SOLICITATION NO. W912ES-04-B-0010

FLOOD CONTROL

DEVILS LAKE, NORTH DAKOTA

RAMSEY COUNTY

SPECIFICATIONS FOR

DEVILS LAKE LEVEE 1460 RAISE

JULY 2004

US Army Corps of Engineers

St. Paul District

DEVILS LAKE LEVEE 1460 RAISE

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SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO. W912ES-04-B-0010	2. TYPE OF SOLICITATION [X] SEALED BID (IFB) [ ] NEGOTIATED *(RFP)*	3. DATE ISSUED 14-Jul-2004	PAGE OF PAGES 1 OF 164

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

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. W81G67-4162-0710	6. PROJECT NO.

7. ISSUED BY CODE W912ES	8. ADDRESS OFFER TO *(If Other Than Item 7)* CODE
CONTRACTING DIVISION USACE - ST. PAUL 190 5TH STREET E ST. PAUL MN 55101 TEL:651-290-5419 FAX: 651-290-5706	**See Item 7** TEL: FAX:

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code)* *(NO COLLECT CALLS)*
	TAMMY M MOORE	651-290-5408

SOLICITATION

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

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

W912ES-04-B-0010 Devils Lake Levee 1460 Raise, Ramsey County, Devils Lake, North Dakota. This procurement is being issued full open competition utilizing sealed bid procedures. The applicable NAICS code is 237990 with a small business size standard of $28.5 The work includes raising and extending the existing levee at Devils Lake, North Dakota. Levee work may include, but is not limited to, following features: clearing and grubbing, removals, stripping, impervious fill, geotextile fabric, bedding, riprap, topsoil, seeding and aggregate surfacing. Water and sanitary sewer systems may be relocated which may include, but is not limited to waterline, gate valves, hydrants, manholes, septic tanks and forcemain. Surface features will be required to be restored. The work also may include, but is not limited to the construction of a sheetpile retaining wall with a concrete cap, roadway guardrail and chain link fence. Any contract to be awarded from this solicitation is subject to the availability of funds. The cost-share agreement that would make funding available for this project is currently being finalized. Award of a contract will be made pending execution of subject agreement and once funds needed for work to be completed during the current fiscal year have been allocated. This project will be funded by the Government and City of Grand Forks.

11. The Contractor shall begin performance within 10 calendar days and complete it within 15 Nov 05 calendar days after receiving [ ] award, [X] notice to proceed. This performance period is [X] mandatory, [ ] negotiable. *(See* 52.211-10 *.)*

12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES," indicate within how many calendar days after award in Item 12B.)* [X] YES [ ] NO	12B. CALENDAR DAYS 10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 02:00 PM *(hour)* local time 13 Aug 2004 *(date).* If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee [X] is, [ ] is not required.

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

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

SOLICITATION, OFFER, AND AWARD (Continued)

(Construction, Alteration, or Repair)

OFFER ***(Must be fully completed by offeror)***

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

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ 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 *(Type or print)*	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 *(4 copies unless otherwise specified)*	**ITEM**	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(c) ☐ 41 U.S.C. 253(c)
26. ADMINISTERED BY CODE		27. PAYMENT WILL BE MADE BY: CODE

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.

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

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

Section 00010 - Solicitation Contract Form

BID SCHEDULE

BASE ITEMS – DEVILS LAKE LEVEE RAISE TO 1460

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Clearing and Grubbing	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Stripping Topsoil	20,640	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003	Salvage Aggregate Surfacing	2,411	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	Impervious Fill	103,149	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	Geotextile Fabric	87,441	Square Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006	Remove and Replace Riprap	16,066	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007	Type 3 Bedding	8,225	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008	Type 4 Bedding	5,432	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009	Type 5 Bedding	1,251	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010	Type 6 Bedding	23,462	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0011	Type D Riprap	18,651	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0012	Type E Riprap	17,925	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	Type H Riprap	5,133	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0014	Type F Riprap	36,263	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0015	Type G Riprap	36,263	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0016	Topsoil	12,463	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0017	Seeding	23.40	Acre	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0018	Raise Transformer	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0019	Segmental Retaining Wall	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0020	Construct Aggregate Surfacing	3,181	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0021	Inspection Trench	1,034	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0022	Salvage Guardrail	860	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0023	Reinstall Guard Rail	815	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0024	Concrete Boat Ramp	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0025	Reuse Signs	14	Each	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0026	New Signs	1	Each	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0027	Reuse Gate	6	Each	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0028	New Gate	2	Each	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0029	Bond	1	Lump Sum		
				_____.____	_____.____

BASE ITEMS (CLINS 0001-0029) $_____

OPTION ONE - LAKESHORE DRIVE

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0030	Stripping Topsoil	390	Cubic Yard		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0031 OPTION	Salvage Aggregate Base	295	Cubic Yard		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0032 OPTION	Asphalt Removal	2,300	Cubic Yard		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0033 OPTION	Impervious Fill	5,195	Cubic Yard		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0034 OPTION	Topsoil	390	Cubic Yard		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0035 OPTION	Seeding	.20	Acre		
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0036 OPTION	Aggregate Base	295	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0037 OPTION	Extension of Culvert	20	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0038 OPTION	Bituminous Pavement	250	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0039 OPTION	Bond	1	Lump Sum	_____.____	_____.____

TOTAL OPTION ONE (CLINS 0030-0039) $_____

OPTION TWO - GOLF COURSE

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0040 OPTION	Remove Existing Lines	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0041 OPTION	New Utility Lines-Sewer Lines	1,570	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0042	New Utility Lines - Water Line	1,490	Linear Foot		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0043	New Utility Lines - Residential Service Connections	4	Each		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0044	New Utility Lines - Storm Sewer Line	260	Linear Foot		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0045	New Utility Line-Storm Sewer Catch Basin	1	Each		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0046	New Utility Lines - Sanitary Manhole	4	Each		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0047	New Utility Lines - Sanitary Cleanout	4	Each		
OPTION					
				_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0048 OPTION	New Utility Lines - Septic Tank	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0049	Clearing and Grubbing	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0050	Salvage Aggregate Surfacing	600	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0051 OPTION	Impervious Fill	6,075	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0052	Type 3 Bedding	1,650	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0053 OPTION	Type 4 Bedding	693	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0054 OPTION	Type D Riprap	3,300	Actual Tons	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0055 OPTION	Type E Riprap	1,386	Actual Tons	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0056 OPTION	Sheetpile Wall	1	Lump Sum	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0057 OPTION	Topsoil	450	Cubic Yard	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0058 OPTION	Seeding	1	Acre	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0059 OPTION	Construct Aggregate Surfacing	1,075	Cubic Yard	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0060 OPTION	Inspection Trench	700	Linear Foot	_____.____	_____.____
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0061 OPTION	New Guard Rail	800	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0062 OPTION	Bond	1	LS	_____.____	_____.____

OPTION TWO (CLIN 0040-0062) $_____

OPTION THREE - MERTENS FARM

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0063 OPTION	Stripping Topsoil	52	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0064 OPTION	Impervious Fill	40	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0065 OPTION	Geotextile Fabric	165	Square Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0066 OPTION	Type 6 Bedding	125	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0067 OPTION	Type F Riprap	188	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0068 OPTION	Topsoil	10	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0069 OPTION	Seeding	.10	Acre	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0070 OPTION	Inspection Trench	70	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0071 OPTION	Bond	1	Lump Sum	_____.____	_____.____

OPTION THREE (CLINS 0063-0071) $_____

OPTION FOUR - ACORN RIDGE A

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0072 OPTION	Clearing and Grubbing	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0073 OPTION	Stripping Topsoil	2,100	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0074 OPTION	Impervious Fill	3,760	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0075 OPTION	Geotextile Fabric	3,178	Square Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0076 OPTION	Type 5 Bedding	735	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0077 OPTION	Type G Riprap	1,455	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0078 OPTION	Topsoil	1,270	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0079 OPTION	Seeding	2.50	Acre	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0080 OPTION	Inspection Trench	1,710	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0081	Bond	1	Lump Sum	_____.____	_____.____

OPTION FOUR (CLINS 0072-0081) $_____

OPTION FIVE - HIGHWAY 2

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0082 OPTION	Stripping Topsoil	900	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0083 OPTION	Impervious Fill	40	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0084 OPTION	Geotextile Fabric	5,933	Square Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0085	Type 4 Bedding	2,940	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0086	Type E Riprap	5,865	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0087 OPTION	Topsoil	360	Cubic Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0088	Seeding	1	Acre	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0089	Inspection Trench	1,441	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0090	Removal of Culvert	100	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0091	Install Manhole	1	Each	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0092 OPTION	Replace Culvert with New Culvert	169	Linear Foot	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0093 OPTION	Asphalt Removal	235	Square Yard	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0094 OPTION	Asphalt Replacement	40	Actual Tons	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0095 OPTION	Traffic Control Plan	1	Lump Sum	_____.____	_____.____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0096 OPTION	Bond	1	Lump Sum	_____.____	_____.____

OPTION FIVE (CLIN 0082-0096) $_____

BASE – CLINS 0001-0029 $_____

OPTION ONE-LAKESHORE DRIVE – CLINS 0030-0039 $_____

OPTION TWO – GOLF COURSE OPTION – CLINS 0040-0062 $_____

OPTION THREE – MERTEN FARM – CLINS 0063-0071 $_____

OPTION FOUR – ACORN RIDGE A OPTION – CLINS 0072-0081 $_____

OPTION FIVE – HIGHWAY 2 OPTION – CLINS 0082-0096 $_____

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Section 00100 - Bidding Schedule/Instructions to Bidders

CLAUSES INCORPORATED BY FULL TEXT

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.

52.214-3 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.

(End of provision)

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.

(End of provision)

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.

(End of provison)

52.214-4001 INQUIRIES - BID INFORMATION

(a) Inquiries:

Any questions regarding this solicitation should be directed to Tammy Moore, Contract Specialist, at telephone number (651) 290-5408 (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 priced construction contract resulting from this solicitation.

(End of clause)

52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(End of provision)

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
2.0%	6.9%

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

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

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in

excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

(1) Name, address, and telephone number of the subcontractor;

(2) Employer's identification number of the subcontractor;

(3) Estimated dollar amount of the subcontract;

(4) Estimated starting and completion dates of the subcontract; and

(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Ramsey County, Devils Lake, North Dakota

(End of provision)

52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(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--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 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 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, 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)

52.232-38 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

Department of the Army
Contracting Division
St. Paul District, Corps of Engineers
190 Fifth Street East
St. Paul, MN 55101-1638

(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) – ALTERNATE I (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) An organized site visit has been scheduled for--
July 22, 2004
10:00 a.m.

(c) Participants will meet at--
City of Devils Lake
423 6th Street
Devils Lake, North Dakota 58301

The meeting will be held in the Commissioner's Room

(End of provision)

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. (See Section 00700, clause entitled ("Performance of Work by the Contractor").

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.

52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of"(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any DFARS (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of provision)

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

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

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

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

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

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

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

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

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

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

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

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

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

(d) Taxpayer Identification Number (TIN).

___ TIN:._____

___ TIN has been applied for.

___ TIN is not required because:

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

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

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

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

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

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(f) Common parent.

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

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

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

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

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

(End of provision)

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

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

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

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

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

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

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

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

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

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

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

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

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

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004) - ALTERNATE I (APR 2002)

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

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

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

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

____ Black American.

____ Hispanic American.

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

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

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

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

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

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

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

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

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

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

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

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

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

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

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

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

(d) Notice.

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

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

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

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

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

(End of provision)

52.219-2 EQUAL LOW BIDS. (OCT 1995)

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

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

_____

_____

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

52.219-22 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(PRO0Net); 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 (AUG 2003)

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

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

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C.

13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

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

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

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

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

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

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

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

(C) Major group codes 20 through 39.

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

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

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

(End of clause)

52.226-2 HISTORICALLY BLACK COLLEGE OR UNIVERSITY AND MINORITY INSTITUTION REPRESENTATION (MAY 2001)

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

Historically black college or university means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institution means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k, including a Hispanic-serving institution of higher education, as defined in Section 316(b)(1) of the Act (20 U.S.C. 1101a)).

(b) Representation. The offeror represents that it--

( ) is ( ) is not a historically black college or university;

( ) is ( ) is not a minority institution.

(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 indebtness 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 disclosure 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)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)

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

(1) Foreign person means any person (including any individual, partnership, corporation, or other form of association) other than a United States person.

(2) United States person is defined in 50 U.S.C. App. 2415(2) and means--

(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);

(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and

(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) Certification. If the offeror is a foreign person, the offeror certifies, by submission of an offer, 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. 2407(a) prohibits a United States person from taking.

(End of provision)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (MAY 2001) --ALTERNATE I (MAR 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) 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).

(d) 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.

(e) 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.

(f) "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.

(g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(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)

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed $100,000.

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.

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 2003)

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

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

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

(1) The name of the subcontractor.

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

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

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

proposed debarment.

(End of clause)

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

The Contractor shall be required to (a) commence work under this contract within 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 15 November 2005. The time stated for completion shall include final cleanup of the premises.

The Contractor shall place all impervious fill according to the specification on or before **1 November 2004** for the areas located at Station 16+30L to 87+00L, 0+00C to 90+76C, 241+00W to 288+00W and 00+00E to 120+00E.

The Contractor shall place all the riprap, bedding and geotextile according to the specification on or before **15 June 2005** for the areas located at Station 16+30L to 87+00L, 0+00C to 90+76C, 241+00W to 288+00W and 00+00E to 120+00E.

The Golf Club Read, beginning north of the clubhouse at STA 70+76C and continuing south past the clubhouse and along County Club Road, ending at STA 17 + 33, which is County Road 1, shall be worked on between labor day and 15 November of the same calendar year the option is exercised.

(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 $3,620.00 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)

52.214-26 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 data 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.

(End of clause)

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.

(End of clause)

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).

(End of clause)

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.

(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 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 (MAY 2004)

(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 service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(End of clause)

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

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

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

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

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

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

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

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

(c) The apparent low bidder, upon request by the Contracting Officer, shall submit a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owner small business, 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, 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, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

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

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

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

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

(v) 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) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) 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, 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 in 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) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

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

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

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

(F) 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, 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, 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, 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, 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)

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(End of clause)

52.222-3 CONVICT LABOR (JUN 2003)

(a) Except as provided in paragraph (b) of this clause, the Contractor shall not employ in the performance of this contract any person undergoing a sentence of imprisonment imposed by any court of a State, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.

(b) The Contractor is not prohibited from employing persons--

(1) On parole or probation to work at paid employment during the term of their sentence;

(2) Who have been pardoned or who have served their terms; or

(3) Confined for violation of the laws of any of the States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

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

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

(iii) 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;

(iv) 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

(v) 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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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).

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

(End of clause)

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

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

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

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

(End of clause)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) 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 paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(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).

(End of clause)

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 disabled veterans and the number of veterans of the Vietnam era 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 that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted 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 during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous 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 count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era 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 the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(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 deter- mine 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 at which 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) though (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 (AUG 2003)

(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 in 40 CFR 372.65;

(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 the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

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

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

(iii) Major group codes 20 through 39.

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

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

(5) The facility is not located in the United States or its outlying areas.

(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).

(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 constitutea 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.)

(End of clause)

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.

(f) 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 20% 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.

(End of clause)

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)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEP 2002)

(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) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, 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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

(i) Name and address of the Contractor.

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

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

(iv) Description of work or services performed.

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

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

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

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

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

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

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

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

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

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

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

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

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

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

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

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

officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) Make such payment within--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) The amount to be withheld;

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

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

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

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

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

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

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

(End of clause)

52.233-1 DISPUTES. (JUL 2002)

(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. 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. 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 disput 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.

(End of clause)

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 15% 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.

(End of clause)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

(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.

(End of clause)

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.

(End of clause)

52.236-4 PHYSICAL DATA (APR 1984)

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

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and subsurface exploration. The subsurface exploration included soil borings and soils testing (both in the field and the laboratory) noted on the boring logs. Graphic logs of borings located within the area of work under this contract are shown on the drawings. The borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches. Variations in stratigraphy and characteristics of the soil and rock are known to occur between borings. Normal variations in site geology will not be considered as differing materially within the purview of Contract Clause, FAR 52.236-2, Differing Site Conditions. Ground water elevations measured in borings are not constant and will fluctuate

(b) Weather conditions: Bidders should satisfy themselves before submitting bids as to hazards from weather conditions. Complete weather records and reports may be obtained from the local U.S. Weather Service

(c) Transportation facilities: Before submitting a bid, bidders should obtain necessary data as to access of highway and railroad facilities. The unavailability of transportation facilities shall not become a basis for claims for damages or time for completion of the work

(d) River Conditions. Hydrographs of river stages are indicated on the drawings. These hydrographs include historic water levels and/or flows at the gauging stations. The Contractor has the responsibility to schedule its operations to take advantage of the most favorable river stages.

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

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

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

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

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

52.236-13 ACCIDENT PREVENTION (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.

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

(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.

(End of clause)

52.236-16 QUANTITY SURVEYS (APR 1984) - ALTERNATE I (APR 1984)

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

(b) The Contractor shall conduct the original and final surveys and surveys for any periods for which progress payments are requested. All these surveys shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. The Government shall make such computations as are necessary to determine the quantities of work performed or finally in place. The Contractor shall make the computations based on the surveys for any periods for which progress payments are requested.

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

Contractor shall retain copies of all such material furnished to the Contracting Officer.

(End of clause)

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.

(End of clause)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997) - ALTERNATE I (APR 1984

(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. Upon completing the work under this contract, the Contractor shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted.

(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.

(End of clause)

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.

(End of clause)

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.

(End of clause)

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:

_____
_____

(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)

52.244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)

(a) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

(b) If the Contractor is an approved mentor under the Department of Defense Pilot Mentor-Protege Program (Pub. L. 101–510, section 831 as amended), the Contractor may award subcontracts under this contract on a noncompetitive basis to its proteges.

(End of clause)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (MAY 2004)

(a) Definitions.

"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 (MAY 2004) (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 (Apr 2002) (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.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(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.

(End of clause)

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.

(End of clause)

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)

52.246-24 LIMITATION OF LIABILITY--HIGH-VALUE ITEMS (FEB 1997)

(a) Except as provided in paragraphs (b) through (e) below, and notwithstanding any other provision of this contract, the Contractor shall not be liable for loss of or damage to property of the Government (including the supplies delivered under this contract) that (1) occurs after Government acceptance of the supplies delivered under this contract, and (2) results from any defects or deficiencies in the supplies.

(b) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Government's acceptance of, the supplies results from willful misconduct or lack of good faith on the part of any of the Contractor's managerial personnel. The term "Contractor's managerial personnel," as used in this clause, means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives wb ho have supervision or direction of--

(1) All or substantially all of the Contractor's business;

(2) All or substantially all of the Contractor's operations at any one plant, laboratory, or separate location at which the contract is being performed; or

(3) A separate and complete major industrial operation connected with the performance of this contract.

(c) If the Contractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Government through purchase or use of the supplies required to be delivered under this contract, the Contractor shall be liable to the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after Government acceptance of, and resulting from any defects or deficiencies in, the supplies delivered under this contract.

(d)(1) This clause does not diminish the Contractor's obligations, to the extent that they arise otherwise under this contract, relating to correction, repair, replacement, or other relief for any defect or deficiency in supplies delivered under this contract.

(2) Unless this is a cost-reimbursement contract, if loss or damage occurs and correction, repair, or replacement is not feasible or desired by the Government, the Contractor shall, as determined by the Contracting Officer--

(i) Pay the Government the amount it would have cost the Contractor to make correction, repair, or replacement before the loss or damage occurred; (ii) Provide other equitable relief.

(e) This clause shall not limit or otherwise affect the Government's rights under clauses, if included in this contract, that cover--

(1) Warranty of technical data;

(2) Ground and flight risks or aircraft flight risks; or

(3) Government property.

(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.

(End of clause)

52.248-3 VALUE ENGINEERING--CONSTRUCTION (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or $100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of $50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract . . . . . , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004) - 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 49.001 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.

(End of clause)

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.

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any DFARS (48 CFR 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

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.

(h) 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.

(End of clause)

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.

(i) 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 ALTERNATE A (NOV 2003)

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

“Central Contractor Registration (CCR) database” means the primary Government repository for contractor information required for the conduct of business with the Government.

“Commercial and Government Entity (CAGE) code” means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an “NCAGE code.”

“Data Universal Numbering System (DUNS) number” means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

“Data Universal Numbering System +4 (DUNS+4) number” means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

“Registered in the CCR database” means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records “Active.”

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS +4” followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at http://www.dnb.com; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, 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 review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)(1)(i) If a Contractor has legally changed its business name, “doing business as” name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the “Suspension of Payment” paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the “Suspension of payment” paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at http://www.ccr.gov or by calling 1-888-227-2423, or 269-961-5757.

(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.

(End of clause)

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)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employees has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2..1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(End of clause)

252.225-7002 QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS (APR 2003)

(a) Definition. Qualifying country, as used in this clause, means any country set forth in subsection 225.872-1 of the Defense Federal Acquisition Regulation (FAR) Supplement.

(b) Subject to the restrictions in section 225.872 of the Defense FAR Supplement, the Contractor shall not preclude qualifying country sources or U.S. sources from competing for subcontracts under this contract.

(End of clause)

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (JUN 2004)

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

(1) Component means any item supplied to the Government as part of an end product or of another component.

(2) End product means supplies delivered under a line item of this contract.

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

(4) 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) The Contractor shall deliver under this contract only such of the following items, either as end products or components, that have been grown, reprocessed, reused, or produced in the United States:

(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).

(10) Any item of individual equipment (Federal Supply Class 8465) manufactured from or containing fibers, yarns, fabrics, or materials listed in this paragraph (b).

(c) This clause does not apply--

(1) To items listed in section 25.104(a) of the Federal Acquisition Regulation (FAR), or other items 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 end products incidentally incorporating cotton, other natural fibers, or wool, for which the estimated value of the cotton, other natural fibers, or wool--

(i) Is not more than 10 percent of the total price of the end product; and (ii) Does not exceed the simplified acquisition threshold in FAR part 2;

(3) To waste and byproducts of cotton or wool fiber for use in the production of propellants and explosives;

(4) To foods, other than fish, shellfish, or seafood, that have been manufactured or processed in the United States, regardless of where the foods (and any component if applicable) were grown or produced. Fish, shellfish, or seafood manufactured or processed in the United States and fish, shellfish, or seafood contained in foods manufactured or processed in the United States shall be provided in accordance with paragraph (d) of this clause;

(5) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(6) 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 product 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.

(d)(1) Fish, shellfish, and seafood delivered under this contract, or contained in foods delivered under this contract--

(i) Shall be taken from the sea by U.S.-flag vessels; or

(ii) If not taken from the sea, shall be obtained from fishing within the United States; and

(2) Any processing or manufacturing of the fish, shellfish, or seafood shall be performed on a U.S.-flag vessel or in the United States.

(End of clause)

252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (OCT 2003)

(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.

Native Hawaiian small business concern means an entity that is --

(1) A small business concern as defined in section 3 of the Small Business Act (15 U.S.C. 632) and relevant implementing regulations; and

(2) Owned and controlled by a Native Hawaiian as defined in 25 U.S.C. 4221(9).

(b) The Contractor shall use its best efforts to give Indian organizations, Indian-owned economic enterprises, and Native Hawaiian small business concerns 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, Indian-owned economic enterprise, or Native Hawaiian small business concern as to its eligibility, unless an 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--

(1) For matters relating to Indian organizations or Indian-owned economic enterprises: 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.

(2) For matters relating to Native Hawaiian small business concerns: Department of Hawaiian Home Lands, PO Box 1879, Honolulu, HI 96805. The Department of Hawaiian Home Lands will determine the eligibility and will notify the Contracting Officer.

(e) No incentive payment will be made--

(1) While a challenge is pending; or

(2) If a subcontractor is determined to be an ineligible participant.

(f)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an incentive payment in accordance with this clause.

(2) The incentive amount that may be requested is 5 percent of the estimated cost, target cost, or fixed price included in the subcontract at the time of award to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(3) In the case of a subcontract for commercial items, the Contractor may receive an incentive payment only if the subcontracted items are produced or manufactured in whole or in part by an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(4) The Contractor has the burden of proving the amount claimed and shall assert its request for an incentive payment prior to completion of contract performance.

(5) 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 estimated cost, target cost, or fixed price included in the subcontract awarded to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(6) If the Contractor requests and receives an incentive payment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the incentive amount.

(g) The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts exceeding $500,000 for which further subcontracting opportunities may exist.

(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.

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

(End of clause)

252.232-7003 ELECTRONIC SUBMISSION OF PAYMENT REQUESTS (JAN 2004)

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

(1) Contract financing payment and invoice payment have the meanings given in section 32.001 of the Federal Acquisition Regulation.

(2) Electronic form means any automated system that transmits information electronically from the initiating system to all affected systems. Facsimile, e-mail, and scanned documents are not acceptable electronic forms for submission of payment requests. However, scanned documents are acceptable when they are part of a submission of a payment request made using one of the electronic forms provided for in paragraph (b) of this clause.

(3) Payment request means any request for contract financing payment or invoice payment submitted by the Contractor under this contract.

(b) Except as provided in paragraph (c) of this clause, the Contractor shall submit payment requests using one of the following electronic forms:

(1) Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA). Information regarding WAWF-RA is available on the Internet at https://wawf.eb.mil.

(2) Web Invoicing System (WInS). Information regarding WInS is available on the Internet at https://ecweb.dfas.mil.

(3) American National Standards Institute (ANSI) X.12 electronic data interchange (EDI) formats.

(i) Information regarding EDI formats is available on the Internet at http://www.X12.org.

(ii) EDI implementation guides are available on the Internet at http://www.dfas.mil/ecedi.

(4) Another electronic form authorized by the Contracting Officer.

(c) If the Contractor is unable to submit a payment request in electronic form, or DoD is unable to receive a payment request in electronic form, the Contractor shall submit the payment request using a method mutually agreed to by the Contractor, the Contracting Officer, the contract administration office, and the payment office.

(d) In addition to the requirements of this clause, the Contractor shall meet the requirements of the appropriate payment clauses in this contract when submitting payments requests.

(End of clause)

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)

252.242-7004 MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM (SEP 1996)

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

(1) Material management and accounting system means the Contractor's system or systems for planning, controlling, and accounting for the acquisition, use, issuing, and disposition of material. Material management and accounting systems may be manual or automated. They may be stand-alone systems or they may be integrated with planning, engineering, estimating, purchasing, inventory, accounting, or other systems.

(2) Valid time-phased requirements means material which is --

Needed to fulfill the production plan, including reasonable quantities for scrap, shrinkage, yield, etc.; and

(ii) Charged/billed to contracts or other cost objectives in a manner consistent with the need to fulfill the production plan.

(3) Contractor means a business unit as defined in section 31.001 of the Federal Acquisition Regulation (FAR).

(b) General. The Contractor agrees to--

(1) Maintain a material management and accounting system (MMAS) that--

(i) Reasonably forecasts material requirements;

(ii) Ensures that costs of purchased and fabricated material charged or allocated to a contract are based on valid time-phased requirements; and

(iii) Maintains a consistent, equitable, and unbiased logic for costing of material transactions.

(2) Assess its MMAS and take reasonable action to comply with the MMAS standards in paragraph (f) of this clause.

(c) Applicability. Paragraphs (d) and (e) of this clause apply only if the Contractor--

(1) Is a large business; and

(2) Received, in its fiscal year preceding award of this contract, Department of Defense prime contracts or subcontracts, and their modifications totaling--

(i) $70 million or more; or

(ii) $30 million or more (but less than $70 million), and is notified in writing by the Contracting Officer that paragraphs (d) and (e) apply.

(d) Disclosure, demonstration, and maintenance requirements. (1) The Contractor shall--

Disclose its MMAS to the Administrative Contracting Officer in writing; and

(ii) If requested by the Administrative Contracting Officer, demonstrate that the MMAS conforms to the standards in paragraph (f) of this clause.

(2) An MMAS disclosure is adequate when the Contractor has provided the Administrative Contracting Officer with documentation which--

(i) Accurately describes those policies, procedures, and practices that the Contractor currently uses in its MMAS; and

(ii) Provides sufficient detail for the Government to reasonably make an informed judgment regarding the adequacy of the MMAS.

(3) An MMAS demonstration is adequate when the Contractor has provided the Administrative Contracting Officer--

(i) Sufficient evidence to demonstrate the degree of compliance of its MMAS with the standards at paragraph (f) of this clause; and

(ii) Identification of any significant deficiencies, the estimated cost impact of the deficiency, and a comprehensive corrective action plan.

(4) The Contractor shall disclose significant changes in its MMAS to the Administrative Contracting Officer within 30 days of implementation.

(5) If the contractor desires the Government to protect such information as privileged or confidential, the Contractor shall--

(i) Notify the Government representative to whom the information is submitted, i.e., the ACO, or the auditor; and

(ii) Ensure an appropriate legend is on the face of the document(s) at the time of submission.

(e) Deficiencies. (1) If the Contractor receives a report which identifies deficiencies in its MMAS, the Contractor agrees to respond as follows--

(i) If the Contractor agrees with the report findings and recommendations, the Contractor shall--

(A) Within 30 days, state its agreement in writing; and

(B) Within 60 days, correct the deficiencies or submit a corrective action plan.

(ii) If the Contractor disagrees with the report findings and recommendations, the Contractor shall, within 30 days, state its rationale for each area of disagreement.

(2) The Administrative Contracting Officer shall evaluate the Contractor's response and notify the Contractor of the--

(i) Determination concerning remaining deficiencies;

(ii) Adequacy of any proposed or completed corrective action plan; and

(iii) Need for any new or revised corrective action plan.

(f) MMAS standards. MMAS systems shall have adequate internal accounting and administrative controls to ensure system and data integrity, and comply with the following:

(1) Have an adequate system description including policies, procedures, and operating instructions which comply with the Federal Acquisition Regulation and Defense FAR Supplement;

(2) Ensure that costs of purchased and fabricated material charged or allocated to a contract are based on valid time-phased requirements as impacted by minimum/economic order quantity restrictions--

(i) A 98 percent bill of material accuracy and a 95 percent master production schedule accuracy are desirable as a goal in order to ensure that requirements are both valid and appropriately time-phased.

(ii) If systems have accuracy levels below these, the Contractor shall demonstrate that--

(A) There is no material harm to the Government due to lower accuracy levels; and

(B) The cost to meet the accuracy goals is excessive in relation to the impact on the Government;

(3) Provide a mechanism to identify, report, and resolve system control weaknesses and manual override. Systems should identify operational exceptions such as excess/residual inventory as soon as known;

(4) Provide audit trails and maintain records (manual and those in machine readable form) necessary to evaluate system logic and to verify through transaction testing that the system is operating as desired;

(5) Establish and maintain adequate levels of record accuracy, and include reconciliation of recorded inventory quantities to physical inventory by part number on a periodic basis. A 95 percent accuracy level is desirable. If systems have an accuracy level below 95 percent, the Contractor shall demonstrate that--

(i) There is no material harm to the Government due to lower accuracy levels; and

(ii) The cost to meet the accuracy goal is excessive in relation to the impact on the Government;

(6) Provide detailed descriptions of circumstances which will result in manual or system generated transfers of parts;

(7) Maintain a consistent, equitable, and unbiased logic for costing of material transactions--

(i) The Contractor shall maintain and disclose written policies describing the transfer methodology and the loan/pay-back technique.

(ii) The costing methodology may be standard or actual cost, or any of the inventory costing methods in 48 CFR 9904.411-50(b). Consistency shall be maintained across all contract and customer types, and from accounting period to accounting period for initial charging and transfer charging.

(iii) The system should transfer parts and associated costs within the same billing period. In the few instances where this may not be appropriate, the Contractor may accomplish the material transaction using a loan/pay-back technique. The “loan/pay-back technique” means that the physical part is moved temporarily from the contract, but the cost of the part remains on the contract. The procedures for the loan/pay-back technique must be approved by the Administrative Contracting Officer. When the technique is used, the Contractor shall have controls to ensure--

(A) Parts are paid back expeditiously;

(B) Procedures and controls are in place to correct any overbilling that might occur;

(C) Monthly, at a minimum, identification of the borrowing contract and the date the part was borrowed; and

(D) The cost of the replacement part is charged to the borrowing contract;

(8) Where allocations from common inventory accounts are used, have controls (in addition to those in paragraphs (b)(2) and (7) of this clause) to ensure that--

(i) Reallocations and any credit due are processed no less frequently than the routine billing cycle;

(ii) Inventories retained for requirements which are not under contract are not allocated to contracts; and

(iii) Algorithms are maintained based on valid and current data;

(9) Notwithstanding FAR 45.505-3(f)(1)(ii), have adequate controls to ensure that physically commingled inventories that may include material for which costs are charged or allocated to fixed-price, cost-reimbursement, and commercial contracts do not compromise requirements of any of the standards in paragraphs (f)(1) through (8) of this clause. Government furnished material shall not be--

(i) Physically commingled with other material; or

(ii) Used on commercial work; and

(10) Be subjected to periodic internal audits to ensure compliance with established policies and procedures.

(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:

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002) ALTERNATE I (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 Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., 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 steamship company.

(f) The Contractor shall 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) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(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)

Section 00800 - Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

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 -- Ramsey County, Devils Lake, North Dakota

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Days	18	14	10	3	4	5	4	3	3	2	7	17

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).

52.214-5000 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;
(3) Discrepancy between unit price and extended price, the unit price will govern;
(4) Apparent errors in extension of unit prices will be corrected;
(5) 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)

52.217-4000 OPTION FOR ADDITIONAL WORK (Construction) (AUG 2000)

The Government may require the Contractor to perform the work identified as optional item(s) (CLIN(s):

Option One – Lakeshore Drive – CLINS 0030 through 0039
Option Two – Golf Course – CLINS 0040 through 0062
Option Three – Mertens Farm – CLINS 0063 through 0071
Option Four – Acorn Ridge A – Clins 0072 though 0081
Option Five – Highway 2 – Clins 0082 through 0096

at the price stated in the Schedule. The Contracting Officer may exercise the option(s) by written notice to the Contractor at any time before the required completion date stated in Section 00700, Commencement, Prosecution, and completion of Work (April 1984) or any extensions thereto. The Contracting Officer shall provide the Contractor notice of the Government's intent to exercise the options by 01 July 2005. Notice of intent to exercise the option shall not constitute an exercise of the option and shall not bind the government to exercise the option. If the

Government should exercise the options by 01 July 2005 of the required completion date or any extension thereto, the Government shall NOT extend the required contract completion date after the date of the exercise of the option.

Exercise of the option shall be evidenced on Standard Form 30, citing this Section as the authority for exercising the option. Notice of intent to exercise the option shall be considered to have been given at the earlier of the occurrence of any of the following events: deposit of written notification in the mail, receipt by the Contractor of a facsimile notifying it of the Government's intent to exercise the option, or receipt by the Contractor of an e-mail notifying the Contractor of the Government's intent to exercise the option. The option shall be considered to have been exercised at the time the Government deposits written notification to the Contractor in the mail or, if earlier, at the time written notice is delivered to the Contractor.

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 Ramsey County, Devils Lake, North Dakota 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.

52.232-4004 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 will 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.

52.232-5002 CONTINUING CONTRACTS (ALTERNATE) (MAR 1995)--EFARS

(a) Funds are not available at the inception of this contract to cover the entire contract price. The sum of $1 million dollars has been reserved for this contract and is available for payment to the contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds, together with funds provided by one or more non-federal project sponsors will be reserved for this contract. The liability of the United States for payments beyond the funds reserved for this contract is contingent on the reservation of additional funds.

(b) Failure to make payments in excess of the amount currently reserved, or that may be reserved form time to time, shall not be considered a breach of this contract, and shall not entitle the contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs (e) and (h) below.

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

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

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

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

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

(h) If, upon the expiration of 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 other vise due, the contractor, by written notice delivered to the contracting officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be at no cost to the Government, except that, to the extent that additional funds to make payment therefore are allocated to this contract, it may be treated as a termination for the convenience of the Government.

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

(j) The term "Reservation" means monies that have been set aside and made available for payments under this contract.

(End of clause)

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.

52.236-4012 MATERIAL SOURCES

a. Concrete aggregate and stone protection materials meeting the requirements of these specifications can be produced from the sources listed in Section 00830 "Attachments":

b. Materials may be furnished from any of the listed sources or at the option of the Contractor may be furnished from any other sources designated by the Contractor and approved by the Contracting Officer, subject to the conditions hereinafter stated.

c. After the award of the contract, the Contractor shall designate in writing only one source for each type of material or one combination of sources from which he proposes to furnish the materials. If the Contractor proposes to furnish materials from a source or from sources not listed, he may designate only a single source for each type of material or single combination of sources for materials. Samples for acceptance testing shall be provided as required by the TECHNICAL PROVISIONS. If a source for materials so designated by the Contractor is not approved for use by the Contracting Officer, the Contractor may not submit for approval other sources but shall furnish the materials from approved sources selected from the list at no additional cost to the Government.

d. Approval of a source of materials is not to be construed as approval of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable as determined by the Contracting Officer. Materials produced from an approved source shall meet all the requirements of the TECHNICAL PROVISIONS of these specifications.

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 and 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.

52.239-4001 YEAR 2000 COMPLIANCE (FAR 39.106) (JUL 1998)

The contractor shall ensure that, with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. Specifically, the contractor shall perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order which may be affected by the Year 2000 compliance requirement.

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.

DOCUMENT 00830

ATTACHMENTS
03/96

PART 1 GENERAL

1.1 DAVIS-BACON WAGE DETERMINATION

General Decision Number: ND030015 11/21/2003 ND15

Superseded General Decision Number: ND020015

State: North Dakota

Construction Types: Heavy

Counties: Adams, Barnes, Benson, Billings, Bottineau, Bowman, Burke, Cavalier, Dickey, Divide, Dunn, Eddy, Emmons, Foster, Golden Valley, Grant, Griggs, Hettinger, Kidder, La Moure, Logan, McHenry, McIntosh, McKenzie, McLean, Mercer, Mountrail, Nelson, Oliver, Pembina, Pierce, Ramsey, Ransom, Renville, Richland, Rolette, Sargent, Sheridan, Sioux, Slope, Stark, Steele, Stutsman, Towner, Traill, Walsh, Ward, Wells and Williams Counties in North Dakota.

HEAVY CONSTRUCTION PROJECTS (including Sewer & Water Line Construction & Drainage Projects and Excluding Industrial and Processing Plants and Refineries)

Modification Number	Publication Date
0	06/13/2003
1	11/21/2003

ELEC0714-009 01/01/2001

ADAMS, BILLINGS, BOTTINEAU, BOWMAN, BURKE, DIVIDE, DUNN, EMMONS, GOLDEN VALLEY, GRANT, HETTINGER, MCHENRY, MCKENZIE, MCLEAN, MERCER, MOUNTRAIL, OLIVER, PIERCE, RENVILLE, ROLETTE, SHERIDAN, SIOUX, SLOPE, STARK, WARD, & WILLIAMS COUNTIES:

	Rates	Fringes
Electrician		
CABLE SPLICER	$ 23.85	10.5%+a
ELECTRICIAN	$ 23.45	10.5%+a

FOOTNOTE; a. $5.20 per hour.

ELEC1426-012 06/01/2002

BARNES, BENSON, CAVALIER, DICKEY, EDDY, FOSTER, GRIGGS, KIDDER,

LA MOURE, LOGAN, MCINTOSH, NELSON, PEMBINA, RAMSEY, RANSOM, RICHLAND, SARGENT, STEELE, STUTSMAN, TOWNER, TRAILL, WALSH, & WELLS COUNTIES:

	Rates	Fringes
Electrician		
CABLE SPLICER	$ 22.54	5.20+12%
ELECTRICIAN	$ 21.47	5.20+12%

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* ENGI0049-037 11/01/2003

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 18.35	7.45
GROUP 2	$ 18.20	7.45
GROUP 3	$ 17.95	7.45
GROUP 4	$ 17.80	7.45
GROUP 5	$ 16.95	7.45

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: All Terrain Vehicle Cranes 80 tons and over,Hydro,Cranes, 80 tons and over, Crane Operator with 135' boom and over Gantry Crane Operator, & Traveling Tower Crane.

GROUP 2: All Terrain Vehicle Cranes over 20 tons and up to 80 tons, Hydro Cranes 20 tons up to 80 tons,Creter Crane, & Crane Operator up to 135' Boom.

GROUP 3: All Terrain Vehicle Cranes thru 20 tons, Hydro Cranes thru 20 tons, Tractor with boom attachment

GROUP 4: Push Tractor Roller

GROUP 5: Tractor pulling Compaction or Aerating Equipment

SUND2000-007 05/04/2000

	Rates	Fringes
Carpenter		
CARPENTER (Including Form building & Concrete Forms)	$ 13.98	
Concrete Finisher/Cement Mason	$ 14.37	3.67
Ironworker		
REINFORCING	$ 17.03	

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  Laborers:
     Common.....................$  9.96
     Pipelayers.................$ 10.48

  Painter, Brush and Spray.......$ 18.14

  Power equipment operators:
     Backhoes...................$ 14.00            3.74
     Bobcat.....................$ 12.82            2.35
     Bulldozer..................$ 14.06            4.00
     Excavator..................$ 12.05
     Front End Loader...........$ 13.15            3.17
     Mechanic...................$ 15.16            5.31
     Motor Grader...............$ 14.74            4.51
     Scraper....................$ 13.85            4.25
     Self Propelled Packer......$ 11.55            4.25
     Sheepsfoot.................$ 12.57            3.23
     Skidster...................$ 11.06            2.05

  Truck Driver
     Dump.......................$ 11.39            3.60
     Semi.......................$ 11.52             .23
     Tandem.....................$ 11.14            1.63

-----------------------------------------------------------------
 TEAM0082-002 11/01/2003

                                  Rates          Fringes

  Truck Driver
     ARTICULATED OFF ROAD
     HAULER.....................$ 16.70            6.40

-----------------------------------------------------------------

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

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

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

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WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

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

Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

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

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative

Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

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

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END OF GENERAL DECISION

1.2 CITY OF DEVILS LAKE EXCAVATION PERMIT

The Contractor shall obtain a permit from the City of Devils Lake for excavations outside of the work limits shown on the Drawings and within the limits of the City's jurisdiction. A permit application form is provided in Attachment 1.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Document --

CITY OF DEVILS LAKE
PO BOX 1048
DEVILS LAKE, ND 58301

APPLICATION FOR EXCAVATING PERMIT

Name of Applicant _____

Address _____

Phone _____

Legal description of excavation site _____

_____ containing _____AC

Hauling to _____

Remarks_____

Excavation plans submitted and on file for inspection at the office of the City Engineer.

$50.00 application fee paid on _____(date)

Excavation permit valid for 1 year from date of approval.

The applicant and undersigned agree to conform to all applicable laws of this jurisdiction.

Signature of contractor _____

Address _____

Signature of land owner _____

Address _____

Office use only

Action taken by governing body: ____ Approved ____ Denied on_____Date

Remarks _____

Signature _____, City Engineer

CITY OF DEVILS LAKE
EXCAVATION REQUIREMENTS

Rock crushers, concrete and asphalt mixing plants, sand and gravel pits, earth excavation, waste disposal pits, or any other such excavation shall be allowed provided they meet the following requirements:

1. When the application is filed, the applicant shall provide a plan showing the land proposed for excavation. This plans shall show the existing and proposed contours of the land on at least 2 foot contour intervals, any improvements thereon and to a distance of 300 feet in all directions from the proposed work.

2. Concurrent with the above, the applicant shall also provide a plan showing the contemplated changed condition of the land due to the excavation. This plan must include the contemplated re-use of the land, what curing of the land is planned, and the proposed final contours on at least 2 foot contour levels.

3. No excavation or processing of excavated materials shall be permitted nearer than 30 feet to the boundary of adjacent property nor nearer than 125 feet to any existing residence, unless written agreement is obtained from the owner or owners of such adjacent property consenting to a lesser distance and the City of Devils Lake approves such lesser distance. The City may set a greater distance than above mentioned, when in their opinion it is justified.

4. The City of Devils Lake shall specify the degree of slopes of banks for all excavations, the depth of and the distance from any public structures. When excavations are near or adjacent to irrigation canals or ditches, the applicant shall secure written agreement from the ditch company or from officials responsible for the canals or ditches indicating their determination as to setbacks from the public rights-of-way when excavation is contemplated near such rights-of-way.

5. Sand and gravel shall be excavated in such a manner so as to leave an average of 2 feet of undisturbed sand or gravel, as evenly as possible, over the entire excavation tract, to provide a water bearing strata for any existing ground water, and more if the City deems it necessary.

6. Prior to any excavation taking place the City shall inspect the borrow site to determine top soil depths across the site being proposed. All top soils shall be stripped from the site and stockpiled on site. Upon completion of the borrow, all top soil stripped shall be spread as evenly as possible so as to produce a new surface for the purpose of growing crops, trees, shrubs, etc. Operations shall be conducted in such a manner that excavated areas will not collect or permit stagnant water to remain therein.

7. An excavation operation shall maintain haulage roads within the premises covered by the permit and such roads shall be kept in a reasonably dust-free condition when said dust would be injurious to bordering premises. The City shall specify the conditions in each instance to insure this requirement. The hours of operations, unless otherwise specified by the City, shall be from 6:00 am to 10:00 pm, or unless a national emergency arises or special permission is granted by the City.

8. Rock crushers, concrete and asphalt mixing plants may be permitted providing the City finds that the following facts prevail:

A. The use is accessory to the sand and gravel operation.

B. In the finished product, the operator uses the product of the sand and gravel pit on which the operation is proposed. The City may set out additional conditions under which these operations may be permitted and the said conditions may vary by location due to abutting land uses.

9. The operator of any excavation shall post a bond in the form prescribed by the City in a sum equal to the number of acres covered by the permit multiplied by $10,000.00, to insure full compliance with all of the terms and conditions of the permit and the rules and regulations of the City pertaining to extraction and processing. The minimum amount of such bond shall be $20,000.00. The City shall have the power and authority to provide for an alternative method of indemnifying the City in lieu of the posting of the bond herein mentioned.

10. The operator shall furnish evidence that he is insured to the extent set by the City Commission against liability for any negligent act or omission arising from the operation or maintenance of an excavation and all activities connected with or incident thereto.

11. Prior to the granting of a permit, a hearing shall be held at a meeting set by the Board of City Commissioners concerning the property.

12. Upon the granting of a permit by the City, the fee schedule established in the Resolution of Fees and Rates shall apply to each individual ownership of land which is included in the operation.

13. All permits shall be in full force for a period of 1 year from the date of approval thereof unless a shorter time is set by the City. Such temporary permits may be renewable by the City for the same period of time or less, without further notice, hearing or posting of the property involved provided, however, that the operator has complied with all the terms and conditions of the original permit. A renewal of a permit shall be considered as a new permit with respect to fees.

14. The City shall have the power to cancel permits upon proof of violation of any of these requirements.

15. Upon the granting of a permit by the City, the following fee shall apply:

More than 1 acre to and including 2 acres	$300.00
More than 2 acres to and including 3 acres	$400.00
More than 3 acres to and including 4 acres	$500.00
More than 4 acres to and including 5 acres	$600.00
More than 5 acres to and including 10 acres	$1,000.00
In addition, land in excess of 10 acres (per acre)	$25.00

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 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.

1.3 PERMITS

The Contractor shall be responsible for obtaining all permits needed to complete the Work, except as noted elsewhere in these documents. The City of Devils Lake Excavating Permit application form is provided in Section 00830.

PART 2 PRODUCTS

2.1 RECYCLED/RECOVERED MATERIALS

Government procurement policy is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practicable consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The Environmental Protection Agency (EPA) has designated certain items which must contain a specified percent range of recovered or recycled materials. EPA designated products specified in this contract comply with the stated policy and with the EPA guidelines. The Contractor shall make all reasonable efforts to use recycled and recovered materials in providing the EPA designated products and in otherwise utilizing recycled and recovered materials in the execution of the work.

PART 3 EXECUTION

3.1 DISPOSAL OF DEBRIS AND WASTE

The Contractor's attention is directed to Section 01355 ENVIRONMENTAL PROTECTION and to the following CONTRACT CLAUSES: 52.236-7 PERMITS AND RESPONSIBILITIES; 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS; 52.236-10 OPERATIONS AND STORAGE AREAS; and 52.236-12 CLEANING UP. Burning will not be permitted at the project site and debris or waste shall not be left on the site. Disposal of clearing and grubbing debris shall be by one of the following methods:

3.1.1 Burning

Burning will not be permitted at the project site.

3.1.2 Disposal offsite for useful purposes

In the interest of conservation, it is required that the Contractor make a reasonable effort to dispose of the material offsite for some useful purpose. Timber may be cut into convenient lengths and utilized for making saw logs, posts, cordwood, wood chips for paper making or other uses, or other similar use.

3.1.3 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.

3.1.4 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.

3.2 SCHEDULING

3.2.1 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: 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS.

3.2.2 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 for which 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.

3.3 OTHER CONTRACTS

The Contractor shall coordinate with other contractors in the performance of the work and schedule such work to provide for a minimum of delays and interferences. Coordination shall be through the Contracting Officer. Work listed below is currently required under separate contract or is scheduled to be awarded as a separate contract prior to completion of work under this contract. These contracts will be considered in the application of CONTRACT CLAUSE: 52.236-8 OTHER CONTRACTS.

-- End of Section --

SECTION 01140

WORK RESTRICTIONS
05/01

PART 1 GENERAL

1.1 MEASUREMENT AND PAYMENT

The contactor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract items.

1.2 BLASTING

Blasting will not be permitted.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 EXISTING UTILITIES

3.1.1 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:

Nodak Electric
POC: John Rogers, Engineering Manager
P.O. Box 13000
Grand Forks, North Dakota 58208 3000
800 732 4373
701 746 4461

North Dakota Telephone Co.
POC: Tom Hunter
802 S. 5th Street
Devils Lake ND 58301
701 662 6406

United Power Assocition
POC: Chuck Lukkarila
Hwy 10 Box 800
Elk River MN 55330
612 241 2261

Ramsey County Rural Utilities

POC: Nels Halgren
P.O. Box 1257
Devils Lake, ND 58301
701-662-5781

MDU Gas
Russ Bezanson
P.O. Box 777
Devils Lake, ND 58301
701-662-4999

3.1.2 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. Repair of damaged utilities shall be in accordance with CLAUSE 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS.

3.1.3 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.

3.1.4 North Dakota One Call Excavation Notice System

For contract work performed within the State of North Dakota, the Contractor shall meet the requirements of North Dakota Statutes, Chapter 42-23 "One Call Excavation Notice System." The North Dakota One Call notification center telephone numbers are:

Hotline	800-795-0555
Main Office	701-223-9380

3.2 PROTECTION OF TREES

Trees to be protected shall be determined and staked by the Contracting Officer. The following measures shall be implemented for tree protection and shall be addressed in the Environmental Protection Plan required under Section 01355 ENVIRONMENTAL PROTECTION:

a. The trees shall be protected from wounds to the bark and foliage.
b. The critical root zone shall be protected from compaction and grading.
c. Changes in temporary site drainage and ponding shall be minimized to the extent possible that it effects the protected trees.

The critical root zone of trees designated to be protected shall be surrounded by a high visibility fence 4 feet in height, supplied and erected by the Contractor. The critical root zone shall be defined by an area extending 1.5 feet radius from each tree for each inch of Diameter at Breast Height (DBH). The fence shall be securely erected and installed prior to any movement through the project site by construction vehicles or equipment, and remain in place until construction and clean-up are completed. The critical root zone shall remain free of all construction activities including trenching, staging, stockpiling and storage of materials. Vehicles and equipment shall not drive or park within the critical root zone. Variation to the critical root zone size or configuration will only be permitted where it is absolutely necessary for construction of the project, and requires approval of the Contracting Officer. Short duration alterations of the critical root zone involving wood chips and limited equipment travel shall be submitted in writing for approval.

The Contractor shall not operate equipment in vegetated areas outside the work limits.

3.2.1 Restoration of Damaged Trees

Any existing tree designated to be protected that is damaged by the Contractor's operations shall be replaced. Trees will be considered damaged if the critical root zone in cohesive soils is compacted, if there are significant wounds that could contribute to rot, or if distress (evident by reduced growth or other observations of distress documented by a forester) is observed prior to closing the contract. Trees shall be replaced in kind on a caliper inch per caliper inch basis (DBH) (e.g. one 6-inch red oak shall be replaced with two 3-inch red oaks, three 2-inch red oaks, or six 1-inch red oaks). Replacement trees shall be guaranteed with the Contractor's standard warranty. Replacement tree size and location will be determined and staked by the Contracting Officer. Repair by pruning, aeration, soil conditioning, or other recommendation from a qualified forester will be considered as substitution for replacement by the Contracting Officer.

-- End of Section --

SECTION 01270

MEASUREMENT AND PAYMENT
01/02

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.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

NIST HB 44	(1997) NIST Handbook 44: Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices

1.2 COMPENSATION

The payment provided for in the contract shall constitute full compensation for furnishing all materials and for performing all work under the contract in a complete and acceptable manner. The contract work shall include providing plant, equipment, tools, supplies, labor, supervision, incidental materials, quality control, environmental protection, and meeting safety requirements, and for performing all work required for which separate payment is not otherwise provided. Compensation for all work shown, specified, or essential to completion of the project (whether or not the specific material or operation is indicated) shall be included on the bidding schedule. The payment provided for in the contract includes compensation for all risk, loss, damage, and expense arising out of the nature of the work or its prosecution, subject to conditions of the contract. Payment for each contract line item will constitute full compensation for furnishing the materials and constructing the work complete in place as specified.

1.3 MEASUREMENT AND PAYMENT

Except as provided for below, the work of this section will not be measured for payment. The Contractor shall include compensation for the work of this section in the most applicable contract line items in the bidding schedule.

1.3.1 Lump Sum Payment Items

Payment items for the work of this contract for which contract lump sum

payments will be made are listed in the bidding schedule and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment items, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associative contractor quality control, environmental protection, safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.3.1.1 Sheetpile Wall

Payment for the sheetpile wall will be made at the contract lump sum price bid. This work will include the construction of the sheetpile wall, the concrete, and the fencing. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work as specified.

1.3.1.2 Transformer Raise

Payment for the transformer raise will be made at the contract lump sum price bid. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work in accordance with all local, state, and federal codes.

1.3.1.3 Segmental Retaining Wall

Payment for the segmental retaining wall will be made at the contract lump sum price bid. This work will include the construction of the segmental retaining wall complete with gravel base and drainage material. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work as specified.

1.3.1.4 Concrete Boat Ramp

Payment for the concrete boat ramp will be made at the contract lump sum price bid. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work as specified.

1.3.1.5 Removal of Existing Lines

Payment for removals will be made at the contract lump sum price bid. Capping of existing utilities is included in this item. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work as specified.

1.3.1.6 Traffic Control Plan

Payment for the traffic control plan will be made at the contract lump sum price bid. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work in accordance with the work as specified.

1.3.1.7 Clearing and Grubbing

Payment for clearing and grubbing will be made at the contract lump sum price bid. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

1.3.2 Riprap, Bedding, Bituminous Pavement

Payment will be by the ton (TN) (2,000 pounds avoirdupois) of material acceptably placed within the tolerances specified. Price(s) and payment(s) will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials, and equipment and constructing the work complete in place as specified.

1.3.2.1 Measurement by Weight

Materials paid for by weight will be measured by weighing each truck load on approved scales before being placed in the work. Scales shall be of sufficient length to permit simultaneous weighing of all axle loads and shall be sensitive to a change in load of 0.2 percent throughout the range of the scales. The scale's accuracy shall conform to the applicable requirements of NIST HB 44 and shall be certified by a scale servicing company or by an inspector of the State Inspection Bureau. Each load shall be accompanied by a delivery ticket certified by the weighmaster. Delivery tickets shall be collected by the Contractor, and copies thereof shall be furnished to the Contracting Officer. As a minimum, each ticket shall contain the following information:

1. Date and time.
2. Vehicle number.
3. Gross weight.
4. Vehicle tar weight.
5. Net weight.
6. Job total for material weighed.
7. Signature of weighmaster.

1.3.3 Topsoil and Impervious Fill

Payment will be by the cubic yard of material acceptably placed within the tolerances specified. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

These items will be measured by the cubic yard in place using the average-end-area method based on the thicknesses shown on the plans. Tolerances are provided only for the convenience of the contractor and no material placed outside the lines and grades in the plans as a result of the permitted tolerances will be measured for payment. Volumes occupied by structures will not be included in measurement.

1.3.4 Salvage Aggregate Surfacing

Payment will be by the cubic yard of material stripped, stockpiled, and reused in the work. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

Salvage aggregate surfacing will be measured by the cubic yard in place using the average-end-area method based on the thicknesses shown on the plans. Tolerances are provided only for the convenience of the contractor and no material placed outside the lines and grades in the plans as a result of the permitted tolerances will be measured for payment.

1.3.5 Stripping Topsoil

Payment will be by the cubic yard of material stripped and removed from the project. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

Topsoil stripping will be measured by the cubic yard in place before removal using the average-end-area method based on the thicknesses shown on the plans. Tolerances are provided only for the convenience of the contractor and no material placed outside the lines and grades in the plans as a result of the permitted tolerances will be measured for payment.

1.3.6 Geotextile Fabric

Payment will be made for geotextile fabric by the square yard of material acceptably placed within the tolerances specified. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

Measurement of geotextile fabric will be by the square yard of material in place, placed in accordance with the plans. No additional payment will be made for fabric overlap in the seams as required by the specifications.

1.3.7 Remove and Replace Riprap

Payment for removal and replacement of riprap will be made by the cubic yard of material removed from the existing project. All riprap removed under this item will be reinstalled in the work. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

Measurement for riprap removal and replacement will be made by the cubic yard of material in place before excavation begins. Limits of riprap removal will be coordinated with U.S. Army Corps of Engineers staff before operations commence.

1.3.8 Seeding

Payment will be by the acre of seeding performed. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

Seeding will be measured as the area needed to construct the work. Areas which are outside the limits of normal construction operations will be seeded at the expense of the contractor. Measurement will be made to the nearest 0.1 acre.

1.3.9 Inspection Trench

Payment for the inspection trench will be by the linear foot of trench excavated. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified. The impervious fill placed within the inspection trench is included in this contract unit price.

The inspection trench will be measured by the linear foot along the levee centerline as shown on the plans.

1.3.10 Sewer Line, Water Line, and Storm Sewer Line

Sewer lines, water lines, and storm sewer lines will be measured and paid for by the linear foot installed. Flared end sections will be paid for at the unit price for the culvert. Price and payment will be made at the contract unit price and will cost full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

1.3.11 Salvage Guard Rail

The salvage guard rail will be measured and paid for by the linear foot of guard rail removed and stored. Removal includes guard rail and posts. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

1.3.12 Reinstall Guard Rail

Reinstallation of the guard rail will be measured and paid for by the linear foot of salvage guard rail reinstalled. Price and payment at the contract unit price will constitute full compensation for furnishing all plant, labor, materials, and equipment and constructing the work complete in place as specified.

1.3.13 New Guard Rail

New guard rail will be measured and paid for by the linear foot of guard rail installed. Price and payment at the contract unit price will constitute full compensation for furnishing all plant, labor, materials,

and equipment and constructing the work complete in place as specified.

1.3.14 Reuse Sign

Sign reuse will be measured and paid for by the number of signs removed and reinstalled. Payment shall include compensation for the removal, stockpiling and reinstallation of the signs as specified.

1.3.15 New Signs

New signs will be measured and paid for by the number of new signs installed. Price and payment will be made at contract unit price and will constitute full compensation for all plant, labor, and equipment and constructing the work complete in place as specified. Materials for new signs will be supplied by the governmental entity requesting the sign.

1.3.16 Reuse Gate

Reused gates will be measured and paid for by the number of gates removed and reinstalled. Payment shall include compensation for the removal, stockpiling and reinstallation of the gates as specified.

1.3.17 New Gate

New gates will be measured and paid for by the number of new gates installed. Price and payment will be made at the contract unit price and will constitute full compensation for furnishing all plant, labor, materials and equipment and constructing the work complete in place as specified.

1.3.18 Residential Service Connections, Storm Sewer Catch Basin, Install Manhole, Sanitary Manhole, Sanitary Cleanout, and Septic Tank

These items will be measured and paid for by the number of items in installed. Price and payment will be made at the contract unit price and will constitute full compensation for all plant, labor, and equipment for constructing the work completed in place as specified.

1.3.19 Asphalt Removal

Payment for removal of asphalt will be made at the contract square yard price bid. This price shall constitute full compensation for all labor, equipment, tools and incidentals necessary to complete the work as specified.

This item will be measured by the square yard in place.

1.3.20 Bidding Schedule Items

Bidding Schedule Items applicable to the work of this section are as follows:

Item	Unit
Sheetpile Wall	LS
Transformer Raise	LS
Segmental Retaining Wall	LS
Concrete Boat Ramp	LS
Removal of Existing Lines	LS
Traffic Control Plan	LS
Clearing and Grubbing	LS
Riprap	TN
Bedding	TN
Bituminous Pavement	TN
Topsoil	CY
Impervious Fill	CY
Salvage Aggregate Surfacing	CY
Topsoil Stripping	CY
Geotextile Fabric	SY
Remove and Replace Riprap	CY
Seeding	AC
Inspection Trench	LF
Sewer Line	LF
Water Line	LF
Storm Sewer Line	LF
Salvage Guard Rail	LF
Reinstall Guard Rail	LF
New Guard Rail	LF
Reuse Sign	EA
New Signs	EA

Item	Unit
Gate Reuse	EA
New Gates	EA
Residential Service Connections	EA
Storm Sewer Catch Basin	EA
Manhole	EA
Sanitary Manhole	EA
Sanitary Cleanout	EA
Septic Tank	EA
Asphalt Removal	SY

1.4 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.

1.5 QUANTITY SURVEYS

The Contractor shall provide quantity surveys for bulk materials measured by volume or weight, unless an alternate method of measurement is specified. Quantity surveys are specified in Section 01720 CONTRACTOR SURVEYS.

1.6 MEASUREMENT BY WEIGHT

Bulk materials paid for by weight will be measured by weighing each truck load on approved scales before being placed in the work. Scales shall be of sufficient length to permit simultaneous weighing of all axle loads and shall be sensitive to a change in load of 0.2 percent throughout the range of the scales. The scale's accuracy shall conform to the applicable requirements of NIST HB 44 and shall be certified by scale servicing company or by an inspector of the State Inspection Bureau. Each load shall be accompanied by a delivery ticket certified by the weighmaster. Delivery tickets shall be collected by the Contractor, and copies thereof shall be furnished to the Contracting Officer. As a minimum, each ticket shall contain the following information:

(1) Date and time.
(2) Vehicle number.
(3) Gross weight.
(4) Vehicle tare weight.
(5) Net weight.
(6) Job total for material weighed.
(7) Signature of weighmaster.

1.7 MEASUREMENT UNITS

When materials are measured in units other than the measurement units specified as the basis of payment, the measured quantities shall be converted to the specified unit of measure. Factors for conversions from one basis or unit of measurement to another shall be approved by the Contracting Officer.

1.8 UNIT PRICES

Payment items for the work of this contract are listed in the BIDDING SCHEDULE and described below. The payment items provided for on the bidding schedule embody the majority of the work; but the work descriptions provided below do not specifically discuss all incidental work required to complete the contract work.

1.8.1 Bonds

Bonds will be paid for on a job basis in accordance with FAR 52.232-5.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 01312

QUALITY CONTROL SYSTEM (QCS)
08/01

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. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site. 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 500 MHz Pentium or higher processor

128+ MB RAM for workstation / 256+ MB RAM for server

1 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader, 8x speed or higher

SVGA or higher resolution monitor (1024 x 768, 256 colors)

Mouse or other pointing devise

Windows compatible printer (Laser printer must have 4+ MB of RAM)

Connection to the Internet, minimum 56 BPS

Software

MS Windows 98, ME, NT, or 2000

Word Processing software compatible with MS Word 97 or newer

Latest version of : Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

Electronic mail (E-mail), MAPI compatible

Virus protection software that is regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

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

1.4.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed at the Contractor's CQC System Manager training classes (Reference Section 01451 CONTRACTOR QUALITY CONTROL, PARAGRAPH: QUALITY CONTROL ORGANIZATION).

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 300.

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. The listing of submittals is general and not all-inclusive. The contractor shall review the contract documents and incorporate additional required submittals, complete the columns for contractor schedule dates and submit the updated register to the Contracting Officer for approval within 7 calendar days after Notice to Proceed. The approved submittal register will be used to manage submittals throughout the life of the contract. The submittal register and construction schedule shall be coordinated. 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 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS"[, and Section 01320 PROJECT SCHEDULE]. 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 --

SECTION 01330

SUBMITTAL PROCEDURES
01/02

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-06 Test Reports

SD-07 Certificates

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," Government approved 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 Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the

Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 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) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

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. Columns "c" through "f" have been completed by the Government; the Contractor shall complete columns "a" and "g" through "i" and submit the forms to the Contracting Officer for approval within 7 calendar days after Notice to Proceed. The Contractor shall keep the submittal register up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

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 are included in the CQS software. Hardcopies will be furnished to the Contractor if the CQS software is not used on this contract. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

3.5.1 Submittal Copies

The Contractor shall submit 6 hardcopies of each submittal (both government approved and for information only), or 1 hardcopy 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 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.

3.5.5 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 it's 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:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

-- End of Section --

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR ☐ FIO ☐ GOV'T. APPROVAL

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/etc.)* *b.*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruction No. 6)* *h.*	FOR CE USE CODE *i.*
				SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*			

REMARKS	**I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.** _____ NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A -- Approved as submitted.

B -- Approved, except as noted on drawings.

C -- Approved, except as noted on drawings. Refer to attached sheet resubmission required.

D -- Will be returned by separate correspondence.

E -- Disapproved (See attached).

F -- Receipt acknowledged.

FX -- Receipt acknowledged, does not comply as noted with contract requirements.

G -- Other *(Specify)*

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

(Reverse of ENG Form 4025-R)

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Devils Lake Levee Raise to 1460

CONTRACTOR

ACTIVITY NO (a)	TRANSMITTAL NO (b)	SPEC SECT (c)	DESCRIPTION ITEM SUBMITTED (d)	PARAGRAPH # (e)	CLASSIFICATION (f)	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES SUBMIT (g)	APPROVAL NEEDED BY (h)	MATERIAL NEEDED BY (i)	CONTRACTOR ACTION CODE (j)	DATE OF ACTION (k)	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR (l)	APPROVING AUTHORITY DATE FWD TO OTHER REVIEWER (m)	DATE RCD FROM OTH REVIEWER (n)	ACTION CODE (o)	DATE OF ACTION (p)	MAILED TO CONTR/ DATE RCD FRM APPR AUTH (q)	REMARKS (r)
		01355	SD-01 Preconstruction Submittals															
			Environmental Protection Plan	1.7	G_ENV													
		01451	SD-01 Preconstruction Submittals															
			CQC Plan		FIO													
			SD-06 Test Reports															
			CQC Documentation		FIO													
		01500	SD-02 Shop Drawings															
			Site Plan		FIO													
			Government Field Office		FIO													
			Traffic Control Plan		FIO													
		01565	SD-01 Preconstruction Submittals															
			Notice of Intent (NOI)		FIO													
			Public Notification		FIO													
			SD-02 Shop Drawings															
			Temporary Erosion And Sediment		FIO													
			Control Plan															
			SD-11 Closeout Submittals															
			Notice of Termination (NOT)		FIO													
			Notice of Discontinuation		FIO													
		01720	SD-06 Test Reports															
			Survey Notes		FIO													
			As-Built Surveys		FIO													
			Quantity Surveys		FIO													
		01780	SD-11 Closeout Submittals															
			As-Built Drawings		G_GEN													
		02220	SD-07 Certificates															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Devils Lake Levee Raise to 1460

CONTRACTOR

ACTIVITY NO (a)	TRANSMITTAL NO (b)	SPEC SECT (c)	DESCRIPTION ITEM SUBMITTED (d)	PARAGRAPH # (e)	CLASSIFICATION (f)	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES SUBMIT (g)	APPROVAL NEEDED BY (h)	MATERIAL NEEDED BY (i)	CONTRACTOR ACTION CODE (j)	DATE OF ACTION (k)	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR (l)	APPROVING AUTHORITY DATE FWD TO OTHER REVIEWER (m)	DATE RCD FROM OTH REVIEWER (n)	ACTION CODE (o)	DATE OF ACTION (p)	MAILED TO CONTR/ DATE RCD FRM APPR AUTH (q)	REMARKS (r)
		02220	Demolition plan	1.9	G													
		02373	SD-07 Certificates															
			Geotextile	2.1.1	FIO													
		02388	SD-01 Preconstruction Submittals															
			Reuse of Riprap		G													
			Material Sources		G GT													
			SD-06 Test Reports															
			Gradation Test		G													
		02722A	SD-03 Product Data															
			Waybills and Delivery Tickets		FIO													
			SD-06 Test Reports															
			Sampling and testing	1.4	FIO													
			Field Density Tests	1.4.2.3	FIO													
		02831	SD-07 Certificates															
			Chain Link Fence	2.1.1	FIO													
			GA		FIO													
		02841N	SD-02 Shop Drawings															
			Wiring and schematic diagrams	1.7.2	FIO													
			SD-03 Product Data															
			Spare parts	1.7.1	FIO													
			SD-06 Test Reports															
			Vehicle barrier system	1.7.4	FIO													
			SD-07 Certificates															
			List of equipment	1.7.3	FIO													
			List of product installation	1.7.3	FIO													

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Devils Lake Levee Raise to 1460

CONTRACTOR

ACTIVITY NO (a)	TRANSMITTAL NO (b)	SPEC SECT (c)	DESCRIPTION ITEM SUBMITTED (d)	PARAGRAPH # (e)	CLASSIFICATION (f)	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES SUBMIT (g)	APPROVAL NEEDED BY (h)	MATERIAL NEEDED BY (i)	CONTRACTOR ACTION CODE (j)	DATE OF ACTION (k)	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR (l)	APPROVING AUTHORITY DATE FWD TO OTHER REVIEWER (m)	DATE RCD FROM OTH REVIEWER (n)	ACTION CODE (o)	DATE OF ACTION (p)	MAILED TO CONTR/ DATE RCD FRM APPR AUTH (q)	REMARKS (r)
		02841N	SD-10 Operation and Maintenance															
			Data															
			Vehicle barrier	1.7.5	G													
		02921N	SD-03 Product Data															
			Wood cellulose fiber mulch	2.8.4	FIO													
			Fertilizer	2.7	FIO													
			SD-06 Test Reports															
			Topsoil composition tests	2.4.4	FIO													
			Plant tissue sample test	1.8.1	FIO													
			SD-07 Certificates															
			seed	2.1	FIO													
			sods	2.2	FIO													
			sprigs	2.3	FIO													
			SD-08 Manufacturer’s Instructions															
			Erosion Control Materials	2.10	FIO													
		03100	SD-03 Product Data															
			Design Calculations and		FIO													
			Fabrication Drawings															

SECTION 01355

ENVIRONMENTAL PROTECTION
01/01

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	(2003) U.S. Army Corps of Engineers Safety and Health Requirements Manual

US ARMY CORPS OF ENGINEERS TECHNICAL REPORT

WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or

welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (e.g. 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 from the governing agency to discharge water.

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 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 flamable 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 (e.g. pounds per acre), 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 52.236-9 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 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. The failure of the Contracting Officer to notify the Contractor of any noncompliance with Federal, State, or local environmental laws or regulations, permits, or the Contractor's Environmental Protection Plan shall not relieve the Contractor of the duty to comply with those laws or regulations, permits, or the Contractor's Environmental Protection Plan.

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, except those 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. 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 52.236-12 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 --

SECTION 01451

CONTRACTOR QUALITY CONTROL
01/02

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	(2001) 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	(2000b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 SUBMITTALS

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

SD-01 Preconstruction Submittal

CQC Plan;

The Contractor shall prepare a CQC plan in accordance with this section and submit for Government approval.

SD-06 Test Reports

CQC Documentation;

The Contractor shall submit results of all tests and measurements required by the CQC plan.

1.3 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 the 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 3.7.2.1: 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 (CQC) Management Report

b. Preparatory Phase Checklist

c. 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.

-- End of Section --

CONSTRUCTION QUALITY CONTROL (CQC) MANAGEMENT REPORT

Contractor Production

Contractor's Name

_____

_____

Daily Report No:_____ Date:_____
Contract No.:_____

Project Title & Location: _____

Weather:_____ Precipitation:_____in. Temp.:_____Min._____Max.

1. Contract/Subcontractors and Area of Responsibility:

NUMBER:	TRADE	HOURS	EMPLOYER	LOCATION/DESCRIPTION OF WORK

2. Operating Plant or Equipment. (Not hand tools)

Plant/Equipment	Date of Arrival/Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair

CQC Management Report (cont.)

3. Work performed today: (Indicate location and description of work performed by prime and/or subcontractors by letter in table above).

4. 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)

5. Test performed as required by plans and/or specifications:

6. Material received:

CQC Management Report (cont.)

7. Submittals Reviewed:

(a) Submittal No.	(b) Spec/Plan Reference	(c) By Whom	(d) Action

8. Off-site surveillance activities, including action taken:

9. Job safety: (Report violations; Corrective instructions given; Corrective actions taken).

10. 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.
1. Where is work located? _____
2. Is a sample panel required? Yes _____ No_____
3. 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

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES
01/02

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.

Government Field Office;

The Contractor shall submit a preliminary plan and description of the mobile office facilities which it proposes to furnish prior to proceeding with procurement thereof.

Traffic Control Plan;

The Contractor shall submit a traffic control plan prepared to meet the reuqirements of ND/DOT Standard Specifications for Road and Bridge Construction, Section 704.

1.2 REFERENCES

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

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (ND/DOT)

ND/DOT Standard Specifications	(2002) North Dakota Department of Transportation Standard Specification
ND/DOT Std. Spec. 704	Traffic Control

ENGINEERING MANUALS

EM 385-1-1	(2003) U.S. Army Corps of Engineers Safety and Health Requirements

1.3 GROUNDS AND ROADWAYS

1.3.1 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. Any additional rights-of-entry 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-entry 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.

1.3.2 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.

1.4 PAVEMENT REMOVAL AND REPLACEMENT

Where roads are cut, removed, or otherwise damaged in the prosecution of the work the Contractor shall replace all pavements or other surfacings so removed or damaged to their preconstruction condition. After backfill is completed on paved streets, a temporary surface shall be laid down and the street opened to the traffic in order to provide access to abutting property. Restoration of the original street surface construction shall be completed no later than 60 calendar days after starting excavation. Should weather conditions preclude the restoration of the original surface material, temporary resurfacing utilizing a bituminous mixture shall be installed with the final surface constructed no later than June 1 of the following construction season.

1.5 AVAILABILITY AND USE OF UTILITY SERVICES

1.5.1 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.

1.5.2 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.

1.5.3 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.

1.6 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. Dust control shall be provided as stated in Section 01355 ENVIRONMENTAL PROTECTION.

1.6.1 Off-Site 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.

1.6.2 On-Site 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.

1.6.3 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.

1.7 CONTRACTOR'S TEMPORARY FACILITIES

1.7.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.7.2 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," "Construction Limits," and/or staging areas. Trailers, materials, or equipment shall not be placed or stored outside the work limits.

1.8 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.

1.9 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. The fence shall be erected in the locations shown on the Drawings. 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.

1.10 TRAFFIC CONTROL PLAN

The Contractor shall prepare a traffic control plan for all areas where work will occur adjacent to public roadways. All roads must be kept passable throughout the duration of the work. The traffic plan shall be

prepared to comply with the requirements of ND/DOT Std. Spec. 704, Traffic Control. The Contractor shall conduct operations, post signs and flagmen, and provide all other safeguards to the public and workers required by the approved plan.

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: Flood Control; Devils Lake, ND

PROJECT NAME: Devils Lake Levee 1460 Raise

2.2 GOVERNMENT FIELD OFFICE

The Contractor shall provide and maintain for the life of the contract an approved mobile office (mobile home style) meeting the following requirements as to space and facilities for the exclusive use of the government. The unit shall be ready for occupancy within 10 calendar days after notice to proceed. The unit shall provide a minimum of 600 square feet of floor area and shall include four private offices, each having approximately 100 square feet of floor area and a storage closet. The unit shall have two entrance doors. The remaining space is to be utilized as one large office, a toilet room, a chest of drawers and a storage area for coats, etc. The unit shall be provided with a toilet room consisting of a stool and lavatory and an electric heater. The unit interior headroom shall be no less than a nominal 8'-0".

2.2.1 Location

The Contractor shall locate the portable mobile home type field office at or near the Contractor's field office site at a location approved by the Contracting Officer. Four parking spaces shall be reserved for Government vehicles at the Government trailer.

2.2.2 Construction

The Government field office shall be similar in quality and age as the Contractor's field office, if provided. Exterior and interior finishes shall be free from color fade, chipping, or peeling. The unit shall be set level on blocking, be provided with plywood skirting, and be anchored to the ground for protection against wind damage. Exterior doors shall be provided with screens and outside hasps for use with padlocks. The unit shall be electrically wired for fluorescent ceiling lighting fixtures and weather proof porch lights at each entrance door, along with switches, duplex convenience outlets, and a master switch and fuse box as required. The entire unit shall be adequately insulated with fiberglass insulation and vapor barrier. Dead air crawl space shall be properly ventilated. Heating and air conditioning facilities shall be provided to maintain an ambient inside temperature of 68 degrees F. The unit shall be weather proof, and furnished with a forced air type heating plant, either gas or oil with hot and cold air ducts adequate to supply even heat throughout the unit. Air conditioning shall be furnished with capacity as recommended by the manufacturer for the trailer size. A central air conditioning system shall be provided.

2.2.3 Utilities

The Contractor shall be responsible for service fees in connection with electrical power and heating (natural gas or oil service). The Contractor shall also be responsible for service fees in connection with the water supply, sanitary waste system, and telephone as indicated below. When available, city water and sewer system connections are preferred.

a. Sanitary Facilities. In the absence of a city sewer connection, holding tanks shall be provided. The lavatory shall discharge into an outside underground holding tank with a capacity of not less than 400 gallons and a vented drain. The contractor shall provide year-round pumping of the holding tank as required. Subject to approval, a serviced chemical toilet may be used. If an underground holding tank is installed, the holding tank shall be removed, the excavation backfilled, and the ground surface restored at the completion of the project.

b. Potable Water. In the absence of a city water connection, a potable water storage tank of not less than 300 gallons capacity shall be furnished with adequate supply filling connections and screened vent, and shall be stainless steel or plastic with a drain cock of not less than ½ inch size. If the storage tank was installed underground, upon completion of the job, the Contractor shall remove the underground holding tank, backfill the excavation, and restore the ground surface. The Contractor shall provide potable water for the storage tank if

service connections are not provided.

c. Telephone. The Contractor shall be responsible for installation of telephone at the Government office. The telephone hook-up should be placed on a separate account from the Contractor's phone so that it can be transferred to the Government after installation. The Government will be responsible for the telephone service to the Government field office after installation.

2.2.4 Furnishings.

The following furnishings shall be provided for the Government office:

a. A hot and cold drinking water dispenser.
b. Bulletin board, minimum size 6 square feet.
c. A cabinet shall be supplied along a side wall with minimum nominal dimensions 2 feet wide, 3 feet high and 6 feet long. The cabinet shall include a finished wood or laminate counter. Two shelves, one above and one below the cabinet, shall be provided for storage.
d. Sign. The contractor shall securely attach to the unit exterior and adjacent to the main entrance door, as approved, a 24 inch by 36 inch sign with the Corps of Engineers castle insignia with wording as specified.
e. Stoop. A stoop with 8 inch risers and handrails shall be provided at each entrance door.
f. Windows. All windows shall be provided with sash and security screens along with shades, blinds or similar features that allow for the complete coverage of the windows on the inside.
g. Lavatory. A 5 by 24 inch metal shelf and 15 by 20 inch wood or metal framed plate glass mirror shall be provided above the lavatory.

2.2.5 Furniture

Office furniture shall be coordinated with respect to style, color, and upholstery. The following furniture shall be provided:

a. Four desks either wood or steel, double pedestal type, top approximately 60 inches by 34 inches, with lock.
b. Four swivel armchairs with tilting seat and adjustable spring back.
c. Four filing cabinets, four-drawer legal size, with lock.
d. One drafting table stool, non-tilting, rotary type with back and circular footrest.
e. One drafting table, metal and/or wood, 36 inches by 48 inches.
f. One conference table, 3/4 inch thick by 72 inches long by 36 inches wide with solid core construction top.
g. Eight chairs for conference table, either wood or steel construction, with cushioned seat and backrest.
h. One rack for hanging full size drawings.

2.2.6 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.

2.2.7 Maintenance.

The Contractor shall maintain the field office 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. Toilet paper, paper toweling, paper and supplies for the FAX and copy machines shall be provided. Supply water for the drinking water dispensor. Supply water for the lavatory if a service connection is not provided for potable water.
b. Maintenance of office equipment. Include a maintenance service contract/agreement for operation of the Fax and Copy machines.
c. Janitorial Service. The Contractor shall provide daily janitorial service and provide all janitorial and sanitary supplies as well as trash removal service.
d. Snow removal. Maintenance of site access including snow removal service is the responsibility of the Contractor.

PART 3 EXECUTION

3.1 MAINTENANCE OF GROUNDS

Borrow areas, stockpiles, and other grounds stripped of natural vegetation or disturbed by the Contractor's operations shall be kept free of noxious weeds, debris, and unnecessary materials and supplies. Control of vegetation shall comply with local ordinances.

3.2 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.

3.3 RESTORATION OF STORAGE AREA

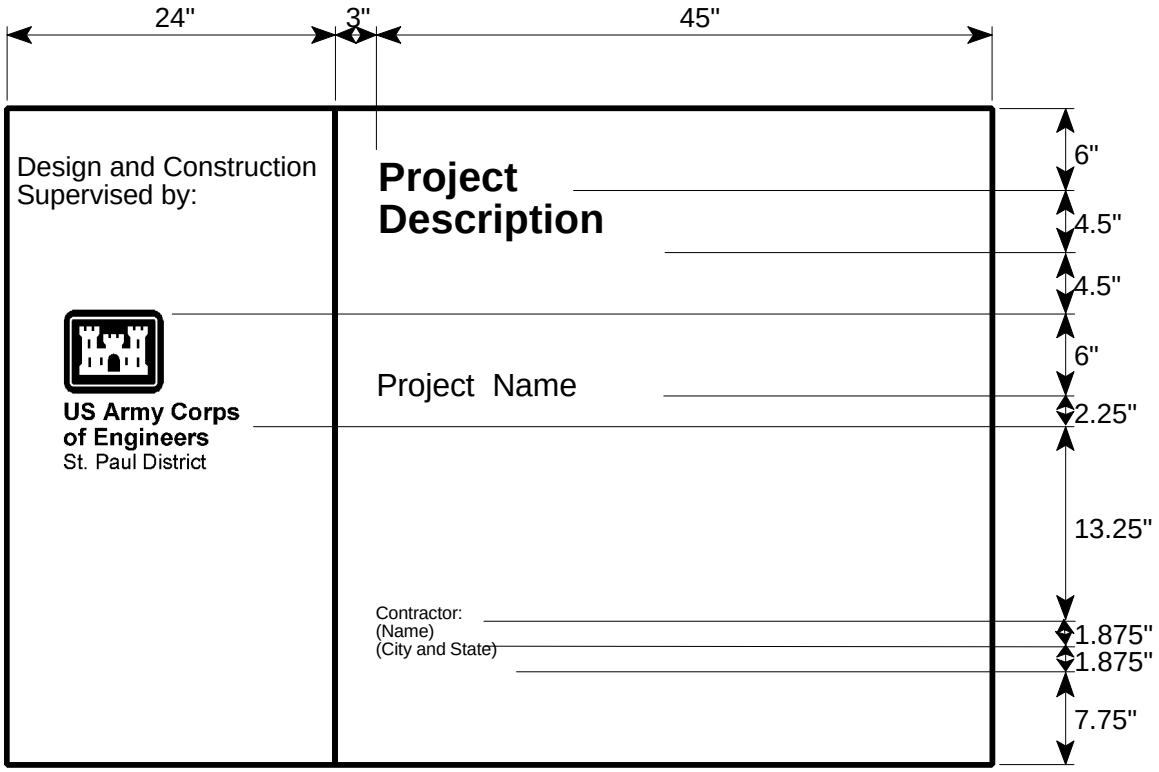
Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and

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 tor 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.



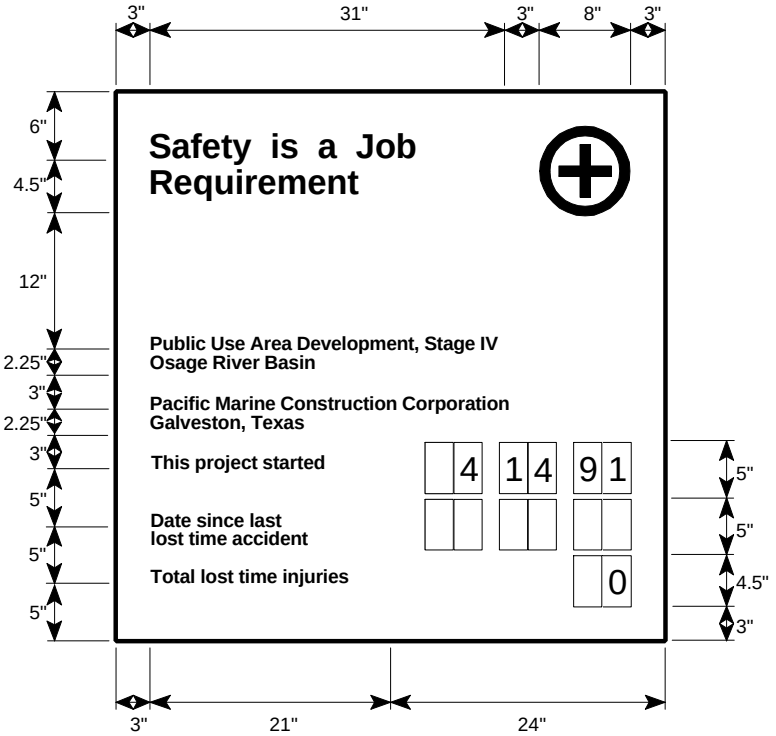
Project Description:
One to three line project title legend describes the work being done under this contract.
Color: Black; Typeface: 3" Helvetica Bold; Maximum line length: 42".

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 prim e 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



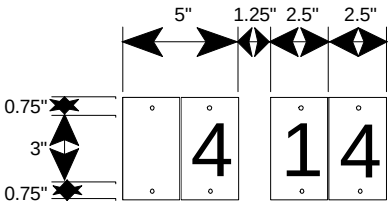
All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps Standards (EP 310-1-6a and 6b).

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".

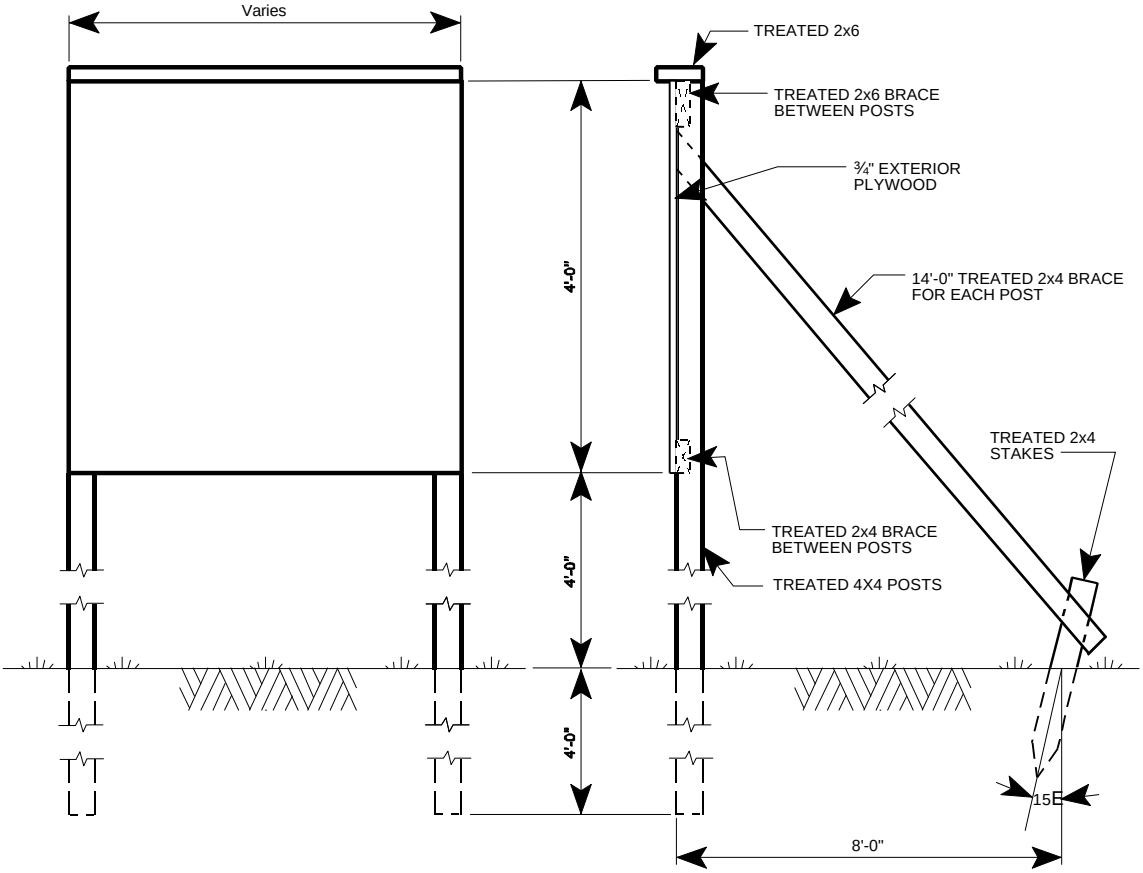
Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Typeface: 1.5" Helvetica Regular; Color: Black; Maximum line length: 42".

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



SECTION 01565

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM
01/02

PART 1 GENERAL

1.1 GENERAL

This section covers best management practices to be implemented for prevention of storm water pollution as required by the National Pollutant Discharge Elimination System (NPDES). The North Dakota Department of Health is responsible for administering permits for NPDES in the state of North Dakota. The Government has determined that the project work included under this contract requires NPDES permitting. The requirements herein supplement those covered in Section 01355 ENVIRONMENTAL PROTECTION.

1.1.1 Definitions

The following terms apply to this specification and the general permit, unless redefined in subsequent paragraphs.

a. "EPA" means the United States Environmental Protection Agency.
b. "NPDES" means the National Pollutant Discharge Elimination System.
c. "BMP" means Best Management Practices.
d. "General Permit" means the general permit authorization to discharge storm water associated with a construction activity under the National Pollutant Discharge Elimination System/State Disposal System Permit Program.
e. "Owner" as referred to in the general permit shall mean the Federal Government.
f. "NDPDES" means the North Dakota Pollutant Discharge Elimination System.
i. "Notice of Intent (NOI)" means the application to be filed with the state to receive a general permit for storm water discharges associated with a construction activity.

1.1.2 Contract Drawings

The following features are shown on or can be determined from the contract drawings:

a. The drainage patterns and approximate slopes anticipated after the major grading activities.
b. Areas of soil disturbance.
c. The location(s) where stabilization practices are expected to occur.
d. Typical details showing suggested Best Management Practices (BMP's) for erosion and sediment control.
e. Waters of the State.
f. Final site stabilization.

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 D 6461	(1999) Silt Fence Materials
ASTM D 6462	(1999) Silt Fence Installation

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA/832/R-92/005	Storm Water Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices

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

Notice of Intent (NOI);

A copy of the NOI (ND Form SFN 19145) shall be submitted to the Contracting Officer at the same time it is transmitted to the state.

Public Notification;

A copy of the public notice of storm water discharge shall be submitted to the Contracting Officer prior to notifying the newspapers.

SD-02 Shop Drawings

Temporary Erosion And Sediment Control Plan;

A specific Temporary Erosion and Sediment Control Plan shall be submitted in accordance with PARAGRAPH: PERMIT COMPLIANCE AND ADDITIONAL REQUIREMENTS.

SD-11 Closeout Submittals

Notice of Termination (NOT);

A copy of the notice of termination (WDNR Form 3400-162) shall be submitted to the Contracting Officer at the same time it is transmitted to the state.
Notice of Discontinuation;

A copy of the Notice of Discontinuation shall be submitted to the Contracting Officer at the same time it is transmitted to the state.

1.4 PERMIT COMPLIANCE AND ADDITIONAL REQUIREMENTS

The Contractor shall comply with the requirements of General Permit No. NDR03-0000 and any new or revised requirements of the general permit in effect throughout the project. The following define additional requirements and clarify which requirements of the General Permit are to be performed by either the Contractor, the Government, or both.

1.4.1 Schedule

No contract project construction activities which require an NPDES permit may commence until the state's general permit is effective. The Contractor shall verify that the permit has been extended or reissued after its expiration date if construction will occur after permit expiration.

1.4.2 Construction Site Erosion Control Storm Water Pollution Prevention (SWPP) Plan

The contract drawings show typical details of suggested best management practices (BMP's) for erosion and sediment control taken from EPA/832/R-92/005. The BMP's, together with applicable portions of the site drawings and specifications form an initial plan for temporary erosion and sediment control. The Contractor shall finalize and implement the plan. The finalized plan, together with documentation, shall be in accordance with the general permit and NR 216. The plan shall be maintained at the site and made available to federal, state, and local officials as requested. The Contractor shall determine the specific BMP's for erosion and sediment control (including the types, locations, and installation scheduling of erosion and sediment controls). These BMP's and corresponding material specifications and shop drawings shall be included in the Plan.

1.4.3 Notice of Intent (NOI)

The NOI shall be signed by the Contractor. A blank copy of the Application form is included at the end of this section. Immediately after contract award, the Contractor shall prepare the SWPP plan, complete the Notice of Intent, and submit the form with the SWPP plan to the state. The NOI shall be submitted to the State 30 days in advance of ground breaking activities. The Contractor is responsible for payment of the application fee.

1.4.4 Permanent Erosion and Sediment Control Plan

The Government has developed the Permanent Erosion and Sediment Control Plan and will maintain availability of the plan to federal, state, and local officials as required in the General Permit.

1.5 MEASUREMENT AND PAYMENT

The contactor 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

2.1 SILT FENCE

Silt fence shall be installed where shown on the Drawings. On level sites with minimal potential for sediment loading, the wire fabric may be omitted. Silt fence shall conform to ASTM D 6461 and shall be installed in accordance with ASTM D 6462.

2.2 STRAW BALES

Straw shall be baled from oats, wheat, rye, barley, rice, or other coarse fiber vegetation that will percolate water. Hay baled from grass, alfalfa and clover is not acceptable.

2.3 OTHER PRODUCTS

Any products proposed for use that are not included on drawing Z2-22 shall be described fully, with catalog cuts and manufacturer's instructions for use, in the temporary erosion and sediment control plan.

PART 3 EXECUTION

As between the Government and the Contractor, the Contractor shall be responsible for fulfilling the obligations of the general permit.

3.1 IMPLEMENTATION

The Contractor shall install the sediment and erosion control system in accordance with the plan submitted to the Contracting Officer. The BMP's shall be modified if inspection indicates distress to the system or reveals unforeseen circumstances, or if directed by the Contracting Officer. Any updates to the plan shall be recorded. Permanent stabilization shall be initiated as soon as practicable in any portion of the site where construction activities are complete.

3.2 MAINTENANCE

The Contractor shall be responsible for implementing and managing the erosion and sediment control BMP's before and during the construction

activities; and ensure that the Plan will be implemented and stay in effect until the work has been completed, the entire work site has undergone final stabilization, and a Notice of Termination has been submitted to the Contracting Officer and the state permitting authority.

3.3 RECORDS

The contractor shall record on CQC reports: (1) dates when major stripping and grading activities occur, (2) dates when construction activities temporarily or permanently cease on a portion of the site, (3) when permanent stabilization practices are initiated, and (4) activities associated with inspection and maintenance.

3.4 ATTACHMENTS

NOTICE OF INTENT TO OBTAIN COVERAGE UNDER NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, NORTH DAKOTA DEPARTMENT OF HEALTH (SFN 19145) 1 Page

NDPDES General Permit No. NDR03-0000 19 Pages

-- End of Section --

NOTICE OF INTENT TO OBTAIN COVERAGE UNDER NDPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

NORTH DAKOTA DEPARTMENT OF HEALTH
DIVISION OF WATER QUALITY
SFN 19145 (11/02)

Clear Entire Form

FOR DEPT. USE ONLY

Application No.

Date Received

GENERAL INFORMATION

Name of Owner or Operator of Construction Project Seeking Authorization to Discharge	Contact Person/Contact Phone No.	Business Phone No.

Mailing Address	City	State	Zip Code

Type of Owner or Operator: ☐ Developer/Builder ☐ General Contractor ☐ Municipality ☐ State of ND ☐ Federal ☐ Other (Specify):

This NOI is to obtain coverage under Small Construction Activity (see Part I.C of permit): ☐ YES ☐ NO

Clear Buttons

There are special reporting requirements for Small Construction Activity in Part III.D of permit

Name of Construction Project (Large Construction Activity only - see Part I.D of permit)

Brief Description of Construction Activity (Please fill out for **both** Small and Large Construction Activity)

LARGE CONSTRUCTION ACTIVITY INFORMATION

Names of Contractors Working at Site (if known)

1)

2)

3)

Project Start Date:

Estimated Completion Date:

Estimated Area of Total Disturbance in Acres

Facility Location						
	Street			City		
	OR	1/4 1/4	Section	Township	Range	County
	OR	Latitude o I II		Longitude o I II		County

Receiving Waters			
	☐ Natural Surface Drainage		Name or Description of Receiving Waters
	OR	☐ Municipal Storm Sewer	Name of City

Clear Buttons Above

SIGNATURE INFORMATION

RETURN COMPLETED APPLICATION TO:

North Dakota Department of Health
Division of Water Quality
1200 Missouri Ave., Rm. 203
PO Box 5520
Bismarck, ND 58506-5520

Telephone: 701-328-5210

I certify I am familiar with NDCC 61-28-08, and with the information contained in this application. To the best of my knowledge and belief, the information in this application is true, complete, and accurate.

Printed Name of Applicant(s)	Title
Signature of Applicant(s)	Application Date

(Attach additional pages if needed)

Permit No.: NDR03-0000

Effective Date: October 1, 1999

Mod. Effective Date: March 10, 2003

Expiration Date: September 30, 2004

AUTHORIZATION TO DISCHARGE UNDER THE

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Chapter 33-16-01 of the North Dakota Department of Health rules as promulgated under Chapter 61-28 (North Dakota Water Pollution Control Act) of the North Dakota Century Code,

facilities both qualifying for and satisfying the requirements identified in Part I of this permit

are authorized to discharge storm water associated with **CONSTRUCTION ACTIVITY**

to waters of the state

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I-VI, hereof.

This permit and the authorization to discharge shall expire at midnight,

September 30, 2004.

_____
Dennis R. Fewless, Director
Division of Water Quality

_____
Date

PART I - PERMIT COVERAGE

A. Permit Area

This permit applies to all areas within the jurisdiction of the state of North Dakota

B. Eligibility and Limitations

1. Storm Water Discharges Covered by this Permit

This permit applies to all new and existing discharges of storm water from construction activity involving land disturbance of equal to or greater than one acre. This includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb equal to or greater than one acre. Construction activity involves any of the following:

a. Construction activity including: clearing, grading, and excavation activities.
b. Examples of eligible construction projects include but are not limited to: road building/rebuilding, site development, housing subdivision development, utility trenching, etc.
c. Areas that are dedicated to producing earthen materials (such as soils, sand and gravel) for use at a construction site(s) as approved by the Department.

2. Storm Water Discharges *Not* Covered by this Permit

The following are not provided coverage under this permit:

a. Storm water discharges associated with industrial activity from any source other than construction activities of those approved operations as in Part I.B.1.b.
b. Storm water discharges associated with mining activities.
c. Storm water discharges associated with industrial activity from discharge points subject to existing effluent limitations guidelines.
d. Storm water discharges that the Department has shown to be contributing to a violation of a water quality standard.

C. Small Construction Activity Coverage

Small construction activity involves land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb equal to or greater than one and less than five acres.

1. Notice of Intent (NOI)

An operator must submit one single NOI form to the Department to obtain coverage for storm water discharges from all of their small construction sites. An operator is the individual who has day to day supervision and control of activities occurring at the construction sites. This can be the owner, developer, the general contractor or, in some circumstances, the agent of one of these parties.

2. Contents of the NOI

The NOI for small construction activity shall contain, at a minimum, the following information:

a. Name and mailing address of the owner or operator.
b. Contact name and phone number.
c. A brief description of the construction activity type.
d. The signature of the applicant(s), signed in accordance with Part IV.E of this permit.

3. Deadlines

The NOI for small construction activity shall be submitted to the Department prior to the start of construction.

4. Submittal

Completed NOIs shall be submitted, by mail or hand delivery, to:

North Dakota Department of Health
Division of Water Quality
1200 Missouri Avenue
PO Box 5520
Bismarck, ND 58506-5520

Operators of small construction activity shall submit an Annual Location Record (see Part III.D) to the Department by January 31.

D. Large Construction Activity Coverage

Large construction activity involves land disturbance of equal to or greater than 5 acres. Large construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb equal to or greater than five acres.

1. Notice of Intent (NOI)

The operator of large construction activity shall submit an NOI and Storm Water Pollution Prevention (SWPP) Plan (see Part II.C.3) to obtain coverage for storm water discharges for each construction project. An operator is the individual who has day to day supervision and control of activities occurring at the construction site. This can be the owner, developer, the general contractor or, in some circumstances, the agent of one of these parties.

2. Contents of the NOI

The NOI for large construction activity shall contain, at a minimum, the following information:

a. Name and mailing address of the owner or operator.
b. Contact name and phone number.

c. The type of owner or operator of the construction site (federal, state, private, or other entity).
d. Name of construction project
e. A brief description of the construction activity.
f. List of contractors/subcontractors working at the site (if known).
g. Construction project's SIC code.
h. The anticipated starting date and the anticipated date of completion for the project.
i. The estimated area of total disturbance in acres.
j. County and location of the construction site, including latitude and longitude or township, range, section, and 1/4 section.
k. Name of receiving water(s) or the name of the receiving municipal storm sewer system and receiving water(s).
l. The signature of the applicant(s), signed in accordance with Part IV.E of this permit.

3. Deadlines

The NOI and SWPP Plan for large construction activity shall be submitted to the Department 30 days prior to the start of construction.

4. Submittal

Completed **NOIs** and **SWPP Plans** (see Part II.C) shall be submitted, by mail or hand delivery, to:

North Dakota Department of Health
Division of Water Quality
1200 Missouri Avenue
PO Box 5520
Bismarck, ND 58506-5520

E. Permit Certification

1. Automatic Coverage

If the applicant does not receive a request for additional information or a notification of denial from the Department within 10 days of receipt of the application by the Department, authorization to discharge in accordance with the conditions of this permit shall be deemed granted.

2. Request for Additional Information

The Department shall have the right to request additional data and/or deny the authorization for any particular discharge.

3. Individual or Alternative General Permits

a. The Department may, at any time and by written notification only, require any person authorized by this permit to apply for and obtain either an individual NDPDES permit or to seek coverage under an alternative NDPDES general permit.

b. Any person covered by this general permit may request to be excluded from such coverage by either applying for an individual NDPDES permit or filing a Notice of Intent to be covered under an alternative NDPDES general permit.

c. When an individual NDPDES permit is issued to a person otherwise subject to this permit or the person is approved for coverage under an alternative NDPDES general permit, the applicability of this permit to the individual permittee is automatically terminated upon the effective date of the individual permit or the date of approval for coverage under the alternative general permit.

d. When an individual NDPDES permit is denied to a person otherwise subject to this permit, or the person is denied for coverage under an alternative NDPDES general permit, the applicability of this permit remains in effect, unless otherwise specified by the Department.

4. Local Authority

This permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control discharges of storm water to storm sewer systems or other water courses within their jurisdiction.

F. Continuation of Coverage

Facilities covered under this permit can continue coverage under the renewed permit, provided a satisfactory request is made. Any request to retain coverage under a renewal of this permit shall be made in writing to the Department at least 15 days prior to the expiration date of this permit. If requested by the Department, a new NOI shall be submitted.

G. Transfer of Ownership or Control

1. Coverage under this permit may be transferred to a new permittee if the existing and new permittees notify the Department in writing, at least 48 hours before the transfer of ownership or control; and the notice includes a written agreement between the existing and new permittees containing a specific date of transfer or permit responsibility, coverage and liability between them. If requested by the Department, an NOT shall be submitted by the existing permittee and an NOI submitted by the new permittee.

2. The new owner or operator must comply with all regulations in this permit and with all provisions of the existing SWPP Plan until such time as the existing SWPP Plan is amended or replaced by a new SWPP Plan. If the personnel responsible for implementing the SWPP Plan change, these changes must be amended to the SWPP Plan within 30 days of transfer of ownership or control.

H. Notice of Termination (NOT)

1. Final Stabilization

Final stabilization is reached when all construction activities that are authorized by this permit have been completed, and uniform vegetative cover has been established with a

density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

2. Notice of Termination (NOT) for Small Construction Activity

Operators of small construction activity (see Part I.C) are not required to submit NOTs for their individual small construction sites, however, final stabilization is required on all sites. If an operator ceases all of its small construction activity and has submitted Annual Location Records (see Part III.D) that certify final stabilization has been completed on its small construction sites, an NOT must be submitted to end permit coverage for small construction activity.

3. Content of NOT for Small Construction Activity

a. Permit number.
b. Name and mailing address of the owner or operator.
c. Contact name and phone number.
d. Certification that all small construction activity has been finally stabilized.
e. Signature of the applicant(s), signed in accordance with Part IV.E of this permit.

4. Notice of Termination (NOT) for Large Construction Activity

When a site has been finally stabilized, an NOT shall be submitted to the Department.

5. Content of NOT for Large Construction Activity

The NOT shall contain, at a minimum, the following information:

a. Permit number.
b. Name of construction site.
c. Name and mailing address of the owner or operator.
d. Contact name and phone number.
e. County and location of the construction site, including latitude and longitude or township, range, section, and 1/4 section.
f. Certification that the site has been finally stabilized.
g. Signature of the applicant(s), signed in accordance with Part IV.E of this permit.

6. Submittal

Completed **NOTs** shall be submitted, by mail or hand delivery, to:

North Dakota Department of Health
Division of Water Quality
1200 Missouri Avenue
PO Box 5520
Bismarck, ND 58506-5520

PART II - SPECIAL CONDITIONS

A. Prohibition of Non-Storm Water Discharges

All discharges covered by this permit shall be composed entirely of storm water. The discharge of materials other than storm water must be identified as a potential source of pollution in the SWPP Plan (Part II.C.3). Unless otherwise determined by the Department, discharges of other than storm water must be in compliance with an appropriate NDPDES permit issued for the discharge.

B. Releases in Excess of Reportable Quantities

This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302. Any release of a hazardous substance, including a release in a storm water discharge, must be reported to the agencies identified in Part IV.F. The discharge of hazardous substances in storm water discharges shall be minimized in accordance with the applicable SWPP Plan for the facility. Should a reportable quantity release occur, the SWPP Plan shall be revised to prevent the recurrence of such a release.

C. Storm Water Pollution Prevention Plans

All facilities covered by this permit shall prepare and implement a Storm Water Pollution Prevention (SWPP) Plan that is subject to Department approval. Guidance forms for preparing a SWPP Plan are located on the website **http://www.health.state.nd.us/wq/Storm/Construction/ConstructionHome.htm** or can be obtained from the Department. The main objective of the plan shall be to identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activity; and to describe Best Management Practices (BMPs) which will be used to reduce the pollutants in the storm water discharges associated with construction activity. The implementation of these objectives will be used to meet the terms and conditions of this permit.

1. Plan Preparation and Implementation Deadlines

   a. SWPP Plans for large construction activity (see Part I.D) shall be submitted with the NOI. It is not necessary for operators of small construction activity (see Part I.C) to submit their SWPP Plans to the Department, unless requested in writing by the Department.

      Implementation of the plan shall be at the start of construction. The SWPP Plan may be submitted and/or implemented at later dates only upon written request by the permittee showing just cause and subsequent written approval by the Department.

   b. SWPP Plans approved and implemented under the previous version of this permit shall remain in effect under this permit. Operations covered under an existing SWPP Plan shall amend the SWPP Plan as described in Part II.C.2.d of this permit.

c. If the permittee must also operate under an approved state or local sediment and erosion control plan, or any other storm water management plan, it will be the permittee's responsibility to ensure that the SWPP Plan for this permit complies with all other required plans. A SWPP Plan is not a substitute for a storm water management plan developed under other regulatory programs. It is acceptable for the plan to reflect the storm water management measures developed under other regulatory programs and to incorporate the applicable portions of such programs by reference.

d. The permittee shall amend the SWPP Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the water of the state, or if the SWPP Plan proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity.

2. <u>SWPP Plan Contents</u>

Key elements for SWPP Plans shall include, at a minimum, the following information:

a. *Site Description*

A site description shall contain, at a minimum, the following information:

i) A description of the nature of the construction activity.
ii) The proposed timetable for major activities.
iii) Estimates of the total area of the site, and the area of the site that is expected to undergo clearing, excavation, or grading.
iv) A description of the fill material to be used, the existing soils at the site, and the erodibility of such soils.
v) The name of any receiving water(s) and the size, type and location of any outfall or; for discharges to a municipal separate storm sewer, the name of the municipal owner of the system, the location of the storm sewer discharge, and the name of the ultimate receiving waters.

b. *Site Map*

A site map that indicates, at a minimum, the following information:

i) Construction site boundaries and area of soil disturbance
ii) The location of springs, streams, wetlands, and other surface waters
iii) The location of areas used for storage of building materials, soils, or wastes.
iv) The locations of proposed and existing storm water controls
v) Storm water runoff drainage patterns
vi) Township, range, section or lines of latitude and longitude

c. *Significant Material Inventory*

The location and description of any potential pollution sources, such as vehicle fueling, fertilizers or chemicals, etc. Generally, significant materials are raw materials, finished products, and byproducts. The term also includes materials

necessary for an operation which have the potential to be released with storm water. The description should identify methods of storage, disposal, and outdoor processing involving significant materials.

d. *Best Management Practices (BMPs)*

The plan shall clearly describe the relationship between the phases of construction and the implementation and maintenance of BMPs. The description of BMPs shall include the following components:

i) Erosion and Sediment Controls

a) Nonstructural

A description of nonstructural practices designed to preserve existing vegetation where practicable and re-vegetate open areas as soon as practicable after construction activity ceases. In developing vegetative practices, the permittee shall consider: temporary and permanent seeding, mulching, sod stabilization, filter strips, grassed waterways, erosion blankets, geotextiles, preservation of mature vegetation and tree or shrub planting.

b) Structural

A description of structural practices which indicates how, to the degree practicable, the permittee will divert flows from exposed soil, store flows, or otherwise limit runoff from exposed areas of the site. In developing structural practices, the permittee shall consider the relevance of: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drains, pipe slope drains, rock outlet protection, drain inlet and outlet protection, temporary drain diversion, sediment traps, temporary sediment basins, infiltration trenches or basins, and retaining walls.

ii) Other Controls

a) A description of methods to reduce the tracking of sediment onto public or private roads.

b) If applicable, a description of methods for handling and disposing of contaminated soils.

c) A description of methods for recovering sediments.

d) A description of spill prevention and response procedures for areas where potential spills can occur.

e. *Post-Construction Controls*

A description of the post-construction control measures to be implemented until final stabilization is achieved.

f. *Inspection and Maintenance*

A description of procedures which will be used to inspect and maintain, in good and effective operating condition, the storm water controls identified in the SWPP Plan. Site inspections must be in accordance with Part III of this permit.

g. *Signature*

All SWPP Plans must be signed in accordance with Part IV.E of this permit.

D. **Additional Terms and Conditions**

Storm water discharges from construction sites shall not cause pollution, contamination, or degradation to waters of the state.

1. Visible or measurable erosion which leaves the construction site is prohibited. Visible or measurable erosion is defined as:

   a. Deposits of mud, dirt, sediment, or similar material exceeding one-half cubic foot in volume in any area of 100 square feet or less on public or private streets, adjacent property, or into the storm and surface water either by deliberate actions or as a result of erosion; or

   b. Evidence of concentrated flows of water over bare soils, turbid or sediment-laden flows, or evidence of on-site erosion on bare soil slopes, where runoff of water is not filtered or captured on the site using the techniques in the approved SWPP Plan; or

   c. Earth slides, mud flows, earth sloughing, or other earth movement which leaves the property.

2. If any measurable quantity of sediment leaves the site because of structural failure or lack of design capacity of the BMPs, the sediment shall be placed back on the site or properly disposed of, as soon as is prudent. Under no conditions shall the sediment be washed into the storm sewers or drainage ways.

3. Concrete wash water shall not be discharged to waters of the state or to storm sewer systems.

4. Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled materials from entering waters of the state.

5. No chemicals are to be added to the discharge unless permission for the use of a specific chemical is granted by the Department. In granting the use of such chemicals, special conditions and monitoring may need to be addressed through an individual NDPDES permit or an alternative NDPDES general permit.

6. All storm water discharges must comply with the requirements, policies, or guidelines, of municipalities and other local agencies. Any discharges of storm water to storm drainage systems or other water courses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NDPDES permits, must comply with their local requirements.

PART III - EFFLUENT LIMITATIONS, MONITORING, RECORDING, AND REPORTING REQUIREMENTS

A. Effluent Limitations

The quality of storm water discharges associated with construction activity shall reflect the best which is attainable through the proper implementation of all items in the SWPP Plan for the construction site.

B. Monitoring Requirements

The permittee shall inspect the construction site to ensure that the storm water controls identified in the SWPP Plan are effective and properly maintained. The construction site perimeter, disturbed areas, and areas used for material storage shall be inspected for evidence of, or the potential for, erosion, sediment accumulation, sediment material residue and spills. The following guidelines shall be used for monitoring the effectiveness of the SWPP Plan:

1. Inspection Frequency:

   a. Large Construction Activity

      Inspections shall be performed by or under the direction of the permittee at least once every 7 calender days and within 24 hours after any storm event of greater than 0.50 inches of rain per 24-hour period. The permittee shall have the option of maintaining a rain gauge at their site or utilizing the nearest National Weather Service precipitation gauge station. Any gauge station used shall be located within 10 miles of the storm water discharge.

   b. Small Construction Activity

      Inspections shall be performed by or under the direction of the permittee at least once every 14 calendar days and within 24 hours after any storm event of greater than 0.50 inches of rain per 24-hour period. The permittee shall have the option of maintaining a rain gauge at their site or utilizing the nearest National Weather Service precipitation gauge station. Any gauge station used shall be located within 10 miles of the storm water discharge.

2. During storm events or periods of snow melt, when runoff occurs daily, all SWPP Plan controls shall be inspected by or under the supervision of the permittee daily.

3. Storm water runoff discharges shall be visibly monitored at the above frequency to evaluate the effectiveness of the SWPP Plan controls. If any measurable quantities of sediment are leaving the property, corrective action shall be taken as soon as is prudent to reduce the discharge of sediments.

4. There may be times when the performance of the site inspection may not be practical during an inspection period. Adverse climatic conditions, such as flooding, high winds, tornadoes, electrical storms, etc., or impracticable climatic conditions, such as drought, extended frozen conditions, etc., may prohibit inspections. Should this occur, the permittee must make a record of the description of why the inspection(s) could not be performed in lieu of the actual inspection data. Any available documentation of the events which did not allow for the inspection should also be available.

C. **Recording Requirements**

Inspection results shall be summarized and recorded on a Site Inspection Record (SIR). The SIRs shall be maintained on-site, in accordance with Part IV.D of this permit. The SIR shall contain, at a minimum, the following information:

1. The date and time of inspection.
2. The name of the person performing the inspection.
3. The date and duration (in hours) of the storm event.
4. The rainfall measurements or estimates (in inches) of the storm event.
5. The duration of time between this event and the end of the most recent storm event which was 0.50 inches or greater in precipitation.
6. All incidents of erosion, sediment accumulation, material residue, or spills shall be documented and noted on the SIR. The report shall include the location and description of the incident, estimated quantity of material or size of area affected, and a brief explanation of potential cause and remedial action taken.
7. Any measurable quantities of sediment released off the site, shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measures taken to clean up the sediment that has left the site.
8. If no storm event occurs during an inspection period, “no discharge” shall be recorded on the SIR.

D. **Annual Location Record Report - (Small Construction Activity only)**

Operators of Small Construction Activity shall maintain a Location Record that shows the locations they operated small construction activity.

1. Contents of the Location Record

The Location Record shall contain the following:

a. Permit number
b. Name and mailing address of the owner or operator
c. Name of each small construction site
d. Location of each site (street address, latitude and longitude, or legal land description of township, range, section, and 1/4 section)
e. Start date of each site
f. The estimated area of total disturbance in acres of each site
g. Status of each site (in progress, grading complete, final stabilization date)

2. Submittal

A copy of the Annual Location Record shall be submitted to the Department by January 31 of each year, covering the small construction sites operated during the preceding calendar year (January 1 through December 31). The report shall be submitted to the Department at the following address:

North Dakota Department of Health
Division of Water Quality
1200 Missouri Avenue
PO Box 5520
Bismarck, ND 58506-5520

PART IV - COMPLIANCE RESPONSIBILITIES

A. **Duty to Comply** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the Department advance notice of any planned changes at the permitted facility or of any activity which may result in permit noncompliance.

B. **Operation and Maintenance** The permittee shall at all times maintain in good working order, and operate as efficiently as possible, all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit and with the requirement of the SWPP Plans. If necessary to achieve compliance with the conditions of this permit, this shall include the operation and maintenance of backup or auxiliary systems.

C. **Duty to Provide Information** The permittee shall furnish to the Department, upon request, copies of records required to be kept by this permit. When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or any report, it shall promptly submit such facts or information.

D. **Records Retention** All records and information (including calibration and maintenance) required by this permit shall be kept for at least three years or longer if requested by the Department or EPA.

E. **Signatory Requirements** All applications, reports, or information submitted to the Department shall be signed and certified by the permittee in accordance with the following criteria:

1. All permit applications shall be signed by a responsible corporate officer, a general partner, or a principal executive officer or ranking elected official, in addition to contractors and subcontractors involved in the construction activity or SWPP Plan.

2. All reports required by the permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Department; or

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

3. If an authorization under Part IV.E.2 is no longer accurate for any reason, a new authorization satisfying the above requirements must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

F. **Immediate Notification** The permittee shall report any noncompliance of discharge which may seriously endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstance. The report shall be made to the EPA, Region VIII, National Emergency Response Center, at 1-800-424-8802 and the State of North Dakota, Division of Emergency Management, 1-800-472-2121. In addition, a written submission to both the Department and EPA shall be provided within five days of the time that the permittee became aware of the circumstances. The submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the estimated time noncompliance is expected to continue if it has not been corrected; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

G. **Bypassing** Any bypass is prohibited except where unavoidable to prevent loss of life, personal injury, or severe property damage, and there were no feasible alternatives to the bypass. The permittee shall provide notification of unanticipated bypasses as may be required by Part IV.F, Immediate Notification. If, for other reasons, a bypass is considered necessary, a request to bypass shall be submitted, at least 15 days in advance if possible, to the Department. No bypass of this type shall occur until permission has been obtained from the Department.

H. **Upset Conditions** An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of the following paragraph are not met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

1. An upset occurred and the permittee can identify its cause(s);

2. The permitted facility was, at the time, being properly operated;

3. The permittee submitted notice of the upset as may be required under Part IV.F, Immediate Notification; and

4. The permittee complied with any remedial measures required under Part IV.I, Duty to Mitigate.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. **Duty to Mitigate** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The permittee, at the Department's request, shall provide accelerated or additional monitoring as necessary to determine the nature and impact of any discharge.

J. **Removed Materials** Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner to prevent any pollutant from entering waters of the state or creating a health hazard.

PART V - GENERAL REQUIREMENT

A. **Right of Entry** The permittee shall allow Department and EPA representatives, at reasonable times and, if requested, upon the presentation of credentials, to inspect any facilities or equipment (including monitoring and control equipment), to sample discharges, and to have access to and copy any records required to be kept by this permit. For facilities which discharge to a municipal or other separated storm sewer, this shall also pertain to authorized representatives of the municipal operator or the separate storm sewer receiving the discharge.

B. **Availability of Reports** Except for data determined to be confidential under 40 CFR, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

C. **Transfers** This permit is not transferable except upon the filing of a Statement of Acceptance by the new party and subsequent Department approval. The Department may require the new operator to apply for and obtain an individual NDPDES permit as stated in Part I.G. The current permit holder should inform the new controller, operator, or owner of the existence of this permit and also notify the Department of the possible change.

D. **New Limitations or Prohibitions** The permittee shall comply with any effluent standards or prohibitions established under Section 306(a), Section 307 (a), of Section 405 of the Act for any pollutant (toxic or conventional) present in the discharge or removed substances within the time identified in the regulations, even if the permit has not yet been modified to incorporate the requirements.

E. **Permit Actions** This permit may be modified, revoked and reissued, or terminated for cause. Also, if there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or coverage under an alternative general permit in accordance with Part I.E of this permit. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit conditions.

F. **Need to Halt or Reduce** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G. **State Laws** Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation preserved under Section 510 of the Act.

H. **Oil and Hazardous Substance Liability** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation preserved under Section 311 of the Act.

I. **Property Rights** The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges; nor does it authorize any injury to private property or any invasion of personal rights; nor any infringement of federal, state, or local laws or regulations.

J. **Severability** The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

PART VI - DEFINITIONS

"the Act" means the Clean Water Act.

"BMP" or "Best Management Practices" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“Bypass" means the intentional diversion of waste streams from any portion of a treatment facility."Construction" means any activity associated with construction, including but not limited to: clearing, grading, and excavation.

"Department" means the North Dakota State Department of Health, Division of Water Quality.

"Grab" sample, for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.

“Large Construction Activity” means land disturbance of equal to or greater than 5 acres. Large construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb equal to or greater than five acres.

“Non-storm water discharges” means discharges other than storm water. The term includes both process and non-process sources. Process waste water sources that require a separate NDPDES permit include, but are not limited to industrial processes, domestic facilities and cooling water. Non-storm water sources that may be addressed in this permit include, but are not limited to: fire hydrant flushing and testing, potable water line flushing, infrequent building and pavement washdowns without detergents, uncontaminated foundation drains, springs, lawn watering and air conditioning condensate.

"Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

"Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

“Small Construction Activity” means land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan will ultimately disturb equal to or greater than one and less than five acres.

"Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

“Storm water discharge associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NDPDES program. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or byproducts used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all areas listed in the previous sentence (except access roads) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by products, or industrial machinery <u>are exposed to storm water</u>. For the purposes of this paragraph, material handling activities include: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, byproduct or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally or municipally owned or operated that meet the description of the facilities listed in this paragraph [(i)-(xi)] include those facilities designated under 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR, Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this paragraph);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry), including active or inactive mining operations [except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(1)], and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts, or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection), including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42, 44, and 45, which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i) - (vii) or (ix) - (xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including lands dedicated to the disposal of sewage sludge that are located within the confines of the facility, with design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(x) Construction activity including clearing, grading, and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 31 (except 311), 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25 [and which are not otherwise included within categories (i) - (x)].

“Storm water discharge associated with small construction activity” means the discharge of storm water from:

(i) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal

to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

(ii) Any other construction activity designated by EPA or the Department, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the state.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

"Waters of the state": Any and all surface waters that are contained in or flow in or through the state of North Dakota as defined in NDCC 61-28-02. This definition includes all water courses, even if they are usually dry.

SECTION 01720

CONTRACTOR SURVEYS
05/01

PART 1 GENERAL

1.1 SUBMITTALS

SD-06 Test Reports

Survey Notes;

The Contractor shall submit survey notes on a schedule as agreed with the COR.

As-Built Surveys;

The Contractor shall submit as-built survey information showing final constructed conditions of the project.

Quantity Surveys;

The Contractor shall submit notes and final plots and calculations for surveys performed to measure pay quantities.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 FIELD LAYOUT SURVEYS

The Contractor shall layout the work from the Government established bench marks in accordance with CONTRACT CLAUSE 52.236-17 LAYOUT OF WORK. The construction of each feature of work shall follow the alignments as indicated on the drawings. The Contractor shall have in place, at least 7 calendar days prior to commencing construction operations, sufficient stakes and markings to enable the Contracting Officer to observe the field layout of the alignment and limits of each feature of work. For each feature of work, these stakes shall define areal limits such that the Contracting Officer can easily determine, without additional surveys, if alignment and/or limit adjustments need to be made. For embankments, levees, floodwalls, and similar work, these stakes shall define centerline, stationing, outermost fill/cut limits, and work limits. Raises of existing levees shall be staked based on the downstream (land side) edge of the existing levee crest, unless directed otherwise in the drawings. The grading and riprap placement shall then be staked with the dimensions shown on the drawings, as adjusted in the field and approved by the Government to accommodate existing conditions along the levees. For buildings and

similar work, the building corners and grid lines shall be staked. General site work shall be staked to define staging areas, storage areas, and other area limits as directed. The Contracting Officer may waive these requirements for certain areas. The layout shall be sufficient for the Contracting Officer to mark trees, vegetation and other features to be left undisturbed. No work shall take place without approval of field layout by the Contracting Officer.

3.1.1 Alignment Changes

The Government reserves the right to make changes in the alignment of any feature of work as may be found necessary during the course of the contract. If it becomes necessary, through no fault of the Contractor, to abandon a line, location or feature on which work has been done, an equitable adjustment for completed work will be made. No alignment changes or abandonment shall take place without prior written notice from the Contracting Officer.

3.2 UTILITY AS-BUILT SURVEYS

An as-built field survey of all utilities shall be conducted after installation to determine the final locations and elevations of all utility structures such as manholes, catch basins, hydrants, gate valves, cleanouts, service connections, and other special controls or structures. Final elevations shall be determined for all sewer inverts and castings. 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. This information shall be included on the Contractor Record Drawings in Section 01780 CLOSEOUT SUBMITTALS.

3.3 QUANTITY SURVEYS FOR MEASUREMENT AND PAYMENT

The Contractor shall perform quantity surveys in accordance with CONTRACT CLAUSE 52.236-16 QUANTITY SURVEYS--ALTERNATE I. Quantity surveys shall be completed for all features of work necessary to establish measurement for partial and final payments. Surveys shall be completed in enough detail to accurately determine quantities and verify the required section. The quantity surveys shall meet the following criteria:

a. Complete initial surveys prior to commencement of construction of each feature, and prior to disturbance in the area.
b. Space cross sections at 100 foot maximum intervals. Include additional cross sections as necessary to define the geometry.
c. Each cross section from the survey notes shall be plotted at a scale of 1" = 10'.
d. Provide a copy of the survey notes and cross sections to the Contracting Officer within 10 days after completion of the survey.
e. Complete partial surveys as necessary to supplement payment requests.
f. Complete final surveys upon completion of each feature.

The Contracting Officer may use the surveys for tolerance verification purposes.

-- End of Section --

SECTION 01780

CLOSEOUT SUBMITTALS
11/99

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)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 02220

DEMOLITION (REMOVALS)
05/02

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 the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6	(1990) Safety Requirements for Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. The work includes demolition, salvage of identified items and materials, and removal of resulting rubbish and debris. Rubbish 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 SUBMITTALS

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

SD-07 Certificates

Demolition plan; G

1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations.

In addition to the requirements of the "Contract Clauses," safety requirements shall conform with ANSI A10.6.

1.5 DUST CONTROL

Prevent the spread of dust and avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

1.6 PROTECTION

1.6.1 Existing Work

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. Do not overload pavements to remain. Provide new supports and reinforcement for existing construction weakened by demolition or removal work. Repairs, reinforcement, or structural replacement must have Contracting Officer approval.

1.6.2 Trees

Trees within the project site which might be damaged during demolition, and which are indicated to be left in place, shall be protected by a 6 foot high fence. The fence shall be securely erected a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees. Any tree designated to remain that is damaged during the work under this contract shall be replaced in kind or as approved by the Contracting Officer.

1.6.3 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.

1.6.4 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.

1.7 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

1.8 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Repair items to be relocated which are damaged or replace damaged items with new undamaged items as approved by the Contracting Officer.

1.9 REQUIRED DATA

Demolition plan shall include procedures for coordination with other work in progress and a disconnection schedule of utility services.

1.10 ENVIRONMENTAL PROTECTION

The work shall comply with the requirements of Section 01355 ENVIRONMENTAL PROTECTION.

1.11 USE OF EXPLOSIVES

Use of explosives will not be permitted.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVED

3.1.1 Utilities and Related Equipment

Remove existing utilities, as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. 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. Remove meters and related equipment and deliver to a location on the station in accordance with instructions of the Contracting Officer. If utility lines are encountered that are not shown on drawings, contact the Contracting Officer for further instructions.

3.1.2 Paving and Slabs

Provide neat sawcuts at limits of pavement removal as indicated.

3.2 DISPOSITION OF MATERIAL

3.2.1 Title to Materials

Except where specified in other sections, all materials and equipment removed, and not reused, shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.2.2 Reuse of Materials and Equipment

Remove and store materials and equipment indicated to be reused or relocated to prevent damage, and reinstall as the work progresses.

-- End of Section --

SECTION 02231

CLEARING AND GRUBBING
07/02

PART 1 GENERAL

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

3.1.2 Trees, Shrubs, and Existing Facilities

Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.1.3 Utility Lines

Protect existing utility lines that are indicated to remain from damage. Notify the Contracting Officer immediately of damage to or an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utility lines that are indicated or made known to the Contractor prior to start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, the Contractor shall notify the Contracting Officer in ample time to minimize interruption of the service.

3.2 CLEARING

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within the areas to be cleared. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing.

3.3 TREE REMOVAL

Where indicated or directed, trees and stumps that are designated as trees shall be removed from areas outside those areas designated for clearing and grubbing. This work shall include the felling of such trees and the removal of their stumps and roots as specified in paragraph GRUBBING. Trees shall be disposed of as specified in paragraph DISPOSAL OF MATERIALS.

3.4 GRUBBING

Grubbing shall consist of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas. Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract, such as areas for buildings, and areas to be paved. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

3.5 DISPOSAL OF MATERIALS

3.5.1 Nonsaleable Materials

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations, except for salable timber, shall be disposed of outside the limits of Government-controlled land at the Contractor's responsibility except when otherwise directed in writing. Such directive will state the conditions covering the disposal of such products and will also state the areas in which they may be placed.

-- End of Section --

SECTION 02276

MODULAR CONCRETE BLOCK RETAINING WALL
06/04

PART 1 GENERAL

1.1 DESCRIPTION

A. The requirements of this section shall govern all segmental block retaining wall construction.

B. CONTRACTOR shall provide all materials, equipment, and labor required to construct the modular block retaining walls to grades as provided on the Drawing including, but not limited to:

1. Furnishing and installing segmental block wall units to the lines and grades designated on the Drawing.

2. Preparing foundation soil, furnishing and installing leveling pad, and backfilling to the lines and grades shown on the Drawing.

3. Furnishing and installing all appurtenant materials required for construction of the retaining walls as shown on the Drawing.

1.2 REFERENCES

The publications listed below form a part of this section to the extent referenced:

ASTM INTERNATIONAL (ASTM)

ASTM D 698	(2000a) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))
ASTM C 1372	(2003) Segmental Retaining Wall Units
ASTM D 422	(1963; R 2002) Particle-Size Analysis of Soils

1.3 SUBMITTALS

The following shall be submitted in accordance with Section 01330, "Submittals," in sufficient detail to show full compliance with the specification:

A. Submit sample of proposed segmental retaining wall units prior to delivery to Site.

B. Submit latest edition of the manufacturer's specifications for the proposed materials and method of installation stating that the segmental retaining wall units meet the requirements of these Specifications.

C. CONTRACTOR shall submit a test report documenting the strength of specific modular concrete unit and geogrid reinforcement connection. The maximum design tensile load of the geogrid shall be equal to the laboratory tested ultimate strength of the geogrid/facing unit connection at a maximum normal force limited by the "Hinge Height" of the structure divided by a factor of safety equal to 1.5. The connection strength evaluation shall be performed in accordance with NCMA test method SRWU-1.

1.4 DELIVERY, STORAGE, AND HANDLING

CONTRACTOR shall protect all materials from the elements and other damage during delivery and while stored on the Site.

1.5 QUALITY ASSURANCE

Construction shall be done by an experienced installer who has specialized in installing segmental block retaining walls similar to that indicated for this project.

1.6 SEQUENCING AND SCHEDULING

Coordinate sequencing of retaining wall construction so that work adjacent to previously completed portions of the wall does not disturb the completed work.

PART 2 PRODUCTS

2.1 MODULAR BLOCK UNITS

Modular block units shall be Keystone Standard units, or approved equal. Modular block units shall conform to the requirements of ASTM C 1372, Standard Specifications for Segmental Retaining Wall Units. Modular block units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:

1. Compressive strength = 3000 pounds per square inch.

2. Water absorption shall be limited to 6 percent.

3. A minimum of 100 pounds per square foot per wall face area shall be provided.

4. Inter-unit shear strength shall have a minimum of 1500 pounds per lineal foot at 2 pounds per square inch normal stress.

5. Geogrid/block unit shall have a minimum connection strength of 1000 pounds per lineal foot at 2 pounds per square inch normal stress.

6. A minimum setback of 1.25 inches per course shall be used.

The concrete units shall be positively interlocked between layers with shear pin. After installation and cleaning, a surface sealer will be applied to the blocks. This material shall be silane or ethyl siloxane with at least 40 percent active content by weight.

2.2 SHEAR CONNECTORS

Shear connectors shall be 0.5 inch diameter thermoset isopthalic polyester resin-pultruded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees Fahrenheit to over 100 degrees Fahrenheit.

Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.3 BASE LEVELING PAD MATERIAL

Material shall consist of a compacted aggregate base as shown on the Drawings.

2.4 DRAINAGE FILL

Drainage fill shall consist of clean 1 inch minus crushed stone or crushed gravel meeting the following gradation tested in accordance with ASTM D 422:

Sieve Size	Percent Passing
1 inch	100 %
0.75 inch	75 - 100 %
No. 4 Sieve	0 - 10 %
No. 50 Sieve	0 - 5 %
No. 200 Sieve	0%

PART 3 EXECUTION

3.1 EXCAVATION

CONTRACTOR shall excavate to the lines and grades shown on the construction drawings. Proof-roll foundation area to determine if remedial work is required. CONTRACTOR shall take precautions to minimize excavation. Over-excavation shall be filled with compacted material. CONTRACTOR shall verify location of existing structures and utilities prior to excavation. CONTRACTOR shall ensure that all surrounding areas are protected from the effects of the wall excavation.

3.2 BASE LEVELING PAD

Base leveling pad material shall be placed to a minimum thickness of 6 inches. Top of base material shall be located to allow bottom of wall units to be buried to proper depths as shown on the drawings. Base leveling pad material shall be installed on undisturbed native soils or suitable replacement fills compacted to at least 97.5 percent of the

Standard Proctor Maximum Dry Density as per ASTM D 698. Leveling pad shall be constructed so as to insure full contact with the base surface of the concrete units.

3.3 MODULAR BLOCK INSTALLATION

First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.

Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations. Install shear connectors as per manufacturer's recommendations. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.

Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed two courses.

3.4 QUALITY CONTROL

CONTRACTOR shall establish and maintain quality control for work under this Section for all operations, including, but not limited to, the following:

1. Volume of fill, drainage material, and base material used.

2. Monitoring lift thickness and material uniformity during construction.

3. Compaction tests and density tests to verify compliance with Specifications.

4. Locations and elevations of all tests and materials used.

-- End of Section --

SECTION 02300

EARTHWORK
01/02

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 422	(1963; R 1998) Particle Size Analysis of Soils
ASTM D 698	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3)
ASTM D 1556	(1996) Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D 1557	(1991) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbs/cu. ft.)
ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 2488	(1993) Description and Identification of Soils
ASTM D 2922	(1996) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(1988; R 1996) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
ASTM D 4718	(1987; R 1994) Correction of Unit Weight and Water Content for Soils Containing Oversize Particles

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:

1.2.1 Schedule of Operations

The Contractor shall submit a proposed schedule of operations for approval.

1.2.2 Testing

A summary of testing results indicated in PARAGRAPH: TESTING shall be submitted when the site work is substantially complete. The Contracting Officer shall be informed of test results daily for direction on corrective action required. Draft copies of field testing results shall be furnished to the Contracting Officer on a frequent and regular basis as directed, but do not need to be formally transmitted through the submittal process.

1.2.3 Daily Report Forms

A compilation of the daily report forms for earthwork observation and inspection trench observations ordered by date shall be submitted when the work is substantially complete. Preliminary copies shall be furnished to the Contracting Officer on a weekly or monthly basis as directed, but do not need to be formally transmitted through the submittal process.

1.3 SUBSURFACE DATA

Reference the Physical Data clause in Section 00700 SPECIAL CONTRACT REQUIREMENTS.

1.4 BORROW SOURCES AND EVALUATION

The Contractor shall furnish materials. The Government will make such evaluations as necessary to determine whether or not materials with acceptable characteristics can be obtained from the proposed source.

1.4.1 Borrow Sources

a. Evaluation by Test Data. The Contractor will hire an approved soils laboratory to perform the necessary testing to show the borrow source material meets the minimum requirements. The Government will notify the Contractor of required sampling and number of tests required. The Contractor shall be responsible for sampling and testing costs for alternate sources. The Contracting Officer shall be present during the sampling, unless waived. Information provided with the samples shall

include the location and elevation from which the sample was taken. Testing shall be completed by a laboratory approved in accordance with Section 01451 CONTRACTOR QUALITY CONTROL. Test results and jar samples shall be furnished to the Government geologist at the District Office. This will require a 2-day evaluation period after the test results are received at the District Office.

PART 2 PRODUCTS

2.1 DEFINITIONS

2.1.1 Definitions

The term "embankment" as used in these specifications is defined as the earth fill portions of the embankment structures and includes all types of earth fill materials for the embankments and all other specified or directed earth fills, (excepting those riprap and bedding materials used for slope protection, which are described in SECTION: STONE PROTECTION), within the limits of the embankment. "Compacted fill" includes all fill, except backfill, deposited in layers and compacted by rolling or tamping. The type of compacted earth fill is Impervious Fill for the embankments. "Backfill," as used in these specifications, is defined as that excavation refill which cannot be placed around or adjacent to a structure until the structure is completed.

2.1.2 General

The origin of any fill material in no way determines where it may be used in the embankments Materials for embankment fills shall be secured from required excavations and from the borrow areas as approved. The intention is to use the most suitable materials obtainable from these sources. Material to be wasted will be specifically designated by the Contracting Officer at the time the material is excavated. Materials containing brush, roots, sod or other perishable materials will not be considered suitable. The suitability of the materials shall be subject to approval of the Contracting Officer and their disposition in the embankment will be as directed by the Contracting Officer. The Contractor shall excavate in the borrow areas in the location determined by the Contracting Officer, whenever such control is necessary to obtain the type of material required for the embankment. Mixing of materials during the excavating process at the borrow area may be required.

2.1.3 Proctor

Degree of compaction required is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 698. The maximum density is hereafter abbreviated as the "Standard Proctor" or "Proctor" value.

2.2 SATISFACTORY MATERIALS

Satisfactory Materials for fill include all soils except these classified in ASTM D 2487 as PT, OH, OL, MH and CH. Satisfactory material shall be

free from ice, snow, frozen earth, trash, debris, organic material, and stones larger than 6 inches in any dimension.

2.2.1 Impervious Fill

Impervious fill material shall be cohesive, satisfactory materials with not less than 30 percent by weight passing the No. 200 sieve obtained from excavation operations, designated borrow or off-site sources.

2.2.2 Backfill

Backfill shall consist of material of a type and quality conforming to that specified for the contiguous embankment fill material, unless otherwise shown or directed by the Contracting Officer.

2.2.3 Cohesionless and Cohesive Materials

Cohesionless materials include material classified in ASTM D 2487 as GW, GP, SW and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH and CH. Materials classified as GM, GP-GM, SM and SP-SM will be identified as cohesionless only when the fines have a plasticity index of 0.

2.2.4 Unstable Material

Unstable material shall consist of materials too wet to properly support the utility pipe, conduit, or appurtenant structure.

2.2.5 Initial Backfill Material

Initial backfill shall consist of select granular material or satisfactory materials free from rocks 3 inches or larger in any dimension or free from rocks of such size as recommended by the pipe manufacturer, whichever is smaller. Initial backfill for utilities which are beneath the levee or embankment foundation shall be impervious fill or as indicated on the drawings.

2.3 CONSTRUCTION EQUIPMENT

Compaction equipment shall consist of sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil type being compacted. Water flooding or jetting methods of compaction will not be permitted for any soil types. Sprinkling equipment for cohesive soils shall apply water uniformly, in controlled quantities, and be capable of variable application widths.

2.3.1 Dams and Levees

Use of sheepsfoot rollers (vibratory or non-vibratory), or scarification between lifts, is required for construction of dams, dikes, or levees (any water retaining structures). Construction equipment and methods shall avoid poor bonding between lifts, characterized by layered or laminated texture at the lift interfaces. Smooth surfaces (such as produced from smooth drum rollers, rubber tired rollers, and construction traffic) shall be scarified prior to placing subsequent lifts.

PART 3 EXECUTION

3.1 ORDER OF WORK

3.1.1 Locations

The embankment work shall be performed at such locations and in such order as approved by Contracting Officer.

3.1.2 Main Embankment Work

All work which will be subsequently covered or surrounded by embankment shall be fully completed, including backfill, prior to commencing embankment operations in the area.

3.2 GENERAL

3.2.1 Lines and Grades

The embankment shall be constructed to the lines, grades and cross sections indicated on the drawings, unless otherwise directed by the Contracting Officer. The Government reserves the right to increase or decrease the foundation widths or the embankment slopes or make such other changes in the embankment sections as may be deemed necessary to produce a safe structure. Increases in height of section, made to compensate for shrinkage or consolidation of the embankment material subsequent to the completion of the embankment, will not exceed five (5) percent of the height above the foundation indicated on the drawings.

3.2.2 Conduct of the Work

The Contractor shall maintain and protect the embankment in a satisfactory condition at all times until final completion and acceptance of all work under the contract. If in the opinion of the Contracting Officer the hauling equipment causes horizontal shears or slickensides, rutting, quaking, heaving, cracking or excessive deformation of the embankment, the Contractor shall limit the type, load or travel speed of the hauling equipment on the embankment. Any approved embankment material which is lost in transit or rendered unsuitable after being placed in the embankment and before final acceptance of the work, shall be replaced by the Contractor in a satisfactory manner and no additional payment will be made therefor. The Contractor shall excavate and remove from the embankment any material which the Contracting Officer considers objectionable and shall also dispose of such material and refill the excavated area as directed, all at no cost to the Government. The Contractor may be required to remove, at his own expense, any embankment material placed outside of prescribed slope lines.

3.2.3 Haul Roads

3.2.3.1 General

Contractor shall be responsible for maintenance, removal, and restoration of all haul roads including the pre-existing haul roads. Haul roads within the area of contact between the main embankment and its foundation and abutments shall be removed and the area shall be treated as specified.

3.2.3.2 Pre-Existing Haul Roads

Pre-existing haul roads may be used by Contractor. They shall be free draining and shall be maintained in good condition throughout the contract period, unless otherwise directed by the Contracting Officer.

3.2.3.3 Additional Haul Roads

Additional haul roads shall be located and constructed by the Contractor as approved by the Contracting Officer. They shall be designed to maintain the intended traffic, to be free draining and shall be maintained in good condition throughout the contract period, unless otherwise directed by the Contracting Officer.

3.2.4 Stockpiling from Approved Borrow Sources

When the excavation from approved borrow sources progresses at a faster rate than placement in the fill is being accomplished, such excavated material shall be stockpiled at approved locations adjacent to the work until its use is authorized. No payment will be made for such stockpiling nor for the reloading and hauling of this material to its final position in the embankments.

3.2.5 Existing Levee

The Contractor shall monitor the section during stripping and preparation operations for signs of instability. In the event that signs of instability such as cracking or sloughing are evidenced by the Contractor or Contracting Officer, the Contractor shall cease stripping and preparation operations and implement remedial procedures to stabilize the levee to the satisfaction of the Contracting Officer. The Contractor shall stock pile or have sufficient levee fill material available to implement remedial measures if necessary.

3.3 CLASSIFICATION OF SOIL MATERIALS

Classification of soil materials shall be performed by the Contractor in accordance with ASTM D 2488. The Contracting Officer reserves the right to revise the Contractor classifications. In the case of disagreement, the Contracting Officer's classification will govern unless the soils are classified in accordance with ASTM D 2487. Not withstanding provisions of FAR 52.246-12 INSPECTION OF CONSTRUCTION, testing completed by the Contractor in conjunction with soil material classification will be considered incidental to the contract work.

3.4 STRIPPING OF TOPSOIL

Where indicated or directed, topsoil shall be stripped to depths shown on the drawings. Topsoil shall be spread on areas already graded and prepared for topsoil, or transported and deposited in stockpiles convenient to areas that are to receive application of the topsoil later, or at locations indicated or specified. Topsoil shall be kept separate from other excavated materials, brush, litter, objectionable weeds, roots, stones larger than 2 inches in diameter, and other materials that would interfere with planting and maintenance operations. Any surplus of topsoil from excavations and grading shall be removed from the site.

3.5 EXCAVATION

After topsoil removal has been completed, excavation of every description, regardless of material encountered, within the grading limits of the project shall be performed to the lines and grades indicated. Excavation material suitable for use as fill shall be transported to and placed in fill areas within the limits of the work. All unsatisfactory material, including any soil which is disturbed by the Contractor's operations or softened due to exposure to the elements and water, and surplus material shall be disposed of in areas approved for off site storage. Excavations carried below the depths indicated shall be refilled to the proper grade with satisfactory material. During construction, excavation and fill shall be performed in a manner and sequence that will provide proper drainage at all times. Material required for fill or embankment in excess of that produced by excavation within the grading limits shall be excavated from the borrow areas indicated or from other approved areas selected by the Contractor as specified.

3.5.1 Changes and Differing Site Conditions

Any excavation subgrades that are unstable, pump, rut excessively, reveal soil conditions that are substantially different from that indicated in the contract, or are unsuitable for proceeding with the work shall immediately be reported to the Contracting Officer. In the event that it is necessary to remove material to a depth greater than specified, the Contracting Officer will provide direction for changed work; and an adjustment in the contract price will be considered in accordance with the contract. Unsatisfactory material encountered below the grades shown shall be removed as directed. Determination of elevations and measurements of approved overdepth excavation of unsatisfactory material below grades indicated shall be done under the direction of the Contracting Officer. The Contracting Officer shall be notified prior to proceeding with any unauthorized work. Additional work not authorized by the Contracting Officer shall be at the Contractor's expense.

3.5.2 Borrow and Disposal Areas

Each borrow and disposal area is subject to the approval of the Contracting Officer. Proposed borrow areas which involve the excavation of wetlands or wooded areas will not be approved by the Contracting Officer. Disposal areas which involve the placement of materials in wetlands or floodplain areas will require a minimum of 7-calendar days for review and approval or

disapproval.

3.6 BORROW MATERIAL

Borrow material shall be selected to meet the requirements and conditions of the particular fill or embankment for which it is to be used. Borrow material shall be obtained from the borrow areas shown or from other approved sources, either private or within the limits of the project site, selected by the Contractor. Unless otherwise provided in the contract, the Contractor shall obtain from the owners the right to procure material, pay royalties and other charges involved, and bear the expense of developing the sources, including rights-of-way for hauling. Borrow material from approved sources on Government-controlled land may be obtained without payment of royalties. Unless specifically provided, no borrow shall be obtained within the limits of the project site without prior written approval. Necessary clearing, grubbing, and drainage of borrow pits and the disposal of debris thereon shall be considered related operations to the borrow excavation.

3.6.1 Excavation and Borrow Pits

Except as otherwise permitted, borrow pits and other excavation areas shall be excavated providing adequate drainage. Overburden and other spoil material shall be transported to designated spoil areas or otherwise disposed of, or used for special purposes. Borrow pits shall be neatly trimmed and drained after the excavation is completed. The Contractor shall ensure that excavation of any area, operation of borrow pits, or dumping of spoil material results in minimum detrimental effects on natural environmental conditions.

3.6.2 Utilization of Excavated Materials

Material removed from excavations shall be incorporated in the work insofar as practicable. No excavated material that is satisfactory for use as fill shall be wasted without specific written authorization. Material authorized to be wasted shall be stored in designated areas approved for surplus material storage and disposed of offsite. No excavated material shall be disposed of in such a manner as to obstruct the flow of any stream, endanger a partly finished structure, impair the efficiency or appearance of any structure, or be detrimental to the completed work in any way.

3.7 INSPECTION TRENCH

The inspection trench will be used to locate undesirable subsurface features. Any pipes, tiles, conduits, buried debris, or other unsatisfactory foundation materials encountered shall be removed from within the footprint of the levee or plugged as directed by the Contracting Officer. The Contractor shall notify the Contracting Officer 48 hours prior to start of this work. Observations shall be recorded on the report forms attached to this specification, or on a Contractor's special purpose form for observing trench excavations if approved by the Contracting Officer.

a. Inspection Trench Excavation and Observation. An inspection trench will be excavated as shown on the plans. Immediately after excavating the trench, the Contractor shall inspect and record the soil and water conditions encountered and any other pertinent features. Soils on the base and side slopes shall be identified in accordance with ASTM D 2488. In reaches where caving occurs, the Contractor shall either widen the trench, dewater to keep the trench stable, or assign a competent person to observe the excavation continuously in addition to the excavator operator. Excessive water seepage shall be removed to allow visual inspection. During construction of the inspection trench, the Contractor shall immediately notify the Contracting Officer in the event that soil conditions encountered differ significantly from those shown on the boring logs.

b. Inspection Trench Backfill. The Contracting Officer will observe the trench before backfilling, unless waived for trench stability reasons. All water and mud shall be removed from the trench before backfill is placed. The excavated material may be used for backfill only if it meets the material specified. All inspection trench backfill shall be placed in lifts and compacted as specified in PARAGRAPH: COMPACTION.

c. Inspection Trench Location. The inspection trench shall generally be located close to the levee centerline. The inspection trench shall be continuous at all points, aligned with smooth curves, and free from abrupt changes in alignment. The Contracting Officer may direct the actual alignment of the inspection trench within the limits of the levee right of way to intercept suspect areas.

3.8 TRENCHING AND BACKFILL FOR UTILITY SYSTEMS

Excavation shall be performed to the lines and grades indicated. Earth excavation shall include removal and disposal of material not classified as rock excavation. During excavation, material satisfactory for backfilling shall be stockpiled in an orderly manner at a distance from the banks of the trench equal to 1/2 the depth of the excavation, but in no instance closer than 2 feet. Excavated material not required or not satisfactory for backfill shall be removed from the site. Grading shall be done as may be necessary to prevent surface water from flowing into the excavation, and any water accumulating therein shall be removed to maintain the stability of the bottom and sides of the excavation. Unauthorized overexcavation shall be backfilled in accordance with PARAGRAPH: BACKFILLING AND COMPACTION at no additional cost to the Government.

3.8.1 Trench Excavation

The trench shall be excavated as recommended by the manufacturer of the pipe to be installed. Trench walls below the top of the pipe shall be sloped, or made vertical, and of such width as recommended in the manufacturer's installation manual. Where no manufacturer's installation manual is available, trench walls shall be made vertical. Trench walls more than 6 feet high shall be shored, cut back to a stable slope, or provided with equivalent means of protection for employees who may be exposed to moving ground or cave in. Trench walls which are cut back shall

be excavated to at least the angle of repose of the soil. Special attention shall be given to slopes which may be adversely affected by weather or moisture content. The trench width below the top of pipe shall not exceed 24 inches plus pipe outside diameter (O.D.) for pipes of less than 24 inches inside diameter and shall not exceed 36 inches plus pipe outside diameter for sizes larger than 24 inches inside diameter. Where recommended trench widths are exceeded, redesign, stronger pipe, or special installation procedures shall be utilized by the Contractor. The cost of redesign, stronger pipe, or special installation procedures shall be borne by the Contractor without any additional cost to the Government.

3.8.1.1 Bottom Preparation

The bottoms of trenches shall be accurately graded to provide uniform bearing and support for the bottom quadrant of each section of the pipe. Bell holes shall be excavated to the necessary size at each joint or coupling to eliminate point bearing. Stones of 3 inches or greater in any dimension, or as recommended by the pipe manufacturer, whichever is smaller, shall be removed to avoid point bearing.

3.8.1.2 Removal of Unyielding Material

Where overdepth is not indicated and unyielding material is encountered in the bottom of the trench, such material shall be removed 3 inches below the required grade and replaced with suitable materials as provided in PARAGRAPH: BACKFILLING AND COMPACTION.

3.8.1.3 Removal of Unstable Material

Where unstable material is encountered in the bottom of the trench, such material shall be removed to the depth directed and replaced to the proper grade with select granular material (impervious fill or as indicated on the drawings if beneath the levee or embankment) as provided in PARAGRAPH: BACKFILLING AND COMPACTION. When removal of unstable material is required due to the fault or neglect of the Contractor in his performance of the work, the resulting material shall be excavated and replaced by the Contractor without additional cost to the Government.

3.8.1.4 Excavation for Appurtenances

Excavation for manholes, catch-basins, inlets, or similar structures shall be sufficient to leave at least 12 inches clear between the outer structure surfaces and the face of the excavation or support members or of sufficient size to permit the placement and removal of forms for the full length and width of structure footings and foundations as shown. Removal of unstable material shall be as specified above. When concrete or masonry is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation. Excavation to the final grade level shall not be made until just before the concrete or masonry is to be placed. Excavation shall be of sufficient depth to allow for the installation of previous fill beneath the appurtenance being constructed as shown in the Drawings.

3.8.1.5 Stockpiles

Stockpiles of satisfactory and unsatisfactory and wasted materials shall be placed and graded as specified. Stockpiles shall be kept in a neat and well drained condition, giving due consideration to drainage at all times. The ground surface at stockpile locations shall be cleared, grubbed, and sealed by rubber-tired equipment, excavated satisfactory and unsatisfactory materials shall be separately stockpiled. Stockpiles of satisfactory materials shall be protected from contamination which may destroy the quality and fitness of the stockpiled material. If the Contractor fails to protect the stockpiles, and any material becomes unsatisfactory, such material shall be removed and replaced with satisfactory material from approved sources at no additional cost to the Government. Locations of stockpiles of satisfactory materials shall be subject to prior approval of the Contracting Officer.

3.8.2 Backfilling and Compaction

Backfill material shall consist of satisfactory material as indicated on the drawings. Backfill material in the levee or embankment sections or beneath the levee or embankment foundations shall be impervious fill, flowable fill, or as indicated on the drawings. Backfill shall be placed in layers not exceeding 6 inches loose thickness for compaction by hand operated machine compactors, and 8 inches loose thickness for other than hand operated machines, unless otherwise specified. Each layer shall be compacted to at least 95 percent maximum density for cohesionless soils and 90 percent maximum density for cohesive soils, unless otherwise specified. Degree of compaction shall be expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557.

3.8.2.1 Trench Backfill

Trenches shall be backfilled to the grade shown. The trench shall be backfilled to 2 feet above the top of pipe prior to performing the required pressure tests. The joints and couplings shall be left uncovered during the pressure test. Backfill and material used to replace removed unyielding and unstable material in trenches beneath the levee and embankment foundations shall be impervious fill.

Unyielding material removed from the bottom of the trench shall be replaced with select granular material or initial backfill material, unless under a levee, in which case it shall be replaced with material as shown on the Drawings.

Unstable material removed from the bottom of the trench or excavation shall be replaced with select granular material placed in layers not exceeding 6 inches loose thickness, unless under a levee, in which case it shall be replaced with material as shown on the Drawings.

Bedding shall be of the type and thickness shown. Bedding material shall be placed and compacted with approved tampers to a height of at least one foot above the utility pipe or conduit. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to ensure thorough compaction of the fill under the haunches

of the pipe.

The remainder of the trench, shall be filled with satisfactory material as indicated on the drawings. Backfill shall be deposited in layers of a maximum of 12 inch loose thickness, and compacted to 85 percent maximum density for cohesive soils and 90 percent maximum density for cohesionless soils.

3.8.3 Backfill for Appurtenances

After the manhole, catchbasin, inlet, or similar structure has been constructed and the concrete has been allowed to cure for 3 days, backfill shall be placed in such a manner that the structure will not be damaged by the shock of falling earth. The backfill material shall be deposited and compacted as specified for final backfill, and shall be brought up evenly on all sides of the structure to prevent eccentric loading and excessive stress.

3.8.4 Special Requirements

Special requirements for both excavation and backfill relating to the specific utilities are as follows:

3.8.4.1 Electrical Distribution System

Direct burial cable and conduit or duct line shall have a minimum cover of 24 inches from the finished grade, unless otherwise indicated.

3.8.5 Testing

Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government.

3.8.5.1 Testing Facilities

Tests shall be performed by an approved commercial testing laboratory or may be tested by facilities furnished by the Contractor. No work requiring testing will be permitted until the facilities have been inspected and approved by the Contracting Officer. The first inspection shall be at the expense of the Government. Cost incurred for any subsequent inspection required because of failure of the first inspection will be charged to the Contractor.

3.8.5.2 Testing of Backfill Materials

Characteristics of backfill materials shall be determined in accordance with particle size analysis of soils ASTM D 422 and moisture-density relations of soils ASTM D 1557. A minimum of one particle size analysis and one moisture-density relation test shall be performed on each different type of material used for bedding and backfill from each source.

3.8.5.3 Field Density Tests

Tests shall be performed in sufficient numbers to ensure that the specified

density is being obtained. A minimum of one field density test every 100 feet of installation shall be performed. One moisture density relationship shall be determined for every 1500 cubic yards of material used. Field in-place density shall be determined in accordance with ASTM D 1556 or 2922.

When ASTM D 2922 is used, the calibration curves shall be checked and adjusted using the sand cone method as described in PARAGRAPH: Calibration of the ASTM publication. ASTM D 2922 results in a wet unit weight of soil and when using this method, ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job, on each different type of material encountered, at intervals as directed by the Contracting Officer. Copies of calibration curves, results of calibration tests, and field and laboratory density tests shall be furnished to the Contracting Officer. Trenches improperly compacted shall be reopened to the depth directed, then refilled and compacted to the density specified at no additional cost to the Government.

3.8.5.4 Displacement of Pipes

After other required tests have been performed and the trench backfill compacted to 2 feet above the top of the pipe, the pipe shall be inspected to determine whether significant displacement has occurred. This inspection shall be conducted in the presence of the Contracting Officer. Pipe sizes larger than 36 inches shall be entered and examined, while smaller diameter pipe shall be inspected by shining a light or laser between manholes or manhole locations, or by the use of television cameras passed through the pipe. If, in the judgment of the Contracting Officer, the interior of the pipe shows poor alignment or any other defects that would cause improper functioning of the system, the defects shall be remedied as directed at no additional cost to the Government.

3.9 PREPARATION OF LEVEE FOUNDATION

After excavation or stripping of the embankment and embankment foundation, the sides of test pits, and other similar cavities or depressions shall be broken down, where so directed, so as to flatten out the slopes, and the sides of the cut or hole shall be scarified to provide bond between the foundation material and the fill. The fill shall be placed in layers, moistened, and compacted in accordance with the applicable provisions of the appropriate paragraphs in this section. Materials which cannot be compacted by roller equipment because of inadequate clearances shall be spread in 6-inch layers and compacted with power tampers to an extent equal to that of the contiguous embankment fill material. After filling of depressions and immediately prior to placement of compacted fill in any section of the embankment, the foundation of such section shall be loosened thoroughly by scarifying, plowing, discing or harrowing to a minimum depth of six inches, and the moisture content shall be adjusted to the amount specified for the appropriate type of material, except in areas where this requirement is waived by the Contracting Officer. No separate payment will be made for loosening and rolling the foundation area, the abutment area, or the surfaces of partial fill sections, but the entire cost thereof shall

be included in the applicable contract price for fill.

3.10 PLACEMENT

3.10.1 General

No fill shall be placed on any part of the embankment foundation until such areas have been inspected and approved. The gradation and distribution of materials throughout the compacted earth fill section of the embankment shall be such that the embankment will be free from lenses, pockets, streaks, and layers of material differing substantially in texture or gradation from surrounding material of the same class. Successive loads of material shall be dumped at locations on the fill as directed or approved by the Contracting Officer. No fill shall be placed upon a frozen surface, nor shall snow, ice, or frozen earth be incorporated in the embankment.

3.10.2 Rate of Placement

Unless otherwise directed, the embankment shall be maintained at approximately the same level regardless of the number of types of materials being placed.

3.10.3 Impervious Fill

Impervious fill shall be placed in the impervious embankment section and inspection trench. In general, the more impervious materials shall be placed towards the center of the impervious section.

3.10.4 Pervious Fill

Pervious fill shall be placed in the excavations beneath and around the structures and pipes as indicated on the drawings.

3.10.5 Spreading

After dumping, the materials, shall be spread by bulldozers or other approved means in approximately horizontal layers over the entire fill areas. Unless otherwise directed, the thickness of these layers before compaction with tamping type rollers shall not be more than the thickness specified for impervious fill. As soon as practicable after commencement of construction of any section of the embankment, the central portion thereof shall be raised or crowned with grades not to exceed 2 percent so that the surface of the fill will drain freely and shall be so maintained throughout construction. If the compacted surface of any layer of material, is determined to be too smooth to bond properly with the succeeding layers, it shall be loosened by harrowing, or by any other approved method, before the succeeding layer is placed thereon. During the dumping and spreading processes, the Contractor shall maintain at all times an adequate workforce to remove all roots and debris from all embankment materials and all stones of greater than 3 inches in maximum dimension. Stone so removed shall be placed in the outer slopes of the fill and the roots and debris shall be removed from the embankment and disposed of in an approved manner. The entire surface of any section of the embankment under construction shall be maintained in such condition that construction equipment can travel on any

part of any one section. Ruts in the surface of any layer shall be filled satisfactorily before compacting.

3.11 COMPACTION

3.11.1 Moisture Control

The materials in each layer of the fill shall contain the amount of moisture, within the limits specified below or as directed by the Contracting Officer, necessary to obtain the desired compaction as determined by the Contracting Officer. Material that is not within the specified limits after compaction shall be reworked, regardless of density.

3.11.1.1 Impervious Sections

The moisture content after compaction shall be as uniform as practicable throughout any one layer of impervious materials. The moisture content after compaction shall be within the limits of 2 percentage points above optimum and 2 percentage points below optimum moisture content as determined by field moisture-density tests. Material that is too wet shall be spread on the embankment and permitted to dry, assisted by discing or harrowing, if necessary, until the moisture content is reduced to an amount within the specified limits. When the material is too dry, the Contractor will be required to sprinkle each layer on the fill. Harrowing or other approved methods will be required to work the moisture into the material until a uniform distribution of moisture is obtained. Water applied on a layer of fill shall be accurately controlled in amount so that free water will not appear on the surface during or subsequent to rolling. Should too much water be added to any part of the embankment, so that the material is too wet to obtain the desired compaction, the rolling on that section of the embankment shall be delayed until the moisture content of the material is reduced to an amount within the specified limits. If it is impracticable to obtain the specified moisture content by wetting or drying the material on the fill, the Contractor may be required to prevent or dry back the material at the sources of excavation. If, in the opinion of the Contracting Officer, the top or contact surfaces of the partial fill section become too dry to permit suitable bond between these surfaces and the additional fill to be placed thereon, the Contractor shall loosen the dried materials by scarifying or discing to such depths as may be directed by the Contracting Officer, shall dampen the loosened material to an acceptable moisture content, and shall compact this layer in accordance with the applicable requirements to densities comparable to the underlying embankment.

3.11.2 Placement And Compaction

3.11.2.1 Percent Of Maximum Standard Density

The degree of compaction required is expressed as a percentage of the maximum dry density obtained by the test procedure presented in ASTM D 698, abbreviated hereinafter as Percent Maximum Standard Density.

3.11.2.2 Equipment

Compaction equipment shall consist of sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other approved equipment well suited to the soil type being compacted.

Sprinkling equipment shall consist of tank trucks, pressure distributors, or other equipment designed to apply water uniformly and in controlled quantities to variable width of surface.

Miscellaneous equipment: Scarifiers, disks, spring tooth or spike tooth harrows, spreaders, mechanical tampers, and other equipment shall be of approved types suitable for construction of fills and embankments.

3.11.2.3 Coverage And Compaction

Embankments and fills: The type of fill, its maximum uncompacted lift thickness, and the minimum compaction requirements (Percent of Maximum Standard Density) to which each type of fill shall be compacted shall be as listed below.

Fill Zone	Maximum Uncompacted Lift Thickness* (inches)	Percent of Maximum Standard Density
Impervious Fill	8	95
Pervious Fill	6	100

* Satisfactory materials shall be placed in horizontal layers not exceeding 6 inches loose depth when hand operated compactors are used.

** Embankments and subgrade under bituminous pavements shall be compacted to at least the Percent of Maximum Standard Density as follows:

a) For fill sections the top 36 inches below the aggregate base course shall be placed in uncompacted lifts not exceeding 9 inches and compacted to at least 100 Percent of Maximum Standard Density; material below this level shall be compacted as required for general grading.

b) For cut sections in cohesionless soils the subgrade surface shall be compacted to at least 100 Percent of Maximum Standard Density. For cut sections in cohesive soils, the subgrade shall be proofrolled and any soft areas shall be brought to the Contracting Officers attention.

3.12 TESTING

3.12.1 General

All testing expenses shall be the Contractor's responsibility. Testing shall be performed by a commercial testing laboratory selected by the Contractor and approved by the Contracting Officer or performed by the Contractor if approved by the Contracting Officer. The Contracting Officer reserves the right to direct the location and select the material for samples to be tested and to direct where and when moisture-density tests

shall be performed.

The Contracting Officer shall be informed of test results daily for direction on corrective action required. Testing results shall be formally submitted to the Contracting Officer at intervals not exceeding one calendar month. Draft copies of field testing results shall be submitted to the Contracting Officer on a frequent and regular basis, as directed. Supplements of draft test results shall be arranged with the Contracting Officer.

3.12.2 Corrective Action

Tests of materials which do not meet the contract requirements (failing test) will not be counted as part of the required testing. Each such failing test must be retaken at the same location as the failing test was taken. If testing indicates material does not meet the contract requirements, the material represented by the failing test shall not be placed in the contract work or shall be recompacted or removed. The quantity of material represented by the failing test shall be determined by the Contracting Officer up to the quantity indicated by the testing frequency. The Contractor may increase testing frequency in the vicinity of a failing test in order to reduce removal requirements, as approved by the Contracting Officer. Such increases in testing frequency shall be at the Contractor's expense and at no additional cost to the Government.

Schedule of Tests (minimum)

1. Sieve Analysis (EM 1110-2-1906, Appendix V)

Pervious fill	One per 1,500 C.Y. (in place measure)
Impervious fill	One per 5,000 C.Y. (in place measure)

2. Moisture Density Relations (EM 1110-2-1906, Standard Compaction Test)

Pervious fill	One Test
Impervious fill	Four Tests

3. Density and Moisture Content (ASTM D 1556)

Pervious fill	One per 1,500 C.Y. (in place measure)
Impervious fill	One per 5,000 C.Y. (in place measure)

4. Atterberg Limits (EM 1110-2-1906, Appendix III)

   One test for each moisture density relation test (standard compaction test) performed on cohesive materials only, and one additional Atterberg limit test per five density tests performed on cohesive materials to correlate field density and moisture content tests to moisture-density relation tests

Results of tests shall be immediately submitted to the Contracting Officer.

3.12.3 Nuclear Density Testing Equipment

Nuclear density testing equipment shall be used in general accordance with ASTM D 2922 and ASTM D 3017. In addition, the following conditions shall apply:

1. Prior to using the nuclear density testing equipment on the site, the Contractor shall submit to the Contracting Officer a certification that the operator has completed a training course approved by the nuclear density testing equipment manufacturer, the most recent data sheet from the manufacturer's calibration, and a copy of the most recent statistical check of the standard count precision.

2. The first test and every tenth test thereafter shall include a sand cone correlation test. The sand cone test shall be centered over the prepared surface for the nuclear test, shall include a nominal 6 inch diameter sand cone, and shall include a minimum wet soil weight extracted from the hole of 6 pounds. In addition, testing of aggregate base soils shall include a minimum of 3 sand cone correlations for each day of testing; and testing of bituminous shall include a minimum of 3 core densities for each day of testing. The density correlations shall be submitted with test results. Each transmittal including density test data shall include a summary of all density correlations for the job neatly prepared on a summary sheet including at a minimum:

    a. meter serial number and operators initials.
    b. standard count for each test.
    c. material type.
    d. probe depth.
    e. moisture content by each test method and the deviation.
    f. wet density by each test method and the deviation.

3. The nuclear density testing equipment shall be capable of extending a probe 6 inches minimum down into a hole.

4. Nuclear density testing equipment used within 2 vertical feet from the existing ground water level, 5 horizontal feet from a vertical wall or massive concrete structure, or in a trench shall have the standard count changed before and after each test.

5. Nuclear density testing equipment shall not be used during rain.

3.12.4 Proctor Tests

Report forms for summaries of Proctor tests shall include the minimum information. Additional data required by the applicable ASTM test methods shall be kept on file by the Contractor. Jar samples shall be retained by the testing laboratory for each Proctor test until field testing is completed.

1. Test Number and method
2. Sample location and visual soil description
3. maximum dry density, and optimum water content
4. gravel contents in sample and test specimens

3.12.5 Treatment of Oversize Particles for Density Tests

The fine gravel contents shall be corrected by selecting an appropriate Proctor sample. The fine gravel content shall be the particles retained on the No. 4 sieve and passing the 3/4" sieve. The fine gravel content of the field density test shall be within ±5% of the fine gravel content of the Proctor sample.

The oversize fraction shall be particles retained on the 3/4" sieve. For oversize fractions greater than 5%, the oversize particles shall be corrected in accordance with the Finer Fraction Method specified in ASTM D 4718.

Each sand cone test shall report the gravel content retained on the No. 4, 3/8" and 3/4" sieve as appropriate for the proctor method referenced.

Where nuclear testing is used and lack of uniformity in the soil due to layering, rock or voids is suspected, the test volume site shall be dug up and visually examined to determine if the test material is representative of the full material in general and if rock correction is required.

3.13 SUBGRADE AND EMBANKMENT PROTECTION

Compacted subgrades that are disturbed by the Contractor's operations or adverse weather shall be scarified and compacted as specified herein to the required density prior to further construction thereon. Subgrades not meeting the specifications for finish, material type and density at the time of surface material placement shall be corrected at the Contractor's expense. Cohesive embankments and subgrades shall be kept crowned or sloped for drainage. Newly graded areas shall be protected from traffic and erosion. Any settlement or washing away that may occur from any cause shall be repaired. No base course or pavement shall be laid until the subgrade has been checked and approved by the Contracting Officer. Ditches and drains along subgrade shall be maintained to provide effective drainage. All work shall implement best management practices for erosion control.

3.14 FINISHED EXCAVATION, FILLS, AND EMBANKMENTS

All areas covered by the project, including excavated and filled sections and adjacent transition areas, shall be uniformly smooth-graded. The finished surface shall be reasonably smooth, compacted, and free from irregular surface changes. The degree of finish shall be that ordinarily obtainable from blade-grader operations, except as otherwise specified. Ditches and gutters shall be finished to permit adequate drainage. The surface of areas to be turfed shall be finished to a smoothness suitable for the application of turfing materials.

3.14.1 Subgrade Areas

For subgrade areas to be paved, the following shall be accomplished:

a. soft or otherwise unsatisfactory material shall be replaced with

satisfactory excavated material or other approved materials;

b. low areas resulting from removal of unsatisfactory material shall be brought up to required grade with satisfactory materials, and the entire subgrade shall be shaped to line, grade, and cross section and shall be compacted as specified.

3.14.2 Surface Areas

The surface of embankments or excavated areas for road construction or other areas on which a base course or pavement is to be placed shall vary not more than 0.05 foot from the established grade and approved cross section. Surfaces other than those that are to be paved shall be finished not more than 0.15 foot above or below the established grade or approved cross section.

3.15 SLIDES

In the event of slides in any part of the embankment prior to final acceptance of the work the Contractor shall remove material from the slide area, as directed, and shall rebuild such portion of the embankment. In case it is determined that the slide was caused through the fault of the Contractor the removal and disposal of material and the rebuilding of the embankment shall be performed without cost to the Government; otherwise this work will be paid for at the applicable contract unit prices for borrow excavation and compacted fill or backfill.

3.16 FOUNDATION SETTLEMENT AND DISPLACEMENT

3.16.1 Additional Material

Should the Contractor desire to make a claim for placing additional embankment fill material, within the authorized limits, due to settlement and/or displacement of the foundation which exceeds the tolerances specified or indicated, the Contractor shall, at its own expense, erect settlement-displacement gages. These gages shall be installed on the prepared foundation at a point directly under the crown of the planned dike section prior to placing of fill material and shall be maintained during the entire construction period. The Contractor shall submit for approval a plan showing the proposed arrangement of the gages. On this plan, the Contracting Officer will mark the range over which the settlement and displacement measured by each gage will apply. The Contractor shall take measurements and/or surveys to determine elevations on the gages prior to placing fill material and again within 48 hours after completion of the dike at the sites of the gages as required to determine settlement and displacement of the foundation. Measurement of additional fill material placed by reason of settlement and/or displacement of the foundation shall be as stated in PARAGRAPH: MEASUREMENT AND PAYMENT.

3.16.2 Foundation Failure

In clearly established cases of sudden failure of foundation where no provision has been made for the measurement of settlement or displacement, or where settlement-displacement is such as to destroy their utility, the

settlement-displacement shall be determined by methods approved by the Contracting Officer.

3.16.3 Work Stoppage

Where settlement and/or displacement of the foundation develops to such an extent as to make it inadvisable, in the opinion of the Contracting Officer, to continue to add material, and, advisable in the Contracting Officer's opinion, to postpone until a considerably later date all attempts to bring that portion of the line to full grade and cross section, the Contracting Officer will have the right to omit further work on such portion of the dike, and to accept it as completed.

3.17 QUALITY CONTROL

The Contractor shall establish and maintain quality control for work under this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

1. Foundation materials.

2. Foundation preparation.

3. Zoning of materials.

4. Layer thickness.

5. Moisture control.

6. Compaction.

7. Lines, grades, and tolerances.

8. Tests results.

A copy of the quality control records, including inspections and tests, as well as the records of corrective action taken, shall be furnished to the Government as directed by the Contracting Officer.

-- End of Section --

WORK SHEET FOR GRADATION ANALYSIS OF RIPRAP
METHOD A

Project Name:	Date:
Riprap Type:	Test No.
Source, Quarry, or Pit:	
Sample Location:	Test Made By:

Part 1. Weigh all stones larger than 5 pounds and record.

(1) PASSING WT.							5 lbs.
(2) RETAINED WT.						5 lbs.	PAN
(3) -------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
-------							-------
(4) TOTALS							

Rows (1) & (2) Enter 5 to 7 weight classes to yield approx. 75%, 50%, 30%, and 15% finer points.

Row (3) List weight of each stone. Attach additional sheets if necessary.

Row (4) Add all individual stone weights listed in each column.

Part 2. Summary Table.

(5) WEIGHT CLASSES		(6)	(7)	(8)
PASSING (stone wt. in lbs.)	RETAINED (stone wt. in lbs.)	TOTAL WEIGHT EACH CLASS (lbs.)	CUMMULATIVE WEIGHT PASSING (lbs.)	TOTAL PERCENT PASSING (%)
	5 lbs.			
5 lbs.	PAN			
SAMPLE TOTAL			--------	--------

Column (5) Enter same weight classes used in Rows (1) and (2).

Column (6) Enter weights of material from Row (4)

Column (7) Add column (6) from bottom up to get cumulative weight passing.

Column (8) Divide column (7) by sample total to get total percent passing.

WORK SHEET FOR GRADATION ANALYSIS OF RIPRAP
METHOD B

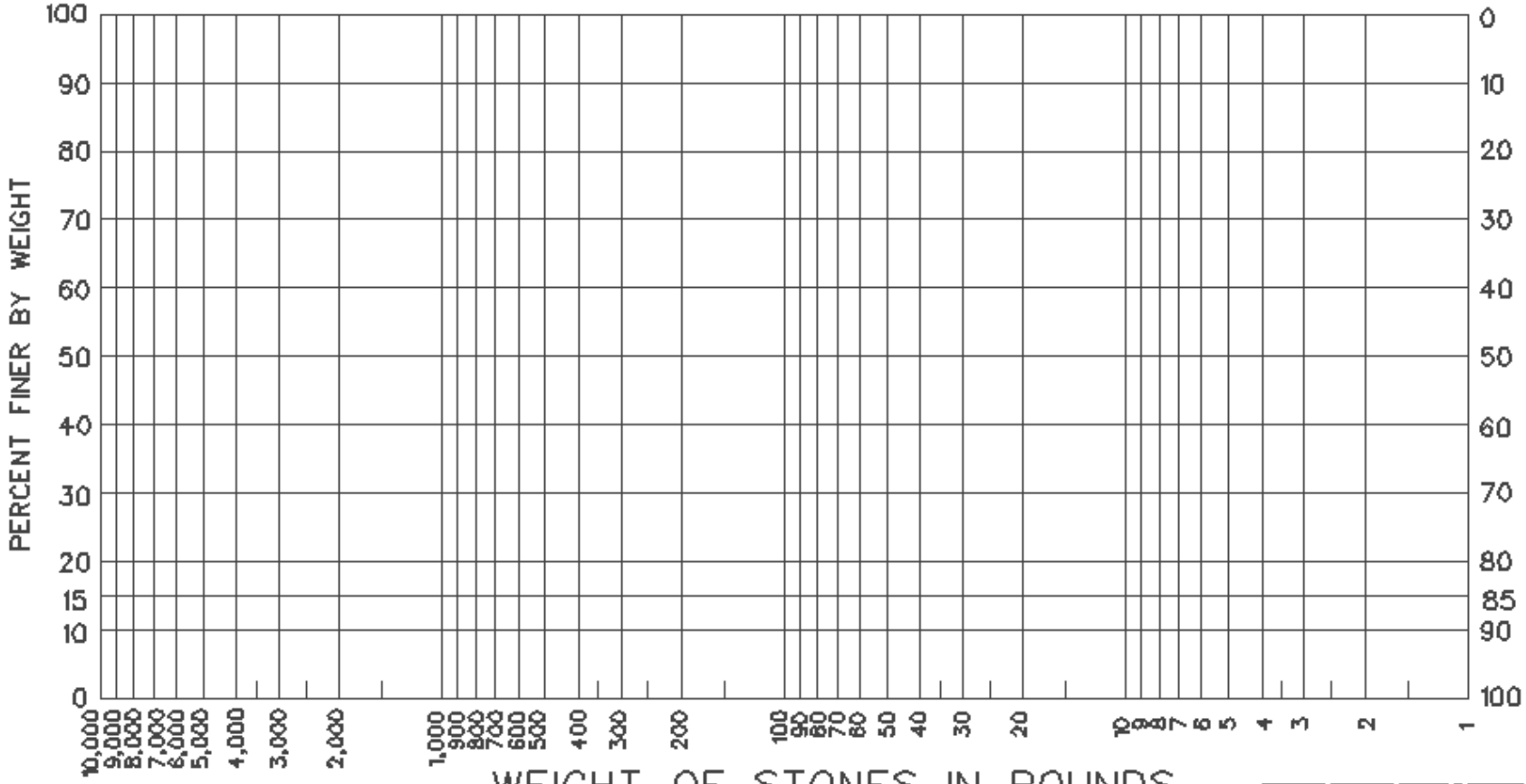
Project Name:	Date:
Riprap Type:	Test No.
Source, Quarry, or Pit:	
Sample Location:	Test Made By:

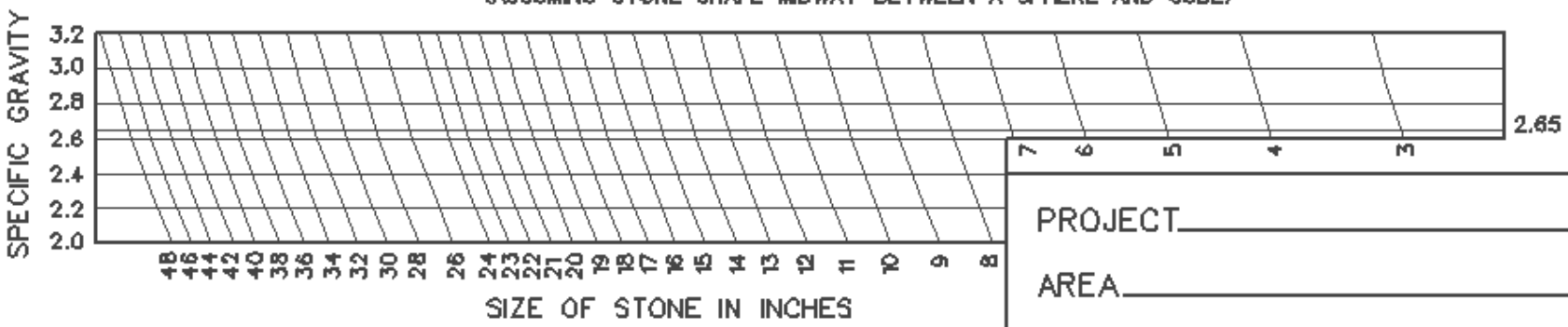
Part 1. Separate rock into 5 to 7 piles, ordered by size. The largest pile should contain 2 to 5 stones. Intermediate piles between the largest stones and those smaller than 5 pounds should be approximately equal in total weight. Separate all stones before weighing.

Part 2. Summary Table.

(1) WEIGHT CLASSES		(2)	(3)	(4)
PASSING (stone wt. in lbs.)	RETAINED (stone wt. in lbs.)	TOTAL WEIGHT EACH CLASS (lbs.)	CUMMULATIVE WEIGHT PASSING (lbs.)	TOTAL PERCENT PASSING (%)
	5 lbs.			
5 lbs.	PAN			
SAMPLE TOTAL			--------	--------

Column (1) Weight the smallest and largest stone in each pile. If weight classes overlap, adjust stones as necessary and repeat.
Column (2) Weigh the total amount of rock in each pile and record.
Column (3) Add column (2) from bottom up to get cumulative weight passing.
Column (4) Divide column (3) by sample total to get total percent passing.





SPECIFIC GRAVITY OF STONE = [ ]

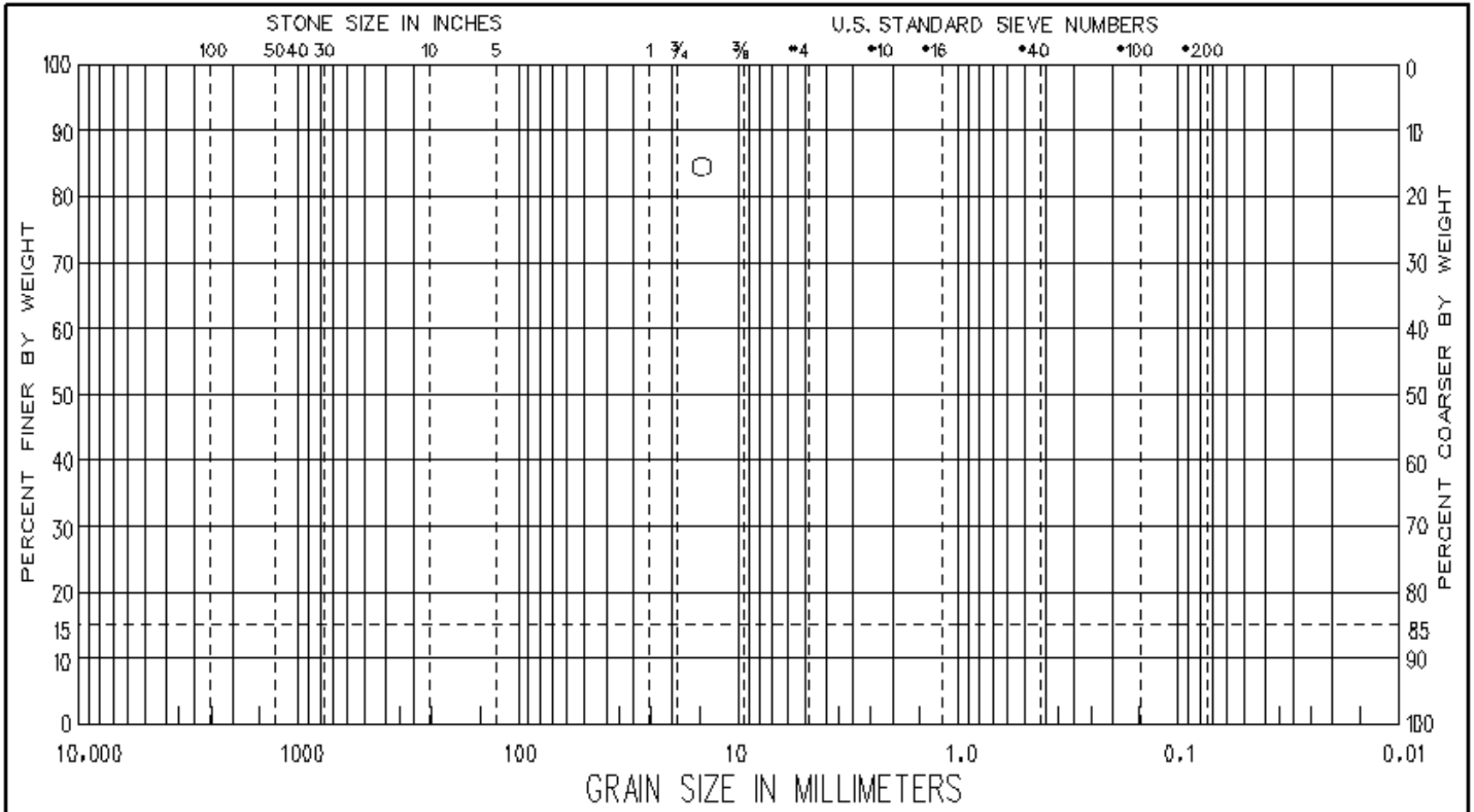
PROJECT _____

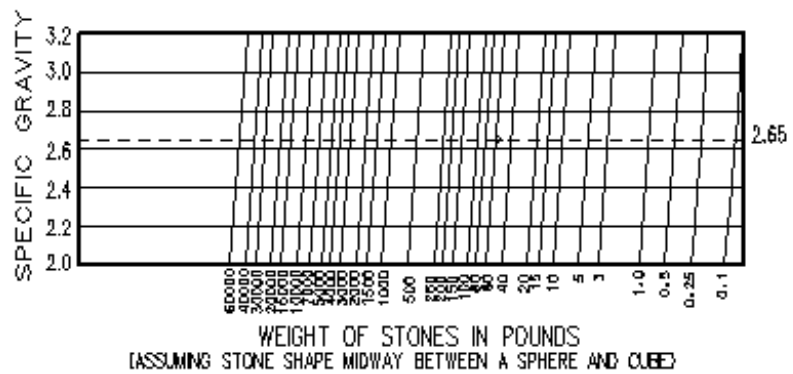
AREA _____

DATE _____

RIPRAP/ROCKFILL GRADATION CURVE

ENGR FORM 4055 DATE OF FORM: MAY 1998





SPECIFIC GRAVITY OF STONE= [ ]

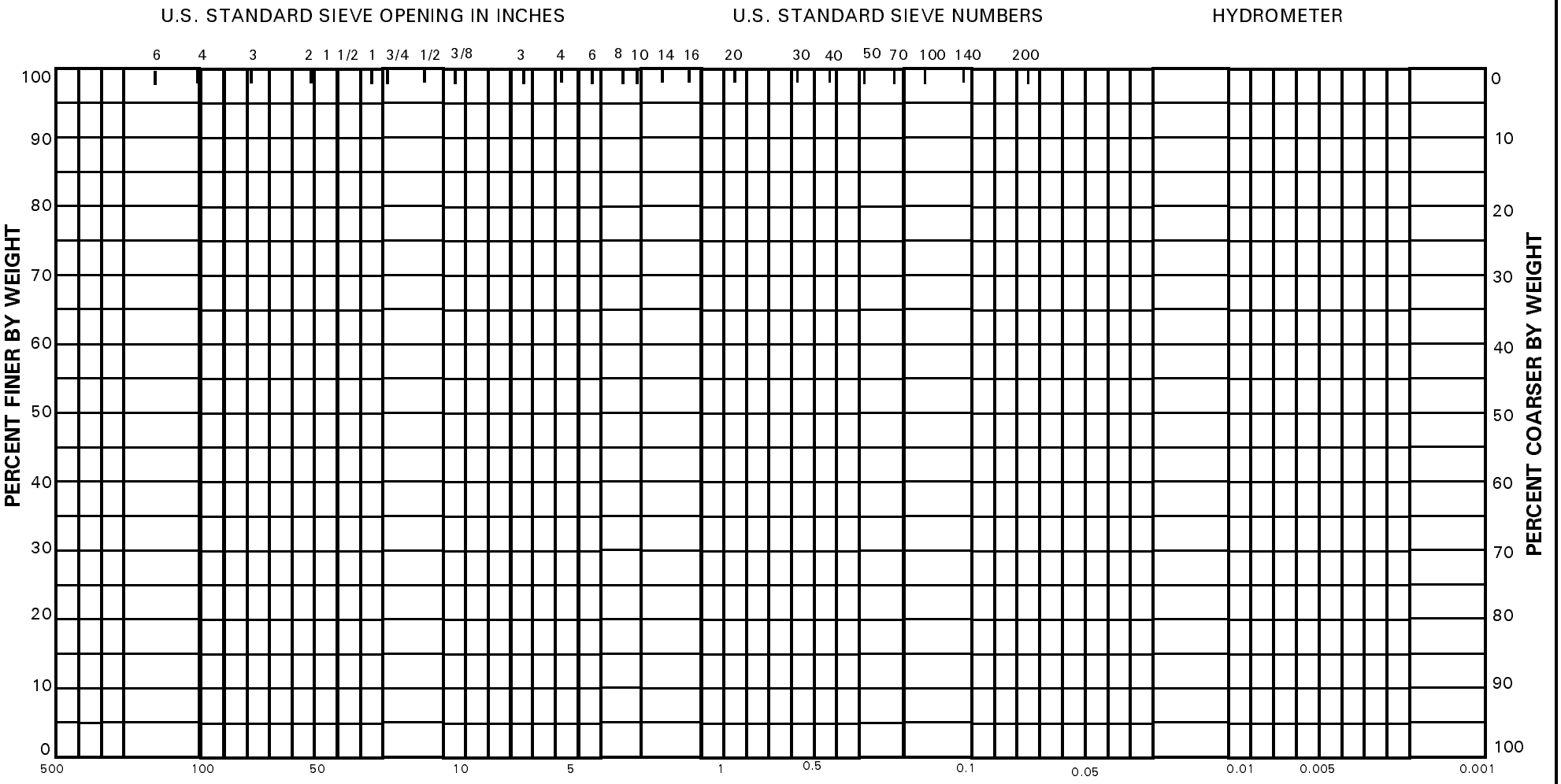
PROJECT _____

AREA _____

DATE _____

GRADATION CURVES FOR RIPRAP FILTER AND BEDDING

EWGR FORM 4055



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI

Project

Area

Boring

Date

GRADATION CURVES

ENG FORM 2087, 1 MAY 63 (EM 1110-2-1906) (Proponent: CECW-EG)

DAILY REPORT FORM FOR EARTHWORK OBSERVATION

Project Name:	Date:
Contract Number: DACW37- - -	Temperature
QC Technician/Inspector:	Precipitation
Earthwork Contractor:	

Sunny ☐ partly cloudy ☐ overcast ☐ windy ☐ Other _____

Stripping and Excavation

Area (sta., Elevation)	Depth/Thickness Removed	Excavated Material (ASTM D 2488)	Base Material (ASTM D 2488)

Excavation Equipment:

Description	No. Operating	Type (Make & Model or Capacity)
Dozers		
Backhoes		
Wheel Loaders		
Other_____		

Fill Placement

Area (Sta., Elevation) (Grids, depth below FFE)	Fill Material (ASTM D 2488)	Lift Thickness & Number of Passes

Hauling/Placing Equipment:

Description	No. Operating	Type (Make & Model or Capacity)
Trucks		
Scrapers		
Compactors		
Dozers/Graders		
Other_____		

Density Tests Taken (list numbers): _____

Notes: _____

_____

DAILY REPORT FORM FOR INSPECTION TRENCH

Project Name:	Date:
Contract Number: DACW37- - -	Temperature
QC Technician/Inspector:	Precipitation
Earthwork Contractor:	

Sunny ☐ partly cloudy ☐ overcast ☐ windy ☐ Other _____

Soil Stratigraphy

Zone (label in sketch)	Soil Description (ASTM D 2488)	Water Conditions
Trench base soils		

Sketch of Trench Profile

Beginning Sta. Ending Sta.

Trench Width: _____

Side Slopes (vert., 1V:1H, etc.): _____

Pipes, tiles, or Conduits: _____

(indicate sta., depth or elevation, leakage, etc.) _____

Excavation Equipment:

Description	No. Operating	Type (Make & Model or Capacity)
Backhoes		
Other_____		

Fill Material: _____

Borrow Area: _____

Compaction Equipment: _____

Lift Thickness: _____

Number of passes: _____

Density Tests Taken (list numbers): _____

Notes: _____

_____

SECTION 02350

STEEL SHEET PILING
09/99

PART 1 GENERAL

1.1 SCOPE

Work included in this Section shall be performed in accordance with the following paragraphs, as well as the General Requirements set forth in Division 1 of these Specifications.

Work covered under this Section includes providing all materials, equipment, and labor to furnish and install sheet piling for the flood wall as shown on the Drawings. This Specification does not apply to any other temporary construction sheet piling installed by Contractor for Contractor's purposes.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM A 690	(2000a) High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments

U.S. Army Corps of Engineers, Engineer Manuals (EM)

EM 1110-2-2906	(1991) Design of Pile Foundations

1.3 SUBMITTALS

The following shall be submitted in accordance with SECTION: SUBMITTAL PROCEDURES.

a. Manufacturer's Data. Contractor shall submit for documentation manufacturer's data, including mill test reports, for the sheet piling section to be furnished and installed in the Work.

   1. Mill Test Reports. The information submitted in the mill test report shall include Specification Designation, Heat Number, Heat Analysis, and Nominal Size.

   2. Tension Tests. Two tension tests per heat shall be provided including the yield point, tensile strength, and elongation. Provide results of these tests with the Mill Test Report. Perform additional tension tests if the thickness of sections from a heat

differ by more than 10 mm.

b. Pile Driving Records/Record Drawings. During the course of driving piles, accurately record the following information for each sheet driven:

1. date driven
2. hammer type
3. tip elevation
4. cutoff elevations
5. sequence of drilling
6. number of blows per foot for the entire length of the pile
7. driving force for each hammer blow

The attached pile driving report from EM 1110-2-2906 or similar records shall be kept. On completion of the Work, the Contractor shall provide record drawings of the final sheet pile locations and depths.

PART 2 PRODUCTS

2.1 SHEET PILING

2.1.1 Floodwall Piling Material and Accessories

Material and accessories to be used in the floodwall construction shall conform to the requirements of the latest ASTM A 690.

2.1.1.1 New Piling

Sheet piling shall be new hot-rolled structural sections with interlocks on the flange tip. Cold-formed sheet piling shall not be used.

2.1.1.2 Strength

Minimum yield strength of 36,000 lbs/in^2; minimum section modulus of 48.5 in^3/pile.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 General

Contractor shall install steel sheet piling as shown on the Construction Drawings.

3.1.2 Continuous Sections

Steel sheet piling shall be installed in single continuous sheets, braced as necessary, and cut off as specified on the plans.

3.1.3 Defective Sheet Piling

Work determined to be defective by the Contracting Officer shall be corrected to the satisfaction of the Contracting Officer at no extra cost to the Government.

3.1.4 Cleaning Steel Piles

Where structural concrete is cast against steel piles, the piling sheet shall be cleaned of all dirt and loose scale.

3.1.5 Damaged Piles

Damaged piles will not be accepted.

3.2 PLACING OF SHEET PILING

Piling shall be carefully located as shown on the Construction Drawings and placed or driven in a plumb position, each pile interlocked with adjoining piles for its entire length so as to form a continuous diaphragm throughout the length of each wall run. The Contractor shall place or drive all piles to line, and shall provide suitable temporary walls or guide structures to ensure that the piles are located in correct alignment. All piles shall be placed or driven as shown on the Drawings and shall extend to the elevations indicated for the tops of piles.

3.3 DRIVING OF SHEET PILING

3.3.1 Pile Hammer

Piling shall be driven by use of a pile hammer, insuring the pile is not subject to damage and is interlocked throughout its length. The pile shall be maintained in proper alignment during driving operations by use of suitable leads or by guides attached to the hammer. To prevent damage to the top of the pile, a protecting cap shall be employed in driving. All piles shall be driven without the aid of a water jet.

3.3.2 Plumbness

If at any time the forward or leading edge of the piling wall is found to be out of plumb in the plane of the wall, the piles already assembled and partly driven shall be driven to full depth, and the Contractor shall provide and drive tapered piles or take other corrective measures to ensure the plumbness of succeeding piles. The maximum permissible taper for any tapered pile will be 1/4 inch per foot of length.

3.3.3 Obstructions

Should boulders or other obstructions be encountered, the Contractor shall make every effort to drive the piling to the required depth. If it becomes impossible to drive a pile to the specified penetration without severe damage to the pile, notify the Contracting Officer who will make such changes in design or alignment of the pile structure as may be deemed necessary to ensure the adequacy and stability of the structure. Payment

for additional labor and materials necessitated by such changes will be made at the applicable contract prices.

Should riprap be encountered at the surface at the location of driven pile, the Contractor shall make every effort to remove riprap prior to sheet driving.

3.3.4 Defective Work

Piles driven out of interlock with adjacent piles or otherwise split, bent, damaged or deviating from the specified tolerance, shall be removed and replaced with other piles at the Contractor's expense. When directed to do so by the Contracting Officer, the Contractor shall trim the tops of piles excessively battered during driving, at the Contractor's expense. Cutoffs shall become the property of the Contractor and shall be removed from the Work site.

3.4 SPLICING

Splicing will not be allowed. Sections shall be ordered in full length from the mill. If field conditions dictate the need for additional length, as determined by the Contracting Officer, the splice shall be made by an approved butt weld making full penetration of the web, and piles adjoining spliced piles shall be full length piles.

3.5 CUTTING SHEET PILE

The top of the sheet piling shall be field cut to the lines and grades shown on the Drawings to form a neat and straight line.

3.6 TOLERANCES

3.6.1 Horizontal Alignment

The top of the sheet piling shall not vary by more than 2 inches from the horizontal alignment shown on the Drawings.

3.6.2 Non-conforming Alignment

If alignment not conforming to the above tolerance requires modification of the reinforced concrete cap including thickness to maintain cover depths on reinforcing, the cost of furnishing and installing such modifications including engineering and administrative costs shall be the responsibility of Contractor without additional compensation by Government.

-- End of Section --

PILE DRIVING REPORT

PROJECT _____ PILE NO. _____

CONTRACTOR _____ LOCATION _____

HAMMER: TYPE:

MAKE & MODEL _____ DIMENSIONS _____

WT. RAM _____ STROKE _____ LENGTH IN LEADS

ENERGY DELIVERED _____ BATTER 1 ON (5)

DESCRIPTION AND DIMENSION OF
DRIVING CAP _____ (K) _____ ELEVATION OF GROUND _____

SPEED: RATED MEASURED _____ ELEVATION OF CUTOFF _____

STEAM OR AIR PRESSURE:
AT HAMMER _____ AT BOILER _____ ELEVATION OF PILE TIP _____

JETTING PRESSURE AND ELEVATIONS: ELEVATION OF SPLICES

_____

INSPECTOR _____ DATE _____

TIME: START DRIVING _____ FINISH DRIVING _____ DRIVING TIME _____

INTERRUPTIONS (TIME, TIP ELEV., & REASON) _____

DRIVING RESISTANCE

FT	NO. OF BLOWS	FT	NO. OF BLOWS	FT	NO. OF BLOWS	FT	NO. OF BLOWS	FT	NO. OF BLOWS	FT	NO. OF BLOWS
0	_____	18	_____	36	_____	54	_____	71	_____	89	_____
1	_____	19	_____	37	_____	55	_____	72	_____	90	_____
2	_____	20	_____	38	_____	56	_____	73	_____	91	_____
3	_____	21	_____	39	_____	60	_____	74	_____	92	_____
4	_____	22	_____	40	_____	57	_____	75	_____	93	_____
5	_____	23	_____	41	_____	58	_____	76	_____	94	_____
6	_____	24	_____	42	_____	59	_____	77	_____	95	_____
7	_____	25	_____	43	_____	60	_____	78	_____	96	_____
8	_____	26	_____	44	_____	61	_____	79	_____	97	_____
9	_____	27	_____	45	_____	62	_____	80	_____	98	_____
10	_____	28	_____	46	_____	63	_____	81	_____	99	_____
11	_____	29	_____	47	_____	64	_____	82	_____	100	_____
12	_____	30	_____	48	_____	65	_____	83	_____	101	_____
13	_____	31	_____	49	_____	66	_____	84	_____	102	_____
14	_____	32	_____	50	_____	67	_____	85	_____	103	_____
15	_____	33	_____	51	_____	68	_____	86	_____	104	_____

BLOWS/INCH FOR LAST FOOT OF DRIVING

FT	NO. OF BLOWS
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____

16 _____	34 _____	53 _____	69 _____	87 _____	105_____	11 _____
17 _____	35 _____	53 _____	70 _____	88 _____	106_____	12 _____

SECTION 02373

GEOTEXTILE
09/01

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the 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 4354	(1999) Sampling of Geosynthetics for Testing
ASTM D 4355	(1999) Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	(1999a) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(1991; R 1996) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(1991; R 1997) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1999a) Determining Apparent Opening Size of a Geotextile
ASTM D 4759	(1988; R 1996) Determining the Specification Conformance of Geosynthetics
ASTM D 4833	(2000) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	(2001) Identification, Storage, and Handling of Geosynthetic Rolls and Samples

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-07 Certificates

Geotextile

A minimum of 7 days prior to scheduled use, manufacturer's certificate of compliance stating that the geotextile meets the requirements of this section. For needle punched geotextiles, the manufacturer shall also certify that the geotextile has been continuously inspected using permanent on-line full-width metal detectors and does not contain any needles which could damage other geosynthetic layers. The certificate of compliance shall be attested to by a person having legal authority to bind the geotextile manufacturer.

1.3 DELIVERY, STORAGE AND HANDLING

Delivery, storage, and handling of geotextile shall be in accordance with ASTM D 4873.

1.3.1 Delivery

The Contracting Officer shall be notified a minimum of 24 hours prior to delivery and unloading of geotextile rolls. Rolls shall be packaged in an opaque, waterproof, protective plastic wrapping. The plastic wrapping shall not be removed until deployment. If quality assurance samples are collected, rolls shall be immediately rewrapped with the plastic wrapping. Geotextile or plastic wrapping damaged during storage or handling shall be repaired or replaced, as directed. Each roll shall be labeled with the manufacturer's name, geotextile type, roll number, roll dimensions (length, width, gross weight), and date manufactured.

1.3.2 Storage

Rolls of geotextile shall be protected from construction equipment, chemicals, sparks and flames, temperatures in excess of 160 degrees F, or any other environmental condition that may damage the physical properties of the geotextile. To protect geotextile from becoming saturated, rolls shall either be elevated off the ground or placed on a sacrificial sheet of plastic in an area where water will not accumulate.

1.3.3 Handling

Geotextile rolls shall be handled and unloaded with load carrying straps, a fork lift with a stinger bar, or an axial bar assembly. Rolls shall not be dragged along the ground, lifted by one end, or dropped to the ground.

PART 2 PRODUCTS

2.1 RAW MATERIALS

2.1.1 Geotextile

Geotextile shall be a needle punched, nonwoven pervious sheet of polymeric

material and shall consist of long-chain synthetic polymers composed of at least 95 percent by weight polyolefins, polyesters, or polyamides. The use of woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) will not be allowed. Stabilizers and/or inhibitors shall be added to the base polymer, as needed, to make the filaments resistant to deterioration by ultraviolet light, oxidation, and heat exposure. Regrind material, which consists of edge trimmings and other scraps that have never reached the consumer, may be used to produce the geotextile. Post-consumer recycled material may also be used. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. Geotextiles shall meet the requirements specified in Table 1. Where applicable, Table 1 property values represent minimum average roll values (MARV) in the weakest principal direction. Values for AOS represent maximum average roll values.

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE

PROPERTY	UNITS	ACCEPTABLE VALUES	TEST METHOD
GRAB STRENGTH	LBS	200	ASTM D 4632
PUNCTURE	LBS	80	ASTM D 4833
TRAPEZOID TEAR	LBS	50	ASTM D 4533
APPARENT OPENING SIZE	U.S. SIEVE	50	ASTM D 4751
PERMITTIVITY	SEC -1	0.20	ASTM D 4491
ULTRAVIOLET DEGRADATION	PERCENT	50 AT 500 HRS	ASTM D 4355

2.2 MANUFACTURING QUALITY CONTROL SAMPLING AND TESTING

The Manufacturer shall be responsible for establishing and maintaining a quality control program to assure compliance with the requirements of the specification. Documentation describing the quality control program shall be made available upon request. Manufacturing quality control sampling and testing shall be performed in accordance with the manufacturer's approved quality control manual. As a minimum, geotextiles shall be randomly sampled for testing in accordance with ASTM D 4354, Procedure A. Acceptance of geotextile shall be in accordance with ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

PART 3 EXECUTION

3.1 QUALITY ASSURANCE SAMPLES AND TESTS

3.1.1 Quality Assurance Samples

The Contractor shall provide assistance to the Contracting Officer in the collection of quality assurance samples. Samples shall be collected upon delivery to the site for quality assurance testing at the request of the Contracting Officer. Samples shall be identified with a waterproof marker by manufacturer's name, product identification, lot number, roll number, and machine direction. The date and a unique sample number shall also be noted on the sample. The outer layer of the geotextile roll shall be discarded prior to sampling a roll. Samples shall then be collected by cutting the full-width of the geotextile sheet a minimum of 3 feet long in the machine direction. Rolls which are sampled shall be immediately resealed in their protective covering.

3.1.2 Quality Assurance Tests

The Contracting Officer may provide quality assurance samples to an Independent Laboratory. Samples will be tested to verify that geotextile meets the requirements specified in Table 1. Test method ASTM D 4355 shall not be performed on the collected samples. Geotextile product acceptance shall be based on ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

3.2 INSTALLATION

3.2.1 Subgrade Preparation

The surface underlying the geotextile shall be smooth and free of ruts or protrusions which could damage the geotextile. Subgrade materials and compaction requirements shall be in accordance with Section 02300.

3.2.2 Placement

The Contractor shall notify the Contracting Officer a minimum of 24 hours prior to installation of geotextile. Geotextile rolls which are damaged or contain imperfections shall be repaired or replaced as directed. The geotextile shall be laid flat and smooth so that it is in direct contact with the subgrade. The geotextile shall also be free of tensile stresses, folds, and wrinkles. On slopes steeper than 10 horizontal on 1 vertical, the geotextile shall be laid with the machine direction of the fabric parallel to the slope direction.

3.3 SEAMS

3.3.1 Overlap Seams

Geotextile panels shall be continuously overlapped a minimum of 24 inches at all longitudinal and transverse joints. Where seams must be oriented across the slope, the upper panel shall be lapped over the lower panel. If approved, sewn seams may be used instead of overlapped seams.

3.4 PROTECTION

The geotextile shall be protected during installation from clogging, tears, and other damage. Damaged geotextile shall be repaired or replaced as directed. Adequate ballast (e.g. sand bags) shall be used to prevent uplift by wind. The geotextile shall not be left uncovered for more than 3 days after installation.

3.5 REPAIRS

Torn or damaged geotextile shall be repaired. Clogged areas of geotextile shall be removed. Repairs shall be performed by placing a patch of the same type of geotextile over the damaged area. The patch shall extend a minimum of 12 inches beyond the edge of the damaged area. Patches shall be continuously fastened using approved methods. The machine direction of the patch shall be aligned with the machine direction of the geotextile being repaired. Geotextile rolls which cannot be repaired shall be removed and replaced. Repairs shall be performed at no additional cost to the Government

3.6 PENETRATIONS

Engineered penetrations of the geotextile shall be constructed as shown on the drawings.

3.7 COVERING

Geotextile shall not be covered prior to inspection and approval by the Contracting Officer. Cover soil shall be placed in a manner that prevents soil from entering the geotextile overlap zone, prevents tensile stress from being mobilized in the geotextile, and prevents wrinkles from folding over onto themselves. On side slopes, soil backfill shall be placed from the bottom of the slope upward. Cover soil shall not be dropped onto the geotextile from a height greater than 6 inches. No equipment shall be operated directly on top of the geotextile without approval of the Contracting Officer.

-- End of Section --

SECTION 02388

STONE PROTECTION (RIPRAP)
01/02

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 33	(1999) Concrete Aggregates
ASTM C 127	(1988; R 1993) Specific Gravity and Absorption of Coarse Aggregate
ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM C 295	(1998) Petrographic Examination of Aggregates for Concrete
ASTM D 75	(1987; R 1997) Sampling Aggregates
ASTM D 4791	(1999) Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D 4992	(1994) Evaluation of Rock to be Used for Erosion Control
ASTM D 5312	(1992; R 1997) Evaluation of Durability of Rock for Erosion Control Under Freezing and Thawing Conditions

CORPS OF ENGINEERS (COE)

EM 1110-2-2302	(1990) Construction with Large Stone

1.2 SUBMITTALS

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

SD-01 Preconstruction Submittals

Reuse of Riprap; G

The Contractor shall submit the means and methods to be used to remove and replace riprap.

Material Sources; G, GT

The Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish stone protection materials. The Contractor shall state in writing methods of processing and handling riprap, and shall notify the Contracting Officer when production methods are changed.

SD-06 Test Reports

Gradation Test; G

Gradation Test Results for riprap and bedding. Riprap gradation testing results shall be submitted on the WORKSHEET FOR GRADATION ANALYSIS OF RIPRAP and the gradation curve (ENG FORM 4055). Bedding gradation testing results shall be submitted on Contractor's standard laboratory report form and the gradation curve (ENG FORM 2087). A blank copy of each form is included at the end of this section.

PART 2 PRODUCTS

2.1 STONE SOURCES AND EVALUATION

Stone and aggregate materials shall be produced from the sources listed in Section 00830 ATTACHMENTS. If the Contractor proposes to furnish materials from a source not listed, the Government Geologist will make such investigations and evaluations as necessary to determine whether or not materials with acceptable durability can be produced from the proposed source. The rock supplied shall be produced from one rock formation to provide a product of uniform appearance. The Contractor shall not supply rock from various formations, or mix field-stone with quarried rock, unless approved by the Contracting Officer. It is the Contractor's responsibility to determine that the stone source or combination of sources selected is capable of providing the quality, quantities and gradation needed and at

the rate needed to maintain the scheduled progress of the work.

2.1.1 Alternate Sources

a. Evaluation by Site Inspection. If the Contractor proposes to furnish stone from an unlisted source, the Government will evaluate the alternate source and reply within 30 days. A quarry investigation shall be performed by a Government geologist or engineer. If the source is an undeveloped quarry or if the operation has been dormant for more than one year such that the quarry face is weathered, the Contractor shall expose fresh rock for 20 feet horizontally and for the full height of the face proposed for production, prior to the field evaluation. The Government will consider service records for stone of a similar size, placed in a similar thickness and exposed to weathering under similar conditions as are anticipated for this contract. The Government may choose to accept the source based on rock classification, geologic evaluation, and service records show that the stone is durable to the satisfaction of the Government.

b. Evaluation by Test Data. If sufficient information is not available, the Government will reconsider the alternate source if evaluation is supplemented by sampling and testing. This will require an additional 60 day evaluation period. If the Contractor wishes to pursue the alternate source, the Government will notify the Contractor of required testing and evaluation criteria. Criteria for acceptance will consider criteria in EM 1110-2-2302, but will also consider characteristics of rock found in nearby quarries. Some common test procedures that may be considered include:

Unit Weight and Absorption (ASTM C 127).
Petrographic Examination (ASTM C 295 and ASTM D 4992).
Resistance to Freezing and Thawing (ASTM D 5312).

c. Sampling and Testing. Samples from alternate sources shall be taken by a representative of the quarry under the supervision of the Contracting Officer. Information provided with the samples shall include the location and stratigraphy within the quarry from which the sample was taken. The Contractor shall ship the samples to a laboratory identified by the Contracting Officer. The Government will be responsible for testing costs associated with one quarry per project; and the Contractor shall be responsible for testing costs for additional sources.

2.1.2 Acceptance of Materials

Acceptance of a source of stone is not to be construed as acceptance of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable for stone as determined by the Contracting Officer. The Contracting Officer also reserves the right to reject individual units of produced specified materials in stockpiles at the quarry, all transfer points, and at the project construction site when such materials are determined to be unsuitable.

2.2 RIPRAP GRADATIONS

The stone shall be well graded within the limits specified.

2.2.1 Riprap Type D

Stone Size	Min	Max
W100 (lbs)	117	292
W50 (lbs)	58	86
W15 (lbs)	18	43

2.2.2 Riprap Type E

Stone Size	Min	Max
W100 (lbs)	276	691
W50 (lbs)	138	205
W15 (lbs)	43	102

2.2.3 Riprap Type F

Stone Size	Min	Max
W100 (lbs)	394	984
W50 (lbs)	197	292
W15 (lbs)	62	146

2.2.4 Riprap Type G

Stone Size	Min	Max
W100 (lbs)	35	86
W50 (lbs)	17	26
W15 (lbs)	5	13

2.2.5 Riprap Type H

Stone Size	Min	Max
W100 (lbs)	719	1797
W50 (lbs)	359	532
W15 (lbs)	112	266

2.2.6 General

All stone shall be durable material. Stone for riprap shall have a specific gravity not less than 2.55. Stone shall be of a suitable quality to ensure permanence in the structure and in the climate in which it is to be used. It shall be free from cracks, blast fractures, bedding, seams and other defects that would tend to increase its deterioration from natural causes. A hairline crack that is defined as being detrimental shall have a minimum width of 4 mil and shall be continuous for one-third the dimension of at least two sides of the stone. The stone shall be clean and reasonably free from soil, quarry fines, and shall contain no refuse. Any foreign material adhering to or combined with the stone as a result of stockpiling shall be removed prior to placement. The maximum aspect ratio (greatest dimension:least dimension) of any piece of stone for size ranges shall be not greater than 3:1 when measured across mutually perpendicular axis. ASTM D 4791 shall be used as a guide to perform the test.

2.2.2 Production

Riprap shall be handled and selectively loaded onto trucks in a manner to avoid segregation and provide a distribution of stone sizes consistent with the gradation band and test samples. Each truckload shall be representative of the gradation requirements.

2.3 BEDDING MATERIAL

Bedding material shall be composed of tough, durable particles, adequately free from thin, flat and elongated pieces, and shall contain no organic matter nor soft, friable particles in quantities considered objectionable by the Contracting Officer. The aggregates shall meet the quality requirements of ASTM C 33. The bedding material shall be well-graded between the limits shown. Gradation shall conform to the following requirements:

2.3.1 Bedding Type 3

Sieve Designation	Percent Passing by Weight
5"	100
4"	89-100
2"	71-89
1.5"	64-82
3/4"	46-64
3/8"	30-47
#4	14-30
#10	0-11
#20	0-5

2.3.2 Bedding Type 4

Sieve Designation	Percent Passing by Weight
6"	100
4"	79-100
3"	71-89
1.5"	54-71
3/4"	38-54
3/8"	22-38
#4	7-22
#10	0-5

2.3.3 Bedding Type 5

Sieve Designation	Percent Passing by Weight
4"	100
2"	82-100
0.5"	45-63
#4	23-40
#10	2-20
#20	0-7

2.3.4 Bedding Type 6

Sieve Designation	Percent Passing by Weight
12"	100
4"	72-92
1.5"	50-68
3/4"	30-49
3/8"	11-30
#3	0-20
#6	0-3

2.3.5 Bedding Type 7

Sieve Designation	Percent Passing by Weight
16"	100
6"	74-94
2"	47-64
3/4"	21-40
3/8"	2-22
#4	0-5

2.4 SOURCE QUALITY CONTROL

Gradation tests shall be performed by the methods and at the frequency listed below. A satisfactory gradation test shall be obtained prior to any hauling and delivery of materials. All tests, including failing tests shall be submitted. Tests performed on material which do not meet gradation and shape requirements will not be counted as part of the tests required. The Contracting Officer shall be informed immediately of test results and draft copies of test results shall be furnished at the Contracting Officers request.

2.4.1 Sampling Requirements

The Contracting Officer shall direct the time and location of sampling, unless waived. Samples shall be taken from stockpiles or loaded trucks, and not directly from conveyers or chutes.

2.4.2 Riprap Gradation Testing

a. Notification. The Contracting Officer shall be informed 24 hours before each riprap test.

b. Testing Frequency. At least 1 gradation test shall be performed per 25,000 tons.

c. Sample Size. The sample shall have a minimum gross weight not less than 25 times the maximum stone size in the specified gradation (25 * W_{100}).

2.4.2.1 Riprap Test Method A

Test method A shall consist of weighing all stones larger than 5 pounds in a sample. Five to seven weight classes shall be selected within the range

of stone sizes. Each stone shall be weighed and recorded on the Work Sheet for Gradation Analysis of Riprap Method A; and the calculations on the worksheet shall be performed and recorded. A plot of the gradation shall be completed on ENG FORM 4055 in accordance with accepted practice for soil and aggregate gradations.

2.4.2.2 Riprap Test Method B

Test method B shall consist of separating the stones into 5 to 7 piles, ordered by size. The sample shall be separated on a clean, hard surface that is free of smaller stones that could become mixed with the sample. The stones shall be visually screened to place them into appropriate piles. All stones shall be separated and placed into a pile before weighing. After separating, the smallest and largest rock in each pile shall be weighed and recorded. The stones shall be adjusted as necessary so that the weight classes do not overlap. After adjustment is adequate and weight classes have been established, each pile of stone shall be weighed and recorded on the Work Sheet for Gradation Analysis of Riprap Method B; and the calculations on the worksheet shall be performed and recorded. A plot of the gradation shall be completed on ENG FORM 4055 in accordance with accepted practice for soil and aggregate gradations.

2.4.3 Bedding Gradation Testing

The bedding and filter materials shall be sampled in accordance with ASTM D 75 and tested in accordance with ASTM C 136.

a. Testing Frequency. At least 1 gradation test shall be performed per 5000 tons.

b. Sample Size. Aggregate samples shall have a minimum gross weight not less than 110 pounds per inch of the maximum nominal aggregate size in the specified gradation.

2.5 STOCKPILES

Stockpiles shall be formed by a series of layers or truckload dumps, where the rock essentially remains where it is placed. Subsequent layers shall be started 10 feet from the edge of the previous layer so that the rock will not roll down the edges of the pile. Any stone which has become contaminated with soil or refuse shall not be put into the work unless the contaminating material has been removed prior to placement.

PART 3 EXECUTION

3.1 CONSTRUCTION TOLERANCES

Work shall generally meet the required elevations, slope and grade; and the outer surfaces shall be even and present a neat appearance.

a. Subgrades. Areas on which stone protection will be placed shall be graded and/or dressed to conform to cross sections shown on the contract drawings within 2 inches above or below the neat lines. The surface shall

be reasonably smooth to match tolerances normally obtained by rough grading with bladed equipment. For subaqueous construction in greater than 3 feet of water, the tolerance shall be 6 inches.

b. Layer Thickness. Any layers found to be less than 80% of the specified thickness shall be corrected. This tolerance shall only be exceeded on isolated spot checks, and if the tolerance is commonly exceeded, the Contractor shall change construction methods to improve the quality control. If it is necessary to estimate riprap quantities for changes, the volume shall be based on neat line dimensions and the plan dimension for thickness.

c. Surface Tolerances. The finished surface tolerance above the neatline shall generally not deviate from the lines and grades shown by more than half (1/2) the thickness of the layer. Riprap that has a rough and uneven surface shall be reworked by hand to stabilize stones that wobble and are out of tolerance, except where the Contracting Officer approves use of equipment. Rearranging of individual stones shall be required to the extent necessary to obtain a well-graded distribution of stone sizes.

3.2 FOUNDATION PREPARATION

Foundation areas shall be excavated or filled to the lines and grades shown. Filling shall be with earth similar to the adjacent material and shall be well compacted. Immediately prior to placing riprap, the prepared subgrade will be inspected by the Contracting Officer unless waived; and no material shall be placed thereon until that area has been approved.

3.3 PLACEMENT OF BEDDING

Bedding material shall be spread uniformly on the prepared base to the lines and grades indicated and in such manner as to avoid disturbance to the subgrade. Placing by methods which tend to segregate the particle sizes will not be permitted. Placement shall begin at the bottom of the area to be covered and continue up slope. Subsequent loads of material shall be placed against previously placed material in such a manner as to ensure a relatively homogenous mass. Any damage to the surface of the prepared base during placing of the material shall be repaired before proceeding with the work. Compaction of bedding material will not be required, but the surface shall be finished to present an adequately even surface, free from mounds or windrows.

3.4 PLACEMENT OF RIPRAP

3.4.1 Layer Requirements

Riprap shall be placed in a manner which will produce a well-graded mass of rock with the minimum practicable percentage of voids. The large stones shall be well distributed. The finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones.

3.4.2 Construction Methods

Unsegregated stone shall be placed in a systematic manner. Riprap shall be

placed to its full course thickness in one operation and in such manner as to avoid displacing underlying material. Placement shall typically begin at the bottom of the area to be covered and continue up slope. Subsequent loads of material shall be placed against previously placed material in such a manner as to ensure a relatively homogenous mass. Final finish of slope shall be performed as the material is placed.

Placing riprap in layers will not be permitted. Placing riprap by dumping it into chutes, or by any method likely to cause segregation of the various sizes, shall not be permitted. Placing riprap by dumping it at the top of the slope and pushing it down the slope shall not be permitted. No equipment shall be operated directly on the completed stone protection system. Dump trucks shall be equipped with bottom hinged tailgates if rock is directly placed into position with the trucks.

3.4.3 Reuse of Riprap

Riprap to be salvaged for reuse is to be removed and reinstalled in a manner that maintains the gradation characteristics.

3.5 MAINTENANCE

The Contractor shall maintain the stone protection and underlying works until accepted by the Contracting Officer. When appropriate, the Contractor shall place stone protection in a timely manner to reduce risk of scour. Any material displaced prior to acceptance and due to the Contractor's negligence or neglect shall be replaced at the Contractor's expense.

3.6 CONTRACTOR QUALITY CONTROL

The Contractor shall establish and maintain quality control for all work performed at the job site under this section to assure compliance with contract requirements. The Contractor shall maintain records of quality control tests, inspections and corrective actions. Quality control measures shall cover all construction operations including, but not limited to, the placement of all materials to the slope and grade lines shown and in accordance with this section.

In addition to the Contractor's system to establish and maintain quality control for stone placement operations, the following information shall be recorded and promptly provided to the Contracting Officer on request:

a. Record yardage of stone placed in completed sections of the work and check quantity for compliance with design sections.

b. Quality.

c. Gradation.

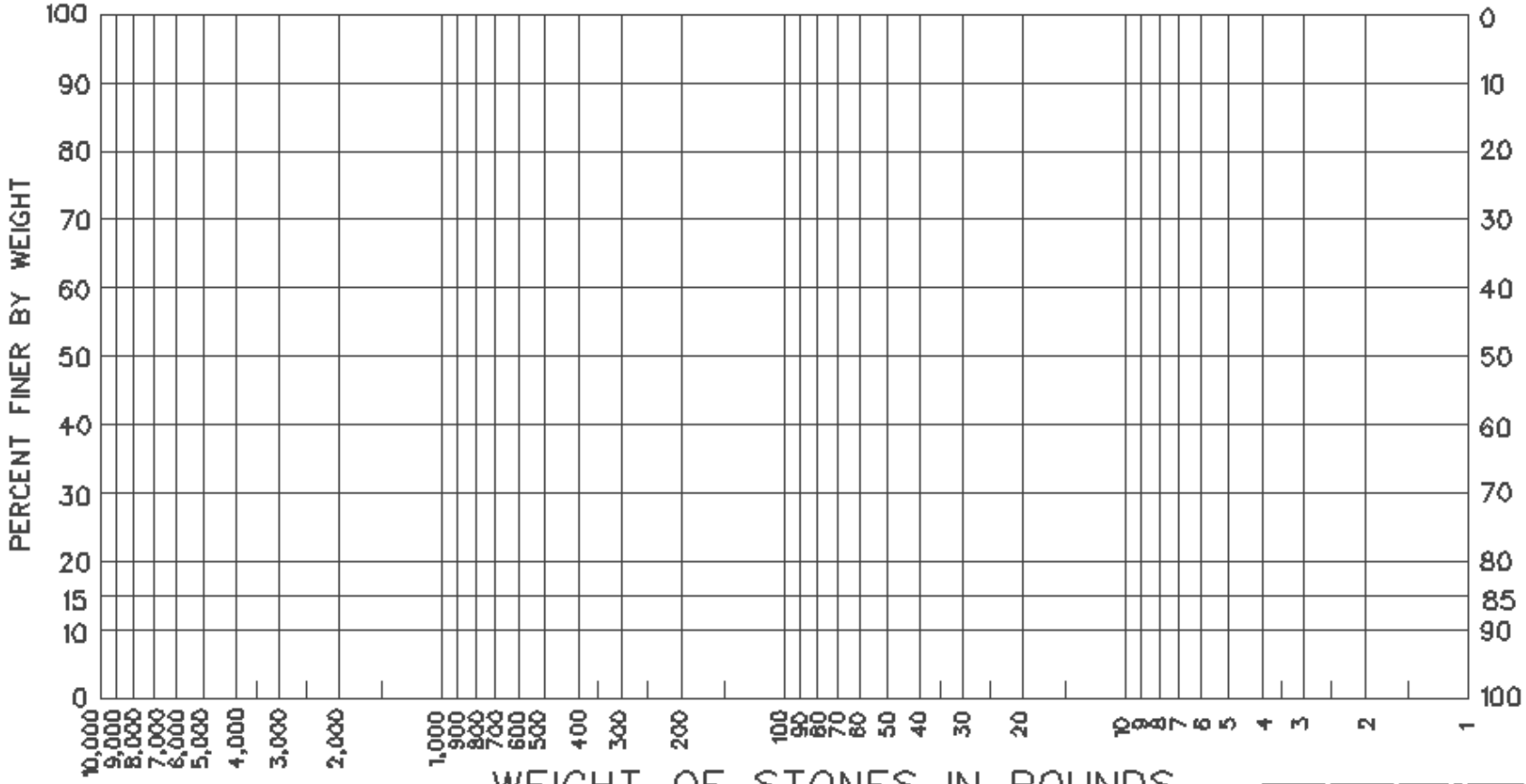
d. Foundation preparation.

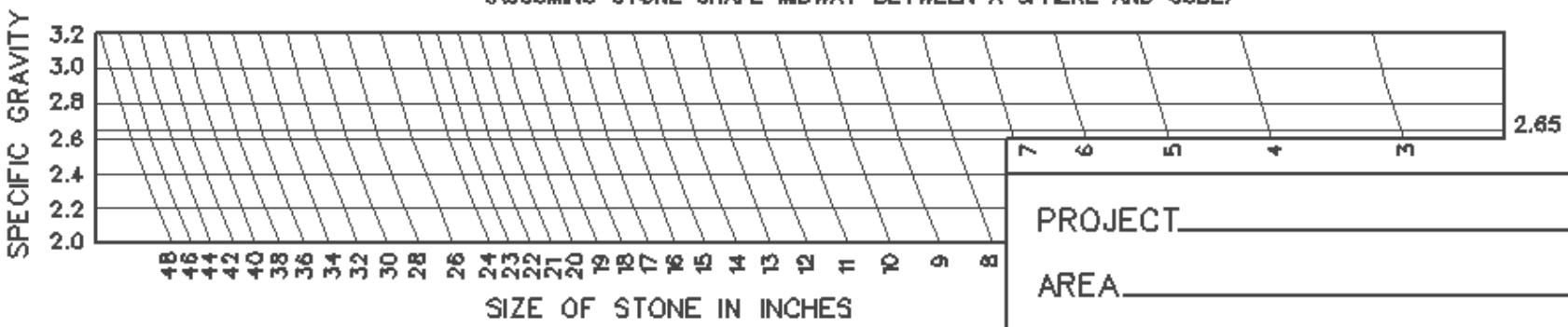
e. Testing for gradation and shape.

f. Layer thickness.

g. Uniformity of in-place gradation of riprap.

-- End of Section --





SPECIFIC GRAVITY OF STONE = [ ]

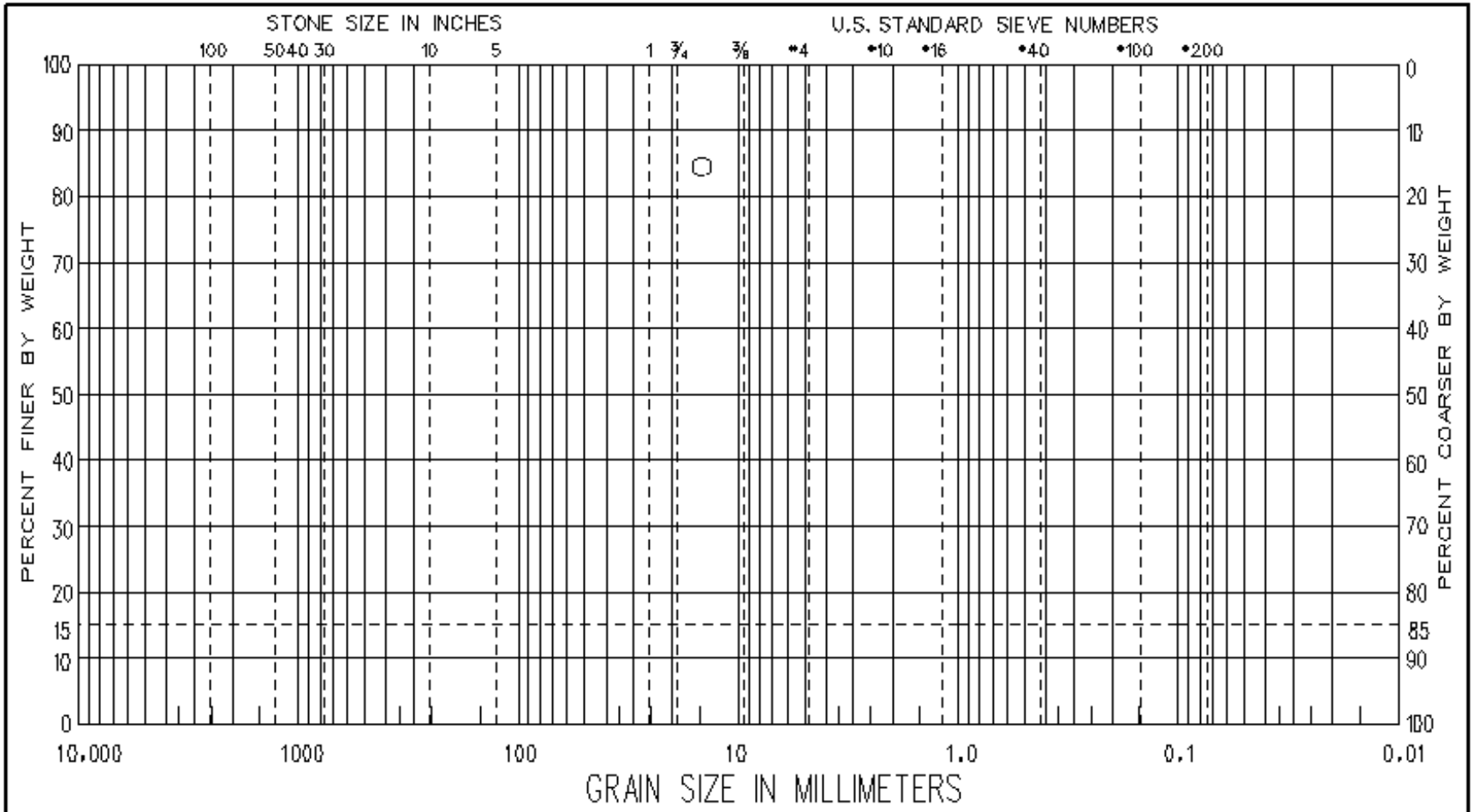
PROJECT _____

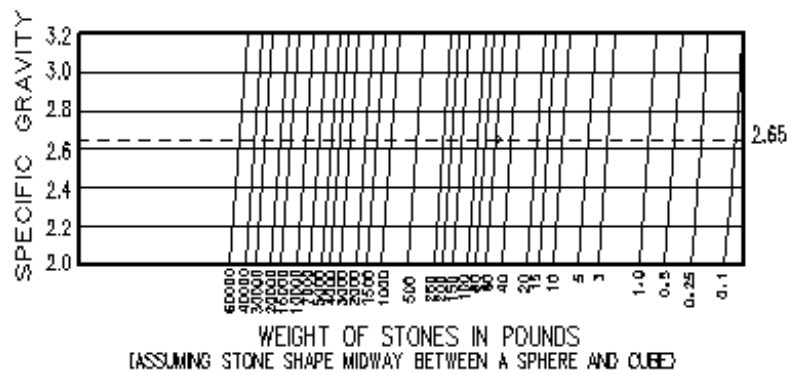
AREA _____

DATE _____

RIPRAP/ROCKFILL GRADATION CURVE

ENGR FORM 4055 DATE OF FORM: MAY 1998





SPECIFIC GRAVITY OF STONE= [ ]

PROJECT _____

AREA _____

DATE _____

GRADATION CURVES FOR RIPRAP FILTER AND BEDDING

EWGR FORM 4055

WORK SHEET FOR GRADATION ANALYSIS OF RIPRAP
METHOD A

Project Name:	Date:
Riprap Type:	Test No.
Source, Quarry, or Pit:	
Sample Location:	Test Made By:

Part 1. Weigh all stones larger than 5 pounds and record.

(1) PASSING WT.							5 lbs.
(2) RETAINED WT.						5 lbs.	PAN
(3) -------							-------
-------							-------
-------							-------
-------							-------
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(4) TOTALS							

Rows (1) & (2) Enter 5 to 7 weight classes to yield approx. 75%, 50%, 30%, and 15% finer points.

Row (3) List weight of each stone. Attach additional sheets if necessary.

Row (4) Add all individual stone weights listed in each column.

Part 2. Summary Table.

(5) WEIGHT CLASSES		(6)	(7)	(8)
PASSING (stone wt. in lbs.)	RETAINED (stone wt. in lbs.)	TOTAL WEIGHT EACH CLASS (lbs.)	CUMMULATIVE WEIGHT PASSING (lbs.)	TOTAL PERCENT PASSING (%)
	5 lbs.			
5 lbs.	PAN			
SAMPLE TOTAL			--------	--------

Column (5) Enter same weight classes used in Rows (1) and (2).

Column (6) Enter weights of material from Row (4)

Column (7) Add column (6) from bottom up to get cumulative weight passing.

Column (8) Divide column (7) by sample total to get total percent passing.

WORK SHEET FOR GRADATION ANALYSIS OF RIPRAP
METHOD B

Project Name:	Date:
Riprap Type:	Test No.
Source, Quarry, or Pit:	
Sample Location:	Test Made By:

Part 1. Separate rock into 5 to 7 piles, ordered by size. The largest pile should contain 2 to 5 stones. Intermediate piles between the largest stones and those smaller than 5 pounds should be approximately equal in total weight. Separate all stones before weighing.

Part 2. Summary Table.

(1) WEIGHT CLASSES		(2)	(3)	(4)
PASSING (stone wt. in lbs.)	RETAINED (stone wt. in lbs.)	TOTAL WEIGHT EACH CLASS (lbs.)	CUMMULATIVE WEIGHT PASSING (lbs.)	TOTAL PERCENT PASSING (%)
	5 lbs.			
5 lbs.	PAN			
SAMPLE TOTAL			--------	--------

Column (1) Weight the smallest and largest stone in each pile. If weight classes overlap, adjust stones as necessary and repeat.
Column (2) Weigh the total amount of rock in each pile and record.
Column (3) Add column (2) from bottom up to get cumulative weight passing.
Column (4) Divide column (3) by sample total to get total percent passing.

SECTION 02630A

STORM-DRAINAGE SYSTEM
03/00

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 48	(1994a) Gray Iron Castings
ASTM A 536	(1999el) Ductile Iron Castings
ASTM A 929/A 929M	(1997) Steel Sheet, Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe
ASTM B 26/B 26M	(1998) Aluminum-Alloy Sand Castings
ASTM C 76	(1999) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
ASTM C 270	(1997) Mortar for Unit Masonry
ASTM C 478	(1997) Precast Reinforced Concrete Manhole Sections
ASTM D 1557	(1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))
ASTM D 1751	(1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D 1752	(1984; R 1996el) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D 2167	(1994) Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D 2922	(1996el) Density of Soil and Soil-Aggregate in Place by Nuclear Methods

(Shallow Depth)

ASTM D 3017 (1988; R 1996el) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

1.2 DELIVERY, STORAGE, AND HANDLING

1.2.1 Delivery and Storage

Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris. Before, during, and after installation, plastic pipe and fittings shall be protected from any environment that would result in damage or deterioration to the material. The Contractor shall have a copy of the manufacturer's instructions available at the construction site at all times and shall follow these instructions unless directed otherwise by the Contracting Officer. Solvents, solvent compounds, lubricants, elastomeric gaskets, and any similar materials required to install plastic pipe shall be stored in accordance with the manufacturer's recommendations and shall be discarded if the storage period exceeds the recommended shelf life. Solvents in use shall be discarded when the recommended pot life is exceeded.

1.2.2 Handling

Materials shall be handled in a manner that ensures delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

PART 2 PRODUCTS

2.1 PIPE FOR CULVERTS AND STORM DRAINS

Pipe for culverts and storm drains shall be of the sizes indicated and shall conform to the requirements specified.

2.1.1 Concrete Pipe

ASTM C 76, Class III.

2.2 DRAINAGE STRUCTURES

2.2.1 Flared End Sections

Sections shall be of a standard design fabricated from zinc coated steel sheets meeting requirements of ASTM A 929/A 929M.

2.3 MISCELLANEOUS MATERIALS

2.3.1 Concrete

Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements of Section 03300 CAST-IN-PLACE STRUCTURAL CONCRETE. Expansion-joint filler material shall conform to ASTM D 1751, or ASTM D 1752, or shall be resin-impregnated fiberboard conforming to the physical requirements of ASTM D 1752.

2.3.2 Mortar

Mortar for pipe joints, connections to other drainage structures, and brick or block construction shall conform to ASTM C 270, Type M, except that the maximum placement time shall be 1 hour. The quantity of water in the mixture shall be sufficient to produce a stiff workable mortar. Water shall be clean and free of harmful acids, alkalies, and organic impurities. The mortar shall be used within 30 minutes after the ingredients are mixed with water. The inside of the joint shall be wiped clean and finished smooth. The mortar head on the outside shall be protected from air and sun with a proper covering until satisfactorily cured.

2.3.3 Precast Reinforced Concrete Manholes

Precast reinforced concrete manholes shall conform to ASTM C 478. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall be smoothed to a uniform surface on both interior and exterior of the structure.

2.3.4 Frame and Cover for Gratings

Frame and cover for gratings shall be cast gray iron, ASTM A 48, Class 35B; cast ductile iron, ASTM A 536, Grade 65-45-12; or cast aluminum, ASTM B 26/B 26M, Alloy 356.0T6. Weight, shape, size, and waterway openings for grates and curb inlets shall be as indicated on the plans.

PART 3 EXECUTION

3.1 EXCAVATION FOR PIPE CULVERTS, STORM DRAINS, AND DRAINAGE STRUCTURES

Excavation of trenches, and for appurtenances and backfilling for culverts and storm drains, shall be in accordance with the requirements specified below.

3.1.1 Trenching

The width of trenches at any point below the top of the pipe shall be not greater than the outside diameter of the pipe plus 6 inches to permit satisfactory jointing and thorough tamping of the bedding material under and around the pipe. Sheeting and bracing, where required, shall be placed within the trench width as specified. Contractor shall not overexcavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures will be necessary. Cost of this redesign and increased cost of pipe or installation shall be

borne by the Contractor without additional cost to the Government.

3.1.2 Removal of Rock

Rock in either ledge or boulder formation shall be replaced with suitable materials to provide a compacted earth cushion having a thickness between unremoved rock and the pipe of at least 8 inches or 1/2 inch for each foot of fill over the top of the pipe, whichever is greater, but not more than three-fourths the nominal diameter of the pipe. Where bell-and-spigot pipe is used, the cushion shall be maintained under the bell as well as under the straight portion of the pipe.

3.1.3 Removal of Unstable Material

Where wet or otherwise unstable soil incapable of properly supporting the pipe, as determined by the Contracting Officer, is unexpectedly encountered in the bottom of a trench, such material shall be removed to the depth required and replaced to the proper grade with select granular material, compacted as provided in paragraph BACKFILLING. When removal of unstable material is due to the fault or neglect of the Contractor in his performance of shoring and sheeting, water removal, or other specified requirements, such removal and replacement shall be performed at no additional cost to the government.

3.2 BEDDING

The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe.

3.2.1 Concrete Pipe Requirements

When no bedding class is specified or detailed on the drawings, concrete pipe shall be bedded in a soil foundation accurately shaped and rounded to conform to the lowest one-fourth of the outside portion of circular pipe or to the lower curved portion of pipe arch for the entire length of the pipe or pipe arch. When necessary, the bedding shall be tamped. Bell holes and depressions for joints shall be not more than the length, depth, and width required for properly making the particular type of joint.

3.3 PLACING PIPE

Each pipe shall be thoroughly examined before being laid; defective or damaged pipe shall not be used. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Lifting lugs in vertically elongated metal pipe shall be placed in the same vertical plane as the major axis of the pipe. Pipe shall not be laid in water, and pipe shall not be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary.

3.3.1 Concrete, Clay, PVC, Ribbed PVC and Ductile Iron Pipe

Laying shall proceed upgrade with spigot ends of bell-and-spigot pipe and

tongue ends of tongue-and-groove pipe pointing in the direction of the flow.

3.4 JOINTING

3.4.1 Concrete and Clay Pipe

3.4.1.1 Plastic Sealing Compound Joints for Tongue-and-Grooved Pipe

Sealing compounds shall follow the recommendation of the particular manufacturer in regard to special installation requirements. Surfaces to receive lubricants, primers, or adhesives shall be dry and clean. Sealing compounds shall be affixed to the pipe not more than 3 hours prior to installation of the pipe, and shall be protected from the sun, blowing dust, and other deleterious agents at all times. Sealing compounds shall be inspected before installation of the pipe, and any loose or improperly affixed sealing compound shall be removed and replaced. The pipe shall be aligned with the previously installed pipe, and the joint pulled together. If, while making the joint with mastic-type sealant, a slight protrusion of the material is not visible along the entire inner and outer circumference of the joint when the joint is pulled up, the pipe shall be removed and the joint remade. After the joint is made, all inner protrusions shall be cut off flush with the inner surface of the pipe. If nonmastic-type sealant material is used, the "Squeeze-Out" requirement above will be waived.

3.5 DRAINAGE STRUCTURES

3.5.1 Manholes and Inlets

Construction shall be of reinforced concrete or precast reinforced concrete; complete with frames and covers or gratings; and with fixed galvanized steel ladders where indicated. Pipe connections to concrete manholes and inlets shall be made with flexible, watertight connectors.

3.6 BACKFILLING

3.6.1 Backfilling Pipe in Trenches

After the pipe has been properly bedded, selected material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches in compacted depth. The backfill shall be brought up evenly on both sides of pipe for the full length of pipe. The fill shall be thoroughly compacted under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compacting shall continue until the fill has reached an elevation of at least 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical rammers or tampers in layers not exceeding 6 inches. Tests for density shall be made as necessary to ensure conformance to the compaction requirements specified below. Where it is necessary, in the opinion of the Contracting Officer, that sheeting or portions of bracing used be left in place, the contract will be adjusted accordingly. Untreated sheeting shall not be left in place beneath structures or pavements.

3.6.2 Backfilling Pipe in Fill Sections

For pipe placed in fill sections, backfill material and the placement and compaction procedures shall be as specified below. The fill material shall be uniformly spread in layers longitudinally on both sides of the pipe, not exceeding 6 inches in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12 inches above the top of the pipe shall extend a distance of not less than twice the outside pipe diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12 inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 6 inches.

3.6.3 Movement of Construction Machinery

When compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any damaged pipe shall be repaired or replaced.

3.6.4 Compaction

3.6.4.1 General Requirements

Cohesionless materials include gravels, gravel-sand mixtures, sands, and gravelly sands. Cohesive materials include clayey and silty gravels, gravel-silt mixtures, clayey and silty sands, sand-clay mixtures, clays, silts, and very fine sands. When results of compaction tests for moisture-density relations are recorded on graphs, cohesionless soils will show straight lines or reverse-shaped moisture-density curves, and cohesive soils will show normal moisture-density curves.

3.6.4.2 Minimum Density

Backfill over and around the pipe and backfill around and adjacent to drainage structures shall be compacted at the approved moisture content to the following applicable minimum density, which will be determined as specified below.

a. Under paved roads, streets, parking areas, and similar-use pavements including adjacent shoulder areas, the density shall be not less than 90 percent of maximum density for cohesive material and 95 percent of maximum density for cohesionless material, up to the elevation where requirements for pavement subgrade materials and compaction shall control.

b. Under unpaved or turfed traffic areas, density shall not be less than 90 percent of maximum density for cohesive material and 95 percent of maximum density for cohesionless material.

c. Under nontraffic areas, density shall be not less than that of the surrounding material.

3.6.5 Determination of Density

Testing shall be the responsibility of the Contractor and performed at no additional cost to the Government. Testing shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. Tests shall be performed in sufficient number to ensure that specified density is being obtained. Laboratory tests for moisture-density relations shall be made in accordance with ASTM D 1557 except that mechanical tampers may be used provided the results are correlated with those obtained with the specified hand tamper. Field density tests shall be determined in accordance with ASTM D 2167 or ASTM D 2922. When ASTM D 2922 is used, the calibration curves shall be checked and adjusted, if necessary, using the sand cone method as described in paragraph Calibration of the referenced publications. ASTM D 2922 results in a wet unit weight of soil and when using this method ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall be checked along with density calibration checks as described in ASTM D 3017 or ASTM D 2922. Test results shall be furnished the Contracting Officer. The calibration checks of both the density and moisture gauges shall be made at the beginning of a job on each different type of material encountered and at intervals as directed.

-- End of Section --

SECTION 02722A

AGGREGATE BASE COURSE
05/01

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 117	(1995) Materials Finer Than 75 micrometer (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 127	(1988; R 1993el) Specific Gravity and Absorption of Course Aggregate
ASTM C 128	(1997) Specific Gravity and Absorption of Fine Aggregate
ASTM C 131	(1996) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 75	(1987; R 1997) Sampling Aggregates
ASTM D 1557	(1991; R 1998) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))
ASTM D 2487	(2000) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 2922	(1996el) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	(1988; R 1996el) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

ASTM E 11 (1995) Wire-Cloth Sieves for Testing Purposes

1.2 DEFINITIONS

For the purposes of this specification, the following definitions apply.

1.2.1 Aggregate Base Course

Aggregate base course (ABC) is well graded, durable aggregate uniformly moistened and mechanically stabilized by compaction.

1.3 SUBMITTALS

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

SD-03 Product Data

Waybills and Delivery Tickets

Copies of waybills and delivery tickets during the progress of the work. Before the final statement is allowed, the Contractor shall file certified waybills and certified delivery tickets for all aggregates actually used.

SD-06 Test Reports

Sampling and testing
Field Density Tests

Calibration curves and related test results prior to using the device or equipment being calibrated. Copies of field test results within 24 hours after the tests are performed.

1.4 SAMPLING AND TESTING

Sampling and testing shall be the responsibility of the Contractor. Sampling and testing shall be performed by a testing laboratory approved in accordance with Section 01451 CONTRACTOR QUALITY CONTROL. Work requiring testing will not be permitted until the testing laboratory has been inspected and approved. The materials shall be tested to establish compliance with the specified requirements; testing shall be performed at the specified frequency. The Contracting Officer may specify the time and location of the tests. Copies of test results shall be furnished to the Contracting Officer within 24 hours of completion of the tests.

1.4.1 Sampling

Samples for laboratory testing shall be taken in conformance with ASTM D 75. When deemed necessary, the sampling will be observed by the Contracting

Officer.

1.4.2 Tests

The following tests shall be performed in conformance with the applicable standards listed.

1.4.2.1 Sieve Analysis

Sieve analysis shall be made in conformance with ASTM C 117 and ASTM C 136. Sieves shall conform to ASTM E 11.

1.4.2.2 Moisture-Density Determinations

The maximum density and optimum moisture content shall be determined in accordance with ASTM D 1557.

1.4.2.3 Field Density Tests

Density shall be field measured in accordance with ASTM D 2922. For the method presented in ASTM D 2922 the calibration curves shall be checked and adjusted if necessary using only the sand cone method as described in paragraph Calibration, of the ASTM publication. Tests performed in accordance with ASTM D 2922 result in a wet unit weight of soil and when using this method, ASTM D 3017 shall be used to determine the moisture content of the soil. The calibration curves furnished with the moisture gauges shall also be checked along with density calibration checks as described in ASTM D 3017. The calibration checks of both the density and moisture gauges shall be made by the prepared containers of material method, as described in paragraph Calibration of ASTM D 2922, on each different type of material being tested at the beginning of a job and at intervals as directed.

1.4.3 Testing Frequency

1.4.3.1 Initial Tests

One of each of the following tests shall be performed on the proposed material prior to commencing construction to demonstrate that the proposed material meets all specified requirements when furnished. If materials from more than one source are going to be utilized, this testing shall be completed for each source.

a. Sieve Analysis.

1.4.3.2 In Place Tests

Each of the following tests shall be performed on samples taken from the placed and compacted ABC. Samples shall be taken and tested at the rates indicated.

a. Density tests shall be performed on every lift of material placed and at a frequency of one set of tests for every 250 square yards, or portion thereof, of completed area.

b. Sieve Analysis [including No. 635 size material] shall be performed for every 500 tons, or portion thereof, of material placed.

1.4.4 Approval of Material

The source of the material shall be selected prior to the time the material will be required in the work. Tentative approval of material will be based on initial test results. Final approval of the materials will be based on sieve analysis, liquid limit, and plasticity index tests performed on samples taken from the completed and fully compacted ABC.

1.5 WEATHER LIMITATIONS

Construction shall be done when the atmospheric temperature is above 35 degrees F. When the temperature falls below 35 degrees F, the Contractor shall protect all completed areas by approved methods against detrimental effects of freezing. Completed areas damaged by freezing, rainfall, or other weather conditions shall be corrected to meet specified requirements.

1.6 PLANT, EQUIPMENT, AND TOOLS

All plant, equipment, and tools used in the performance of the work will be subject to approval before the work is started and shall be maintained in satisfactory working condition at all times. The equipment shall be adequate and shall have the capability of producing the required compaction, meeting grade controls, thickness control, and smoothness requirements as set forth herein.

PART 2 PRODUCTS

2.1 AGGREGATES

The ABC shall consist of clean, sound, durable particles of crushed stone, crushed slag, crushed gravel, crushed recycled concrete, angular sand, or other approved material. ABC shall be free of lumps of clay, organic matter, and other objectionable materials or coatings. The portion retained on the No. 4 sieve shall be known as coarse aggregate; that portion passing the No. 4 sieve shall be known as fine aggregate.

2.1.1 Coarse Aggregate

Coarse aggregates shall be angular particles of uniform density. When the coarse aggregate is supplied from more than one source, aggregate from each source shall meet the specified requirements and shall be stockpiled separately.

a. Crushed Gravel: Crushed gravel shall be manufactured by crushing gravels, and shall meet all the requirements specified below.

b. Crushed Stone: Crushed stone shall consist of freshly mined quarry rock, and shall meet all the requirements specified below.

c. Crushed Recycled Concrete: Crushed recycled concrete shall

consist of previously hardened portland cement concrete or other concrete containing pozzolanic binder material. The recycled material shall be free of all reinforcing steel, bituminous concrete surfacing, and any other foreign material and shall be crushed and processed to meet the required gradations for coarse aggregate. Crushed recycled concrete shall meet all other applicable requirements specified below.

2.1.1.1 Aggregate Base Course

ABC coarse aggregate shall not show more than 50 percent loss when subjected to the Los Angeles abrasion test in accordance with ASTM C 131. The amount of flat and elongated particles shall not exceed 30 percent. A flat particle is one having a ratio of width to thickness greater than 3; an elongated particle is one having a ratio of length to width greater than 3. In the portion retained on each sieve specified, the crushed aggregates shall contain at least 50 percent by weight of crushed pieces having two or more freshly fractured faces with the area of each face being at least equal to 75 percent of the smallest midsectional area of the piece. When two fractures are contiguous, the angle between planes of the fractures must be at least 30 degrees in order to count as two fractured faces. Crushed gravel shall be manufactured from gravel particles 50 percent of which, by weight, are retained on the maximum size sieve listed in TABLE 1.

2.1.2 Fine Aggregate

Fine aggregates shall be angular particles of uniform density. When the fine aggregate is supplied from more than one source, aggregate from each source shall meet the specified requirements.

2.1.2.1 Aggregate Base Course

ABC fine aggregate shall consist of screenings, angular sand, crushed recycled concrete fines, or other finely divided mineral matter processed or naturally combined with the coarse aggregate.

2.1.3 Gradation Requirements

The specified gradation requirements shall apply to the completed base course. The aggregates shall have a maximum size of 2 inches and shall be continuously well graded within the limits specified in TABLE 1. Sieves shall conform to ASTM E 11.

TABLE I. GRADATION OF AGGREGATES

Percentage by Weight Passing Square-Mesh Sieve

Sieve Designation	No. 1	No. 2	No. 3
2 inch	100	----	----
1-1/2 inch	70-100	100	----
1 inch	45-80	60-100	100

TABLE I. GRADATION OF AGGREGATES

Percentage by Weight Passing Square-Mesh Sieve

Sieve Designation	No. 1	No. 2	No. 3
1/2 inch	30-60	30-65	40-70
No. 4	20-50	20-50	20-50
No. 10	15-40	15-40	15-40
No. 40	5-25	5-25	5-25
No. 200	0-8	0-8	0-8

NOTE 1: Particles having diameters less than 0.0008 inch shall not be in excess of 3 percent by weight of the total sample tested.

NOTE 2: The values are based on aggregates of uniform specific gravity. If materials from different sources are used for the coarse and fine aggregates, they shall be tested in accordance with ASTM C 127 and ASTM C 128 to determine their specific gravities. If the specific gravities vary by more than 10 percent, the percentages passing the various sieves shall be corrected as directed by the Contracting Officer.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

When the ABC is constructed in more than one layer, the previously constructed layer shall be cleaned of loose and foreign matter by sweeping with power sweepers or power brooms, except that hand brooms may be used in areas where power cleaning is not practicable. Adequate drainage shall be provided during the entire period of construction to prevent water from collecting or standing on the working area. Line and grade stakes shall be provided as necessary for control. Grade stakes shall be in lines parallel to the centerline of the area under construction and suitably spaced for string lining.

3.2 OPERATION OF AGGREGATE SOURCES

Aggregates shall be obtained from offsite sources.

3.3 STOCKPILING MATERIAL

Prior to stockpiling of material, storage sites shall be cleared and leveled by the Contractor. All materials, including approved material available from excavation and grading, shall be stockpiled in the manner and at the locations designated. Aggregates shall be stockpiled on the cleared and leveled areas designated by the Contracting Officer to prevent segregation. Materials obtained from different sources shall be stockpiled separately.

3.4 PREPARATION OF UNDERLYING COURSE

Prior to constructing the ABC, the underlying course or subgrade shall be cleaned of all foreign substances. At the time of construction of the ABC, the underlying course shall contain no frozen material. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances. The underlying course shall conform to Section 02300 EARTHWORK. Ruts or soft yielding spots in the underlying courses, areas having inadequate compaction, and deviations of the surface from the requirements set forth herein shall be corrected by loosening and removing soft or unsatisfactory material and by adding approved material, reshaping to line and grade, and recompacting to specified density requirements. For cohesionless underlying courses containing sands or gravels, as defined in ASTM D 2487, the surface shall be stabilized prior to placement of the ABC.

3.5 INSTALLATION

3.5.1 Mixing the Materials

The coarse and fine aggregates shall be mixed in a stationary plant, or in a traveling plant or bucket loader on an approved paved working area. The Contractor shall make adjustments in mixing procedures or in equipment as directed to obtain true grades, to minimize segregation or degradation, to obtain the required water content, and to insure a satisfactory ABC meeting all requirements of this specification.

3.5.2 Placing

The mixed material shall be placed on the prepared subgrade or subbase in layers of uniform thickness with an approved spreader. When a compacted layer 6 inches or less in thickness is required, the material shall be placed in a single layer. When a compacted layer in excess of 6 inches is required, the material shall be placed in layers of equal thickness. No layer shall exceed 6 inches or less than 3 inches when compacted. The layers shall be so placed that when compacted they will be true to the grades or levels required with the least possible surface disturbance. Where the ABC is placed in more than one layer, the previously constructed layers shall be cleaned of loose and foreign matter by sweeping with power sweepers, power brooms, or hand brooms, as directed. Such adjustments in placing procedures or equipment shall be made as may be directed to obtain true grades, to minimize segregation and degradation, to adjust the water content, and to insure an acceptable ABC.

3.5.3 Grade Control

The finished and completed ABC shall conform to the lines, grades, and cross sections shown. Underlying material(s) shall be excavated and prepared at sufficient depth for the required ABC thickness so that the finished ABC with the subsequent surface course will meet the designated grades.

3.5.4 Edges of Base Course

The ABC shall be placed so that the completed section will be a minimum of

0.5 feet wider, on all sides, than the next layer that will be placed above it. Additionally, approved fill material shall be placed along the outer edges of ABC in sufficient quantities to compact to the thickness of the course being constructed, or to the thickness of each layer in a multiple layer course, allowing in each operation at least a 2 foot width of this material to be rolled and compacted simultaneously with rolling and compacting of each layer of ABC. If this base course material is to be placed adjacent to another pavement section, then the layers for both of these sections shall be placed and compacted along this edge at the same time.

3.5.5 Compaction

Each layer of the ABC shall be compacted as specified with approved compaction equipment. Water content shall be maintained during the compaction procedure to within plus or minus 2 percent of the optimum water content determined from laboratory tests as specified in paragraph SAMPLING AND TESTING. Rolling shall begin at the outside edge of the surface and proceed to the center, overlapping on successive trips at least one-half the width of the roller. Alternate trips of the roller shall be slightly different lengths. Speed of the roller shall be such that displacement of the aggregate does not occur. In all places not accessible to the rollers, the mixture shall be compacted with hand-operated power tampers. Compaction shall continue until each layer has a degree of compaction that is at least 100 percent of laboratory maximum modified Proctor density through the full depth of the layer. The Contractor shall make such adjustments in compacting or finishing procedures as may be directed to obtain true grades, to minimize segregation and degradation, to reduce or increase water content, and to ensure a satisfactory ABC. Any materials that are found to be unsatisfactory shall be removed and replaced with satisfactory material or reworked, as directed, to meet the requirements of this specification.

3.5.6 Thickness

Compacted thickness of the aggregate course shall be as indicated. No individual layer shall exceed 6 inches nor be less than 3 inches in compacted thickness. The total compacted thickness of the ABC course shall be within 1/2 inch of the thickness indicated. Where the measured thickness is more than 1/2 inch deficient, such areas shall be corrected by scarifying, adding new material of proper gradation, reblading, and recompacting as directed. Where the measured thickness is more than 1/2 inch thicker than indicated, the course shall be considered as conforming to the specified thickness requirements. Average job thickness shall be the average of all thickness measurements taken for the job, but shall be within 1/4 inch of the thickness indicated. The total thickness of the [ABC] [and] [GCA] course shall be measured at intervals in such a manner as to ensure one measurement for each 500 square yards of base course. Measurements shall be made in 3 inch diameter test holes penetrating the base course.

3.5.7 Finishing

The surface of the top layer of ABC shall be finished after final compaction

by cutting any overbuild to grade and rolling with a steel-wheeled roller. Thin layers of material shall not be added to the top layer of base course to meet grade. If the elevation of the top layer of ABC is 1/2 inch or more below grade, then the top layer should be scarified to a depth of at least 3 inches and new material shall be blended in and compacted to bring to grade. Adjustments to rolling and finishing procedures shall be made as directed to minimize segregation and degradation, obtain grades, maintain moisture content, and insure an acceptable base course. Should the surface become rough, corrugated, uneven in texture, or traffic marked prior to completion, the unsatisfactory portion shall be scarified, reworked and recompacted or it shall be replaced as directed.

3.5.8 Smoothness

The surface of the top layer shall show no deviations in excess of 3/8 inch when tested with a 10 foot straightedge. Measurements shall be taken in successive positions parallel to the centerline of the area to be paved. Measurements shall also be taken perpendicular to the centerline at 50 foot intervals. Deviations exceeding this amount shall be corrected by removing material and replacing with new material, or by reworking existing material and compacting it to meet these specifications.

3.6 TRAFFIC

Completed portions of the ABC course may be opened to limited traffic, provided there is no marring or distorting of the surface by the traffic. Heavy equipment shall not be permitted except when necessary to construction, and then the area shall be protected against marring or damage to the completed work.

3.7 MAINTENANCE

The ABC shall be maintained in a satisfactory condition until the full pavement section is completed and accepted. Maintenance shall include immediate repairs to any defects and shall be repeated as often as necessary to keep the area intact. Any ABC that is not paved over prior to the onset of winter, shall be retested to verify that it still complies with the requirements of this specification. Any area of ABC that is damaged shall be reworked or replaced as necessary to comply with this specification.

3.8 DISPOSAL OF UNSATISFACTORY MATERIALS

Any unsuitable materials that must be removed shall be disposed of as directed. No additional payments will be made for materials that must be replaced.

-- End of Section --

SECTION 02831

CHAIN LINK FENCE
04/04

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, equipment, and materials and performing all operations as necessary to furnish and install chain link fencing, complete as specified.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM A 36/A 36M	(2003a) Carbon Structural Steel
ASTM A 123/A 123M	(2002) Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 153/A 153M	(2003) Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A 392	(2003) Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A 780	(2001) Repair of Damaged and Uncoated Areas of Hot-Dipped Galvanized Coatings
ASTM A 824	(2001) Metallic-Coated Steel Marcelled Tension Wire for Use With Chain Link Fence
ASTM F 1043	(2000) Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework
ASTM F 1083	(1997; R 2003) Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F 626	(1996a; R 2003) Fence Fittings
ASTM F 900	(2003) Industrial and Commercial Swing Gates

1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Chain Link Fence; GA

Statement, signed by an official authorized to certify on behalf of the manufacturer, attesting that the chain link fence and component materials meet the specified requirements.

PART 2 PRODUCTS

2.1 FENCE FABRIC

Fence fabric shall conform to the following:

2.1.1 Chain Link Fence Fabric

ASTM A 392, Class 1 , zinc-coated steel wire with minimum coating weight of 1.2 ounces of zinc per square foot of coated surface. Fabric shall be fabricated of 9 gauge wire woven in 2 inch mesh. Fabric height shall be as shown. Fabric shall be twisted and barbed on the top selvage and knuckled on the bottom selvage.

2.2 POSTS

2.2.1 Metal Posts for Chain Link Fence

ASTM F 1083, zinc-coated. Group IA, with external coating Type A steel pipe or Group IC steel pipe, zinc-coated with external coating Type A. Sizes shall be as shown on the drawings. Line posts and terminal (corner, gate, and pull) posts selected shall be of the same designation throughout the fence. Gate post shall be for the gate type specified subject to the limitation specified in ASTM F 900.

2.2.2 Post Base Plates

ASTM A 36/A 36M, zinc-coated, Group IA steel plate. Coatings shall conform to ASTM A 123/A 123M.

2.3 BRACES AND RAILS

ASTM F 1083, zinc-coated, Group IA, steel pipe, size NPS 1-1/4. Group IC steel pipe, zinc-coated, shall meet the strength and coating requirements of ASTM F 1043.

2.4 WIRE

2.4.1 Tension Wire

Tension wire shall be Type I or Type II, Class 2 coating, in accordance with ASTM A 824.

2.5 ACCESSORIES

ASTM F 626. Ferrous accessories shall be zinc or aluminum coated. Truss rods shall be furnished for each terminal post. Truss rods shall be provided with turnbuckles or other equivalent provisions for adjustment. Tie wire for attaching fabric to rails, braces, and posts shall be 9 gauge steel wire and match the coating of the fence fabric. Miscellaneous hardware coatings shall conform to ASTM A 153/A 153M unless modified.

2.6 ANCHOR BOLTS

Anchor bolts shall be stainless steel adhesive anchors meeting the size and pullout requirements noted on the drawings.

PART 3 EXECUTION

3.1 INSTALLATION

Fence shall be installed to the lines and grades indicated. The area on either side of the fence line shall be cleared to the extent indicated. Line posts shall be spaced equidistant at intervals not exceeding 10 feet. Terminal (corner, gate, and pull) posts shall be set at abrupt changes in vertical and horizontal alignment. Fabric shall be continuous between terminal posts; however, runs between terminal posts shall not exceed 500 feet. Any damage to galvanized surfaces, including welding, shall be repaired with paint containing zinc dust in accordance with ASTM A 780.

3.2 POSTS

Posts shall be set plumb and in alignment. Posts shall be attached to the concrete sheet pile cap by base plate and anchor bolts as shown on the drawings. Non-shrink grout shall be used for leveling. Non-shrink grout shall be allowed to cure for 72 hours prior to attachment of any item to the posts. Fence post rigidity shall be tested by applying a 50 pound force on the post, perpendicular to the fabric, at 5 feet above ground. Post movement measured at the point where the force is applied shall be less than or equal to 3/4 inch from the relaxed position. Every tenth post shall be tested for rigidity. When a post fails this test, further tests on the next four posts on either side of the failed post shall be made. All failed posts shall be removed, replaced, and retested at the Contractor's expense.

3.3 TENSION WIRES

Tension wires shall be installed along the top and bottom of the fence line and attached to the terminal posts of each stretch of the fence. Top tension wires shall be installed within the top 4 inches of the installed

fabric. Bottom tension wire shall be installed within the bottom 4 inches of the installed fabric. Tension wire shall be pulled taut and shall be free of sag.

3.4 CHAIN LINK FABRIC

Chain link fabric shall be installed on the side of the post indicated. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 15 inch intervals. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Fabric shall be fastened to line posts at approximately 15 inch intervals and fastened to all rails and tension wires at approximately 24 inch intervals. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined. The bottom of the installed fabric shall be [2] [1] plus or minus 1/2 inch above the ground. After the fabric installation is complete, the fabric shall be exercised by applying a 50 pound push-pull force at the center of the fabric between posts. The use of a 30 pound pull at the center of the panel shall cause fabric deflection of not more than 2-1/2 inches when pulling fabric from the post side of the fence. Every second fence panel shall meet this requirement. All failed panels shall be resecured and retested at the Contractor's expense.

-- End of Section --

SECTION 02920

SEEDING, SODDING, AND TOPSOIL
10/98

PART 1 GENERAL

Wherever possible, all seed shall be drilled. Other seeding methods are subject to approval. Existing turf areas which have been damaged during the contract operations, and which are outside of the limits designated to be seeded, shall be restored following the requirements in this section, at no additional cost to the Government.

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.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (ND/DOT)

ND/DOT Standard	Standard Specifications for Road and Bridge Construction

AGRICULTURAL MARKETING SERVICE (AMS)

AMS-01	(Aug 95) Federal Seed Act Regulations Part 201

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 5268	(1992; R 1996) Topsoil Used for Landscaping Purposes

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

Manufacturer's Literature;

The Contractor shall submit manufacturer's literature discussing

physical characteristics, applications, guarantees, and installation of the seed, mulch, and fertilizer. The Contractor shall submit manufacturer's literature for equipment showing application and installation instructions.

SD-06 Test Reports

Seed Test;

The Contractor shall submit test reports for a purity and germination test following the Association of Official Seed Analysts (AOSA) rules for each seed mixture. The test reports shall indicate the purity percentage and germination percentage for each species.

Quantity Check;

Bag count or bulk weight measurements of material used compared with area covered to determine the application rate and quantity installed.

Maintenance Record;

Maintenance work performed, area repaired or reinstalled, diagnosis for unsatisfactory stand of grass plants.

Water Test

Water from sources other than municipal water supply shall be tested for salinity and pH.

SD-07 Certificates

Certificates of Compliance;

Prior to the delivery of materials, certificates of compliance attesting that materials meet the specified requirements. Certified copies of the material certificates shall include the following:

a. Seed. Mixture percentage, percent pure live seed, percent germination, weed seed content, and date tested.
b. Fertilizer. Chemical analysis and composition percent.
c. Mulch: Composition and source.

1.3 SOURCE INSPECTION

The source of delivered topsoil shall be subject to inspection.

1.4 DELIVERY, INSPECTION, STORAGE, AND HANDLING

1.4.1 Inspection

Seed shall be inspected upon arrival at the job site for conformity to

species and quality. Seed materials shall be delivered in manufacturer's original, unopened containers with labels and tags intact and legible. Seed that is wet, moldy, or bears a test date five months or older, shall be rejected. Unacceptable materials shall be removed from the job site.

1.4.2 Storage

Materials shall be stored in areas provided by the Contractor. The storage areas shall be made accessible to the Contracting Officer so that application rates can be verified. Seed, lime, and fertilizer shall be stored in cool, dry locations away from contaminants. Chemical treatment materials shall be stored according to manufacturer's instructions and not with seed.

1.4.3 Handling

Except for bulk deliveries, materials shall not be dropped or dumped from vehicles.

1.4.4 Soil Amendments

Soil amendments shall be delivered to the site in the original, unopened containers bearing the manufacturer's chemical analysis. In lieu of containers, soil amendments may be furnished in bulk. A chemical analysis shall be provided for bulk deliveries.

PART 2 PRODUCTS

2.1 SEED

Substitutions will not be allowed without written request and approval from the Contracting Officer. The mixing of seed may be done by the seed supplier prior to delivery, or on site in the presence of the Contracting Officer. Seed for native grass and forbe species shall be gathered from within 500 miles of the jobsite.

2.1.1 Seed Classification

State-certified seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for mixture percentage, purity, germination, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws.

2.1.2 Permanent Seed Species and Mixtures

Follow seed material guidelines outlined in ND/DOT Standard Specifications for Road and Bridge Construction, Section 708. Permanent seed species and mixtures shall be proportioned by weight as follows:

Mix Designation	Pounds Pure Live Seed Per Acre

2.1.3 Temporary Seed Species

Seed species for winter erosion protection, temporary surface erosion control, or overseeding shall consist of 10 pounds of oats or 1-1/2 bushels of winter wheat per acre.

2.1.4 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture. Innoculent shall consist of the proper bacteria applied in the amount and manner recommended by the manufacturer to all legumes in the seed mix.

2.2 TOPSOIL

Existing topsoil shall be used to the greatest extent possible. If topsoil is brought in from off-site, it shall be as defined in ASTM D 5268. All topsoil shall be free from slag, cinders, stones, lumps of soil, sticks, roots, trash or other material over 1-1/2 inch diameter. Topsoil shall be free from viable plants and plant parts.

2.3 SOIL AMENDMENTS

Soil amendments required under this contract consist of fertilizer. Soil amendments consisting of pH adjuster, organic material and soil conditioners may be added at the Contractors option if approved by the Contracting Officer, or shall be added if directed by the Contracting Officer and will be negotiated in accordance with Contract Clause CHANGES.

2.3.1 Fertilizer

The nutrients ratio shall be 25 percent nitrogen, 5 percent phosphorus, and 10 percent potassium. Fertilizer shall be slow release complete commercial grade, free flowing, and uniform in composition and should include sulfur and iron as well (not less than 1% and not more than 8% added sulfur and iron).

2.4 MULCH

2.4.1 Straw Mulch

Straw mulch materials shall consist of wheat, oat, or rye straw, hay, grass, or other plants approved by the Contracting Officer. Mulch materials shall be native to the region. The mulch material shall be air dry, reasonably light in color, and shall not be musty, moldy, caked, or otherwise of low quality. The mulch shall be seed free or fumigated to prevent introduction of weeds. The use of mulch that contains noxious weeds will not be accepted. Dry mulching material which breaks and does not bend is unacceptable. Mulch shall have a consistency for placing with commercial mulch blowing equipment.

2.4.2 Paper Fiber

Paper fiber mulch shall be recycled news print that is shredded for the purpose of mulching seed.

2.5 WATER

Water shall be the responsibility of the Contractor, unless otherwise noted. Water shall not contain elements toxic to plant life.

PART 3 EXECUTION

3.1 INSTALLING SEED TIME AND CONDITIONS

3.1.1 Notification

The Contractor shall notify the Contracting Officer 24 hours in advance of beginning seeding or any changes in turf establishment operations.

3.1.2 Seeding Time

Seed shall be installed from May to November. No finished construction area shall be left untopsoiled and unseeded during the winter months. When substantially complete areas are not seeded within the specified seeding times for fall planting, a temporary winter cover shall be placed.

3.1.3 Seeding Conditions

Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed alternate times shall be submitted for approval.

3.2 SITE PREPARATION

3.2.1 Spreading Topsoil

3.2.1.1 Stripped Materials

Topsoil obtained from stripping operations shall be kept separate from other unusable excavated materials, brush, litter, objectionable weeds, roots, stones, and other materials that would interfere with planting and maintenance operations. Unusable material shall be removed and properly disposed of.

3.3 SEEDING

Prior to installing seed, any previously prepared surface compacted or damaged shall be reworked to meet the requirements of paragraph SITE PREPARATION. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

3.3.1 Equipment

Gravity feed applicators, which drop seed directly from a hopper onto the prepared soil, shall not be used because of the difficulty in achieving even coverage, unless otherwise approved.

3.3.2 Broadcast Seeding

In areas inaccessible to drill seeding, seed shall be broadcast by hand. Seed shall be uniformly broadcast at the rate specified for the mix. Half the total rate of seed application shall be sown with sower moving in one direction, and the remainder with sower moving at right angles to first sowing. Seed shall be covered a maximum 1/4 inch depth by disk harrow, steel mat drag, cultipacker, or other approved device. Seed shall not be broadcast when wind speed exceeds 5 miles per hour.

3.3.3 Drill Seeding

Seed shall be uniformly drilled to a depth of 1/2 to 3/4 inches at the rate specified for the mix. Equipment shall have drills a maximum 6 inches distance apart. Row markers shall be used with the drill seeder. Seed shall be drilled in two directions, applying approximately half the seed in each direction. The drilling equipment shall be maintained with half full seed boxes during the seeding operations. When slopes exceed 1 vertical on 5 horizontal, baffle plates spaced not more than 6 inches apart shall be installed in the seed box.

3.3.4 Hydroseeding (Optional)

The hydroseeding operation shall apply the seed, mulch, and fertilizer simultaneously. The seed shall be applied at the rate indicated in the Seed Mixture Table. The fertilizer shall be applied at a rate proposed by the Contractor and agreed to by the Contracting Officer. The mulch shall be applied at a rate of about 1 ton per acre. During application, the spray shall be directed to obtain a uniform material distribution as evidenced by a formation of a "blotter-like" cover, with about 5% void area. The mulch shall permit percolation of water to the underlying soil. The seed mixed with water and fertilizer shall be applied within 1 hour after adding to the tank.

3.3.5 Mulching

3.3.5.1 Hay or Straw Mulch

Hay or straw mulch shall be spread uniformly at the rate of 2 tons per acre, except as modified for native grasses. Mulch shall be spread by hand, blower-type mulch spreader, or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of steep slopes, and continued uniformly until the area is covered. The mulch shall not be bunched or clumped. Sunlight shall not be completely excluded from penetrating to the ground surface. All areas installed with seed shall be mulched on the same day as the seeding. Mulch shall be anchored immediately following spreading.

3.3.5.2 Mechanical Anchor

Mechanical anchor shall be a V-type-wheel land packer; a scalloped-disk land packer designed to force mulch into the soil surface; or other suitable equipment.

3.3.5.3 Wood Cellulose Fiber, Paper Fiber, and Recycled Paper

Wood cellulose fiber, paper fiber, or recycled paper shall be applied as part of the hydroseeding operation. The mulch shall be mixed and applied in accordance with the manufacturer's recommendations.

3.3.6 Initial Watering

Watering shall be started immediately after completing the seeding of an area. Water shall be applied to supplement rainfall at a rate sufficient to ensure moist soil conditions to a minimum 3 inch depth. Run-off and puddling shall be prevented. Watering trucks shall not be driven over turf areas, unless otherwise directed.

3.4 RESTORATION AND CLEAN UP

Immediately upon completion of the seeding operation in an area, the area shall be protected against traffic or other use by erecting barricades, providing signage, or as directed. Existing turf areas, pavements, and facilities that have been damaged from the seeding operation shall be restored to original condition at Contractor's expense. Excess and waste material shall be removed from the seeded areas and shall be disposed offsite. Adjacent paved areas shall be cleaned.

3.5 MAINTENANCE

3.5.1 Maintenance Watering

The Contractor shall be responsible for watering after planting to promote adequate growth and development. Water shall be distributed with equipment that does not erode or disturb the mulch. If the grass wilts, or if the soil becomes crusted and desiccated during germination, the Contracting Officer may direct watering. Watering directed by the Contracting Officer shall be performed within 48 hours after notice by the Contracting Officer to the Contractor; and shall place about 10,000 gallons per acre.

3.5.2 General Maintenance

Maintenance of the seeded areas shall include eradicating weeds, protecting embankments and ditches from surface erosion, maintaining erosion control materials and mulch, protecting installed areas from traffic, mowing, watering, and post-fertilization. If any portion of the surface becomes rilled, gullied, damaged, or destroyed, that portion shall be repaired to re-establish the area without additional cost to the government. The Contractor shall control erosion during the maintenance period by using ditch checks, sod swales, silt fences or other methods until a proper stand of turf is established.

3.5.2.1 Repair or Reinstall

Unsatisfactory stand of grass plants and mulch shall be repaired or reinstalled, and eroded areas shall be properly filled. Mulch material that has been removed by wind or other causes shall be replaced and secured. Maintenance shall include protecting embankments and ditches from erosion and maintaining erosion control material.

3.5.3 Maintenance Record

A record of each site visit shall be furnished, describing the maintenance work performed; areas repaired or reinstalled; and diagnosis for unsatisfactory stand of grass plants.

3.6 ACCEPTANCE

Turf establishment after seeding shall extend for 12 months after completion of the seeding on the entire project, unless desired growth is established, and shortening the period of the Contractor's responsibility for acceptably established areas is authorized by the Contracting Officer. Grass plants shall be evaluated for species and health when the grass plants are a minimum 1 inch high.

a. Native Grasses. A proper stand of turf from the seeding of native grasses is defined as a minimum of 2 to 4 plants per square foot and where no gaps larger than 6 inches in diameter occur anywhere in the turfed area. Only plants specified in the seed mix table will be considered.

3.7 SURFACE EROSION CONTROL

Where indicated or as directed, surface erosion control material shall be installed in accordance with manufacturer's instructions. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade. When directed during contract delays affecting the seeding operation or when a quick cover is required to prevent surface erosion, the areas designated shall be seeded with a temporary seed crop.

-- End of Section --

SECTION 03100

CONCRETE FORMWORK
02/04

PART 1 GENERAL

1.1 SCOPE

This section covers the materials, techniques, and workmanship requirements for concrete formwork utilized in placing new concrete.

1.2 RELATED WORK OF OTHER SECTIONS

The following items of related work are covered under other sections:

a. Concrete: SECTION: CONCRETE.

1.3 REFERENCES

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

ACI INTERNATIONAL (ACI)

ACI 347	(2001) Guide to Formwork for Concrete
ACI SP 4	Formwork for Concrete

1.4 SUBMITTALS

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

SD-03 Product Data

Design Calculations and Fabrication Drawings

The design and engineering of the formwork, as well as its construction, shall be the responsibility of the Contractor. The formwork shall be designed for loads, lateral pressure and allowable stresses in accordance with Chapter I of ACI 347. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete and shall have sufficient rigidity to maintain specified tolerances. Forms shall be designed in accordance with ACI SP 4, and detailed drawings. The Contractor shall submit the design calculations and shop drawings for the fabrication of the formwork.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 GENERAL

Forms shall be mortar tight and shall be structurally adequate, properly aligned, and adequately supported to produce concrete surfaces meeting the surface requirements of PARAGRAPH: SURFACE FINISH REQUIREMENTS below and conforming to the positions shown on the drawings within the tolerances specified below in PARAGRAPH: CONSTRUCTION TOLERANCES. That portion of the form in contact with the concrete shall not be of a material which interferes with the setting of the concrete. Where forms for continuous surfaces are placed in successive units, care shall be taken to fit the forms over the completed surface so as to obtain accurate alignment of the surface and to prevent leakage of mortar. The type, shape, size, quality, and strength of all materials of which the forms are made shall be submitted for review in the design calculations and shop drawings for fabrication of the formwork. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, metal will be not less than 2 inches from any concrete surface. Wire ties will not be permitted where the concrete surface will be exposed to weathering and where discoloration will be objectionable, and flat ties shall not be used. Forms shall be so constructed that they can be removed without damaging the concrete. Exposed joints, edges and external corners shall be chamfered and dummy chamfers and false joints shall be used to provide a neat and uniform appearance, unless otherwise directed or shown. Chamfered joints shall not be permitted where earth or rockfill is placed in contact with concrete surfaces. Chamfered joints shall be terminated a sufficient distance outside the limits of the earth or rockfill so that the ends of the joints will be clearly visible. Form openings in pipes, pipe sleeves, embedment hooks, vents, and other mechanical and electric needs shall be located and sized as shown on the contract and approved shop Drawings, and prevented from leakage of mortar.

3.2 SURFACE FINISH REQUIREMENTS

Allowable irregularities are designated "abrupt" and "gradual" for purposes of providing tolerances. Offsets resulting from displaced, misplaced, or mismatched forms, or sheathing, or by loose knots in sheathing, or other similar defects, shall be considered "abrupt" irregularities. Irregularities resulting from warping, unplaneness, and similar uniform variations from planeness, or true curvature, shall be considered "gradual" irregularities. "Gradual" irregularities will be checked for conformance with the prescribed tolerances by means of 5 foot templates composed of a straightedge for plane surfaces, or a "shaped" template for curved or warped surfaces. In measuring irregularities, the straightedge or template should be held so that it is parallel to the intended line of the surface.

3.2.1 Sheathing

The sheathing shall be one or more of the following materials: tongue and

groove lumber, plywood, concrete form board, laminated wood sheathing, or steel. Where necessary, laminated forms shall be sanded to meet required tolerances in surface irregularities and to obtain the required shape. Abrupt variations shall not exceed zero positive and 1/8 inch negative in the direction of flow for the surfaces exposed to flowing water and 1/8 inch in either direction for all other surfaces. Gradual variations shall not exceed 1/4 inch.

3.3 CONSTRUCTION TOLERANCES

Variations in alignment, grade, dimensions of the structures from the established alignment, grade, and dimensions shown on the drawings shall be within the tolerances specified in the following table.

TABLE I

CONSTRUCTION TOLERANCES FOR REINFORCED CONCRETE CONSTRUCTION

1)	Variation from the level or from the grades indicated on the drawings.	In 10 feet	1/4 inch
2)	Variation in cross sectional dimensions in the thickness of section.	Minus Plus	1/2 inch 1/2 inch

3.4 FORM COATING

3.4.1 Coating

Forms for exposed surfaces shall be coated with form oil or form release agent before the form or reinforcement is placed in final position. The coating shall be a commercial formulation of satisfactory and proven performance that will not bond with, stain or adversely affect concrete surfaces, will not impair subsequent treatment of concrete surfaces depending upon bond or adhesion, impede the wetting of surfaces to be cured with water, or react with the alkali in the cement. The coating shall be used as recommended in the manufacturer's printed or written instructions. Forms for unexposed 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.

3.5 FORM ACCESSORIES

3.5.1 Ties and Mechanical Anchors

Ties and mechanical anchors and other similar form accessories to be partially or wholly embedded in the concrete shall be of a commercially manufactured type. After the ends or end fasteners have been removed, the embedded portion of the tie shall terminate not less than 2 inches from any concrete surface either exposed to view or exposed to water. Form ties shall be constructed so that the ends or end fasteners can be removed

without spalling the concrete.

3.5.2 Explosive Driven Anchors

Explosive driven anchors such as nails and studs shall not be used.

3.6 REMOVAL

All form removal shall be accomplished in a manner which will prevent injury to the concrete and safety of the structure. Forms shall not be removed before the expiration of the minimum time indicated below, except as otherwise directed or specifically authorized by the Contracting Officer. When conditions on the work are such as to justify the requirement, forms will be required to remain in place for a longer period.

3.6.1 Unsupported Concrete

Formwork shall not be removed in less than 24 hours unless authorized by the Contracting Officer. Variation from the time given depends on temperature, lift heights, and type and amount of cementitious material in the concrete.

3.7 QUALITY CONTROL

The Contractor shall establish and maintain quality control for work under this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations. A copy of the records of inspections and tests, as well as the records of corrective action taken, shall be furnished the Government as directed by the Contracting Officer.

-- End of Section --

SECTION 03200

CONCRETE REINFORCEMENT AND ACCESSORIES
02/04

PART 1 GENERAL

1.1 SCOPE

This section covers the furnishing of all equipment, materials, techniques, and labor for providing and placing reinforcement and accessories for concrete reinforcement.

1.2 RELATED WORK OF OTHER SECTIONS

The following items of related work are covered under other sections:

a. Concrete: SECTION: CONCRETE.

1.3 REFERENCES

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

ACI INTERNATIONAL (ACI)

ACI 315	(1999) Details and Detailing of Concrete Reinforcement
ACI 318/318R	(2002) Building Code Requirements for Structural Concrete and Commentary

ASTM INTERNATIONAL (ASTM)

ASTM A 615/A 615M	(2003a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM E 8	Standard Test Method for Tension Testing of Metallic Materials

1.4 SUBMITTALS

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

1.4.1 Shop Drawings

The Contractor shall prepare and submit complete shop drawings to the Contracting Officer for approval in accordance with specified requirements. Shop drawings shall include the following:

a. Reinforcement steel schedules showing quantity, shape and size, dimensions, weight per meter and total weights.

b. Details of reinforcement steel supports including types, sizes, spacing and sequence.

1.4.2 Test Reports

Certified test reports of reinforcement steel showing that the steel complies with the applicable specifications shall be submitted to the Contracting Officer by the Contractor. Reports shall be furnished for each steel shipment and shall be identified with specific lots prior to use of the steel in the work.

1.4.2.1 Chemical Composition of Reinforcement Steel

The Contractor shall provide the Contracting Officer three copies of the ladle analysis of each lot of reinforcement steel. The ladle analysis shall be obtained from the manufacturer and the Contractor shall certify that the steel furnished conforms to the ladle analysis. The ladle analysis shall state the percentage of carbon, phosphorus, manganese and sulfur present in the steel.

1.4.3 Disposition Records

A system of identification which shows the disposition of specific lots of approved test materials in the work shall be established and submitted to the Contracting Officer before completion of the contract.

PART 2 PRODUCTS

2.1 REINFORCEMENT STEEL

Reinforcement steel shall conform to ASTM A 615/A 615M, 60 kips/in^2 grade, deformed billet bars, plain finish, sizes as shown on the drawings.

2.2 ACCESSORIES

2.2.1 Reinforcement Steel Supports

Reinforcement steel supports shall conform to ACI 315. Bar supports for formed surfaces exposed to view or to be painted shall be plastic protected wire or stainless steel.

PART 3 EXECUTION

3.1 INSTALLATION

Reinforcement steel and supports shall be installed or placed as specified and as shown on contract and approved shop drawings. Placement details of reinforcement and accessories not specified or shown on the drawings shall be in accordance with ACI 315 or ACI 318/318R. Reinforcement shall be fabricated to shapes and dimension shown, placed where indicated within

specified tolerances, and adequately supported during concrete placement. At the time of concrete placement, all reinforcement shall be free from loose, flaky rust, scale (except tight mill scale), mud, oil, grease or any other coating that might reduce the bond with the concrete.

3.2 PLACING TOLERANCES

3.2.1 Concrete Cover

The minimum concrete cover of reinforcement steel and accessories shall be as indicated on the drawings. The tolerance is 3/8 inch.

3.3 SPLICING

Splices in reinforcement steel shall be as specified, shown on the drawings or as directed by the Contracting Officer. Reinforcement steel may be spliced at alternate or additional locations at no additional cost to the Government, subject to the approval of the Contracting Officer. Except as provided herein, all splicing shall be lap splices and shall be in accordance with approved splicing procedures and the requirements of ACI 318/318R.

3.4 MATERIALS TESTS

The Contractor shall have required material tests performed by an approved laboratory to demonstrate that the materials are in conformance with the specifications. Tension tests shall be performed on full cross section specimens in accordance with ASTM E 8, using a gage length that spans the extremities of specimens. Tests shall be at the Contractor's expense.

3.5 INSPECTION AND ACCEPTANCE

Concrete shall not be placed until the reinforcing steel has been directly inspected and accepted by the Government. Formwork which makes the reinforcing inaccessible for inspection shall not be placed until the reinforcing area in question has been inspected and accepted by the government.

3.6 QUALITY CONTROL

The Contractor shall establish and maintain quality control for work under this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations. A copy of the records of inspections and tests, as well as the records of correction action taken, shall be furnished to the Government as directed by the Contracting Office.

-- End of Section --

SECTION 03300

CONCRETE
02/02

PART 1 GENERAL

1.1 SCOPE

The work of this section shall include the furnishing and placement of all cast-in-place concrete, including forms, rebar, waterstops, concrete, admixtures, sealants, and curing materials.

1.2 REFERENCES

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

ACI INTERNATIONAL (ACI)

ACI 306R	(1988) Cold Weather Concreting
ACI 308R	(2001) Guide to Curing Concrete
ACI 309R	(1996) Guide for Consolidation of Concrete
ACI 318M/318RM	(2002) Metric Building Code Requirements for Structural Concrete and Commentary
ACI 347R	(2001) Guide to Formwork for Concrete

ASTM INTERNATIONAL (ASTM)

ASTM D 75	(2003) Sampling Aggregates
ASTM A 615/A 615M	(2003a) Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM C 143/C 143M	(2003) Slump of Hydraulic Cement Concrete
ASTM C 150	(2002ae1) Portland Cement
ASTM C 171	(2003) Sheet Materials for Curing Concrete
ASTM C 172	(1999) Sampling Freshly Mixed Concrete
ASTM C 231	(2003) Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	(2001) Air-Entraining Admixtures for Concrete

ASTM C 309	(2003) Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 33	(2003) Concrete Aggregates
ASTM C 39	(1993a) Compressive Strength of Cylindrical Concrete Specimens
ASTM C 494/C 494M	(1999ae1) Chemical Admixtures for Concrete
ASTM C 618	(2003) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 94/C 94M	(2003a) Ready-Mixed Concrete

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 400	(1963) Requirements for Water for Use in Mixing or Curing Concrete

1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Data

Air Entraining Admixture; FIO.

Accelerating Admixture; FIO.

Water Reducing or Retarding Admixture; FIO.

Curing Materials; FIO.

Reinforcing Steel; FIO.

Expansion Joint Filler Strips, Premolded; FIO.

Joint Sealants - Field Molded Sealants; FIO.

Batching and Mixing Equipment; FIO.

Batching and mixing equipment will be accepted on the basis of manufacturer's data which demonstrates compliance with the applicable specifications.

Conveying, Placing, and Curing Concrete; FIO.

The methods and equipment for transporting, handling, depositing,

consolidating, and curing the concrete shall be submitted prior to the first concrete placement.

SD-06 Reports

Aggregates; FIO.

Aggregates will be accepted on the basis of certificates of compliance and test reports that show the material(s) meets the quality and grading requirements of the specifications under which it is furnished.

Concrete Mixture Proportions; FIO.

Ten days prior to placement of concrete, the contractor shall submit the mixture proportions that will produce concrete of the quality required. Applicable test reports shall be submitted to verify that the concrete mixture proportions selected will produce concrete of the quality specified.

SD-07 Certificates

Cementitious Materials; FIO.

Certificates of compliance attesting that the concrete materials, including non-shrink grout, meet the requirements of the specifications shall be submitted in accordance with the Special Clause "CERTIFICATES OF COMPLIANCE". Cementitious material will be accepted on the basis of a manufacturer's certificate of compliance, accompanied by mill test reports that the material(s) meet the requirements of the specification under which it is furnished.

Aggregates; FIO.

Aggregates will be accepted on the basis of certificates of compliance and tests reports that show the material(s) meet the quality and grading requirements of the specifications under which it is furnished.

Asphalt Waterproofing; FIO

Asphalt waterproofing will be accepted on the basis of certificates of compliance that show the material meets the quality and requirements of the specifications under which it is furnished.

1.4 DESIGN AND PERFORMANCE REQUIREMENTS

The Government will maintain the option to sample and test aggregates and concrete to determine compliance with the specifications. The Contractor shall provide facilities and labor as may be necessary to assist the Government in procurement of representative test samples. Samples of aggregates will be obtained at the point of batching in accordance with

ASTM D 75. Concrete will be sampled in accordance with ASTM C 172. Slump and air content will be determined in accordance with ASTM C 143/C 143M and ASTM C 231/C 231M, respectively, when cylinders are molded. Compression test specimens will be made, cured, and transported in accordance with ASTM C 31. Compression test specimens will be tested in accordance with ASTM C 39. Samples for strength tests will be taken not less than once each shift in which concrete is produced. A minimum of three specimens will be made from each sample; two will be tested at 28 days (90 days if Pozzolan is used) for acceptance, and one will be tested at 7 days for information.

1.4.1 Strength

Acceptance test results will be the average strengths of two specimens tested at 28 days (90 days if Pozzolan is used). The strength of the concrete will be considered satisfactory so long as the average of three consecutive acceptance test results equal or exceed the specified compressive strength, F'c, and no individual acceptance test result falls below F'c by more than 500 psi.

1.4.2 Construction Tolerances

A Class "C" finish shall apply to all surfaces except those specified to receive a Class "D" finish. A Class "D" finish shall apply to all surfaces which will be permanently concealed after construction. The surface requirements for the classes of finish required shall be as specified in ACI 347R.

1.4.3 Concrete Mixture Proportions

Concrete mixture proportions shall be the responsibility of the Contractor. Mixture proportions shall include the dry weights of cementitious material(s); the nominal maximum size of the coarse aggregate; the specific gravities, absorptions, and saturated surface dry weights of fine and coarse aggregates; the quantities, types, and names of admixtures; and quantity of water per cubic yard of concrete. All materials included in the mixture proportions shall be of the same type and from the same source as will be used on the project. Specified compressive strength F'c shall be 4,500 psi at 28 days (90 days if pozzolan is used). The maximum nominal size coarse aggregate shall be 1 1/2 inches, except 3/4 inch maximum nominal size coarse aggregate shall be used when any of the following conditions exist: the narrowest dimension between sides of forms is less than 7-1/2 inches, the depth of the slab is less than 4-1/2 inches, or the minimum cover or clear spacing between reinforcing is less than 2 inches. The air content shall be between 4.5 and 7.5 percent. The slump measured at the chute of the truck and before adding plasticizers shall be between 2 and 4 inches. The maximum water cement ratio shall be 0.45.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Cementitious Materials

Cement shall be Portland cement and shall conform to appropriate specifications listed:

2.1.1.1 Portland Cement

ASTM C 150, Type I or Type II

2.1.1.2 Pozzolan

Pozzolan shall conform to ASTM C 618, Class C of F, including requirements of Tables 1A and 2A.

2.1.2 Aggregates

Aggregates shall meet the quality and grading requirements of ASTM C 33 Class Designations 4S or better.

2.1.3 Admixtures

Admixtures to be used, when required or approved, shall comply with the appropriate specification listed. Chemical admixtures that have been in storage at the project site for longer than 6 months or that have been subjected to freezing shall be retested at the expense of the contractor at the request of the Contracting Officer and shall be rejected if test results are not satisfactory.

2.1.3.1 Air Entraining Admixture

ASTM C 260

2.1.3.2 Water Reducing or Retarding Admixture

ASTM C 494/C 494M, Type A, B, or D. High range water reducing admixture Type F or G may be used only when approved, approval being contingent upon particular placement requirements as described in the Contractor's Quality Control Plan.

2.1.4 Water

Water for mixing and curing shall be fresh, clean, potable, and free from injurious amounts of oil, acid, salt, or alkali, except that unpotable water may be used if it meets the requirements of COE CRD-C 400.

2.1.5 Reinforcing Steel

Reinforcing steel bar shall conform to the requirements of ASTM A 615/A 615M, Grade 60. Details of reinforcement not shown shall be in accordance with ACI 318M/318RM, Chapters 7 and 12.

2.1.6 Formwork

The design and engineering of the formwork as well as its construction, shall be the responsibility of the Contractor.

2.1.7 Form Coatings

Forms for exposed surfaces shall be coated with a nonstaining form oil, which shall be applied shortly before concrete is placed.

2.1.8 Curing Materials

2.1.8.1 Impervious Sheet Materials

Impervious sheet materials, ASTM C 171, type optional, except polyethylene film, if used, shall be white opaque.

2.1.8.2 Membrane Forming Curing Compound

ASTM C 309, Type 1 D or 2, Class [A].

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 General

Construction joints shall be prepared to expose coarse aggregate, and the surface shall be clean, damp, and free of laitance. Ramps and walkways, as necessary, shall be constructed to allow safe and expeditious access for concrete and workmen. Snow, ice, standing or flowing water, loose particles, debris, and foreign matter shall have been removed. Earth foundations shall be satisfactorily compacted. Spare vibrators shall be available. The entire preparation shall be accepted by the Government prior to placing.

3.1.2 Embedded Items

Reinforcement shall be secured in place; joints, anchors, and other embedded items shall have been positioned. Internal ties shall be arranged so that when the forms are removed all metal will be not less than 2 inches from concrete surfaces permanently exposed to view or exposed to water on the finished structures. Embedded items shall be free of oil and other foreign matters such as loose coatings or rust, paint, and scale. The embedding of wood in concrete will be permitted only when specifically authorized or directed. All equipment needed to place, consolidate, protect, and cure the concrete shall be at the placement site and in good operating condition.

3.1.3 Formwork Installation

Forms shall be properly aligned, adequately supported, and mortar tight. The form surfaces shall be smooth and free from irregularities, dents,

sags, or holes when used for permanently exposed faces. All exposed joints and edges shall be chamfered, unless otherwise indicated.

3.1.4 Production of Concrete

3.1.4.1 Ready Mixed Concrete

Ready mixed concrete shall conform to ASTM C 94/C 94M except as otherwise specified.

3.2 CONVEYING AND PLACING CONCRETE

3.2.1 General

Concrete placement shall not be permitted when weather conditions prevent proper placement and consolidation without approval. When concrete is mixed and/or transported by a truck mixer, the concrete shall be delivered to the site of the work and discharge shall be completed within 1 1/2 hours. Concrete shall be conveyed from the mixer to the forms as rapidly as practicable by methods which prevent segregation or loss of ingredients. Concrete shall be in place and consolidated within 15 minutes after discharge from the mixer. Concrete shall be deposited as close as possible to its final position in the forms and be so regulated that it may be effectively consolidated in horizontal layers 18 inches or less in thickness with a minimum of lateral movement. In so depositing there shall be no vertical drop greater than 5 feet except where suitable equipment is provided to prevent segregation and where specially authorized. The placement shall be carried on at such a rate that the formation of cold joints will be prevented.

3.2.2 Consolidation

Concrete shall be consolidated in accordance with ACI 309R. Each layer of concrete shall be consolidated by internal vibrating equipment. Internal vibration shall be systematically accomplished by inserting the vibrator through the fresh concrete in the layer below at a uniform spacing over the entire area of placement. The distance between insertions shall be approximately 1.5 times the radius of action of the vibrator and overlay the adjacent, just vibrated area by approximately a few inches. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the layer below, if such a layer exists. It shall be held stationary until the concrete is consolidated and then withdrawn slowly at the rate of about 3 inches per second. Vibrator shall not be used to transport concrete within the forms. No more than 4 cubic yards of concrete may be deposited prior to consolidation.

3.2.3 Cold Weather Requirements

No concrete placement shall be made when the ambient temperature is below 2 degrees C(35 degrees F) or if the ambient temperature is below 5 degrees C(40 degrees F) and falling. Mixing and placing temperature of the concrete shall be in accordance with ACI 306R Table 1.4.1. Suitable covering and other means as approved shall be provided for maintaining the concrete at a temperature of at least 10 degrees C(50 degrees F) for not

less than 72 hours after placing and at a temperature above freezing for the remainder of the curing period. Salt, chemicals, or other foreign materials shall not be mixed with the concrete to prevent freezing. Any concrete damaged by freezing shall be removed and replaced at the expense of the contractor.

3.2.4 Hot Weather Requirements

When the rate of evaporation of surface moisture, as determined by use of Figure 1 of ACI 308R, is expected to exceed 0.2 pound per square foot per hour, provisions for windbreaks, shading, fog spraying, or 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.

3.3 FORM REMOVAL

Forms shall not be removed before the expiration of 24 hours after concrete placement except where otherwise specifically authorized. Supporting forms and shoring shall not be removed until the concrete has cured for at least 5 days. When conditions on the work are such as to justify the requirement, forms will be required to remain in place for longer periods.

3.4 FINISHING

3.4.1 General

No finishing or repair will be done when either the concrete or the ambient temperature is below 10 degrees C (50 degrees F).

3.4.2 Finishing Formed Surfaces

All fins and loose materials shall be removed, and surface defects including tie holes shall be filled. All honeycomb areas and other defects shall be repaired. All unsound concrete shall be removed from areas to be repaired. Surface defects greater than 1/2 inch in diameter and holes left by removal of tie rods in all surfaces not to receive additional concrete shall be reamed or chipped and filled with dry pack mortar. The prepared area shall be brush coated with an approved epoxy resin or latex bonding compound or with a neat cement grout after dampening and filled with mortar or concrete. The cement used in mortar or concrete for repairs to all surfaces permanently exposed to view shall be a blend of Portland cement and white cement so that the final color when cured will be the same as adjacent concrete.

3.4.3 Finishing Unformed Surfaces

All unformed surfaces that are not to be covered by additional concrete or backfill shall be float finished to elevations shown, unless otherwise specified. Surfaces to receive additional concrete or backfill shall be brought to the elevations shown and left as a true and regular surface. Exterior surfaces shall be sloped for drainage unless otherwise shown. Joints shall be carefully made with a jointing tool. Unformed surfaces shall be finished to a tolerance of 3/8 inch for a float finish and 5/16

inch for a trowel finish as determined by a 10 foot straightedge placed on surfaces shown on the plans to be level or having a constant slope. Finishing shall not be performed while there is excess moisture or bleeding water on the surface. No water or cement shall be added to the surface during finishing.

3.4.3.1 Float Finish

Surfaces to be float finished shall be screeded and darbied or bullfloated to eliminate the ridges and to fill in the voids left by the screed. In addition, the darby or bullfloat shall fill all surface voids and only slightly embed the coarse aggregate below the surface of the fresh concrete. When the water sheen disappears and the concrete will support a person's weight without deep imprint, floating should be completed. Floating should embed large aggregates just beneath the surface, remove slight imperfections, humps, and voids to produce a plane surface, compact the concrete, and consolidate mortar at the surface.

3.4.3.2 Expansion and Contraction Joints

Expansion and contraction joints shall be made in accordance with the details shown or as otherwise specified.

3.5 CURING AND PROTECTION

Beginning immediately after placement and continuing for at least 7 days, all concrete shall be cured and protected from premature drying, extremes in temperature, rapid temperature change, freezing, mechanical damage, and exposure to rain or flowing water. All materials and equipment needed for adequate curing and protection shall be available and at the site of the placement prior to the start of concrete placement. Preservation of moisture for concrete surfaces not in contact with forms shall be accomplished by the following method:

a. Application of membrane forming curing compound conforming to ASTM C 309, Type 1 D, on surfaces permanently exposed to view and Type 2 on other surfaces shall be accomplished in accordance with manufacturer's instructions.

The preservation of moisture for concrete surfaces placed against wooden forms shall be accomplished by keeping the forms continuously wet for 7 days. If forms are removed prior to end of the required curing period, other curing methods shall be used for the balance of the curing period. During the period of protection removal, the temperature of the air in contact with the concrete shall not be allowed to drop more than 15 degrees C (25 degrees F)within a 24 hour period.

3.6 TESTS AND INSPECTIONS

3.6.1 General

The individuals who sample and test concrete as required in this specification shall have demonstrated a knowledge and ability to perform the necessary test procedures equivalent to the ACI minimum guidelines for

certification of Concrete Field Testing Technicians, Grade I.

3.6.2 Inspection Details and Frequency of Testing

3.6.2.1 Preparations for Placing

Foundation or construction joints, forms, and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor to certify that it is ready to receive concrete.

3.6.2.2 Air Content

Air content shall be checked at least once during each shift that concrete is placed for each class of concrete required. Samples shall be obtained in accordance with ASTM C 172 and tested in accordance with ASTM C 231.

3.6.2.3 Slump

Slump shall be checked once during each shift that concrete is produced. Samples shall be obtained in accordance with ASTM C 172 and tested in accordance with ASTM C 143/C 143M.

3.6.2.4 Consolidation and Protection

The Contractor shall ensure that the concrete is properly consolidated, finished, protected, and cured.

3.6.3 Action Required

3.6.3.1 Placing

The placing foreman shall not permit placing to begin until he has verified that an adequate number of acceptable vibrators, which are in working order and have competent operators, are available. Placing shall not be continued if any pile is inadequately consolidated.

3.6.3.2 Air Content

Whenever a test result is outside the specification limits, the concrete shall not be delivered to the forms and an adjustment shall be made to the dosage of the air entrainment admixture.

3.6.3.3 Slump

Whenever a test result is outside the specification limits, the concrete shall not be delivered to the forms and an adjustment should be made in the batch weights of water and fine aggregate. The adjustments are to be made so that the water cement ratio does not exceed that specified in the submitted concrete mixture proportion.

3.6.4 Reports

The results of all tests and inspections conducted at the project site shall be reported informally at the end of each shift and in writing weekly

and shall be delivered within 3 days after the end of each weekly reporting period. See SECTION: CONTRACTOR QUALITY CONTROL.

-- End of Section --

SECTION 03301

NON-SHRINK GROUT
02/04

PART 1 GENERAL

1.1 SCOPE

This section covers the material specifications and installation requirements for non-shrink grout.

1.2 RELATED WORK OF OTHER SECTIONS

The following items of related work are covered under other sections:

a. Chain link fence post: SECTION: CHAIN LINK FENCE

1.3 REFERENCES

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

ACI INTERNATIONAL (ACI)

ACI 347R	(2001) Guide to Formwork for Concrete

ASTM INTERNATIONAL (ASTM)

ASTM C 1107	(2002) Packaged Dry, Hydraulic-Cement Grout(Nonshrink)
ASTM C 136	(2001) Sieve Analysis of Fine and Coarse Aggregates
ASTM C 150	(2002ae1) Portland Cement
ASTM C 31/C 31M	(2003a) Making and Curing Concrete Test Specimens in the Field
ASTM C 33	(2003) Concrete Aggregates
ASTM C 39/C 39M	(2003) Compressive Strength of Cylindrical Concrete Specimens

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL

PROCEDURES:

1.4.1 Non-shrink Grout

1.4.1.1 General

Descriptive literature of the grout proposed for use shall be furnished together with a certificate from the manufacturer stating that it is suitable for the application or exposure for which it is being considered.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Non-shrink Grout

Non-shrink grout shall be nonmetallic and be proportioned to provide a minimum 28-day compressive strength of 5,000 pounds per square inch. The grout shall be mixed, placed, and cured in accordance with the cement manufacturer's written specification, or as noted by the Contracting Officer.

2.1.1.1 Prepackaged Non-shrink Grout

Prepackaged non-shrink grout shall conform to ASTM C 1107 Grade C.

2.1.1.2 Non-prepackaged Non-shrink Grout

Non-shrink grout that is not prepackaged shall meet the performance requirements of Paragraph 6 of ASTM C 1107 Grade C and adaptation of the methods in Paragraphs 7 through 13 of ASTM C 1107. Non-shrink grout that is not prepackaged shall consist of fine aggregate, Portland cement, water, and a volume change controlling ingredient. Water content shall be the minimum that will provide a flowable mixture and completely fill the space to be grouted without segregation, bleeding, or reduction of strength.

2.1.2 Cement

Only Portland Type I or Type IA cement conforming to ASTM C 150 shall be used.

2.1.3 Water

Water for mixing shall be free from sewage, oil, acid, alkali, salts, and objectionable quantities of silt, organic matter, and other deleterious substances. Water shall be potable. River water shall not be used.

2.1.4 Fine Aggregate

Fine aggregate shall meet the quality and gradation requirements of ASTM C 33.

PART 3 EXECUTION

3.1 PREPARATION

Clean grout contact surfaces of oil, grease, scale, and other foreign matter. Chip away unsound concrete leaving surface level, but rough.

3.2 FORMWORK

Formwork shall be in accordance with ACI 347R.

3.3 CONSTRUCTION

3.3.1 Mixing and Placing

Non-shrink grout ingredients shall be thoroughly dry mixed before adding water. After adding water, the batch shall be mixed for three minutes. Batches shall be of size to allow continuous placement of freshly mixed grout. Grout not used within 30 minutes after mixing shall be discarded. Surfaces upon which non-shrink grout is to be placed shall be clean, damp and free from frost, snow, ice, standing or flowing water, loose particles, debris and foreign matter. All equipment needed to place the non-shrink grout shall be at the placement site and in good operating condition. The space to receive grout shall be filled solid with the grout. Forms shall be of wood or other equally suitable material for retaining the grout and shall be removed after the grout has set. The placed grout shall be worked to eliminate voids. Temperature of the grout, and of surfaces receiving the grout, shall be maintained at 65 to 85 degrees F until after setting. The exposed grout's surface shall be struck level and finished to match as close as possible to the adjacent undisturbed existing concrete.

3.4 CURING AND PROTECTION

Non-shrink grout shall be cured and protected from premature drying, extremes in temperature, rapid temperature change, freezing, mechanical damage, and exposure to rain and flowing water, beginning immediately after placement and continuing for seven days. All materials and equipment needed for adequate curing and protection shall be available and at the site of the placement prior to start of grout placement. Preservation of moisture for grout surfaces shall be accomplished through the application of impervious sheet material or the application of membrane forming curing compound in accordance with the manufacturer's printed or written instructions.

3.5 QUALITY CONTROL

3.5.1 General

In accordance with the provisions of SECTION: CONTRACTOR QUALITY CONTROL, a quality control system shall be established and maintained that regulates, tests, and inspects all the procedures, equipment, materials, and personnel so that the completed project will comply with the requirements of the project specifications and the following.

3.5.2 Inspection Details and Frequency of Testing

3.5.2.1 Mix Proportions

Mix proportions shall be checked for accuracy at least once for each mix design used.

3.5.2.2 Aggregate Gradation

The Contractor shall perform initial tests and submit to the Contracting Officer at least 30 days prior to commencement of grouting to confirm quality and gradation. Testing shall be in accordance with ASTM C 136. At least one gradation test shall be made for each aggregate size used during each shift that non-shrink grout is produced. Upon approval, test frequency may be decreased by one half when variation among recent readings is minimal.

3.5.2.3 Compression Test Specimens

Samples for strength test for each mix design used shall be taken not less than once each day. Five 2 inch by 4 inch or 3 inch by 6 inch cylinder specimens shall be made from each sample; one shall be tested at 24 hours, one at three days, one at seven days and two shall be tested at 28 days. Compression test specimens shall be made and cured in accordance with ASTM C 31/C 31M, and compression test specimens shall be tested in accordance with ASTM C 39/C 39M.

3.5.3 Records

A copy of the records of inspections, as well as the records of corrective action taken, shall be furnished to the Government as directed.

-- End of Section --