

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES
				J	1 17
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 28-Mar-2003	4. REQUISITION/PURCHASE REQ. NO. W26GLG-3063-7185		5. PROJECT NO.(If applicable)	
6. ISSUED BY CONTRACTING OFFICE (CA/CW) US ARMY ENGR DIST NORFOLK ATTN: CENAO-SS-C 803 FRONT STREET NORFOLK VA 23510-1096	CODE DACA65	7. ADMINISTERED BY (If other than item 6)		CODE	
		See Item 6			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X	9A. AMENDMENT OF SOLICITATION NO. DACA65-03-R-0016
				X	9B. DATED (SEE ITEM 11) 07-Mar-2003
					10A. MOD. OF CONTRACT/ORDER NO.
					10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE		11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS		
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended.					
Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)					
2ND ACCESS ROAD BRIDGE CROSSING, FORT EUSTIS, VIRGINIA					
1. SECTION 00010: The bidding schedule is amended to read as shown on attached.					
2. SECTION 00100:					
a. FAR Clause 52.232-15, PROGRESS PAYMENTS NOT INCLUDED, is hereby deleted in its entirety.					
b. Paragraph E4LC27, REQUIREMENT FOR "PAYMENT & PERFORMANCE BONDS" OR "PAYMENT BONDS ONLY" is clarified as attached.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)		27-Mar-2003	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

The following items are applicable to this modification:

CONTINUATION

3. SECTION 00700:

- a. FAR Clause 52.217-7, OPTIN FOR INCREASED QUANTITY-SEPARATELY PRICED LINE ITEM is amended to read as shown on attached.
- b. FAR Clause 52.232-18, AVAILABILITY OF FUNDS is deleted in its entirety.
- c. FAR Clause 52.232-27, PROMPT PAYMENT OF CONSTRUCTION CONTRACT is added as shown on attached.

4. Plans and specifications are amended as shown.

SECTION 00010 - SOLICITATION CONTRACT FORM

BIDDING SCHEDULE

**SECTION 00010
PRICING PROPOSAL SCHEDULE**

SCHEDULE I - BASE PROPOSAL.

The contractor shall furnish all plant, labor, material, equipment, etc. necessary to perform all work in strict accordance with the terms and conditions set forth in the contract to include all attachments thereto. Total proposal and price breakdown information is shown below:

ITEM NO	ITEM
0001	For the construction of the 2 nd Access Road from Newport News to Fort Eustis, VA.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AA	All construction work for construction of Bridge 4316, to include appurtenances, concrete, steel, sitework, lighting and utilities, temporary trestle, and all associated work, complete, as shown on the drawings and as specified, exclusive of piling items 0001AC thru 0001 AF below.	1.00	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AB	All construction work for construction of Bridge 3650, to include concrete, steel, sitework, lighting and utilities, appurtenances, and all associated work complete, as shown on the drawings and as specified, exclusive of piling items 0001AC thru 0001 AF below.	1.00	Lump Sum		

NET AMT

SUPPLIES/SERVICES
Items 0001AC thru 0001AG - For completion of all work associated with the installation of all bridge pilings.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AC	Prestressed 12-inch square concrete piling, complete, including test piles and all work incidental thereto as shown on the drawings and as specified.	4990	LF		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AD		14,940	LF		
	Prestressed 24-inch square concrete piling, complete, including test piles and all work incidental thereto as shown on the drawings and as specified.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AE		3	EA		
	Pile load test, complete, including all work incidental thereto, as shown on the drawings and as specified.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AF		6	EA		
	Dynamic Pile Testing/Analysis, complete, including all work incidental thereto as shown on the drawings and as specified.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AG		1.00	Lump Sum		
	All construction work for the Roadwork, to include demolition, clearing, relocation of utilities, installation of utilities, new pavement, drains, curbs, gutters, and appurtenances, complete, as shown on the drawings and as specified as base bid. This item is exclusive of work described in schedule II items 0002AC and 0002AD.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AH		1.00	Lump Sum		
	All construction work for construction of the Retaining Walls, to include sitework, foundations, drainage, and concrete, complete as shown on the drawings and as specified.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AI		1.00	Lump Sum		
	All construction work on the Guardhouse, to include sitework, foundations, utilities and building construction, complete, as shown on the drawings and as specified.				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AJ		1.00	Lump Sum		

All construction work associated with the installation of drop arm security gates and swing gates at the entrance, complete, as shown on the drawings and as specified.

NET AMT

BASE BID ITEMS	SCHEDULE I - TOTAL BASE ITEMS	_____
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SCHEDULE II - OPTIONS

ITEM NO.	ITEM
0002	

The contractor shall furnish all plant, labor, material, equipment, etc. Necessary to perform all work in strict accordance with the terms and conditions set forth in the contract to include all attachments thereto. Total proposal and price breakdown information is shown below:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA		1.00	Lump Sum		

All construction work associated with drawings indicated as Option 1, to include the work on Madison Ave, south of Patton Ave, which is within the limits shown on the drawings. The work in this area includes demolition of pavement and utilities, sitework, sidewalks, installation of utilities, site improvements, exterior lighting, signalization, and fencing, complete, as shown on the drawings and as specified.

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB		1.00	Lump Sum		

All construction work associated with drawings indicated as Option 2, to include the work on Madison Ave. and Patton & Lee Avenues, which is within the limits shown on the drawings. The work in this area includes demolition of pavement and utilities, sitework, sidewalks, installation of utilities, site improvements, exterior lighting, signalization, and asphalt pavement, complete, as shown on the drawings and as specified.

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AC		1.00	Lump Sum		

All construction work associated with drawings indicated as Option 3, to include provision of new underground electrical power distribution in duct bank and manhole system, related power distribution equipment and street lighting with underground electrical feed within the limits shown on the drawings. The limits of this area are generally described as the area between Sternberg Avenue and Pershing Avenue. This work is in lieu of provision of new aerial electrical power distribution lines and street lighting in this area and shall be the difference in cost for provision of new underground in lieu of aerial electrical distribution, street lighting and service work.

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AD		1.00	Lump Sum		

All construction work associated with drawings indicated as Option 4, to include provision of new underground communication lines in duct bank and manhole system within the limits shown on the drawings. The limits of this area are generally described as the area between Sternberg Avenue and Pershing Avenue. This work is in lieu of provision of new directly buried communication lines in this area and shall be the difference in cost for provision of new underground communication lines in duct bank and manhole system in lieu of new directly buried communication lines and related work.

NET AMT

	TOTAL SCHEDULE II – OPTION ITEMS (Items 0002AA-AD)	
	TOTAL SCHEDULE I & II ALL BASE & OPTION ITEMS	

SECTION 00700 - CONTRACT CLAUSES

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 120 calendar days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

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

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

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

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

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

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

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

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

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

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

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

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

(i) Name and address of the Contractor.

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

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

(iv) Description of work or services performed.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) Make such payment within--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) The amount to be withheld;

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

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

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

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

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

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

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

(End of clause)

E4LC CONSTR 27 REQUIREMENT FOR "PAYMENT AND PERFORMANCE BONDS" OR "PAYMENT BONDS ONLY"

If the resulting contract is awarded for an amount in excess of \$100,000, the contractor shall be required to provide both payment and performance bonds in accordance with FAR 52.228-15, "Performance and Payment Bonds-- Construction." FAR 52.228-15 applies only to those contracts awarded for an amount in excess of \$100,000.

If the resulting contract is awarded for an amount in excess of \$25,000 but no more than \$100,000, the contractor shall not be required to provide a performance bond. The required payment bond shall be provided in accordance with FAR 52.228-13, "Alternative Payment Protections." FAR 52.228-13 applies only to those contracts awarded for an amount in excess of \$25,000 by no more than \$100,000.

Neither payment nor performance bonds are required for contracts awarded for an amount less than \$25,000.

SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

WAGE DETERMINATION

General Decision Number VA020006

General Decision Number **VA020006**

Superseded General Decision No. VA010006

State: Virginia

Construction Type:
HIGHWAY

County(ies):

GLOUCESTER MATHEWS WILLIAMSBURG*
 HAMPTON* NEWPORT NEWS* YORK
 JAMES CITY POQUOSON*

*INDEPENDENT CITIES

HIGHWAY CONSTRUCTION PROJECTS (Excluding tunnels, building structures in rest area projects and railroad construction; bascule, suspension and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction and other major bridges)

Modification Number Publication Date

0 03/01/2002
 1 11/15/2002

COUNTY(ies):

GLOUCESTER MATHEWS WILLIAMSBURG*
 HAMPTON* NEWPORT NEWS* YORK
 JAMES CITY POQUOSON*

ELEC1340G 12/01/2001

	Rates	Fringes
ELECTRICIANS (Including Traffic Signal Installer/Maintainer)	19.15	2.40+11.25%

* ENGI0147X 05/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS: Oilers/Greasers	12.02	6.43

SUVA3052A 02/10/1999

	Rates	Fringes
ASBESTOS WORKERS	10.10	
CARPENTERS, STRUCTURE	12.07	
CONCRETE FINISHERS	10.74	
DECKHANDS	9.50	
FENCE ERECTORS	13.07	
FLAGGERS	9.43	
FORM SETTERS	9.88	
LABORERS:		
Construction Workers II (Laborers)	7.91	
Construction Workers I (Skilled Laborers)	8.93	
Landscape Worekrs	7.36	
Asphalt Rakers	9.04	
Pipelayers	9.13	
Power Tool Operators	13.75	

PAINTERS, BRIDGE	11.99
POWER EQUIPMENT OPERATORS:	
Asphalt Distributor Operators	8.86
Asphalt Paver Operators	10.11
Backhoe Operators	11.02
Bulldozer Operators	10.45
Bulldozer Operators (Utility)	9.94
Concrete Finish Machine/ Screed Operators (Bridge)	11.00
Concrete Finish Machine Operators, Utility	11.15
Concrete Paving Machine Operators	8.25
Crane, Derrick, Dragline Operators (1 yd. & under)	13.79
Crane, Derrick, Dragline Operators (Over 1 yd.)	16.00
Crusher Tender Operators	10.35
Drill Operators	10.00
Excavator Operators	12.00
Front-End Loader Operators (2 yds. & under)	9.82
Front-End Loader Operators (Over 2 yds.)	10.03
Fuel and Lubricant Service	
Truck Drivers	8.50
Gradall Operators	14.00
Grade Checkers	7.76
Hydro-Seeder Operators	8.00
Log Skidder Operators	15.00
Mechanics	13.04
Mobile Mixer Operators	10.71
Motor Grader Operators (Fine Grade)	12.43
Motor Grader Operators (Rough Grade)	9.98
Pavement Marker Operators	9.28
Pavement Marking Truck Operators	9.55
Pavement Planing Operators	9.25
Pile Driver Leadsman	14.00
Pile Driver Operators	16.00
Pipe Boring/Jacking Machine Operators	8.38
Plant Operators	10.00
Roller Operators (Rough)	9.37
Roller Operators (Finish)	8.50
Scraper Pan Operators	8.50
Shot Blast Machine Operators	9.00
Shovel Operators (2 yds. & under)	12.00
Shovel Operator (Over 2 yds.)	12.13
Slip-Form Paver Operators	8.50
Slurry Seal Paver Machine Operators	9.00
Slurry Seal Paver Truck Drivers	9.00

Stabilizer Operators	7.94
Stone Spreader Operators	9.83
Subgrade Machine Operators	9.12
Tractor Operators (Crawlers)	9.26
Tractor Operators (Utility)	9.43
Transit Mix Truck Drivers	9.75
Trenching Machine Operators	10.88
REINFORCING METAL WORKERS	16.80
TRUCK DRIVERS:	
Heavy Duty	8.40
Multi, Tandem and Single	
Rear Axle	8.43
WATERPROOFERS	8.00
WELDERS	13.70

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 (29 CFR 5.5(a)(1)(ii)).

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

Branch of Construction Wage Determinations

Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 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, D. C. 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, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

Amendment No. 1 – Civil Engineering
Second Access Rd., Ft. Eustis, Va

Drawing Changes:

C-108 Drawing is re-issued. Utility revisions added at new school.

C-109 Drawing is re-issued. Revised per Amendment No. 1

C-119 Signage: On Warwick Blvd. at Sta. 0+10 add a “No U-Turn” sign [R3-4] to be provided in the grassed median to serve the new left turn lanes.

C-128 Drawing is re-issued. Utility revisions added at new school.

C-129 Drawing is re-issued. Revised per Amendment No. 1

C-503 Retaining Wall Details- Retaining Wall Notes, add note 13.

“13. The Contractor may encounter groundwater during excavation for foundations. Pumped groundwater shall be routed to an approved sediment trap, or other approved filtering device prior to discharge.”

C-512 Where the asphalt surface course is shown as SM-9.0D, change designation to SM-12.5D.

C-132 Drainage Structure 6-1. Indicate that the outlet be provided with a minimum of 20 ft. of VDOT EC-1, Erosion Control Stone.

C-112 Add the following note, “Note-Triangular island median shall be a grassed median; VDOT Type MC-1 Curbed Median.

C-101 – C-120 Striping Plans: To augment lane line striping the Contractor shall provide Retroreflectors of the Recessed and Snow Plowable Raised Pavement Marker type per Section 235 of the VDOT RBS. Markers shall be provided in all lane lines and edge lines. Marker spacing shall be as shown on the attached sketches SK-1 and SK-2. Marker selection and layout shall be as approved by the City of Newport News, Dept of Engineering.

Retroreflectors as Panel type Delineators (Reflective Sheeting) shall be provided at nose of guard rail, and as guard rail delineators spaced at 40 ft intervals. Reflective Sheeting shall comply with Section 247 of the RBS.

Second Access Rd, Ft. Eustis, VA
Items to be amended- Civil Engineering
Specification Changes:

Section 01005, Page 2, paragraph 1.4.2: In line two correct “ball” to “bill”.

Section 01005, Page 4, paragraph 1.6.3.1: In line two correct “Maday” to “Monday”.

Section 01320, Page 2, paragraph 3.3 Project Schedule: Add the following sentence, Contractor shall provide the Government a copy of the software program used for scheduling.

Section 01355, Page 9, paragraph 3.2.2: In line four change “Clean Water Act Section 404, Nationwide Permit No. [____].” To read “Clean Water Act, Section 404, Nationwide Permit No.’s 15, 18, and Permit No. 02-V0377-02 (VMRC Permit No. 02-0377).

Section 01356, Page 1, paragraph 1.1 References: add “VESCH, Virginia Erosion and Sediment Control Handbook, 1992.

Section 01500, Project Sign Attachment: add under “US Army Corps of Engineers”, “Newport News, Virginia” in similar typeface. The Contractor shall provide two Project Signs; one on Ft. Eustis, and one in Newport News near the Entrance. Locations shall be approved by the C.O.R.

Section 02241, Page 2, paragraph 1.2, 1.2.1, 1.2.2: Delete these paragraphs and substitute new paragraph, “1.2 Measurement and Payment. All work under this section will not be measured for payment, and shall be paid at the contract item lump sum price.

Section 02512, Page 2, paragraph 2.1.1: Change “Type SM-2C, (Surface Mixture) and BM-1, (Base Mixture)...” to read “Type SM-12.5D (Surface Mixture), IM-19.0D (Intermediate Mixture), and BM-25.0 (Base Mixture)...”

Section 02512, Page 2, paragraph 2.3.1: Change “Type SM-9.0D” to read “Type SM-12.5D”.

Section 02513, Page 1, paragraph 1.1: Add the following reference: “MUTCD, Manual on Uniform Traffic Control Devices, Millennium Edition.

Section 02630a, Page 6, paragraph 2.1: Add the following sentence, “Storm Drains shall be constructed of reinforced concrete pipe. Infiltration Drains shall be PE Pipe as indicated below.”

Section 02921a, Page 4, paragraph 2.1.2,: Delete paragraph and substitute new paragraph 2.1.2. “2.1.2 Permanent Seed Species and Mixtures. Permanent seeding shall comply with the VESCH, site specific seeding mixtures for the Coastal Plain Area (Table 3.32D).

For lawn areas, Kentucky 31, or tall-type fescue, at 200 lbs/acre. For slopes use Mixtures for General Slopes (3 : 1 or less).

Section 02921a, Page 5, paragraph 2.1.3: Delete paragraph and substitute new paragraph 2.1.3. "2.1.3 Temporary Seed. Temporary seed species for surface erosion control or over-seeding shall be in accordance with VESCH, Table 3.31B.

Section 02921a, Page 8, paragraph 3.1.1: Change "from Sep. to Oct." to read "from 15 Sep. to 15 Nov."

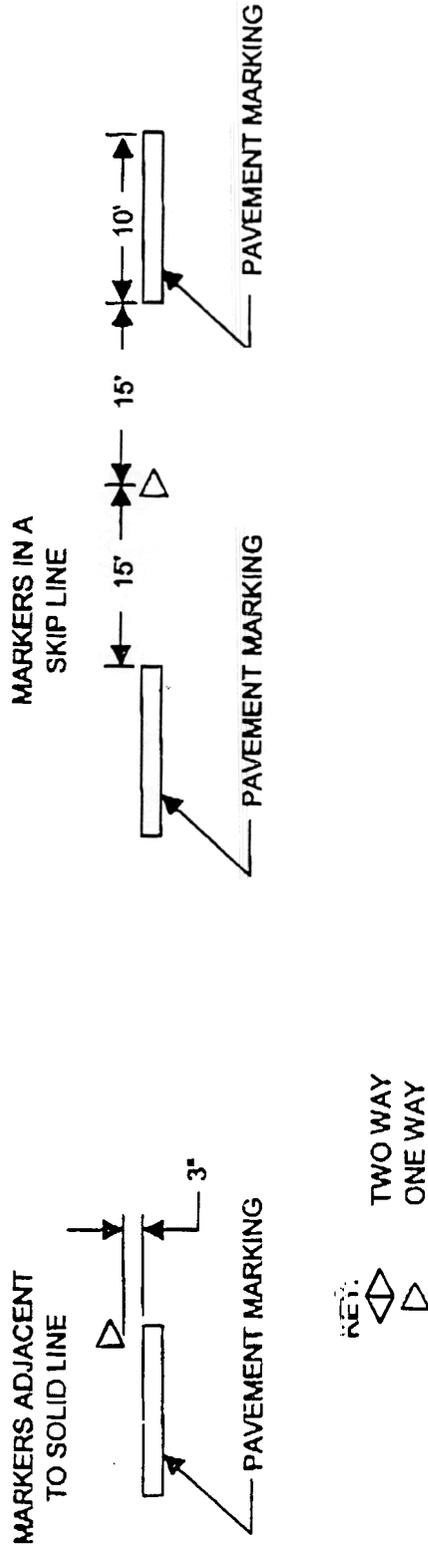
Section 02921a, Page 10, paragraph 3.3.1.1: Where parenthesis is left blank, indicate 5 lbs. Per 1000 sq. ft.

Section 02930a, Page 16, paragraph 3.9.1: Change line 9 from "...Sections 02921 Seeding; 2922." to read, "...Section 02921a Seeding."

Delete Specification Section 02840A, Active Vehicle Barriers, and substitute new Section 02840A issued with this amendment.

Insert Section 03301 Concrete into the Specifications as attached to this amendment.

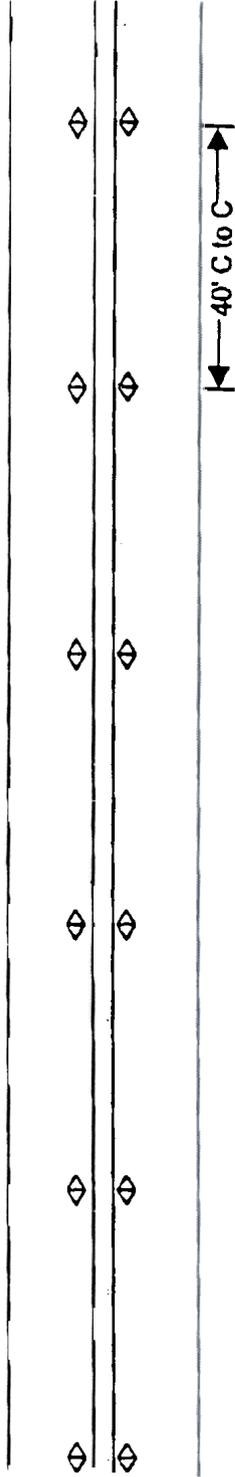
GENERAL PLACEMENT:



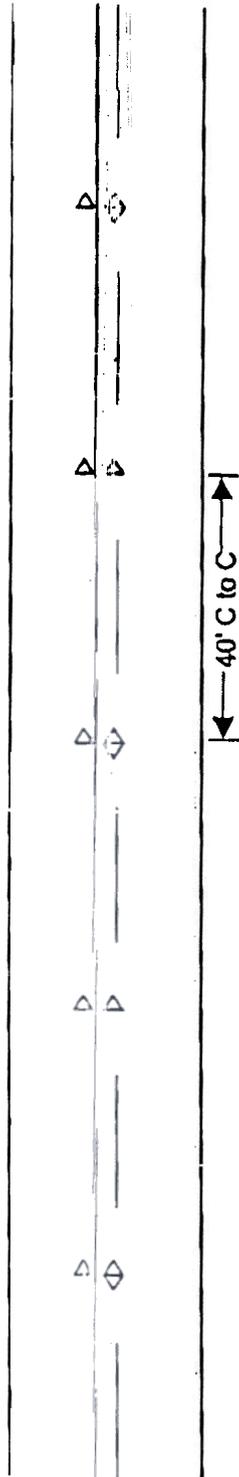
GENERAL NOTES:

1. EXACT LOCATIONS OF THE MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. TYPICAL SPACING IS 40' C-C WHEN USED ADJACENT TO A SOLID LINE AND 80' C-C WHEN USED IN CONJUNCTION WITH A SKIP LINE EXCEPT THAT ON HORIZONTAL CURVES OF 4° OR MORE, THE SPACING ALONG SKIP LINES AND CHANNELIZING LINES ADJACENT TO TURN LANES CAN BE REDUCED BY 1/2 AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

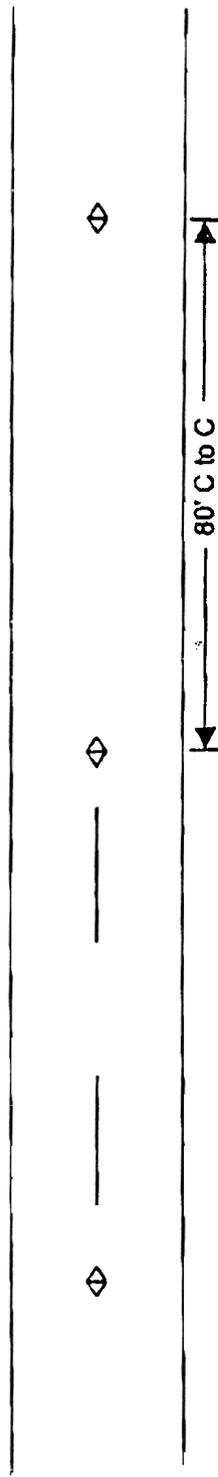
NO PASSING



PASSING ONE DIRECTION



PASSING TWO DIRECTIONS



SK-2

Specifications Revisions:

1. Section 01055, paragraph 1.4.3. Replace the first sentence with the following:

“The Flat Dilatometer Test was performed and the data reduced in accordance with Federal Highway Administration report number FHWA-SA-91-044, “The Flat Dilatometer Test” (1992). Thrust measurements were made with a load cell with an accuracy of +/- 10 kgf.”
2. Section 02230a, paragraph 1.3.1. Replace the first sentence with the following:

“Payment shall be included in the payment of the applicable Item and will be based on completed work performed as shown.”
3. Section 02241, paragraph 1.4. Delete “FIO” following “Equipment”, “Sampling and Testing” and “Density Testing”.
4. Section 02241, paragraph 1.6.3. Add “a minimum pressure of 150 psi. The loading shall be equally distributed to all wheels,” in place of “all wheels” in the first sentence. Also, add “t” to “ires”.
5. Section 02241, paragraph 1.6.4. Add “a uniform loose density so that when compacted, the layer or layers shall” in the third sentence after the words “thickness and to”.
6. Section 02241, paragraph 1.6.7. In the first sentence change “r” to “s” in the word “bituminour [sic]”. Add the sentence “Straightedge shall be made available for Government use” at the end of the paragraph.

Section 02241, paragraph 1.8.1. Add the following before the first sentence, “Sampling and testing shall be the responsibility of the Contractor.”
8. Section 02241, paragraph 1.8.1. In the first sentence change “an” to “a” and delete the words “approved commercial”. At the end of the first sentence add “approved in accordance with Section 01451 Contractor Quality Control.”
9. Section 02241, paragraph 1.8.1. Add the following sentence to the end of the paragraph, “In addition to Contractor reporting of test results required by these specifications, the testing laboratory shall furnish directly to the Resident Contracting Officer, an information copy of each in-place density test and related moisture and calibration results.”
10. Section 02241, paragraph 1.8.4. Replace sentence with “Sieve analysis shall be made in conformance with ASTM C 117 and ASTM C 136. Sieves shall conform to ASTM E 11.”
11. Section 02241, paragraph 1.8.5. Delete first sentence.
12. Section 02241, paragraph 1.8.6. Replace two sentences with “The maximum density and optimum moisture content shall be determined in accordance with ASTM D 1557.”
13. Section 02241, paragraph 2.1.1. In the first sentence add “clean, sound, durable particles of” after the words “shall consist of”. In the second sentence delete “durable”, add “and other” before

“objectionable”, and “materials or” after “objectionable”. In the third sentence insert “Section 208, Type I” after “VDOT RBS”.

14. Section 02241, paragraph 2.1. After the last sentence add “Recycled material will not be accepted.”

15. Section 02241, paragraph 3.2.1. Replace paragraph with:

“Prior to constructing the aggregate base course, the underlying course or subgrade shall be cleaned of all foreign substances. At the time of construction of the aggregate base course, 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 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 in harmful quantities, the surface shall be mechanically stabilized prior to placement of the aggregate base course. Stabilization shall be accomplished by mixing aggregate base course into the underlying course and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements of the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained by the Contractor in a satisfactory condition until the aggregate base course is placed.”

16. Section 02241, paragraph 3.2.3. Delete paragraph 3.2.3.

17. Section 02241, paragraph 3.3.1. Change title to “Mixing the Materials”. In the last sentence after “base course” add “meeting all requirements of this specification”.

18. Section 02241, paragraph 3.3.3. Replace this section with:

“Each layer of the aggregate base course shall be compacted as specified with approved compaction equipment. Water content shall be maintained during the compaction procedure to the percentage necessary to obtain the specified degree of compaction. 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 of sufficient size to obtain the specified compaction. Compaction shall continue until each layer has a degree of compaction that is at least 100 percent of laboratory maximum 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 aggregate base course. 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. Construction of overlying materials shall not proceed until test results are approved.”

19. Section 02241, paragraph 3.3.4. Delete this paragraph.

20. Section 02241, paragraph 3.3.5. Rename title of the paragraph to “Placing” and replace the paragraph with:

“The approved 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 be 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 aggregate base course 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 aggregate base course.”

21. Section 02241, paragraph 3.3.6. Replace this section with:

“The surface of the top layer of aggregate base course 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 aggregate base course is 1/2 inch or more below grade, then the top layer shall be scarified to a depth of at least 3 inches and new material shall be blended in and compacted to bring to grade. Alternatively, the thickness of the overlying material layer may be increased by an equal dimension, at the approval of the Contracting Officer. 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 recompactd or it shall be replaced as directed.”

22. Section 02241, paragraph 3.3.6. Replace this section with:

“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, or by increasing the thickness of the overlying material layer as approved by the Contracting Officer.”

23. Section 02241, paragraph 3.3.6.2. Replace this section with:

“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 aggregate base 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, except that reduction of overlying materials thicknesses shall not be allowed as a result. 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 aggregate base 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.”

24. Section 02241, paragraph 3.3.7. Delete this section.

25. Section 02241, paragraph 3.4.2. Delete this section.

26. Section 02241. Add the following paragraphs to Section 3.4

3.4.5 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
- b. Liquid limit and plasticity index
- c. Moisture-density relationship.

3.4.6. In Place Tests. Each of the following tests shall be performed on samples taken from the placed and compacted aggregate base course. 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 shall be performed for every 500 tons, or portion thereof, of material placed.
- c. Liquid limit and plasticity index tests shall be performed at the same frequency as the sieve analysis.

3.4.7. Approval of Material. The source of the material shall be selected 14 days 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 aggregate base course.

27. Section 02241, paragraph 3.4.3. Delete this section.
28. Section 02241, paragraph 3.6. Add the following sentence to the end of the paragraph. "Any area of the aggregate base course that is damaged shall be reworked or replaced as necessary to comply with this specification."
29. Section 02300a, paragraph 1.2. Replace the first sentence with the following:

"Earthwork will not be measured for payment. Payment shall be included in the payment of the applicable Item and will be based on completed work performed as shown."
30. Section 02300a, paragraph 1.3.1. Delete the last sentence and replace with the following:

"Satisfactory Materials shall be free from: roots and other organic matter; contamination from hazardous, toxic or radiological substances; trash, debris; and frozen materials. Satisfactory materials shall be comprised of stones less than 3 inches in any dimension."
31. Section 02300a, paragraph 1.3.3. Add the following sentence at the end of the paragraph.

"Cohesionless Backfill material for use behind the Concrete Retaining Wall shall include only GW, GP, SW, and SP, as defined above."
32. Section 02300a, paragraph 1.4. Change submittal designation for SD-06 Test Reports, Testing and SD-07 Certificates, Testing to "G".
33. Section 02300a, paragraph 3.14. At the end of sentence 7 add "at no additional cost to the government".
34. Section 02316a, paragraph 1.4. Change submittal designation for SD-06 Test Reports, Field Density Tests and Testing of Backfill Materials to "G".

35. Section 02316a, paragraph 3.1.2. In the third sentence, after “rubber-tired equipment” add a period “.”, and capitalize “e” in excavated.
36. Section 02316a, paragraph 3.6.4. In the first sentence, after “compacted to” insert “2 feet above the top of the pipe”.
37. Section 02374a, paragraph 1.3. Change submittal designation for SD-06 Test Reports, Sampling and Testing and Geosynthetic Drainage Layer to “G”.
38. Section 02378a, paragraph 1.3. Change submittal designation for SD-07 Certificates, Geotextile to “G”.
39. Section 02458R, paragraph 1.3. Change submittal designation to “G” on the following submittals:
 - SD-02 Shop Drawings: Fabrication and Installation and Pile Driving Plan.
 - SD-03 Product Data: Pile Driving Equipment, Dynamic Testing Equipment and Load Testing Equipment.
 - SD-06 Test Reports: Material Test Reports, Concrete Mix Proportions and Tests, Dynamic Test Report and Load Test Report.

Second Access Rd. Amendment 1: Structural Items to be amended

Sht S101. 1. Construction. Add the following: All tests as required by referenced VDOT specifications shall be performed by testing laboratories certified to perform the tests or are regularly engaged in material testing if no certification is specified. All other testing shall be as specified by Corps of Engineers specifications. Testing shall be at the contractors expense.

Sht S101. 1. Construction. Add: The above VDOT Specifications are applicable to the bridge construction and take precedence in case of conflict.

Sht S101. 1. Standards. Revise: Virginia Department of Transportation Road and Bridge Standards 2000 ***To:*** Virginia Department of Transportation Road and Bridge Standards 2001.

Sht S101. 2. Submittals. Add the following: Submittal and review procedures shall be as specified by Corps of Engineers Specifications.

Sht S101. 2. Submittals. Add: The latest edition of the Virginia Department of Transportation Road and Bridge Specification (2002) shall be applicable.

Sht S101. 2. Submittals. Delete: Precast Concrete Piles.

Sht S101. Add note: 5. Measurement and payment shall be as specified in the Pricing Proposal Schedule (Section 00010) in the Corps of Engineers documents.

Sht S101. Add note: 6. Bridges are located in tidal environment.

Sht S103. Slope Fill. Add note: For Rip Rap see Civil Dwgs.

Sht S105. Section At Pier Diaphragm. Revise: #8x20'-0" continuity bars center over pier typ. ***To:*** #7x30'-0" continuity bars center over pier.

Sht S301. Add the following note: 6. Reinforcing for abutments and wingwalls shall be in accordance with ASTM A615 Grade 60 and shall be epoxy coated.

Sht S301. Add the following note: 7. Performed joint filler shall be in accordance with VDOT section 212.02 (c).

Sht S301. Abutment Section and Abutment A&B Plan. Delete: rubberized waterproofing membrane. ***Add note:*** Membrane shall be in accordance with VDOT section 217.

Sht S301. Add note: 8. Reinforcement shown in elevation is symmetrical about centerline.

Sht S301. Abutment Section. Revise note: 5 wraps #4 21" dia **To:** 5 wraps #4 30" dia typ all piles.

Sht S301. Abutment Section. Revise note: #6 cont. **To:** #6 between piles.

Sht S301. Abutment B Elevation- Abutment A Opp Hand. Delete: #4 Front Face.

Sht S301. Abutment B Elevation- Abutment A Opp Hand. Add note: For wingwall reinforcement see sht S304.

Sht S301. Add note: 8. For sleeve thru abutment backwall see sht E506.

Sht S301. Abutment Section. Revise note: #9 cont **To:** #6 cont.

Sht S302. Add note: 6. Reinforcing for abutments and wingwalls shall be in accordance with ASTM A615 Grade 60 and shall be epoxy coated.

Sht S302. Add note: 7. Reinforcement size & spacing shown in elevation are symmetrical about centerline.

Sht S303. Add note: 7. Reinforcement size & spacing shown in elevation are symmetrical about centerline.

Sht S304. Wingwall Elevation Abutment C – (Abutment A&B Sim). Revise: #8 eq spa @ 1'-0" (max) backface **To:** #6 eq spa @ 1'-0" (max) backface

Sht S304. Add attached detail: Abutment sleeve Detail- Abutment C & D

Sht S305. Add note: 8. All vertical pile reinforcing shall extend into cap for all piles. See sht S313.

Sht S305. Add note: 9. Reinforcement shown in elevation is symmetrical about centerline.

Sht S305. Add note: 10. Performed joint filler shall be in accordance with VDOT section 212.02 (c).

Sht S305. Pier Elevation. Delete note and leader: #8

Sht S305. Pier Elevation. Delete note and leader: #5

Sht S306. Add note: 5. Corrugated metal deck forms are not permitted.

Sht S306. Add note: 6. For sleeve thru concrete see sht E506.

Sht S306. Typical Cross Section. Revise: #7 @ 4" top **To:** #7 @ 6" top.

Sht S306. Typical Cross Section. Revise (two locations): #4 @ 8" stagger T & B To: #4 @ 6" stagger T & B.

Sht S306. Typical Cross Section. Revise (two locations): #5 @ 8" top & bott To: #5 @ 6" top & bott.

Sht S307. Add note: 4. Corrugated metal deck forms are not permitted.

Sht S307. Typical Cross Section. Revise: 16" Dia to: 14" Dia.

Sht S307. Fixed Pier Diaphragm. Revise: #8x15' continuity bars. Center bars over Pier typ. To: #7x30' Continuity bars. Half length either side of pier centerline.

Sht S307. Typical Cross Section. Revise: #8 @ 4" oc top fix pier only To: #7 @ 6" oc top fix pier only.

Sht S307. Typical Cross Section. Revise (two locations): #4 @ 8" To: #4 @ 6".

Sht S307. Typical Cross Section. Revise: #4 @ 8" oc bott To: : #4 @ 6" oc bott

Sht S308. Strand Pattern At End. Delete: 6-1/8" interior.

Sht S308. Strand Pattern At End. Delete: 2 Spa @ 2" = 4".

Sht S308,S309. Delete note 3 and add: 3. Mild steel reinforcing for precast girders shall be in accordance with ASTM A615 Grade 60 and shall be epoxy coated.

Sht S310. Plan View Elastomeric Bearing. Revise dimension: 1'-8" to 1'-10".

Sht S310. Delete note: 1. All material for castings excluding grate hold down screws shall be gray iron conforming to ASTM A40 Class 30. Add note: 1. All material for castings excluding grate hold down screws shall be gray iron conforming to ASTM A48 Class 30S.

Sht S312. Delete note 14. Add note: 14. Reinforcing for concrete curb shall be in accordance with ASTM 615 Grade 60 and shall be epoxy coated.

Sht S312. Delete drawing: Post and Deck Slab Details. Add attached drawing: Post and Deck Slab Details.

Sht S313. Delete note: Piles shall be finished in accordance with the requirements of section 404.03(i) concrete exposed to tidal water. Add note: Piles shall be finished in accordance with the requirements of section 404.03(f) concrete exposed to tidal water.

Sht S313.Delete drawing: Section A-A Section Strand Patterns For Piles With S.R. Strands.

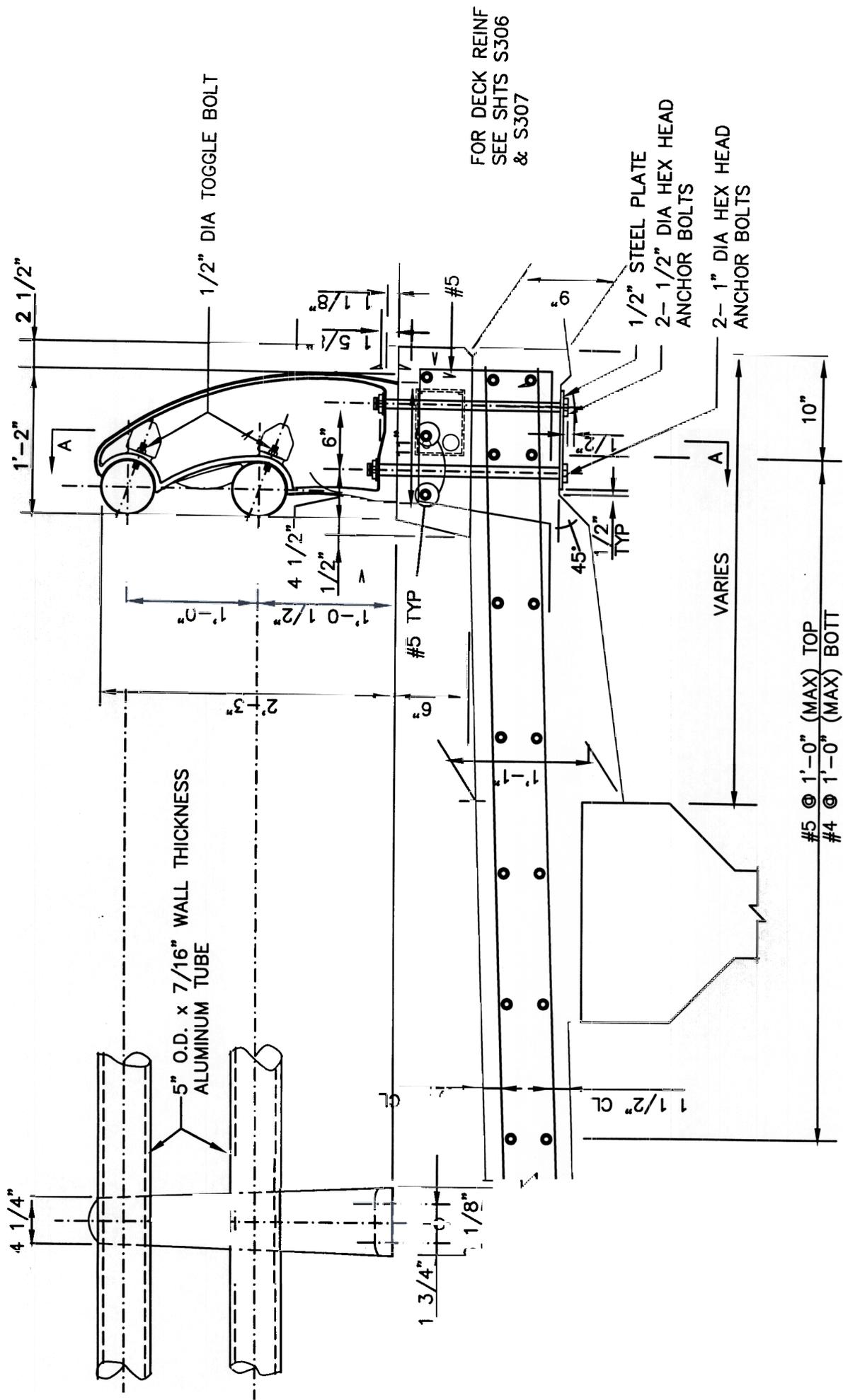
Add attached drawing: Section A-A Section Strand Patterns For Piles With S.R. Strands.

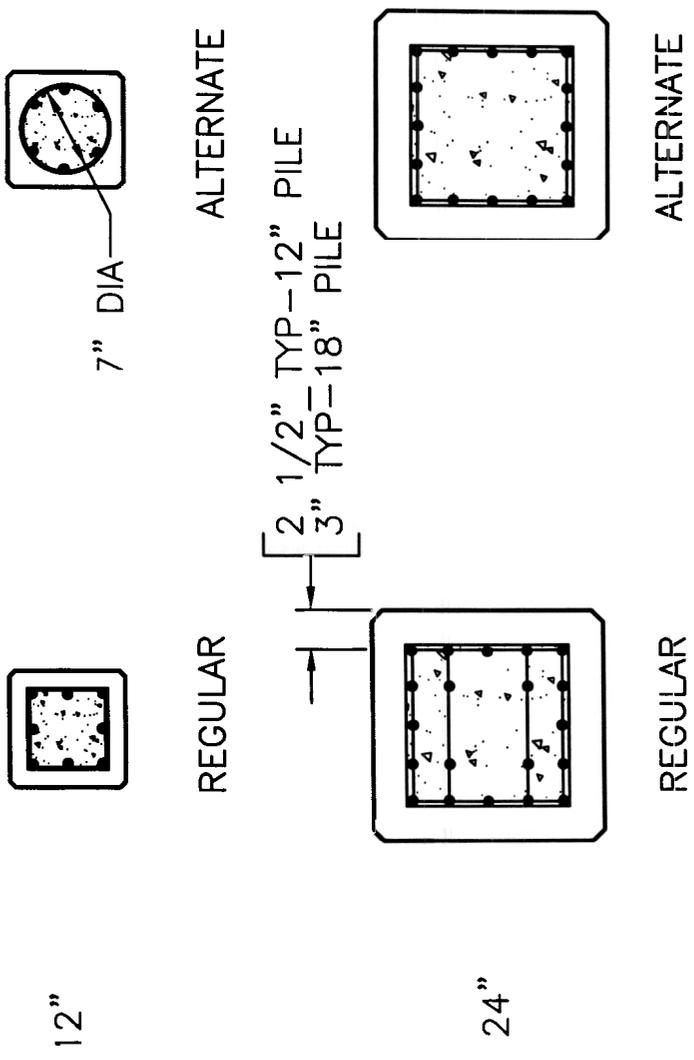
Sht S313. Delete drawing: Elevation & Section B-B Pile Head. ***Add attached drawing:*** Elevation & Section B-B Pile Head.

Sht S313.Delete table: Pile Data. ***Add attached table:*** Pile Data.

Sht S313. Delete table: Pile Pickup Data. ***Add attached table:*** Pile Pickup Data.

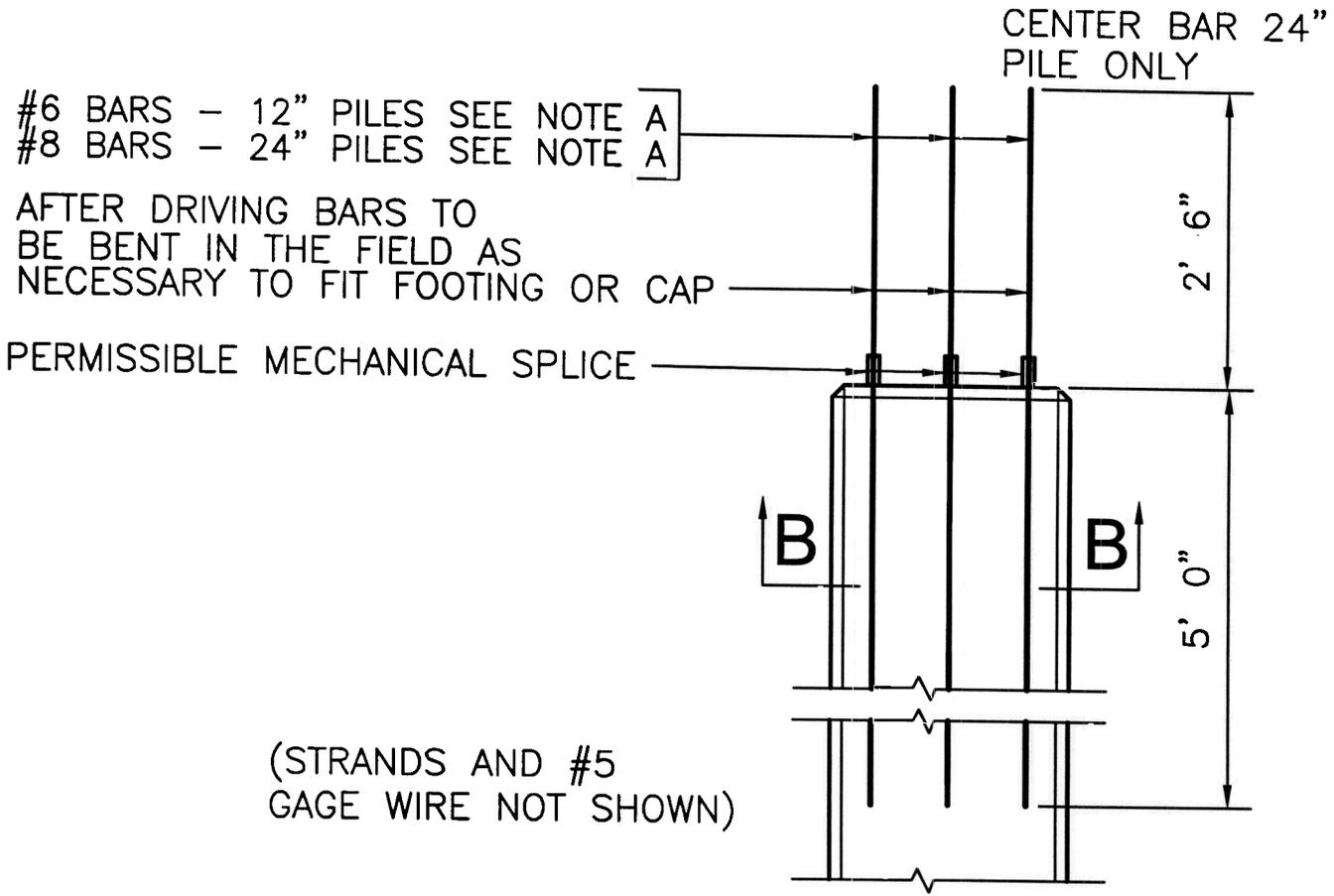
Sht S313. Delete table: Quantities Per Pile For Estimating. ***Add attached table:*** Quantities Per Pile For Estimating .





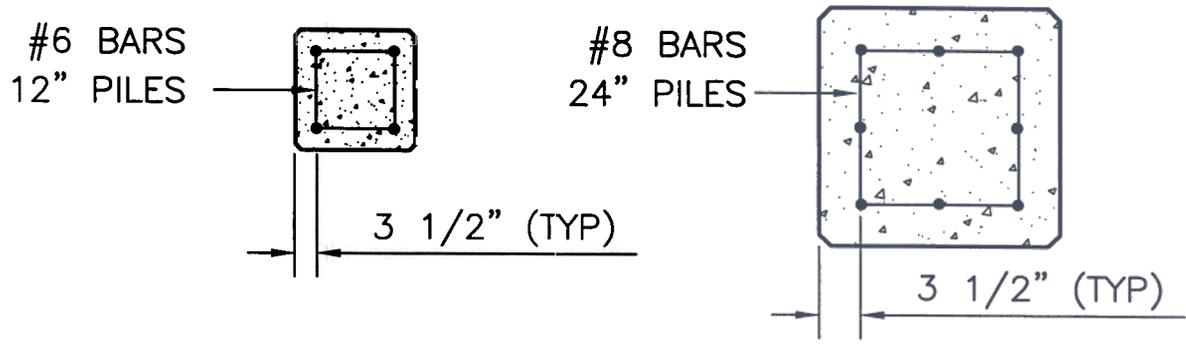
SECTION A-A
SECTION STRAND PATTERNS
FOR PILES WITH S.R. STRANDS

N.T.S.



ELEVATION

N.T.S.



SECTION B-B PILE HEAD

N.T.S.

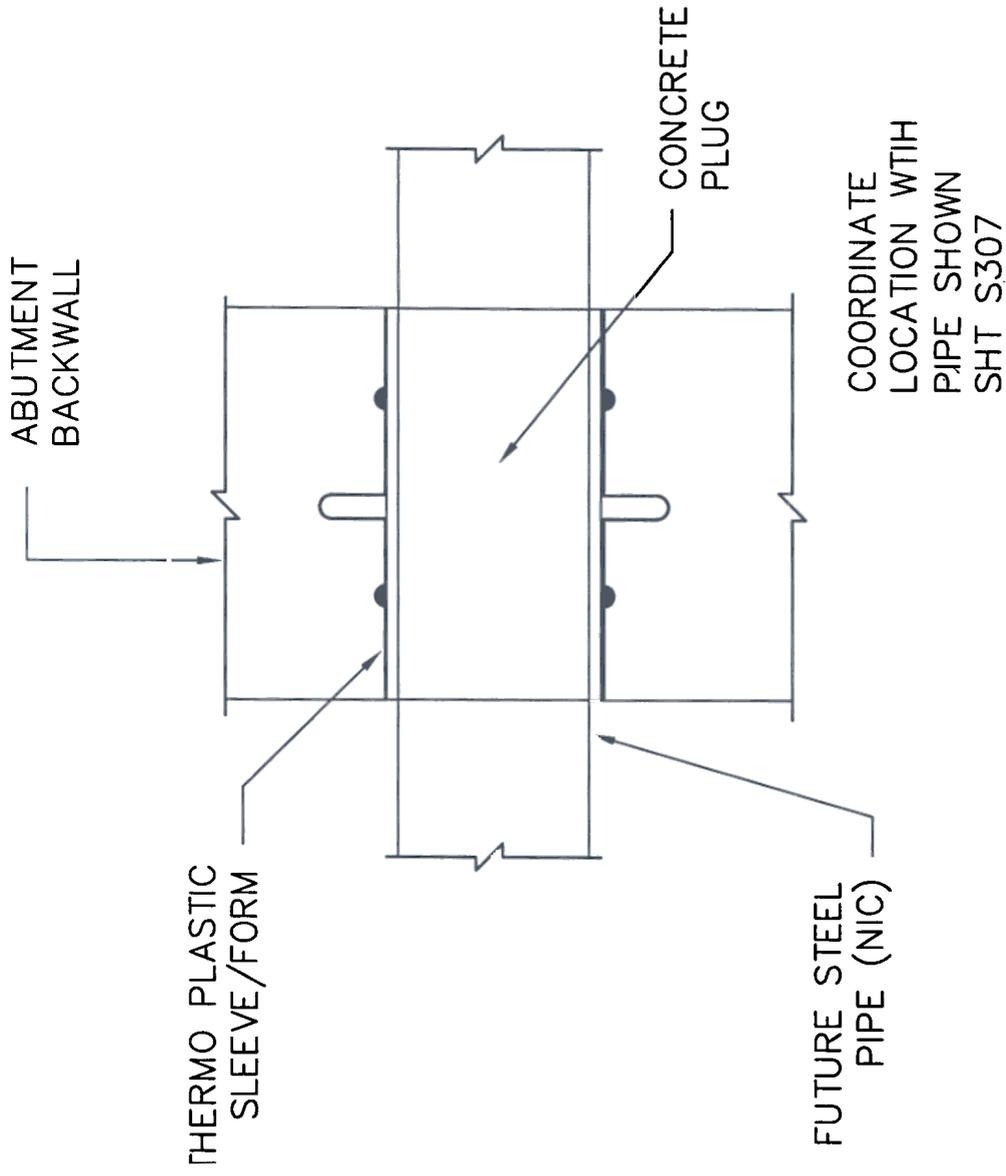
PILE PICKUP DATA

PILE SIZE	APPROX. WT. PER LIN. FT. POUNDS	MAXIMUM LENGTHS FOR VARIOUS PICKUP SYSTEMS			
		1-POINT	2-POINT	3-POINT	4-POINT
		L	L	L	L
12"	150	51'	73"	104'	141'
24"	600	72'	102'	146'	198'

MAXIMUM LENGTHS ARE DETERMINED FROM IMPACT LOADS. "L" IS THE MAXIMUM PICKUP LENGTH BASED ON A CONCRETE COMPRESSIVE STRENGTH OF 5000 psi. IF PILES ARE PICKED UP WHEN THE CONCRETE STRENGTH IS LESS THAN 5000 psi. THE MAXIMUM PICKUP LENGTH SHALL BE THE TABULATED LENGTH REDUCED BY 1% FOR EVERY 250 psi. BELOW 5000 psi.

QUANTITIES PER PILE FOR ESTIMATING

PILE			BUILD--UP		
PILE SIZE	CLASS A5 CONCRETE CU. YDS.	REINFORCING STEEL POUNDS	STRAND LENGTH (NET) LIN. FT.	CLASS A5 CONCRETE CU. YDS.	REINFORCING STEEL POUNDS
12"	.036L	.61L + 68	N x L	.15 lb	6.6 lb + 16
24"	.146L	1.44L + 232	N x L	.15 lb	22.8 lb + 68



ABUTMENT SLEEVE DETAIL

ABUTMENT C&D

NTS

2nd Access Rd Ft Eustis

Amendment No. 1 (Electrical)

Specification revisions

1. Section 16375A, paragraph 1.3, SUBMITTALS, add subparagraphs as follows:
 - d. Switchgear and Sectionalizing Terminals
 - e. Manholes and handholes.
2. Section 16375A, paragraph 3.6.3: Delete last sentence “ Cables for the telephone and communications systems will be installed by others.” And add in its place “See SECTION 16711A , TELEPHONE SYSTEM, OUTSIDE PLANT for telephone and communication cable work requirements.”
3. Section 16375A, paragraph 3.7.1.1: Delete third sentence “ Tops of concrete pads shall be level and shall project 4 inches above finished paving or grade and sloped to drain.”
4. Section 16375A, paragraph 3.11.3: Change requirement of “25 ohms” to “10 ohms” for multiple rod, ground mat and ground ring installations.
5. Section 16528A, paragraphs 3.7.2 and 3.7.5.1: Change section reference from Section 03300 “CAST IN PLACE STRUCTURAL CONCRETE” to SECTION 03301 “CONCRETE”.
6. SECTION 16768A “UMCS FIBER OPTIC DATA TRANSMISSION SYSTEM”:
delete section in its entirety.
7. Add new specification SECTION 16341 “PADMOUNTED SWITCHGEAR” as attached.

Amendment 1 Electrical Drawings:

E-100
E-101
E-102
E-103
E-104
E-105
E-106
E-107
E-108
E-110
E-111
E-113
E-114
E-503
E-504

Amendment 1 New Electrical Drawings:

E-124
E-125
E-126
E-127
E-128
E-129
E-130
E-131

SECTION 02840A

ACTIVE VEHICLE BARRIERS
04/01

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 ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO HB-16 (1996) Standard Specifications for Highway Bridges

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 106 (1999e1) Seamless Carbon Steel Pipe for High-Temperature Service

ASTM D 3034 (1998) Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1 (2000) Structural Welding Code - Steel

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

FHWA SA-89-006 (1988) Manual on Uniform Traffic Control Devices for Streets and Highways

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA 250 (1997) Enclosures for Electrical Equipment (1000 Volts Maximum)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE J 517 (1998) Hydraulic Hose

UNDERWRITERS LABORATORIES (UL)

UL 486A (1997; Rev thru Dec 1998) Wire Connectors and Soldering Lugs for Use with Copper Conductors

1.2 GENERAL REQUIREMENTS

Barriers furnished shall in all respects be identical to the unit tested and certified except for the width of the vehicle barrier, which is as indicated, and except for bollards which have a set diameter. Crash test shall be performed and data compiled by an approved independent testing agency. Test vehicle shall not vault or penetrate the barrier during the test. The design and structural materials of the vehicle barrier furnished shall be the same as those used in the crash tested barrier.

NAMEPLATES

Nameplate data shall be permanently attached to each vehicle barrier. The data shall be legibly marked on corrosion-resistant metal plates and shall consist of at least the following:

- a Manufacturer's name
- b Model number
- c Serial number
- d Date of manufacture.

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

Installation; G
Equipment; G

Detail drawings containing complete wiring and schematic diagrams, and any other details required to demonstrate that the system has been coordinated and will properly function as a unit. Drawings shall show proposed layout and anchorage of equipment and appurtenances, and equipment relationship to other parts of the work including foundation and clearances for maintenance and operation. Detail drawings shall include a copy of the crash test report or certificate of barrier performance.

SD-03 Product Data

Vehicle Barriers; G
Spare Parts

A complete list of equipment, materials, including industrial standards used and how they apply to the applicable component and manufacturer's descriptive data and technical literature, catalog cuts, and installation instructions. Spare parts data for each different item of material and equipment used, after approval of the detail drawings. The data shall include a complete list of parts and supplies, with current unit prices and source of supply

Vehicle Barriers; G

Information necessary to document a minimum 1-year successful field operation performance history for each type of vehicle barrier installed.

SD-06 Test Reports

Field Testing; G

Test reports in booklet form showing all field tests, including component adjustments and demonstration of compliance with the specified performance criteria, upon completion and testing of the installed system. Each test report shall indicate the final position of controls.

SD-10 Operation and Maintenance Data

Vehicle Barriers; G Operating and Maintenance Instructions

Six copies of operation and maintenance manuals, a minimum of 2 weeks prior to field training. One complete set prior to performance testing and the remainder upon acceptance. Manuals shall be approved prior to acceptance. Operation manuals shall outline the step-by-step procedures required for system startup, operation, and shutdown. The manuals shall include the manufacturer's name, model number, service manual, parts list, and brief description of all equipment and their basic operating features. Maintenance manuals shall include routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guide. The manuals shall include piping layout, equipment layout, and simplified wiring and control diagrams of the system as installed. The manuals shall also include hydraulic oil types to be used for ambient temperature ranges of minus 30 degrees F to 150 degrees F to cover winter operation, summer operation, and ambient temperature ranges in between.

DELIVERY AND STORAGE

Components placed in storage shall be protected from the weather, humidity, and temperature variation, dirt and dust, or other contaminants. Structural materials shall be stored on sleepers or pallets and shall be protected from rust and objectionable materials such as dirt, grease, or oil.

SPARE PARTS

A manufacturer's standard recommended spare parts package, with current unit prices and source of supply complete with detailed manuals on parts replacement, shall be provided with each barrier to facilitate 1 year of normal operation. Particular consideration shall be given to system components which are not readily available from local or commercial sources and which are critical to the operation of the system.

PART 2 PRODUCTS

CRASH BEAM

The crash beam shall be an above-grade assembly that, in the "DOWN" position, shall present a visible obstacle to approaching vehicles. The

height of the barrier shall be a minimum of 30 inches as measured from the roadway surface to the centerline of the crash beam. The crash beam shall be capable of blocking a minimum road width as shown on the plans. The crash beam end shall contain a locking pin with padlock acceptance for securing the crash beam when it is in the "DOWN" position. Crash beam shall withstand a 15,000 pound vehicle traveling at 30 miles per hour, with maximum beam deflection of 20 feet.

1.1 Powered Crash Beam

The crash beam shall be operated by means of a hydraulic power system. The crash beam shall be capable of being raised or lowered within an 8 to 15 second time range.

2.1.2 Failure Mode of Operation

A disconnect system for the crash beam shall be provided to allow manual operation of the barrier in the event of an electrical or mechanical failure.

2.1.3 Hydraulic Power Unit

The hydraulic power unit shall contain biodegradable and nontoxic hydraulic fluid which maintains its viscosity between 96 and 1000 saybolt universal seconds (SUS) even at constant heaviest use rate, for an ambient temperature range of 20 to 150 degrees F. A hydraulic fluid heater shall be provided so that the viscosity remains between 80 and 4000 SUS for ambient temperatures below minus 7 degrees C (20 degrees F). Buried hydraulic lines for the connection of the hydraulic power unit to the barrier shall be flexible or carbon steel pipe or a combination of flexible and carbon steel pipe. Flexible and rigid hydraulic line working pressure shall exceed the maximum system relief pressure.

- a. Flexible hydraulic lines shall be in accordance with SAE J 517.
- b. Rigid hydraulic lines shall be seamless carbon steel pipe in accordance with ASTM A 106.

Hydraulic Power Unit Enclosure

A NEMA Type 3R enclosure as specified in NEMA 250 shall be provided to enclose the hydraulic power unit. The enclosure shall be designed for easy removal of the hydraulic power unit components and other accessories without complete removal of the enclosure. An access door latch shall be provided. Equipment within the enclosure shall be placed and configured so that all periodic maintenance can be performed through the access door without removal of the equipment. The enclosure shall be equipped with weatherproof louver vents appropriately sized and located to dissipate internal heat generation.

2.2 MISCELLANEOUS EQUIPMENT

Safety Equipment

Red 8 inch traffic lights shall be supplied for each entrance and exit to alert motorists of the barrier position. Traffic lights are not required for manual barriers. The yellow light shall indicate that the barrier is fully open. All other positions shall cause the light to show red. Brackets shall be supplied to allow the light to be mounted a minimum 4.5

feet above the roadway pavement on a 3.5 inch outside diameter metal post or mounted directly on the crash gate.

FINISH

Surfaces shall be painted in accordance with manufacturer's standard finish. The barrier crash beam shall be painted reflective white with 12 inch wide Red diagonal reflective stripes.

2.4 CONCRETE

The concrete shall conform to Section 03301 CAST-IN-PLACE STRUCTURAL CONCRETE.

WELDING

Welding shall be in accordance with AWS D1.1

PAVEMENT

After placement of the vehicle barrier, the pavement sections shall be replaced to match the section and depth of the surrounding pavement. Pavement shall be warped to match the elevations of existing pavement. Positive surface drainage, away from the vehicle barrier, shall be provided by pavement slope.

3 EXECUTION

INSTALLATION

Installation shall be in accordance with manufacturers instructions and in the presence of a representative of the manufacturer. Manufacturer's representative shall be experienced in the installation, adjustment, and operation of the equipment provided. The representative shall also be present during adjustment and testing of the equipment.

3.2 FIELD TESTING

Upon completion of construction, a field test shall be performed for each vehicle barrier. The test shall include raising and lowering the barrier through its complete range of operation. The Contracting Officer shall be notified at least 7 days prior to the beginning of the field test. The Contractor shall furnish all equipment and make all necessary corrections and adjustments prior to tests witnessed by the Contracting Officer. Any conditions that interfere with the proper operation of the barrier disclosed by the test shall be corrected at no additional cost to the Government. Adjustments and repairs shall be done by the Contractor under the direction of the Contracting Officer. After adjustments are made to assure correct functioning of components, applicable tests shall be completed.

FIELD TRAINING

A field training course shall be provided for designated operating staff members. Training shall be provided for a total period of not less than 1 hour of normal working time and shall start after the system is functionally complete but prior to final acceptance tests. Field training shall cover all of the items contained in the operating and maintenance instructions.

End of Section

SECTION 03301

CONCRETE
09/95

PART 1 GENERAL

1.1 REFERENCES

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

ACI INTERNATIONAL (ACI)

ACI 775	Epoxy Coated Reinforcing Steel Bars
ACI 301	(1989) Structural Concrete for Buildings
ACI 304	Measuring, Mixing, Transporting, and Placing Concrete
ACI 305R	(1991) Hot Weather Concreting
ACI 315	Details and Detailing of Concrete Reinforcement
ACI 318R-89	Building Code Requirements for Reinforced Concrete

VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

VDOT	Road and Bridge Specifications and all supplements thereto
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1.2 SUBMITTALS

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

SD-02 Shop Drawings

Fabrication and Placement; G

The Contractor shall submit shop drawings in accordance with ACI 315 which shall include: reinforcement steel placement drawings; reinforcement steel schedules showing quantity, size, shape, dimensions, weight per foot, total weights and bending details, and details of bar supports showing types, sizes, spacing, and sequence, and joint locations.

SD-06 Test Reports

Strength;
Slump;
Air Content;
Temperature;

PART 2 PRODUCTS

- 2.1 CONCRETE for cast-in-place work shall conform to ASTM C94.
 - 2.1.1 Strength shall be as shown on the drawing
 - 2.1.2 Cement shall be Type II
 - 2.1.3 Maximum aggregate size shall be 3/4"
 - 2.1.4 Maximum water to cement ratio shall be 0.35
 - 2.1.5 Slump shall be 3 inches maximum
 - 2.1.6 Aircontent shall be 5 to 7 percent
- 2.2 REINFORCEMENT shall conform to ACI 301, epoxy coated, Grade 60
FORM MATERIAL shall conform to ACI 301.
- 2.4 CURING MATERIAL shall conform to ACI 301

3 EXECUTION

- 3.1 FORMWORK shall conform to ACI 301
- 3.2 INSTALLATION OF REINFORCING shall conform to ACI 301
- 3.3 BATCHING, MIXING AND TRANSPORTING CONCRETE shall conform to ACI 301, ACI 305R, and ACI 306R except as otherwise specified.
PROTECTION shall conform to ACI 301.
- 3.5 FINISHING CONCRETE shall conform to ACI 301. Deck and pavement surfaces shall have a broom or belted finish.
- 3.6 TESTING AND ACCEPTANCE OF CONCRETE: strength tests, slump test, air content tests, and temperature tests shall be performed at the Contractor's expense in accordance with ACI 301.

End of Section -

SECTION 16341

PAD-MOUNTED SWITCHGEAR

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 C57.12.29 (1991) Switchgear and Transformers
Pad-Mounted Equipment - Enclosure
Integrity for Coastal Environments

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 167 (1999) Stainless and Heat-Resisting
Chromium-Nickel Steel Plate, Sheet, and
Strip

ASTM D 1535 (1997) Specifying Color by the Munsell
System

ASTM D 2472 (2000) Sulfur Hexafluoride

EUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION (CENELEC)

EN 60265-1 (1998) High Voltage Switches for Rated
Voltages Above 1 kV and Less Than 52 kV
(IEC 60265-1 : 1998)

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE Std 386 (1995) Separable Insulated Connector
Systems for Power Distribution Systems
Above 600 V (ANSI/IEEE)

IEEE C2 (2002) National Electrical Safety Code
(ANSI/IEEE)

IEEE C37.60 (1981; R 1992) Overhead, Pad Mounted, Dry
Vault, and Submersible Automatic Circuit
Reclosers and Fault Interrupters for AC
Systems (ANSI/IEEE)

IEEE C62.11 (1999) Metal-Oxide Surge Arresters for AC
Power Circuits (> 1 kV) (ANSI/IEEE)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

- NEMA C37.72 (1987) Manually-Operated, Dead-Front Padmounted Switchgear with Load Interrupting Switches and Separable Connectors for Alternating-Current Systems
- NEMA C57.12.28 (1999) Pad-Mounted Equipment - Enclosure Integrity (Revision of ANSI C57.12.28-88)

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)

- NETA ATS (1999) Electrical Power Distribution Equipment and Systems

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- NFPA 70 (2002) National Electrical Code
- NFPA 70B (1998) Electrical Equipment Maintenance

UNDERWRITERS LABORATORIES (UL)

- UL 467 (1993; R 1999, Bul 2000) Grounding and Bonding Equipment

1.2 DEFINITIONS

Year 2000 Compliant

Year 2000 compliant - means computer controlled facility components that accurately process date and time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations.

Switched Way

A switched way is considered a three-phase circuit entrance to the bus through a switch. For single-phase switches, it is a single-phase entrance to the bus through a switch.

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-02 Shop Drawings

Switchgear Drawings; G

SD-03 Product Data

Electronic Overcurrent Control Curves; G

SF6 Insulated Pad-mounted Switchgear; G

Insulated High-Voltage Connectors; G

Surge Arresters; G

Each submittal shall include data on switches and associated accessories. Each submittal shall include manufacturer's information for each component, device and accessory provided the equipment.

SD-06 Test Reports

Acceptance Checks and Tests; G

SD-07 Certificates

Paint Coating System; G

SD-09 Manufacturer's Field Reports

Switchgear design and production tests; G

SD-10 Operation and Maintenance Data

SF6 Insulated Pad-mounted Switchgear, Data Package 5; G

Submit operation and maintenance data in accordance with Section 01780, "Close Out Submittals".

4 QUALITY ASSURANCE

1.4.1 Switchgear Drawings

Furnish drawings that include, but are not limited to, the following

- a. Overall dimensions, weights, plan view, and front view
- b. Ratings
- c. Single-line diagram.

1.4.2 Paint Coating System

Submit ANSI C57.12.29 paint coating system performance requirement tests

1.4.3 Electronic Overcurrent Control Curves

Provide time-current characteristic curves (on full size logarithmic and instruction manuals for the electronic overcurrent control.

PART 2 PRODUCTS

2.1 SF6 INSULATED PAD-MOUNTED SWITCHGEAR

NEMA C37.72

Ratings and Test Requirements

The voltage rating of the switchgear shall be 15.5 kV. The corresponding ratings associated with the required switchgear voltage rating shall be as follows:

Rated Maximum Voltage, kV	15.5
Rated Withstand Impulse Voltage, kV BIL	95
Continuous and Load Interrupting Current, A	600
Short-Time Current, kA rms Sym	12
Short-Circuit interrupting Current, kA rms Sym	12

Switched ways shall be rated for the required continuous and load interrupting current. Short-circuit interrupting current rating applies to fault interrupting switched ways only.

2.1.2 Switchgear Construction

Switch contacts and cable entrance terminations shall be contained in an SF6 filled stainless steel tank. Switchgear shall be shipped factory filled with SF6 gas conforming to ASTM D 2472. Switchgear shall be configured with load interrupting and fault interrupting switched ways as indicated. Switchgear shall have front accessible terminations suitable for cables entering from below. Switch contact positions for switched ways shall be visible through viewing windows in the SF6 tank located adjacent to the manual operating provisions. Provide gas pressure gage in viewable location from switch operating handle. Each switched way shall have provisions for grounding.

2.1.2.1 Pad-mounting Provisions

Provide enclosed switchgear suitable for installation on a concrete pad. Switchgear enclosure base shall be fabricated of ASTM A 167 type 304 or 304L stainless steel. Enclosure base shall include any part of the switchgear enclosure that is within 3 inches of concrete pad. Paint enclosure including base ASTM D 1535 Munsell 7GY3.29/1.5 green. Paint coating system shall comply with NEMA C57.12 .28 regardless of equipment material.

Load Interrupting Switched Ways

Load interrupter switched ways shall provide single-pole or three-pole group operated switching as indicated and shall be the vacuum type.

2.1.4 Fault Interrupting Switched Ways

IEEE C37.60. Provide non-fused, non-reclosing, manual reset, vacuum interrupters consisting of vacuum bottles and a spring assisted operating mechanism. Each fault interrupting switched way shall utilize internally

mounted current transformers and an electronic overcurrent control to provide single-pole or three-pole ganged tripping as indicated for single-phase and three-phase faults. The electronic overcurrent control shall have provisions for a wide variety of field selectable time-current characteristic curves with ten field selectable trip levels through a current range of 600 amperes.

2.1.5 Dead-Front High-Voltage Bushings

IEEE Std 386. 15 kV, 95 kV BIL. Provide 600 ampere one-piece deadbreak apparatus bushings and 200 ampere bushing wells with bushing well inserts for each switched way as indicated.

- a. Parking stands: Provide a parking stand near each dead-front bushing. Provide insulated standoff bushings for parking of energized load-break connectors on each parking stands.

2.2 Insulated High-Voltage Connectors

IEEE Std 386. Provide corresponding connector for each switched way. Connectors shall have a steel reinforced hook-stick eye, grounding eye, test point, and arc-quenching contact material.

200 Ampere loadbreak connector ratings: Voltage: 15 kV, 95 kV BIL
Short time rating: 10,000 rms symmetrical amperes.

- b. 600 Ampere deadbreak connector ratings: Voltage: 15 kV, 95 kV BIL.
Short time rating: 40,000 rms symmetrical amperes. Connectors shall have 200 ampere bushing interface for surge arresters where indicated.
- c. Provide one set of three grounding elbows and one set of three feed-thru inserts. Grounding elbows and feed-thru inserts shall be delivered to the Contracting Officer.

Surge Arresters

IEEE C62.11, rated 10 kV, fully shielded, dead-front, metal-oxide-varistor, elbow type with resistance-graded gap, suitable for plugging into inserts. Provide arresters on switched ways where indicated.

SF6 Refill Cylinders

Provide two SF6 refill cylinders, minimum size of 6 pounds of SF6; include regulator, valves, and hose for connection to the fill valve of the switch

SOURCE QUALITY CONTROL

2.5.1 Switchgear Design and Production Tests

Furnish reports which include results of design and production tests performed according to NEMA C37.72 and IEEE C37.60. Production tests shall be performed by the manufacturer on each switchgear assembly to ensure that

design performance is maintained in production.

PART 3 EXECUTION

INSTALLATION

Electrical installations shall conform to IEEE C2, NFPA 70, and to the requirements specified herein.

3.2 GROUNDING

NFPA 70 and IEEE C2, except that grounds and grounding systems shall have a resistance to solid earth ground not exceeding 10 ohms. When work, in addition to that indicated or specified, is required to obtain the specified ground resistance, notify the Contracting Officer.

3.2.1 Grounding Electrodes

Provide buried counterpoise cables and driven ground rods as specified in Section 16375 Electrical Distribution System, Underground, at perimeter of switchgear pad.

3.2.2 Switchgear Grounding

Connect #4/0 bare copper conductor ground loop, not less than 18 inches below grade, to the upper end of the ground rods by exothermic welds or compression connectors. Provide #4/0 bare copper conductors connecting the switchgear grounding provisions to two different ground rods or counterpoise

3.2.3 Connections

Make joints in grounding conductors and ground loop by exothermic weld or compression connector. Exothermic welds and compression connectors shall be installed as specified in Section 16375.

3.2.4 Grounding and Bonding Equipment

UL 467, except as indicated or specified otherwise

3.3 FOUNDATION FOR EQUIPMENT AND ASSEMBLIES

Mount switch on concrete slab. Slab shall be at least 12 inches thick, reinforced with a 6 x 6 - W2.9 x W2.9 mesh, placed uniformly 4 inches from the top of the slab. Slab shall be placed on a 6 inch thick, well-compacted gravel base. Top of concrete slab shall be approximately 6 inches above finished grade. Edges above grade shall have 3/4 inch chamfer. Slab shall be of adequate size to project at least 8 inches beyond equipment.

Stub up conduits, with bushings, 2 inches into cable wells in the concrete pad. Coordinate dimensions of cable wells with switch cable training areas. Concrete work shall be as specified in Section 03301 "Concrete."

3.4 FIELD QUALITY CONTROL

3.4.1 Performance of Acceptance Checks and Tests

Perform in accordance with the manufacturer's recommendations, NFPA 70B, NETA ATS and referenced ANSI standards.

Include the following visual and mechanical inspections and electrical tests, performed in accordance with NETA ATS.

3.4.1.1 Switchgear

a. Visual and Mechanical Inspection

- (1) Compare equipment nameplate information with specifications and approved shop drawings.
- (2) Inspect physical and mechanical condition
- (3) Check for proper anchorage, alignment, required area clearances, and grounding.
- (4) Perform mechanical operator tests in accordance with manufacturer's instructions.

Verify that insulating SF6 gas pressure is correct

- (6) Inspect all indicating devices for proper operation

b. Electrical Tests

- (1) Perform contact-resistance tests
- (2) Trip fault interrupters by operation of overcurrent control
- (3) Perform insulation-resistance tests
- (4) Perform an over-potential test on each switched way pole with the switched way in the open position in accordance with the manufacturer's instructions.
- (5) Set fault interrupter overcurrent control in accordance with government provided settings. Request settings from government, in writing, a minimum of 30 days prior to scheduling electrical tests.

3.4.1.2 Grounding System

a. Visual and Mechanical Inspection

Inspect ground system for compliance with contract plans and specifications.

b Electrical Tests

Perform ground-impedance measurements utilizing the fall-of-potential method. On systems consisting of interconnected ground rods, perform tests after interconnections are complete. On systems consisting of a single ground rod perform tests before any wire is connected. Take measurements in normally dry weather, not less than 48 hours after rainfall. Use a portable ground testing megger in accordance with manufacturer's instructions to test each ground or group of grounds. The instrument shall be equipped with a meter reading directly in ohms or fractions thereof to indicate the ground value of the ground rod or grounding systems under test.

Submit the measured ground resistance of each ground rod and grounding system, indicating the location of the rod and grounding system. Include the test method and test setup (i.e., pin location) used to determine ground resistance and soil conditions at the time the measurements were made.

3.4.2 Follow-Up Verification

Upon completion of acceptance checks and tests, the Contractor shall show by demonstration in service that devices are in good operating condition and properly performing the intended function. Test shall require each item to perform its function not less than three times. As an exception to requirements stated elsewhere in the contract, notify the Contracting Officer 5 working days in advance of the dates and times for checks and tests.

-- End of Section --