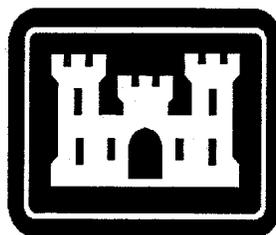


MAINTENANCE
MISSISSIPPI RIVER
LOCK AND DAM NO. 1
MINNEAPOLIS, MINNESOTA

**SPECIFICATIONS
FOR**

**CONCRETE REHABILITATION
OF AMBURSEN DAM**

DECEMBER 2002



**US Army Corps
of Engineers**
St. Paul District

CONSTRUCTION PROJECT DOCUMENTS

MAINTENANCE
MISSISSIPPI RIVER
LOCK AND DAM NO. 1
MINNEAPOLIS, MINNESOTA

CONCRETE REHABILITATION OF AMBURSEN DAM

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(Construction, Alteration, or Repair)

OFFER (Must be fully completed by offeror)

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

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

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

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

19. ACKNOWLEDGMENT OF AMENDMENTS

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

AMENDMENT NO.										
DATE										

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

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

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

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

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

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

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

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

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Section 00010 – Bid Items

BID ITEMS

ITEM NO SUPPLIES/SERVICES
 0001 TYPE A JOINT REPAIR - SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AA	FIRST 1360 LF	1,360	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AB	OVER 1360 LF	272	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0002 OGEE FACE JOINT REPAIR (TYPE A) - CONCRETE REMOVAL AND REPLACEMENT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	FIRST 1060 CF	1,060	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB	OVER 1060 CF	212	Cubic Feet		

ITEM NO SUPPLIES/SERVICES
 0003 TYPE A JOINT REPAIR -JOINT CONSTRUCTION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AA	FIRST 680 LF	680	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AB	OVER 680 LF	136	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0004	TYPE B JOINT REPAIR – SAWCUTTING, HORIZONTAL APRON JOINT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004AA	FIRST 1178 LF	1,178	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004AB	OVER 1178 LF	236	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0005	HORIZONTAL APRON TYPE B JOINT REPAIR - CONCRETE REMOVAL AND REPLACEMENT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005AA	FIRST 662 CF	662	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005AB	OVER 662 CF	132	Cubic Feet		

ITEM NO SUPPLIES/SERVICES
 0006
 TYPE B JOINT REPAIR -JOINT CONSTRUCTION, HORIZONTAL APRON JOINT REPAIR

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AA	FIRST 589 LF	589	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AB	OVER 589 LF	118	Linear Foot		
				-----	-----

ITEM NO SUPPLIES/SERVICES
 0007
 HORIZONTAL APRON JOINT REPAIR (TYPE B JOINT)-DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007AA	FIRST 395 EACH	395	Each		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007AB	OVER 395 EACH	79	Each		
				-----	-----

ITEM NO SUPPLIES/SERVICES
 0008
 HORIZONTAL EXPANSION TYPE C JOINT REPAIR - JOINT PREPARATION AND CONSTRUCTION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008AA	FIRST 1132 LF	1,132	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008AB	OVER 1132 LF	226	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009	UPSTREAM CREST TYPE D JOINT REPAIR - JOINT PREPARATION AND CONSTRUCTION	68	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0010	TYPE E JOINT REPAIR - SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010AA	FIRST 30 LF	30	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010AB	OVER 30 LF	6	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0011	OGEE TOE/NEW CONCRETE TYPE E JOINT REPAIR - CONCRETE REMOVAL AND REPLACEMENT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0011AA	FIRST 175 CF	175	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0011AB	OVER 175 CF	35	Cubic Feet		

ITEM NO SUPPLIES/SERVICES
 0012
 TYPE E JOINT REPAIR - OGEE TOE/NEW CONCRETE REPAIR (TYPE E JOINT)-
 JOINT CONSTRUCTION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0012AA	FIRST 168 LF	168	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0012AB	OVER 168 LF	34	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0013
 TYPE E JOINT REPAIR - OGEE TOE/NEW CONCRETE JOINT REPAIR (TYPE E
 JOINT) - DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013AA	FIRST 112 EA	112	Each		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013AB	OVER 112 EA	22	Each		

ITEM NO SUPPLIES/SERVICES
 0014
 TYPE F JOINT REPAIR - CONCRETE JOINT REPAIR (TYPE F JOINT) -
 SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0014AA	FIRST 70 LF	70	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0014AB	OVER 70 LF	14	Linear Foot		
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ITEM NO SUPPLIES/SERVICES
0015
TYPE F JOINT REPAIR - CONCRETE REMOVAL AND REPLACEMENT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0015AA	FIRST 33 CF	33	Cubic Feet		
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0015AB	OVER 33 CF	7	Cubic Feet		
				-----	-----

ITEM NO SUPPLIES/SERVICES
0016
TYPE F JOINT REPAIR - JOINT CONSTRUCTION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0016AA	FIRST 70 LF	70	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0016AB	OVER 70 LF	14	Linear Foot		
				-----	-----

ITEM NO SUPPLIES/SERVICES
0017
TYPE F JOINT REPAIR - DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0017AA	FIRST 46 EA	46	Each		
0017AB	OVER 46 EA	9	Each		
0018	APRON SPALL REPAIR - SAWCUTTING	185	Linear Foot		
0019	APRON SPALL REPAIR - DOWELS	128	Each		
0020	APRON SPALL REPAIR-CONCRETE REPAIR	110	Cubic Feet		
0021	CONCRETE SURFACE REPAIR,VERTICAL SAWCUTTING				
0021AA	FIRST 1089 LF	1,089	Linear Foot		
0021AB	OVER 1089 LF	218	Linear Foot		
0022	VERTICAL-EXISITING REBAR PREPARATION, CONCRETE SURFACE REPAIR				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0022AA	FIRST 172 LF	172	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0022AB	OVER 172 LF	34	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0023	CONCRETE SURFACE REPAIR, VERTICAL-SURFACE & SPALL REPAIR

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0023AA	FIRST 63 CF	63	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0023AB	OVER 63 CF	13	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES
0024	CONCRETE SURFACE REPAIR, VERTICAL - ANCHOR DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0024AA	FIRST 197 EA	197	Each		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0024AB	OVER 197 EA	39	Each		

ITEM NO SUPPLIES/SERVICES
 0025
 CONCRETE SURFACE REPAIR, OVERHEAD- SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0025AA	FIRST 362 LF	362	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0025AB	OVER 362 LF	72	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0026
 CONCRETE SURFACE REPAIR, OVERHEAD - EXISTING REBAR PREPARATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0026AA	FIRST 20 LF	20	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0026AB	OVER 20 LF	4	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0027
 CONCRETE SURFACE REPAIR, OVERHEAD SURFACE PREPARATION & SPALL REPAIR

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0027AA	FIRST 25 CF	25	Cubic Feet		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0027AB	OVER 25 CF	5	Cubic Feet		

ITEM NO SUPPLIES/SERVICES
 0028
 CONCRETE SURFACE REPAIR, OVERHEAD-ANCHOR DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0028AA	FIRST 185 EA	185	Each		

				-----	-----
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0028AB	OVER 185 EA	37	Each		

ITEM NO SUPPLIES/SERVICES
 0029
 CONCRET SURFACE REPAIR, UNDERSIDE OF BEAMS-SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0029AA	FIRST 340 LF	340	Linear Foot		

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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0029AB	OVER 340 LF	68	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0030
 CONCRETE SURFACE REPAIR, UNDERSIDE OF BEAMS - EXISTING REBAR PREPARATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0030AA	FIRST 86 LF	86	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0030AB	OVER 86 LF	17	Linear Foot		
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ITEM NO	SUPPLIES/SERVICES				
0031	CONCRETE SURFACE REPAIR, UNDERSIDE BEAMS - SURFACE PREPARATION AND SPALL REPAIR				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0031AA	FIRST 25 CF	25	Cubic Feet		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0031AB	OVER 25 CF	5	Cubic Feet		
				-----	-----

ITEM NO	SUPPLIES/SERVICES				
0032	CONCRETE SURFACE REPAIR, UNDERSIDE OF BEAMS - ANCHOR DOWELS				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0032AA	FIRST 47 EA	47	Each		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0032AB	OVER 47 EA	9	Each		
				-----	-----

ITEM NO	SUPPLIES/SERVICES				
0033	CONCRETE SURFACE REPAIR, CORNER PATCHING - SAWCUTTING				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0033AA	FIRST 284 LF	284	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0033AB	OVER 284 LF	57	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES				
0034	CONCRETE SURFACE REPAIR, CORNER PATCHING - EXISTING REBAR PREPARATION				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0034AA	FIRST 38 LF	38	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0034AB	OVER 38 LF	8	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES				
0035	CONCETE SURFACE REPAIR, CORNER PATCHING-SURFACE PREPARATION AND SPALL REPAIR				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0035AA	FIRST 14 CF	14	Cubic Feet		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0035AB	OVER 14 CF	2.80	Cubic Feet		
				-----	-----

ITEM NO	SUPPLIES/SERVICES				
0036	CONCRETE SURFACE REPAIR, CORNER PATCHING - ANCHOR DOWELS				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0036AA	FIRST 58 EA	58	Each		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0036AB	OVER 58 EA	12	Each		

ITEM NO	SUPPLIES/SERVICES
0037	STRUCTURAL CRACK SEALING - JOINT PREPARATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0037AA	FIRST 152 LF	152	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0037AB	OVER 152 LF	30	Linear Foot		

ITEM NO	SUPPLIES/SERVICES
0038	STRUCTURAL CRACK SEALING - JOINT SEALING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0038AA	FIRST 7.5 GALLONS	7.50	Gallon		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0038AB	OVER 7.5 GALLONS	1.50	Gallon		

ITEM NO SUPPLIES/SERVICES
 0039
 LEAK SEALING WORK - JOINT PREPARATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0039AA	FIRST 112 LF	112	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0039AB	OVER 112 LF	22	Linear Foot		

ITEM NO SUPPLIES/SERVICES
 0040
 LEAK SEALING WORK - JOINT SEALING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0040AA	FIRST 22.4 GALLONS	22.40	Gallon		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0040AB	OVER 22.4 GALLONS	4.50	Gallon		

ITEM NO SUPPLIES/SERVICES
 0041
 OGEE SPALL REPAIR - SAWCUTTING

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0041AA	FIRST 83 LF	83	Linear Foot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0041AB	OVER 83 LF	17	Linear Foot		
				-----	-----

ITEM NO SUPPLIES/SERVICES
0042
OGEE SPALL REPAIR - EXISTING REBAR PREPARATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0042AA	FIRST 5 LF	5	Linear Foot		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0042AB	OVER 5 LF	1	Linear Foot		
				-----	-----

ITEM NO SUPPLIES/SERVICES
0043
OGEE SPALL REPAIR, SURFACE PREPARATION AND SPALL REPAIR

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0043AA	FIRST 19 CF	19	Cubic Feet		
				-----	-----

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0043AB	OVER 19 CF	4	Cubic Feet		
				-----	-----

ITEM NO SUPPLIES/SERVICES
0044
OGEE SPALL REPAIR - ANCHOR DOWELS

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0044AA	FIRST 37 EA	37	Each		
0044AB	OVER 37 EA	7	Each		
0045	SLUICEWAYS 2,3,5,6,7 AND 8 PLUGGING	6	Each		
0046	SLUICEWAY 4 PLUGGING	1	Each		
0047	STEEL WALKWAY SUPPORT REPAIR WORK	1	Lump Sum		
0048	ELECTRICAL WORK	1	Lump Sum		
0049	DEWATERING	1	Lump Sum		
0050	BONDS (BID, PERFORMANCE AND PAYMENT)	1	Lump Sum		
TOTAL BID ITEMS (CLINS 0001 THROUGH 0050)					

BID SCHEDULE NOTES

1. EFFECTIVE MAY 31, 1998, ALL CONTRACTORS MUST REGISTER WITH THE DEFENSE CENTRAL CONTRACTOR REGISTRATION (CCR) IN ORDER TO RECEIVE ANY CONTRACT AWARD. (Other than those made via the Government credit card program). Contractors may register on line at <http://www.ccr.gov>
2. FACSIMILE OF BIDS/PROPOSALS AND FACSIMILE OF MODIFICATIONS THERETO, WILL NOT BE ACCEPTED.
3. All Quantities are estimated except where unit is given as "EA" (EACH) or "LS" (LUMP SUM).
4. NOTICE TO LARGE BUSINESS: The U.S. Army Corps of Engineers, St. Paul District, is committed to participation of Small Business, Small Disadvantaged Business and Women-Owned Small Business in the performance of work under this solicitation and resultant contract.

Your attention is directed to the solicitation clauses 52.219-0008 entitled "Utilization of Small Business Concerns", 52.219-0009 I entitled "Small Business Subcontracting Plan," and 52.219-7003 entitled "Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)".

If you are a large business and the apparent low bidder with a bid exceeding \$1,000,000, submission of a Subcontracting Plan in accordance with above clauses will be required. The Contracting Officer will review the plan using the following goals to assure that it represents your best efforts to maximize subcontracting opportunities. Award will not be made until the Contracting Officer approves the Subcontracting Plan.

The following subcontracting goals are informational only and not legally binding but are considered reasonable and achievable during the resultant contract from this solicitation. The goals expressed in percent of total planned subcontracting dollars are:

Small Business	61.4%
Small Disadvantaged Business	9.1%
Women-Owned Small Business	5.0%
HUBZone Small Business	Maximum Percent (%) Practicable
Veteran-owned Small Business	3.0%
Subcontract Reporting (SF 294 & SF 295)	100.0%

5. The apparent low bidder will be requested to provide the following information as soon as possible after bid opening:
 - a. A Financial Statement, to include a balance sheet and income statement, and
 - b. A Bank Certification of Financial Capability (line of credit).

This information will be treated as confidential. The financial statements should be not over 60 days old. If over 60 days old, a certification should be attached stating that the financial condition of the firm is substantially the same or, if not the same, the changes that have taken place.

6. All extensions of the unit prices shown will be subject to verification by the Government. In case of a discrepancy between the unit price and the extension, the unit price will govern.

7. The original bid/proposal and any modifications must be complete as to all the items on the schedule. Award will be made to that bidder whose bid is most advantageous to the Government, based on price and the price related factors included in the solicitation.
8. Unbalanced Bids. The government may reject as nonresponsive any bid that is materially unbalanced between contract line item numbers or sub-items on the bidding schedule. A bid is materially unbalanced when it is based on prices which are significantly less than cost for some work and prices which are overstated, in relation to cost, for other work. A materially unbalanced bid may be rejected if the Contracting Officer has a reasonable doubt as to whether the bid will result in the lowest overall cost to the government even though it may be the low evaluated bid. Additionally, a bid that is so unbalanced so as to be tantamount to an advance payment will be rejected as nonresponsive even if acceptance of the bid would result in the lowest overall cost to the government.
9. Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing in accordance with Section 00100, Contract Clause "Explanation To Prospective Bidders", not later than 10 days prior to bid opening. Questions can be faxed to (651) 290-5706, attention to F. Mitchell. Questions received after the deadline may not be answered prior to bid submittal.
10. Funding for this contract is contingent upon the conditions stated in Section 00800, Clause No. 52.232-5001, Continuing Contracts.
11. The addresses, phone numbers, and internet addresses (if available) for references cited in these specifications are listed in the Corps of Engineer Guide Specification (CEGS) 01090 SOURCES FOR REFERENCE PUBLICATIONS. CEGS 01090 is available on the TECHNIFO page of the Corps of Engineers Huntsville District internet site at: <http://www.hnd.usace.army.mil/>.
12. Any forthcoming amendments will only be available on this web site. E-mail notifications will be sent upon issuance of any amendments to all registered firms. Due to e-mail message notifications may not be reliable based on system constraints, it is recommended that each registered firm check this web site periodically for updates. A paper hard copy of each amendment will not be mailed unless specifically requested in writing.
13. Bid Bonds
 - a. It is the responsibility of the bidder to include an acceptable bid guarantee with its bid. This bid note does not provide bidders with an all-inclusive checklist for submitting an acceptable bid bond – rather, it provides some “lessons learned” information as to the unacceptability of photocopied bid bonds.
 - b. This solicitation requires bidders to submit a bid guarantee along with their bids (see clause 52.228-1). One acceptable form of bid guarantee is a bid bond. For a bid to be responsive, the bid bond accompanying the bid must unequivocally bind the bonding company – if it does not, the bid must be rejected as nonresponsive. Please note that a nonresponsive bid may not be corrected after bid opening to make it responsive – it must be rejected. The Contracting Officer has the authority and responsibility to determine whether the bid bond and its accompanying documentation clearly show that the person(s) executing the bid bond on behalf of the surety have the authority to unequivocally bind the bonding company. In order for a bid bond to be acceptable, it must be accompanied by a valid power-of-attorney issued by the surety (the bonding company, not the insurance agency writing the bond).
 - c. Photocopied or faxed powers-of-attorney are not acceptable. In order for a power-of-attorney accompanying a bid bond to be acceptable, it must be: (i) an original power-of-attorney (containing original signatures and corporate seals), (ii) a copy of a power-of-attorney accompanied by an original certification (original means original signature and original corporate seal) by the secretary (or other authorized officer) of the surety stating that the copied power-of-attorney is still in full force and effect as of the date of the certification and has not

been revoked, or (iii) a power-of-attorney with facsimile (stamped, printed or mechanically signed) signatures and facsimile corporate seals that: (A) contains language stating that the surety will be bound by facsimile seals and signatures and (B) also contains an ORIGINAL corporate seal at the certification block. (An original seal is (I) a raised, crimped seal, or (II) a paper or foil corporate seal that is manually attached to the power-of-attorney.)

14. For purposes of the clause entitled “52.219-4 -- Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999)”, the term “otherwise successful offer” means the lowest responsive bid from a responsible bidder prior to the application of any evaluation preference required by this clause.
15. The solicitation clause FAR 52.219-4 expressed that Small Disadvantaged Business (SDB) firms would receive both the HUBZone and SDB evaluation preference adjustments (See FAR clause 52.219-23). Guidance from the Office of the Under Secretary of Defense provides that DOD contracting activities, including the Department of the Army, shall suspend the use of price evaluation adjustments for SDB businesses in DOD Acquisitions, as prescribed in FAR subpart 19.11. Therefore the clause 52.219-23 is not contained in this solicitation and no SDB evaluation preference adjustment will be utilized.
16. **The bidders' attention is directed to Section 00800, Clause 52.232-5001 – Continuing Contracts, paragraph (b). The specified amount has been reserved by the Government for this contract for fiscal year 2003 ending September 30, 2003. Congress has not yet provided the Corps with its full fiscal year 2003 appropriations and the Corps does not know when (or if) additional funding will become available for fiscal year 2003. The Corps has budgeted \$750,000 to be available for this contract for fiscal year 2003 and expects that the funds will become available sometime during the fiscal year. However, the Government’s funding obligations under this contract are as stated in the Continuing Contracts clause. If additional funding information relating to this solicitation becomes available prior to bid opening, the Corps will endeavor to provide that information by an amendment to this solicitation.**

Section 00100 - Instructions to Bidders

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 99)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at <http://www.customerservice@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(End of provision)

52.209-4001 BIDDER'S QUALIFICATIONS (APR 1984) FAR 9.105-1

Before a bid is considered for award, the bidder may be requested by the Government to submit a statement regarding his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the work.

52.214-1 SOLICITATION DEFINITIONS--SEALED BIDDING (JUL 1987)

"Government" means United States Government.

"Offer" means "bid" in sealed bidding.

"Solicitation" means an invitation for bids in sealed bidding.

(End of provision)

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

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

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

(End of provision)

52.214-4 FALSE STATEMENTS IN BIDS (APR 1984)

Bidders must provide full, accurate, and complete information as required by this solicitation and its attachments. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

(End of provision)

52.214-5 SUBMISSION OF BIDS (MAR 1997)

(a) Bids and bid modifications shall be submitted in sealed envelopes or packages (unless submitted by electronic means) (1) addressed to the office specified in the solicitation, and (2) showing the time and date specified for receipt, the solicitation number, and the name and address of the bidder.

(b) Bidders using commercial carrier services shall ensure that the bid is addressed and marked on the outermost envelope or wrapper as prescribed in subparagraphs (a)(1) and (2) of this provision when delivered to the office specified in the solicitation.

(c) Telegraphic bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written or telegraphic notice.

(d) Facsimile bids, modifications, or withdrawals, will not be considered unless authorized by the solicitation.

(e) Bids submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation.

52.214-6 EXPLANATION TO PROSPECTIVE BIDDERS (APR 1984)

Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bids. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

(End of provision)

52.214-7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (NOV 1999)

(a) Bidders are responsible for submitting bids, and any modifications or withdrawals, so as to reach the Government office designated in the invitation for bids (IFB) by the time specified in the IFB. If no time is specified in the IFB, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that bids are due.

(b)(1) Any bid, modification, or withdrawal received at the Government office designated in the IFB after the exact time specified for receipt of bids is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late bid would not unduly delay the acquisition; and--

(i) If it was transmitted through an electronic commerce method authorized by the IFB, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of bids; or

(ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of bids and was under the Government's control prior to the time set for receipt of bids.

(2) However, a late modification of an otherwise successful bid that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(c) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the bid wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(d) If an emergency or unanticipated event interrupts normal Government processes so that bids cannot be received at the Government office designated for receipt of bids by the exact time specified in the IFB and urgent Government requirements preclude amendment of the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(e) Bids may be withdrawn by written notice received at any time before the exact time set for receipt of bids. If the IFB authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision at 52.214-31, Facsimile Bids. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

(End of provision)

52.214-12 PREPARATION OF BIDS (APR 1984)

(a) Bidders are expected to examine the drawings, specifications, Schedule, and all instructions. Failure to do so will be at the bidder's risk.

(b) Each bidder shall furnish the information required by the solicitation. The bidder shall sign the bid and print or type its name on the Schedule and each continuation sheet on which it makes an entry. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(c) For each item offered, bidders shall (1) show the unit price, including, unless otherwise specified, packaging, packing, and preservation and (2) enter the extended price for the quantity of each item offered in the "Amount" column of the Schedule. In case of discrepancy between a unit price and an extended price, the unit price will be presumed to be correct, subject, however, to correction to the same extent and in the same manner as any other mistake.

(d) Bids for supplies or services other than those specified will not be considered unless authorized by the solicitation.

(e) Bidders must state a definite time for delivery of supplies or for performance of services, unless otherwise specified in the solicitation.

(f) Time, if stated as a number of days, will include Saturdays, Sundays, and holidays.

(End of provision)

52.214-18 PREPARATION OF BIDS--CONSTRUCTION (APR 1984)

(a) Bids must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a bid must initial each erasure or change appearing on any bid form.

(b) The bid form may require bidders to submit bid prices for one or more items on various bases, including--

(1) Lump sum bidding;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of subparagraphs (1) through (3) above.

(c) If the solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(d) Alternate bids will not be considered unless this solicitation authorizes their submission.

52.214-19 CONTRACT AWARD--SEALED BIDDING-- CONSTRUCTION (AUG 1996)

(a) The Government will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation.

(b) The Government may reject any or all bids, and waive informalities or minor irregularities in bids received.

(c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the bid.

(d) The Government may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Government even though it may be the low evaluated bid, or if it is

so unbalanced as to be tantamount to allowing an advance payment.

52.214-34 SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)

Offers submitted in response to this solicitation shall be in the English language. Offers received in other than English shall be rejected.

(End of provision)

52.214-35 SUBMISSION OF OFFERS IN U.S. CURRENCY (APR 1991)

Offers submitted in response to this solicitation shall be in terms of U.S. dollars. Offers received in other than U.S. dollars shall be rejected.

(End of provision)

52.214-4001 INQUIRIES - BID INFORMATION

(a) Inquiries:

Any questions regarding this solicitation should be directed to Suellen Buelow, Contract Specialist, at telephone number (651) 290-5418 (collect calls not accepted). It is requested that all technical questions on the plans and specifications be submitted to the Contract Specialist by facsimile transmission to (651) 290-5706.

The Planholder's List and bid results can be found on the St. Paul District web site at <http://www.mvp.usace.army.mil> (click on "Contracting/Bidders Info", then "Electronic Bid Solicitations").

(b) Bid Depository/Bid Opening Information:

Bids must be deposited prior to the date and time set for opening of bids. The bid depository is located in the Contracting Division, 6th Floor, of the St. Paul District, Corps of Engineers Centre, 190 Fifth Street East, St. Paul, Minnesota 55101-1638. A public bid opening will be held at the same location.

**52.214-4002 ALL OR NONE QUALIFICATIONS (APR 1984) FAR
14.404-5**

A bidder/offeror must quote on all items in this solicitation to be eligible for award. The Government will award on a "All or None" basis. Evaluation of bids/offers will be based, among other factors, upon the total price quoted for all items.

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a [firm fixed price](#) contract resulting from this solicitation.

(End of clause)

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

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

(End of provision)

**52.225-10 NOTICE OF BUY AMERICAN ACT/BALANCE OF
PAYMENTS PROGRAM REQUIREMENT--CONSTRUCTION
MATERIALS (FEB 2000)**

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act--Balance of Payments Program--Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act or Balance of Payments Program should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act or Balance of Payments Program before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act or Balance of Payments Program, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.232-15 PROGRESS PAYMENTS NOT INCLUDED (APR 1984)

A progress payments clause is not included in this solicitation, and will not be added to the resulting contract at the time of award. Bids conditioned upon inclusion of a progress payment clause in the resulting contract will be rejected as nonresponsive.

52.232-38 SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER (MAY 1999)

The offeror shall provide, with its offer, the following information that is required to make payment by electronic funds transfer (EFT) under any contract that results from this solicitation. This submission satisfies the requirement to provide EFT information under paragraphs (b)(1) and (j) of the clause at 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration.

- (1) The solicitation number (or other procurement identification number).
- (2) The offeror's name and remittance address, as stated in the offer.
- (3) The signature (manual or electronic, as appropriate), title, and telephone number of the offeror's official authorized to provide this information.
- (4) The name, address, and 9-digit Routing Transit Number of the offeror's financial agent.
- (5) The offeror's account number and the type of account (checking, savings, or lockbox).
- (6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the offeror's financial agent.
- (7) If applicable, the offeror shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the offeror's financial agent is not directly on-line to the Fedwire and, therefore, not the receiver of the wire transfer payment.

(End of provision)

52.233-2 SERVICE OF PROTEST (AUG 1996)

- (a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Frederick Mitchell
Contracting Officer

USACE
190 E. Fifth Street
St. Paul, MN. 55101

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

(End of provision)

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

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

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

Jim Ryan, Telephone: (612) 724-2971,
Mailing Address:
US Army Corps of Engineers
5000 West River Parkway
Minneapolis, MN 55417

52.236-4002 WORK PERFORMED BY THE CONTRACTOR

The successful bidder must furnish the Contracting Officer within 10 days after the award, the items of work which he will perform with his own forces, the percentage of the total work this represents, and the estimated cost thereof.

52.236-4005 UNAVAILABILITY OF UTILITY SERVICES

The responsibility shall be upon the Contractor to provide and maintain at its expense, adequate utilities for its use for construction and domestic consumption, and to install and maintain necessary connections and lines for same, but only at such locations and in such manner as may be approved by the Contracting Officer. Before final acceptance, temporary connections and lines installed by the Contractor shall be removed in a manner satisfactory to the Contracting Officer.

252.209-7003 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (MAR 1998)

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

Section 00600 - Representations & Certifications

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

(a) The offeror certifies that --

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

(i) Those prices,

(ii) The intention to submit an offer, or

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

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

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

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

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

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

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

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

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

(End of provision)

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

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

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

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

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

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

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

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

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

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

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

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

(d) Taxpayer Identification Number (TIN).

___ TIN: _____

___ TIN has been applied for.

___ TIN is not required because:

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

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

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

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

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

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(f) Common parent.

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

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

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

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

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

(End of provision)

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

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

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

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

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

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

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

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

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

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

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

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

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

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2001) ALTERNATE I (OCT 2000) & ALTERNATE II (OCT 2000)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 237990.

(2) The small business size standard is 28.5 million.

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

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

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

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

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

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

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

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

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

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

Black American.

Hispanic American.

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

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

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

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

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

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

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

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

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

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

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

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

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

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

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

(d) Notice.

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

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

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

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

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

(End of provision)

52.219-2 EQUAL LOW BIDS. (OCT 1995)

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

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

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

52.219-22 SMALL DISADVANTAGED BUSINESS STATUS (OCT 1999)

(a) General. This provision is used to assess an offeror's small disadvantaged business status for the purpose of obtaining a benefit on this solicitation. Status as a small business and status as a small disadvantaged business for general statistical purposes is covered by the provision at FAR 52.219-1, Small Business Program Representation.

(b) Representations.

(1) General. The offeror represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either--

___ (i) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and

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

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

(C) It is identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration(PROONet); or

___ (ii) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(2)___ For Joint Ventures. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements at 13 CFR 124.1002(f) and that the representation in paragraph (b)(1) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(c) Penalties and Remedies. Anyone who misrepresents any aspects of the disadvantaged status of a concern for the purposes of securing a contract or subcontract shall:

- (1) Be punished by imposition of a fine, imprisonment, or both;
- (2) Be subject to administrative remedies, including suspension and debarment; and
- (3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

(End of provision)

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

The offeror represents that --

- (a) [] It has, [] has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;
- (b) [] It has, [] has not, filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

- (a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

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

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

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

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

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

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

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

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

52.225-11 BUY AMERICAN ACT--BALANCE OF PAYMENTS PROGRAM--CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (FEB 2002)

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

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

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

Cost of components means--

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

Designated country means any of the following countries: Aruba, Austria, Bangladesh, Belgium, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Canada, Cape Verde, Central African Republic, Chad, Comoros, Denmark, Djibouti, Equatorial Guinea, Finland, France, Gambia, Germany, Greece, Guinea, Guinea-Bissau, Haiti, Hong Kong, Iceland, Ireland, Israel, Italy, Japan.

Kiribati, Korea, Republic of, Lesotho, Liechtenstein, Luxembourg, Malawi, Maldives, Mali, Mozambique, Nepal, Netherlands, Niger, Norway, Portugal, Rwanda.

Sao Tome and Principe, Sierra Leone, Singapore, Somalia, Spain, Sweden, Switzerland, Tanzania U.R., Togo, Tuvalu, Uganda, United Kingdom, Vanuatu, Western Samoa, Yemen.

Designated country construction material means a construction material that--

- (1) Is wholly the growth, product, or manufacture of a designated country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different construction material distinct from the materials from which it was transformed.

Domestic construction material means--

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

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

North American Free Trade Agreement country means Canada or Mexico.

North American Free Trade Agreement country construction material means a construction material that--

- (1) Is wholly the growth, product, or manufacture of a North American Free Trade Agreement (NAFTA) country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a NAFTA country into a new and different construction material distinct from the materials from which it was transformed.

United States means the 50 States and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

(b) Construction materials. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) and the Balance of Payments Program by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act and the North American Free Trade Agreement (NAFTA) apply to this acquisition. Therefore, the Buy American Act and Balance of Payments Program restrictions are waived for designated country and NAFTA country construction materials.

(2) The Contractor shall use only domestic, designated country, or NAFTA country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows: None

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

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent. For determination of unreasonable cost under the Balance of Payments Program, the Contracting Officer will use a factor of 50 percent;

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

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

(c) Request for determination of inapplicability of the Buy American Act or Balance of Payments Program. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including--

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

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

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

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

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

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

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

(2) If the Government determines after contract award that an exception to the Buy American Act or Balance of Payments Program applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

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

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

Foreign and Domestic Construction Materials Price Comparison

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

\1\ Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).
List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.
Include other applicable supporting information.

(End of clause)

52.232-38 SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER (MAY 1999)

The offeror shall provide, with its offer, the following information that is required to make payment by electronic funds transfer (EFT) under any contract that results from this solicitation. This submission satisfies the requirement

to provide EFT information under paragraphs (b)(1) and (j) of the clause at 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration.

- (1) The solicitation number (or other procurement identification number).
- (2) The offeror's name and remittance address, as stated in the offer.
- (3) The signature (manual or electronic, as appropriate), title, and telephone number of the offeror's official authorized to provide this information.
- (4) The name, address, and 9-digit Routing Transit Number of the offeror's financial agent.
- (5) The offeror's account number and the type of account (checking, savings, or lockbox).
- (6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the offeror's financial agent.
- (7) If applicable, the offeror shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the offeror's financial agent is not directly on-line to the Fedwire and, therefore, not the receiver of the wire transfer payment.

(End of provision)

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

(a) "Definitions."

As used in this provision --

- (a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.
- (2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.
- (3) "Significant interest" means --
 - (i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;
 - (ii) Holding a management position in the firm, such as a director or officer;
 - (iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

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

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

(b) "Prohibition on award."

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

(c) "Disclosure."

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

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

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

(End of provision)

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

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

(b) Representation. The Offeror represents that it:

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

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

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

(End of provision)

Section 00700 - Contract Clauses

52.232-35 DESIGNATION OF OFFICE FOR GOVERNMENT RECEIPT OF ELECTRONIC FUNDS TRANSFER INFORMATION (MAY 1999)

(a) As provided in paragraph (b) of the clause at 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration, the Government has designated the office cited in paragraph (c) of this clause as the office to receive the Contractor's electronic funds transfer (EFT) information, in lieu of the payment office of this contract.

(b) The Contractor shall send all EFT information, and any changes to EFT information to the office designated in paragraph (c) of this clause. The Contractor shall not send EFT information to the payment office, or any other office than that designated in paragraph (c). The Government need not use any EFT information sent to any office other than that designated in paragraph (c).

(c) Designated Office:

Mailing Address:

U.S. Army Corps of Engineers
St. Paul District
190 East Fifth Street
St. Paul, MN 55101-1638

Telephone Number:

651/290-5233

Person to Contact:

Mr. Wayne Scheffel, CEMVP-RM-F

Electronic Address:

wayne.scheffel@usace.army.mil

(End of clause)

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

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

- (b) "Commercial component" means any component that is a commercial item.
- (c) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that--
- (i) Has been sold, leased, or licensed to the general public; or
 - (ii) Has been offered for sale, lease, or license to the general public;
- (2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;
- (3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for--
- (i) Modifications of a type customarily available in the commercial marketplace; or
 - (ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;
- (4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;
- (5) Installation services, maintenance services, repair services, training services, and other services if--
- (i) Such services are procured for support of an item referred to in paragraph (c)(1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and
 - (ii) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;
- (6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed. For purposes of these services--
- (i) Catalog price means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and
 - (ii) Market prices means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.
- (7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or
- (8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

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

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

(f) Nondevelopmental item means--

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

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

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

(End of clause)

52.202-4001 *DEFINITIONS (MAY 1995) EFARS Part 2.101*

"Chief of Contracting Office" means the Chief of the Contracting Division at a District, or the Director of Contracting at a Division, Center, Laboratory, or other support activity.

"Command" means each USACE Division, each USACE District, The U.S. Army Engineering and Support Center (HNC), Transatlantic Programs Center (TAC), Transatlantic Programs Center (Europe) (TAE), Topographic Engineer Center (TEC), Cold Regions Research and Engineering Laboratory (CRREL), Construction Engineering Research Laboratory (CERL), Humphreys Engineering Center Support Activity (HECSA), and Waterways experiment Station (WES).

"Commander" means the commanding officer of each USACE district and each USACE division, and the director or commander of HNC, TAC, TAE, ETL, CRREL, CERL, HECSA and WES.

"Head of Contracting Activity (HCA)" for USACE means the Chief of Engineers.

Centers. For determining contracting authority levels for this regulation, Centers (HNC, and TAC) will equate to a Division. As a subordinate unit to TAC, TAE's contracting authority will therefore equate to that of a district.

Level higher than the contracting officer. When a District or TAE chief of contracting is the contracting officer, a "level higher than the contracting

officer" means the Division or Center Director of Contracting. When an operating Division, Center or Laboratory Director/Chief of Contracting is the contracting officer a "level higher than the contracting officer" means the PARC.

Local Cooperation Agreements (LCAs). See Project Cooperation Agreements.

Project Cooperation Agreements. Formerly referred to as Local Cooperation Agreements, these are agreements under 31 U.S.C. 6305 and 42 U.S.C. 1962d-5b. They are not contracts as defined by the FAR.

"USACE and HQUSACE" means the United States Army Corps of Engineers and its headquarters, respectively.

52.203-3 GRATUITIES (APR 1984)

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

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

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

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

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

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

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

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

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

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

fee.

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

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

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

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

(End of clause)

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

(a) Definitions.

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

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

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

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

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

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

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract

entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

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

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

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

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

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

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

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

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

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

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

(End of clause)

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

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

- (1) Cancel the solicitation, if the contract has not yet been awarded or issued; or
 - (2) Rescind the contract with respect to which--
 - (i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--
 - (A) Exchanging the information covered by such subsections for anything of value; or
 - (B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or
 - (ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.
 - (b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.
 - (c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.
- (End of clause)

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

- (a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.
- (b) The price or fee reduction referred to in paragraph (a) of this clause shall be--
 - (1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;
 - (2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;
 - (3) For cost-plus-award-fee contracts--
 - (i) The base fee established in the contract at the time of contract award;
 - (ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.
 - (4) For fixed-price-incentive contracts, the Government may--

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

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

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

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

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

(End of clause)

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

(a) Definitions.

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

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

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

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

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

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

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

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

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

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

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

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

(b) Prohibitions.

- (1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to

influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

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

(i) Agency and legislative liaison by own employees.

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

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

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

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

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

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

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

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

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

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

(ii) Professional and technical services.

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

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or

negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

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

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

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

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

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

(c) Disclosure.

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

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

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

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

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

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

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

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

(e) Penalties.

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

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

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

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

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

(End of clause)

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

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

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

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

- (1) The name of the subcontractor.
- (2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.
- (3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.
- (4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984) - ALTERNATE I (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 March 1, 2004. * The time stated for completion shall include final cleanup of the premises.

The completion date is based on the assumption that the successful offeror will receive the notice to proceed by February 10, 2003. The completion date will be extended by the number of calendar days after the above date that the Contractor receives the notice to proceed, except to the extent that the delay in issuance of the notice to proceed results from the failure of the Contractor to execute the contract and give the required performance and payment bonds within the time specified in the offer.

(End of clause)

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

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$430.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-13 TIME EXTENSIONS (SEP 2000)

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

(End of clause)

52.211-18 VARIATION IN ESTIMATED QUANTITY (APR 1984)

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

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

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

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

(1) The proposal for the modification;

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

(3) Pricing of the modification; or

(4) Performance of the modification.

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

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

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

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

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

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

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

- (1) Based on adequate price competition;
 - (2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
 - (3) Set by law or regulation.
- (b) If any price, including profit, negotiated in connection with any modification under this clause, was increased by any significant amount because
- (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data;
 - (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data; or
 - (3) any of these parties furnished data of any description that were not accurate, the price shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) above.
- (c) Any reduction in the contract price under paragraph (b) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which:
- (1) the actual subcontract; or
 - (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.
- (d) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made:
- (1) the Contractor agrees not to raise the following matters as a defense:
 - (i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted;
 - (ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer;
 - (iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract; or
 - (iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.
 - (2) Except as prohibited by subdivision (d)(2)(ii) of this clause:
 - (i) an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if:

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

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

(ii) An offset shall not be allowed if:

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

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

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

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

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

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

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

(2) be limited to such modifications.

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

(1) Based on adequate price competition;

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

(3) Set by law or regulation.

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

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

52.214-29 ORDER OF PRECEDENCE--SEALED BIDDING (JAN 1986)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the specifications); (b) representations and other instructions; (c) contract clauses; (d) other documents, exhibits, and attachments; and (e) the specifications.

(End of clause)

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

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

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

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

(ii) Otherwise successful offers from small business concerns;

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

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

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

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

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

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

___ Offeror elects to waive the evaluation preference.

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

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

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

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

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

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

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

(End of clause)

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

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

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

Definitions. As used in this contract--

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

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. Service-disabled veteran-owned small business concerns meet the definition of veteran-owned small business concerns, and offerors may include them within the subcontracting plan goal for veteran-owned small business concerns. A separate goal for service-disabled veteran-owned small business concerns is not required. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

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

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

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

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

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

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

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

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

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

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

(iv) HUBZone small business concerns;

(v) Small disadvantaged business concerns; and

(vi) Women-owned small business concerns.

- (4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.
- (5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, (iii) Service-disabled veteran-owned small business concerns; HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.
- (6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—
- (i) Small business concerns;
 - (ii) Veteran-owned small business concerns;
 - (iii) Service-disabled veteran-owned small business concerns;
 - (iv) HUBZone small business concerns;
 - (v) Small disadvantaged business concerns; and
 - (vi) Women-owned small business concerns.
- (7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.
- (8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business and women-owned small business concerns have an equitable opportunity to compete for subcontracts.
- (9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 (\$1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.
- (10) Assurances that the offeror will--
- (i) Cooperate in any studies or surveys as may be required;
 - (ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;
 - (iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns,

women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.

(iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

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

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

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

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

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

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

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

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

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

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

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

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

(A) Trade associations;

(B) Business development organizations;

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

(D) Veterans service organizations.

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

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

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

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

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

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

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

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

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

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

(1) the master plan has been approved,

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

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

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

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

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

(j) The Contractor shall submit the following reports:

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

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

(End of clause)

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

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

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

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

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

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

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

(End of clause)

52.222-3 CONVICT LABOR (AUG 1996)

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

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

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

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

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

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

(End of clause)

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

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

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

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

(d) Payrolls and basic records.

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

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

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding \$100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis -Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular

contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis -Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis -Bacon Act have been met. The Secretary of Labor may require

the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis -Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis -Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis -Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis -Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be

paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988))

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis -Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis -Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis -Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis -Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis -Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis -Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis -Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

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

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

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

(End of clause)

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

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

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

Goals for minority participation for each trade	Goals for female participation for each trade
0.5%	6.9%

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

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

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

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

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is

Minneapolis, Minnesota Hennepin County

52.222-26 EQUAL OPPORTUNITY (FEB 1999)

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

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

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

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi)

layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

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

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

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

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

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

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

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

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

year; and

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

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

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

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

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

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

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

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

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

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

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

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

(1) Actively participates in the group;

- (2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;
- (3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;
- (4) Makes a good-faith effort to meet its individual goals and timetables; and
- (5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- (i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.
- (j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- (k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.
- (l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.
- (m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.
- (n) The Contractor shall designate a responsible official to--
- (1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;
- (2) Submit reports as may be required by the Government; and
- (3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

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

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

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

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

Executive and top management means any employee--

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

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

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

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

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

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

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

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

Special disabled veteran means--

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

(i) Rated at 30 percent or more; or

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

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

Veteran of the Vietnam era means a person who--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) The employment notices shall--

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

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

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

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

(vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

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

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

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

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

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

(ii) The rights of applicants and employees.

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

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

(1) The information is voluntarily provided;

(2) The information will be kept confidential;

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

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

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

(End of clause)

52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (APR 1998)

(a) Executive Order 12856 of August 3, 1993, requires Federal facilities to comply with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)(42 U.S.C. 11001-11050) and the Pollution Prevention Act of 1990 (PPA)(42 U.S.C. 13101-13109).

(b) The Contractor shall provide all information needed by the Federal facility to comply with the emergency planning reporting requirements of Section 302 of EPCRA; the emergency notice requirements of Section 304 of EPCRA; the list of Material Safety Data Sheets required by Section 311 of EPCRA; the emergency and hazardous chemical inventory forms of Section 312 of EPCRA; the toxic chemical release inventory of Section 313 of EPCRA, which includes the reduction and recycling information required by Section 6607 of PPA; and the toxic chemical reduction goals requirements of Section 3-302 of Executive Order 12856.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or

work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic construction material means--

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

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

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

United States means the 50 States and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

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

(2) This requirement does not apply to the construction material or components listed by the Government as follows:
none

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

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent. For determination of unreasonable cost under the Balance of Payments Program, the Contracting Officer will use a factor of 50 percent;

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

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

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

- (A) A description of the foreign and domestic construction materials;
- (B) Unit of measure;
- (C) Quantity;
- (D) Price;
- (E) Time of delivery or availability;
- (F) Location of the construction project;
- (G) Name and address of the proposed supplier; and
- (H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

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

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

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

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

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

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

Foreign and Domestic Construction Materials Price Comparison

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

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

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

Include other applicable supporting information.

(End of clause)

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

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

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

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

(End of clause)

52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (JUN 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior)

commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitute not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1542(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street, NW., MS 2626-MIB, Washington, DC 20240-4000.

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

(2) The Contractor may request an adjustment under the Indian Incentive Program to the following:

- (i) The estimated cost of a cost-type contract.
- (ii) The target cost of a cost-plus-incentive-fee prime contract.
- (iii) The target cost and ceiling price of a fixed-price incentive prime contract.
- (iv) The price of a firm-fixed-price prime contract.

(3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures.

(End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

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

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

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

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

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

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

(End of clause)

52.228-1 BID GUARANTEE (SEP 1996)

- (a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.
- (b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.
- (c) The amount of the bid guarantee shall be **twenty** percent of the bid price or **\$3 million**, whichever is less.
- (d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.
- (e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

52.228-11 PLEDGES OF ASSETS (FEB 1992)

- (a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--
- (1) Pledge of assets; and
 - (2) Standard Form 28, Affidavit of Individual Surety.
- (b) Pledges of assets from each person acting as an individual surety shall be in the form of--
- (1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;
 - (2) A recorded lien on real estate. The offeror will be required to provide--
- (i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the

property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

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

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

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

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

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

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

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

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

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

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

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

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

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

(A) 90 days following final payment; or

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

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

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

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

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

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

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

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

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

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision,

International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

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

Sincerely,

[Issuing financial institution]

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

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

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

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

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

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

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

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

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

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

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

Sincerely,

[Confirming financial institution]

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

SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

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

_____.

[Beneficiary Agency]

By: _____

(End of clause)

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

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

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

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that

was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

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

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

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

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

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

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

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

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

(End of clause)

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

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

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(Name)

(Title)

(Date)

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

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

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

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

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

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

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

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

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

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

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

- (1) Completion and acceptance of all work;
 - (2) Presentation of a properly executed voucher; and
 - (3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).
- (i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.
- (j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--
- (1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and
 - (2) Deducted from the next available payment to the Contractor.

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

- (1) The date fixed under this contract.
- (2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.
- (3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) Name and address of the Contractor.

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

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

(iv) Description of work or services performed.

- (v) Delivery and payment terms (e.g., discount for prompt payment terms).
 - (vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).
 - (vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.
 - (viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.
 - (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
 - (x) Electronic funds transfer (EFT) banking information.
 - (A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.
 - (B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.
 - (C) EFT banking information is not required if the Government waived the requirement to pay by EFT.
 - (xi) Any other information or documentation required by the contract.
- (3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.
- (i) The designated billing office received a proper invoice.
 - (ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.
 - (iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.
- (4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.
- (i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity,

quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;
- (3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;
- (4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--
- (i) Make such payment within--
 - (A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph (e)(5)(i)) of this clause; or
 - (B) Seven days after the Contractor recovers such funds from the Government; or
 - (ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;
- (5) Notice to Contracting Officer. Notify the Contracting Officer upon--
- (i) Reduction of the amount of any subsequent certified application for payment; or
 - (ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--
 - (A) The amounts withheld under paragraph (e)(1) of this clause; and
 - (B) The dates that such withholding began and ended; and
- (6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--
- (i) The day the identified subcontractor performance deficiency is corrected; or
 - (ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.
- (f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--
- (i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and
 - (ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

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

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

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

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

(1) The amount to be withheld;

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

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

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

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

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

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

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

(End of clause)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER— CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

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

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

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

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

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

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

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

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

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

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

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

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

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

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

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.233-1 DISPUTES. (DEC 1998)

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

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

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

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

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

(A) Exceeding \$100,000; or

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

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

(1) Cancel the stop-work order; or

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

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

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

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

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

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

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

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

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

The Contractor shall perform on the site, and with its own organization, work equivalent to at least **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.

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

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

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

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

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

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

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

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

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

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

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

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

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

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

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

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

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

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

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

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

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

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

52.236-8 OTHER CONTRACTS (APR 1984)

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

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

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

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

(1) at or near the work site, and

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

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

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

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

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

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

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

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

52.236-12 CLEANING UP (APR 1984)

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

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

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

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

- (2) avoid interruptions of Government operations and delays in project completion dates; and
 - (3) control costs in the performance of this contract.
- (b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-
- (1) Provide appropriate safety barricades, signs, and signal lights;
 - (2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and
 - (3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.
- (c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.
- (d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.
- (e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.
- (f) Before commencing the work, the Contractor shall-
- (1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and
 - (2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

(End of clause)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

- (a) The Contractor shall, within five days after the work commences on the contract or another period of time

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

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

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

52.236-17 LAYOUT OF WORK (APR 1984)

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

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

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

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

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

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

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

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

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

(End of clause)

52.236-26 *PRECONSTRUCTION CONFERENCE (FEB 1995)*

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

52.242-13 *BANKRUPTCY (JUL 1995)*

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

(End of clause)

52.242-14 *SUSPENSION OF WORK (APR 1984)*

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

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that

performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

52.243-4 CHANGES (AUG 1987)

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

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

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

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

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

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

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

- (1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general

nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

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

52.244-2 SUBCONTRACTS (AUG 1998)

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

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

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

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

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

(c) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (d) or (e) of this clause.

(d) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(e) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

None

(f)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (c), (d), or (e) of this clause, including the following information:

- (i) A description of the supplies or services to be subcontracted.
 - (ii) Identification of the type of subcontract to be used.
 - (iii) Identification of the proposed subcontractor.
 - (iv) The proposed subcontract price.
 - (v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.
 - (vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.
 - (vii) A negotiation memorandum reflecting--
 - (A) The principal elements of the subcontract price negotiations;
 - (B) The most significant considerations controlling establishment of initial or revised prices;
 - (C) The reason cost or pricing data were or were not required;
 - (D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;
 - (E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;
 - (F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and
 - (G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.
- (2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) of this clause.
- (g) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--
- (1) Of the acceptability of any subcontract terms or conditions;
 - (2) Of the allowability of any cost under this contract; or
 - (3) To relieve the Contractor of any responsibility for performing this contract.

(h) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(i) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(j) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(k) Paragraphs (d) and (f) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

(End of clause)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2001)

(a) Definitions. As used this clause--

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (FEB 1999) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the

Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

52.246-21 WARRANTY OF CONSTRUCTION (MAR 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

- (1) Obtain all warranties that would be given in normal commercial practice;
 - (2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and
 - (3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.
- (h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.
- (i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.
- (j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.
- (End of clause)

52.247-34 F.O.B. DESTINATION (NOV 1991)

- (a) The term "f.o.b. destination," as used in this clause, means--
- (1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and
 - (2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.
- (b) The Contractor shall--
- (1)(i) Pack and mark the shipment to comply with contract specifications; or
 - (ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

- (2) Prepare and distribute commercial bills of lading;
- (3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;
- (4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;
- (5) Furnish a delivery schedule and designate the mode of delivering carrier; and
- (6) Pay and bear all charges to the specified point of delivery.

52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

- (1) Requires a change to this, the instant contract, to implement; and
- (2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--
 - (i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the

existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996) - ALTERNATE I (SEP 1996)

- (a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.
- (b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:
- (1) Stop work as specified in the notice.
 - (2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.
 - (3) Terminate all subcontracts to the extent they relate to the work terminated.
 - (4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.
 - (5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.
 - (6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.
 - (7) Complete performance of the work not terminated.
 - (8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.
 - (9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

- (a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.
- (b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.
- (c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

- (a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.
- (b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) “Arising out of a contract with the DoD” means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) “Conviction of fraud or any other felony” means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.

(3) “Date of conviction” means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

- (2) Cancellation of the contract at no cost to the Government; or
 - (3) Termination of the contract for default.
- (f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—
- (1) The person involved;
 - (2) The nature of the conviction and resultant sentence or punishment imposed;
 - (3) The reasons for the requested waiver; and
 - (4) An explanation of why a waiver is in the interest of national security.
- (g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.
- (h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.203-7002 DISPLAY OF DOD HOTLINE POSTER (DEC 1991)

- (a) The Contractor shall display prominently in common work areas within business segments performing work under Department of Defense (DoD) contracts, DoD Hotline Posters prepared by the DoD Office of the Inspector General.
- (b) DoD Hotline Posters may be obtained from the DoD Inspector General, ATTN: Defense Hotline, 400 Army Navy Drive, Washington, DC 22202-2884.
- (d) The Contractor need not comply with paragraph (a) of this clause if it has established a mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports.

(End of clause)

252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION.(NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application

through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

(End of clause)

252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

(a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

(End of clause)

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

252.219-7003 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 1996)

This clause supplements the Federal Acquisition Regulation 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, clause of this contract.

(a) *Definitions. Historically black colleges and universities*, as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institutions, as used in this clause, means institutions meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

(b) Except for company or division-wide commercial items subcontracting plans, the term *small disadvantaged business*, when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions, in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small, small disadvantaged, and women-owned small businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are not small, small disadvantaged, or women-owned small businesses for the firms listed in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

(End of clause)

252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) "Definitions".

As used in this clause --

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (AUG 2000)

(a) The Contractor agrees to deliver under this contract only such of the following articles that have been grown, reprocessed, reused, or produced in the United States, its possessions, or Puerto Rico --

(1) Food;

(2) Clothing;

(3) Tents, tarpaulins, or covers;

(4) Cotton and other natural fiber products;

(5) Woven silk or woven silk blends;

(6) Spun silk yarn for cartridge cloth;

(7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics;

(8) Canvas products;

(9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles); or

(10) Any item of individual equipment (Federal supply Classification 8465) manufactured from or containing such fibers, yarns, fabrics, or materials.

(b) This clause does not apply --

(1) To supplies listed in FAR section 25.104(a), or other supplies for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To foods which have been manufactured or processed in the United States, its possessions, or Puerto Rico;

- (3) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or
- (4) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--
- (i) The fabric is to be used as a component of an end item that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--
- (a) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);
- (B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;
- (C) Upholstered seats (whether for household, office, or other use); and
- (D) Parachutes (Federal Supply Class 1670); or
- (ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.
- (End of clause)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (JUN 1992)

- (a) Definitions. As used in this clause--
- (1) "Foreign person" means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).
- (2) "United States person" is defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concerns, as determined under regulations of the President.
- (b) Certification. By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--
- (1) Does not comply with the Secondary Arab Boycott of Israel; and
- (2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.
- (End of clause)

252.226-7001 Utilization of Indian Organizations and Indian-Owned Economic Enterprises-DoD Contracts (Sep 2001)

(a) Definitions. As used in this clause--

“Indian” means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any “Native” as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

“Indian organization” means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17.

“Indian-owned economic enterprise” means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

“Indian tribe” means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452 (c).

“Interested party” means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contract shall use its best efforts to give Indian organizations and Indian-owned economic enterprises the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless and interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer. No incentive payment will be made--

(1) Within 59 working days of subcontract award;

(2) While a challenge is pending; or

(3) If a subcontractor is determined to be an ineligible participant.

(e)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of cost-type contract.

- (ii) The target cost of a cost-plus-incentive-fee contract.
 - (iii) The target cost and ceiling price of a fixed-price incentive contract.
 - (iv) The price of a firm-fixed-price contract.
- (2) The amount of the adjustment that may be made to the contract is 5 percent of the estimated cost, target cost, or firm-fixed price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.
- (3) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.
- (4) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor.
- (5) If the Contractor requests and receives an adjustment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the adjustment.
- (f) The Contractor shall insert the substance of this clause, including this paragraph (f), in all subcontracts that--
- (1) Are for other than commercial items; and
 - (2) Are expected to exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.
- (End of clause)

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

- (a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.
- (b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

- (a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

- (b) The price breakdown --
 - (1) Must include sufficient detail to permit an analysis of profit, and of all costs for --
 - (i) Material;
 - (ii) Labor;
 - (iii) Equipment;
 - (iv) Subcontracts; and
 - (v) Overhead; and
 - (2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.
- (c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.
- (d) The Contractor's proposal shall include a justification for any time extension proposed.

252.236-7001 CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (AUG 2000)

- (a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.
- (b) The Contractor shall--
 - (1) Check all drawings furnished immediately upon receipt;
 - (2) Compare all drawings and verify the figures before laying out the work;
 - (3) Promptly notify the Contracting Officer of any discrepancies;
 - (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
 - (5) Reproduce and print contract drawings and specifications as needed.
- (c) In general--
 - (1) Large-scale drawings shall govern small-scale drawings; and
 - (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.
- (d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not

relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

see section 00830

(End of clause)

252.236-7006 COST LIMITATION (JAN 1997)

(a) Certain items in this solicitation are subject to statutory cost limitations. The limitations are stated in the Schedule.

(b) An offer which does not state separate prices for the items identified in the Schedule as subject to a cost limitation may be considered nonresponsive.

(c) Prices stated in offers for items subject to cost limitations shall include an appropriate apportionment of all costs, direct and indirect, overhead, and profit.

(d) Offers may be rejected which--

(1) Are materially unbalanced for the purpose of bringing items within cost limitations; or

(2) Exceed the cost limitations, unless the limitations have been waived by the Government prior to award.

252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES. (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for --

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

252.242-7000 POSTAWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any postaward conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

(End of clause)

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DOD) (MAR 2000)

In addition to the clauses listed in paragraph (c) of the Subcontracts for Commercial Items and Commercial Components clause of this contract (Federal Acquisition Regulation 52.244-6), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (DEC 1991)

At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a Material Inspection and Receiving Report in the manner and to the extent required by Appendix F, Material Inspection and Receiving Report, of the Defense FAR Supplement.

(End of clause)

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will

process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

- (1) Type, weight, and cube of cargo;
 - (2) Required shipping date;
 - (3) Special handling and discharge requirements;
 - (4) Loading and discharge points;
 - (5) Name of shipper and consignee;
 - (6) Prime contract number; and
 - (7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.
- (e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information --
- (1) Prime contract number;
 - (2) Name of vessel;
 - (3) Vessel flag of registry;
 - (4) Date of loading;
 - (5) Port of loading;
 - (6) Port of final discharge;
 - (7) Description of commodity;
 - (8) Gross weight in pounds and cubic feet if available;
 - (9) Total ocean freight in U.S. dollars; and
 - (10) Name of the steamship company.
- (f) The Contractor agrees to provide with its final invoice under this contract a representation that to the best of its knowledge and belief --
- (1) No ocean transportation was used in the performance of this contract;
 - (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
 - (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-

U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
-----	-----	-----
-----	-----	-----
-----	-----	-----
TOTAL	-----	-----

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) The Contractor shall include this clause, including this paragraph (h), in all subcontractors under this contract that--

(1) Exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation; and

(2) Are for a type of supplies described in paragraph (b)(3) of this clause.

(End of clause)

252.247-7024 Notification of Transportation of Supplies by Sea (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

252.248-7000 PREPARATION OF VALUE ENGINEERING CHANGE PROPOSALS (MAY 1994)

Prepare value engineering change proposals, for submission pursuant to the value engineering clause of this contract, in the format prescribed by the version of MIL-STD-973 in effect on the date of contract award.

(End of clause)

Section 00800 - Special Contract Requirements

52.000-4004 PARTNERING

The Government proposes to form a partnering relationship with the contractor. This partnering relationship will strive to facilitate communication and draw on the strengths of each organization in an effort to achieve a quality project, within budget, and on schedule. Participation will be totally voluntary. Partnering will not alter or supersede any provision of this contract nor will it provide either party with any additional contractual rights or obligations. Participation in partnering will not affect award of this contract. Any cost associated with this partnering will be agreed to by both parties and will be shared equally, with no change in contract price.

52.212-4003 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (OCT 1989) ER 415-1-15

a. This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the CONTRACT CLAUSES: DEFAULT (FIXED-PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this clause, 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
WORKDAYS BASED ON (5) DAY WORKWEEK.**

GEOGRAPHIC LOCATION -- Minneapolis, MN

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Days	_18_	_14_	_8_	_4_	_5_	_5_	_4_	_4_	_4_	_3_	_6_	_15_

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will 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 workday. The number of actual adverse weather delay 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 the CONTRACT CLAUSES: DEFAULT (FIXED-PRICE CONSTRUCTION).

52.212-5000 EVALUATION OF SUBDIVIDED ITEMS (MAR 1995)--EFARS

Item Nos. 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0033, 0034, 0035, 0036, 0037, 0038, 0039, 0040, 0041, 0042, 0043, and 0044 are subdivided into two or more estimated quantities and are to be separately priced. The Government will evaluate each of these items on the basis of total price of its sub-items.

(End of provision)

52.212-5001 VARIATIONS IN ESTIMATED QUANTITIES, SUBDIVIDED ITEMS (MAR 1995)--EFARS

This variation in estimated quantities clause is applicable only to Items Nos. 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0033, 0034, 0035, 0036, 0037, 0038, 0039, 0040, 0041, 0042, 0043, and 0044.

(a) Variation from the estimated quantity in the actual work performed under any second or subsequent sub-item or elimination of all work under such a second or subsequent sub-item will not be the basis for an adjustment in contract unit price.

(b) Where the actual quantity of work performed for Items Nos. 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0033, 0034, 0035, 0036, 0037, 0038, 0039, 0040, 0041, 0042, 0043, and 0044.

is less than 85% of the quantity of the first sub-item listed under such item, the contractor will be paid at the contract unit price for that sub-item for the actual quantity of work performed and, in addition, an equitable adjustment shall be made in accordance with the clause FAR 52.211-18, Variation in Estimated Quantities.

(c) If the actual quantity of work performed under Items Nos. 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0033, 0034, 0035, 0036, 0037, 0038, 0039, 0040, 0041, 0042, 0043, and 0044.

exceeds 115% or is less than 85% of the total estimated quantity of the sub-item under that item and/or if the quantity of the work performed under the second sub-item or any subsequent sub-item under Items Nos. 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0010, 0011, 0012, 0013, 0014, 0015, 0016, 0017, 0021, 0022, 0023, 0024, 0025, 0026, 0027, 0028, 0029, 0030, 0031, 0032, 0033, 0034, 0035, 0036, 0037, 0038, 0039, 0040, 0041, 0042, 0043, and 0044 exceeds 115% or is less than 85% of the estimated quantity of any such sub-item, and if such variation causes an increase or a decrease in the time required for performance of this contract the contract completion time will be adjusted in accordance with the clause FAR 52.211-18, Variation in Estimated Quantities.

(End of clause)

52.214-5000 ARITHMETIC DISCREPANCIES – EFARS

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

- (1) Obviously misplaced decimal points will be corrected;
- (2) Discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected;
- (4) Apparent errors in addition of lump sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

52.228-15 PERFORMANCE AND PAYMENT BONDS-- CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.228-4002 INSURANCE

As referenced in Contract Clause: INSURANCE--WORK ON A GOVERNMENT INSTALLATION, the following types and amounts of insurance are required under this contract.

Type	Amount
Worker's Compensation and Employer's Liability Insurance:	
Coverage A Worker's Compensation	Compliance with State of Minnesota Worker's Compensation Law
Coverage B Employer's Liability	\$ 100,000
General Liability Insurance:	
Bodily Injury	\$1,000,000 per occurrence
Property Damage	Not Required
Automobile Liability Insurance (Comprehensive Policy Form):	
Bodily Injury	\$ 500,000 per person and \$1,000,000 per occurrence
Property Damage	\$ 100,000 per occurrence

52.228-4022 REQUIREMENT FOR BID GUARANTEE (FAR 28.101-2)

Each bidder shall submit with its bid a Bid Bond (Standard Form 24) with good and sufficient surety or sureties acceptable to the Government or other security as provided in the clause BID GUARANTEE in the form of twenty percent (20%) of the bid price or \$3,000,000 whichever is lesser. The bid bond penalty may be expressed in terms of a percentage of the bid price or may be expressed in dollars and cents.

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)—EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region IV. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.232-4004 INVOICE PROCEDURES

In accordance with CONTRACT CLAUSE titled "PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS", the contractor shall submit invoices as follows:

a. In order to qualify for a periodic payment, the Contractor must submit a proper invoice (request for payment) to the Contracting Officer's Representative (COR) and a determination must be made that supplies or services conform to the contract requirements. This determination will be made for the sole purpose of processing progress payments and will not constitute formal acceptance. The due date for making progress payments shall be as stated in the contract clause: PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS.

b. The submitted request for payment must be accompanied with documentation adequate to substantiate the amount requested. Substantiation shall be consistent with the clauses in the solicitation titled Quantity Surveys, Purchase Orders, Invoices, etc. satisfactory to the COR.

c. The Contractor must also include with the payment request a certification as described in the Clause "PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS".

d. Payment requests will be reviewed for propriety by the COR. Defective invoices will be returned to the Contractor for resolution with defects identified. Along with the returned invoice, the COR may include, at its option, an ENG FORM 93-PAYMENT ESTIMATE reflecting the substantiated and uncontested payment amount. The Contractor will then be given the option of signing and returning the FORM 93 for payment along with the original invoice and certification or resubmitting a revised invoice and certification. To expedite payment, the Contractor may request in writing that the COR retain the defective invoice and immediately process the payment request at the amount determined to be acceptable to the Government.

52.232-5001 CONTINUING CONTRACTS (MAR 1995)—EFARS

(a) This is a continuing contract, as authorized by Section 10 of the River and Harbor Act of September 22, 1922 (33 U.S. Code 621). The payment of some portion of the contract price is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors. The responsibilities of the Government are limited by this clause notwithstanding any contrary provision of the "Payments to Contractor" clause or any other clause of this contract.

(b) The sum o f \$50,000 has been reserved for this contract and is available for payments to the contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds together with funds provided by one or more non-federal project sponsors will be reserved for this contract.

(c) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not entitle the contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs (f) and (i) below. No such failure shall constitute a breach of this contract, except that this provision shall not bar a breach-of-contract action if an amount finally determined to be due as a termination allowance remains unpaid for one year due solely to a failure to reserve sufficient additional funds therefore.

(d) The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The contracting officer will promptly notify the contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.

(e) If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the contractor shall give written notice to the contracting officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

(f) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. The contractor shall be entitled to simple interest on any payment that the contracting officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97, as in effect on the first day of the delay in such payment.

(g) Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.

(h) An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.

(i) If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the

contractor, by written notice delivered to the contracting officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

(j) If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the contractor, to reduce said reservation by the amount of such excess.

(End of clause)

52.236-4006 SAFETY AND HEALTH REQUIREMENTS MANUAL INTERIM CHANGES, EM 385-1-1 (APR 2001)

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil> (at the HQ homepage, select Safety and Occupational Health). The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation.

52.236-4014 PURCHASE ORDERS

Two legible copies of each purchase order issued by the Contractor or the Contractor's subcontractors for materials and equipment to be incorporated into the project, shall be furnished the Contracting Officer as soon as issued. Each purchase order shall (1) be clearly identified with applicable Department of Army contract number, (2) carry an identifying number, (3) be in sufficient detail to identify the material being purchased, and (4) indicate a definite delivery date. At the option of the Contractor, the copies of the purchase orders may or may not indicate the price of the articles purchased.

52.236-4025 FLOATING PLANT EQUIPMENT (MAY 1999)

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, trackhoes, 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 of engineers for review and acceptance prior to start of this feature of work.

52.236-4061 OBSTRUCTION OF CHANNEL

The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the Provisions of Section 7 of the River and Harbor Act approved August 8, 1917. The Contractor will be required to conduct the work in such manner as to obstruct navigation as little as possible. The Contractor shall consult with the appropriate Coast Guard office to determine whether a Notice to Mariners will need to be issued for construction-related activities that might interfere with navigation or be interfered with by such navigation. (Point of Contact: Marine Safety Detachment, St. Paul, Minnesota, 651-290-3991) If the Contractor's plant so obstructs the channel as to make difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon the completion of the work the Contractor shall promptly remove his plant, including ranges, buoys, piles, and other marks placed by him under the contract whether in navigable waters or on shore.

52.236-4062 SIGNAL LIGHTS (JAN 1965)

The Contractor shall display signal lights and conduct his operations in accordance with the General Regulation of the Department of the Army and the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels or floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard instruction M16672.2B, navigation rules: International-Inland (COMDTINST) M16672.2B, or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 33 CFR (Inland) as applicable.

52.236-4063 RADIO

The Contractor shall maintain a staff that is knowledgeable about radio communications to advise oncoming navigation of appropriate passing directions while the Contractor's floating plant is in the navigation channel. In particular, the Contractor shall monitor Marine Band Channel 13 for commercial navigation and Channel 16 for emergency communication.

52.236-5000 PLANT AND MATERIAL REMOVAL AFTER CONTRACT TERMINATION (MAR 1995)—EFARS

Should this contract be terminated as provided in clause 52.232-5001 because of the failure of Congress to provide additional funds for its completion, the contractor may be permitted to remove plant and material on which payments for preparatory work have been made, subject to an equitable deduction from the amounts due the contractor to reimburse the United States for the unabsorbed value of such plant and material.

(End of clause)

52.246-4001 LABORATORY AND TESTING FACILITIES

The Contractor shall provide and maintain all measuring and testing devices, laboratory equipment, instruments, transportation, and supplies necessary to accomplish the required testing. All measuring and testing devices shall be calibrated at established intervals against certified standards. The Contractor's measuring and testing equipment shall be made available for use by the Government for verification of their accuracy and condition as well as for any inspection or test desired pursuant to SECTION 00700: INSPECTION OF CONSTRUCTION. The location of the laboratory shall be convenient to the site such that test results are available prior to proceeding with the next sequential phase of the work.

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

"Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

- (1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.
- (2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.
- (3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.
- (4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).
- (5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate."

(End of Clause)

SECTION 00830

ATTACHMENTS

INDEX

ATTACHMENT	TITLE
1	TYPE D JOINT REPAIR PHOTOS
2	NAVIGATION SEASON SUMMARY
3	FORD COFFERDAM SYSTEM
4	EXISTING INFLATABLE FLASHBOARD SYSTEM
5	WAGE RATES



Buttress 3 Upstream Joint



Buttress 5 Upstream Joint



Buttress 7 Upstream Joint



Buttress 9 Upstream Joint

Type D Joint Repair Photos



Buttress 13 Upstream Joint



Buttress 11 Upstream Joint



Buttress 17 Upstream Joint



Buttress 15 Upstream Joint

Type D Joint Repair Photos



Buttriss 19 Upstream Joint



Buttriss 23 Upstream Joint



Buttriss 25 Upstream Joint



Buttriss 27 Upstream Joint



Butress 29 Upstream Joint



Butress 31 Upstream Joint



Butress 33 Upstream Joint



Butress 35 Upstream Joint

**NAVIGATION SEASON SUMMARY
ST. PAUL DISTRICT
SPRING OPENING AND FALL CLOSING DATES
LOCK AND DAM 1**

YEAR	OPENING DATE	CLOSING DATE	LENGTH OF SEASON	YEAR	OPENING DATE	CLOSING DATE	LENGTH OF SEASON
1936				1975	03-Mar	13-Dec	285
1937				1976	01-Mar	05-Dec	279
1938				1977	16-Mar	09-Dec	268
1939				1978	25-Mar	30-Nov	250
1940				1979	30-Mar	30-Nov	245
1941				1980	27-Apr	23-Nov	210
1942				1981	02-May	08-Dec	220
1943				1982	04-Apr	02-Dec	242
1944				1983	11-Mar	30-Nov	264
1945				1984	24-Mar	30-Nov	251
1946				1985	18-Mar	25-Nov	252
1947				1986	24-Mar	02-Dec	253
1948				1987	27-Feb	23-Nov	269
1949				1988	24-Mar	23-Nov	244
1950				1989	29-Mar	27-Nov	243
1951				1990	08-Mar	26-Nov	263
1952				1991	22-Mar	26-Nov	249
1953				1992	11-Mar	24-Nov	258
1954				1993	24-Mar	27-Nov	248
1955				1994	29-Mar	24-Nov	240
1956				1995	21-Mar	22-Nov	246
1957				1996	22-Mar	21-Nov	244
1958				1997	17-Mar	22-Nov	250
1959				1998	02-Mar	29-Nov	272
1960				1999	23-Mar	27-Nov	249
1961				2000	20-Mar	21-Nov	246
1962				2001	20-Mar	30-Nov	255
1963				2002	20-Mar		
1964	15-Mar	09-Dec	269	2003			
1965	21-Mar	21-Dec	275	2004			
1966	06-Mar	11-Dec	280	2005			
1967	19-Mar	22-Dec	278	2006			
1968	06-Mar	15-Dec	284	2007			
1969	08-Mar	15-Dec	282	2008			
1970	06-Mar	13-Dec	282	2009			
1971	07-Mar	19-Dec	287	2010			
1972	05-Mar	10-Dec	280	2011			
1973	04-Mar	16-Dec	287	2012			
1974	09-Mar	15-Dec	281	2013			

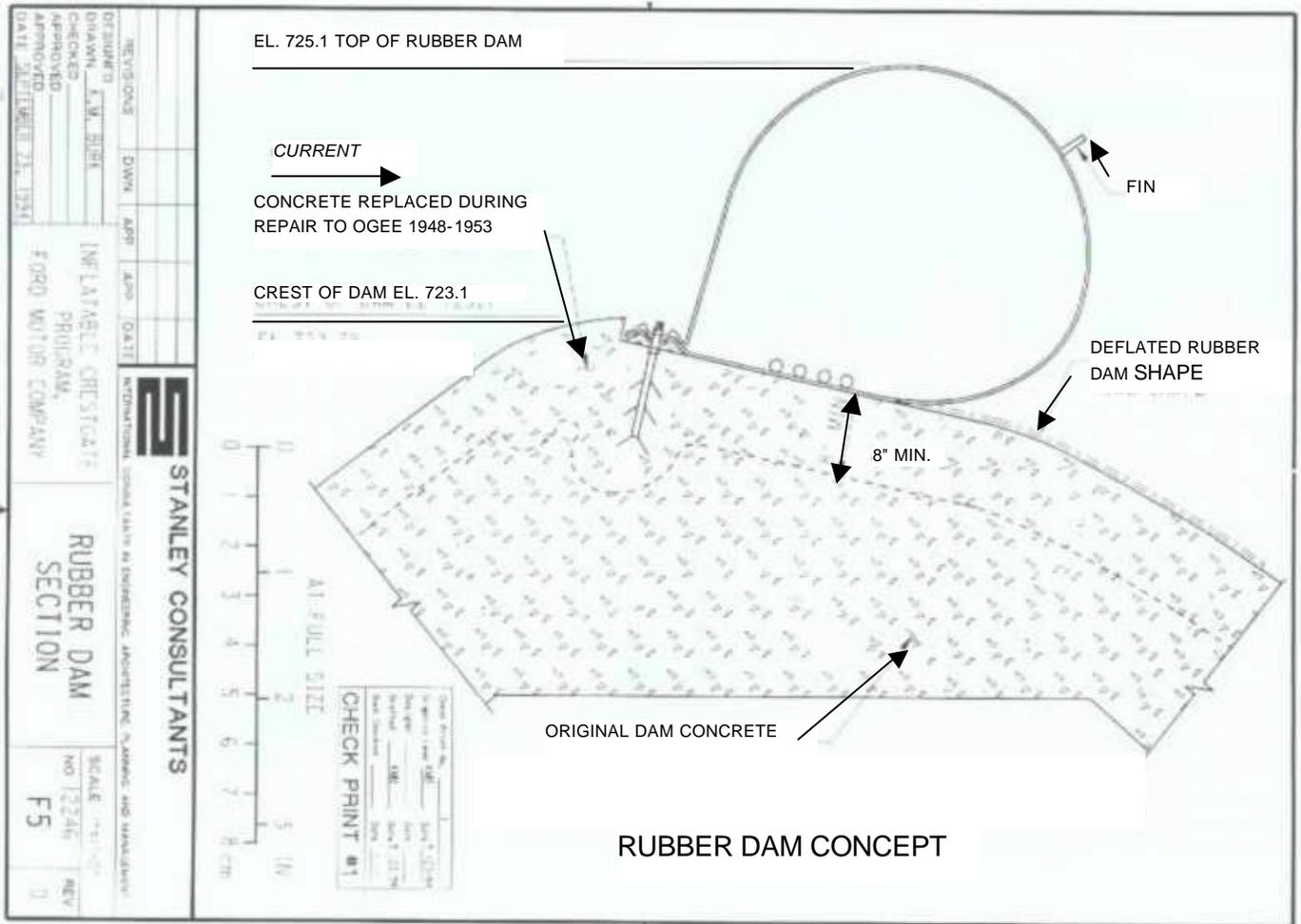
FORD COFFERDAM SYSTEM



FORD COFFERDAM SYSTEM



FORD INFLATABLE FLASH BOARD SYSTEM



Wage Rates
 General Decision Number MN020061

General Decision Number MN020061
 Superseded General Decision No. MN010061
 State: Minnesota Construction Type:

HEAVY
 SEWER AND WATER LINE
 TREATMENT PLANT

County(ies):

ANOKA	HENNEPIN	SCOTT
BENTON	HOUSTON	SHERBURNE
CARVER	ISANTI	ST LOUIS
CHISAGO	OLMSTED	STEARNS
CLAY	POLK	WASHINGTON
DAKOTA	RAMSEY	WRIGHT

TREATMENT PLANTS, HEAVY, SEWER & WATER LINES

Modification Number	Publication Date
0	03/01/2002
1	04/19/2002
2	05/03/2002
3	05/17/2002
4	06/21/2002
5	08/16/2002
6	11/15/2002

COUNTY(ies):

ANOKA	HENNEPIN	SCOTT
BENTON	HOUSTON	SHERBURNE
CARVER	ISANTI	ST LOUIS
CHISAGO	OLMSTED	STEARNS
CLAY	POLK	WASHINGTON
DAKOTA	RAMSEY	WRIGHT

ASBE0034G 06/01/2002

	Rates	Fringes
ANOKA, BENTON, CARVER, CHISAGO, DAKOTA, HENNEPIN, HOUSTON, ISANTI, OLMSTED, RAMSEY, SCOTT, SHERBURNE, STEARNS, WASHINGTON & WRIGHT COUNTIES		

INSULATOR/ASBESTOS WORKERS (Includes application of all insulating materials, protective coverings, coatings & finishings to all types of mechanical systems)

29.59	12.34
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 ASBE0049G 06/01/2002

	Rates	Fringes
ST. LOUIS COUNTY: ASBESTOS WORKERS/INSULATORS (Includes application of all insulating materials, protective coverings, coatings & finishings to all types of mechanical systems)	28.33	8.93

 ASBE0133C 07/01/2002

	Rates	Fringes
CLAY & POLK COUNTIES		

ASBESTOS WORKERS/INSULATORS (Includes application of all insulating materials, protective coverings, coatings & finishings to all types of mechanical systems)	22.43	7.60

ASBE0205K 05/01/1998		
	Rates	Fringes
ANOKA, BENTON, CARVER, CHISAGO, DAKOTA, HENNEPIN, HOUSTON, ISANTI, OLMSTED, RAMSEY, SCOTT, SHERBURNE, ST. LOUIS, STEARNS, WASHINGTON & WRIGHT COUNTIES:		
HAZARDOUS MATERIAL HANDLERS (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems)	18.21	3.30

BOIL0647E 10/01/1999		
	Rates	Fringes
BOILERMAKERS	23.35	9.71

BRMN0001Z 05/01/2002		
	Rates	Fringes
ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT, SHERBURNE (City of Elk River), WASHINGTON & WRIGHT COUNTIES:		
BRICKLAYERS & STONEMASONS	28.64	8.80

BRMN0003E 05/01/2002		
	Rates	Fringes
ST. LOUIS (South of a line between Townships #54 & #55, 2 miles north of Cotton) COUNTY:		
BRICKLAYERS	26.88	9.46

BRMN0003F 05/01/2002		
	Rates	Fringes
ST. LOUIS COUNTY (S. of a line between Townships 54 & 55 (2 miles north of Cotton)		
TILE LAYERS	21.96	9.00

BRMN0007C 05/01/2002		
	Rates	Fringes
HOUSTON COUNTY		
BRICKLAYERS; BLOCKLAYERS; CAULKERS; CLEANERS; POINTERS; & STONEMASONS	27.27	9.13

BRMN0008I 05/01/2002		
	Rates	Fringes
OLMSTED COUNTY		
BRICKLAYERS; CAULKERS; CLEANERS; POINTERS; & STONEMASONS	27.78	9.13

BRMN0008J 05/01/2002		
	Rates	Fringes
OLMSTED COUNTY		
TILE LAYERS	25.14	

BRMN0015H	05/01/2002	
	Rates	Fringes
CLAY AND POLK COUNTIES		
BRICKLAYERS	25.82	9.05

BRMN0015I	05/01/2002	
	Rates	Fringes
CLAY COUNTY		
CEMENT MASONS	25.42	9.05

BRMN0016C	05/01/2002	
	Rates	Fringes
ST. LOUIS (North of a line between Townships #54 & #55, 2 miles north of Cotton) COUNTY:		
BRICKLAYERS	25.11	11.20

BRMN1000A	05/01/2002	
	Rates	Fringes
BENTON, SHERBURNE (Excluding city of Elk River) & STEARNS COUNTIES:		
BRICKLAYERS; BLOCKLAYERS & STONEMASONS		
	26.65	8.80

BRMN1000B	05/01/2002	
	Rates	Fringes
BENTON COUNTY		
CEMENT MASONS (Treatment Plants)	26.20	8.70
STEARNS COUNTY		
CEMENT MASONS & PLASTERERS (Treatment Plants)	26.20	8.70

BRMN1000C	05/01/2002	
	Rates	Fringes
ANOKA, BENTON, CARVER, CHISAGO, CLAY, DAKOTA, HENNEPIN, HOUSTON, ISANTI, POLK, RAMSEY, SCOTT, SHERBURNE, ST. LOUIS (Excluding Duluth and south of Township Line 55), STEARNS, WASHINGTON & WRIGHT COUNTIES:		
TILE SETTERS	27.29	9.65

BRMN1000D	05/01/2002	
	Rates	Fringes
TILE FINISHERS	23.90	7.55

BRMN1000E	05/01/2002	
	Rates	Fringes
MARBLE SETTERS	28.64	8.80

BRMN1000J	05/01/2002	
	Rates	Fringes
TERRAZZO MECHANICS	26.91	10.10
TERRAZZO BASE MACHINES	27.79	8.70
TERRAZZO FINISHERS	27.46	8.70

* CARP0087F	05/01/2002	
	Rates	Fringes
ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,		

SHERBURNE (Excluding St. Cloud & extending 5 miles beyond the city limits of St. Cloud), WASHINGTON & WRIGHT COUNTIES:
 CARPENTERS; INSULATORS; &
 PILEDRIVERMEN (Treatment Plants) 28.66 7.88

 * CARP0087L 05/01/2002

	Rates	Fringes
ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT, SHERBURNE, WASHINGTON, AND WRIGHT COUNTIES CARPENTERS & PILEDRIVERMEN (Heavy, Sewer & Water Lines)	26.17	9.80

 CARP0190I 05/01/1997

	Rates	Fringes
ANOKA, BENTON, CARVER, CHISAGO, CLAY, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT, SHERBURNE, STEARNS, WASHINGTON & WRIGHT COUNTIES: LATHERS	22.45	7.04

 * CARP0190L 06/01/2001

	Rates	Fringes
HOUSTON AND OLMSTED COUNTIES LATHERS	24.34	5.04

 CARP0361G 05/01/2001

	Rates	Fringes
ST. LOUIS (Alborn, Arnold, Bartlett, Birch, Brookstone, Canyon, Clinton, Culver, Duluth, Floodwood, Gowan, Island, Kelsey, Lakewood, Meadowlands, Munger, Palmers, Payne, Prasit, Shaw & Taft) COUNTY: CARPENTERS (Treatment Plants)	20.54	9.00

 CARP0361J 05/01/2001

	Rates	Fringes
POLK & ST. LOUIS COUNTIES LATHERS	20.82	9.00

 CARP0361M 05/01/2001

	Rates	Fringes
ST. LOUIS (Alborn, Arnold, Bartlett, Birch, Brookstone, Canyon, Clinton, Culver, Duluth, Floodwood, Gowan, Island, Kelsey, Lakewood, Meadowlands, Munger, Palmers, Payne, Prasit, Shaw & Taft) COUNTY: SOFT FLOOR LAYERS	19.73	9.91

 * CARP0361T 05/01/2002

	Rates	Fringes
ST LOUIS COUNTY (Southern 1/3 including Cotton, Floodwood, Fond Du Lac, and Proctor) CARPENTERS & PILEDRIVERMEN (Heavy, Sewer, and Water Lines)	22.51	10.96

 * CARP0361U 05/01/2002

	Rates	Fringes
ST LOUIS COUNTY (Duluth) CARPENTERS & PILEDRIVERMEN (Heavy, Sewer, and Water Lines)	22.91	10.96

* CARP0548F 04/28/2002		
	Rates	Fringes
ANOKA, BENTON, CARVER, CHISAGO, CLAY (Moorhead & up to 5 miles radius), DAKOTA, HENNEPIN, HOUSTON, ISANTI, OLMSTED, POLK (East Grand Forks & up to 5 miles radius), RAMSEY, SCOTT, SHERBURNE, STEARNS, WASHINGTON & WRIGHT COUNTIES:		
MILLWRIGHTS	29.44	8.18

* CARP0596D 06/01/2002		
	Rates	Fringes
ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT, SHERBURNE (E. of Hwy #169, inclu. Zimmerman, Big Lake & Elk River), WASHINGTON & WRIGHT (S. of Hwy #12, inclu. Cokato, Buffalo & Monticello) COUNTIES:		
SOFT FLOOR LAYERS	25.44	9.73

* CARP0606F 05/01/2002		
	Rates	Fringes
CLAY AND POLK COUNTIES CARPENTERS & PILEDRIVERMEN (Heavy, Sewer, and Water Lines)		
	18.34	10.10

* CARP0606G 05/01/2002		
	Rates	Fringes
ST. LOUIS COUNTY (Excluding Alborn, Arnold, Bartlett, Birch, Brookstone, Canyon, Clinton, Culver, Duluth, Floodwood, Gowan, Island, Kelsey, Lakewood, Meadowlands, Munger, Palmers, Payne, Prasit, Shaw & Taft)		
CARPENTERS; PILEDRIVERMEN & SOFT FLOOR LAYERS (Treatment Plants)		
	19.96	10.10

* CARP0606I 05/01/2002		
	Rates	Fringes
POLK COUNTY (Excluding East Grand Forks and an area 5 miles outside city limits)		
CARPENTERS & PILEDRIVERMEN (Treatment Plants)		
	16.49	8.96

* CARP0606J 05/01/2002		
	Rates	Fringes
ST LOUIS COUNTY (Northeast 2/3 including Cook, Cusson, Ely; and Western part including Chisholm, Greaney, and Orr)		
CARPENTERS & PILEDRIVERMEN (Heavy, Sewer, and Water Lines)		
	23.37	10.10

* CARP0930C 05/01/2002		
	Rates	Fringes
BENTON, SHERBURNE (Extreme NW portion, Including St. Cloud & extending 5 miles beyond the city limits of St. Cloud) & STEARNS COUNTIES		
CARPENTERS & PILEDRIVERMEN (Treatment Plants)		
	20.66	7.23

* CARP0930F 05/01/2002		
	Rates	Fringes
BENTON AND STEARNS COUNTIES CARPENTERS & PILEDRIVERMEN		

(Heavy, Sewer & Water Lines)	21.79	9.58

* CARP1176B 05/01/2002		
	Rates	Fringes
CLAY COUNTY (City of Moorhead & a radius of 5 miles NE & South of the city limits) & POLK COUNTY (East Grand Forks & an area 5 miles outside city limits):		
CARPENTERS (Treatment Plants)	16.00	8.90
PILEDRIVERMEN (Treatment Plants)	18.02	8.90

CARP1348C 05/01/2000		
	Rates	Fringes
CLAY (Excluding Moorhead & up to 5 miles radius), POLK (Excluding East Grand Forks & up to 5 miles radius) & ST. LOUIS COUNTIES:		
MILLWRIGHTS (Treatment Plants)	21.66	10.29

* CARP1382D 05/01/2002		
	Rates	Fringes
OLMSTED COUNTY		
CARPENTERS & PILEDRIVERMEN (Treatment Plants)	23.43	6.88

* CARP1382H 05/01/2002		
	Rates	Fringes
HOUSTON COUNTY		
CARPENTERS & PILEDRIVERMEN (Treatment Plants)	19.12	6.88

* CARP1382P 05/01/2002		
	Rates	Fringes
HOUSTON AND OLMSTED COUNTIES		
CARPENTERS & PILEDRIVERMEN (Heavy, Sewer, and Water Lines)	22.09	8.83

* ELEC0110K 05/01/2002		
	Rates	Fringes
ANOKA (Except Anoka & Fridley Townships & the cities of Andover, Anoka, Columbia Heights, Coon Rapids, Fridley, Hilltop, Ramsey & Spring Lake Park), CHISAGO, DAKOTA, ISANTI, RAMSEY, SHERBURNE (East of Becker & Santiago Townships) & WASHINGTON COUNTIES:		
ELECTRICIANS	29.45	28.5%+5.77
CABLE SPLICERS	30.45	28.5%+5.77

ELEC0110L 03/01/1998		
	Rates	Fringes
SOUND, SIGNAL & COMMUNICATIONS WORK:		
Technician (Installation of Controller Only)	19.22	.58+a+b
Installer (Excluding Controller Work)	11.31	.34+a+b
FOOTNOTES:		
a. 1 year's service - 5 days' paid vacation; 2 years' service - 10 days' paid vacation; 5 years' service - 12 days' paid vacation; 7 years' service - 14 days' paid vacation; 9 years' service - 16 days' paid vacation; 11 years' service - 18 days' paid vacation; 12 years' service - 20 days' paid vacation		

b. 8 Paid Holidays: New Year's Day; Memorial Day; 4th of July; Labor Day; Thanksgiving Day; Day After Thanksgiving; the normal work day preceding Christmas Day; & Christmas Day

 ELEC0160D 03/31/2002

	Rates	Fringes
LINE CONSTRUCTION:		
Lineman; Cable Splicer; Dynamiter; Special Equipment Operator; & Technician	27.51	10.01
Equipment Operator	23.66	8.90
Groundman/Truck Driver; & Pole Treating Truck Driver	19.26	7.64
LINE CLEARANCE:		
Tree Trimmer; Tractor Operator	18.44	7.40
Groundman/Truck Driver	12.91	5.81
Groundman	11.99	5.55

 * ELEC0242G 06/01/2002

	Rates	Fringes
ST. LOUIS COUNTY (South part bounded on the north by the north line of Kelsey Township extended east & west):		
ELECTRICIANS	26.14	49.5%

 ELEC0292F 05/01/2000

	Rates	Fringes
AREA 1: ANOKA (Andover, Anoka, Columbia Heights, Coon Rapids, Fridley, Hilltop, Ramsey, Spring Lake Park), BENTON AND SHERBURNE COUNTIES (East of Hwy 25 to Hwy 10 and an imaginary line straight West to the Mississippi River), CARVER, HENNEPIN, SCOTT, AND WRIGHT COUNTIES		
ELECTRICIANS:		
Electricians	27.50	12.18
Cable Splicers	28.50	12.62
AREA 2: BENTON AND SHERBURNE COUNTIES (West of Hwy 25 to Hwy 10 and an imaginary line straight West to the Mississippi River), AND STEARNS COUNTY		
ELECTRICAL CONTRACTS OVER \$300,000:		
Electricians	23.80	10.97
Cable Splicers	24.80	11.43
ELECTRICAL CONTRACTS UNDER \$300,000:		
Electricians	20.92	9.64
Cable Splicers	21.92	10.11

 * ELEC0294I 06/01/2002

	Rates	Fringes
ST. LOUIS COUNTY (North part bounded on the south by the south line of Ellsburg Township, extended east & west):		
ELECTRICIANS	26.09	44.5%
CABLE SPLICERS	26.64	44.5%

 ELEC0343N 06/01/2002

	Rates	Fringes
HOUSTON AND OLMSTED COUNTIES		
ELECTRICIAN	24.72	15%+8.27
CABLE SPLICER	25.72	15%+8.27

* ELEC1426J 06/01/2002

	Rates	Fringes
CLAY & POLK COUNTIES		
ELECTRICIAN	20.57	12%+6.20
CABLE SPLICER	21.60	12%+6.20

* ENGI0049Y 05/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS (Treatment Plants):		
GROUP 1	29.94	8.45
GROUP 2	29.60	8.45
GROUP 3	28.19	8.45
GROUP 4	27.85	8.45
GROUP 5	27.68	8.45
GROUP 6	26.17	8.45
GROUP 7	25.05	8.45
GROUP 8	23.04	8.45

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - Helicopter Operator; Truck & Crawler Crane with 200' of Boom & Over, including Jib (\$.50 premium with 300' of Boom & over, including jib); & Tower Crane 250' & Over

GROUP 2 - Truck & Crawler Crane with 150' of Boom, up to but not including 200' of Boom, including Jib; & Tower Crane 200' & Over, Concrete Pump 164 ft Boom.

GROUP 3 - Traveling Tower Crane; Master Mechanic; Pile Driving Operator (when 3 drums are used); Truck & Crawler Crane, up to but not including 150' of Boom, including Jib; Derrick (Guy & Stiffleg); Tower Crane (Stationary) up to 200'; & All Terrain Vehicle Crane, Boom Truck over 100 ft.

GROUP 4 - Crawler Backhoe; Hoist Engineer (3 drums or more); Locomotive Operator; Overhead Crane Operator (inside building perimeter); & Tractor Operator with Boom

GROUP 5 - Air Compressor Operator 450 CFM or Over (2 or more machines); Pump Operator and/or Conveyor Operator (2 or more machines); Mechanic; Pumpcrete or Complaco type Machine Operator; Forklift; Boom Truck up to 100 ft; Concrete Mixer Operator; Drill Rig - Heavy Rotary or Churn when used for Caisson Drilling for Elevator Cylinder or Building Construction; Front End Loader (Over 1 cu. yd.); Hoist Engineer (1 or 2 drums); Straddle Carrier Operator; Power Plant Engineer (100 KW & over on multiples equal to 100KW & over); Tractor Operator over D2; & Well Point Pump Op.

GROUP 6 - Concrete Batch Plant Operator; Gunitite Operator; Tractor Operator D2 or similar size; & Front End Loader Operator, up to 1 cu. yd.

GROUP 7 - Air Compressor Operator 600 CFM or Over; Pump and/or Conveyor Operator; Brakeman; Pick-up Sweeper (1 cu. yd. & over Hopper capacity); Truck Crane Oiler; & Welding Machine Operator, Fireman temporary heat.

GROUP 8 - Mechanical Space Heater (Temporary Heat); Oiler or Greaser; & Elevator Operator

* ENGI0049Z 05/01/2002

	Rates	Fringes
ANOKA, CARVER, CHISAGO (South of the northern boundary of T. 34-N that part consisting substantially of the cities of Thomson, Cloquet, Scanlon & Carlton), DAKOTA, HENNEPIN, RAMSEY, SCOTT,		

SHERBURNE (South of the northern boundary of T. 33-N & E. of the western boundary of R. 27-W), ST. LOUIS, WASHINGTON & WRIGHT (East of & including Hwy #25) COUNTIES

POWER EQUIPMENT OPERATORS (Heavy, Sewer & Water Lines):

GROUP 1	26.27	8.45
GROUP 2	25.72	8.45
GROUP 3	25.54	8.45
GROUP 4	25.42	8.45
GROUP 5	22.38	8.45
GROUP 6	21.17	8.45

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - Helicopter Pilot; *Crane with over 135' Boom, excluding Jib; Dragline, Crawler, Hydraulic Backhoe and/or other similar equipment with Shovel-type Controls 3 cu yds & over; Pile Driving when 3 Drums are in use

GROUP 2 - Cableway; Concrete Mixer, Stationary Plant over 34E; Derrick (Guy or Stiffleg) (Power) (Skids or Stationary); Diver Dragline, Crawler, Hydraulic Backhoe and/or similar equipment with Shovel-type Controls, up to 3 cu. yds; Dredge or Engineers, Dredge (Power) & Engineer; Front End Loader, 5 cu. yds. & over; Grader or Motor Patrol, Finishing Earthwork & Bituminous; Locomotive Crane; Master Mechanic; Mixer (Paving) Concrete Paving, Road; Mole, including Power Supply; Mucking Machine, including Mucking Operations, Conway or similar type; Piledriving; Refrigeration Plant Engineer; Tandem Scraper; Tractor - Boom type; Truck Crane - Crawler Crane; Tugboat 100 HP & over

GROUP 3 - Dual Tractor; Elevating Grader; Pumpcrete; Scraper - Struck Cap. 32 cu yds & over; Self-propelled Traveling Soil Stabilizer

GROUP 4 - Air Track Rock Drill; Articulated Hauler Terex, Caterpillar or similar type; Asphalt Bituminous Stabilizer Plant; Automatic Road Machine (CMI or similar); Backfiller; Bituminous Roller (8 Tons & over); Bituminous Spreader & Finishing (Power); Boom Truck (Power operated Boom); Brokk or R.T.C. 750 Remote Control or Similar types with all attachments; Cat & Scraper; Cat Tractor with Rock Wagons or similar types; Challenger 75-D or 85-D when pulling Scraper or Bulldozer; Chip Harvester & Tree Cutter over 150 HP; Concrete Batch Plant; Concrete Mixer on jobsite over 14S; Concrete Mobile; Crushing Plant (Gravel & Stone) or Gravel Washing, Crushing & Screening Plant; Curb Machine; Directional Boring Machine; Dope Machine (Pipeline); Drill Rigs, Heavy Rotary or Churn or Cable Drill; Fork Lift or Straddle Carrier; Fork Lift or Lumber Stacker; Front End Loader, over 1 cu. yd.; Hoist Engineer (Power); Hydraulic Tree Planter; Launcherman (Tankerman or Pilot License); Lead Greaser; Locomotive; Mechanic; Milling, Grinding & Planing Machine; Morbark Tub Grinder or Similar Type; Multiple Machines, such as Air Compressors, Welding Machines, Generators, Pumps; Pavement Breaker or Tamping Machine (Power Driven) Mighty Mite or similar type; Pickup Sweeper, 1 cu. yd. & over Hopper Cap.; Pipeline Wrapping, Cleaning or Bending Machine; Power Plant Engineer, 100 K.W.H. & over; Power Actuated Horizontal Boring Machine, over 6"; Pugmill; Rubber-tired Farm Tractor, Backhoe Attach; Scraper, up to 32 cu. yds.; Skid Steer Loader, over 1 cu. yd. with Backhoe Attachment; Slip Form (Power Driven) (Paving); Tie Tamper & Ballast Machine; Tractor, Bulldozer; Tractor Operator, over 50 HP with Power Take-off;

Trenching Machine (Sewer, Water, Gas); Well Point Installation; Dismantling or Repair Mechanic
 GROUP 5 - Air Compressor, 600 CFM or over; Bituminous Roller (Under 8 tons); Bituminous Rubber-tired Roller; Bituminous Spreader & Bituminous Finishing Machine Tender (Power); Concrete Distributor & Spreader Finishing Machine, Longitudinal Float, Joint Machine, & Spray; Concrete Saw (Multiple Blade) (Power Operated); Form Trench Digger (Power); Front End Loader, up to & incl. 1 cu. yd.; Grader (Motor Patrol); Guniting Gunall; Hydraulic Log Splitter; Loader (Barber Greene or similar type); Payhauler or similar type; Post Hole Driving Machine/Post Hole Auger; Power Actuated Auger & Boring Machine; Power Actuated Jack; Pump; Self-propelled Chip Spreader (Flaherty or similar); Sheep Foot Compactor with Blade - 200 HP & over; Shouldering Machine (Power) Apsco or similar type inclu. self-propelled Sand & Chip Spreader; Stump Chipper & Tree Chipper; Tractor Operator, Bulldozer, 50 HP or less; & Tree Farmer (Machine)
 GROUP 6 - Challenger 75-D or 85-D when pulling Disk or Roller; Conveyor; Dredge Deck Hand; Fireman or Tank Car Heater; Gravel Screening Plant (Portable not Crushing or Washing); Greaser (Truck or Tractor); Leverman; Mechanic tender; Mechanic, Space Heater (Temporary Heat); Oiler (Power Shovel, Crane, Dragline); Power Sweeper; Roller on Gravel Compaction; Self-propelled Vibrating Packer (35 HP & over); Sheep Foot Roller; Tractor, Wheel Type (over 50 HP); & Truck Crane Oiler
 *CRANE OVER 135' BOOM, EXCLUDING JIB - \$.25 PREMIUM;
 CRANE OVER 200' BOOM, EXCLUDING JIB - \$.50 PREMIUM

UNDERGROUND WORK:

TUNNELS, SHAFTS, ETC. - \$.25 PREMIUM
 UNDER AIR PRESSURE - \$.50 PREMIUM

HAZARDOUS WASTE PROJECTS (PPE Required):

LEVEL A - \$1.25 PREMIUM
 LEVEL B - \$.90 PREMIUM
 LEVEL C - \$.60 PREMIUM

 * ENGI1049U 05/01/2002

	Rates	Fringes
BENTON (East of the western right-of-way of U.S. Hwy #10),		
CHISAGO (North of the northern boundary of T. 34-N), HOUSTON,		
ISANTI, OLMSTED, SHERBURNE (North of the northern boundary of T.		
33-N and E. of the western boundary of R. 27-W), STEARNS (East of		
the western right-of-way of Minn. Hwy #15) & WRIGHT (West of Hwy		
#25) COUNTIES		

POWER EQUIPMENT OPERATORS (Heavy, Sewer & Water Lines):

GROUP 1	24.06	8.45
GROUP 2	23.61	8.45
GROUP 3	23.49	8.45
GROUP 4	23.31	8.45
GROUP 5	20.74	8.45
GROUP 6	19.87	8.45

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - Helicopter Pilot; *Crane with over 135' Boom, excluding Jib; Dragline, Crawler, Hydraulic Backhoe and/or other similar equipment with Shovel-type Controls 3 cu yds & over; Pile Driving when 3 Drums are in use
 GROUP 2 - Cableway; Concrete Mixer, Stationary Plant over 34E; Derrick (Guy or Stiffleg) (Power) (Skids or Stationary); Diver

Dragline, Crawler, Hydraulic Backhoe and/or similar equipment with Shovel-type Controls, up to 3 cu. yds; Dredge or Engineers, Dredge (Power) & Engineer; Front End Loader, 5 cu. yds. & over; Grader or Motor Patrol, Finishing Earthwork & Bituminous; Locomotive Crane; Master Mechanic; Mixer (Paving) Concrete Paving, Road; Mole, including Power Supply; Mucking Machine, including Mucking Operations, Conway or similar type; Piledriving; Refrigeration Plant Engineer; Tandem Scraper; Tractor - Boom type; Truck Crane - Crawler Crane; Tugboat 100 HP & over

GROUP 3 - Dual Tractor; Elevating Grader; Pumpcrete; Scraper - Struck Cap. 32 cu yds & over; Self-propelled Traveling Soil Stabilizer

GROUP 4 - Air Track Rock Drill; Articulated Hauler Terex, Caterpillar or similar type; Asphalt Bituminous Stabilizer Plant; Automatic Road Machine (CMI or similar); Backfiller; Bituminous Roller (8 Tons & over); Bituminous Spreader & Finishing (Power); Boom Truck (Power operated Boom); Brokk or R.T.C. 750 Remote Control or Similar types with all attachments; Cat & Scraper; Cat Tractor with Rock Wagons or similar types; Challenger 75-D or 85-D when pulling Scraper or Bulldozer; Chip Harvester & Tree Cutter over 150 HP; Concrete Batch Plant; Concrete Mixer on jobsite over 14S; Concrete Mobile; Crushing Plant (Gravel & Stone) or Gravel Washing, Crushing & Screening Plant; Curb Machine; Directional Boring Machine; Dope Machine (Pipeline); Drill Rigs, Heavy Rotary or Churn or Cable Drill; Fork Lift or Straddle Carrier; Fork Lift or Lumber Stacker; Front End Loader, over 1 cu. yd.; Hoist Engineer (Power); Hydraulic Tree Planter; Launcherman (Tankerman or Pilot License); Lead Greaser; Locomotive; Mechanic; Milling, Grinding & Planing Machine; Morbark Tub Grinder or Similar Type; Multiple Machines, such as Air Compressors, Welding Machines, Generators, Pumps; Pavement Breaker or Tamping Machine (Power Driven) Mighty Mite or similar type; Pickup Sweeper, 1 cu. yd. & over Hopper Cap.; Pipeline Wrapping, Cleaning or Bending Machine; Power Plant Engineer, 100 K.W.H. & over; Power Actuated Horizontal Boring Machine, over 6"; Pugmill; Rubber-tired Farm Tractor, Backhoe Attach; Scraper, up to 32 cu. yds.; Skid Steer Loader, over 1 cu. yd. with Backhoe Attachment; Slip Form (Power Driven) (Paving); Tie Tamper & Ballast Machine; Tractor, Bulldozer; Tractor Operator, over 50 HP with Power Take-off; Trenching Machine (Sewer, Water, Gas); Well Point Installation; Dismantling or Repair Mechanic

GROUP 5 - Air Compressor, 600 CFM or over; Bituminous Roller (Under 8 tons); Bituminous Rubber-tired Roller; Bituminous Spreader & Bituminous Finishing Machine Tender (Power); Concrete Distributor & Spreader Finishing Machine, Longitudinal Float, Joint Machine, & Spray; Concrete Saw (Multiple Blade) (Power Operated); Form Trench Digger (Power); Front End Loader, up to & incl. 1 cu. yd.; Grader (Motor Patrol); Guniting Gunall; Hydraulic Log Splitter; Loader (Barber Greene or similar type); Payhauler or similar type; Post Hole Driving Machine/Post Hole Auger; Power Actuated Auger & Boring Machine; Power Actuated Jack; Pump; Self-propelled Chip Spreader (Flaherty or similar); Sheep Foot Compactor with Blade - 200 HP & over; Shouldering Machine (Power) Apsco or similar type inclu. self-propelled Sand & Chip Spreader; Stump Chipper & Tree Chipper; Tractor Operator, Bulldozer, 50 HP or less; & Tree Farmer (Machine)

GROUP 6 - Challenger 75-D or 85-D when pulling Disk or Roller; Conveyor; Dredge Deck Hand; Fireman or Tank Car Heater; Gravel Screening Plant (Portable not Crushing or Washing); Greaser (Truck or Tractor); Leverman; Mechanic tender; Mechanic, Space Heater (Temporary Heat); Oiler (Power Shovel, Crane, Dragline); Power Sweeper; Roller on Gravel Compaction; Self-propelled Vibrating Packer (35 HP & over); Sheep Foot Roller; Tractor, Wheel Type (over 50 HP); & Truck Crane Oiler
 *CRANE OVER 135' BOOM, EXCLUDING JIB - \$.25 PREMIUM;
 CRANE OVER 200' BOOM, EXCLUDING JIB - \$.50 PREMIUM

UNDERGROUND WORK:

TUNNELS, SHAFTS, ETC. - \$.25 PREMIUM
 UNDER AIR PRESSURE - \$.50 PREMIUM

HAZARDOUS WASTE PROJECTS (PPE Required):

LEVEL A - \$1.25 PREMIUM
 LEVEL B - \$.90 PREMIUM
 LEVEL C - \$.60 PREMIUM

 * ENGI1049V 05/01/2002

Rates Fringes

BENTON (West of the western right-of-way of U.S. Hwy #10), CLAY,
 POLK & STEARNS (West of the Western right-of-way of Minn. Hwy
 #15) COUNTIES

POWER EQUIPMENT OPERATORS (Heavy, Sewer & Water Lines):

GROUP 1	21.65	8.45
GROUP 2	20.72	8.45
GROUP 3	20.52	8.45
GROUP 4	20.41	8.45
GROUP 5	18.70	8.45
GROUP 6	18.10	8.45

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - Helicopter Pilot; *Crane with over 135' Boom, excluding Jib; Dragline, Crawler, Hydraulic Backhoe and/or other similar equipment with Shovel-type Controls 3 cu yds & over; Pile Driving when 3 Drums are in use

GROUP 2 - Cableway; Concrete Mixer, Stationary Plant over 34E; Derrick (Guy or Stiffleg) (Power) (Skids or Stationary); Diver Dragline, Crawler, Hydraulic Backhoe and/or similar equipment with Shovel-type Controls, up to 3 cu. yds; Dredge or Engineers, Dredge (Power) & Engineer; Front End Loader, 5 cu. yds. & over; Grader or Motor Patrol, Finishing Earthwork & Bituminous; Locomotive Crane; Master Mechanic; Mixer (Paving) Concrete Paving, Road; Mole, including Power Supply; Mucking Machine, including Mucking Operations, Conway or similar type; Piledriving; Refrigeration Plant Engineer; Tandem Scraper; Tractor - Boom type; Truck Crane - Crawler Crane; Tugboat 100 HP & over

GROUP 3 - Dual Tractor; Elevating Grader; Pumpcrete; Scraper - Struck Cap. 32 cu yds & over; Self-propelled Traveling Soil Stabilizer

GROUP 4 - Air Track Rock Drill; Articulated Hauler Terex, Caterpillar or similar type; Asphalt Bituminous Stabilizer Plant; Automatic Road Machine (CMI or similar); Backfiller; Bituminous Roller (8 Tons & over); Bituminous Spreader & Finishing (Power); Boom Truck (Power operated Boom); Brokk or R.T.C. 750 Remote Control or Similar types with all attachments; Cat & Scraper; Cat Tractor with Rock Wagons or similar types; Challenger 75-D or 85-

D when pulling Scraper or Bulldozer; Chip Harvester & Tree Cutter over 150 HP; Concrete Batch Plant; Concrete Mixer on jobsite over 14S; Concrete Mobile; Crushing Plant (Gravel & Stone) or Gravel Washing, Crushing & Screening Plant; Curb Machine; Directional Boring Machine; Dope Machine (Pipeline); Drill Rigs, Heavy Rotary or Churn or Cable Drill; Fork Lift or Straddle Carrier; Fork Lift or Lumber Stacker; Front End Loader, over 1 cu. yd.; Hoist Engineer (Power); Hydraulic Tree Planter; Launcherman (Tankerman or Pilot License); Lead Greaser; Locomotive; Mechanic; Milling, Grinding & Planing Machine; Morbark Tub Grinder or Similar Type; Multiple Machines, such as Air Compressors, Welding Machines, Generators, Pumps; Pavement Breaker or Tamping Machine (Power Driven) Mighty Mite or similar type; Pickup Sweeper, 1 cu. yd. & over Hopper Cap.; Pipeline Wrapping, Cleaning or Bending Machine; Power Plant Engineer, 100 K.W.H. & over; Power Actuated Horizontal Boring Machine, over 6"; Pugmill; Rubber-tired Farm Tractor, Backhoe Attach; Scraper, up to 32 cu. yds.; Skid Steer Loader, over 1 cu. yd. with Backhoe Attachment; Slip Form (Power Driven) (Paving); Tie Tamper & Ballast Machine; Tractor, Bulldozer; Tractor Operator, over 50 HP with Power Take-off; Trenching Machine (Sewer, Water, Gas); Well Point Installation; Dismantling or Repair Mechanic

GROUP 5 - Air Compressor, 600 CFM or over; Bituminous Roller (Under 8 tons); Bituminous Rubber-tired Roller; Bituminous Spreader & Bituminous Finishing Machine Tender (Power); Concrete Distributor & Spreader Finishing Machine, Longitudinal Float, Joint Machine, & Spray; Concrete Saw (Multiple Blade) (Power Operated); Form Trench Digger (Power); Front End Loader, up to & incl. 1 cu. yd.; Grader (Motor Patrol); Gunit Gunall; Hydraulic Log Splitter; Loader (Barber Greene or similar type); Payhauler or similar type; Post Hole Driving Machine/Post Hole Augar; Power Actuated Auger & Boring Machine; Power Actuated Jack; Pump; Self-propelled Chip Spreader (Flaherty or similar); Sheep Foot Compactor with Blade - 200 HP & over; Shouldering Machine (Power) Apsco or similar type inclu. self-propelled Sand & Chip Spreader; Stump Chipper & Tree Chipper; Tractor Operator, Bulldozer, 50 HP or less; & Tree Farmer (Machine)

GROUP 6 - Challenger 75-D or 85-D when pulling Disk or Roller; Conveyor; Dredge Deck Hand; Fireman or Tank Car Heater; Gravel Screening Plant (Portable not Crushing or Washing); Greaser (Truck or Tractor); Leverman; Mechanic tender; Mechanic, Space Heater (Temporary Heat); Oiler (Power Shovel, Crane, Dragline); Power Sweeper; Roller on Gravel Compaction; Self-propelled Vibrating Packer (35 HP & over); Sheep Foot Roller; Tractor, Wheel Type (over 50 HP); & Truck Crane Oiler

*CRANE OVER 135' BOOM, EXCLUDING JIB - \$.25 PREMIUM;

CRANE OVER 200' BOOM, EXCLUDING JIB - \$.50 PREMIUM

UNDERGROUND WORK:

TUNNELS, SHAFTS, ETC. - \$.25 PREMIUM

UNDER AIR PRESSURE - \$.50 PREMIUM

HAZARDOUS WASTE PROJECTS (PPE Required):

LEVEL A - \$1.25 PREMIUM

LEVEL B - \$.90 PREMIUM

LEVEL C - \$.60 PREMIUM

IRON0512M 05/01/2002

Rates

Fringes

ATTACHMENT 5

DACW37-03-B-0001

00830-5-13

ANOKA, BENTON, CARVER, CHISAGO, DAKOTA, HENNEPIN, HOUSTON,
ISANTI, OLMSTED, RAMSEY, SCOTT, SHERBURNE, STEARNS, WASHINGTON &
WRIGHT COUNTIES

IRONWORKERS	29.50	11.84
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IRON0563L 05/01/2002

	Rates	Fringes
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ST. LOUIS COUNTY:

IRONWORKERS	23.78	12.70
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IRON0793F 05/01/2002

	Rates	Fringes
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CLAY & POLK COUNTIES

IRONWORKERS	19.14	9.73
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LABO0010J 05/01/2002

	Rates	Fringes
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LANDSCAPERS: Seeding, Sodding &
Planting of evergreen & deciduous
shrubs & trees

13.34	5.05
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LABO0132I 01/01/2000

	Rates	Fringes
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ANOKA, BENTON, CARVER, CHISAGO, CLAY, DAKOTA, HENNEPIN, HOUSTON,
ISANTI, OLMSTED, RAMSEY, SCOTT, SHERBURNE, STEARNS, WASHINGTON &
WRIGHT COUNTIES:

LABORERS, Asbestos Abatement	19.16	6.62
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* LABO0132M 05/01/2002

	Rates	Fringes
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ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,
SHERBURNE, WASHINGTON & WRIGHT COUNTIES

LABORERS (Treatment Plants):

GROUP 1	25.73	7.71
GROUP 2	26.23	7.71
GROUP 3	26.73	7.71

LABORERS CLASSIFICATIONS

GROUP 1 - Construction Craft Laborer; Flagperson/Traffic Control;
Carpenter Tender; Concrete; Damp Proofer Below Grade; Drill
Runner Tender; Dumpman - Dirt, Asphalt, Concrete, Cement; Heater
Tender; Hot Tar Caulker - Corker; Joist Handler; Material
Handler - Power Buggy; Rebar; Snow Blower Operator; Signal
Person; Asbestos and Hazardous Waste Technician; Hydro Blast or
Waterblast; Chain Saw Operator; Concrete Saw, Drill Operator;
Concrete Vibrator; Demolition & Remodeling, Excluding Demolition
of an entire Structural System; Mason Tender; Mortar Mixer -
Cement or any other substitute Material or Composition; Pipe
Handler; Pneumatic & Electric Tool, Jackhammer, Paving Buster,
Chipping Hammer, Tamper Operator, etc.; Swing Stage Line Scaffold
(Not including Patent" Scaffolding); Torchman - Gas, Electric,
Thermal or similar device; & Remote Control Tamper
GROUP 2 - Caisson Work; Mounted Wall Saw Operator; Nozzle
Operator - Gunitite, Cement, Sandblasting; Pipelayer; Pipe Rehab
Technical, including Cleaning, Cutting, Cameraing, etc.;
Refractory Worker; Sheeting Setter & Driver, Heavy Building
Excavation; Underground Work - Open Ditch or Excavation 8' Below
Grade; & Underpinning

GROUP 3 - Driller for Blasting purposes; Dynamite Blaster or substitute products Tovex TR, Water, Gas, Gel, Bristar, Silent Dynamite, etc.

 LABO0132P 06/01/1999

	Rates	Fringes
ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT, SHERBURNE, WASHINGTON & WRIGHT COUNTIES:		
PLASTER TENDERS (Treatment Plants)	23.85	5.59

 LABO0405D 05/01/1999

	Rates	Fringes
HOUSTON COUNTY:		
LABORERS (Treatment Plants):		
GROUP 1	15.49	4.89
GROUP 2	16.19	4.89
FLAGPERSON	13.66	4.89

OLMSTED COUNTY:

0	LABORERS (Treatment Plants):	
1		
2	GROUP 1	16.94
3	GROUP 2	17.64
4	FLAGPERSON	15.06
5		

LABORER CLASSIFICATIONS

GROUP 1 - Construction; General; Carpenter Tender; Concrete; Damp Proofer Below Grade; Dumpman - Dirt, Asphalt, Concrete, Cement; Heater Tender; Hot Tar Caulker - Corker; Firewatch; Joist Handler; Material Handler - Power Buggy; Rebar; Signalperson; Snow Blower Operator; Demolition & Wrecking, Including Remodeling; Chain Saw Operator; Concrete Saw, Drill Operator; Concrete Vibrator; Pipe Handler; Pneumatic & Electric Tool, Jackhammer, Paving Buster, Chipping Hammer, Tamper Operator, etc.; Swing Stage Line Scaffold (not including "Patent" Scaffolding); & Remote Control Tamper

GROUP 2 - Pipe Rehab Technician, including Cleaning, Cutting, Cameraing, etc.; Caisson Work; Nozzle Operator - Gunitite, Cement, Sandblasting; Pipelayer; Refractory Worker; Sheeting Setter & Driver, Heavy Building Excavation; Underground Work - Open Ditch or Excavation 8' Below Grade; Underpinning; Mason Tender; Mortar Mixer - Cement or any other substitute Material or Composition; Driller for Blasting Purposes; Dynamite Blaster or substitute products Tovex TR, Water, Gas, Gel, Bristar, Silent Dynamite, etc.

 0 * LABO0405E 05/01/2002

	Rates	Fringes
HOUSTON & OLMSTED COUNTIES		
LABORERS (Heavy, Sewer & Water Lines):		
5	GROUP 1	19.59
6	GROUP 2	19.79
8	GROUP 3	19.94

9	GROUP 4	20.04	5.96
0	GROUP 5	20.29	5.96
1	GROUP 6	21.59	5.96

2

3 LABORER CLASSIFICATIONS

4

5 GROUP 1: Construction; Bituminous Batchperson (Stationary
6 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
7 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
8 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
9 Batch person; Concrete Handler, Caisson, Footings, Columns,
0 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
1 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
2 Puddler (Paving); Conduit Layer; Curb Setter; Damp Proofer Below
3 Grade; Demolition of an entire Structural System, Excluding
4 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
5 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
6 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
7 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
8 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
9 Operator; Pump Operator (Less than 6"); Retaining Wall
0 Installation; Sand Cushion Bedmaker; Signal person; Slip Lining
1 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard Rail
2 Installation; Squeegee person; Stabilizing Batch person
3 (Stationary Plant); Temporary Heaters & Blower Tender; Top Person
4 (Sewer, Water or Gas Trench); Traffic Controller (Traffic
5 Barriers) & Transit/Level; Flagperson. Pipelayer, Laser Beam
6 (sewer, water, gas) \$1.50 above Group 1 rate. Blasting Person
7 (dynamite or substitute products) \$3.00 above Group 1 rate.

8

9 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
0 Remote Control); Concrete Drilling; Concrete Mixer Operator;
1 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
2 8' Below starting level of manual work; Formsetter; Joint Sawyer,
3 Mortar; Pipe Fuser/Technician; Pneumatic Tools, Jackhammer,
4 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
5 & Related Accessories (Electric/Hydraulic); Stone Tender/Mason
6 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device

7

8 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam
9 Work

0

1 GROUP 4: Bottom person (Sewer, Water or Gas Trench - More than
2 8' Below starting level or manual Work); Cement Gun Operator (1
3 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
4 (Gunite, Sandblasting, Cement)

5

6 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer; Tunnel
7 Miner; Tunnel Miner Tender; Underground Laborer; & Underpinning

8

9 GROUP 6: Tunnel Miner Under Pressure

0

1

2 LABO0563C 05/01/2001

3

4

5 BENTON, CLAY (Except City limits of Moorhead) & STEARNS COUNTIES:

6

7 LABORERS (Treatment Plants):

8

9 Total Construction Projects Over \$950,000:

0	GROUP 1	18.02	6.72
1	GROUP 2	18.77	6.72
2	GROUP 3	19.02	6.72
3	FLAGPERSON	16.11	6.72

4

5 Total Construction Projects Under \$950,000:

6	GROUP 1	16.27	6.72
7	GROUP 2	17.02	6.72
8	GROUP 3	17.27	6.72
9	FLAGPERSON	14.54	6.72

0

1 LABORER CLASSIFICATIONS

2

3 GROUP 1 - Construction; Asbestos & Hazardous Waste Technician;
 4 Carpenter Tender; Chain Saw Operator; Concrete Saw, Drill
 5 Operator; Concrete Vibrator; Concrete; Damp Proofer Below
 6 Grade; Demolition & Remodeling, Excluding Demolition of an
 7 entire Structural System; Drill Runner Tender; Dump Person -
 8 Dirt, Asphalt, Concrete, Cement; Heater Tender; Hot Tar Caulker-
 9 Corker; Hydro Blast or Waterblaster; Joist Handler; Mason
 0 Tender; Material Handler - Power Buggy; Mortar Mixer - Cement
 1 or any other Substitute material or Composition; Pipe Handler;
 2 Pneumatic & Electric Tools, Jackhammer, Paving Buster, Chipping
 3 Hammer, Tamper Operator, etc.; Remote Control Tamper; Signal
 4 Person; Snow Blower Operator; Swing Stage Line Scaffold (Not
 5 including "Patent" Scaffolding); Torchperson - Gas, Electric,
 6 Thermal or similar device

7

8 GROUP 2 - Caisson Work; Mounted Wall Saw Operator; Nozzle
 9 Operator - Guniting, Cement, Sandblasting; Pipelayer; Pipe Rehab
 0 Technician (Including Cleaning, Cutting, Cameraing, etc.);
 1 Refractory Worker; Sheeting Setter & Driver, Heavy Building
 2 Excavation; Underground Work - Open Ditch or Excavation 8'
 3 Below Grade; & Underpinning

4

5 GROUP 3 - Driller for Blasting Purposes; Dynamite Blaster or
 6 substitute products Tovel TR, Water, Gas, Gel, Bristar, Silent
 7 Dynamite, etc.

8

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1 * LABO0563I 05/01/2002

2

3 ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,

4

5 SHERBURNE, WASHINGTON & WRIGHT COUNTIES

6

7 LABORERS (Heavy, Sewer & Water Lines):

8	GROUP 1	22.89	6.21
9	GROUP 2	23.09	6.21
0	GROUP 3	23.24	6.21
1	GROUP 4	23.34	6.21
2	GROUP 5	23.59	6.21
3	GROUP 6	24.89	6.21

0	GROUP 3	18.89	5.86
1	GROUP 4	18.99	5.86
2	GROUP 5	19.24	5.86
3	GROUP 6	20.54	5.86

4

5 LABORER CLASSIFICATIONS

6

7 GROUP 1: Construction; Bituminous Batchperson (Stationary
8 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
9 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
0 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
1 Batch person; Concrete Handler, Caisson, Footings, Columns,
2 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
3 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
4 Puddler (Paving); Conduit Layer; Curb Setter; Damp Proofer Below
5 Grade; Demolition of an entire Structural System, Excluding
6 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
7 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
8 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
9 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
0 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
1 Operator; Pump Operator (Less than 6"); Retaining Wall
2 Installation; Sand Cushion Bedmaker; Signal person; Slip Lining
3 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard Rail
4 Installation; Squeegee person; Stabilizing Batch person
5 (Stationary Plant); Temporary Heaters & Blower Tender; Top Person
6 (Sewer, Water or Gas Trench); Traffic Controller (Traffic
7 Barriers) & Transit/Level; Flagperson. Pipelayer, Laser Beam
8 (sewer, water, gas) \$1.50 above Group 1 rate. Blasting Person
9 (dynamite or substitute products) \$3.00 above Group 1 rate.

0

1 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
2 Remote Control); Concrete Drilling; Concrete Mixer Operator;
3 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
4 8' Below starting level of manual work; Formsetter; Joint Sawyer,
5 Mortar; Pipe Fuser/Technician; Pneumatic Tools, Jackhammer,
6 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
7 & Related Accessories (Electric/Hydraulic); Stone Tender/Mason
8 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device

9

0 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam
1 Work

2

3 GROUP 4: Bottom person (Sewer, Water or Gas Trench - More than
4 8' Below starting level or manual Work); Cement Gun Operator (1
5 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
6 (Gunite, Sandblasting, Cement)

7

8 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer; Tunnel
9 Miner; Tunnel Miner Tender; Underground Laborer; & Underpinning

0

1 GROUP 6: Tunnel Miner Under Pressure

2 -----

3

4 * LABO0563K 05/01/2002

5

6 CLAY (Excluding City Limits of Moorhead) & POLK (Excluding City

7 Limits of East Grand Forks) COUNTIES

8

9 LABORERS (Heavy, Sewer & Water Lines):

0	GROUP 1	15.74	5.21
1	GROUP 2	15.94	5.21
2	GROUP 3	16.09	5.21
3	GROUP 4	16.19	5.21
4	GROUP 5	16.44	5.21
5	GROUP 6	17.74	5.21

6

7 LABORER CLASSIFICATIONS

8

9 GROUP 1: Construction; Bituminous Batchperson (Stationary
0 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
1 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
2 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
3 Batch person; Concrete Handler, Caisson, Footings, Columns,
4 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
5 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
6 Puddler (Paving); Conduit Layer; Curb Setter; Damp Proofer Below
7 Grade; Demolition of an entire Structural System, Excluding
8 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
9 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
0 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
1 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
2 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
3 Operator; Pump Operator (Less than 6"); Retaining Wall
4 Installation; Sand Cushion Bedmaker; Signal person; Slip Lining
5 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard Rail
6 Installation; Squeegee person; Stabilizing Batch person
7 (Stationary Plant); Temporary Heaters & Blower Tender; Top Person
8 (Sewer, Water or Gas Trench); Traffic Controller (Traffic
9 Barriers) & Transit/Level; Flagperson. Pipelayer, Laser Beam
0 (sewer, water, gas) \$1.50 above Group 1 rate. Blasting Person
1 (dynamite or substitute products) \$3.00 above Group 1 rate.

2

3 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
4 Remote Control); Concrete Drilling; Concrete Mixer Operator;
5 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
6 8' Below starting level of manual work; Formsetter; Joint Sawyer,
7 Mortar; Pipe Fuser/Technician; Pneumatic Tools, Jackhammer,
8 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
9 & Related Accessories (Electric/Hydraulic); Stone Tender/Mason
0 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device

1

2 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam
3 Work

4

5 GROUP 4: Bottom person (Sewer, Water or Gas Trench - More than
6
7 8' Below starting level or manual Work); Cement Gun Operator (1
8 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
9 (Gunite, Sandblasting, Cement)

0

1 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer; Tunnel
2 Miner; Tunnel Miner Tender; Underground Laborer; & Underpinning

3

4 GROUP 6: Tunnel Miner Under Pressure

5 -----

6

7 * LABO0563Q 05/01/2002

8

Rates

Fringes

9 CLAY (City Limits of Moorhead) & POLK (City Limits of East Grand

0 Forks) COUNTIES:

1

2 LABORERS (Heavy, Sewer & Water Lines):

3 GROUP 1 15.74 5.21

4 GROUP 2 15.94 5.21

5 GROUP 3 16.09 5.21

6 GROUP 4 16.19 5.21

7 GROUP 5 16.44 5.21

8 GROUP 6 17.74 5.21

9

0 LABORER CLASSIFICATIONS

1

2 GROUP 1: Construction; Bituminous Batchperson (Stationary
3 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
4 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
5 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
6 Batchperson; Concrete Handler, Caisson, Footings, Columns,
7 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
8 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
9 Puddler (Paving); Conduit Layer; Curb Setter; Damp-proofer Below
0 Grade; Demolition of an entire Structural System, Excluding
1 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
2 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
3 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
4 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
5 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
6 Operator; Pump Operator (Less than 6"); Retaining Wall
7 Installation; Sand Cushion Bedmaker; Signalperson; Slip Lining
8 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard
9 Rail Installation; Squeegee person; Stabilizing Batch
0 person (Stationary Plant); Temporary Heaters & Blower Tender; Top
1 Person (Sewer, Water or Gas Trench); Flagperson/ Traffic
2 Controller(Traffic Barriers) & Transit/Level. Pipelayer, Laser
3 Beam (sewer, water, gas) \$1.50 above Group 1 rate. Blasting
4 person (dynamite or substitute productrs) \$3.00 above Group 1
5 rate.

6

7 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
8 Remote Control); Concrete Drilling; Concrete Mixer Operator;
9 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
0 8' Below starting level of manual work; Formsetter; Joint Sawyer,
1 Mortar; Pipe Fuser/Technician; Pipe Rehab Technician, including
2
3 Cleaning, Cutting, Cameraing, etc.; Pneumatic Tools, Jackhammer,
4 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
5 & Related Accessories (Electric/ Hydraulic); Stone Tender/Mason
6 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device
7

8 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam

9 Work

0

1 GROUP 4: Bottom Person (Sewer, Water or Gas Trench - More than
 2 8' Below starting level or manual Work); Cement Gun Operator (1
 3 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
 4 (Gunitite, Sandblasting, Cement)

5

6 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer;
 7 Tunnel Miner; Tunnel Miner Tender; Underground Laborer; &
 8 Underpinning

9

0 GROUP 6: Blasting Person (Dynamite or substitute Products);
 1 Tunnel Miner Under Pressure

2 -----

3

4 LABO0580B 04/19/1999

5

6 CLAY (Moorhead) & POLK (East Grand Forks) COUNTIES:

7

8 LABORERS (Treatment Plants)	14.05	4.34
-------------------------------	-------	------

9

0 LABORER CLASSIFICATIONS

1

2 Common; Concrete Bucket; Power Tool Operator; Mortar Mixer;
 3 Brick & Plasterers' Tender; Jackhammer Work; Hod Carrier;
 4 Non-Metallic Pipe Layer; Gas Line Wrapping or Taping; Cutting
 5 Torch for Demolition; Sandblaster & Gunitite Pot Tender; & Hose
 6 Tender

7 -----

8

9 LABO1091B 05/01/1998

0

1 ST. LOUIS COUNTY (South of T 55 N):

2

3 LABORERS (Treatment Plants):

4 GROUP 1	15.95	5.39
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5 GROUP 2	16.10	5.39
-----------	-------	------

6 GROUP 3	16.35	5.39
-----------	-------	------

7 GROUP 4	16.65	5.39
-----------	-------	------

8 FLAGPERSON	14.05	5.39
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9

0 LABORER CLASSIFICATIONS

1

2 GROUP 1 - General; Carpenter Tender; Concrete Laborer; Damp
 3 Proofer Below Grade; Drill Runner Tender; Dumpman - Dirt,
 4 Asphalt, Concrete, Cement; Heater Tender; Hot Tar Caulker -
 5 Corker; Joist Handler; Rebar; Snow Blower Operator;
 6 Signalperson; Material Handler (All types Power Buggy); Fire
 7 Control; Asbestos Removal; & Hazardous Waste

8

9 GROUP 2 - Chain Saw Operator; Concrete Saw, Drill Operator;
 0 Concrete Vibrator; Demolition & Wrecking, Excluding
 1 Remodeling; Gunitite, Sandblasting Machine Operator; Mason
 2 Tender; Mortar Mixer - Cement or any other substitute material
 3 or composition; Pipe Handler; Pneumatic & Electric Tools,
 4 Jackhammer, Paving Buster, Chipping Hammer, Tamper Operator,
 5 etc.; Swing Stage Line Scaffold (not including "patent"
 6 scaffolding); Torchman - Gas, Electric, Thermal or similar
 7 device; & Hydroblast

8
 9 GROUP 3 - Caisson Work; Nozzle Operator - Guniting, Cement,
 0 Sandblasting; Pipelayer; Refractory Worker; Sheeting Setter &
 1 Driver, Heavy Building Excavation; Underground Work - Open
 2 Ditch or Excavation 8' Below Grade; Underpinning; & Hod
 3 Carrier
 4
 5 GROUP 4 - Driller for Blasting Purposes; Dynamite Blasters or
 6 substitute products Tovex TR, Water, Gas, Gel, Bristar, Silent
 7 Dynamite, etc.; Asbestos Abatement Worker; & Hazardous Waste
 8 Worker

9 -----
 0
 1 LABO1091D 05/01/2002

	Rates	Fringes
3 ST. LOUIS COUNTY (South of TR 55):		
4		
5 LABORERS:		
6 Asbestos Abatement	20.80	7.41

7 -----
 8

9 * LABO1091G 05/01/2002

	Rates	Fringes
1 ST. LOUIS COUNTY (South of T. 55 N)		
2		
3 LABORERS (Heavy, Sewer & Water Lines):		
4 GROUP 1	22.17	5.96
5 GROUP 2	22.37	5.96
6 GROUP 3	22.52	5.96
7 GROUP 4	22.62	5.96
8 GROUP 5	22.87	5.96
9 GROUP 6	24.17	5.96

0

1 LABORER CLASSIFICATIONS

2
 3 GROUP 1: Construction; Bituminous Batchperson (Stationary
 4 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
 5 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
 6 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
 7 Batch person; Concrete Handler, Caisson, Footings, Columns,
 8 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
 9 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
 0 Puddler (Paving); Conduit Layer; Curb Setter; Damp Proofer Below
 1 Grade; Demolition of an entire Structural System, Excluding
 2 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
 3 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
 4
 5 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
 6 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
 7 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
 8 Operator; Pump Operator (Less than 6"); Retaining Wall
 9 Installation; Sand Cushion Bedmaker; Signal person; Slip Lining
 0 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard Rail
 1 Installation; Squeegee person; Stabilizing Batch person
 2 (Stationary Plant); Temporary Heaters & Blower Tender; Top Person
 3 (Sewer, Water or Gas Trench); Traffic Controller (Traffic
 4 Barriers) & Transit/Level; Flagperson. Pipelayer, Laser Beam

5 (sewer, water, gas) \$1.50 above Group 1 rate. Blasting Person
6 (dynamite or substitute products) \$3.00 above Group 1 rate.
7
8 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
9 Remote Control); Concrete Drilling; Concrete Mixer Operator;
0 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
1 8' Below starting level of manual work; Formsetter; Joint Sawyer,
2 Mortar; Pipe Fuser/Technician; Pneumatic Tools, Jackhammer,
3 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
4 & Related Accessories (Electric/Hydraulic); Stone Tender/Mason
5 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device
6
7 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam
8 Work
9
0 GROUP 4: Bottom person (Sewer, Water or Gas Trench - More than
1 8' Below starting level or manual Work); Cement Gun Operator (1
2 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
3 (Guniting, Sandblasting, Cement)
4
5 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer; Tunnel
6 Miner; Tunnel Miner Tender; Underground Laborer; & Underpinning
7
8 GROUP 6: Tunnel Miner Under Pressure

9 -----

0
1 LABO1097B 05/01/2001

2 Rates Fringes
3 POLK COUNTY (Excluding the city limits of East Grand Forks):
4
5 LABORERS (Treatment Plants):

6
7 Projects Under \$760,000 including Mechanical & Electrical:

8 GROUP 1	13.48	5.06
9 GROUP 2	13.67	5.06
0 GROUP 3	13.84	5.06
1 FLAGPERSON	11.88	5.06

2
3 Projects \$760,000 & Over, including Mechanical & Electrical:

4 GROUP 1	15.68	5.06
5 GROUP 2	16.08	5.06
6 GROUP 3	16.28	5.06
7 FLAGPERSON	13.98	5.06

8
9 LABORER CLASSIFICATIONS

0
1 GROUP 1 - Construction; Carpenter Tender; Concrete; Damp
2 Proofer Below Grade; Dump Person - Dirt, Asphalt, Concrete &
3 Cement; Heater Tender; Hot Tar Caulker - Corker; Joist
4 Handler; Material Handler - Power Buggy; Rebar; Signal Person;
5 & Snow Blower Operator; Chain Saw Operator; Concrete Vibrator;
6 Demolition & Wrecking, Excluding Remodeling; Mason Tender;
7 Mortar Mixer - Cement or Any Other Substitute Material or
8 Composition; Pipe Handler; Pneumatic & Electric Tool,
9 Jackhammer, Paving Buster, Chipping Hammer, Tamper Operator,
0 Etc.; Swing Stage Line Scaffold (Not including "Patent"
1 Scaffolding); & Torch Person - Gas, Electric, Thermal or

2 similar device; Scrapping, Sweeping & Clean-up; Skid Steer,
 3 Forklift (Incidental Use)
 4
 5 GROUP 2 - Creosote Handler; Caisson Work; Concrete Saw Drill
 6 Operator; Nozzle Operator - Gunite, Cement, Sandblasting;
 7 Pipelayer; Sheeting Setter & Driver, Heavy Building
 8 Excavation; Underground Work - Open Ditch or Excavation 8'
 9 Below Grade; Underpinning; & High Pay/Low Pay - 40 ft. Over or
 0 Under Ground Floor without Conventional Floor Areas; Pipe-
 1 Rehab Technician, including Cleaning, Cutting, Camering, etc.;
 2 & Wall Mounted Saw Operator
 3
 4 GROUP 3 - Driller for Blasting Purposes; Dynamite Blaster or
 5 substitute products; & Tovex TR, Water, Gas, Gel, Bristar,
 6 Silent Dynamite, etc.

7 -----
 8
 9 LABO1097D 05/01/2001

	Rates	Fringes
1 ST. LOUIS COUNTY (North of T 55 N):		
2		
3 LABORERS (Treatment Plants):		
4 GROUP 1	19.67	5.81
5 GROUP 2	20.07	5.81
6 GROUP 3	20.37	5.81
7 Flagperson	17.77	5.81
8 Refractory Worker	21.67	5.81

9
 0 LABORERS CLASSIFICATIONS
 1

2 GROUP 1 - Construction; Carpenter Tender; Concrete; Damp
 3 Proofer Below Grade; Dump Person - Dirt, Asphalt, Concrete &
 4 Cement; Heater Tender; Hot Tar Caulker - Corker; Joist
 5 Handler; Material Handler - Power Buggy; Rebar; Signal Person;
 6 & Snow Blower Operator; Chain Saw Operator; Concrete Vibrator;
 7 Demolition & Wrecking, Excluding Remodeling; Mason Tender;
 8 Mortar Mixer - Cement or Any Other Substitute Material or
 9 Composition; Pipe Handler; Pneumatic & Electric Tool,
 0 Jackhammer, Paving Buster, Chipping Hammer, Tamper Operator,
 1 Etc.; Swing Stage Line Scaffold (Not including "Patent"
 2 Scaffolding); & Torch Person - Gas, Electric, Thermal or
 3 similar device; Scrapping, Sweeping & Clean-up; Skid Steer,
 4 Forklift (Incidental Use)
 5
 6 GROUP 2 - Creosote Handler; Caisson Work; Concrete Saw Drill
 7 Operator; Nozzle Operator - Gunite, Cement, Sandblasting;
 8 Pipelayer; Sheeting Setter & Driver, Heavy Building
 9 Excavation; Underground Work - Open Ditch or Excavation 8'
 0 Below Grade; Underpinning; & High Pay/Low Pay - 40 ft. Over or
 1 Under Ground Floor without Conventional Floor Areas; Pipe-
 2 Rehab Technician, including Cleaning, Cutting, Camering, etc.;
 3 & Wall Mounted Saw Operator
 4
 5 GROUP 3 - Driller for Blasting Purposes; Dynamite Blaster or
 6 substitute products; & Tovex TR, Water, Gas, Gel, Bristar,
 7 Silent Dynamite, etc.
 8 -----

9
0 LABO1097G 05/01/2002
1 Rates Fringes
2 POLK COUNTY (Excluding the city limits of East Grand Forks);
3 & ST. LOUIS COUNTY (N. of TR 55, but excluding a 20-mile radius
4 of Grand Forks, North Dakota):
5
6 LABORERS:
7 Asbestos Abatement 20.80 7.41
8 -----

9
0 * LABO1097L 05/01/2002
1 Rates Fringes
2 ST. LOUIS COUNTY (North of T. 55 N)
3
4 LABORERS (Heavy, Sewer & Water Lines):
5 GROUP 1 21.62 6.51
6 GROUP 2 21.82 6.51
7 GROUP 3 21.97 6.51
8 GROUP 4 22.07 6.51
9 GROUP 5 22.32 6.51
0 GROUP 6 23.62 6.51

1
2 LABORER CLASSIFICATIONS
3

4 GROUP 1: Construction; Bituminous Batchperson (Stationary
5 Plant); Bituminous Worker - Shoveler, Raker, Floater, Squeegee,
6 Utility; Blaster Tender; Brick Tender; Carpenter Tender; Cement
7 Coverperson Batch Truck; Cement Handler - Bulk, Bag; Concrete
8 Batch person; Concrete Handler, Caisson, Footings, Columns,
9 Piling, Slabs, etc.; Concrete Longitudinal Float Operator
0 (Manual Bullfloat on Paving); Concrete Shoveler, Tamper &
1 Puddler (Paving); Conduit Layer; Curb Setter; Damp Proofer Below
2 Grade; Demolition of an entire Structural System, Excluding
3 Remodeling; Drill Runner Tender; Dump Operator (Dirt, Paver,
4 Dumping Batch Truck, etc.); Fabric Installer; Grade Checker;
5 Hydrant & Valve Setter; Hydro Blast or Waterblaster; Joint Filler
6 (Concrete Pavement); Kettleperson (Bituminous or Lead); Labor
7 Wrecking Demolition; Mortar Mixer; Pipe Handler; Power Buggy
8 Operator; Pump Operator (Less than 6"); Retaining Wall
9 Installation; Sand Cushion Bedmaker; Signal person; Slip Lining
0 of Utility Lines; Soil Stabilizer; Sound Barrier & Guard Rail
1
2 Installation; Squeegee person; Stabilizing Batch person
3 (Stationary Plant); Temporary Heaters & Blower Tender; Top Person
4 (Sewer, Water or Gas Trench); Traffic Controller (Traffic
5 Barriers) & Transit/Level; Flagperson. Pipelayer, Laser Beam
6 (sewer, water, gas) \$1.50 above Group 1 rate. Blasting Person
7 (dynamite or substitute products) \$3.00 above Group 1 rate.
8
9 GROUP 2: Chain Saw; Compaction Equipment (Hand Operated or
0 Remote Control); Concrete Drilling; Concrete Mixer Operator;
1 Concrete Sawyer; Concrete Vibrator; Ditch & Other Work more than
2 8' Below starting level of manual work; Formsetter; Joint Sawyer,
3 Mortar; Pipe Fuser/Technician; Pneumatic Tools, Jackhammer,
4 Paving Buster, Chipping Hammer, etc.; Remote Control Demo Machine
5 & Related Accessories (Electric/Hydraulic); Stone Tender/Mason

6 Tender; & Torchperson - Gas, Electric, Thermal or Similar Device
7
8 GROUP 3: Brick or Block Paving Setter; Caisson Work; Cofferdam
9 Work
0
1 GROUP 4: Bottom person (Sewer, Water or Gas Trench - More than
2 8' Below starting level or manual Work); Cement Gun Operator (1
3 1/2" or Over); Driller - Air Track or Similar; & Nozzle Operator
4 (Gunite, Sandblasting, Cement)
5
6 GROUP 5: Asbestos & Hazardous Waste Tech; Tunnel Laborer; Tunnel
7 Miner; Tunnel Miner Tender; Underground Laborer; & Underpinning
8
9 GROUP 6: Tunnel Miner Under Pressure

0 -----

1
2 * PAIN0061F 05/01/2002

	Rates	Fringes
4 CHISAGO, DAKOTA, RAMSEY & WASHINGTON COUNTIES		
6 PAINTERS:		
7 GROUP 1	26.25	9.38
8 GROUP 2	26.25	9.28
9 GROUP 3	19.69	9.28
0 GROUP 4	27.00	9.38

1
2 PAINTER CLASSIFICATIONS
3
4 GROUP 1: Brush; Paperhanger
5 GROUP 2: Drywall Finisher
6 GROUP 3:- Drywall Sander
7 GROUP 4: Sandblaster; Spray; Swing Stage; Boatswain Chair;
8 Window Jack; Safety Belt; Erected Structural Steel; Bridges;
9 & Application of Epoxy Materials & Materials containing over
0 50% Creosote

1 -----

2
3 PAIN0106I 05/01/2001

	Rates	Fringes
5 ST LOUIS COUNTY		
7 GLAZIERS	20.11	7.24+a
9 FOOTNOTE:		
0 a. 1 to 4 years' service - 1 week's paid vacation; 5 to 11		
1 years' service - 2 weeks' paid vacation; 11 years' service		
2 or more - 3 weeks' paid vacation		

3 -----

4
5 PAIN0106J 05/01/2001

	Rates	Fringes
7 ST. LOUIS COUNTY:		
9 PAINTERS:		
0 REPAINT:		
1 Brush & Roller	21.23	7.73
2 Paperhanger, Spray, Steel,		

3	and Taper	21.83	7.73
4	New:		
5	Brush; Roller	22.73	7.73
6	Paperhanger, Spray, Steel,		
7	and Taper	23.33	7.73
8	-----		
9			
0	* PAIN0386I 05/01/2002		
1		Rates	Fringes
2	ANOKA, CARVER, HENNEPIN, ISANTI, SCOTT, SHERBURNE (South & East		
3	of a line drawn between the town of Santiago in Sherburne County		
4	and the town of Clearwater in Wright County) & WRIGHT COUNTIES:		
5			
6	PAINTERS:		
7	Brush; Roller; & Paperhanger	25.50	10.13
8	Spray; Steel; Sandblaster; Swing		
9	Stage & Epoxy	26.25	10.13
0	-----		
1			
2	* PAIN0386J 05/01/2002		
3		Rates	Fringes
4	ANOKA, CARVER, HENNEPIN, ISANTI, SCOTT, SHERBURNE (South & east		
5	of a line drawn between the town of Santiago, Sherburne County		
6	and the town of Clearwater, Wright County) & WRIGHT COUNTIES:		
7			
8	DRYWALL:		
9	Finisher	24.93	10.60
0	Sander	18.70	10.60
1	-----		
2			
3	* PAIN0681E 05/01/2002		
4		Rates	Fringes
5	HOUSTON AND OLMSTED COUNTIES		
6			
7	CORPORATE CITY LIMITS OF ROCHESTER:		
8			
9	PAINTERS:		
0	Brush & Roller	22.71	6.63
1	Paperhanger & Steel	22.96	6.63
2	Sandblasting & Spray	23.21	6.63
3			
4	Stageman & Beltman	23.71	6.63
5			
6	REMAINING AREA:		
7			
8	\$600,000 & over in volume including Electrical & Mechanical:		
9			
0	PAINTERS:		
1	Brush & Roller	22.71	6.63
2	Paperhanger & Steel	22.96	6.63
3	Sandblasting & Spray	23.21	6.63
4	Stageman & Beltman	23.71	6.63
5			
6	Under \$600,000 in volume including Electrical & Mechanical:		
7			
8	PAINTERS:		
9	Brush & Roller	19.30	6.63

0	Paperhanger & Steel	19.52	6.63
1	Sandblasting & Spray	19.73	6.63
2	Stageman & Beltman	20.15	6.63
3			
4	APPLICATION OF EPOXY, CREOSOTE OR ALL OTHER HIGHLY TOXIC		
5	MATERIALS - \$.25 PREMIUM		
6	-----		
7			
8	* PAIN0681H 05/01/2002		
9		Rates	Fringes
0	HOUSTON & OLMSTED COUNTIES:		
1			
2	DRYWALL FINISHERS	22.07	7.68
3	DRYWALL SANDERS	16.55	7.68
4	-----		
5			
6	* PAIN0880A 05/01/1999		
7		Rates	Fringes
8	SIGN PAINTERS	21.12	2.08+a+b
9			
0	FOOTNOTES:		
1	a. 8 Paid Holidays: New Year's Day; Memorial Day;		
2	Independence Day; Labor Day; Thanksgiving Day; the Day After		
3	Thanksgiving; the last working Day Before Christmas; &		
4	Christmas Day		
5			
6	b. Vacation Pay: 3 yrs' service - 2 wks' paid vacation; 6 yrs'		
7	service - 3 wks' paid vacation; 15 yrs' service - 4 wks' paid		
8	vacation		
9	-----		
0			
1	* PAIN0884F 06/01/2002		
2		Rates	Fringes
3	PAINTERS:		
4			
5	BENTON, SHERBURNE (Western one-half, North & West of a line drawn		
6	between the city of Santiago in Sherburne County & the city of		
7	Clearwater in Wright County) & STEARNS COUNTIES:		
8			
9	Projects Under \$8,000.00:		
0			
1	GROUP 1	16.00	7.06
2	GROUP 2	16.00	7.06
3	GROUP 3	16.61	7.06
4			
5	All Other Work:		
6	GROUP 1	19.31	7.71
7	GROUP 2	19.31	7.71
8	GROUP 3	20.76	7.06
9			
0	CLAY & POLK COUNTIES:		
1			
2	Projects Under \$8,000.00:		
3	GROUP 1	14.41	1.87
4	GROUP 2	15.21	6.34
5	GROUP 3	15.16	1.87
6			

7	All Other Work:		
8	GROUP 1	18.01	3.56
9	GROUP 2	18.31	6.99
0	GROUP 3	18.76	1.87

1
2 PAINTER CLASSIFICATIONS

3
4 GROUP 1: Brush & Roller
5
6 GROUP 2: Drywall Taper & Finisher
7
8 GROUP 3: Spray; Two Component Paints; Epoxies; Sandblasting &
9 Rigging; Bridge Painting; Work done on Swing Scaffolding,
0 Safety Harness, Boatswain's Chair, Coverings & Erection of
1 Scaffolding for same, Work on Erected Structural Steel, Storage
2 Bins, Tanks, Abrasive Blasting; Steeple Jack Work which applies
3 to Smokestacks, Elevated Tanks & Erected Towers over 35 ft. &
4 Flag Poles; & Structural Supports

5 -----
6
7 * PAIN1324E 06/01/2002

8		Rates	Fringes
9	ANOKA, BENTON, CARVER, CHISAGO, CLAY, DAKOTA, HENNEPIN, HOUSTON,		
0	ISANTI, OLMSTED, POLK, RAMSEY, SCOTT, SHERBURNE, STEARNS,		
1	WASHINGTON & WRIGHT COUNTIES		

2			
3	GLAZIERS	27.36	10.14
4	-----		

5
6 PLAS0265D 06/01/2000

7		Rates	Fringes
8	ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,		
9	SHERBURNE, WASHINGTON & WRIGHT COUNTIES:		

0			
1	PLASTERERS	24.88	8.35
2	-----		

3
4 PLAS6330I 05/01/2000

5		Rates	Fringes
6	ST. LOUIS COUNTY (South of T 55N):		

7			
8	CEMENT MASONS (Treatment Plants)	21.34	8.15
9	-----		

0
1 PLAS6330J 05/01/2000

2		Rates	Fringes
3	HOUSTON & OLMSTED COUNTIES:		

4			
5	CEMENT MASONS (Treatment Plants):	23.29	4.37
6	-----		

7
8 PLAS6330K 05/01/2000

9		Rates	Fringes
0	ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,		
1	SHERBURNE, WASHINGTON & WRIGHT COUNTIES:		

2			
3	CEMENT MASONS (Treatment Plants)	24.99	7.96

4	-----		
5			
6	PLAS6330L 05/01/2000		
7		Rates	Fringes
8	ST. LOUIS COUNTY (North of T 55N):		
9			
0	CEMENT MASONS (Treatment Plants)	18.20	9.00
1	-----		
2			
3	PLAS6330M 05/01/2000		
4		Rates	Fringes
5	ST. LOUIS COUNTY:		
6			
7	PLASTERERS	19.62	8.70
8	-----		
9			
0	PLAS6330N 06/01/2000		
1		Rates	Fringes
2	HOUSTON & OLMSTED COUNTIES:		
3			
4	PLASTERERS	25.25	2.40
5	-----		
6			
7	PLAS6330O 05/01/2000		
8		Rates	Fringes
9	ST. LOUIS COUNTY (South of T 55N):		
0			
1	CEMENT MASONS (Heavy, Sewer & Water		
2	Lines)	20.33	10.70
3	-----		
4			
5	PLAS6330P 05/01/2000		
6		Rates	Fringes
7	ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,		
8	SHERBURNE, WASHINGTON & WRIGHT COUNTIES:		
9			
0	CEMENT MASONS (Heavy, Sewer & Water		
1	Lines)	23.79	7.96
2	-----		
3			
4	PLAS6330Q 05/01/2000		
5		Rates	Fringes
6	ST. LOUIS COUNTY (North of T 55N):		
7			
8	CEMENT MASONS (Heavy, Sewer & Water		
9	Lines)	18.20	9.00
0	-----		
1			
2	PLAS6330R 05/01/2000		
3		Rates	Fringes
4	HOUSTON & OLMSTED COUNTIES:		
5			
6	CEMENT MASONS (Heavy, Sewer & Water		
7	Lines)	22.69	4.75
8	-----		
9			
0	PLAS6330U 07/01/1999		

1		Rates	Fringes
2	POLK COUNTY:		
3			
4	CEMENT MASONS (Treatment Plants)	18.35	5.80
5	-----		
6			
7	PLAS6330W 05/01/2000		
8		Rates	Fringes
9	BENTON, CLAY & POLK COUNTIES:		
0			
1	PLASTERERS	17.75	4.65
2	-----		
3			
4	PLUM0006E 08/01/2001		
5		Rates	Fringes
6	HOUSTON COUNTY:		
7			
8	PIPEFITTERS; PLUMBERS; & STEAMFITTERS:		
9	Mechanical Contracts Up to		
0	\$75,000.00	22.93	8.35
1	All Other Mechanical Contracts	28.66	8.35
2			
3	OLMSTED COUNTY:		
4			
5	PIPEFITTERS; PLUMBERS; &		
6	STEAMFITTERS	22.93	8.35
7	-----		
8			
9	PLUM0011H 05/01/2001		
0		Rates	Fringes
1	ST. LOUIS COUNTY (South of an east-west line drawn through		
2	Cotton)		
3			
4	PLUMBERS, PIPEFITTERS,		
5	and STEAMFITTERS	26.35	9.15
6	-----		
7			
8	PLUM0015E 05/01/2001		
9			
0		Rates	Fringes
1	ANOKA, CARVER, HENNEPIN, ISANTI, SCOTT, SHERBURNE (East of a line		
2	running northeasterly from the point of Wright County that lies		
3	furthest north to that point of Mille Lacs County that is south		
4	by west) & WRIGHT COUNTIES:		
5			
6	PLUMBERS	27.70	9.17+a
7			
8	FOOTNOTE:		
9	a. Paid Holiday: Labor Day		
0	-----		
1			
2	PLUM0015F 05/01/2001		
3		Rates	Fringes
4	BENTON & STEARNS COUNTIES		
5			
6	PLUMBERS	25.80	9.71+a
7			

8 FOOTNOTE:

9 a. Paid Holiday: Labor Day

0 -----

1

2 PLUM0034E 05/01/2002

3		Rates	Fringes
---	--	-------	---------

4 CHISAGO, DAKOTA, RAMSEY & WASHINGTON COUNTIES

5

6	PLUMBERS	30.55	10.29+a
---	----------	-------	---------

7

8 FOOTNOTE:

9 a. 1 Paid Holiday: Labor Day

0 -----

1

2 PLUM0126E 05/15/2002

3		Rates	Fringes
---	--	-------	---------

4 CLAY & POLK COUNTIES

5

6 PLUMBERS & STEAMFITTERS:

7 Mechanical Projects

8	under \$2,000,000	25.89	8.31
---	-------------------	-------	------

9 Mechanical Projects

0	\$2,000,000 and above	28.29	8.31
---	-----------------------	-------	------

1 -----

2

3 PLUM0417B 06/01/2001

4		Rates	Fringes
---	--	-------	---------

5 ANOKA, DAKOTA, HENNEPIN, RAMSEY, SCOTT & WASHINGTON COUNTIES:

6

7	SPRINKLER FITTERS	29.42	11.17+a
---	-------------------	-------	---------

8

9 FOOTNOTE:

0 a. 6 Paid Holidays: Memorial Day; July 4th; Friday before

1 Labor Day; Labor Day; Columbus Day; & Thanksgiving Day

2 -----

3

4 * PLUM0455F 05/01/2002

5		Rates	Fringes
---	--	-------	---------

6

7 CHISAGO, DAKOTA, RAMSEY & WASHINGTON COUNTIES

8

9	PIPEFITTERS & STEAMFITTERS	31.22	10.64
---	----------------------------	-------	-------

0 -----

1

2 * PLUM0539G 05/01/2002

3		Rates	Fringes
---	--	-------	---------

4 ANOKA, CARVER, HENNEPIN, ISANTI, SCOTT, SHERBURNE (East of a line

5 running North-Easterly from the point of Wright Co.that lies

6 furthest North to that point of Mille Lacs that is South by West)

7 & WRIGHT COUNTIES:

8

9	PIPEFITTERS	31.30	10.70
---	-------------	-------	-------

0 -----

1

2 * PLUM0539L 05/01/2002

3		Rates	Fringes
---	--	-------	---------

4 BENTON, SHERBURNE (West of a line running North-Easterly from

5 point of Wright Co. lies furthest North to point of Mille Lacs
6 that is South by West) & STEARNS COUNTIES

7
8 PIPEFITTERS 24.71 13.03

9 -----
0
1 * PLUM0589E 06/01/2002

2 Rates Fringes
3 ST. LOUIS COUNTY (North of an East-West line drawn through
4 Cotton)

5
6 PIPEFITTERS; PLUMBERS; &
7 STEAMFITTERS 24.56 12.13

8 -----
9
0 ROOF0096U 06/01/1998

1 Rates Fringes
2 ROOFERS:
3 HOUSTON COUNTY 16.01 3.92
4 OLMSTED COUNTY 17.34 3.92

5 -----
6
7 ROOF0096V 07/01/2000

8 Rates Fringes
9 ST. LOUIS COUNTY (South of Hwy 16, excluding city of Forbes):

0 ROOFERS 22.20 7.15

1 -----
2
3
4 ROOF0096W 05/01/2000

5 Rates Fringes
6 ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI (South of State
7 Highway #95, including Cambridge), RAMSEY, SCOTT, WASHINGTON &
8 WRIGHT (South of County Road #39) COUNTIES:

9
0 ROOFERS 24.94 7.63+a

1
2 FOOTNOTE:

3
4 a. 1 Paid Holiday: Labor Day

5 -----
6
7 ROOF0096X 06/01/2000

8 Rates Fringes
9 BENTON, ISANTI (North of State Highway #95, excluding Cambridge),
0 SHERBURNE, STEARNS & WRIGHT (North of Wright County Road #39,
1 from South Haven to Monticello, including both towns) COUNTIES:

2
3 ROOFERS 21.50 5.45

4 -----
5
6 ROOF0096Y 05/01/2000

7 Rates Fringes
8 ST. LOUIS COUNTY (Northern two-thirds):

9
0 ROOFERS 18.20 5.20

1 -----

2			
3	ROOF0214B	04/01/1998	
4			
		Rates	Fringes
5	CLAY & POLK COUNTIES:		
6			
7	ROOFERS	10.83	
8	-----		
9			
0	SFMN0669D	04/01/2002	
1			
		Rates	Fringes
2	BENTON, CARVER, CHISAGO, CLAY, HOUSTON, ISANTI, OLMSTED, POLK,		
3	SHERBURNE, ST. LOUIS, STEARNS & WRIGHT COUNTIES:		
4			
5	SPRINKLER FITTERS	27.76	8.05
6	-----		
7			
8	SHEE0010U	05/01/2002	
9			
		Rates	Fringes
0	BENTON, SHERBURNE & STEARNS COUNTIES		
1			
2	SHEET METAL WORKERS	26.07	10.53
3	-----		
4			
5	SHEE0010V	06/01/2002	
6			
		Rates	Fringes
7	CLAY COUNTY		
8			
9	SHEET METAL WORKERS	20.07	7.16
0	-----		
1			
2	SHEE0010W	05/01/2000	
3			
		Rates	Fringes
4	ST. LOUIS COUNTY (Southern one-third):		
5			
6	SHEET METAL WORKERS	24.28	9.88
7	-----		
8			
9	SHEE0010X	05/01/2001	
0			
		Rates	Fringes
1	ST. LOUIS COUNTY (Northern two-thirds)		
2			
3	SHEET METAL WORKERS	24.83	9.57
4	-----		
5			
6	SHEE0010Y	05/01/2001	
7			
		Rates	Fringes
8	ANOKA, CARVER, CHISAGO, DAKOTA, HENNEPIN, ISANTI, RAMSEY, SCOTT,		
9	WASHINGTON & WRIGHT COUNTIES		
0			
1	SHEET METAL WORKERS	28.26	10.68+a
2			
3	FOOTNOTE:		
4	a. Paid Holiday: Labor Day		
5	-----		
6			
7	SHEE0010Z	05/01/2002	
8			
		Rates	Fringes

9 OLMSTED COUNTY

0

1 SHEET METAL WORKERS	25.76	9.62
-----------------------	-------	------

2 -----

3

4 SHEE1000A 05/01/1999

5	Rates	Fringes
---	-------	---------

6 HOUSTON COUNTY:

7

8 SHEET METAL WORKERS:

9 Sheet Metal Installations of

0 \$50,000.00 & Under	17.53	6.49
-----------------------	-------	------

1 All Other Work	19.69	6.49
------------------	-------	------

2 -----

3

4 SHEE1000E 06/01/2002

5	Rates	Fringes
---	-------	---------

6 CLAY COUNTY

7

8 SHEET METAL WORKERS	20.04	7.30
-----------------------	-------	------

9 -----

0

1 TEAM0132F 05/01/2000

2	Rates	Fringes
---	-------	---------

3 CHISAGO (Northern half) & ISANTI COUNTIES:

4

5 TRUCK DRIVERS (Treatment Plants)	23.08	
------------------------------------	-------	--

6 -----

7

8 * TEAM0160I 05/01/2002

9	Rates	Fringes
---	-------	---------

0 ANOKA, CARVER, CHISAGO (S. of T. 34-N), DAKOTA, HENNEPIN, RAMSEY,

1 SCOTT, SHERBURNE, WASHINGTON & WRIGHT COUNTIES

2

3 TRUCK DRIVERS (Heavy, Sewer & Water Lines):

4 GROUP 1	21.60	6.50
-----------	-------	------

5

6 GROUP 2	21.05	6.50
-----------	-------	------

7 GROUP 3	20.95	6.50
-----------	-------	------

8 GROUP 4	20.70	6.50
-----------	-------	------

9

0 TRUCK DRIVER CLASSIFICATIONS

1

2 GROUP 1 - Boom; Mechanic; Off-Road, including Articulated Dump

3 Truck; Tractor Trailer; Winch Truck

4

5 GROUP 2 - Tri Axles (Including Four Axles)

6

7 GROUP 3 - Bituminous Distributor; Bituminous Distributor (One

8 man operation); Tandem Axles; & Single Axles

9

0 GROUP 4 - Bituminous Distributor Spray Operator (Rear and

1 Oiler); Dumpman; Pilot Car; Self-propelled Packer; Slurry

2 Operator; Tank Truck Tender (Gas, Oil, Road Oil & Water);

3 Tractor Operator (Wheel type used for any purpose)

4

5 THE FOLLOWING CLASSIFICATIONS SHALL COME UNDER THE APPROPRIATE

6 AXLE RATE WAGE GROUP:
 7 "A" Frame; Dry Batch Hauler; Ready-Mix Concrete; Slurry;
 8 Tank (Gas, Oil, Road Oil & Water)
 9 -----

1 * TEAM0160V 05/01/2002

	Rates	Fringes
2 ST. LOUIS COUNTY		
3 TRUCK DRIVERS (Heavy, Sewer & Water Lines):		
4 GROUP 1	21.40	6.50
5 GROUP 2	20.85	6.50
6 GROUP 3	20.75	6.50
7 GROUP 4	20.50	6.50

1 TRUCK DRIVER CLASSIFICATIONS

2
 3 GROUP 1 - Boom; Mechanic; Off-Road, including Articulated Dump
 4 Truck; Tractor Trailer; Winch Truck

5
 6 GROUP 2 - Tri Axles (Including Four Axles)

7
 8 GROUP 3 - Bituminous Distributor; Bituminous Distributor (One
 9 man operation); Tandem Axles; & Single Axles

0
 1 GROUP 4 - Bituminous Distributor Spray Operator (Rear and
 2 Oiler); Dumpman; Pilot Car; Self-propelled Packer; Slurry
 3 Operator; Tank Truck Tender (Gas, Oil, Road Oil & Water);
 4 Tractor Operator (Wheel type used for any purpose)

5
 6 THE FOLLOWING CLASSIFICATIONS SHALL COME UNDER THE APPROPRIATE
 7 AXLE RATE WAGE GROUP:

8 "A" Frame; Dry Batch Hauler; Ready-Mix Concrete; Slurry;
 9 Tank (Gas, Oil, Road Oil & Water)

0
 1 -----

2
 3 * TEAM0160W 05/01/2002

	Rates	Fringes
4 HOUSTON AND OLMSTED COUNTIES		
5 TRUCK DRIVERS (Heavy, Sewer & Water Lines):		
6 GROUP 1	19.60	6.50
7 GROUP 2	19.05	6.50
8 GROUP 3	18.95	6.50
9 GROUP 4	18.75	6.50

0
 1 TRUCK DRIVER CLASSIFICATIONS

2
 3 GROUP 1 - Boom; Mechanic; Off-Road, including Articulated Dump
 4 Truck; Tractor Trailer; Winch Truck

5
 6 GROUP 2 - Tri Axles (Including Four Axles)

7
 8 GROUP 3 - Bituminous Distributor; Bituminous Distributor (One
 9 man operation); Tandem Axles; & Single Axles

0

3 GROUP 4 - Bituminous Distributor Spray Operator (Rear and
 4 Oiler); Dumpman; Pilot Car; Self-propelled Packer; Slurry
 5 Operator; Tank Truck Tender (Gas, Oil, Road Oil & Water);
 6 Tractor Operator (Wheel type used for any purpose)

7
 8 THE FOLLOWING CLASSIFICATIONS SHALL COME UNDER THE APPROPRIATE
 9 AXLE RATE WAGE GROUP:
 0 "A" Frame; Dry Batch Hauler; Ready-Mix Concrete; Slurry;
 1 Tank (Gas, Oil, Road Oil & Water)

2 -----
 3
 4 * TEAM0160X 05/01/2002

	Rates	Fringes
5 BENTON, CHISAGO (N. of T. 34-N), CLAY, ISANTI, POLK &		
6 STEARNS COUNTIES		
7 TRUCK DRIVERS (Heavy, Sewer & Water Lines):		
8 GROUP 1	17.52	6.50
9 GROUP 2	17.01	6.50
0 GROUP 3	16.86	6.50
1 GROUP 4	16.86	6.50

2 TRUCK DRIVER CLASSIFICATIONS

3 GROUP 1 - Boom; Mechanic; Off-Road, including Articulated Dump
 4 Truck; Tractor Trailer; Winch Truck

5 GROUP 2 - Tri Axles (Including Four Axles)

6 GROUP 3 - Bituminous Distributor; Bituminous Distributor (One
 7 man operation); Tandem Axles; & Single Axles

8 GROUP 4 - Bituminous Distributor Spray Operator (Rear and
 9 Oiler); Dumpman; Pilot Car; Self-propelled Packer; Slurry
 0 Operator; Tank Truck Tender (Gas, Oil, Road Oil & Water);
 1 Tractor Operator (Wheel type used for any purpose)

2 THE FOLLOWING CLASSIFICATIONS SHALL COME UNDER THE APPROPRIATE
 3 AXLE RATE WAGE GROUP:
 4 "A" Frame; Dry Batch Hauler; Ready-Mix Concrete; Slurry;
 5 Tank (Gas, Oil, Road Oil & Water)

6 -----
 7 * TEAM0221D 06/01/2002

	Rates	Fringes
8 TRUCK DRIVERS (LANDSSCAPE):		
9 Single Axles & Farm Tractors	14.20	6.20
0 Tandem Axles	14.35	6.20
1 Truck-Train Combination	14.50	6.20

2 -----
 3
 4 * TEAM0346D 05/01/2002

	Rates	Fringes
5 ANOKA, CARVER, CHISAGO (Southern half), DAKOTA, HENNEPIN, RAMSEY,		
6 ST. LOUIS, SCOTT, SHERBURNE, WASHINGTON & WRIGHT COUNTIES:		

7 TRUCK DRIVERS (Treatment Plants):

0	GROUP 1	22.00	6.30
1	GROUP 2	21.45	6.30
2	GROUP 3	21.35	6.30
3	GROUP 4	21.10	6.30

4
5 TRUCK DRIVER CLASSIFICATIONS

- 6 GROUP 1: Boom Truck
- 7 GROUP 2: Ready Mix, Tractor Trailor
- 8 GROUP 3: Fork Lift, Mechanic, Tandem or 3 axle Truck
- 9 GROUP 4: Dumpman, Farm Tractor, Single or 2 axle Truck

0 -----

1			
2	TEAM0405C 05/01/1999		
3		Rates	Fringes
4	HOUSTON COUNTY		
5			
6	TRUCK DRIVERS (Treatment Plants)	15.49	

7			
8	OLMSTED COUNTY		
9			
0	TRUCK DRIVERS (Treatment Plants)	16.94	

1 -----

2			
3	TEAM0563C 05/01/1999		
4		Rates	Fringes
5	BENTON, CLAY (Except City limits of Moorhead) & STEARNS COUNTIES:		
6			
7	TRUCK DRIVERS (Treatment Plants):		
8	Total Construction Projects of		
9			
0	Over \$950,000.00	15.59	
1	Total Construction Projects		
2	Under \$950,000.00	13.84	

3 -----

4			
5	TEAM0580C 04/19/1999		
6		Rates	Fringes
7	CLAY (Moorhead) & POLK (East Grand Forks) COUNTIES:		
8			
9	TRUCK DRIVERS (Treatment Plants)	14.05	

0 -----

1			
2	* TEAM1097B 05/01/2001		
3		Rates	Fringes
4	POLK COUNTY (Excluding the city limits of East Grand Forks):		
5			
6	TRUCK DRIVERS (Treatment Plants):		
7	Under \$760,000, including		
8	Electrical & Mechanical	13.48	
9			
0	\$760,000 & Over, including		
1	Electrical & Mechanical	15.68	

2 -----

3
4 WELDERS - Receive rate prescribed for craft performing operation
5 to which welding is incidental.

6 =====

7
8 Unlisted classifications needed for work not included within
9 the scope of the classifications listed may be added after
0 award only as provided in the labor standards contract clauses
1 (29 CFR 5.5(a)(1)(ii)).

2 -----
3 In the listing above, the "SU" designation means that rates
4 listed under that identifier do not reflect collectively
5 bargained wage and fringe benefit rates. Other designations
6 indicate unions whose rates have been determined to be
7 prevailing.

8
9 WAGE DETERMINATION APPEALS PROCESS
0

1 1.) Has there been an initial decision in the matter? This can
2 be:

- 3
4 * an existing published wage determination
5 * a survey underlying a wage determination
6 * a Wage and Hour Division letter setting forth a
7 position on a wage determination matter
8 * a conformance (additional classification and rate)
9 ruling

0
1 On survey related matters, initial contact, including requests
2
3 for summaries of surveys, should be with the Wage and Hour
4 Regional Office for the area in which the survey was conducted
5 because those Regional Offices have responsibility for the
6 Davis-Bacon survey program. If the response from this initial
7 contact is not satisfactory, then the process described in 2.)
8 and 3.) should be followed.

9
0 With regard to any other matter not yet ripe for the formal
1 process described here, initial contact should be with the Branch
2 of Construction Wage Determinations. Write to:

3
4 Branch of Construction Wage Determinations
5 Wage and Hour Division
6 U. S. Department of Labor
7 200 Constitution Avenue, N. W.
8 Washington, D. C. 20210
9

0 2.) If the answer to the question in 1.) is yes, then an
1 interested party (those affected by the action) can request
2 review and reconsideration from the Wage and Hour Administrator
3 (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

4
5 Wage and Hour Administrator
6 U.S. Department of Labor
7 200 Constitution Avenue, N. W.
8 Washington, D. C. 20210
9

0 The request should be accompanied by a full statement of the
1 interested party's position and by any information (wage payment
2 data, project description, area practice material, etc.) that the
3 requestor considers relevant to the issue.

4

5 3.) If the decision of the Administrator is not favorable, an
6 interested party may appeal directly to the Administrative Review
7 Board (formerly the Wage Appeals Board). Write to:

8

9 Administrative Review Board
0 U. S. Department of Labor
1 200 Constitution Avenue, N. W.
2 Washington, D. C. 20210

3

4 4.) All decisions by the Administrative Review Board are final.

5

END OF GENERAL DECISION

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SECTION 01000

GENERAL

PART 1 GENERAL

1.1 ORGANIZATION OF SPECIFICATIONS

The specifications which govern the materials and equipment to be furnished and the work to be performed under this contract are listed in the Table of Contents. No attempt has been made in the specifications to segregate work to be performed by any trade, craft, or subcontractor. Any segregation between the trades or crafts shall be solely a matter for agreement between the Contractor, Contractor's employees, and subcontractors.

1.2 REFERENCES

Reference to the standards, specifications, or codes of any technical society, organization, or association, or local, state, or Federal authority shall mean the specific edition or revision listed.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Dewatering plan;

The submittal requirements are described in PARAGRAPH: DEWATERING OPERATIONS.

SD-11 Closeout Submittals

Utility As-Builts;

The Utility As-Builts are described under PARAGRAPH: SURVEYS.

1.4 MEASUREMENT AND PAYMENT

The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract line items on the bidding schedule.

PART 2 PRODUCTS

2.1 APPROVAL OF MATERIALS OR ALTERNATES

Requests for approval of materials and products, or substitutes thereof, will not be considered prior to award of the contract.

2.2 WARRANTIES

Any items that are submitted for review or approval of the Contracting officer should include a copy of the manufacturer's standard warranty if one is available.

PART 3 EXECUTION

3.1 GROUNDS AND ROADWAYS

3.1.1 Availability of Grounds

The boundary limits of the grounds made available for the Contractor's use during the life of the contract are shown on the drawings.

3.1.1.1 Access to Site

The work area is not accessible by land from the east bank except by private property owned by the Ford Plant. The Government does not have and can not provide access rights for use of private property for construction of the project. The Government would accept use of private property for access for construction, subject to separate agreement between the Contractor and the private property owner. The Contractor shall provide evidence of such agreement to the Contracting Officer prior to accessing the work area via the private property. The Ford Plant will allow emergency egress across its property by construction personnel. Point of contact at the Ford Plant for access issues is Brad Bystrom, (651) 696-0660.

3.1.1.2 Other Grounds

Any additional rights-of-way or grounds desired by the Contractor shall be obtained by the Contractor at its own expense, and copies of agreements for the use of such rights-of-way shall be furnished to the Contracting Officer before entering thereon. Such agreements shall clearly relieve the Government of any responsibility for damages resulting from the use of the grounds.

3.1.1.3 Parking

Contractor parking will be permitted only in the area(s) shown, including the Contractor's staging area. No parking will be allowed on the grass. Contractor parking shall be coordinated with the Government.

3.1.1.4 Snow Removal

The Contractor shall be responsible for snow removal in the Contractor's access, work, and parking areas, including on the dam apron. The

Government will provide snow removal for general access to the site during normal working hours. If Contractor chooses to work outside normal hours, it shall be responsible for providing snow removal for general site access.

3.1.2 Drainage Facilities

Insofar as natural drainage from the protected areas is obstructed by contract operations, it shall be the Contractor's responsibility to make adequate provision for accommodating such drainage in a satisfactory manner during the life of this contract, either by temporary means or by use of the permanent construction and operation of the permanent facilities.

3.1.3 Roadways

3.1.3.1 Traffic Hazards

When continuous haul operations or other condition created by the Contractor's operations result in interference or hazard to traffic on streets and highways, beyond that of ordinary public usage, the Contractor shall erect warning signs and provide flagging services as necessary to safeguard the public as required in SECTION 01500: TEMPORARY CONSTRUCTION FACILITIES.

3.1.3.2 Haul Routes

The Contractor shall be responsible for securing all permits required along haul routes. The Contractor shall be the sole permittee and shall be responsible for meeting all obligations of the permits. A copy of each permit shall be submitted to the Contracting Officer. The Contractor, as between the Government and the Contractor, has sole responsibility for damage or deterioration of the Contractor's haul routes. Dust control shall be provided as stated in SECTION 01355: ENVIRONMENTAL PROTECTION.

3.2 DISPOSAL OF DEBRIS AND WASTE

The Contractor's attention is directed to SECTION 01355: ENVIRONMENTAL PROTECTION and to the following CONTRACT CLAUSES: PERMITS AND RESPONSIBILITIES; PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS; OPERATIONS AND STORAGE AREAS; and CLEANING UP. Burning will not be permitted at the project site and debris or waste shall not be left on the site, except as otherwise allowed in Section 02220 DEMOLITION. Disposal of debris and waste debris shall be by one of the following methods:

3.2.1 Disposal in a Locally Operated Sanitary Landfill

Contractor shall select the disposal site with the approval of the Contracting Officer. The Contractor shall secure the required permits for disposal and provide copies of the permit to the Contracting Officer.

3.2.2 Disposal of Solid Construction Debris and Waste

Disposal of solid construction debris and waste shall consist of removal

from Government property and disposal in compliance with Federal, state, and local requirements for solid waste disposal. Contractor shall select the disposal site with the approval of the Contracting Officer.

3.3 EXISTING UTILITIES

3.3.1 General

The Contractor shall coordinate all utility relocation requirements and make payment to the utility companies for all services, fees, and permits required to relocate and reestablish service. The Contractor shall be responsible for all costs related to protecting existing utilities. The Contractor shall coordinate with the utility representatives listed below:

Electrical: Ford Motor Company
Telephone: Qwest
Sewer and Water: City of Minneapolis

3.3.2 Buried Utilities

The approximate locations of known existing buried utilities are shown on the drawings to the extent of available information at the time the drawings were prepared. (In general, no service connections are shown.) Prior to commencing excavation, the Contractor shall accurately locate all such installations. In the event the Contractor damages any existing utility lines, report thereof shall be made immediately to the Contracting Officer. If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs shall be performed immediately.

3.3.3 Interruption of Services

Utility services shall not be interrupted except for brief periods to facilitate cut-ins. The Contractor shall provide temporary service and shall relocate existing utilities as required to construct the work shown and insure uninterrupted service. If interruption of services is unavoidable, the Contractor shall request approval in writing at least 30 calendar days prior to the proposed interruption. This submittal shall fully describe all details of proposed interruption and the reasons why alternatives are not feasible. The Contractor shall further coordinate with the owner of the utility and notify affected consumers at least 10 calendar days in advance of interruption of services. The Contracting Officer will not in general approve proposals which require interruption of services for more than 4 continuous hours.

3.3.4 Minnesota One Call Excavation Notice System

For contract work performed within the State of Minnesota, the Contractor shall meet the requirements of Minnesota Statutes, Chapter 216D "One Call Excavation Notice System." The Gopher State One Call notification center telephone numbers are:

Metro area (651) 454-0002
Outstate (800) 252-1166

3.4 SCHEDULING

3.4.1 General

It shall be the responsibility of the Contractor to schedule and execute the work, incorporating the necessary requirements set forth in these specifications. The Contractor shall develop and submit a schedule in accordance with CONTRACT CLAUSE: SCHEDULES FOR CONSTRUCTION CONTRACTS.

3.4.2 Notification

The Contractor shall inform the Government in writing within 5 days after receipt of notice to proceed and before work begins as to which hours of the day and days of the week work under this contract will be performed. The Contractor shall notify the Government at least 24 hours before work is to be conducted on overtime, in multiple shifts, on weekends, or on Federal Government holidays.

3.4.3 Work Hours

The hours during which the Contractor is expected to perform work under this contract are unrestricted. Assistance by Government personnel to operate gates or machinery shall be coordinated with the Contracting Officer and must be performed while there is adequate staff on duty.

3.5 CONSTRUCTION RESTRICTIONS

3.5.1 Interior Ambursen Dam Repairs, Electrical and Communications Work

This work can be completed year round provided that the Contractor's activities do not interfere with the normal operation of the lock and dam.

3.5.2 Exterior Ambursen Dam Repairs

This work includes all work by the Contractor on upstream and downstream crest of spill way, including the apron area.

The Ford Hydro Plant can pass approximately 6,000 cubic feet per second (cfs) of flow. The Contractor should expect flows in excess of 6,000 cfs to pass over the crest of the inflatable flash board system. Flow duration curves from previous years are included in the contract drawings. Flows in excess of 6,000 cfs cresting the inflatable flashboard system are documented during all twelve months of the year. The flow duration curve data is available from the Corp of Engineers web page (<http://www.mvp-wc.usace.army.mil/projects/Lock1.shtml>)

A summary table of the navigation season for Lock and Dam No. 1 for previous years is contained in Section 00830 ATTACHMENTS. The upstream pool elevation cannot be lowered during periods of navigation. Changes in the pool elevation outside the navigation season must be coordinated with the Government and Ford Motor Company. If the Contractor negotiates an agreement with Ford to lower the pool outside the navigation season, the Contractor shall provide evidence of such agreement to the Contracting Officer prior to lowering the pool.

It is the sole responsibility of the Contractor to coordinate operations with the Ford Hydro Plant and the Government for construction on the exterior dam areas subject to river flows. The Contractor shall be responsible for designing the system to permit access to the up and downstream sides of the spill way crest.

During installation of the existing inflatable flash board system, Ford installed a cofferdam over half of the spill way. This allowed work on the protected half, while maintaining a maximum pool elevation. Photographs of the Ford cofferdam system are provided in Section 00830 ATTACHMENTS. This information is provided for informational purposes only. The Government or it's contractors assume no responsibility for this cofferdam design. The Contractor is responsible for its own designs.

3.5.3 Blasting

Blasting will not be permitted.

3.5.4 Lock and Dam Operation

The Contractor shall keep the lock operational during the navigation season, and the dam operational year-round. The navigation season shall be defined as March 1 through December 1, unless otherwise specified. Facilities shall be maintained for operating personnel so they can perform their normal functions. The Contractor shall designate a coordinator to assure that the construction work is coordinated with the operation of the lock. Lock and Dam personnel will not accept deliveries, phone calls, or mail or deliver messages for the Contractor.

3.5.5 Diving

All diving shall be performed in accordance with the U.S. Army Corps of Engineers "Safety and Health Requirements Manual" EM 385-1-1, Section 30. Prior to submitting bids on this contract, Contractor's and their diving Subcontractor (if applicable), shall obtain copies of this manual, and plan their procedures and staffing requirement accordingly. The Corps of Engineers "Safety and Health Requirements Manual" EM 385-1-1 is available to prospective bidders for review at the U.S. Army Engineer District, St. Paul, MN.

3.5.6 Work Restrictions Near Flammable Cargo

When tows enter the lock carrying flammable cargo, the Contractor shall discontinue use of welders, torches, electric tools, and any other source of flame or sparks. The duration and vicinity of these restrictions shall be directed by the Contracting Officer.

3.5.7 Load Restrictions

- a. Lock Walls. The Contractor shall adhere to the following weight limitations in the area of the lockwall: Maximum 40 tons within 50 ft. of the lock chamber face of the lockwall and maximum 150 tons beyond 50 ft. from the lock chamber face of the lockwall.

b. Electrical Trenches. All wheel loads shall require bridging over the electrical trenches. This bridging shall span the electrical trenches so that no additional load is imposed on the electrical trenches.

c. Protection of Existing Grating. Protection shall include all grating that is not replaced under this contract. This protection does not relieve the Contractor of the responsibility for limiting loads on the miter gate to prevent damage to the walkway support system.

d. Miter Gates. The Contractor shall not transport any loads over the miter gates or lock walls that will damage the grating or supports. The following requirements shall apply to transporting materials or supplies across the top of lock walls or miter gates:

1. Maximum loading (gross weight) shall not exceed 5,000 pounds with a maximum wheel load of 1,500 pounds.

2. All grating shall be covered by the Contractor with 3/4 inch exterior grade plywood.

e. Dam Interior Cross Beams. Existing cross beams are in various states of deterioration. Contractor shall not overload beams during construction. Contractor is responsible for determining appropriate loads that can be applied by its construction activities.

3.5.8 Confined Space

The Government considers the interior work area of the Ambursen Dam to be a non-permit requiring confined space. Contractor shall be responsible for confirming this designation, for following appropriate safety procedures, and for providing a safe work environment for its employees, government personnel, and consultants.

3.6 OTHER CONTRACTS

None.

3.7 DEWATERING OPERATIONS

3.7.1 Scope

The Contractor shall design, furnish, install and operate dewatering systems in conjunction with associated cofferdams and other related work. Surface drainage shall be controlled by rerouting storm water runoff or diverting natural drainage, as necessary.

3.7.2 Payment

Dewatering will be paid for as specified in Section 01270 MEASUREMENT AND PAYMENT.

3.7.3 Requirements

Control of surface water shall be accomplished in a manner that will provide suitable working conditions for construction and will not result in damage to existing structures. Suitable working conditions for construction will provide a dry or moist subgrade free of standing, percolating, or running water during placement and curing of concrete.

3.7.3.1 Regulations

Compliance with all regulations shall be incidental to the dewatering work. Disposal of water shall be in accordance with SECTION 01355: ENVIRONMENTAL PROTECTION and all applicable regulations.

3.7.3.2 Operation

Upon installation and commencement of dewatering operations, the system shall be operated continuously (24 hours/day, 7 days/week) until dewatering is no longer required. The Contractor shall be responsible for maintaining the system.

3.7.3.3 Removal

Upon completion of the work all equipment shall be removed.

3.7.4 Dewatering Plan

A dewatering plan shall be submitted for each area or phase of the contract where dewatering systems are required. The plan shall be reviewed and signed by a Registered Professional Engineer. The plan shall include the following items:

1. layout (including the relationship to site improvements and construction operations)
2. type, sizes, depth and spacing of dewatering devices
3. number and capacity of pumps
4. design assumptions, analysis methods, and calculations
5. description of installation equipment
6. description of operating procedures
7. description of discharge point
8. type and location of monitoring equipment
9. removal and abandonment plans

3.7.5 Liability

Government review of the proposed dewatering system will not relieve the Contractor of full responsibility for the adequacy of the dewatering operations. The Contractor shall be responsible for dewatering effects on adjacent properties, including but not limited to blockage of easements, erosion or sedimentation of ditches, and encroachment onto private property by flooding from pump outlets and sedimentation basins.

3.8 FLOATING PLANT

3.8.1 Equipment and Personnel

Floating plant and personnel shall comply with the applicable U.S. Coast Guard regulations and licensing requirements. Floating plant equipment shall meet the applicable requirements of 46 CFR Chapter 1 Subchapter E and 46 CFR 44.05-10.

3.8.2 Navigable Waters

Floating vessels operating on the Mississippi River and it's tributaries must be operated in accordance with 33 CFR 207.3, "Ohio River, Mississippi River above Cairo, Ill., and their tributaries; use, administration, and navigation."

3.9 SEWAGE AND BILGE WATER DISPOSAL

The Contractor's methods for disposal of sanitary sewage, and bilge water accumulated aboard floating plant equipment, shall meet applicable local, state, and federal requirements.

3.10 SURVEYS

3.10.1 Field Layout

The Contractor shall layout the work from available reference points in accordance with CONTRACT CLAUSE: LAYOUT OF WORK. The construction of each feature of work shall follow the alignments as indicated on the drawings.

3.10.2 Utility As-builts

An as-built field survey of all new utilities shall be conducted after installation to determine the final locations and elevations of all utility components. Locations shall be shown using the same convention as the original contract drawings (typically stationing and offset from known centerline). If no convention is used in the contract drawings, locations shall be tied to at least 2 permanent landmarks.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

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SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the sponsoring organization, e.g.

ASTM B 564 Nickel Alloy Forgings. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

ACI INTERNATIONAL (ACI)

P.O. Box 9094
Farmington Hills, MI 48333-9094
Ph: 248-848-3700
Fax: 248-848-3701
Internet: <http://www.aci-int.org>
AOK 6/00

ACOUSTICAL SOCIETY OF AMERICA (ASA)

2 Huntington Quadrangle
Melville, NY 11747-4502
Ph: 516-576-2360
Fax: 516-576-2377
email: asa@aip.org
Internet: <http://asa@aip.org>
AOK 6/00

AGRICULTURAL MARKETING SERVICE (AMS)

Seed Regulatory and Testing Branch
USDA, AMS, LS Div.
Room 209, Bldg. 306, BARC-East
Beltsville, MD 20705-2325
Ph: 301-504-9430
Fax: 301-504-8098
Internet: <http://www.ams.usda.gov/lsg>
e-mail: james_p_tripplitt@usda.gov
AOK 6/00

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

4301 North Fairfax Dr., Suite 425
ATTN: Pubs Dept.
Arlington, VA 22203
Ph: 703-524-8800
Fax: 703-528-3816
E-mail: ari@ari.org
Internet: www.ari.org
AOK 6/00

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)

1712 New Hampshire Avenue, NW
Washington, DC 20009
Ph: 202-483-9370
FAX: 202-588-1217
Intrnet: www.acca.org
AOK 6/00

AIR DIFFUSION COUNCIL (ADC)

104 So. Michigan Ave., No. 1500
Chicago, IL 60603
Ph: 312-201-0101
Fax: 312-201-0214
Internet: www.flexibleduct.org
AOK 6/00

AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)

30 W. University Dr.
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088
Internet: www.amca.org
AOK 6/00

ALUMINUM ASSOCIATION (AA)

900 19th Street N.W.
Washington, DC 20006
Ph: 202-862-5100

Fax: 202-862-5164
Internet: www.aluminum.org
AOK 6/00

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

1827 Walden Ofc. Sq.
Suite 104
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
Internet: www.aamanet.org
AOK 6/00

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 800-231-3475 202-624-5800
Fax: 800-525-5562 202-624-5806
Internet: www.aashto.org
AOK 6/00

NOTE: AASHTO documents with numbers beginning with M or T are available only in Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 1998 @\$289.00\X

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

P.O. Box 12215
1 Davis Drive
Research Triangle Park, NC 27709-2215
Ph: 919-549-8141
Fax: 919-549-8933
Internet: aatcc.org
AOK 6/00

AMERICAN BEARING MANUFACTURERS ASSOCIATION (AFBMA)

1200 19th Street, NW, Suite 300
Washington, DC 20036-2422
Ph: 202-429-5155
Fax: 202-828-6042
Internet: abma-dc.org
AOK 6/00

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)

950 North Glebe Road, Suite 160
Arlington, Virginia 22203-1824
Ph: 703-522-7350
Fax: 703-522-2665
Internet: abma.com

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AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)

222 West Las Colinas Blvd., Suite 641
Irving, TX 75039-5423
Ph: 972-506-7216
Fax: 972-506-7682
Internet: <http://www.concrete-pipe.org>
e-mail: info@concrete-pipe.org
AOK 6/00

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

1330 Kemper Meadow Dr.
Suite 600
Cincinnati, OH 45240
Ph: 513-742-2020
Fax: 513-742-3355
Internet: www.acgih.org
E-mail: pubs@acgih.org
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AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)

American Wood Council
ATTN: Publications Dept.
1111 Nineteenth St. NW, Suite 800
Washington, DC 20036
Ph: 800-294-2372 202-463-2700
Fax: 202-463-2471
Internet: <http://www.afandpa.org>
AOK 6/00

AMERICAN GAS ASSOCIATION (AGA)

400 N. Capitol St. N.W. Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
Internet: www.aga.org
AOK 6/00

AMERICAN GAL ASSOCIATION LABORATORIES (AGAL)

Address
Ph:
Fax:
Internet:

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)

1500 King St., Suite 201
Alexandria, VA 22314-2730

Ph: 703-684-0211
Fax: 703-684-0242
Internet: www.agma.org
AOK 6/00

AMERICAN HARDBOARD ASSOCIATION (AHA)

1210 West Northwest Highway
Palatine, IL 60067-1897
Ph: 847-934-8800
Internet: www.ahardbd.org

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

One East Wacker Dr., Suite 3100
Chicago, IL 60601-2001
Ph: 312-670-2400
Publications: 800-644-2400
Fax: 312-670-5403
Internet: www.aisc.org
AOK 6/00

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)

7012 So. Revere Parkway, Suite 140
Englewood, CO 80112
Ph: 303-792-9559
Fax: 303-792-0669
Internet: www.aitc-glulam.org
AOK 6/00

AMERICAN IRON AND STEEL INSTITUTE (AISI)

1101 17th St., NW Suite 1300
Washington, DC 20036
Ph: 202-452-7100

AOK 6/00

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

11 West 42nd St
New York, NY 10036
Ph: 212-642-4900
Fax: 212-398-0023
Internet: www.ansi.org/

Note: Documents beginning with the letter "S" can be ordered from:
Acoustical Society of America

P. O. Box 1020
Sweickley, PA 15143-9998
Ph: 412-741-1979
Fax: 412-741-0609
Internet: asa.aip.org
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AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)

1250 I St., NW, Suite 500
Washington, DC 20005-3922
Ph: 202-789-2900
FAX: 202-789-1893
AOK 6/00

AMERICAN PETROLEUM INSTITUTE (API)

1220 L St., NW
Washington, DC 20005-4070
Ph: 202-682-8000
Fax: 202-962-4776
Internet: <http://www.api.org>
AOK 6/00

AMERICAN RAILWAY ENGINEERING & MAINTENANCE-OF-WAY ASSOCIATION
(AREMA)

8201 Corporate Dr., Suite 1125
Landover, MD 20785-2230
Ph: 301-459-3200
Fax: 301-459-8077
Internet: www.arema.org
AOK 6/00

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)

1711 Arlingate Lane
P.O. Box 28518
Columbus, OH 43228-0518
Ph: 800-222-2768
Fax: 614-274-6899
Internet: www.asnt.org
AOK 6/00

AMERICAN SOCIETY FOR QUALITY (ASQ)

611 East Wisconsin Ave.
P.O. Box 3005
Milwaukee, WI 53201-3005
Ph: 800-248-1946
Fax: 414-272-1734
Internet: <http://www.asq.org>
AOK 6/00

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9585

Fax: 610-832-9555
Internet: www.astm.org
AOK 6/00

NOTE: The annual ASTM Book of Standards (66 Vol) is available for \$3500.00. Prices of individual standards vary.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

1801 Alexander Bell Drive
Reston, VA 20190-4400
Ph: 703-295-6300 - 800-548-2723
Fax: 703-295-6222
Internet: www.asce.org
e-mail: marketing@asce.org
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AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

1791 Tullie Cir., NE
Atlanta, GA 30329
Ph: 800-527-4723 or 404-636-8400
Fax: 404-321-5478
Internet: <http://www.ashrae.org>
AOK 6/00

AMERICAN SOCIETY OF SANITARY ENGINEERING FOR PLUMBING AND SANITARY RESEARCH (ASSE)

901 Canterbury, Suite A
Westlake, OH 44145
Ph: 440-835-3040
Fax: 440-835-3488
E-mail: asse@ix.netcom.com
Internet: www.asse-plumbing.org
AOK 6/00

AMERICAN WATER WORKS ASSOCIATION(AWWA)

6666 West Quincy
Denver, CO 80235
Ph: 800-926-7337 - 303-794-7711
Fax: 303-347-0804
Internet: www.awwa.org
AOK 6/00

AMERICAN WELDING SOCIETY (AWS)

550 N.W. LeJeune Road
Miami, FL 33126

Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
Internet: <http://www.amweld.org>
AOK 6/00

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

3246 Fall Creek Highway, Suite 1900
Grandbury, TX 76049-7979
Ph: 817-326-6300
Fax: 817-326-6306
NOTE: AWPA Book of Standards is published yearly @\$75.00;
individual standards may be ordered separately for \$12.00 to
\$28.00 each.

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

2130 Barrett Park Dr., Suite 102
Kennesaw, GA 30144-3681
Ph: 770-427-9371
Fax: 770-423-1703
Internet: www.apawood.org
Note: Prices are available only by calling APA

ARCHITECTURAL WOODWORK INSTITUTE (AWI)

1952 Isaac Newton Square West
Reston, VA 20190
Ph: 703-733-0600
Fax: 703-733-0584
Internet: www.awinet.org

ARMY ENVIRONMENTAL CENTER (AEC)

(Add Address, Telephone)

ARMY PAMPHLET (DAPAM)

(Add Address, Telephone)

ASBESTOS CEMENT PIPE PRODUCERS ASSOCIATION (ACPPA)

1745 Jefferson Davis Highway, Suite 406
Arlington, VA 22202
Ph: 703-412-1153
Fax: 703-412-1152

ASME INTERNATIONAL (ASME)

Three Park Avenue

New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: www.asme.org

ASPHALT INSTITUTE (AI)

Research Park Dr.
P.O. Box 14052
Lexington, KY 40512-4052
Ph: 606-288-4960
Fax: 606-288-4999
Internet: www.asphaltinstitute.org
e-mail: asphalti@asphaltinstitute.org

ASSOCIATED AIR BALANCE COUNCIL (AABC)

1518 K St., NW, Suite 503
Washington, DC 20005
Ph: 202-737-0202
Fax: 202-638-4833

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION (AAMI)

3330 Washington Blvd., Suite 400
Arlington, VA 22201-4598
Ph: 703-525-4890
Fax: 703-276-0793
Internet: www.aami.org

ASSOCIATION OF EDISON ILLUMINATING COMPANIES (AEIC)

600 No. 18th St.
P.O. Box 2641
Birmingham, AL 35291-0992
Ph: 205-257-2530
Fax: 205-257-2540
Internet: <http://www.aeic.org/index.htm>
E-Mail: veazey-white@apc.com

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS (AHAM)

20 No. Wacker Dr., Suite 1231
Chicago, IL 60606
Ph: 312-984-5800
Fax: 312-984-5823
Internet: <http://www.aham.org>

ASSOCIATION OF IRON AND STEEL ENGINEERS (AISE)

Three Gateway Center, Suite 1900
Pittsburg, PA 15222-1004
Ph: 412-281-6323

BIFMA INTERNATIONAL (BIFMA)

2680 Horizon Drive SE, Suite A-1
Grand Rapids, MI 49546-7500
Ph: 616-285-3963
Fax: 616-285-3765
Internet: www.bifma.com
E-mail: email@bifma.com

BIOCYCLE, JOURNAL OF WASTE RECYCLING

BRICK INSTITUTE OF AMERICA (BIA)

11490 Commerce Park Dr., Suite 308
Reston, VA 22091
Ph: 703-620-0010
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Fax: 703-684-0427

NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION (NELMA)

272 Tuttle Road
P.O. Box 87A
Cumberland Center, ME 04021
Ph: 207-829-6901
Fax: 207-829-4293

NORTHEAST REGIONAL AGRICULTURAL ENGINEERING SERVICE (NRAES)

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Ithaca, NY 14853-5701
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Fax: 607-254-8770
Internet: <http://rcwpsun.cas.psu.edu/nraes>
E-mail: nraes@cornell.edu

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Fax: 561-533-7466

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Ph: 703-803-2980
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Warrendale, PA 15096-0001
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Fax: 724-776-5760
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e-mail: publications@sae.org

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SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION (SCMA)

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Pensacola, FL 32504-9094
Ph: 850-434-2611
Fax: 850-433-5594
e-mail: spib@spib.org

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Internet: www.sspc.org

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Fax: 847-462-1940
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e-mail: janet@sdi.org

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Fax: 216-892-1404

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Fax: 843-626-5565

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Ph: 847-438-8265
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Internet: www.steeltank.com
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WATER QUALITY ASSOCIATION (WQA)

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WEST COAST LUMBER INSPECTION BUREAU (WCLIB)

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Portland, OR 97281
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Fax: 503-684-8928

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)

7017 N.E. Highway 99 # 108
Vancouver, WA 98666
Ph: 360-693-9958
Fax: 360-693-9967

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)

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WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMMPA)

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Woodland, CA 95695
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SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUBMITTALS

None.

1.2 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.2.1 Steel Walkway Support Repair Work

1.2.1.1 Payment

Payment will be made for costs associated with repair of the steel walkway support. Work includes, but is not limited to, furnishing and installing steel clips on underside of walkway support beam.

1.2.1.2 Unit of Measure

Unit of measure: lump sum.

1.2.2 Electrical Work

1.2.2.1 Payment

Payment will be made for costs associated with demolition of existing electrical components in accordance with Section 02220 and the electrical work as specified in Division 16 of the Specifications. Electrical work includes, but are not limited to, installing new lighting and electrical system and internal dam communication system.

1.2.2.2 Unit of Measure

Unit of measure: lump sum.

1.2.3 Dewatering

1.2.3.1 Payment

Payment will be made for costs associated with dewatering of upstream and downstream portions of the structure in order to perform exterior concrete surface and joint repairs on crest and apron areas. Dewatering required for plugging of sluiceways is not part of this item.

1.2.3.2 Unit of Measure

Unit of measure: lump sum.

1.2.4 Bonds

1.2.4.1 Payment

Payment will be made for the costs associated with providing performance and payment bonds for this contract.

1.2.4.2 Unit of Measurement

Unit of measure: lump sum.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

1.3.1 Type A, B, E, and F Joint Repair, Sawcutting

1.3.1.1 Payment

Payment will be made for costs associated with sawcutting concrete prior to the various types of joint repair.

1.3.1.2 Measurement

Measurement will be the number of linear feet of sawcutting acceptably performed along the removal limits approved by the Contracting Officer.

1.3.1.3 Unit of Measure

Unit of measure: linear foot

1.3.2 Type A, B, E, and F Joint Repair, Concrete Removal and Replacement

1.3.2.1 Payment

Payment will be made for costs associated with removing existing concrete and placing new concrete for the various types of joint repair. Work includes, but is not limited to, removing and disposing of existing concrete and joint materials, cleaning and preparing surfaces as specified, and furnishing and placing new silica fume concrete.

1.3.2.2 Measurement

Measurement will be the number of cubic feet of concrete acceptably repaired. Volume will be determined by counting the number of product containers used for the accepted repairs and multiplying by the established yield for the product. The "established yield" shall be the conversion factor approved by the Contracting Officer's Representative (COR) based on a yield test of the product conducted by the Contractor in the field. If acceptable to COR, the conversion factor may be based on the yield rate stated in manufacturer's product literature.

1.3.2.3 Unit of Measure

Unit of measure: cubic foot

1.3.3 Type A, B, E, and F Joint Repair, Joint Construction

1.3.3.1 Payment

Payment will be made for costs associated with furnishing and installing materials (except silica fume concrete and dowels) to construct new joints of the types shown on the drawings.

1.3.3.2 Measurement

Measurement will be the number of linear feet of each type of joint acceptably constructed.

1.3.3.3 Unit of Measure

Unit of measure: linear foot

1.3.4 Type B, E, and F Joint Repair, Dowels

1.3.4.1 Payment

Payment will be made for costs associated with anchoring dowels into existing concrete for the various types of joint repair. Work includes, but is not limited to, drilling holes in existing concrete and furnishing and anchoring dowels.

1.3.4.2 Measurement

Measurement will be the number of dowels acceptably installed.

1.3.4.3 Unit of Measure

Unit of measure: each

1.3.5 Type C and D Joint Repair, Joint Preparation and Construction

1.3.5.1 Payment

Payment will be made for costs associated with preparing for and constructing the various types of joint repair. Work includes, but is not limited to, removing and disposing of existing concrete and/or joint materials, cleaning and preparing surfaces as specified, and furnishing and placing new joint materials.

1.3.5.2 Measurement

Measurement will be the number of linear feet of joint acceptably prepared.

1.3.5.3 Unit of Measure

Unit of measure: linear foot

1.3.6 Apron Spall Repair, Sawcutting

1.3.6.1 Payment

Payment will be made for costs associated with sawcutting concrete prior to apron spall repair.

1.3.6.2 Measurement

Measurement will be the number of linear feet of sawcutting acceptably performed along the removal limits approved by the Contracting Officer.

1.3.6.3 Unit of Measure

Unit of measure: linear foot

1.3.7 Apron Spall Repair, Dowels

1.3.7.1 Payment

Payment will be made for costs associated with anchoring dowels into existing concrete for apron spall repair. Work includes, but is not limited to, drilling holes in existing concrete and furnishing and anchoring dowels.

1.3.7.2 Measurement

Measurement will be the number of dowels acceptably installed.

1.3.7.3 Unit of Measure

Unit of measure: each

1.3.8 Apron Spall Repair, Concrete Repair

1.3.8.1 Payment

Payment will be made for costs associated with removing and disposing of loose and deteriorated concrete, cleaning and preparing surfaces as specified, and furnishing and placing silica fume concrete to repair apron spall areas.

1.3.8.2 Measurement

Measurement will be the number of cubic feet of spalled concrete acceptably repaired. Volume will be determined by counting the number of product containers used for the accepted repairs and multiplying by the established yield for the product. The "established yield" shall be the conversion factor approved by the Contracting Officer's Representative (COR) based on a yield test of the product conducted by the Contractor in the field. If acceptable to COR, the conversion factor may be based on the yield rate stated in manufacturer's product literature.

1.3.8.3 Unit of Measure

Unit of measure: cubic foot

1.3.9 Concrete Surface Repair, Sawcutting

1.3.9.1 Payment

Payment will be made for costs associated with sawcutting concrete prior to vertical, overhead, underside of beam, and corner patching concrete surface repair work. (See contract drawings M-L1-40/053 through 059 for information on how each type of surface repair is designated on drawings.)

1.3.9.2 Measurement

Measurement will be the number of linear feet of sawcutting acceptably performed along the removal limits approved by the Contracting Officer.

1.3.9.3 Unit of Measure

Unit of measure: linear foot

1.3.10 Concrete Surface Repair, Existing Rebar Preparation

1.3.10.1 Payment

Payment will be made for costs associated with preparing existing exposed rebar prior to vertical, overhead, underside of beam, and corner patching concrete surface repair work.

1.3.10.2 Measurement

Measurement will be the number of linear feet of existing rebar acceptably prepared.

1.3.10.3 Unit of Measure

Unit of measure: linear foot

1.3.11 Concrete Surface Repair, Surface Preparation and Spall Repair

1.3.11.1 Payment

Payment will be made for costs associated with removing and disposing of loose and deteriorated concrete, cleaning and preparing surfaces as specified, and furnishing and placing polymer modified mortar to repair vertical, horizontal, underside of beam, and corner patching concrete surfaces.

1.3.11.2 Measurement

Measurement will be the number of cubic feet of polymer modified mortar acceptably placed, determined by counting the number of polymer modified mortar product containers used for the accepted repairs and multiplying by the established yield for the product. The "established yield" shall be the conversion factor approved by the Contracting Officer's Representative (COR) based on a yield test of the product conducted by the Contractor in the field. If acceptable to COR, the conversion factor may be based on the yield rate stated in manufacturer's product literature.

1.3.11.3 Unit of Measure

Unit of measure: cubic foot

1.3.12 Concrete Surface Repair, Anchor Dowels

1.3.12.1 Payment

Payment will be made for costs associated with anchoring dowels into existing concrete for vertical, horizontal, underside of beam, and corner patching concrete surface repair work. Work includes, but is not limited to, drilling holes in existing concrete and furnishing and anchoring dowels.

1.3.12.2 Measurement

Measurement will be the number of dowels acceptably installed.

1.3.12.3 Unit of Measure

Unit of measure: each

1.3.13 Structural Crack Sealing, Joint Preparation

1.3.13.1 Payment

Payment will be made for costs associated with preparing structural cracks for sealing. Work includes, but is not limited to, cleaning cracks, drilling injection posts, applying surface seal, performing other preparation work as required, and finishing repair.

1.3.13.2 Measurement

Measurement will be the number of linear feet of crack acceptably prepared.

1.3.13.3 Unit of Measure

Unit of measure: linear foot

1.3.14 Structural Crack Sealing, Joint Sealing

1.3.14.1 Payment

Payment will be made for costs associated with furnishing and injecting epoxy injection material to seal structural cracks.

1.3.14.2 Measurement

Measurement will be the number of gallons of epoxy injection material acceptably placed, determined by counting the number of product containers used for the accepted sealing work.

1.3.14.3 Unit of Measure

Unit of measure: gallon

1.3.15 Leak Sealing Work, Joint Preparation

1.3.15.1 Payment

Payment will be made for costs associated with preparing leaking cracks and joints for sealing. Work includes, but is not limited to, cleaning leaking cracks or joints, drilling injection ports, applying surface seal, performing other preparation work as required, and finishing repair.

1.3.15.2 Measurement

Measurement will be the number of linear feet of sealing work acceptably prepared.

1.3.15.3 Unit of Measure

Unit of measure: linear foot

1.3.16 Leak Sealing Work, Joint Sealing

1.3.16.1 Payment

Payment will be made for costs associated with furnishing and injecting hydrophilic sealant to seal leaking cracks and joints.

1.3.16.2 Measurement

Measurement will be the number of gallons of hydrophilic sealant (in the

pre-expanded condition) acceptably placed, determined by counting the number of product containers used for the accepted sealing work.

1.3.16.3 Unit of Measure

Unit of measure: gallon

1.3.17 Ogee Spall Repair, Sawcutting

1.3.17.1 Payment

Payment will be made for costs associated with sawcutting concrete prior to ogee spall repair.

1.3.17.2 Measurement

Measurement will be the number of linear feet of sawcutting acceptably performed along the removal limits approved by the Contracting Officer.

1.3.17.3 Unit of Measure

Unit of measure: linear foot

1.3.18 Ogee Spall Repair, Existing Rebar Preparation

1.3.18.1 Payment

Payment will be made for costs associated with preparing existing exposed rebar prior to ogee spall repair.

1.3.18.2 Measurement

Measurement will be the number of linear feet of existing rebar acceptably prepared.

1.3.18.3 Unit of Measure

Unit of measure: linear foot

1.3.19 Ogee Spall Repair, Surface Preparation and Spall Repair

1.3.19.1 Payment

Payment will be made for costs associated with removing and disposing of loose and deteriorated concrete, cleaning and preparing surfaces as specified, and furnishing and placing polymer modified mortar to repair ogee spalls.

1.3.19.2 Measurement

Measurement will be the number of cubic feet of polymer modified mortar acceptably placed, determined by counting the number of polymer modified mortar product containers used for the accepted repairs and multiplying by the established yield for the product. The "established yield" shall be

the conversion factor approved by the Contracting Officer's Representative (COR) based on a yield test of the product conducted by the Contractor in the field. If acceptable to COR, the conversion factor may be based on the yield rate stated in manufacturer's product literature.

1.3.19.3 Unit of Measure

Unit of measure: cubic foot

1.3.20 Ogee Spall Repair, Anchor Dowels

1.3.20.1 Payment

Payment will be made for costs associated with anchoring dowels into existing concrete for ogee spall repair. Work includes, but is not limited to, drilling holes in existing concrete and furnishing and anchoring dowels.

1.3.20.2 Measurement

Measurement will be the number of dowels acceptably installed.

1.3.20.3 Unit of Measure

Unit of measure: each

1.3.21 Sluiceway Plugging

1.3.21.1 Payment

Payment will be made for costs associated with plugging sluiceways. Work includes, but is not limited to, dewatering, forming, and furnishing and installing concrete sluiceway plug.

1.3.21.2 Measurement

Measurement will be the number of sluiceways acceptably plugged.

1.3.21.3 Unit of Measure

Unit of measure: each

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

PART 1 GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format.

Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

Particular attention is directed to other clauses which have a direct relationship to the reporting to be accomplished through QCS:

- 52.236-15 Schedules for Construction Contracts,
- 52.232-5 Payments Under Firm Fixed Price Construction Contracts,
- Section 01330, SUBMITTAL PROCEDURES,
- Section 01451, CONTRACTOR QUALITY CONTROL

There is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal

computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 200 MHz Pentium or higher processor

32+ MB RAM

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader

Color monitor

Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory.

Connection to the Internet, minimum 28 BPS

Software

MS Windows 95 or newer version operating system (MS Windows NT 4.0 or newer is recommended)

Word Processing software compatible with MS Word 97 or newer

Internet browser

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) compatible with MS Outlook

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control(QQC) Training

The use of QCS will be discussed at the Contractor's QC System Manager Training classes.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted with file attachments, e.g., daily reports, schedule updates, payment requests. The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, and management staff. The Contractor shall deliver Contractor administrative data in electronic format prior to the preconstruction conference.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. The Contractor shall deliver subcontractor administrative data in electronic format prior to the preconstruction conference.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to

the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data with file attachment(s). A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government

via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts". This schedule shall be input and maintained in the RMS-QC database. The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION

The Contractor shall submit updates, payment requests, correspondence and other data in the format directed by the Contracting Officer. Submission formats available include diskettes, CD-ROM, or E-mail. Generally, E-mail is preferred for submissions from the Contractor's home office, and diskette or CD-ROM is preferred for submissions from the contractor's field office.

Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of

running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01330

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers and titles as follows:

- SD-01 Preconstruction Submittals
- SD-02 Shop Drawings
- SD-03 Product Data
- SD-04 Samples
- SD-05 Design Data
- SD-06 Test Reports
- SD-07 Certificates
- SD-08 Manufacturer's Instructions
- SD-09 Manufacturer's Field Reports
- SD-10 Operation and Maintenance Data
- SD-11 Closeout Submittals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.6 MEASUREMENT AND PAYMENT

The work of this section will not be measured for payment. The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract items.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals

requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is a submittal register (ENG Form 4288) showing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall maintain a submittal register for the project in accordance with Section 01312 QUALITY CONTROL SYSTEM (QCS).

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. The submittal register shall provide for a reasonable timely distribution of shop drawings as they are prepared (particularly within a specific discipline, i.e.: structural, mechanical).

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

3.5.1 Submittal Copies

The Contractor shall submit 6 copies of each submittal (both government approved and for information only), or 1 hard copy and 1 electronic copy, unless otherwise indicated. Each transmittal shall address only one submittal item. Transmittals returned for resubmission shall be resubmitted in their entirety. When approved by the Contracting Officer, routine test reports and delivery tickets may be submitted with daily quality control reports in place of following submittal procedures under this section.

3.5.2 Schedule

Shop drawings shall be submitted with ample time to secure Government

approval prior to the time the items covered thereby are to be delivered to the site. Additional time should be allowed for possible resubmittal. Materials fabricated or delivered without Government approval of the shop drawing will be subject to rejection. All submittals shall be made prior to commencement of applicable work, and allow adequate time for government review acceptable to the Contracting Officer.

3.5.3 Shop Drawings

Shop drawings shall be reproductions on high quality paper with clear legible print. Drawings shall generally be bordered a minimum of one inch and trimmed to neat lines. Shop drawing quality will be subject to approval. Each shop drawing, including catalog data, shall be identified with a title block including the name of the Contractor, contract number, name and location of project, and name of the item of work or structure to which the shop drawing applies. Catalog data, including specifications and full descriptive matter, may be submitted as shop drawings. Catalog data must be supplemented as necessary to include all pertinent data to verify conformance to the contract documents. When catalog data includes non applicable data, the applicable data shall be clearly indicated.

3.5.4 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Five copies of the submittal will be retained by the Contracting Officer and 1 copy of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples

for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p>

3.10 CONTRACTOR RECORD DRAWINGS

The Contractor shall maintain a separate set of marked-up full-scale contract drawings indicating as-built conditions. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. Revisions shall be shown on all drawings and details related to the changed feature. These drawings shall be neatly prepared with clear legible print. Deleted items shall be indicated in red and added items or changed locations shall be shown in green. These drawings shall be furnished to the Contracting Officer within 30 days after the required contract completion date.

3.10.1 As-Built Shop Drawings

The Contractor shall record changes to shop drawings to indicate as-built conditions. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted.

-- End of Section --

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

A --	Approved as submitted.	E --	Disapproved (See attached).
B --	Approved, except as noted on drawings.	F --	Receipt acknowledged.
C --	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX --	Receipt acknowledged, does not comply as noted with contract requirements.
D --	Will be returned by separate correspondence.	G --	Other (Specify)
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

SUBMITTAL REGISTER

CONTRACT NO.
DACW37-03-B-0001

TITLE AND LOCATION Concrete Rehabilitation of Ambursen Dam						CONTRACTOR											
A C T I V I T Y N O	T R A N S M I T T A L N O	S P E C I F I C S E C T I O N	D E S C R I P T I O N	P A R A G R A P H N O	G O V E R N M E N T C L A S S I F I C A T I O N	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					M A I L E D T O C O N T R A C T O R /	R E M A R K S
						S U B M I T	B Y	B Y	A C T I O N C O D E	D A T E O F A C T I O N	D A T E F O R W A R D I N G	D A T E F O R W A R D I N G	D A T E F O R W A R D I N G	D A T E F O R W A R D I N G	D A T E F O R W A R D I N G		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
	01000		SD-01 Preconstruction Submittals														
			Dewatering plan														
			SD-11 Closeout Submittals														
			Utility As-Builts														
	01355		SD-01 Preconstruction Submittals														
			Environmental Protection Plan	1.7	G ENV												
	01500		SD-02 Shop Drawings														
			Site Plan														
	01780		SD-11 Closeout Submittals														
			As-Built Drawings		G GEN												
	03100		SD-03 Product Data														
			Form Materials	2.1													
			Form Releasing Agents	2.1.4													
	03150		SD-02 Shop Drawings														
			Waterstops	2.4	G STR												
			SD-03 Product Data														
			Preformed Expansion Joint Filler														
			Cap Seals														
			Waterstops	2.4													
			SD-04 Samples														
			Waterstops	2.4													
			SD-07 Certificates														
			Preformed Expansion Joint Filler														
			Cap Seals														
			Waterstops	2.4													
	03200		SD-03 Product Data														

SUBMITTAL REGISTER

CONTRACT NO.
DACW37-03-B-0001

TITLE AND LOCATION					CONTRACTOR												
Concrete Rehabilitation of Ambursen Dam																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION	PARAGRAPH #	G O V T CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/	REMARKS	
						APPROVAL NEEDED	MATERIAL NEEDED	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION			DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
	03200		Welding	1.3													
			SD-07 Certificates														
			Reinforcing Steel														
	03300		SD-01 Preconstruction Submittals														
			Concrete Operation Plan		G MAT												
			Cold Weather Plan		G MAT												
			Hot Weather Plan		G MAT												
			SD-03 Product Data														
			Concrete Mixture Design		G MAT												
			SD-07 Certificates														
			Manufacturer's Certificates														
			Qualifications														
	03900		SD-01 Preconstruction Submittals														
			Concrete Repair Schedule														
			Concrete Removal and Disposal		G STR												
			Scheme														
			Patch and Repair Forming														
			Scheme														
			SD-03 Product Data														
			Polymer Modified Mortar														
			Chemical Grout														
			Epoxy Adhesive														
			Epoxy Bonding Agent														
			Surface Sealer														
	03930		SD-03 Product Data														
			Epoxy injection material														

SUBMITTAL REGISTER

CONTRACT NO.
DACW37-03-B-0001

TITLE AND LOCATION Concrete Rehabilitation of Ambursen Dam						CONTRACTOR											
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	03930		Hydrophilic sealant														
			SD-07 Certificates														
			Epoxy injection material														
			Hydrophilic sealant														
	05500		SD-02 Shop Drawings														
			Steel Angles		G STR												
			SD-03 Product Data														
			Adhesive Anchors		G STR												
	07900		SD-03 Product Data														
			Backing														
			Bond-Breaker	2.2													
			Primer														
			Sealant														
			SD-07 Certificates														
			Sealant														
	16415		SD-02 Shop Drawings														
			Interior Electrical Equipment		G EE												
			SD-03 Product Data														
			Manufacturer's Catalog		G EE												
			Material, Equipment, and Fixture Lists		G EE												
			Installation Procedures		G EE												
			As-Built Drawings	1.2.6													
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			Materials and Equipment														

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

ENGINEERING MANUALS (EM)

EM 385-1-1	(1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual
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US ARMY CORPS OF ENGINEERS TECHNICAL REPORT

WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1
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1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical,

or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

1.2.5 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.6 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.7 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters

that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

1.2.8 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.9 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G,ENV

The environmental protection plan.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.7.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

- a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program.
- e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan

shall include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.

f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.

g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.

h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

i. Drawing showing the location of borrow areas.

j. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer, and the local Fire Department for flammable materials, in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.

4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup,

restoration, and material-placement equipment available in case of an unforeseen spill emergency.

6. The methods and procedures to be used for expeditious contaminant cleanup.

k. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction.

l. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

m. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

n. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

o. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan shall include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

p. A historical, archaeological, cultural resources biological

resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

q. A pesticide treatment plan shall be included and updated, as information becomes available. The plan shall include: sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. The Contractor is responsible for Federal, State, Regional and Local pest management record keeping and reporting requirements.

1.7.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the contract.

1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will

have an adverse environmental impact.

1.10 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping (suspending) all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 PERMITS

Permits obtained by the Government related to the work of this contract are attached in SECTION 00830: ATTACHMENTS, or referenced in SECTION 01000: GENERAL. The Contractor is responsible for obtaining all applicable permits or licenses (those not obtained by the Government). The Contractor shall be responsible for implementing the terms and requirements of the permits held by the Contractor or the Government. A copy of permits referenced in SECTION 01000: GENERAL are available for inspection in the Office of the District Engineer, Army Corps of Engineers Centre, 190 Fifth Street East, St. Paul, Minnesota 55101-1638.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.2.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas

within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.2.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Any temporary measures shall be removed after the area has been stabilized.

3.2.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

3.3.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, water return for hydraulic dredging, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. The Contractor shall plan its operations and perform all work necessary to minimize adverse impact, such as water turbidity, on the habitat for wildlife and on water quality for downstream use.

3.3.2 Stream Crossings

Stream crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments.

3.3.3 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands, unless authorized herein. The Contractor shall be responsible for the protection of wetlands shown on the drawings in accordance with paragraph ENVIRONMENTAL PERMITS, REVIEWS, AND APPROVALS.

Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.4.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with state rules.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.5.1 Solid Wastes

Solid wastes (excluding dredge material and clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.5.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations.

The Contractor shall transport Contractor generated hazardous waste off Government property in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

3.5.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations.

3.5.5 Waste Water

Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways.

3.6 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs.

3.7 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Existing historical, archaeological, and cultural resources within the Contractor's work area are shown on the drawings, or will be designated by the Contracting Officer, if any have been identified. The Contractor shall protect these resources and shall be responsible for their preservation during the life of the Contract. If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.8 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.9 PESTICIDES

3.9.1 Pesticide Delivery and Storage

Pesticides shall be delivered to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Pesticides shall be stored according to manufacturer's instructions and under lock and key when unattended.

3.9.2 Qualifications

For the application of pesticides, the Contractor shall use the services of a subcontractor whose principal business is pest control. The subcontractor shall be licensed and certified in the state where the work is to be performed.

3.9.3 Pesticide Handling Requirements

The Contractor shall formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and shall use the clothing and personal protective equipment specified on the labeling for use during all phases of the application. Material Safety Data Sheets (MSDS) shall be available for all pesticide products.

3.9.4 Application

Pesticides shall be applied by a State Certified Pesticide Applicator in accordance with EPA label restrictions and recommendation. The Certified Applicator shall wear clothing and personal protective equipment as specified on the pesticide label. Water used for formulating shall only come from locations designated by the Contracting Officer. The Contractor shall not allow the equipment to overflow. Prior to application of pesticide, all equipment shall be inspected for leaks, clogging, wear, or damage and shall be repaired prior to being used.

3.10 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.11 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.12 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.13 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --

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SECTION 01451

CONTRACTOR QUALITY CONTROL

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 D 3740 (1999) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (1998) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

The Contractor shall be responsible for the work for the work of this section, without any direct compensation being made other than the payment received for contract items.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction

and construction related activities at the site.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, not later than 15 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent or someone higher in the Contractor's organization.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and

person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 10 calendar days prior to the Coordination Meeting.

During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by

either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure safety and contract compliance. The Safety and Health Manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be maintained at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a person with a minimum of 5 years experience in related duties on construction work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 Additional Requirement

In addition to the above qualifications, the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered through the Government in the Minneapolis - St. Paul, Minnesota metropolitan area.

3.4.4 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a testing laboratory meeting the requirements listed under PARAGRAPH: CAPABILITY CHECK, or establish a testing laboratory at the project site meeting those requirements. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the

contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329. The Contractor shall submit a Quality Management Manual meeting the requirements of ASTM D 3740 and ASTM E 329 for each laboratory to be used, including on-site project laboratories.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$1000.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Contracting Officer. Coordination for each specific test, exact delivery location, and dates will be made with the Contracting Officer.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected.

Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These

inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.

- g. Off-site surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

The following sample forms are enclosed at the end of this section:

- a. Construction Quality Control Management Report
- b. CQC Report
- c. Preparatory Phase Checklist
- d. Initial Phase Checklist

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.12 IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM FOR CONTRACTOR QUALITY CONTROL OF CONTRACT

The Contractor shall utilize the Construction Contractor Quality module of the Resident Management System (RMS) to implement contractor quality control. See Section 01312 QUALITY CONTROL SYSTEM (QCS).

-- End of Section --

CQC Report

1. Work performed today: (Indicate location and description of work performed by prime and/or subcontractors by letter in table above).

2. Results of control activities: (Indicate whether P - Preparatory, I - Initial, or F - Follow-up Phase. When a P or I meeting is conducted, complete attachment 1-A or 1-B, respectively. When network analysis system is used, identify work by use of I-J numbers)

3. Test performed as required by plans and/or specifications:

4. Material received:

CQC Report (Cont'd)

5. Submittals Reviewed:

(a) Submittal No.	(b) Spec/Plan Reference	(c) By Whom	(d) Action
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

6. Off-site surveillance activities, including action taken:

7. Job safety: (Report violations; Corrective instructions given; Corrective actions taken).

8. Remarks: (Instructions received or given. Conflict(s) in Plans and/or Specifications)

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.

CQC System Manager

PREPARATORY PHASE CHECKLIST

Contract No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____

Government Rep Notified _____ Hours in Advance Yes ____ No ____

I. Personnel Present.

Name	Position	Company/Government
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____

(List additional personnel on reverse side)

II. Submittals.

1. Review submittals and/or submittal log 4288. Have all submittals been approved? Yes ____ No ____

If No, what items have not been submitted?

- a. _____
- b. _____
- c. _____

2. Are all materials on hand? Yes ____ No ____

- a. _____
- b. _____
- c. _____

3. Check approved submittals against delivered material. (This should be done as material arrives).

Comments: _____

III. Material Storage.

Are materials stored properly? Yes ____ No ____

If No, what action is taken?

Preparatory Phase Checklist (Cont'd)

IV. Specifications.

1. Review each paragraph of specifications.

2. Discuss procedure for accomplishing the work.

3. Clarify any differences.

V. Preliminary Work.

Ensure preliminary work is correct.

If not, what action is taken? _____

VI. Testing.

1. Identify test to be performed, frequency, and by whom.

2. When required? _____

3. Where required? _____

4. Review Testing Plan. _____

5. Has test facilities been approved? _____

VII. Safety.

1. Review applicable portion of EM 385-1-1. _____

2. Activity Hazard Analysis approved? Yes _____ No _____

VIII. Corps of Engineers comments during meeting.

CQC System Manager

INITIAL PHASE CHECKLIST

Contract No.: _____

Date: _____

Definable Feature: _____

Government Rep Notified: _____ Hours in Advance Yes _____ No _____

I. Personnel Present:

	Name	Position	Company/Government
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

(List additional personnel on reverse side)

II. Identify full compliance with procedures identified at preparatory. Coordinate plans, specifications, and submittals.

Comments: _____

III. Preliminary Work. Ensure preliminary work is complete and correct. If not, what action is taken?

IV. Establish Level of Workmanship.

- Where is work located? _____
- Is a sample panel required? Yes _____ No _____
- Will the initial work be considered as a sample? Yes _____ No _____
(If yes, maintain in present condition as long as possible).

V. Resolve any Differences.

Comments: _____

Review job conditions using EM 385-1-1 and job hazard analysis.

Comments: _____

CQC System Manager

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SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Site Plan;

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 Temporary Electrical Facilities

The Contractor shall be responsible for coordination and costs for electrical power required for the Contractor's operations, including all costs for utility company hookup, installation/dismantling of transformers and distribution lines. In general, the Contractor shall establish its own service connection with the utility company. If the Contractor proposes to use an existing Government service connection, a request shall be submitted for approval to verify the Contractor's use will not interfere with operation of the facilities, and the monthly service fees will be paid for in whole (including Government power consumption) by the Contractor.

1.2.2 Sanitation

The Contractor shall provide and maintain within the construction area field-type sanitary facilities in accordance with EM 385-1-1. These facilities shall include but not be limited to toilet, washing, and drinking water facilities.

1.2.3 Telephone

The Contractor shall make arrangements and pay all costs for their telephone facilities desired. Government personnel will not take or deliver messages for the Contractor.

1.3 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads.

1.3.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.3.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.4 CONTRACTOR'S TEMPORARY FACILITIES

1.4.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated staging area.

Government office and warehouse facilities will not be available to the Contractor's personnel.

1.4.2 Staging Area

The boundary limits of the grounds made available for the Contractor's use during the life of the contract are shown on the drawings as Work Limits. Trailers, materials, or equipment shall not be placed or stored outside the work limits.

1.5 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

1.6 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, generally located to encompass the active construction areas. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

PART 2 PRODUCTS

2.1 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

2.1.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

2.1.2 Project and Safety Signs

The Contractor shall furnish and erect a Project sign and a Safety sign in a location selected by the Contracting Officer at the project site within 15 days after receipt of the notice to proceed. The requirements for the

signs and their content shall be as shown on the drawings at the end of this section. The data required by the safety sign shall be corrected daily. Signs shall be maintained throughout the construction period, and upon completion of the project, the signs shall be removed from the site. The PROJECT DESCRIPTION and PROJECT NAME shall be as follows:

PROJECT DESCRIPTION: MAINTENANCE, MISSISSIPPI RIVER LOCK AND DAM NO. 1

PROJECT NAME: CONCRETE REHABILITATION OF AMBURSEN DAM

2.2 GOVERNMENT OFFICE EQUIPMENT

No Government field office is required for this project. However, Contractor shall provide and maintain for the life of the contract office equipment as listed below for the Government's use. The equipment shall be delivered to the project site and setup where designated by the Contracting Officer within 30 calendar days after notice to proceed.

2.2.1 Office Equipment

The following equipment shall be provided:

- a. One desk top facsimile (FAX) machine with modem BPS speeds of 9600,7200,4800, and 2400; an effective scanning width of 11.7 inches and line scanning density of 8 pels/mm horizontal and an effective scanning width of 7.7 inches and line scanning density of 3.85 lines/mm vertical. Initially supply four reams of paper(500 sheets per ream).
- b. One desk top copying machine with an indirect dual component dry tone process. Paper copy sizes shall be a maximum of 11 inches by 17 inches and a minimum of 4.25 inches by 5.5 inches. The machine shall have a halogen lamp light source and an automatic sheet feed (single cassette). Initially supply four reams (500 sheets per ream) of white copying paper and furnish a complete maintenance service contract/agreement for the machine.
- c. One personal computer, minimum 433 megahertz, 4 gigabyte hard drive, 64 megabyte of RAM, CD ROM Reader; 17" monitor (26 dot pitch maximum), mouse and keyboard. The software provided with the computer will be Microsoft "Windows 98" or better and Microsoft "Office Professional" or approved equivalent.
- d. One laser printer, HP 4000N or approved equivalent.
- e. One lockable, legal size, four-drawer file cabinet.

2.2.2 Maintenance.

The Contractor shall maintain the office equipment for the life of the contract. The Contractor shall be responsible for maintaining and paying for all costs associated with the following services:

- a. Supplies. Paper and supplies for the FAX machine, copy machine,

and printer shall be provided.

b. Maintenance of office equipment. Include a maintenance service contract/agreement for operation of the Fax and Copy machines.

PART 3 EXECUTION

3.1 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

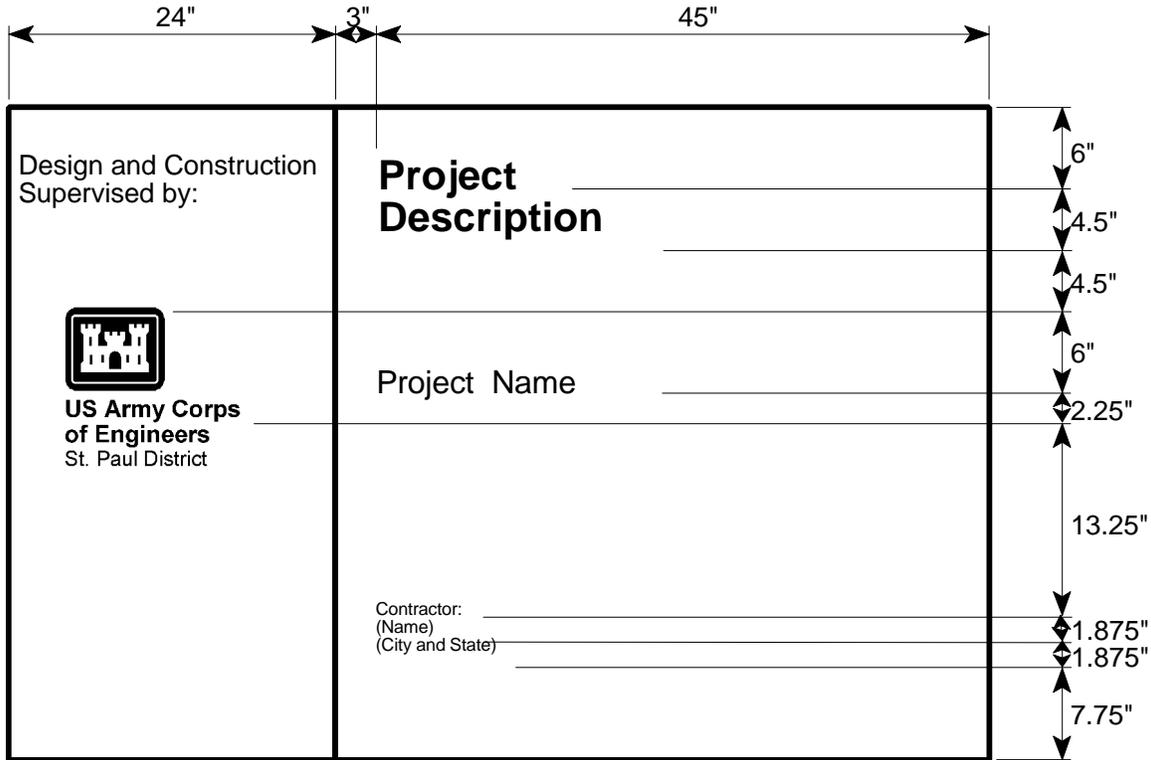
3.2 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --

PROJECT SIGN

The graphic format for this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large 4' x 4' section of the panel on the right is to be white with black legend. A 2' x 4' decal provided by the Corps shall be placed on the left side of the sign panel.



Project Description:

One to three line project title legend describes the work being done under this contract.
 Color: Black; Typeface: 3" Helvetica Bold; Maximum line length: 42".

Project Name:

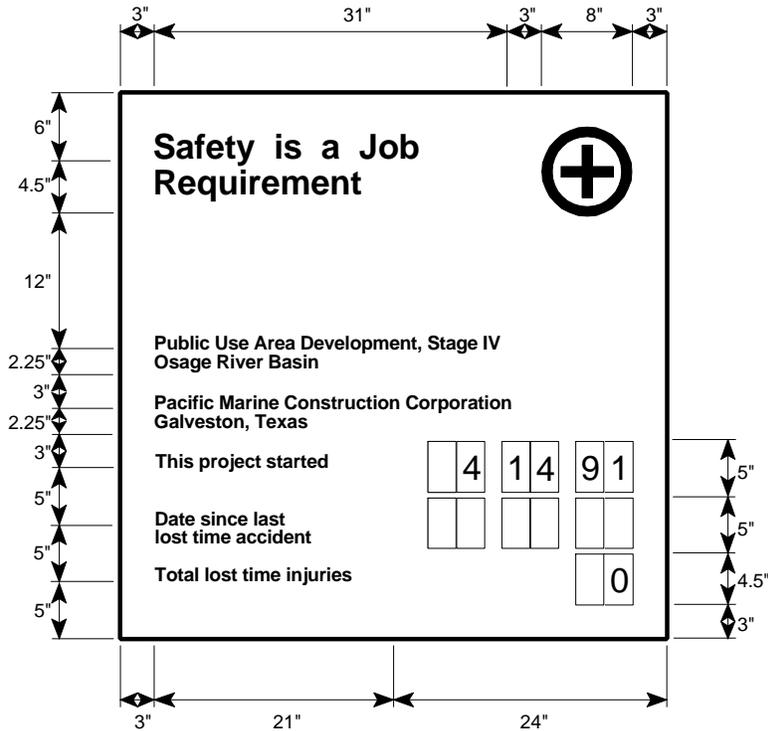
One to three line identification of project or facility.
 Color: Black; Typeface: 1.5" Helvetica Bold; Maximum line length: 42".
 Cross-align the first line of PROJECT NAME with the first line of the Corps Signature as shown.

Contractor:

One to five line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state.
 Color: Black; Typeface: 1.25" Helvetica Bold; Maximum line length: 21".

All typography is flush left and ragged right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps Standards (EP 310-1-6a and 6b).

SAFETY SIGN



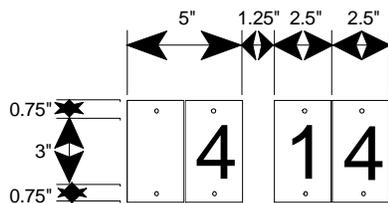
All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps Standards (EP 310-1-6a and 6b).

Legend Group 1: Standard two-line title "Safety is a Job Requirement" with (8" od.) Safety Green First Aid logo. Typeface: 3" Helvetica Bold; Color: Black.

Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Typeface: 1.5" Helvetica Regular; Color: Black; Maximum line length: 42".

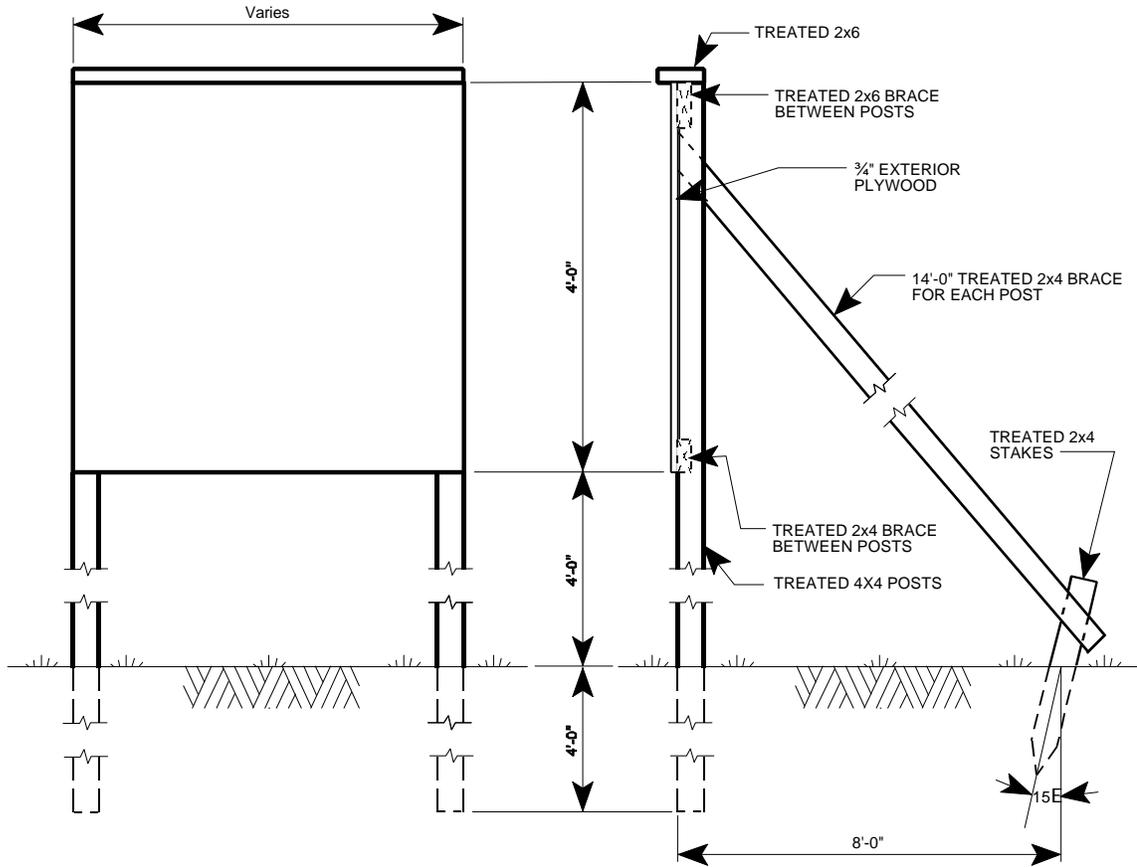
Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Typeface: 1.5" Helvetica Regular; Color: Black; Maximum line length: 42".

Legend Group 4: Standard safety record captions as shown. Typeface: 1.25" Helvetica Regular; Color: Black.



Replaceable numbers are to be mounted on white 0.060 aluminum plates and screw-mounted to background. Typeface: 3" Helvetica Regular; Color: Black; Plate size: 2.5" x 4.5".

SIGN ERECTION DETAILS



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SECTION 01780

CLOSEOUT SUBMITTALS

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- 1.1 SUBMITTALS
- 1.2 As-Built Drawings
- 1.3 CONTRACTOR RECORD DRAWINGS
 - 1.3.1 Changes and Corrections
 - 1.2.6 Drawing Standards

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section Table of Contents --

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals

As-Built Drawings; G,GEN

Contractor record drawings showing final as-built conditions of the project.

1.2 As-Built Drawings

Paper prints and reproducible drawings will become the property of the Government upon final approval. Failure to submit final as-built drawings and marked prints, as required herein, will be cause for withholding payment due the Contractor under this contract. These drawings shall be furnished to the Contracting Officer within 30 days after the required contract completion date. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.3 CONTRACTOR RECORD DRAWINGS

The Contractor shall maintain a separate set of marked-up full-scale contract drawings indicating as-built conditions. These drawings shall show all changes and revisions made up to the time the work is completed and accepted. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated.

1.3.1 Changes and Corrections

The working and final as-built drawings shall show, but shall not be limited to, the following information:

- a. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- b. Surveyed elevations shall be listed for all sewer inverts and castings.
- c. The location and dimensions of any changes within buildings or structures.
- d. Changes in details of design.
- e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.
- f. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

1.2.6 Drawing Standards

- a. Deleted items shall be indicated in red.
- b. Added items or changed locations shall be shown in green.
- c. Variations shall be shown in the same general detail utilized in the contract drawings.
- d. Revisions shall be shown on all drawings and details related to the changed feature.
- e. All markups shall be neat, clean and legible.
- f. Where contract drawings or specifications present options, only the option selected for construction shall be shown.

PART 2 PRODUCTS (NOT USED)

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- 1.4 PROTECTION
 - 1.4.1 Protection of Personnel
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 - 1.4.3 Protection of Existing Property
 - 1.4.4 Environmental Protection
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- 1.7 AVAILABILITY OF WORK AREAS

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

- 3.1 UTILITIES
- 3.2 DISPOSITION OF MATERIAL
- 3.3 CLEAN UP

-- End of Section Table of Contents --

SECTION 02220

DEMOLITION

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.

ENGINEERING MANUALS (EM)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 GENERAL REQUIREMENTS

The work includes demolition and removal of resulting waste and debris (except certain concrete waste as defined in paragraph CLEAN UP). Waste and debris shall be removed from Government property daily, unless otherwise directed, to avoid accumulation at the demolition site. Materials that cannot be removed daily shall be stored in areas specified by the Contracting Officer. In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections.

1.3 DUST CONTROL

The amount of dust resulting from demolition shall be controlled to prevent the spread of dust to occupied portions of the construction site and to avoid creation of a nuisance in the surrounding area. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.

1.4 PROTECTION

1.4.1 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.4.2 Protection of Structures

Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the Contracting Officer. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.4.3 Protection of Existing Property

Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government; any damaged items shall be repaired or replaced as approved by the Contracting Officer. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

1.4.4 Environmental Protection

The work shall comply with the requirements of Section 01355 ENVIRONMENTAL PROTECTION.

1.5 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

1.6 USE OF EXPLOSIVES

Use of explosives will not be permitted.

1.7 AVAILABILITY OF WORK AREAS

Areas in which the work is to be accomplished will be available in accordance with the following schedule:

Area	Date
All	June 1, 2002

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 UTILITIES

Disconnection of utility services, with related meters and equipment, are

specified in Section 16415 ELECTRICAL WORK. Existing utilities shall be removed as indicated. When utility lines are encountered that are not indicated on the drawings, the Contracting Officer shall be notified prior to further work in that area.

3.2 DISPOSITION OF MATERIAL

Title to material and equipment to be demolished is vested in the Contractor upon receipt of notice to proceed. The Government will not be responsible for the condition, loss or damage to such property after notice to proceed. Dispose of materials in accordance with Section 01000 GENERAL.

3.3 CLEAN UP

Debris and waste shall be removed from all work areas except as follows:

- a. Within the sliceway bays on the interior of the Ambursen Dam, interior demolition concrete that is 3 inch in diameter or smaller may be left within the structure. Demolition concrete larger than 3 inch in diameter shall be removed.
- b. Within the other bays on the interior of the Ambursen Dam, all interior demolition concrete may be left within the structure.

All other wastes shall be removed. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas. Local regulations regarding hauling and disposal shall apply.

-- End of Section --

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SECTION 03100

STRUCTURAL CONCRETE FORMWORK

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 - 2.1.3 Form Ties
 - 2.1.4 Form Releasing Agents

PART 3 EXECUTION

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- 3.2 CHAMFERING
- 3.3 COATING
- 3.4 REMOVAL OF FORMS

-- End of Section Table of Contents --

SECTION 03100

STRUCTURAL CONCRETE FORMWORK

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.

ACI INTERNATIONAL (ACI)

ACI 347R (1994) Guide to Formwork for Concrete

AMERICAN HARDBOARD ASSOCIATION (AHA)

AHA ANSI/AHA A135.4 (1995) Basic Hardboard

DEPARTMENT OF COMMERCE (DOC)

DOC PS 1 (1996) Voluntary Product Standard -
Construction and Industrial Plywood

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Form Materials;

Manufacturer's data including literature describing form materials, accessories, and form releasing agents.

Form Releasing Agents;

Manufacturer's recommendation on method and rate of application of form releasing agents.

1.3 DESIGN

Formwork shall be designed in accordance with methodology of ACI 347R for anticipated loads, lateral pressures, and stresses. Forms shall be capable

of producing a surface which meets the requirements of the class of finish specified in Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE. Forms shall be capable of withstanding the pressures resulting from placement and vibration of concrete.

PART 2 PRODUCTS

2.1 FORM MATERIALS

2.1.1 Forms For Exposed Surfaces

Forms shall be plywood panels conforming to DOC PS 1, Grade B-B concrete form panels, Class I or II. Other form materials or liners may be used provided the smoothness and appearance of concrete produced will be equivalent to that produced by the plywood concrete form panels.

2.1.2 Forms For Concealed Surfaces

Forms shall be shiplap lumber; plywood conforming to DOC PS 1, Grade B-B concrete form panels, Class I or II; tempered concrete form hardboard conforming to AHA ANSI/AHA A135.4; other approved concrete form material; or steel, except that steel lining on wood sheathing shall not be used.

2.1.3 Form Ties

Form ties shall be factory-fabricated metal ties, shall be of the removable or internal disconnecting or snap-off type, and shall be of a design that will not permit form deflection and will not spall concrete upon removal. Solid backing shall be provided for each tie. Except where removable tie rods are used, ties shall not leave holes in the concrete surface less than 1/4 inch nor more than 1 inch deep and not more than 1 inch in diameter. Removable tie rods shall be not more than 1-1/2 inches in diameter.

2.1.4 Form Releasing Agents

Form releasing agents shall be commercial formulations that will not bond with, stain or adversely affect concrete surfaces. Agents shall not impair subsequent treatment of concrete surfaces depending upon bond or adhesion nor impede the wetting of surfaces to be cured with water or curing compounds.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Formwork

Forms shall be mortar tight, properly aligned and adequately supported to produce concrete surfaces meeting the surface requirements specified in Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE and conforming to construction tolerance given in TABLE 1. Where concrete surfaces are exposed to view, joints in form panels shall be arranged as approved. Where forms for continuous surfaces are placed in successive units, the forms shall fit over the completed surface to obtain accurate alignment of

the surface and to prevent leakage of mortar. Forms shall not be reused if there is any evidence of surface wear and tear or defects which would impair the quality of the surface. Surfaces of forms to be reused shall be cleaned of mortar from previous concreting and of all other foreign material before reuse. Form ties that are to be completely withdrawn shall be coated with a nonstaining bond breaker.

3.2 CHAMFERING

Except as otherwise shown, external corners that will be exposed shall be chamfered, beveled, or rounded by moldings placed in the forms.

3.3 COATING

Forms for exposed surfaces shall be coated with a form releasing agent before the form or reinforcement is placed in final position. The coating shall be used as recommended in the manufacturer's printed or written instructions. Forms for concealed surfaces may be wet with water in lieu of coating immediately before placing concrete, except that in cold weather with probable freezing temperatures, coating shall be mandatory. Surplus coating on form surfaces and coating on reinforcing steel and construction joints shall be removed before placing concrete.

3.4 REMOVAL OF FORMS

Forms shall be removed preventing injury to the concrete and ensuring the complete safety of the structure. Formwork not supporting the weight of concrete may be removed when the concrete has attained sufficient strength to resist damage from the removal operation but not before at least 24 hours has elapsed since concrete placement. Supporting forms and shores shall not be removed from beams, floors and walls until the concrete repair is strong enough to carry their own weight and any other construction or natural loads.

TABLE 1

TOLERANCES FOR FORMED SURFACES

1. Variations from the plumb:	In any 10 feet of length ----- 1/4 inch
a. In the lines and surfaces of columns, piers, walls and in arises	Maximum for entire length ----- 1 inch
b. For exposed corner columns, control-joint grooves, and other conspicuous lines	In any 20 feet of length ----- 1/4 inch Maximum for entire length----- 1/2 inch
2. Variation from the level or from the	In any 10 feet of length -----1/4 inch

TABLE 1

TOLERANCES FOR FORMED SURFACES

grades indicated on the drawings:	In any bay or in any 20 feet of length----- 3/8 inch
a. In slab soffits, ceilings, beam soffits, and in arises, measured before removal of supporting shores	Maximum for entire length ----- 3/4 inch
b. In exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines	In any bay or in any 20 feet of length ----- 1/4 inch Maximum for entire length----- 1/2 inch
3. Variation of the linear building lines from established position in plan	In any 20 feet ----- 1/2 inch Maximum -----1 inch

-- End of Section --

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 - 3.2.1 Non-Metallic
 - 3.2.1.1 Polyvinyl Chloride Waterstop
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 - 3.2.2 Hydrophilic Waterstop Installation

-- End of Section Table of Contents --

SECTION 03150

EXPANSION JOINTS AND WATERSTOPS

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 D 412	(1997) Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension
ASTM D 471	(1996) Rubber Property - Effect of Liquids
ASTM D 518	(1999) Rubber Deterioration-Surface Cracking
ASTM D 573	(1999) Rubber-Deterioration in an Air Oven
ASTM D 1751	(1983; R 1991) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D 1752	(1984; R 1996) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D 2240	(2000) Rubber Property-Durometer Hardness
ASTM D 3884	(2001) Abrasion Resistance of Textile Fabrics (Rotary Platform, Double Head Method)
ASTM D 5249	(1995) Backer Material for Use With Cold and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM F 547	(1977; R 1995) Definitions of Terms Relating to Nails for Use with Wood and Wood-Base Materials
ASTM G 53	(1996) Operating Light and Water Exposure

Apparatus (Fluorescent UV-Condensation
Type) for Exposure of Nonmetallic Materials

CORPS OF ENGINEERS (COE)

COE CRD-C 572

(1974) Corps of Engineers Specifications
for Polyvinylchloride Waterstop

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

Waterstops; G, STR

Shop drawings and fabrication drawings provided by the manufacturer or prepared by the Contractor.

SD-03 Product Data

Preformed Expansion Joint Filler;
Cap Seals;
Waterstops;

Manufacturer's literature, including safety data sheets and installation instructions, for preformed fillers, cap seals, and waterstops.

SD-04 Samples

Waterstops;

Specimens identified to indicate manufacturer, type of material, size, quantity of material, and shipment or lot represented. Each sample shall be a piece not less than 12 inch long cut from each 200 ft of finished waterstop furnished, but not less than a total of 4 ft of each type, size, and lot furnished. One splice sample of each size and type for every 50 splices made in the factory and every 10 splices made at the job site. The splice samples shall be made using straight run pieces with the splice located at the mid-length of the sample and finished as required for the installed waterstop. The total length of each splice shall be not less than 12 inches long.

SD-07 Certificates

Preformed Expansion Joint Filler;
Cap Seals;
Waterstops;

Certificates of compliance stating that the joint filler, cap seals, and waterstops conform to the requirements specified.

1.3 DELIVERY AND STORAGE

Material delivered and placed in storage shall be stored off the ground and protected from moisture, dirt, and other contaminants. Sealants shall be delivered in the manufacturer's original unopened containers. Sealants whose shelf life has expired shall be removed from the site.

PART 2 PRODUCTS

2.1 EXPANSION JOINT FILLER

Expansion joint filler shall be preformed cork material conforming to ASTM D 1752, Type II. Filler material shall be of the thickness shown on the contract drawings and of a width applicable for the joint formed. Backer material, when required, shall conform to ASTM D 5249.

2.2 CAP SEALS

2.2.1 General

Modified PVC cap seal, extruded from an elastomeric material of which the basic resins are prime virgin materials, meeting the following performance requirements:

- a. Tensile Strength, ASTM D 412: 2350 psi min.
- b. Elongation, ASTM D 412: 375% min.
- c. Hardness, ASTM D 2240: 81+/-3 Shore A
- d. Oil Swell (ASTM Oil #3, 70 hrs @ 212 deg. F change in volume/weight), ASTM D 471: +/- 15% by vol., +/- 15% by wt.
- e. Ozone Resistance (20% strain, 300 pphm, 70 hrs @ 104 deg. F, ASTM D 518: No cracking
- f. UV Resistance (2000 hrs @ 70 deg. F), ASTM G 53: 2200 psi minimum, 200% minimum
- g. Abrasion Resistance (10,500 cycles, 1000 g load), ASTM D 3884: Material Loss -0.35 grams max.
- h. Adhesive Bond Strength, ASTM D 412: 1000 psi min.
- i. Results after Heat Aging (24 hrs @ 70 deg. F), ASTM D 573: Tensile strength retained 90%, elongation retained 90%, hardness change +/-3 Shore A

2.2.2 Configuration

For new concrete construction applications, provide standard product with barbed anchors extending into concrete on both sides of cap. For retrofit applications where new concrete abuts old concrete, provide product with one flat side and one barbed side.

2.2.3 Accessories

Provide factory made fabrications for all changes of direction, intersections, and transitions leaving only straight butt joint splices for field assembly. Provide manufacturer's recommended adhesive for sealing of all butt splices.

2.3 ELASTOMERIC SEALANT

Elastomeric joint sealant shall be in accordance with Section 07900 JOINT SEALING.

2.4 WATERSTOPS

Intersection and change of direction waterstops shall be shop fabricated.

2.4.1 PVC Waterstops

PVC waterstops shall be manufactured from a prime virgin resin; reclaimed material is not acceptable. The compound shall contain plasticizers, stabilizers, and other additives to meet specified requirements. Polyvinylchloride waterstops shall conform to COE CRD-C 572.

2.4.2 Hydrophilic Waterstops

Swellable strip type compound of polymer modified chloroprene rubber that swells upon contact with water shall conform to ASTM D 412 as follows:
Tensile strength 420 psi minimum; ultimate elongation 600 percent minimum.
Hardness shall be 50 minimum on the type A durometer and the volumetric expansion ratio in distilled water at 70 degrees F shall be 3 to 1 minimum.

2.4.3 Concrete Nails

Concrete nails for attaching hydrophilic waterstop for vertical and overhead applications shall comply with ASTM F 547 and shall be 3 inch in length.

PART 3 EXECUTION

3.1 JOINTS

Joints shall be installed at locations indicated and as authorized.

3.1.1 Joint Filler

Expansion joint filler shall be used where indicated. The filler shall extend the full slab depth, unless otherwise indicated. The edges of the joint shall be neatly finished with an edging tool of 1/8 inch radius. Where the joint is to receive a sealant, the filler strips shall be

installed at the proper level below the finished slab with a slightly tapered, dressed and oiled wood strip temporarily secured to the top to form a recess to the size shown on the drawings. The wood strip shall be removed after the concrete has set. Contractor may opt to use a removable expansion filler cap designed and fabricated for this purpose in lieu of the wood strip. The groove shall be thoroughly cleaned of laitance, curing compound, foreign materials, protrusions of hardened concrete, and any dust which shall be blown out of the groove with oil-free compressed air.

3.1.2 Cap Seals

Where indicated, provide cap seals for expansion joint filler. Prior to placing concrete, place cap seal on joint filler. For standard applications, terminate stakes or other filler supports 1/4 inch below legs of cap. For retrofit applications, fasten filler/cap seal assembly to existing concrete with concrete nails or adhesive. Use factory fabrications for intersections and changes of direction. Assure all sections to be spliced are cut square and bond together using adhesive. Secure cap seal to joint filler with staples, nails, screws (approximately 18 inch on center) or adhesive to prevent dislocation during concrete placement. Follow manufacturer's recommendations. Place concrete using normal placement techniques, utilizing the cap seal as a screed rail. Vibrate concrete to insure good consolidation around cap seal. Do not tool joint.

3.1.3 Elastomeric Joint Sealant

Where indicated, seal joints in accordance with Section 07900 JOINT SEALING.

3.2 WATERSTOPS, INSTALLATION AND SPLICES

Waterstops shall be installed at the locations shown to form a continuous water-tight diaphragm. Adequate provision shall be made to support and completely protect the waterstops during the progress of the work. Any waterstop punctured or damaged shall be repaired or replaced. Exposed waterstops shall be protected during application of form release agents to avoid being coated. Suitable guards shall be provided to protect exposed projecting edges and ends of partially embedded waterstops from damage when concrete placement has been discontinued. Splices shall be made by certified trained personnel using approved equipment and procedures.

3.2.1 Non-Metallic

Fittings shall be shop made using a machine specifically designed to mechanically weld the waterstop. A miter guide, proper fixturing (profile dependant), and portable power saw shall be used to miter cut the ends to be joined to ensure good alignment and contact between joined surfaces. The splicing of straight lengths shall be done by squaring the ends to be joined. Continuity of the characteristic features of the cross section of the waterstop (ribs, tabular center axis, protrusions, etc.) shall be maintained across the splice.

3.2.1.1 Polyvinyl Chloride Waterstop

Splices shall be made by heat sealing the adjacent waterstop edges together using a thermoplastic splicing iron utilizing a non-stick surface specifically designed for waterstop welding. The correct temperature shall be used to sufficiently melt without charring the plastic. The spliced area, when cooled, shall show no signs of separation, holes, or other imperfections when bent by hand in as sharp an angle as possible.

3.2.1.2 Quality Assurance

Edge welding will not be permitted. Centerbulbs shall be compressed or closed when welding to non-centerbulb type. Waterstop splicing defects which are unacceptable include, but are not limited to the following: 1) Tensile strength less than 80 percent of parent section. 2) Free lap joints. 3) Misalignment of centerbulb, ribs, and end bulbs greater than 1/16 inch. 4) Misalignment which reduces waterstop cross section more than 15 percent. 5) Bond failure at joint deeper than 1/16 inch or 15 percent of material thickness. 6) Misalignment of waterstop splice resulting in misalignment of waterstop in excess of 1/2 inch in 10 feet. 7) Visible porosity in the weld area, including pin holes. 8) Charred or burnt material. 9) Bubbles or inadequate bonding. 10) Visible signs of splice separation when cooled splice is bent by hand at a sharp angle.

3.2.2 Hydrophilic Waterstop Installation

Hydrophilic waterstop shall be attached to substrate with epoxy adhesive selected and applied in accordance with waterstop manufacturer's recommendations. Where required by manufacturer, use gel form of epoxy adhesive. Ends of waterstop to be joined shall be miter cut with sharp knife or shears. The ends shall be adhered with cyanacrylate (super glue) adhesive.

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SECTION 03200

CONCRETE REINFORCEMENT

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.

ACI INTERNATIONAL (ACI)

ACI 318/318R (1995) Building Code Requirements for Structural Concrete and Commentary

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 615/A 615M (1996a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM A 706/A 706M (1998) Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement

AMERICAN WELDING SOCIETY (AWS)

AWS D1.4 (1998) Structural Welding Code - Reinforcing Steel

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

CRSI MSP-1 (1996) Manual of Standard Practice

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Welding;

If welding is to be used for splicing of reinforcement, submit a list of qualified welders names.

SD-07 Certificates

Reinforcing Steel;

Certified copies of mill reports attesting that the reinforcing steel furnished contains no less than 25 percent recycled scrap steel and meets the requirements specified herein, prior to the installation of reinforcing steel.

1.3 WELDING

Welders shall be qualified in accordance with AWS D1.4. Qualification test shall be performed at the worksite and the Contractor shall notify the Contracting Officer 24 hours prior to conducting tests. Special welding procedures and welders qualified by others may be accepted as permitted by AWS D1.4.

1.4 DELIVERY AND STORAGE

Reinforcement and accessories shall be stored off the ground on platforms, skids, or other supports.

PART 2 PRODUCTS

2.1 REINFORCING STEEL AND DOWELS

Reinforcing steel and dowels shall be deformed bars conforming to ASTM A 615/A 615M or ASTM A 706/A 706M, Grade 60, sizes as indicated.

2.2 WIRE TIES

Wire ties shall be 16 gauge or heavier black annealed steel wire.

2.3 SUPPORTS

Bar supports for formed surfaces shall be designed and fabricated in accordance with CRSI MSP-1 and shall be steel or precast concrete blocks. Precast concrete blocks shall have wire ties and shall be not less than 4 inches square when supporting reinforcement on ground. Precast concrete block shall have compressive strength equal to that of the surrounding concrete. Steel supports within 1/2 inch of concrete surface shall be galvanized, plastic protected or of stainless steel. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface. For slabs on grade, supports shall be precast concrete blocks, plastic coated steel fabricated with bearing plates, or specifically designed wire-fabric supports fabricated of plastic.

PART 3 EXECUTION

3.1 REINFORCEMENT

Reinforcement shall be fabricated to shapes and dimensions shown. Reinforcement shall be cold bent unless otherwise authorized. Bending may

be accomplished in the field or at the mill. Bars shall not be bent after embedment in concrete. Safety caps shall be placed on all exposed ends of vertical concrete reinforcement bars that pose a danger to life safety. Wire tie ends shall face away from the forms.

3.1.1 Placement

Reinforcement shall be free from loose rust and scale, dirt, oil, or other deleterious coating that could reduce bond with the concrete. Reinforcement shall be placed in accordance with ACI 318/318R at locations shown plus or minus one bar diameter. Concrete coverage shall be as indicated or as required by ACI 318/318R. If bars are moved more than one bar diameter to avoid interference with other reinforcement, conduits or embedded items, the resulting arrangement of bars, including additional bars required to meet structural requirements, shall be approved before concrete is placed.

3.1.2 Splicing

Splices of reinforcement shall conform to ACI 318/318R and shall be made only as required or indicated. Splicing shall be by lapping or by mechanical or welded butt connection. Welding shall conform to AWS D1.4. Welded butt splices shall be full penetration butt welds. Lapped bars shall be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 6 inches. Mechanical butt splices shall be in accordance with the recommendation of the manufacturer of the mechanical splicing device. Butt splices shall develop 125 percent of the specified minimum yield tensile strength of the spliced bars or of the smaller bar in transition splices. Bars shall be flame dried before butt splicing. Adequate jigs and clamps or other devices shall be provided to support, align, and hold the longitudinal centerline of the bars to be butt spliced in a straight line.

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SECTION 03300

CAST-IN-PLACE STRUCTURAL CONCRETE

PART 1 GENERAL

1.1 SCOPE

This section covers cast-in-place concrete for sluiceway plugs. It also covers silica fume concrete for concrete surface and joint repairs that are specified in Section 03900 CONCRETE SURFACE AND EXTERIOR JOINT REPAIR.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ACI INTERNATIONAL (ACI)

- | | |
|-----------|-----------------------------------------------------------------------------------------------|
| ACI 211.1 | (1991) Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete |
| ACI 301 | (1996) Standard Specifications for Structural Concrete |

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

- | | |
|--------------|-----------------------------------------------------|
| AASHTO M 182 | (1991; R 1996) Burlap Cloth Made From Jute or Kenaf |
|--------------|-----------------------------------------------------|

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | |
|------------|---------------------------------------------------------------|
| ASTM C 31 | (1998) Making and Curing Concrete Test Specimens in the Field |
| ASTM C 39 | (1996) Compressive Strength of Cylindrical Concrete Specimens |
| ASTM C 94 | (1999) Ready-Mixed Concrete |
| ASTM C 136 | (1996a) Sieve Analysis of Fine and Coarse Aggregates |
| ASTM C 143 | (1998) Slump of Hydraulic Cement Concrete |

ASTM C 150	(1998) Portland Cement
ASTM C 171	(1997) Sheet Materials for Curing Concrete
ASTM C 231	(1997) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	(1998) Air-Entraining Admixtures for Concrete
ASTM C 494	(1999) Chemical Admixtures for Concrete
ASTM C 618	(1999) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 685	(1998) Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C 989	(1999) Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C 1064	(1999) Temperature of Freshly Mixed Portland Cement Concrete
ASTM C 1077	(1998) Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM C 1240	(1999) Silica Fume for Use as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar and Grout

CORPS OF ENGINEERS (COE)

COE CRD-C 400	(1963) Requirements for Water for Use in Mixing or Curing Concrete
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NATIONAL READY-MIXED CONCRETE ASSOCIATION (NRMCA)

NRMCA TMMB 100	(1994) Truck Mixer Agitator and Front Discharge Concrete Carrier Standards
NRMCA QC 3	(1984) Quality Control Manual: Section 3, Plant Certifications Checklist: Certification of Ready Mixed Concrete Production Facilities

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office

that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Concrete Operation Plan; G,MAT

The plan shall demonstrate a thorough understanding of all involved technical and logistical conditions necessary for the production of concrete that meets all requirements of these specifications. The plan shall provide as a minimum the following:

- a. Sources of cement, pozzolan, silica fume, and aggregates.
- b. Location of aggregate stockpiles, batching plant, and mixing plant.
- c. Method and route for conveying batched concrete under all expected weather conditions.
- d. Method of conveying concrete within the project.
- e. Sources of electrical power and water.
- f. Provisions for replacement of required equipment in the event of breakdown.
- g. Methods for preventing aggregate stockpiles from freezing, moisture variation, or contamination.
- h. Methods of consolidation and curing. Include manufacturer's literature.
- i. Contractor quality control.

Cold Weather Plan; G,MAT

If concrete is to be placed under cold weather conditions, the procedures, materials, methods, and protection proposed to accomplish it shall be submitted for review.

Hot Weather Plan; G,MAT

If concrete is to be placed under hot weather conditions, the procedures, materials, methods, and protection proposed to accomplish it shall be submitted for review.

SD-03 Product Data

Concrete Mixture Design; G,MAT

A mix design shall be submitted for each concrete mix to be used on the project. Each mix design shall list the proportions by weight of cement, weight or volume of water, weights of aggregates in a saturated surface-dry condition, and type, quantity, and name of admixtures per cubic yard of concrete. All materials included in the mixture shall be of the same type and from the same source as will be used on the project. Each mix shall be accompanied by evidence by one of the following methods that demonstrates the mix will produce concrete having the characteristics and quality as specified:

a. Project Data. Submit evidence obtained within the last 5 years from previous quality control testing on the concrete mix.

b. Mix Design Study. Submit a mix design study complying with ACI 211.1 conducted in the past 12 months. The mix design shall be completed by a testing laboratory complying with ASTM C 1077.

Project data or mix design studies shall be obtained for the exact mix as submitted. Minor mix alterations or substitutions may be accepted if approved by the Contracting Officer. Any alternations or substitutions shall be clearly identified, and shall be accompanied by recommendations from the admixture supplier or a registered professional engineer indicating the expected effects on the concrete.

SD-07 Certificates

Manufacturer's Certificates;

The following materials shall be certified for compliance with all specification requirements:

- a. Cement, pozzolan, and silica fume
- b. Impervious sheet curing materials
- c. Admixtures

Qualifications;

Written documentation for Contractor Quality Control personnel.

Batch Tickets

Batch tickets shall be collected and furnished to the Contracting Officer for each load of ready-mixed concrete. The batch tickets do not need to be transmitted through the submittal process.

1.4 QUALIFICATIONS

Contractor Quality Control personnel assigned to concrete construction shall be American Concrete Institute (ACI) Certified Workmen in grade I or higher or shall have written evidence of having completed similar qualification programs:

1.5 CONSTRUCTION TOLERANCES

Variation in alignment, grade, and dimensions of the structures from the established alignment, grade, and dimensions shown shall be within the tolerances specified in SECTION 03100 - CONCRETE FORMWORK.

1.5.1 Appearance

Finished surfaces shall be protected from stains or abrasions. Permanently exposed surfaces shall be cleaned, if stained or otherwise discolored, by

an approved method that does not harm the concrete. Abrupt variations in color, shade, or tint will not be permitted on these surfaces.

1.6 STORAGE OF MATERIALS

Cement and other cementitious materials shall be stored in weathertight buildings, bins, or silos which will exclude moisture and contaminants and keep each material completely separated. Aggregate stockpiles shall be arranged and used in a manner to avoid excessive segregation and to prevent contamination with other materials or with other sizes of aggregates. Aggregate shall not be stored directly on ground unless a sacrificial layer is left undisturbed. Reinforcing bars and accessories shall not be stored on cohesive soils or areas that may puddle water. Other materials shall be stored in such a manner as to avoid contamination and deterioration. Admixtures which have been in storage at the project site for longer than 6 months or which have been subjected to freezing shall not be used unless retested and proven to meet the specified requirements. Materials shall be capable of being accurately identified after bundles or containers are opened.

1.7 GOVERNMENT ASSURANCE INSPECTION AND TESTING

The Contracting Officer may appoint a Government representative or an independent testing laboratory to inspect construction and monitor operations of the Contractor's CQC staff as considered appropriate for quality assurance. The Contractor shall provide facilities and labor as may be necessary for procurement of representative test samples. Government inspection or testing will not relieve the Contractor of any of its CQC responsibilities. Failure to detect defective work or material will not prevent rejection later when a defect is discovered nor will it obligate the Government for final acceptance.

PART 2 PRODUCTS

2.1 GENERAL CONCRETE REQUIREMENTS

Concrete shall be composed of a cementitious material, water, fine and coarse aggregates, and admixtures. The design compressive strength and water-cement ratio shall be as follows:

- a. Concrete for Sluiceway Plugs: The design compressive strength shall not be less than 3,000 pounds per square inch. Water cement ratio shall not exceed 0.60.
- b. Where Silica Fume Concrete is Designated for Concrete Surface and Joint Repairs: The design compressive strength shall not be less than 4,500 pounds per square inch. Water cement ratio shall not exceed 0.45.

The maximum water-cement ratio will be determined by the weight equivalency method as described in ACI 211.1 (cement plus pozzolan, silica fume, and ground granulated blast furnace slag). Materials shall meet the requirements of the respective publications and other data specified below.

2.1.1 Strength Requirements

The strength of the concrete will be considered satisfactory so long as the average of all sets of three consecutive test results equals or exceeds the specified compressive strength $f'c$ and no individual test result falls below the specified strength $f'c$ by more than 500 psi. A "test" is defined as the average of two companion cylinders, or if only one cylinder is tested, the results of the single cylinder test. Design compressive strength ($f'c$) shall be evaluated for acceptance at 28 days unless pozzolan is used, in which case the design strength shall be met in 90 calendar days, provided the 90-day period does not extend past the contract expiration date. Members identified with concrete not meeting the criteria shall be replaced. The Contractor may conduct additional testing to verify strength or further define the limits of inferior concrete if approved by the Contracting Officer.

2.1.2 Slump

Slump of the concrete, as delivered to the point of placement into the forms, shall not exceed 4 inches. If a superplastizer is used, the slump shall not exceed 4 inches before the admixture is added and shall not exceed 8 inches at the point of delivery after the admixture is added.

2.1.3 Admixtures

Concrete shall not contain admixtures that provide special properties to the concrete unless specified or approved. Admixtures used on the project shall be included in the mix design submittals. Accelerating admixtures shall be used only during cold weather and when approved in writing.

2.1.3.1 Air Entrainment

All concrete shall be air entrained to contain between 4 and 7 percent total air, except that concrete with nominal 3/8 inch maximum coarse aggregate shall be air entrained to contain between 5.5 and 8.5 percent total air.

2.1.4 Size of Coarse Aggregate

Nominal maximum size coarse aggregate shall be as follows:

- a. Concrete for Sluiceway Plugs: 3/4 inch to 1-1/2 inch as selected by Contractor based on placement method.
- b. Where Silica Fume Concrete is Designated for Concrete Surface and Joint Repairs: 3/8 inch.

2.1.5 Silica Fume Concrete

Silica fume concrete shall be a packaged, pre-blended mix which is ready to use with only the addition of water at the project site.

2.2 CEMENTITIOUS MATERIALS

Cementitious materials shall be as follows:

- a. Concrete for Sluiceway Plugs: Cementitious material shall be portland cement, or portland cement in combination with pozzolan or ground granulated blast furnace slag. Optional pozzolan replacement of cement shall be limited to 30 percent of the total cementitious material of a mix by weight.
- b. Where Silica Fume Concrete is Designated for Concrete Surface and Joint Repairs: Cementitious material shall be portland cement in combination with silica fume.

Cementitious materials shall conform to appropriate specifications listed below. Use of cementitious materials in concrete which will have surfaces exposed in the completed structure shall be restricted so there is no change in color, source, or type of cementitious material.

2.2.1 Portland Cement

ASTM C 150, Type I with a maximum 15 percent amount of tricalcium aluminate, or Type II. White portland cement shall meet the above requirements except that it may be Type I, Type II or Type III. White Type III shall be used only in specific areas of the structure, when approved in writing.

2.2.2 Pozzolan (Fly Ash)

ASTM C 618, Class C or F with the optional requirements for multiple factor, drying shrinkage, and uniformity from Table 2A of ASTM C 618. Requirement for maximum alkalis from Table 1A of ASTM C 618 shall apply.

2.2.3 Ground Granulated Blast-Furnace (GGBF) Slag

ASTM C 989, Grade 120.

2.2.4 Silica Fume

Silica fume shall conform to ASTM C 1240. Silica fume shall be furnished as a dry, densified material as part of a prepackaged mix.

2.3 AGGREGATES

2.3.1 Composition

Fine aggregate shall consist of natural sand, manufactured sand, or a combination of natural and manufactured sands. Coarse aggregate shall consist of gravel, crushed gravel, crushed stone, or a combination thereof.

2.3.2 Quality

The aggregate particles shall be clean, hard, unweathered, and uncoated. The shape of the particles shall be generally cubical or spherical. Where required, fines shall be removed from the aggregates by adequate washing. The aggregates as delivered to the mixer shall meet the quality requirements of ASTM C-33, table 3 for the appropriate type or location of concrete construction for use in a severe climate.

2.4 CHEMICAL ADMIXTURES

Chemical admixtures, when required or permitted, shall conform to the appropriate specification listed.

- a. Air-Entraining Admixture. ASTM C 260 and shall consistently entrain the air content in the specified ranges under field conditions.
- b. Accelerating Admixture. ASTM C 494, Type C or E, except that calcium chloride or admixtures containing calcium chloride shall not be used.
- c. Water-Reducing or Retarding Admixture. ASTM C 494, Type A, B, or D.
- d. High-Range Water Reducer. ASTM C 494, Type F or G.

2.5 CURING MATERIALS

2.5.1 Impervious-Sheet

Impervious-sheet materials shall conform to ASTM C 171, type optional, except that polyethylene sheet shall be white opaque.

2.5.2 Burlap and Cotton Mat

Burlap and cotton mat used for curing shall conform to AASHTO M 182.

2.6 WATER

Water for mixing and curing shall be fresh, clean, potable, and free of injurious amounts of oil, acid, salt, or alkali, except that non-potable water may be used if it meets the requirements of COE CRD-C 400. Water for curing shall not contain any substance that stains the concrete. River water shall not be used.

PART 3 EXECUTION

3.1 CONCRETE FINISH SCHEDULE

- a. Forms. Surfaces, unless another type of finish is specified, shall be left with the texture imparted by the forms, except defective surfaces shall be repaired as described above. Forms shall not be reused if there is any evidence of surface wear or defects that would impair the quality of the surface.
- b. Horizontal Concrete Repairs. Concrete shall be screeded, floated, and lightly troweled to a finish approved by the Contracting Officer. Match adjacent existing surfaces as much as practical. The finished surface shall be a true plane within 5/16 inch in 10 feet.

3.2 PREPARATION FOR PLACING SLUICeway CONCRETE

Surfaces to receive concrete shall be clean, damp and free from frost, ice,

mud, loose particles, foreign matter, and water. Forms shall be in place, cleaned, coated, and adequately supported. Reinforcing steel shall be in place, cleaned, tied, and adequately supported. Transporting and conveying equipment shall be in-place, ready for use, clean, and free of hardened concrete and foreign material. Equipment for consolidating concrete shall be at the placing site and in proper working order. Equipment and material for curing and for protecting concrete from weather or mechanical damage shall be at the placing site, in proper working condition and in sufficient amount for the entire placement. Preparation for placing silica fume concrete for joint and spall repair shall be in accordance with Section 03900 CONCRETE SURFACE AND EXTERIOR JOINT REPAIR.

3.2.1 Embedded Items

Before placement of concrete, care shall be taken to determine that all embedded items are firmly and securely fastened in place as indicated on the drawings, or required. Conduit and other embedded items shall be clean and free of oil and other foreign matter such as loose coatings or rust, paint, and scale. The embedding of wood in concrete will be permitted only when specifically authorized or directed. Voids in sleeves, inserts, and anchor slots shall be filled temporarily with readily removable materials to prevent the entry of concrete into voids.

3.3 CONCRETE PRODUCTION

Concrete shall be furnished from a ready-mixed concrete plant, except that small batches for pours less than 2 cubic yards may be batched on-site. Ready-mixed concrete shall be batched, mixed, and transported in accordance with ASTM C 94. Truck mixers, agitators, and nonagitating transporting units shall comply with NRMCA TMMB 100. Ready-mix plant equipment and facilities shall be certified in accordance with NRMCA QC 3. Aluminum pipes, chutes, troughs, spouts, or tremies shall not be used for pumping, conveying, or placing concrete.

3.3.1 Concrete Mixers

The mixers shall not be charged in excess of the capacity recommended by the manufacturer. Truck mixers, the mixing of concrete therein, and concrete uniformity shall conform to the requirements of ASTM C 94. Each truck shall be equipped with two counters from which it is possible to determine the number of revolutions at mixing speed and the number of revolutions at agitating speed.

3.3.2 Site Mixed Concrete

If the Contractor elects to provide an onsite batching and mixing plant, a batch type plant shall be provided of sufficient capacity to prevent cold joints. Site-mixed concrete shall be produced in conformance with ACI 301, or by volumetric batching and continuous mixing in conformance with ASTM C 685.

3.4 TRANSPORTING CONCRETE TO PROJECT SITE

Concrete shall be transported to the placing site in truck mixers

conforming to NRMCA TMMB 100.

3.5 CONVEYING CONCRETE ON SITE

Concrete shall be conveyed from mixer to forms by methods that will prevent segregation or loss of ingredients. Any concrete transferred from one conveying device to another shall be passed through a hopper, which is conical in shape, and shall not be dropped vertically more than 5 feet, except where suitable equipment is provided to prevent segregation and where specifically authorized. Trucks shall be equipped with radios or phones to permit communication between the mixing plant and the concrete placement site.

3.5.1 Concrete Pumps

The pipeline shall be rigid steel pipe or heavy-duty flexible hose. The inside diameter of the pipe shall be at least three times the nominal maximum size coarse aggregate in the concrete mixture to be pumped, but not less than 5 inches. The maximum size coarse aggregate will not be reduced to accommodate the pumps. The distance to be pumped shall not exceed limits recommended by the pump manufacturer. The concrete shall be supplied to the concrete pump continuously. When pumping is completed, concrete remaining in the pipeline shall be ejected without contamination of concrete in place. After each operation, equipment shall be thoroughly cleaned, and flushing water shall be wasted outside of the forms and in compliance with the approved environment protection plan.

3.6 PLACING CONCRETE

Mixed concrete shall be discharged within 1-1/2 hours or before the mixer drum has revolved 300 revolutions, whichever comes first after the introduction of the mixing water to the cement and aggregates. When the length of haul makes it impossible to deliver truck-mixed concrete within this time limit, batching of cement and a portion of the mixing water shall be delayed until the truck mixer is at or near the construction site. Concrete shall be placed within 15 minutes after it has been discharged from the transporting unit. Sufficient placing capacity shall be provided so that concrete can be kept free of cold joints.

3.6.1 Depositing Concrete

Concrete shall be deposited as close as possible to its final position in the forms, and there shall be no vertical drop greater than 5 feet except where suitable equipment is provided to prevent segregation and where specifically authorized. Depositing of the concrete shall be so regulated that it will be effectively consolidated in horizontal layers not more than 18 inches thick, except that all slabs shall be placed in a single layer. Concrete to receive other construction shall be screeded to the proper level. Concrete shall be deposited continuously so that fresh concrete is deposited on in-place concrete that is still plastic.

3.6.2 Consolidation

Consolidation of concrete shall conform to ACI 309, except as otherwise

specified. Immediately after placing, each layer of concrete shall be consolidated by internal vibrators, except for slabs 4 inches thick or less. The vibrators shall at all times be adequate in effectiveness and number to properly consolidate the concrete. A spare vibrator shall be kept at the jobsite during all concrete placing operations. Vibrators shall be inserted vertically at uniform spacing over the area of placement.

The distance between insertions shall be approximately 1-1/2 times the radius of action of the vibrator so that the area being vibrated will overlap the adjacent just-vibrated area by a reasonable amount. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the preceding layer if there is such. Vibrator shall be held stationary until the concrete is consolidated and then vertically withdrawn slowly while operating. Form vibrators shall not be used unless specifically approved and unless forms are constructed to withstand their use. Vibrators shall not be used to move concrete within the forms. Excessive vibration of concrete resulting in segregation shall be prevented.

3.6.3 Cold Weather Requirements

Concrete shall not be placed without a procedure approved in accordance with paragraph: SUBMITTALS when the concrete is likely to be subjected to freezing temperatures before the expiration of the curing period. Heating of the mixing water or aggregates will be required to regulate the concrete-placing temperatures. The placing temperature of the concrete shall be as recommended in ACI 306R, Table 3.1, with the temperature of the concrete measured in accordance with ASTM C 1064. Air and form temperature in contact with concrete shall be above 50 degrees F prior to placing concrete and maintained for the first 3 days, and at a temperature above 32 degrees F for the remainder of the specified curing period. Thermometers shall be installed at such locations as may be directed. Suitable thermometers shall be furnished by the Contractor and installed adjacent to the concrete surface and 2 inches inside the surface of the concrete. During the period of protection removal, heat shall be shut down and insulation or tents shall be removed in a systematic schedule such that the temperature differential between the air and concrete surface does not exceed 25 degrees F. Exhaust fumes from combustion heating units shall be vented to the outside of the enclosure, and heaters and ducts shall be placed and directed so as not to cause areas of overheating and drying of concrete surfaces or to create fire hazards. Materials entering the mixer shall be free from ice, snow, or frozen lumps.

3.6.4 Hot Weather Requirements

Concrete shall be properly placed and finished with approved procedures in accordance with paragraph: SUBMITTALS. When hot, windy conditions during concreting appear probable, equipment and material shall be at the placing site to provide windbreaks, shading, fogging, or other action to prevent plastic shrinkage cracking or other damaging drying of the concrete. The concrete-placing temperature shall not exceed 85 degrees F (60 degrees F for concrete for horizontal repairs). Cooling of the mixing water or aggregates or placing concrete in the cooler part of the day may be required to obtain an adequate placing temperature. Steel forms and reinforcements shall be cooled prior to concrete placement when steel temperatures are greater than 120 degrees F. Conveying and placing

equipment shall be cooled if necessary to maintain proper concrete-placing temperature. When the rate of evaporation of surface moisture, as determined by use of Figure 2.1.5 of ACI 305, may reasonably be expected to exceed 0.2 pounds per square feet per hour, provision for windbreaks, shading, fog spraying, or wet covering with a light-colored material shall be made in advance of placement, and such protective measures shall be taken as quickly as finishing operations will allow.

3.7 JOINTS

All joints not shown on the drawings are subject to approval by the Contracting Officer.

3.8 FINISHING FORMED SURFACES

Beginning no more than 24 hours after form removal, all fins and loose materials shall be removed. All voids and honeycombs exceeding 1/2 inch in diameter and all tie rod holes shall be reamed or chipped and filled with dry pack mortar. Voids and honeycomb shall be dampened, brush-coated with a neat cement grout or with an approved bonding agent, and filled with mortar. The cement used in mortar for all surfaces permanently exposed to view shall be a blend of portland cement and white cement, so that the final color when cured shall be the same as adjacent concrete. Trial patches shall be used to determine the proportions to match colors. The mortar shall consist of one part cement to two and one-half parts fine aggregate. The quantity of mixing water shall be the minimum necessary to obtain a uniform mixture and to permit placing. Mortar shall be thoroughly compacted in place and struck off to adjacent concrete. Temperature of the concrete, ambient air, replacement concrete, or mortar during remedial work, including curing, shall be above 50 F. The patched areas shall be cured for seven days. Defective areas larger than 36 square inches in any surface shall be replaced or corrected as directed by the Contracting Officer.

3.9 FINISHING UNFORMED SURFACES

The finish of all unformed surfaces shall meet the requirements of paragraph Tolerances in PART 1, when tested as specified herein.

3.9.1 General

Unformed surfaces that are not to be covered by additional concrete or backfill shall have a float finish, with additional finishing as specified below, and shall be true to the elevation shown on the drawings. Unless otherwise shown on the drawings, exterior surfaces shall be sloped for drainage, as directed. Joints shall be carefully made with a jointing or edging tool. The dusting of surfaces with dry cement or other materials or the addition of any water during finishing shall not be permitted. If bleedwater is present prior to finishing, the excess water shall be carefully dragged off or removed by absorption with porous materials such as burlap. Slabs with surfaces which exhibit significant crazing shall be removed and replaced.

3.9.2 Rough Slab Finish

As a first finishing operation for unformed surfaces, the surface shall receive a rough slab finish. The concrete shall be screeded with straightedge strikeoffs immediately after consolidation to bring the surface to the required finish level with no coarse aggregate visible.

3.9.3 Floated Finish

Screeding shall be followed immediately by darbying or bull floating before bleeding water is present, to bring the surface to a true, even plane. After the concrete has stiffened it shall be floated to a true and even plane free of ridges. Floating shall be performed by use of suitable hand floats or power driven equipment.

3.9.4 Troweled Finish

The finished surface shall be thoroughly consolidated and shall be steel-troweled to a smooth, even, dense finish, free from blemishes including trowel marks and be uniform in texture and appearance. A final hard steel troweling shall be done by hand, with the trowel tipped, and using hard pressure, when the surface is at a point that the trowel will produce a ringing sound. Tolerance shall be true planes within 5/16 inch in 10 feet as determined by a 10 foot straightedge placed anywhere on the slab in any direction.

3.10 CURING AND PROTECTION

Concrete shall be cured by an approved method for a period of 7 days, except that cement blended with pozzolan shall be cured for 14 days. The curing period may be reduced to 3 days under the written approval of the Contracting Officer for type 3 cement or proper use of accelerator admixtures. Membrane forming curing compounds shall not be used on surfaces designated to receive surface sealer in accordance with Section 03900 CONCRETE SURFACE AND EXTERIOR JOINT REPAIR.

3.10.1 General

Immediately after placement, concrete shall be protected from premature drying, extremes in temperatures, rapid temperature change, mechanical injury and damage from rain and flowing water. Materials and equipment needed for adequate curing and protection shall be available and at the site prior to placing concrete. No fire or excessive heat, including welding, shall be permitted near or in direct contact with the concrete at any time.

3.10.2 Moist Curing

Concrete to be moist-cured shall be maintained continuously wet for the entire curing period, commencing immediately after finishing. When wooden forms are left in place during curing, they shall be kept wet at all times. Surfaces shall be cured by ponding, by continuous sprinkling, by continuously saturated burlap or cotton mats, or by continuously saturated plastic coated burlap. Burlap and mats shall be clean and free from any contamination and shall be completely saturated before being placed on the

concrete. The Contractor shall have an approved work system to ensure that moist curing is continuous 24 hours per day. If inspection identifies an area of inadequate curing, immediate corrective action shall be taken, and the required curing period for those areas shall be extended by 1 day.

3.10.3 Impervious Sheeting

Surfaces shall be thoroughly wetted and be completely covered with sheeting. Sheeting shall be at least 18 inches wider than the concrete surface to be covered. Covering shall be laid with light-colored side up. Covering shall be lapped not less than 12 inches and securely weighted down or shall be lapped not less than 4 inches and taped to form a continuous cover with completely closed joints. The sheet shall be weighted to prevent displacement so that it remains in contact with the concrete during the specified length of curing. Coverings shall be folded down over exposed edges of slabs and secured by approved means. Sheets shall be immediately repaired or replaced if tears or holes appear during the curing period. If inspection identifies tears, holes, laps or joints that are not completely closed, the tears and holes shall promptly be repaired or the sheets replaced, the joints closed, and the required curing period for those areas shall be extended by 1 day.

3.11 TESTING AND INSPECTION FOR CONTRACTOR QUALITY CONTROL

The Contractor shall perform the inspection and tests described below and, based upon the results of these inspections and tests, shall take the action required and shall submit specified reports. When, in the opinion of the Contracting Officer, the concreting operation is out of control, concrete placement shall cease and the operation shall be corrected. The laboratory performing the tests shall conform with ASTM C 1077. If the Government conducts quality assurance testing, the Contractor shall assist in collection of samples as directed. All necessary platforms, tools, and equipment for obtaining samples shall be furnished by the Contractor.

3.11.1 Grading and Corrective Action

3.11.1.1 Fine Aggregate

At least once during each shift when the concrete plant is operating, there shall be one sieve analysis in accordance with ASTM C 136.

3.11.1.2 Coarse Aggregate

At least once during each shift in which the concrete plant is operating, there shall be a sieve analysis in accordance with ASTM C 136 for each size of coarse aggregate.

3.11.2 Concrete Mixture

- a. Air Content Testing. Air content tests shall be measured when compressive strength specimens are fabricated. Specified air content shall be attained at point of placement into the forms. Measurement shall be in accordance with ASTM C 231.

b. Slump Testing. The concrete slump shall be measured when compressive strength specimens are fabricated. Measurement shall be in accordance with ASTM C 143. The slump shall be reported along with the compressive strength data.

c. Temperature. The temperature of the concrete shall be measured when compressive strength specimens are fabricated. Measurement shall be in accordance with ASTM C 1064. The temperature shall be reported along with the compressive strength data.

d. Strength Specimens. Test cylinders shall be cast for compressive strength tests for each mix design at the following rates:

a. not less than once each day when pour exceeds 8 cubic yards.

b. not less than once for each 125 cubic yards of concrete.

c. the number of test cylinders need not exceed 3 sets per day for each mix.

d. not less than 1 set for every 100 linear feet of silica fume concrete for joint repair.

A set of test specimens for concrete specified to have a 28-day strength in accordance with paragraph STRENGTH REQUIREMENT shall consist of five cylinders, two to be tested at 7 days, two at 28 days, and one at 90 days. A set of test specimens for concrete specified to have a 90-day strength in accordance with the same paragraph shall consist of six cylinders, two tested at 7 days, two at 28 days, and two at 90 days. For the 28 day strength concrete, if either of the 28 day breaks does not meet the specified strength, the fifth cylinder shall be tested at 90 days, otherwise it shall be discarded. Test specimens shall be molded and cured in accordance with ASTM C 31 and tested in accordance with ASTM C 39. Results of all strength tests shall be reported immediately to the Contracting Officer.

3.11.3 Inspection Before Placing

Foundations, construction joints, forms, and embedded items shall be inspected by the Contractor in sufficient time prior to each concrete placement in order to certify to the Contracting Officer that they are ready to receive concrete. Full cooperation shall be given other trades to install embedded items. Suitable templates or instructions shall be used for setting items not placed in the forms.

3.11.4 Cold-Weather Protection

At least once each shift and once per day on non-work days, an inspection shall be made of all areas subject to cold-weather protection. Any deficiencies shall be noted, corrected, and reported.

3.11.5 Reports

The results of all tests and inspections conducted at the project site, as

well as corrective actions taken, shall be reported in writing weekly and shall be delivered to the quality assurance representative within three days after the end of each weekly reporting period. The Contracting Officer has the right to examine all Contractor quality control records.

-- End of Section --

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SECTION 03900

CONCRETE SURFACE AND EXTERIOR JOINT REPAIR

PART 1 GENERAL

1.1 SCOPE

This section covers requirement for concrete surface repairs on both interior and exterior of structure. It also covers requirements for exterior joint repairs.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ACI INTERNATIONAL (ACI)

- | | | |
|-----------|--------|-------------------------------------------|
| ACI 305 | (1991) | Hot Weather Concreting |
| ACI 306 | (1990) | Cold Weather Concreting |
| ACI 548.1 | (1997) | Guide for the Use of Polymers in Concrete |

CONCRETE SAWING AND DRILLING ASSOCIATION (CSDA)

- | | | |
|------------|--------|----------------------|
| CSDA F-102 | (2000) | Flat Sawing |
| CSDA W-104 | (2000) | Concrete Wall Sawing |

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | | |
|-----------------|--------|----------------------------------------------------------------------------------------|
| ASTM C 31/C 31M | (1998) | Making and Curing Concrete Test Specimens in the Field |
| ASTM C 39 | (1996) | Compressive Strength of Cylindrical Concrete Specimens |
| ASTM C 109 | (1998) | Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens) |
| ASTM C 144 | (1997) | Aggregate for Masonry Mortar |
| ASTM C 321 | (2000) | Bond Strength of Chemical-resistant Mortars |
| ASTM C 881 | (1999) | Epoxy-Resin-Base Bonding Systems |

	for Concrete (AASHTO M235)
ASTM C 882	(1991) Bond Strength of Epoxy-Resin System Used with Concrete By Slant Shear
ASTM C 1042	(1991) Bond Strength of Latex Systems Used with Concrete by Slant Shear
ASTM D 412	(1998a) Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
ASTM D 790	(2000) Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D 1042	(1993) Linear Dimensional Changes of Plastics Under Accelerated Service Conditions
ASTM D 3574	(1995) Flexible Cellular Materials - Slab, Bonded, and Molded Urethane Foams

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Concrete Repair Schedule;

A construction schedule for the repair work to be performed under this section shall be submitted.

Concrete Removal and Disposal Scheme; G, STR

The Contractor shall submit a written proposal outlining the proposed procedure for removing damaged concrete from exterior concrete repair work, and the methods of retaining and disposal of all debris.

Patch and Repair Forming Scheme;

Installation procedure shall include a typical formwork detail for spalled and drummy areas on the underside of interior beams and doorway corners, including a description of how the Contractor plans to install the formwork, place and consolidate the patch material behind the formwork, and remove the formwork without damaging the newly placed material.

SD-03 Product Data

Polymer Modified Mortar;
Chemical Grout;
Epoxy Adhesive;
Epoxy Bonding Agent;
Surface Sealer;

Manufacturer's literature, including surface preparation, mixing and application procedures for listed products. One copy of the instructions shall be kept available at the job site at all times while this work is being performed.

1.4 WEATHER LIMITATIONS

1.4.1 Cold Weather

Cold weather concreting shall be in accordance with ACI 306, except as modified herein. When daily low temperatures are below freezing and/or when it is likely that temperatures will be below freezing within seven days of the concrete placement, provide protection, heat, and/or heated materials so as to maintain the concrete at 45 degrees F to 65 degrees F for the complete seven-day curing period. Provide sufficient thermometers, controls, and supervision to ensure that these requirements are being met. Maintain the protection so that concrete does not cool at more than 20 degrees F per 24 hours. Heating devices used shall not blow or radiate intense heat directly at concrete or formwork. Heating devices used shall not discharge products of combustion into enclosures. Maintain the required curing as specified hereinafter.

1.4.2 Hot Weather

Hot weather concreting shall be in accordance with ACI 305, except as modified herein. When weather conditions are such that excessive drying and/or premature set is liable to occur, provide wind screens, shading, and/or cooled materials so as to prevent these conditions and to provide good finishing conditions, as applicable. If crushed ice is used, it must be 100 percent melted before discharge of the materials from the mixer.

1.5 EQUIPMENT

Equipment that is dependable and adequate to accomplish the specified work shall be assembled at the work site in sufficient time before the start of the work to permit thorough inspection, calibration of weighing and measuring devices, adjustment of parts, and the making of any repairs that may be required. The equipment shall be maintained in acceptable working condition during the life of the project.

1.5.1 Sandblasting

Sandblasting equipment shall include an air compressor, hose, and long-wearing venturi-type nozzle of proper size, shape and opening. The maximum nozzle opening shall not exceed 1/4 inch. The air compressor shall be capable of maintaining a line pressure of not less than 90 psi at

the nozzle while in use. The compressor shall be equipped with traps that will maintain the compressed air free of oil and water. The height, angle of inclination and the size of the nozzle shall be adjusted as necessary to provide satisfactory results. The Contractor shall provide protective covers and barriers as required to prevent over-spray onto adjacent surfaces.

1.6 STORAGE OF MATERIALS

Labeling of packages shall clearly define contents, manufacturer, batch identification, etc. Aggregate stockpiles shall be arranged and used in a manner to avoid excessive segregation and to prevent contamination with other materials or with other sizes of aggregates. Epoxy and acrylic modified cement shall be stored in accordance with the manufacturer's recommendations.

PART 2 PRODUCTS

2.1 POLYMER MODIFIED MORTAR (PMM)

Two-component, polymer modified, cement based, surface repair mortar. Mortar shall be a prepackaged commercial formulation consisting of a two-component polymer modified, shrinkage-compensated cementitious system suited for resurfacing distressed concrete surfaces. The mortar shall comply with ACI 548.1.

The prepackaged mortar shall have a standard thickness application range of 1/4 inch to 1 inch. This thickness shall be extendable to 3 inches with the addition of 3/8 inch pea gravel. The mortar, without aggregate extension shall be proportioned to provide a minimum 28-day compressive strength of 7,500 pounds per square inch, when tested in accordance with ASTM C 109, and a minimum 28-day slant shear bond strength of 2,500 psi when tested in accordance with ASTM C 1042.

Color of cured mortar shall be concrete gray. Mortar shall require no bonding agent to be applied to the substrate prior to placing the mortar to achieve the specified performance. Cured mortar shall not produce a vapor barrier. Mortar shall be thermally compatible with existing concrete and be freeze thaw-resistant.

For overhead surfaces and outside surfaces of doors and corbels, use a non-sag PMM specifically recommended by manufacturer for this purpose.

2.2 SILICA FUME CONCRETE

Silica fume concrete shall be in accordance with Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE.

2.3 CHEMICAL GROUT

Chemical grout shall be a polyurethane grout and accelerator system. The grouting compound shall be a hydrophobic polymer of the isocyanate type to be mixed with an accelerator based on tertiary amines with a controlled reaction time of one to 10 minutes depending on the mix preparation. When

the grout is mixed with 0.5% to 5% accelerator, the mixture shall react upon contact with water and expand to five to seven times its original volume and cure to a polyurethane foam. The cured grout shall meet or exceed the following properties:

- (1) Density (ASTM D 3574): 8.75 - 9.17 lbs/gal (1048-1099 Kg/M³).
- (2) Tensile strength (ASTM D 412): 150 psi.
- (3) Elongation (ASTM D 3574): 250%.
- (4) Shrinkage (ASTM D 1042): Less than 4%.
- (5) Toxicity: Non-toxic.

2.4 REINFORCEMENT AND DOWELS

Reinforcement and dowels shall be in accordance with Section 03200 CONCRETE REINFORCEMENT.

2.5 EPOXY ADHESIVE

Epoxy adhesive for bonding dowel bars to holes in concrete shall meet the requirements of ASTM C 881, Type 1, Grade 1. The appropriate Class shall be used for the temperature conditions during the work. The material shall be a two-component, 100 percent solids, low viscosity, water insensitive material specially suited for grouting steel reinforcement. The adhesive shall meet or exceed the following properties: flexural strength of 10,000 pounds per square inch in accordance with ASTM D 790 and bond strength of 500 pounds per square inch in accordance with ASTM C 321.

2.6 EPOXY BONDING AGENT

Epoxy bonding agent shall meet the requirements of ASTM C 881, Type 1, Grade 2. The appropriate Class shall be used for the temperature conditions during the work. The material shall be a two-component, 100 percent solids, water insensitive material specially suited for bonding fresh, plastic concrete to hardened concrete and steel. The bonding agent shall meet or exceed the following properties: flexural strength of 7,000 pounds per square inch in accordance with AASTM D 790 and bond strength of 500 pounds per square inch in accordance with ASTM C 321.

2.7 WATERSTOPS

PVC and hydrophilic waterstops shall be in accordance with Section 03150 EXPANSION JOINTS AND WATERSTOPS.

2.8 JOINT FILLER

Joint filler and seal caps shall be in accordance with Section 03150 EXPANSION JOINTS AND WATERSTOPS.

2.9 JOINT SEALANT

Elastomeric joint sealant, including backing, shall be in accordance with Section 07900 JOINT SEALING.

2.10 SURFACE SEALER

High molecular weight methacrylate (HMWM), 2-component, rapid curing, solvent-free, crack healer/penetrating sealer. The maximum viscosity of the methacrylate monomer shall not exceed 25 cps at 73 degrees F. Bond strength at 2 days shall be at least 2,000 psi when dry cured and tested in accordance with ASTM C 882. Sand for covering the High Molecular Weight Methacrylate shall meet the quality and grading requirements of aggregate for masonry mortar per ASTM C 144.

2.11 WATER

Water shall be fresh and free from injurious amount of oil, acid, salt, alkali, organic matter, or other deleterious substances. Water shall be potable. River water shall not be used.

PART 3 EXECUTION

3.1 SURFACE REPAIR

3.1.1 Surface Preparation

Approximate locations and areas of concrete surface repair are indicated on the drawings. The Contractor shall sound the concrete surfaces indicated for repair in the presence of the Contracting Officer to determine the actual extent of concrete removal required. Actual locations and limits of deteriorated concrete shall be determined by visual inspection and by rapping with a hammer or 5/8 inch steel rod. A dull or hollow sound from the rapping shall indicate that the concrete is defective. The Contractor shall mark the lines on the concrete that shall be the limits of concrete removal as approved by the Contracting Officer. Limits of repair will be as shown on the drawings or as otherwise directed, based on the above methods. Saw-cut perimeter of areas to be repaired and remove all deteriorated concrete. Sawing shall be in accordance with CSDA F-102 and CSDA W-104, and removal shall be by chipping hammers or other approved means. The depth of removal shall be as approved by the Contracting Officer, but not less than the minimum as required by the PMM manufacturer, nor more than is required to reach sound concrete. After removal of unsound concrete, surfaces shall be thoroughly cleaned with sandblasting, unless otherwise approved. Surface cleaning shall be done from the top towards the bottom on vertical surface repairs and shall be continued until all debris and loose fragments are removed. After sandblasting, the surface shall be rinsed with clean water. Care shall be taken so that the sandblasting does not leave a polished surface. Prepared surface shall have a minimum profile of plus or minus 1/16 inch.

3.1.2 Existing Reinforcement Preparation

Existing reinforcing shall be preserved during concrete removal. Where existing steel reinforcement is exposed, remove concrete to a clearance of 1 inch around steel. Blast clean exposed reinforcing in accordance with SSPC SP-6. Do not allow new rust to form on reinforcing before surface repair is completed.

3.1.3 Anchor Dowel Installation

Install anchors using epoxy adhesive in accordance with the adhesive manufacturer's recommendations.

3.1.4 Mixing PMM

PMM shall be mixed mechanically in an appropriate sized mortar mixer and in quantities that can be placed within 30 minutes, or less if recommended by the manufacturer. For repairs greater than 1 inch in depth add pea gravel at a rate not exceeding 42 pounds per 0.5 cu ft of mortar.

3.1.5 Placing PMM

Concrete surfaces against which PMM is to be placed shall be damp with no glistening water evident at the time of application. Surfaces shall be between 50 F and 80 F at the time of placement. Use appropriate formwork where required. Scrub PMM into substrate, filling pores and voids. Force PMM against edge of repair, working toward center. After filling repair, consolidate, then screed. Corner repairs shall re-establish original corner shape. Allow PPM to set to required stiffness, then finish to match adjacent concrete surface.

3.1.6 Curing PMM

Curing and finishing shall be in accordance with the manufacturer's instructions. Unless otherwise specified, PMM shall be cured for a minimum of 24 hours using wet burlap, polyethylene sheeting, or a nonsolvent PMM compatible curing compound. The newly placed PMM shall be maintained at 50 F for at least the first 24 hours and protected from freezing for an additional four days. Do not use membrane forming curing compound on surfaces designated to receive surface sealer.

3.2 JOINT REPAIR WITH SILICA FUME CONCRETE

3.2.1 Surface Preparation

Types and locations of concrete joint repair are indicated on the drawings.

The exact limits of concrete to be removed shall be as approved by the Contracting Officer. Saw-cut perimeter of areas to be repaired and remove concrete. Sawing shall be in accordance with CSDA F-102 and CSDA W-104, and removal shall be by chipping hammers or other approved means. The depth of sawcutting and concrete removal shall be as indicated on the drawings. After removal of concrete, surfaces shall be thoroughly cleaned with sandblasting, unless otherwise approved. Surface cleaning shall be continued until all debris and loose fragments are removed. After sandblasting, the surface shall be rinsed with clean water. Care shall be taken so that the sandblasting does not leave a polished surface. Prepared surface shall have a minimum profile of plus or minus 1/16 inch.

3.2.2 Anchor Dowel Installation

Install anchors using epoxy adhesive in accordance with the adhesive manufacturer's recommendations.

3.2.3 Waterstops Installation

Waterstops shall be installed in accordance with Section 03150 EXPANSION JOINTS AND WATERSTOPS.

3.2.4 Expansion Joint Filler Installation

Expansion joint filler and seal caps shall be installed in accordance with Section 03150 EXPANSION JOINTS AND WATERSTOPS.

3.2.5 Applying Bonding Agent

Where designated on drawings, apply bonding agent to existing concrete in accordance with manufacturer's recommendations. Place fresh concrete while bonding agent is still tacky.

3.2.6 Placing Silica Fume Concrete

Silica fume concrete shall be placed and cured in accordance with Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE. Before placing concrete, apply a scrub coat of silica fume concrete to existing concrete surfaces that will be in contact with new concrete. After placing concrete, finish surface to match adjacent concrete surfaces.

3.2.7 Sealing Joints

Where indicated on drawings, install elastomeric joint sealant in accordance with Section 07900 JOINT SEALING.

3.3 JOINT REPAIR WITH CHEMICAL GROUT

3.3.1 Surface Preparation

Remove loose, disintegrating joint filler and concrete at joints to be repaired.

3.3.2 Placing Backer Rod

Saturate backer rod with chemical grout and place in joint where indicated on the drawings. In apron expansion joint, activate first (lower) backer rod with water and let stand for 1 hour. In apron and upstream crest joints, activate upper (second) backer rod with water and let stand for 12 hours before injecting chemical grout.

3.3.3 Placing Chemical Grout

Mix and inject chemical grout in accordance with manufacturer's recommendations to fill annular space between backer rods. Begin injection at lowest point of joint to be repaired.

3.3.4 Sealing Joints

Elastomeric joint sealant shall be installed in accordance with Section 07900 JOINT SEALING.

3.4 SURFACE SEALER APPLICATION

Surface to receive sealer shall be thoroughly cleaned by sandblasting to remove dust, laitance, grease, oils, coatings and other foreign material. The substrate shall be clean and dry prior to application of HMWM. Apply in accordance with manufacturer's directions. Typical directions require application by roller, squeegee or broom then, let material penetrate into cracks and substrate. Remove excess leaving no visible surface film. For cracks greater than 1/8 inch wide, fill crack with oven-dried sand before applying HMWM. Apply a second treatment of HMWM evenly over the surface and then wait approximately 20 minutes at 73 degrees F, cover with light broadcast of a dry masonry sand. Distribute evenly over the surface at a rate of 15 to 20 pounds/100 square feet. After a curing period of 12 hours at 73 degrees F, remove any loose sand by lightly brooming.

3.5 TESTING PMM

Test specimens shall be prepared in sets of three 3 inch by 6 inch cylinders, in accordance with ASTM C 31/C 31M, taken from the mixes of each day's placement. Testing shall be in accordance with ASTM C 39. Of each set of three cylinders made, one shall be tested at three days and two at 28 days. Testing shall be performed by an independent testing laboratory at the expense of the Contractor. Test specimens shall have a compressive strength of not less than 4,000 psi at three days and not less than 7,500 psi at 28 days.

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SECTION 03930

CONCRETE CRACK AND INTERIOR JOINT REPAIR

PART 1 GENERAL

1.1 SCOPE

This section covers requirements for structural crack sealing and sealing of leaking cracks and joints on interior of structure.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 321	(2000) Bond Strength of Chemical-resistant Mortars
ASTM C 881	(1999) Epoxy-Resin-Base Bonding Systems for Concrete
ASTM D 790	(2000) Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D 1042	(1993) Linear Dimensional Changes of Plastics Under Accelerated Service Conditions
ASTM D 3574	(1995) Flexible Cellular Materials - Slab, Bonded, and Molded Urethane Foams

1.3 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-03 Product Data

Epoxy injection material;

Hydrophilic sealant;

Submit the manufacturer's technical data for injection materials. The technical data shall include description of equipment and

installation procedures for the injection work.

SD-07 Certificates

Epoxy injection material;

Hydrophilic sealant;

Prior to use of injection materials, submit a certificate of compliance from manufacturer for each product proposed for use in the contract work stating that the injection material complies with the contract requirements for the material. Certificates shall include actual test results of each injection material proposed.

1.4 CONTRACTOR QUALIFICATIONS

1.4.1 Applicator's Qualifications

Each applicator engaged in the injection process contract work shall have a minimum of five years of documented experience in successful injection repair projects on concrete structural components.

1.4.2 Worker's Qualifications

Each worker engaged in the injection process contract work shall have satisfactorily completed an instruction program in the methods of restoring concrete structures utilizing the specific injection process required. The instruction curriculum shall have included theory on the nature and causes of cracking in concrete, methods for permanently repairing damaged structural members, the technical aspects of correct material selection and use, and the operation, maintenance, and troubleshooting of equipment used in the repair work.

1.4.3 Worker's Experience

Each worker engaged in the operation of the injection equipment for the contract work shall have a minimum of three years of experience in the operation of the equipment. Workers shall have participated in a minimum of five documented concrete repair projects.

1.5 DELIVERY AND STORAGE

Injection materials shall be delivered to the project work site in clearly labeled, unopened containers. Each label shall clearly indicate:

- (1) Manufacturer's name and address.
- (2) Manufacturer's product name or product number.
- (3) Manufacturer's lot number.
- (4) Mix ratio.
- (5) SPI hazardous material rating and appropriate warnings for handling.

PART 2 PRODUCTS

2.1 EPOXY INJECTION MATERIAL

Epoxy injection material shall meet the requirements of ASTM C 881, Type 1, Grade 1. The appropriate Class shall be used for the temperature conditions during the work. The material shall be a two-component, 100 percent solids, low viscosity, water insensitive material specially suited to injection for sealing of concrete cracks and joints. The cured injection material shall meet or exceed the following properties: flexural strength of 10,000 pounds per square inch in accordance with ASTM D 790 and bond strength of 500 pounds per square inch in accordance with ASTM C 321.

2.2 HYDROPHILIC SEALANT (INJECTION MATERIAL)

Injection material shall be a hydrophilic, liquid polyurethane injection resin designed to seal leaks in concrete structures. Material shall be a one-component, minimum 85 percent solids, low viscosity material. When injection material contacts water, it shall expand to form a tough, flexible foam seal that can not be penetrated by water. The cured injection material shall meet or exceed the following properties:

- (1) Tensile Strength (ASTM D 3574): 380 p.s.i.
- (2) Elongation (ASTM D 3574): 200%.
- (3) Shrinkage (ASTM D 1042): Less than 10%.

PART 3 EXECUTION

3.1 STRUCTURAL CRACK REPAIR

3.1.1 Limits

Structural cracks shall be repaired using epoxy injection material. The location of cracks to be repaired is indicated on the drawings. Only those cracks shown on the drawings or as approved by the Contracting Officer shall be injected.

3.1.2 Equipment

3.1.2.1 Type

Equipment used to meter and mix the two injection material components and inject the mixed material into the cracks shall be a nozzle head mixing and positive displacement type.

3.1.2.2 Discharge Pressure

Injection equipment shall have capability of discharging the mixed material at any pre-set pressure up to 300 pounds per square inch and maintaining that pressure. The mixing head of the injection lines shall be attached to a pressure check device. The pressure check device shall consist of two independent valved nozzles capable of controlling flow rate and pressure by opening or closing the valve. There shall be a pressure gage capable of sensing the pressure buildup behind each valve.

3.1.2.3 Volume Ratio Tolerance

Equipment shall be capable of maintaining the volume ratio for the material prescribed by the injection material manufacturer within + 5 percent by volume at any discharge pressure up to 300 pounds per square inch. The ratio check device shall consist of two independent valved nozzles capable of controlling flow rate and back pressure by opening or closing the valve to restrict material flow. The equipment shall have a pressure gage capable of sensing the back pressure behind each valve.

3.1.3 Procedure

3.1.3.1 Crack Preparation

Prior to sealing surfaces, the concrete surface along each crack shall be cleaned of loose matter, dirt, laitance, oil, grease, salt, and other contaminants. Where indicated on drawings, route cracks to the dimension indicated prior to repair. The manufacturer's recommendations shall be followed for cleaning each area to receive the injection material. The surfaces shall be sealed with manufacturer's recommended material to contain the injection material.

3.1.3.2 Injection

Injection shall not proceed unless the temperature of the concrete to receive the injection material is at least 40 F. Openings in the surface seal for the entry ports shall be established along the crack. The distance between the entry ports shall be not less than 6 inches nor greater than 18 inches. Injection of the injection material into each crack shall begin at the entry port at the lower end of the crack and proceed in an upward direction. Injection shall continue at the first port until the injection material appears at the next adjacent port. The first port shall then be plugged and injection started at the second port until the injection material appears at the next port. The entire crack shall be injected in the same sequence.

3.1.3.3 Finishing

Curing of the injection material shall be in accordance with the manufacturer's recommendations, except that the ambient temperature shall not be less than 40 F. After the injection material has cured, the surface seal and special fittings shall be removed. The surface along the crack shall be ground flush. Indentations and protrusions caused by placement of the entry ports or other causes shall be removed.

3.1.4 Testing

At all times during the course of the contract work, complete and accurate records shall be kept and made available to the Contracting Officer. The Contractor shall conduct additional tests of the volume ratio and pressure in the Contracting Officer's presence if requested.

3.1.4.1 Pressure Test

The valves on the pressure check device shall be closed and the equipment operated until the gage pressure on each line reads 300 pounds per square inch; the pumps shall then be stopped and the gage pressure shall not drop below 190 pounds per square inch for at least 3 minutes. The pressure check test shall be run for each injection unit at the beginning and at the end of each day that the unit is used in the contract work.

3.1.4.2 Volume Ratio Test

The mixing head of the injection equipment shall be disconnected and the two injection material components shall be pumped simultaneously through the ratio check device. The discharge pressure shall be adjusted to 300 pounds per square inch for both injection material components. Both injection material components shall be simultaneously discharged into separate calibrated containers. The amounts discharged into the calibrated container simultaneously during the same time period shall be compared to determine the mix ratio. The ratio test shall be run for each injection unit at the beginning and at the end of every day that the unit is used in the work.

3.1.4.3 Hardness Test

During the first day of crack injection after sufficient time that operation conditions are typical of flow rates and pressures used for the project, Contractor shall conduct a Durometer (hardness) check of dispensed product. The sample shall be of sufficient volume such that it hardens soon without excessive thermal distortion. The hardness of the sample shall be compared to the hardness of an exact same volume manually measured sample. Samples shall be tested with a Durometer. If hardness of equipment prepared sample is not comparable to manually prepared sample, make adjustments to equipment. Test of equipment shall be repeated after equipment maintenance or when other tests indicate equipment malfunction.

3.1.4.4 Core Sampling and Testing

Contractor shall collect concrete cores every 50 feet of structurally repaired crack. Cores shall be 2 inch in diameter and be long enough to bisect the repaired section of crack. Core locations will be approved by COR before collection and shall be collected after epoxy has had sufficient time to set. Cores shall be inspected immediately upon extraction and then demolished and examined. If cracks are not sufficiently filled, Contractor shall propose corrective action. Where cores are taken, fill holes with epoxy mortar.

3.2 LEAKING CRACK AND JOINT REPAIR

3.2.1 Limits

Leaking cracks and joints shall be repaired using hydrophilic sealant (injection material). The location of cracks and joints to be repaired is indicated on the drawings. Only those cracks and joints shown on the drawings or as approved by the Contracting Officer shall be injected.

3.2.2 Procedure

3.2.2.1 Crack/Joint Preparation

Clean the surface of the crack/joint. All loose or unsound material shall be removed. Drill injection port holes at at 45 degree angle to intersect the crack/joint at approximately 1/2 the depth of the structure. Determine hole spacing as recommended by injection material manufacturer. Clean the holes out by injecting water through a wand that will reach the back of the hole. Inject until clean water is flowing out of the hole. Insert injection ports flush into the port holes. Leave the tops off the ports. Put the tip on the first port, beginning in sequence with the lowest, and inject clean water into the port at 250 p.s.i. minimum. Continue until air and water begins to flow out of the crack and out of the other ports. Complete this step for every port. Apply surface seal as recommended by injection material manufacturer.

3.2.2.2 Injection

Remove the tips from all of the ports except the first one to be injected. Use a different pump for injection material than the one used to pump the water. Starting with the first port, pump the injection material at a pressure of 250 p.s.i. minimum. Increase the pressure at 100 p.s.i. increments as needed to gain full penetration of the crack/joint. Always use the lowest pressure possible to inject the crack/joint. Comply with manufacturer's pressure recommendations for the size of crack/joint being repaired. Once the material has fully penetrated the crack/joint or begins to flow out of the next port, put the tip on the next port and begin pumping. Repeat this process until the entire crack/joint has been pumped.

3.2.2.3 Finishing

Curing of the injection material shall be in accordance with the manufacturer's recommendations, except that the ambient temperature shall not be less than 40 F. After the injection material has cured, the surface seal and special fittings shall be removed. The surface along the crack/joint shall be ground flush. Indentations and protrusions caused by placement of the entry ports or other causes shall be removed.

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SECTION 05500

METAL FABRICATIONS

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	(1997ael) Carbon Structural Steel
ASTM A 123/A 123M	(1997ael) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 653/A 653M	(1999) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 924/A 924M	(1999) General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM E 488	(1996) Strength of Anchors in Concrete and Masonry Elements

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1	(1998) Structural Welding Code - Steel
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1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Steel Angles; G, STR

Detail drawings indicating material thickness, type, grade, and class; dimensions; and construction details. Drawings shall include catalog cuts, erection details, manufacturer's descriptive

data and installation instructions, and templates.

SD-03 Product Data

Adhesive Anchors; G, STR

Manufacturer's product data for anchors showing compliance with the specified requirements.

1.3 GENERAL REQUIREMENTS

The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with AWS D1.1. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip galvanized after fabrication. Galvanizing shall be in accordance with ASTM A 123/A 123M, ASTM A 653/A 653M, or ASTM A 924/A 924M, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Poor matching of holes for fasteners shall be cause for rejection.

1.4 WORKMANSHIP

Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved, exposed riveting shall be flush. Where tight fits are required, joints shall be milled. Corner joints shall be coped or mitered, well formed, and in true alignment. Work shall be accurately set to established lines and elevations and securely fastened in place. Installation shall be in accordance with manufacturer's installation instructions and approved drawings, cuts, and details.

PART 2 PRODUCTS

2.1 STEEL ANGLES

Steel angles shall be fabricated from structural carbon steel, ASTM A 36/A 36M, galvanized after fabrication.

2.2 ADHESIVE ANCHORS

Provide stainless steel, epoxy adhesive anchors of diameter indicated on drawings. Minimum concrete embedment shall be as shown on drawings. Design values listed shall be as tested according to ASTM E 488.

- a. Minimum allowable pullout value shall be 2,340 lb.
- b. Minimum allowable shear value shall be 1,875 lb.

PART 3 EXECUTION

3.1 INSTALLATION REQUIREMENTS

All items shall be installed at the locations shown. Adhesive anchors shall be installed according to the manufacturer's recommendations.

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SECTION 07900

JOINT SEALING

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 C 509	(1994) Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM C 920	(1998) Elastomeric Joint Sealants
ASTM D 412	(1998a) Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension
ASTM D 1056	(1998) Flexible Cellular Materials - Sponge or Expanded Rubber

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Backing;

Bond-Breaker;

Primer;

Sealant;

Manufacturer's descriptive data including storage requirements, shelf life, curing time, instructions for mixing and application, and primer data. A copy of the Material Safety Data Sheet shall be provided for each solvent, primer or sealant material.

SD-07 Certificates

Sealant;

Certificates of compliance stating that the materials conform to the specified requirements.

1.3 ENVIRONMENTAL REQUIREMENTS

The ambient temperature shall be within the limits of 40 to 90 degrees F when the sealants are applied.

1.4 DELIVERY AND STORAGE

Materials shall be delivered to the job in the manufacturer's original unopened containers. The container label or accompanying data sheet shall include the following information as applicable: manufacturer, name of material, formula or specification number, lot number, color, date of manufacture, mixing instructions, shelf life, and curing time at the standard conditions for laboratory tests. Materials shall be handled and stored to prevent inclusion of foreign materials. Materials shall be stored at temperatures between 40 and 90 degrees F unless otherwise specified by the manufacturer.

PART 2 PRODUCTS

2.1 BACKER ROD

Backer rod shall be twice the diameter of the joint or crack.

2.1.1 Rubber

Cellular rubber sponge backing shall be ASTM D 1056, Type 2, closed cell, Class A, Grade as suitable for application, round cross section.

2.1.2 Synthetic Rubber

Synthetic rubber backing shall be ASTM C 509, Option I, Type I preformed rods.

2.1.3 Neoprene

Neoprene backing shall be ASTM D 1056, closed cell expanded neoprene cord Type 2, Class C, Grade 2C2.

2.2 BOND-BREAKER

Bond-breaker shall be as recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

2.3 PRIMER

Primer shall be non-staining type as recommended by sealant manufacturer for the application.

2.4 JOINT SEALANT

2.4.1 Polyurethane Sealant

Sealant for vertical and sloped surfaces shall be two-component polyurethane conforming to ASTM C 920, Type M, Grade NS (vertical and sloped joints), Class 25, Use NT.

2.4.2 Polyurea Sealant

Sealant for horizontal surfaces shall be two-component, self-leveling, 100 percent solids, polyurea joint sealant capable of accommodating movement of up to +/- 25 percent of installed joint width. Installed product shall have a tensile strength (ASTM D 412) of 500 psi, elongation of 800 percent and hardness (Shore A) of 40.

2.5 SOLVENTS AND CLEANING AGENTS

Solvents, cleaning agents, and accessory materials shall be provided as recommended by the manufacturer.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Surface Preparation

The surfaces of joints to receive sealant shall be free of all frost, condensation and moisture. Oil, grease, dirt, chalk, particles of mortar, dust, loose rust, loose mill scale, and other foreign substances shall be removed from surfaces of joints to be in contact with the sealant. Oil and grease shall be removed with solvent and surfaces shall be wiped dry with clean cloths. For surface types not listed below, the sealant manufacturer shall be contacted for specific recommendations.

3.1.2 Concrete Surfaces

Where surfaces have been treated with curing compounds, oil, or other such materials, the materials shall be removed by sandblasting or wire brushing. Laitance, efflorescence and loose mortar shall be removed from the joint cavity.

3.2 APPLICATION

3.2.1 Masking Tape

Masking tape may be placed on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Masking tape shall be removed within 10 minutes after joint has been filled and tooled.

3.2.2 Backing

Backing shall be installed to provide the indicated sealant depth. The installation tool shall be shaped to avoid puncturing the backing.

3.2.3 Bond-Breaker

Bond-breaker shall be applied to fully cover the bottom of the joint without contaminating the sides where sealant adhesion is required.

3.2.4 Primer

Primer shall be used on all surfaces in accordance with instructions furnished with the sealant. Primer shall be applied to the joint surfaces to be sealed. Surfaces adjacent to joints shall not be primed.

3.2.5 Sealant

Sealant shall be used before expiration of shelf life. Multi-component sealants shall be mixed according to manufacturer's printed instructions. Sealant in guns shall be applied with a nozzle of proper size to fit the width of joint. Joints shall be sealed as detailed in the drawings. Sealant shall be forced into joints with sufficient pressure to expel air and fill the groove solidly. Sealant shall be installed to the indicated depth without displacing the backing. Unless otherwise indicated, specified, or recommended by the manufacturer, the installed sealant shall be dry tooled to produce a uniformly smooth surface free of wrinkles and to ensure full adhesion to the sides of the joint; the use of solvents, soapy water, etc., will not be allowed. Sealants shall be installed free of air pockets, foreign embedded matter, ridges and sags. Sealer shall be applied over the sealant when and as specified by the sealant manufacturer.

3.3 CLEANING

The surfaces adjoining the sealed joints shall be cleaned of smears and other soiling resulting from the sealant application as work progresses.

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SECTION 16415

ELECTRICAL WORK

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C78.1 (1991; C78.1a; R 1996) Fluorescent Lamps - Rapid-Start Types - Dimensional and Electrical Characteristics

ANSI C82.1 (1997) Specifications for Fluorescent Lamp Ballasts

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B 1 (1995) Hard-Drawn Copper Wire

ASTM B 8 (1999) Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft

ASTM D 709 (1992; R 1997) Laminated Thermosetting Materials

CODE OF FEDERAL REGULATIONS (CFR)

47 CFR 18 Industrial, Scientific, and Medical Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C62.41 (1991; R 1995) Surge Voltages in Low-Voltage AC Power Circuits

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA AB 1 (1993) Molded Case Circuit Breakers and Molded Case Switches

NEMA FU 1 (1986) Low Voltage Cartridge Fuses

NEMA ICS 1 (1993) Industrial Control and Systems

NEMA ICS 2 (1993) Industrial Control and Systems
 Controllers, Contactors, and Overload
 Relays Rated Not More Than 2,000 Volts AC
 or 750 Volts DC

NEMA ICS 3 (1993) Industrial Control and Systems
 Factory Built Assemblies

NEMA ICS 6 (1993) Industrial Control and Systems
 Enclosures

NEMA LE 4 (1987) Recessed Luminaires, Ceiling
 Compatibility

NEMA OS 1 (1996) Sheet-Steel Outlet Boxes, Device
 Boxes, Covers, and Box Supports

NEMA PB 1 (1995) Panelboards

NEMA RN 1 (1989) Polyvinyl-Chloride (PVC) Externally
 Coated Galvanized Rigid Steel Conduit and
 Intermediate Metal Conduit

NEMA ST 20 (1992) Dry-Type Transformers for General
 Applications

NEMA WD 1 (1983; R 1989) General Requirements for
 Wiring Devices

NEMA WD 6 (1988) Wiring Devices - Dimensional
 Requirements

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1999) National Electrical Code

NFPA 101 (1997; Errata 97-1; TIA 97-1) Life Safety
 Code

UNDERWRITERS LABORATORIES (UL)

UL 1 (1993; Rev thru Jan 1995) Flexible Metal
 Conduit

UL 20 (1995; Rev thru Oct 1998) General-Use Snap
 Switches

UL 44 (1997; Rev Mar 1999) Thermoset-Insulated
 Wires and Cables

UL 50 (1995; Rev thru Oct 1997) Enclosures for
 Electrical Equipment

UL 67 (1993; Rev thru Nov 1995) Panelboards

UL 83 (1998) Thermoplastic-Insulated Wires and Cables

UL 98 (1994; R thru Jun 1998) Enclosed and Dead-Front Switches

UL 360 (1996; Rev thru Oct 1997) Liquid-Tight Flexible Steel Conduit

UL 467 (1993; Rev thru Aug 1996) Grounding and Bonding Equipment

UL 486A (1997; Rev thru Dec 1998) Wire Connectors and Soldering Lugs for Use with Copper Conductors

UL 486C (1997; Rev thru Aug 1998) Splicing Wire Connectors

UL 486E (1994; Rev thru Feb 1997) Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors

UL 489 (1996; Rev thru Dec 1998) Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures

UL 506 (1994; Rev Oct 1997) Specialty Transformers

UL 508 (1999) Industrial Control Equipment

UL 510 (1994; Rev thru Apr 1998) Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape

UL 512 (1993; R Dec 1995) Fuseholders

UL 514A (1996; Rev Jul 1998) Metallic Outlet Boxes

UL 514B (1997; Rev Oct 1998) Fittings for Cable and Conduit

UL 542 (1994; Rev thru Jul 1998) Lampholders, Starters, and Starter Holders for Fluorescent Lamps

UL 844 (1995; Rev thru Aug 1997) Electric Lighting Fixtures for Use in Hazardous (Classified) Locations

UL 845 (1995; Rev Feb 1996) Motor Control Centers

UL 854	(1996; Rev Apr 1998) Service-Entrance Cables
UL 877	(1993; Rev thru May 1997) Circuit Breakers and Circuit-Breaker Enclosures for Use in Hazardous (Classified) Locations
UL 935	(1995; Rev thru Oct 1998) Fluorescent-Lamp Ballasts
UL 943	(1993; Rev thru May 1998) Ground-Fault Circuit-Interrupters
UL 1570	(1995; Rev thru Jun 1997) Fluorescent Lighting Fixtures
UL 1660	(1994; Rev Apr 1998) Liquid-Tight Flexible Nonmetallic Conduit
UL Elec Const Dir	(1998) Electrical Construction Equipment Directory

1.2 GENERAL

1.2.1 Rules

The installation shall conform to the requirements of NFPA 70 and NFPA 101, unless more stringent requirements are indicated or shown.

1.2.2 Coordination

The drawings indicate the extent and the general location and arrangement of equipment, conduit, and wiring. The Contractor shall become familiar with all details of the work and verify all dimensions in the field so that the outlets and equipment shall be properly located and readily accessible.

Lighting fixtures, outlets, and other equipment and materials shall be carefully coordinated with mechanical or structural features prior to installation and positioned according to architectural reflected ceiling plans; otherwise, lighting fixtures shall be symmetrically located according to the room arrangement when uniform illumination is required, or asymmetrically located to suit conditions fixed by design and shown. Raceways, junction and outlet boxes, and lighting fixtures shall not be supported from sheet metal roof decks. If any conflicts occur necessitating departures from the drawings, details of and reasons for departures shall be submitted and approved prior to implementing any change. The Contractor shall coordinate the electrical requirements of the mechanical work and provide all power related circuits, wiring, hardware and structural support, even if not shown on the drawings.

1.2.3 Special Environments

1.2.3.1 Weatherproof Locations

Wiring, Fixtures, and equipment in designated locations shall conform to

NFPA 70 requirements for installation in damp or wet locations.

1.2.4 Standard Products

Material and equipment shall be a standard product of a manufacturer regularly engaged in the manufacture of the product and shall essentially duplicate items that have been in satisfactory use for at least 2 years prior to bid opening.

1.2.5 Nameplates

1.2.5.1 Identification Nameplates

Major items of electrical equipment and major components shall be permanently marked with an identification name to identify the equipment by type or function and specific unit number as indicated. Designation of motors shall coincide with their designation in the motor control center or panel. Unless otherwise specified, identification nameplates shall be made of laminated plastic in accordance with ASTM D 709 with black outer layers and a white core. Edges shall be chamfered. Plates shall be fastened with black-finished round-head drive screws, except motors, or approved nonadhesive metal fasteners. When the nameplate is to be installed on an irregular-shaped object, the Contractor shall devise an approved support suitable for the application and ensure the proper installation of the supports and nameplates. In all instances, the nameplate shall be installed in a conspicuous location. At the option of the Contractor, the equipment manufacturer's standard embossed nameplate material with black paint-filled letters may be furnished in lieu of laminated plastic. The front of each panelboard, motor control center, switchgear, and switchboard shall have a nameplate to indicate the phase letter, corresponding color and arrangement of the phase conductors. The following equipment, as a minimum, shall be provided with identification nameplates:

Minimum 1/4 inch
High Letters

Minimum 1/8 inch
High Letters

Panelboards
Safety Switches
Transformers
Equipment Enclosures

Each panel or similar assemblies shall be provided with a nameplate in addition to nameplates listed above, which shall be provided for individual compartments in the respective assembly, including nameplates which identify "future," "spare," and "dedicated" or "equipped spaces."

1.2.6 As-Built Drawings

Following the project completion or turnover, within 30 days the Contractor shall furnish 2 sets of as-built drawings to the Contracting Officer.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation;

submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Interior Electrical Equipment; G, EE

Detail drawings consisting of equipment drawings, illustrations, schedules, instructions, diagrams, and other information necessary to define the installation. Detail drawings shall show the rating of items and systems and how the components of an item and system are assembled, function together, and how they will be installed on the project. Data and drawings for component parts of an item or system shall be coordinated and submitted as a unit. Data and drawings shall be coordinated and included in a single submission.

Multiple submissions for the same equipment or system are not acceptable except where prior approval has been obtained from the Contracting Officer. In such cases, a list of data to be submitted later shall be included with the first submission. Detail drawings shall show physical arrangement, construction details, connections, finishes, materials used in fabrication, provisions for conduit or busway entrance, access requirements for installation and maintenance, physical size, electrical characteristics, foundation and support details, and equipment weight. Drawings shall be drawn to scale and/or dimensioned. Optional items shall be clearly identified as included or excluded. Detail drawings shall as a minimum include:

- a. Transformers.
- b. Light fixtures, exit signs, lamps.
- c. Circuit breakers.
- d. Conduit and fittings.
- e. Wire.

Structural drawings showing the structural or physical features of major equipment items, components, assemblies, and structures, including foundations or other types of supports for equipment and conductors. These drawings shall include accurately scaled or dimensioned outline and arrangement or layout drawings to show the physical size of equipment and components and the relative arrangement and physical connection of related components. Weights of equipment, components and assemblies shall be provided when required to verify the adequacy of design and proposed construction of foundations or other types of supports. Dynamic forces shall be stated for switching devices when such forces must be considered in the design of support structures. The appropriate detail drawings shall show the provisions for leveling, anchoring, and connecting all items during installation,

and shall include any recommendations made by the manufacturer.

Electrical drawings including single-line and three-line diagrams, and schematics or elementary diagrams of each electrical system; internal wiring and field connection diagrams of each electrical device when published by the manufacturer; wiring diagrams of cabinets, panels, units, or separate mountings; interconnection diagrams that show the wiring between separate components of assemblies; field connection diagrams that show the termination of wiring routed between separate items of equipment; internal wiring diagrams of equipment showing wiring as actually provided for this project. Field wiring connections shall be clearly identified.

If departures from the contract drawings are deemed necessary by the Contractor, complete details of such departures, including changes in related portions of the project and the reasons why, shall be submitted with the detail drawings. Approved departures shall be made at no additional cost to the Government.

SD-03 Product Data

Manufacturer's Catalog; G, EE.

Data composed of catalog cuts, brochures, circulars, specifications, product data, and printed information in sufficient detail and scope to verify compliance with the requirements of the contract documents.

Material, Equipment, and Fixture Lists; G, EE.

A complete itemized listing of equipment and materials proposed for incorporation into the work. Each entry shall include an item number, the quantity of items proposed, and the name of the manufacturer of each item.

Installation Procedures; G, EE.

Installation procedures for rotating equipment, transformers, switchgear, battery systems, voltage regulators, and grounding resistors. Procedures shall include diagrams, instructions, and precautions required to install, adjust, calibrate, and test devices and equipment.

As-Built Drawings;

The as-built drawings shall be a record of the construction as installed. The drawings shall include all the information shown on the contract drawings, deviations, modifications, and changes from the contract drawings, however minor. The as-built drawings shall be kept at the job site and updated daily. The as-built drawings shall be a full-sized set of prints marked to reflect all deviations, changes, and modifications. The as-built drawings shall be complete and show the location, size, dimensions, part

identification, and other information. Additional sheets may be added. The as-built drawings shall be jointly inspected for accuracy and completeness by the Contractor's quality control representative and by the Contracting Officer prior to the submission of each monthly pay estimate. Upon completion of the work, the Contractor shall submit three full sized sets of the marked prints to the Contracting Officer for approval. If upon review, the as-built drawings are found to contain errors and/or omissions, they will be returned to the Contractor for correction.

The Contractor shall correct and return the as-built drawings to the Contracting Officer for approval within ten calendar days from the time the drawings are returned to the Contractor.

SD-07 Certificates

Materials and Equipment;

The label or listing of the Underwriters Laboratories, Inc., will be accepted as evidence that the materials or equipment conform to the applicable standards of that agency. In lieu of this label or listing, a statement from a nationally recognized, adequately equipped testing agency indicating that the items have been tested in accordance with required procedures and that the materials and equipment comply with all contract requirements will be accepted. However, materials and equipment installed in hazardous locations must bear the UL label unless the data submitted from other testing agency is specifically approved in writing by the Contracting Officer. Items which are required to be listed and labeled in accordance with Underwriters Laboratories must be affixed with a UL label that states that it is UL listed. No exceptions or waivers will be granted to this requirement. Materials and equipment will be approved based on the manufacturer's published data.

For other than equipment and materials specified to conform to UL publications, a manufacturer's statement indicating complete compliance with the applicable standard of the American Society for Testing and Materials, National Electrical Manufacturers Association, or other commercial standard, is acceptable.

1.4 WORKMANSHIP

Materials and equipment shall be installed in accordance with NFPA 70, recommendations of the manufacturer, and as shown.

PART 2 PRODUCTS

Products shall conform to the respective publications and other requirements specified below. Materials and equipment not listed below shall be as specified elsewhere in this section. Items of the same classification shall be identical including equipment, assemblies, parts, and components.

2.1 CABLES AND WIRES

Conductors No. 8 AWG and larger diameter shall be stranded. Conductors No. 10 AWG and smaller diameter shall be solid, except that conductors for remote control, alarm, and signal circuits, classes 1, 2, and 3, shall be stranded unless specifically indicated otherwise. Conductor sizes and ampacities shown are based on copper, unless indicated otherwise. All conductors shall be copper.

2.1.1 Equipment Manufacturer Requirements

When manufacturer's equipment requires copper conductors at the terminations or requires copper conductors to be provided between components of equipment, provide copper conductors or splices, splice boxes, and other work required to meet manufacturer's requirements.

2.1.2 Insulation

Unless indicated otherwise, or required by NFPA 70, power and lighting wires shall be 600-volt, Type USE-2 conforming to UL 854 or RHW-2 conforming to UL 44; remote-control and signal circuits shall be Type TW, THW or TF, conforming to UL 83. Where lighting fixtures require 90-degree Centigrade (C) conductors, provide only conductors with 90-degree C insulation or better.

2.1.3 Bonding Conductors

ASTM B 1, solid bare copper wire for sizes No. 8 AWG and smaller diameter; ASTM B 8, Class B, stranded bare copper wire for sizes No. 6 AWG and larger diameter.

2.2 CIRCUIT BREAKERS

2.2.1 MOLDED-CASE CIRCUIT BREAKERS

Molded-case circuit breakers shall conform to NEMA AB 1 and UL 489 and UL 877 for circuit breakers and circuit breaker enclosures located in hazardous (classified) locations. Circuit breakers may be installed in panelboards, switchboards, enclosures, motor control centers, or combination motor controllers.

2.2.2 Construction

Circuit breakers shall be suitable for mounting and operating in any position. Lug shall be listed for copper conductors only in accordance with UL 486E. Single-pole circuit breakers shall be full module size with not more than one pole per module. Multi-pole circuit breakers shall be of the common-trip type having a single operating handle such that an overload or short circuit on any one pole will result in all poles opening simultaneously. Sizes of 100 amperes or less may consist of single-pole breakers permanently factory assembled into a multi-pole unit having an internal, mechanical, nontamperable common-trip mechanism and external handle ties. All circuit breakers shall have a quick-make, quick-break overcenter toggle-type mechanism, and the handle mechanism shall be trip-free to prevent holding the contacts closed against a short-circuit or

sustained overload. All circuit breaker handles shall assume a position between "ON" and "OFF" when tripped automatically. All ratings shall be clearly visible.

2.2.3 Ratings

Voltage ratings shall be not less than the applicable circuit voltage. The interrupting rating of the circuit breakers shall be at least equal to the available short-circuit current at the line terminals of the circuit breaker and correspond to the UL listed integrated short-circuit current rating specified for the panelboards and switchboards. Molded-case circuit breakers shall have nominal voltage ratings, maximum continuous-current ratings, and maximum short-circuit interrupting ratings in accordance with NEMA AB 1. Ratings shall be coordinated with system X/R ratio.

2.2.4 Thermal-Magnetic Trip Elements

Thermal magnetic circuit breakers shall be provided as shown. Automatic operation shall be obtained by means of thermal-magnetic tripping devices located in each pole providing inverse time delay and instantaneous circuit protection. The instantaneous magnetic trip shall be adjustable and accessible from the front of all circuit breakers on frame sizes above 150 amperes.

2.3 CONDUIT AND TUBING

2.3.1 Flexible Conduit, Steel

General-purpose type, UL 1; liquid tight, UL 360, and UL 1660.

2.3.2 PVC Coated Rigid Steel Conduit

NEMA RN 1.

2.4 CONDUIT AND DEVICE BOXES AND FITTINGS

2.4.1 Boxes, Metallic Outlet

NEMA OS 1 and UL 514A.

2.4.2 Boxes, Switch (Enclosed), Surface-Mounted

UL 98.

2.4.3 Fittings for Conduit and Outlet Boxes

UL 514B.

2.4.4 Fittings, PVC Coated, for Use with Rigid PVC Coated Conduit

UL 514B.

2.5 CONNECTORS, WIRE PRESSURE

2.5.1 For Use With Copper Conductors

UL 486A.

2.6 ELECTRICAL GROUNDING AND BONDING EQUIPMENT

UL 467.

2.6.1 Ground Rods

Ground rods shall be of copper-clad steel conforming to UL 467 not less than 3/4 inch in diameter by 10 feet in length of the sectional type driven full length into the earth.

2.6.2 Ground Bus

The ground bus shall be bare conductor or flat copper in one piece, if practicable.

2.7 ENCLOSURES

2.7.1 Cabinets and Boxes

Cabinets and boxes with volume greater than 100 cubic inches shall be in accordance with UL 50, hot-dip, zinc-coated, if sheet steel.

2.7.2 Circuit Breaker Enclosures

UL 489.

2.8 LIGHTING FIXTURES, LAMPS, BALLASTS, EMERGENCY EQUIPMENT, CONTROLS AND ACCESSORIES

The following specifications are supported and supplemented by information and details on the drawings. Additional fixtures, if shown, shall conform to this specification. Lighting equipment installed in classified hazardous locations shall conform to UL 844. Lamps, lampholders, ballasts, transformers, electronic circuitry and other lighting system components shall be constructed according to industry standards. Equipment shall be tested and listed by a recognized independent testing laboratory for the expected installation conditions. Equipment shall conform to the standards listed below.

2.8.1 Lamps

Lamps shall be constructed to operate in the specified fixture, and shall function without derating life or output as listed in published data. Lamps shall meet the requirements of the Energy Policy Act of 1992.

- a. Fluorescent lamps shall have color temperature of 3,000 degrees Kelvin. They shall be designed to operate with the ballasts and circuitry of the fixtures in which they will be used. Fluorescent lamps, including spares, shall be manufactured by one manufacturer to provide for color and performance consistency. Fluorescent

lamps shall comply with ANSI C78.1. Fluorescent tube lamp efficiencies shall meet or exceed the following requirements.

T8, 32 watts	(4' lamp)	2800 lumens
T12,34 watts	(4' lamp)	2800 lumens
T8,59 watts	(8' lamp)	5700 lumens
T12,60 watts	(8' lamp)	5600 lumens
T8/U,31-32 watts	(U-tube)	2600 lumens
T12/U,34 watts	(U-tube)	2700 lumens

(1) Linear fluorescent lamps, unless otherwise indicated, shall be 4 feet long 32 watt T8, 265 mA, with minimum CRI of 75. Lamps of other lengths or types shall be used only where specified or shown. Lamps shall deliver rated life when operated on rapid start ballasts.

2.8.2 Ballasts and Transformers

Ballasts or transformers shall be designed to operate the designated lamps within their optimum specifications, without derating the lamps. Lamp and ballast combinations shall be certified as acceptable by the lamp manufacturer.

(1) Electronic fluorescent ballasts shall comply with 47 CFR 18 for electromagnetic interference. Ballasts shall withstand line transients per IEEE C62.41, Category A. Ballasts shall have total harmonic distortion between 10 and 20%; minimum frequency of 20,000Hz; filament voltage between 2.5 and 4.5 volts; maximum starting inrush current of 20 amperes; and shall comply with the minimum Ballast Efficacy Factors shown in the table below. Minimum starting temperature shall be 32 degrees F. Ballasts shall carry a manufacturer's full warranty of three years, including a minimum \$10 labor allowance per ballast.

ELECTRONIC FLUORESCENT BALLAST EFFICACY FACTORS

LAMP TYPE	TYPE OF STARTER & LAMP	NOMINAL OPERATIONAL VOLTAGE	NUMBER OF LAMPS	MINIMUM BALLAST EFFICACY FACTOR
32W T8	rapid start	120 or 277 V	1	2.54
	linear & U-tubes		2	1.44
			3	0.93
			4	0.73
34W T12	rapid start	120 or 277 V	1	2.64
	linear & U-tubes		2	1.41
			3	0.93

ELECTRONIC FLUORESCENT BALLAST EFFICACY FACTORS

59W T8	rapid start linear	120 or 277 V	2	0.80
60W T12	rapid start linear	120 or 277 V	2	0.80

(2) Magnetic fluorescent ballasts shall be energy-saving, automatic resetting type, approved for the application by the Certified Ballast Manufacturers and complying with ANSI C82.1 and UL 935. Minimum ballast starting temperature shall be 40 degrees F for normal service and 0 degrees F where cold temperature service is required. Magnetic fluorescent ballasts shall have a ballast factor not less than shown in the following table:

MAGNETIC FLUORESCENT BALLAST FACTORS*

Design starting temperature above 40 degrees F with 60 Hz input frequency

LAMP TYPE	NUMBER OF LAMPS	NOMINAL OPERATIONAL INPUT VOLTAGE	TYPE OF STARTER & LAMP	MIN. BALLAST FACTOR
25W F25T8	1	120v	rapid start	.96
	1	277v		.96
	2	120v		.95
	2	277v		.94
32W F32T8	1	120v	rapid start	.96
	1	277v		.95
	2	120v		.85
	2	277v		.96
96W F96T8	1	120 or 277v	instant start	1.10
	2			.85

* For ballasts not specifically designed for use with dimming controls.

2.8.3 Fixtures

Fixtures shall be in accordance with the size, shape, appearance, finish, and performance shown. Unless otherwise indicated, lighting fixtures shall be provided with housings, junction boxes, wiring, lampholders, mounting supports, trim, hardware and accessories for a complete and operable installation. Recessed housings shall be minimum 20 gauge cold rolled or galvanized steel as shown. Extruded aluminum fixtures shall have minimum wall thickness of 0.125 inches. Plastic lenses shall be 100% virgin acrylic or as shown. Glass lenses shall be tempered. Heat resistant glass shall be borosilicate type. Conoid recessed reflector cones shall be

Alzak with clear specular low iridescent finish.

- a. Fluorescent fixtures shall comply with UL 1570. Recessed ceiling fixtures shall comply with NEMA LE 4. Fixtures shall be plainly marked for proper lamp and ballast type to identify lamp diameter, wattage, color and start type. Marking shall be readily visible to service personnel, but not visible from normal viewing angles. Fluorescent fixture lens frames on recessed and surface mounted troffers shall be one assembly with mitered corners. Parabolic louvers shall have a low iridescent finish and 45 degree cut-off. Louver intersection joints shall be hairline type and shall conceal mounting tabs or other assembly methods. Louvers shall be free from blemishes, lines or defects which distort the visual surface. Integral ballast and wireway compartments shall be easily accessible without the use of special tools. Housings shall be constructed to include grounding necessary to start the lamps. Open fixtures shall be equipped with a sleeve, wire guard, or other positive means to prevent lamps from falling. Medium bi-pin lampholders shall be twist-in type with positive locking position. Long compact fluorescent fixtures and fixtures utilizing U-bend lamps shall have clamps or secondary lampholders to support the free ends of the lamps.
- b. Emergency lighting fixtures and accessories shall be constructed and independently tested to meet the requirements of applicable codes. Batteries shall be Nicad or equal with no required maintenance, and shall have a minimum life expectancy of five years and warranty period of three years.
- c. Exit signs shall be ENERGY STAR compliant, thereby meeting the following requirements. Input power shall be less than 5 watts per face. Letter size and spacing shall adhere to NFPA 101. Luminance contrast shall be greater than 0.8. Average luminance shall be greater than 15 cd/m^2 measured at normal (0 degree) and 45 degree viewing angles. Minimum luminance shall be greater than 8.6 cd/m^2 measured at normal and 45 degree viewing angles. Maximum to minimum luminance shall be less than 20:1 measured at normal and 45 degree viewing angles. The manufacturer warranty for defective parts shall be at least 5 years.

2.8.4 Lampholders, Starters, and Starter Holders

UL 542

2.9 LOW-VOLTAGE FUSES AND FUSEHOLDERS

2.9.1 Fuses, Low Voltage Cartridge Type

NEMA FU 1.

2.9.2 Fuseholders

UL 512.

2.10 MOTOR CONTROLS AND MOTOR CONTROL CENTERS

2.10.1 General

NEMA ICS 1, NEMA ICS 2, NEMA ICS 3 and NEMA ICS 6, and UL 508 and UL 845. Panelboards supplying non-linear loads shall have neutrals sized for 200 percent of rated current.

2.11 PANELBOARDS

Dead-front construction, NEMA PB 1 and UL 67.

2.12 RECEPTACLES

2.12.1 Heavy Duty Grade

NEMA WD 1. Devices shall conform to all requirements for heavy duty receptacles.

2.12.2 Ground Fault Interrupters

UL 943, Class A or B.

2.12.3 NEMA Standard Receptacle Configurations

NEMA WD 6.

a. Single and Duplex, 15-Ampere and 20-Ampere, 125 Volt

15-ampere, non-locking: NEMA type 5-15R, locking: NEMA type L5-15R,
20-ampere, non-locking: NEMA type 5-20R, locking: NEMA type L5-20R.

2.13 SPLICE, CONDUCTOR

UL 486C.

2.14 SNAP SWITCHES

UL 20.

2.15 TAPES

2.15.1 Plastic Tape

UL 510.

2.15.2 Rubber Tape

UL 510.

2.16 TRANSFORMERS

Single- and three-phase transformers shall have two windings per phase. Full-capacity standard NEMA taps shall be provided in the primary windings

of transformers unless otherwise indicated. Three-phase transformers shall be configured with wye-delta windings, except as indicated. "T" connections may be used for transformers rated 15 kVA or below.

2.16.1 Transformers, Dry-Type

Transformers shall have 220 degrees C insulation system for transformers 15 kVA and greater, and shall have 180 degrees C insulation system for transformers rated 10 kVA and less, with temperature rise not exceeding 150 degrees C under full-rated load in maximum ambient temperature of 40 degrees C. Transformer of 150 degrees C temperature rise shall be capable of carrying continuously 100 percent of nameplate kVA without exceeding insulation rating.

a. 600 Volt or Less Primary:

NEMA ST 20, UL 506, general purpose, dry-type, self-cooled, ventilated. Transformers shall be provided in NEMA enclosure. Transformers shall be quiet type with maximum sound level at least 3 decibels less than NEMA standard level for transformer ratings indicated.

2.16.2 Average Sound Level

The average sound level in decibels (dB) of transformers shall not exceed the following dB level at 12 inches for the applicable kVA rating range listed unless otherwise indicated:

kVA Range	dB Sound Level
1-50	50
51-150	55
151-300	58
301-500	60
501-700	62
701-1000	64
1001-1500	65
1501 & above	70

2.17 WIRING DEVICES

NEMA WD 1 for wiring devices, and NEMA WD 6 for dimensional requirements of wiring devices.

PART 3 EXECUTION

3.1 GROUNDING

Grounding shall be in conformance with NFPA 70, the contract drawings, and the following specifications.

3.1.1 Grounding Conductors

A green equipment grounding conductor, sized in accordance with NFPA 70 shall be provided, regardless of the type of conduit. Equipment grounding

bars shall be provided in all panelboards. The equipment grounding conductor shall be carried back to the service entrance grounding connection or separately derived grounding connection. All equipment grounding conductors, including metallic raceway systems used as such, shall be bonded or joined together in each wiring box or equipment enclosure. Metallic raceways and grounding conductors shall be checked to assure that they are wired or bonded into a common junction. Metallic boxes and enclosures, if used, shall also be bonded to these grounding conductors by an approved means per NFPA 70. When switches, or other utilization devices are installed, any designated grounding terminal on these devices shall also be bonded to the equipment grounding conductor junction with a short jumper.

3.2 WIRING METHODS

Wiring shall conform to NFPA 70, the contract drawings, and the following specifications. Unless otherwise indicated, wiring shall consist of insulated conductors installed in PVC coated rigid steel conduit. Wire fill in conduits shall be based on NFPA 70 for the type of conduit and wire insulations specified. Wire fill in conduits located in Class I or II hazardous areas shall be limited to 25 percent of the cross sectional area of the conduit.

3.2.1 Conduit and Tubing Systems

Conduit and tubing systems shall be installed as indicated. Conduit sizes shown are based on use of copper conductors with insulation types as described in paragraph WIRING METHODS. Minimum size of raceways shall be 1/2 inch. Only metal conduits will be permitted when conduits are required for shielding or other special purposes indicated, or when required by conformance to NFPA 70. PVC coated rigid steel conduit shall be used in damp, wet or corrosive locations when permitted by NFPA 70 and the conduit system is provided with appropriate boxes, covers, clamps, screws or other appropriate type of fittings. Bushings, manufactured fittings or boxes providing equivalent means of protection shall be installed on the ends of all conduits and shall be of the insulating type, where required by NFPA 70.

Only UL listed fittings shall be used to connect to PVC coated rigid metal conduit, cast boxes, and conduit bodies. Raceways shall not be installed under the firepits of boilers and furnaces and shall be kept 6 inches away from parallel runs of flues, steam pipes and hot-water pipes. Raceways shall be concealed within finished walls, ceilings, and floors unless otherwise shown. Raceways crossing structural expansion joints or seismic joints shall be provided with suitable expansion fittings or other suitable means to compensate for the building expansion and contraction and to provide for continuity of grounding.

3.2.1.1 Pull Wires

A pull wire shall be inserted in each empty raceway in which wiring is to be installed if the raceway is more than 50 feet in length and contains more than the equivalent of two 90-degree bends, or where the raceway is more than 150 feet in length. The pull wire shall be of No. 14 AWG zinc-coated steel, or of plastic having not less than 200 pounds per square inch tensile strength. Not less than 10 inches of slack shall be left at

each end of the pull wire.

3.2.1.2 Conduit Stub-Ups

Where conduits are to be stubbed up through concrete floors, a short elbow shall be installed below grade to transition from the horizontal run of conduit to a vertical run. A conduit coupling fitting, threaded on the inside shall be installed, to allow terminating the conduit flush with the finished floor. Wiring shall be extended in rigid threaded conduit to equipment, except that where required, flexible conduit may be used 6 inches above the floor. Empty or spare conduit stub-ups shall be plugged flush with the finished floor with a threaded, recessed plug.

3.2.1.3 Changes in Direction of Runs

Changes in direction of runs shall be made with symmetrical bends or cast-metal fittings. Field-made bends and offsets shall be made with an approved hickey or conduit-bending machine. Crushed or deformed raceways shall not be installed. Trapped raceways in damp and wet locations shall be avoided where possible. Lodgment of plaster, dirt, or trash in raceways, boxes, fittings and equipment shall be prevented during the course of construction. Clogged raceways shall be cleared of obstructions or shall be replaced.

3.2.1.4 Supports

Metallic conduits and tubing, and the support system to which they are attached, shall be securely and rigidly fastened in place to prevent vertical and horizontal movement at intervals of not more than 10 feet and within 3 feet of boxes, cabinets, and fittings, with approved pipe straps, wall brackets, conduit clamps, conduit hangers, threaded C-clamps, beam clamps, or ceiling trapeze. Loads and supports shall be coordinated with supporting structure to prevent damage or deformation to the structure. Loads shall not be applied to joist bridging. Attachment shall be by wood screws or screw-type nails to wood; by toggle bolts on hollow masonry units; by expansion bolts on concrete or brick; by machine screws, welded threaded studs, heat-treated or spring-steel-tension clamps on steel work. Nail-type nylon anchors or threaded studs driven in by a powder charge and provided with lock washers and nuts may be used in lieu of expansion bolts or machine screws. Raceways or pipe straps shall not be welded to steel structures. Cutting the main reinforcing bars in reinforced concrete beams or joists shall be avoided when drilling holes for support anchors. Holes drilled for support anchors, but not used, shall be filled. In partitions of light steel construction, sheet-metal screws may be used. Raceways shall not be supported using wire or nylon ties. Raceways shall be independently supported from the structure. Upper raceways shall not be used as a means of support for lower raceways. Supporting means shall not be shared between electrical raceways and mechanical piping or ducts. Cables and raceways shall not be supported by ceiling grids. Except where permitted by NFPA 70, wiring shall not be supported by ceiling support systems. Conduits shall be fastened to sheet-metal boxes and cabinets with two locknuts where required by NFPA 70, where insulating bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, a single locknut and bushing may be used. Threadless fittings

for electrical metallic tubing shall be of a type approved for the conditions encountered. Additional support for horizontal runs is not required when EMT rests on steel stud cutouts.

3.2.1.5 Exposed Raceways

Exposed raceways shall be installed parallel or perpendicular to walls, structural members, or intersections of vertical planes and ceilings. Raceways under raised floors and above accessible ceilings shall be considered as exposed installations in accordance with NFPA 70 definitions.

3.2.1.6 Exposed Risers

Exposed risers in wire shafts of multistory buildings shall be supported by U-clamp hangers at each floor level, and at intervals not to exceed 10 feet.

3.2.1.7 Communications Raceways

Communications raceways indicated shall be installed in accordance with the previous requirements for conduit and tubing and with the additional requirement that no length of run shall exceed 50 feet for 1/2 inch and 3/4 inch sizes, and 100 feet for 1 inch or larger sizes, and shall not contain more than two 90-degree bends or the equivalent. Additional pull or junction boxes shall be installed to comply with these limitations whether or not indicated. Inside radii of bends in conduits of 1 inch size or larger shall not be less than ten times the nominal diameter.

3.2.2 Cables and Conductors

Installation shall conform to the requirements of NFPA 70. Covered, bare or insulated conductors of circuits rated over 600 volts shall not occupy the same equipment wiring enclosure, cable, or raceway with conductors of circuits rated 600 volts or less.

3.2.2.1 Sizing

Unless otherwise noted, all sizes are based on copper conductors and the insulation types indicated. Sizes shall be not less than indicated. Branch-circuit conductors shall be not smaller than No. 12 AWG. Conductors for branch circuits of 120 volts more than 100 feet long and of 277 volts more than 230 feet long, from panel to load center, shall be no smaller than No. 10 AWG. Class 1 remote control and signal circuit conductors shall be not less than No. 14 AWG. Class 2 remote control and signal circuit conductors shall be not less than No. 16 AWG. Class 3 low-energy, remote-control and signal circuits shall be not less than No. 22 AWG.

3.2.2.2 Use of Aluminum Conductors in Lieu of Copper

Aluminum conductors shall not be used.

3.2.2.3 Cable Splicing

Splices shall be made in an accessible location. Crimping tools and dies

shall be approved by the connector manufacturer for use with the type of connector and conductor.

- a. Copper Conductors, 600 Volt and Under: Splices in conductors No. 10 AWG and smaller diameter shall be made with an insulated, pressure-type connector. Splices in conductors No. 8 AWG and larger diameter shall be made with a solderless connector and insulated with tape or heat-shrink type insulating material equivalent to the conductor insulation.

3.2.2.4 Conductor Identification and Tagging

Power, control, and signal circuit conductor identification shall be provided within each enclosure where a tap, splice, or termination is made.

Where several feeders pass through a common pull box, the feeders shall be tagged to indicate clearly the electrical characteristics, circuit number, and panel designation. Phase conductors of low voltage power circuits shall be identified by color coding. Phase identification by a particular color shall be maintained continuously for the length of a circuit, including junctions.

- a. Color coding shall be provided for service, feeder, branch, and ground conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in the same raceway or box, other neutral shall be white with colored (not green) stripe. The color coding for 3-phase and single-phase low voltage systems shall be as follows:

120/208-volt, 3-phase: Black(A), red(B), and blue(C).
277/480-volt, 3-phase: Brown(A), orange(B), and yellow(C).
120/240-volt, 1-phase: Black and red.

- b. Conductor phase and voltage identification shall be made by color-coded insulation for all conductors smaller than No. 6 AWG. For conductors No. 6 AWG and larger, identification shall be made by color-coded insulation, or conductors with black insulation may be furnished and identified by the use of half-lapped bands of colored electrical tape wrapped around the insulation for a minimum of 3 inches of length near the end, or other method as submitted by the Contractor and approved by the Contracting Officer.
- c. Control and signal circuit conductor identification shall be made by color-coded insulated conductors, plastic-coated self-sticking printed markers, permanently attached stamped metal foil markers, or equivalent means as approved. Control circuit terminals of equipment shall be properly identified. Terminal and conductor identification shall match that shown on approved detail drawings. Hand lettering or marking is not acceptable.

3.3 BOXES AND SUPPORTS

Boxes shall be provided in the wiring or raceway systems where required by

NFPA 70 for pulling of wires, making connections, and mounting of devices or fixtures. Pull boxes shall be furnished with screw-fastened covers. Indicated elevations are approximate, except where minimum mounting heights for hazardous areas are required by NFPA 70. Unless otherwise indicated, boxes for wall switches shall be mounted 48 inches above finished floors. Switch and outlet boxes located on opposite sides of fire rated walls shall be separated by a minimum horizontal distance of 24 inches. The total combined area of all box openings in fire rated walls shall not exceed 100 square inches per 100 square feet. Maximum box areas for individual boxes in fire rated walls vary with the manufacturer and shall not exceed the maximum specified for that box in UL Elec Const Dir. Only boxes listed in UL Elec Const Dir shall be used in fire rated walls.

3.3.1 Box Applications

Each box shall have not less than the volume required by NFPA 70 for number of conductors enclosed in box. Boxes for metallic raceways shall be listed for the intended use when located in normally wet locations, when flush or surface mounted on outside of exterior surfaces, or when located in hazardous areas. Boxes installed in wet locations and boxes installed flush with the outside of exterior surfaces shall be gasketed. Boxes for mounting lighting fixtures shall be not less than 4 inches square, or octagonal, except smaller boxes may be installed as required by fixture configuration, as approved. Cast-metal boxes with 3/32 inch wall thickness are acceptable. Large size boxes shall be NEMA 6 or as shown.

3.3.2 Brackets and Fasteners

Boxes and supports shall be fastened to wood with wood screws or screw-type nails of equal holding strength, with bolts and metal expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screw or welded studs on steel work. Threaded studs driven in by powder charge and provided with lockwashers and nuts, or nail-type nylon anchors may be used in lieu of expansion shields, or machine screws. Penetration of more than 1-1/2 inches into reinforced-concrete beams or more than 3/4 inch into reinforced-concrete joists shall avoid cutting any main reinforcing steel. The use of brackets which depend on gypsum wallboard or plasterboard for primary support will not be permitted. In partitions of light steel construction, bar hangers with 1 inch long studs, mounted between metal wall studs or metal box mounting brackets shall be used to secure boxes to the building structure. When metal box mounting brackets are used, additional box support shall be provided on the side of the box opposite the brackets. This additional box support shall consist of a minimum 12 inch long section of wall stud, bracketed to the opposite side of the box and secured by two screws through the wallboard on each side of the stud. Metal screws may be used in lieu of the metal box mounting brackets.

3.3.3 Mounting in Walls, Ceilings, or Recessed Locations

In walls or ceilings of concrete, tile, or other non-combustible material, boxes shall be installed so that the edge of the box is not recessed more than 1/4 inch from the finished surface. Boxes mounted in combustible walls or ceiling material shall be mounted flush with the finished surface.

The use of gypsum or plasterboard as a means of supporting boxes will not be permitted. Boxes installed for concealed wiring shall be provided with suitable extension rings or plaster covers, as required. The bottom of boxes installed in masonry-block walls for concealed wiring shall be mounted flush with the top of a block to minimize cutting of the blocks, and boxes shall be located horizontally to avoid cutting webs of block. Separate boxes shall be provided for flush or recessed fixtures when required by the fixture terminal operating temperature, and fixtures shall be readily removable for access to the boxes unless ceiling access panels are provided.

3.3.4 Installation in Overhead Spaces

In open overhead spaces, cast-metal boxes threaded to raceways need not be separately supported except where used for fixture support; cast-metal boxes having threadless connectors and sheet metal boxes shall be supported directly from the building structure or by bar hangers. Hangers shall not be fastened to or supported from joist bridging. Where bar hangers are used, the bar shall be attached to raceways on opposite sides of the box and the raceway shall be supported with an approved type fastener not more than 24 inches from the box.

3.4 DEVICE PLATES

One-piece type device plates shall be provided for all outlets and fittings. Plates on unfinished walls and on fittings shall be of zinc-coated sheet steel, cast-metal, or impact resistant plastic having rounded or beveled edges. Plates on finished walls shall be of satin finish corrosion resistant steel or satin finish chromium plated brass. Screws shall be of metal with countersunk heads, in a color to match the finish of the plate. Plates shall be installed with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16 inch. The use of sectional-type device plates will not be permitted. Plates installed in wet locations shall be gasketed and provided with a hinged, gasketed cover, unless otherwise specified.

3.5 RECEPTACLES

3.5.1 Single and Duplex, 15 or 20-ampere, 125 volt

Single and duplex receptacles shall be rated 20 amperes, 125 volts, two-pole, three-wire, grounding type with polarized parallel slots. Bodies shall be of ivory to match color of switch handles in the same room or to harmonize with the color of the respective wall, and supported by mounting strap having plaster ears. Contact arrangement shall be such that contact is made on two sides of an inserted blade. Receptacle shall be side- or back-wired with two screws per terminal. The third grounding pole shall be connected to the metal mounting yoke. Switched receptacles shall be the same as other receptacles specified except that the ungrounded pole of each suitable receptacle shall be provided with a separate terminal. Only the top receptacle of a duplex receptacle shall be wired for switching application. Receptacles with ground fault circuit interrupters shall have

the current rating as indicated, and shall be UL Class A type unless otherwise shown. Ground fault circuit protection shall be provided as required by NFPA 70 and as indicated on the drawings.

3.5.2 Weatherproof Applications

Weatherproof receptacles shall be suitable for the environment, damp or wet as applicable, and the housings shall be labeled to identify the allowable use. Receptacles shall be marked in accordance with UL 514A for the type of use indicated; "Damp locations", "Wet Locations", "Wet Location Only When Cover Closed". Assemblies shall be installed in accordance with the manufacturer's recommendations.

3.5.2.1 Wet Locations

Receptacles in wet locations shall be installed in an assembly rated for such use whether the plug is inserted or withdrawn, unless otherwise indicated. In a duplex installation, the receptacle cover shall be configured to shield the connections whether one or both receptacles are in use.

3.5.3 Special-Purpose or Heavy-Duty Receptacles

Special-purpose or heavy-duty receptacles shall be of the type and of ratings and number of poles indicated or required for the anticipated purpose. Contact surfaces may be either round or rectangular. One appropriate straight or angle-type plug shall be furnished with each receptacle. Locking type receptacles, rated 30 amperes or less, shall be locked by rotating the plug. Locking type receptacles, rated more than 50 amperes, shall utilize a locking ring.

3.6 WALL SWITCHES

Wall switches shall be of the totally enclosed tumbler type. The wall switch handle and switch plate color shall be ivory. Wiring terminals shall be of the screw type or of the solderless pressure type having suitable conductor-release arrangement. Not more than one switch shall be installed in a single-gang position. Switches shall be rated 20-ampere 277-volt for use on alternating current only. Pilot lights indicated shall consist of yoke-mounted candelabra-base sockets rated at 75 watts, 125 volts, and fitted with glass or plastic jewels. A clear 6-watt lamp shall be furnished and installed in each pilot switch. Jewels for use with switches controlling motors shall be green, and jewels for other purposes shall be red. Dimming switches shall be solid-state flush mounted, sized for the loads.

3.7 PANELBOARDS AND LOADCENTERS

Circuit breakers and switches used as a motor disconnecting means shall be capable of being locked in the open position. Door locks shall be keyed alike. Nameplates shall be as approved. Directories shall be typed to indicate loads served by each circuit and mounted in a holder behind a clear protective covering. Busses shall be copper.

3.7.1 Panelboards

Panelboards shall be circuit breaker equipped as indicated on the drawings.

3.8 FUSES

Equipment provided under this contract shall be provided with a complete set of properly rated fuses when the equipment manufacturer utilize fuses in the manufacture of the equipment, or if current-limiting fuses are required to be installed to limit the ampere-interrupting capacity of circuit breakers or equipment to less than the maximum available fault current at the location of the equipment to be installed. Fuses shall have a voltage rating of not less than the phase-to-phase circuit voltage, and shall have the time-current characteristics required for effective power system coordination. Time-delay and non-time-delay options shall be as shown.

3.9 TRANSFORMER INSTALLATION

Three-phase transformers shall be connected only in a delta-wye or wye-delta configuration as indicated. "T" connections may be used for transformers rated at 15 kVA or below. Dry-type transformers shown located within 5 feet of the exterior wall shall be provided in a weatherproof enclosure. Transformers to be located within the building may be provided in the manufacturer's standard, ventilated indoor enclosure designed for use in 40 degrees C ambient temperature, unless otherwise indicated.

3.10 LIGHTING FIXTURES, LAMPS AND BALLASTS

This paragraph shall cover the installation of lamps, lighting fixtures and ballasts in interior or building mounted applications.

3.10.1 Lamps

Lamps of the type, wattage, and voltage rating indicated shall be delivered to the project in the original cartons and installed just prior to project completion. Lamps installed and used for working light during construction shall be replaced prior to turnover to the Government if more than 15% of their rated life has been used. Lamps shall be tested for proper operation prior to turn-over and shall be replaced if necessary with new lamps from the original manufacturer. 10% spare lamps of each type, from the original manufacturer, shall be provided.

3.10.2 Lighting Fixtures

Fixtures shall be as shown and shall conform to the following specifications and shall be as detailed on the drawings. Illustrations shown on the drawings are indicative of the general type desired and are not intended to restrict selection to fixtures of any particular manufacturer. Fixtures of similar designs and equivalent energy efficiency, light distribution and brightness characteristics, and of equal finish and quality will be acceptable if approved. In suspended acoustical ceilings with fluorescent fixtures, the fluorescent emergency light

fixtures shall be furnished with self-contained battery packs.

3.10.2.1 Accessories

Accessories such as straps, mounting plates, nipples, or brackets shall be provided for proper installation.

3.10.2.2 Suspended Fixtures

Suspended fixtures shall be provided with swivel hangers or hand-straightens so that they hang plumb. Pendants, rods, or chains 4 feet or longer excluding fixture shall be braced to prevent swaying using three cables at 120 degrees of separation. Suspended fixtures in continuous rows shall have internal wireway systems for end to end wiring and shall be properly aligned to provide a straight and continuous row without bends, gaps, light leaks or filler pieces. Aligning splines shall be used on extruded aluminum fixtures to assure hairline joints. Steel fixtures shall be supported to prevent "oil-canning" effects. Fixture finishes shall be free of scratches, nicks, dents, and warps, and shall match the color and gloss specified. Pendants shall be finished to match fixtures. Aircraft cable shall be stainless steel. Canopies shall be finished to match the ceiling and shall be low profile unless otherwise shown. Maximum distance between suspension points shall be 10 feet or as recommended by the manufacturer, whichever is less.

Suspended fixtures installed in seismic areas shall have 45% swivel hangers and shall be located with no obstructions within the 45% range in all directions. The stem, canopy and fixture shall be capable of 45% swing.

3.10.3 Ballasts

Remote type ballasts or transformers, where indicated, shall be mounted in a well ventilated, easily accessible location, within the maximum operating distance from the lamp as designated by the manufacturer.

3.11 EQUIPMENT CONNECTIONS

Wiring not furnished and installed under other sections of the specifications for the connection of electrical equipment as indicated on the drawings shall be furnished and installed under this section of the specifications. Connections shall comply with the applicable requirements of paragraph WIRING METHODS. Flexible conduits 6 feet or less in length shall be provided to all electrical equipment subject to periodic removal, vibration, or movement and for all motors. All motors shall be provided with separate grounding conductors. Liquid-tight conduits shall be used in damp or wet locations.

3.12 CIRCUIT PROTECTIVE DEVICES

The Contractor shall calibrate, adjust, set and test each new adjustable circuit protective device to ensure that they will function properly prior to the initial energization of the new power system under actual operating conditions.

3.13 REPAIR OF EXISTING WORK

The work shall be carefully laid out in advance, and where cutting, channeling, chasing, or drilling of floors, walls, partitions, ceiling, or other surfaces is necessary for the proper installation, support, or anchorage of the conduit, raceways, or other electrical work, this work shall be carefully done, and any damage to building, piping, or equipment shall be repaired by skilled mechanics of the trades involved at no additional cost to the Government.

3.14 ACCEPTANCE

Final acceptance of the facility will not be given until the Contractor has successfully completed all tests and after all defects in installation, material or operation have been corrected.

-- End of Section --