

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 05-Sep-2003	4. REQUISITION/PURCHASE REQ. NO. W807PM-3184-1262		5. PROJECT NO.(If applicable)
6. ISSUED BY VBURG CONSOL CONTRACTING OFC 4155 CLAY ST VICKSBURG MS 39183-3435		CODE DACW38	7. ADMINISTERED BY (If other than item 6) See Item 6	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)			<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. DACW38-03-B-0037	
			<input checked="" type="checkbox"/> 9B. DATED (SEE ITEM 11) 08-Aug-2003	
			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.) Reference Invitation for Bids No. DACW38-03-B-0037 for Jonesville Lock, Stoplog Slot Construction, scheduled to open 9 Sep 2003, 1400 Hours, is amended as follows: <div style="text-align: center;">Bid Opening Date and Time</div> A new bid opening date and time of 16 Sep 03, 1430 Hours, is hereby established. See Page 2 for Continuation.				
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 05-Sep-2003

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

STANDARD FORM 1442

SF 1442, page 1 of 143, is revised and replaced.

TECHNICAL SPECIFICATIONS

SECTION 00800 SPECIAL CONTRACT REQUIREMENTS is revised and reissued in its entirety.

SECTION 01000 GENERAL CONTRACT REQUIREMENTS is revised and reissued in its entirety.

SECTION 02140 COFFERDAMS AND DEWATERING is revised and reissued in its entirety.

SECTION 05502 METALS: MISCELLANEOUS, STANDARD ARTICLES, SHOP FABRICATED ITEMS is revised and reissued in its entirety.

DRAWINGS

DRAWINGS NOS. 1, 14 and 15 are revised and reissued.

Pages revised by this amendment have the notation "Revised by Amendment 0001" at the bottom of the page. Text deleted by this amendment is shown as overstruck. Text added by this amendment is shown as underlined.

Encls: As noted above.

ADDITIONAL REFERENCE DRAWINGS FOR INFORMATION ONLY

The additional reference drawings depicting "as-built" conditions of the existing structure have been included for information only and are not to be considered a part of the contract.

MINUTES TO THE PRE-BID CONFERENCE

ATTACHMENT 1 to this Amendment is comprised of questions and answers regarding subject solicitation and is provided as information purposes only.

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. DACW38-03-B-0037	2. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 08-Aug-2003	PAGE OF PAGES 1
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

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4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. W807PM-3184-1262	6. PROJECT NO.
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7. ISSUED BY VBURG CONSOL CONTRACTING OFC 4155 CLAY ST VICKSBURG, MS 39183-3435	CODE DACW38	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> See Item 7	CODE
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9. FOR INFORMATION CALL:	A. NAME Alice W. Scott	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i> (601) 631-7906
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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):*
**JONESVILLE LOCK
STOPLOG SLOT CONSTRUCTION**

DESCRIPTION OF WORK: The work consists of furnishing all plant, labor, materials and equipment, and constructing new stoplog slots at Jonesville Lock, Jonesville, Louisiana. Principal features of work include mobilization and demobilization; providing as-built drawings (both blue-line and electronic); cofferdams and dewatering; demolition and construction of the new stoplog slots and associated work, including concrete work, bulkhead slot armor, bulkhead sill beam, hand rails, and other miscellaneous metals; painting; and environmental protection.

The estimated value of the proposed work is between \$1,000,000.00 and \$5,000,000.00.

11. The Contractor shall begin performance within 10 calendar days and complete it within *180* calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. (See Section 00800 .)

12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 10
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original _____ copy to perform the work required are due at the place specified in Item 8 by *02:30 PM* (hour) local time *09/16/03* (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 30 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

JONESVILLE LOCK, STOPLOG SLOT CONSTRUCTION

PRE-BID CONFERENCE
MULTIPURPOSE CONFERENCE ROOM, VICKSBURG DISTRICT
VICKSBURG, MISSISSIPPI
21 AUGUST 2003
10:00 a.m.

PRESENT:

CORPS OF ENGINEERS:

Mr. Robert R. Brown, Consolidated Contracting Office
Ms. Jeri H. McGuffie, Consolidated Contracting Office
Ms. Janalyn Hennessee, Consolidated Contracting Office
Ms. Stacy Thurman, Consolidated Contracting Office
Ms. Cynthia Brown, Consolidated Contracting Office
Mr. Will Bradley, Engineering Division
Mr. Allen Perry, Engineering Division
Mr. Ed Schilling, Engineering Division
Mr. Jimmy Coldiron, Operations Division
Mr. Allen Lantz, Construction Division
Ms. Myra Dean, Planning, Programs, and Project Management Div.
Ms. Nita McKenzie, Planning, Programs, and Project Management Div.
Ms. Shirley H. Reed, Deputy for Small Business

CONTRACTORS:

Mr. Tom Smith, OCCI
Mr. Mike Bonner, OCCI
Mr. Mike Smith, M&J Construction Co.
Mr. Anthony Niehaus, BBC
Mr. Curt McMillin, Continental Construction
Mr. David S. Huval, CEC, Inc.
Mr. Joe Frederickson, Underwater Engineering

QUESTIONS AND ANSWERS

1. The 120-day performance time is a very aggressive timetable when you consider submittal preparation time, COE review time, fabrication and field installation. Can the performance time be extended?

After a review of the performance period, it was determined that the Notice to Proceed will be issued in two steps, including a NOTICE TO PROCEED WITH PREPARATORY WORK and a NOTICE TO PROCEED WITH CONSTRUCTION, and the performance period will be changed to 180 calendar days. The specifications have been revised by Amendment 0001 to reflect these changes.

2. Some of the steel shapes such as the HP12x63, are not readily available, can other types of steel be used?

All steel is to remain as specified in the original plans and specifications. Steel shapes can be fabricated or commercially rolled. (See specifications Section 05502, paragraph BULKHEAD SLOT ARMOR AND SILL BEAM.)

3. ASTM A276 is a specification for bars and shapes. The majority of the material in the stoplog recesses will be plate.

The specifications have been revised by Amendment 0001 to allow the use of ASTM A276 or ASTM A240/A240M.

4. At what heights of water will time not be charged?

Elevation 39.5. (See specifications Section 00800, paragraph PHYSICAL DATA.)

5. Will the stoplogs be provided by the Corps? How will they be transported? Will the Corps allow the Contractor to use its crane for moving the stoplogs?

The stoplogs will be delivered to the job site on a barge by the Government. The Contractor will be required to provide no less than two weeks notice before the stoplogs are to be used. The Contractor will also be responsible for providing a vessel suitable for moving the stoplog barge after delivery, and the Contractor will be responsible for providing a crane to move and place stoplogs. (Section 01000, paragraph IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY has been revised by Amendment 0001 to reflect these changes.)

6. Will the Government provide the weights and drawings of the stoplogs to be used?

Yes. Drawings are provided in tif format with this amendment.

7. Can more concrete be removed than what is shown?

Concrete shall only be removed within those boundaries shown on the plans. Any excess damage caused by removing concrete outside the defined boundaries is the responsibility of the Contractor.

8. Has this lock been dewatered since it was constructed?

This lock has never been dewatered.

9. Are there actual As-Built drawings of the Lock?

Yes. The Reference drawings are "As Constructed" drawings. The Reference drawings were furnished as part of the original bid package. If any further drawings are necessary a complete set of drawings is available at the Vicksburg District Office for view. Also, electronic copies of most of the drawings are available in tiff or pdf format.

10. Assuming the lock is bounded on sand and dirt, are you anticipating any flow of water because we're actually dewatering the lock?

The lock chamber itself cannot be dewatered; all dewatering is to take place in the gatebays only.

11. How much muck and debris is expected in the bottom of the lock?

We have no precise means of measuring this, however from experience we estimate that the existing poiree slot is filled with mud and debris.

12. Can hydraulic pumps be used?

Section 02140, paragraph DEWATERING has been revised by Amendment 0001 to permit the use of hydraulically driven pumps.

13. What is the wage rate determination for crane operators, masons or divers?

If a wage classification and hourly rate is not shown on the applicable Wage Determination, the bidder must determine the hourly rate to be utilized for the specific wage classification. After award, the prime contractor will submit a proposal utilizing Standard Form (SF)1444 entitled "Request for Authorization Additional Classification and Rate" to the Department of Labor (DOL) requesting the additional wage classification and rate be approved. It is important to note that the Contractor's request will have to contain supplemental information relating to how the proposed wage rate was developed. Pending a final determination by DOL, the Contractor may tentatively classify and pay affected employees in accordance with the contractor's proposal. The Contractor should be advised, however, that they may eventually be required to re-classify the affected employees and/or furnish wage restitution should the proposed additional classification and rate be denied by the DOL.

14. Who will be liable if a tow hit a cofferdam during navigation hours?

If the cofferdam is constructed in accordance with the plans submitted to the Contracting Officer and is damaged by vessels navigating the lock, the Contractor shall make repairs to the cofferdam and/or any part of the permanent work, as ordered by the Contracting Officer. Full compensation therefor will be paid at the applicable contract unit prices or, in the absence thereof, an amount determined as an equitable adjustment under the Contract Clause entitled "CHANGES" for all repairs of the cofferdam and/or the permanent work which, in the opinion of the Contracting Officer, could not have been protected from damage. (Section 02140, paragraph COFFERDAMS has been revised by Amendment 0001 to reflect these changes.)

DOCUMENT TABLE OF CONTENTS
DIVISION 00 - DOCUMENTS
SECTION 00800
SPECIAL CONTRACT REQUIREMENTS

PART 1 GENERAL

- 1.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)
- 1.2 NOTICES TO PROCEED WITH PREPARATORY WORK AND CONSTRUCTION
- 1.3 LIQUIDATED DAMAGES-CONSTRUCTION (SEPT 2000)
- 1.4 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)
- 1.5 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)
- 1.6 WORK TO BE PERFORMED BY CONTRACTOR'S OWN ORGANIZATION
- 1.7 PHYSICAL DATA (APR 1984)
- 1.8 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991)
- 1.9 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)
- 1.10 COMMAND OVERSIGHT
- 1.11 OBSTRUCTION OF NAVIGABLE WATERWAYS (DEC 1991)
- 1.12 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)
- 1.13 YEAR 2000 COMPLIANCE
- 1.14 SECURITY REQUIREMENTS FOR UNCLASSIFIED CONTRACTS

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Document Table of Contents --

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

PART 1 GENERAL

1.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 10 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 ~~120~~180 calendar days after the date the Contractor receives the notice to proceed. The lock will be closed to navigation for ~~a period not to exceed seven (7) days per gate bay during~~ construction of the bottom stoplog sill. Lock closure time may not exceed twenty-one (21) days per gate bay, with a period of no less than fourteen (14) days between lock closures. Navigation will be closed during daylight hours only during construction of the vertical slots and may include limited periodic daytime passages as construction permits. During construction of the vertical slots, night time navigation through the lock will remain open to tows up to 55 feet wide. The time stated for completion shall include final cleanup of the premises. (FAR 52.211-10)

1.2 NOTICES TO PROCEED WITH PREPARATORY WORK AND CONSTRUCTION

This paragraph supplements the requirements of the COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK paragraph.

(a) In accordance with paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (a), within a reasonable time following award of the contract, a "NOTICE TO PROCEED WITH PREPARATORY WORK" will be issued by the Government. Following receipt of this NOTICE TO PROCEED WITH PREPARATORY WORK, the Contractor shall proceed with the submission of shop drawings; the procurement of long lead time materials and supplies; performing other work that can be done without access to the job site; and performing other work required in preparation for construction. Storage of materials and supplies is the Contractor's responsibility. In accordance with the Contract Clause PAYMENT FOR MATERIALS DELIVERED OFF-SITE, the Contractor may submit estimates for progress payments as contemplated by the Contract Clause PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS, after receipt of the NOTICE TO PROCEED WITH PREPARATORY WORK. For details see subparagraph (b) of Contract Clause PAYMENT FOR MATERIALS DELIVERED OFF-SITE.

(b) In accordance with Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (c), no physical work will be permitted at the construction site until the NOTICE TO PROCEED WITH CONSTRUCTION has been issued by the Government. The NOTICE TO PROCEED WITH CONSTRUCTION will be issued after the end of the high water season. It is presently anticipated, but not guaranteed, that the Notice to Proceed with Construction will be issued on or about 01 June 2004. The 180 calendar days allowed for completion of the entire work ready for use will be measured from the date the Contractor receives the NOTICE TO PROCEED WITH CONSTRUCTION. As stated in paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK, the time for completion shall include final cleanup of the premises.

1.3 LIQUIDATED DAMAGES-CONSTRUCTION (SEPT 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 \$510.00 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. (FAR 52.211-12)

1.4 CONTRACT DRAWINGS 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 which 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 which 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:

FILE NO. O-15-274

DRAWING TITLE	DRAWING NO.
INDEX TO DRAWINGS, GENERAL NOTES, LOCATION AND VICINITY MAP	1
LOCK STRUCTURE, EXISTING CONDITIONS, PLAN	2

DRAWING TITLE	DRAWING NO.
MONOLITH 4U, DEMOLITION, PLAN	3
MONOLITH 4U, DEMOLITION, SECTIONS AND DETAILS	4
MONOLITH 4U, REINFORCEMENT	5
MONOLITH 5U, DEMOLITION, PLAN	6
MONOLITH 5U, DEMOLITION, SECTIONS AND DETAILS	7
MONOLITH 5U, REINFORCEMENT	8
MONOLITH 5U, REINFORCEMENT	9
MONOLITH 5U, REINFORCEMENT	10
MONOLITH 19U, DEMOLITION, PLAN	11
MONOLITH 19U, DEMOLITION, SECTIONS AND DETAILS	12
MONOLITH 19U, REINFORCEMENT	13
BULKHEAD RECESS INSERT, PLAN, SECTIONS, AND DETAILS	14
BULKHEAD SILL BEAM, PLAN AND SECTIONS	15
BULKHEAD SILL, DETAILS	16
NEW SLOT, REINFORCEMENT DETAILS	17
STAGE HYDROGRAPH, UPPER POOL	18
STAGE HYDROGRAPH, LOWER POOL	19

(DFARS 252.236-7001)

1.5 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 twenty (20) 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. (FAR 52.236-1)

1.6 WORK TO BE PERFORMED BY CONTRACTOR'S OWN ORGANIZATION

Within 10 days after award, the successful bidder/contractor must furnish the Contracting Officer a description of the items of work which will be performed with its own forces and the estimated cost of those items. (See paragraph PERFORMANCE OF WORK BY THE CONTRACTOR.)

1.7 PHYSICAL DATA (APR 1984)

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

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

(b) Weather Conditions. Information with respect to temperatures and precipitation may be obtained from the National Weather Service.

(c) Transportation Facilities.

(1) Roads. Louisiana State Highway 124 serves the general area.

(2) Water Routes. The Ouachita/Black River provides dependable navigation from its mouth at Mile 34.3 on the Red River to Jonesville Lock and Dam located at Mile 25.0 south of Jonesville,

Louisiana. Dependable navigation exists upstream of this point to Camden, Arkansas. Navigation interests are also advised to familiarize themselves with 33 CFR Section 207.249.

(d) Floods. High water stages or events are not to be considered a "flood," and damages resulting therefrom are not compensable under Section 01000 GENERAL CONTRACT REQUIREMENTS, paragraph DAMAGE TO WORK unless high water stages or events exceed Elevation 39.5 NGVD at the site.

(FAR 52.236-4)

1.8 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) Sixty percent of the lump sum price upon completion of the contractor's mobilization at the work site.

(2) The remaining forty 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 subparagraphs (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.

(DFARS 252.236-7004)

1.9 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)

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

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's

accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For 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. (EFARS 52.231-5000)

NOTE: EP-1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule" is available on the internet at <http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep.htm>, or may be purchased from the Government Printing Office on CD-ROM by calling (202) 512-1800.

1.10 COMMAND OVERSIGHT

Although the U.S. Army Corps of Engineers has decided that effective 1 Oct 93 District and operating Major Subordinate Commanders will no longer be Contracting Officers, the Commanders will be expected to exercise oversight on (approve) critical decisions on this contract, including contract award (see FAR Clause 52.204-1, "Approval of Contract"), settlement actions and alternate dispute resolution (ADR).

1.11 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 the provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et. seq). (DFARS 52.236-7002)

1.12 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)

(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 this contract).

(b) 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.

(c) If, after award, there is a change in the composition of the item(s) or a revision of Federal Standard 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.

(d) 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.

(e) 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.

(f) 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 of 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.

(EFAR 52.223-3)

1.13 YEAR 2000 COMPLIANCE

In accordance with FAR 39.106, the Contractor shall ensure that with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. Specifically, the contractor shall:

(a) Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishing under this contract and each task/delivery order which may be affected by the Year 2000 compliance requirement.

(b) Indicate whether each component is currently Year 2000 compliant or requires an upgrade for compliance prior to government acceptance.

1.14 SECURITY REQUIREMENTS FOR UNCLASSIFIED CONTRACTS

All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the Security Officer, ATTN: CEMVK-PM, 4155 Clay Street, Vicksburg, MS 39183-3435 within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors that have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the Security Officer, ATTN: CEMVK-PM, 4155 Clay Street, Vicksburg, MS 39183-3435. For those contractors that do not have a CAGE Code or Facility Security Clearance, Security Officer, ATTN: CEMVK-PM, 4155 Clay Street, Vicksburg, MS 39183-3435 Security Office will process the investigation in coordination with the Contractor and contract employees.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01000
GENERAL CONTRACT REQUIREMENTS

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 PARTNERING
- 1.3 RIGHTS-OF-WAY
- 1.4 PRECONSTRUCTION CONFERENCE
- 1.5 SUBMITTAL OF SUBCONTRACTING PLAN
- 1.6 NOTIFICATION OF AREA ENGINEER BEFORE BEGINNING WORK
- 1.7 ORDER OF WORK
- 1.8 PROGRESS CHART
- 1.9 DESIGNATED BILLING OFFICE
- 1.10 PAYMENT INVOICES
- 1.11 TEMPORARY PROJECT FENCING
- 1.12 AS-BUILT DRAWINGS
- 1.13 PROJECT SIGN (APR 1991)
- 1.14 MINIMUM REQUIRED INSURANCE
- 1.15 WORK IN QUARANTINED AREA
- 1.16 CERTIFICATES OF COMPLIANCE
- 1.17 PROCESS FOR OBTAINING CURRENT REQUIREMENTS OF THE U.S. ARMY CORPS
OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL (EM 385-1-1)
- 1.18 SAFETY SIGN
- 1.19 ACCIDENT PREVENTION PLAN
- 1.20 DAILY INSPECTIONS
- 1.21 ACCIDENT INVESTIGATIONS AND REPORTING
- 1.22 IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY
- 1.23 MACHINERY AND MECHANIZED EQUIPMENT
- 1.24 VEHICLE WEIGHT LIMITATIONS
- 1.25 PUBLIC AND PRIVATE UTILITIES
- 1.26 DAMAGE TO WORK
- 1.27 ENERGY CONSERVATION
- 1.28 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER
- 1.29 CONTROL OF ACCESS TO CONSTRUCTION AREAS
- 1.30 HARBOR MAINTENANCE FEE

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01000

GENERAL CONTRACT REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

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

CODE OF FEDERAL REGULATIONS (CFR)

19 CFR 24.24	Harbor Maintenance Fee
33 CFR 156	Oil and Hazardous Material Transfer Operations

1.2 PARTNERING

The Government encourages formation of informal project partnerships on all projects. A project partnership strives to utilize a cooperative working relationship to jointly establish and effectively reach mutual project execution goals. The partnering process will in no way relax or stiffen the requirements of the contract, but will enhance the likelihood of success through improved working relationships. The possibility of an informal partnership may be discussed at the Pre-construction Conference for this project.

1.3 RIGHTS-OF-WAY

a. The rights-of-way for the work to be constructed under this contract, within the limits indicated on the drawings, will be provided by the Government without cost to the Contractor. If these rights-of-way are used by the Contractor, he shall, at his own expense, do all work necessary to make such rights-of-way suitable for traveling to and from the worksite. Upon completion of the Contractor's work, any such rights-of-way furnished by the Government shall be left in a condition satisfactory to the Contracting Officer.

b. When so directed by the Contracting Officer, the Contractor shall, without expense to the Government and at any time during the progress of the work when it is not being actively used for contract operations, promptly vacate and clean up any part of the Government grounds or rights-of-way that have been allotted to or have been in use by the Contractor.

c. The Contractor shall not obstruct any existing roads on lands controlled by the United States except with written permission of the Contracting Officer and shall maintain such roads in as good condition as exists at the time of commencement of work under this contract.

d. The Contractor shall procure, without expense to the Government, all additional lands, access roads, or rights-of-way necessary for his use in the performance of the work or as required by his method of

operation. The Contractor shall submit written evidence to the Contracting Officer that he has obtained the rights-of-way from the property owners. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired such rights-of-way, prepared and executed in accordance with the laws of the State in which the land is located. The Contractor shall also obtain from the owners a release for the Government for any damages which may result from his use of such rights-of-way. The written conveyance and release shall be provided to the Government prior to use of Contractor obtained additional lands, access roads, or rights-of-way. If temporary rights-of-way are obtained by the Contractor the period of time for those rights shall coincide with Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK, plus a reasonable time for any extension granted for the completion of the work. Any agreements or permits with levee boards, counties, parishes, municipalities, or other political subdivisions for moving material and equipment will be the responsibility of the Contractor and will be obtained at no expense to the Government. Any delays to the Contractor resulting from delays in procuring such additional lands, access roads, rights-of-way, or permits for moving material and equipment for his work under this contract will not be a basis for any claim for increase in the cost of this contract. The Contractor shall make his own investigations to determine the conditions, restrictions and difficulties which may be encountered in acquiring such rights-of-way and in the transportation of material and equipment. In addition, the Contractor shall be solely liable for any and all damages and claims of any nature whatsoever arising from or growing out of the acquisition and use of rights-of-way, etc., other than those furnished by the Government.

e. Other than project lands, the United States will not provide access or rights-of-way over any public lands and will not be responsible for acquiring such.

f. The Contractor shall repair at no expense to the Government, any and all damage to any existing roads when such damage is a result of his operations under this contract. (CEMVK-OC, 1989)

1.4 PRECONSTRUCTION CONFERENCE

a. A preconstruction conference will be arranged by the Area Engineer as soon after contract award as possible, and the conference will be conducted before work is allowed to commence. The Area Engineer will notify the Contractor of the time, date, and location for the meeting. At this conference, the Contractor will be oriented with respect to contract administration procedures, lines of authority, and construction matters. All known subcontractors performing at least 20 percent of the contract are required to attend this conference. Additional conferences may be established by the Area Engineer for any major subcontractors unknown at the time of the initial conference.

b. Submission by the Contractor of the items listed below will determine the date of the conference. The following items shall be submitted to the Area Engineer for review at least seven (7) calendar days prior to the preconstruction conference:

- (1) Accident Prevention Plan
- (2) Environmental Protection Plan

(3) Quality Control Plan

c. The Contractor shall bring to this conference, in completed form the following:

(1) Letter of superintendent appointment and authority

(2) List of subcontractors

d. The Contractor should bring to this conference, or at least be prepared to discuss, the following:

(1) Submittal register

(2) Progress chart or Network Analysis System (as applicable)

e. Minutes of this conference will be taken and prepared by the Area Engineer and sent to the Contractor for his concurrence and signature.

1.5 SUBMITTAL OF SUBCONTRACTING PLAN

a. This paragraph does not apply to small business concerns.

b. After bid opening, and within 7 days, the apparent low bidder, upon telephone notification by the Small and Disadvantaged Business Utilization Specialist, shall submit a Small and Disadvantaged Business Subcontracting Plan. The plan shall be submitted in accordance with Contract Clauses UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS CONCERNS and SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN - ALTERNATE 1, and the person responsible for administering the plan shall be named in paragraph AGENT FOR SUBMITTING SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN of the Representations and Certifications.

1.6 NOTIFICATION OF AREA ENGINEER BEFORE BEGINNING WORK

At least 7 days before beginning work and at least one day before resuming after a period of seven (7) days or more when no work has been performed, the Contractor shall notify U.S. Army Corps of Engineers, Mr. Gerald R. McDonald, Area Engineer, Vidalia Area Office, 100 Advocate Row, Vidalia, Louisiana 71373-3032, telephone (318) 336-5226.

1.7 ORDER OF WORK

The work shall be carried on in accordance with the Progress Chart (schedule) required by paragraph (a) of the Contract Clause SCHEDULES FOR CONSTRUCTION CONTRACTS.

1.8 PROGRESS CHART

The progress chart required by provisions of paragraph (a) of the Contract Clause SCHEDULES FOR CONSTRUCTION CONTRACTS shall be prepared on ENG FORM 2454, copies of which will be furnished to the Contractor by the Government. Three (3) copies of the schedule will be required. The Progress Chart shall be periodically updated.

1.9 DESIGNATED BILLING OFFICE

The designated billing office for this contract shall be U.S. Army Corps of Engineers, Vidalia Area Office, 100 Advocate Row, Vidalia, Louisiana 71373-3032.

1.10 PAYMENT INVOICES

a. The Federal Acquisition Regulation requires that the "REMIT TO" address on the invoice match the "REMIT TO" address on the contract or a proper notice of assignment. The Payment Office will verify a match of the "REMIT TO" address in the contract and Contractor's invoice prior to payment. If the addresses do not match, the invoice will be determined improper and returned to the Contractor for correction and resubmission. If an invoice is improperly returned, the original invoice receipt date shall be used as the basis for determining interest to be paid in accordance with the PROMPT PAYMENT ACT.

b. Among other things, the Contract Clause PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS requires that a proper invoice for payment include substantiation of the amounts requested. As required in Office of Management and Budget, Circular A-125 (Rev.), PROMPT PAYMENT, dated December 12, 1989, substantiation of the amount requested for progress payments under construction contracts includes the following:

- (1) An itemization of the amounts requested related to the various elements of work required by the contract covered by the payment request;
- (2) A listing of the amount included for work performed by each subcontractor under the contract;
- (3) A listing of the total amount of each subcontract under the contract;
- (4) A listing of the amounts previously paid to each such subcontractor under the contract; and,
- (5) Additional supporting data in a form and detail required by the contracting officer.

c. Failure to include the above information in a Contractor's invoice will result in the invoice being considered defective under the provisions of the PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS clause of the contract, and it will be returned to the Contractor for correction and resubmission. (CEMVK-OC, 1997)

1.11 TEMPORARY PROJECT FENCING

Temporary project fencing as required by Section 4, "Temporary Facilities", paragraph 04.A.04 of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual, is not required on this project.

1.12 AS-BUILT DRAWINGS

This paragraph supplements the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION.

a. As-Built Contract Drawings. The Contractor shall maintain two (2) half-size sets of blue-line prints of the contract drawings depicting in

red a record of as-built conditions. These drawings shall be maintained in current condition at all times during the entire contract period. The blue-line drawings shall be updated daily by the Contractor showing all changes from the contract plans which are made in the work, additional information which might be uncovered in the course of construction, and information for future construction reference (such as debris disposed by burying). This information shall be recorded on the blue-line prints accurately and neatly by means of details and notes. Each month, prior to submitting a request for progress payment, the Contractor shall review the blue-line as-built drawings with the Contracting Officer, and the Contractor shall certify that the as-built drawings are accurate and up-to-date before progress payment is made. The Contractor shall deliver to the Contracting Officer two (2) complete sets of the as-built marked blue-line prints at the time of the final inspection of the project. In addition, the Contractor shall have the as-built marked prints scanned into full-size, 300 dpi TIFF (tagged image file format) black-and-white raster images and shall deliver to the Contracting Officer two (2) complete sets on CD-ROM at the time of final inspection. The as-built drawings shall be identified by entering the words "AS-BUILT DRAWINGS" in letters at least 3/16-inch high, placed in the lower right corner of each drawing.

b. As-Built Shop Drawings. Upon completion of individual features of work, the Contractor shall revise and resubmit any shop drawings for the feature as necessary to show as-built conditions. The notation "Revised to show as-built conditions" shall be placed in red in the lower right corner of each drawing, along with the initials of a responsible company representative. Each revised as-built shop drawing or catalog cut shall be resubmitted using ENG FORM 4025, enclosed at the end of Section 01330 SUBMITTAL PROCEDURES.

c. No separate measurement or payment will be made for providing as-built drawings, as-built shop drawings, electronic drawings and plates, or for any of the work required by this clause, and all costs therefor shall be included in the applicable contract prices contained in the Bidding Schedule.

1.13 PROJECT SIGN (APR 1991)

The Contractor shall fabricate, erect and maintain one sign for project identification. The sign shall be displayed and positioned for reading by passing viewers. The exact location is subject to Contracting Officer's approval. Information for the right side of the project sign shall be as follows:

Title: JONESVILLE LOCK
Project: STOPLOG SLOT CONSTRUCTION
Contract No: DACW38-03-C-0XXX
Contractor: (Contractor's name and city)

The project identification sign shall meet the requirements specified in the U.S. Army Corps of Engineers Sign (USACES) Standards Manual, EP 310-1-6a and EP 310-1-6b. A copy of the sign standards manual is available for review at the office of the Vicksburg District Sign Program Manager and questions concerning manufacture and installation of the project identification sign may be addressed to:

Vicksburg District Sign Program Manager (Lawran Richter)
ATTN: CEMVK-OD-MN
4155 Clay Street
Vicksburg, MS 39183-3435
Telephone: (601) 631-5287

1.14 MINIMUM REQUIRED INSURANCE

The following paragraph is applicable if the services involved are performed on a Government Installation. Government Installation is defined as property where the Government holds by fee simple title, by construction rights-of-way, or perpetual easement, etc., an interest in real property. See Contract Clause INSURANCE-WORK ON A GOVERNMENT INSTALLATION.

a. Workmen's Compensation and Employer's Liability Insurance. The Contractor shall comply with all applicable workmen's compensation Statutes of the State of Louisiana and shall furnish evidence of Employer's Liability Insurance in an amount of not less than \$100,000.

b. General Liability Insurance. Bodily injury liability insurance in the minimum limits of \$500,000 per occurrence on the comprehensive form of policy.

c. Automobile Liability Insurance. Minimum limits of \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. This insurance shall be on the comprehensive form of policy and shall cover the operation of all automobiles used in performance of the contract.

1.15 WORK IN QUARANTINED AREA

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

1.16 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of material with specification requirements shall be executed in accordance with Section 01330 SUBMITTAL PROCEDURES. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from

furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.17 PROCESS FOR OBTAINING CURRENT REQUIREMENTS OF THE U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL (EM 385-1-1)

Contractors are required to comply with the latest version, and all posted changes, of the U.S. Army Corps of Engineers Safety and Health Requirements Manual in effect on the issue date of this solicitation. EM 385-1-1 and changes are available on the Internet at <http://www.hq.usace.army.mil> (at the HQ home page, select "Safety and Occupational Health", and then select "EM 385-1-1" for the manual, or "Changes to EM" for the most recent changes to the manual). Prior to making an offer, offerors should check the referenced website for the latest changes. No separate payment will be made for compliance with the requirements of this paragraph, or for compliance with other safety requirements of the contract.

1.18 SAFETY SIGN

The Contractor shall fabricate, erect and maintain a safety sign at the site, as located by the Contracting Officer. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The data required shall be current. The safety sign shall meet the requirements specified in the U.S. Army Corps of Engineers Sign (USACES) Standards Manual, EP 310-1-6a and EP 310-1-6b. A copy of the sign standards manual is available for review at the office of the Vicksburg District Sign Program Manager and questions concerning manufacture and installation of the safety sign may be addressed to:

Vicksburg District Sign Program Manager (Lawran Richter)
ATTN: CEMVK-OD-MN
4155 Clay Street
Vicksburg, MS 39183-3435
Telephone: (601) 631-5287

1.19 ACCIDENT PREVENTION PLAN

Refer to Contract Clause ACCIDENT PREVENTION (Alternate I). Within 15 days after receipt of award of the contract, an Accident Prevention Plan shall be submitted to the Contracting Officer for review and acceptance. The plan shall be prepared in the following format:

- a. An executed MVD FORM 358-R, "Administrative Plan" (available upon request), see Appendix A, "Minimum Basic Outline for Accident Prevention Plan" of EM 385-1-1.
- b. An executed MVD FORM 359-R, "Activity Hazard Analysis" (available upon request), see paragraph 01.A.09 and figure 1-1 of EM 385-1-1.
- c. A copy of company policy statement regarding accident prevention.
- d. When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be submitted on MVD Form 414R Fuel Oil Transfer, (available upon request). (Refer to 33 CFR 156.)
- e. The Contractor shall not commence physical work at the site until the plan has been accepted by the Contracting Officer, or his authorized representative. At the Contracting Officer's discretion,

the Contractor may submit his Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also, refer to Section 1, "Program Management", paragraph 01.B, "Indoctrination and Training" of EM 385-1-1.

1.20 DAILY INSPECTIONS

Refer to Section 01451 CONTRACTOR QUALITY CONTROL and Contract Clause INSPECTION OF CONSTRUCTION. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer. Reports of daily inspections shall be maintained at the job site. The reports shall be records of the daily inspections and resulting actions. As a minimum each report shall include the following:

- a. Phase(s) of construction underway during the inspection
- b. Locations or areas inspections were made.
- c. Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

1.21 ACCIDENT INVESTIGATIONS AND REPORTING

Refer to EM 385-1-1, Section 1, "Program Management", paragraph 01.D, "Accident Reporting and Recordkeeping". Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported in writing to the Contracting Officer or his representative within one working day after the accident occurs.

1.22 IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY

- a. The Government will furnish to the Contractor the property identified in the Schedule to be incorporated or installed into the work or used in performing the contract. The listed property is stored at the Red River Central Maintenance Facility, and will be delivered to the site on a barge provided by the Government. The Contractor is responsible for requesting delivery no less than two weeks prior to his expected use of the bulkheads. Upon arrival of the bulkheads, the Contractor shall verify the quantity and condition and acknowledge receipt to the Contracting Officer in writing. Upon receipt of the bulkheads, the Contractor is responsible for maintaining proper mooring of the barge, barge tending, providing a vessel and licensed personnel for moving the barge containing the bulkheads, and a crane and qualified operators necessary for placing the bulkheads.~~The Contractor is required to transport and verify its quantity and condition and acknowledge receipt to the Contracting Officer.~~ The Contractor shall also report to the Contracting Officer within 24 hours of delivery any damage to or shortage of the property as received. All such property shall be installed or incorporated into the work at the expense of the Contractor, unless otherwise indicated in this contract.
- b. Each item of property to be furnished under this clause shall be as follows:

SCHEDULE

QUANTITY	ITEM	DESCRIPTION
4	Lock Bulkheads	Type A
4	Lock Bulkheads	Type B
6	Lock Bulkheads	Type C

1.23 MACHINERY AND MECHANIZED EQUIPMENT

Machinery and mechanized equipment used under this contract shall comply with the following:

a. When mechanized equipment is operated on floating plant, the Contractor shall provide positive and acceptable means of preventing this equipment from moving or falling into the water. The type of equipment addressed by this clause includes front-end loaders, bulldozers, trucks (both on- and off-road), backhoes, hydraulic excavators (track hoes), and similar equipment. If the Contractor plans to use such equipment on floating plant, an activity hazard analysis must be developed for this feature of work. The plan must include a detailed explanation of the type or types of physical barriers, curbs, structures, etc., which will be incorporated to protect the operator and prevent the equipment from entering the water. Nonstructural warning devices may be considered for situations where the use of structural barriers is determined to be impracticable. The activity hazard analysis must thoroughly address the procedure and be submitted to the Corps for review and acceptance prior to start of this feature of work.

b. The stability of crawler, truck, and wheel-mounted cranes shall be assured.

(1) The manufacturer's load-rating chart may be used to determine the maximum allowable working load for each particular crane's boom angle provided a test load, with a boom angle of 20 degrees, confirms the manufacturer's load-rating table.

(2) Stability tests are required if:

(i) there is no manufacturer's load-rating chart securely fixed to the operator's cab;

(ii) there has been a change in boom or other structural member or,

(iii) there has been a change in the counterweight.

The test shall consist of lifting a load with the boom in the least stable undercarriage position and at an angle of 20 degrees above the horizontal. The test shall be conducted under close supervision on a firm, level surface. The load that tilts the machine shall be identified as the test load. The test load moment (in ft-lbs) shall then be calculated by multiplying the horizontal distance (in feet) from the center of rotation of the machine to the test load, times the test load (in lbs). Three-fourths of this test-load moment shall then be used to compute the maximum allowable operating loads for the boom at 20, 40, 60, and 80 degrees above horizontal. From these maximum

allowable operating loads, curve shall be plotted and posted in the cab of the machine in sight of the operator. These values shall not be exceeded except in the performance test described below. The test load shall never exceed 100 percent of the manufacturer's maximum rated capacity.

(3) In lieu of the test and computations above, the crane may be load tested for stability at each of the four boom positions listed above.

c. Performance tests shall be performed in accordance with Section 16, "Machinery and Mechanized Equipment" of EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual, except as specified below. Performance tests shall be conducted after each stability test, when the crane is placed in service on a project, and at least every 12 months.

(1) When conducting a performance load test which is required of a new crane or a crane in which load sustaining parts have been altered, replaced, or repaired (excluding replacement of the rope), the test load shall be as specified in ASME/ANSI B30 Series. That is, for overhead, gantry, portal, pillar, tower, monorail, and underhung cranes, the test load shall not exceed 125 percent of the manufacturer's load rating capacity chart at the configuration of the test; and for hammerhead tower, mobile, and floating cranes and boom trucks, the test load shall not exceed 110 percent of the manufacturer's load rating capacity chart at the configuration of the test.

(2) When conducting a performance load test which is required because a crane is reconfigured, or reassembled after disassembly, or because the crane requires an annual load test, the test loads shall not exceed 100 percent of the manufacturer's load rating capacity chart at the configuration of the test.

(3) All load tests are required to be conducted in accordance with the manufacturer's recommendations.

d. Inspections shall be made which will ensure a safe and economical operation of both cranes and draglines with inspection documented. Copies of the inspections and tests shall be available at the job site for review. All stability and performance tests on cranes and all complete dragline inspections shall be witnessed by the Contracting Officer or his authorized representative.

e. A complete dragline inspection shall be made:

- (1) at least annually;
- (2) prior to the dragline being placed in operation; and
- (3) after the dragline has been out of service for more than 6 months.

f. All heavy equipment moved onto the worksite shall be inspected for compliance with this contract. Some MVD Inspection forms are attached at the end of this section. All completed forms, including abatement schedule of any violations, shall be maintained at the job site for continued review and update as needed.

1.24 VEHICLE WEIGHT LIMITATIONS

Vehicle weight limitations for operation on rural roads and bridges may affect the prosecution of work in this contract. The Contractor will be responsible for obtaining all necessary licenses and permits in accordance with the Contract Clause PERMITS AND RESPONSIBILITIES. Current information regarding road and bridge weight limits may be obtained by contacting the Louisiana Department of Transportation and Development and the police jury for the parishes through which equipment and materials will be transported as a result of this contract.

1.25 PUBLIC AND PRIVATE UTILITIES

a. Unless otherwise specified, shown on the drawings, or stated in writing by the Contracting Officer, the Contractor shall not remove or disturb any public or private utilities. Such removals, alterations, and relocations, where necessary, will be made by others. The locations, if any, shown on the drawings for underground utilities are approximate only. The exact locations of such utilities shall be determined by the Contractor in the field prior to commencing construction operations in their vicinity.

b. The attention of the Contractor is directed to the possibility that he may encounter, within the right-of-way limits, utilities, some of which may be buried, and the existence of which is presently not known. Should any such utilities be encountered, the Contractor shall immediately notify the Contracting Officer so that he may determine whether they shall be removed, relocated, or altered. After such determination is made, the Contractor shall, if so directed by the Contracting Officer, remove, relocate, or alter them as required, and an equitable adjustment will be made in accordance with the Contract Clause CHANGES. In event the Contracting Officer arranges for such removals, alterations, or relocations to be performed by others, the Contractor shall cooperate with such others during the latter's removal, alteration, or relocation operations in accordance with the Contract Clause OTHER CONTRACTS.

1.26 DAMAGE TO WORK

a. The responsibility for damage to any part of the permanent work shall be as set forth in the Contract Clause PERMITS AND RESPONSIBILITIES. However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood (see Section 00800 SPECIAL CONTRACT REQUIREMENTS, paragraph PHYSICAL DATA, subparagraph FLOODS) or earthquake, 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 shall make repairs as ordered by the Contracting Officer and full compensation for such repairs to permanent work 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, for any part of such damaged permanent work, there is no applicable contract unit or lump sum price, then an equitable adjustment pursuant to the Contract Clause CHANGES will be made as full compensation for the repairs for that part of the permanent work for which there is no applicable contract unit or lump sum price.

b. 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.

1.27 ENERGY CONSERVATION

The Contractor shall ensure that construction operations are conducted efficiently and with the minimum use of energy.

1.28 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with Contract Clause DEFAULT (FIXED PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this paragraph, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON FIVE (5) DAY WORK WEEK

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

(6) (3) (5) (4) (4) (5) (4) (3) (3) (3) (5) (5)

c. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor shall record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph b, above, the contracting officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with Contract Clause DEFAULT (FIXED PRICE CONSTRUCTION).

1.29 CONTROL OF ACCESS TO CONSTRUCTION AREAS

a. This paragraph supplements the Contract Clauses PERMITS AND RESPONSIBILITIES and OPERATIONS AND STORAGE AREAS.

b. It shall be the responsibility of the Contractor to prevent possible injury to visitors to the project site. Only personnel engaged in contract work and others authorized by the Contracting Officer shall be permitted to enter into the construction areas. Suitable barriers, warning signs and directives shall be placed by the Contractor to direct persons not engaged in the work away from the areas of danger. The Contractor shall be responsible for effective enforcement of this paragraph during the period of this contract.

1.30 HARBOR MAINTENANCE FEE

a. Offerors or bidders contemplating use of U.S. ports in the performance of contract are subject to paying a harbor maintenance fee on cargo. Federal law establishes an ad valorem port use fee on commercial cargo imported into or exported from various U.S. ports. The fee is 0.125 percent (0.00125). Cargo to be used in performing work under contracts with the U.S. Government is not exempt from the fee, although certain exemptions do exist. Offerors are responsible for ensuring that the applicable fee and associated costs are taken into consideration in the preparation of their offers. Failure to pay the harbor maintenance fee may result in assessment of penalties by the Customs Service.

b. The statute is at Title 26 U.S. Code section 4461 and 4462. Department of Treasury Customs Service regulations implementing the statute, including a list of ports subject to the fee, are found at 19 CFR 24.24, Harbor Maintenance Fee. Additional information may be obtained from local U.S. Customs Service Offices or by writing to the Director, Budget Division, Office of Finance, Room 6328, U.S. Customs Service, 1301 Constitution Avenue, N.W., Washington, D.C. 20229.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02140

COFFERDAMS AND DEWATERING

PART 1 GENERAL

- 1.1 SCOPE
- 1.2 SUBMITTALS
- 1.3 DETAILED PLAN AND PROCEDURES

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

- 3.1 COFFERDAMS
- 3.2 DEWATERING

-- End of Section Table of Contents --

SECTION 02140

COFFERDAMS AND DEWATERING

PART 1 GENERAL

1.1 SCOPE

This section covers the design and construction of temporary localized cofferdams and a dewatering system to permit the placement of concrete in the dry. The Contractor shall furnish all labor, plant, equipment, materials, and supplies necessary for the construction required therefor, unless otherwise indicated on the drawings.

1.2 SUBMITTALS

Government approval is required for all submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Detailed plan and procedures; G

Dewatering layout; G

SD-05 Design Data

Cofferdam plan and design data; G

Plan and design of the cofferdams, including design computations and design analysis shall be submitted for review and approval.

1.3 DETAILED PLAN AND PROCEDURES

The detailed plan and procedures proposed for the accomplishment of the work shall be submitted for review and approval. The procedures shall include a detailed description of the methods and equipment to be used for each operation, and the sequence of operations. No work shall commence until the Contractor has received the Contracting Officer's approval in writing.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 COFFERDAMS

The Contractor shall coordinate the cofferdam setting and sealing operations with the Lockmaster and Contracting Officer. Design of the cofferdams shall be the responsibility of the Contractor, including review of the hydrographs and determination of appropriate top elevation. The Contractor shall submit drawings and calculations, approved by a registered professional engineer, of the cofferdams~~its proposed plan and design of the~~

~~cofferdams, including design computations and design analysis, for review and approval by~~ to the Contracting Officer a minimum of 30 days prior to start of ~~construction~~ fabrication of the cofferdams. Drawings shall be submitted for review ~~and approval~~ for informational purposes only. The Contractor shall assume all responsibility for the design of cofferdams. Any damage to the cofferdams which, in the judgement of the Contracting Officer, is due to the failure of the Contractor to take reasonable precautions, shall be repaired by the Contractor at no additional cost to the Government. If the cofferdam is constructed in accordance with the plans submitted to the Contracting Officer and is damaged by vessels navigating the lock, the Contractor shall make repairs to the cofferdam and/or any part of the permanent work, as ordered by the Contracting Officer. Full compensation therefor will be paid at the applicable contract unit prices or, in the absence thereof, an amount determined as an equitable adjustment under the Contract Clause entitled CHANGES for all repairs of the cofferdam and/or the permanent work which, in the opinion of The Contracting Officer, could not have been protected from damage. ~~The Contractor shall be responsible for establishing the tops of the cofferdams. Any damage to the cofferdams which, in the judgment of the Contracting Officer, is due to the failure of the Contractor to take reasonable precautions, shall be repaired by the Contractor at no additional cost to the Government.~~

3.2 DEWATERING

The Contractor shall design a dewatering system and furnish, install, operate, and maintain all pumps and other equipment as required to dewater and maintain in a water-free condition the areas in which work is to be performed in the dry. The design of the dewatering layout shall be submitted before work is begun and revised in accordance with site conditions. Dewatering design and the capacity of equipment shall be in accordance with sound engineering practice and shall be approved by the Contracting Officer. Approval of the Contractor's dewatering system, including cofferdams, is conditional and is predicated upon satisfactory performance during construction. All necessary revisions to the Contractor's dewatering plan and system, including cofferdams, shall be at the Contractor's expense. Hydraulically driven pumps will ~~not~~ be allowed. Upon satisfactory completion of all work within the areas to be protected and dewatered, the Contractor shall remove all protective structure material, cofferdams, pumps and other equipment, and appurtenances installed for protection and dewatering at the site.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 05 - METALS

SECTION 05502

METALS: MISCELLANEOUS, STANDARD ARTICLES, SHOP FABRICATED ITEMS

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 FABRICATION AND WORKMANSHIP REQUIREMENTS

PART 2 PRODUCTS

- 2.1 MISCELLANEOUS METALS AND STANDARD METAL ARTICLES
 - 2.1.1 Structural Steel
 - 2.1.2 Steel Plates
 - 2.1.2.1 Structural
 - 2.1.3 Steel Pipes
 - 2.1.4 Stainless Steel
 - 2.1.4.1 Plate, Sheet, and Strip
 - 2.1.4.2 Bars and Shapes
 - 2.1.4.3 Pipe
 - 2.1.5 Bolts, Nuts, and Washers
 - 2.1.5.1 Bolts, Nuts, and Washers (Other Than High-Strength)
 - 2.1.6 Screws
 - 2.1.6.1 Cap Screws
 - 2.1.6.2 Machine Screws
 - 2.1.6.3 Wood Screws
 - 2.1.6.4 Set Screws
 - 2.1.7 Expansion Anchors
 - 2.1.8 Toggle Bolts
 - 2.1.9 Floor Gratings
- 2.2 SHOP FABRICATED METAL ITEMS
 - 2.2.1 Railings
 - 2.2.1.1 Materials
 - 2.2.1.2 Fabrication
 - 2.2.1.3 Installation
 - 2.2.2 Grating
 - 2.2.3 Recess Frames
 - 2.2.4 Lock Wall Armor
 - 2.2.4.1 Surfaces to be Coated
 - 2.2.4.2 Formula P-38, Aluminum Phenolic Finish Coat
 - 2.2.4.3 Quantitative Requirements
 - 2.2.4.4 Water Resistance
 - 2.2.4.5 Application of Formula P-38, Aluminum Phenolic Finish Coat
 - 2.2.5 Bulkhead Slot Armor and Sill Beam
 - 2.2.6 Lock Wall Line Hooks and Check Posts

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 05502

METALS: MISCELLANEOUS, STANDARD ARTICLES, SHOP FABRICATED ITEMS

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 36/A 36M	(1996) Carbon Structural Steel
ASTM A 53	(1999) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A 123	(1989a) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 153/A 153M	(1995) Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A 240/A 240M	(1996) Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels
ASTM A 276	(1996) Stainless and Heat-Resisting Steel Bars and Shapes
ASTM A 307	(1994) Carbon Steel Bolts and Studs, 60 000 psi Tensile Strength
ASTM A 312/A 312M	(1995a) Seamless and Welded Austenitic Stainless Steel Pipes
ASTM A 514/A 514M	(1994a) High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding
ASTM A 564/A 564M	(1995) Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes

ASME INTERNATIONAL (ASME)

ASME B18.2.1	(1981; Supple 1991; R 1992) Square and Hex Bolts and Screws (Inch Series)
ASME B18.2.2	(1987; R 1993) Square and Hex Nuts (Inch Series)
ASME B18.3	(1986; R 1995) Socket Cap, Shoulder and

	Set Screws (Inch Series) Including Dimensions of Hexagon and Spline Sockets and Keys to Match
ASME B18.6.1	(1981; R 1991) Wood Screws (Inch Series)
ASME B18.6.2	(1972; R 1993) Slotted Head Cap Screws, Square Head Set Screws, and Slotted Headless Set Screws
ASME B18.6.3	(1972; R 1991) Machine Screws and Machine Screw Nuts
ASME B18.21.1	(1994) Lock Washers (Inch Series)
ASME B18.22.1	(1965; R 1990) Plain Washers
ASTM D 12	(1988; R 1998) Raw Tung Oil
ASTM D 962	(1981; R 1999) Aluminum Powder and Paste Pigments for Paints
ASTM D 1200	(1994; R 1999) Viscosity by Ford Viscosity Cup
ASTM D 1308	(1987; R 1998) Effect of Household Chemicals on Clear and Pigmented Organic Finishes
ASTM D 1475	(1998) Density of Paint, Liquid Coatings, Inks, and Related Products
ASTM D 1640	(1995; R 1999) Drying, Curing, or Film Formation of Organic Coatings at Room Temperature
ASTM D 2369	(2001e1) Volatile Content of Coatings
ASTM D 4206	(1996; R 2001) Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-1923	(Rev A) Shield, Expansion (Lag, Machine and Externally Threaded Wedge Bolt Anchors)
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NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM MBG 531	(1993) Metal Bar Grating Manual
NAAMM MBG 531S	(1989) Guide Specification for Stainless Steel Grating

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC Paint 25	(1997; R 2000) Zinc Oxide, Alkyd, Linseed Oil Primer for Use Over Hand Cleaned Steel, Type I and Type II
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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

Shop Fabricated Metal Items; G

Detail drawings shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

SD-03 Product Data

Miscellaneous Metals and Standard Metal Articles
Shop Fabricated Metal Items

Lists of materials shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

Records which identify the disposition of approved material and fabricated items in the work must be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

SD-06 Test Reports

Miscellaneous Metals and Standard Metal Articles
Shop Fabricated Metal Items

Certified test reports for materials tests and analyses shall be submitted for approval as specified and in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

1.3 FABRICATION AND WORKMANSHIP REQUIREMENTS

Fabrication requirements and workmanship provisions for items specified in this section shall conform with the requirements of Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

PART 2 PRODUCTS

2.1 MISCELLANEOUS METALS AND STANDARD METAL ARTICLES

Miscellaneous metal materials and standard metal articles shall conform to the respective specifications and other designated requirements. Sizes shall be as specified or shown. Where material requirements are not specified, materials furnished shall be suitable for the intended use and shall be subject to approval.

2.1.1 Structural Steel

ASTM A 36/A 36M.

2.1.2 Steel Plates

2.1.2.1 Structural

ASTM A 514/A 514M, Grade A.

2.1.3 Steel Pipes

ASTM A 53, Type S, Grade A, seamless, galvanized, nominal size and weight class or outside diameter and nominal wall thickness as shown, plain ends.

2.1.4 Stainless Steel

2.1.4.1 Plate, Sheet, and Strip

ASTM A 240/A 240M, UNS S30400, S40500 or S41008. Plate finish shall be hot-rolled and annealed or heat treated, and blast cleaned or pickled. Sheet and strip finish shall be No. 1.

2.1.4.2 Bars and Shapes

Stainless steel bars and shapes shall conform to the following as specified or shown:

- a. ASTM A 276, UNS S30400, S40500, or S41000 with a maximum carbon content of 0.08 percent, Condition A, hot-finished or cold-finished, Class C.
- b. ASTM A 564/A 564M, UNS S17400 or S45000, age-hardened heat treatment condition, hot-finished or cold-finished, Class C.

2.1.4.3 Pipe

ASTM A 312/A 312M, seamless, UNS S30400, NPS and schedule number or outside diameter and nominal wall thickness as shown, plain ends.

2.1.5 Bolts, Nuts, and Washers

Bolts, nuts, and washers shall be of the material, grade, type, class, style and finish indicated or best suited for intended use.

2.1.5.1 Bolts, Nuts, and Washers (Other Than High-Strength)

- a. Bolts and Nuts - ASTM A 307, Grade A, hot-dip galvanized.
- b. Bolts - ASME B18.2.1.
- c. Nuts - ASME B18.2.2.
- d. Washers
 - (1) Plain Washers - ASME B18.22.1, Type B.
 - (2) Lock Washer - ASME B18.21.1.

2.1.6 Screws

Screws shall be of the material, grade, type, style, and finish indicated

or best suited for use intended.

2.1.6.1 Cap Screws

ASME B18.2.1, ASME B18.3, or ASME B18.6.2 as required.

2.1.6.2 Machine Screws

ASME B18.6.3.

2.1.6.3 Wood Screws

ASME B18.6.1.

2.1.6.4 Set Screws

ASME B18.6.2.

2.1.7 Expansion Anchors

CID A-A-1923, type as required, except that nail driven types will not be acceptable, galvanized unless otherwise indicated.

2.1.8 Toggle Bolts

Toggle bolts shall have spring action snap open wings and require a predrilled hole. Screws and sheet metal wings shall be made of zinc-plated steel.

2.1.9 Floor Gratings

NAAMM MBG 531 and NAAMM MBG 531S. Finish shall be steel, zinc-coated in accordance with ASTM A 123 after fabrication. Steel hardware and fasteners shall be zinc-coated in accordance with ASTM A 153/A 153M.

2.2 SHOP FABRICATED METAL ITEMS

Shop fabricated metal items shall conform to the requirements and details as specified or shown and to the workmanship provisions and other applicable fabrication requirements as specified in Section 05055 METALWORK FABRICATION, MACHINE WORK, MISCELLANEOUS PROVISIONS.

2.2.1 Railings

Railings shall be of the type specified and shown and shall be furnished and installed complete with all fittings, brackets, fasteners, sleeves, anchors, and other appurtenances as shown and as required for proper installation.

2.2.1.1 Materials

Aluminum railings shall be of pipe or tube as specified in paragraph PIPES AND TUBES. Steel railings shall be of steel as specified in paragraph PIPE. Sleeves and other appurtenances shall be of the same material as the rails and posts or approved compatible materials.

2.2.1.2 Fabrication

Rigid joints in railings shall be of welded, threaded, or slip-on fittings

assembly and shall be flush-finished. Welded joints shall be reinforced with tight-fitting interior sleeves and shall be assembled by welding rails and posts to flush-type fittings, or by mitering and welding joining rails and posts. Assembled threaded joints shall have no exposed threads. Slip-on fittings shall be tight-fitting. Fasteners for slip-on fittings shall be the self-locking, concealed type. Fasteners for aluminum fittings shall be of aluminum or stainless steel. Fasteners for steel fittings shall be of stainless steel. Expansion joints in railings shall be an outer-sleeved or inner-sleeved slip-joint, with one end of the sleeve secured to one rail and the ends of the adjoining rails separated a minimum of 1 inch in the installed position. Expansion joints shall be located in rails near the intersection of rails and posts. Bends in railings shall be made in a manner that railings are not crushed and shall maintain their original cross-sectional shape. Welds shall be ground smooth. Railings shall be free of burrs, sharp corners, and sharp edges. For railings of other than welded assembly, manufacturer design calculations, showing that the installed railings are capable of withstanding a design working load of 200 pounds applied in any direction at any point on the top rail without permanent deformation, must be submitted and approved prior to installation.

2.2.1.3 Installation

Railings shall be installed as specified and shown. Railing posts anchored to concrete surfaces perpendicular to the posts shall be as shown for MONILITH 20-U on Drawing No. 22 REFERENCE DRAWINGS.

2.2.2 Grating

Gratings shall be as specified in paragraph FLOOR GRATINGS. Edges of gratings and openings through gratings which require the cutting of more than one bearing bar shall be banded. Fasteners shall be of the type recommended by the manufacturer and approved.

2.2.3 Recess Frames

Recess frames shall be fabricated of structural shapes of the type shown. Welded joints in frames shall be ground smooth. Steel frames shall be galvanized after fabrication. Frames shall be anchored to supports in the manner shown and shall not be continuous across contraction or expansion joints.

2.2.4 Lock Wall Armor

Lock wall armor tees and preformed corner protection plates shall be fabricated from steel conforming to ASTM A 36/A 36M, except that minimum yield strength shall be 33,000 psi, maximum tensile strength shall be waived, and the maximum allowable manganese content shall be 1.40 percent. Tees may be commercially rolled sections or may be fabricated from steel plates provided they have a nominal weight of not less than 28.2 pounds per foot and conform essentially to details shown. Installation shall conform to details shown. Tees and preformed plates shall be erected true to line and grade. The continuous edges of exposed faces shall not have a vertical or horizontal distortion from a straight line greater than 0.025 inch per foot of length. Distortion for any single section shall not exceed 1.4 inches. Where there is a warp in the installed tees or preformed plates greater than 1/16 inch, an extra anchor shall be installed at the proper location to draw the section into position. Bolt heads on exposed faces shall be counter sunk and fitted so that they are flush with the finished surfaces. Joints between abutting sections shall be square and the butting

ends shall be sawed or otherwise made smooth and regular.

2.2.4.1 Surfaces to be Coated

Only surfaces of the corner protection that are installed are required to be coated.

SURFACE PREPARATION	1st COAT	2nd COAT	3rd COAT
Alternate 1 Power tool or brush-off blast cleaning	SSPC Paint 25 Type I or Type II	P-38 (Aluminum)	P-38 (Aluminum)
Alternate 2 Commercial blast cleaning	SSPC Paint 25 Type I or Type II	P-38 (Aluminum)	P-38 (Aluminum)

2.2.4.2 Formula P-38, Aluminum Phenolic Finish Coat

This material shall be a ready-mixed aluminum paint. The pigment shall be leafing aluminum powder or paste conforming to the requirements of ASTM D 962 Types I or II, Class B, Medium. The vehicle shall be a phenolic resin varnish of 33-gallon oil length. The resin portion of the vehicle shall be a dry granular phenol-formaldehyde resin made from aliphatic para-substituted phenols with substituting groups containing four to eight carbon atoms. The oil portion of the vehicle shall consist of not less than 80% tung oil conforming to ASTM D 12 and the remainder shall be alkali refined linseed oil. The vehicle shall not contain rosin derivatives. Paint solvents shall consist of aliphatic and aromatic hydrocarbons as necessary. The paint shall meet the requirements of paragraphs Quantitative Requirements and Water Resistance.

2.2.4.3 Quantitative Requirements

The paint shall have the following properties.

Characteristics	Requirement (minimum/maximum)
Pigment, percent by weight of paint	13 / --
Volatile, percent by weight of paint, ASTM D 2369	-- / 45
Nonvolatile vehicle, percent by weight of paint	42 / --
Viscosity, seconds, ASTM D 1200	35 / 45
Flash point, Degrees F (C), ASTM D 4206	86 (30) / --
Leafing, percent	50 / --
Density, pounds per gallon, ASTM D 1475	8 / --
Dry, set-to-touch, hours, ASTM D 1640	0.5 / 2
Dry, to recoat, hours, ASTM D 1640	-- / 16

2.2.4.4 Water Resistance

Prepare a test panel by spray applying two coats of paint to a 3 by 6 inch solvent cleaned matte-finish steel test plate. Each coat shall have a dry film thickness of approximately 2.0 mils. Allow 24 hours dry time between coats. Air dry the prepared panel 72 hours and immerse in distilled water at 73 +/- 2F for 72 hours in accordance with ASTM D 1308. The test paint shall exhibit no wrinkling or blistering immediately upon removal of the panel from the water. The paint shall be no more than slightly affected

when examined two hours after removal and after 24 hours shall show no more than a slight visible whitening or dulling in comparison to the unexposed film.

2.2.4.5 Application of Formula P-38, Aluminum Phenolic Finish Coat

The first coat shall be brush or spray applied in the shop or field as indicated at a maximum spreading rate of 500 square feet per gallon and touched up in the field as necessary to maintain its integrity at all times. The second or third coats of the system shall be applied in the field at a maximum spreading rate of 450 square feet per gallon. Prior to applying field coats, all field welds, other bare metal, and damaged areas of the shop-primed surfaces shall be cleaned and primed as previously specified except that application shall be by brush.

2.2.5 Bulkhead Slot Armor and Sill Beam

Bulkhead slot armor and sill beam protection angles shall be fabricated from steel conforming to ASTM A 276 or ASTM A 240/A 240M. ~~Angles~~ Steel shapes may be commercially rolled sections or may be fabricated from steel plates and conform essentially to details shown. Installation shall conform to details shown. Bulkhead slot armor shall be erected true to line and grade. The continuous edges of exposed faces shall not have a vertical or horizontal distortion from a straight line greater than 1/16 inches per unit of length. Distortion for any single section shall not exceed 1/4 inches. Where there is a warp in the installed slot armor greater than 1/16 inches, an extra anchor shall be installed at the proper location to draw the section into position. Bolt heads on exposed faces shall be counter sunk and fitted so that they are flush with the finished surfaces.

2.2.6 Lock Wall Line Hooks and Check Posts

Lock wall line hooks and check posts shall be fabricated of alloy steel mechanical tubing as specified in paragraph MECHANICAL. Dimensions, including outside diameter and wall thickness, and anchor bars shall be as shown.

PART 3 EXECUTION (Not Applicable)

-- End of Section --