PROJECT CONTRACT DOCUMENTS FOR

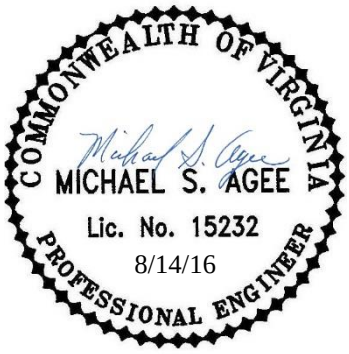
NORTHSIDE NEIGHBORHOOD IMPROVEMENT PLAN
DILLARD STREET AND ALLEY IMPROVEMENTS

CITY OF
MARTINSVILLE, VIRGINIA

CDBG C.I.G. #13-14

COMMISSION NO. 3514

MAY 2016



MATTERN & CRAIG
CONSULTING ENGINEERS • SURVEYORS
701 FIRST STREET, S.W.
ROANOKE, VA 24016

DESIGN COORDINATOR: MICHAEL S. AGEE, P.E.

(540) 345-9342

NORTHSIDE NEIGHBORHOOD IMPROVEMENT PLAN
DILLARD STREET AND ALLEY IMPROVEMENTS

CITY OF
MARTINSVILLE, VIRGINIA

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Martinsville
A CITY WITHOUT LIMITS

NOTICE TO BIDDERS
NORTHSIDE NEIGHBORHOOD IMPROVEMENT PLAN
DILLARD STREET AND ALLEY IMPROVEMENTS
August 14, 2016

Sealed bids will be received by the City of Martinsville, Virginia, at the Purchasing Office located at the City's Warehouse and Garage Complex at 990 Fishel Street until Thursday, September 15, 2016, @ 2:00 p.m., at which time bids will be opened and publicly read covering the following item of work:

> Work consists of reconstruction of approximately 1850 feet of Dillard Street. Construction paving approximately 337 feet of the alley from the intersection of Dillard Street and Ruffin Street and improve driveway access to three houses located off Warren Court.

Specifications are attached. The City Engineer will accompany interested bidders over the site. Bids must be accompanied by a bid bond equal to five percent (5%) of the bid which may be forfeited if the successful bidder fails to execute the contract within ten (10) days after the award or fails to give satisfactory surety as required herein.

Performance bond will be required in an amount equal to one hundred percent (100%) of the contract price conditioned upon the faithful performance of the contract and upon payment of all persons supplying labor and furnishing materials for the project. The performance bond shall be executed by a surety company authorized to do business in the State of Virginia.

No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of thirty (30) days. All contractors are hereby notified that they must have proper license under the Virginia State laws governing their respective trades.

The City of Martinsville, Virginia, reserves the right to reject any or all bids, to waive any and all informalities therein, and the award shall, if made, be made to the lowest responsive responsible bidder, or bidders, taking into consideration the quality of materials, labor and equipment.

The successful bidder will be required to affect such liability insurance as will be necessary to save the City of Martinsville harmless and will be required to furnish a certificate of such insurance.

All materials used and work done shall be subject to the inspection, test and approval of the Director of Public Works of the City of Martinsville, Virginia, or his duly authorized representatives, and payment for materials furnished or work done shall be withheld until such approval is obtained.

The successful bidder shall enter into a written contract within ten (10) days of the award of the contract and said contract shall embody all of the terms, conditions, and provisions of the notice to bidders, specifications and proposals.

There will be a pre-bid meeting at 10:00 a.m. on Tuesday, August 30, 2016, at the City of Martinsville Council Chambers.

Please mark your envelope, "Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements", and the date of bid opening in the lower left corner of your envelope.

CITY OF MARTINSVILLE, VIRGINIA
GENERAL SPECIFICATIONS

1) Persons desiring to submit a bid will find attached hereto-detailed specifications, estimate of quantities and proposal blank. The specifications and plans are to be considered as, and shall form a part of, the contract. The time to which bids will be received will be found in the published notice calling for bids.

2) Bids must be made upon the bid form provided. The blank places in the bid form, except as otherwise noted, must be filled in, and no change shall be made in the phraseology of the bid or in the terms mentioned therein.

3) Bids that contain any omission, erasures, alterations, additions, or items not called for in the estimate, or that contain irregularities of any kind, shall be rejected as informal.

4) Each bid shall specify the gross sum, written in with ink or typed in both words and figures, for the work, which will be performed according to the plans, and specifications, together with a unit price for each of the separate items as called for. Such gross sum shall be based upon the quantities as shown in the approximate estimate.

5) Only actual quantities of work performed will be paid for, and upon completion of the work if such actual quantities show either increase or decrease from the approximate estimate, then such variation will be computed at the unit prices in the bid and will be taken from or added to the gross sum bid.

6) The attention of persons intending to submit a bid is specifically called to that paragraph of the contract which debars a contractor from pleading misunderstanding or deception because of estimates of quantities, character, location or other conditions surrounding the same.

7) Permission will not be given to withdraw, modify, or explain any bid after it has been deposited with the City of Martinsville.

8) If the bid is made by a firm, the name and place of residence of each member of the firm must be given. If made by a corporation, the names of the president, secretary, and treasurer shall be given.

9) Every bid must be accompanied by a bid bond equal to five percent of the bid.

10) The contract, if awarded, shall be made to the lowest responsive responsible bidder whose bid shall comply within all the provisions required to render it formal. The City of Martinsville

reserves the right to reject any and all bids, if, in their judgment, it is for the best interest of the City of Martinsville to do so.

11) Reasonable grounds for supposing that any bidder is interested in more than one bid for the same contract shall cause the rejection of all bids in which he is interested.

12) The bidder must be prepared, if requested to do so by the City, to present evidence of experience, ability, and financial standing, as well as statement as to plant and machinery.

13) The contractor whose bid is accepted will be required to execute the contract and furnish bonds within ten days from the date of award. In case of failure or refusal on the part of the bidder to enter into the contract within the set period, the amount of the deposit made (5% of the bid) will be forfeited to the City of Martinsville, and paid to City Treasurer. Upon the execution of the contract and approval of the bond, the deposit will be returned to the bidder. The deposit by persons other than one to whom award of contract is made, will be returned to the person or persons making the proposal immediately after the contract and bond have been executed.

14) The amount of bond required for the faithful performance of the contract is 100 percent of the amount of the contract price.

15) Payment to the contractor will be made monthly to an amount not exceeding ninety per centum of the work done. The per centum of the contract price will be retained until the entire work has been completed and accepted. No payment will be made for material delivered except in place. Each bidder must distinctly understand that part and final payments, as the vouchers are issued on account of the contract shall be subject to a reserved right of the City to withhold any part of the sum of money to be paid under the contract in the event of failure of the contractor to promptly make payments to all persons supplying him equipment, labor, tools, or materials in the performance and completion of work provided for in the contract.

16) The successful bidder must fully comply with all municipal building ordinances and regulations, and obtain all required license and permits, and pay all charges and expenses connected therewith, and be responsible for all damages to person or property which may occur in connection with the prosecution of the work. The contractor shall take into account all contingent work which has to be done by other parties, arising from any cause whatsoever, either now known or which may become necessary during the progress of the work, and shall be responsible for any damages done to the same.

17) Each bidder must understand that, should his bid be accepted he is to forfeit to the City of Martinsville the sum of $150.00 as liquidated damages, for each and every working day's delay not caused by the City that may occur beyond the time stipulated in the contract for the supply of all the materials and the performance and completion of the work subject, however, to the discretion of the Public Works Director or designated agent, and that the contractor is to be entitled to one day, in addition to said stipulated time, for each and every working day's delay that may be caused by the City of Martinsville. Only skilled and reliable workmen are to be employed on the project; if any person employed on the work by the contractor shall appear to the City Director of Public Works or agent to be incompetent or disorderly, he shall be

discharged immediately upon proper notice to the contractor from the City Director, and such person shall not again be employed on the City's project.

18) All work shall be completed within the time designated in the contract, and should any neglect or unnecessary delay occur in the execution of any part of the same, the Public Works Department may have the work done and charge the cost thereof to the contractor or declare the contract void.

19) No charge shall be made by the contractor for hindrance or delay from any cause during the progress of any portion of the work embraced in these specifications, nor shall any claim be allowed for extra work, unless same shall be done in pursuance of a written order from the Department of Public Works and claim made and approved at the first settlement after work is executed. The contractor shall not assign, underlet or make a subcontract for the execution of any portion of the work other than for materials, without sanction, in writing from the Department of Public Works. Any work not specified which may be fairly implied as included in the contract, of which the Director of Public Works or agent shall judge, shall be done by the contractor without extra charge.

20) No bid will be considered unless the bidder has complied with the provisions of Title 54, Chapter 7 (Section 54-113 through 54-145 of the Code of Virginia).

21) The contractor shall be required to guard the public from liability to accident during the progress of the work, including placing of materials, both by day and night, and will be held responsible for any damage the City may have to pay in consequence of his neglecting the necessary precautions. In all cases he shall protect his work and the public during its execution, and after its completion, by proper barriers and lights, until the Director of Public Works or agent shall direct the same to be removed.

22) The contractor shall have charge of and be responsible for the entire line of work, and be liable for all damages to any fixtures along the line of the work until its completion and acceptance. Any unfaithful or imperfect work that may be discovered at any time before or within one year after the completion and acceptance of the work shall be corrected by the contractor immediately on the requirement of the Director of Public Works.

23) All surplus material, such as earth, sand, rubbish, stone, etc., is to be removed by the contractor from the line of work as the work progresses, and is to be deposited at the City Warehouse Complex at 990 Fishel Street.

24) All materials provided shall be of the best quality, subject to the approval of the Director of Public Works or agent; and, if any materials which he may deem unfitted to be used are brought to the work, the same shall be forthwith removed; and if the directions of the Director of Public Works or agent are not complied with within twenty-four hours after written notice, he shall be at liberty to remove same at the expense of the contractor. The material to be placed so as to be of as little inconvenience as possible to the public or adjoining tenements. All materials shall be subject to such tests as the Director of Public Works or agent may prescribe.

25) The contractor shall suspend all work under this contract when notified by the Director of

Public Works or agent that the weather is unsuitable for carrying it on.

26) All fees for any patent invention, article or arrangement or other apparatus that may be used upon or in any way connected with the construction, erection, or maintenance of the work or any part thereof, embraced in the contract on these specifications shall be included in the price stipulated and in the contract for said work, and the contractor or contractors must protect and hold harmless the City against any and all demands for such fees or claims.

27) It is specifically stipulated and made a part of these specifications that the successful bidder will obtain a contractor's license from the City of Martinsville.

NEGOTIATION

In the event the bid from the lowest responsible bidder exceeds available funds, the City may negotiate with the apparent low bidder to obtain a contract price within available funds. The procedures for such negotiations shall be as follows:

a. City, Engineer, and apparent low bidder together will review the project and attempt to find mutually agreeable proposed changes that will effectively reduce the cost of the project.

b. Apparent low bidder will present reasonably documented and substantiated proposed deductions in project cost for each potential project change, which will allow City to evaluate each proposed deduction.

c. The parties will attempt to negotiate and sign a reasonable contract for the entire project, the price of which does not exceed available funds

INSURANCE

The Contractor shall not commence work under any contract until he has obtained all the insurance required hereunder and such insurance has been approved by the City; nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance has been so obtained and approved. Approval of the insurance by the City shall not relieve or decrease the liability of the Contractor hereunder.

a. Worker's Compensation including Occupational Disease and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of the Contract, Workers' Compensation and Employer's Liability Insurance for all of his employees to be engaged in work on the project under this Contract in an amount no less than the minimum allowed by the State Corporation Commission, and in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Workers' Compensation and Employer's Liability Insurance for all of the latter's employees to be engaged in such work.

b. Comprehensive General Liability Insurance: The Contractor shall maintain during the life of the Contract comprehensive general liability insurance as shall protect him and the City of Martinsville and its officers, agents, and employees from claims for damages for personal injury, including death, as well as from claims for property damage, which may arise from operations under the Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amount of such insurance shall be not less than a combined single limit of $1,000,000.00 per occurrence on bodily injury and property damage and $1,000,000.00 aggregate on completed operations. The comprehensive general liability insurance shall provide the following coverage:

Comprehensive
Premises--Operation
Products/Completed Operations Hazard
Contractual Insurance
Underground Hazard
Explosion & Collapse Hazard
Independent Contractor and Subcontractor
Broad Form Property Damage
Personal Injury

c. Automobile liability insurance with minimum combined single limits of $1,000,000.00 per occurrence. This insurance shall include bodily injury and property damage for the following vehicles:

Owned Vehicles
Non-owned Vehicles
Hired Vehicles

d. Umbrella Policy: At the option of the Contractor, primary limits may be less than required, with an umbrella policy providing the additional limits needed. This form of insurance will be acceptable provided that the primary and umbrella policies both provide the insurance coverage's herein required. However, any such umbrella policy must have minimum coverage limits of $3,000,000.00.

e. The Contractor, at his cost, shall effect and maintain in the names of the City, the Engineer and the Contractor, fire, vandalism and extended coverage insurance (or all-risk, builder's risk insurance if approved by the City), upon the entire structure or structures on which the work of this Contract is to be done and upon all material in or adjacent thereto and intended for use thereon to one hundred percent (100%) of the Contract amount. Such insurance may include a deductible provision if the City consents to such provision; however, the Contractor in such case will be liable for paying to the City the amount of such deduction whenever a claim arises. The loss, if any, is to be made adjustable with and payable to the City as Trustee for whom it may concern. Written evidence of the insurance required herein shall be filed with the City not later than thirty (30) days following the date of the award of the Contract. A copy of the evidence of insurance shall be filed with the Director of Purchasing.

f. All policies shall name the City of Martinsville, its officers, agents, and employees as additional insured. This coverage shall be reflected on the Certificates of Insurance (including any endorsements or riders thereto) which will be provided to the City. Each Certificate of Insurance shall require that notice be given thirty (30) days prior to cancellation or material change in the policies to the Director of Purchasing.

g. The insurance required by this Article shall include contractual liability insurance applicable to the Contractor's obligations.

h. The Contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his contract "Subcontractor's Insurance" of the type and in the same amounts as specified in the preceding schedule or (2) insure the activities of his subcontractors in his own policy.

EQUAL EMPLOYMENT

During the performance of the contract, the Contractor agrees as follows:

a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions for this nondiscrimination clause.

b. The Contractor also shall not discriminate against any handicapped person in violation of any state or federal law or regulation and shall also post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this additional nondiscrimination clause.

c. The Contractor, in solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such contractor is an equal opportunity employer.

d. Notices, advertisements, and solicitations placed in accordance with Federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

e. The Contractor will include the provisions of the foregoing paragraphs in every subcontract or purchase order over $10,000 so that the provisions will be binding upon each subcontractor or vendor.

f. The Contractor will otherwise comply with all other applicable provisions of local, State, and Federal law.

PERMITS

The Contractor shall, at his own expense, secure any business or professional licenses, permits or pay any fees required by the City of Martinsville or Commonwealth of Virginia to include securing a City of Martinsville business license. For further information, contact Commissioner of Revenue's office at 276-403-5131.

INDEMNIFICATION

a. The Contractor shall indemnify the City, its agents, officers, and employees against any damages to property or injuries to or death of any person or persons, including property and employees or agents of the City, and shall defend and indemnify the City, its agents, officers, and employees from any claims, demands, suits, actions, or proceedings of any kind, including workers' compensation claims, of or by anyone, in any way resulting from or arising out to the operations in connection with the work described in the contract, including operations of subcontractors and acts or omissions of employees or agents of Contractor or Contractor's subcontractors. Contractor shall procure and maintain, at Contractor's own costs and expense, any additional kinds and amounts of insurance that, in Contractor's own judgment, may be necessary for Contractor's proper protection in the prosecution of the work.

b. The Contractor shall, at his own expense, appear, defend, and pay all charge of attorneys and other expenses arising there from or incurred in connection therewith, and, if any judgment shall be rendered against the City, and/or its officers, agents, and employees, in any such action, the Contractor shall, at his own expense, satisfy and discharge the same. The Contractor expressly understands and agrees that any performance bond or insurance protection required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep, and save harmless and defend the City, its agents, officers, and employees as herein provided.

c. The Contractor shall assume all risks and responsibilities for casualties of every description in connection with the work, except that he shall not be held liable or responsible for delays or damage to the work caused by acts of God, acts of Public Enemy, acts of Government, quarantine restrictions, general strikes through the trade, or by freight embargoes not caused or participated in by the Contractor. The Contractor shall have charge and control of the entire work until completion and acceptance of the same by the City.

d. The Contractor shall alone be liable and responsible for, and shall pay, any and all loss or damage sustained by any person or party either during the performance or subsequent to the completion of the work under this agreement, by reason of injuries to persons and damage to property, building, and adjacent work, that may occur either during the performance of the work covered by this contract or that may be sustained as a result of or in consequence thereof, irrespective of whether or not such injury or damage be due to negligence or the inherent nature of the work.

e. The Contractor shall bear all losses resulting from the amount or character of the work being different, or because the nature of the premises on which the work is done is different from what was expected or on account of the weather, or similar causes.

f. The Contractor, however, will not be obligated to indemnify the City, its officers, agents, or employees against liability for damage arising out of bodily injury to persons or

damage to property caused by or resulting solely from the negligence of the City or its officers, agents, and employees.

Bids will be publicly opened and read in the office of the Purchasing Manager, Karen Mays, City of Martinsville, Central Warehouse, 990 Fishel Street, Martinsville, Va. 24112. Bids may be mailed or hand delivered to the Fishel Street address, or sent by FedEx or UPS. Please mark your envelope, "Bid for Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements", and the date of bid opening in the lower left corner of your envelope.

Signature Sheet
Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements

My signature certifies that the proposal as submitted complies with the Scope of Work and all Terms and Conditions as set forth in this Request for Proposal.

My signature further certifies that this proposal is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a proposal for the same services, and is in all respects fair and without collusion or fraud. I understand collusion is a violation of Virginia Governmental Fraud Act and Federal Law and can result in fines, prison sentences and civil damages awards. I agree to this proposal by all conditions of the proposal and certify that I am authorizing to sign this proposal.

To receive consideration for award, this signature sheet must be returned to the Purchasing Department as it shall be a part of your response.

If there are any parts of the terms and conditions that your company cannot meet, please indicate which ones on an attached page.

In signing this form, the contractor agrees to all parts of this proposal.

Company Name: _____

Address: _____

_____

Signature: _____

Name (type or print) _____

Official Title: _____

Federal Tax ID Number: _____

Date: _____ Telephone Number: _____

Email Address _____

BID FORM

PROJECT: Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements

THIS BID IS SUBMITTED TO: City of Martinsville, Virginia

Purchasing Office

990 Fishel Street

Martinsville, Virginia 24112-6209

THIS BID SUBMITTED BY: _____

_____

1. The undersigned BIDDER proposes and agrees, if this BID is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Notice to Bidders and General Specifications, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

   a) BIDDER has carefully studied the Bidding Documents and the following Addenda, receipt of all of which is hereby acknowledged.

ADDENDUM NO.	DATE

   b) BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work;

   c) BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

d) BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site. BIDDER acknowledges that OWNER and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

e) BIDDER is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.

f) BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, test, studies and data with the Contract Documents.

g) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

h) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement of rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with the Contract Documents for the following price(s):

UNIT PRICES

NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL EST. PRICE
1.	Mobilization	LS	1		
2.	Earthwork	LS	1		
3.	Storm Drain Pipe (15")	LF	40		
4.	Aggregate Base Material Type No. 21B	TN	2000		
5.	Asphalt Concrete Type SM-9.5A	TN	400		
6.	Asphalt Concrete Base Course Type BM-25.0	TN	650		
7.	Concrete Curb (STD CG-2)	LF	250		
8.	Demolition of Pavement	SY	4500		
9.	Dry Rip Rap, Class AI, T=18"(STD EC-1)	TN	8		
10.	Protective Covering, (STD EC-2) & (STD EC-3)	SY	60		

TOTAL BID FOR ALL UNIT PRICES _____

_____ ($_____)
(use words) (figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work will be substantially completed and also completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

(a) Required Bid Security in the form of _____
(b) Evidence of Bidder's qualification to do business in State where project is located, such as up-to-date license certificate. Complete and attach to Bid the Bidder's Qualification Statement.

7. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below.

The following address: _____
_____
_____

8. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Specifications.

9. **BID SUBMITTED** on _____, 20_____

State Contractor License No. _____.
Field Office, Type III

If BIDDER is:
<u>An Individual</u>
By: _____(SEAL)
(Individual's Name)

doing business as _____
Business address: _____
_____
Phone No: _____

<u>A Corporation</u>
By: _____(SEAL)
(Corporation Name)

_____
(State of incorporation)
By: _____(SEAL)
(Name of person authorized to sign)

_____
(Title)
(Corporate Seal)
Attest: _____
(Secretary)
Business address: _____
_____
Phone No: _____
(V) Date of Qualification to do business is _____

A Joint Venture

By: _____(SEAL)
(Name)

_____
(Address)

By: _____
(Name)

_____
(Address)

Phone Number and Address for receipt of official communications

_____

_____

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

EXHIBIT A

Construction Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature: _____
Name and Title:

EJCDC No. 1910-28A (1984 Edition)
Prepared through the joint efforts of The Surety Association of America, Engineers' Joint Contract Documents Committee, The Associated General Contractors of America, and the American Institute of Architects.

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
2. Deny liability in whole or in part and notify the Owner citing reasons therefor.

5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

EXHIBIT B

Construction Payment Bond

Any singular reference to the Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT
Date:
Amount
Description (Name and Location):

BOND
Date (Not earlier than Construction Contract Date):
Amount:
Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature:_____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature:_____
Name and Title:

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

Signature:_____
Name and Title:

SURETY
Company: (Corp. Seal)

Signature:_____
Name and Title:

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Reprinted 10/90

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to the Owner, this obligation shall be null and void if the Contractor:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with the Contractor:

1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed: and
2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located of after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in the Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is dated as of the _____ day of _____ in the year 20_____ by and between _____ (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The work is generally described as follows:

_____

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements

Article 2. ENGINEER

The Project has been designed by Mattern & Craig, Inc.

who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIMES

3.1 The Work shall be substantially completed and ready for final inspection by the OWNER no later than December 13, 2016. The work shall be totally completed and accepted by the OWNER no later than December 23, 2016. (Reference Section 34 in the Federal Contract Inserts).

3.2 *Liquidated Damages.* OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a

penalty) CONTRACTOR shall pay OWNER _____ _____ dollars ($_____) for each day that expires after the time specified in paragraph 3.1 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the time specified in paragraph 3.1 for completion and readiness for final payment or any proper extension thereof granted by OWNER. CONTRACTOR shall pay OWNER _____ _____dollars ($_____) for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment.

Article 4. CONTRACT PRICE

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 4.1 below:

4.1 for all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 4.1:

UNIT PRICE WORK

NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL EST. PRICE
1.	Mobilization	LS	1		
2.	Earthwork	LS	1		
3.	Storm Drain Pipe (15")	LF	40		
4.	Aggregate Base Material Type No. 21B	TN	2000		
5.	Asphalt Concrete Type SM-9.5A	TN	400		
6.	Asphalt Concrete Base Course Type BM-25.0	TN	650		
7.	Concrete Curb (STD CG-2)	LF	250		
8.	Demolition of Pavement	SY	4500		
9.	Dry Rip Rap, Class AI, T=18"(STD EC-1)	TN	8		
10.	Protective Covering, (STD EC-2) & (STD EC-3)	SY	60		
	TOTAL				

TOTAL OF ALL UNIT PRICES _____

_____ $_____ (dollars)
(use words)

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9.2 of the General Conditions.

(In special circumstances, the Bid may be attached to avoid extensive retyping. See paragraph 13.10 below. Any exhibits attached should be listed in Article 8.)

Article 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1. *Progress Payments; Retainage.* OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the _____ day of each month during construction as provided in paragraphs 5.1.1. and 5.1.2. below. All such payments will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

5.1.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

_____% of Work completed (with the balance being retainage). If Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed.

5.1.2. Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to _____% of the Contract Price (with the balance being retainage), less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

5.2. *Final Payment.* Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.13.

Article 6. INTEREST

All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum rate allowed by law at the place of the Project.

Article 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into the Agreement CONTRACTOR makes the following representations:

7.1. CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 8) and the other related data identified in the Bidding Documents including "technical data."

7.2. CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.

7.3. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

7.4. CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph SC-4.2 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by

CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

7.5. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

7.6. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

7.7. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 8. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

8.1. This Agreement (pages 1 to ____, inclusive).

8.2. Exhibits to this Agreement (pages _____ to ____, inclusive).

8.3. Performance, Payment, and other Bonds, identified as exhibits _____ and consisting of _____ pages.

8.4. Notice to Proceed.

8.5. General Conditions (pages _____ to ____, inclusive).

8.6. Supplementary Conditions (pages _____ to ____, inclusive).

8.7. Specifications bearing the title _____ and consisting of ____ divisions and _____ pages, as listed in table of contents thereof.

8.8. Drawings consisting of a cover sheet and sheets numbered _____ through _____, inclusive with each sheet bearing the following general title:

(Fill in, and, if a set of Drawings is not attached to each signed counterpart of Agreement, so indicate in which case OWNER and CONTRACTOR should initial or otherwise appropriately identify each Drawing.)

8.9. Addenda numbers _____ to ____, inclusive.

(Those Addenda which pertain exclusively to the bidding process need not be listed.)

8.10. CONTRACTOR's Bid (pages _ to ____, inclusive) marked exhibit _____.

8.11. Documentation submitted by CONTRACTOR prior to Notice of Award (pages _____ to ____, inclusive.)

8.12. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

The documents listed in paragraphs 8.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

Article 9. MISCELLANEOUS

9.1. Terms used in this Agreement which are defined in Federal Contract Inserts will have the meanings indicated in the Federal Contract Inserts.

9.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.3 OWNER and CONTRACTOR each binds itself, its partners, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

9.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.5 OTHER PROVISIONS.

(*Insert other provisions here if applicable.)*

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR or identified by ENGINEER on their behalf.

This Agreement will be effective on_____, 20 _____ (which is the Effective Date of the Agreement).

OWNER_____	CONTRACTOR _____
_____	_____
By: _____	By: _____
(CORPORATE SEAL)	(CORPORATE SEAL)
Attest _____	Attest _____
Address for giving notices	Address for giving notices
_____	_____
_____	_____

(If OWNER is a public body, attach evidence)

M&C FORM #016

NOTICE OF AWARD

Dated _____, 20____

TO: _____
(Bidder)

ADDRESS: _____

_____

_____

PROJECT: _____

_____
(Insert name of Contract as it appears in the Bidding Document)

OWNER's CONTRACT NO: _____

You are notified that your Bid dated _____, 20____ for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a contract for _____

_____

_____
(Indicate total Work, alternates or sections or Work awarded)

The Contract Price of your contract is _____ Dollars ($_____).

_____ copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by _____, 20____.

1. You must deliver to the OWNER _____ fully executed counterparts of the Agreement including all the Contract Documents. This includes the triplicate sets of Drawings. Each of the Contract Documents must bear your signature on the cover.

2. You must deliver with the executed Agreement the Contract Security (Bonds) as specified in the General Specifications and the Certificate of Insurance as specified in the Federal Contract Inserts.

3. (List other conditions precedents).

_____

_____

_____

_____

_____

_____

_____

_____

Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid in default, to annul this Notice of Award and to declare your Bid Security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

_____
(Owner)

By: _____
(Authorized Signature)

_____
(Title)

ACCEPTANCE OF AWARD

_____
(Contractor)

By: _____
(Authorized Signature)

_____
(Title)

Federal Contract Inserts

CD - 8.1

General Conditions - Part I

1. Definitions
2. Engineer's Authority
3. Materials, Services, Workmanship and Facilities
4. Equals
5. Additional Instructions and Detail Drawings
6. Requests for Supplemental Information
7. Shop Drawings
8. Drawings and Specifications
9. Warranty of Title
10. Samples, Certificates and Tests
11. Surveys, Permits, and Codes
12. Patents
13. Superintendence by Contractor
14. Protection of Work, Property and Persons
15. Accident Prevention
16. Sanitary Facilities
17. Use of Premises/Storage
18. Schedules, Reports and Records
19. Inspection
20. Payments to Contractor
21. Payments by Contractor
22. Public Body's Use of Premises
23. Changes in the Work
24. Claims for Extra Cost/Subsurface Conditions
25. Time for Completion and Liquidated Damages
26. Suspension of Work, Termination and Delay
27. Correction of Work
28. Cleanup Requirements
29. Fitting and Coordination of the Work
30. Subcontracting
31. Separate Contracts
32. Lands and Rights-of-Way
33. As Constructed Drawings
34. Final Inspection and Closeout
35. Insurance
36. Assignment of Contract
37. Indemnification
38. Guarantee
39. Notices
40. Access to Records
41. Withholding of Funds
42. Federal Funding Termination
43. Interest of Contractor
44. Political Activity
45. Interest of Officials
46. Provisions Required by Law Deem Inserted
47. Contract Security
48. Contractual Disputes
49. Administrative Appeals Procedure and Arbitration
50. Other Contractual Requirements

General Conditions Part I must be included in CDBG contracts unless another substantially equivalent contract is provided by another state or federal agency which provides funding for the same activity and **equivalency is certified by the Project Engineer**. In such case, Section 40 Access to Records and all reference to Virginia Code provisions must be included.

1. Definitions

A. Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:

B. ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications, or corrections.

C. BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

D. BIDDER - Any person, firm, or corporation submitting a BID for the WORK.

E. BONDS - Bid, Performance, and Payment Bonds and other instruments of surety, furnished by the CONTRACTOR and the CONTRACTOR'S surety in accordance with the CONTRACT DOCUMENTS.

F. CHANGE ORDER – A written amendment to the construction contract between the CONTRACTOR and OWNER that changes either the CONTRACT PRICE and/or the CONTRACT TIME. All change orders must be approved by DHCD prior to their execution and must be signed by the ENGINEER/ARCHITECT, OWNER, CONTRACTOR and DHCD.

G. CONTRACT DOCUMENTS - The contract, including Invitation to BID, Instructions for BIDDERS, BID, BID BOND, Agreement, Payment BOND, Performance BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

H. CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

I. CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

J. CONTRACTOR - The person, firm, or corporation with whom the OWNER has executed the Agreement.

K. DRAWINGS - The parts of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

L. ENGINEER - The engineer or architect responsible for the design and quality control of the WORK and so designated by the CONTRACT DOCUMENTS; or any other person or firm so designated by the PUBLIC BODY.

M. FIELD ORDER - A written order effecting a change in the WORK but not altering the scope of the project or involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

N. NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

O. NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date for commencement of the WORK.

P. PROJECT - The undertaking to be performed in the manner as provided in the CONTRACT DOCUMENTS.

Q. PROJECT MANAGER - The authorized representative of the PUBLIC BODY for the PROJECT so named in the CONTRACT DOCUMENTS or any other person so designated by the PUBLIC BODY.

R. PUBLIC BODY - The legislative, executive or judicial body, agency, office, department, authority, post, commission, committee, institution, board or political subdivision created to perform some governmental duty, and which is empowered by law to undertake the activities described in the CONTRACT DOCUMENTS; and which is designated as such in the Agreement of the CONTRACT DOCUMENTS.

S. SCOPE OF THE PROJECT - The defined geographic area as set forth in the CDBG contract between the GRANTEE and DHCD within which construction improvements are being made that will benefit LMI persons who reside within that area.

T. SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

U. SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

V. SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

W. SUBSTANTIAL COMPLETION - That date certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in

accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

X. SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

Y. WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

Z. WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at their last given address, or delivered in person to said party or their authorized representative on the WORK.

2. Engineer's Authority

A. The ENGINEER shall act as the PUBLIC BODY's representative during the construction period in the capacity as detailed in the CONTRACT DOCUMENTS. The ENGINEER shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed, and shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER shall make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

B. Inspections may be at the factory or fabrication plant of the source of material supply.

C. The ENGINEER shall not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.

D. The ENGINEER shall promptly make decisions relative to the interpretation of the CONTRACT DOCUMENTS, insofar as he has the authority to do so by provisions of the CONTRACT DOCUMENTS in his capacity as representative of the PUBLIC BODY.

3. Materials, Services, Workmanship and Facilities

A. It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

B. Materials shall be stored so as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

C. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

D. Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

E. The CONTRACTOR shall submit to the ENGINEER for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which is to be installed in the WORK. The CONTRACTOR shall further submit full information as to type, performance characteristics, and all other pertinent information as required concerning such equipment. The CONTRACTOR shall submit to the ENGINEER for approval full information, as required, concerning all other materials or articles which he proposes to incorporate in the WORK.

F. Machinery, mechanical and other equipment, materials and articles installed or used without such prior approval shall be at the risk of subsequent rejection.

G. Materials specified by reference to the number or symbol of a specific standard, such as on A.S.T.M. Standards, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation To Bids, except as limited to type, class, or grade, or modified in such reference. The standards referred to, except as modified in the SPECIFICATIONS, shall have full force and effect as though printed therein.

H. Unless otherwise specifically provided for in the SPECIFICATIONS, all workmanship, equipment, materials and articles incorporated into the WORK shall be new and the best grade of respective kinds for the purpose.

4. Equals

Whenever a material, article or piece of equipment is identified in the SPECIFICATIONS by reference to manufacturer's or vendor's names, trade names, catalog numbers, etc. it is intended merely to establish a standard; and unless otherwise provided in the Invitation to Bid any material, article, or equipment of other manufacturers and vendors which the ENGINEER determines to be equal of that specified, considering quality, workmanship, economy of operation, and suitability of purpose intended, shall be accepted. The purchase or installation of such substituted material or equipment will not be allowed without the ENGINEER'S prior written approval.

5. Additional Instructions and Detail Drawings

A. The CONTRACTOR may be furnished, with additional instructions and detail drawings by the ENGINEER, as necessary to carry out the CONTRACT DOCUMENTS.

B. The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawing and instructions.

6. Requests for Supplemental Information

A. The CONTRACTOR shall request that the ENGINEER provide any additional information not already in his possession in order to execute the WORK. Such requests shall be made in a timely manner as the need appears, and shall be submitted in sufficient advance to allow preparation and appropriate action to be taken so as to avoid delay.

B. Requests which shall be in writing must list the necessary items and the date by which each will be required by the CONTRACTOR. The first such list shall be submitted within two weeks after AWARD of CONTRACT and shall be as complete as possible at that time.

C. The CONTRACTOR shall furnish any assistance and information the ENGINEER may require in responding to these requests.

D. The CONTRACTOR shall be fully responsible for any delays in his work or to others due to his failure to comply with the provisions of this section.

7. Shop Drawings

A. The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS.

B. The approval of a SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

C. The approval of a SHOP DRAWING which the ENGINEER deems to be a minor adjustment of the CONTRACT DOCUMENTS not involving scope change a change in the contract price or extension of time shall be evidenced by written documentation in substance, as follows:

"The modification shown on the attached drawing is approved in the interest of the PUBLIC BODY to effect an improvement for the project and is ordered with the understanding that it does not involve any change in scope, contract price or time; that it is subject generally to all CONTRACT DOCUMENTS and that it is without prejudice to any and all rights of the PUBLIC BODY under the CONTRACT and bond or bonds."

D. When submitted for the ENGINEER'S review, SHOP DRAWINGS shall be the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

E. Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission have been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR on the site and shall be available to the ENGINEER.

8. Drawings and Specifications

A. The intent of the DRAWINGS AND SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and for all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy, or operation by the PUBLIC BODY.

B. In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over general DRAWINGS.

C. Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after discovery of such discrepancies, inconsistencies, or ambiguities shall be done at the CONTRACTOR'S risk.

9. Warranty of Title

A. No material, supplies, or equipment to be installed or furnished under this contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The CONTRACTOR shall warrant good title to all materials, supplies, and equipment installed or incorporated in the WORK, and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the PUBLIC BODY free from any claims, liens or charges.

B. Neither the CONTRACTOR nor any person, firm, or corporation furnishing any material or labor for any work covered by this contract shall have any right to lien upon any improvement or appurtenance thereon.

C. Nothing in this section, however, shall impair the right of persons furnishing materials or labor to recover under any bond given by the CONTRACTOR or any rights under the law permitting such persons to look to the funds due the CONTRACTOR in the hands of the PUBLIC BODY.

D. The provisions of this section shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the WORK when no formal contract is entered into for such materials.

10. Samples, Certificates and Tests

A. The CONTRACTOR shall submit all materials or equipment samples, certificates, affidavits, etc. as required by the ENGINEER or called for in the CONTRACT DOCUMENTS. No such material or equipment shall be manufactured or delivered at the site except at the CONTRACTOR'S BOND, and except at the CONTRACTOR' S risk until required samples have been approved in writing by the ENGINEER. Any delay in the WORK caused by late or improper submission of samples or certificates for approval shall not be considered just cause for extension of contract time.

B. Each sample submitted by the CONTRACTOR shall carry a label giving the name of the CONTRACTOR, the PROJECT, and the name of the producer. The accompanying certificate or letter from the CONTRACTOR shall state that the sample complies with contract requirements, shall state the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information. It should also include a statement that all materials or equipment furnished for use in the PROJECT shall comply with the samples and/or certified statements.

C. Approval of materials shall be general only and shall not constitute a waiver of the PUBLIC BODY'S right to demand full compliance with the CONTRACT DOCUMENTS. After actual deliveries, the ENGINEER shall have such tests made as he deems necessary and may reject materials, equipment and accessories for cause, even though such materials and equipment have been given general approval. If materials, equipment or accessories which fail check tests have been incorporated into the WORK, the ENGINEER shall have the right to cause their removal, and replacement by proper materials or to secure such preparation by the CONTRACTOR as is equitable.

D. Except as otherwise specifically stated in the CONTRACT DOCUMENTS the costs of sampling and testing will be divided as follows:

(1) The CONTRACTOR shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes.

(2) The CONTRACTOR shall assume all costs of re-testing materials which fail to meet contract requirements.

(3) The CONTRACTOR shall assume all costs of testing materials offered in substitution for those found deficient.

(4) The PUBLIC BODY will pay all other expenses.

E. If the CONTRACT DOCUMENTS, laws, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested or approved by someone other than the CONTRACTOR or ENGINEER, the CONTRACTOR will give the ENGINEER notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

11. Surveys, Permits, and Codes

A. The PUBLIC BODY shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of benchmarks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the PUBLIC BODY, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slopes, stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cutsheets.

B. The CONTRACTOR shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

C. Permits and licenses of a temporary nature necessary for prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the CONTRACT DOCUMENTS.

Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the PUBLIC BODY unless otherwise specified.

D. The CONTRACTOR shall give all notices and comply with all applicable laws, ordinances and codes of the appropriate jurisdictions for the WORK as drawn and specified. Before installing any work, the CONTRACTOR shall examine the CONTRACT DOCUMENTS for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the ENGINEER in writing and any necessary changes shall be adjusted as provided for in Section 23, CHANGES IN THE WORK.

Should the CONTRACTOR fail to observe the foregoing provisions and proceed with the WORK or variance with any applicable ordinance or code (Notwithstanding compliance with the CONTRACT DOCUMENTS), the CONTRACTOR shall remove such work without cost to the PUBLIC BODY, and proceed in the manner specified in this section.

E. The CONTRACTOR shall at his own expense secure and pay the appropriate department of the appropriate public authority fees or charges for all permits for street pavement, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, gas and sewer permits required within the jurisdiction.

F. The CONTRACTOR shall comply with applicable laws, and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the PROJECT and commit no trespass on any public or private property in any operation due to or connected with the WORK.

12. Patents

The CONTRACTOR shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights, and save the PUBLIC BODY harmless from loss on account thereof, except that the PUBLIC BODY shall be responsible for any such loss when a particular manufacturer is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent the CONTRACTOR shall be responsible for such loss unless the CONTRACTOR promptly gives such information to the ENGINEER.

13. Superintendence by Contractor

A. Except where the CONTRACTOR is an individual and provides personal superintendence to the WORK, the CONTRACTOR shall provide a competent superintendent, satisfactory to the ENGINEER and PUBLIC BODY, on the WORK at all times during working hours with full authority to act. The CONTRACTOR shall also provide adequate personnel for the proper coordination and expediting of his work.

B. The CONTRACTOR will he held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK.

C. The CONTRACTOR shall lay out his own work and he shall be responsible for all work executed by him under the CONTRACT. He shall verify all figures and elevations before proceeding with the WORK and will be held responsible for any error resulting from his failure to do so.

14. Protection of Work, Property and Persons

A. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection: (1) to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby; and, (2) all material and equipment to be incorporated therein, whether in storage on or off the site or adjacent thereof, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities not designated for removal, relocation or replacement during the course of construction.

B. The CONTRACTOR will comply with applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The CONTRACTOR will notify owners of adjacent utilities when prosecution of the WORK may affect them.

The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK all necessary safeguards for safety and protection. The CONTRACTOR shall remedy all damage or loss to any property caused directly or indirectly, in whole or part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone of whose acts any of them may be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the PUBLIC BODY, of the ENGINEER or anyone employed by either of them or anyone whose acts either of them may be liable, and not attributable, directly or indirectly in whole or in part, to the fault or negligence of the CONTRACTOR.

C. The CONTRACTOR shall shore up, brace, underpin, secure and protect as may be necessary all foundations and other parts of existing structures adjacent to, or in the vicinity of the WORK, which may be affected in any manner by the WORK. The CONTRACTOR shall be responsible for giving any and all required notices to any potentially affected property owner or other affected party prior to commencement of any work.

D. In an emergency affecting the safety of life, limb or property, including adjoining property, the CONTRACTOR, without special instructions or authorization from the PUBLIC BODY, is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed by the PUBLIC BODY or the ENGINEER. Any compensation claimed will be determined by the procedure in Section 23, CHANGES IN THE WORK.

15. Accident Prevention

A. No person employed in the performance of this CONTRACT shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his health or safety as determined under construction and health standards promulgated by the Secretary of Labor.

B. Machinery, equipment and all site hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc. , to the extent that such provisions do not conflict with applicable law.

C. The CONTRACTOR shall maintain an accurate record of all cases of death, occupational disease or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on this PROJECT.

16. Sanitary Facilities

The CONTRACTOR shall furnish, install and maintain ample sanitary facilities for workers. These facilities shall be sufficient to meet the needs of the PROJECT and be located to the satisfaction of the PUBLIC BODY. All such facilities and services shall be furnished in strict accordance with applicable health regulations.

17. Use of Premises/Storage

A. The CONTRACTOR shall confine his equipment, storage of materials, and construction operations to PROJECT area as shown in the CONTRACT DOCUMENTS and prescribed by ordinances or permits, or as may be desired by the PUBLIC BODY, and shall not unreasonably encumber the PROJECT area or public rights-of-way with his materials and construction equipment.

B. The CONTRACTOR shall consult with the PUBLIC BODY and the ENGINEER for suitable storage space for bulk materials on each project. If sufficient storage is not available on the PROJECT site the CONTRACTOR shall arrange for storage elsewhere.

C. The CONTRACTOR shall comply with all reasonable instructions of the PUBLIC BODY, the ENGINEER, and all applicable regulations regarding signs, advertising, traffic, fires, explosives, danger signals and barricades.

18. Schedules, Reports and Records

A. The CONTRACTOR shall submit to the PUBLIC BODY such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required for the WORK to be performed.

B. Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which the CONTRACTOR proposes to carry out the WORK, including dates at which various parts of the WORK will be started, estimated dates of completion of each part, and as applicable:

(1) The dates at which special detail drawings will be required.

(2) Respective dates for submission of SHOP DRAWINGS, the beginning of manufacturer, testing and the installation of materials, supplies and equipment.

C. The CONTRACTOR shall submit a schedule of payments that the CONTRACTOR anticipates will be earned during the course of the WORK.

D. The PUBLIC BODY, the ENGINEER, their authorized representatives, and authorized representatives of participating state and federal agencies shall have at all times access to the WORK, materials, payrolls, records, personnel, invoices of materials or other relevant data and records. The CONTRACTOR shall provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.

19. Inspection

A. All materials and workmanship shall be subject to inspection, examination, or test by the PUBLIC BODY and the ENGINEER of any and all items during manufacture or construction, and at any and all places where such manufacture or construction is carried on. The PUBLIC BODY and ENGINEER shall have the right to reject defective materials and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected.

B. The ENGINEER shall act as the PUBLIC BODY'S representative in carrying out inspection and in assessing the acceptability of all aspects of the WORK in accordance with the CONTRACT DOCUMENTS. The opinions and directives of the ENGINEER concerning the WORK shall be adhered to at all times unless they conflict with the CONTRACT DOCUMENTS or are superseded by the PUBLIC BODY.

C. The CONTRACTOR shall promptly furnish all materials reasonably necessary for any tests which may be required. All tests performed by the ENGINEER will be performed in such a manner as not to delay the WORK unnecessarily and will be made in accordance with the provisions of the CONTRACT DOCUMENTS.

D. The CONTRACTOR shall notify the ENGINEER sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval of the ENGINEER, the CONTRACTOR shall uncover for inspection and re-cover such facilities all at his Ohm expense.

E. Should the PUBLIC BODY consider it necessary at any time prior to final acceptance of the WORK to examine any work already approved and completed, the CONTRACTOR shall on request promptly furnish all necessary facilities, labor and material. If such work is found to be defective due to the fault of the CONTRACTOR or his SUBCONTRACTORS, the CONTRACTOR shall defray the cost of such re-examination and of satisfactory reconstruction.

If such work is found to be acceptable according to the CONTRACT DOCUMENTS, the actual cost of such re-examination in labor and materials, plus 15% of such costs to cover general expenses shall be allowed the CONTRACTOR, and if such re-examination has delayed the WORK to a significant degree he shall be allowed a commensurate time extension.

20. Payments to Contractor

A. Partial Payments

(1) The CONTRACTOR shall prepare his requisition for partial payment as of the last day of the month (unless the payment schedule is tied to milestone, in such case requisition is prepared at appropriate stage of completion) and submit it with the required number of copies to the ENGINEER for his approval. The amount of the payment due the CONTRACTOR shall be determined by adding the total value of the work completed to date to the value of the materials properly stored at the site, and deducting (a) five percent (5%) of the total amount to be retained until final payment, (b) the amount of all previous payments, and, (c) such claims as may be specifically excepted by the CONTRACTOR as provided for in Section 48 hereof. The total value of work completed to date shall be based upon the

estimated quantities of work completed and on the unit prices contained in the agreement; mobilization costs shall not be included. The value of the materials properly stored on site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection by the ENGINEER.

(2) The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment and submit the partial payment estimate to the PUBLIC BODY, or return the partial payment estimate to the CONTRACTOR indicating in writing the reason for refusing to approve payment. In such case the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The PUBLIC BODY will within thirty (30) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment.

(3) Monthly or partial payments made by the PUBLIC BODY to the CONTRACTOR are moneys advanced for the purpose of assisting the CONTRACTOR to expedite the WORK. The CONTRACTOR shall be responsible for the care and protection of all materials and work upon which such payments have been made until final acceptance of the PROJECT by the PUBLIC BODY. Such payments shall not constitute a waiver of the right of the PUBLIC BODY to require the fulfillment of all terms of the CONTRACT DOCUMENTS and all improvement embraced therein to the satisfaction of the PUBLIC BODY.

B. Final Payment

(1) After final inspection and acceptance by the PUBLIC BODY of all WORK according to the CONTRACT DOCUMENTS, the CONTRACTOR shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work and the applicable unit prices stipulated in the CONTRACT DOCUMENTS. The total amount of the final payment due the CONTRACTOR under this CONTRACT shall be the amount computed as described above less all previous payments. Final payment shall be made subject to the CONTRACTOR furnishing the PUBLIC BODY with a release in satisfactory form of all claims against the PUBLIC BODY arising under and by virtue of the CONTRACT DOCUMENTS, other than such claims as may be specifically excepted by the CONTRACTOR from the operation of the release as provided for under Section 48, CONTRACTUAL DISPUTES.

(2) If a lump sum CONTRACT price is in effect the following wording is operative "The amount of the final payment due the CONTRACTOR shall be the lump sum shown in the CONTRACT DOCUMENTS or this sum as adjusted by approved CHANGE ORDERS.

(3) The PUBLIC BODY, before paying the final payment, may require the CONTRACTOR to furnish releases or receipts from all SUBCONTRACTORS having performed any work and all persons having supplied materials, equipment and services to the CONTRACTOR, if the PUBLIC BODY deems the same necessary in order to protect its interests. The PUBLIC BODY may if it deems it advisable make payment to the CONTRACTOR in part or in full without requiring the furnishing of such releases or receipts, and any payments so made shall in no way impair the obligations of any surety furnished under the terms of the CONTRACT DOCUMENTS.

(4) Any amount withheld by the PUBLIC BODY as "Liquidated Damages" under the terms of the CONTRACT DOCUMENTS shall be deducted from the final payment due the CONTRACTOR.

(5) Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate to be attached to the final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire amount due the CONTRACTOR as described in provisions of this section shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK. If the PUBLIC BODY fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment, interest of the maximum legal rate commencing on the first day after said payment is due and continuing until payment is received by the CONTRACTOR.

C. Acceptance of Final Payment

The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the PUBLIC BODY of all claims and all liability to the CONTRACTOR other than claims in stated amounts which may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the PUBLIC BODY and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the CONTRACT DOCUMENTS or the Performance or Payment BONDS.

21. Payments by Contractor

Except in cases of bona fide disputes, or where the CONTRACTOR has some other justifiable reason for delay, the CONTRACTOR shall pay:

A. For all transportation and utility services not later than the end of the calendar month following that in which the services are rendered.

B. For all materials, tools and other expendable equipment to the extend of ninety percent (90%) of the cost thereof not later than the end of the calendar month following that in which such materials, tools and equipment are delivered at the site of the PROJECT.

C. To each of his SUBCONTRACTORS, not later than the end of the calendar month in which each payment is made to the CONTRACTOR, the representative amount allowed the CONTRACTOR on account of the work performed by his SUBCONTRACTORS, to the extent of each SUBCONTRACTOR'S interest therein.

22. Public Body's Use of Premises

A. Prior to SUBSTANTIAL COMPLETION, the PUBLIC BODY with the concurrence of the ENGINEER and the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

B. The PUBLIC BODY shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the PUBLIC BODY.

23. Changes in The Work

A. The PUBLIC BODY may make changes in the WORK required to be performed by the CONTRACTOR under the CONTRACT DOCUMENTS without releasing the CONTRACTOR from any of his obligations under the CONTRACT DOCUMENTS or any guarantee given by him pursuant to the CONTRACT provisions, and without affecting the validity of the guaranty BONDS, and without relieving or releasing the surety or sureties of said BONDS. All WORK shall be executed under the terms of the original CONTRACT DOCUMENTS unless it is expressly provided otherwise. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER. All change Orders must be approved by the Virginia Department of Housing and Community Development (DHCD) and may not alter the scope of the project. DHCD must receive justification for Change Orders from the grantee.

B. Except for the purpose of affording protection against any emergency endangering health, life, limb or property as specified in Section 14, the CONTRACTOR shall make no change in the WORK as specified in the CONTRACT DOCUMENTS unless in pursuance of a written approved CHANGE ORDER from the PUBLIC BODY

authorizing the CONTRACTOR to proceed with the change. No claim for an adjustment of the CONTRACT PRICE or time will be valid unless so ordered.

C. If applicable unit prices are contained in the CONTRACT DOCUMENTS, the PUBLIC BODY may order the CONTRACTOR to proceed with the applicable unit prices specified in the CONTRACT DOCUMENTS; provided that in the case of a unit price contract the net value of all changes does not increase or decrease the original total amount shown in the CONTRACT DOCUMENTS by more than twenty five percent (25%).

D. If the applicable unit prices are not contained in the CONTRACT DOCUMENTS or if the total net change increases or decreases the total CONTRACT PRICE more than twenty five percent (25%), or $10,000 (whichever is greater) the PUBLIC BODY shall, before ordering the CONTRACTOR to proceed with the desired changes, request from him an itemized proposal covering the WORK involved in the change after which the procedure shall be as follows:

(1) If the proposal is acceptable the PUBLIC BODY will prepare the CHANGE ORDER in accordance therewith for acceptance by the CONTRACTOR.

(2) If the proposal is not acceptable, the PUBLIC BODY shall order the WORK change to be commenced and the CONTRACTOR and PUBLIC BODY shall follow the procedure detailed in Section 48, Contractual Disputes.

E. Each CHANGE ORDER shall include in its final form:

(1) A detailed description of the change in the WORK

(2) The CONTRACTOR'S proposal (if any) or a confirmed copy thereof

(3) A definite statement as to the resulting change in the CONTRACT PRICE or TIME

(4) The statement that all WORK involved in the change shall be performed in accordance with the CONTRACT DOCUMENTS except as modified by the CHANGE ORDER.

F. The procedures as outlined in this section for a unit price CONTRACT also apply in the case of a lump sum CONTRACT.

G. The ENGINEER also, may at any time, by issuing a FIELD ORDER make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles the CONTRACTOR to a change in

CONTRACT PRICE or TIME, or both, in which event the CONTRACTOR shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of such ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instructions from the PUBLIC BODY.

H. All change orders must be approved in writing and in advance of any associated work performance by DHCD. Any change order, regardless of the cost, which results in a change in project scope will be disallowed.

24. Claims for Extra Cost/Subsurface Conditions

A. Should the CONTRACTOR claim that any instructions by DRAWINGS or otherwise entitles him to a change in CONTRACT PRICE or TIME he shall follow the procedures in SECTION 23.

B. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines or bench marks, will not be recognized unless accompanied by certified survey data made prior to the time the original ground was disturbed, clearly showing that errors exist which result in handling more material, or performing more work, than could be reasonably estimated from the CONTRACT DOCUMENTS.

C. Any discrepancies which may be discovered between the actual conditions and those represented by the CONTRACT DOCUMENTS shall at once be reported to the PUBLIC BODY and work shall not proceed except at the CONTRACTOR' S risk until written instructions have been issued by the PUBLIC BODY.

D. The PUBLIC BODY shall promptly investigate the conditions, and if it is found that such conditions do so materially differ from those upon which the CONTRACT DOCUMENTS are based, and cause an increase or decrease in the cost of, or time required for, performance of the WORK an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER.

Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless required WRITTEN NOTICE has been given; provided that the PUBLIC BODY may, if it determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

25. Time for Completion and Liquidated Damages

A. The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on the date specified in the NOTICE TO PROCEED.

B. The CONTRACTOR will proceed with the WORK at such rate of PROGRESS to insure full completion within the CONTRACT TIME. It is expressly understood and agreed by and between the CONTRACTOR and the PUBLIC BODY that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

C. Liquidated Damages for Delays

If the WORK is not completed within the time stipulated in the CONTRACT DOCUMENTS including any extensions of time for excusable delays as herein provided, the CONTRACTOR shall pay to the PUBLIC BODY as fixed, agreed and liquidated damages for each calendar day of delay, until the WORK is completed, the amount set forth in the CONTRACT DOCUMENTS hereof and the CONTRACTOR and his sureties shall be liable to the PUBLIC BODY for the amount thereof. These fixed, agreed and liquidated damages are being set for delay because fixing actual damages for delay is impractical and extremely difficult.

The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the PUBLIC BODY and the ENGINEER:

(1) To any preference, priority or allocation order duly issued by the PUBLIC BODY.

(2) To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the PUBLIC BODY, acts of another CONTRACTOR in the performance of a contract with the PUBLIC BODY, fires, floods, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather, and

(3) To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs C.(1) and C.(2) of this Section.

The aforementioned exemptions from payment of liquidated damages shall apply only if the CONTRACTOR promptly notifies the PUBLIC BODY within ten (10) days with WRITTEN NOTICE documenting the cause of such delay.

Upon receipt of such NOTICE the PUBLIC BODY shall ascertain the facts and the cause and the extent of such delay. If upon the basis of the facts and the terms of the CONTRACT DOCUMENTS, the delay is properly excusable, the PUBLIC BODY

shall extend the CONTRACT TIME for completion of the WORK for a period commensurate with the period of excusable delay.

26. Suspension of Work, Termination And Delay

A. The PUBLIC BODY may suspend the WORK or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the CONTRACTOR by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which shall fix the date on which the WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

B. If the CONTRACTOR is adjudged bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of its property or if the CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment, or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK, or disregards the authority of the ENGINEER, or otherwise violates any provision of the CONTRACT DOCUMENTS, then the PUBLIC BODY may, without prejudice to any other right or remedy and after giving the CONTRACTOR and its surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate services of the CONTRACTOR and take possession of the PROJECT and all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR and finish the WORK by whatever method the PUBLIC BODY may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the PUBLIC BODY. Such costs incurred by the PUBLIC BODY will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

C. Where the CONTRACTOR'S services have been so terminated by the PUBLIC BODY, said termination shall not affect any right of the PUBLIC BODY against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the PUBLIC BODY due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

D. After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the PUBLIC BODY may, without cause or prejudice to any other right or remedy, elect to abandon the PROJECT and to terminate the CONTRACT. In

such case the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

E. It through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the PUBLIC BODY or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the PUBLIC BODY fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded through the legally recognized disputed claim procedure within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the PUBLIC BODY terminate the CONTRACT and recover from the PUBLIC BODY payment for all WORK executed and expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the PUBLIC BODY has failed to make any payment as foresaid, the CONTRACTOR may upon ten (10) days WRITTEN NOTICE to the PUBLIC BODY and ENGINEER stop the WORK until all amounts then due are paid, in which event and upon resumption of the WORK CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME, or both, to compensate for the costs and delays attributable to the stoppage of the WORK.

F. If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of the PUBLIC BODY or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the Costs and delays necessarily caused by the failure of the PUBLIC BODY or ENGINEER.

27. Correction of Work

A. The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the PUBLIC BODY and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

B. All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the PUBLIC BODY may remove such WORK and store the materials at the expense of the CONTRACTOR.

C. If the PUBLIC BODY deems if not expedient to require the CONTRACTOR to correct WORK not done in accordance with the CONTRACT DOCUMENTS, an agreement may be made between the PUBLIC BODY and the CONTRACTOR for a change in CONTRACT PRICE with an equitable deduction in lieu of replacement and removal.

28. Cleanup Requirements

A. The construction premises, job sites and any property leased for storage of equipment or materials shall be maintained by the CONTRACTOR in reasonably neat and orderly condition, free from accumulation of waste material and rubbish during the entire construction period. All crates, cartons and other flammable and trash shall be removed from work areas at the end of each working day. Trash burning on the site shall be prohibited unless done in accordance with local ordinance.

B. The CONTRACTOR shall remove all rubbish and debris from WORK with reasonable promptness. Rubbish and debris shall not be permitted to accumulate in excessive amounts that will become hazardous underfoot and to vehicular traffic.

C. Upon completion of the WORK, the CONTRACTOR shall remove all temporary construction facilities, including buildings, fences, scaffolding, unused materials; and rubbish of any kind. Buildings, job site and adjacent property shall be left in a neat and clean condition acceptable to the PUBLIC BODY.

29. Fitting and Coordination of the Work

The CONTRACTOR shall be responsible for the proper fitting of all WORK and for the coordination of the operation of all trades, SUBCONTRACTORS, or material supplies engaged in the WORK. The CONTRACTOR shall guarantee to each of his SUBCONTRACTORS the locations and measurements which they may require for the fitting of their work to all surrounding work.

30. Subcontracting

A. The CONTRACTOR may utilize specialty SUBCONTRACTS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

B. The CONTRACTOR shall not contract with any proposed SUBCONTRACTOR without the prior written approval of the PUBLIC BODY. Prior to the award of each SUBCONTRACT, the CONTRACTOR shall notify the PUBLIC BODY and the ENGINEER in writing of the name and trade of each SUBCONTRACTOR proposed, and furnish such written information as the PUBLIC BODY and the ENGINEER may require concerning the proposed SUBCONTRACTOR. Any objection the PUBLIC BODY may have concerning the proposed SUBCONTRACT shall be expressed in

writing within seven (7) days after receipt by the PUBLIC BODY of the CONTRACTOR'S proposal of a SUBCONTRACT.

C. The PUBLIC BODY may, without claim for extra cost by the CONTRACTOR, disapprove of any SUBCONTRACTOR based upon its own determination, or because of the fact that the proposed SUBCONTRACTOR is listed as ineligible to receive award of CONTRACTS for federally funded jobs due to being listed as debarred by the U. S. Department of Housing and Urban Development, the U. S. Department of Labor, or the Commonwealth of Virginia.

D. The CONTRACTOR shall be as fully responsible for the acts and omissions of its SUBCONTRACTORS, and for persons either directly or indirectly employed by them, as the CONTRACTOR is for the acts and omissions of persons employed by the CONTRACTOR.

E. The CONTRACTOR shall cause appropriate provisions to be inserted in all SUBCONTRACTS relative to the WORK to bind SUBCONTRACTORS to applicable provisions of the CONTRACT DOCUMENTS.

F. There shall be nothing contained in the CONTRACT DOCUMENTS that shall create any contractual relation between any SUBCONTRACTOR and the PUBLIC BODY.

31. Separate Contracts

A. The PUBLIC BODY reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate the WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends on the work of any other contractors, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defect in such work that render it unsuitable for such proper execution and results.

B. The PUBLIC BODY may perform additional work related to this PROJECT or the PUBLIC BODY may let other contracts containing provisions similar to these. The CONTRACTOR shall afford the other contractors who are parties to such contracts (or the PUBLIC BODY if the PUBLIC BODY is performing the additional work) reasonable opportunity for the introduction and storage of equipment and materials and the execution of work, and shall properly connect and coordinate the WORK with theirs.

C. If the performance of additional work by other contractors or the PUBLIC BODY is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to

starting any such additional work. If the CONTRACTOR believes that the performance of such additional work by the PUBLIC BODY entitles him to an extension of CONTRACT TIME, the CONTRACTOR may make a claim thereof for a CHANGE ORDER.

32. Lands and Rights-Of-Way

A. Prior to issuance of NOTICE TO PROCEED the PUBLIC BODY shall obtain all land and rights-of-way necessary for carrying out and for completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

B. The PUBLIC BODY shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

33. As Constructed Drawings

The CONTRACTOR shall provide the ENGINEER with accurate information to be used in the preparation of permanent As Constructed Drawings. For this purpose, the CONTRACTOR shall record on one set of CONTRACT DRAWINGS all changes from the installations originally indicated, and record final locations of underground lines by depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks etc.

34. Final Completion Inspection and Closeout

A. When the WORK as described in the CONTRACT DOCUMENTS is substantially completed, the CONTRACTOR shall notify the ENGINEER and PUBLIC BODY by WRITTEN NOTICE that the WORK will be ready for final inspection on a definite date specified in such NOTICE. The WRITTEN NOTICE shall be given at least ten (10) days prior to the date state for final inspection. If the PUBLIC BODY determines that the status of the WORK is as represented, it will make arrangements necessary to conduct final inspection on the date stated in the NOTICE, or as soon thereafter as is practicable. The inspection party will include the ENGINEER and such representatives of the PUBLIC BODY as deemed appropriate.

B. After the ENGINEER and the PUBLIC BODY have been satisfied that the CONTRACTOR has performed satisfactorily in accordance with the CONTRACT DOCUMENTS, the ENGINEER will certify that the CONTRACTOR is eligible for final payment by the PUBLIC BODY.

C. The CONTRACTOR is required to execute a Release of Liens, Payment in Full to Subcontractors and Material Suppliers Certification, Warranty of Materials and Workmanship and all other appropriate documents that are essential to close out of the PROJECT as requested by the PUBLIC BODY.

D. The PUBLIC BODY'S attorney will review the CONTRACTOR'S close out documents prior to acceptance by the PUBLIC BODY. If the PUBLIC BODY and its attorney are satisfied that the PUBLIC BODY is released from all liens, claims or other charges connected with the WORK, the PUBLIC BODY will make payment to the CONTRACTOR.

35. Insurance

A. The CONTRACTOR shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the CONTRACTOR'S execution of the WORK, whether such execution be by the CONTRACTOR, any SUBCONTRACTOR, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

(1) Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

(2) Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;

(3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than employees;

(4) Claims for damages insured by usual personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (b) by any other person; and

(5) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.

B. Certificates of Insurance acceptable to the PUBLIC BODY shall be filed with the PUBLIC BODY prior to commencement of the WORK. These Certificates shall contain a provision that coverage afforded under the policies will not be cancelled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the PUBLIC BODY.

C. The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, Liability insurance as herein- after specified:

(1) Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by the CONTRACTOR or by any SUBCONTRACTOR employed by the CONTRACTOR or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR employed by the CONTRACTOR. Insurance shall be written with a limit of liability of not less than $500,000 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by anyone person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $200,000 aggregate for any such damage sustained by two or more persons in any accident.

(2) The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the PUBLIC BODY, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

D. The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, in accordance with the provisions of State law, Workman's Compensation Insurance, including occupational disease provisions, for all of the CONTRACTOR'S employees at the site of the PROJECT and in case any WORK is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site for the PROJECT is not protected under Workmen's Compensation statue, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of its employees not otherwise protected.

E. The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the PUBLIC BODY, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the PUBLIC

BODY. The policy shall name as the insured the CONTRACTOR, and the PUBLIC BODY.

36. Assignment of Contract

A. The CONTRACTOR' S obligations and duties under this CONTRACT shall not be assigned in whole or in part by the CONTRACTOR without the prior written approval of the PUBLIC BODY. This shall not prohibit the assignment of the proceeds due hereunder to a bank or financial institution, provided however that such assignment does not encumber or in any way lay claim to materials, equipment or machinery to be incorporated into the WORK or otherwise to be vested in the PUBLIC BODY by terms of the CONTRACT DOCUMENTS. This provision shall not preclude the CONTRACTOR from subletting as provided in the CONTRACT DOCUMENTS, parts of the WORK.

B. This CONTRACT may be assigned by the PUBLIC BODY to any corporation, agency, or instrumentally authorized to accept such assignment.

37. Indemnification

A. The CONTRACTOR will indemnify and hold harmless the PUBLIC BODY and the ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorney fees arising out of or resulting from the performance of the WORK, provided that such claims, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use there- from; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

B. In any and all claims against the PUBLIC BODY or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, of benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or any other employee benefit acts.

C. The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, its agents, or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

38. Guarantee

The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of substantial inspection. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of final inspection of the facility that the facility is free from all defects due to faulty materials and workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of the damages of other parts of the system resulting from such defects. The PUBLIC BODY will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments or other WORK that may be made necessary by such defects, the PUBLIC BODY may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

39. Notices

A. All NOTICES, demands, requests, instructions, approvals, proposals, and claims must be made in writing.

B. Any NOTICE to or demand upon the CONTRACTOR shall be sufficiently given if delivered at the office of the CONTRACTOR stated on the signature page of the CONTRACT DOCUMENTS (or at such other office as he may from time to time designate in writing to the PUBLIC BODY, or deposited in the United States Mail in a sealed, postage paid envelope, or if delivered with charges prepaid to any telegraph company for transmission in each case addressed to such office).

C. All NOTICES required to be delivered to the PUBLIC BODY shall, unless otherwise specified in writing to the CONTRACTOR, be delivered to the designated representative and any NOTICE to or demand upon the PUBLIC BODY shall be sufficiently given if so delivered in writing, or deposited in the United States Mail in a sealed, postage paid envelope, or delivered with charges prepaid to any telegraph company for transmission to said designated representative at such address, or to such other address as the PUBLIC BODY may subsequently specify in writing to the CONTRACTOR for such purposes.

D. Any such WRITTEN NOTICE shall be deemed to have been given as of the time of actual delivery, or in the case of mailing, when the same should have been received in due course of post, or in the case of telegrams at the time of actual receipt, as the case may be.

40. Access to Records

The PUBLIC BODY, the Inspector General of the United States, U. S. Department of Housing and Urban Development, U. S. Department of Labor, the General Accounting Office, and DHCD shall be permitted by the CONTRACTOR to have full access to, and right to examine any pertinent books, documents, papers and records of the CONTRACTOR involving transactions related to this CONTRACT, during the period of this PROJECT and for five (5) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia. The CONTRACTOR agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. The CONTRACTOR agrees to maintain all books, documents, papers and records required under this CONTRACT for a period of not less than five (5) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia.

41. Withholding Of Funds

Not withstanding the provisions of Section 20 herein, the following shall apply:

A. The PUBLIC BODY may withhold or cause to be withheld from the CONTRACTOR so much of the accrued payments or advances as may be considered necessary to satisfy any liability of the CONTRACTOR or any SUBCONTRACTOR for liquidated damages under the CONTRACT Work Hours and Safety Standards Act - Overtime Compensation.

B. If the CONTRACTOR or any SUBCONTRACTOR fails to pay any laborer, mechanic, apprentice, trainee, watchman or guard employed on the WORK all or part of the wages required by the CONTRACT DOCUMENTS, the PUBLIC BODY may, upon WRITTEN NOTICE to the CONTRACTOR, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

42. Federal Funding Termination

In the event that federal funding is terminated or otherwise unavailable for the purpose of compensating the CONTRACTOR, the CONTRACT is null and void, releasing the CONTRACTOR from further obligations contained therein.

43. Interest of Contractor

The CONTRACTOR covenants that the CONTRACTOR presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the CONTRACTOR'S services hereunder. The CONTRACTOR further covenants that in the performance of this CONTRACT no person having any such interest shall be employed.

44. Political Activity

No portion of CONTRACT funds shall be directly used for any political activity or to further the election or defeat of any candidate for public office.

45. Interest of Officials

A. No member of or delegate to the Congress of the United States, shall be admitted to any share or part of this CONTRACT or to any benefit to arise there from; but this provision shall not be construed to extend to this CONTRACT if made with a corporation for its general benefit.

B. No employee, officer or agent of the PUBLIC BODY shall participate in selection, or in the award or administration of this CONTRACT if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: the employee, officer or agent; any member of his immediate family; his partner; or an organization which employs or is about to employ any of the preceding persons has a financial or other interest in the CONTRACTOR or this CONTRACT.

46. Provisions Required By Law Deem Inserted

Each and every provision of law and clause required by law to be inserted in this CONTRACT shall be deemed to be inserted herein and the CONTRACT shall be read and enforced as though it were included herein.

47. Contract Security

Requirements: Section 2.2-4337 of the Virginia Public Procurement Act requires performance and payment bonds in the amount of the contract for construction contracts exceeding $500,000 awarded to any prime contractor. State law does not preclude public bodies from requiring such bonds for construction contracts below $500,000. Section 2.2-4337 also allows the contractor to require of each subcontractor a payment bond (but not

a performance bond). HUD regulations at 24 CFR Part 85 requires performance and payment bonds for 100 percent of the contract price for contracts exceeding $150,000 and such bonds must be obtained from companies listed in the U.S. Treasury Circular 570.

NOTE: The public body must use the sample wording or develop its own wording consistent with the requirements.

Sample

A. Simultaneous with the delivery of the executed CONTRACT, the CONTRACTOR shall furnish to the PUBLIC BODY the following BONDS payable to the PUBLIC BODY:

   1. A performance BOND in the sum of the CONTRACT amount conditioned upon the faithful performance of the CONTRACT in strict conformity with the CONTRACT DOCUMENTS.

   2. A payment BOND in the sum of the CONTRACT amount. Such BOND shall be for the protection of claimants who have and fulfill contracts to supply labor or materials to the CONTRACTOR, or to any of his SUBCONTRACTORS, in the prosecution of the WORK, and shall be conditioned upon the prompt payment for all such material furnished or labor supplied or performed in the prosecution of the WORK. "Labor or materials" shall include public utility services and reasonable rental of equipment, but only for periods when the equipment rented is actually used at the site.

B. Each of the BONDS shall be executed by one or more surety companies authorized to do business in Virginia. When the CONTRACT amount exceeds $150,000, such company shall also be listed in the latest issue of the U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570.

C. In lieu of a payment or performance BOND, the CONTRACTOR may furnish a certified check or cash escrow in the face amount required by the BOND.

48. Contractual Disputes

Requirements: Section 2.2-4363 of the Virginia Public Procurement Act requires public bodies to include in their contracts (or by reference) a procedure for consideration of contractual claims. Such procedure must establish a time limit for a final decision in writing by the public body. OMB Part 85 provides that "The grantee is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements entered in support of a grant. These include but are not limited to source evaluation, protests, disputes, and claims."

As a minimum, ALL PUBLIC BODIES MUST ESTABLISH a procedure for consideration of contractual claims including a time limit for a final decision. TWO EXCEPTIONS MUST BE PROVIDED for in a general contractual disputes clause. These exceptions concern disputes arising out of the labor standards provisions of the contract and disputes relative to a contractor's compliance with the affirmative action clauses.

Sample

A. Contractual claims whether for money or other relief, except disputes arising out of the Labor Standards Provisions of this CONTRACT and disputes relative to the CONTRACTOR' S compliance with the affirmative action clauses shall be submitted in writing no later than sixty (60) days after final payment, however, WRITTEN NOTICE of the CONTRACTOR'S intention to file such a claim must be given at the time of the occurrence or prior to beginning of that part of the WORK upon which the claim is based. Such WRITTEN NOTICE of the CONTRACTOR'S intention to file a claim need not detail the amount of the claim, but shall state the facts or issues relating to the claim in sufficient detail to identify the claim, together with its character and scope. Upon the filing of such WRITTEN NOTICE the CONTRACTOR shall proceed with the WORK as directed.

B. The PUBLIC BODY, upon receipt of a detailed claim, may at any time render its decision and shall render such decision within days of final payment. Each such decision rendered by the PUBLIC BODY shall be forwarded to the CONTRACTOR by WRITTEN NOTICE.

C. If the CONTRACTOR disagrees with the decision of the PUBLIC BODY concerning any pending claim he shall promptly notify the PUBLIC BODY by WRITTEN NOTICE that he is proceeding with the WORK under protest. Any claim not resolved, whether by failure of the CONTRACTOR to accept the decision of the PUBLIC BODY or under a WRITTEN NOTICE of CONTRACTOR'S intention to file a claim or a detailed claim not acted upon by the PUBLIC BODY, shall be specifically exempt by the CONTRACTOR from payment request, whether progress or final. Pendency of claims shall not delay payment of amounts agreed due in the final payment.

D. The decision on contractual claims by the PUBLIC BODY shall be final and conclusive unless the CONTRACTOR appeals within six months of the date of the final decision on the claim by the PUBLIC BODY by invoking the administrative appeals procedure, if available, or by instituting legal action in the appropriate circuit court.

49. Administrative Appeals Procedure and Arbitration

Requirements: Under Section 2.2-4365 of the Virginia Public Procurement Act, a public body may establish an administrative appeals procedure for hearing protests of a decision to award or an award, appeals from refusals to allow withdrawal of bids, appeals from

disqualifications and determinations of nonresponsibility, and appeals from decisions on disputes arising during the performance of a contract. And such administrative procedure shall provide for a hearing before a disinterested person or panel.

The sample administrative appeals procedure is optional.

Sample:

A. Not later than six months from the date of the decision of the PUBLIC BODY, the CONTRACTOR may invoke the Administrative Appeals Procedure, by filing with the PUBLIC BODY a WRITTEN NOTICE of an intention to arbitrate, which NOTICE shall contain a statement setting forth the nature of the dispute, the amount involved, and the remedy sought. The CONTRACTOR shall file two copies of said NOTICE with any Regional Office of the American Arbitration Association (AAA), together with two copies of the arbitration provisions of this CONTRACT and the appropriate filing fee as provided for in the administrative fee schedule of the AAA in effect at the time of filing. Such dispute shall be settled in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.

B. The award shall be final and conclusive and shall not be set aside unless the findings of fact contained therein are fraudulent or arbitrary or capricious, or so grossly erroneous as to imply bad faith.

C. No determination on an issue of law shall be final if appropriate legal action is instituted in a timely manner. Any party to the Administrative Appeals Procedure shall be entitled to institute judicial review if such action is brought within thirty (30) days of the receipt of the written decision.

D. Judgment upon the award may be entered in any court having jurisdiction thereof.

E. Should the Administrative Appeals Procedure be invoked prior to completion of the WORK, the CONTRACTOR shall carry on the WORK and maintain the progress schedule unless otherwise agreed to by the CONTRACTOR and the PUBLIC BODY in writing.

50. Other Contractual Requirements

RETAINAGE: Section 2.2-4333 of the Virginia Public Procurement Act provides, "In any public contract for construction which provides for progress payments in installments based upon an estimated percentage of completion, the contractor shall be paid at least ninety-five percent of the earned sum when payment is due, with not more than five percent being retained to assure faithful performance of the contract. All amounts withheld may be included in the final payment... Any subcontract for a public project which provides for similar progress payments shall be subject to the same limitations."

There are no federal requirements addressing the retainage issues.

NOTE: The maximum five percent retainage allowable is incorporated in Section 20 of General Conditions - Part I.

EQUALS: Both 24 CFR Part 85 and Section 2.2-4315 of the Virginia Public Procurement Act require that in contracts the use of a certain brand, make or manufacture does not restrict the procurement to a specific brand, make or manufacturer. This requirement is found in Section 4 of General Conditions - Part I.

RECORDS RETENTION AND ACCESS TO: The federal requirements concerning retention of records and access to records and incorporated in Section 40 of General Conditions - Part I.

CONTRACT TERMINATION: The 24 CFR Part 85 requirements concerning contract termination are incorporated in the language found in Section 26 of General Conditions - Part I.

CD - 8.2

General Conditions - Part II

(TO BE INSERTED VERBATIM IN ALL CDBG CONSTRUCTION CONTRACTS; Except Subpart A, Federal Labor Standards Provisions; and Subpart B, Contract Work hours and Safety Standards Act, do not apply to rehabilitation of residential property, including bathroom additions, for use by less than eight families)

Subpart A: Federal Labor Standards Provisions

29 CFR 5.5 (a) - APPLICABILITY

The Project or Program to which the work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this contract pursuant to the provisions applicable to such Federal assistance.

(Applicable to all contracts/subcontracts in excess of $2,000)

1. Minimum Wages

A. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph l(d) of this subpart; also regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits of the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any classification and

wage rates conformed under paragraph l(b) of this subpart) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

B.

(1) The Virginia Department of Housing and Community Development (DHCD) and the Public Body shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. DHCD and the U.S. Department of Labor shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

ii. The classification is utilized in the area by the construction industry; and

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

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

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

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs 1 (b) (B) or (C) of this subpart, shall be paid to all workers

performing work in the classification under this contract from the first day on which work is performed in the classification.

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

D. If the contractor does not make payment to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

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

3. Payrolls and Basic Records

A. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section l(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(l)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing

benefits under a plan or program described in section l(b) (2) (B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

A.

(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the designated Public Body. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5 (a) (3) (i). This information may be submitted in any form desired. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

i. That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

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

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

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

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

B. The contractor or subcontractor shall make the records required under paragraphs 3(a) of this subpart available for inspection, copying, or transcription by authorized representatives of the Public Body, DHCD or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees

A. Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage rate determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the

Administrator determined that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Employment and Training Administration, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

C. Equal Employment Opportunity: The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements

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

6. Subcontracts

The contractor or subcontractor shall insert in any subcontract the clauses contained in 29 CFR 5.5(a) (1) through (12) and such other clauses as the Department of Housing and Community Development may by appropriate instruction require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontract. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract Termination: Debarment

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements

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

9. Disputes Concerning Labor Standards

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility

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

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

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

11. Employment of Certain Persons Prohibited

No person under the age of sixteen years and no person who, at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this Contract.

12. Questions Concerning Certain Federal Statutes and Regulations

All questions arising under this Contract not specifically addressed in the above paragraphs which relate to the application or interpretation of (a) the aforesaid Anti-Kickback Act, (b) the Contract Work Hours and Safety Standards Act, (c) the aforesaid Davis-Bacon Act, (d) the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Acts, or (e) the labor standards provisions of any other pertinent Federal statute, shall be referred, through the Public Body to the Virginia Department of Housing and Community Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purposes of this Contract.

Subpart B: Contract Work Hours And Safety Standards Act

(Applicable to all construction contracts. As used in this "Subpart" the terms "laborers" and "mechanics" include watchman and guards.)

1. Overtime Requirements

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay plus the straight-time rate of any required fringe benefits for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in paragraph (1) of this subpart, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of

the clause set forth in paragraph (1) of this subpart, in the sum of $10 for each calendar day or which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this subpart.

3. Withholding For Unpaid Wages and Liquidated Damages

The Public Body or DHCD shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this subpart.

4. Subcontract

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this subpart and also a clause requiring the subcontractors to include these clauses in any lower tier subcontract. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this subpart.

In addition to the clauses contained in Subpart B, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statues cites in 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under Subpart B shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representative of the Public Body, DHCD and/or the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

Subpart C: Equal Employment Opportunity

1. Executive Order 11246, As Amended.

(Applicable to all contracts/subcontracts in excess of $10,000)

A. During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

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

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders,

this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 1 1246, as amended, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (i) and the provisions of paragraphs (i) through (vii) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

B. Subcontracts: Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

2. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246, as amended). (Applicable to all contracts and subcontracts exceeding $10,000.)

A. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

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

Timetables	Goals for minority participation in each trade	Goals for female participation in each trade
	12%	6.9%
	(Insert goals for (each year.)	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order 11246, as amended, and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in

each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

C. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the boundaries of the County of Henry, Virginia, in which the project area is located.

3. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

(Applicable to all contracts/subcontracts in excess of $10,000)

A. As used in these specifications:

(1) "Covered area" means the geographical area described in the solicitation from which this contract resulted;

(2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

(3) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

(4) "Minority" includes:

- Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
- Asian or Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
- American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

B. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

C. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

D. The Contractor shall implement the specific affirmative action standards provided in paragraphs g (1) through (16) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract, shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

E. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

F. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their

training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.

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

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

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

(3) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization, and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

(4) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

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

(6) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc. ; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

(7) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

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

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

(11) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

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

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

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

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

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

H. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations [g(1) through (16)]. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under g(1) through (16) of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

I. A single goal for minorities and a separate rate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in a violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

J. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

K. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246, as amended.

L. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

M. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph g of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

N. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, whether age is greater than 62 years, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

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

Subpart D: Title VI of the Civil Rights Act Of 1964, As Amended

No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Subpart E: Section 109 Of The Housing And Community Development Act Of 1974, As Amended

No person in the United States shall on the ground of race, color, national origin, or sex be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title. Any prohibition against discrimination on the basis of age under the *Age Discrimination Act of 1975* or with respect to an otherwise qualified handicapped individual as provided in *Section 504 of the Rehabilitation Act of 1973* shall also apply to any such program or activity.

Subpart F: Section 3 Of The Housing And Urban Development Act Of 1968

(Applicable to all contracts/subcontracts in excess of $100,000)

A. The Section 3 covered Project Area for this PROJECT is designated as the boundaries of the County of Henry**,** Virginia, in which the project area is located.

B. The purpose of Section 3 is to ensure that employment and other economic opportunities generated by Housing and Urban Development assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

C. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

D. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and

training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

E. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontractor or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

F. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed were not filled to circumvent the contractor's obligations under 24 CFR part 135.

G. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

Subpart G: Opportunities For Minority And Female-Owned Businesses

The work covered by this CONTRACT is subject to the provisions of OMB Part 85, Attachment 0 which requires that minority and female-owned businesses be solicited whenever they are sources of supplies, equipment, construction and services on federally funded projects.

A. In procuring supplies, equipment, construction and services, the CONTRACTOR and all SUBCONTRACTORS will contact those appropriate minority and female-owned firms provided by the PUBLIC BODY on its solicitation list and provide such firms reasonable opportunities to compete for procurement contracts.

B. The CONTRACTOR shall keep a complete and accurate record of all procurement of greater than ten thousand dollars ($10,000) made in the execution of the PROJECT. Such record shall be on a form provided by the PUBLIC BODY and shall be submitted to the PUBLIC BODY no less than every thirty (30) days.

Subpart H: Compliance With Air And Water Acts

(Applicable to all contracts/subcontracts in excess of $100,000)

In compliance with Section 306 of the Clean Air Act, as amended, (42 USC 1857(h)), Section 508 of the Clean Water Act, as amended, (33 USC 1368), Executive Order 11738, and the regulations

(40 CFR, Part 15) of the Environmental Protection Agency with respect thereto the Contractor agrees that:

A. Any facility to be utilized in the performance of this contract or any subcontract shall not be a facility listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20.

B. He will comply with all requirements of Section 306 of the Clean Air Act, as amended, and Section 508 of the Clean Water Act, as amended, and all regulations and guidelines issued thereunder.

C. He will promptly notify the PUBLIC BODY of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

D. He will include or cause to be included the provisions of paragraph 1 through 4 of this subpart in every nonexempt subcontract and that he will take such action as the Government may direct as a means of enforcing such provisions.

Subpart I: Lead-Based Paint Hazards

The construction or rehabilitation of residential structures is subject to the HUD Lead-Based Paint regulations, 24 CFR Part 35, issued pursuant to the Lead-Based Paint Poisoning Prevention Act, Public Law 91-695, 84 Stat. 2078, as amended by Public Law 93-151 and Public Law 94-317 (42 U.S.C. 4801).

A. The CONTRACTOR and SUBCONTRACTORS shall not use lead-based paint in residential structures and shall eliminate any lead-based paint hazards in residential structures rehabilitated.

B. The PUBLIC BODY shall be responsible for inspections and certifications required under Section 35.24.

Subpart J: Immigration Reform And Control Act Of 1986

The Contractor agrees by signing this contract that he/she does not and will not during the performance of this contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

Subpart K: Disclosure

All contractors and subcontractors shall complete a disclosure statement at the time of contract execution that discloses those persons who have an interest in the contract proceeds. Attach form follows this page.

Subpart L: Access To Records And Construction Site

The PUBLIC BODY, the Inspector General of the United States, United States Department of Housing and Urban Development, United States Department of Labor, the General Accounting Office, and the Virginia Department of Housing and Community Development shall be permitted by the CONTRACTOR to have full access to, and right to examine any pertinent books, documents, papers and records and construction site of the CONTRACTOR involving transactions related to this CONTRACT, during the period of this PROJECT and for three (3) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia.

VIRGINIA COMMUNITY IMPROVEMENT GRANT

COMMUNITY IMPROVEMENT GRANT DISCLOSURE REPORT

(Completed by all Developers, Contractors, Subcontractors or Consultants)

1. Local Government Name _____

2. CIG Contract # _____

3. Project Name _____

3. Name of Firm _____

President _____

Address _____

Telephone _____

FIN or SS# _____

Type of Contract (check applicable description)

Construction Prime ☐ *Construction Sub ☐

Design ☐ Other Specify ☐

Description of work or service provided:

_____

5. Date this Report _____ and ___ # of pages.

6. Revision to Report Date _____ and ___ # pages.

**Note*: Housing Rehabilitation subcontractors are not required to be listed or to complete this Report.

Interested Parties	If Firm is an entity, identify each officer, director, principal stockholder and other persons who will have a $50,000 or 10% interest, whichever is lower.		
Name (Last, First, Initial).	**SS#**	**Type Participation**	**$ and %**

If there are no persons with a reportable financial interest, you must also certify that this is true.

I hereby certify this information is true.

(Signature) _____ Date _____

Title _____

Certification

Warning: If you knowingly make a false statement on this form you may be subject to civil or criminal penalties under Section 1001 of Title 18 of the United States Code. In addition, any person who knowingly and materially violates any required disclosure of information including intentional non-disclosure is subject to a civil money penalty not to exceed $10,000 for each violation.

Note: Please copy this page and attach additional pages as needed. Please indicate # of pages and date on cover.

TO GRANTEE:

General Decision Number: VA160128 01/08/2016 VA128

Superseded General Decision Number: VA20150128

State: Virginia

Construction Type: Highway

Counties: Alleghany, Appomattox, Augusta, Bath, Bland, Buchanan, Buckingham, Buena Vista*, Carroll, Charlotte, Clifton Forge*, Covington*, Craig, Cumberland, Dickenson, Floyd, Franklin, Frederick, Galax*, Giles, Grayson, Halifax, Harrisonburg*, Henry, Highland, Lee, Lexington*, Martinsville*, Montgomery, Nelson, Norton*, Page, Patrick, Prince Edward, Pulaski, Radford*, Rockbridge, Rockingham, Russell, Salem*, Shenandoah, Smyth, South Boston*, Staunton*, Tazewell, Waynesboro*, Winchester*, Wise and Wythe Counties in Virginia.

*INDEPENDENT CITIES

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least
$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016

SUVA2013-001 09/20/2013

	Rates	Fringes
ASBESTOS WORKER.	$ 12.66	
CARPENTER (STRUCTURE)	$ 18.21	
CEMENT MASON/CONCRETE FINISHER	$ 19.35	
ELECTRICIAN	$ 17.05	
FORM SETTER	$ 16.00	
IRONWORKER, REINFORCING	$ 22.71	
IRONWORKER, STRUCTURAL	$ 24.00	
LABORER		
Asphalt Raker	$ 14.51	
Blaster	$ 21.80	
Construction Worker I (Skilled Laborer.	$ 15.30	
Construction Worker II (Laborer).	$ 12.37	
Deckhand	$ 13.70	
Fence Erector.	$ 12.83	
Flagger	$ 11.45	
Grade Checker	$ 15.25	
Guardrail Erector.	$ 13.18	
Landscape Worker.	$ 12.27	
Pipe Layer.	$ 16.75	
Power Tool Operator	$ 14.00	
Sign Erector.	$ 15.27	
PAINTER	$ 25.00	
POWER EQUIPMENT OPERATOR:		
Air Compressor	$ 11.75	

Asphalt Distributor.....$ 15.26
Asphalt Paver. .....$ 16.02
Backhoe.....$ 17.79
Boom/Auger.....$ 29.00
Bulldozer (Utility).....$ 15.38
Bulldozer.....$ 19.36
Concrete Finish Machine
Screed, Bridge.....$ 34.60
Concrete Finish Machine .....$ 34.60
Concrete Paving Machine .....$ 13.94
Concrete Pump.....$ 16.45
Concrete Saw .....$ 22.50
Crane, Derrick, Dragline.....$ 26.68
Crusher Tender.....$ 17.00
Drill Operator.....$ 20.00
Excavator (Gradall).....$ 20.53
Front End Loader .....$ 19.36
Hydro Seeder .....$ 16.64
Log Skidder.....$ 16.00
Mechanic.....$ 15.89
Mobile Mixer .....$ 10.45
Motor Grader (Fine Grade).....$ 26.13
Motor Grader (Rough Grade) .....$ 20.64
Oiler, Greaser.....$ 19.23
Pavement Marking Operator.....$ 15.44
Pavement Marking Truck
Operator .....$ 18.00
Pavement Planing Groundman .....$ 14.04
Pavement Planing Operator .....$ 17.28
Pile Driver, Leadsman .....$ 21.70
Pile Driver.....$ 15.00
Pipe Boring/Jacking
Machine Operator .....$ 11.00
Plant Operator .....$ 13.45
Roller (Finish).....$ 13.61
Roller (Rough) .....$ 15.85
Scraper Pan .....$ 12.78
Shot Blast Machine.....$ 14.94
Shovel Operator
(2 yds and under) .....$ 10.41
Shovel Operator
(over 2 yds) .....$ 11.50
Slip-Form Paver.....$ 9.50
Slurry Seal Paver Machine

Operator .....$ 14.23
Slurry Seal Paver Truck
Operator .....$ 10.43
Stabilizer Operator .....$ 9.55
Stone-Spreader .....$ 13.54
Subgrade Machine Operator .....$ 11.50
Tractor Operator (Crawlers) .....$ 14.08
Tractor Operator (Utility) .....$ 12.25
Trenching Machine .....$ 12.00
Vacuum Machine .....$ 19.25

TRAFFIC SIGNALIZATION:

Traffic Signal Installation .....$ 21.91

TRUCK DRIVER

Fuel and Lubricant Service

Truck Driver.....$ 16.25
Transit Mix Truck Driver.....$ 12.25
Truck Driver (Single,
Tandem & Multi Rear Axle).....$ 15.19
Truck Driver, Heavy Duty
(7 c.y. & under).....$ 15.50

Truck Driver, Heavy Duty
(over 7 c.y. .....$ 16.69

WATERPROOFER .....$ 13.16

WELDER.....$ 15.76

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

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number

used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

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END OF GENERAL DECISION

---------- END OF GENERAL DECISION.

EXPLANATION OF PAYROLL RECORD (FORM WH-347)

What It Is Used For: The contractor and subcontractors submit their weekly Payroll Report to the Grantee each week or part of a week in which there are employees assigned to the project. All workers assigned that week MUST be included.

When It Is Used: During the construction phase of the project.

Where It Goes: In the Grantee's Labor Standards project file.

General Instructions: The Grantee must review each Payroll Report to assure that the Contractor and all subcontractors are complying with *Davis-Bacon Act*, *Contract Work Hours and Standards Act*, and *Copeland "Anti-Kickback" Act* requirements. Payroll records must be verified by field inspections (See Appendix 51 for *Record of Employee Interview* form) and checked against the *Register of Assigned Employees* (See Appendix 54 for form).

Form Instructions:

PAYROLL REPORT

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Payroll No.: Beginning with the number "1", list the payroll number for the submission.

For Week Ending: List the workweek ending date.

Project and Location: List the project's name as found on the CDBG Agreement.

Project or Contract No.: List the project's CIG number.

Column 1 - Name and Individual Identifying Number of Worker: Enter each worker's full name and an individual identifying number on each weekly payroll submitted e. g.; the last four digits of the employee's Social Security number (SSN). Full SNN shall ot be included on the payroll. Employers must maintain the current address and full SSN for each employee and must provide this information upon request to the Grantee and DHCD.

Column 2 - No. of Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List the classification as shown on the wage decision issued for this project. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, consult with your Grantee's Contract Compliance Officer. An individual may be shown as having worked in more than one classification provided an accurate breakdown or hours worked in each classification is maintained and shown on the submitted payroll by use of separate entries. When listing a sole proprietor/subcontractor on a payroll, a prime contractor should record the sole proprietor/subcontractor's information in the same manner as an employee.

Column 4 - Hours worked: List the day and date and straight time and overtime hours worked in the applicable boxes. On all contracts subject to the Contract Work Hours Standard Act, enter hours worked in excess of 40 hours a week as "overtime".

Column 5 - Total: Self-explanatory

Column 6 - Rate of Pay (Including Fringe Benefits): In the "straight time" box for each worker, list the actual hourly rate paid for straight time worked, plus cash paid in lieu of fringe benefits paid. When recording the straight time hourly rate, any cash paid in lieu of fringe benefits may be shown separately from the basic rate. For example, "$12.25/.40" would reflect a $12.25 base hourly rate plus $0.40 for fringe benefits. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. When overtime is worked, show the overtime hourly rate paid plus any cash in lieu of fringe benefits paid in the "overtime" box for each worker; otherwise, you may skip this box. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962 if the prime contract exceeds $100,000. In addition to paying no less than the predetermined rate for the classification which an individual works, the contractor must pay amounts predetermined as fringe benefits in the wage decision made part of the contract to approved fringe benefit plans, funds or programs or shall pay as cash in lieu of fringe benefits. See "FRINGE BENEFITS" below.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of a worker's weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus "$163.00/$420.00" would reflect the earnings of a worker who earned $163.00 on a Federally assisted construction project during a week in which $420.00 was earned on all work.

Column 8 - Deductions: Five columns are provided for showing deductions made. An Employee Payroll Deduction Authorization must be provided for any deduction listed in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 C.F.R., Part 3. If an individual worked on other jobs in addition to this project, show actual

deductions from his/her weekly gross wage, and indicate that deductions are based on his gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Totals - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

✱ **Submission of Payrolls –** Certified payroll reports may be submitted electronically, i.e., via the internet. However, the electronic signature/submission does not mean pdf files of signed payrolls attached to an email, or faxed copies of signed payrolls. These methods are comparable to photocopies and are not acceptable submissions.

STATEMENT OF COMPLAINCE

Statement Required by Regulations, Parts 3 and 5: While the "statement of compliance" need not be notarized, the statement (on page 2 of the payroll form) is subject to the penalties provided by 18 U.S.C. § 1001, namely, a fine, possible imprisonment of not more than 5 years, or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Items 1and 2: Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "*See* Deductions column in this payroll." *See* "FRINGE BENEFITS" below for instructions concerning filling out paragraph 4 of the statement.

Item 4 FRINGE BENEFITS - Contractors who pay all required fringe benefits: If paying all fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor, show the basic cash hourly rate and overtime rate paid to each worker on the face of the payroll and check paragraph 4(a) of the statement on page 2 of the WH-347 payroll form to indicate the payment. Note any exceptions in section 4(c).

Contractors who pay no fringe benefits: If not paying all fringe benefits to approved plans, funds, or programs in amounts of at least those that were determined in the applicable wage decision of the Secretary of Labor, pay any fringe benefit amount to each laborer and mechanic and insert in the "straight time" of the "Rate of Pay" column of the payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the application wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringe benefits, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringe benefits at the straight time rate. In addition, check paragraph 4(b) of the statement to indicate the payment of fringe benefits in cash directly to the workers. Note any exceptions in section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the covered worker as cash in lieu of fringe benefits. Enter any exceptions to section 4(a) or 4(b) in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid each worker as cash in lieu of fringe benefits and the hourly amount paid to plans, funds, or programs as fringe benefits. The contractor must pay an amount not less than the predetermined rate plus cash in lieu of fringe benefits as shown in section 4(c) to each such individual for all hours worked (unless otherwise provided by applicable wage determination) on the Federal or Federally assisted project. Enter the rate paid and amount of cash paid in lieu of fringe benefits per hour in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

✱ If the wage decision(s) issued required no fringes to be paid, do not check off any of the boxes in Section 4. Make a note in the “Remarks” box that no fringes are required to be paid by the wage decision(s) issued.

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/esa/whd/forms/wh347instr.htm)

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

U.S. Wage and Hour Division
Rev. Dec. 2008

NAME OF CONTRACTOR ☐ OR SUBCONTRACTOR ☐	ADDRESS	OMB No.: 1215-0149 Expires: 12/31/2011
PAYROLL NO. / FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT. OR ST.	(4) DAY AND DATE / HOURS WORKED EACH DAY							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS FICA	WITH-HOLDING TAX			OTHER	TOTAL DEDUCTIONS	(9) NET WAGES PAID FOR WEEK
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that is will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, ESA, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

(over)

Date _____

I, _____ _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____; that during the payroll period commencing on the
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Start. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

_____

_____

_____

_____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ – in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ – Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

CERTIFICATION OF SUBCONTRACTORS ON SITE

(To Be Submitted As Part of Weekly Payroll Report)

I, _____, the general contractor, hereby certify that the employees denoted on attached payroll reports for the week ending / / represent all employees that worked on CIG# - project for _____ *(insert Grantee's Name)*, including employees of all subcontractors.

_____ _____/_____/_____

Name and Title Date

Names of Subcontractors That Worked On Project for This Pay Period.

1. _____
2. _____
3. _____
4 _____
5. _____

EXPLANATION OF EMPLOYEE INTERVIEW FORM

What it is used for: To be used to interview project workers in order to determine that the Contractor and all subcontractors are complying with *Davis-Bacon Act*, *Contract Work Hours and Standards Act*, and *Copeland "Anti-Kickback" Act* requirements. It is used as a test against payroll information. It is also used to verify compliance with Section 3 requirements.

When It Is Used: During the construction phase of the project.

Where It Goes: Grantee's Labor Standards project file.

General Instructions: Employees should be selected for interviews either at random or on the basis of suspected irregularities as determined through the site visit or Payroll Reports. The number of interviews necessary is determined by the size of the Project. **A minimum of at least one worker per trade and 25% of the total number of workers must be interviewed. Interviews must be conducted during construction a minimum of once a month** to determine the Contractor's compliance with the aforementioned federal requirements. Interviews **must** take place during the times in which **each** subcontract is being performed to assure that all trades are covered. This may mean that interviews will have to be conducted during evening or weekend hours.

Form Instructions:

Items 1a - 1c: Self-explanatory

Items 2a – 2d: Enter the employee's full name, a telephone number where the employee can be reached, and the employee's home address. Many construction workers use a temporary address in the locality of the project and have a more permanent address elsewhere from which mail may be forwarded to them. Obtain a more permanent address, if available.

Items 3a – 4c: Enter the employee's responses. Ask the employee whether they have a pay stub with them; if so, determine whether the pay stub is consistent with the information provided by the employee.

Items 5 – 7: Try to get specific responses from the employee so it is easier to verify that the work observed is consistent with the job classification listed on the payroll report. For example, the job classification (#5) must identify the trade involved e.g.; Carpenter, Electrician, Plumber, etc.

Items 8 – 12b: Self-explanatory. If the employee will not sign the form, just note it in the appropriate box

Items 13 – 15c: These items represent some of the most important information that can be gathered while conducting on-site interviews. Please be specific about the duties you observed the employee performing. It may be easiest to make these observations before initiating the interview. Please record any comments or remarks that may be helpful. For example, if the employee interviewed was working with a crew, how many workers were in the crew? What activities was the employee doing e.g.; dumping gravel, laying down pipe, connecting pipe in a ditch, etc. What tools and pieces of equipment was the employee using e.g.; shovel, level, pipe, pry bar, etc.

The level of specificity that is warranted is directly related to the extent to which interview(s) or other observations indicate that there may be violations present. If interviews indicate that there may be underpayments involving a particular trade(s), the interviewer is encouraged to interview as many workers in that trade(s) that are available.

Items 16 – 17b: The information on the form may be reviewed for general compliance, initially. For example, are the job classification and wage rate stated by the employee compatible with the classifications and wage rates on the applicable wage decision? Are the duties observed by the interviewer consistent with the job classification?

After completion of the interview the Contract Compliance Officer **must** note on the form whether the employee's statements were consistent and whether they verified what was observed.

The Contract Compliance Officer must cross reference the information on the Record of Employee Interview form with information from the Contractor's weekly Payroll Report, the Register of Assigned Employees, and the Wage Decision, indicating so by filling out the bottom part of the form. Appropriate action must be initiated to clear any discrepancies and questionable items.

☎ Call your Community Representative for a copy of the *Record of Employee Intervie*w instructions in Spanish.

Record of Employee Interview

U.S. Department of Housing and Urban Development
Office of Labor Relations

OMB Approval No. 2501-0009
(exp. 10/31/2010)

The information is collected to ensure compliance with the Federal labor standards by recording interviews with construction workers. The information collected will assist HUD in the conduct of compliance monitoring; the information will be used to test the veracity of certified payroll reports submitted by the employer. The information collected on this form is considered sensitive and is protected by the Privacy Act. The Privacy Act requires that these records be maintained with appropriate administrative, technical, and physical safeguards to ensure their security and confidentiality. In addition, these records should be protected against any anticipated threats or hazards to their security or integrity that could result in substantial harm, embarrassment, inconvenience, or unfairness to any individual on whom the information is maintained.

1a. Project Name	2a. Employee Name
1b. Project Number	2b. Employee Phone Number (including area code)
1c. Contractor or Subcontractor (Employer)	2c. Employee Home Address & Zip Code
	2d. Verification of identification? Yes ☐ No ☐

3a. How long on this job?	3b. Last date on this job before today?	3c. No. of hours last day on this job?	4a. Hourly rate of pay?	4b. Fringe Benefits?	4c. Pay stub?
				Vacation Yes ☐ No ☐ Medical Yes ☐ No ☐ Pension Yes ☐ No ☐	Yes ☐ No ☐

5. Your job classification(s) (list all) --- continue on a separate sheet if necessary

6. Your duties

7. Tools or equipment used

	Y	N		Y	N
8. Are you an apprentice or trainee?	☐	☐	10. Are you paid at least time and ½ for all hours worked in excess of 40 in a week?	☐	☐
9. Are you paid for all hours worked?	☐	☐	11. Have you ever been threatened or coerced into giving up any part of your pay?	☐	☐

12a. Employee Signature	12b. Date

13. Duties observed by the Interviewer (Please be specific.)

14. Remarks

15a. Interviewer name (please print)	15b. Signature of Interviewer	15c. Date of interview

Payroll Examination

16. Remarks

17a. **Signature of Payroll Examiner**	17b. **Date**

Previous editions are obsolete **Form HUD-11 (08/2004)**

Historial de Entrevista del Empleado

Departamento de Vivienda y Desarrollo Urbano de EE.UU.
Oficina de Relaciones Laborales

Aprobación de OMB No. 2501-0009
(exp. 10/31/2010)

La información que se recopila tiene la finalidad de garantizar la conformidad a las normas laborales Federales mediante entrevistas con obreros de construcción. La información recopilada asistirá a HUD a conducir el monitoreo de conformidad; la información se usará para examinar la veracidad de los informes de nómina certificados presentados por el patrón. La Ley de Privacidad requiere que estos archivos se mantengan con salvaguardas administrativos, técnicos, y físicos apropiados para garantizar su seguridad y confidencialidad. Además, estos archivos deberán ser protegidos contra cualquier amenaza anticipada o riesgos a su seguridad o integridad, que podría causar daño sustancial, vergüenza, inconveniencias, o injusticias a cualquier individuo de quien se mantiene la información. **La información recopilada aquí es voluntaria y cualquier información proporcionada será mantenida como confidencial**.

1a. Nombre del proyecto	2a. Nombre del empleado
1b. Número del proyecto	2b. Número de teléfono del empleado (incluso prefijo local)
1c. Contratista o subcontratista (Patrón)	2c. Dirección residencial del empleado y código postal
	2d. ¿Verificación de identificación? Sí ☐ No ☐

3a. ¿Cuánto tiempo en este trabajo?	3b. ¿Último día en este trabajo antes de hoy?	3c. ¿No. de horas en su ultimo día en este trabajo?	4a. ¿Salario por hora?	4b. ¿Beneficios complementarios?	4c. ¿Talonario de paga?
				Vacaciones Sí ☐ No ☐ Médicos Sí ☐ No ☐ Pensión Sí ☐ No ☐	Sí ☐ No ☐

5. Clasificación(es) de su trabajo(s) (enumere todas) --- continúe en una página separada si es necesario

6. Sus deberes

7. Herramientas o equipo usado

	S	N		S	N
8. ¿Es aprendiz?	☐	☐	10. ¿Le pagan al menos tiempo y medio por todas las horas trabajadas superior a 40 horas semanales?	☐	☐
9. ¿Le pagan todas las horas trabajadas?	☐	☐	11. ¿Alguna vez ha sido amenazado o coercionado a entregar parte de su paga?	☐	☐

12a. Firma del empleado	12b. Fecha

13. Deberes observados por el entrevistador (Por favor sea específico.)

14. Comentarios

15a. Nombre del entrevistador (use letra de imprenta)	15b. Firma del entrevistador	15c. Fecha de la entrevista

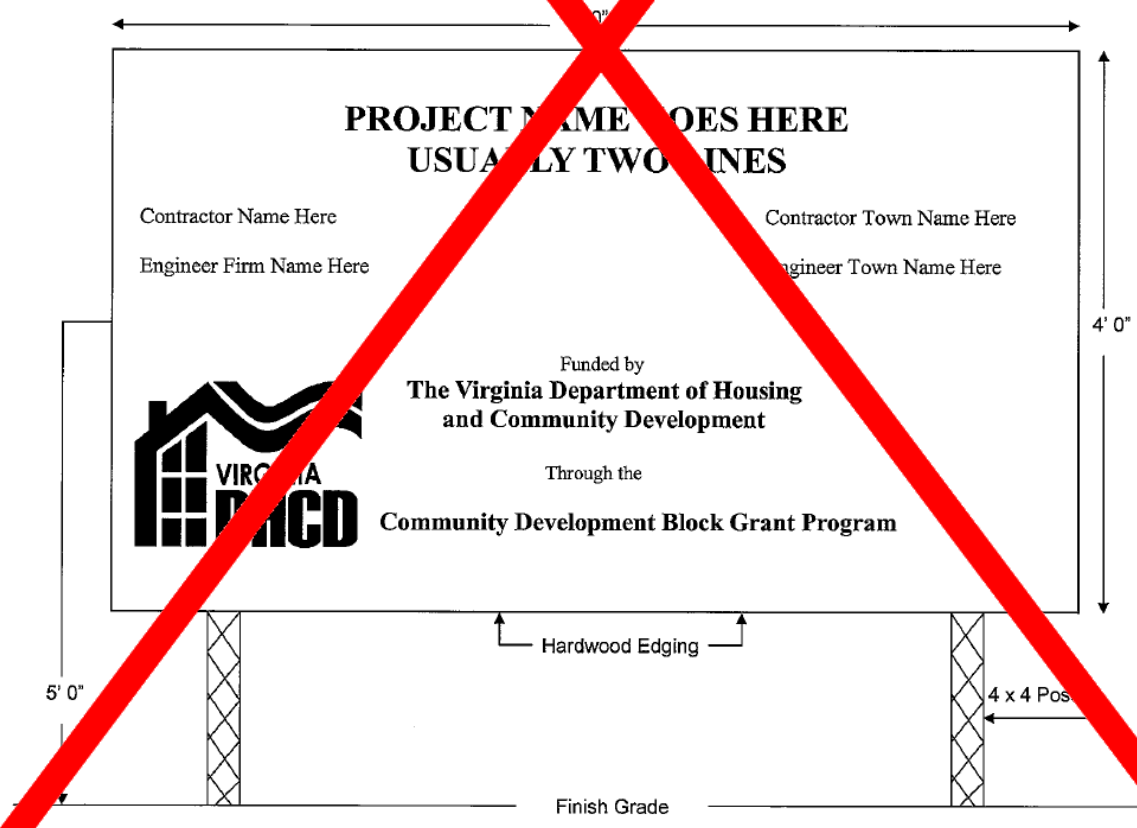
Examinación de Nómina

16. Comentarios

17a. **Firma del examinador de nómina**	17b. **Fecha**

SIGN SPECIFICATIONS

- Dimensions are as per attached schematic
- Material can be plywood or other firm material that will withstand wind and moisture without warping
- **Sign should be erected perpendicular to the adjacent road**
- Sign may be painted front and back if community desires
- Background should be white.
- Lettering should be a medium shade of blue (such as royal); PMS = Pantone Blue 072
- An electronic copy of DHCD logo is available from your Community Development Specialist



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Partners for Better Communities

Register of Assigned Employees Month Covered: _____, 2012 Date Completed: _____

Submit initial list of workforce prior to start of construction; update monthly throughout construction to show changes.

SECTION I: Identification of Level of Submittal, see instructions on back of form

(1) Grantee: _____ Grant #: _____ Project Name: _____

HIRING GOALS: 30% LOCAL LMI (Section 3) _____% MINORITY 6.9 % FEMALE

Prime Contractor _____ Contracted Amount $_____

(2) Subcontractor _____ Contracted Amount $ _____

SECTION II: List all workers paid by this contract. For NEW HIRES: complete items 'a' thru 'h.' For MODIFICATIONS: complete only item 'a' and item(s) being modified. Update the Register to add new hires, rehires and changes to job classifications, rate of pay or authorized payroll deductions.

a. NAME OF EMPLOYEE b. COUNTY OF RESIDENCE	c. TRADE & JOB CLASSIFICATION d. RATE OF PAY & BENEFITS	e. (1). DATE HIRED or e (2). DATE RECALLED f. AUTHORIZED PAYROLL DEDUCTIONS	g. MINORITY	h. GENDER
a. b.	c. d.	e (1) or e(2) f.	____yes ____no	____female ____male
a. b.	c. d.	e (1) or e(2) f.	____yes ____no	____female ____male
a. b.	c. d.	e (1) or e(2) f.	____yes ____no	____female ____male
a. b.	c. d.	e (1) or e(2) f.	____yes ____no	____female ____male

***SECTION 3 RESIDENT – A resident of the area in which Section 3 covered assistance is expended, and who qualifies as a low- or very low-income person.**
SECTION 3 BUSINESS: - A business of the area in which 51% or more is owned by Section 3 Residents or 30% of employed staff are Section 3 Residents; or 25% of contracts committed to Section 3 Businesses

EXPLANATION OF REGISTER OF ASSIGNED EMPLOYEES

What it is used for: To document all procurements of more than $10,000 (or more than $1,000 if a housing rehabilitation project) made in a CDBG project. To track progress toward hiring goals. To assist in assuring compliance with Section 3 and Davis-Bacon and Related Acts.

When it is used: To document the initial workforce and new hires, rehires and any changes in job classifications, rate of pay and authorized deductions throughout the construction process. It is updated on an ongoing basis.

Where it goes: The Grantee files all reviewed and accepted Registers in their labor standards and equal opportunity project files.

I*nstruction*s:*

- COMPLETE THE "Month Covered" AND "Date Completed" IN THE TOP RIGHT CORNER.
- The Local LMI (Section 3) Hiring Goal is always 30%. Insert the Minority and Female goals as found in the Transmittal of Wage Decision letter sent to the Chief Executive Official by the PMO Program Manager.
- ROUND CONTRACT AMOUNTS TO THE NEAREST DOLLAR.
- NEW HIRES are registered as such one time and only on the original submittal or for the month in which it occurred; DO NOT DUPLICATE 'NEW HIRES' ON SUBSEQUENT SUBMITTALS.
- RECALLED means a person who was off of the Company's payroll and is now back on the payroll. The person is treated as NEW HIRES except that the date recalled is entered in e (2). Subsequent recalls of any employees, whether originally listed as a 'new hire' or a 'recall' are treated as 'modifications,' see below.
- MODIFICATIONS affect ONLY the following items: (ONLY ITEM 'a' AND ITEM(S) BEING MODIFIED ARE COMPLETED FOR MODIFICATIONS.)
  - changes to employee's name, e.g. due to marriage (item a) (if change is to name, show both old and new name)
  - changes in trade and job classification (item c)
  - changes in rate of pay and benefits (item d)
  - changes in authorized payroll deductions (item f)
  - a recall of an employee previously registered (item e (2).

GRANTEE'S RESPONSIBILITIES: For every procurement with a prime contractor, the Grantee must complete item (1) of SECTION I and supply the prime contractor with enough copies for the duration of the contract. After submission of the Register by its Prime, the Grantee must review the Register for completeness, accuracy and consistency with the *Monthly CDBG Register of Contractors, Subcontractors, and Suppliers* and the *Payroll Report*.

PRIME CONTRACTOR'S RESPONSIBILITIES: The Prime Contractor must submit this prior to start of construction and update it as necessary throughout the construction process. The Prime Contractor must use the forms supplied by the Grantee in which item (1) of Section I is already completed; item (2) remains blank. In SECTION II, the Prime Contractor completes items 'a' thru 'h' on 'new hires' and first time 'recalls', and only item 'a' and the item(s) being modified for modifications.

For every procurement with a subcontractor, the Prime Contractor should complete item (2) of SECTION I (item (1) is already completed on the form) and supply the subcontractor with enough copies for the duration of the subcontract. The Prime Contractor must obtain this form from all of its subcontractors for submission to the Grantee.

SUBCONTRACTOR'S RESPONSIBILITIES: The Subcontractor must submit this prior to start of construction, update it as necessary throughout the construction process and submit it to the Prime Contractor.

The Subcontractor must use the forms supplied by the Prime Contractor in which Section I is already completed. In SECTION II, the Subcontractor completes items 'a' thru 'h' on 'new hires' and first time 'recalls'; and only item 'a' and the item(s) being modified for modifications.

Monthly CDBG Register of Contractors, Subcontractors and Suppliers Month Covered: _____, 2012

Register all procurements of more than $10,000 one time only, in month of occurrence

SECTION I: Identification of Level of Submittal, see instructions on back of form

(1) Grantee: _____ Grant #: _____ Project Name: _____ "Local Business" County*: _____

(2) General Contractor _____ IRS# (or owner's SSN) _____

(3) Subcontractor _____ IRS# (or owner's SSN) _____

SECTION II: Details of Procurements

Choose one *(first row should be for the General Contractor)*	Name and Physical Address of Business, and IRS# (or owners' SSN)	Contract Description or Items Supplied	Amount of Contract or Purchase	Ownership of Business *(check **all** that apply; do not leave blank)*
____ General Contractor ____ Subcontractor ____ Supplier	IRS# (or SSN):		$	____Minority Business ____ Local (Section 3) Business ____ Female-Owned Business ____ White American ____ Black American ____ Native* American ____ Hispanic American ____ Asian American ____ Not American Owned
____ General Contractor ____ Subcontractor ____ Supplier	IRS# (or SSN):		$	____Minority Business ____ Local (Section 3) Business ____ Female-Owned Business ____ White American ____ Black American ____ Native* American ____ Hispanic American ____ Asian American ____ Not American Owned
____ General Contractor ____ Subcontractor ____ Supplier	IRS# (or SSN):		$	____Minority Business ____ Local (Section 3) Business ____ Female-Owned Business ____ White American ____ Black American ____ Native* American ____ Hispanic American ____ Asian American ____ Not American Owned
____ General Contractor ____ Subcontractor ____ Supplier	IRS# (or SSN):		$	____Minority Business ____ Local (Section 3) Business ____ Female-Owned Business ____ White American ____ Black American ____ Native* American ____ Hispanic American ____ Asian American ____ Not American Owned

***SECTION 3 RESIDENT – A resident of the area in which Section 3 covered assistance is expended, and who qualifies as a low- or very low-income person**

SECTION 3 BUSINESS – A business of the area in which 51% or more is owned by Section 3 residents or 30% of employed staff are Section 3 residents or 25% of subcontracts are committed to Section 3 businesses.

EXPLANATION OF MONTHLY REGISTER OF CONTRACTORS, SUBCONTRACTORS AND SUPPLIERS

What it is used for: To document all procurements of more than $10,000 made in a CDBG project. To assist in assuring compliance with Section 3 and Davis-Bacon and the Related Acts.

When it is used: Procurements are registered as they occur or on a monthly basis prior to submittal. This form is compiled by the Grantee, the General Contractor, and each subcontractor per the instructions below for each month and part of month during the course of a contract.

Where it goes: The Grantee files all reviewed and accepted submittals in their procurement and equal opportunity project files.

Instructions:

- Complete the "Month Covered" and "Date Completed" in the top right corner.
- ROUND CONTRACT AMOUNTS TO THE NEAREST DOLLAR.
- RECORD THE PHYSICAL ADDRESS OF BUSINESS ONLY. P. O. Boxes and other mailing addresses are not acceptable.
- A procurement is registered one time and only for the month in which it occurred; DO NOT DUPLICATE PROCUREMENTS ON SUBSEQUENT SUBMITTALS.

GRANTEE'S RESPONSIBILITIES: The Grantee should complete this form each month to register all applicable procurements with General Contractors, subcontractors and suppliers. For submittal to itself the Grantee completes line (1) of SECTION I; line (2) and (3) will be left blank. For every procurement with a General Contractor, the Grantee should complete lines (1) and (2) of SECTION I and supply the General Contractor with enough copies for the duration of the contract. After submission of the Register by its Prime, the Grantee must review the Register for completeness, accuracy and consistency with the *Register of Assigned Employees* and the *Payroll Report*. The Grantee should not pay the prime its final invoice until it has received all of the required Registers and has determined their accuracy.

GENERAL CONTRACTOR'S RESPONSIBILITIES: The General Contractor must prepare and submit this form every month and part of month to the Grantee along with any submittals received from subcontractors. The General Contractor must use the forms supplied by the Grantee in which lines (1) and (2) of SECTION I are already completed and line (3) remains blank.

In SECTION II, the Prime will identify each procurement as either 'subcontractor' or 'supplier' and will give complete information in the remaining columns. For every procurement with a subcontractor, the General Contractor should complete item (3) of SECTION I (lines (1) and (2) being already completed by the Grantee) and supply the subcontractor with enough copies for the duration of the subcontract. The General Contractor must obtain this form monthly from all of its subcontractors for submission to the Grantee.

SUBCONTRACTOR'S RESPONSIBILITIES: The Subcontractor must complete this form every month and part of month during the course of the contract for submittal to the General Contractor. The Subcontractor should use the forms supplied by the General Contractor in which SECTION I is already completed. In SECTION II, the Subcontractor will identity each procurement as either 'subcontractor' or supplier' and will give complete information in the remaining columns. The subcontractor must submit its final Register to the General Contractor with its final invoice. The General Contractor must review its subcontractor's final register and verify that it is complete and accurate before payment of the final invoice to the subcontractor.

CONTRACTOR'S QUALIFICATION STATEMENT

Please attach a photocopy of contractor's license and EPA Certification. All questions must be answered in full. Additional sheets for clarification of answers or additional information must be attached. **This statement must be notarized**.

1. Name, address, phone number, contractor license #, and IRS number (or last 4 digits of owner's social security #) of company.

2. List the company's owner and principal officer and date and place organized.

3. Describe general character of work performed.

4. List any work awarded failed to be completed or contracts defaulted on. Note where and why.

5. List the three most important recent contracts over $10,000. State the owner, work, approximate cost, place, date started and date completed.

1._____ $ _____
_____ From _____ To _____
2._____ $ _____
_____ From _____ To _____
3._____ $ _____
_____ From _____ To _____

6. List the contracts upon which you are currently working. State the owner, location, approximate cost, and estimated date of completion.

7. List three material suppliers and amount of credit available.

1._____ $ _____
2._____ $ _____
3._____ $ _____

8. List bank references and amount of credit available.

1._____ $ _____
2._____ $ _____

9. List insurance coverage and amount.
Liability-Property : _____ $_____
Liability-Personal Injury: _____ $_____
Vehicle and Equipment: _____ $_____
Other-_____ : _____ $_____
(identify)

10. List subcontractors utilized. State name, address, specialty, subcontractor license #, and years of experience.

1. Name: _____
Address: _____
Specialty: _____
License #_____ Years of Experience_____

2. Name: _____
Address: _____
Specialty: _____
License #_____ Years of Experience_____

3. Name: _____
Address: _____
Specialty: _____
License #_____ Years of Experience_____

11. Provide a general description of the experience of the company and its key personnel.

12. Number of current full-time employees _____
Number employed at highest level in past twelve months _____

13. Are you on any list of debarred contractors maintained by the U.S. Department of Labor, U.S. Department of Housing & Urban Development, or Virginia Department of Highways?
☐ YES ☐ NO

14. All contractors, subcontractors and their workers, including electricians, must have appropriate lead-based paint training in order to be considered for work under this program.

a. Have any of your workers attended this training?
☐ YES ☐ NO If yes, complete the Employee Training Record.

If not, they will be required to attend the training before they can work on a project site. Do you need information about lead training and certification classes?
☐ YES ☐ NO

b. Are you an EPA certified "Renovation, Repair and Painting" firm?
☐ YES ☐ NO

The undersigned hereby authorizes and requests any person, firm or Corporation to furnish any information requested by _____ in verification of the recitals comprising this statement of contractor's qualifications:

Contractor's Name: _____

Authorized Signature: _____
Type Name and Title: _____
Date: _____

City/County/Town of _____,
Commonwealth of Virginia

_____ being duly sworn deposes and says that he/she is _____ of _____and that the answers to the foregoing questions and all statements therein contained are true and correct.

My commission expires: _____.

Given under my hand this _____day of _____, 20_____.

_____ _____
Notary Public Registration Number

LEAD BASED PAINT RELATED TRAINING AND CERTIFICATIONS
EMPLOYEE RECORD

Contractor's Name: _____ Date: _____

Employee's Name	Training Type and Level
	Certified Renovator

Note: All contractors, subcontractors and workers must have, at a minimum, the Lead Safe Work Practices training to work on DHCD housing rehabilitation projects consisting of interim controls. Each contractor must also have EPA Certification in "Renovation, Repair and Painting" as a firm and at least one individual Certified Renovator assigned to the project.

EXPLANATION OF EQUAL OPPORTUNITY CHECKLIST

What it is Used For:	This is required to assure that all required Equal Opportunity requirements are explained and all appropriate forms are conveyed to the Contractor and subcontractors.
When it is Used:	During the Pre-construction Conference.
Where it Goes:	To Grantee's Equal Opportunity project file.
Instructions:	Part of the 'wage decision packet' sent by DHCD with the Wage Decision applicable to the activity(s) being contracted. Use the checklist to check off equal opportunity items as they are addressed at the Pre-construction Conference. Have the Contractor and any known subcontractors sign this checklist after completing review of items. **Any subcontractors hired subsequent of the Pre-construction Conference must also sign the checklist.** See also “Equal Opportunity Requirements,” as found in Chapter 8: Federal Labor Standards and Equal Opportunity Requirements.

EQUAL OPPORTUNITY CHECKLIST

(to be completed initially at pre-construction conference)

☐ Contractors have reviewed and understand Equal Opportunity/Section 3 contract provisions.

☐ Contractors must inform unions or other source of workers of Equal Opportunity requirements such as:

a) taking applications at jobsite; and

b) advertising in local or appropriate media.

*☐ Contractors have received DHCD forms "Register of Assigned Employees" and "Register of Contractors, Subcontractors and Suppliers"; and have been instructed to submit initial forms at Start of Construction and every month or part of month during the course of the contract.

☐ Contractors are aware of goals for utilization of minority and female workers.

☐ Contractors are aware that they are obligated to the greatest extent feasible to hire lower income project area residents as workers and trainees and to utilize project are businesses and businesses owned by project area residents.

☐ Prime contractor has been given Equal Opportunity poster and will display it in prominent place at jobsite(s).

*☐ If contractors employ more than 50 persons and contract is over $50,000 they have submitted form EEO-l to the Joint Reporting Committee, P. 0. Box 779, Norfolk, Virginia 23501; 804/461-1213.

* Denotes those items which must be submitted by the Contractor.

***(Public Body)**:*

_____
Signature

_____
Title

***(Prime Contractor)**:*

_____
Signature

_____
Title

_____
Company

(Subcontractor):

_____
Signature

_____
Title

_____
Company

***(Subcontractor)*:**

_____
Signature

_____
Title

_____
Company

(Subcontractor):

_____
Signature

_____
Title

_____
Company

***(Subcontractor)*:**

_____
Signature

_____
Title

_____
Company

(Subcontractor):

_____
Signature

_____
Title

_____
Company

***(Subcontractor)*:**

_____
Signature

_____
Title

_____
Company

EXPLANATION OF LABOR STANDARDS CHECKLIST

What it is Used For:	This is required to assure that all required Labor Standards requirements are explained and all appropriate forms are conveyed to the Contractor and subcontractors.
When it is Used:	During the Pre-construction Conference.
Where it Goes:	To Grantee's Labor Standards project file.
Instructions:	Part of the 'wage decision packet' sent by DHCD with the Wage Decision applicable to the activity(s) being contracted. Use the checklist to check off labor standards items as they are addressed at the Pre-construction Conference. Have the Contractor and any known subcontractors sign this checklist after completing review of items. **Any subcontractors hired subsequent of the Pre-construction Conference must also sign the checklist.** See also "Labor Standards Checklist," as found in Chapter 8: Federal Labor Standards and Equal Opportunity Requirements.

LABOR STANDARDS CHECKLIST

(to be completed initially at pre-construction conference)

☐ Contractors have reviewed and understand all Labor Standards contract provisions.

☐ Contractors have reviewed and understand wage decision and job classifications.

☐ Contractors have been informed that all workers:

a) must be paid at least the appropriate minimum wage for the job classification;

b) must be paid time-and-a-half for all work beyond 40 hours per week;

c) must be paid at least weekly;

d) must perform only the work which is covered by the job classification they are listed and paid in. If a worker performs in more than one job classification, he must be paid either the wage of the highest paid job he works or time cards signed by the worker must document the amount of time worked in each job during the week.

☐ Contractors will inform all workers:

a) of their job classifications and duties;

b) of their wage rates and fringe benefits;

c) that they may be interviewed on the jobsite and are required to cooperate;

d) of deductions from pay.

☐ Contractors will obtain each worker's name, permanent address, and social security number prior to assigning them to a jobsite.

*☐ Contractors will obtain certification of any apprentices and trainees, including registration number and year of program, and will submit the same to the Public Body.

☐ Contractors are aware that they are responsible for the compliance of their subcontractors with Labor Standards provisions.

☐ Contractors must verify that the subcontractors(s) is/are not debarred from Federal or State contracts.

☐ Contractors will construct and erect a project identification sign at the construction site identifying DHCD as a funding source per specifications as stated in contract documents.

☐ Prime contractor has received and will post in a prominent place on the site:

a) Wage Decision;

b) Labor Standards poster: "Notice to All Enployees... " (Davis-Bacon Act) WH- 1321

c) "Safety and Health Protection on the Job" poster (VA DOL).

*☐ Contractors have received Payroll report form (WH-347) and understand:

a) how it is to be filled out;

b) that it must be filled out completely;

c) that it must include every worker assigned to the project (excluding non-working, supervisory, or clerical personnel);

d) that Payroll reports must be submitted for every week or part of a week during the course of the contract, and must be submitted by all subcontractors. Payroll reports will be submitted to the Grantee within seven (7) days of the end of the work week.

☐ Contractors will maintain employment and payroll records which will be accessible to the Public Body, DHCD, and appropriate federal agencies for 3 years.

*Denotes those items which must be submitted by the Contractor.

***(Public Body)**:*

_____
Signature

_____
Title

***(Prime Contractor)**:*

_____
Signature

_____
Title

_____
Company

(Subcontractor):

_____
Signature

_____
Title

_____
Company

***(Subcontractor)*:**

_____
Signature

_____
Title

_____
Company

(Subcontractor):

_____
Signature

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Title

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Company

***(Subcontractor)*:**

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Signature

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Title

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Company

(Subcontractor):

_____
Signature

_____
Title

_____
Company

***(Subcontractor)*:**

_____
Signature

_____
Title

_____
Company

SECTION 3
PLAN OF ACTION
CONTRACTOR OR SUBCONTRACTOR

For contracts exceeding $100,000

(to be completed initially at Pre-construction Conference)

_____*(Name of contractor)*_____ agrees to implement the following specific Plan of Action steps directed at increasing the utilization of lower income residents and businesses within the County of _____.

A. To ascertain from the locality's Grantee the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the Section 3 Plan of Action for _____*(Name of Business)*_____.

B. Attempt to recruit from within the Section 3 area the necessary number of lower income residents through: a display advertisement in a local newspaper, signs placed at the project site, directly contacting the local Virginia Employment Commission (VEC) office, the local County (or City) Department of Social Services, or any Community Action Agencies that serve the Section 3 area.

C. Maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons that are qualified, if otherwise eligible and if a vacancy exists.

D. For all solicitations in excess of $100,000 for subcontractors, determine if each responding subcontractor is a Section 3 business for the project and insert this Section 3 Plan of Action requirement in any resulting agreement. Contracts and subcontracts for less than $100,000 are exempt from the preparation of a Section 3 Plan of Action.

E. To formally contact subcontractors and other appropriate groups to secure their cooperation for the program.

F. To ensure that all appropriate project area business concerns are notified of the pending sub-contractual opportunities.

G. To maintain records, including copies of correspondence, memoranda etc., which document that all of the above affirmative action steps have been taken.

H. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 Plan.

I. To list on Table A information related to subcontracts to be awarded.

J. To list on Table B all projected workforce needs for all phases of this project by occupation, trade, skill level, and number of positions.

As officers and representative of ____*(Name of Contractor/Subcontractor)*____, we the undersigned have read and fully agree to this Section 3 Plan of Action, and become a party to the full implementation of this program.

_____
Signature

_____ _____
Title Date

_____
Signature

_____ _____
Title Date

SECTION 3
PROPOSED SUBCONTRACTS BREAKDOWN

(to be completed initially at Pre-construction Conference)

TABLE A

For the period covering _____ 20__ through _____ 20__

(Duration of the CDBG-Assisted Contract)

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
TYPE OF CONTRACT (BUSINESS OR PROFESSION)	TOTAL NUMBER OF CONTRACTS	TOTAL APPROXIMATE DOLLAR AMOUNT	ESTIMATED NUMBER OF CONTRACTS TO PROJECT AREA BUSINESSES*	ESTIMATED DOLLAR AMOUNT TO PROJECT AREA BUSINESSES*

*The Project Area is coextensive with the Town/City/County of _____’s boundaries.

_____
Company

_____ _____
Project Name Project Number

_____ _____
EEO Officer (Signature) Date

SECTION 3
ESTIMATED PROJECT WORKFORCE BREAKDOWN

(to be completed initially at Pre-construction Conference)

TABLE B

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
JOB CATEGORY	TOTAL ESTIMATED POSITIONS	NO. POSITIONS CURRENTLY OCCUPIED BY PERMANENT EMPLOYEES	NO. POSITIONS NOT CURRENTLY OCCUPIED	NO. POSITIONS TO BE FILLED WITH LIPAR*
OFFICERS/SUPERVISORS				
PROFESSIONALS				
TECHNICIANS				
HOUSING SALES/RENTAL/MGMT.				
OFFICE CLERICAL				
SERVICE WORKERS				
OTHERS				

TRADE:

JOURNEYMEN				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				

TRADE:

JOURNEYMEN				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				

*Lower Income Project Area Residents, Individuals residing within the City/County of _____ whose family income does not exceed 80% of the median income.

_____
Company

SECTION 3
BUSINESS CERTIFICATION

COUNTY OF _____
_____(*ADDRESS*)_____
_____(*PHONE NUMBER*)_____

CERTIFICATION FOR BUSINESS CONCERNS SEEKING NOTIFICATION OF SECTION 3 CONTRACTING (SERVICES AND CONSTRUCTION) OPPORTUNITIES

Name of Business _____

Address of Business _____

Phone # _____ Email Address _____

DUNS Number _____ EIN # _____ or SS # (s) _____

Type of Business: ☐ Corporation ☐ Partnership
☐ Sole Proprietorship ☐ Joint Venture

County Business License Registration # _____

A <u>Section 3 Resident</u> is defined as any individual who resides within the County in which the federal assistance is expended and whose household income does not exceed 80% of the median income of the County adjusted for household size.

A *<u>Section 3 Business</u>* means a business that meets one or more of the following criteria:

(1) The business is 51% or more owned by Section 3 residents;

(2) The business has 30% or more permanent full-time employees that are certified Section 3 residents; or

(3) The business provides written evidence of a commitment to subcontract in excess of 25% of the dollar award of all subcontracts with a Section 3 Business.

To become CERTIFIED as a Section 3 Business please check all boxes that apply and <u>provide written evidence of the same</u>:

☐ **Business owner(s) live in _____ County.**

☐ **Business is 51% or more owned by Section 3 residents.**

☐ **Business has 30% or more permanent full-time employees that are certified Section 3 residents.**

☐ **Business will subcontract in excess of 25% of the dollar award of all subcontracts with a Section 3 Business(es).**

_____ (Corporate Seal)

Printed Name of Authorized
Official of Company

_____ _____

Signature of Authorized Date
Official of Company

SECTION 3
NEW EMPLOYEE TRACKING FORM

CONTRACTOR'S/SUBCONTRACTOR'S
NEW EMPLOYEE INFORMATION FORM

One *New Employee Information Form* is completed by the employer for each new employee hired for work on this project during the construction phase of the project.

This is a required form and should accompany the first payroll on which the name of the newly hired employee appears.

1. Name of Grant Recipient _____
2. CDBG Contract Number _____
3. Name of Employer _____
4. Name of New Employee _____
5. Street Address or P.O. Box # _____
6. City and Zip Code _____
7. Date of Hire of New Employee _____

8. Methods of attempting to recruit local persons of low and moderate income include: display advertisement in a local newspaper, public bulletin board, consideration of all applications received, U.S. employment service (i.e. local VEC office), a sign at the project site, and the posting of a notice at the project site. On the line below, list the method(s) used:
   _____

9. Does the employee live within the corporate limits (boundaries) of the Section 3 area listed on line 1? ☐ Yes ☐ No
   **The Resident Employment Data sheet must accompany this form.

_____ _____
Signature of Employer or Employer Representative Date

If the answer to 9 is "Yes" and if the household income is below the income category based on the number of persons residing in the household, and based on current Section 8 income limits, the employee is a Section 3 employee.

10. Is the above listed employee a Section 3 employee? ☐ Yes ☐ No

_____ _____
Signature of CDBG Grant Manager Date

SECTION 3 INCOME SURVEY

Your signature below will serve as self-certification of your Gross Household Income based on your household size. Circle the household size that reflects the total number of persons that currently reside in your household. Then review the corresponding income level and indicate whether your Gross Household Income is above or below the corresponding HH income referenced for your household size. Feel free to ask for assistance if you do not understand these instructions.

_____
Name of Head of Household

_____
Street Address / Town / State / Zip Code

Number of Persons Living in Household	Gross HH Income Level for the Section 3 County	Income ABOVE	Income BELOW
1	$		
2	$		
3	$		
4	$		
5	$		
6	$		
7	$		
8	$		

WARNING: Title 18, Section 1001 of the U.S. Code states that a person is guilty of a felony for knowingly and willingly making false or fraudulent statements to any department of the United States Government.

_____ _____
Householder Signature Date

_____
Print Name

_____ _____
Witness Signature Date

_____
Print Name

Minutes of Preconstruction Conference **

Grantee: _____

Contract #_____

Project Name: _____

Project Location: _____

Description of Project: _____

_____

_____

_____

Prime Contractor: _____

Known Subcontractors: _____

_____

_____

_____

Amount of Contract: $_____

Date and Place of Conference: _____

_____

Attendees/Name and Title:

_____

_____

_____

_____

*** ATTACH AGENDA AND HANDOUTS*

Summary of Items Covered: (Include all major construction related issues and attach Labor Standards and Equal Opportunity (Section 3) checklists)

Comments of Unresolved Issues:

_____

Prime Contractor & Title

_____

Project Engineer

_____

Project Manager - Public Body

EXPLANATION OF

NOTICE TO PROCEED WITH CONSTRUCTION FORM

Explanation of Form

After all Pre-construction Conference issues are resolved and the General Contractor submits all required bonds and insurance certifications, the construction contract may be executed. Following that, the *Notice to Proceed with Construction* should be given to the Contractor.

✱ **A copy of the *Notice to Proceed with Construction* must be sent to your DHCD Community Development Specialist.**

NOTICE TO PROCEED WITH CONSTRUCTION

(Date)

TO: _____
(*Successful Low Bidder*)

ADDRESS: _____

_____

PROJECT NAME: _____

CONTRACT FOR: _____

_____

You are hereby notified to commence work in accordance with the Contract Documents dated *(insert date)* on or before *(insert date)* and you are to complete the work within _____ consecutive calendar days thereafter. The date of substantial completion of all work is therefore *(insert date)* and the date of final completion of construction is *(insert date).*

A notice of Start of Construction and all required pre-construction documents must be submitted to the Public Body no later than one (1) day prior to commencement of work.

_____
(Owner)

_____
(Signature of Authorized Official)

_____
(Type Title)

ACCEPTANCE OF AWARD

_____
(Contractor)

_____
(Signature of Authorized Official)

_____
(Type Title)

cc: Engineer
DHCD Community Development Specialist

EXPLANATION OF APPLICABILITY OF EQUAL OPPORTUNITY CLAUSE

1. What contracts or subcontracts are subject to the Equal Opportunity Clause?

   -- "Federal government contracts or subcontracts" exceeding $10,000 or contracts or subcontracts with the Federal government which, in any 12 month period, total or can reasonably be expected to have an aggregate total value exceeding $10,000.

   -- "Federal assisted construction contracts/subcontracts and non-construction contracts/subcontracts" exceeding $10,000.

2. When is a bidder required to have on file at each establishment, affirmative action programs?

   -- For NON-CONSTRUCTION CONTRACTS (service and supply), DOL regulations (41 CFR 60-2) call for a Written Affirmative Action Plan from each prime contractor or subcontractor with 50 or more employees and (1) a contract of $50,000 or more; or (2) Government bills of lading which, in any 12 month period, total or can be reasonably be expected to total $50,000 or more.

   -- For CONSTRUCTION CONTRACTS, DOL Regulations do not require a Written Affirmative Action Plan. However, Contractors must take specified Affirmative Action Steps and to demonstrate with evidence that the Specifications (41 CFR 60-4. 3) in the Equal Opportunity Clause have been implemented.

3. What reports are due under the applicable filing requirements?

   -- Standard Form 100 (EEO-1)

   Each person (contractor and subcontractor) shall file annually with the Joint Reporting Committee, on or before March 31, reports on Standard Form 100 (EEO-1), if such person (1) is not exempt as provided for by 41 CFR 60-1.5, (2) has 50 or more employees, and (a) a contract of $50,000 or more; or (b) government bills of lading which, in any 12 month period, total or can reasonably be expected to total $50,000 or more.

   Each person required to submit reports shall file such report with the PUBLIC BODY within 30 days after the award to him of a contract or subcontract, UNLESS such person has submitted such a report within 12 months preceding the date of the award. Subsequent reports shall be submitted annually, on or before March 31, to the Joint Reporting Committee, P. 0. Box 779, Norfolk, Virginia 23501. Forms can be requested in writing or by calling 804/461-1213.

BIDDER COMPLIANCE STATEMENT

CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

Applicability: Bid exceeding ten thousand dollars ($10,000) for contract/subcontract of unlimited amount and non-construction contract/subcontract for less than one million dollars ($1,000,000).

This statement relates to a proposed contract between (pick one): ☐ Contractor and Public Body OR ☐ Contractor and Subcontractor to be funded under a federally assisted project. Pursuant to Executive Order 11246 and its implementing regulations at 41 CFR 60-1.7(b) (1), as the undersigned bidder, I certify that:

1) Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
☐ YES ☐ NO

2) Bidder has developed and has on file at each establishment, affirmative action programs pursuant to 41 CFR 60-2 (applies only to non-construction contractors).
☐ YES ☐ NO (contract less than $50,000 AND fewer than 50 employees)

3) Bidder has filed with the Joint Reporting Committee; the Director of the Office of Federal Contract Compliance Programs, U.S. Department of Labor; and agency; and/or the Equal Employment Opportunity Commission; all reports due under the applicable filing requirements.
☐ YES ☐ NO ☐ None Required

I understand that if I have failed to file any compliance reports which have been required of me, or have failed to develop and have on file at each establishment affirmative action programs pursuant to 41 CFR 60-2, when required, I am not eligible to have my bid or proposal considered, or to enter into the proposed contract.

I further understand that if awarded the proposed contract, and the contract for the FIRST time brings me under the filing requirements or the written affirmative action programs that I wilI, as applicable: (a) within 30 days file with the Public Body, Standard Form 100 (EEO- 1); and (b) within 120 days from the commencement of the contract, develop and submit to the Director of the Office of Federal Contract Compliance Programs, U.S. Department of Labor, for approval a Written Affirmative Action Plan.

Signature: _____
Type Name: _____ Title: _____
Address, including zip code: _____
IRS # (or owner's social security #): _____

Attachment: Any other reports that have been required pursuant to Executive Order 11246 by a contracting agency, the Equal Opportunity Commission, or the Director of the Office of Federal Contract Compliance Programs, U. S. DOL.

Attachment to Certain Construction Contracts

Applicable to contracts/subcontracts in excess of $2,000 that are funded under legislation subject to Reorganization Plan Number 14 of 1950 (64 Stat. 1267), and which is for construction, alteration, and/or repair, including painting and decoration. Some of the legislation most likely to provide funding (that is, combined with CDBG funds) is: Appalachian Regional Development Act of 1965, Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, Public Works and Economic Development Act of 1965, Federal-Aid Highway acts, Vocational Education Act of 1963 and Vocational Education Amendments of 1968.

Subpart A: Contract Work Hours and Safety Standards Act- Safety and Health

1. The contractor shall not require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by regulations of the Secretary of Labor.

2. The contractor shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.).

3. The contractor shall include or cause to be included in each nonexempt subcontract the clauses in (1) and (2) above.

   A person who undertakes to perform a portion of a contract involving the furnishing of supplies of materials will be considered a "subcontractor" under section 107 if the work in question involves the performance of construction work and is to be performed: (a) Directly on or near the construction site, or (b) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project.

Subpart B: Immigration Reform and Control Act Of 1986

The Contractor agrees by signing this contract that he/she does not and will not during the performance of this contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

TECHNICAL SPECIFICATIONS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK INCLUDED

A. Title of work, and type of Contract:

1. Proposed Northside Neighborhood Improvement Plan Dillard Street and Alley Improvements

2. The Contract is a unit price contract.

1.02 RELATED WORK

A. Contract forms and Conditions of the Contract listed in Table of Contents.

B. Related requirements specified in other Sections listed in Table of Contents, including all Sections under Division 1, unless otherwise specified.

1.03 WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract comprises:

1. Demolition and repaving Dillard Street, alley construction from Dillard Street to existing alley and driveway entrance access improvements off Warren Court.

1.04 CONTRACT METHOD

A. Construct the Work under a unit price contract.

B. The Owner reserves the right to award other contracts for additional work in connection with this project as required to install improvements and to equip the project.

1.05 WORK SEQUENCE

A. Construct Work in stages to accommodate Owner's use of premises during construction. Coordinate with Progress Schedule.

B. Required stages:

1. Install erosion and sediment control items prior to beginning any land disturbing activities.

2. Locate conflicting overhead and underground public utilities.

C. Construct Work in stages to provide for continuous public usage. Do not close off public usage of facilities until use of one stage of Work will provide alternate usage.

1.06 CONTRACTOR USE OF PREMISES

A. Contractor shall limit use of premises for Work, storage and access, to allow:

1. Owner occupancy.

2. Public usage.

B. Coordinate use of premises under direction of Owner.

C. Assume full responsibility for protection and safekeeping of products under this Contract.

D. Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

1.07 OWNER-FURNISHED PRODUCTS

A. Owner Responsibilities:

1. Arrange for delivery of shop drawings, product data, samples, manufacturer's instructions, and certificates to Contractor.

2. Deliver supplier's bill of materials to Contractor.

3. Arrange and pay for delivery in accordance with Progress Schedule.

4. Inspect deliveries jointly with Contractor.

5. Submit claims for transportation damage.

6. Arrange for replacement of damaged, defective, or missing items.

7. Arrange for manufacturer's field services; arrange for and deliver manufacturer's warranties and bonds to Contractor.

B. Contractor Responsibilities:

1. Designate submittals and delivery date for each product in Progress Schedule.

2. Review shop drawings, product data, samples, and other submittals. Submit to Engineer with notification of any observed discrepancies or problems anticipated due to non-conformance with Contract Documents.

3. Receive and unload products at site.

4. Inspect deliveries jointly with Owner, record shortages, and damaged or defective items.

5. Handle products at site, including uncrating and storage.

6. Protect products from damage, and from exposure to elements.

7. Assemble, install, connect, adjust, and finish products.

8. Provide installation inspections required by public authorities.

9. Repair or replace items damaged by Contractor.

1.08 REQUEST FOR INFORMATION

Any questions, clarifications or interpretations requested by the Contractor shall be filled out on the attached form. RFIs shall be numbered sequentially, and be filled in completely. Form and all required additional information shall be delivered to the Engineer or his designated representative. Responses will be on the form or on attachments.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

REQUEST FOR INFORMATION NO: ___

Mattern & Craig Comm. No: _____

Project: _____

Owner: _____

Contractor: _____

RFI Title _____

REFERENCE

Item: _____

Specification Section: _____

Drawing No: _____

Other: _____

REQUEST

The following [ ] information, [ ] interpretation, or [ ] clarification is requested as described below or in the attachments:

_____

_____

_____

Requested by: _____ Date: _____

Contractor

RESPONSE

The following [ ] information, [ ] interpretation, or [ ] clarification is provided as described below or in the attachments:

_____

_____

_____

Responded by: _____ Date: _____

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Procedures for preparation and submittal of applications for payment.

1.02 RELATED WORK

A. Owner-Contractor Agreement: Contract Sum, unit prices, amounts of progress payments, and retainages and times for submittals.

B. Conditions of the Contract.

C. Specified elsewhere:

1. Section 01310 - Progress Schedules
2. Section 01370 - Schedule of Values
3. Section 01700 - Contract Closeout

1.03 FORMAT

A. For each item, provide a column with headings: Item Number; Description of work; Scheduled Value, Previous Applications; Work in Place (and Stored Materials) under this Application; Authorized Change Orders; Total Completed (and Stored) to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.

1.04 PREPARATION OF APPLICATIONS

A. Use computer generated form.

B. Execute certification by signature of authorized officer.

C. Use data on accepted Schedule of Values. Provide dollar value in each column for each line item for portion of Work performed and for stored products.

D. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.

E. Prepare Application for Final Payment as specified in Section 01700.

F. Review application with Resident Project Representative (RPR) and obtain RPR's approval.

1.05 SUBMITTAL PROCEDURES

A. Submit three copies of each Application for Payment at times stipulated in Agreement.

B. Submit under transmittal letter.

1.06 SUBSTANTIATING DATA

A. When Engineer requires substantiating information, submit data justifying line item amounts in question.

B. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01040

COORDINATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. Coordination of Work of Contract.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work

1.03 DESCRIPTION

A. Coordinate scheduling, submittals, and work of the various sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.

B. Coordination with Contractors on other Contracts in this project.

1.04 MEETINGS

A. In addition to progress meetings, hold coordination meetings and preinstallation conferences with personnel and subcontractors to assure coordination of Work.

1.05 COORDINATION OF SUBMITTALS

A. Schedule and coordinate submittals with City as required.

B. Coordinate work of various sections having interdependent responsibilities for installing, connection to, and placing in service, such as equipment, piping, electrical, etc.

C. Coordinate requests for substitutions to assure compatibility of space, of operating elements, and effect on work of other Sections.

1.06 COORDINATION OF CONTRACT CLOSEOUT

A. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

B. After Owner occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

C. Assemble and coordinate closeout submittals specified in Section 01700.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.01 WORK INCLUDED

A. Field engineering services for laying out the Project.

B. Engineer will identify control points and limits of work, and Contractor will provide specified construction stakeout, as indicated in Section 01850.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 01850 - Special Conditions

1.03 QUALITY CONTROL

A. Professional Surveyor: Registered Professional Surveyor shall provide the construction stakeout.

B. Professional Engineer: Registered professional engineer skilled in disciplines required for service on Project, licensed in the State in which Project is located.

1.04 SUBMITTALS

A. Submit name, address, and telephone number of surveyor and engineer before starting Work.

B. On request, submit documentation verifying accuracy of survey work.

C. Submit certificate signed by surveyor, certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.

1.05 PROJECT RECORD DOCUMENTS

A. Maintain complete, accurate log of control and survey work as it progresses.

B. Submit Record Documents under provisions of Section 01700.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 INSPECTION

A. Verify locations of survey control points prior to starting work. Promptly notify Engineer of any discrepancies discovered.

3.02 SURVEY REFERENCE POINTS

A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to Engineer.

B. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons. Replace dislocated survey control points based on original survey control.

3.03 SURVEY REQUIREMENTS

A. Maintain a minimum of two (2) permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on Project Record Documents.

B. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means:

1. The entire project.
2. Grid or axis for structures.

C. Periodically verify layouts by same means.

D. The plans and supplementary drawings shall not be scaled and the Contractor must verify all dimensions and elevations at the site prior to proceeding with the work. The Contractor shall also verify existing utility locations prior to purchasing materials affected by these locations.

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

(Architectural, Civil & Structural)

PART 1 GENERAL

1.01 WORK INCLUDED

A. Applicability of Reference Standards.

B. Provisions of Reference Standards at site.

C. Acronyms used in Contract documents for Reference Standards and current designations. Source of Reference Standards.

1.02 RELATED WORK

A. Conditions of the Contract.

1.03 QUALITY ASSURANCE

A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. The date of the standard is that in effect as of the Bid date, or date of Owner-Contractor Agreement when there are no bids, except when a specific date is specified.

C. When required by individual Specifications section, obtain copy of standard. Maintain copy at jobsite during submittals, planning, and progress of the specific work, until Substantial Completion.

1.04 SCHEDULE OF REFERENCES

AASHTO American Association of State Highway and Transportation Officials
444 North Capitol Street, N. W.
Washington, DC 20001

ACI	American Concrete Institute Box 19150 Reford Station Detroit, MI 48219
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 W. Quincy Avenue Denver, CO 80235
CPSC	U. S. Consumer Product Safety Commission
FS	Federal Specifications General Services Administration Specifications Unit (WFSIS) 7th and D Streets, S. W. Washington, DC 20407
NBS	National Bureau of Standards, Product Standards U. S. Department of Commerce Washington, DC 20234
UL	Underwriters' Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062
VDOT	Virginia Department of Transportation 1401 East Broad Street Richmond, VA 23219

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 WORK INCLUDED

A. Contractor participation in preconstruction conferences.

B. Contractor administration of progress meeting.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01310 - Progress Schedules
2. Section 01500 - Construction Facilities and Temporary Controls
3. Individual Specifications Sections: Preinstallation conferences

1.03 PRECONSTRUCTION CONFERENCES

A. Engineer will administer preconstruction conference for execution of Owner-Contractor Agreement, exchange of preliminary submittals, establishing Notice to Proceed date, stating Project procedures, and answering questions.

1.04 PROGRESS MEETINGS - CONTRACTORS DUTIES

A. Schedule and administer Project meetings throughout progress of the Work at a maximum of one month intervals, called meetings, and preinstallation conferences.

B. Make physical arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within five days to Engineer, participants, and those affected by decisions made at meetings.

C. Attendance: Job superintendent, major subcontractors and suppliers; Utility representatives; Owner and Engineers appropriate to agenda topics for each meeting.

D. Suggested Agenda: Review of Work progress since last meeting, status of progress schedule and adjustments thereto, expected progress by next meeting, number of workers on site, delivery schedules, submittals, shop drawing status summary,

maintenance of quality standards, pending changes and substitutions, project questions, and other items affecting progress of Work.

PART 2 **PRODUCTS -** Not Used

PART 3 **EXECUTION -** Not Used

END OF SECTION

SECTION 01310

PROGRESS SCHEDULES

PART 1 GENERAL

1.01 WORK INCLUDED

A. Procedures for preparation and submittal of construction Progress Schedules and periodical updating.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 01027 - Applications for Payment
3. Section 01200 - Project Meetings
4. Section 01340 - Shop Drawings, Product Data and Samples
5. Section 01370 - Schedule of Values
6. Section 01700 - Contract Closeout

1.03 FORMAT

A. Prepare Schedules as a horizontal bar chart with separate bar for each major portion of Work or operation, identifying first work day of each week.

B. Sequence of Listings: The Table of Contents of Specifications.

C. Scale and Spacing: To provide space for notations and revisions.

D. Sheet Size: Minimum (8-1/2 x 11)(11 x 17) inches.

1.04 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by major Specification section number.

C. Provide sub-schedules to define critical portions of entire Schedule.

D. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

E. Provide separate schedule of submittal dates for shop drawings, product data, and samples and dates reviewed submittals will be required from Engineer. Show decision dates for selection of finishes.

F. Show delivery dates for Owner furnished items, if any.

G. Coordinate content with Section 01370, Schedule of Values.

1.05 REVISIONS TO SCHEDULES

A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.

B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.

C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

1.06 SUBMITTALS

A. Submit initial Schedules within 15 days after date established in Notice to Proceed. After review, resubmit required revised data within 10 days.

B. Submit revised Progress Schedules with each Application for Payment.

C. Submit under transmittal letter.

1.07 DISTRIBUTION

A. Distribute copies of reviewed schedules to job site file, subcontractors, suppliers, Engineer, Owner, and other concerned entities.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in Schedules.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 GENERAL

1.01 WORK INCLUDED

A. Procedures for submittals.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 01310 - Progress Schedules
2. Section 01370 - Schedule of Values
3. Section 01400 - Quality Control
4. Section 01700 - Contract Closeout

1.03 SHOP DRAWINGS

A. Present in a clear and thorough manner. Title each drawing with Project and Contract name and number; identify each shop drawing by Specification section and paragraph number; identify each element of drawings by reference to sheet number and detail, schedule, or room name of Contract Documents. All equipment and materials shall have shop drawings submitted for them. Shop drawings shall be thoroughly checked and coordinated by the fabricator and Contractor prior to being submitted.

B. Identify field dimensions; show relation to adjacent or critical features or Work or products.

C. Minimum Sheet Size: 8-1/2 inches x 11 inches.

1.04 PRODUCT DATA

A. Submit only pages which are pertinent; clearly mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics, and capacities; wiring and piping diagrams and controls; components parts; finishes; dimensions; and required clearances.

B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.

1.05 NOT USED

1.06 MANUFACTURER'S INSTRUCTIONS

A. Manufacturer's instructions for storage, preparation, assembly, installation, adjusting, balancing, and finishing under provisions of Section 01400, Quality Control.

1.07 CONTRACTOR REVIEW

A. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.

B. Coordinate submittals with requirements of Work and of Contract Documents.

C. Sign or initial each sheet of shop drawings and product data, and each sample label to certify compliance with requirements of Contract Documents. Notify Engineer in writing at time of submittal, of any deviations from requirements of Contract Documents.

D. Do not fabricate products or begin work which requires submittals until return of submittal with Engineer acceptance.

1.08 SUBMITTALS REQUIREMENTS

A. Furnish submittals specified in sections of the specifications, and for all equipment and materials used in the project. Contractor shall establish a numbering system for all submittals. Resubmittals of corrected submittals shall use sequential letter suffixes.

B. Transmit submittals in accordance with approved Progress Schedule and in such sequence to avoid delay in the Work or work of other contracts.

C. Provide 8 x 4 inch blank space on each submittal for Contractor and Engineer stamps.

D. Apply Contractor's stamp, signed or initialed, certifying to review, verification of products, field dimensions and field construction criteria, and coordination of information with requirements of Work and Contract Documents.

E. Coordinate submittals into logical groupings to facilitate interrelation of the several items:

1. Finishes which involve Engineer selection of colors, textures, or patterns.

2. Associated items which require correlation for efficient function or for installation.

F. Submit number of copies of shop drawings Contractor requires, plus three copies which will be retained by the Engineer.

G. Submit number of copies of product data and manufacturer's instructions Contractor requires, plus three copies which will be retained by Engineer.

H. Submit number of samples specified in individual Specifications sections.

I. Submit under transmittal letter. Identify Project by title and number. Contract by number. Identify Work and product by Specifications section and Article number. Use established numbering system.

1.09 RESUBMITTALS

A. Make resubmittals under procedures specified for initial submittals; identify changes made since previous submittal. Use sequential letter suffixes after the submittal number for numbering resubmittals.

B. The ENGINEER, as the OWNER's representative, reserves the right to require the CONTRACTOR to resubmit any shop drawing found not to comply with the contract documents. Any shop drawing requiring more than one resubmittal shall be reviewed by ENGINEER at CONTRACTOR's expense, and will be invoiced monthly directly to the CONTRACTOR by the ENGINEER at the rate of $100.00 per hour or fraction thereof. The CONTRACTOR shall pay the ENGINEER prior to the next pay request. Approval of the next pay request by the ENGINEER shall be contingent on the receipt of payment for the additional reviews.

1.10 ENGINEER'S REVIEW

A. Engineer will review shop drawings, product data, and samples and return submittals within ten days of receipt of a complete, Contractor checked submittal.

1.11 DISTRIBUTION

A. Duplicate and distribute reproductions of shop drawings, copies of product data, and samples, which bear Engineer's stamp of approval, to job site file, Record Documents file, subcontractors, suppliers and other entities requiring information.

PART 2 **PRODUCTS -** Not Used

PART 3 **EXECUTION -** Not Used

END OF SECTION

SECTION 01370

SCHEDULE OF VALUES

PART 1 GENERAL

1.01 WORK INCLUDED

A. Procedures for preparation and submittal of Schedule of Values.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 01027 - Application for Payment
2. Section 01310 - Progress Schedules
3. Section 01700 - Contract Closeout

1.03 FORMAT

A. Schedule of Values shall be on approved computer driven Application for Payment Form.

B. The Owner shall approve the Schedule of Values prior to submission of first Application for Payment.

C. Contractor's standard media-driven printout can be submitted for approval.

D. Follow Table of Contents of Specifications for listing component parts. Identify each line item by number and title of major Specifications section.

E. Use items in the Bid Form to establish Schedule of Values.

1.04 CONTENT

A. List installed value of each major item of Work and each subcontracted item of Work as a separate line item to serve as a basis for computing values for Progress Payments. Round off values to nearest dollar.

B. For each major subcontract, list products and operations of that subcontract as separate line items.

C. Include Work allowances, stakeout allowance, and testing allowance as line items of Work, when applicable.

D. Coordinate listings with Progress Schedule.

E. Component listings shall each include a directly proportional amount of Contractor's overhead and profit.

F. For items on which payments will be requested for stored products, list sub-values for cost of stored products, including taxes paid.

G. Submit a sub-schedule for each separate stage of Work when specified in Section 01010, Summary of Work.

H. The sum of values listed shall equal total Contract Sum.

1.05 SUBMITTAL

A. Submit three copies of Schedule 15 days prior to first Application for Payment. Form and content shall be acceptable to Engineer.

B. Transmit under transmittal letter. Identify Project by title and number. Identify Contract by number.

1.06 SUBSTANTIATING DATA

A. When Engineer requires substantiating information, submit data justifying line item amounts in question.

B. Provide one copy of data with cover letter for each copy of Application. Show Application number and date, and line item by number and description.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.01 WORK INCLUDED

A. General Quality Control.

B. Workmanship.

C. Manufacturer's Instructions.

D. Manufacturer's Certificates.

E. Mockups.

F. Manufacturer's Field Services.

G. Testing Services.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01090 - Reference Standards
2. Section 01340 - Shop Drawings, Product Data & Samples

1.03 QUALITY CONTROL, GENERAL

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.04 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and cracking.

1.05 MANUFACTURERS' INSTRUCTIONS

A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

1.06 MANUFACTURERS' CERTIFICATES

A. When required by individual Specifications Section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01410

TESTING SERVICES

PART 1 GENERAL

1.01 WORK INCLUDED

A. Contractor provided concrete testing laboratory services.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 02207 - Earthwork
2. Section 02209 - Utility Backfill and Restoration
3. Section 01010 - Summary of Work
4. Section 01400 - Quality Control
5. Section 01700 - Contract Closeout
6. Section 02505 - Asphalt Paving
7. Individual Specification Sections: Inspections and tests required, and standards for testing.

1.03 REFERENCES

A. Titles and current designations of reference standards shall be as specified in Section 01090, unless otherwise specified herein.

1.04 SELECTION AND PAYMENT

A. Contractor shall employ and pay for services of an independent testing laboratory to perform specified inspection and testing.

B. Employment of testing laboratory shall in no way relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

1.05 QUALITY ASSURANCE

A. Comply with requirements of ASTM E329 and ASTM D3740.

B. Laboratory shall maintain a full-time registered engineer on staff to review services.

C. Laboratory authorized to operate in State in which project is located.

1.06 CONTRACTOR SUBMITTALS

A. Prior to start of Work, submit concrete and geotechnical testing laboratory name, address, and telephone number, and names of full-time registered engineer and responsible officer. Submit same for steel testing services.

B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.07 LABORATORY RESPONSIBILITIES

A. Test samples of mixes submitted by Contractor.

B. Provide qualified personnel at site after due notice; cooperate with Engineer and Contractor in performance of services.

C. Perform specified inspection, sampling, and testing of products in accordance with specified standards.

D. Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly (by fax) notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.

F. Perform additional inspections and tests required by Engineer.

G. Attend preconstruction conferences and progress meetings, as requested by the Engineer, or the Contractor.

1.08 LABORATORY REPORTS

A. After each inspection and test, promptly submit two (2) copies of laboratory report to Engineer and to Contractor. Include: Date issued, Project title and number, name of inspector, date and time of sampling or inspection, identification of product and Specification section, location in the Project, type of inspection or test, date of test, results of tests, and conformance with Contract Documents. When requested by Engineer, provide interpretation of test results.

B. Test results from concrete cylinder breaks shall be faxed to the Engineer within two (2) working days of when the cylinders are broken.

1.09 LIMITS ON TESTING LABORATORY AUTHORITY

A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

B. Laboratory may not approve or accept any portion of the Work.

C. Laboratory may not assume any duties of Contractor.

D. Laboratory has no authority to stop Work.

1.10 CONTRACTOR RESPONSIBILITIES

A. Deliver to laboratory at designated location adequate samples of soil materials and concrete materials proposed to be used which require testing, together with proposed concrete and grout mix designs.

B. Cooperate with laboratory personnel, and provide access to Work, and to manufacturer's facilities, when required.

C. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.

D. Notify Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.

E. Arrange with laboratory and pay for additional samples and tests required by Contractor beyond specified requirements.

1.11 SCHEDULE OF INSPECTIONS AND TESTS

A. See following Sections for specific inspection and tests:

1. Section 02207 - Earthwork
2. Section 02209 - Utility Backfilling and Restoration
3. Section 02505 - Asphalt Paving
4. Section 02528 - Concrete Curb and Curb and Gutter

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 WORK INCLUDED

A. Electricity, Lighting.

B. Heat, Ventilation.

C. Telephone Service.

D. Water.

E. Sanitary Facilities.

F. Barriers.

G. Protection of Installed Work.

H. Security.

I. Surface Water Control.

J. Cleaning During Construction.

K. Field Offices and Sheds.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work

1.03 ELECTRICITY, LIGHTING

A. Provide lighting for construction operations.

B. Permanent lighting, if available, may be used during construction. Maintain lighting and make routine repairs.

1.04 HEAT, VENTILATION

A. Provide as required to maintain specified conditions for construction operations, to protect materials and finishes from damage due to temperature or humidity.

B. Prior to operation of permanent facilities for temporary purposes, verify that installation is approved for operation, and the filters are in place. Provide and pay for operation and maintenance of permanent facilities and for restoration at completion of the Project.

C. Provide ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, or gases.

1.05 TELEPHONE SERVICE

A. Provide telephone service to field offices. Provide cell phone for onsite superintendent.

1.06 WATER

A. Provide service required for construction operations. Extend branch piping with outlets located so that water is available by use of hoses. Provide backflow preventers or check valves as required by local code.

1.07 SANITARY FACILITIES

A. Provide and maintain required temporary facilities and enclosures.

B. Permanent facilities used during construction operations shall be maintained in a sanitary condition and restored at completion of the Project.

1.08 BARRIERS

A. Provide as required to prevent public entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide barricades as required by governing authorities for public rights-of-way and for public access to existing homes.

C. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials, and puddling or continuous running water. Barriers shall protect root systems of trees and shrubs that are to remain.

1.09 PROTECTION OF INSTALLED WORK

A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.

B. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.

1.10 SECURITY

A. Provide security program and facilities to protect Project from unauthorized entry, vandalism, and theft.

1.11 SURFACE WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide and operate pumping equipment. Provide sediment control of pumped water in accordance with Erosion and Sediment Control Standards.

1.12 CLEANING DURING CONSTRUCTION

A. Control accumulation of waste materials and rubbish; periodically dispose of off-site.

1.13 FIELD OFFICES AND SHEDS (Not Required For This Project)

A. Office: Weather-tight, with lighting, electrical outlets, heating, cooling, ventilating equipment and equipped with furniture. Provide, in addition, space for Project meetings, with table and chairs to accommodate 6 persons. Provide separate private office, similarly equipped and furnished, for use of Engineer.

B. Storage Sheds for Tools, Materials, and Equipment: Weather-tight, with heat and ventilation for products requiring controlled conditions, with adequate space for organized storage and access, and lighting for inspection of stored materials.

1.14 REMOVAL

A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.

B. Clean and repair damage caused by installation or use of temporary facilities. Remove underground installation to a depth of 2 feet; grade site as indicated. Restore existing facilities used during construction to specified, or to original condition.

PART 2 **PRODUCTS** - Not Used

PART 3 **EXECUTION** - Not Used

END OF SECTION

SECTION 01570

TRAFFIC REGULATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. Construction Parking Control.

B. Flagmen.

C. Flares and Lights.

D. Haul Routes.

E. Removal.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01500 - Construction Facilities and Temporary Controls
2. Section 02080 - Traffic, Property, and Utility Maintenance and Coordination.

PART 2 PRODUCTS

2.01 SIGNS AND DEVICES

A. Post-mounted and wall-mounted traffic control and informational signs.

B. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdiction, or Department of Transportation.

C. Flagman Equipment: As required by local jurisdiction, or Department of Transportation.

D. All traffic control devices shall meet the requirements of the latest revision of the manual of Uniform Traffic Control Devices.

PART 3 EXECUTION

3.01 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking, including Contractor's employees, to prevent interference with public traffic and parking, and access by emergency vehicles.

B. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas.

C. Prevent parking on or adjacent to roads or in unsafe areas.

3.02 FLAGMEN

A. Provide trained and equipped flagmen to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.03 FLARES AND LIGHTS

A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.04 HAUL ROUTES

A. Consult with authorities, establish public thoroughfares to be used for haul routes and site access.

B. Confine construction traffic to designated haul routes.

C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.05 TRAFFIC SIGNS AND SIGNALS

A. At approaches to site and on site, install traffic signs and signals, if needed, at crossroads, detours, parking areas and elsewhere as needed to direct construction and affected public traffic.

B. Relocate signs as Work progresses, to maintain effective traffic control.

3.06 REMOVAL

A. Remove equipment and devices when no longer required. Repair damage caused by installation. Remove post settings to a depth of 2 feet.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Products.

B. Transportation and Handling.

C. Storage and Protection.

D. Product Options.

E. Products List.

F. Substitutions.

G. Systems Demonstration.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01090 – Reference Standards
2. Section 01340 – Shop Drawings, Project Data and Samples
3. Section 01400 – Quality Control

1.03 PRODUCTS

A. Products include material, equipment, and systems.

B. Comply with Specifications and referenced standards as minimum requirements.

C. Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.

1.04 TRANSPORTATION AND HANDLING

A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.05 STORAGE AND PROTECTION

A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store within temperature and humidity ranges required by manufacturer's instructions.

B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.

C. Store loose granular materials on solid surface in a well-drained area; prevent mixing with foreign matter.

D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

1.06 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards.

B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not specifically named.

1.07 PRODUCTS LIST

A. Within 15 days after date established in Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

1.08 SUBSTITUTIONS AND “OR EQUAL” ITEMS

A. Only within 15 days after date established in Notice to Proceed will the Engineer consider requests from Contractor for substitutions. Subsequently, substitutions will be considered only when a product becomes unavailable due to no fault of Contractor. A substitution is when material or product is substantially different from item specified. An “or equal” item is not considered a substitution, but must be proved to the satisfaction of the Engineer that the “or equal” item is of equal quality, equal performance, same method of operation, equal or lower power consumption, equal or lower maintenance costs, and of equal or better installed experience (minimum of 10 projects.)

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents, for both substitutions and "or equal".

C. Request for substitution and "or equal" constitutes a representation that Contractor:

1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.

2. Will provide the same warranty for substitution as for specified product.

3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.

4. Waives claims for additional costs which may subsequently become apparent.

5. Will pay the Engineer to revise construction drawings, if necessary, for preparation of Record Drawings.

D. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.

E. Engineer will determine acceptability of proposed substitution, and the "or equal" item and will notify Contractor of acceptance or rejection in writing within a reasonable time.

F. A maximum of three (3) substitutions requests shall be allowed on this project. Only one request for "or equal" will be considered for each product. When submittal is not accepted, provide specified product.

PART 2 **PRODUCTS -** Not Used

PART 3 **EXECUTION -** Not Used

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Closeout Procedures.

B. Final Cleaning, and Painting.

C. Project Record Documents.

D. Operation and Maintenance Data, and Manuals.

E. Warranties and Bonds.

F. Spare Parts and Maintenance Materials.

1.02 RELATED WORK

A. Conditions of the Contract.

B. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 01027 - Applications for Payment.
3. Section 01500 - Construction Facilities and Temporary Controls
4. Section 01600 - Material and Equipment

1.03 CLOSEOUT PROCEDURES

A. Comply with procedures stated in the Contract Documents for issuance of Certificate of Substantial Completion.

B. When Contractor considers Work has reached final completion, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.

C. A final inspection shall be conducted by the Engineer, when requested by the Contractor and when all the Work is done. Punch list items shall be remedied immediately and the Inspector and Engineer notified. If the final inspection shows work is not complete and a second final inspection is required, the Contractor shall pay for the Engineer’s time and travel for the first final inspection.

D. In addition to submittals required by the conditions of the Contract, provide submittals required by governing authorities, and submit an Application for Final Payment with a final statement of accounting giving total adjusted Contract Sum, previous payments, change orders, allowances, and sum remaining due. Retainage shall be shown as zero. Final payment shall not be made until all punch list items are satisfied.

E. Engineer will issue a final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order.

1.04 FINAL CLEANING AND PAINTING

A. Execute final cleaning and painting prior to final inspection.

B. Clean site; sweep and pressure wash paved areas and curbs/sidewalks, rake clean other surfaces; clean drainage system.

C. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site.

D. Seed and mulch all disturbed areas not covered by structure, walk or pavement.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01850

SPECIAL CONDITIONS

PART 1 GENERAL

1.01 WORK INCLUDED

A. The specifications have been arranged and sectioned only as a means of reference and shall not be interpreted as being a proper or complete means or method in which to arrange, install or complete the work.

B. The Contractor shall comply with "Rules and Regulations Governing Construction, Demolition and all Excavation" as adopted by the Safety Codes Commission of the Commonwealth of Virginia, OSHA. The Contractor is required to employ safe practices and comply with all safety standards and laws.

C. The definition of Owner for this project is City of Martinsville, VA.

1.02 LOCATION OF WORK

A. The site of the work is Dillard Street, adjacent alley and entrance off Warren Court.

1.03 DOCUMENTS FOR CONSTRUCTION

A. Contractor shall be given three (3) sets of contract plans and specifications to be used during construction at no cost. Additional sets will be provided at the per set cost of reproduction.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.01 LAYING OUT WORK [CONTRACTOR-PROVIDED FIELD STAKEOUT]

A. It is imperative that the Contractor work within the shown rights of way or easements, at all times, unless approved otherwise by the property owner and the Engineer.

B. The Contractor shall, at his expense, provide competent engineering survey services and shall provide and maintain accurate, detailed, survey work.

C. Survey bench marks, baselines, station points, distances, offset lines, inverts, elevations, and other related information shall be laid out in accordance with the plans.

D. The plans and supplementary drawings shall not be scaled and the Contractor must verify all dimensions and elevations at the site prior to proceeding with the work. The Contractor shall also verify existing utility locations prior to purchasing materials affected by these locations.

3.02 TEMPORARY FACILITIES [COORDINATE WITH SECTION 01500]

A. The Contractor may provide and maintain, at his expense, suitable field office facilities as required for the work and at a location approved by the Engineer.

B. The Contractor shall provide and maintain, at his expense, toilet accommodations for his employees at locations approved by the Engineer. The sanitary facility shall comply with all Local and State Sanitary Health Regulations for the installation, use and waste removal.

C. The Contractor shall provide and pay for all water, electricity, illumination, heat and other utilities required for the proper execution of the work.

D. The Contractor shall provide and maintain all barricades, fences, and other protective devices required around the project site and storage area in order to protect the work, his employees and the public.

3.03 SEQUENCE OF WORK

A. Soil and erosion control items shall be placed prior to any land disturbing activity.

B. The Contractor shall coordinate his work with the other Contractors on this project as it may affect sequence.

3.04 HIGHWAY RIGHT OF WAY

A. The Contractor shall obtain and bear the costs of all insurances set forth in the General Specifications, perfecting the permits and obtaining appropriate permission prior to beginning work within the rights of ways. The Contractor shall also pay for and arrange for all required inspections and tests.

3.05 OVERHEAD UTILITIES

A. The Contractor shall contact utilities with overhead facilities in the project area or adjacent to the project area and request the utility to make safety arrangements to protect workers in the vicinity of the lines, in accordance with the Overhead Voltage Lines Safety Act (Section 59.1 - 406, et seq. of the Code of Virginia). The

Contractor shall not proceed with work until such measures are in place. The invoice from the utility shall be paid directly by the Owner.

3.07 CITY OF MARTINSVILLE STANDARDS

A. The Contractor shall comply with the construction standards and standard specifications and standard details of the City of Martinsville. Where they are more stringent than these Documents, the more stringent requirements shall apply.

3.08 PERMITS

A. The Contractor is required to obtain all construction permits required for this project including erosion and sediment control, blasting and land disturbing permit.

B. The Contractor shall obtain and pay for the actual permit.

3.09 LICENSES

A. The Contractor shall have a business license for the City of Martinsville.

3.10 EXISTING CONDITIONS DOCUMENTATION

A. The Contractor shall photograph, videotape, and use any other means necessary to document all existing conditions in the vicinity of the work prior to beginning any construction activities.

END OF SECTION

SECTION 01900

MEASUREMENTS AND PAYMENTS

PART 1 GENERAL

1.01 BASIS

A. All work shall be paid on the basis of the Unit Prices stated in the Bid Form and upon the actual work performed and materials installed, complete-in-place, in accordance with the Contract Documents. No separate payment shall be made for such items as the constant maintenance and coordination of the work, utility excavation, excavation, trench protection, utility support and coordination, traffic control (M.O.T.), sheeting and shoring, underpinning, installation procedure, maintaining drainage flow, maintaining sewage flow, dewatering, utility backfill, backfill, pavement sawcutting, cutting and removal, inspection, testing and restoration except when specified otherwise. The expense for these and any other incidental or related work necessary to provide and install a Bid Item, complete-in-place, shall be included in the Unit Price for that particular Bid Item. All work indicated or implied for a complete and finished installation shall be included in one of the several unit prices.

B. See Section 01850 for electric and telephone services, and their invoices.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 MEASUREMENTS AND PAYMENTS

A. Mobilization

1. Work shall consist of the performance of construction preparatory operations, including the movement of personnel and equipment to the project site, payment of performance and payment bond and other insurance premiums and for the establishment of the Contractor's offices, buildings and other facilities necessary to begin work on a substantial phase of the contract. Mobilization shall be paid for at the contract lump sum price, which price shall be full compensation for performing the work specified and the furnishing of all materials, labor, tools, equipment and incidentals necessary to mobilize and subsequently demobilize the construction preparatory operations. Payment for this item will be made in two

installments. The first payment of 50 percent of the lump sum price will be made on the first estimate following partial mobilization and the initiation of construction work. The second and final payment will be made on the next estimate following the completion of substantial mobilization including the erection of all Contractor's offices and buildings. The completion of the erection of materials processing plants, if any, will not be required as a condition to the release of the final payment.

2. The lump sum price paid for mobilization will be subject to the following limitations:

Total Original Contract Amount, Including Mobilization	Maximum Lump Sum Bid Allowed for Mobilization Item*
To More Than	And Including
$ 0	$ 200,000...15 percent of total contract amount
200,000	1,000,000...$30,000 plus 7.5 percent of (total contract minus $200,000)
1,000,000	More...$90,000 plus 5 percent of (contract minus $1,000,000)

*In the event the lump sum bid for mobilization exceeds the amount stated herein, the difference (remainder) will not be paid until the next estimate.

No additional payment will be made for demobilization and remobilization due to shutdowns, suspensions of the work or for other mobilization activities.

B. Earthwork: shall be paid for at the lump sum price bid, complete-in-place, for all excavation, demolition, clearing and grubbing, stripping and storing of topsoil, excavation, filling and backfilling, compaction testing, rough and finish grading, erosion control, spreading topsoil, seeding, and utility earthwork. The price bid shall exclude items included with other bid items.

C. Storm Drain Pipe: shall be measured and paid per lineal foot, for each size specified or indicated, regardless of class indicated. Measurements shall be made of the actual horizontal length, from face of headwall to face of headwall or from center of structure to center of structure, except where indicated otherwise. The lineal foot price shall include all labor, equipment and materials for the pipe and culvert, joints, fittings, excavation, anti-seepage collars, anchor blocks, backfill, compaction, improved bedding, connections to existing systems, restoration, connections of various pipes to other pipes when not at structures, removal of existing pipe, removal of existing manholes, removal of existing inlets, plugging of existing

pipes, abandonment of existing pipes and manholes and inlets, including plugs, headwall removal, temporary fencing, culvert removal, culvert abandonment (except concrete plugs), removal and disposal of excess excavated material including pavement, placement of compacted fill over storm drain right-of-way, and any other work required for a complete installation.

D. Demolition of asphalt concrete pavement and shoulder structure courses or a combination thereof will be measured as demolition of pavement and paid for in square yards based on the width of the widest course. Such price shall include all demolition, removal and disposal costs of existing pavement, base, subbase and stabilized subgrade materials to the depth required. This item shall include demolition of asphalt in existing gutter.

E. Riprap: shall be paid for at the unit price bid per ton of surface area by Class. This price shall include all labor, equipment and materials for riprap and its placement, excavation, grading, backfill, bedding, mortar or grout, filter fabric, special construction techniques and any other item necessary for a complete, working protection system. (Measurement for tonnage shall be by quarry ticket.)

F. Protective Covering, STD EC-2 & STD EC-3: shall be paid for at the unit price bid per square yard, complete-in-place, which price shall include all labor equipment and material for the mat, excavation, anchoring, placement, backfill, special construction techniques and any other item for a complete working system.

G. Aggregate Base Material: shall be measured by quarry ticket and paid for per ton. The quantity in the Bid Form is the amount of material estimated as a pavement base. The price shall include all labor, equipment, and materials for the base and its placement. The price shall include existing subgrade and aggregate base removal where removal is indicated.

H. Asphalt Concrete Base Material: shall be measured by plant ticket and paid for per ton for the type base paving material specified or indicated and shall include all labor, equipment and materials for the base and the prime coat and their placement, including that for all pavement replacement. The price shall include existing asphalt concrete base removal where removal is indicated.

I. Asphalt Concrete Surface Material: shall be measured by plant ticket and paid for per ton for the type surface paving material specified or indicated and shall include all labor, equipment and materials for the surface material, for the tack coat and their placement including that for all pavement replacement and pavement overlays and the expense for raising or reworking any manholes or structures, and the expense of filling existing holes and depressions under an overlay. The price shall include existing asphalt concrete surface removal where removal is indicated.

J. Topsoil and Seeding: shall be paid for as part of the lineal foot price bid for the associated pipe, curb and gutter, the square yard price for walks and entrances, and as part of the lump sum for earthwork; no separate payment shall be made.

K. Erosion Control: shall be paid for as part of the lump sum price bid for the earthwork; except as otherwise noted.

L. Concrete Curb: shall be paid for at the lineal foot price bid, complete-in-place, including all labor and materials for any required excavation, backfilling, and filling, topsoiling, seeding, forming, and concrete required. Removal of existing curb shall be paid for as part of the lineal foot price bid for new curb.

M. Restoration: shall be paid for as part of the lineal foot price bid for the associated pipe - no separate payment shall be made.

END OF SECTION

SECTION 02080

TRAFFIC, PROPERTY AND UTILITY MAINTENANCE AND COORDINATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all materials, equipment, labor and services required to regulate and coordinate traffic, to protect and maintain property, to notify the public of work conditions, and to coordinate the work with the respective Utility Companies.

1.02 SITE

A. The Contractor shall, at his expense, maintain the work site in a clean and orderly appearance at all times. All debris and surplus material collected shall be disposed of off the work site by the Contractor, at his expense. Access for emergency vehicles shall be maintained at all times.

1.03 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 01570 - Traffic Regulation

1.04 REFERENCES

A. Virginia Erosion and Sediment Control Handbook latest revision.

B. Virginia Department of Transportation - Road and Bridge Specifications and Standard Details; latest revision.

C. Virginia Department of Transportation - Work Area Protection Manual.

D. U.S. Department of Transportation - Manual on Uniform Traffic Control Devices.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 TRAFFIC MAINTENANCE AND COORDINATION

A. The Contractor shall make every attempt possible to maintain through traffic at all times. (One lane of traffic shall be maintained at all times and two (2) flagmen shall be provided at all times work is in progress and traffic must be controlled.) The Contractor shall not close or excavate within the right-of-way of a street or alley without obtaining the approval of and the required permits from the Local Governing Authorities.

B. When work conditions dictate that a street or part of a street be closed to traffic, the Contractor shall provide and maintain, at his expense, all signs, barricades and flashing lights necessary to physically close a street or part of a street adjacent to work area. The Contractor shall provide and maintain all traffic control devices and signs required to coordinate and detour the through traffic around the closed street.

C. The Contractor shall provide and maintain, at his expense, all signs, cones, stands and flagmen required to control and protect traffic passing through a work zone.

D. All traffic control and street closed signs shall be in accordance with the Virginia Work Area Protection Manual and Federal "Manual on Uniform Traffic Control Devices."

E. The Contractor shall keep all street intersections open to traffic, when practical. When work is perpendicular to the street, the Contractor shall work in no more than one-half (1/2) of the street width, at one time. The first half of work must be completed and the street passable prior to working in the second half.

F. The Contractor shall provide and maintain a safe and passable pedestrian access for the public conducting business or residing within the work area. Sidewalks shall remain clear and open at all times during the work, unless approved otherwise by the Owner or local governing authorities.

G. The Contractor shall provide the necessary diversion ditches, dikes or temporary culverts required to prevent mud and debris from being washed onto the streets or property. The Contractor's vehicles shall be kept clean to prevent mud or dust from being deposited on streets.

3.02 PROPERTY MAINTENANCE AND COORDINATION

A. The Contractor shall notify the property owner(s) forty-eight (48) hours prior to working within easements located upon private property in order to coordinate a means of ingress and egress to the work area and determine a storage area for materials. Storage area shall be fenced, if necessary, to keep animals away.

B. The Contractor shall maintain a safe and passable vehicular entrance to all private or public property. The Contractor shall notify the property owner(s) twelve (12) hours in advance of the blocking of an entrance. Do not block an entrance for more than twelve (12) hours at any one time, without approval of the Owner.

C. The Contractor shall notify the owner(s) of animals forty-eight (48) hours prior to working upon the property to allow the owner time to relocate the animals, if possible. The Contractor shall maintain the integrity of the existing fences and gates during the work.

D. Existing lawn, trees, shrubs, fences, utilities, culverts, walls, walks, driveways, poles, signs, right-of-way monuments, mailboxes and the like shall be protected from damage during the work under this contract. Any damage caused to such items shall be repaired or replaced by the Contractor at his expense.

E. Tree and plant roots or branches that may interfere with the work shall be trimmed or cut only with the approval of the Owner. Any trees or plants which are shown to remain and do not interfere with the work but are accidentally damaged by the work shall be repaired or replaced by the Contractor, at his expense.

3.03 UTILITY MAINTENANCE AND COORDINATION

A. Before the work is started, the Contractor shall notify all companies, corporations, municipalities and individuals who own utilities on the construction site, in the right of way or immediately adjacent to the construction area of the work to be performed. The Contractor shall arrange to have the various utilities located and to have them removed or relocated as required, or to determine the method of protection acceptable to the respective owner, if the method of protection is not specified hereinafter. Any cost incurred with removing or relocating utilities shall be borne by the Contractor unless indicated otherwise.

B. The location of existing utilities shown on the drawings was taken in part from existing records and in part from field surveys, and may not represent exact location. The Contractor shall excavate to locate buried utilities far enough in advance of pipeline laying to allow for adjustments in pipelaying both horizontally and vertically.

C. The work shall be coordinated and performed in a manner so that all existing fire hydrants, without exception, shall be accessible at any time during the work.

D. The Contractor shall maintain the existing streams, ditches, drainage structures, culverts and flows at all times during the work. The Contractor shall pay for all personal injury and all property damage which occurs as a result of failing to facilitate drainage.

E. The Contractor shall ascertain the exact location of each existing utility that may interfere with the work. The Contractor may obtain field utility locations by calling "Miss Utility" (1-800-552-7001) forty-eight (48) hours prior to working in the vicinity of existing utilities. If the utilities fail to locate, a second call shall be made providing an additional three (3) hour notice. Contractor shall note that a "Location Request Form," referencing Virginia State Law, is included in these specifications.

F. The Contractor shall repair or replace any existing sanitary sewer or storm drain utility damaged or misaligned during or due to the work. All other utilities shall be repaired or replaced by the respective Utility Company(s) at the expense of the Contractor.

G. The Contractor shall coordinate all work within the vicinity of the existing utilities with the respective Utility Company. The work shall be conducted in a manner to avoid unnecessary service interruption and in accordance with the rules and regulations of the respective Utility Company.

H. When the work is approaching an existing utility or structure that may be in conflict with, or connected to, the work, the Contractor shall excavate test pits to verify the location, size, and elevation of the existing utility or structure. By taking this precaution the Contractor may adjust the work or have the existing utility relocated as necessary. Failure to take such precautions may result in the Contractor adjusting the work or having the existing utility relocated, at his expense.

I. When the existing utilities cross the trench excavation, the existing utilities shall be adequately supported and protected from damage due to the work as required, specified or directed. All methods for supporting and maintaining the existing utilities shall be subject to the approval of the respective Utility Company and the Owner. Any utilities removed as part of the work, and not indicated to be removed or abandoned, shall be restored using materials and installation equal to the utility's standards.

J. The Contractor shall exercise care to insure that the grade and alignment of the existing utility be maintained and that no joints or connections are disturbed. Backfill shall be carefully placed and compacted to prevent the future damage or settlement to the existing utility.

K. The Contractor shall notify the Owner in writing one week in advance of any required depressurizations or cutoffs of portions of the water system. All valves shall be operated by the Water Utility. The Contractor shall be allowed to make all the taps so indicated in non-pressure condition, with day, the time of day, and the duration of each outage subject to the Owner's approval. The new water lines shall be installed, tested, and disinfected before individual service connections and before other connections to the existing mains are made. All taps of the new line shall be made under a pressure condition and visually inspected for leakage prior to backfill. Through coordination with the Owner, the Contractor shall limit the

number of persons without water service to the minimum possible number with each outage. Outages shall be of minimum duration and shall not exceed four continuous hours at any time. The Contractor shall notify residences and businesses affected by all outages. Existing water lines indicated to be removed or abandoned shall not be removed from service until all service connections are made to the new water line. The Contractor shall install all new fire hydrants before any existing hydrants are removed.

L. The Contractor shall maintain sewage flow at all times by pumping and/or diversion, or other means acceptable to the Engineer. At no time shall the Contractor allow raw sewage to flow out of the sewerage system to adjacent land or waterways, or cause sewage to surcharge the sewerage system such that sewage backs up into any service connection. In the event such backup occurs, the Contractor shall correct and pay for all damage caused. Note that portions of the existing system may be subject to large, sudden wet weather flows.

3.04 PROTECTION OF PUBLIC AND PROPERTY

A. The Contractor shall comply with all local, state and federal laws and the Occupational Safety and Health Act in protecting the public, the worksite, and adjacent property from damage. The Contractor shall provide all sheeting, shoring, barricades, trench boxes, warning lights, signs, and fences required for this protection. Erosion control and sediment control shall be provided.

END OF SECTION

SECTION 02207

EARTHWORK

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work includes all labor, equipment and materials required for earthwork for the project, including utility excavation, placement, backfill, and compaction.

1.02 RELATED WORK

A. Specified elsewhere:

1.	Section 01010	-	Summary of Work
2.	Section 02212	-	Erosion Control and RipRap
3.	Section 02480	-	Landscaping
4.	Section 02505	-	Asphalt Paving
5.	Section 02524	-	Concrete Walks
6.	Section 02528	-	Concrete Curbs and Curb and Gutter
7.	Section 02666	-	Water System Installation
8.	Section 02735	-	Storm Drain Installation
9.	Section 02740	-	Sanitary Sewer Installation
10.	Section 02741	-	Sewage Force Main System Installation
11.	Section 02931	-	Topsoiling and Seeding
12.	Section 03300	-	Cast-In-Place Concrete

1.03 QUALITY ASSURANCE

A. Comply with all codes, laws, ordinances and regulations of governmental authorities having jurisdiction over this part of the work.

B. Contractor shall comply with all State and Local erosion and sediment control ordinances and regulations.

1.04 REFERENCES

A. American Society for Testing Materials (ASTM); latest revisions:

1. D 698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort

2. D 1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort

3. D 2216 Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock

4. D 2487 Standard Test Method for Classification of Soils for Engineering Purposes

1.05 TESTING SERVICES

A. The testing laboratory shall be selected by the Contractor and approved by the Engineer and will be responsible for conducting and interpreting tests. The Testing Laboratory shall state in each report whether or not the test specimens conform to all requirements of the Contract Documents and specifically note any deviation therefrom.

B. General requirements for testing shall be as specified in Section 01410. Specific test and inspection requirements shall be as specified herein.

1.06 SUBMITTALS

A. Submit the following in accordance with Section 01340:

1. Test Reports:

a. Optimum moisture - maximum density of soils.
b. Field density tests.

1.07 EXAMINATION OF SITE AND RECORDS

A. The Contractor shall examine the site, the Drawings and records of existing subsurface soil conditions for the project, to determine the conditions under which the work will be performed. The existing construction shown, and soil investigation data represent all conditions known to the Owner. The Contractor shall formulate his own conclusions as to the subsurface conditions and shall remove all materials to the design subgrades indicated or hereinafter specified.

1.08 PROTECTION OF UTILITIES

A. Protect all existing service lines and related structures encountered in the excavation work. Where such lines and structures have been undermined due to the excavation work, provide suitable supports. If damaged, repair such lines or structures or arrange for their repair with the proper authorities or companies, at no additional cost to the project.

B. Report any uncharted or incorrectly charted lines to the Engineer for further direction.

1.09 PROTECTION OF TREES

A. Protect all trees which are indicated on the Drawings to remain or to be relocated. Box trunks of such trees with 2 inch thick wood planks secured to trunks with wire or metal straps. Material or debris shall not be piled under such trees. Excavating or extensive grading shall not be performed under such trees within the spread of the branches. If excavation under such trees is necessary, and is approved, roots which are over 1 inch in diameter shall not be cut. Where branches of such trees are removed to facilitate construction, or the trees are inadvertently damaged, all damage to such trees shall be repaired by persons skilled in the care of trees.

1.10 PRECAUTIONS

A. Take every precaution to guard against any movement or settlement of existing or new construction, utilities, paving, walks, light standards, piping, conduit, etc., and shall provide at his own expense, all sheet piling, bracing or shoring necessary in connection therewith. The Contractor shall be entirely responsible for the design, and adequacy of any sheet piling, bracing and shoring required.

PART 2 PRODUCTS

2.01 MATERIALS

A. Suitable material for fill, backfill and subgrade preparation shall be GW, GP, GM, GC, SW, SP, SM, ML, CL, or SC as classified in the Unified Soil Classification System in accordance with ASTM D 2487. Material for structural fill shall be CL or better (silty clay of low to medium plasticity), free of organic or other deleterious materials and rock larger than 3" nominal diameter. The suitability of material to be used as fill shall be determined by the classification method specified in ASTM D 2487 and by the moisture/density tests in accordance with ASTM D698 and D2216. Suitable material removed from the excavation shall be used in forming the necessary fill. Material shall be free of debris, roots, and organic matter. Frozen material shall not be used as fill. Any additional material necessary for establishing the indicated grades shall be furnished by the Contractor and approved by the Geotechnical Engineer as part of this contract. The maximum particle size shall be six inches largest dimension, except in the uppermost lift, where the maximum particle size shall be two inches largest dimension.

B. Improved bedding material shall be Virginia Department of Transportation (VDOT) #57 or #68 coarse aggregate for storm drains and VDOT#21A aggregate for sanitary sewers.

C. Trench stabilization material shall be VDOT #2 coarse aggregate, or #357 coarse aggregate.

D. Select backfill material shall be VDOT #57 coarse aggregate, #21A base course, or crusher run aggregate material size 25 or 26, as indicated on the drawings.

E. Unsuitable materials shall be those materials not meeting the requirements specified hereinbefore for suitable materials. Rock particles greater than six (6) inches in diameter or dimension shall be considered unsuitable material.

2.02 CLASSIFICATION OF EXCAVATION

A. All excavation shall be unclassified, and shall be part of the lump sum price bid for the Work.

A. All excavated material shall be classified as either Rock or Earth Excavation. The estimated quantity indicated for Rock Excavation in the Bid Form shall be the amount of rock expected to be encountered by the Contractor. The remainder of the excavation shall be assumed to be Earth Excavation which shall be included in the unit price for installing the pipe complete-in-place. Rock Excavation shall include boulders measuring one-half (1/2) cubic yard or more in volume and weighing more than five hundred (500) pounds and/or solid ledges, bedded deposits, unstratified masses and conglomerations of materials so firmly cemented as to possess the characteristics of solid rock which cannot be removed without systematic drilling and blasting. Sidewalk, curb and gutter, paving, pipe and structures to be removed shall not be classified as rock. When rock is encountered the Contractor shall notify the Engineer in order that the quantities can be measured. Earth Excavation shall comprise all materials not classified as Rock Excavation and shall include clay, silt, sand, muck, gravel, hardpan, loose shale and loose stone in masses measuring less than boulders.

B. Topsoil shall consist of loose, friable clay, loam, free from rocks, stones and other undesirable material and shall be capable of supporting a good growth of grass.

PART 3 EXECUTION

3.01 EARTHWORK

A. The work includes demolition, clearing and grubbing the site, dewatering, stripping and storing of topsoil, excavation, filling and backfilling, compaction, testing, rough and finish grading over the areas indicated, erosion control, spreading topsoil, seeding, and utility earthwork. The Contractor shall excavate all materials encountered to the lines and grades specified and lines and grades indicated on the plans. Any water that accumulates in the excavations shall be promptly removed.

B. Where indicated on the drawings, the existing structures and pipelines shall be carefully demolished and removed from the site. The demolition work shall be done carefully so as to not disrupt the Owner's operations, and so as to not endanger or harm adjacent property, structures or the public, in accordance with Section 02060.

C. The entire area (indicated) (within the limit of work) shall be cleared and grubbed and shall be cleaned of all debris. Topsoil shall be stripped from all areas to be graded, paved and built upon to the depth encountered and stored for reuse later in the work. Under the structures, paved, and fill areas, stumps, roots, logs, matted roots and other debris not suitable for foundation purposes shall be removed to a minimum depth of eighteen (18) inches below any subgrade and at least 15 feet beyond the building perimeter. The resulting hole shall be backfilled with suitable material and compacted as specified hereinafter for backfill. Cleared material shall be completely removed from the site, and disposed of by the Contractor, at his expense. All areas to receive fill shall be stripped of rootmat five feet beyond toe of anticipated fills. Topsoil, all vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish and other debris within the area upon which fill is to be placed, shall be stripped or otherwise removed before the fill is started. In no case will such objectionable material be allowed to remain in or under the fill area. Sloped ground surfaces steeper than one vertical to four horizontal on which fill is to be placed shall be plowed, stepped, benched, or broken up in such manner that fill material will bond with the existing surface, as directed. Before starting the fill, or before placing structures or pavement, the area shall be proofrolled with a rubber-tired vehicle, typically a loaded dump truck. Any soft, pumping, or rutting spots that are discovered shall have the soft material excavated and the void filled with suitable material, compacted as hereinafter specified.

D. A subsurface investigation was made of the site. The report is available from the Engineer. Nothing on the drawings or in the specifications shall be taken as a guarantee that materials other than those disclosed by the borings will not be encountered or that the proportions of the various materials will not vary from those indicated.

E. Topsoil shall be carefully stripped to its full depth from all areas indicated to be graded, or to be built upon. Stripped topsoil shall be stored and protected for reuse later, in accordance with Section 02931. Contractor shall stockpile a quantity of topsoil that will be required for use to complete the Work. All excess topsoil shall be hauled from the site and disposed of by the Contractor at his expense.

F. Store and use explosives in accordance with the Occupational Safety and Health Act and with other Federal, State and Local ordinances and regulations. The Contractor shall hold the Owner harmless for any injuries and for all damage caused by the explosives and shall satisfactorily correct and shall pay for all injuries and damage resulting from his use of explosives. Prior to firing blasts, the Contractor

shall have a competent man, carrying a red flag, stationed at a reasonable distance from the blast at each avenue of approach to give warning of the blast. Blasting in the vicinity of any existing utilities shall be done carefully and with the knowledge and approval of the Owner of the utility. The Contractor shall conduct preblasting inspection of nearby facilities and structures, and vibration monitoring during blasting, and both shall be available to the Owner and Engineer as a certified report.

G. Excavations:

1. All excavations of every description and of whatever substances encountered within the grading limits shall be performed to the grades, slopes, and elevations indicated. All excavated materials which are not considered suitable for fill and any surplus of excavated material which is not required for fill shall be disposed of by the Contractor **at an approved off-site location/or on the project site at designated disposal area approved by the Owner**. Excavations shall extend a sufficient distance away from the walls to permit erection and removal of forms and installation of drains and other permanent work. Excavations shall be carefully made to the depths indicated, with the bottoms level, free of loose material, and free of all loam, organic material and other unsuitable material as hereinafter specified. All excavations shall be approved by the Geotechnical Engineer prior to the placing of any concrete. Where rock occurs and the foundation wall will rest thereon, the rock shall be leveled to a hard, clean surface. Sloping rock shall be stepped, as directed. Where occasional outcroppings occur and the foundation wall is not to rest on the rock, the rock shall be removed for a depth of at least six (6) inches and not more than ten (10) inches below the indicated bottom of the foundation wall and the resulting void filled and compacted with suitable material as specified hereinafter. Excavations carried below the required depth, other than that specified for occasional rock outcropping, shall be backfilled with trench stabilization material, except general rock areas where the backfill shall be concrete. Any water that accumulates in the excavations shall be promptly removed, and filtered to reduce sediment, in accordance with Sediment Control Regulations.

2. The Contractor shall clear and grub all vegetation, debris and any other material encountered within the limits of grading and as required for trenches and ditches indicated to be worked on, but where grading contours are not shown. All material from the demolition, the clearing and grubbing and debris removal shall be disposed of off the site by the Contractor at his expense.

3. Drying or wetting the soil to achieve compaction and proper density shall be performed at no additional cost to the Owner.

4. Utility Excavation

a. The Contractor shall excavate all materials encountered in the trenches and ditches, along the alignments shown on the drawings. Excavated suitable material to be utilized for backfilling shall be piled alongside the trench at a distance sufficient to avoid overloading the trench walls and causing caveins, and located to prevent obstruction of driveways, roads and hydrants. All excavated material not suitable for or not required for backfilling, including that from the trenches and the ditches, shall be removed and disposed of by the Contractor at his expense. The Contractor shall utilize means necessary to prevent surface water from washing into the trench. Any water that accumulates in the trench shall be promptly removed, and filtered to reduce sediment. Do not open more than 100 feet of trench in advance of pipe laying except as specifically approved in advance by the Engineer. Trenching shall be by the open cut method.

b. Trenches shall be excavated with vertical walls to the width indicated in the detail on the drawing to a point one foot above the top of pipe. Where the trench width is exceeded, any redesign and additional materials required, to provide equivalent installation conditions shall be borne by the Contractor at no additional cost to the Owner.

c. The trench bottom shall be excavated to provide a firm, stable, and uniform support for the full length of the pipe. Bell holes shall be provided at each joint to permit the proper joint assembly and pipe support. Any part of the trench bottom excavated below the required grade shall be backfilled to grade and compacted to provide firm pipe support. Trenches shall have four (4) inches of loose soil in the bottom before pipe is placed, so pipe is firmly and continuously in contact with soil. Pipe shall not bridge any areas. Rock larger than 3 inches shall be removed from the trench bottom and any voids filled with soil or improved bedding. Ledge rock, boulders and large stones shall be removed to provide six (6) inches of soil cushion on all sides of the pipe including the bottom, and on all sides of accessories. When an unstable subgrade condition is encountered, which will provide inadequate pipe support, additional trench depth shall be excavated and refilled with trench stabilization material. The removal, backfill and disposal of unsuitable material shall be (at the Contractor's expense) (paid for at the unit price bid).

d. Trenches and excavations shall be sheeted and braced as required by the Occupational Safety and Health Act and any applicable State and local laws, and as required to protect the public, adjacent property and the work. Do not remove sheeting except when such removal

will not result in damage to the work or the adjacent property. Sheeting left in place shall be cut off 18 inches below the existing ground surface, and shall be dimensionally located on the set of contract drawings provided by the Contractor showing "Record of Construction."

e. The trenches for gravity pipelines shall be excavated to the grade lines indicated which shall be the true elevation of the invert of the pipe. Gravity pipelines are defined as sanitary sewers, flexible pipe, storm and roof drains and culverts. Where improved bedding is required, the bottom of the trench shall be excavated to a minimum overdepth of four (4) inches below the bottom of the pipe to provide for improved pipe bedding for the entire length of the gravity pipeline. The bedding shall be shaped so that the bottom quadrant of the pipe rests on the bed. Bell holes and depressions as required for the joint shall be dug after the bedding has been graded and shaped, and shall be only of such length, depth, and width as required for properly making the particular type of joint.

f. The trenches for water lines and force mains shall be graded to avoid local high points. Trenches shall be graded either level or on a continuous upslope to the high points designated on the drawings. Trenches shall be such a depth as to provide a minimum cover over the top of the pipe of thirty-six (36) inches as measured from the existing ground surface, or the final grade, whichever is lower. Rock shall be removed six (6) inches below pipe and the void filled with (improved bedding) (suitable material).

g. Unauthorized overdepths shall be backfilled with trench stabilization material at no additional cost to the Owner.

h. Excavation for manholes, inlets, and other structures shall be sufficient to leave at least twelve (12) inches in the clear between their outer surfaces and the embankment or timber which may be used to hold and protect the banks. Any overdepths of excavation below such appurtenances shall be backfilled as specified above for overdepth in trenches.

i. Grading or construction of berms shall be performed as required to prevent surface water from flowing into trenches and other excavations.

5. In areas where trenching for pipes will be in fills, the fills shall be brought to an elevation at least one (1) foot above the top of the pipe, and then the trench excavated in the compacted fill, as herein specified for trench excavation.

H. Filling and Backfilling:

1. Suitable material shall be used for fill, backfill and subgrade preparation. Material shall be free of debris, roots and organic matter. Frozen material shall not be used as fill or backfill. Any additional material necessary for establishing the indicated grades shall be furnished by the Contractor and approved by the Geotechnical Engineer as part of this contract. The maximum particle size shall be six inches largest dimension, except in the uppermost lift, where the maximum particle size shall be two inches largest dimension. Fill material shall be placed in successive horizontal layers not to exceed eight (8) inches of loose material, and then thoroughly compacted as hereinafter specified.

2. Fill or backfill adjacent to the foundation and retaining walls shall be placed in eight (8) inch horizontal layers, each layer being moistened or dried and compacted as hereinafter specified. Special care shall be taken to prevent wedging action as the backfill proceeds. Backfill materials placed within 5 feet of retaining walls must be compacted with hand equipment only and the compaction of each lift must start adjacent to the wall and progress outward away from the wall.

3. Embankment slopes shall be constructed by filling one (1) foot beyond the proposed finished slope surface for each lift. Compaction equipment shall work to the edge of each lift. After the entire fill is placed and compacted, the outside foot of the slope shall be trimmed to the design slope with a dozer. Unless indicated on the drawings, no slopes shall be steeper than 2 horizontal to 1 vertical.

4. Roadway and parking lot excavation shall conform to the grades and slopes indicated. Unsuitable subgrade materials shall be removed, and suitable fill shall be used for backfill. Where subgrade is excavated ground or natural ground, the excavated or natural ground portion shall be scarified to a depth of twelve (12) inches and shall be compacted as specified hereinafter.

I. Utility Placement:

1. Proper implements, tools and equipment shall be used for the placement of the pipe in the trench. The recommendations of the pipe manufacturer shall be strictly adhered to. The pipe and accessories shall be inspected by the Engineer for defects prior to lowering into trench. Any defective, damaged or unsound material shall be repaired or replaced as directed by the Engineer. Under no circumstances should the pipe or accessories be dropped into the trench. All foreign matter and soil shall be removed from the pipe interior. When pipe laying is not in progress, open ends of installed

pipe shall be closed or plugged to prevent entrance of trench water, soil, and foreign matter into the pipeline.

2. Elevations and slopes indicated show the position of the invert of the gravity pipe. All gravity pipe shall be laid to true line and grade with bell ends up grade. The sections of the pipe shall be laid and fitted together that, when complete, the gravity line will have a smooth and uniform invert between manholes. The trench bottom shall be dug to fit the bell ends so that the body or barrel of the pipe rests on the bottom of the trench for its full length. All pipe shall be inspected for defects, before lowering it into the trench. For water lines in rock areas, six (6) inches of (improved bedding) (suitable material) shall be provided beneath the pipe.

3. Establish and maintain pipeline alignment and grades, from the horizontal and vertical reference points indicated. All pipe eight (8) inches in diameter and larger shall be laid to a grade established by laser as established from the reference points indicated. Alignment shall be maintained by a transit or theodolite plumbed over the centerline of the downstream manhole. The adjustable laser level mounted at the invert of the downstream manhole shall be used with targets set in the bell end of the pipe sections being laid. A steel tape shall be used to measure distances.

4. Trenching shall be in accordance with the details. Each section of pipe is to be placed in a "home" position and backfilled to the centerline with suitable or improved bedding material, as previously specified, prior to another section being joined to the first. If additional bedding material or other bedding methods are required by the Contractor, for him to be able to install PVC pipe and meet the deflection test, this additional material or alternate methods shall be provided at no additional cost to the Owner. Excavating equipment is not to be used to shove sections of pipe together, unless authorized by the Engineer, and then only one section at a time. The interior of the pipeline shall be cleared of all soil and debris of every description as installation progresses. When work is not in progress, plug open ends of pipes to prevent trench water or other substances from entering the pipeline.

J. Utility Backfilling:

1. The trench for HDPE and PVC shall be bedded to the top of pipe with improved bedding. Concrete culverts and storm drains shall be bedded to the bottom quadrant of the pipe with improved bedding. Do not bed water pipe and sewage force mains, except in rock.

2. After the sanitary sewer, storm drain, water line, force main, or culvert pipe has been placed, the trench and pipe shall be visually inspected by the Engineer. After this inspection, the initial backfill above the improved

bedding shall be thoroughly filled and tamped in layers not exceeding six (6) inches in depth with suitable material that is free from cinders, ashes, refuse, vegetable or organic materials, pavement, debris, boulders, rocks or stones, or other material deemed unsuitable by the Geotechnical Engineer. No frozen material shall be used. Backfilling shall be done in such a way as to prevent dropping of material directly on top of the pipe through any vertical distance greater than three (3) feet and shall be deposited in horizontal layers. At one foot below final grade, the continuous metallic pipe locator tape shall be placed in the trench above pressure pipe, if, PVC, PE, or other non-metallic pipe or tubing is used. Backfilling shall be with suitable material as hereinbefore specified in this section. No particles with a diameter greater than one (1) inch shall be placed in the initial backfill from the top of the improved bedding to a point one (1) foot over the top of the gravity pipe. No rock particles with a diameter or dimension greater than five (5) inches shall be placed in the remainder of the backfill. If there is insufficient suitable backfill material from the excavation, the Contractor shall provide the required suitable material as part of the lump sum price. Final backfill in grassed areas shall be mounded three (3) inches above surrounding grade to allow for settlement. Final backfill in paved areas shall be mounded two (2) inches and allowed to settle for 30 days prior to the pavement placement. The trench in paved areas shall be maintained daily, as required, to provide a smooth crossing for vehicles until such time as the final pavement is placed.

K. Compaction and Testing:

1. Compaction shall be performed by hand compaction equipment adjacent to the structures. General area compaction equipment shall be the Contractor's option, subject to the approval of the Engineer. The compaction in grassed areas shall be 90 percent of maximum density at optimum moisture obtained in the procedure in ASTM D698. The compaction of the 12 inches immediately below structure subgrades shall be compacted to 100 percent of maximum density in accordance with ASTM D698. The compaction under the building, detention basin embankments, adjacent to foundation walls, and within ten (10) feet of structures, under walks and under pavement shall be 95 percent of maximum density at optimum moisture in ASTM D698. The materials shall be aerated or moistened, as required to provide a moisture content that falls within 3 percentage points of either side of optimum, unless otherwise approved by the Engineer. Moisture determinations shall be made. Field density tests and moisture tests shall be performed at the Contractor's expense by an independent soils testing laboratory, on each lift at locations selected by the Engineer to assure that the correct compaction has been performed.

   If any test fails, additional testing at the Contractor's expense shall be performed to determine the extent of the improperly compacted material.

The improperly compacted material shall then be removed, replaced and recompacted and the area shall then be retested to insure proper compaction, all at no additional expense to the Owner.

2. For all utilities ninety-five (95) percent compaction (per ASTM D698) shall be maintained to a minimum depth of two (2) feet over the top of the pipe. Each layer shall be thoroughly tamped and compacted by hand or pneumatic tamper in place. Special care shall be taken in using a mechanical tamper directly over the pipe. Backfill may be placed in layers not exceeding twelve (12) inches in depth after reaching the one foot depth over the pipe. For trenches beneath traveled rights of way, the entire depth of the trench above the improved bedding shall be backfilled with suitable material and shall be compacted to ninety-five (95) percent. For trenches beneath non-traveled areas, trench upward from one foot above the top of pipe shall be compacted to ninety (90) percent. Each layer shall be moistened or dried as necessary to provide a moisture content that falls within three (3) percentage points of either side of optimum moisture unless otherwise approved in writing by the Geotechnical Engineer. The degree of compaction required is expressed as a percentage of maximum density obtained by the test procedure described in ASTM D 698. Backfill compaction shall be accomplished by use of equipment designed and suitable for the materials being compacted and their specific location or situation. Compaction by "puddling," either natural or man-induced shall not be allowed.

L. Finish Grading:

1. Finish grading shall be done as required to establish the slopes indicated. The grades shall be formed to easy contours sloping toward inlets and ditches. The grading shall eliminate low spots and pockets that do not drain. Ditches shall be excavated to the sections and elevations shown and shall be excavated on smooth slopes to avoid low spots and pockets that do not drain. Allowance for sod thickness shall be made in areas indicated to be sodded.

2. Finish the surface of all excavations and fill and all disturbed areas to a smooth surface, with the grades sloping away from the buildings. Finish swales and ditches so that effective drainage results. Proper allowance shall be made for topsoil and for pavement thickness. Proper allowance for sod thickness shall be made in areas indicated to be sodded. Any settling or washing or any eroded areas that develop, prior to acceptance of the work shall be repaired at no additional expense to the Owner. Topsoil and seeding of all disturbed areas shall be performed in accordance with the Section 02931.

M. Restoration:

1. Developed property such as driveways, walks, steps, mailboxes, fences and the like, disturbed by the work, shall be restored or replaced to their original condition. Ditches shall be restored to their original shape and slope. All disturbed areas not covered by pavement or structure and all areas disturbed by the construction activity shall be fertilized, limed, seeded with the type of seed that produces a stand of grass similar to the existing and mulched. Any property pins or monuments, moved or destroyed by the project work, shall be restored to their correct location by a licensed surveyor.

2. The Contractor shall, at all times, keep a neat worksite, and his operations shall not be a source of litter. Earth that is spilled or washed onto adjacent property shall be promptly removed and the surface restored to its original condition. The project site shall not be a source of litter.

3. Pavement restoration shall be in accordance with Section 02505. Pavement shall be thoroughly cleaned upon completion of construction.

N. Quality of Work:

1. Any unfaithful or imperfect work that may be discovered before the final acceptance of the work shall be corrected immediately on the requirement of the Engineer, notwithstanding that it may have been overlooked or approved by the proper inspector. The inspection of the work shall not relieve the Contractor of any of his obligations to perform sound and reliable work as herein described. And all the work, of whatever kind, which during its progress, and before it is finally accepted may become damaged for any cause, shall be properly taken up or removed so much of it as may be objectionable and be replaced by good and sound work satisfactory to the Engineer.

O. Pipe or Structures to Be Abandoned or Removed:

1. Pipe indicated on the plans to be abandoned shall be plugged, capped or sealed with concrete.

2. Pipe indicated on the plans to be removed shall be completely removed then backfilled with suitable material and thoroughly compacted, in accordance with related backfill work specified elsewhere. Removed pipe not required in the completion of the work shall be taken from the site and disposed of by the Contractor.

3. Structures indicated on the plans to be abandoned shall be cut off or removed to a minimum depth of twenty-four (24) inches below finished grade then backfilled with suitable material and thoroughly compacted, in accordance with related backfill work specified elsewhere. Existing frames

and covers shall be returned to the respective Owner if not reused on this project.

4. Structures indicated on the plans to be removed shall be demolished and completely removed, then backfilled with suitable material and thoroughly compacted, in accordance with related backfill work specified elsewhere. Existing frames and covers shall be returned to the respective Owner, if not reused on this project.

P. Maintenance of Utility Trenches:

1. The Contractor shall maintain the surface over the trench or excavation for a period of one (1) year after final completion and acceptance of the work, both in public right of way and private property, and shall fill in any settled areas with suitable fill and reseed or shall fill settled areas with pavement, as the location warrants.

Q. Final Inspection:

1. Testing shall be in accordance with Section 02980 and as follows. Upon notification by the Contractor of the completion of any major part of the work, the Engineer shall carefully inspect the part of the work, in part and as a whole and make such tests as will satisfy him that every provision of the Contract has been faithfully carried out. He shall carefully inspect all lines, manholes, etc., by light test and all other work done by the Contractor. All pipe lines are intended to be straight from manhole to manhole, and a reasonably full, round circle of light shall be visible from one end to the other. Any broken or cracked pipe shall be replaced with sound pipe. Any deposit found in the sanitary sewer or storm drain including protruding cement or packing, shall be removed and the pipe barrel left clean for its entire length, the sanitary sewer must be practically watertight, and no leakage will be allowed. All manholes, inlets, flared end sections, headwalls, and wingwalls shall be of the specified size, shape and material of neat appearance, shall have their inverts shaped and shall have their tops set at the proper grade.

2. All ditches shall be lined as specified and/or indicated, with erosion protective material. Grass shall be growing in all disturbed areas - any bare spots or eroded areas shall be repaired, and seeded.

3. All curb, curb and gutter, walks, pads and concrete pavement shall be clean with proper surface finished. All damaged sections shall be replaced. All paved areas shall be clean and uniform, and shall slope to drain, with no puddles.

4. In general, the work shall comply with these specifications; and if not found to be so in any respect, it shall be brought to the proper condition by cleaning, painting or, if necessary, by rebuilding, all at the expense of the Contractor. If, in the opinion of the Engineer, the above methods of testing do not secure satisfactory results and a defect exists in a pipe line or other construction not accessible except by uncovering, the Engineer shall order the work to be uncovered. If, however, it be found that after the pipe or other work has been uncovered no defect exists, or the defect was not the fault of the Contractor, then the expense so incurred by the Contractor shall be borne by the Owner. During final inspection the Contractor shall, at his own expense, furnish suitable provisions as to needed drainage, workmen, and appliances.

END OF SECTION

SECTION 02209

UTILITY BACKFILLING AND RESTORATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all backfill equipment, materials, labor, and services required to fill, compact, restore and grade all trenched areas to the designated or required elevations.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 02212 - Erosion Control and RipRap
3. Section 02931 - Topsoiling and Seeding

1.03 QUALITY

A. All materials for the compaction of the backfill shall be in accordance with the latest revisions of the applicable American Society for Testing Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO) and Virginia Department of Transportation (VDOT) standards.

B. The Contractor shall comply with all Local and State erosion and sedimentation control ordinances and requirements.

C. The Contractor shall maintain the surface over the trench or excavation for a period of one (1) year after final completion and acceptance of the work, both in public right of way and private property, and shall fill in any settled areas with suitable fill and reseed or with pavement as the location warrants.

D. Backfilling shall not be done in freezing weather except by special permission of the Engineer, and it shall not be accomplished with frozen material. No fill shall be made where the material in the trench is already frozen.

E. The Contractor shall at all times during the construction, and at its completion for final inspection, keep the trench, excavation or other parts of the work free from accumulated water.

1.04 REFERENCES

A. American Society for Testing Materials (ASTM); latest revisions:

1. D 698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort

2. D 1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort

3. D 2216 Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock

4. D 2487 Standard Test Method for Classification of Soils for Engineering Purposes

1.05 TESTING SERVICES

A. The testing laboratory shall be selected by the Contractor approved by the Owner and will be responsible for conducting and interpreting tests. The Testing Laboratory shall state in each report whether or not the test specimens conform to all requirements of the Contract Documents and specifically note any deviation therefrom.

B. General requirements for testing shall be as specified in Section 01410. Specific test and inspection requirements shall be as specified herein.

1.06 SUBMITTALS

A. Submit the following in accordance with Section 01340:

1. Test Reports:

a. Optimum moisture - maximum density of soils.

b. Field density tests.

PART 2 PRODUCTS

2.01 BACKFILL MATERIAL

A. Materials for backfill shall be suitable excavated material or suitable material obtained from other sources. Suitable material for backfilling shall be GW, GP, GM, GC, SW, SP, SM, SC, ML or CL as classified in the Unified Soil Classified System in accordance with ASTM D 2487 and moisture determinations in accordance with

ASTM D 2216. The maximum particle size shall be as specified hereinafter. The material shall be within 3 percent above or below maximum dry density.

B. Material shall consist of durable natural granular material or granular aggregates free of organic material, loam, debris, ashes, cinders, pavement, boulders or other objectionable material which cannot be thoroughly compacted. Backfilling shall be done in such a way as to prevent dropping of material directly on top of the pipe through any vertical distance greater than three (3) feet and shall be deposited in horizontal layers. No particles with a diameter greater than one (1) inch shall be placed in the initial backfill from the top of the improved bedding to a point one (1) foot over the top of the gravity pipe. No rock particles with a diameter or dimension greater than five (5) inches shall be placed in the remainder of the backfill. Excavated rock particles with a diameter or dimension greater than five (5) inches shall be considered unsuitable backfill material.

C. Material shall not contain stones larger in diameter than those specified herein, nor granite, broken concrete, masonry rubble or other material which in the opinion of the Engineer is unsuitable for backfill.

D. Excessively wet excavated material shall not be used as backfill. Frozen material shall not be placed in the trench, nor shall approved backfill be placed upon frozen material. However, backfilling may be allowed in freezing weather with approval of the Engineer.

E. Aggregate Backfill Material, where indicated for trenches below paved, or surface treated streets, shall be crusher run aggregate material Size 25 or Size 26 in accordance with VDOT Section 302, compacted in 6 inch lifts.

F. Metallic locator tape shall be a standard manufactured product, used for the purpose of locating plastic utility pipes.

PART 3 EXECUTION

3.01 JOB CONDITIONS

A. Prior to placing backfill all organic, rubbish, debris, or other unsuitable or objectionable material within the trench shall be removed. All concrete forms shall be removed. All shoring or sheeting shall be removed or cut off at the elevation stipulated by the Engineer.

B. Prior to placing backfill, the trench, the installed pipe, vaults, inlets, and manholes shall be visually inspected by the Engineer.

C. Backfill material shall be placed in uniform horizontal layers and thoroughly compacted with equipment accepted by the Engineer to perform such work. The backfill shall be placed and compacted to the required subgrade depth in order to allow for the proper placement of pavement or topsoil.

D. Backfill material shall be placed and compacted so as to not unevenly support, damage or displace the alignment of the pipe, inlets, vaults, or manholes. Backfill material shall be worked under the sides of the pipe to provide satisfactory haunching.

E. Backfill shall not be placed or compacted against cast-in-place concrete until it has obtained sufficient strength to withstand the backfill pressure placed upon it.

F. Prior to placing pressure pipes several inches of loose earth from the trench bottom or trench walls shall be placed in the trench bottom to provide a bedding for the pipe. In rock areas, six (6) inches of VDOT #57, #68 coarse aggregate shall be provided beneath the pipe with provisions being made for the bells, in accordance with the standard details. Backfill for pressure lines shall be placed by hand from the bottom of the pipe to a point 12 inches above the top of the pipe in 6 inch layers, compacted with hand mechanical tampers, equally on both sides of the pipe and appurtenances, using care to avoid damaging pipe or coatings. At one foot below subgrade, the continuous metallic pipe locator tape shall be placed in the trench, if PVC pipe or other non-metallic pipe or tubing is provided. Tape shall be required over service connections.

G. Upon the completion of backfilling, all excess soil, stones and debris shall be disposed of off the project site by the Contractor, at his expense.

3.02 BACKFILL BELOW UNPAVED AREAS

A. Backfill from the top of the pipe bedding or bottom of the pipe trench to one (1) foot above the top of the pipe shall be free of stones larger than one (1) inch in diameter and shall be placed in layers not to exceed six (6) inches and compacted with hand operated tampers.

B. Backfill from one (1) foot above the top of the pipe to the topsoil subgrade shall be free of stones larger than five (5) inches in diameter and shall be placed in layers not to exceed twelve (12) inches and compacted with mechanical tampers.

C. Final backfill in grassed areas shall be mounded three (3) inches above surrounding grade to allow for settlement.

D. Trenches in which pipe or structures are to be abandoned or removed shall be backfilled to the topsoil subgrade with material free of stones larger than five (5)

inches in diameter and shall be placed in layers not to exceed twelve (12) inches and compacted with mechanical tampers.

3.03 BACKFILL BELOW PAVED AREAS

A. Backfill from the top of the pipe bedding or bottom of the pipe trench to one (1) foot above the top of the pipe shall be free of stones larger than one (1) inch in diameter and shall be placed in layers not to exceed six (6) inch and compacted with hand operated tampers.

B. Backfill from one (1) foot above the top of the pipe to the subgrade shall be free of stones larger than five (5) inches in diameter and shall be placed in layers not to exceed eight (8) inches and compacted with mechanical tampers.

C. Final backfill in paved areas shall be mounded two (2) inches and allowed to settle for 30 days prior to pavement replacement. The trench in paved areas shall be maintained daily, as required, to provide a smooth crossing for vehicles until such time as the final pavement is placed.

D. Trenches in which pipe or structures are to be abandoned or removed shall be backfilled to the subgrade with material free of stones larger than four (4) inches in diameter and shall be placed in layers not to exceed eight (8) inches and compacted with mechanical tampers.

3.04 BACKFILL WITH AGGREGATE BACKFILL MATERIAL - TRENCHES PERPENDICULAR TO THE RIGHT OF WAY

A. Where indicated, backfill from the top of the pipe bedding or bottom of the pipe trench to the subgrade shall be aggregate backfill material and shall be placed in layers not to exceed eight (8) inches and shall be compacted with hand operated tampers to one (1) foot above the top of the pipe and with mechanical tampers thereafter to the subgrade.

B. Trenches in which pipe or structures are to be abandoned or removed shall be backfilled to the subgrade with aggregate backfill material and shall be placed in layers not to exceed eight (8) inches and compacted with mechanical tampers.

3.05 COMPACTION AND TESTS

A. Backfill shall be moistened or aerated as required to provide the proper moisture content necessary to achieve the compaction specified herein.

B. Compaction by water, either natural or mechanical, shall not be permitted. Each layer shall be thoroughly tamped and compacted by hand or pneumatic tamper in

place. Special care shall be taken in using a mechanical tamper directly over the pipe.

C. Compaction:

1. Backfill material shall be placed and compacted to the following minimum percentages of the maximum density as determined by ASTM D698.

2. Fill from the top of the pipe bedding or bottom of the pipe trench to one (1) foot above the top of the pipe, each layer shall be compacted 95 percent (ASTM D698).

3. Fill below unpaved areas from one (1) foot above the top of the pipe to the topsoil subgrade and in drainage channels to the topsoil subgrade, each layer shall be compacted 90 percent (ASTM D698).

4. Fill below paved areas or walks, each layer to the pavement subgrade shall be compacted 95 percent (ASTM D698).

D. Testing of backfill will be coordinated by the Engineer with an independent testing laboratory and paid for by the Contractor. One field density test per lift, per 500 lineal feet, or fraction thereof, of pipe shall be performed by the Contractor at his expense in the presence of the Engineer to assure compliance with the compaction requirements. If a test indicates that the required density has not been obtained, the backfill in that 500 foot reach of pipe shall be removed, replaced, recompacted and retested at the Contractor's expense unless the Contractor can show by additional testing, at his expense, that the limit of improperly compacted material is confined to a lesser reach. Location of such tests shall be selected by the Engineer.

E. Backfill material will be tested in accordance with ASTM D698 and D2216. Backfill that fails to meet the minimum percentages specified shall be removed replaced, recompacted, and the area retested all at the expense of the Contractor, to ensure the correct compaction has been performed.

3.06 RESTORATION

A. The Contractor shall at his own expense, clean up all refuse, rubbish, scrap material and debris caused by his operations, to the end that at all times the site of the work shall not be a source of litter and shall present a neat, orderly and workmanlike appearance. Immediately following the backfilling of the trench, the Contractor shall "broom" or otherwise clean the surfaces of paved streets. All surplus material shall be removed and disposed of at this time, at the Contractor's expense.

B. Finish grading shall be done as required to establish the slopes indicated. The grades shall be formed to easy contours sloping toward inlets and ditches. The grading shall

eliminate low spots and pockets that do not drain. Ditches shall be excavated to the sections and elevations shown and shall be excavated on smooth slopes to avoid low spots and pockets that do not drain.

C. Developed property such as walks, steps, mailboxes, fences and the like, disturbed by the work, shall be restored or replaced to their original condition. Ditches shall be restored to their original shape and slope. All disturbed areas not covered by pavement or structures and all areas disturbed by the construction activity shall be fertilized, limed, seeded with the type of seed that produces a stand of grass similar to the existing, and mulched. Any washing or erosion of the surface, and any areas that seed does not germinate, and grass grow, prior to acceptance of the work, shall be repaired by the Contractor, at no additional expense to the Owner.

D. Any property pins or monuments, moved or destroyed by the project work, shall be restored to their correct location by a licensed surveyor.

E. Maintain the surface of any trench or excavation in a traveled right of way or paved surface in such condition as to make it passable and safe for traffic. The backfilled trench shall be maintained to the satisfaction of the Engineer in order that it remains passable and safe for traffic at all times following the backfilling of the trench and prior to the pavement restoration. Pavement restoration shall be in accordance with Section "Asphalt Paving."

F. Restoration of underground utilities shall be in accordance with the Standards of the Utility, with respect to labor, equipment, and materials.

G. Where required, additional concrete steps, low walls and walks shall be provided to provide a smooth, safe transition to private property from new walks, and new curb and gutter.

END OF SECTION

SECTION 02212

EROSION CONTROL AND RIPRAP

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include all labor, equipment, materials, and services required to control erosion and sediment on the project side and on areas beyond the project limits, affected by the project.

1.02 RELATED WORK

A. Specified elsewhere:

1.	Section 01010	-	Summary of Work
2.	Section 02207	-	Earthwork
3.	Section 02209	-	Utility Backfilling and Restoration
4.	Section 02931	-	Topsoiling and Seeding

1.03 GENERAL

A. The Contractor shall maintain the work site in a clean and orderly appearance and condition at all times. All disturbed areas not designated for pavement and sidewalk replacement, structural use, and the like shall be stabilized. All stabilization measures and materials shall be in accordance with the specifications contained within the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992 and/or any subsequent revisions or editions.

B. The Contractor shall have an employee certified with the Department of Conservation and Recreation in erosion and sediment control who shall inspect erosion and sediment control devices and measures for proper installation and deficiencies immediately after each rainfall, at least daily during prolonged rainfall, and weekly when no rainfall event occurs, in accordance with Section 107.14(a) of the VDOT Road and Bridge Specifications.

PART 2 PRODUCTS

2.01 MATERIALS

A. Materials shall be in accordance with the Virginia Erosion and Sediment Control Handbook, Latest Edition, and subsequent revisions, and VDOT Standards, where indicated.

2.02 RIPRAP AND FILTER FABRIC

A. Riprap shall be dry riprap Class A1, as defined in Sections 204 and 414 of the Virginia Department of Transportation - Road and Bridge Specifications - Latest Edition.

2.03 PROTECTIVE COVERING

A. Where indicated, protective covering (VDOT EC-2) mat shall be provided in ditches in accordance with Section 02931 of these specifications, and VDOT Sections 244 and 606.

PART 3 EXECUTION

3.01 EROSION CONTROL

A. The erosion control system shall protect adjacent properties, including Owner's property not in the project area. The System shall be in accordance with the Virginia Erosion and Sediment Control Handbook and local ordinances, and shall be approved by the Engineer. All erosion control measures shall be placed prior to commencement of grading. Stabilization measures shall be applied to earthen structures, such as dams, dikes and diversion channels immediately after installation. All elements of the erosion control system shall be sized and designed in accordance with the criteria specified in the handbook. The numbers in parenthesis refer to standard and specification number in the handbook (Virginia).

B. Temporary measures shall be applied throughout the construction of the project to control erosion and to minimize siltation of adjacent areas, property, street, drainage ditches, storm drains, and waterways. The Contractor, as a minimum, shall employ all erosion control measures indicated on the drawings and specified herein. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant (undisturbed) for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year. Any adjacent areas or property that has sediment from the project area shall be cleaned up by the Contractor.

C. Stockpiled material shall be surrounded at the base with a temporary sediment barrier. Slopes of stockpiled material shall not exceed 2 to 1.

D. Vehicles leaving the construction site shall be cleaned to remove mud prior to entrance onto public rights of way. Washing shall be done on a temporary construction entrance specified hereinafter.

E. Surface runoff from disturbed areas that is comprised of flow from draining areas less than three acres shall be controlled by a sediment trap and from disturbed areas that is comprised of flow from draining areas greater than or equal to three acres shall be controlled by a sediment basin. The sediment basin shall be designed and constructed to accommodate the anticipated sediment loading from the land-disturbing activity. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area to be served by the basin.

F. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected. Concentrated runoff shall not flow down cut or fill slopes unless contained within and adequate temporary or permanent channel, flume or slope drain structure.

G. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment. Contractor shall clean up any inlets, pipes, ditches and culverts that have sediment from the project area.

H. Before newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

I. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

J. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary stream crossing constructed of nonerodible material shall be provided.

K. All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met. No construction materials, chemicals, or any other harmful material shall be allowed to enter the watercourse, whether directly or in runoff as a result of any project activity.

L. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

M. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

1. No more than 100 lineal feet of trench may be opened at one time.

2. Excavated material shall be placed on the uphill side of trenches.

3. Effluent from dewatering operation shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

4. Restabilization shall be accomplished in accordance with these specifications.

5. Applicable safety regulations shall be complied with.

N. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by [vehicular] tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner.

O. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the Engineer. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

P. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increase in volume, velocity and peak flow rate of stormwater runoff.

Q. The Contractor shall be responsible for weekly inspection of temporary erosion control system to insure maximum effectiveness of the protective measures. Any damaged areas of the erosion control system shall be immediately repaired.

R. Disposal of excavated material, if done within the City of Martinsville, VA shall be in accordance with the City Erosion and Sediment Control Ordinance. A disposal plan for all sites shall be submitted to the Engineer for approval.

S. Minimum required measures (numbers from erosion handbook):

1. Temporary stone construction entrance (3.02)
2. Silt fence (3.05)
3. Storm drain inlet protection (3.07)
4. Temporary diversion dike (3.09 and 3.10)
5. Outlet protection (3.18)
6. Riprap (3.19)
7. Rock check dams (3.20)
8. Topsoiling (3.30)
9. Temporary seeding (3.31)

T. Maintenance and inspections:

1. All erosion and sediment control structures and systems shall be maintained, inspected and repaired as needed to insure continued performance of their intended function. A statement describing the maintenance responsibilities of the Contractor is included in the approved erosion and sediment control plan.

2. In addition to the Contractor's inspection requirements of paragraph 1.03(B) of this section, periodic inspections will be made on all projects by the local enforcement authority. An inspection shall be made during or immediately following initial installation of erosion and sediment controls, at least once in every two-week period, within 48 hours following any runoff producing storm event, and at the completion of the project prior to the release of any performance bonds.

3. In the event the Contractor repeatedly fails to satisfactorily control erosion and siltation, the Owner reserves the right to employ outside assistance or to use his own forces to provide the erosion control measures indicated and specified. The cost of such work, plus related engineering costs, will be deducted from monies due the Contractor for other work.

3.02 RIPRAP

A. Riprap shall be placed in accordance with VDOT Section 414. The riprap shall be placed so that it produces a dense well-graded mass of stone with a minimum of voids. Riprap shall be placed on filter fabric. Filter fabric shall be installed in accordance with the manufacturer's instructions. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, controlled dumping of successive loads during final placing, or by a combination of these methods. The riprap shall be placed to its full thickness in one operation. The riprap shall not be placed in layers. The riprap shall not be placed by dumping into chutes or similar methods which are likely to cause segregation of the various stone

sizes. Care should be taken not to dislodge the underlying material when placing the stones.

B. The finished slope shall be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the required grades and a good distribution of stone sizes. Final thickness of the riprap blanket shall be within plus or minus 1/4 of the specified thickness. The thickness shall be 2.00 feet for Class I riprap, and 3.00 feet for Class II riprap.

END OF SECTION

SECTION 02505

ASPHALT PAVING

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all paving equipment, materials, labor, and services required to return all excavated sections of streets and private drives to an original or better condition, and to provide all new pavement indicated.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 02207 - Earthwork
3. Section 02209 - Utility Backfilling and Restoration
4. Section 02528 - Concrete Curbs and Curb and Gutter

1.03 REFERENCES

A. All materials and methods of construction shall be in accordance with the previous revision of the applicable Virginia Department of Transportation (VDOT) Standards (2008) and Road and Bridge Specifications (2007), and accompanying Special Provisions, and copied notes.

1.04 EXISTING FACILITIES

A. Replace all excavated sections of pavement with similar base and surface material, and finish the grade of the surface material flush with the surrounding grade, unless specified otherwise.

B. The Contractor shall, at his expense, raise or rework any existing signal, water, storm or sanitary sewer manholes that may require adjustment as a result of the paving work. The respective Electric, Telephone or Gas Company shall, at their expense, raise or rework their existing structures. Inform the Owner as to the paving schedule, in order that the Municipality can properly notify the respective Utility Companies.

C. Traffic and Lane markings and parking lines shall be painted and/or repainted by and at the expense of the Contractor upon the completion of the paving.

1.05 WARRANTY

A. The Contractor shall maintain the paved surface over all excavated areas for a period of one (1) year after the work has been completed and accepted by the Owner.

1.06 JURISDICTION

A. Note that streets on this project are under the jurisdiction of the City of Martinsville, VA and work in the street right-of-way will be subject to inspection by their inspector.

1.07 QUALITY ASSURANCE

A. Comply with all codes, laws, ordinances, and regulations of governmental authorities including, but not limited to, local municipalities and sanitary districts having jurisdiction over this part of the work.

B. Pavement testing shall be in accordance with standard VDOT requirements and shall be paid for by the Contractor.

1.08 TEMPORARY RESTORATION

A. Make temporary pavement restoration when it is not feasible to immediately replace pavement after the placement and compaction of the backfill.

B. Furnish and install crushed stone or gravel or temporary asphalt base material as required to maintain traffic until permanent pavement can be restored.

C. Continuously maintain the temporary material in a smooth condition, free of holes or ruts, until the permanent pavement is restored. No trench in a street shall be left open overnight without lighted barricades. Maintain the surface such that dust is not a nuisance to the public.

PART 2 PRODUCTS

2.01 MATERIALS

A. Coarse Aggregate shall be Number 68 or #8P, Grade B minimum as indicated in these specifications and shall conform with VDOT Section 203. (Use in surface treatment pavement.)

B. Aggregate Base Material shall be Type I for Size 21A or 21B and shall conform with VDOT Section 208.

C. Liquid Asphalt Material shall conform with VDOT Section 210 and shall be of the Grade as follows:

Tack Coat	Grade CRS-2 or CMS-2
Prime Coat	Grade RC-70, RC-250 or MC-250.
Seal Coat	Grade CRS-2, CMS-2 or CMS-2H

D. Asphalt Concrete Base Material shall be Type BM-25.0, Asphalt Concrete, as available, and shall conform with VDOT Section 211, and applicable Special Provisions for Asphalt Concrete Mixtures. Where suitable and when approved by the Engineer and the Municipality or Agency responsible for the street, other mix designs may be used.

E. Asphalt Concrete Surface Material shall be Type SM-9.5A Asphalt Concrete, and shall conform with VDOT Section 211 and applicable Special Provisions for Asphalt Concrete Mixtures. Where suitable and when approved by the Engineer and the Municipality or Agency responsible for the street, other mix designs may be used. Aggregate shall be limestone, or where indicated, granite.

F. Paint shall be No. 44 conforming to VDOT Section 246, for traffic areas and shall be Benjamin Moore "Ironclad Safety Zone" (white) or equal for parking stripes, and blue for handicap areas lines and symbols. Other line types and colors are specified on the drawings.

PART 3 EXECUTION

3.01 SUBGRADE

A. In cut areas remove any existing pavement and remove subgrade to a depth to allow for pavement thickness. Subgrade should be scarified and compacted. In cut and fill areas, subgrade should be compacted to ninety-five (95) percent of maximum dry density as determined by ASTM D698, moistened or dried to within plus or minus three (3) percentage points of optimum moisture, and brought up to a height

suitable to allow for the pavement thickness. Subgrade fill shall be suitable material as specified in Section [02207] [02209].

B. Edges of existing asphalt concrete or surface treatment pavement shall be cut in a straight line using a mechanical saw manufactured for that purpose, a minimum of six (6) inches back from the edge of the trench. A planing machine shall be an acceptable alternative.

3.02 ASPHALT CONCRETE PAVEMENT

A. Prepare subgrade by grading and compacting backfill prior to placing the base course. The surface shall be true to line and grade.

B. Aggregate Base Course shall consist of aggregate base material as specified herein and placed in accordance with VDOT Section 309, to the compacted thickness indicated on the drawings or as a minimum to a compacted thickness of six (6) inches, on the subgrade.

C. Asphalt Concrete Base Course shall consist of the compacted thickness indicated on the drawings or as a minimum four (4) inches compacted thickness of asphalt concrete base material as specified herein and shall be placed in accordance with VDOT Section 315 directly on the aggregate base course. Where a trench is in an area that is to receive a pavement overlay, the top of the asphalt base shall be flush with the existing, adjacent surface, and the asphalt base course shall be 4-1/2 inches compacted thickness.

D. Tack Coat shall consist of liquid asphalt material as specified herein and applied at a rate of 0.20 gallons per square yard and in accordance with VDOT Section 310, and applicable Special Provisions, on the asphalt base course, when more than 2 weeks have passed since the underlying surface was placed, or on existing asphalt surface is to be overlaid.

E. Asphalt Concrete Surface Course shall consist of the compacted thickness indicated on the drawings or as a minimum two (2) inches compacted thickness of asphalt concrete surface material as specified herein and shall be placed in accordance with VDOT Section 315 on the (tacked) asphalt base course. Where a trench is in an area that is to receive a pavement overlay, the entire area, including that over the trench, shall receive the overlay during a single paving operation, in which case the asphalt surface course over the trench shall be 2 inches.

3.03 STREET PAVEMENT OVERLAY

A. Fill and build-up existing pavement holes and depressions as required with asphalt concrete base material as specified herein and placed in accordance with VDOT Section 315.

B. Tack Coat shall consist of liquid asphalt material as specified herein and applied over the existing pavement and fill material at a rate of 0.20 gallons per square yard and in accordance with VDOT Section 310. Tack coat shall be placed on a cleaned surface.

C. Asphalt Concrete Surface Course shall consist of one and one-half inches compacted thickness of asphalt concrete surface material as specified herein and shall be placed in accordance with VDOT Section 315.

3.04 MISCELLANEOUS RESTORATION

A. Replacement of concrete pavement shall consist of 1 1/2 times the original thickness on compacted subgrade using VDOT Class A3 concrete, with a broom finish, (or as specified in Section 02514).

B. Replacement of gravel pavement shall consist of four (4) inches compacted #21B VDOT type I aggregate base course on the compacted subgrade.

C. Pavement for driveways shall be restored such that the wearing surface and the base course shall each be one and one-half times the original thickness. Materials shall be of the same type as the original pavement, and shall comply with VDOT materials and construction methods for the type of pavement involved. Soil driveways shall have the disturbed area covered with four (4) inches of gravel as specified for gravel pavement replacement.

D. Sidewalks, curbs, curb, and gutter, headwalls, steps, and other miscellaneous concrete damaged by construction shall be replaced in full sections with a light broom finish where appropriate. Concrete shall be VDOT A4, and conform to ASTM C-94. Sidewalk shall be 4" minimum thickness.

3.05 MISCELLANEOUS CONCRETE

A. All miscellaneous concrete structures, steps, low walls, walks, curbs, gutters, paved ditches and the like shall utilize concrete with concrete, reinforcing and related items conforming to Sections 02524 and 03300 of these specifications.

END OF SECTION

SECTION 02528

CONCRETE CURBS AND CURB AND GUTTER

PART 1 GENERAL

1.01 WORK INCLUDED

A. Concrete curbs and curb and gutter as shown on the Drawings and specified herein.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of work.
2. Section 02207 - Earthwork.
3. Section 02505 - Asphalt Paving.

1.03 QUALITY ASSURANCE

A. Curbs and curb and gutter on public property and on private property shall comply with all laws, rules and regulations of governmental authorities having jurisdiction over such work.

1.04 REFERENCES

A. American Concrete Institute (ACI); latest edition:

1. 301 Standard Specifications for Structural Concrete
2. 305R Hot Weather Concreting
3. 306R Cold Weather Concreting
4. 306.1 Standard Specifications for Cold Weather Concreting

B. American Society for Testing Materials (ASTM); latest edition:

1. A675 Standard Specification for Steel Bars, Carbon, Hot-Wrought Special Quality, Mechanical Properties
2. C31 Standard Method of Making and Curing Concrete Test Specimens in the Field
3. C33 Standard Specifications for Concrete Aggregates
4. C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

5. C94 Standard Specification for Ready-Mixed Concrete

6. C143 Standard Test Method for Slump of Portland Cement Concrete

7. C150 Standard Specification for Portland Cement

8. C173 Standard Test Method for Air Content of Freshly Mixed Concrete by Volumetric Method

9. C192 Standard Method of Making and Curing Concrete Test Specimens in the Laboratory

10. C231 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

11. D994 Standard Specification for Preformed Expansion Joint Filler for concrete (Asphalt Type)

12. D1751 Standard Specification for Preformed Expansion Joint Fillers for concrete Paving and Structural Construction (Nonextruding and Resilient asphalt Types)

1.05 TESTING SERVICES

A. The testing laboratory will be responsible for conducting and interpreting tests, stating in each report whether or not the test specimens conform to all requirements of the Contract Documents and specifically note any deviation therefrom.

B. General requirements for testing shall be as specified in Section 01410. Specific test and inspection requirements shall be as specified herein.

1.06 SUBMITTALS

A. Submit the following in accordance with Section 01340:

1. Mix Design: Concrete mix design, including report on design strength test.

2. Test reports on placed concrete:

a. Tests of materials, or review of test reports available from suppliers.

b. Field tests as specified herein.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, handle and store material at the job site in such a manner as to prevent damage. Packaged material shall be in original containers with seals unbroken and labels intact until time of use. All damaged or otherwise unsuitable material when so ascertained shall be immediately removed from the job site.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Sika Chemical Co.
Lyndhurst, NJ 07071

B. Master Builders
Cleveland, OH 44118

C. W.R. Grace
Cambridge, MA 02140

D. W.R. Meadows, Inc.
Elgin, IL 60606

E. Guardian Chemical Company
Atlanta, GA 30301

F. Celotex Corporation
Tampa, FL 33622

2.02 MATERIALS

A. Portland Cement: ASTM C 150, Type 1, normal Portland cement; uniform gray color, from single source.

B. Aggregates: All fine and coarse aggregate shall conform to ASTM C 33.

1. Fine Aggregates: Natural or artificial, hard clean sand.

2. Coarse Aggregates: Crushed stone, size 57.

C. Water: Potable.

D. Air Entraining Admixture: ASTM C 260:

1.	Sika AER	Sika
2.	MB-VR	Master Builders
3.	Darex AEA	W.R. Grace

E. Dowel Bars: ASTM A 675, plain, with metal sleeves.

F. Liquid Membrane Curing Compound (100 percent Resin Type): ASTM C 309, Type 1:

1.	Master Kure 100W	Master Builders
2.	Seal Cure	W.R. Meadows
3.	Clear Seal	Tamms Industries

G. Preformed Fiber Joint Filler non-extruding, for expansion joints which are to be sealed: ASTM D 1751:

1.	Fiber Expansion Joint Filler Code 1390	W.R. Grace
2.	Fiber Expansion Joint	W.R. Meadows
3.	Flexcell	Celotex

H. Preformed Asphalt Joint Filler for expansion joints which are not sealed: ASTM D 994:

1.	Code 1301	W.R. Grace
2.	Asphalt Expansion Joint	W.R. Meadows
3.	Elastite Asphalt Expansion Joint	Celotex

2.03 PROPORTIONING AND MIXING

A. The testing laboratory shall design the mix for the concrete to obtain a strength, as determined by test cylinders, at least 15 percent higher than specified.

B. The adequacy of the design shall be verified by tests on standard cylinders; 2 tested at 7 days and 2 at 28 days, in accordance with ASTM C 39 and C 192.

C. The testing laboratory shall submit the copies of the mix design and the test results to the Engineer for approval before any concrete is placed.

D. Cement content shall be in accordance with the following minimum requirements:

1.	Design Strength psi	Cement Content sacks/cubic yard
	4000	5.5

E. Ready-Mixed Concrete shall conform with ASTM C 94.

F. The mixture shall contain no more water than is necessary to produce concrete which is workable and plastic within the limits specified herein for slump. The maximum water-cementitious materials ratio shall be 0.45. Corrections shall be made for the amount of moisture contained in the aggregates and allowances shall be made for absorption of moisture by the aggregates during the period of mixing and handling. A uniform consistency shall be maintained continuously. Mixture shall contain 5-7 percent air entrainment. No calcium chloride shall be used.

G. The consistency shall be determined by the method specified in ASTM C 143.

H. The slump shall be not less than 2 or more than 4 inches.

I. The Owner reserves the option to test every load for compliance with the mix design and with these specifications.

PART 3 EXECUTION

3.01 PREPARING SUBGRADE

A. Prior to fine grading, the rough grade shall be tamped or rolled until thoroughly compacted and shall be constructed true to grade and cross section.

B. Fine grading and filling shall be performed using sand, or other granular subbase, uniformly graded. Subgrade shall not be built-up under forms after forms are in place. Subgrade shall be tested with an approved template. High spots shall be lowered and low spots raised. Subbase shall be compacted and leveled to grade.

C. Wet the prepared subgrade to ensure a moist condition when concrete is placed.

3.02 FORMS FOR CURBS AND CURBS AND GUTTERS

A. Forms shall be carefully set to alignment and grade and to conform to the dimensions of the curb. All forms shall be held rigidly in place by the use of steel or wooden stakes placed at intervals not to exceed 4 feet. The forms on the front of the curb shall not be removed less than 2 hours nor more than 6 hours after the concrete has been placed. Forms for back of curbs shall remain in place until the face or top of the curb has been rubbed and finished. In no event shall forms be removed while the concrete is sufficiently plastic to slump in any direction. Forms shall be cleaned thoroughly each time they are used and coated with a light oil as often as necessary to prevent the concrete from adhering.

3.03 PLACING AND FINISHING CURBS AND CURBS AND GUTTERS

A. Concrete shall be placed in the forms to the specified depth in 6 inch layers and thoroughly consolidated by tamping and spading so that there are no rock pockets at forms, and mortar entirely covers top surfaces. The surface of the top of the curb shall be edged with the proper edging tool and floated and finished with a smooth wood float or a concrete rubbing block until it is true to grade and section and uniform in texture. Immediately after removing the front curb form, the face of the curb shall be rubbed with a wood or concrete rubbing block until all blemishes, form marks, and tool marks have been removed. The face of the finished curb shall be true and straight, and the top surface of curbs shall be of uniform width, free from humps, sags, or other irregularities. When a straightedge 10 feet long is laid on the top or face of the curb, the surface shall not vary more than 1/8 inch from the edge of the straightedge, except at grade changes or curves. All visible surfaces and edges of the finished curb shall be free of all blemishes and form and tool marks and shall be uniform in color, shape, and appearance.

B. Expansion joints and contraction joints shall be provided in all curbs and curbs and gutters, and shall be constructed at right angles to the line of curbs, as specified hereinafter and as shown. Provide dowels with metal sleeves in expansion joints as required.

1. Contraction joints shall be formed in the fresh concrete immediately after removal of the forms and as a part of the finishing operation. Form contraction joints by cutting a groove 1-1/4 inches in depth in the top and face of the curb using an approved cutting tool having a blade 1/8 inch wide and jointer having a radius of 1/8 inch.

2. Expansion joints shall be formed by means of the specified type preformed filler material, cut and shaped to the cross-section of the curb. Expansion joints shall be provided in curbs at the ends of all returns and directly opposite the expansion joints of abutting concrete pavement, and unless otherwise shown shall be of the same thickness as the joints in the pavement. Three-fourth inch (3/4 inch) thick expansion joints shall be placed at intervals not exceeding 60 feet except as otherwise shown.

3.04 PLACING CONCRETE DURING HOT AND COLD WEATHER

A. Concrete placed in cold weather shall conform with ACI 306.1 and 306 R. Do not place concrete if the air temperature has fallen below or is expected to fall below 20°F within 12 hours of concrete placement without Engineer's approval. When air temperature has fallen below or is expected to fall below 40°F within 12 hours of concrete placement, uniformly heat all water and aggregates before mixing to obtain a concrete mix temperature of not less than 50°F and not more than 75°F at point of placement. Provide adequate means to maintain the temperature in the area where concrete is being placed between 50°F and 70°F for

at least seven days after placement. Protect concrete from rapid dry-out during heating and avoid thermal shock due to sudden cooling or heating. No frozen materials or materials containing snow or ice shall be used in the mix. No dependence shall be placed on salt or other chemicals for the prevention of freezing. No concrete shall be placed on frozen subgrade.

B. Concrete placed in hot weather shall conform with ACI 305 R. During hot weather, suitable precautions shall be taken to avoid drying of the concrete prior to finishing. Windbreaks, sunshades, covering, fog sprays, etc. shall be used as required, or directed by the Engineer. Do not place concrete if the air temperature is above or is expected to rise above 95°F within 12 hours of concrete placement. When air temperature is above or is expected to rise above 85°F within 12 hours of concrete placement, maintain concrete temperatures at time of placement below 80°F. Do not place concrete any time if concrete temperature at time of placement is above 85°F.

3.05 CURING

A. The surface of the newly placed concrete shall be wetted by fog spray if it becomes dry before the curing material is placed. The water shall be applied as a fine fog spray so that it will not mar or injure the surface. The top and edges of the concrete shall not be unprotected for a period of more than 1/2 hour at the time the forms are removed.

B. Curing shall be maintained for at least 7 days and may be accomplished by keeping the concrete moist and covering with wetted burlap, impermeable paper, or polyethylene sheeting, or by placing a liquid membrane curing compound.

3.06 INSPECTION AND TESTS

A. Testing laboratory shall make the following inspections and tests:

1. Test materials for compliance, or review available test reports.

2. Verify Contractor's mix designs.

3. Perform tests on placed concrete in accordance with ACI 301 and following:

a. Secure composite samples in accordance with ASTM C172 at point of placement unless approved in writing by the Engineer.

b. Perform compression strength tests in accordance with ASTM C39 for each 25 cubic yards of concrete, or fraction thereof on specimens taken immediately before placing. Make a minimum of one strength test for concrete placed in one day. A set of

specimens for a test shall consist of three standard 6 x 12 cylinders, made and cured in accordance with ASTM C 31. Test one cylinder at 7 days and two cylinders at 28 days. The set of cylinders shall be picked up within 24 hours after casting and shall be delivered to testing laboratory for further curing and for testing.

c. The strength level of the concrete will be considered satisfactory so long as the averages of all sets of three consecutive strength test results equal or exceed the specified 28-day compressive strength, and no individual strength test result falls below the specified 28-day compressive strength by more than 500 psi. Any concrete of unsatisfactory strength will be rejected and shall be removed and replaced with acceptable concrete. Such rejection shall prevail unless: (1) the Contractor, at his expense, obtains and submits evidence acceptable to the Engineer that the strength and quality of the rejected concrete is acceptable. If such evidence consists of cores taken from the work, the cores shall be obtained and tested in accordance with the standard methods of ASTM C42, or (2) the Engineer determines that said concrete is located where it will not create an intolerable detrimental effect and the Contractor agrees to a reduced payment to compensate the Owner for loss of durability and other benefits.

d. Whenever the average of three consecutive tests, which were made to determine acceptability of concrete, falls to less than 150 psi above the specified strength or any single test falls more than 200 psi below the specified strength, the Contractor shall at his expense, make corrective changes in concrete manufacturing procedures before placing additional concrete of that class. Such changes must be approved by the Engineer prior to use.

e. Three additional concrete cylinders shall be made during a placement which requires temporary heating. These cylinders shall be left in the enclosure in same environment as concrete placed. One cylinder shall be tested at 3 days, one at 7 days and the third at 28 days to verify adequacy of temporary heating system.

f. Perform slump tests in accordance with ASTM C 143. Furnish slump cone at the site. Perform a minimum of one slump test for every third load (minimum) at point of placement. Include results with concrete test results.

g. Test of air content in accordance with ASTM C 173 or ASTM C 231. Furnish and maintain equipment for testing air content at the site. Perform a minimum of one air content test for every third

load (minimum) at point of placement. Include results with concrete test results.

h. Test concrete temperature for every third load (minimum) at point of placement. Include results with concrete test reports. Test concrete temperature for every load if air temperature is below 40°F or above 85°F.

B. If, in the opinion of the Engineer, foregoing tests indicate concrete strengths below those required, or visual defects indicate concrete of poor quality has been placed, additional tests shall be made and reported as directed by the Engineer at the expense of the Contractor.

3.07 BACKFILLING

A. After the concrete has been cured, the spaces along the edges of the walks and curbs shall be backfilled to the required elevation with material approved by the Engineer. The material shall then be compacted until firm, and the surface neatly graded, with allowance made for topsoil

END OF SECTION

SECTION 02605

PIPE, JOINTS, FITTINGS AND APPURTENANCES

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all equipment, materials, labor and services required to provide all piping, joints, fittings and appurtenances specified and indicated.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 – Summary of Work
2. Section 02207 – Earthwork
3. Section 02209 – Utility Backfill and Restoration
4. Section 02505 – Asphalt Paving
5. Section 02528 – Concrete Curbs and Curb and Gutter

1.03 QUALITY ASSURANCE

A. All materials and appurtenances required for the work shall be new, of first class quality and shall be furnished, delivered, erected, connected and finished in every detail as specified or indicated. All materials found defective, regardless of the circumstances, shall be replaced with new material at the expense of the Contractor.

B. Comply with all codes, laws, ordinances and regulations of governmental authorities including, but not limited to, local municipalities and sanitary districts having jurisdiction over this part of the work.

1.04 REFERENCES

A. The materials specified for the construction shall comply with the latest revisions of the applicable American Society for Testing Materials (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI) and the Virginia Department of Transportation (VDOT) standards, and the Standard Details herein.

B. Virginia Department of Transportation (VDOT)-Road and Bridge Specifications and Standard Details; latest revisions.

C. American Society for Testing Materials (ASTM); latest revision:

1.	A48	Standard Specification for Gray Iron Castings
2.	B43	Seamless Red Brass Pipe, Standard Sizes
3.	B62	Composition Bronze or Ounce Metal Castings
4.	B687	Brass, Copper, and Chromium Plated Pipe Nipples
5.	C14	Standard Specification for Concrete Sewer, Storm Drain and Culvert Pipe
6.	C55	Standard Specification for Concrete Building Brick
7.	C76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
8.	C150	Standard Specification for Portland Cement
9.	C443	Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
10.	C789	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers
11.	C850	Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers with less than 2 feet of cover subjected to Highway loads
12.	D1785	Specification for Polyvinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80 and 120
13.	D2241	Specification for Polyvinyl Chloride (PVC) Pressure Rated Pipe (SDR-Series)
14.	D3034	Specification for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings
15.	F794	Specification for Polyvinyl Chloride (PVC) Large Diameter Ribbed Gravity Sewer Pipe and Fittings based on controlled inside diameter
16.	F894	Specification for Polyethylene (PE) large diameter profile wall sewer and drain pipe
17.	D3350	Standard Specification for Polyethylene Plastics Pipe and Fittings Materials

D. American Concrete Institute (ACI); latest revision:

1. 318 Building Code Requirements for Reinforced Concrete

1.05 SUBMITTALS

A. Shop drawings, catalog data sheets, diagrams, design calculations, and other such data necessary to describe completely and to substantiate compliance with the drawings and specifications shall be submitted for all materials, joints and accessories specified in this section, in accordance with the procedure set forth in the Section 01340.

1. Precast Concrete Box Culverts

a. Designs which are modified from the standards of ASTM C789 or C850 may be acceptable if complete shop drawings and design calculations stamped by a Professional Engineer registered in the Commonwealth of Virginia for any modifications to the box culvert are submitted to the Engineer for review.

b. Submit fabrication and placing drawings of reinforcing steel and bar supports. Show all dimensions necessary for fabrication and placing of the reinforcing steel and accessories including clear distances, and embedment and lap lengths.

c. Submit complete concrete mix design. Indicate the specific mix design proposed, including quantity and types of admixtures, cement, coarse and fine aggregate, documentation of determination of required average compressive strength and documentation of average strength consisting of strength test records from field tests or results from suitable trial mixture.

d. Report of compression tests shall be submitted in accordance with Section 10 of ASTM C789 and C850. Air content, slump and air temperature shall be reported for each strength test. Testing services shall be performed by on independent testing agency and paid for by the Contractor.

2. Resubmissions

a. Indicate all revisions made from the previous submittals.

PART 2 PRODUCTS

2.01 PIPE SELECTIONS

1. The Contractor shall install only one (1) type of pipe between structures except where ductile iron pipe is specified or indicated. Where existing pipe is to be replaced or extended the same type of pipe shall be installed, unless specified or indicated otherwise. All piping shall be installed in strict accordance with the recommendations of the manufacturer.

2. Gravity sanitary sewers with an inside diameter greater than eighteen (18) inches shall be either reinforced concrete pipe (O-ring joints), smooth inside and outside wall PVC sewer pipe, or ductile iron pipe, at the Contractor's option, unless specified or indicated otherwise. Carrier pipes in casing pipes shall be ductile iron pipe.

3. Gravity sanitary sewers with an inside diameter less than or equal to eighteen (18) inches shall be either reinforced concrete, smooth inside and outside wall polyvinyl chloride or ductile iron pipe, at the Contractor's option, unless specified or indicated otherwise. Carrier pipes in casing pipes shall be ductile iron pipe.

4. Sanitary sewer laterals shall be either Schedule 40 polyvinyl chloride, the same material as the gravity sanitary sewer, or ductile iron pipe, at the Contractor's option, unless specified or indicated otherwise.

5. Storm drainage pipe, driveway culverts, and culverts shall be reinforced concrete pipe, PVC storm drain pipe or HDPE pipe, as indicated. Roof drains and downspout drainlines shall be schedule 40 PVC pipe. Culverts, where indicated, shall be aluminum box culverts or aluminum structural plate pipe arch.

6. Water pipe shall be ductile cast iron, or AWWA polyvinyl chloride (AWWA PVC). PVC pipe shall have metallic locator tape placed one (1) foot below final grade, above the pipe. Carrier pipes in casing pipes shall be ductile iron pipe.

7. Water service pipes shall be polyethylene tubing or copper tubing.

8. Sewage force mains shall be ASTM PVC pressure pipe, or ductile iron pipe, as indicated. PVC pipe shall have metallic locator tape one (1) foot below final grade, above the pipe. Carrier pipes in casing pipes shall be ductile iron pipe.

9. Concrete box culverts shall be precast concrete (Salem Precast standard) or cast-in-place.

10. Pipe through detention basin embankments shall be reinforced concrete pipe with o-ring joints, and anti-seepage collars.

2.02 TYPES OF PIPE

A. Reinforced concrete pipe and fittings shall be Class III, wall thickness B, as a minimum, unless specified or indicated otherwise, and shall conform with ASTM C76 and VDOT Section 232. Elliptical pipe shall conform to ASTM C507 and shall be Class HE-III.

B. Precast concrete box culvert shall conform to ASTM C 789 Table (1), (2), (3) or ASTM C 850 Table (1) or (2). Cast-in-place culverts shall conform to AASHTO HS-20 loading and Industry Standards. Concrete for precast concrete box culverts shall have a minimum 28 day compression strength at 4000 psi and shall be air entrained. The maximum water cementitious materials ratio shall be 0.45.

1. Reinforcing steel for reinforced concrete box culverts shall meet requirements of ASTM A 615 grade 60 with supplementary requirement S1 and shall be deformed. Welded wire fabric shall meet requirements of ASTM A185.

2. Calcium chloride shall not be used in concrete. Chloride ions in admixtures shall not exceed 0.1 percent by weight of cement content.

C. Larger diameter PVC pipe and fittings shall conform to ASTM F-679 or ASTM F-794, and shall be made of PVC plastic. The pipe stiffness shall meet or exceed 46 psi when tested in accordance with ASTM D2412. Pipe shall be Carlon PVC pipe, Certainteed, or equal.

D. High-Density Polyethylene Pipe

1. Pipe and fitting materials shall be high-density polyethylene meeting ASTM D3350 Cell Classification 324420C for 4"-10" (100-250mm) or 335420C for 12"-60" (300-1500mm) diameters.

2. 4"-10" (100-250mm) diameters shall meet AASHTO to M252 Type S. 12"-48" (300-1200mm) diameters shall meet AASHTO M294-97 Type S. 54" and 60" (1350 and 1500mm) shall meet AASHTO MP7-97.

3. Pipe shall be joined with a bell-and-spigot joint. On diameters 4"-10" (100-250mm), bells shall be a push-on sleeve. The bell shall be integrally formed on diameters 12"-30" (300-750mm). On diameters 36"-60" (900-1500mm), bells will be provided with push-on sleeve coupler or bell-and-spigot joint. 4"-8" (100-200mm) diameter bell-and-spigot pipe joints shall meet the soil tightness requirements of AASHTO Standard Specification for Highway Bridges, Section 26, paragraph 26.4.2.4 (e). 10"-60" (250-1500mm) diameter push-on sleeve coupler or bell-and-spigot joint shall use a gasket to form a

silt-tight connection. The gasket material shall meet all testing requirements of ASTM D1056 Grade 2A2. Gaskets shall be installed in the bell by the pipe manufacturer.

E. Polyvinyl chloride (PVC) pipe and fittings shall be SDR 35 and shall conform with ASTM D 3034 for pipe sizes 4”-15” and ASTM-679 for pipe sizes 18”-48”. Schedule 40 PVC pipe for service laterals shall conform to ASTM D1785.

2.03 JOINTS AND COUPLINGS

A. General: The Contractor shall include in his bid a sum sufficient to cover the cost of the field services of experienced and qualified representatives of the manufacturer whose products are approved for the work. Such representative shall be available to instruct the Contractor's personnel in the proper jointing procedure to be used to secure the best possible joints with the materials selected.

B. Reinforced concrete pipe and fittings and elliptical concrete pipe and fittings shall have bell spigot type joints and shall be made with “O” ring type watertight compression rubber gasket and shall conform with ASTM C443. The gaskets shall be installed and the joints made in strict accordance with the recommendations of the pipe manufacturer. As an alternate to “O-ring” joints, concrete pipe joints for storm drains (except in detention basin embankments) shall be made with flexible butyl sealants or gaskets at the Contractor's option. Flexible butyl sealants shall be manufactured by Concrete Sealants, Inc. (CS-302) or equal and flexible butyl gaskets shall be Concrete Products Supply Company (E-Z STIK) or equal. The gaskets or sealants shall be installed and the joint made in accordance with the recommendations of the manufacturer. Lift holes shall be filled with mortar.

C. Joints for precast concrete box culverts shall be tight fitting and shall be made with flexible butyl gasket as manufactured by Concrete Sealants, Inc., Concrete Products Supply, Inc., or equal. Open space in the joint on the top shall be filled with mortar. Lift holes shall be filled with mortar.

D. Joints for ribbed HDPE pipe shall have an integral bell and spigot gasketed joint such that when assembled, the gasket will be compressed radially in the pipe bell to form a watertight seal. Gasket shall conform to ASTM F-477.

E. PVC pipe and fittings shall be bell and spigot type joints. The bell and spigot joint shall be sealed with elastomeric gaskets conforming to ASTM D3212. The joints shall be made in strict accordance with the recommendation of the pipe manufacturer.

F. Joints for all gravity PVC pipe and polyethylene shall be push-on type bell and spigot, sealed with elastomeric gaskets, conforming to ASTM D3212.

G. Ductile iron pipe and fittings for buried service shall be either mechanical or bell and spigot type joints as specified or indicated. Joints shall be made with a single

watertight rubber gasket manufactured in accordance with AWWA C111/ANSI 21.11. The joints shall be made in strict accordance with the recommendations of the pipe manufacturer. Joints for above ground or in-vault service shall be flanged joints in accordance with AWWA C115.

H. Joints for PVC water pipe shall be elastomeric gaskets conforming to AWWA C900. All fittings and valves shall be mechanical joint. When assembling the PVC pipe to the fittings, the rubber gasket supplied with the fitting shall be used. The rubber ring provided with the PVC pipe shall not be used. When connecting to the mechanical joints, the beveled spigot of the PVC pipe is not required. The beveled end of the pipe shall be cut off prior to insertion into the mechanical joint fitting.

I. Joints for polyethylene tubing shall be couplings manufactured by Ford Meter Box Company, Mueller, McDonald or equal.

J. Joints for copper tubing shall be couplings manufactured by Ford Meter Box Company, Mueller, McDonald or equal.

K. Joints for ASTM PVC pressure-rated pipe shall be solvent cement with couplings.

L. Joints for schedule 40 PVC shall be couplings with solvent cement. Fittings shall conform to ASTM D2466, schedule 40.

M. Couplings shall be PVC, and shall attach to each pipe with a stainless steel band. All couplings shall be marked to show part number, size of each pipe connection, and pipe materials. Couplings shall be Fernco Flexible Couplings or equal.

N. Brass fittings shall be stamped or embossed with the manufacturer's name. All brass fittings surfaces in contact with potable water shall comply with ANSI/NSF Standard 61.

PART 3 **EXECUTION** - Not Used

END OF SECTION

SECTION 02735

STORM DRAIN INSTALLATION

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include the providing of all proper materials, equipment, tools, accessories, labor and services required to install the storm drainage system, including roof drains, complete-in-place, using sound standard engineering techniques and construction practices.

1.02 RELATED WORK

A. Specified elsewhere:

1.	Section 01010	-	Summary of Work
2.	Section 02207	-	Earthwork
3.	Section 02208	-	Utility Excavation, Stabilization, Bedding, **[Highway, Railroad, and Stream]** Crossing
4.	Section 02209	-	Utility Backfilling and Restoration
5.	Section 02505	-	Asphalt Paving
6.	Section 02605	-	Pipe, Joints, Fittings and Appurtenances
7.	Section 02607	-	Precast Concrete
8.	Section 02980	-	Inspections and Tests

1.03 QUALITY ASSURANCE

A. Any equipment, tool or accessory found to be defective or not in a fit condition to accomplish the work continuously and expeditiously shall be promptly replaced with satisfactory equipment.

B. Include the expense of procuring the field services of experienced and qualified manufacturer representatives for the approved materials. The representative shall instruct the Contractor's employees as to the proper installation procedure for the particular material.

C. Comply with all codes, laws, ordinances and regulations of governmental authorities including, but not limited to, local municipalities and sanitary districts having jurisdiction over this part of the work.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 LAYING PIPE AND PLACING STRUCTURES

A. The installation of the storm drain system shall begin at the downstream outfall or structure and proceed upstream. The downstream sections shall be completed, prior to allowing upstream storm drainage to enter the system.

B. Make provisions at all times to allow natural drainage to flow through the work area with minimum damage to the new construction and/or the existing downstream storm drain system.

C. Do not allow drainage to back up or be diverted onto private property. If it does, pay for all damages which may result by failing to maintain the drainage flow.

D. Do not lay pipe or place structures until all water has been removed from the trench, or when in the opinion of the Engineer, the trench or the weather conditions are unsuitable for work.

E. Install only one (1) type of pipe between the structures and/or the outfall section, unless specified or indicated otherwise. Where existing pipe is to be replaced or extended the same type of pipe shall be installed, unless specified or indicated otherwise.

F. Pipe that may require field cutting shall be done so in a neat and workmanlike manner, so as to leave a smooth end at right angles to the axis of the pipe. Care shall be taken to avoid damaging the pipe and any coatings or linings. Ductile iron pipe shall not be cut with an oxyacetylene torch.

G. The materials shall be visually inspected by the Engineer for defects before lowering the pipe or placing the structures into the trench. During the laying operation no tools, clothing or other material shall be placed in the pipe or structures. The interior of the pipe shall be clear of all soil, debris and superfluous materials prior to and during the installation.

H. Exercise every precaution to prevent foreign material from entering the pipe while it is being placed in the trench. Failure by the Contractor to take such precautions may result in the Engineer requiring a heavy, tightly woven canvas bag of suitable size be placed over each end of the pipe and moved only when the joint can be made properly.

I. The pipe and structures shall be lowered carefully into the trench by suitable means and handled with care at all times to avoid damage. Under no circumstances shall the materials be dropped or dumped into the trenches.

J. The pipe shall be installed in accordance with the pipe manufacturer's recommendations and as directed by the Engineer. The pipe shall be laid in true

straight lines with the bell ends upstream and with the invert of the pipe being the true elevation and grade of the system. The sections of the pipe shall be laid and fitted together so that, when complete, the gravity line will have a smooth and uniform invert between manholes. The trench shall be excavated to fit the bell ends so that the body or barrel of the pipe rests on the bottom of the trench for its full length. PVC and HDPE shall be installed with care and shall have backfill carefully compacted to avoid pockets of non-support of pipe walls. Excessive deflections and opening of joints in the pipe will not be accepted. Such deflected lengths of pipe and joints shall be replaced, whether it occurs during placing of backfill or during the "Inspection and Testing" period.

K. Establish and maintain the horizontal alignment and vertical elevation and grade of the system in accordance with the survey information indicated on the plans.

L. The horizontal alignment of the pipe shall be maintained by a transit or theodolite plumbed over the center of the downstream manhole. The vertical elevation and grade shall be maintained by an adjustable laser level mounted at the invert of the downstream manhole with target(s) placed in the bell end of the pipe being laid.

M. When work is not in progress, securely close the open ends of the pipe to prevent trench water or other substances from entering the pipe. Exception may be granted by the Engineer when the storm drain follows the natural course.

3.02 JOINTING

A. The storm drain system shall be laid and joined complete-in-place in order that each length and section of pipe and/or box culvert, between the structures and/or outfall section have a smooth and uniform invert.

B. The previous joint shall have been completed and the entire length of pipe shall be well bedded and firmly backfilled before jointing another length of pipe. Bell holes shall be dug of sufficient size to insure proper jointing, and so pipe is supported along its entire length. For box culverts under sidewalk and pavement, the top joint opening shall be mortared. Lift holes of pipe and culvert shall be filled with mortar.

C. Do not use excavation equipment to push the pipe into the home position, unless approved by the Engineer, and then only for one length of pipe at a time.

D. Use standard adapter fittings for making joints of pipes of different material unless indicated specifically otherwise.

E. Joint the pipe as recommended by the manufacturer to obtain the degree of watertightness required. The use of lubricants, primers, adhesives and similar materials shall be as recommended by the manufacturers. Excessively open joints on box culverts and pipes 42" and larger shall be filled with mortar.

3.03 CONNECTION TO EXISTING SYSTEMS

A. The new pipe connection to be made to an existing structure, where no stub or opening exists, shall be made through an opening of minimum diameter cut into the structure wall at the required location and elevation.

B. The existing invert channels and benches shall be reworked as required to form a new flow channel from the new connection to the existing flow channel.

C. The new pipe connected to an existing structure shall be secured in position and the remaining opening shall be filled with brick and sealed with mortar. The outer surface of the connection shall be covered with concrete a minimum of 8 inches thick, covering the joint area completely and thoroughly.

3.04 CLEANING EXISTING STRUCTURES AND PIPES

A. Existing drainage structures and pipes, within the construction limits, to remain shall be cleared and cleaned of debris and sediment in order to facilitate proper drainage.

B. The expense for the clearing and cleaning shall be incidental to the work and included in the price of new pipe or structures installed complete-in-place.

3.05 CONNECTIONS TO PIPES WITHOUT MANHOLES

A. Where pipes from inlets are indicated to be connected to the main lines, the pipe from the inlet shall enter the larger pipe as a factory made connection with its invert above the point of 1/3 of the height of the large pipe, and shall not protrude into the large pipe. The area around the junction shall be packed with grout with the inside being "formed" to result in a smooth surface. The transition area shall be coated inside and out with Koppers 300M or equal. As an alternate, factory fabricated tees made of class III concrete (minimum) pipe or ASTM rated PVC or HDPE material and shapes are acceptable.

3.06 REMOVAL OF EXISTING CATCH BASINS AND INLETS

A. Catch basins and inlets indicated to be removed shall be completely removed, and the grate covers salvages and turned over to the Owner at a location in the project site designated by the Engineer. Other debris from the removal shall be disposed of by the Contractor off the site. The open ends of pipes entering or leaving these catch basins shall be plugged with concrete. The holes resulting from the removal of catch basins shall be backfilled with aggregate base material, or compacted suitable material, with allowance for topsoil where required.

3.07 SANITARY SEWERS CROSSING THE STORM DRAIN TRENCHES

A. Sanitary sewers that cross the storm drain trenches shall be replaced with a single piece of ductile iron pipe of sufficient length so that the ductile iron pipe extends eighteen (18) inches into each trench wall, so the pipe rests on natural ground. Lengths shown on drawing are approximate, and do not supersede this requirement. Also, the pipe shall extend to a point, at least 18 inches from the trench wall, where the existing pipe is sound. The new ductile iron pipe shall be joined to the existing pipe with a rubber or neoprene coupling, with two stainless steel tightening bands, that is manufactured for this purpose and is suitable for the various types and sizes of pipe encountered at each location.

END OF SECTION

SECTION 02931

TOPSOILING AND SEEDING

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all equipment, materials, labor and services required to establish a permanent vegetative cover over all areas disturbed or altered by construction.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 02207 - Earthwork
3. Section 02209 - Utility Backfilling and Restoration

1.03 GENERAL

A. Materials shall be delivered in unbroken containers, clearly marked by the manufacturer as to contents. Limes, Fertilizer and Seed shall be labeled as to proportions, analysis and quality. Store all materials in a manner affording protection from damage by weather or vandalism.

B. Follow the specifications set forth in strict fashion except as directed by the Engineer. Should a soil test or other competent test data indicate such a change is necessary, the Engineer will direct the Contractor accordingly.

1.04 REFERENCES

A. The materials and method of construction for protective covering and erosion control shall be in accordance with the latest revisions of the Virginia Department of Transportation (VDOT) Standards, and Road and Bridge Specifications.

1.05 JOB CONDITIONS

A. Topsoil shall be stockpiled, on the project site, for reuse on all disturbed areas in the grading and landscape work, and in lawns. Additional topsoil required for the project shall be provided by the Contractor, as part of the lump sum price (as described in Section 01900).

B. Utility trenches shall be seeded so that no more than 500 lineal feet remain unseeded at any one time.

C. Seeding shall only be performed between March 1 and April 15 or between August 20 and September 30. At other times, sodding or seeding with rye for temporary cover shall be made until the desired spring or later summer seeding time.

D. Seeding shall not be performed on frozen or muddy grounds or when prevailing winds exceed five (5) miles per hour.

1.06 SUBMITTALS

A. Submittals on all materials used shall be provided no less than 30 days before the seeding operations are to begin. If soil tests are required these test results shall be provided no less than 60 days before the seeding is to begin.

B. Submittals on seed and fertilizer shall include a test report from the Virginia Department of Agriculture and Consumer Services (VDACS) or a comparable testing lab. The test report shall bear the specific lot number of the product as well as the date sampled, the purity, the germination, the percent weed seed, the analysis, date tested as well as other pertinent data about the product.

PART 2 PRODUCTS

2.01 LIME

A. A soil test shall be made of the area using the guidelines included in these specifications unless one is readily available and shall be made available to the Engineer. The test shall provide among other information the relative pH of the soil and the amount of lime needed in tons per acre or pounds per one thousand square feet to be applied to correct the pH to a satisfactory level of between 6.0 and 7.0.

B. Lime shall be ground or pulverized agricultural grade limestone containing not less than 85 percent total carbonates and shall be ground to such a fineness that at least 50% will pass a 100 mesh sieve and at least 90% will pass a 20 mesh sieve.

C. Lime shall be applied at the rate in the following table, except where the soil test shall indicate that other amounts are necessary.

LBS. OF GROUND AGRICULTURAL LIMESTONE* PER THOUSAND SQUARE FEET NEEDED TO CORRECT pH LEVEL OF ACID SOILS TO 6.5			
	Soil Texture		
Existing pH	**Sandy Loam**	**Loam**	**Clay Loam**
6.2	20	35	40
6.0	40	55	70
5.8	55	65	85
5.6	70	80	105
5.4	90	100	125
5.2	105	120	140
5.0	120	140	160
4.8	125	180	205
4.6	155	210	230
4.0	200	250	300

* Lime should always be applied in accordance with the results of a soil test, such as may be obtained through the soil testing laboratory at VPI & SU or through a reputable commercial laboratory.

Source: DSWC's Basic Urban E&S in Virginia

D. Lime may be applied with the use of a bulk spreader, drop type spreader, Hydroseeder or any other equipment approved for application by the Engineer. The application shall result in an even spreading of the lime over the entire area to be seeded.

E. In areas 3:1 or flatter the lime shall be applied after the disking operation and before raking the soil. Lime shall be applied before any application of fertilizer except when the seeding equipment used is a hydroseeder. On slopes 3:1 or steeper or where a hydroseeder is used in the seeding operation the application of lime can be made in conduction with the fertilizer seed and mulch in the slurry mix in the hydroseeder.

2.02 FERTILIZER

A. The fertilizer shall be an agricultural grade 10-20-10 or any equivalent 1-2-1 ratio fertilizer. Fertilizer shall be commercial/agricultural grade, free flowing, uniform in composition and shall conform to State and Federal regulations. Fertilizer shall bear the manufacturer's guaranteed statement of analysis. An affidavit from the shipper will be submitted to the Engineer stating the guaranteed analysis of the product.

B. The rate of application for mixed grasses and legumes shall be the equivalent of 1200 pounds of 10-20-10 per acre except where otherwise directed; for legume stands only 1000 pounds of 5-20-10 per acre; and for grass stands only, 1000 pounds of 10-20-10 per acre. These shall be modified if needed as a result of the soil test.

C. Fertilizer may be applied with the use of a bulk spreader, cyclone spreader, Hydroseeder or other equipment approved for application by the Engineer. The application shall result in an even spreading of the fertilizer over the entire area to be seeded.

D. Take care as to not spill amounts of the fertilizer in the areas to be seeded during the loading and spreading of fertilizer.

2.03 SEED

A. Seed shall be the type and variety stated and shall conform to all State and Federal seed laws. Seed used shall be delivered in the manufacturer's original container except where a blend is desired and supplied by a competent recognized blending source.

B. Seed to be used will be that shown in TABLE #2 or as shown on the plans.

C. Prior to seeding, scarify the topsoil surface with a rake to a minimum depth of 1/4 inch. The application of seed shall be by broadcast, cyclone type, drill type, hydroseeder, or other equipment approved for application by the Engineer. The application of the seed over the area shall be even and at the rates specified in TABLE #2 or as indicated on the plans.

D. The Contractor shall take great care to insure that the seed is not sown into areas that are to receive landscaping or other treatment such as asphalt and/or concrete

pavement. This includes bed areas, landscaped berms, parking and drive areas as well as sidewalks, etc.

E. All seed shall be accompanied by an affidavit bearing the lot numbers test dates and shall have been tested within nine months of shipment. The affidavit shall include the purity, germination, percent weed seed and percent hard seed where applicable and shall be submitted to the Engineer.

F. Where a blend is supplied, the blend shall be completed by persons and equipment regularly engaged in such activities. The blend shall also have all test reports and affidavits as stated above for all components of the mix. The bags of seed shall bear a tag indicating the blended components as a percentage of the total by weight as well as the date of the blend.

G. Inoculant - the inoculant added to legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared for the species. Inoculants shall not be used later than the date indicated on the container. Twice the suppliers recommended rate of inoculant shall be used on dry seedings and five times the recommended rate on hydroseedings.

H. The seeded area shall remain undisturbed until the application of mulch immediately following the application of the seed.

I. Required tolerances for purity and germination are included in TABLE #4.

2.04 MULCH

A. Mulch shall be straw or grain mulch as described, or wood cellulose fiber.

B. Straw mulch shall be from oats wheat and or barley and shall be free of noxious weeds and noxious weed seeds. The straw will not contain sticks rocks or other objectionable material and will not be wet, moldy or otherwise undesirable.

TABLE 1
SITE SPECIFIC SEEDING MIXTURES
FOR APPALACHIAN/MOUNTAIN AREA

	Total Lbs. Per Acre
Minimum Care Lawn	
- Commercial or Residential	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	90-100%
- Improved Perennial Ryegrass*	0-10%
- Kentucky Bluegrass	0-10%
High-Maintenance Lawn	
Minimum of three (3) up to five (5) varieties of bluegrass from approved list for use in Virginia.	125 lbs.
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
- Crownvetch ***	20 lbs.
	150 lbs.

* Perennial Ryegrass will germinate faster and at lower soil temperatures than fescue, thereby providing cover and erosion resistance for seedbed.

** Use seasonal nurse crop in accordance with seeding dates as stated below:

March, April through May 15th	Annual Rye
May 16 through August 15th	Foxtail Millet
August 16th through September, October	Annual Rye
November through February	Winter Rye

*** If Flatpea is used, increase to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may also be included in any slope or low-maintenance mixture during warmer seeding periods; add 10-20 lbs/acre in mixes.

TABLE 2
SITE SPECIFIC SEEDING MIXTURES
FOR PIEDMONT AREA

	Total Lbs. Per Acre
Minimum Care Lawn	
- Commercial or Residential	175-200 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	95-100%
- Improved Perennial Ryegrass	0-5%
- Kentucky Bluegrass	0-5%
High-Maintenance Lawn	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	100%
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
- Crownvetch **	20 lbs.
	150 lbs.

* Use seasonal nurse crop in accordance with seeding dates as stated below:

February 16th through April	Annual Rye
May 1st through August 15th	Foxtail Millet
August 16th through October	Annual Rye
November through February 15th	Winter Rye

** Substitute Sericea lespedeza for Crownvetch east of Farmville, VA. (May through September use hulled Sericea, all other periods, use unhulled Sericea). If Flatpea is used in lieu of Crownvetch, increase rate to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in mixes.

TABLE 3
SITE SPECIFIC SEEDING MIXTURES
FOR COASTAL PLAIN AREA

	Total Lbs. Per Acre
Minimum Care Lawn	
- Commercial or Residential	175-200lbs.
- Kentucky 31 or Turf-Type Tall Fescue	
or	
- Common Bermuda grass	75 lbs.
High-Maintenance Lawn	
- Kentucky 31 or Turf-Type Tall Fescue	200-250 lbs.
or	
- Hybrid Bermuda grass (seed) **	40 lbs. (unhulled)
or	30 lbs. (hulled)
- Hybrid Bermuda grass (by other vegetative establishment method, see Std. & Spec. 3.34)	
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
	150 lbs.
Low Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	93-108 lbs.
- Common Bermuda grass **	0-15 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
- Sericea Lespedeza **	20 lbs.
	150 lbs.

* Use seasonal nurse crop in accordance with seeding dates as stated below:

February, March through April . . . . . Annual Rye
May 1st through August . . . . . Foxtail Millet
September, October through November 15th . . . . . Annual Rye
November 16th through January . . . . . Winter Rye

** May through October, use hulled seed. All other seeding periods, use unhulled seed. Weeping Lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in mixes.

TABLE 4
QUALITY OF SEED*

	Minimum Seed Purity (%)	Minimum Germination (%)
Legumes		
Crownvetch	98	65**
Lespedeza, Korean	97	85**
Lespedeza, Sericea	98	85**
Grasses		
Bluegrass, Kentucky	97	85
Fescue, Tall (Improved, Turf-Type Cultivars)	98	85
Fescue, Tall (KY-31)	97	85
Fescue, Red	98	85
Redtop	94	80
Reed Canary grass	98	80
Perennial Ryegrass	98	90
Weeping Lovegrass	98	87
Annuals		
Annual Ryegrass	97	90
German Millet	98	85
Oats	98	80
Cereal Rye	98	85

* Seed containing prohibited or restricted noxious weeds should not be accepted. Seed should not contain in excess of 0.5% weed seed. To calculate percent pure, live seed, multiply germination times purity and divide by 100.

Example: KY-31 Tall Fescue with a germination of 85 percent and a purity of 97 percent.

97 x 85 = 8245. 8245) 100 = 82.45 percent pure live seed.

** Includes "hard seed"

C. Wood cellulose fiber used for hydraulic mulching shall consist of specially manufactured commercially available products containing wood cellulose fiber, recycled newsprint fibers or a combination of these materials.

D. The wood cellulose fiber or newsprint fiber will contain no growth or germination inhibiting factors and shall contain a dye for color. The dye shall allow the operator to meter the amount of mulch being applied to the area to insure proper coverage.

E. Straw mulch shall be applied at the rate of 2000 pounds per acre. Wood cellulose fiber mulch shall be applied at the rate of 1500 pounds dry weight per acre.

F. The application of straw mulch will be through a blower or other approved equipment capable of shredding the material from the bale and distributing it evenly over the seeded areas. The application of mulch will take place no more than 48 hours after the seeding operation of the area. Mulch shall cover 60 to 75 percent of the area.

G. The application of wood cellulose fiber mulch shall be in a slurry mix through a hydroseeder. The slurry mixture shall be constantly agitated from the initial mixing point until the material is discharged onto the ground. The material shall then be applied over the seeded area in a manner not disruptive to the placement of seed, and shall cover 85 to 90 percent of the area.

H. Take all necessary precautions to prevent the application of the wood cellulose fiber mulch, straw or binders onto landscaped areas, fixtures, fences and signs in the area to be mulched.

2.05 MULCH TACKIFIER

A. Straw mulch shall be tacked to the seeded area by the use of one of the following methods; a crimping device that will punch the straw into the soil to prevent wind disturbance. The use of a chemical binder manufactured for the purpose of securing mulch may also be used when applied with a hydroseeder. The use of wood cellulose is also allowed for tacking straw mulch.

B. When a chemical binder is used, follow the manufacturer's recommendations as to the rates of material required. The Contractor may also elect the use of an application of wood cellulose fiber at the rate of 750 pounds to the acre as a tackifier in lieu of the above methods.

C. The tacking or securing of the straw mulch shall be completed immediately after the mulching is complete.

2.06 PROTECTIVE COVERING AND SOIL STABILIZATION MAT

A. Protective covering shall consist of soil retention mat or jute mesh and shall be in accordance with VDOT Standard EC-2. Soil stabilization mat shall be in accordance with VDOT Standard EC-3, Type A or Type B, as indicated, in accordance with VDOT's approved product list. Protective covering and soil stabilization mat shall be installed where indicated on drawings.

B. Materials for protective covering and soil stabilization mat shall fully comply with the requirements of VDOT Section 244.

C. Installation of soil retention coverings shall fully comply with the requirements of VDOT Section 606.

D. Areas requiring soil retention coverings shall be seeded with the seed mixture in TABLE #2 and fertilized with 10-20-10 fertilizer at the rate of 35 pounds per 1000 square feet prior to installation of the covering material.

PART 3 EXECUTION

3.01 SUBGRADE PREPARATION

A. All subgrade for finished lawn areas and drainage channels shall be raked to remove all debris and stones over two (2) inches in diameter. All subgrade for open field areas and shoulders shall be raked to remove all debris and stone over three (3) inches in diameter.

B. Prior to spreading topsoil, the subgrade shall be loosened to a minimum of four (4) inches by tilling, disking or harrowing.

3.02 TOPSOIL PREPARATION

A. Topsoil shall be spread over the prepared subgrade in all lawn areas to a minimum depth of four (4) inches. Bond topsoil to subgrade by tilling, disking or harrowing. Topsoil shall not be spread over the subgrade when either the topsoil or subgrade are frozen or excessively wet.

B. Where topsoil is not applied, the surface of finished grade shall also be prepared as specified for topsoil hereinafter.

C. Prior to seeding finished lawn areas and drainage channels, topsoil surface shall be raked to remove all debris and stones over two (2) inches in diameter and to smooth any surface irregularities. Prior to seeding open field areas and shoulders, topsoil shall be raked to remove all debris and stones over three (3) inches in diameter and to smooth any surface irregularities.

D. Topsoil finish grade of lawn areas and open fields shall be slightly higher than existing grade and rounded off to avoid abrupt changes in grade.

3.03 PREPARATION OF AREAS TO BE SEEDED

A. Preparation of utility installation and erosion control areas:

1. Slopes 3:1 or steeper:

   a. On slopes, use the walking or tracking method with a dozer or other tracked equipment. Vertically "walk" the slope so as to leave track marks perpendicular to the toe of the slope. Remove large rocks, stones and roots over two inches in diameter.

   b. Where this tracking of slope areas is not possible or practical, the use of a slope chain may be used to loosen the top two inches of soil for proper seedbed preparation. The chain shall be dragged across the top of the slope. The spikes on the chain shall produce puncture marks in the slope as well as serve to loosen the soil surface.

   c. Where the sloped areas are smoothly graded and are unable to be loosened satisfactorily for seedbed preparation, cutting horizontal grooves into the slope may be required with the use of grading equipment or by other means.

   d. If the slope is freshly graded and the surface is friable without disturbing, the Contractor may be allowed to seed the slope without further slope preparation.

2. Areas Flatter Than 3:1:

   a. Use a disk or harrow to loosen the top 4 inches of soil. Where this is not possible backdrag the area with the toothed bucket or dozer type equipment to loosen the soil surface.

   b. Rake the area smooth and remove roots, rocks and other debris that may interfere with the seeding operation. Debris larger than two inches in diameter should be raked from the surface with the use of a York Rock Rake, hand rake or other comparable equipment.

3. Ditchlines, Waterways, Channel Change Areas:

   a. Care should be taken to insure that a minimum of disturbance occurs in all areas that are to carry water through the site. Preparation for seeding in these areas consists of removing large stones, rocks, roots and other debris that may interfere with the germination of seed.

   b. In ditchlines that will receive EC2 treatment, the ditch shall be free of all obstructions that may prevent the EC2 from being attached securely and to the bottom and sides of the ditch.

B. Preparation of Industrial Lawn and Shoulder Areas:

1. Slopes 3:1 or Steeper:

a. On slopes, use the walking or tracking method with a dozer or other tracked equipment. Vertically 'walk' the slope so as to leave track marks perpendicular to the tow of the slope. Remove large rocks stones, and roots over two inches in diameter.

b. Where this tracking of slope areas is not possible or practical, the use of a slope chain may be used to loosen the top two inches of soil for proper seedbed preparation. The chain shall be dragged across the top of the slope. The spikes on the chain shall produce puncture marks in the slope as well as serve to loosen the soil surface.

c. Where the sloped areas are smoothly graded and are unable to be loosened satisfactorily for seedbed preparation, cutting horizontal grooves into the slope may be required with the use of grading equipment or by other means.

2. Areas Flatter Than 3:1:

a. On areas that are to receive topsoil placement disk the surface of the subsoil grade to a depth of four to five inches to insure that the topsoil bonds to the subgrade. Remove large rocks, roots and other debris that may interfere with the placement of the topsoil.

b. After the placement of the topsoil or in the absence of topsoil placement, use a disk or harrow to loosen the top four inches of soil.

c. Rake the area smooth and remove roots, rocks and other debris that may interfere with the seeding operation. Debris larger than one inch in diameter should be raked from the surface with the use of a York Rock Rake, hand rake or other comparable equipment.

d. In the final preparation of the surface, care should be taken to insure that low areas or depressions do not occur which could later cause ponding or settling out areas.

C. Preparation of Residential Lawn Areas:

1. Topsoiled Lawn Areas:

a. On areas that are to receive topsoil placement, disk the surface of the subsoil grade to a depth of four to five inches to insure that the topsoil bonds to the subgrade. Before topsoil is placed remove large

rocks, roots and other debris that may interfere with the placement of the topsoil.

b. The subgrade and the topsoil will be free of roots, rocks and construction debris such as building materials, concrete and other objectionable material.

c. Care shall be taken to insure that the subgrade as well as the finished topsoil elevations provide drainage away from the structure and all entrances to prevent the possibility of future flooding, ponding or other water damage.

d. Rake the area smooth and remove roots, rocks and other debris that may interfere with the seeding operation. Debris larger than one inch in diameter should be raked from the surface with the use of a York Rock Rake, hand rake or other comparable equipment.

e. If the lawn is to be irrigated by an underground watering system, final lawn preparation shall not occur before the irrigation system is installed. The Contractor shall work toward providing that the finish grade of the lawn is in accordance with the irrigation system manufacturer's recommendations regarding head placement in the soil.

2. Non-Topsoiled Lawn Areas:

a. Soil samples will be required on all non-topsoiled residential lawns before liming to insure the proper amount of lime is used.

b. In the absence of topsoil placement, use a disk or harrow to loosen the top four inches of soil.

c. Care shall be taken to insure that the subgrade as well as the finish elevations provide drainage away from the structure and all entrances to prevent the possibility of future flooding, ponding or other water damage.

d. Rake the area smooth and remove roots, rocks and other debris that may interfere with the seeding operation. Debris larger than one inch in diameter should be raked from the surface with the use of a York Rock Rake, hand rake or other comparable equipment.

e. If the lawn is to be irrigated by an underground watering system, final lawn preparation shall not occur before the irrigation system is installed. The Contractor shall work toward providing that the finish grade of the lawn is in accordance with the irrigation system

manufacturer's recommendations regarding head placement in the soil.

3.04 APPLICATION

A. The fertilizer, lime, seed and mulch shall be applied to the indicated and specified areas in accordance with the procedures and rates specified, and in accordance with standard practices and recommendations of the suppliers and manufacturers.

3.05 PROTECTION AND MAINTENANCE OF SEEDED AREAS

A. Protection and Maintenance of Utility Installation and Erosion Control Areas:

1. After the seeding is completed in a particular area, the area shall be protected from vehicular, and or foot traffic by erecting, barricades, signs, ropes or other such devices to prevent traffic where necessary.

2. Surfaces gullied or otherwise damaged following seeding shall be repaired and re-graded as required and re-seeded as directed by the Engineer.

3. The establishment period shall be the amount of time required to establish the desired species or its companion crop over 90% of the seeded area to a height of six (6) inches or 90 calendar days from the last seeding date.

B. Protection and Maintenance of Industrial Lawn and Shoulder Areas:

1. After the seeding is completed in a particular area, the area shall be protected from vehicular, and or foot traffic by erecting, barricades, signs, ropes or other such devices to prevent traffic where necessary.

2. The maintenance of the seeded lawn areas shall also include periodic weeding mowing and re-seeding and re-fertilizing as necessary to insure that a satisfactory stand of turf is produced by the end of the Establishment Period. Surfaces gullied or otherwise damaged following seeding shall be repaired and regraded as required and reseeded as directed by the Engineer.

3. The Establishment period shall be determined by the amount of time required during the growing season to complete three mowings of the lawn areas.

C. Protection and Maintenance of Residential Lawn Areas

1. After the seeding is completed in the lawn area, the area shall be protected from vehicular, and or foot traffic by erecting barricades, signs, ropes or other such devices to prevent traffic where necessary.

2. The maintenance of the seeded lawn areas shall also include periodic weeding, mowing and re-seeding and re-fertilizing as necessary to insure that a satisfactory stand of turn is produced by the end of the Establishment period. Surfaces gullied or otherwise damaged following seeding shall be repaired and regraded as required and re-seeded as directed by the Engineer.

3. The Establishment period shall be determined by the amount of time required during the growing season to complete three mowings of the lawn areas.

4. During the establishment period the Contractor shall make a post-seeding fertilization treatment of a fertilizer capable of delivering .5 lbs. nitrogen, .07 lbs. of phosphorous and .10 lbs. potash per 1000 square feet. A minimum of 32% of the nitrogen shall be in slow release from such a sulphur coated area, I.B.D.U. or other approved slow release sources.

3.06 ACCEPTANCE OF SEEDED AREAS

A. Acceptance of Utility Installation and Erosion Control Areas:

1. The acceptance of seeded Utility Installation and Erosion Control areas shall be at the end of the Establishment Period mentioned earlier in this section. Final acceptance will be made when the specified vegetation is successfully established in the area to be accepted.

2. The acceptance of the seeded area shall be by the Engineer and shall be provided to the Contractor in writing.

B. Acceptance of Industrial Lawn and Shoulder Areas:

1. The acceptance of seeded Industrial Lawn areas shall be when a uniform stand of the desired species exists, free of bare areas and weedy areas as a result of poor germination and/or development.

2. The acceptance of the seeded area shall be by the Engineer and shall be provided to the Contractor in writing.

C. Acceptance of Residential Lawn Areas:

1. The acceptance of seeded Residential Lawn areas shall be when a uniform stand of the desired species exists, free of bare areas and weedy areas as a result of poor germination and/or development.

2. The acceptance of the seeded area shall be by the Engineer and shall be provided to the Contractor in writing.

3.07 INSTRUCTIONS ON SOIL SAMPLING

A. Follow the procedure outlined below to determine the relative soil pH of the areas to be seeded. The information provided through this procedure will be made available to the Engineer as soon as it is available.

1. TOOLS REQUIRED:

   A soil probe or small spade
   A large pail such as a 5 gallon bucket
   A grid, sketch or drawing of the area to be sampled
   Soil sample boxes or kits (check local extension agent)

2. Be sure to identify the entire area to be sampled.

3. Make sure that the soil to be seeded is the soil being sampled. Sampling should take place as close to seeding as possible to insure to sample the actual material that is to be seeded.

4. Sample depth should be in the top three to four inches.

5. Take a large area to be sampled and remove several small samples from the soil and place them in the larger container. In a one acre plot (roughly 200 feet by 200 feet) take approximately 10 to 20 samples. Mix this material together in the larger container and remove enough material to fill one or two soil sampling boxes.

6. Number these boxes and place these numbers on the sketch of the area for future reference. Carefully complete the process so that when finished, the area sampled can be located on the map or sketch.

7. Fill out the information on the form using the reference numbers from the boxes on your sketch. Return the completed forms to your local extension agent with the boxes of soil.

8. A copy of the corresponding soil test reports shall be made available to the Engineer.

END OF SECTION

SECTION 02980

INSPECTIONS AND TESTS

PART 1 GENERAL

1.01 WORK INCLUDED

A. The work shall include providing all necessary equipment, material, labor and services required to properly test and inspect all work.

1.02 RELATED WORK

A. Specified elsewhere:

1. Section 01010 - Summary of Work
2. Section 02207 - Earthwork
3. Section 02209 - Utility Backfilling and Restoration
4. Section 02505 - Asphalt Paving
5. Section 02605 - Pipe, Joints, Fittings and Appurtenances
6. Section 02735 - Storm Drain Installation
7. Section 15555 - Interior Piping and Accessories

1.03 REFERENCES

A. American Society for Testing Materials; latest edition:

1. ASTM C828 Practice for Low-Pressure Air Test of Vitrified Clay Pipe Lines (4 to 12 inch)

B. American National Standards Institute (ANSI)/American Water Works Association (AWWA); latest edition:

1. ANSI/AWWA C600 Installation of Ductile-Iron Water Mains and their Appurtenances

2. ANSI/AWWA C651 Disinfecting Water Mains

1.04 COST

A. Work in this Section shall be at the Contractor's expense and not part of any project allowance, unless specified otherwise, herein.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 INSPECTION

A. The Engineer shall inspect the work in any part, or as a whole, and shall make or request all tests deemed necessary to insure that the work has been completed in accordance with the plans and specifications.

B. Repair or replace, at his expense, any length of pipe, manhole, structure, pavement, and any material that is found or tested to be defective or deficient during the work or within one (1) year after the work has been completed and accepted by the Owner.

C. The Engineer shall inspect the building work, all finish surfaces, all heating and ventilating systems, all structural items including bolts, doors, windows, furnishings, equipment, accessories, tanks, vaults, and any other items in the project.

D. Any unfaithful or imperfect work that may be discovered before the final acceptance of the work shall be corrected immediately on the requirement of the Engineer, notwithstanding that it may have been overlooked or approved by the proper inspector. The inspection of the work shall not relieve the Contractor of any of his obligations to perform sound and reliable work as herein described. And all the work, of whatever kind, which during its progress, and before it is finally accepted may become damaged for any cause, shall be properly taken up or removed so much of its as may be objectionable and be replaced by good and sound work satisfactory to the Engineer.

3.02 PIPE TESTS

A. All pipe shall be tested by the Contractor in the presence of the Engineer before being incorporated into the work. When laid, pipe shall not be covered unless and until inspected by the Engineer and permission granted. The necessary facilities for proper inspection shall be provided by the Contractor when requested by the Engineer.

B. Manufacturer's certificates will be accepted in lieu of tests for materials. If independent laboratory tests are desired by the Engineer, they will be secured by the Contractor, but the Contractor will be reimbursed by the Owner for the actual costs of such tests.

3.03 TESTING OF SANITARY SEWER

A. Prior to the final inspection, the required tests shall be completed in the presence of the Engineer in an approved manner with acceptable results.

B. Smoke test all existing sewer service connections prior to connecting to the new sewer pipe. The smoke bombs shall be non-explosive, non-toxic, and shall produce a white or gray smoke and leave no residue. The smoke test results shall be submitted to the Engineer in the form of pictures and/or addresses of services which indicate an improper connection.

C. Prove the watertightness of the sewer system or portions thereof by a low pressure air test, at such times as the Engineer may direct. Test shall be made only in the presence of the Engineer. Furnish all plugs, compressor, power, and other labor and equipment required for the test and shall make repairs necessary until test results are satisfactory.

D. A low pressure air test shall be employed. The testing equipment, procedure, and results will all be subject to the strict approval of the Engineer. Results of the air test will be reviewed for compliance with ASTM designation C-828, AND C-924, current revisions. The air test is to be conducted between two (2) consecutive manholes. The test equipment shall consist of two (2) plugs (one tapped and equipped for air inlet connection), a shut-off valve, a pressure regulating valve, a pressure reduction valve, and a monitoring pressure gauge having a pressure range from 0 to 5 psi, graduated in 0.10 psi with an accuracy of " .04 psi. The test equipment shall be set up outside the manhole for easy access and reading. Air shall be supplied to the test slowly and shall be regulated to prevent the pressure inside the pipe from exceeding 5.0 psig. The pipeline shall be filled until a constant internal pressure of 3.5 psig is maintained. The internal pressure shall be maintained at 3.5 psig or slightly above for a five (5) minute stabilization period, after which time the internal pressure will be adjusted to 3.5 psig, the air supply shut off and the test begun. No person shall remain in the manhole while pipe is being pressurized or throughout the test for safety purposes. A pressure drop of 1.0 psi from 3.5 to 2.5 psig shall be allowed for the test times specified in the following table, based upon the designated pipe size and test segment length.

1. For concrete pipe test, see ASTM C 924.

2. For PVC pipe, see the next table.

AIR TEST TABLE
PVC PIPE
BASED ON EQUATIONS FROM ASTM C-828 LATEST REVISION
SPECIFICATIONS TIME (MIN:SEC)
REQUIRED FOR PRESSURE DROP FROM 3.5 TO 2.5 PSI
WHEN TESTING ONE PIPE DIAMETER ONLY

	PIPE DIAMETER, INCHES						
LENGTH OF TEST SEGMENT	4	6	8	10	12	15	18
25	0:04	0:10	0:17	0:22	0:26	0:31	0:36
50	0:09	0:20	0:35	0:44	0:53	1:02	1:12
75	0:13	0:30	0:53	1:06	1:20	1:33	1:48
100	0:18	0:40	1:11	1:29	1:47	2:05	2:24
125	0:22	0:50	1:29	1:51	2:13	2:36	3:00
150	0:26	1:00	1:46	2:13	2:40	3:07	3:36
175	0:31	1:10	2:04	2:35	3:07	3:39	4:12
200	0:35	1:19	2:22	2:58	3:33	4:17	4:48
225	0:40	1:30	2:40	3:20	4:00	4:41	5:24
250	0:44	1:40	2:58	3:42	4:45	5:13	6:00
275	0:48	1:50	3:16	4:06	4:54	5:44	6:36
300	0:53	2:00	3:33	4:27	5:20	6:15	7:12
350	1:02	2:20	4:09	5:11	6:14	7:18	8:24
400	1:10	2:40	4:45	5:56	7:07	8:20	9:36
450	1:19	3:00	5:20	6:40	8:01	9:23	10:49
500	1:28	3:20	5:56	7:25	8:54	10:26	12:01

Should the 1.0 psi drop occur in less time than that specified in the table the sewer segment shall have failed. If the time required for the pressure to drop 1.0 psi is greater than that shown in the table, the sewer segment shall have passed. For a more detailed description of the air test method refer to ASTM designation C-828, current revision. An air pressure correction shall be required when the prevailing ground water is above the sewer line being tested and shall be calculated as follows:

(Ground Water Depth (ft.) ÷ 2.31) + 3.5 = Starting Test Pressure

Ending Test Pressure = Starting Pressure - 1.0 psi

There is no change from time requirements established for the basic air test.

E. Manhole tests:

1. Manholes shall be tested by vacuum test, after assembly but prior to backfilling. Test shall comply with ASTM standard C1244, latest revision.

Manholes shall be tested by vacuum, only if constructed of precast concrete. Testing shall include the joint between the concrete cone and spacer rings.

2. Stubouts, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn.

3. Installation and operation of vacuum equipment and indicating devices shall be in accordance with equipment specifications for which performance information has been provided by the manufacturer and approved by the Virginia State Department of Health.

4. A measured vacuum of 10 inches of mercury shall be established in the manhole. The time for the vacuum to drop to nine inches of mercury shall be recorded.

5. Acceptance standards for leakage shall be established from the elapsed time for a negative pressure change from 10 inches to nine inches of mercury. The maximum allowable leakage rate for a four-foot diameter manhole shall be in accordance with the following:

Manhole Depth	Minimum Elapsed Time for a Pressure Change of 1 Inch Hg
10 ft. or less	60 seconds
>10 ft. but <15 ft.	75 seconds
>15 ft. but <25 ft.	90 seconds

For manholes five feet in diameter, add an additional 15 seconds and for manholes six feet in diameter, add an additional 30 seconds to the time requirements for four-foot diameter manholes.

6. If the manhole fails the test, necessary repairs shall be made and the vacuum test repeated one time.

7. If a manhole fails the second test or if the joint mastic is completely pulled out during the vacuum test, the manhole shall be disassembled and the mastic replaced.

F. Testing of Flexible Pipes

1. The Contractor shall deflection test the entire length of PVC pipe by means of a go-no-go mandrel to assure that deflection limits have not been exceeded. For pipe backfilled 60 days or less, the mandrel shall be set for 5% maximum deflection, and for pipe backfilled more than 60 days, the mandrel shall be set for 7.5% maximum deflection. The testing shall be performed completely at the expense of the Contractor and shall be

performed in the presence of the Engineer. Mandrel and proving ring details shall be approved by the Engineer and shall be sized at 5% or 7.5% less than ASTM dimensions for the sewer pipe (in accordance with ASTM D-3034 and F-679). The 5% mandrel test shall be performed up to two (2) months after pipe is backfilled. The 7.5% mandrel test shall be performed no sooner than two (2) months after backfill of the pipe is completed. All pipe that fails the deflection test shall be removed and replaced at the Contractor's expense. The "rerounder" technique shall not be allowed. The Contractor shall use approved nine (9) arm mandrels and proving rings for each size of mainline pipe. The contract length "L" of the mandrel arms and the actual mandrel diameter "D" (ID of the proving ring) shall equal the dimensions in Table I below. Critical mandrel dimensions shall carry a tolerance of ±.01."

TABLE
9 Arm Mandrel
D Dimension

Nom. Dia.	L	ASTM D3034 SDR 35	ASTM D2751 (6" only)* ASTM D2680
6"	6"	5.31"	5.31" (SDR 35) 5.14" (SDR 23.5)
8"	8"	7.09"	
10"	10"	8.84"	
12"	12"	10.51"	
15"	15"	12.86"	
18"	18"	15.84"	
21"	18"	18.96"	
24"	18"	21.32"	
27"	18"	23.61"	

Mandrel and proving ring may be obtained from Wortco, Inc., 220 High Street, Franklin, Ohio 45005 (1-513-746-6439). Hurco Enterprises (1-800-843-1300), Cherne Industries (1-800-843-7584) or equal.

2. Testing of Flexible Storm Drains:

Ribbed PVC and ribbed HDPE shall be tested for deflections by pulling a go/no-go mandrel through the pipe at least one month after final backfill. Deflections of the pipe shall not exceed 7.5%. If deflections exceed 7.5%, the pipe shall be relaid.

G. The Owner reserves the right to inspect the complete-in-place sanitary sewer pipe with in-line television inspection equipment operated by Municipality forces. The Contractor shall notify the Owner at least two (2) weeks prior to a section being completed in order to schedule the television inspection. Any defective work revealed by this inspection shall be repaired by the Contractor, at his expense.

3.04 TESTING OF WATER LINES

A. After placing all harnessing and all valve support concrete (if applicable), sufficient backfill shall be placed prior to filling the pipe with water and field testing to prevent lifting of the pipe. When local conditions require that the trenches be backfilled immediately after the pipe has been laid, the testing shall be carried out after backfilling has been completed but prior to placement of the permanent surface. At least seven (7) days shall elapse after the last valve support or hydrant block has been cast (Type I Portland Cement) prior to testing, unless high early strength concrete (Type III) is used, in which case three (3) days shall elapse.

B. All testing will be performed in accordance with the AWWA C600, current revision.

C. Pressure Test: After the pipe has been laid, all newly laid pipe or any valved section thereof shall be subjected to a hydrostatic pressure test.

1. Test pressure restrictions. Test pressures shall:

a. not be less than 1.25 times the stated working pressure measured at the highest elevation along the test section and not less than 1.5 times the stated working pressure at the lowest elevation of the test section;

b. not exceed thrust restraint design pressures or 1.5 times the pressure rating of the pipe or joint, whichever is less (as specified by the manufacturer);

c. be of at least 2-hour duration;

d. not vary by more than + 5 psi;

e. not exceed the working rated pressure of the valves when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

2. Each valved section of pipe shall be filled with properly disinfected water slowly and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer.

3. Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants.

4. All exposed pipe, fittings, valves, hydrants and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated until it is satisfactory to the Engineer.

D. A leakage test shall be conducted concurrently with the pressure test. Leakage shall be defined as the quantity of water (makeup water) that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water. No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD(P)^{1/2}}{148{,}000}$$

in which L is the allowable leakage (makeup water) , in gallons per hour; S is the length of pipeline tested in feet; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test, in pounds per square inch gauge. When testing against closed metal-seated valves, an additional leakage per enclosed valve of 0.0078 gal/hr/in. of nominal valve size shall be allowed. When hydrants are in the test section, the test shall be made on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than the allowable amount, the Contractor shall, at his own expense, locate and repair the defective material until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

3.05 WATER TANK TESTING

A. Water tank testing shall be in accordance with Section 02851.

3.06 BOOSTER PUMPING STATION TESTING

A. The piping and valves shall be disinfected and pressure tested in accordance with the requirements of Section 02666.

B. The equipment shall be tested, in the presence of the Engineer, to ensure all functions are fully operational, including pump operation from the telemetry to the water tank.

3.07 INTERMEDIATE INSPECTIONS

A. The Engineer shall be allowed access to inspect any work to insure compliance with the plans and specifications.

B. Any inspection by the Engineer that may have overlooked or approved improper or damaged work shall not relieve the Contractor of the responsibility to repair or replace the defective or damaged work.

C. The pipe shall be visually inspected by light with a reasonable full, round circle of light visible from one manhole to the other, or by a laser with targets placed in the manhole, or by traveling through the pipe of adequate size.

D. The manhole and structures shall be visually examined for size, shape, appearance and condition.

END OF SECTION

MISCELLANEOUS

Miss Utility of Virginia

LOCATION REQUEST FORM

1-800-552-7001

Please fill in form and be prepared to give information when operator answers.

TICKET _____ **DATE** _____ **TIME** _____

COMPANY _____ **PHONE** _____ **EXT.** _____

ADDRESS _____

CITY & STATE _____ **ZIP** _____

CALLER _____ **CALL BACK** _____

LOCATION (From where to where – be specific) _____

_____

WORK TYPE _____

WORK DATE _____ **TIME** _____

INSTRUCTIONS _____ **DONE FOR** _____

STATE VA **CITY OR COUNTY** _____

GRID _____ _____ _____ _____ _____

REMARKS _____

_____

A. Call Miss Utility Monday through Friday from 7:00 A.M. to 5:00 P.M. Emergencies will be handled on a 24-hour basis as stipulated in the State Law.

B. Virginia Statute 56-265.17 states notification (ticket) shall be valid for ten working days and may be extended for an additional ten-working-day period upon request to the operator at least forty-eight hours prior to the expiration of the original ten-working-day period.

C. Virginia Statute 56-265.19 requires a minimum of two working days notice prior to any planned excavation. Virginia Statute 56-265.20 states that should the utilities fail to locate, a second call must be made providing an additional three (3) hour notice before excavation commences.

D. For your protection make every effort not to call the center with "in progress" jobs as you will be in violation of the State Law and subject to billing should damages occur. (Make sure "in progress" requests are absolutely necessary

Remember – It Is The Law!

Our Service Is Free – Damages Are Not

Typical Traffic Control

Non-Stationary Operation on a Two-Lane Roadway Using Flaggers

(Figure TTC-24.1)

NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*

Option:

3. Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

4. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
5. **The Flagger (W20-7) symbol sign shall stay within ½ mile of each flagger.**

Guidance:

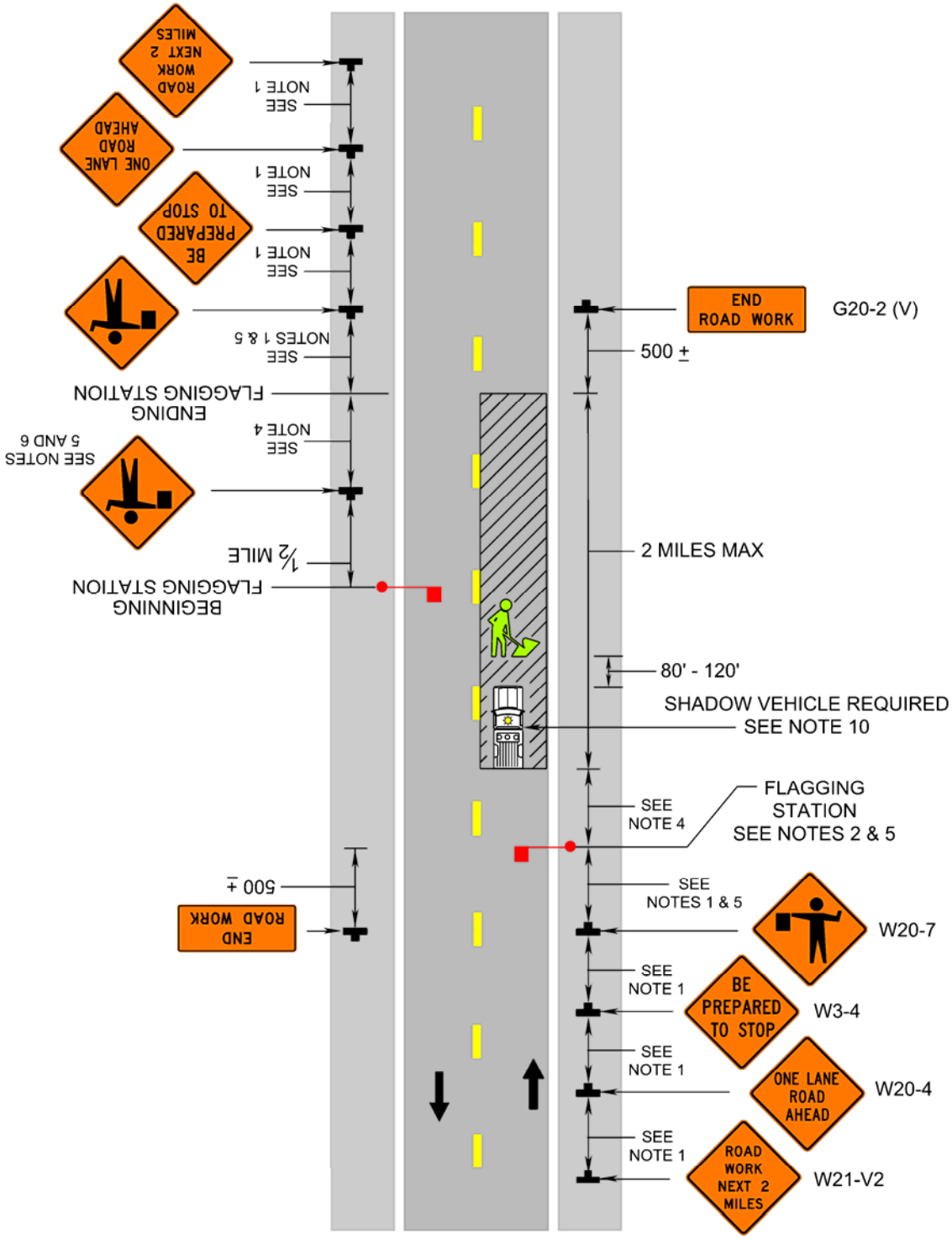
6. *Additional Flagger symbol signs should be placed at ½ mile intervals and either erected by the approaching flagger, or taken down as the operation proceeds past this point.*
7. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*
8. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign, then the advance warning signs should be readjusted at greater distances.*

Standard:

9. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
10. **A shadow vehicle with at least one amber rotating, flashing or[1] oscillating lights shall be parked 80'-120' in advance of the first work crew.**
11. **The maximum length of the work area shall be two miles.**

1: Revision 1 – 4/1/2015

Non-Stationary Operation on a Two-Lane Roadway Using Flaggers
(Figure TTC-24.1)



Typical Traffic Control

End of Day Signing for Paving Operations on a Two-Lane Roadway

(Figure TTC-59.1)

NOTES

Standard:

1. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
2. **The maximum pavement edge drop-off shall be 2 inches or less.**
3. **NO CENTER LINE (W8-12) sign shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present. In addition, NO CENTER LINE signs shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles if the unmarked area is longer than 4 miles.**
4. **A DO NOT PASS (R4-1) sign shall be used when the centerline has been obliterated or until pavement markings have been installed. The DO NOT PASS sign shall be installed after the NO CENTER LINE sign and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Thereafter the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles or every 2 miles if the unmarked area is longer than 4 miles.**
5. **In the vicinity of a turning lane a BUMP (W8-1) sign shall be installed.**
6. **The UNEVEN LANES (W8-11) sign and BUMP sign shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Additional UNEVEN LANES signs shall be installed every mile.**
7. **Signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:[1]

8. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*

Option:[1]

9 Only traffic control signing for pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.

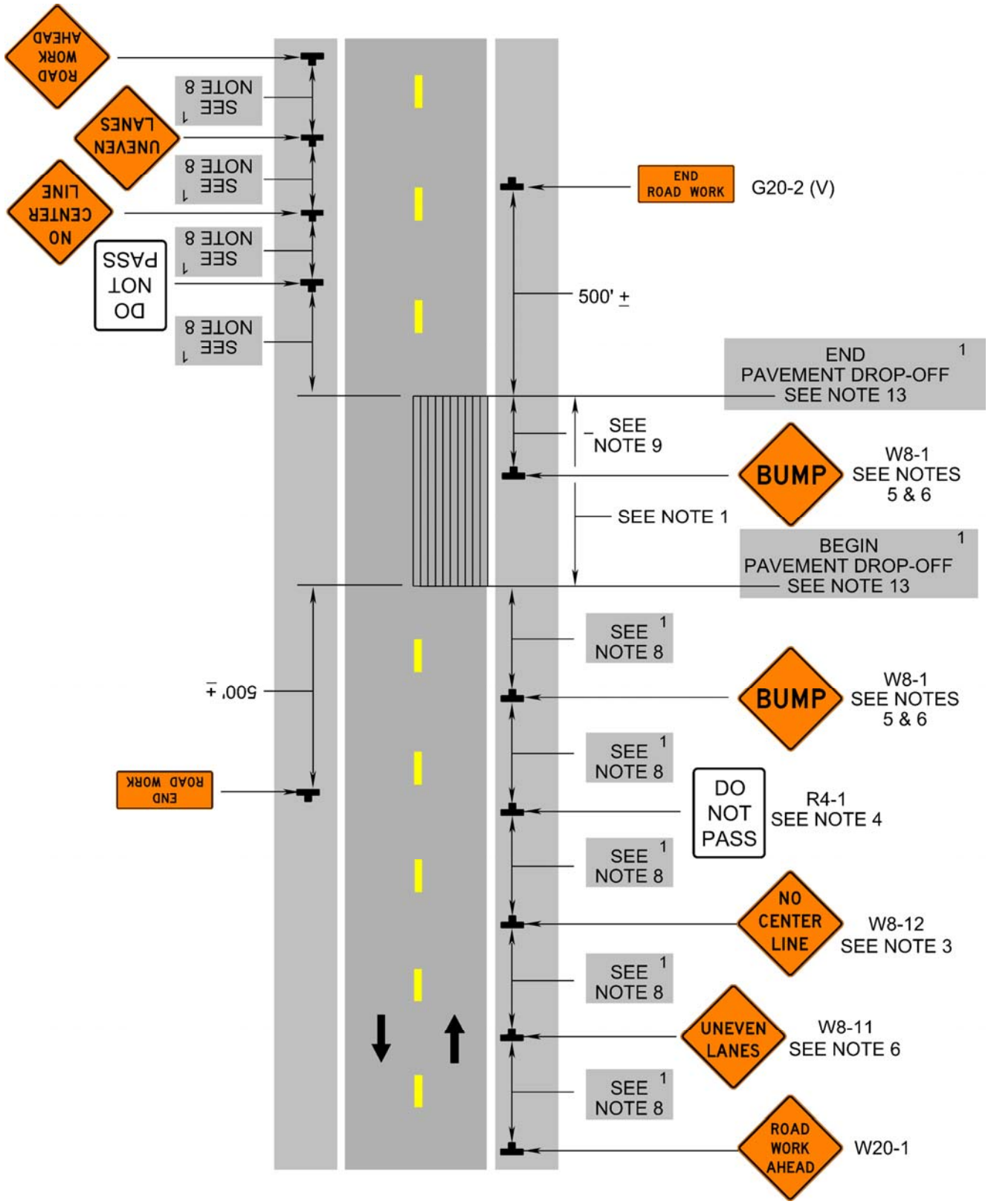
10 The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

11. **The LOW SHOULDER sign shall be repeated at 1 mile intervals where there is an elevation difference of less than 2 inches between the shoulder and the travel lane extends over a distance in excess of 1 mile.**
12. **If pavement marking cannot be installed in accordance with Section 704.03 of the Road and Bridge Specifications, then yellow temporary pavement markers spaced at 10 foot centers for two-way traffic shall be placed along the centerline for lane division. No edge markers will be required.**
13. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**

1: Revision 1 – 4/1/2015

End of Day Signing for Paving Operations on a Two-Lane Roadway (Figure TTC-59.1)



1: Revision 1 – 4/1/2015