will not be permitted. No grinding aids, antissettling agents, or any other materials except those shown in the formula will be permitted. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods. The ortho-phosphoric acid shall be measured accurately and diluted with at least four parts of ketone to one part of acid and it shall be slowly incorporated into the finished paint with constant and thorough agitation.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.
- c. The white and gray paints shall be furnished in the volume ratio designated by the purchaser. The gray paint shall contain no pigments other than those specified. Enough carbon black shall be included to produce a dry paint film having a reflectance of 20-24 (ASTM E 1347). The resulting gray color shall approximate color 26231 of FED-STD-595.

2.2.3 Formula VZ-108d, Vinyl-Type Zinc-Rich Impacted Immersion Coating

INGREDIENTS PERCENT BY WEIGHT POUNDS GALLONS

COMPONENT A

Vinyl Resin, Type 3	16.6	109.2	9.65
Methyl Isobutyl Ketone	80.6	528.9	79.30
Suspending Agent E	0.7	4.6	0.28
Suspending Agent F	0.4	2.7	0.19
Methanol	0.5	3.3	0.50
Synthetic Iron Oxide (Red)	1.2	7.9	0.19

100.0	656.6	90.11
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COMPONENT B

INGREDIENTS PERCENT BY WEIGHT POUNDS GALLONS

Silane B	100.0	4.1	0.47
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COMPONENT C

Zinc Dust	100.0	550.0	9.42
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100.00	(mixed paint)	
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The iron oxide and suspending agents shall be dispersed into the vehicle (Component A) to a fineness of grind of

not less than 4 on the Hegman scale (ASTM D 1210). Grinding in steel-lined containers or using steel-grinding media shall not be permitted. The sole purpose of the iron oxide pigment is to produce a contrasting color. A red iron oxide-type 3 vinyl resin vehicle paste may be used in place of dry iron oxide provided compensating adjustment are made in the additions of Type 3 resin and methyl isobutyl ketone. The finished product with zinc dust added shall produce a paint which has a red tone upon drying and a reflectance of not more than 16 (ASTM E 1347).

b. VZ-108d paint shall be supplied as a kit. Each kit shall consist of 4.5 gallons (33.1 pounds) of Component A in a 5-gallon lug closure type pail, 27.5 pounds of zinc dust (Component C) packaged in a 1-gallon plastic pail, and 3 fluid ounces of silane (Component B) packaged in a glass bottle of suitable size having a polyethylene lined cap. The bottle of silane shall be placed on the zinc dust in the 1 gallon pail. In addition to standard labeling requirements, each container of each component shall be properly identified as to component type and each container label of Component A shall carry the following:

MIXING AND APPLICATION INSTRUCTIONS: WARNING - THIS PAINT WILL NOT ADHERE TO STEEL SURFACES UNLESS COMPONENT B IS ADDED. Remove the 3 ounces of bottled Component B (silane) from the Component C (zinc dust) container and add to the base paint Component A) with thorough stirring. Then sift the zinc dust into the base paint while it is being vigorously agitated with a power-driven stirrer and continue the stirring until the zinc dust has been dispersed. The mixed paint shall at some point be strained through a 30-60 mesh screen to prevent zinc dust slugs from reaching the spray gun nozzle. The paint shall be stirred continuously during application at a rate that will prevent settling. If spraying is interrupted for longer than 15 minutes, the entire length of the hose shall be whipped vigorously to redisperse the zinc. If the spraying is to be interrupted for more than 1 hour, the hose shall be emptied by blowing the paint back into the paint pot. Thinning will not normally be required when ambient temperatures are below about 80 degrees F, but when the ambient and steel temperatures are higher, methyl isoamyl ketone (MIAK) or methyl isobutyl ketone (MIBK) should be used. If paint is kept covered at all times, its pot life will be about 8 days.

2.2.4 Formula C-200a, Coal Tar-Epoxy (Black) Paint

The paint shall conform to SSPC Paint 16 manufactured with Type 1 pitch. In addition to standard labeling, container labels shall include the term, Corps of Engineers Formula C-200a.

2.3 INGREDIENTS FOR SPECIAL PAINT FORMULAS

The following ingredient materials and thinners apply only to those special paints whose formulas are shown above in detail.

2.3.1 Pigments and Suspending Agents

2.3.1.1 Aluminum Powder

For vinyl paint aluminum powder shall conform to ASTM D 962, Type 1, Class B.

2.3.1.2 Carbon Black

Carbon black shall conform to ASTM D 561, Type I or II.

2.3.1.3 Zinc Dust

Zinc dust pigment shall conform to ASTM D 520, Type II.

2.3.1.4 Iron Oxide

Iron oxide, (Dry) synthetic (red), shall conform to ASTM D 3721. In addition, the pigment shall have a maximum oil absorption of 24 and a specific gravity of 4.90 to 5.20 when tested in accordance with ASTM D 281 and ASTM D 153, Method A, respectively. When the pigment is dispersed into specified vinyl paint formulation, the paint shall have color approximating FED-STD-595 color 10076 (dark red paint), and shall show no evidence of incompatibility or reaction between pigment and other components after 6 months storage.

2.3.1.5 Titanium Dioxide

Titanium dioxide in vinyl paint Formula V-766e shall be one of the following: Kronos 2160 or 2101, Kronos, Inc.; Ti-Pure 960, E.I. Dupont DeNemours and Co., Inc.

2.3.1.6 Suspending Agent E

Suspending Agent E shall be a light cream colored finely divided powder having a specific gravity of 2 to 2.3. It shall be an organic derivative of magnesium aluminum silicate mineral capable of minimizing the tendency of zinc

dust to settle hard without increasing the viscosity of the paint appreciably. MPA-14, produced by RHEOX, Inc., has these properties.

2.3.1.7 Suspending Agent F

Suspending Agent F shall be a light cream colored finely divided powder having a specific gravity of approximately 1.8. It shall be an organic derivative of a special montmorillonite (trialkylaryl ammonium hectorite). Bentone 27, produced by RHEOX, Inc., has these properties.

2.3.2 Resins, Plasticizer, and Catalyst

2.3.2.1 Diisodecyl Phthalate Diisodecyl Phthalate shall have a purity of not less than 99.0 percent, shall contain not more than 0.1 percent water, and shall have an acid number (ASTM D 1045) of not more than 0.10.

2.3.2.2 Vinyl Resin, Type 3

Vinyl resin, Type 3, shall be a vinyl chloride-acetate copolymer of medium average molecular weight produced by a solution polymerization process and shall contain 85 to 88 percent vinyl chloride and 12 to 15 percent vinyl acetate by weight. The resin shall have film-forming properties and shall, in specified formulations, produce results equal to Vinylite resin VYHH, as manufactured by the Union Carbide Corporation.

2.3.2.3 Vinyl Resin, Type 4

Vinyl resin, Type 4, shall be a copolymer of the vinyl chloride-acetate type produced by a solution polymerization process, shall contain (by weight) 1 percent interpolymerized dibasic acid, 84 to 87 percent vinyl chloride, and 12 to 15 percent vinyl acetate. The resin shall have film-forming properties and shall, in the specified formulations, produce results equal to Vinylite resin VMCH, as manufactured by the Union Carbide Corporation.

2.3.2.4 Ortho-phosphoric Acid

Ortho-phosphoric acid shall be a chemically pure 85-percent grade.

2.3.3 Solvent and Thinners

2.3.3.1 Methanol

Methanol (methyl alcohol) shall conform to ASTM D 1152.

2.3.3.2 Methyl Ethyl Ketone

Methyl ethyl ketone (MEK) shall conform to ASTM D 740.

2.3.3.3 Methyl Isobutyl Ketone

Methyl isobutyl ketone (MIBK) shall conform to ASTM D 1153.

2.3.3.4 Methyl Isoamyl Ketone

Methyl isoamyl ketone (MIAK) shall conform to ASTM D 2917.

2.3.3.5 Toluene

Toluene shall conform to ASTM D 841.

2.3.4 Silane B

Silane B for Formula VZ-108d shall be N-beta-(aminoethyl)-gamma-aminopropyltrimethoxy silane. Silane A-1120, produced by the C.K. Witco Corporation, and Silane Z-6020, produced by Dow Corning Corporation, are products of this type.

2.4 TESTING

2.4.1 Chromatographic Analysis

Solvents in vinyl paints and thinners shall be subject to analysis by programmed temperature gas chromatographic methods and/or spectrophotometric methods, employing the same techniques that give reproducible results on prepared control samples known to meet the specifications. If the solvent being analyzed is of the type consisting primarily of a single chemical compound or a mixture of two or more such solvents, interpretation of the test results shall take cognizance of the degree of purity of the individual solvents as commercially produced for the paint industry.

2.4.2 Vinyl Paints

Vinyl paints shall be subject to the following adhesion test. When V-766 formulation is tested, 5 to 7 mils (dry) shall be spray applied to mild steel panels. The steel panels shall be essentially free of oil or other contaminants that may interfere with coating adhesion. The test panels shall be dry blast cleaned to a White Metal grade which shall be in compliance with SSPC SP 5/NACE 1. The surface shall have an angular profile of 2.0 to 2.5 mils as measured by ASTM D 4417, Method C. When V-102 formulation is tested, it shall be spray applied over 1.5 to 2.5 mils (dry) of V-766 known to pass this test. When VZ-108 is tested, the coating shall be mixed in its proper proportions and then spray applied to a dry film thickness of 1.5 to 2.5 mils above the blast profile. The VZ-108 shall be top coated with a V-766 known to pass this test. In all cases, the complete system shall have a total dry

film thickness of 5 to 7 mils above the blast profile. After being air dried for 2 hours at room temperature, the panel shall be dried in a vertical position for 16 hours at 120 degrees F. After cooling for 1 hour, the panel shall be immersed in tap water at 85 to 90 degrees F for 48 to 72 hours. Immediately upon removal, the panel shall be dried with soft cloth and examined for adhesion as follows: With a pocket knife or other suitable instrument, two parallel cuts at least 1 inch long shall be made 1/4 to 3/8 inch apart through the paint film to the steel surface. A third cut shall be made perpendicular to and passing through the end of the first two. With the tip of the knife blade, the film shall be loosened from the panel from the third cut between the parallel cuts for a distance of 1/8 to 1/4 inch. With the panel being held horizontally, the free end of the paint film shall be grasped between the thumb and forefinger and pulled vertically in an attempt to remove the film as a strip from between the first two cuts. The strip of paint film shall be removed at a rate of approximately 1/10 inch per second and shall be maintained in a vertical position during the process of removal. The adhesion is acceptable if the strip of paint breaks when pulled or if the strip elongates a minimum of 10 percent during its removal. Paints not intended to be self-priming shall exhibit no delamination from the primer.

PART 3 EXECUTION

3.1 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

3.1.1 General Requirements

Surfaces to be painted shall be cleaned before applying paint or surface treatments. Deposits of grease or oil shall be removed in accordance with SSPC SP 1, prior to mechanical cleaning. Solvent cleaning shall be accomplished with mineral spirits or other low toxicity solvents having a flash point above 100 degrees F. Clean cloths and clean fluids shall be used to avoid leaving a thin film of greasy residue on the surfaces being cleaned. Items not to be prepared or coated shall be protected from damage by the surface preparation methods. Machinery shall be protected against entry of blast abrasive and dust into working parts. Cleaning and painting shall be so programmed that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces, and surfaces not intended to be painted shall be suitably protected from the effects of cleaning and painting operations. Welding of,

or in the vicinity of, previously painted surfaces shall be conducted in a manner to prevent weld spatter from striking the paint and to otherwise reduce coating damage to a minimum; paint damaged by welding operations shall be restored to original condition. Surfaces to be painted that will be inaccessible after construction, erection, or installation operations are completed shall be painted before they become inaccessible.

3.1.2 Ferrous Surfaces Subject to Severe Exposure

Ferrous surfaces subject to extended periods of immersion or as otherwise required shall be dry blast-cleaned to SSPC SP 5/NACE 1. The blast profile, unless otherwise specified, shall be 1.5 to 2.5 mils as measured by ASTM D 4417, Method C. Appropriate abrasive blast media shall be used to produce the desired surface profile and to give an angular anchor tooth pattern. If recycled blast media is used, an appropriate particle size distribution shall be maintained so that the specified profile is consistently obtained. Steel shot or other abrasives that do not produce an angular profile shall not be used. Weld spatter not dislodged by blasting shall be removed with impact or grinding tools and the areas reblasted prior to painting. Surfaces shall be dry at the time of blasting. Blast cleaning to SSPC SP 5/NACE 1 shall be done in the field and, unless otherwise specifically authorized, after final erection. Within 8 hours after cleaning, prior to the deposition of any detectable moisture, contaminants, or corrosion, all ferrous surfaces blast cleaned to SSPC SP 5/NACE 1 shall be cleaned of dust and abrasive particles by brush, vacuum cleaner, and/or blown down with clean, dry, compressed air, and given the first coat of paint. Upon written request by the Contractor, the Contracting Officer may authorize mill or shop cleaning of assembled or partially assembled components specified to receive the vinyl-type paint system or System No. 6-A-Z employing the epoxy zinc-rich primer. The surfaces, if shop blasted, shall be shop coated with the first and second coats of the specified paint system except that the epoxy zinc-rich primed surfaces shall receive an extra single spray coat of the zinc primer at the time field painting is started, as specified in the paint system instructions. The shop coating shall be maintained in good condition by cleaning and touching up of areas damaged during the construction period. If pinpoint or general rusting appears, surfaces shall be reblasted and repainted at no added cost to the

Government. Prior to the field application of subsequent coats, soiled areas of the shop coating shall be thoroughly cleaned and all welds or other unpainted or damaged areas shall be cleaned and coated in a manner to make them equivalent to adjacent, undamaged paint surfaces.

3.2 PAINT APPLICATION

3.2.1 General

Each coat shall be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Application of initial or subsequent coatings shall not commence until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are satisfactory. Each paint coat shall be applied in a manner that will produce an even, continuous film of uniform thickness. Edges, corners, crevices, seams, joints, welds, rivets, corrosion pits, and other surface irregularities shall receive special attention to ensure that they receive an adequate thickness of paint. Spray equipment shall be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles shall be as recommended by the spray equipment manufacturer for the material being applied.

3.2.2 Mixing and Thinning

Paints shall be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Paste or dry-powder pigments specified to be added at the time of use shall, with the aid of powered stirrers, be incorporated into the vehicle or base paint in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned immediately prior to use. Thinning shall generally be limited to the addition of not more than 1 pint per gallon of the proper thinner; this general limitation shall not apply when more specific thinning instructions are provided. Paint that has been stored at low temperature, shall be brought up to at least 70 degrees F before being mixed and thinned, and its temperature in the spray tank or other working container shall not fall below 60 degrees F during the

application. Paint that has deteriorated in any manner to a degree that it cannot be restored to essentially its original condition by customary field-mixing methods shall not be used and shall be removed from the project site. Paint and thinner that is more than 1 year old shall be re-sampled and resubmitted for testing to determine its suitability for application.

3.2.3 Atmospheric and Surface Conditions

Paint shall be applied only when the relative humidity is less than 50% and to surfaces that are more than 5 degrees F above the dew point temperature and that are completely free of moisture as determined by sight and touch. Paint shall not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, the temperature of the surfaces to be painted and of air in contact therewith shall be not less than 45 degrees F during paint application nor shall paint be applied if the surfaces can be expected to drop to 32 degrees F or lower before the film has dried to a reasonably firm condition. During periods of inclement weather, painting may be continued by enclosing the surfaces and applying artificial heat, provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. Paint shall not be applied to surfaces heated by direct sunlight or other sources to temperatures that will cause detrimental blistering, pinholing, or porosity of the film.

3.2.4 Time Between Surface Preparation and Painting

Surfaces that have been cleaned and/or otherwise prepared for painting shall be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

3.2.5 Method of Paint Application

Unless otherwise specified, paint shall be applied by brush or spray to ferrous and nonferrous metal surfaces. Special attention shall be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Other methods of application to metal surfaces shall be subject to the specific approval of the Contracting Officer. Paint on plaster, concrete, or other nonmetallic surfaces shall be applied by brush, roller, and/or spray.

3.2.6 Coverage and Film Thickness

Film thickness or spreading rates shall be as specified hereinafter. Where no spreading rate is specified, the paint shall be applied at a rate normal for the type of material being used. In any event, the combined coats of a specified paint system shall completely hide base surface and the finish coats shall completely hide undercoats of dissimilar color.

3.2.6.1 Measurement on Ferrous Metal

Where dry film thickness requirements are specified for coatings on ferrous surfaces, measurements shall be made with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D 1186. They shall be calibrated using plastic shims with metal practically identical in composition and surface preparation to that being coated, and of substantially the same thickness (except that for measurements on metal thicker than 1/4 inch, the instrument may be calibrated on metal with a minimum thickness of 1/4 inch). Frequency of measurements shall be as recommended for field measurements by ASTM D 1186 and reported as the mean for each spot determination. The instruments shall be calibrated or calibration verified prior to, during, and after each use.

3.2.6.2 Measurements on Nonferrous Metal

Where dry film thickness requirements are specified for coatings applied to nonferrous metal surfaces, measurements shall be made using a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D 1400. Calibration shall be on metal identical in composition and surface preparation to that being coated and of substantially the same thickness (except that for measurements on metal thicker than 1/4 inch, the instrument may be calibrated on metal with a minimum thickness of 1/4 inch). Frequency of measurements shall be as recommended for field measurements by ASTM D 1400 and reported as the mean for each spot determination. The instruments shall be calibrated or calibration verified prior to, during, and after each use.

3.2.7 Progress of Painting Work

Where field painting on any type of surface has commenced, the complete painting operation, including priming and

finishing coats, on that portion of the work shall be completed as soon as practicable, without prolonged delays. Sufficient time shall elapse between successive coats to permit them to dry properly for re-coating, and this period shall be modified as necessary to suit adverse weather conditions. Paint shall be considered dry for re-coating when it feels firm, does not deform or feel sticky under moderate pressure of the finger, and the application of another coat of paint does not cause film irregularities such as lifting or loss of adhesion of the undercoat. All coats of all painted surfaces shall be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, undercoats shall be cleaned of dust, grease, overspray, or foreign matter by means of airblast, solvent cleaning, or other suitable means. Cement and mortar deposits on painted steel surfaces, not satisfactorily removed by ordinary cleaning methods, shall be brush-off blast cleaned and completely repainted as required. Undercoats of high gloss shall, if necessary for establishment of good adhesion, be scuff sanded, solvent wiped, or otherwise treated prior to application of a succeeding coat. Field coats on metal shall be applied after erection except as otherwise specified and except for surfaces to be painted that will become inaccessible after erection.

3.2.8 Contacting Surfaces

When ordinary bolted contact is to exist between surfaces of ferrous or other metal parts of substantially similar chemical composition such surfaces will not be required to be painted, but any resulting crevices shall subsequently be filled or sealed with paint. Contacting metal surfaces formed by high-strength bolts in friction-type connections shall not be painted. Where a nonmetal surface is to be in bolted contact with a metal surface, the contacting surfaces of the metal shall be cleaned and given three coats of the specified primer. Unless otherwise specified, corrosion-resisting metal surfaces, including cladding therewith, shall not be painted.

3.2.9 Drying Time Prior to Immersion

Minimum drying periods after final coat prior to immersion shall be: epoxy systems at least 5 days, vinyl-type paint systems at least 3 days. Minimum drying periods shall be

increased twofold if the drying temperature is below 65 degrees F and/or if the immersion exposure involves considerable abrasion.

3.2.10 Protection of Painted Surfaces

Where shelter and/or heat are provided for painted surfaces during inclement weather, such protective measures shall be maintained until the paint film has dried and discontinuance of the measures is authorized. Items that have been painted shall not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. All metalwork coated in the shop or field prior to final erection shall be stored out of contact with the ground in a manner and location that will minimize the formation of water-holding pockets; soiling, contamination, and deterioration of the paint film, and damaged areas of paint on such metalwork shall be cleaned and touched up without delay. The first field coat of paint shall be applied within a reasonable period of time after the shop coat and in any event before weathering of the shop coat becomes extensive.

3.2.11 Vinyl Paints

3.2.11.1 General

Vinyl paints shall be spray applied, except that areas inaccessible to spraying shall be brushed. Airless spray equipment shall not be used. All of the vinyl paints require thinning for spray application except the zinc-rich vinyl paint (Formula VZ 108d) which will normally require thinning only under certain weather conditions.

Thinners for vinyl paints shall be as follows:

APPROXIMATE AMBIENT AIR TEMPERATURE

(Degrees F)

Below 50 MEK

50 - 70 MIBK

Above 70 MIAK

The amount of thinner shall be varied to provide a wet spray and avoid deposition of particles that are semidry when they strike the surface.

Vinyl paints shall not be applied when the temperature of the ambient air and receiving surfaces is less than 35 degrees F nor when the receiving surfaces are higher than 125 degrees F. Each spray coat of vinyl paint shall consist of a preliminary extra spray pass on edges, corners, interior angles, pits, seams, crevices, junctions of joining members, rivets, weld lines, and similar surface

irregularities followed by an overall double spray coat. A double spray coat of vinyl-type paint shall consist of applying paint to a working area of not less than several hundred square feet in a single, half-lapped pass, followed after drying to at least a near tack-free condition by another spray pass applied at the same coverage rate and where practicable at right angles to the first. Bolts, and similar surface projections shall receive sprayed paint from every direction to ensure complete coverage of all faces. Pits, cracks, and crevices shall be filled with paint insofar as practicable, but in any event, all pit surfaces shall be thoroughly covered and all cracks and crevices shall be sealed off against the entrance of moisture. Fluid and atomization pressures shall be kept as low as practicable consistent with good spraying results. Unless otherwise specified, not more than 2.0 mils, average dry film thickness, of vinyl paint shall be applied per double spray coat. Except where otherwise indicated, an undercoat of the vinyl-type paint may receive the next coat any time after the undercoat is tack-free and firm to the touch, provided that no speedup or delay in the re-coating schedule shall cause film defects such as sags, runs, air bubbles, air craters, or poor intercoat adhesion. Neither the prime coat nor any other coat shall be walked upon or be subjected to any other abrading action until it has hardened sufficiently to resist mechanical damage.

3.2.11.2 Vinyl Zinc-Rich Primer

Primer shall be field mixed combining components A, B, and C. Mixing shall be in accordance with label instructions. After mixing, the paint shall be kept covered at all times to avoid contamination and shall be applied within 8 days after it is mixed. When the ambient and/or steel temperature is below about 80 degrees F, the paint will not normally require thinning; however, the paint shall at all times contain sufficient volatiles (thinners) to permit it to be satisfactorily atomized and to provide a wet spray and to avoid deposition of particles that are semidry when they reach the surface. The paint shall be stirred continuously during application at a rate that will prevent the zinc dust from settling. When spraying is resumed after any interruption of longer than 15 minutes, the entire length of the material hose shall be whipped vigorously until any settled zinc is redispersed. Long periods of permitting the paint to remain stagnant in the

hose shall be avoided by emptying the hoses whenever the painting operation is to be suspended for more than 1 hour. The material (paint) hoses shall be kept as short as practicable, preferably not more than 50 feet in length. Equipment used for spraying this zinc primer shall not be used for spraying other vinyl-type paints without first being thoroughly cleaned, since many of the other paints will not tolerate zinc contamination; no type of hot spray shall be used. An average dry film thickness of up to 2.5 mils may be applied in one double-spray coat. Unless specifically authorized, not more than 8 days shall elapse after application of a VZ-108d zinc-rich coat before it receives a succeeding coat.

3.2.11.3 Vinyl Paints

Vinyl Paints (Formulas V-102e and V-766e) are ready-mixed paints designed to be spray applied over a wide range of ambient temperatures by field thinning with the proper type and amount of thinner. For spray application, they shall be thinned as necessary up to approximately 25 percent (1 quart per gallon of base paint) with the appropriate thinner; when ambient and steel temperatures are above normal, up to 40-percent thinning may be necessary for satisfactory application.

3.2.12 Coal Tar-Epoxy (Black) Paint (Formula C-200a)

3.2.12.1 Mixing

Component B shall be added to previously stirred Component A and thoroughly mixed together with a heavy-duty mechanical stirrer just prior to use. The use of not more than 1 pint of xylene thinner per gallon of paint will be permitted to improve application properties and extend pot life. The pot life of the mixed paint, extended by permissible thinning, may vary from 2 hours in very warm weather to 5 or more hours in cool weather. Pot life in warm weather may be extended by precooling the components prior to mixing; cooling the mixed material; and/or by slow, continuous stirring during the application period. The mixed material shall be applied before unreasonable increases in viscosity take place.

3.2.12.2 Application

Spray guns shall be of the conventional type equipped with a fluid tip of approximately 0.09 inch in diameter and external atomization, seven-hole air cap. Material shall

be supplied to the spray gun from a bottom withdrawal pot or by means of a fluid pump; hose shall be 1/2 inch in diameter. Atomization air pressure shall not be less than 80 psi. High-pressure airless spray equipment shall not be used. Brush application shall be with a stiff-bristled tool heavily laden with material and wielded in a manner to spread the coating smoothly and quickly without excessive brushing. The coverage rate of the material is approximately 110 square feet per gallon per coat to obtain 20 mils (dry thickness) in a two-coat system. The paint shall flow together and provide a coherent, pinhole-free film. The direction of the spray passes (or finish strokes if brushed) of the second coat shall be at right angles to those of the first where practicable.

3.2.12.3 Subsequent Coats

Except at the high temperatures discussed later in this paragraph, the drying time between coal tar-epoxy coats shall not be more than 72 hours, and application of a subsequent coat as soon as the undercoat is reasonably firm is strongly encouraged. Where the temperature for substrate or coating surfaces during application or curing exceeds or can be expected to exceed 125 degrees F as the result of direct exposure to sunlight, the surfaces shall be shaded by overhead cover or the interval between coats shall be reduced as may be found necessary to avoid poor intercoat adhesion. Here, poor intercoat adhesion is defined as the inability of two or more dried coats of coal tar-epoxy paint to resist delamination when tested aggressively with a sharp knife. Under the most extreme conditions involving high ambient temperatures and sun-exposed surfaces, the drying time between coats shall not exceed 10 hours, and the reduction of this interval to a few hours or less is strongly encouraged. Where the curing time of a coal tar-epoxy undercoat exceeds 72 hours of curing at normal temperatures, 10 hours at extreme conditions, or where the undercoat develops a heavy blush, it shall be given one of the following treatments before the subsequent coat is applied:

- a. Etch the coating surface lightly by brush-off blasting, using fine sand, low air pressure, and a nozzle-to-surface distance of approximately 3 feet.
- b. Remove the blush and/or soften the surface of the coating by wiping it with cloths dampened with 1-methyl-2-pyrrolidone. The solvents may be applied to the surface by

fog spraying followed by wiping, but any puddles of solvent must be mopped up immediately after they form. The subsequent coat shall be applied in not less than 15 minutes or more than 3 hours after the solvent treatment.

3.2.12.4 Ambient Temperature

Coal tar-epoxy paint shall not be applied when the receiving surface or the ambient air is below 50 degrees F nor unless it can be reasonably anticipated that the average ambient temperature will be 50 degrees F or higher for the 5-day period subsequent to the application of any coat.

3.2.12.5 Safety

In addition to the safety provisions in paragraph SAFETY AND HEALTH PROVISIONS, other workmen as well as painters shall avoid inhaling atomized particles of coal tar-epoxy paint and contact of the paint with the skin.

3.3 PAINT SYSTEMS APPLICATION

The required paint systems and the surfaces to which they shall be applied are shown in this paragraph, and/or in the drawings. Supplementary information follows.

3.3.1 Fabricated and Assembled Items

Items that have been fabricated and/or assembled into essentially their final form and that are customarily cleaned and painted in accordance with the manufacturer's standard practice will be exempted from equivalent surface preparation and painting requirements described herein, provided that:

- a. Surfaces primed (only) in accordance with such standard practices are compatible with specified field-applied finish coats.
- b. Surfaces that have been primed and finish painted in accordance with the manufacturer's standard practice are of acceptable color and are capable of being satisfactorily touched up in the field.
- c. Items expressly designated herein to be cleaned and painted in a specified manner are not coated in accordance with the manufacturer's standard practice if different from that specified herein.

3.3.2 Surface Preparation

The method of surface preparation and pretreatment shown in the tabulation of paint systems is for identification

purposes only. Cleaning and pretreatment of surfaces prior to painting shall be accomplished in accordance with detailed requirements previously described.

3.3.3 System No. 3-A-Z

Paint shall be spray applied to an average dry film thickness of a minimum of 6.5 mils for the completed system, and the thickness at any point shall not be less than 5.5 mils. The dry film thickness of the zinc-rich coat shall be approximately 2.5 mils. Specified film thickness, including the prescribed total, shall be attained in any event, and any extra coats needed to attain specified thickness shall be applied at no additional cost to the Government. Attaining of the specified film thickness in fewer than the prescribed number of coats or spray passes will be acceptable provided heavier applications do not cause an increase in pinholes, bubbles, blisters, or voids in the dried film and also provided that not more than 2.0 mils (dry film thickness) per double spray coat nor more than 1.0 mil per single spray pass of non-zinc paint shall be applied at one time.

3.3.4 System No. 6-A-Z

Epoxy zinc-rich primer 19B shall be applied in accordance with the manufacturer's directions in a single, half-lapped spray coat to an average dry film thickness of a minimum of 3.0 mils. The thickness at any point shall not be less than 2.5 mils or greater 8 mils for the primer. After a minimum drying period of 6 hours and no more than 96 hours, at least two coats of coal tar epoxy paint shall be applied to provide a minimum thickness at any point of 16 mils for the completed system. If the epoxy zinc-rich paint has been applied in the shop or otherwise has been permitted to cure for longer than 96 hours, it shall be re-coated with an additional thin tack coat of the zinc-rich paint, which in turn shall be overcoated within 96 hours with the first coat of coal tar-epoxy paint. The specified film thicknesses shall be attained in any event, and any additional coats needed to attain specified thickness shall be applied at no additional cost to the Government.

3.3.28 Protection of Nonpainted Items and Cleanup

Walls, equipment, fixtures and all other items in the vicinity of the surfaces being painted shall be maintained

free from damage by paint or painting activities. Paint spillage and painting activity damage shall be promptly repaired.

3.4 INSPECTION

The Contractor shall inspect, document, and report all work phases and operations on a daily basis. As a minimum the daily report shall contain the following:

- a. Inspections performed, including the area of the structure involved and the results of the inspection.
- b. Surface preparation operations performed, including the area of the structure involved, the mode of preparation, the kinds of solvent, abrasive, or power tools employed, and whether contract requirements were met.
- c. Thinning operations performed, including thinners used, batch numbers, and thinner/paint volume ratios.
- d. Application operations performed, including the area of the structure involved, mode of application employed, ambient temperature, substrate temperature, dew point, relative humidity, type of paint with batch numbers, elapsed time between surface preparation and application, elapsed time for re-coat, condition of underlying coat, number of coats applied, and if specified, measured dry film thickness or spreading rate of each new coating.

3.5 PAINTING SCHEDULES

SYSTEM NO. 3-A-Z

Items or surfaces to be coated: Steel Sheet Piles
SURFACE PREPARATION 1st COAT 2nd COAT 3rd COAT 4th COAT
White metal Vinyl zinc- White Vinyl Aluminum Aluminum
blast rich VZ-108d V-766e Vinyl Vinyl
cleaning (double (double V-102e V-102e as spray coat) spray
coat) (double needed to spray coat) obtain the required
thickness)

SYSTEM NO. 6-A-Z

Items or surfaces to be coated: Steel Sheet Piles
SURFACE 1st & 2nd
PREPARATION COAT 3rd COAT 4th COAT
White metal MS MIL-DTL-24441 Coal tar- Coal tar-blast
/19B epoxy C-200a epoxy C-200a
cleaning (black) (black)

End of Section -

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			J	1	3
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 09-Aug-2002	4. REQUISITION/PURCHASE REQ. NO. W32CS520546395		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412		7. ADMINISTERED BY (If other than item 6) CODE See Item 6			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			X	9A. AMENDMENT OF SOLICITATION NO. DACW17-02-B-0011	
			X	9B. DATED (SEE ITEM 11) 16-Jul-2002	
				10A. MOD. OF CONTRACT/ORDER NO.	
				10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) San Juan Harbor, Puerto Rico: Project Modifications for Improvement of the Environment at La Esperanza Peninsula, Catano, Puerto Rico					
14.A. DESCRIPTIVE SPECIFICATION CHANGES: Any enclosures accompanying this amendment should be inserted in the plans and/or specifications as applicable. All superseded materials should be removed or adequately marked to indicate they have been superseded.					
14.B. The BID OPENING DATE is CHANGED to AUGUST 20, 2002 AT 11:00 A.M.					
(See Page 2 for continuation of description.)					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA		16C. DATE SIGNED
_____ (Signature of person authorized to sign)			BY _____ (Signature of Contracting Officer)		

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SECTION 00010 - SOLICITATION, OFFER, AND AWARD

14.C. Make the following pen and ink changes to Block 13.A.:

“Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 11:00:00 (hour) local time 8/20/02 (date).”

SECTION 00100 - INSTRUCTIONS TO OFFERORS/EVALUATION FACTORS FOR AWARD

14.D. Section 00100: Delete Paragraph Number 999.219-4002, Subcontracting Plan Target Goals, and replace with the following revised Paragraph Number 999.219-4002.

SUBCONTRACTING PLAN TARGET GOALS

The offeror's attention is directed to the Small, Small Disadvantaged And Women Owned Small Business Subcontracting Plan clause of this solicitation. The clause and this paragraph do not apply to small business concerns.

(a) Where applicable, the offeror shall submit a subcontracting plan to the Contracting Officer for review and approval prior to contract award. The subcontracting plan may be submitted with the offer or after the date set for receipt of offers. If the plan is not submitted with the offer, the Contracting Officer will request the plan and specify the due date. The plan must contain all required elements set forth in the above referenced contract clause; must address basic contract requirements and options separately; and must demonstrate how the Contractor will accomplish the subcontracting requirements consistent with the obligations described in the clause. The plan will be evaluated in accordance with Army FAR Supplement (AFARS) Appendix DD, Subcontracting Plan Evaluation Guide. (AFARS is available on the worldwide web at <http://acqnet.saalt.army.mil/library/default.htm>.) Acceptability of the plan will be one of the elements considered by the Contracting Officer when determining contractor responsibility prior to award of a contract.

(b) The following subcontracting target goals are provided for informational purposes only. They are not legally binding.

Category	Target Goal
(1) Small Business Concerns	71.1%
(2) SBA Small Disadvantaged Business Concerns	10.2%
(3) Women-Owned Small Business Concerns	10.6%
(4) SBA HUBZone Small Business Concerns	3.0%
(5) Service-Disabled Veteran-Owned Small Business Concerns	3.0%
(6) Veteran-Owned Small Business Concerns	5.0%

(Stated percentages are based on the total amount of planned subcontracting; not the price of the contract. These target goals do not apply to contracts for commercial items. See FAR Part 12. For definitions of small business concern, small disadvantaged business concern, and woman owned small business concern, see the Small Business Program Representations (FAR 52.219-1) provision in this section of this solicitation. For HUBZone small business concern qualifications, see FAR subpart 19.13.)

(c) After award of the contract and prior to commencement of work, the Deputy for Small Business will instruct the Contractor in the preparation and timely submission of required subcontracting reports (SF-294 and SF-295). Where practicable, the above briefing will take place during the pre-work conference.

(d) Additional information concerning subcontracting plan requirements may be obtained from Ms. Debra Overstreet, Deputy for Small Business, Phone: 904-232-1150, or email debra.k.overstreet@usace.army.mil.

(End of paragraph number 999.219-4002)

=

14.E. SPECIFICATIONS:

14.E.1. Either asterisks appear before and after the line or lines where revisions have been made to the text on the enclosed revised or added pages or the text changes have been updated with additions noted with underlined text and deletions noted with line/cross-outs, and pertain only to changes made by this amendment.

14.E.2. The text changes may have necessitated reformatting of subsequent text or pages. If this is the case, those pages have also been issued as amended pages but are not marked with asterisks or underlined text and line/cross-outs.

DESIGN AUTHENTICATION: DELETE the existing DESIGN AUTHENTICATION after the Cover page and REPLACE with the attached revised DESIGN AUTHENTICATION.

SECTION 01330: SUBMITTAL PROCEDURES; DELETE APPENDIX 01330-A (Submittal Register) and REPLACE with the attached revised APPENDIX 01330-A (Submittal Register).

SECTION 02464: STEEL SHEET PILES; DELETE SECTION 02464 and REPLACE with the attached revised SECTION 02464.

SECTION 09965: PAINTING: STEEL SHEET PILES; DELETE SECTION 09965 and REPLACE with the attached revised SECTION 09965.

14.F. DRAWINGS: D. O. File No. 102-38,205 dated June 2001 in 8 Sheets + Cover:

DELETE Drawing Nos. 2/2 and 2/3 and REPLACE with the attached revised Drawing Nos. 2/2 and 2/3.

*
San Juan Harbor, Puerto Rico;
Project Modifications for Improvement of
the Environment at La Esperanza Peninsula,
Catano, Puerto Rico

IFB No. DACW17-02-B-0011

DESIGN AUTHENTICATION

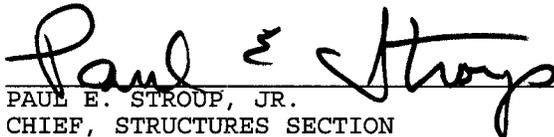
This project was designed by the Jacksonville District, U. S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear on these project documents within the scope of their employment as required by ER 1110-1-8152.



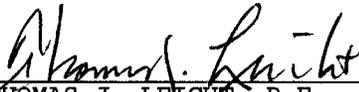
ANNE D. FORE
CHIEF, COST ENGINEERING BRANCH
ENGINEERING DIVISION



W. B. FARLEY
CHIEF, LEVEES AND WATERWAYS SECTION
DESIGN BRANCH, ENGINEERING DIVISION



PAUL E. STROUP, JR.
CHIEF, STRUCTURES SECTION
DESIGN BRANCH, ENGINEERING DIVISION



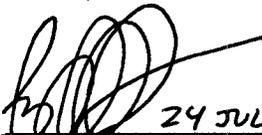
THOMAS J. LEICHT, P.E.
CHIEF, DESIGN BRANCH
ENGINEERING DIVISION



LUIS A. RUIZ, P.E.
CHIEF, GEOTECHNICAL BRANCH
ENGINEERING DIVISION



EDWARD E. MIDDLETON, Ph.D., P.E.
CHIEF, ENGINEERING DIVISION



JAMES G. MAY
COLONEL, CORPS OF ENGINEERS
DISTRICT ENGINEER

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION						CONTRACTOR											
La Esperanza Peninsula, Catano, Puerto Rico (Rev Am #0001)																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	DATE OF ACTION	DATE OF ACTION	DATE OF ACTION	DATE OF ACTION	DATE OF ACTION	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01000	SD-01 Preconstruction Submittals Hurricane and Severe Storm Plan		G COR												
			SD-02 Shop Drawings Construction Drawings		G COR												
			SD-07 Certificates Critical Lift Plan		G COR												
		01310	SD-01 Preconstruction Submittals Standard Form 100 FIO Affirmative Action Plan List of Subcontractors Signature Authority Drug-Free Work Place Record Accident Prevention Plan Diving Plan (including Activity Hazards Analysis)		G COR G COR												
		01321	SD-01 Preconstruction Submittals Construction Schedule		G COR												
		01330	SD-01 Preconstruction Submittals Submittal Register		G COR												
		01355	SD-01 Preconstruction Submittals Environmental Protection Plan SD-11 Closeout Submittals Logs/Final Summary Report FIO		G PD												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

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La Esperanza Peninsula, Catano, Puerto Rico (Rev Am #0001)																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					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		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01355	Project Environmental Summary Sheet														
		01411	SD-03 Product Data Calibration Standard FIO														
			SD-06 Test Reports Turbidity Monitoring FIO														
		01452	SD-01 Preconstruction Submittals Quality Control Plan		G COR												
			Personnel Qualifications		G COR												
			Letter of Authority FIO														
		01500	SD-01 Preconstruction Submittals Mobilization/Demobilization Plan FIO														
			Security Plan														
			SD-02 Shop Drawings Site Layout FIO														
			Temporary Electric Drawings														
			SD-07 Certificates Boat Operator's License FIO														
		01780	SD-02 Shop Drawings As-Built Drawings	1.2.1	G COR												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

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						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)
	02230		SD-03 Product Data														
			Materials Other Than Salable Timber	3.3.1	G RE												
	02325		SD-01 Preconstruction Submittals														
			Notice of Intent to Dredge														
			FIO														
			Relocation of Navigation Aids														
			SD-07 Certificates														
			Notification of Discovery of Historical Period Shipwreck Sites														
			FIO														
			Notice of Need for Dredging Survey														
			Daily/Monthly Report of Operations														
			Notice of Misplaced Material														
	02464		SD-02 Shop Drawings														
			Steel Sheet Piles	2.1	G												
			SD-07 Certificates														
			Pile Pulling Method														
			Material Certificates														
			Pile Driving Equipment														
			Interlock Tension Test Procedure														
			SD-11 Closeout Submittals														
			Pile Driving Records														
	05055		SD-02 Shop Drawings														

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

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						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)
		05055	Detail Drawings		G												
			SD-03 Product Data														
			Welding Procedures of Structural Steel		G												
			Structural Steel Welding Repairs	2.3.3	G												
			Materials Orders	2.1.1	G												
			Materials List	2.1.2	G												
			Shipping Bill		G												
			SD-06 Test Reports														
			Tests, Inspections, and Verifications	2.3	G												
			SD-07 Certificates														
			Qualification of Welders, Welding Operators and Certification of NDT Operators		G												
			SD-11 Closeout Submittals														
			Materials Disposition Records														
		09965	SD-03 Product Data														
			Accident Prevention Plan		G SO												
			Confined Space Procedures		G SO												
			Respiratory Protection Program		G SO												
			Airborne Sampling Plan		G SO												
			Ventilation Assessment		G SO												
			Medical Surveillance Plan		G SO												
			Worker Protection Plan		G SO												
			Environmental Compliance Plan		G SO												

SUBMITTAL REGISTER

CONTRACT NO.
DACW17-02-B-0011

TITLE AND LOCATION						CONTRACTOR											
La Esperanza Peninsula, Catano, Puerto Rico (Rev Am #0001)																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	GOVT CLASSIFICATION REVIEW NUMBER	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)
		09965	Waste Classification, Handling, and Disposal Plan		G SO												
			Containment Plan		G ED												
			Visible Emissions Monitoring Plan		G SO												
			Ambient Air Monitoring Plan		G SO												
			SD-04 Samples														
			Specification and Proprietary Paints		G COR												
			Thinners		G COR												
			SD-06 Test Reports														
			Airborne Sampling Report		G SO												
			Inspection and Operation Records		G COR												
			SD-07 Certificates														
			Qualifications and Experience		G SO												
			Qualified Painting Contractor		G ED												
			Qualified Coating Thickness Gages		G COR												

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DIVISION 02 - SITE WORK

SECTION 02464

STEEL SHEET PILES

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- 1.2 SUBMITTALS
- 1.3 DELIVERY, STORAGE AND HANDLING

PART 2 PRODUCTS

- 2.1 STEEL SHEET PILES
- 2.2 STEEL PLATES
- 2.3 TESTS, INSPECTIONS, AND VERIFICATIONS
 - 2.3.1 Materials Tests

PART 3 EXECUTION

- 3.1 GRADING
- 3.2 INSTALLATION
 - 3.2.1 Pile Driver
 - 3.2.2 Pile Protection
 - 3.2.3 Pile Driving
 - 3.2.4 Cutting and Splicing
 - 3.2.5 Welding
 - 3.2.6 Tolerances in Driving
 - 3.2.7 Corrosion Protection
- 3.3 INSPECTION
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 - 3.3.2 Pulling and Redriving
- 3.4 INSTALLATION RECORDS

-- End of Section Table of Contents --

SECTION 02464

STEEL SHEET PILES

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 6/A 6M	(2000) General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
ASTM A 572/A 572M	(200) High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM A 690/A 690M	(1994) High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments

AMERICAN WELDING SOCIETY, INC. (AWS)

AWS D1.1	(2000) Structural Welding Code - Steel
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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

Steel Sheet Piles; G

Submit drawings for approval prior to start of the work or ordering materials. Include details of top protection, special reinforcing tips, tip protection, lagging, and fabricated additions to plain piles and driving, cut-off method, and corrosion protection. Drawings for sheet piling including fabricated sections shall show complete dimensions including minimum section properties and details of piling and the driving sequence and location of piling. Include details and dimensions of templates and other temporary guide structures for installing the piling. Provide details of the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

~~SD-06 Test Reports~~

~~Materials Tests~~

~~Interlock tension strength test conform to the piling manufacturer's standard test, include testing at least two 3 inch long coupons taken randomly from different as produced pilings of each heat and must be approved by the Contracting Officer.~~

SD-07 Certificates

Pile Pulling Method

Material Certificates

Submit for each shipment certificates and identified with specific lots prior to installing piling. Identification data should include piling type, dimensions, chemical composition, mechanical properties, section properties, heat number, and mill identification mark.

Pile Driving Equipment

Submit descriptions of pile driving equipment to be employed in the work to the Contracting Officer for approval. Descriptive information includes manufacturer's name, model numbers, capacity, rated energy, hammer details, cushion material, helmet and templates.

Interlock Tension Test Procedure

Submit the procedure for testing the tension strength of piling interlocks as required herein for approval prior to testing sheet piling.

SD-11 Closeout Submittals

Pile Driving Records

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.

1.3 DELIVERY, STORAGE AND HANDLING

Handle piles using handling holes or lifting devices. Handle long length piles with care to prevent damage. Support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Supports between multiple lifts shall be in a vertical plane. Protect piling to prevent damage to coatings and to prevent corrosion prior to installation.

PART 2 PRODUCTS

2.1 STEEL SHEET PILES

Steel sheet piles should meet the requirements specified herein. Heavy gage hot-rolled sheet piling shall conform to ASTM A 572/A 572M, Grade 50, or ASTM A 690/A 690M. The interlock of sheet piling shall be free-sliding, allow a swing angle of at least 0.09 rad/ 5 degrees when threaded and maintain continuous interlocking when installed. Sheet piling including special fabricated sections shall be full-length sections of the dimensions shown. Fabricated sections shall conform to the requirements herein and the piling manufacturer's recommendations for fabricated sections. Provide sheet piling with standard pulling holes. Metalwork fabrication for sheet piling sections shall conform to the requirements of Section 05055, "Metalwork Fabrication".

2.2 STEEL PLATES

Structural steel plates for splices and other fabrication appurtenances shall conform to ASTM A 572/A 572M, Grade 50.

2.3 TESTS, INSPECTIONS, AND VERIFICATIONS

Requirements for material tests, workmanship and other measures for quality assurance shall be as specified and in Section 05055 METALWORK FABRICATION.

2.3.1 Materials Tests

Materials tests shall conform to the following requirements. Sheet piling and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of sheet piling shall meet the requirements of ASTM A 6/A 6M.

~~2.3.2 Interlocked Joint Strength in Tension Test~~

~~The interlocked joint strength in tension test shall conform to the piling manufacturer's standard test, include testing at least two 3 inch long coupons taken randomly from different as produced pilings of each heat and must be approved.~~

PART 3 EXECUTION

3.1 GRADING

Where indicated, work will be divided into grading areas within which satisfactory excavated material shall be placed in embankments, fills, and required backfills. The contractor shall not haul satisfactory material excavated in one grading area to another grading area except when so directed in writing. Pre-excavation or dredging will not be permitted. Backfill as indicated.

3.2 INSTALLATION

3.2.1 Pile Driver

Use a pile driver having a delivered force or energy suitable for the total weight of the pile and the character of subsurface material to be encountered. Operate the driver at the rate recommended by the manufacturer throughout the entire driving period. Repair damage to piling caused by use of a pile driver with excess delivered force or energy.

3.2.2 Pile Protection

Prior to driving, provide template or driving frame suitable for aligning, supporting, and maintaining sheet piling in the correct position during setting and driving. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved. Provide at least two levels of support, at third points (not less than 20 feet apart). Templates shall not move when supporting sheet piling. Fit templates with wood blocking to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment. Mark template for the location of the leading edge of each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means must be used to keep the sheet pile vertical along its leading edge.

3.2.3 Pile Driving

Maintain piling vertical during driving. Drive piles in such a manner as to prevent damage to the piles and to provide a continuous closure. Where possible, drive Z-pile with the ball end leading. If an open socket is leading, a bolt or similar object placed in the bottom of the interlock will minimize packing material into it and ease driving for the next sheet.

Incrementally sequence driving of individual piles such that the tip of any sheet pile shall not be more than 4 feet below that of any adjacent sheet pile. When the penetration resistance exceeds five blows per inch, the tip of any sheet pile shall not be more than 2 feet below any adjacent sheet pile.

3.2.4 Cutting and Splicing

Piles driven to refusal or the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Piles driven below the required top elevation and piles damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed by the Contracting Officer. Unless absolutely required, splicing of sheet piles should be avoided. If directed by the Contracting Officer, splice piles as required to drive them to depths greater than shown on the drawings and extend them up to the required top elevation. Piles adjoining spliced piles shall be full length unless otherwise approved. If splices are allowed in adjoining piles, the splices must be spaced at least 20 feet apart in elevation. Welding of splices shall conform to the requirements of Section 05055, "Metalwork Fabrication." Ends of piles to be spliced shall be squared before splicing to eliminate dips or camber. Splice piles with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks. Spliced piles shall be free sliding and able to obtain the maximum swing with contiguous piles. Trim the tops of piles excessively battered during driving, when directed at no cost to the Government. Pile cut-offs shall become the property of the Contractor and shall be removed from the site. Use a straight edge in cutting by burning to avoid abrupt nicks. Bolt holes shall be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes shall be reasonably smooth and of the proper size for rods or other items to be

inserted. Do not use explosives for cutting.

3.2.5 Welding

Shop and field welding, qualification of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1.

3.2.6 Tolerances in Driving

Drive all piles with a variation from vertical of not more than 1/4 inch per foot. Place the pile so the face will not be more than 6 inches from vertical alignment at any point. Top of pile at elevation of cut-off shall be within 1/2 inch horizontally and 2 inches vertically of the location indicated. Manipulation of piles to force them into position will not be permitted. Check all piles for heave. Redrive all heaved piles to the required tip elevation.

3.2.7 Corrosion Protection

Coat sheet piling in accordance with Section 09965, "PAINTING: STEEL SHEET PILES".

3.3 INSPECTION

Perform continuous inspection during pile driving. Inspect all piles for compliance with tolerance requirements. Bring any unusual problems which may occur to the attention of the Contracting Officer.

3.3.1 Inspection of Driven Piling

The Contractor shall inspect the interlocks of the portion of driven piles that extend above ground. Remove and replace piles found to be out of interlock.

3.3.2 Pulling and Redriving

The Contractor may be required to pull selected piles after driving to determine the condition of the underground portions of piles. The pile pulling method must be approved by the Contracting Officer. Remove and replace at the Contractor's expense any pile pulled and found to be damaged to the extent that its usefulness in the structure is impaired. Re-drive piles pulled and found to be in satisfactory condition.

3.4 INSTALLATION RECORDS

Maintain a pile driving record for each sheet pile. Indicate on the installation record installation dates and times, type and size of hammer, rate of operation, total driving time, dimensions of driving helmet and cap used, blows required per foot for each foot of penetration, final driving resistance in blows for final 6 inches, pile locations, tip elevations, ground elevations, cut-off elevations, and any re-heading or cutting of piles. Record any unusual pile driving problems during driving. Submit complete records to the Contracting Officer.

-- End of Section --

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PAINTING: STEEL SHEET PILES

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1.3.2 Certified Laboratory

1.3.3 Qualified Painting Contractor

1.3.4 Qualified Paint Applicator

1.3.4.1 Test Plate

1.3.4.2 Certification Test Procedure

1.3.4.3 Certification Criteria

1.3.5 Coating Thickness Gage Qualification

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1.5.1.1 Hoses And Nozzles

1.5.1.2 Workers Other Than Blasters

1.5.2 Cleaning with Compressed Air

1.5.3 Cleaning with Solvents

1.5.3.1 Ventilation

1.5.3.2 Personal Protective Equipment

1.5.4 Pretreatment of Metals and Concrete with Acids

1.5.4.1 Personal Protective Equipment

1.5.4.2 Emergency Equipment

1.5.5 Mixing Epoxy and Polyurethane Resin Formulations

1.5.5.1 Exhaust Ventilation

1.5.5.2 Personal Protective Equipment

1.5.5.3 Medical Precautions

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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 NATIONAL STANDARDS INSTITUTE (ANSI)
ANSI Z87.1 (1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection
ANSI Z358.1 (1990) Emergency Eyewash and Shower Equipment

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
ASTM D 12 (1988; R 1998) Raw Tung Oil
ASTM D 153 (1986; R 1996e1) Specific Gravity of Pigments
ASTM D 235 (1999) Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)
ASTM D 281 (1995) Oil Absorption of Pigments by Spatula Rub-Out
ASTM D 304 (1995; R 1999) n-Butyl Alcohol (Butanol)
ASTM D 520 (1984; R 1995e1) Zinc Dust Pigment
ASTM D 561 (1982; R 1999) Carbon Black Pigment for Paint
ASTM D 740 (1994; R 1997) Methyl Ethyl Ketone
ASTM D 841 (1997) Nitration Grade Toluene
ASTM D 962 (1981; R 1999) Aluminum Powder and Paste Pigments for Paints
ASTM D 1045 (1995) Sampling and Testing Plasticizers Used in Plastics
ASTM D 1152 (1989; R 1997) Methanol (Methyl Alcohol)
ASTM D 1153 (1994; R 1997) Methyl Isobutyl Ketone
ASTM D 1186 (1993) Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base
ASTM D 1200 (1994; R 1999) Viscosity by Ford Viscosity Cup
ASTM D 1210 (1996) Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage
ASTM D 1308 (1987; R 1998) Effect of Household Chemicals on Clear and Pigmented Organic Finishes
ASTM D 1400 (1994) Nondestructive Measurement of Dry

Film Thickness of Nonconductive Coatings Applied to a Nonferrous Metal Base

ASTM D 1475 (1998) Density of Paint, Varnish, Lacquer, and Related Products

ASTM D 1640 (1995; R 1999) Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

ASTM D 2369 (1998) Volatile Content of Coatings

ASTM D 2917 (1991; R 1998) Methyl Isoamyl Ketone

ASTM D 3721 (1983; R 1999) Synthetic Red Iron Oxide Pigment

ASTM D 4206 (1996) Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus

ASTM D 4417 (1993; R 1999) Field Measurement of Surface Profile of Blast Cleaned Steel

ASTM E 1347 (1997) Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.20 Access to Employee Exposure and Medical Records

29 CFR 1910.94 Ventilation

29 CFR 1910.134 Respiratory Protection

29 CFR 1910.146 Permit-required Confined Spaces

29 CFR 1910, Subpart I Personal Protective Equipment

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.62 Lead

40 CFR 50.6 National Primary and Secondary Ambient Air Quality Standards for Particulate Matter

40 CFR 50.12 National Primary and Secondary Ambient Air Quality Standards for Lead

40 CFR 50, App B Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere

40 CFR 58, App E Probe Siting Criteria for Ambient Air Quality Monitoring

40 CFR 60, App A, Mtd 22 Visual Determination of Fugitive Emissions

from Material Sources and Smoke Emissions from Flares

40 CFR 117 Determination of Reportable Quantities for Hazardous Substances

40 CFR 122 EPA Administered Permit Programs: The National Pollutant Discharge Elimination System

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 261, App III Chemical Analysis Test Methods

40 CFR 261, App II, Mtd 1311 Toxicity Characteristic Leaching Procedure (TCLP)

40 CFR 262 Standards Applicable to Generators of Hazardous Waste
40 CFR 262.22 Number of Copies
40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
40 CFR 302 Designation, Reportable Quantities and Notification
40 CFR 355 Emergency Planning and Notification
49 CFR 171, Subchapter C Hazardous Materials Regulations

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-3130 Paint (For Application to Wet Surfaces)
CID A-A-3132 Coating System: Epoxy Primer/Urethane Topcoat, For Minimally Prepared Atmospheric Steel
CID A-A-50542 (Rev A) Coating System: Reflective, Slip-Resistant, Chemical-Resistant Urethane for Maintenance Facility Floors

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

FEDERAL STANDARDS (FED-STD)

FED-STD-595 (Rev B, Notice 1) Colors Used in Government Procurement

MASTER PAINTERS INSTITUTE (MPI)

MPI #9 Exterior Alkyd Enamel
MPI #46 Interior Enamel Undercoat
MPI #47 Interior Alkyd, Semi-Gloss
MPI #48 Interior Alkyd, Gloss
MPI #49 Interior Alkyd, Flat
MPI #50 Interior Latex Primer Sealer
MPI #51 Interior Alkyd, Eggshell
MPI #52 Interior Latex, Gloss Level 3
MPI #53 Interior Latex, Flat
MPI #54 Interior Latex, Semi-Gloss
MPI #114 Interior Latex, High Gloss (Acrylic)

MILITARY SPECIFICATIONS (MS)

MS MIL-DTL-24441 (Rev C, Supplement 1) Paint, Epoxy-Polyamide

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
(NIOSH)
NIOSH Pub No. 98-119 (1998, 4th Ed., 2nd Supplement) NIOSH
Manual of Analytical Methods

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SECTION 09965 Page 9.CEGS
SSPC Guide 6 (1995) Containing Debris Generated During
Paint Removal Operations
SSPC QP 1 (1998) Standard Procedure for Evaluating
Qualifications of Painting Contractors

SSPC QP 2 (1995) Standard Procedure for Evaluating the
Qualifications of Painting Contractors to Remove Hazardous
Paint

SSPC Paint 16 (1991) Coal Tar Epoxy-Polyamide Black (or
Dark Red) Paint

SSPC Paint 20 (1991) Zinc-Rich Primers (Type I - "Inorganic"
and Type II - "Organic")

SSPC Paint 25 (1991) Red Iron Oxide, Zinc Oxide, Raw
Linseed Oil and Alkyd Primer (Without Lead and Chromate
Pigments)

SSPC Paint 27 (1991) Basic Zinc Chromate-Vinyl Butyral Wash
Primer

SSPC Paint 33 (1995) Coal Tar Mastic, Cold-Applied

SSPC PS 26.00 (2000) Aluminum-Pigmented Coating System for
Steel Surfaces, Performance-Based

SSPC SP 1 (1982) Solvent Cleaning

SSPC SP 3 (1995) Power Tool Cleaning

SSPC SP 5/NACE 1 (1994) White Metal Blast Cleaning

SSPC SP 6/NACE 3 (1994) Commercial Blast Cleaning

SSPC SP 7/NACE 4 (1994) Brush-Off Blast Cleaning

1.3 SUBMITTALS

Government approval is required for submittals with a "G"
designation; submittals not having a "G" designation are
for information only. When used, a designation following
the "G" designation identifies the office that will review
the submittal for the Government. The following shall be
submitted in accordance with Section 01330 SUBMITTAL

PROCEDURES:

SD-03 Product Data

Accident Prevention Plan; G, [Safety Office]

The Contractor shall submit an Accident Prevention Plan in

accordance with the requirements of Section 01 of EM 385-1-1. The plan shall include, but is not limited to, each of the topic areas listed in Appendix A therein and the requirements of paragraph SAFETY AND HEALTH PROVISIONS; each topic shall be developed in a concise manner to include management and operational aspects.

Confined Space Procedures; G, [Safety Office]

The Contractor shall submit detailed written standard operating procedures for confined spaces in accordance with 29 CFR 1910.146 and EM 385-1-1, Section 6I, and as further described in this paragraph.

a. The procedures shall include certificates of calibration for all testing and monitoring equipment. The certificates of calibration shall include: type of equipment, model number, date of calibration, firm conducting calibration, and signature of individual certifying calibration.

b. The procedures shall include methods of inspection of personal protective equipment prior to use.

c. The procedures shall include work practices and other engineering controls designed to reduce airborne hazardous chemical exposures to a minimum.

d. The procedures shall include specification of the design and installation of ventilation systems which shall provide adequate oxygen content and provide for the dilution of paint solvent vapor, lead, and other toxic particulates within the confined space. In addition, the contractor shall include plans to evaluate the adequacy of air flow patterns.

Respiratory Protection Program; G, [Safety Office]

The Contractor shall submit a comprehensive written respiratory protection program in accordance with 29 CFR 1910.134, 29 CFR 1926.62, and Section 05.E of EM 385-1-1.

Airborne Sampling Plan; G, [Safety Office]

The contractor shall submit an Airborne Sampling Plan detailing the NIOSH Pub No. 98-119, Factory Mutual, or Underwriters Laboratories approved equipment, equipment calibration procedures, sampling methods, sampling to be performed, and analytical procedures to be used based on the type of work to be performed and anticipated toxic contaminants to be generated. The contractor shall include the name of the accredited laboratory, listed by the American Industrial Hygiene Association (AIHA), to be used to conduct the analysis of any collected air samples.

Ventilation Assessment; G, [Safety Office]

The contractor shall submit a plan to provide ventilation assessment as required by paragraph PAINT APPLICATION, subparagraph VENTILATION.

Medical Surveillance Plan; G, [Safety Office]

The Contractor shall submit a Medical Surveillance Plan as required in paragraph MEDICAL STATUS and provide a statement from the examining physician indicating the name of each employee evaluated and any limitations which will preclude the employee from performing the work required. The statement shall include the date of the medical evaluation, the physician's name, signature, and telephone number.

Worker Protection Plan; G, [Safety Office]

The Contractor shall submit a Worker Protection Plan in accordance with the requirements of 29 CFR 1926.62. The plan shall address all necessary aspects of worker protection and shall include activities emitting lead, means to achieve compliance, alternative technologies considered, air monitoring program, implementation schedule, work practice program, administrative controls, multicontractor site arrangements, and jobsite inspections.

Environmental Compliance Plan; G, [Safety Office]

The Contractor shall submit an Environmental Compliance Plan.

The plan shall incorporate the submittals for, Ambient Air Monitoring Plan and Visible Emissions Monitoring Plan. The submitted plan shall also address all aspects of establishing and demarcating regulated areas, ventilation/containment system performance verification, and reporting of accidental releases.

Waste Classification, Handling, and Disposal Plan; G, [Safety Office]

The contractor shall submit a Waste Classification, Handling, and Disposal Plan in accordance with the requirements of 40 CFR 261 and 40 CFR 262 and paragraph Waste Classification, Handling, and Disposal.

Containment Plan; G, [EN]

The Contractor shall submit a plan for containing debris generated during paint removal operations in accordance with the requirements of paragraph Containment. The plan

shall include drawings, load-bearing capacity calculations, and wind load calculations. When the design is such that the spent abrasive is allowed to accumulate in quantities greater than 1,000 pounds, and/or impart a significant wind load on the structure, the contractor shall have the drawings approved by a registered structural engineer. The drawings and calculations shall be stamped with the engineer's seal. The contractor shall also identify the type and placement of water booms, methods for anchoring the booms, and the procedures for removing debris.

Visible Emissions Monitoring Plan; G, [Safety Office]
The Contractor shall submit a Visible Emissions Monitoring Plan in accordance with the paragraph Visible Emissions Monitoring. The plan shall include the provisions for halting work and correcting the containment in the event unacceptable emissions are observed. General statements shall not be used; specific methods, procedures, and details are required.

Ambient Air Monitoring Plan; G, [Safety Office]
The Contractor shall submit a plan for monitoring emissions of particulate matter 10 microns or less in size (PM-10). The plan shall comply with the requirements of EPA regulation 40 CFR 50.6 and paragraph PM-10 Monitoring. The plan shall also include provisions for halting work and correcting the containment in the event unacceptable emissions occur. The Contractor shall submit a plan for monitoring emissions of Total Suspended Particulates (TSP). The plan shall comply with the requirements of EPA regulation 40 CFR 50.12 and paragraph TSP Monitoring. The plan shall also include provisions for halting work and correcting the containment in the event unacceptable emissions occur.

SD-04 Samples

Specification and Proprietary Paints; G, [Area Office]
The Contractor shall submit samples of all special paint formula, Military, Master Painter Institute, Commercial Item Description, and SSPC paints. For products that are specified to be applied in accordance with the manufacturer's recommendations. The Contractor shall submit the paint producers product data sheet or other written instructions for those products. When the required quantity of any type is 50 gallons or less, the

Contractor shall submit in lieu of the liquid paint sample:

- a. A certified test report showing the results of required tests made on the material and a statement that it meets all of the specification requirements.
- b. A certified test report showing the results of required tests made on a previous batch of paint produced by the same firm using the same ingredients and formulation except for minor differences necessitated by a color change and a statement that the previous batch met all of the specification requirements. A report of tests on the proposed batch showing the following properties applicable to the material specifications shall be furnished: color, gloss, drying time, opacity, viscosity, weight per gallon, and fineness of grind.

Thinners; G, [Area Office]

Samples shall be submitted of the thinners which are those solvents used to reduce the viscosity of the paint.

SD-06 Test Reports

Airborne Sampling Report; G, [Safety Office]

The Contractor shall submit reports of airborne sampling tests as required by paragraph Airborne Sampling.

Inspection and Operation Records; G, [Area Office]

The Contractor shall submit records of inspections and operations performed in accordance with paragraph INSPECTION.

Submittals shall be made on a daily basis.

SD-07 Certificates

Qualifications and Experience; G, [Safety Office]

The Contractor shall submit certification pursuant to paragraph QUALIFICATIONS for all job sites. Submittal of the qualifications and experience of any additional qualified and competent persons employed to provide on-site environmental, safety, and health shall also be provided. Acceptance of this submission must be obtained prior to the submission of other required environmental safety, and health submittal items.

Qualified Painting Contractor; G, [EN]

The Contractor shall submit a copy of their current SSPC QP 1 certification.

Qualified Coating Thickness Gages; G, [Area Office]

Documentation of manufacturer's certification shall be submitted for all coating thickness gages.

1.3 QUALIFICATIONS

Qualifications and experience shall comply with the following:

1.3.1 Certified Professional

The Contractor shall utilize a qualified and competent person as defined in Section 01 of EM 385-1-1 to develop the required safety and health submittal and to provide on-site safety and health services during the contract period. The person shall be a Certified Industrial Hygienist (CIH), with a minimum of 3 years of demonstrated experience in similar related work. The Contractor shall certify that the Certified Industrial Hygienist (CIH) holds current and valid certification from the American Board of Industrial Hygiene (ABIH). The CIH may utilize other qualified and competent persons, as defined in EM 385-1-1, to conduct on-site safety and health activities as long as these persons have a minimum of 2 years of demonstrated experience in similar related work and are under the direct supervision of CIH.

1.3.2 Certified Laboratory

The Contractor shall provide documentation which includes the name, address, and telephone number of the laboratories to be providing services. In addition, the documentation shall indicate that each laboratory is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that each is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT) and will document the date of current accreditation. Certification shall include accreditation for heavy metal analysis, list of experience relevant to analysis of lead in air, and a Quality Assurance and Quality Control Program.

1.3.3 Qualified Painting Contractor

The Contractor shall be a certified SSPC-QP 1 Painting Contractor.

1.3.4 Qualified Paint Applicator

Documentation of certification shall be submitted for all paint applicators. Prior to the initiation of any work all paint applicators shall be tested and certified as meeting the requirements of the qualified paint applicator. Certification shall be administered by the government

approved independent third party Test Agency. Applicators failing the certification test shall not be permitted to apply any paint on the project.

1.3.4.1 Test Plate

The test plate shall consist of a 6 feet by 6 feet steel plate with a 3/8 inch minimum thickness. The test plate shall have at least six bolts, three with bolt heads exposed and three with threads exposed, a 12-inch wide flange and a 6-inch diameter pipe each 18-inches long welded perpendicular to the test panel and a 6-inch deep T-beam with sealed ends welded horizontal across the test panel one foot up from the bottom all within the area to be painted on one side. Bolts shall be one-inch minimum in diameter.

1.3.4.2 Certification Test Procedure

Certification testing of paint applicators shall be conducted at the job site in coordination with the Contracting Officer. The Contractor shall supply the fabricated test plates to be used for the tests and shall provide crane service, rigging, and any other work necessary to provide accessibility for the certification testing and inspection. In preparation, the Contractor shall clean and prepare the test plates in accordance with the requirements of the contracted work. Abrasive blasting shall be performed with the blast media to be used in the contract. The paints to be applied shall be the Contractor supplied materials and shall be those previously tested and approved for use on the contract. Paints shall be applied as specified in the contract. The painter being tested shall mix and thin the paints to be used in the test and shall set up and adjust the application equipment for use. Each painter shall apply each of the types of paint comprising the specified system. The test plate shall be painted in a near vertical position.

1.3.4.3 Certification Criteria

The paint applicator shall be evaluated based on the conformance of the applied paint system to the requirements of the specifications. Deficiencies in the coatings, improper mixing or improper application methods are basis for failure. The Test Agency shall be the sole judge as to the acceptability of each paint applicators performance.

1.3.5 Coating Thickness Gage Qualification

Documentation of certification shall be submitted for all coating thickness gages. Magnetic flux thickness gages as described in ASTM D 1186 shall be used to make all coating thickness measurements on ferrous metal substrates. Eddy current thickness gages as described in ASTM D 1400 shall be used to measure coating thickness on all nonferrous metal substrates. Gages shall have an accuracy of +/- 3 percent or better. Gages to be used on the job shall be certified by the manufacturer as meeting these requirements.

1.4 SAMPLING AND TESTING

The Contractor shall allow at least 30 days for sampling and testing. Sampling may be at the job site or source of supply. The Contractor shall notify the Contracting Officer when the paint and thinner are available for sampling. Sampling of each batch shall be witnessed by the Contracting Officer unless otherwise specified or directed. A 1-quart sample of paint and thinner shall be submitted for each batch proposed for use. The sample shall be labeled to indicate formula or specification number and nomenclature, batch number, batch quantity, color, date made, and applicable project contract number. Testing will be performed by the Government. Costs for retesting rejected material will be deducted from payments to the Contractor at the rate of [\$1000.00] dollars for each paint sample retested and [\$750.00] dollars for each thinner retested.

1.5 SAFETY AND HEALTH PROVISIONS

Work shall be performed in accordance with the requirements of 29 CFR 1910, 29 CFR 1926, EM 385-1-1, and other references as listed herein. Matters of interpretation of the standards shall be submitted to the Contracting Officer for resolution before starting work. Where the regulations conflict, the most stringent requirements shall apply. Paragraph SAFETY AND HEALTH PROVISIONS supplements the requirements of EM 385-1-1, paragraph (1). In any conflict between Section 01 of EM 385-1-1 and this paragraph, the provisions herein shall govern.

1.5.1 Abrasive Blasting

The Contractor shall comply with the requirements in

Section 06.H of EM 385-1-1.

1.5.1.1 Hoses And Nozzles

In addition to the requirements in Section 20 of EM 385-1-1, hoses and hose connections of a type to prevent shock from static electricity shall be used. Hose lengths shall be joined together by approved couplings of a material and type designed to prevent erosion and weakening of the couplings. The couplings and nozzle attachments shall fit on the outside of the hose and shall be designed to prevent accidental disengagement.

1.5.1.2 Workers Other Than Blasters

Workers other than blasting operators working in close proximity to abrasive blasting operations shall be protected by utilizing MSHA/NIOSH-approved half-face or full-face air purifying respirators equipped with high-efficiency particulate air (HEPA) filters, eye protection meeting or exceeding ANSI Z87.1 and hearing protectors (ear plugs and/or ear muffs) providing a noise reduction rating of at least 20 dBA or as needed to provide adequate protection.

1.5.2 Cleaning with Compressed Air

Cleaning with compressed air shall be in accordance with Section 20.B.5 of EM 385-1-1 and personnel shall be protected as specified in 29 CFR 1910.134.

1.5.3 Cleaning with Solvents

1.5.3.1 Ventilation

Ventilation shall be provided where required by 29 CFR 1910.146 or where the concentration of solvent vapors exceeds 10 percent of the Lower Explosive Limit (LEL). Ventilation shall be in accordance with 29 CFR 1910.94, paragraph (c)(5).

1.5.3.2 Personal Protective Equipment

Personal protective equipment shall be provided where required by 29 CFR 1910.146 and in accordance with 29 CFR 1910, Subpart I.

1.5.4 Pretreatment of Metals and Concrete with Acids

1.5.4.1 Personal Protective Equipment Personnel shall be protected in accordance with 29 CFR 1910, Subpart I.

1.5.4.2 Emergency Equipment

In addition to the requirements of Section 05 of EM 385-1-1, the Contractor shall provide an eyewash in accordance

with ANSI Z358.1, paragraph (6).

1.5.5 Mixing Epoxy and Polyurethane Resin Formulations

1.5.5.1 Exhaust Ventilation

Local exhaust ventilation shall be provided in the area where the curing agent and resin are mixed. This ventilation system shall be capable of providing at least 100 linear fpm of capture velocity measured at the point where the curing agent and resin contact during mixing.

1.5.5.2 Personal Protective Equipment

Exposure of skin and eyes to epoxy resin components shall be avoided by wearing appropriate chemically resistant gloves, apron, safety goggles, and face shields meeting or exceeding the requirements of ANSI Z87.1.

1.5.5.3 Medical Precautions

Individuals who have a history of sensitivity to epoxy or polyurethane resin systems shall be medically evaluated before any exposure can occur. Individuals who are medically evaluated as exhibiting a sensitivity to epoxy resins shall not conduct work tasks or otherwise be exposed to such chemicals. Individuals who develop a sensitivity shall be immediately removed from further exposure and medically evaluated.

1.5.5.4 Emergency Equipment

A combination unit, comprised of an eyewash and deluge shower, within close proximity to the epoxy or polyurethane resin mixing operation shall be provided in accordance with ANSI Z358.1, paragraph (9).

1.5.6 Paint Application

1.5.6.1 Ventilation

When using solvent-based paint in confined spaces, ventilation shall be provided to exchange air in the space at a minimum rate of 5,000 cubic feet per minute per spray gun in operation. It may be necessary to install both a mechanical supply and exhaust ventilation system to effect adequate air changes within the confined space. All air-moving devices shall be located and affixed to an opening of the confined space in a manner that assures that the airflow is not restricted or short circuited and is supplied in the proper direction. Means of egress shall not be blocked. Ventilation shall be continued after completion of painting and through the drying phase of the operation. If the ventilation system fails or the

concentration of volatiles exceeds 10 percent of the LEL (except in the zone immediately adjacent to the spray nozzle), painting shall be stopped and spaces evacuated until such time that adequate ventilation is provided. An audible alarm that signals system failure shall be an integral part of the ventilation system. The effectiveness of the ventilation shall be checked by using ventilation smoke tubes and making frequent oxygen and combustible gas readings during painting operations. Exhaust ducts shall discharge clear of the working areas and away from possible sources of ignition.

1.5.6.2 Explosion Proof Equipment

Electrical wiring, lights, and other equipment located in the paint spraying area shall be of the explosion proof type designed for operation in Class I, Division 1, Group D, hazardous locations as required by the NFPA 70. Electrical wiring, motors, and other equipment, outside of but within 20 feet of any spraying area, shall not spark and shall conform to the provisions for Class I, Division 2, Group D, hazardous locations. Electric motors used to drive exhaust fans shall not be placed inside spraying areas or ducts. Fan blades and portable air ducts shall be constructed of nonferrous materials. Motors and associated control equipment shall be properly maintained and grounded. The metallic parts of air-moving devices, spray guns, connecting tubing, and duct work shall be electrically bonded and the bonded assembly shall be grounded.

1.5.6.3 Further Precautions

- a. Workers shall wear nonsparking safety shoes.
- b. Solvent drums taken into the spraying area shall be placed on nonferrous surfaces and shall be grounded. Metallic bonding shall be maintained between containers and drums when materials are being transferred.
- c. Insulation on all power and lighting cables shall be inspected to ensure that the insulation is in excellent working condition and is free of all cracks and worn spots. Cables shall be further inspected to ensure that no connections are within 50 feet of the operation, that lines are not overloaded, and that they are suspended with sufficient slack to prevent undue stress or chafing.

1.5.6.4 Ignition Sources

Ignition sources, to include lighted cigarettes, cigars,

pipes, matches, or cigarette lighters shall be prohibited in area of solvent cleaning, paint storage, paint mixing, or paint application.

1.5.7 Health Protection

1.5.7.1 Air Sampling

The Contractor shall perform air sampling and testing as needed to assure that workers are not exposed to contaminants above the permissible exposure limit. In addition, the Contractor shall provide the Contracting Officer with a copy of the test results from the laboratory within five working days of the sampling date and shall provide results from direct-reading instrumentation on the same day the samples are collected.

1.5.7.2 Respirators

During all spray painting operations, spray painters shall use approved SCBA or SAR (air line) respirators, unless valid air sampling has demonstrated contaminant levels to be consistently within concentrations that are compatible with air-purifying respirator Assigned Protection Factor (APF). Persons with facial hair that interferes with the sealing surface of the face piece to face seal or interferes with respirator valve function shall not be allowed to perform work requiring respiratory protection. Air-purifying chemical cartridge/canister half- or full-face piece respirators that have a particulate prefilter and are suitable for the specific type(s) of gas/vapor and particulate contaminant(s) may be used for nonconfined space painting, mixing, and cleaning (using solvents). These respirators may be used provided the measured or anticipated concentration of the contaminant(s) in the breathing zone of the exposed worker does not exceed the APF for the respirator and the gas/vapor has good warning properties or the respirator assembly is equipped with a NIOSH-approved end of service life indicator for the gas(es)/vapor anticipated or encountered. Where paint contains toxic elements such as lead, cadmium, chromium, or other toxic particulates that may become airborne during painting in nonconfined spaces, air-purifying half- and full-face piece respirators or powered air-purifying respirators equipped with appropriate gas vapor cartridges, in combination with a high-efficiency filter, or an appropriate canister incorporating a high-efficiency filter, shall be used.

1.5.7.3 Protective Clothing and Equipment

All workers shall wear safety shoes or boots, appropriate gloves to protect against the chemical to be encountered, and breathable, protective, full-body covering during spray-painting applications. Where necessary for emergencies, protective equipment such as life lines, body harnesses, or other means of personnel removal shall be used during confined-space work.

1.6 MEDICAL STATUS

Prior to the start of work and annually thereafter, all Contractor employees working with or around paint systems, thinners, blast media, those required to wear respiratory protective equipment, and those who will be exposed to high noise levels shall be medically evaluated for the particular type of exposure they may encounter. Medical records shall be maintained as required by 29 CFR 1910.20. The evaluation shall include:

- a. Audiometric testing and evaluation of employees who will work in a noise environment with a time weighted average greater than or equal to 90 dBA.
- b. Vision screening (employees who use full-face piece respirators shall not wear contact lenses).
- c. Medical evaluation shall include, but shall not be limited to, the following:
 - (1) Medical history including, but not limited to, alcohol use, with emphasis on liver, kidney, and pulmonary systems, and sensitivity to chemicals to be used on the job.
 - (2) General physical examination with emphasis on liver, kidney, and pulmonary system.
 - (3) Determination of the employee's physical and psychological ability to wear respiratory protective equipment and to perform job-related tasks.
 - (4) Determination of baseline values of biological indices for later comparison to changes associated with exposure to paint systems and thinners or blast media, which include: liver function tests to include SGOT, SGPT, GGPT, alkaline phosphates, bilirubin, complete urinalysis, EKG (employees over age 40), blood urea nitrogen (bun), serum creatinine, pulmonary function test, FVC, and FEV, chest x-ray (if medically indicated), blood lead and ZPP (for individuals where it is known there will be an exposure to materials containing lead), other criteria that may be deemed necessary by the Contractor's physician, and Physician's statements for individual employees that medical status would permit specific task performance.

(5) For lead-based paint removal, the medical requirements of 29 CFR 1926.62 shall also be included.

1.7 CHANGE IN MEDICAL STATUS

Any employee whose medical status has changed negatively due to work related chemical and/or physical agent exposure while working with or around paint systems and thinners, blast media, or other chemicals shall be evaluated by a physician, and the Contractor shall obtain a physicians statement as described in paragraph MEDICAL STATUS prior to allowing the employee to return to those work tasks. The Contractor shall notify the Contracting Officer in writing of any negative changes in employee medical status and the results of the physicians reevaluation statement.

1.8 ENVIRONMENTAL PROTECTION

In addition to the requirements of section 01354 the Contractor shall comply with the following environmental protection criteria.

1.8.1 Waste Classification, Handling, and Disposal

The Contractor shall be responsible for assuring the proper disposal of all hazardous and nonhazardous waste generated during the project. Hazardous waste shall be placed in properly labeled closed containers and shall be shielded adequately to prevent dispersion of the waste by wind or water. Any evidence of improper storage shall be cause for immediate shutdown of the project until corrective action is taken. Nonhazardous waste shall be stored in closed containers separate from hazardous waste storage areas. All hazardous waste shall be transported by a licensed transporter in accordance with 40 CFR 263 and 49 CFR 171, Subchapter C. All nonhazardous waste shall be transported in accordance with local regulations regarding waste transportation. In addition to the number of manifest copies required by 40 CFR 262.22, one copy of each manifest will be supplied to the Contracting Officer prior to transportation.

1.8.2 Containment

The Contractor shall contain debris generated during paint removal operations in accordance with the requirements of SSPC Guide 6, Class [_2A_]. Where required the minimum air movement velocity shall be 100 fpm for cross-draft ventilation or 60 fpm for downdraft ventilation.

1.8.3 Visible Emissions Monitoring

The time of emissions shall be measured in accordance with 40 CFR 60, App A, Mtd 22. Visible emissions shall be monitored for not less than 15 minutes of every hour. Visible emissions for each hour shall be calculated by extrapolation. In no case shall visible emissions extend greater than 150 ft in any direction horizontal from the containment. In no case shall visible emissions be observed in the area of any sensitive receptor. If such emissions occur the job shall be shut down immediately and corrective action taken. The foreman shall be notified whenever visible emissions exceed 200 seconds in a 1 hour period. The foreman shall be notified and the job shall be shut down and corrective action taken whenever visible emissions exceed 300 seconds in a 2 hour period. Total observed visible emissions from the containment shall not exceed 5 percent of the work day. Shutdown and corrective action shall be taken by the Contractor to prevent such an occurrence. The Contractor shall document each time that the work is halted due to a violation of the visible emissions criteria. Documentation shall include the cause for shutdown and the corrective action taken to resolve the problem.

1.9 PAINT PACKAGING, DELIVERY, AND STORAGE

Paints shall be processed and packaged to ensure that within a period of one year from date of manufacture, they will not gel, liver, or thicken deleteriously, or form gas in the closed container. Paints, unless otherwise specified or permitted, shall be packaged in standard containers not larger than 5 gallons, with removable friction or lug-type covers. Containers for vinyl-type paints shall be lined with a coating resistant to solvents in the formulations and capable of effectively isolating the paint from contact with the metal container. Each container of paint or separately packaged component thereof shall be labeled to indicate the purchaser's order number, date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name, and formula or specification number of the paint together with special labeling instructions, when specified. Paint shall be delivered to the job in unbroken containers. Paints that can be harmed by exposure to cold weather shall be stored in ventilated, heated shelters. All paints shall be stored under cover from the elements and in locations free

from sparks and flames.

PART 2 PRODUCTS

2.1 SPECIAL PAINT FORMULAS

Special paints shall have the composition as indicated in the formulas listed herein. Where so specified, certain components of a paint formulation shall be packaged in separate containers for mixing on the job. If not specified or otherwise prescribed, the color shall be that naturally obtained from the required pigmentation.

2.2 PAINT FORMULATIONS

Special paint formulas shall comply with the following:

2.2.1 Formula V-102e, Vinyl-Type Ready-Mixed Aluminum Impacted Immersion Coating

INGREDIENTS PERCENT BY MASS

Vinyl Resin, Type 3 18.2

Aluminum Powder 8.3

Diisodecyl Phthalate 3.1

Methyl Isobutyl Ketone 33.8

Toluene 36.6

INGREDIENTS PERCENT BY MASS

100.0

a. The paint shall be furnished with the aluminum pigment mixed into the vehicle.

b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.

2.2.2 Formula V-766e, Vinyl-Type White (or Gray) Impacted Immersion Coating

INGREDIENTS PERCENT BY MASS

Vinyl Resin, Type 3 5.6

Vinyl Resin, Type 4 11.6

Titanium Dioxide and (for Gray)

Carbon Black 13.0

Diisodecyl Phthalate 2.9

Methyl Isobutyl Ketone 32.0

Toluene 34.7

Ortho-Phosphoric Acid 0.2

100.0

- a. The dispersion of pigment shall be accomplished by means of pebble mills or other approved methods to produce a fineness of grind (ASTM D 1210) of not less than 7 on the Hegman scale. Grinding in steel-lined or steel-ball mills will not be permitted. No grinding aids, antissettling agents, or any other materials except those shown in the formula will be permitted. The paint shall show the proper proportions of specified materials when analyzed by chromatographic and/or spectrophotometric methods. The ortho-phosphoric acid shall be measured accurately and diluted with at least four parts of ketone to one part of acid and it shall be slowly incorporated into the finished paint with constant and thorough agitation.
- b. The viscosity of the paint shall be between 60 and 90 seconds using ASTM D 1200 and a No. 4 Ford cup.
- c. The white and gray paints shall be furnished in the volume ratio designated by the purchaser. The gray paint shall contain no pigments other than those specified. Enough carbon black shall be included to produce a dry paint film having a reflectance of 20-24 (ASTM E 1347). The resulting gray color shall approximate color 26231 of FED-STD-595.

2.2.3 Formula VZ-108d, Vinyl-Type Zinc-Rich Impacted Immersion Coating

INGREDIENTS PERCENT BY WEIGHT POUNDS GALLONS

COMPONENT A

Vinyl Resin, Type 3	16.6	109.2	9.65
Methyl Isobutyl Ketone	80.6	528.9	79.30
Suspending Agent E	0.7	4.6	0.28
Suspending Agent F	0.4	2.7	0.19
Methanol	0.5	3.3	0.50
Synthetic Iron Oxide (Red)	1.2	7.9	0.19

100.0	656.6	90.11
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COMPONENT B

INGREDIENTS PERCENT BY WEIGHT POUNDS GALLONS

Silane B	100.0	4.1	0.47
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COMPONENT C

Zinc Dust	100.0	550.0	9.42
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100.00	(mixed paint)
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The iron oxide and suspending agents shall be dispersed into the vehicle (Component A) to a fineness of grind of

not less than 4 on the Hegman scale (ASTM D 1210). Grinding in steel-lined containers or using steel-grinding media shall not be permitted. The sole purpose of the iron oxide pigment is to produce a contrasting color. A red iron oxide-type 3 vinyl resin vehicle paste may be used in place of dry iron oxide provided compensating adjustment are made in the additions of Type 3 resin and methyl isobutyl ketone. The finished product with zinc dust added shall produce a paint which has a red tone upon drying and a reflectance of not more than 16 (ASTM E 1347).

b. VZ-108d paint shall be supplied as a kit. Each kit shall consist of 4.5 gallons (33.1 pounds) of Component A in a 5-gallon lug closure type pail, 27.5 pounds of zinc dust (Component C) packaged in a 1-gallon plastic pail, and 3 fluid ounces of silane (Component B) packaged in a glass bottle of suitable size having a polyethylene lined cap. The bottle of silane shall be placed on the zinc dust in the 1 gallon pail. In addition to standard labeling requirements, each container of each component shall be properly identified as to component type and each container label of Component A shall carry the following:

MIXING AND APPLICATION INSTRUCTIONS: WARNING - THIS PAINT WILL NOT ADHERE TO STEEL SURFACES UNLESS COMPONENT B IS ADDED. Remove the 3 ounces of bottled Component B (silane) from the Component C (zinc dust) container and add to the base paint Component A) with thorough stirring. Then sift the zinc dust into the base paint while it is being vigorously agitated with a power-driven stirrer and continue the stirring until the zinc dust has been dispersed. The mixed paint shall at some point be strained through a 30-60 mesh screen to prevent zinc dust slugs from reaching the spray gun nozzle. The paint shall be stirred continuously during application at a rate that will prevent settling. If spraying is interrupted for longer than 15 minutes, the entire length of the hose shall be whipped vigorously to redisperse the zinc. If the spraying is to be interrupted for more than 1 hour, the hose shall be emptied by blowing the paint back into the paint pot. Thinning will not normally be required when ambient temperatures are below about 80 degrees F, but when the ambient and steel temperatures are higher, methyl isoamyl ketone (MIAK) or methyl isobutyl ketone (MIBK) should be used. If paint is kept covered at all times, its pot life will be about 8 days.

2.2.4 Formula C-200a, Coal Tar-Epoxy (Black) Paint

The paint shall conform to SSPC Paint 16 manufactured with Type 1 pitch. In addition to standard labeling, container labels shall include the term, Corps of Engineers Formula C-200a.

2.3 INGREDIENTS FOR SPECIAL PAINT FORMULAS

The following ingredient materials and thinners apply only to those special paints whose formulas are shown above in detail.

2.3.1 Pigments and Suspending Agents

2.3.1.1 Aluminum Powder

For vinyl paint aluminum powder shall conform to ASTM D 962, Type 1, Class B.

2.3.1.2 Carbon Black

Carbon black shall conform to ASTM D 561, Type I or II.

2.3.1.3 Zinc Dust

Zinc dust pigment shall conform to ASTM D 520, Type II.

2.3.1.4 Iron Oxide

Iron oxide, (Dry) synthetic (red), shall conform to ASTM D 3721. In addition, the pigment shall have a maximum oil absorption of 24 and a specific gravity of 4.90 to 5.20 when tested in accordance with ASTM D 281 and ASTM D 153, Method A, respectively. When the pigment is dispersed into specified vinyl paint formulation, the paint shall have color approximating FED-STD-595 color 10076 (dark red paint), and shall show no evidence of incompatibility or reaction between pigment and other components after 6 months storage.

2.3.1.5 Titanium Dioxide

Titanium dioxide in vinyl paint Formula V-766e shall be one of the following: Kronos 2160 or 2101, Kronos, Inc.; Ti-Pure 960, E.I. Dupont DeNemours and Co., Inc.

2.3.1.6 Suspending Agent E

Suspending Agent E shall be a light cream colored finely divided powder having a specific gravity of 2 to 2.3. It shall be an organic derivative of magnesium aluminum silicate mineral capable of minimizing the tendency of zinc

dust to settle hard without increasing the viscosity of the paint appreciably. MPA-14, produced by RHEOX, Inc., has these properties.

2.3.1.7 Suspending Agent F

Suspending Agent F shall be a light cream colored finely divided powder having a specific gravity of approximately 1.8. It shall be an organic derivative of a special montmorillonite (trialkylaryl ammonium hectorite). Bentone 27, produced by RHEOX, Inc., has these properties.

2.3.2 Resins, Plasticizer, and Catalyst

2.3.2.1 Diisodecyl Phthalate Diisodecyl Phthalate shall have a purity of not less than 99.0 percent, shall contain not more than 0.1 percent water, and shall have an acid number (ASTM D 1045) of not more than 0.10.

2.3.2.2 Vinyl Resin, Type 3

Vinyl resin, Type 3, shall be a vinyl chloride-acetate copolymer of medium average molecular weight produced by a solution polymerization process and shall contain 85 to 88 percent vinyl chloride and 12 to 15 percent vinyl acetate by weight. The resin shall have film-forming properties and shall, in specified formulations, produce results equal to Vinylite resin VYHH, as manufactured by the Union Carbide Corporation.

2.3.2.3 Vinyl Resin, Type 4

Vinyl resin, Type 4, shall be a copolymer of the vinyl chloride-acetate type produced by a solution polymerization process, shall contain (by weight) 1 percent interpolymerized dibasic acid, 84 to 87 percent vinyl chloride, and 12 to 15 percent vinyl acetate. The resin shall have film-forming properties and shall, in the specified formulations, produce results equal to Vinylite resin VMCH, as manufactured by the Union Carbide Corporation.

2.3.2.4 Ortho-phosphoric Acid

Ortho-phosphoric acid shall be a chemically pure 85-percent grade.

2.3.3 Solvent and Thinners

2.3.3.1 Methanol

Methanol (methyl alcohol) shall conform to ASTM D 1152.

2.3.3.2 Methyl Ethyl Ketone

Methyl ethyl ketone (MEK) shall conform to ASTM D 740.

2.3.3.3 Methyl Isobutyl Ketone

Methyl isobutyl ketone (MIBK) shall conform to ASTM D 1153.

2.3.3.4 Methyl Isoamyl Ketone

Methyl isoamyl ketone (MIAK) shall conform to ASTM D 2917.

2.3.3.5 Toluene

Toluene shall conform to ASTM D 841.

2.3.4 Silane B

Silane B for Formula VZ-108d shall be N-beta-(aminoethyl)-gamma-aminopropyltrimethoxy silane. Silane A-1120, produced by the C.K. Witco Corporation, and Silane Z-6020, produced by Dow Corning Corporation, are products of this type.

2.4 TESTING

2.4.1 Chromatographic Analysis

Solvents in vinyl paints and thinners shall be subject to analysis by programmed temperature gas chromatographic methods and/or spectrophotometric methods, employing the same techniques that give reproducible results on prepared control samples known to meet the specifications. If the solvent being analyzed is of the type consisting primarily of a single chemical compound or a mixture of two or more such solvents, interpretation of the test results shall take cognizance of the degree of purity of the individual solvents as commercially produced for the paint industry.

2.4.2 Vinyl Paints

Vinyl paints shall be subject to the following adhesion test. When V-766 formulation is tested, 5 to 7 mils (dry) shall be spray applied to mild steel panels. The steel panels shall be essentially free of oil or other contaminants that may interfere with coating adhesion. The test panels shall be dry blast cleaned to a White Metal grade which shall be in compliance with SSPC SP 5/NACE 1. The surface shall have an angular profile of 2.0 to 2.5 mils as measured by ASTM D 4417, Method C. When V-102 formulation is tested, it shall be spray applied over 1.5 to 2.5 mils (dry) of V-766 known to pass this test. When VZ-108 is tested, the coating shall be mixed in its proper proportions and then spray applied to a dry film thickness of 1.5 to 2.5 mils above the blast profile. The VZ-108 shall be top coated with a V-766 known to pass this test. In all cases, the complete system shall have a total dry

film thickness of 5 to 7 mils above the blast profile. After being air dried for 2 hours at room temperature, the panel shall be dried in a vertical position for 16 hours at 120 degrees F. After cooling for 1 hour, the panel shall be immersed in tap water at 85 to 90 degrees F for 48 to 72 hours. Immediately upon removal, the panel shall be dried with soft cloth and examined for adhesion as follows: With a pocket knife or other suitable instrument, two parallel cuts at least 1 inch long shall be made 1/4 to 3/8 inch apart through the paint film to the steel surface. A third cut shall be made perpendicular to and passing through the end of the first two. With the tip of the knife blade, the film shall be loosened from the panel from the third cut between the parallel cuts for a distance of 1/8 to 1/4 inch. With the panel being held horizontally, the free end of the paint film shall be grasped between the thumb and forefinger and pulled vertically in an attempt to remove the film as a strip from between the first two cuts. The strip of paint film shall be removed at a rate of approximately 1/10 inch per second and shall be maintained in a vertical position during the process of removal. The adhesion is acceptable if the strip of paint breaks when pulled or if the strip elongates a minimum of 10 percent during its removal. Paints not intended to be self-priming shall exhibit no delamination from the primer.

PART 3 EXECUTION

3.1 CLEANING AND PREPARATION OF SURFACES TO BE PAINTED

3.1.1 General Requirements

Both Ssurfaces of the sheetpiles, full length, to be painted, shall be cleaned before applying paint or surface treatments. Deposits of grease or oil shall be removed in accordance with SSPC SP 1, prior to mechanical cleaning. Solvent cleaning shall be accomplished with mineral spirits or other low toxicity solvents having a flash point above 100 degrees F. Clean cloths and clean fluids shall be used to avoid leaving a thin film of greasy residue on the surfaces being cleaned. Items not to be prepared or coated shall be protected from damage by the surface preparation methods. Machinery shall be protected against entry of blast abrasive and dust into working parts. Cleaning and painting shall be so programmed that dust or other contaminants from the cleaning process do not fall on wet, newly painted surfaces, and surfaces not intended to be painted shall be suitably protected from the effects of cleaning and painting operations. Welding of,

or in the vicinity of, previously painted surfaces shall be conducted in a manner to prevent weld spatter from striking the paint and to otherwise reduce coating damage to a minimum; paint damaged by welding operations shall be restored to original condition. Surfaces to be painted that will be inaccessible after construction, erection, or installation operations are completed shall be painted before they become inaccessible.

3.1.2 Ferrous Surfaces Subject to Severe Exposure

Ferrous surfaces subject to extended periods of immersion or as otherwise required shall be dry blast-cleaned to SSPC SP 5/NACE 1. The blast profile, unless otherwise specified, shall be 1.5 to 2.5 mils as measured by ASTM D 4417, Method C. Appropriate abrasive blast media shall be used to produce the desired surface profile and to give an angular anchor tooth pattern. If recycled blast media is used, an appropriate particle size distribution shall be maintained so that the specified profile is consistently obtained. Steel shot or other abrasives that do not produce an angular profile shall not be used. Weld spatter not dislodged by blasting shall be removed with impact or grinding tools and the areas reblasted prior to painting. Surfaces shall be dry at the time of blasting. Blast cleaning to SSPC SP 5/NACE 1 shall be done in the field and, unless otherwise specifically authorized, after final erection. Within 8 hours after cleaning, prior to the deposition of any detectable moisture, contaminants, or corrosion, all ferrous surfaces blast cleaned to SSPC SP 5/NACE 1 shall be cleaned of dust and abrasive particles by brush, vacuum cleaner, and/or blown down with clean, dry, compressed air, and given the first coat of paint. Upon written request by the Contractor, the Contracting Officer may authorize mill or shop cleaning of assembled or partially assembled components specified to receive ~~the vinyl-type paint system or~~ System No. 6-A-Z employing the epoxy zinc-rich primer. The surfaces, if shop blasted, shall be shop coated with the first and second coats of the specified paint system except that the epoxy zinc-rich primed surfaces shall receive an extra single spray coat of the zinc primer at the time field painting is started, as specified in the paint system instructions. The shop coating shall be maintained in good condition by cleaning and touching up of areas damaged during the construction period. If pinpoint or general rusting appears, surfaces shall be reblasted and repainted at no added cost to the

Government. Prior to the field application of subsequent coats, soiled areas of the shop coating shall be thoroughly cleaned and all welds or other unpainted or damaged areas shall be cleaned and coated in a manner to make them equivalent to adjacent, undamaged paint surfaces.

3.2 PAINT APPLICATION

3.2.1 General

Each coat shall be free from holidays, pinholes, bubbles, runs, drops, ridges, waves, laps, excessive or unsightly brush marks, and variations in color, texture, and gloss. Application of initial or subsequent coatings shall not commence until the Contracting Officer has verified that atmospheric conditions and the surfaces to be coated are satisfactory. Each paint coat shall be applied in a manner that will produce an even, continuous film of uniform thickness. Edges, corners, crevices, seams, joints, welds, rivets, corrosion pits, and other surface irregularities shall receive special attention to ensure that they receive an adequate thickness of paint. Spray equipment shall be equipped with traps and separators and where appropriate, mechanical agitators, pressure gauges, pressure regulators, and screens or filters. Air caps, nozzles, and needles shall be as recommended by the spray equipment manufacturer for the material being applied.

3.2.2 Mixing and Thinning

Paints shall be thoroughly mixed, strained where necessary, and kept at a uniform composition and consistency during application. Paste or dry-powder pigments specified to be added at the time of use shall, with the aid of powered stirrers, be incorporated into the vehicle or base paint in a manner that will produce a smooth, homogeneous mixture free of lumps and dry particles. Where necessary to suit conditions of the surface temperature, weather, and method of application, the paint may be thinned immediately prior to use. Thinning shall generally be limited to the addition of not more than 1 pint per gallon of the proper thinner; this general limitation shall not apply when more specific thinning instructions are provided. Paint that has been stored at low temperature, shall be brought up to at least 70 degrees F before being mixed and thinned, and its temperature in the spray tank or other working container shall not fall below 60 degrees F during the

application. Paint that has deteriorated in any manner to a degree that it cannot be restored to essentially its original condition by customary field-mixing methods shall not be used and shall be removed from the project site. Paint and thinner that is more than 1 year old shall be re-sampled and resubmitted for testing to determine its suitability for application.

3.2.3 Atmospheric and Surface Conditions

Paint shall be applied only when the relative humidity is less than 50% and to surfaces that are more than 5 degrees F above the dew point temperature and that are completely free of moisture as determined by sight and touch. Paint shall not be applied to surfaces upon which there is detectable frost or ice. Except as otherwise specified, the temperature of the surfaces to be painted and of air in contact therewith shall be not less than 45 degrees F during paint application nor shall paint be applied if the surfaces can be expected to drop to 32 degrees F or lower before the film has dried to a reasonably firm condition. During periods of inclement weather, painting may be continued by enclosing the surfaces and applying artificial heat, provided the minimum temperatures and surface dryness requirements prescribed previously are maintained. Paint shall not be applied to surfaces heated by direct sunlight or other sources to temperatures that will cause detrimental blistering, pinholing, or porosity of the film.

3.2.4 Time Between Surface Preparation and Painting

Surfaces that have been cleaned and/or otherwise prepared for painting shall be primed as soon as practicable after such preparation has been completed but, in any event, prior to any deterioration of the prepared surface.

3.2.5 Method of Paint Application

Unless otherwise specified, paint shall be applied by brush or spray to ferrous and nonferrous metal surfaces. Special attention shall be directed toward ensuring adequate coverage of edges, corners, crevices, pits, rivets, bolts, welds, and similar surface irregularities. Other methods of application to metal surfaces shall be subject to the specific approval of the Contracting Officer. Paint on plaster, concrete, or other nonmetallic surfaces shall be applied by brush, roller, and/or spray.

3.2.6 Coverage and Film Thickness

Film thickness or spreading rates shall be as specified hereinafter. Where no spreading rate is specified, the paint shall be applied at a rate normal for the type of material being used. In any event, the combined coats of a specified paint system shall completely hide base surface and the finish coats shall completely hide undercoats of dissimilar color.

3.2.6.1 Measurement on Ferrous Metal

Where dry film thickness requirements are specified for coatings on ferrous surfaces, measurements shall be made with a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D 1186. They shall be calibrated using plastic shims with metal practically identical in composition and surface preparation to that being coated, and of substantially the same thickness (except that for measurements on metal thicker than 1/4 inch, the instrument may be calibrated on metal with a minimum thickness of 1/4 inch). Frequency of measurements shall be as recommended for field measurements by ASTM D 1186 and reported as the mean for each spot determination. The instruments shall be calibrated or calibration verified prior to, during, and after each use.

3.2.6.2 Measurements on Nonferrous Metal

Where dry film thickness requirements are specified for coatings applied to nonferrous metal surfaces, measurements shall be made using a gage qualified in accordance with paragraph Coating Thickness Gage Qualification. They shall be calibrated and used in accordance with ASTM D 1400. Calibration shall be on metal identical in composition and surface preparation to that being coated and of substantially the same thickness (except that for measurements on metal thicker than 1/4 inch, the instrument may be calibrated on metal with a minimum thickness of 1/4 inch). Frequency of measurements shall be as recommended for field measurements by ASTM D 1400 and reported as the mean for each spot determination. The instruments shall be calibrated or calibration verified prior to, during, and after each use.

3.2.7 Progress of Painting Work

Where field painting on any type of surface has commenced, the complete painting operation, including priming and

finishing coats, on that portion of the work shall be completed as soon as practicable, without prolonged delays. Sufficient time shall elapse between successive coats to permit them to dry properly for re-coating, and this period shall be modified as necessary to suit adverse weather conditions. Paint shall be considered dry for re-coating when it feels firm, does not deform or feel sticky under moderate pressure of the finger, and the application of another coat of paint does not cause film irregularities such as lifting or loss of adhesion of the undercoat. All coats of all painted surfaces shall be unscarred and completely integral at the time of application of succeeding coats. At the time of application of each successive coat, undercoats shall be cleaned of dust, grease, overspray, or foreign matter by means of airblast, solvent cleaning, or other suitable means. Cement and mortar deposits on painted steel surfaces, not satisfactorily removed by ordinary cleaning methods, shall be brush-off blast cleaned and completely repainted as required. Undercoats of high gloss shall, if necessary for establishment of good adhesion, be scuff sanded, solvent wiped, or otherwise treated prior to application of a succeeding coat. Field coats on metal shall be applied after erection except as otherwise specified and except for surfaces to be painted that will become inaccessible after erection.

3.2.8 Contacting Surfaces

When ordinary bolted contact is to exist between surfaces of ferrous or other metal parts of substantially similar chemical composition such surfaces will not be required to be painted, but any resulting crevices shall subsequently be filled or sealed with paint. Contacting metal surfaces formed by high-strength bolts in friction-type connections shall not be painted. Where a nonmetal surface is to be in bolted contact with a metal surface, the contacting surfaces of the metal shall be cleaned and given three coats of the specified primer. Unless otherwise specified, corrosion-resisting metal surfaces, including cladding therewith, shall not be painted.

3.2.9 Drying Time Prior to Immersion

Minimum drying periods after final coat prior to immersion shall be: epoxy systems at least 57 days., ~~vinyl-type paint systems at least 3 days.~~ Minimum drying periods shall be

increased twofold if the drying temperature is below 65 degrees F and/or if the immersion exposure involves considerable abrasion.

3.2.10 Protection of Painted Surfaces

Where shelter and/or heat are provided for painted surfaces during inclement weather, such protective measures shall be maintained until the paint film has dried and discontinuance of the measures is authorized. Items that have been painted shall not be handled, worked on, or otherwise disturbed until the paint coat is fully dry and hard. All metalwork coated in the shop or field prior to final erection shall be stored out of contact with the ground in a manner and location that will minimize the formation of water-holding pockets; soiling, contamination, and deterioration of the paint film, and damaged areas of paint on such metalwork shall be cleaned and touched up without delay. The first field coat of paint shall be applied within a reasonable period of time after the shop coat and in any event before weathering of the shop coat becomes extensive.

~~3.2.11 Vinyl Paints~~

~~3.2.11.1 General~~

~~Vinyl paints shall be spray applied, except that areas inaccessible to spraying shall be brushed. Airless spray equipment shall not be used. All of the vinyl paints require thinning for spray application except the zinc rich vinyl paint (Formula VZ 108d) which will normally require thinning only under certain weather conditions.~~

~~Thinners for vinyl paints shall be as follows:~~

~~APPROXIMATE AMBIENT AIR TEMPERATURE~~

~~(Degrees F)~~

~~Below 50 MEK~~

~~50 — 70 MIBK~~

~~Above 70 MIAK~~

~~The amount of thinner shall be varied to provide a wet spray and avoid deposition of particles that are semidry when they strike the surface.~~

~~Vinyl paints shall not be applied when the temperature of the ambient air and receiving surfaces is less than 35 degrees F nor when the receiving surfaces are higher than 125 degrees F. Each spray coat of vinyl paint shall consist of a preliminary extra spray pass on edges, corners, interior angles, pits, seams, crevices, junctions of joining members, rivets, weld lines, and similar surface~~

~~irregularities followed by an overall double spray coat. A double spray coat of vinyl type paint shall consist of applying paint to a working area of not less than several hundred square feet in a single, half-lapped pass, followed after drying to at least a near tack-free condition by another spray pass applied at the same coverage rate and where practicable at right angles to the first. Bolts, and similar surface projections shall receive sprayed paint from every direction to ensure complete coverage of all faces. Pits, cracks, and crevices shall be filled with paint insofar as practicable, but in any event, all pit surfaces shall be thoroughly covered and all cracks and crevices shall be sealed off against the entrance of moisture. Fluid and atomization pressures shall be kept as low as practicable consistent with good spraying results. Unless otherwise specified, not more than 2.0 mils, average dry film thickness, of vinyl paint shall be applied per double spray coat. Except where otherwise indicated, an undercoat of the vinyl type paint may receive the next coat any time after the undercoat is tack-free and firm to the touch, provided that no speedup or delay in the re-coating schedule shall cause film defects such as sags, runs, air bubbles, air craters, or poor intercoat adhesion. Neither the prime coat nor any other coat shall be walked upon or be subjected to any other abrading action until it has hardened sufficiently to resist mechanical damage.~~

~~3.2.11.2 Vinyl Zinc Rich Primer~~

~~Primer shall be field mixed combining components A, B, and C. Mixing shall be in accordance with label instructions. After mixing, the paint shall be kept covered at all times to avoid contamination and shall be applied within 8 days after it is mixed. When the ambient and/or steel temperature is below about 80 degrees F, the paint will not normally require thinning; however, the paint shall at all times contain sufficient volatiles (thinners) to permit it to be satisfactorily atomized and to provide a wet spray and to avoid deposition of particles that are semidry when they reach the surface. The paint shall be stirred continuously during application at a rate that will prevent the zinc dust from settling. When spraying is resumed after any interruption of longer than 15 minutes, the entire length of the material hose shall be whipped vigorously until any settled zinc is redispersed. Long periods of permitting the paint to remain stagnant in the~~

~~hose shall be avoided by emptying the hoses whenever the painting operation is to be suspended for more than 1 hour. The material (paint) hoses shall be kept as short as practicable, preferably not more than 50 feet in length. Equipment used for spraying this zinc primer shall not be used for spraying other vinyl type paints without first being thoroughly cleaned, since many of the other paints will not tolerate zinc contamination; no type of hot spray shall be used. An average dry film thickness of up to 2.5 mils may be applied in one double spray coat. Unless specifically authorized, not more than 8 days shall elapse after application of a VZ-108d zinc rich coat before it receives a succeeding coat.~~

~~3.2.11.3 Vinyl Paints~~

~~Vinyl Paints (Formulas V-102e and V-766e) are ready mixed paints designed to be spray applied over a wide range of ambient temperatures by field thinning with the proper type and amount of thinner. For spray application, they shall be thinned as necessary up to approximately 25 percent (1 quart per gallon of base paint) with the appropriate thinner; when ambient and steel temperatures are above normal, up to 40 percent thinning may be necessary for satisfactory application.~~

3.2.12 Coal Tar-Epoxy (Black) Paint (Formula C-200a)

3.2.12.1 Mixing

Component B shall be added to previously stirred Component A and thoroughly mixed together with a heavy-duty mechanical stirrer just prior to use. The use of not more than 1 pint of xylene thinner per gallon of paint will be permitted to improve application properties and extend pot life. The pot life of the mixed paint, extended by permissible thinning, may vary from 2 hours in very warm weather to 5 or more hours in cool weather. Pot life in warm weather may be extended by precooling the components prior to mixing; cooling the mixed material; and/or by slow, continuous stirring during the application period. The mixed material shall be applied before unreasonable increases in viscosity take place.

3.2.12.2 Application

Spray guns shall be of the conventional type equipped with a fluid tip of approximately 0.09 inch in diameter and external atomization, seven-hole air cap. Material shall

be supplied to the spray gun from a bottom withdrawal pot or by means of a fluid pump; hose shall be 1/2 inch in diameter. Atomization air pressure shall not be less than 80 psi. High-pressure airless spray equipment shall not be used. Brush application shall be with a stiff-bristled tool heavily laden with material and wielded in a manner to spread the coating smoothly and quickly without excessive brushing. The coverage rate of the material is approximately 110 square feet per gallon per coat to obtain 20 mils (dry thickness) in a two-coat system. The paint shall flow together and provide a coherent, pinhole-free film. The direction of the spray passes (or finish strokes if brushed) of the second coat shall be at right angles to those of the first where practicable.

3.2.12.3 Subsequent Coats

Except at the high temperatures discussed later in this paragraph, the drying time between coal tar-epoxy coats shall not be more than 72 hours, and application of a subsequent coat as soon as the undercoat is reasonably firm is strongly encouraged. Where the temperature for substrate or coating surfaces during application or curing exceeds or can be expected to exceed 125 degrees F as the result of direct exposure to sunlight, the surfaces shall be shaded by overhead cover or the interval between coats shall be reduced as may be found necessary to avoid poor intercoat adhesion. Here, poor intercoat adhesion is defined as the inability of two or more dried coats of coal tar-epoxy paint to resist delamination when tested aggressively with a sharp knife. Under the most extreme conditions involving high ambient temperatures and sun-exposed surfaces, the drying time between coats shall not exceed 10 hours, and the reduction of this interval to a few hours or less is strongly encouraged. Where the curing time of a coal tar-epoxy undercoat exceeds 72 hours of curing at normal temperatures, 10 hours at extreme conditions, or where the undercoat develops a heavy blush, it shall be given one of the following treatments before the subsequent coat is applied:

- a. Etch the coating surface lightly by brush-off blasting, using fine sand, low air pressure, and a nozzle-to-surface distance of approximately 3 feet.
- b. Remove the blush and/or soften the surface of the coating by wiping it with cloths dampened with 1-methyl-2-pyrrolidone. The solvents may be applied to the surface by

fog spraying followed by wiping, but any puddles of solvent must be mopped up immediately after they form. The subsequent coat shall be applied in not less than 15 minutes or more than 3 hours after the solvent treatment.

3.2.12.4 Ambient Temperature

Coal tar-epoxy paint shall not be applied when the receiving surface or the ambient air is below 50 degrees F nor unless it can be reasonably anticipated that the average ambient temperature will be 50 degrees F or higher for the 5-day period subsequent to the application of any coat.

3.2.12.5 Safety

In addition to the safety provisions in paragraph SAFETY AND HEALTH PROVISIONS, other workmen as well as painters shall avoid inhaling atomized particles of coal tar-epoxy paint and contact of the paint with the skin.

3.3 PAINT SYSTEMS APPLICATION

The required paint systems and the surfaces to which ~~they~~it shall be applied are shown in this paragraph, and/or in the drawings. Supplementary information follows.

3.3.1 Fabricated and Assembled Items

Items that have been fabricated and/or assembled into essentially their final form and that are customarily cleaned and painted in accordance with the manufacturer's standard practice will be exempted from equivalent surface preparation and painting requirements described herein, provided that:

- a. Surfaces primed (only) in accordance with such standard practices are compatible with specified field-applied finish coats.
- b. Surfaces that have been primed and finish painted in accordance with the manufacturer's standard practice are of acceptable color and are capable of being satisfactorily touched up in the field.
- c. Items expressly designated herein to be cleaned and painted in a specified manner are not coated in accordance with the manufacturer's standard practice if different from that specified herein.

3.3.2 Surface Preparation

The method of surface preparation and pretreatment shown in the tabulation of paint systems is for identification

purposes only. Cleaning and pretreatment of surfaces prior to painting shall be accomplished in accordance with detailed requirements previously described.

~~3.3.3 System No. 3-A-Z~~

~~Paint shall be spray applied to an average dry film thickness of a minimum of 6.5 mils for the completed system, and the thickness at any point shall not be less than 5.5 mils. The dry film thickness of the zinc rich coat shall be approximately 2.5 mils. Specified film thickness, including the prescribed total, shall be attained in any event, and any extra coats needed to attain specified thickness shall be applied at no additional cost to the Government. Attaining of the specified film thickness in fewer than the prescribed number of coats or spray passes will be acceptable provided heavier applications do not cause an increase in pinholes, bubbles, blisters, or voids in the dried film and also provided that not more than 2.0 mils (dry film thickness) per double spray coat nor more than 1.0 mil per single spray pass of non zinc paint shall be applied at one time.~~

3.3.4 System No. 6-A-Z

Epoxy zinc-rich primer 19B shall be applied in accordance with the manufacturer's directions in a single, half-lapped spray coat to an average dry film thickness of a minimum of 3.0 mils. The thickness at any point shall not be less than 2.5 mils or greater 8 mils for the primer. After a minimum drying period of 6 hours and no more than 96 hours, at least two coats of coal tar epoxy paint shall be applied to provide a minimum thickness at any point of 16 mils for the completed system. If the epoxy zinc-rich paint has been applied in the shop or otherwise has been permitted to cure for longer than 96 hours, it shall be re-coated with an additional thin tack coat of the zinc-rich paint, which in turn shall be overcoated within 96 hours with the first coat of coal tar-epoxy paint. The specified film thicknesses shall be attained in any event, and any additional coats needed to attain specified thickness shall be applied at no additional cost to the Government.

3.3.28 Protection of Nonpainted Items and Cleanup
Walls, equipment, fixtures and all other items in the vicinity of the surfaces being painted shall be maintained

free from damage by paint or painting activities. Paint spillage and painting activity damage shall be promptly repaired.

3.4 INSPECTION

The Contractor shall inspect, document, and report all work phases and operations on a daily basis. As a minimum the daily report shall contain the following:

- a. Inspections performed, including the area of the structure involved and the results of the inspection.
- b. Surface preparation operations performed, including the area of the structure involved, the mode of preparation, the kinds of solvent, abrasive, or power tools employed, and whether contract requirements were met.
- c. Thinning operations performed, including thinners used, batch numbers, and thinner/paint volume ratios.
- d. Application operations performed, including the area of the structure involved, mode of application employed, ambient temperature, substrate temperature, dew point, relative humidity, type of paint with batch numbers, elapsed time between surface preparation and application, elapsed time for re-coat, condition of underlying coat, number of coats applied, and if specified, measured dry film thickness or spreading rate of each new coating.

3.5 PAINTING SCHEDULES

~~SYSTEM NO. 3-A-Z~~

~~Items or surfaces to be coated: Steel Sheet Piles
SURFACE PREPARATION 1st COAT 2nd COAT 3rd COAT 4th COAT
White metal Vinyl zinc White Vinyl Aluminum Aluminum
blast rich VZ-108d V-766e Vinyl Vinyl
cleaning (double (double V-102e V-102e as spray coat) spray
coat) (double needed to spray coat) obtain the required
thickness)~~

SYSTEM NO. 6-A-Z

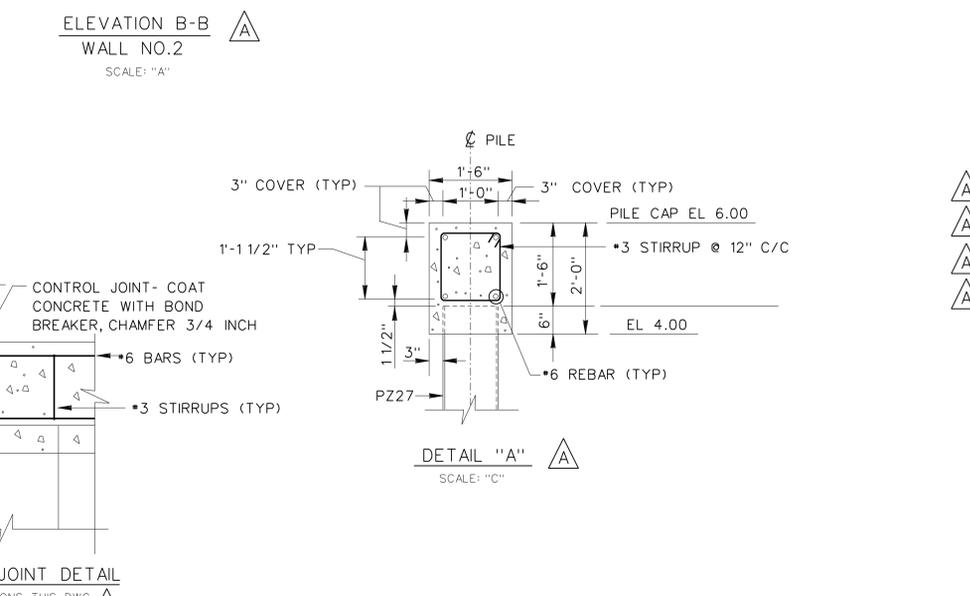
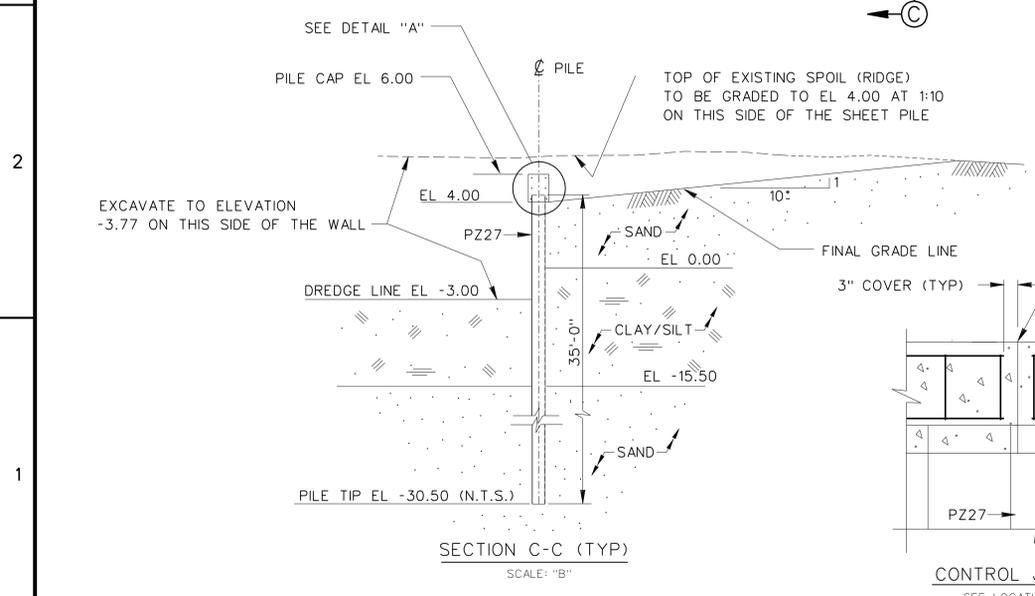
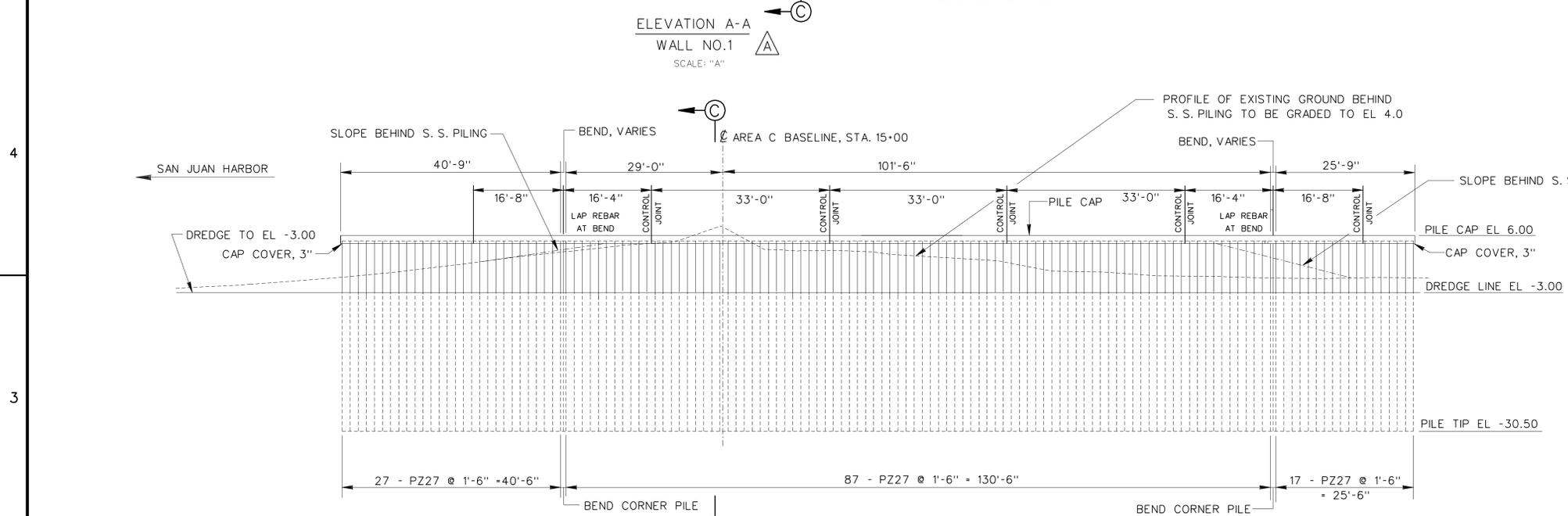
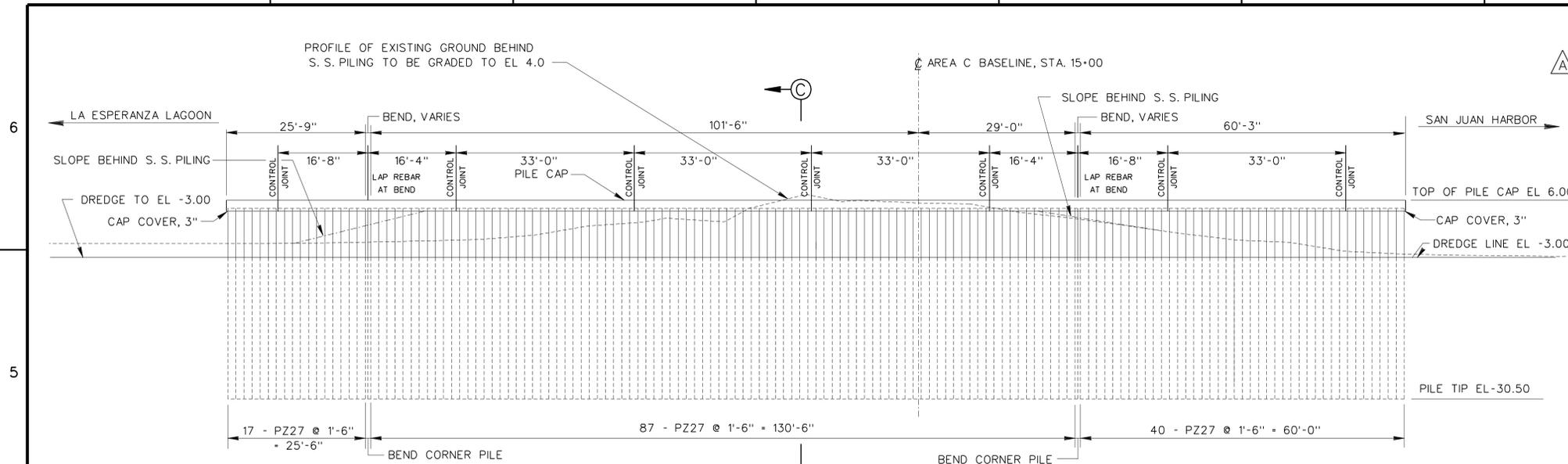
Items or surfaces to be coated: Both sides of
the Steel Sheet Piles for the full length.

SURFACE	1st & 2nd	3rd COAT	4th COAT
PREPARATION	COAT		
White metal	MS MIL-DTL-24441	Coal tar-	Coal tar-
blast	/19B	epoxy C-200a	epoxy C-200a
Cleaning		(black)	(black)

End of Section -

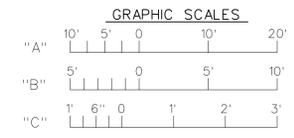
SECTION 09965 PAGE 40 (Rev Am #0001)

A B C D E F G H



- CONCRETE NOTES:**
1. REINFORCEMENT DETAILING AND PLACEMENT SHALL CONFORM TO ACI 315 AND ACI 318.
 2. ALL REINFORCEMENT STEEL SHALL BE A615, GRADE 60 EXCEPT #3 BARS MAY BE GRADE 40.
 3. NO WELDING OF REINFORCEMENT STEEL SHALL BE PERMITTED.
 4. MINIMUM COVER FOR ALL STEEL SHALL BE 3 INCHES.
 5. LAP SPLICE FOR #6 LONGITUDINAL BARS SHALL BE 1'-6". LAP BARS AT ALL BENDS.
 6. CONCRETE SHALL CONFORM TO ASTM C 943. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS".
 7. COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 5,500; ENTRAINED-AIR CONTENT SHALL BE BETWEEN 1 AND 6 PERCENT BY VOLUME; AND SLUMP SHALL BE BETWEEN 2 AND 4 INCHES, WITH A HIGHER SLUMP ALLOWED (NOT TO EXCEED 7 INCHES) WHEN A HIGH RANGE WATER REDUCER IS USED.
 8. MINIMUM TOTAL CEMENTITIOUS CONTENT SHALL BE 658 LB/CY AND MAXIMUM WATER CEMENTITIOUS RATIO LBS/LB SHALL BE 0.41.
 9. CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT.
 10. PROVIDE 3/4 INCH CHAMFER ON ALL LONGITUDINAL EDGES OF CONCRETE CAP.

- SHEET PILE NOTES:**
1. FOR LOCATION PLAN OF WALLS, SEE DWG NO 2/1.
 2. ALL SHEET PILES SHALL BE ASTM A572 GR 50 STEEL.
 3. TESTING, HANDLING AND DRIVING OF SHEET PILES ARE PER SPECIFICATION.
 4. ALL BOLTS SHALL BE HIGH STRENGTH A 325 BOLTS.
 5. SHEET PILES SHALL BE GIVEN A COAT OF ASPHALT PAINT AS PER SPECIFICATION PRIOR TO INSTALLATION.
 6. SHEET PILES SHALL BE DRIVEN IN TO GROUND PRIOR TO DREDGING OR EXCAVATION.
 7. THE TOP ELEVATION OF ALL SHEET PILE WALLS SHALL BE EL. +6.00.
 8. THE GROUND BEHIND THE WALLS SHALL START AT EL. +4.00 AND SHALL BE SLOPED AT 1V ON 10H, OR AS SHOWN ON THE DRAWINGS.
 9. NOT USED
 10. NOT USED.
 11. NOT USED.
 12. NOT USED.
 13. SOIL LAYER DETAILS SHOWN ON SECTION C-C (THIS DWG) AND SECTION E-E (DWG NO 2/3) ARE FOR INFORMATION ONLY. ACTUAL SOIL LAYERS AT ACTUAL WALL LOCATIONS MAY BE DIFFERENT.



US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

Department of the Army
Jacksonville District, Corps of Engineers
Jacksonville, Florida

DESIGNED BY: V.D.R. DATE: 06-08-00X
DRAWN BY: CUD BY: AS SHOWN
CHECKED BY: H.R.D. SCALE: AS SHOWN
PLotted: JUNE 2001
D.O.F. FILE NO. 102-38,205

SAN JUAN HARBOR, PUERTO RICO
PROJECT MODIFICATIONS FOR IMPROVEMENT OF THE ENVIRONMENT
LA ESPERANZA PENINSULA
CATANO, PUERTO RICO
SHEET PILE WALLS 1 & 2
ELEVATIONS AND DETAILS

DRAWING NO. 2/2

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

J

1

2

2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 16-Aug-2002	4. REQUISITION/PURCHASE REQ. NO. W32CS520546395	5. PROJECT NO.(if applicable)
6. ISSUED BY USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412		7. ADMINISTERED BY (If other than item 6) See Item 6	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)	X	9A. AMENDMENT OF SOLICITATION NO. DACW17-02-B-0011
	X	9B. DATED (SEE ITEM 11) 16-Jul-2002
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer is extended, is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;
 or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
SAN JUAN HARBOR, PUERTO RICO; PROJECT MODIFICATIONS FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA, CANTANO, PUERTO RICO

ANY ENCLOSURES ACCOMPANYING THIS AMENDMENT SHOULD BE INSERTED IN THE PLANS AND SPECIFICATIONS AS APPLICABLE. ALL SUPERSEDED MATERIALS SHOULD BE REMOVED AND OR ADEQUATELY MARKED TO INDICATE THEY HAVE BEEN SUPERSEDED.

THE BID OPENING DATE AND TIME REMAINS UNCHANGED.

SEE ATTACHED CONTINUATION PAGE.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
	TEL:	EMAIL:
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)
		16C. DATE SIGNED 16-Aug-2002

EXCEPTION TO SF 30
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

SPECIFICATION CHANGES

SECTION 00010 - Delete SF 1442 and replace with revised SF 1442.

SECTION 00600 – Delete page 00600-5 and replace with revised attached page.

SECTION 00800: Delete pages 00800-ii, 00800-9, and 00800-10 and replace with revised attached pages.

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES
	DACW17-02-B-0011-0002	<input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	16-Jul-2002	1 OF 135

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

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
	W32CS520546395	

7. ISSUED BY	CODE	DACW17	8. ADDRESS OFFER TO (If Other Than Item 7) CODE	ANTILLES
USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412			ANTILLES OFFICE U.S. ARMY CORPS OF ENGINEERS (CESAJ-DS) 400 FERNANDEZ JUNCOS AVENUE SAN JUAN PR 00901-3299	
TEL:	FAX:		TEL:	FAX:

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)
	WANDA I CRUZ	904-232-2813

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):

SAN JUAN HARBOR, PUERTO RICO; PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA, CATANO, PUERTO RICO.

DRAWING FILE NO. 102-38. 205 DATED JUNE 2001.

DESCRIPTION OF WORK: SEE ATTACHED PAGE 00010-3.

MAGNITUDE OF CONSTRUCTION IS BETWEEN \$1,000,000.00 AND \$5,000,000.00.

THIS IS AN UNRESTRICTED PROCUREMENT. ALL BUSINESSES ARE ENCOURAGED TO PARTICIPATE.

YOU MUST BE REGISTERED IN THE CENTRAL CONTRACTOR REGISTRATION IN ORDER TO BE ELIGIBLE TO RECEIVE AND AWARD FROM THIS SOLICITATION. CALL 1-888-227-2423 FOR MORE INFORMATION.

NOTE: BLOCK 13.A., BID OPENING WILL BE AT THE ANTILLES OFFICE, 400 FERNANDEZ JUNCOS AVENUE, SAN JUAN, PUERTO RICO. THE BID BOX IS LOCATED ON THE FIRST FLOOR (CONFERENCE ROOM).

11. The Contractor shall begin performance within 30 calendar days and complete it within 210 calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. (See Section 00700)

12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES," indicate within how many calendar days after award in Item 12B.)	12B. CALENDAR DAYS
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copies to perform the work required are due at the place specified in Item 8 by 11:00 AM (hour) local time 20 Aug 2002 (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.

(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 234490

(2) The small business size standard is ~~\$28,500,000.00~~ \$17,000,000.00.

(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 o is, o 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:

999.223-4025	SIGNAL LIGHTS
999.223-4026	U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1
999.236-4012	DAMAGE TO WORK
999.236-4013	CONTINUITY OF WORK
<u>999.236-4026</u>	<u>BRIDGE TO BRIDGE COMMUNICATION</u>
999.236-4030 (Alt I)	NOTICE TO MARINERS -- CONSTRUCTION CONTRACTS
999.236-4059	ITEMS OF WORK TO BE PERFORMED BY THE CONTRACTOR
999.242-4001	ENGLISH SPEAKING REPRESENTATIVE
999.242-4005	CONTRACTING OFFICER'S PROJECT BUSINESS ADDRESS

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil>. (At the HQ homepage, select Safety and Occupational Health.) The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the date the solicitation for this contract/purchase order was issued.
(End of paragraph number 999.223-4026)

DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in the Permits And Responsibilities clause of this contract. However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane, or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to the CHANGES clause of this contract will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.
(End of paragraph number 999.236-4012)

CONTINUITY OF WORK

No payment will be made for work done in any area designated by the Contracting Officer until the full depth required under the contract is secured in the whole of such area, unless prevented by ledge rock, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured, except by decision of the Contracting Officer. Should any such nonadjacent area be excavated to full depth during the operations carried on under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening. The Contractor may be required to suspend dredging at any time when, for any reason, the gauges or ranges cannot be seen or properly followed.
(End of paragraph number 999.236-4013)

NOTICE TO MARINERS -- CONSTRUCTION CONTRACTS

Should the Contractor, during operations, encounter any objects on the channel bottom which could be a hazard to navigation, the Contractor shall immediately notify the Contracting Officer as to the location of said object and shall provide any other pertinent information necessary for the Contracting Officer to prepare and issue a Notice to Mariners.
(End of paragraph number 999.236-4030)

BRIDGE-TO-BRIDGE COMMUNICATION

In order that radio communication may be made with passing vessels, all dredges engaged in work under this contract shall be equipped with bridge-to-bridge radio telephone equipment. The

radio equipment shall operate on a single channel very high frequency (VHF), FM, on a frequency of 156.55 MC per second with low power output having a communication range of approximately ten miles. The frequency has been approved by the Federal Communications Commission. Channels #13 and #16 must be monitored at all times.

(End of paragraph number 999.236-4026)

ITEMS OF WORK TO BE PERFORMED BY THE CONTRACTOR

Attention is invited to the requirements of the Performance Of Work By The Contractor clause of this contract. The Contractor must furnish the Contracting Officer, within 5 days after award, a listing of the items of work that will be performed by the Contractor's own forces and the estimated cost of those items unless the information was submitted with the offer.

(End of paragraph number 999.236-4059)

ENGLISH SPEAKING REPRESENTATIVE

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

(End of paragraph 999.242-4001)

CONTRACTING OFFICER'S PROJECT BUSINESS ADDRESS

Once the contract is awarded, all communication, submittals, and inquiries by the Contractor regarding the project shall be directed and addressed to Antilles Construction Office, U.S. Army Corps of Engineers, 400 Fernandez Juncos Avenue, San Juan, Puerto Rico 00901-3299. All communications to be in the English language.

(End of paragraph number 999.242-4005)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1

2. AMENDMENT/MODIFICATION NO.
0003

3. EFFECTIVE DATE
19 AUG 2002

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO. (If applicable)

6. ISSUED BY CODE

7. ADMINISTERED BY (If other than Item 6) CODE

USA ENGINEER DISTRICT, JACKSONVILLE
400 WEST BAY STREET CESAJ-CT (ROOM 867)
JACKSONVILLE, FL 32202-4412

PAM OWENS (904) 232-1443

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

(√) 9A. AMENDMENT OF SOLICITATION NO.
DACW17-02-B-0011

X 9B. DATED (SEE ITEM 11)
16-JUL-2002

10A. MODIFICATION OF CONTRACTS/ORDER NO.

10B. DATED (SEE ITEM 13)

CODE

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers tended.

is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(√) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SAN JUAN HARBOR, PUERTO RICO; PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA, CATANO, PUERTO RICO.

THIS AMENDMENT IS ISSUED TO CORRECT A CHANGE MADE BY AMENDMENT 0002

SECTION 00010 - DELETE SF 1442 AND REPLACE WITH REVISED SF 1442, PAGES 00010-1 AND 00010-2.

THE DATE AND TIME FOR RECEIPT OF PROPOSALS IS EXTENDED TO 23 AUG 2002 AT 11:00 AM

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

(Signature of person authorized to sign)

BY

(Signature of Contracting Officer)

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>
	16. REMITTANCE ADDRESS <i>(Include only if different than Item 14)</i>
	See Item 14
CODE	FACILITY CODE

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
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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)

AMENDMENT NO.	DATE								

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>	20B. SIGNATURE	20C. OFFER DATE
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AWARD (To be completed by Government)

21. ITEMS ACCEPTED:
SEE SCHEDULE

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
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24. SUBMIT INVOICES TO ADDRESS SHOWN IN <i>(4 copies unless otherwise specified)</i>	ITEM 26	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)
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26. ADMINISTERED BY	CODE	K360EC0	27. PAYMENT WILL BE MADE BY	CODE	t0b0200
ANTILLES - SAN JUAN OFFICE USA CORPS OF ENGINEERS ((CESAJ-CO-DS) 400 FERNANDEZ JUNCOS AVENUE SAN JUAN, PR 00901-3299			USACE FINANCE CENTER 5722 INTEGRITY DRIVE ATTN: CEFC-AO-P MILLINGTON, TN 38054-5005		

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to issuing office.)* 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.

29. AWARD *(Contractor is not required to sign this document.)*
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>
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30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE
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AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

I. CONTRACT ID CODE J	PAGE OF PAGES 1 2
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2. AMENDMENT/MODIFICATION NO. 0004	3. EFFECTIVE DATE 21-Aug-2002	4. REQUISITION/PURCHASE REQ. NO. W32CS520546395	5. PROJECT NO.(If applicable)
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6. ISSUED BY USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412	CODE DACW17	7. ADMINISTERED BY (If other than item 6) See Item 6	CODE
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8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)	<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. DACW17-02-B-0011
	<input checked="" type="checkbox"/> 9B. DATED (SEE ITEM 11) 16-Jul-2002
	10A. MOD. OF CONTRACT/ORDER NO.
	10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer is extended, is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
SAN JUAN HARBOR, PUERTO RICO; PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT AT LA ESPERANZA PENINSULA, CATANO, PUERTO RICO

THE BID OPENING DATE IS CHANGED TO AUGUST 29, 2002 AT 11:00 A.M.

NOTE: THE DEADLINE TO SUBMIT QUESTIONS IS AUGUST 22, 2002 AT 4:30 P.M. EASTERN STANDARD TIME. QUESTIONS SUBMITTED AFTER THE DEADLINE MAY NOT BE ANSWERED.

(See Page 2 for continuation of description.)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED 16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)
	16C. DATE SIGNED 21-Aug-2002

SPECIFICATION CHANGES

THIS IS A DESCRIPTIVE AMENDMENT. ALL SUPERSEDED MATERIALS SHOULD BE REMOVED OR ADEQUATELY MARKED TO INDICATE THEY HAVE BEEN SUPERSEDED.

Please delete from Section 02325, Paragraph 3.2.1 and replace with the following paragraph:

3.2.1 Access

Land access through La Esperanza Park to the staging area has been pre-coordinated by the Jacksonville District. Any damage to roads or any other park property must be repaired and the property returned to preconstruction condition at the Contractor's expense. The Contractor shall be responsible for providing and maintaining additional access necessary for his equipment and plant to and from the work site, mooring area, and dredged material placement area. The Contractor shall ascertain the environmental conditions which can affect the access such as climate, winds, currents, waves, depths, shoaling, and scouring tendencies. As shown on the drawings, existing dense vegetation (which the Contractor shall not disturb) covers portions of the La Esperanza Peninsula from one shoreline to the other. Consequently, equipment access to the tip of the peninsula can be by water only.

Please add to Section 02325, Paragraph 1.7:

1.7.2 Light Poles

The existing light poles along with associated buried conduit and wiring in the vicinity of sheet pile wall no. 1 & 2 have been abandoned. The contractor shall confirm that the electric lines have been de-energized and then shall remove and dispose of as many of the light poles along with as much associated conduit and wiring as necessary to accomplish the required excavation and sheet pile installation. Disposal of light poles, conduit, and wiring shall be in an area provided by and at the expense of the contractor and shall be approved by the Contracting Officer.

Drawings - Click in the box below for the plans