



ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT
2100 CLARENDON BOULEVARD, SUITE 500
ARLINGTON, VA 22201
(703) 228-3410

INVITATION TO BID NO. 23-DES-ITBPW-586

ELECTRONIC SEALED BIDS WILL BE RECEIVED BY ARLINGTON COUNTY VIA VENDOR REGISTRY UNTIL 3:00 P.M. ON THE 7TH DAY OF AUGUST 2023 .

FOR THE PROVISION OF N. GLEBE ROAD ROADSIDE DITCH RESTORATION

From N. Glebe Road approximately 1,000 feet upstream of the ditch (South of George Washington Memorial Parkway bridge to existing driveway at N Glebe Rd)

The Contractor shall furnish all labor, materials, and equipment for the restoration of the N. Glebe Road ditch and replacement of guardrail and bridge abutment. The project work shall include, but may not be limited to the following:

- Site work
- Clearing and grubbing
- Erosion and sediment controls
- Temporary traffic controls
- Riprap channel restoration
- All other work described and required in the contract documents and drawings

VENDORS ARE REQUIRED TO REGISTER ON [VENDOR REGISTRY](#) IN ORDER TO SUBMIT A RESPONSE TO THIS INVITATION TO BID. NO RESPONSES WILL BE ACCEPTED AFTER THE BID DUE DATE AND TIME.

The County will conduct a virtual bid opening via Microsoft Teams Application (APP). Bidders interested in viewing the public bid opening must download the APP and join the meeting via the Microsoft Teams APP and enable audio, video or both. The link to join the virtual bid opening is provided below:

[Click here to join the meeting](#)
[+1 347-973-6905](tel:+13479736905) United States, New York City (Toll)
Conference ID: 568 280 364#

Bid Surety in the amount of not less than 5% of the bid must be submitted with the bid. Performance and Payment Bonds in the amount of 100% of the award will be required of the successful bidder.

PREBID CONFERENCE

A virtual prebid conference will be held at 9:00 a.m., July 17, 2023 on Microsoft Teams to allow potential Bidders an opportunity to obtain clarification of the specifications and requirements of the solicitation. To join the meeting, please click the following link [Click here to join the meeting](#), or join by dialing +1 347-973-6905 and enter Conference ID 519 264 785#. ATTENDANCE AT THE PREBID CONFERENCE IS OPTIONAL. Minutes of the prebid conference will be recorded by the County and may be incorporated into the solicitation documents through an Addendum. Interested Bidders are, however, urged to attend.

NOTICE: ANY BIDDER ORGANIZED AS A STOCK OR NONSTOCK CORPORATION, LIMITED LIABILITY COMPANY, BUSINESS TRUST, OR LIMITED PARTNERSHIP OR REGISTERED AS A LIMITED LIABILITY PARTNERSHIP MUST BE AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA BEFORE CONTRACT AWARD (REFER TO AUTHORITY TO TRANSACT BUSINESS SECTION IN THE SOLICITATION FOR FURTHER INFORMATION)

Arlington County reserves the right to reject any and all bids, cancel this solicitation, and to waive any informalities or irregularities in procedure. A bidder's submission of a bid indicates acceptance of these terms.

Arlington County, Virginia
Office of the Purchasing Agent

Kaylin Schreiber
Procurement Officer
kschreiber@arlingtonva.us

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I. INFORMATION FOR BIDDERS

1. QUESTIONS AND ADDENDA

BIDDERS MUST BE REGISTERED IN VENDOR REGISTRY TO SUBMIT A QUESTION FOR THIS INVITATION TO BID.

All communications relating to this solicitation must be submitted online using Vendor Registry. For a question to be considered, the question must be entered in the Question Section of the **ITB No. 23-DES-ITBPW-586**. Prior to the award of a contract resulting from this solicitation, bidders are prohibited from contacting any County staff other than those assigned to the Office of the Purchasing Agent.

QUESTIONS REGARDING THE ORIGINAL SOLICITATION MUST BE SUBMITTED BY JULY 18, 2023, AT 5:00 PM EASTERN TIME TO BE CONSIDERED FOR AN ADDENDUM. ALL QUESTIONS RECEIVED BY THE QUESTION DEADLINE WILL BE RESPONDED TO WITHIN VENDOR REGISTRY AND POSTED FOR ALL BIDDERS. THE SYSTEM WILL NOT ACCEPT ANY QUESTIONS AFTER THIS DATE AND TIME.

If any questions or responses require revisions to this solicitation, such revisions will be by formal Addendum only. Bidders are cautioned not to rely on any written, electronic, or oral representations made by any County representative or other person, including the County's technical contact, that appear to change any portion of the solicitation unless the change is ratified by a written Addendum to this solicitation issued by the Office of the Purchasing Agent.

2. INTEREST IN MORE THAN ONE BID AND COLLUSION

Reasonable grounds for believing that a Bidder is interested in more than one bid for a solicitation, including both as a Bidder and as a subcontractor for another Bidder, or that collusion exists between two or more Bidders, will result in rejection of all affected bids. However, an individual or entity acting only as a subcontractor may be included as a subcontractor on bids of two or more different Bidders. Bidders rejected under the above provision will also be disqualified if they respond to a re-solicitation for the same work.

3. TRADE SECRETS OR PROPRIETARY INFORMATION

Trade secrets or proprietary information that a bidder or contractor submits in connection with a procurement transaction may be exempted from public disclosure under the Virginia Freedom of Information Act ("VFOIA"). However, the bidder or contractor must invoke VFOIA protection clearly and in writing on the Bid Form for County review. The Bid Form must include at least the following: (1) the data or other materials sought to be protected and (2) specific reasons why the material is confidential or proprietary. It is the bidder's sole responsibility to defend such exemptions if challenged in a court of competent jurisdiction.

4. DEBARMENT STATUS

The Bidder must indicate on the Bid Form whether it or any of its principals is currently debarred, enjoined, or suspended from submitting bids to the County or to any other state or political subdivision and whether the Bidder is an agent of any person or entity that is currently debarred, enjoined or suspended from submitting bids to the County or to any other state or political subdivision. An affirmative response may be considered grounds for rejection of the bid.

5. AUTHORITY TO TRANSACT BUSINESS

Any Bidder organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership must be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, or as otherwise required by law. The proper and full legal name of the entity and the identification number issued to the Bidder by the Virginia State Corporation Commission must be included on the Bid Form. Any Bidder that is not required to be authorized to transact business in the Commonwealth must include in its bid a statement describing why the Bidder is not required to be so authorized. The County may require a Bidder to provide documentation that 1) clearly identifies the complete name and legal form of the entity and 2) establishes that the entity is authorized by the State Corporation Commission to transact business in the Commonwealth of Virginia. Failure of a Bidder to provide such documentation will be a ground for rejection of the bid or cancellation of any award. For further information refer to the Commonwealth of Virginia State Corporation Commission website at: www.scc.virginia.gov.

The County reserves the right to waive this requirement at any time, for any reason.

6. ARLINGTON COUNTY BUSINESS LICENSES

The successful Bidder must comply with the provisions of Chapter 11 ("Licenses") of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this solicitation, contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, at 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, tel. (703) 228-3060, or e-mail business@arlingtonva.us.

7. VIRGINIA CONTRACTOR LICENSE

For all work that is classified as being performed by "Contractors" as defined by the Virginia State Board for Contractors, a Class A, B, or C License is required.

If a contract for performing or managing construction, removal, repair or improvements is for \$120,000 or more, or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is \$750,000 or more, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS A CONTRACTOR."

If a contract for performing or managing construction, removal, repair or improvements is for \$10,000 or more, but less than \$120,000, or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is \$150,000 or more, but less than \$750,000, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS B CONTRACTOR."

If a contract for performing construction, removal, repair or improvements is for \$1,000 or more, but no more than \$10,000 or if the total value of all such construction, removal, repair, or improvements undertaken by the bidder within any twelve-month period is less than \$150,000, the bidder is required under Title 54.1, Chapter 11, Code of Virginia, as amended, to be licensed as a "CLASS C CONTRACTOR." Class C contractors shall not include electrical, plumbing, and heating, ventilation and air conditioning contractors.

For further information, contact the State Board for Contractors, 2 South Ninth Street, Richmond, VA 23219, (804) 367-8511.

8. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR

The contract that will result from this solicitation will not obligate the County to purchase a specific quantity of items or services during the Contract Term. Any quantities that are included in the contract documents are the present expectations the County for the period of the contract, and the County is under no obligation to buy that, or any, amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual amount, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates specified in the contract.

The items or services covered by this contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through such other contract(s). The County does not guarantee that the selected contractor will be the exclusive provider of the goods or services covered by the resulting contract.

9. PREVAILING WAGE CONTRACT FOR CONSTRUCTION SERVICES

This solicitation and the resulting contract are subject to Prevailing Wage provisions covered under Article 4-104 of the Arlington County Purchasing Resolution. All employees of any contractor or any subcontractor working on the contract shall be paid wages, salaries, benefits, and other remuneration at or above the craft or trade category prevailing wage rate indicated by Virginia Commissioner of Labor and Industry (DOLI) and as listed in the contract. The County will request from DOLI a wage determination at bid posting and a final wage determination at contract award. If the final wage determination changes at contract award, the Bidder shall submit their revised bid pricing to comply with the final wage determination from DOLI. By submitting a response to the solicitation, the Bidder certifies that it will comply with this provision and will ensure that its subcontractors, if any, also comply with the prevailing wage provisions. (Refer to draft Contract Terms and Conditions for further Prevailing Wage details specific to this solicitation/contract.)

10. BID FORM SUBMISSION

The submitted Bid Form must be signed and fully executed. The Bid Form must be submitted electronically via Vendor Registry no later than the date and time specified in this solicitation. The Vendor Registry system will not accept bids after the close date and time. The County will not accept emailed or faxed bid

The Bidder name on the electronic bid submittal shall be the same as the Contractor/Vendor name as the registration in Vendor Registry for the upload to be considered a valid bid. **ONLY ELECTRONIC SUBMISSION IS ALLOWED, NO BID SUBMITTED OTHER THAN A VENDOR REGISTRY ELECTRONIC UPLOAD WILL BE ACCEPTED. Arlington County is not responsible for late submissions, missed Addendums, or questions not submitted before the end date and time.**

Timely submission is solely the responsibility of the Bidder. The Vendor Registry System will not accept applications after the publicly posted date and time. A bid may be rejected if the Bid Form is not signed in the designated space by a person authorized to legally bind the Bidder.

Modification of or additions to the Bid Form may be cause for rejection of the bid; however, Arlington County reserves the right to decide, in its sole discretion, whether to reject such a bid as nonresponsive. As a precondition to bid acceptance, Arlington County may request the bidder to withdraw or modify any such modifications or additions, if it does not affect quality, quantity, price, or delivery.

Bids and all documents uploaded/submitted to Arlington County by an Bidder become the property of the County upon receipt.

11. BIDDER CERTIFICATION

Submission of a signed Bid Form is certification by the respective bidder that it is registered with the Virginia State Corporation Commission (SCC), if applicable, it is the legal entity authorized to enter into an agreement with the County, and that it will accept any award made to it as a result of the submission. Entry of a Bidder's SCC number may be required at Vendor Registration.

12. ERRORS IN EXTENSION

If the unit price and the extension price differ, the unit price will prevail.

13. EXCEPTIONS

Conditional or qualified bids containing exceptions, unless specifically allowed in the solicitation, are subject to rejection in whole or in part as nonresponsive.

14. NONCONFORMING TERMS AND CONDITIONS

If a bid contains alternate terms and conditions that do not conform to the terms and conditions in this solicitation, the bid will be subject to rejection for nonresponsiveness. The County reserves the right to permit a bidder to withdraw nonconforming terms and conditions from its bid prior to the County's determination of nonresponsiveness.

15. BIDDERS' RESPONSIBILITY TO INVESTIGATE

Before submitting a bid, each bidder must make all investigations necessary to ascertain all conditions and requirements affecting the full performance of the contract and to verify any representations made by the County upon which the bidder will rely. No pleas of ignorance of such conditions and requirements will relieve the successful bidder from its obligation to comply in every detail with all provisions and requirements of the contract or will be accepted as a basis for any claim for any monetary consideration on the part of the successful bidder.

16. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

Each bidder is responsible for ascertaining the nature and locations of the Work of the solicitation, and for investigating the general and local conditions and factors which can affect the work or its cost, including but not limited to:

- a. conditions bearing upon transportation, disposal, handling, and storage of materials;
- b. the availability of labor, water, electric power, and roads;
- c. uncertainties of weather, river stage, tides, or similar physical conditions at the site;
- d. the conformation and conditions of the ground; and
- e. the character of equipment and facilities needed before and during work performance.

Each bidder is responsible for investigating the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work publicly or otherwise available, as well as from the drawings and specifications made a part of this solicitation.

The locations of existing utilities, including underground utilities, which may affect the work are indicated on the drawings or in the specifications insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these drawings or specifications shall be construed as

a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of operations. The bidder shall make all necessary investigations to determine the existence and locations of such utilities.

The County assumes no responsibility for any conclusions or interpretations made by the bidder based on the information made available by the County. The County assumes no responsibility for any understanding reached or representation made concerning conditions which could affect the work by any of its officers or agents before the execution of the contract, unless that understanding, or representation is expressly stated in the Contract.

17. INCOMPLETE DOCUMENTS

Each bidder is responsible for having determined the accuracy and/or completeness of the solicitation documents upon which it relied in making its bid, and has an affirmative obligation to notify the Arlington County Purchasing Agent immediately upon discovery of an apparent or suspected inaccuracy, error in, or omission of any pages, drawings, sections, or addenda whose omission from the documents was apparent from a reference or page numbering or other indication in the solicitation documents.

If a bidder downloads an electronic version of the solicitation documents, that potential bidder is responsible for determining the accuracy and/or completeness of the electronic documents and ensuring that the electronic documents used in preparing the bid are the most current version of solicitation documents issued by the County.

If the successful bidder proceeds with any activity that may be affected by an inaccuracy, error in, or omission in the solicitation documents of which it is aware but has not notified the Arlington County Purchasing Agent, the bidder hereby agrees to perform any activity described in the missing or incomplete documents at bidder's sole expense and at no additional cost to Arlington County.

18. ERRONEOUS OR INFEASIBLE REQUIREMENTS

Each bidder is responsible for having determined the feasibility of the work required and shall notify the County Purchasing Agent immediately upon discovery of any apparent erroneous, contradictory, incomplete, or infeasible requirements or directions contained in the Solicitation Documents. If a bidder fails to notify the County of such conditions immediately upon discovery, the bidder assumes all responsibility for any and all work required to satisfy the contract requirements at no additional cost to the County and within the Time for Completion.

19. QUALIFICATION OF BIDDERS

In order to be considered responsible and responsive Bidders shall have the experience described below, and provide the supporting documentation as instructed below.

COMPANY QUALIFICATIONS:

Bidders shall have five (5) continuous years of experience conducting public works infrastructure and stream restoration projects. The experience shall be work of similar size and scope, construction, re-construction, and maintenance. The Bidder's obtained project experience shall consist of the following:

- In-Stream Projects
- Planting and maintenance of ecological restoration planting in the Chesapeake Bay watershed over the past five years
- Guardrail installation

Bidders shall provide a list of three (3) similar projects recently completed projects that involving the same material, equal size, and comparable length. For each project, Bidders shall list the following information:

- Project Name
- Project location
- Project description and Bidder's scope of work within the project
- Equipment used for construction and measures taken to minimize disturbance to the stream corridor and adjacent riparian zone
- Project manager's name, telephone number and email address
- Work start date, scheduled completion, and actual completion date
- Initial contract cost and final contract cost

The experience of the contractor owner(s) may be imputed to a newly formed company/Contractor provided the Contractor owner(s) has/have at least five (5) years of demonstrated experience of reliability and meets the criteria set forth herein.

STAFFING QUALIFICATIONS:

Project Manager:

The Contractor shall have a qualified and experienced Project Manager assigned to this work with a minimum of three (3) years of experience in overseeing projects of similar type and size. Bidder shall submit resume of the proposed Project Manager with their Bids.

In addition, the Purchasing Agent may require a bidder to demonstrate that it has the necessary facilities, ability, and financial resources to comply with the contract and furnish the service, material or goods specified herein in a satisfactory manner before the award of any contract. A bidder may also be required to provide past history and references. Failure to qualify according to the foregoing requirements will result in bid rejection.

20. ALTERNATE BID

Bidders who have other items they wish to offer in lieu of, or in addition to, what is required by this solicitation shall submit a separate bid clearly marked "ALTERNATE BID". Alternate bids will be automatically deemed nonresponsive.

21. INFORMALITIES

The County reserves the right to waive minor defects or variations from the exact requirements of the solicitation in a bid insofar as those defects or variations do not affect the price, quality, quantity, or delivery schedule of the services being procured. If insufficient information is submitted for Arlington County to properly evaluate a bid or a bidder; the County may request such additional information after bid opening, provided that the information requested does not change the price, quality, quantity, or delivery schedule for the services being procured.

22. NEW MATERIAL

Unless otherwise provided for in this solicitation, all goods, materials, supplies, or components offered to the County under this bid solicitation must be new, not used or reconditioned, and are not of such age or so deteriorated as to impair their usefulness or safety and that the goods, materials, supplies, or components offered are current production models of the respective manufacturer. If a bidder believes that furnishing used or reconditioned goods, materials, supplies or components will be in the County's

interest, the bidder shall notify the County Purchasing Agent in writing no later than fifteen (15) calendar days prior to the date set for opening of bids. The notice shall include the reasons for the request and any benefits which may accrue to the County if the Purchasing Agent authorizes the bidding of used or reconditioned goods, materials, supplies or components.

23. BID WITHDRAWAL PRIOR TO BID OPENING

The Bidder may withdraw a bid from Vendor Registry before the opening date and time. It is the sole responsibility of the Bidder to remove and/or resubmit a bid before the bid deadline.

24. WITHDRAWAL OF BID FROM CONSIDERATION AFTER BID OPENING

After the opening of a bid, a bidder may withdraw its bid from consideration if the price of the bid is substantially lower than other bids due solely to a mistake therein, provided the bid is submitted in good faith, the mistake is a clerical mistake as opposed to a judgment mistake, and is actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the bid, which unintentional error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. No partial withdrawals of bids will be permitted after the time and date set for the bid opening. The bidder must give an electronic written notice to the Arlington County Purchasing Agent of a claim of right to withdraw a bid and provide all work papers, documents and other materials used in the preparation of the bid sought to be withdrawn, within two (2) business days after the date of bid opening. A bid may also be withdrawn if the County fails to award or issue a notice of intent to award the bid within ninety (90) days after the date fixed for opening bids.

25. METHOD OF AWARD

The County will award to the lowest responsive and responsible bidder. The lowest bidder will be determined by Total Bid Price.

26. NOTICE OF DECISION TO AWARD

When the County has made a decision to award a contract(s), the County will post a Notice of Award or Intent to Award to [Vendor Registry](#).

27. INSURANCE REQUIREMENTS

Each bidder must be able to demonstrate proof of the specific coverage requirements and limits applicable to this solicitation. If the bidder is not able to do so, it may propose alternate insurance coverage for consideration by the County. Written requests for consideration of alternate coverage must be received by the County Purchasing Agent at least 10 working days prior to bid due date. If the County permits alternate coverage, an amendment to the Insurance Checklist will be issued prior to the time and date set for receipt of bids.

28. SURETY REQUIRED

Companies who wish to implement digital signatures during the COVID-19 public health emergency may do so, along with a SURETY BOND SEAL ADDENDUM which contains an electronic corporate seal and states the following:

“Due to logistical issues associated with the use of traditional seals during this COVID-19 pandemic, [Surety Company] has authorized its Attorney-in-Fact to affix [Surety Company’s] corporate seal to any bond executed on behalf of [Surety Company] by any such Attorney-in-Fact by attaching this Addendum to said bond.

To the extent this Addendum is attached to a bond that is executed on behalf of [Surety Company] by its Attorney-in-Facts, [Surety Company] hereby agrees that the seal below shall be deemed affixed to said bond to the same extent as if its raised corporate seal was physically affixed to the face of the bond.”

A. BID SURETY:

A fully completed and properly executed original Bid Bond, cashier's check, certified check, money order, or cash escrow in the amount of 5% of the amount of the bid made payable to the Treasurer of Arlington County shall accompany each bid. The Bid Surety will be retained until after the award to the successful bidder. The Bid Surety of the successful bidder will be retained until completion of the Contract or the posting of a Performance Bond, whichever occurs sooner. A bid submitted without a proper bid surety will be rejected.

B. FAILURE TO EXECUTE:

The failure of a bidder to accept an award and file acceptable Performance and Payment Bonds within ten (10) days after award notice will cause cancellation of the award and the forfeiture of the Bid Surety to the County.

C. PERFORMANCE SURETY:

A fully completed and properly executed original Performance Bond in the amount of 100% of the amount of the bid will be required of the successful bidder to ensure satisfactory completion of the work. The bond shall be a corporate surety bond issued by a surety company authorized to do business in the Commonwealth of Virginia and acceptable to the County. Where applicable, the Performance Bond shall be renewable annually in the original amount through the completion of the Contract, including all warranty and guarantee periods.

D. PAYMENT BOND:

A fully completed and properly executed original Payment Bond in the amount of 100% of the amount of the bid, will be required of the successful bidder to ensure payment of all persons who have and fulfill contracts for the Contractor for performing labor, providing equipment, or providing material in the performance of the work provided for in the Contract. The Bond shall be a corporate surety bond issued by a surety company authorized to do business in the Commonwealth of Virginia and acceptable to the County. Where applicable, the Payment Bond shall be renewable annually in the original amount for the duration of the Contract.

29. EXECUTION OF CONTRACT

Within three days after the Contract is presented to the successful Bidder for signature, the Contractor must submit to the County Purchasing Agent the original of the executed Agreement. Within ten days the Contractor must submit executed performance and payment bonds and required certificate of insurance. Failure to do so shall constitute a default, and the County may award the Contract to the next lowest responsive and responsible bidder or solicit new bids. The County may then charge against the Contractor the difference between the amount of the Contract award and the amount for which a Contract is subsequently executed, up to the total amount of the Contractor's bid security.

30. EXPENSES INCURRED IN PREPARING BID

All expenses related to a bid are the sole responsibility of the bidder.

31. OPTIONAL ESCROW AGREEMENT

If the successful bidder so elects, the bidder may utilize an escrow account for utilization of the retainage funds pursuant to § 2.2-4334 of the Code of Virginia. The bidder must indicate on the Bid Form whether or not it elects the escrow account procedure.

32. NEGOTIATIONS WITH LOWEST RESPONSIVE AND RESPONSIBLE BIDDER

If the bid by the lowest responsive and responsible bidder exceeds available funds, the County reserves the right to negotiate with the apparent low bidder to obtain an acceptable price. Negotiations with the apparent low bidder may involve discussions of reduction of quantity, quality, or other cost saving mechanisms. The final negotiated contract shall be subject to final approval of the County, in its sole discretion.

33. ELECTRONIC SIGNATURE

If awarded, the Bidder may be required to accept an agreement and sign electronically through the County's e-signature solution, DocuSign.

FOLLOWING THIS PAGE IS THE AGREEMENT THAT WILL BE ENTERED INTO BETWEEN THE COUNTY AND THE CONTRACTOR. THE AGREEMENT IS PART OF THIS SOLICITATION. THIS AGREEMENT IS SUBJECT TO REVIEW BY THE COUNTY ATTORNEY PRIOR TO BEING SUBMITTED FOR CONTRACTOR'S SIGNATURE.

II. AGREEMENT AND CONTRACT TERMS AND CONDITIONS



**ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT
SUITE 500, 2100 CLARENDON BOULEVARD
ARLINGTON, VA 22201**

AGREEMENT NO. 23-DES-ITBPW-586

THIS AGREEMENT is made, on _____, between Contractor's name,
Contractor's address ("Contractor") a name of state type of entity
authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County,
Virginia ("County"). The County and the Contractor, for the consideration hereinafter specified, agree as
follows:

1. CONTRACT DOCUMENTS

The Contract Documents consist of:

- Agreement No. 23-DES-ITBPW-586 and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 23-DES-ITBPW-586, including DES General Conditions, Special Conditions, and Supplementary Specifications incorporated by reference
- Exhibit B – Virginia Department Of Labor And Industry Wage Determination Decision
- Exhibit C – Price Bid of Contractor
- Exhibit D – Contractor Performance Evaluation Form
- Exhibit E – Special Conditions
- Exhibit F – Supplementary Specifications
- Exhibit G – Signed Plan Set
- Exhibit H – Modified Guardrail Layout and Details
- Exhibit I – VDOT Permit
- Exhibit J – NPS Permit
- Exhibit K – Nationwide Permit
- Exhibit L – VDOT Lane Closure Guidelines
- Exhibit M – Arlington County Materials Testing Specifications
- Exhibit N – RFI Form Template

Where the terms and provisions of this Agreement vary from the terms and provisions of the other Contract Documents, the terms and provisions of this Agreement will prevail over the other Contract Documents, and the remaining Contract Documents will be complementary to each other. If there are any conflicts, the most stringent terms or provisions will prevail.

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

2. SCOPE OF WORK

The Contractor will furnish all labor, materials, and equipment for the construction of the N. Glebe Road roadside ditch restoration ("the "Project") and all other work shown, described, and required by the Contract Documents (hereinafter "the Work").

The Work shall be performed according to the standards established by the Contract Documents read together as a single specification. It shall be the Contractor's responsibility, at solely the Contractor's cost, to provide sufficient services to fulfill the purposes of the Work. Nothing in the Contract Documents shall be construed to limit the Contractor's responsibility to manage the details and execution of its Work.

3. PROJECT OFFICER

The performance of the Contractor is subject to the review and approval of the County Project Officer identified in Section 53, Notices, unless the Contractor is otherwise notified in writing.

4. TIME FOR COMPLETION

Work under this Agreement shall achieve Substantial Completion no later than sixty (60) consecutive calendar days after the commencement date given in a Notice to Proceed provided by the County to the Contractor, subject to any modifications made as provided for in the Contract Documents. This sixty (60) day period shall be the Period of Performance for Substantial Completion. No Work shall be deemed Substantially Complete until it meets the requirements of Substantial Completion set forth in the General Conditions. Final Completion of the Work shall be completed no later than thirty (30) calendar days after the date of acceptance of Substantial Completion by the County Project Officer. Work will not reach Final Completion until it meets the requirements set forth in the General Conditions.

Unless otherwise provided, no claims for early completion are allowed.

5. CONTRACT AMOUNT

The County will pay the Contractor in accordance with the terms of the Progress Payments and Retainage and Payment Terms sections below and at the prices shown in Exhibit C, but not more than \$_____ for the Contractor's completion of the Work as required by the Contract Documents provided the Work is performed to the satisfaction of and is accepted by the Project Officer. The Contractor will complete the Work for the total amount specified in this section ("Contract Amount") unless such amount is modified as provided in this Agreement. The Contract Amount includes all of the Contractor's costs and fees (profit) and is inclusive of all anticipated or known site conditions, anticipated or known materials, labor, and equipment costs, or any other costs which should reasonably have been expected by the Contractor Documents.

6. PROGRESS PAYMENTS AND RETAINAGE

The County will make monthly progress payments to the Contractor upon written application by the Contractor, on the basis of a written estimate of the work performed during the preceding calendar month as approved by the Project Officer. However, 5% of each progress payment will be retained by the County until Final Completion and acceptance of all Work covered by the Agreement.

All material and work covered by partial payments will become the property solely of the County at the time the partial payment is made. However, the Contractor will have the sole responsibility, care and custody for all materials and work upon which payments have been made until Substantial Completion. When calculating payment for materials on-site, the County shall not pay for materials which are not scheduled for incorporation into the Work within sixty (60) days from the date of application for payment.

7. PAYMENT TERMS

The Contractor must submit invoices to the County's Project Officer, who will either approve the invoice or require corrections. The County will pay the Contractor 45 days after approval of an invoice for completed work which is reasonable and allocable to the Contract. All payments will be made from the County to the Contractor via ACH. The number of the County Purchase Order pursuant to work has been performed must appear on all invoices.

The Contractor also must submit to the County's Project Officer its W-9 Form, which will include its Federal Employer Identification Number ("FEIN") or Social Security Number ("SSN"), whichever is applicable, before the County can process payment to the Contractor under the Contract.

8. PAYMENT OF SUBCONTRACTORS

The Contractor is wholly responsible for the entire amount owed to any subcontractor with which the Contractor contracts in the performance of this Agreement, regardless of whether the Contractor has received payment from the County.

If the Contractor has not received payment from the County for work completed by a subcontractor under this Contract, the Contractor must pay the subcontractor within 60 days of receipt of an invoice from the subcontractor following satisfactory completion of the work. The Contractor is not liable for amounts that are not owed as a result of the subcontractor's noncompliance with the terms of the Contract, in which case the Contractor must notify the subcontractor, in writing within 50 days of receipt of an invoice from the subcontractor for the work, of its intention to withhold payment, in full or in part, and the reason for doing so. The notice must specify the contractual noncompliance, the dollar amount being withheld and the lower-tier subcontractor responsible for the contractual noncompliance, if applicable.

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

9. PREVAILING WAGE CONTRACT REQUIREMENTS

- A. Section 4-104 of the Arlington County Purchasing Resolution (regarding "Prevailing Wage") applies to this Contract. All employees of the Contractor and any subcontractors shall be paid wages, salaries, benefits, and other remuneration at or above the craft or trade category prevailing wage rate indicated by Virginia Commissioner of Labor and Industry (DOLI) and as listed in the contract.

The Contractor and its subcontractors shall submit all certified payrolls and statements of compliance weekly through the [eComply website](#). If the Contractor or any subcontractor does not have an eComply profile, a one-time registration process immediately following the Notice of Award or Notice of Intent to Award and training on system functionality are required for each non-registered entity. The Contractor shall also be responsible for reviewing subcontractor payrolls and ensuring that contract requirements are met.

In addition to applying the prevailing wage rates to its own employees, the Contractor shall include the provisions of this Article 4-104 in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor agrees to assume the obligation that the wage requirements will be observed in fulfilling the requirements of the Contract. The appropriate enforcement sanctions will be invoked against the Contractor and any such subcontractor in the event of such subcontractor's failure to comply with any of the provisions of this Article 4-104.

All wage rates to be used are listed in this Contract in Exhibit B. While DOLI maintains a list of wage determinations online for reference purposes, only the wage determinations made in an official Wage Determination Decision, sent by DOLI to Arlington County, can be used to ascertain the exact rates to be paid for this Contract.

All rates are determined by DOLI and any appeals of specific classification may be made through the Wage Determination Appeal form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Appeal-for-Wage-Determination-Clarification.pdf>.

- B. Upon award of the Contract, the Contractor shall certify, under oath, to the Virginia Commissioner of Labor and Industry and to the County Prevailing Wage Compliance Manager, the pay scale for each craft and trade to be employed for, or to provide labor for, in the Work by the Contractor and any subcontractors. The Contractor's certification shall include all information required by the Code of Virginia § 2.2-4321.3G.
- C. The Contractor shall ensure that each individual providing labor as a mechanic, laborer, worker or equivalent shall be accurately classified in confirmation with the Wage Determination.

- D. The Contractor shall post the prevailing wage rate for each craft and classification involved as determined by DOLI, including the effective date, in a prominent and easily accessible place at the work site during the time work is being performed. The posting must be in English and any other language that is primarily spoken by the individuals at the work site. Within 10 days of such posting the Contractor shall certify to the County Prevailing Wage Compliance Manager and DOLI its compliance with this subsection at https://www.doli.virginia.gov/wp-content/uploads/2021/04/PW_Posting_Compliance_Form.pdf;
- E. The Contractor must fully cooperate with the County Prevailing Wage Compliance Manager to ensure contract compliance requirements ,including but not limited to site visits, wage rate signage, contractor employee interviews, and the submission of certified payroll records.
- F. The Contractor must submit to the County Prevailing Wage Compliance Manager and DOLI, within five (5) working days of the end of each month, certification for each craft or trade employed on the project, specifying the total hourly amount paid to employees, including wages and applicable fringe benefits using the Pay Scale Certification Form at <https://www.doli.virginia.gov/wp-content/uploads/2021/04/DOLI-Pay-Scale-Certification-for-Public-Works-Projects.pdf>. The certification must itemize the amount paid in wages and each applicable benefit and list the names and addresses of any third party fund, plan or program to which benefit payments will be made on behalf of employees.
- G. The Contractor shall indemnify and hold harmless the County from any fines, demands, claims, suits, and damages, including attorney's fees, resulting from the Contractor's or any subcontractor's failure to pay the Prevailing Wage.
- H. The Contractor and its subcontractors shall keep, maintain, and preserve (i) records relating to the wages paid to and hours worked by each individual performing the work of any mechanic, laborer, or worker; and (ii) a schedule of the occupation or work classification at which each individual performing the work of any mechanic, laborer, or worker on the construction project is employed each work day and week. The Contractor and its subcontractors shall make such records available to the Prevailing Wage Compliance Manager within 10 days of a request or per a regular schedule established in the Contract, and shall certify that records reflect the actual hours worked and the amount paid to its workers for whatever time period is requested. The Contractor and its subcontractors must preserve these records for a period of six (6) years after the expiration or earlier termination of the applicable contract.
- I. Any Contractor or subcontractor who pays any mechanic, laborer, or worker for services under this Contract less than the Prevailing Wage shall be liable to such individuals for the payment of all wages due, plus interest at an annual rate of eight percent (8%) from the dates wages were due; and shall be disqualified from bidding on public contracts with any public body until the Contractor or subcontractor has made full restitution. A willful violation of Article 4-104 is a Class I misdemeanor.
- J. For questions regarding Prevailing Wage, please email prevailingwage@arlingtonva.us.

10. RELEASE AND REQUEST FOR FINAL PAYMENT

In order to receive final payment upon Final Completion of the Project and before Final Acceptance, the Contractor must submit to the Project Officer a signed original notarized copy of the Arlington County Release and Request for Final Payment form per the General Conditions.

11. LIQUIDATED DAMAGES

Time is of the essence under this Contract. The Work must be completed within the Time for Completion. The County and the Contractor agree that damages for failure to achieve Substantial Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1,048 per calendar day is in proportion to the actual loss that the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1,048 per day for each and every day beyond the time for Substantial Completion that the County determines Substantial Completion has not achieved. The County and the Contractor also agree that damages for failure to achieve Final Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1,048 per calendar day is in proportion to the actual loss the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1,048 per day for each and every day beyond the time for Final Completion until Final Completion is achieved.

The County will be entitled to deduct liquidated damages against any sums owed by the County to the Contractor under this Contract. The Contractor hereby waives any defense as to the validity of any liquidated damages on grounds that such liquidated damages are void as penalties or are not reasonably related to actual damages.

12. PERFORMANCE OF WORK BY THE CONTRACTOR

The Contractor shall perform on site, and with its own organization, at least thirty percent (30%) of the total direct labor and at least thirty percent (30%) of the total work in place to be performed under the Contract. Prior to award, the Contractor must demonstrate to the Project Officer's satisfaction that both of these standards will be met during contract performance. Labor and work to be counted when determining whether the Contractor has met the self-performance requirement shall not include any work that the Contractor performs under the supervision of a subcontractor.

The self-performance percentage may be reduced by an Amendment to the Contract, if during performance of the Work, the Contractor requests a reduction and the Project Officer determines that the reduction would be to the advantage of the County.

13. NON-APPROPRIATION

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods or services provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever occurs first.

14. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR

This Contract does not obligate the County to purchase a specific quantity of items or services during Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual

quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods or services covered by this Contract. The items or services covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through those contract(s).

15. COUNTY PURCHASE ORDER REQUIREMENT

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods or services without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

16. LIEN

It is expressly agreed that after any payment has been made by the County either to the Contractor for work done, or labor or material supplied under the Contract, the County will have a lien upon all material delivered to the site either by the Contractor, or for the Contractor, which is to be used in the performance of the Contract.

17. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

18. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

19. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

20. SEXUAL HARASSMENT POLICY

If the Contractor employs more than five employees, the Contractor shall (i) provide annual training on the Contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the Contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the Contractor owns or leases for business purposes and (b) the Contractor's employee handbook.

21. PROJECT STAFF

The County has the right to reasonably reject staff or subcontractors whom the Contractor assigns to the Project. The Contractor must then provide replacement staff or subcontractors satisfactory to the County in a timely manner and at no additional cost to the County. The day-to-day supervision and control of the Contractor's employees and its subcontractors is the sole responsibility of the Contractor.

22. FAILURE TO DELIVER

If the Contractor fails to deliver goods or services in accordance with the Contract terms and conditions, the County, after notice to the Contractor, may procure the goods or services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. The County shall be entitled to offset such costs against any sums owed by the County to the Contractor. However, if public necessity requires the use of nonconforming materials or supplies, they may be accepted at a reduction in price to be determined solely by the County.

23. UNSATISFACTORY WORK

If any of the work done, or material, goods, or equipment provided by the Contractor, is unsatisfactory to the County the Contractor must, upon notice from the County, immediately remove at the Contractor's expense such unsatisfactory work, material, goods, or equipment and replace the same with work, material, goods, or equipment satisfactory to the County. If the Contractor fails to do so after fifteen (15) days the County shall have the right to remove or replace the rejected work, material, goods, or equipment at the expense of the Contractor and offset the expense and administrative costs against any sums owed to the Contractor. This provision applies during the Contract term and during any warranty or guarantee period. At the Project Officer's discretion, rather than correction or replacement of the work, an appropriate adjustment to the Contract Amount may be made.

24. TERMINATION

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE

1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County (“Cure Period”). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. Upon such termination, the Contractor may apply for compensation for Contract services that the County previously accepted (“Termination Costs”), unless payment is otherwise barred by the Contract. The Contractor must submit any request for Termination Costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for Termination Costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek Termination Costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County’s recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to Termination Costs, as defined above, plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

25. INDEMNIFICATION

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County Indemnitees") from and against any and all claims made by third parties for any and all losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor's acts or omissions, including the acts or omissions of its employees, vendors, delivery drivers and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

The Contractor agrees to defend, indemnify, and hold harmless County from any and all damages, costs, claims, expenses, suits, losses, liabilities, or obligations of any kind including without limitation, environmental assessments, evaluations, remediations, fines, penalties, and clean-up costs which may be asserted against or imposed upon, or incurred by County arising from Contractor's discharge or disposal of any hazardous or toxic materials, trash, debris, refuse, waste or other materials ("Materials") related in any way to contractor's operations herein.

26. INTELLECTUAL PROPERTY INDEMNIFICATION

The Contractor warrants and guarantees that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability or

exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

27. COPYRIGHT

By this Contract, the Contractor irrevocably transfers, assigns, sets over and conveys to the County all rights, title and interest, including the sole exclusive and complete copyright interest, in any and all copyrightable works created pursuant to this Contract. The Contractor will execute any documents that the County requests to formalize such transfer or assignment.

The rights granted to the County by this section are irrevocable and may not be rescinded or modified, including in connection with or as a result of the termination of or a dispute concerning this Contract.

The Contractor may not use subcontractors or third parties to develop or provide input into any copyrightable materials produced pursuant to this Contract without the County's advance written approval and unless the Contractor includes this Copyright provision in any contract or agreement with such subcontractors or third parties related to this Contract.

28. OWNERSHIP AND RETURN OF RECORDS

This Contract does not confer on the Contractor any ownership rights or rights to use or disclose the County's data or inputs.

All drawings, specifications, blueprints, data, information, findings, memoranda, correspondence, documents or records of any type, whether written, oral or electronic, and all documents generated by the Contractor or its subcontractors as a result of this Contract (collectively "Records") are the exclusive property of the County and must be provided or returned to the County upon completion, termination, or cancellation of this Contract. The Contractor will not use or willingly cause or allow such materials to be used for any purpose other than performance of this Contract without the written consent of the County.

The Records are confidential, and the Contractor will neither release the Records nor share their contents. The Contractor will refer all inquiries regarding the status of any Record to the Project Officer or to his or her designee. At the County's request, the Contractor will deliver all Records, including hard copies of electronic records, to the Project Officer and will destroy all electronic Records.

The Contractor agrees to include the provisions of this section as part of any contract or agreement related to this Contract into which it enters with subcontractors or other third parties.

The provisions of this section will survive any termination or cancellation of this Contract.

29. CONFIDENTIAL INFORMATION

The Contractor and its employees, agents and subcontractors will hold as confidential all County information obtained under this Contract. Confidential information includes, but is not limited to, nonpublic personal information; personal health information (PHI); social security numbers; addresses; dates of birth; other contact information or medical information about a person; and information

pertaining to products, operations, systems, customers, prospective customers, techniques, intentions, processes, plans and expertise. The Contractor must take reasonable measures to ensure that all of its employees, agents and subcontractors are informed of and abide by this requirement.

30. ETHICS IN PUBLIC CONTRACTING

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its bid was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

31. COUNTY EMPLOYEES

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

32. FORCE MAJEURE

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract, provided that the affected party gives notice to the other party as soon as practicable after the force majeure event, including reasonable detail and the expected duration of the event's effect on the party.

33. AUTHORITY TO TRANSACT BUSINESS

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

34. RELATION TO THE COUNTY

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation.

35. ANTITRUST

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

36. REPORT STANDARDS

The Contractor must submit all written reports required by this Contract for advance review in a format approved by the Project Officer. Reports must be accurate and grammatically correct and should not contain spelling errors. The Contractor will bear the cost of correcting grammatical or spelling errors and inaccurate report data and of other revisions that are required to bring the report(s) into compliance with this section.

Whenever possible, proposals must comply with the following guidelines:

- printed double-sided on at least 30% recycled-content and/or tree-free paper
- recyclable and/or easily removable covers or binders made from recycled materials (proposals with glued bindings that meet all other requirements are acceptable)
- avoid use of plastic covers or dividers
- avoid unnecessary attachments or documents or superfluous use of paper (e.g. separate title sheets or chapter dividers)

37. AUDIT

The Contractor must retain all books, records and other documents related to this Contract for at least five (5) years, unless otherwise specified in the Contract, or such period of time required by the County's funding partner(s), if any, whichever is greater, after the final payment and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's fees; or the County may deduct the overcharges and examination costs from any amount that the County owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five (5) years after the final payment, unless otherwise specified in the Contract, or such period of time required by the County's funding partner(s), if any, whichever is greater, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

The Purchasing Agent may require the Contractor to demonstrate that it has the necessary facilities, ability, and financial resources to comply with the Contract and furnish the service, material or goods specified herein in a satisfactory manner at any time during the term of this Contract.

38. ASSIGNMENT

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

39. AMENDMENTS

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

40. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

41. DISPUTE RESOLUTION

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law.

42. APPLICABLE LAW, FORUM, VENUE, AND JURISDICTION

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

43. ARBITRATION

No claim arising under or related to this Contract may be subject to arbitration.

44. NONEXCLUSIVITY OF REMEDIES

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

45. NO WAIVER

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

46. SEVERABILITY

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

47. ATTORNEY'S FEES

In the event that the County prevails in any legal action or proceeding brought by the County to enforce any provision of this Contract, the Contractor will pay the County's reasonable attorney's fees and expenses.

48. SURVIVAL OF TERMS

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; OWNERSHIP AND RETURN OF RECORDS; AUDIT; COPYRIGHT; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND CONFIDENTIAL INFORMATION.

49. HEADINGS

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

50. AMBIGUITIES

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

51. NOTICES

Unless otherwise provided in writing, all legal notices and other formal communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

TO THE CONTRACTOR:

TO THE COUNTY:

_____, Project Officer

AND

Dr. Sharon T. Lewis, LL.M, MPS, VCO, CPPB
Purchasing Agent
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 500
Arlington, Virginia 22201
Phone: (703) 228-3294
Email: slewis1@arlingtonva.us

TO COUNTY MANAGER’S OFFICE (FOR PROJECT CLAIMS):

Mark Schwartz, County Manager
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 318
Arlington, Virginia 22201

52. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

53. INSURANCE, PAYMENT AND PERFORMANCE BONDS

The Contractor shall maintain the required insurance coverage and payment and performance bonds as set forth in the Invitation to Bid through completion of the Contract, including all warranty and guarantee periods.

54. MATERIAL CHANGES

The Contractor shall notify Purchasing Agent within seven days of any material changes in its operation that relate to any matter attested regarding certifications on its bid form.

55. CONTRACTOR PERFORMANCE EVALUATION

Arlington County will perform written evaluations of the Contractor's performance at various intervals throughout the term of this Contract. The evaluations will address, at a minimum, the Contractor's work/performance, quality, cost controls, schedule, timeliness and sub-contractor management. The Project Officer shall be responsible for completing the evaluations and providing a copy to the Contractor and County Procurement Officer.

56. COUNTERPARTS

This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all purposes hereunder and shall be effective as delivery of a manually executed original counterpart.

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON
COUNTY, VIRGINIA

CONTRACTOR

AUTHORIZED
SIGNATURE: _____

AUTHORIZED
SIGNATURE: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

III. ARLINGTON COUNTY CONSTRUCTION GENERAL CONDITIONS

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A. INTRODUCTION TO TERMS

- 1) The term "Agreement" means the completed and signed Form of Contract Agreement.
- 2) The term "Award Date" means the date of execution of the Agreement by the Purchasing Agent.
- 3) The term "Business Day" shall refer to any day that the County is open for general business.
- 4) The term "Calendar Day" means any day of twenty-four hours measured from midnight to the next midnight. Included are weekends and holidays. When the term "Day" is used it shall be assumed to refer to a Calendar Day unless otherwise specified.
- 5) The term "Change Order" means a written order to the Contractor, signed by the Project Officer and the Contractor, which authorizes a change in the Work, and/or adjustment to the Contract Amount and/or an adjustment to the Time for Completion. A Change Order once signed by all the parties is incorporated into and becomes part of the Contract.
- 6) The term "Commencement Date" means the date on which the Time for Completion will commence for the Contractor to begin to perform his obligations under the Contract Documents as provided in the Notice to Proceed.
- 7) The term "Construction Change Directive" means a written order issued by the County directing a change in the Work prior to agreement on adjustment, if any, in the Contract Amount or Contract Time, or both.
- 8) The term "Contract Documents" means the Agreement and all the documents and Exhibits and/or Attachments identified therein which shall include the Drawings and the Specifications, and all modifications including amendments and subsequent Change Orders thereto properly incorporated in the Contract.
- 9) The terms "County" and "Contractor" shall mean the respective parties to the Contract. They shall be treated throughout the Contract Documents as though each were of the singular number and masculine gender. Only one Contractor is recognized as a party to this Contract.
- 10) The term "Critical Path Method or CPM" means a step-by-step project management technique for process planning that defines critical and non-critical tasks with the goal of preventing time-frame problems and process bottlenecks. An activity on the critical path cannot be started until its predecessor activity has been completed. is delayed then the entire project is delayed.
- 11) The term "Delay" means an event or condition that results in a work activity starting or being completed later than originally planned.

- 12) The term "Drawings" means all drawings pertaining to the Contract, including the Contract Drawings and Construction Notes which show and describe the locations, character, dimensions, and details of the Work to be performed under the contract.
- 13) The term "Field Order" is a written order to the Contractor, authorized by the Project Officer, which acknowledges a change in the Work that does not adjust the Contract Amount and does not adjust the Time for Completion.
- 14) The term "Final Acceptance" shall mean the date on which the County issues the final payment for the Work.
- 15) The term "Final Completion" shall mean the condition when the County agrees that all the Work has been fully completed in accordance with the Contract Documents and is acceptable. The date of the Final Completion of the Work under the Contract is the date on which Final Completion is accomplished.
- 16) The term "Float" shall represent the amount of time that a task in a project network or sequence can be delayed without causing a delay to: subsequent tasks ("free Float") or project completion date ("total Float"). Float shall belong to the County and shall be used for the successful completion of the Project within the Time for Completion.
- 17) The term "Limits of Disturbance (LOD)" shall represent the area within which land disturbing activities take place. Land disturbing activities include all actions that expose bare soil during construction.
- 18) The term "Limits of Work (LOW)" shall represent the area within which construction activities take place, including but not limited to the Limits of Disturbance area.
- 19) The term "Notice to Proceed" shall mean a written notice issued by the County to the Contractor stating the Commencement Date. The Notice to Proceed will specify the Time for Completion of the Contract.
- 20) The term "Project" means the entire proposed construction to be executed as stipulated in the Contract Documents
- 21) The term "Project Officer" means the County Project Officer assigned by the Director of the County Department responsible for the project, or the Director's designee. When a designee to act on behalf of the Project Officer is used by the County, the name of the designee and the duties and authority of such designee will be identified in the Contract Documents or in a written notice to the Contractor from the Project Officer responsible for the project. The designee may be a professional architect or engineer or other person employed by the County to perform construction services administration, design services, or project oversight.

- 22) The term "Punch List" means unfinished items of the construction of the Project, which unfinished items of construction are minor or insubstantial details of construction, mechanical adjustment or decoration remaining to be performed, the non-completion of which would not materially affect use of the Project, and which are capable of being completed within the time specified for Final Completion after Substantial Completion has been achieved.
- 23) The term "Request for Information" (RFI) means a request originated by the Contractor requesting clarification or additional information from the Project Officer and/or Architect/Engineer concerning information in the construction documents where the Contractor believes there is insufficient information or a conflict in the documents. RFI's shall be submitted by the Contractor sufficiently in advance of the Work to provide time for assessment and response without delay of the Work. Responses to RFI's shall not be construed as authorization for a Change Order.
- 24) The term "Schedule of Values" means a listing of the Contractor's total contract value by Construction Specifications Institute (CSI) divisions, including Division 1, Contractor's General Conditions.
- 25) The term "Site" refers to that portion of the property on which the Work is to be performed or which has otherwise been set aside for use by the Contractor.
- 26) The terms "Special Conditions" mean the written statements modifying or supplementing the Technical Specifications or General Conditions for requirements or conditions peculiar to the Contract.
- 27) The term "Specifications" means and shall include the Technical Specifications, the Special Conditions and all written agreements and instructions pertaining to the performance of the Work.
- 28) When used, the term "Stipulated Price Item" means and includes an item of Work, unanticipated or of unknown quantity at the time of issuance of the solicitation for a Bid and determined to be executed, based on the actual field conditions during the progress of Work under the Contract. The Unit Price for the "Stipulated Price Item", as identified in the "Stipulated Price Items" section of the Bid Form, is predetermined by the County as the current reasonably workable rate for the Item inclusive of all necessary labor, equipment, materials, overheads (provision and installation), and the contractor's profit.
- 29) The term "Subcontractor", shall include only those having a direct contract with the Contractor, and it shall include those who furnish material worked to a special design according to the plans and specifications for this Work but shall not include those who merely furnish material not so worked.
- 30) The term "Substantial Completion" shall mean the condition when the County agrees that the Work, or a specific portion thereof, is sufficiently complete, in

accordance with the Contract Documents, so that it can be utilized by the County for the purposes for which it was intended. The date of Substantial Completion of the Work under the Contract is the milestone date on which Substantial Completion condition is accomplished.

- 31) The term "Technical Specifications" means that part of the Contract Documents that describe the quality of materials, method of installation, standard of workmanship, and the administrative and procedural requirements for the performance of the Work under the contract.
- 32) The term "Time for Completion" shall mean the time period set forth in the Agreement.
- 33) The term "Work" shall mean the services performed under this Contract including, but not limited to, furnishing labor, and furnishing and installing materials and equipment required to complete the Project specified in the Contract Documents.

B. DRAWINGS, SPECIFICATIONS, RELATED DATA AND RECORDS KEEPING

1. INTENT OF THE DRAWINGS AND SPECIFICATIONS

- 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, water haulage, light power, transportation, superintendence, temporary construction of all kinds, and other services and facilities of every nature whatsoever that are necessary to execute and deliver the Work, complete and usable within the scope of the Contract with all parts in working order, and all connections properly made.
- b. The general character and scope of the Work are illustrated by the Drawings and listed in the Specifications. Any additional drawings and or other instructions deemed necessary by the Project Officer or designee will be furnished to the Contractor when required for the Work and shall be incorporated into the Contract Documents.
- c. Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that direction, requirements, permission, or review of Project Officer or designee is intended unless stated otherwise. As used herein, "provide" shall be understood to mean "provide complete in place", that is, "furnish and install."
- d. Unless otherwise specifically noted, the word "similar" where it occurs in the Drawings, shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their locations and their connection with other parts of the Work.
- e. Materials or work described in words which, so applied, have a well-known technical, construction industry, or trade meaning, shall be held to refer to the recognized technical or trade meaning.
- f. The Contract Documents are complementary, and what is called for by any one document shall be as binding as if called for by all documents. In case of conflicting variance between the Contract Documents, the Order of Precedence stated in the Agreement shall govern. Figured dimensions on the plans shall be used; drawings shall not be scaled.
- g. Unless otherwise specifically noted, construction tolerances shall be to the numerical precision presented in the Contract Drawings.

2. DISCREPANCIES AND ERRORS

If the Contractor discovers any discrepancies between the Drawings and Specifications and the site conditions or any errors or omissions in the Drawings or Specifications, the Contractor shall at once, but in no event later than three calendar days after discovery of

the discrepancy or error, report them in writing to the Project Officer or designee. If the Contractor proceeds with any work that may be affected by such discrepancies, errors, or omissions, after their discovery, but before a clarification is provided, such work shall be at the Contractor's risk and expense. Issues affecting critical path activities shall be made known to the Project Officer or designee within one business day after discovery.

3. DIFFERING SITE CONDITIONS

The Contractor shall immediately, and before the conditions are further disturbed, give notice to the Project Officer of subsurface or latent physical conditions at the site which differ materially from those indicated in this Contract, or previously unknown physical conditions discovered at the site of an unusual nature and which differ materially from those ordinarily expected to be encountered at the site. Such notice shall be followed by a written notice provided within 48 hours of discovery.

The Project Officer will investigate the site conditions promptly after receiving the notice. If the conditions do materially differ to the extent that an increase or decrease would result in the Contractor's cost of the Work, or the time required for performing any part of the Work under the contract, an equitable adjustment may be made under this clause and the Contract modified in writing accordingly.

No request by the Contractor for an adjustment to the Contract under this clause shall be allowed, unless the Contractor has given the written notice required. If the Contractor proceeds with any work that may be affected by such differing site conditions before giving notice to the Project Officer as set forth herein, such work shall be at the Contractor's sole risk and expense.

No request by the Contractor for an adjustment to the contract for differing site conditions shall be allowed if made after Final Payment under the Contract.

4. COPIES FURNISHED

Except as provided for otherwise, copies of the Drawings and Specifications reasonably necessary for the execution of the Work will be furnished to the Contractor. One electronic copy of the Contract Drawings and Specifications will be provided by the Project Officer or designee to the Contractor.

5. USE OF CADD FILES

The Contractor may request Electronic CADD files related to the Work or the Project. The CADD files will be provided by the County only if the Contractor completes the Arlington County Electronic CADD Drawing Release Form, which form is then incorporated by reference into this Contract. Use of CADD files is at the Contractor's own risk and in no way alleviates Contractor's responsibility for the Work to conform to the Plans and Specifications.

6. DOCUMENTS ON THE JOBSITE

The Contractor shall keep on the site of the Project a copy of the Drawings and Specifications updated to include all authorized revisions and RFI responses, and

shall at all times give the County and its authorized representatives access thereto. The Contractor shall mark up the Drawings on a daily basis in red. The As-Built Drawings shall be submitted to the County at Substantial Completion as the Final As-Built Drawings.

7. OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All Drawings and Specifications and copies thereof furnished by the County are the property of the County and shall not be used on other projects. All copies of the Drawings and Specifications except the signed Contract sets shall be returned to the Project Officer or designee at Final Completion.

8. SUBMITTALS

- a. The term "submittals", as used herein, shall include fabrications, erection and setting drawings, manufacturers' standard drawings, schedules, descriptive literature, catalogs, brochures, performance and test data, wiring and control diagrams, and other descriptive data pertaining to the materials and equipment as required to demonstrate compliance with the Contract requirements.
- b. Unless other specified in the Specifications the Contractor shall submit for the review of the Project Officer or designee a listing of all submittals required by the Specifications or requested by the Project Officer or designee within fifteen (15) calendar days after receipt of the Notice to Proceed. This listing shall include due dates for each required submittal, coordinated with the project schedule such that adequate time is allotted for review and potential resubmittals, fabrication and delivery without causing delay. The Contractor bears all risk for delay associated with submittals not received in a timely manner.
- c. Submittals shall be submitted in such number of copies as established in the Specifications. Each submission shall be accompanied by a letter of transmittal, listing the contents of the submission and identifying each item by reference to specification section or drawing. All submittals shall be clearly labeled with the name of the project and such information as may be necessary to enable their complete review by the Project Officer or designee. Catalog plates and other similar material that cannot be so labeled conveniently shall be bound in suitable covers bearing the identifying data.
- d. Submittals shall be accompanied by all required certifications and other such supporting material, and shall be submitted in sequence or groups that all related items can be checked together. When submittals cannot be checked because a submission is not complete, or because submittals on related items have not been received by the Project Officer or designee, then such submittals will be returned without

action or will be held, not checked, until the missing material is received. Incomplete or defective submittals shall not be considered to have been submitted. Failure to deliver submittals within the specified time will not be grounds for additional time or compensation.

- e. Submittals shall have been reviewed by the Contractor and coordinated with all other related or affected work before they are submitted for review and acceptance and shall bear the Contractor's certification that the Contractor has checked and approved them as complying with all relevant information in the Contract Documents. Submittals submitted without such certification and coordination will be returned to the Contractor without action and will not be considered as a formal submission.
- f. If shop drawings show variations from the Drawings and Specifications because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in the Contractor's letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Drawings and Specifications even though shop drawings have been accepted.
- g. The Project Officer or designee shall review the shop drawings with reasonable promptness. Review and/or acceptance of shop drawings will be general for conformance with the design concept of the Project and compliance with the information given in the Contract Documents, and will not include quantities, detailed dimensions, nor adjustments of dimensions to actual field conditions. Acceptance shall not be construed as permitting any departure from Contract requirements, as authorization of any increase in price nor as relieving the Contractor of the responsibility for any error in details, dimensions or otherwise that may exist. Review is not intended to relieve the contractor of full responsibility for the accuracy and completeness of the plans and calculations, or for the complete compliance with the contract documents. Contractor is solely responsible for the means and methods of the construction, including temporary items proposed for use.

9. SAMPLES

The Contractor shall submit to the Project Officer or designee, all samples required by the Specifications or requested by the Project Officer or designee. Samples shall be submitted in single units only, unless the Contractor desires additional units for the Contractor's own use. Each sample shall bear a label indicating what the material represented, the name of the producer and the title of the Project. Acceptance of a sample shall be only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents, and only for the characteristics or use named in such acceptance. Such acceptance shall not be construed to change or modify any Contract requirements or the Contract Price. Materials and equipment

incorporated in the Work shall match the accepted samples. The Contractor shall be responsible for researching the availability of the specified product in the dimensions and colors specified at no additional cost to the County. Failure of the Contractor to identify specified products that are not commercially produced within the time required for submittal transmittal in order to meet the project schedule shall not be entitled to additional time or compensation.

10. TESTS

Any specified tests of materials and finished articles shall be made by bureaus, laboratories or agencies approved by the Project Officer or designee and the certified reports of such tests shall be submitted to the Project Officer or designee. All tests shall be in compliance with the Specifications. All costs in connection with the testing and test failures shall be borne by the Contractor. Failure of any material to pass the specified tests or any test performed by the Project Officer or designee, will be sufficient cause for refusal to consider, under this Contract, any further materials of the same brand or make of that material. Samples of various materials delivered on the site or in place may be taken by the Project Officer or designee for testing. Samples failing to meet the Contract requirements will automatically void previous acceptance of the items tested. The Contractor will not be compensated for additional time and/or cost incurred in finding an acceptable replacement or the removal and replacement of the defective item.

11. MATERIALS AND EQUIPMENT LIST

- a. Unless otherwise specified in the Specifications, within thirty (30) days of the Commencement Date the Contractor shall submit to the Project Officer or designee a complete list of materials and equipment proposed for use in connection with the Project. Partial lists submitted from time to time will not be considered unless specifically approved by the Project Officer or designee.
- b. After any material or piece of equipment has been approved through submittal process, no change in brand or make will be permitted unless satisfactory written evidence is presented to prove that the manufacturer cannot make scheduled delivery of the accepted material, or that material delivered has been rejected and the substitution of a suitable material is an urgent necessity, or that other conditions have become apparent which indicate that acceptance of such other material is in the best interest of the County. The Contractor is solely responsible for the cost and time required to obtain and install a suitable replacement.

12. STANDARDS, SUBSTITUTIONS

- a. Any material specified by reference to the number, symbol or title of a specific standard, such as a Commercial Standard, a Federal

Specification, a Trade Association Standard, or other similar standard, shall comply with the requirements in the latest revision of the standards or specification and any amendment or supplement, except as limited to type, class or grade, or as modified in such reference. The standard referred to, except as modified in the Specifications, shall have full force and effect as though printed in the Specifications.

- b. Reference in the Specifications or on the Drawings to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as eliminating from competition other products of equal or better quality by other approved manufacturers. Otherwise, applications for acceptance of substitutions for the specified items will be considered only upon request of the Contractor, not of individuals, trades or suppliers, and only for a specific purpose; no blanket acceptance will be granted. No acceptance of a substitution shall be valid unless it is in written form and signed by the Project Officer or designee.
- c. If any proposed substitution will affect a correlated function, adjacent construction or the work of other contractors, then the necessary changes and modifications to the affected work shall be considered as an essential part of the proposed substitution, to be accomplished by the Contractor without additional expense to the County or an extension of the contract time, if and when accepted. Detail drawings and other information necessary to show and explain the proposed modifications shall be submitted with the request for acceptance of the substitution.

13. SURVEYS AND CONTROLS

Unless otherwise specified, the Contractor shall establish all baselines for the location of the principal component parts of the Work, establish a suitable number of benchmarks adjacent to the Work, and develop all detail surveys necessary for construction by a professional land surveyor licensed in the Commonwealth of Virginia. The Contractor shall carefully preserve benchmarks, reference points and stakes, and in the case of destruction thereof by the Contractor or due to the Contractor's negligence or the negligence of any subcontractor or supplier, the Contractor shall be responsible for expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the loss or disturbance of such benchmarks, reference points and stakes. The Contractor shall within 30 days of NTP perform a full site survey to verify all control points shown on the drawings against existing conditions within the site limits. Any discrepancies found during this effort shall be made known immediately to the Project Officer. Failure to perform this survey and provide proof and acceptance of Project datum, control points, and existing benchmarks will not give rise to any extensions to contract time or amount. The cost of all necessary surveying services shall be considered incidental to the work and, unless otherwise specified, shall be included in the cost of the Work.

14. AS-BUILT DRAWINGS

As-Built Drawings shall be the responsibility of the Contractor. The Contractor shall maintain and mark up one set of prints of the applicable Contract Drawings to portray as-built construction. The prints shall be neatly and clearly marked in red to show all variations between the Work actually provided and that indicated on the Contract Drawings, and all utilities encountered in the Work. All drafting shall conform to good drafting practice and shall include such supplementary notes, legends and details as may be necessary for legibility and clear portrayal of the as-built construction. These drawings shall be marked promptly upon any approved change to the Work or discovery of any undocumented utility or obstruction and shall be submitted to the Project Officer or designee in sufficient time to be approved no later than thirty (30) calendar days after the Substantial Completion Date. The final As-Built Drawings approved by the Project Officer or designee shall be submitted in paper copy and .pdf format electronic files prior to Final Completion. Unless otherwise required under the Contract Documents, incorporation of red-lined changes into CADD format shall be the responsibility of the Architect and/or Engineer of Record, with the exception being any documents prepared by the Contractor in CADD, the record version of which shall also be provided to the County in CADD format by the Contractor. Final payments will be held until the complete set of red-line drawings are submitted to and approved by the Project Officer.

15. WEB BASED RECORDS DOCUMENTATION

Unless instructed otherwise, the Contractor shall use the web based construction management tool, e-Builder for, but not limited to, submittals, record keeping and document storage of all construction files including, invoices, pay applications, RFIs, approved shop drawings, change orders, construction progress meeting minutes, warranties, equipment specifications and brochures, record drawings, automated alerts and reminders for all functions, and Operation and Maintenance (O&M) Manuals.

C. COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS

1. STATUS OF COUNTY PROJECT OFFICER OR DESIGNEE

The Project Officer or designee shall be the County's representative during the construction period. All Contractor instructions or requests shall be issued from or submitted through the Project Officer or designee. The Project Officer or designee shall have authority to suspend the Work whenever such suspension may be necessary in the responsible opinion of the Project Officer or designee to ensure the proper execution of the Contract. The Project Officer or designee shall also have authority to reject all work and materials that do not conform to the Contract and to decide questions that arise in the execution of the Work. The County Project Officer or designee will, within a reasonable time, make decisions on all matters relating to the execution and progress of the Work.

2. LIMITATION ON COUNTY'S RESPONSIBILITIES

The County shall not supervise, direct, or have control or authority over, nor be responsible for: The Contractor's means, methods, techniques, sequences or procedures of construction; the safety precautions and programs related to safety, or the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

3. DISPUTES

- a. All disputes or claims arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of Contract shall be submitted in writing to the Project Officer or designee as set forth in these General Conditions. Such claims must set forth in detail the amount of the claim, and shall state the facts surrounding it in sufficient detail to identify it together with its character and scope.
- b. Claims denied by the Project Officer shall be processed in accordance with the procedures outlined in Sections 7-107, Contractual Disputes and 7-108, Legal Actions of the Arlington County Purchasing Resolution and the Dispute Resolution paragraph in the Agreement.
- c. The Contractor shall not cause a delay in the work pending a decision of the Project Officer or designee, County Manager, County Board, or court, except by prior written approval of the Project Officer or designee.

4. INSPECTION OF WORK

The Project Officer or designee and representatives of any public authority having jurisdiction shall, at all times, have access to the Work while in progress. The Contractor shall provide suitable facilities for such access and for proper observation of the Work and shall conduct all special tests required by the Specifications, the Project Officer or designee's instructions, and any laws, ordinances or the regulations of any public

authority applicable to the work. Nothing in this section shall abrogate or otherwise limits or relieves the Contractor's independent duty to inspect the Work.

5. INSPECTION OF MATERIALS

All articles, materials, and supplies purchased by the Contractor for the Work are subject to inspection upon delivery to the site and during manufacturing or fabrication. The County reserves the right to return for full credit, at the risk and expense of the Contractor, all or part of the articles, materials, or supplies furnished contrary to Specifications and instructions. Nothing in this section shall abrogate or otherwise limit or relieve the Contractor's independent duty to inspect materials.

6. EXAMINATION OF COMPLETED WORK

If the Project Officer or designee requests it, the Contractor, at any time before acceptance of the Work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the Specifications. Should the work thus exposed or examined prove acceptable, then the uncovering or removing, and the replacing of the covering or making good of the parts removed shall be paid for as extra work, but should the work so exposed or examined prove unacceptable, then the uncovering, removing and replacing shall be at the Contractor's expense.

7. RIGHT TO SUSPEND WORK

The County shall have the authority to suspend the Work, in whole or in part, for such periods and such reasons as the County may deem necessary or desirable. Any such suspension shall be in writing to the Contractor and the Contractor shall obey such order immediately and not resume the Work until so ordered in writing by the County. No such suspension of the Work shall be the basis for a claim by the Contractor for any increase in the Contract Amount provided that the suspension is for a reasonable time under the circumstances then existing. If the suspension of Work is caused by the County's belief that non-conforming work is being installed, and subsequent investigation proves that the Work was non-conforming, the Contractor shall not be awarded additional time or costs.

8. RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a 10-day period after receipt of written notice from the County or such shorter time as may be reasonable under the circumstances, to commence and continue correction of such default or neglect with diligence and promptness, the County may, without prejudice to other remedies the County may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including the County's expenses, and any additional architect or engineering costs necessary by Contractor's default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the County upon demand.

9. CONTRACTOR MANAGEMENT PERSONNEL

The Contractor shall keep a competent superintendent and any necessary assistants on the Site at all times during progress of the Work and such persons shall be satisfactory to the Project Officer or designee. The superintendent or project manager shall not be changed except with the Project Officer or designee's consent. If the Project Officer determines that the superintendent or project manager is no longer satisfactory, then the superintendent or project manager must be replaced within 15 days of the Project Officer's written notice with a replacement superintendent or project manager with equal or superior qualifications and subject to Project Officer approval.

The superintendent and project manager shall represent the Contractor and all directions given to such persons shall be as binding as if given to the Contractor. The Contractor shall at all times enforce strict discipline and good order among the workers performing under this Contract, and shall not employ on the Work any person not reasonably proficient in the Work assigned. Persons permitted to perform Work under Contractor, or any subcontractor, or sub-subcontractor, shall meet all employment eligibility, safety training, security or drug/alcohol testing requirements required by law or by the County. Any person not complying with all such requirements shall be immediately removed from the Site.

The Contractor shall have a qualified and experienced person who can clearly communicate technical matters regarding the subject project. This person shall be available via phone to respond to emergency situations on the project 24 hours a day.

10. DRUG-FREE POLICY

The Contractor is responsible for ensuring that the Site remains a drug-free site. Contractor will require that employees undergo random drug/alcohol screening on a quarterly interval. Any employee who fails the test must be removed from the Site immediately. Random screening shall be performed by a third party licensed to do so in the Commonwealth of Virginia. The Contractor shall provide its random testing policy and schedule to the Project Officer within 30 days of Notice to Proceed. The Contractor will include this provision in every subcontract relating to this Contract. Any infraction by an employee of the Drug-Free policy shall be reported to the Project Officer within 24 hours.

11. LANDS BY COUNTY

The County shall provide access to the lands shown on the Drawings upon which the Work under the Contract is to be performed and to be used for rights of way and for access. In case all the lands, rights-of-way or easements have not been obtained as herein contemplated before construction begins, then the Contractor shall begin its work on such lands and rights-of-way that the County has acquired access to. No additional time or compensation shall be awarded to the Contractor for modifying work location and sequence provided other locations are available for work.

Contractor shall verify the acquisition of all off-site easements and Rights-of-Way prior to the start of off-site construction. Restore all off-site easements to the conditions existing prior to the start of work.

The Contractor shall confine all activities at the site associated with construction activities, to include storage of equipment and or materials, access to the work, formwork, etc. to within the designated Limits of Disturbance (LOD).

12. LANDS BY CONTRACTOR

If the Contractor requires additional land or lands for temporary construction facilities and for storage of materials and equipment other than the areas available on the site or right-of-way, or as otherwise furnished by the County, then the Contractor shall provide such other lands and access thereto entirely at the Contractor's own expense and without liability to the County. The Contractor shall not enter upon private property for any purpose without prior written permission of all of the persons and entities who own the property. The Contractor shall provide copies of all agreements to the County and shall include language in the agreement indemnifying and holding the County harmless for any damages, repairs, restoration or fees associated with the use of the property. Upon termination of the agreement, the Contractor shall provide to the County a fully executed release from the property owner.

13. PROTECTION OF WORK AND PROPERTY

- a. The Contractor shall continuously maintain and protect all of its Work from damage and shall protect the County's property from damage or loss arising in connection with this Contract until Substantial Completion. After Substantial Completion, the maintenance or protection of any incomplete or remedial Work identified on the punch list that requires maintenance or protection in order to allow for the final completion and acceptance of such Work shall be the responsibility of the Contractor until Final Completion. The Contractor shall make good any such damage or loss, except such as may be caused by agents or employees of the County. Failure to adequately protect the Work shall not be grounds for additional compensation for any maintenance and/or repairs to such Work.
- b. The Contractor shall not place upon the Work, or any part thereof, any loads which are not consistent with the design strength of that portion of the Work.
- c. The Contractor shall be responsible for the preservation of all public and private property, trees, monuments, etc., along and adjacent to the street and/or right-of-way, and shall use every precaution to prevent damage to pipes, conduits and other underground structures, curbs, pavements, etc., except those to be removed or abandoned in place and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise

referenced their location and shall not remove them until directed. Any damage which occurs by reason of the operations under this Contract, whether shown or not on the approved construction plans, shall be completely repaired or replaced to the County's satisfaction by the Contractor at the Contractor's expense. The Contractor shall be responsible for all damages caused by their construction activities.

- d. Prior to commencing construction activity at the Site, the Contractor shall videotape the Site and an additional fifty (50) feet outside the perimeter of the Site. Contractor shall submit a copy of high resolution digital recording on a DVD or flash drive to the County. The recording shall be stable, continuous, and contain all items within the limits of Work. Submission of the DVD to the County shall be a condition precedent to any obligation of the County to consider an Application for Payment. The DVD shall be the property of the County, and the County shall be permitted to reproduce such DVD's and use the same for any purpose without limitation or claim of ownership or compensation from any party. Contractor shall incorporate the cost of the preconstruction survey in the bid amount or the unit prices of the bid items, as applicable. No additional payment will be made by the County.
- e. The Contractor shall shore, brace, underpin, secure, and protect, as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site that may be affected in any way by excavations or other operations connected with the work required under this Contract. The Contractor shall be responsible for giving any and all required notices to owners or occupants of any adjoining or adjacent property or other relevant parties before commencement of any work. Contractor shall provide all engineering (signed and sealed) for items listed in this section per the Specifications. The Contractor shall indemnify and hold the County harmless from any damages on account of settlements or loss of all damages for which the County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
- f. In an emergency affecting the safety of life or of the Work, or of adjoining property, the Contractor, without special instruction or authorization from the Project Officer or designee, or the County, is hereby permitted to act, at the Contractor's discretion, to prevent such threatened loss or injury, and the Contractor shall so act without appeal, if so instructed or authorized.
- g. The Contractor shall contact "Miss Utility" at 811 for marking the locations of existing underground utilities (i.e. Water, sewer, gas, telephone, electric, and cable tv) at least 72 hours prior to any excavation or construction. The Contractor is required to identify and protect all other utility lines found in the work site area belonging to other owners that are not members of "Miss Utility". Private water

and/or sewer laterals will not be marked by "Miss Utility" or the County. The Contractor shall locate and protect these services during construction.

14. SEPARATE CONTRACTS

- a. The County reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable access to the Project including storage of their materials and the execution of their work, and shall properly connect and coordinate its work with the work of other such contractors.
- b. If any part of the Contractor's work depends, for proper execution or results, upon the work of any other contractor, the Contractor shall inspect and promptly report to the Project Officer or designee any defects in such work that renders it unsuitable for such proper execution and results. The Contractor's failure to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the Contractor's work, except as to defects which may develop in other contractor's work after its execution.
- c. If the Contractor or any of the Contractor's subcontractors or employees cause loss or damage to any separate contractor on the Work, the Contractor agrees to settle or make every effort to settle or compromise with such separate contractor. If such separate contractor sues the County on account of any loss so sustained, the County shall notify the Contractor, who shall indemnify and save the County harmless against any expense, claim or judgment arising therefrom, including reasonable attorney's fees.
- d. In case of a dispute arising between two or more separate contractors engaged on adjacent work as to the respective rights of each under their respective contracts, the Project Officer shall determine the rights of the parties.

15. SUBCONTRACTS

- a. Unless otherwise specified, the Contractor shall, within fifteen (15) calendar days after the execution of the Contract by the County, provide to the Project Officer or designee, in writing, the names of all subcontractors proposed for the principal parts of the Work and for such others as requested by the Project Officer or designee, and shall not employ any subcontractors that the Project Officer or designee may object to as incompetent or unfit after an appropriate determination of the subcontractor's ability. No proposed subcontractor will be disapproved except for cause.

- b. The Contractor shall make no substitutions for any subcontractor previously selected/approved unless first submitted to the County for approval.
- c. The Contractor shall be as fully responsible to the County for the acts and omissions of the Contractor's subcontractors as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to the Contractor by the terms of the General Conditions of the Contract, Special Provisions and other Contract Documents comprising the Contract insofar as such documents are applicable to the work of subcontractors.
- e. Nothing contained in the Contract shall be construed to create any contractual relation between any subcontractor and the County, nor shall it establish any obligation on the part of the County to pay to, or see to the payment of any sums to any subcontractor. The County will not discuss, negotiate or otherwise engage in any contractual disputes with any subcontractor.
- f. If requested by the County, the Contractor shall replace any subcontractor at no cost to the County within 30 days of the Project Officers written notice or as otherwise specified. No additional time or compensation will be provided in the event a subcontractor is removed due to non-compliance of the requirements outlined within the Contract.

16. ELIMINATED ITEMS

If any item(s) in the Contract are determined to be unnecessary for the proper completion of the Work contracted, the Project Officer or designee may, upon written notice to the Contractor, eliminate such item(s) from the Contract. Payment will not be made for such item(s) so eliminated; except that the Contractor will be compensated for the actual cost of any work performed and the net cost of materials purchased before the item(s) was eliminated from the Contract, including freight and tax costs, as evidenced by invoice. No additional compensation will be made for overhead or anticipated profit. The County will receive the full unit price credit for work eliminated prior to production or installation.

17. COUNTY ORDINANCES

The Contractor shall comply with all applicable County ordinances, including but not limited to: the *Noise Control*, *Erosion & Sediment Control*, *Storm Water Management*, and *Chesapeake Bay Preservation ordinances (Chapters 15, 57, 60, and 61 of the County Code)*.

D. MATERIALS AND WORKMANSHIP

1. MATERIALS FURNISHED BY THE CONTRACTOR

Unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new. All work shall be accomplished by persons qualified in the respective trades.

2. IBC AND VUSBC REQUIREMENTS

The Contractor certifies that all material supplied or used under this Contract meets all current International Building Code (IBC) requirements and the requirements of the Virginia Uniform Statewide Building Code (VUSBC); and further certifies that, if the material delivered or used in the performance of the work is found to be deficient in any of the applicable state or national code requirements, all costs necessary to bring the material into compliance with the requirements shall be borne by the Contractor. The County shall be entitled to offset such costs against any sums owed by the County to the Contractor under this Contract.

3. ADA COMPLIANCE

The Contractor shall ensure that all Work performed under this Agreement is completed in accordance with the Contract Documents, including Work intended to meet the accessibility requirements of the Americans with Disabilities Act (ADA).

The Contractor is not required to ascertain whether the Contract Documents meet ADA design standards and guidelines. However, should the Contractor discover any non-conformity with such requirements, the Contractor shall immediately inform the County and its design consultant, if applicable, to allow for corrective action.

The Contractor shall defend and hold the County harmless from any expense or liability arising from the Contractor's non-compliance in meeting its obligations herein. The Contractor shall be responsible for all costs related to permitting delays, redesign, corrective Work, and litigation relating to such non-compliance.

4. MANUFACTURER'S DIRECTIONS

Manufactured articles, material, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's directions as accepted by the Project Officer or designee, unless herein specified to the contrary.

5. WARRANTY

All material provided to the County shall be fully guaranteed by the Contractor against manufacturing defects within the period of the manufacturer's standard warranty. Such defects shall be corrected by the Contractor at no expense to the County. The Contractor shall provide all manufacturers' warranties to the Project Officer by the date of Final Completion.

All Work is guaranteed by the Contractor against defects resulting from the use of inferior or faulty materials. The Contractor warrants that the Work will conform to the

requirements of the Contract Documents and will be free from defects or inferior or faulty workmanship, or work not in accordance with the Contract Documents for one (1) year from the date of Substantial Completion or as set forth in the Specifications of the work by the County in addition to and irrespective of any manufacturer's or supplier's warranty.

No date other than Substantial Completion or as set forth in the Specifications shall govern the effective date of the Warranty, unless that date is agreed upon by the County and the Contractor in advance and in a signed writing.

The Contractor shall promptly correct any defective work or materials after receipt of a written notice from the County to do so. If the Contractor fails to proceed promptly or use its best efforts and due diligence to complete such compliance as quickly as possible, the County may have the materials or work corrected and the Contractor and its Sureties shall be liable for all expenses and costs incurred by the County.

Nothing contained in this section shall be construed to establish a period of limitations with respect to other obligations the Contractor may have under this Contract.

6. INSPECTION AND ACCEPTANCE OF MATERIALS

Inspection and acceptance by the County will be at the work site in Arlington County, Virginia and within ten (10) calendar days of delivery unless otherwise provided for in the Contract Documents. The County will not inspect, accept, or pay for any materials stored or delivered off-site by the Contractor, except as provided by the Payment for Stored Materials clause of these General Conditions and other requirements of the Contract Documents. The County's right of inspection shall not be deemed to relieve the Contractor of its obligation to ensure that all articles, materials and supplies are consistent with Specifications and instructions and are fit for their intended use. The County reserves the right to conduct any tests or inspections it may deem appropriate before acceptance. The Contractor shall be responsible for maintaining all materials and supplies in the condition in which they were accepted until they are used in the work.

The Contractor is to coordinate its work and request inspections in such a manner as to minimize the cost to the County without impacting the overall schedule of the Project within reason. All costs associated with re-inspection shall be borne by the Contractor.

7. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the work shall be purchased by the Contractor or any subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that it has good title to, and that it will require all subcontractors to warrant that they have good title to, all materials and supplies for which the Contractor invoices for payment. The County may request proof of title or payment prior to acceptance of the Contractor's invoice.

8. TITLE TO MATERIALS AND WORK COVERED BY PARTIAL PAYMENTS

All material and work covered by partial payments made by the County will become the property solely of the County at the time the partial payment is made. However, risk of

loss or damage to all items shall be the responsibility of the Contractor until Final Acceptance by the County. This provision will not be construed as relieving the Contractor from having sole responsibility for all materials and work upon which payments have been made and for the restoration of any damaged work or replacement or repair at the County's option of any damaged materials. This provision will not be construed as a waiver of the County's right to require fulfillment of all terms of the Agreement, including full rights under the terms of the Warranty provisions of the Agreement, nor shall payment indicate acceptance of the materials or work.

9. CONNECTING WORK

The Contractor shall do all cutting, patching, or digging of the Contractor's work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors as shown upon or reasonably implied by the Drawings and Specifications for the completed Project and shall make good after them as the Project Officer or designee may direct. This work will be performed in a workmanlike manner utilizing proper care and equipment to achieve proper line and grade. The Contractor shall not endanger any work by cutting, patching, or digging, or otherwise, and shall not cut or alter the work of any other contract except with the prior written consent of the Project Officer or designee.

10. REJECTED WORK AND MATERIALS

- a. Any of the Work or materials, goods, or equipment which do not conform to the requirements of the Contract Documents, or are not equal to samples accepted by the Project Officer or designee, or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall be rejected and replaced immediately so as not to cause delay to the Project or work by others. Any defective work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be removed and the work shall be re-executed by the Contractor at the Contractor's expense. The fact that the Project Officer or designee may have previously overlooked such defective work shall not constitute acceptance of any part of it.
- b. If the Contractor fails to proceed at once with the replacement of rejected material and/or the correction of defective workmanship when notified to do so by the Project Officer or designee, the County may, by contract or otherwise, replace such material or correct such workmanship and charge the cost to the Contractor. This clause applies during the Contract and during any warranty or guarantee period.
- c. The Contractor shall be responsible for managing, addressing within a timely manner, and formally closing out all notices of non-compliance issued by the inspector of record, Arlington County Inspection Services, or the Design Team. The Contractor shall be solely liable for any costs or time associated with the corrective action to address any notices of non-compliance. The Contractor must work directly with the entity issuing the notice of non-compliance.

- d. If the Project Officer or designee deems it expedient not to require correction of work which has been damaged or not done in accordance with the Contract, an appropriate adjustment to the Contract Price may be made.

11. PROHIBITION AGAINST ASBESTOS CONTAINING MATERIALS

No goods or equipment provided to the County or construction material installed shall contain asbestos. If a Contractor or supplier provides or installs any goods, equipment, supplies, or materials that contain asbestos in violation of this prohibition, the Contractor shall be responsible for all costs related to the immediate removal and legal disposal of the goods, equipment or materials containing asbestos and replacement with County-approved alternate. The Contractor shall be responsible for all goods, equipment, supplies or materials installed or provided by any of its employees, agents or subcontractors in connection with the work under this contract. The Contractor shall also reimburse to the County all costs of such goods, equipment, supplies or materials installed if not corrected by the Contractor.

E. LEGAL RESPONSIBILITY AND PUBLIC SAFETY

1. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and locations of the work of the Contract, and that it has investigated and satisfied itself as to the general and local conditions and factors which can affect the Work or its cost, including but not limited to:

- a. conditions bearing upon transportation, disposal, handling, and storage of materials;
- b. the availability of labor, water, electric power, and roads;
- c. uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- d. the information and conditions of the ground; and
- e. the character of equipment and facilities needed before and during work performance.

The Contractor, by executing the Contract, represents that it has reviewed and understands the Contract Documents and has notified the County of and obtained clarification of any discrepancies which have become apparent during the bidding period. During the Contract, the Contractor must promptly notify the County in writing of any apparent errors, inconsistencies, omissions, ambiguities, construction impracticalities or code violations discovered as a result of the Contractor's review of the Contract Documents including any differences between actual and indicated dimensions, locations and descriptions, and must give the County timely notice in writing of same and of any corrections, clarifications, additional Drawings or Specifications, or other information required to define the Work in greater detail or to permit the proper progress of the Work. The Contractor must provide similar notice with respect to any variance between its review of the Site and physical data and Site conditions observed. If the Contractor performs any Work involving an apparent error, inconsistency, ambiguity, construction impracticality, omission or code violation in the

Contract Documents of which the Contractor is aware, or which could reasonably have been discovered, without prompt written notice to the County and request for correction, clarification or additional information, as appropriate, the Contractor does so at its own risk and expense and all related claims are specifically waived.

The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the County, as well as from the Drawings and Specifications made a part of this Contract. Unless otherwise specified, all existing structures, materials and obstructions that interfere with the new construction shall be removed and disposed of as part of this Contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the Work without additional expense to the County.

The locations of existing utilities, including underground utilities, which may affect the Work, are indicated on the Drawings or in the Specifications insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these Drawings or Specifications shall be construed as a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of the operations. The Contractor shall make all necessary investigations to determine the existence and locations of such utilities. Should uncharted or incorrectly charted utilities be encountered during performance of the Work, notify the Project Officer or designee immediately for instructions. The Contractor will be held responsible for any damage to and maintenance and protection of existing utilities and structures, of both public and private ownership. However, if it is determined that such existing utility lines or structures require relocation or reconstruction or any other work beyond normal protection, then such additional work will be ordered under the terms of the clause entitled "Changes in Work." At all times, cooperate with the County and utility companies to keep utility services and facilities in operation.

The County assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the County. The County assumes no responsibility for any understanding reached or representation made concerning conditions which can affect the Work by any of its officers or agents before the execution of this Contract, unless that understanding or representation is expressly stated in this Contract.

2. PUBLIC CONVENIENCE

The Contractor shall at all times so conduct its Work as to ensure the least possible obstruction to traffic (vehicular, bicycle and pedestrian) and inconvenience to the general public, County employees, and the residents in the vicinity of the Work. Traffic shall be maintained in accordance with the approved Maintenance of Traffic (MOT) plan. No road, street or sidewalk shall be closed to the public except with the permission of the Project Officer or designee and or proper governmental authority. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor and included in the cost of

the Work to ensure the use of sidewalks, trails, and transit facilities compliant with all applicable ADA and other regulations, as well as the proper functioning of all gutters, drainage inlets, drainage ditches, and irrigation ditches, which shall not be obstructed except as approved by the Project Officer or designee.

The Contractor is responsible for securing its work area for safety and security. The Contractor shall confine its construction and presence to the Limits of Work, unless otherwise approved by the County Project Officer.

3. SAFETY AND ACCIDENT PREVENTION

The Contractor shall comply with, and ensure that the Contractor's employees and subcontractors comply with, all current applicable local, state and federal policies, regulations and standards relating to safety and health, including, by way of illustration and not limitation, the U.S. Department of Labor's Occupational Safety and Hazard Administration (OSHA) Construction Industry Regulations, the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry, the Federal Environmental Protection Agency Standards and the applicable standards of the Virginia Department of Environmental Quality.

The Contractor shall provide, or cause to be provided, all technical expertise, qualified personnel, equipment, tools and material to safely accomplish the Work specified to be performed by the Contractor and subcontractor(s).

The Contractor shall identify to the County Project Officer at least one on-site person who is the Contractor's competent, qualified, and authorized safety officer on the worksite and who is, by training or experience, familiar with and trained in policies, regulations and standards applicable to the work being performed. The competent, qualified and authorized person must be capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, shall be capable of ensuring that applicable safety regulations are complied with, and shall have the authority and responsibility to take prompt corrective measures, which may include removal of the Contractor's personnel from the work site.

The Contractor shall provide to the County, within 7 days of issuance of the Notice to Proceed, a copy of the Contractor's written safety policies and safety procedures applicable to the scope of work. Failure to provide this information within may result in cancellation of the Contract.

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all injury to persons and damage to property either on or off the site, which occur as a result of the Contractor's prosecution of the Work.

The Contractor shall take or cause to be taken such additional safety and health measures as the County may determine to be reasonably necessary. Machinery, equipment, and all hazards shall be guarded in accordance with the safety provisions of

the current version of "Manual of Accident Prevention" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws. The Contractor is directed to the "Rules and Regulations Governing Construction, Demolition and All Excavation" and adopted by the Safety Codes Commission of Virginia, 1966, or latest edition, covering requirements for shoring, bracing, and sheet piling of trench excavations.

4. HAZARDOUS MATERIALS

Arlington County is subject to the Hazard Communication Standard, 29 CFR §1910.1200 (Standard). The Contractor agrees that it will provide or cause to be provided Safety Data Sheets (SDS) required under the Standard for all hazardous materials supplied to the County or used in the performance of the work. Such SDS shall be delivered to the County no later than the time of actual delivery of any hazardous materials to the County or use of such material in the performance of work under the Contract by the Contractor or its subcontractors, whichever occurs first. Container labeling meeting the requirements of the Standard shall be appropriately affixed to the shipping or internal containers. The County reserves the right to refuse shipments of hazardous materials not appropriately labeled, or when SDS have not been received prior to or at the time of receipt of the shipment for use by the County or for use by the Contractor in the performance of the Contract, or whenever the material is delivered in a manner inconsistent with any applicable law or regulation. Any expenses incurred due to the refusal or rejection of SDS are the responsibility of the Contractor. The Contractor shall comply with all federal, state, and local laws governing the storage, transportation, and use of toxic and hazardous materials. The Contractor shall maintain onsite an up to date SDS binder for all material used and delivered to the Project. The County Project Officer or his designee shall be allowed access to the SDS book at all times.

5. HAZARDOUS WASTE

Hazardous Waste Generator/Hazardous Waste Disposal: The County Board of Arlington County, Virginia and the Contractor shall be listed as Co-generators. The Contractor shall assume all the duties pertaining to the Waste Generator, including signing the Waste Shipment Record ("WSR") and manifest. The Contractor shall supply the County Project Officer with the executed original Owner's Copy of the WSR, as required by applicable regulatory agencies within 35 days from the time the waste was accepted by the initial waste transporter, and prior to request for final payment. A separate WSR shall be submitted for each shipment to the disposal site.

Delayed Waste Shipment Records: The Contractor shall report in writing to the EPA Region III office within 45 days if an executed copy of the WSR is not received from the operator of the disposal site. The report to the EPA regional office shall include a copy of the original WSR and a cover letter signed by the Contractor stating the efforts taken to locate the hazardous waste shipment and the results of those efforts.

Temporary Hazardous Waste Storage Prohibited: The Contractor shall not temporarily store hazardous waste unless pre-approved by the County in writing. If so approved, hazardous waste stored off-site in a temporary facility shall be monitored and records shall be kept on the number of containers, size, and weight. The Contractor shall inform the County when the hazardous waste is to be transported to the final disposal site. The

County has the right to inspect the temporary site at any time. The Contractor shall submit copies of all relevant manifests, Waste Shipment Record(s), and landfill receipts to the County Project Officer prior to the request for final payment. All paperwork shall be signed by the Contractor and disposal site operator as required.

6. ASBESTOS

Whenever and wherever during the course of performing any work under this Contract the Contractor discovers the presence of asbestos or suspects that asbestos is present, the Contractor shall stop work immediately, secure the area, notify the County Project Officer immediately and await positive identification of the suspect material. During the downtime in such a case, the Contractor shall not disturb any surrounding surfaces but shall protect the area with suitable dust covers. Work shall not proceed without an Asbestos-Related Work Authorization executed by the County Asbestos Program Manager.

7. CROSSING UTILITIES

When construction crosses highways, railroads, streets, waterways, or utilities under the jurisdiction of State, County, City, or other public agency, public utility, or private entity, the Contractor shall secure written permission where necessary from the proper authority before executing such new construction. A copy of such written permission must be filed with the County before any work is started. The Contractor shall be required to furnish a release from the proper authority before Final Acceptance of the Work.

8. OVERHEAD HIGH VOLTAGE LINES SAFETY ACT

If any work required herein will be performed within ten feet of an overhead high voltage line, the provisions of Virginia Statute 59.1-406, et. seq., "Overhead High Voltage Line Safety Act" (Act) shall apply. The "person or contractor responsible for the work to be done", as that term is used in the Act, will be interpreted to mean the Contractor. The Contractor shall notify the owner or operator of the high voltage line in the manner prescribed in Section 59.1-411 of the Act in sufficient time prior to the time work is to be commenced to avoid any delays in the work. The County will not pay for lost time, profits, or permit any extension of the work for any delays caused by the failure of the Contractor to make such arrangements in a timely manner. All costs for the work shall be paid by the Contractor. The County shall reimburse the Contractor for the actual reasonable cost paid to the owner or operator of the high voltage line by the Contractor on presentation to the County by the Contractor of original invoices from the owner or operator of the high voltage line in the same manner as for other Contractor invoices submitted for work performed. Retention, if applicable to the Contract, shall not be withheld from the payment to the Contractor by the County for this work. No processing, administrative, or other charges above the actual amount charged by the owner or operator of the high voltage line shall be paid to the Contractor by the County.

9. SANITARY PROVISIONS

The Contractor shall provide and maintain such sanitary accommodations for the use of the Contractor's employees and those of its subcontractors as may be necessary to

comply with the requirements and regulations of OSHA and of the local and State departments of health.

10. SITE CLEAN-UP AND WASTE DISPOSAL

The Contractor shall frequently remove and properly dispose of all refuse, rubbish, scrap materials, and debris from the site resulting from the Contractor's operations during the performance of this contract. The Contractor shall ensure the work site presents a neat and orderly appearance at all times. The Contractor shall isolate any and all dumpsters, trash cans and recycling bins provided for the Project from public use until Final Acceptance.

Unless otherwise stated, the Contract Amount and any unit prices shall include all costs and fees for removal and disposal of all waste and debris, whether disposed of at a County site or at any other location.

The Contractor shall remove all surplus material, false work, temporary structures including foundations thereof, and debris resulting from the Contractor's operations at work completion and before Final Acceptance. The County shall reserve the right to remove the surplus material, false work, temporary structures including foundations and debris. The County will restore the site to a neat, orderly condition if the Contractor fails to do so. The County shall be entitled to offset such cost against any sums owed by the County to the Contractor under this Contract.

11. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

When the Project includes an approved SWPPP, the Contractor shall strictly abide by this plan which includes: a Pollution Prevention (P2) Plan, an Erosion and Sediment Control (E&S) Plan, and a Stormwater Management Plan. If the Contractor proposes to deviate from this approved plan, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes.

No separate payment shall be made by the County for SWPPP implementation, with the exception of E&S items as specified on the E&S plans or listed as pay items. The Contractor shall not be entitled to any additional payment for changes to the SWPPP which are the result of the Contractor's work schedule or resource allocation, weather delays, or other factors not controlled by the County.

F. PROGRESS AND COMPLETION OF THE WORK

1. NOTICE TO PROCEED

The Contractor shall be given written Notice to Proceed with the Work. Such Notice to Proceed shall state the date on which the Work is to be commenced, and every calendar day thereafter shall be counted in computing the actual Time for Completion.

2. TIME FOR COMPLETION

It is hereby understood and mutually agreed by and between the Contractor and the County that the Commencement Date, the rate of progress, and the Time for

Completion of the Work to be done hereunder are essential conditions of the Contract. The Contractor agrees that the Work shall be started promptly upon receipt of a written Notice to Proceed in accordance with the accepted schedule. The Work shall be prosecuted regularly, diligently, and uninterruptedly at a rate of progress that will ensure full completion of the Project within the Time for Completion specified in the Contract Documents.

3. SCHEDULE OF COMPLETION

Unless otherwise specified, the Contractor shall within 10 business days after the Award Date, or prior to the pre-construction meeting, whichever occurs first, submit schedules which show the order in which the Contractor proposes to carry on the Work, with dates for starting and completing the various activities of the Work. The Contractor shall submit an updated schedule monthly with the request for partial payment. Review and acceptance by the County of the Contractor's schedule of completion shall in no way relieve the Contractor of its responsibility to complete the Work within the contract time. If the Work falls behind the schedule, the County may require the Contractor to prepare and submit, at no extra cost to the County, a recovery schedule indicating by what means the Contractor intends to regain compliance with the schedule. The recovery schedule must be submitted to the County for review by the date indicated in the County's written demand.

4. CONDITIONS FOR COMPLETION

a. **SUBSTANTIAL COMPLETION:** The Work will be considered Substantially Complete when all of the following conditions have been met and accepted by the Project Officer, and a Certificate of Substantial Completion has been issued:

1. The Contractor has provided formal notice that the Work is substantially complete, and the Project Officer has agreed that the condition of the Work warrants a Substantial Completion inspection;
2. The Contractor has provided a Punch List and that list has been reviewed and approved by the Project Officer. Failure to include an item on the Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents;
3. Final test reports as required by the Contract and certificates of inspection and approval required for use and occupancy;
4. Fire Marshal's report, if applicable;
5. Approval forms and transfer documents for all utilities;
6. All life safety systems, including fire alarms, visual and audios alarms, fire detectors and fire alarm annunciator system, sprinkler systems, and all mechanical and electrical systems are complete and working in an automatic mode, and the County has been adequately trained in the operation of the systems;

7. The HVAC system Testing and Balancing Report and build air quality test results as required for LEED certification have been accepted by the Project Officer;
 8. Operation and Maintenance Manuals have been submitted for review;
 9. All documents and verification of training required in accordance with any Commissioning Plan;
 10. Mark-ups of construction drawings showing the As-Built or "Record" condition have been submitted for review and approval by the Project Officer;
 12. Entrances and egress pathways have been constructed and can remain clear of construction activities;
 13. A Certificate of Occupancy has been issued for the space by the County's Inspection Services Division;
 14. All Commissioning has performed and completed to the satisfaction of the Project Officer; and
 15. Schedule to complete the Punch List and value of Work not yet complete.
- b. Upon the Contractor providing notice that the Work is substantially complete, the Project Officer or designee will invite all relevant parties to perform an inspection of the Work, and any noted deficiencies or incomplete items not indicated on the Contractor's punch list will be added. All punch list items, whether generated by the Contractor or any other party on behalf of the County, shall be completed within thirty (30) days of the date of Substantial Completion, unless otherwise agreed to by the County due to seasonal or other extenuating circumstances.
- c. FINAL COMPLETION: The Work will be considered Finally Complete when all of the following conditions have been met and accepted and a Final Completion Notice has been issued by the Project Officer:
1. The Contractor has provided formal notice that the Work is complete, and the Project Officer has agreed that the condition of the Work warrants a Final Completion inspection;
 2. All construction deficiencies and punch list items have been closed and all construction deficiencies corrected and accepted by the Project Officer;

3. All spare parts and attic stock have been delivered, stored in an orderly manner in a space designated by the Project Officer and a complete inventory list has been verified and accepted by the Project Officer;
4. All warranties and manufacturer certificates and contact information for parties providing warranties have been delivered and accepted by the Project Officer;
5. All final Operating and Maintenance manuals have been delivered and approved and accepted by the Project Officer;
6. All final As-Built Drawings in .pdf format on a CD delivered and accepted by the Project Officer;
7. All commissioning has been completed and any open construction items in the commissioning agent's report have been closed and accepted by the Project Officer; and
8. All LEED documents and submittals, if applicable, to be provided by the Contractor or sub-contractors have been submitted and accepted by the Project Officer.

5. USE OF COMPLETED PORTIONS

The County shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions may not have expired; but taking such possession and use shall not be deemed an acceptance of any work not done in accordance with the Contract Documents. If the Contractor claims that such prior use increases the cost or delays, the completion of remaining work, or causes refinishing of completed work, the Contractor may submit a claim for compensation or extension of time, or both.

G. MEASUREMENT AND PAYMENT

1. PAYMENTS TO CONTRACTOR

The County will make partial payments, less retainage, to the Contractor monthly on the basis of the Contractor's written estimate of the work performed during the preceding calendar month as approved by the Project Officer or designee.

The Contractor's application for payment shall indicate the amount of work completed to date in a format consistent with the accepted bid and as indicated below:

- a. Lump Sum: For lump sum contracts, the Contractor shall provide to the Project Officer a Schedule of Values, and the application for payment will reflect the Schedule of Values and the amount of work completed in those units.

For contracts that include multiple lump sum line items, the application for payment shall reflect the percentage of work completed for each lump sum item. If requested by the Project Officer, the Contractor shall provide a Schedule of Values for each lump sum line item in the contract.

- b. Unit Price: The schedule of unit prices in the accepted bid shall be used as the basis for preparing the estimates, and each partial payment shall represent the total value of all units of work completed, computed at the unit prices stated in the Contract, less the aggregate of previous payments.

At the discretion of the Project Officer, payments may alternatively be based on actual quantities and site measurements taken in the field by County staff using the Contract Unit Prices.

If Stipulated Price Items are included in the contract, Work on such Stipulated Price Items shall be carried out only upon written order by the Project Officer. The payment for a Stipulated Price Item shall be made by the County to the Contractor at the related unit price specified in the 'Stipulated Price Items' section of the Bid Form on the same basis as the payment for any other regular Bid Item.

In addition to the amount of work completed to date, the application for payment shall indicate the aggregate of all previous payments for each line item, the retainage previously withheld, and the total payment requested this period.

The Contractor's application for payment will not be reviewed or processed unless an updated schedule is attached. The pay application shall also contain a certification by the Contractor that due and payable amounts have been paid by the Contractor, including payments to subcontractors, for work which previous payment was received by the Contractor from the County.

5. PAYMENT FOR STORED MATERIALS

When requested in writing by the Contractor, payment allowances may be made for material secured for use on the Project and secured at the project site. Such payments will only be made for materials scheduled for incorporation into the work within sixty (60) days.

Payment for materials stored offsite may be considered at the discretion of the Project Officer. Any such request shall be made in writing, and the Contractor shall provide photographs of materials stored offsite, bills of sale, and proof of insurance on the premises at which off-site materials are stored with the application for payment. Payment for stored materials may also be subject to additional requirements contained elsewhere in the Contract Documents.

3. PAYMENTS WITHHELD

The Project Officer or designee may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate for payment to the extent necessary to protect the County from loss on account of defective work not remedied or withhold payment for violation of any contract term or condition not remedied after sufficient notice given to the Contractor.

Any such withholding shall not result in any liability to the Contractor for damages.

4. COUNTY ORDERED CHANGES IN WORK

The County, without invalidating the Contract, may order extra Work or make changes by addition, deletion or revision in the Work, with the total Contract Amount being adjusted accordingly if applicable. All such work shall be executed under the conditions of the original Contract, except that modification of the Time for Completion caused thereby shall be made at the time of approving such change.

- a. Changes in the Work which do not involve extra cost and are not inconsistent with the purpose of the Project can be directed by means of a Field Order. Otherwise, except in an emergency endangering life or property, no extra Work or change shall be made unless in pursuance of a written Construction Change Directive or Change Order and no claim for an addition to the Contract Amount or Contract Time shall be valid unless so ordered.
- b. The Contractor shall review any County requested or directed change and shall respond in writing within 14 days after receipt of the proposed change stating the effect of the proposed change upon Contractor's work, including any increase or decrease in Contract time and price. The Contractor shall furnish the County an itemized breakdown of the quantities and prices used in computing the proposed change. The Contractor shall also furnish any sketches, drawings, and or pictures to properly explain the change or impact to the Project Officer. It is the sole responsibility of the Contractor to provide adequate change order backup to satisfy the Project Officer.

- c. The value of any such extra work or change shall be proposed by the Contractor in one or more of the following ways: (a) by estimate in a lump sum; (b) by cost and fixed fee; (c) by unit price additions or deletions of quantities stated in the unit price contract; or (d) by any other method permitted under the Arlington County Purchasing Resolution. The Project Officer will determine the method appropriate based on the nature of the changes.
- d. If none of the aforementioned methods is agreed upon the Contractor shall proceed with the work without delay under force account, provided the Contractor receives a Construction Change Directive. In such case, the Contractor shall keep and present in such form as the Project Officer or designee may direct, a correct account of the cost, together with vouchers. The Project Officer or designee shall be permitted to verify such records on a daily basis and may require such additional records as are necessary to determine the cost of the change to the Work. The Project Officer or designee shall certify to the amount due to the Contractor, including a reasonable lump sum allowance for overhead and profit. A complete accounting of the extra cost shall be made within 14 days after completion of the work involved in the claim. Refer to Paragraph G.5, *Force Account Work*, below for a description of allowable costs when work is performed under force account.
- e. A cost proposal for a change in the Work shall provide a complete breakdown itemizing the estimated quantities and costs of labor, materials, and equipment (base cost) required in addition to any markup used. The allowable percentage markups for overhead and profit for a non-force account change to the Work performed by the Contractor's own forces or performed by the Subcontractor shall be negotiated based on the nature, size, and complexity of the Work involved but shall not exceed the percentages for each category listed below.
 - 1) Subcontractor's markup for overhead and profit for the work it performs in a change to the Work shall be a maximum of fifteen (15%).
 - 2) Contractor's markup for overhead and profit on the Subcontractor's base cost in a change to the Work shall be a maximum of ten percent (10%).
 - 3) Contractor's markup for overhead and profit (including bonds and insurance) for work it performs in a change to the Work shall be a maximum of fifteen percent 15%.
 - 4) The markup for overhead and profit of a sub-subcontractor at any tier on a change to the Work it performs shall be a maximum of fifteen percent (15%). The Contractor and all intervening tiers of subcontractors' markup on such sub-subcontractor's base cost in the change to the Work shall not exceed a total of ten percent (10%).
- f. Base Cost is defined as the total of labor, material, and equipment costs, it does not include markup for overhead and profit. The labor costs include only the

costs of employees directly constructing or installing the change in the Work and exclude the costs of employees coordinating or managing the work.

- g. The allowable percentage markups for overhead and profit stated above shall compensate the Contractor, subcontractor, and sub-subcontractor for all other costs associated with or relating to the change to the Work including by way of illustration and not limitation, general conditions, supervision, field engineering, coordination, insurance, bond(s), use of small tools, incidental job costs, and all other general and administrative home and field office expenses.
- h. Allowable costs for changes in the Work shall not include home office expenses including payroll costs for the Contractor's officers, executives, administrators, project managers, estimators, clerks timekeepers, and other administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups in Subsection (e) above.
- i. If the change to the Work also changes the Time for Completion by adding days to perform the Work, an itemized accounting of the following Site direct overhead expenses for the change to the time may be considered as allowable costs for compensation in addition to the base cost indicated above:
 - 1) site superintendent's pro-rata salary
 - 2) temporary site office trailer expense
 - 3) temporary site utilities including basic telephone service, electricity, heat, water, and sanitary/toilet facilities.

All other direct and indirect overhead expenses are considered covered by and included in Subsection (e) markups above. In no case shall subcontractor extended overhead be submitted or considered. The County does not have a direct contractual relationship with any subcontractor or supplier and therefore will not direct, discuss or negotiate with subcontractors employed by the Contractor.

- j. If Contractor requests an extension to the Time for Completion due to changes in the Work it must provide to the Project Officer adequate documentation substantiating its entitlement for the time extension. The documentation must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior changes to the Work, not just an increase or decrease in the time needed to complete a portion of the total Work. In the event a Critical Path Method (CPM) schedule is required by the Contract, no extension to the Time for Completion shall be granted unless the additional or change to the Work increases the length of the critical path beyond the Time for Completion as demonstrated on the approved CPM schedule or bar chart schedule. Any Float belongs to Arlington County. A written statement in addition to a CPM analysis shall be prepared explaining how no other sequence of work activities could have been performed to

decrease the impact or eliminate the impact altogether. If requested by the Project Officer the Contractor must provide alternate documentation detailing the claim to the County's satisfaction.

- k. Any change that will increase the Contract Amount more than 10% will require notice to sureties and require that Performance and Payment Bonds be increased by the Contractor. The increased Performance and Payment Bonds must be sent to the County's Office of the Purchasing Agent within 15 calendar days of the County's approval of such change.

5. FORCE ACCOUNT WORK

A Force Account may be used at the County's discretion and only when either 1) agreement on the valuation of a change cannot be made using the methods described in the preceding paragraph, *County Ordered Changes in the Work*, or 2) the County cannot firmly establish an applicable and acceptable estimate for the cost of the work because the level of effort necessary to perform and complete the work cannot be reasonably estimated or anticipated but can only be determined by performing the work. Because of the significant burden on the County to monitor and control the work, Force Account work is not a preferred method, and it shall be the responsibility of the Contractor to provide all necessary documentation and justification of costs. The rates for labor, equipment and materials to be used in cases of work performed on a force account basis will be compensated as documented below. No costs other than those explicitly listed below shall be allowed:

- a. Labor: Before any Force Account work begins, the Contractor shall submit for approval to the Project Officer the proposed hourly rates and associated labor costs (benefits and payroll burden) for all laborers and forepersons to be engaged in the work. The number of laborers and forepersons engaged in the work will be subject to regulation by the Project Officer and shall not exceed the number that the Project officer deems most practical and economical for the work. For all labor and forepersons in direct charge of the force account work, excluding general superintendence, compensation will be as follows:
 - 1) Certified Pay Rate: The Contractor will receive the actual rate of wage or scale as set forth in his most recent payroll for each classification of laborers, and forepersons who are in direct charge of the specific operation. The time allowed for payment will be the number of hours such workers are actually engaged in the work. If overtime work is authorized by the County, payment will be at the normal overtime rate set forth in the Contractor's most recent payroll.
 - 2) Benefits: The Contractor will be entitled to receive the actual cost for any fringe benefits that are regularly provided to the classes of laborers and forepersons engaged in the work and that are not included in the certified pay rate.

- 3) Payroll Burden: The Contractor will be entitled to receive the actual cost for all costs associated with required payroll taxes and payroll benefits not covered in 2) above, including:
 - Social Security Tax
 - Medicare Tax
 - Unemployment Tax
 - Worker's Compensation Insurance
 - Contractor's Public Liability Insurance
 - Contractor's Property Damage Liability Insurance
 - 4) If the Contractor is unable to provide the necessary documentation for Benefits and Payroll Burden as identified above, the Contractor will be entitled to an additive of 20% of the Certified Hourly Pay Rate as full and final compensation for Benefits and Payroll Burdens
 - 5) Overhead and Profit: The Contractor will be entitled to an additive of 10% on all properly documented and approved costs established in paragraphs 1), 2), 3), and 4) above for all administrative, overhead, and profit associated with labor costs.
 - 6) Subsistence and lodging allowances may be allowed by the Project Officer at the actual and documented costs for lodging and meals if the following conditions are met and the applicable rates and authorization for such costs are established prior to beginning the work. No additives for overhead, administrative, profit, or any other costs will be permitted for subsistence and lodging.
 - i. The specific Force Account work is outside the scope of the original contract, requires mobilization of a separate crew not intended to be used on the original contract, and the Contractor's base location is more than 50 miles from the work site, or
 - ii. Forces which have been working on the Contract will be used for the Force Account work and have been routinely staying overnight during the life of the Project, and the Force Account Work will warrant an extension of the contract time, and the distance from the Contractor's base location to the work site is more than 50 miles
- b. Materials: The Contractor will receive the actual cost of materials accepted by the Project Officer that are delivered and used for the work including taxes, transportation, and handling charges paid by the Contractor, not including labor and equipment rentals as herein set forth, to which 15 percent (15%) of the cost will be added for administration and profit. The Contractor shall make every reasonable effort to take advantage of trade discounts offered by material suppliers. Any discount received shall pass through to the County. Salvageable temporary construction materials will be retained by the County, or their appropriate salvage value shall be credited to the County, at the County's

discretion.

- c. Equipment: For all equipment other than small tools, the Contractor will be entitled to rental rates as established herein, and agreed to in writing before the work is begun. Transportation costs directly attributable to Force Account work will be as stated below. Small tools will be considered any equipment which has a new cost of \$1000 or less, and will not be eligible for any compensation. The Contractor shall provide the Project Officer a list of all equipment to be used in the work. For each piece of equipment, the list shall include the serial number; date of manufacture; location from which equipment will be transported; and, for rental equipment, the rental rate and name of the company from which it is rented. The number and types of equipment engaged in the work will be subject to regulation by the Project Officer as deemed to be the most practical and economical for the work. No compensation will be allowed for equipment which is inoperable due to mechanical failure. Compensation for equipment shall be as follows:

- 1) Hourly Base Equipment Rental Rates (Owned Equipment) – For equipment authorized for use in the Force Account work that is owned by the Contractor, the Contractor shall be entitled to an Hourly Base Rental Rate as detailed in the following paragraphs. The Hourly Base Rental Rate for Contractor owned equipment will not exceed 1/176 of the monthly rates of the schedule shown in the *Rental Rate Blue Book* modified in accordance with the *Rental Rate Blue Book* rate adjustment tables that are current at the time the force account is authorized. The rates for equipment not listed in the *Rental Rate Blue Book* schedule shall not exceed the hourly rate being paid for such equipment by the Contractor at the time of the force account authorization. In the absence of such rates, prevailing rates being paid in the area where the authorized work is to be performed shall be used.
- 2) Hourly Base Equipment Rental Rates (Rented Equipment) – If the Contractor does not possess or have readily available equipment necessary for performing the force account work and such equipment is rented from a source other than a company that is an affiliate of the Contractor, payment will be based on actual invoice rates when the rates are reasonably in line with established rental rates for the equipment in question and are approved by the Project Officer.
- 3) Hourly Operating Rates – Hourly Operating Rates shall be as established in the Blue Book estimated operating cost per hour. This operating cost will be full compensation for fuel, lubricants, repairs, servicing (greasing, fueling, and oiling), small tools, and any and all incidentals. If rental rates for the equipment being used in the work are not listed in the Blue Book or otherwise readily available, the Hourly Operating Cost will be 15% of the established Hourly Base Rental Rate. If invoices for Rental Equipment include the furnishing of fuel, lubricants, repair, and

servicing, then the Contractor will not be entitled to any Hourly Operating costs for that equipment.

- 4) Equipment Usage - Equipment usage will be measured by time in hours of actual time engaged in the performance of the work. The Contractor shall be entitled to the applicable Hourly Base Equipment Rental Rate and Hourly Operating Rate for all approved Equipment Usage.
 - 5) Equipment Standby – Standby time is defined as the period of time equipment authorized for Force Account work by the Project Officer is available on-site for the work but is idle for reasons not the fault of the Contractor or normally associated with the efficient and necessary use of that equipment in the overall operation of the work at hand. Hourly rates for Contractor owned equipment on standby, will be at 50 percent (50%) of the rate paid for equipment performing work. Operating costs will not be allowed for equipment on Standby. When equipment is performing work less than 40 hours for any given week and is on standby, payment for standby time will be allowed for up to 40 hours, minus hours performing work. Payment for Standby will be allowed only for working days. Payment for Standby will not be made for the time that equipment is on the Project in excess of 24 hours prior to its actual performance in the force account work.
 - 6) Transporting Costs – When it is necessary to obtain equipment exclusively for Force Account work from sources beyond the Project limits and the Project Officer authorizes the transporting of such equipment to the Project site, the cost of transporting the equipment will be allowed as an expense. Where the transport requires the use for a hauling unit, the allowable expense will consist only of the actual cost incurred for the use of the hauling equipment, or the applicable Blue Book cost, whichever is less. When equipment is transferred under its own power, the allowable Transporting cost shall be 50% of the Hourly Base Equipment Rental Rate.
 - 7) Overhead and Profit – The Contractor shall be entitled to an additive of 10% on all appropriate and approved Equipment Rental, Operating, and Transporting costs as defined above.
- d. Subcontracting: The Contractor shall receive the cost of work performed by a subcontractor as determined in (a), (b), and (c) above. In addition, the Contractor will be allowed an allowance per the schedule below for administrative costs and profit.

Total Cost of Subcontract Work: Rate Schedule

| | |
|----------------|------------------------------|
| \$0 - \$10,000 | 10% |
| > \$10,000 | \$1,000 + 5 % above \$10,000 |

- e. Other Costs: The Contractor shall not be entitled to any costs associated with Force Account Work other than those specifically identified in this section.
- f. Statements: Payments will not be made for work performed on a force account basis until the Contractor has furnished the Project Officer duplicate itemized statements of all costs of such work detailed as follows:
 - 1. Payroll indicating name, classification, date, daily hours, total hours, rate, and extension of each laborer, foreperson
 - 2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of equipment
 - 3. Quantities of materials, prices, and extensions
 - 4. Transportation of materials
 - 5. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the Force Account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock; that the quantity claimed was actually used; and that the price, transportation, and handling claimed represented his actual cost.

6. CLAIMS FOR EXTRA COST

If the Contractor claims that any event will give rise to a claim for an increase in the Contract Amount or that any instructions from the Project Officer, by drawings or otherwise, will incur him extra cost under the Contract, then, except in emergencies endangering life or property, it shall give the Project Officer written notice thereof no later than three (3) days of the event or instruction. The Contractor thereafter must provide to the Project Officer a full cost proposal within 14 days detailing the amount of additional compensation claimed, together with the basis therefore and documentation supporting the claimed amount. No such claims shall be valid unless so made. If the Project Officer agrees that such event or instructions involve extra cost to the Contractor, any additional compensation will be determined by one of the methods provided in the Changes in Work paragraph of these General Conditions as selected by the Project Officer. All pricing and supporting documentation requirements of the Changes in the Work clause shall apply to claims for extra cost deemed valid under this paragraph.

7. DAMAGES FOR DELAY; EXTENSION OF TIME OTHER THAN FOR WEATHER

a. Excusable Non-Compensable Delays: If and to the extent that the Contractor is delayed at any time in the progress of the Work by a Force Majeure event or other causes outside of the County's control or the Contractor's control and which the Contractor could not have reasonably foreseen, the Contractor may request an extension of the Time for Completion. To be considered for an extension of the Time for Completion, the Contractor shall give the Project Officer timely written notice at the inception of the delay. The Contractor thereafter must provide to the Project Officer a full claim within 14 calendar days of the cessation of the delay and demonstrate that the delay affected the critical path of the accepted schedule and any Float has been consumed. If the Project Officer

agrees with the existence and impact of the delays, the Project Officer shall extend the Time for Completion for the length of time that the Time for Completion was actually delayed thereby. The Contractor shall not be due compensation or damages of any kind as a result of such delay. Delays caused by weather are addressed in Section G.8.

b. Excusable Compensable Delays: If and to the extent that the Contractor is unreasonably delayed at any time in the progress of the Work by any act or omission of the County, its agents or employees, due to causes within the County's control, the Contractor may request an extension of the Time for Completion and/or additional compensation. The Contractor shall give notice to the Project Officer immediately at the time of the occurrence giving rise to the delay and shall give written notice no later than five (5) calendar days after the inception of the delay. The Contractor's written notice shall specify the nature of the delay claimed, the cause of the delay, and the impact of the delay on the Contractor's schedule. Thereafter the Contractor shall provide to the Project Officer a full claim within 14 calendar days of the cessation of the delay. The claim must detail the amount of additional contract time or compensation claimed, together with the basis therefor along with itemized documentation supporting the claim. The itemized documentation must demonstrate that the claimed delay directly affected the critical path of the accepted schedule and any Float has been consumed and the time and/or costs incurred by the Contractor are directly attributable to the delay in the work claimed. The Contractor shall be entitled to additional compensation only if the delay was caused solely by acts or omission of the County, its agents or employees, or due to causes within their control.

If the Contractor is entitled to compensation, an itemized accounting of the following direct site overhead expenses will be considered as allowable costs to be used in determining the compensation due the Contractor: the site superintendent(s) (as identified at the inception of the work) pro rata salary, temporary site facilities, temporary site office expense, and temporary site utilities including basic telephone service, electricity, heat, water, and sanitary/toilets. A fifteen percent (15%) markup of these expenses will be allowed to compensate the Contractor for home office and other direct or indirect overhead.

Furthermore, compensation for the delay shall be calculated from the contractual Time for Completion, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor

c. Non-Excusable Non-Compensable Delays: The Contractor shall not be entitled to an extension of the Time for Completion or to any additional compensation for delays if and to the extent they are caused by acts, omissions, fault, or negligence of the Contractor or its subcontractors, agents, or employees or due to foreseeable causes within their control, including, but not limited to, delays resulting from defective work, including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from defective work or rejected work for which corrective action must be determined before like work can proceed, from incomplete,

incorrect, or unacceptable Submittals or samples, or from the failure to furnish enough properly skilled workers, proper materials or necessary equipment to diligently perform the work in a timely manner in accordance with the Project schedule.

d. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed herein. Furthermore, no extension of time or additional compensation shall be given for any delay unless a full claim is made to the Project Offer within 14 days of the end of the delay. Failure to give written notice or failure to present a timely claim shall constitute a waiver of any claim for extension or additional compensation based upon that cause.

e. If the Contractor submits a claim for damages pursuant to this Section, the Contractor shall be liable to the County for a percentage of all costs incurred by the County in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor’s total delay claim that is determined through litigation to be false or to have no basis in law or fact (Virginia Code §2.2-4335).

f. Any change in the Time for Completion or additional compensation shall be accomplished only by the issuance of a Change Order.

8. TIME EXTENSIONS FOR WEATHER

The Contractor's sole relief on any claims for delay which is caused by abnormal weather shall be an extension of the Time for Completion provided the Contractor gave the Project Officer written notice no later than five (5) calendar days after the onset of such delay and provided the weather affected the Critical Path. A fully-documented claim for a time extension under this Section must be submitted no later than thirty (30) calendar days after the cessation of the delay. It shall be the Contractor’s responsibility to provide the necessary documentation to satisfy the Project Officer that the weather conditions claimed were encountered, which may include daily reports by the Contractor, copies of notification of weather days to the Project Officer, NOAA backup, and pictures from each day claimed.

The Time for Completion will not be extended due to inclement weather conditions which are normal, as defined below, for Arlington County. The Time for Completion includes an allowance for workdays (based on five (5) day workweek) which according to historical data may not be suitable for construction work. The Contractor may request extension to the Time for Completion if it can demonstrate unusual and disruptive weather conditions per the requirements below:

- a. That one or more of the Weather Conditions listed below was encountered; and,
- b. The occurrence of the Weather Condition(s) resulted in an inability to prosecute work which would have otherwise been performed on the day(s) the Weather Condition(s) occurred; and,
- c. The work which was not able to be completed was on the Critical Path and could not be completed **only** due to the Weather Condition(s) claimed.

The Project Officer will determine the Contractor’s entitlement to an extension of the Time for Completion. A time extension of no more than one (1) day will be granted for one (1) day of lost work which satisfies the requirements above, regardless of the number of Weather Conditions encountered. The Contractor’s sole relief shall be an extension of the Time for Completion and no claim for an increase in Contract Amount will be allowed.

The Weather Conditions listed below will be the only basis for consideration by the County, based upon the requirements listed above, as an extension of the Time for Completion due to inclement weather or weather-related site conditions.

Weather Condition #1: Unusually Heavy Precipitation - Figure 1 illustrates the anticipated monthly inclement weather due to precipitation (Rain Days). If the number of days with precipitation in excess of 0.10”, as recorded at Washington Reagan National Airport, exceeds the anticipated Rain Days, the Contractor will be entitled to an extension of one (1) day on the Time for Completion for every day in excess of the Rain Days illustrated in Figure 1. The anticipated value of Rain Days for partial months at the beginning and end of the Contract shall be evaluated on a pro-rated basis.

FIGURE 1
Average days with precipitation of 0.1” or more

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 7 | 6 | 7 | 6 | 8 | 6 | 7 | 6 | 6 | 5 | 6 | 6 |

Weather days are not exclusive to the individual months that they represent in Figure 1. If weather days are not used in a previous month(s) they can be used to offset weather delays in subsequent months. This will be reviewed on a case by case basis and is subject to reconciliation at the end of the Project.

Condition #2: Temperature – The Contractor may be entitled to an additional day for every day that the recorded high temperature at Washington Reagan National Airport is 32 degrees Fahrenheit or less, that has not already been incurred under Weather Condition #1 above. This condition does not apply to vertical construction as defined by the Arlington County Vertical Construction Standards.

9. RELEASE OF LIENS

The County, before making final payment, shall require the Contractor to furnish a complete release of all liens arising out of this Contract. The Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the County, to indemnify him against any lien. If any lien remains unsatisfied after all payments have been made, the Contractor shall refund to the County all money that the latter may be compelled to pay in discharging such lien. However, the County may make payments in part or in full to the Contractor without requiring the releases or receipts, and the payments so made shall not impair the obligations of any Surety or Sureties on any bond or bonds furnished under this Contract.

10. FINAL PAYMENT

After the Contractor has completed all work and corrections to the satisfaction of the Project Officer or designee and delivered all maintenance and operating instructions, schedules, quantities, bonds, certificates of inspection, maintenance records, As-Built Drawings, and other items required as final payment submittal documents, the Contractor may make application for final payment following the procedure for progress payments. The Final Application for Payment shall be accompanied by all documents required in the Contract, including a complete and signed and notarized copy of the Final Payment Release Form as follows:

RELEASE AND REQUEST FOR FINAL PAYMENT

CONTRACT NUMBER: _____ CONTRACTOR NAME: _____

FINAL PAYMENT AMOUNT: _____

The Contractor hereby requests final payment in the amount indicated on the above referenced Contract. The Contractor agrees that its acceptance of final payment releases and forever discharges Arlington County and its officers, employees, servants and agents from any and all actions, claims, demands and liability of whatever nature now existing or which may hereafter arise as a result of or in connection with the above referenced Contract.

The Contractor certifies that all of the debts for labor, materials, and equipment incurred in connection with the above referenced Contract have been fully paid.

AUTHORIZED SIGNATURE DATE: _____

The date of Final Acceptance is the date on which the County issues the final payment for the work performed.

COMMONWEALTH OF VIRGINIA

COUNTY OF ARLINGTON

On this the ____ day of _____, 20__, before me, personally appeared _____, who acknowledged himself/herself to be _____ in the above instrument, and that he/she, as such _____, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing his/her name by himself/herself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

My Commission Expires: _____

VI. INSURANCE REQUIREMENTS

Review this section carefully with your insurance agent or broker prior to submitting a bid or proposal. See the Insurance Checklist (part of the Bid or Proposal Forms) for specific coverages applicable to this Contract. The term "Contract," as used in this section, shall mean the fully executed Agreement covering the work entered into between the County and the Contractor.

1. General

- 1.1 The Contractor shall provide insurance as specified in the Insurance Checklist found on the last page of the bid or proposal form.
- 1.2 The Contract with the Contractor will not be executed by the County until the Contractor has obtained, at its own expense, all of the insurance called for hereunder and such insurance has been approved by the County; additionally, the Contractor shall not allow any subcontractor to start work on any subcontract until all insurance required of the subcontractor has been so obtained and approved by the Contractor. The Contractor shall submit to the County Purchasing Agent copies of all required endorsements and documentation of coverage consistent with the requirements herein or, alternately, at the County's request, certified copies of the required insurance policies in compliance with the insurance requirements. All endorsements and documentation shall state this Contract's number and title.
- 1.3 The Contractor shall require all subcontractors to maintain during the term of this Agreement, Commercial General Liability insurance, Business Automobile Liability insurance, and Workers' Compensation, Employers' Liability insurance, or any other insurance required by the Contract in the same manner and form as specified for the Contractor. The Contractor shall furnish subcontractors' evidence of insurance and copies of endorsements to the County Purchasing Agent immediately upon request by the County and/or prior to the subcontractor's performance of work related to this Contract.
- 1.4 If there is a material change or reduction in coverage, nonrenewal of any insurance coverage or cancellation of any insurance coverage required by this contract, the Contractor shall notify the Purchasing Agent immediately. It is the Contractor's responsibility to notify the County upon receipt of a notice indicating that the policy will not be renewed or will be materially changed. Any policy on which the Contractor has received notification from an insurer that the policy has or will be cancelled or materially changed or reduced must be immediately replaced with another policy consistent with the terms of this Contract and in such a manner that there is no lapse in coverage, and the County immediately notified of the replacement. Not having the required insurance throughout the Contract is considered a material breach of this Contract and grounds for termination. The Contractor shall also obtain an endorsement providing to the County thirty (30) days advance notice of cancellation or nonrenewal (ten days for nonpayment of premium. A copy of that endorsement shall be provided to the County Purchasing Agent prior to the execution of this Contract or any Contract extension thereafter.
- 1.5 No acceptance and/or approval of any insurance by the County shall be construed as relieving or excusing the Contractor, any surety, or any bond, from any liability or obligation imposed under this Agreement.
- 1.6 Arlington County, and its officers, elected and appointed officials, employees, and agents are to be listed as additional insureds under all coverages except Workers' Compensation, Professional

Liability, and Automobile Liability, and the endorsement must clearly identify the County as an additional insured permitted to enjoy all the benefits under the applicable policy of insurance. The certified policy, if requested, must so state coverage afforded under this paragraph shall be primary as respects the County, its officers, elected and appointed officials, agents and employees. The following definition of the term "County" applies to all policies issued under the Contract and to all applicable endorsements:

"The County Board of Arlington County and any affiliated or subsidiary Board, Authority, Committee, or Independent Agency (including those newly constituted), provided that such affiliated or subsidiary Board, Authority, Committee, or Independent Agency is either a Body Politic created by the County Board of Arlington County, Virginia, or one in which controlling interest is vested in Arlington County; and Arlington County Constitutional Officers."

- 1.7 The Contractor shall be responsible for the work performed under the Contract Documents and every part thereof, and for all materials, tools, equipment, appliances, and property of any description used in connection with the work. The Contractor assumes all risks for direct and indirect damage or injury to the property or persons used or employed on or in connection with the Work contracted for, and of all damage or injury to any person or property wherever located, resulting from any action, omission, commission or operation under the Contract, or in connection in any way whatsoever with the contracted work.
- 1.8 The insurance coverage required shall remain in force throughout the Contract or as otherwise stated in the Contract Documents or these Insurance Requirements. If the Contractor fails to provide acceptable evidence of current insurance within seven (7) days of written notice at any time during the Contract, the County shall have the absolute right to terminate the Contract without any further obligation to the Contractor.
- 1.9 Contractual and other liability insurance provided under this Contract shall not contain a supervision, inspection or engineering services exclusion that would preclude the County from supervising or inspecting the work as to the end result. The Contractor shall assume all on-the-job responsibilities as to the control of persons directly employed by it and of the subcontractors and any persons employed by the subcontractor and/or carriers delivering and receiving materials from the Project.
- 1.10 If any policy contains a warranty stating that coverage is null and void (or words to that effect) if the Contractor does not comply with the most stringent regulations governing the work, such policy shall be modified so that coverage shall be afforded in all cases except for the Contractor's willful or intentional noncompliance with applicable government regulations.
- 1.11 All policies shall include the following language: "The insolvency or bankruptcy of the insured or of the insured's estate will not relieve the insurance company of its obligations under this policy."
- 1.12 All policy forms must "Pay on behalf of" rather than "Indemnify" the insured.
- 1.13 Nothing contained in these Insurance Requirements or the Contract Documents shall be construed as creating any contractual relationship between any subcontractor and the County. The Contractor

shall be as fully responsible to the County for the acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons directly employed by it.

- 1.14 Precaution shall be exercised by the Contractor at all times for the protection of persons, (including employees) and property. All existing structures, utilities, roads, services, trees and shrubbery shall be protected against damage or interruption of service at all times by the Contractor and its subcontractors during the term of the Contract, and the Contractor shall be held responsible for any damage to property occurring by reason of its work under the Contract whether identified on the Contract Documents or not.
 - 1.15 For any claims related to this work, The Contractor's insurance shall be deemed primary and non-contributory to all other applicable coverage and in particular with respect to Arlington County, its representatives, officials, employees, and agents. Any insurance or self-insurance maintained by Arlington County shall be excess and noncontributory of the Contractor's insurance. The Contractor shall waive its right of subrogation for all insurance claims.
 - 1.16 If the Contractor does not meet the insurance requirements set forth by the Contract Documents, alternate insurance coverage or self-insurance, satisfactory to the Purchasing Agent, may be considered. Written requests for consideration of alternate coverages including the Contractor's most recent actuarial report and a copy of its self-insurance resolution to determine the adequacy of the insurance funding must be received by the County Purchasing Agent at least ten (10) working days prior to the date set for receipt of bids or proposals. If the County denies the request for alternate coverages, the specified coverages will be required to be submitted. If the County permits alternate coverage, an Addendum to the Insurance Requirements will be prepared and distributed prior to the time and date set for receipt of bids or proposals.
 - 1.17 All required insurance coverages must be acquired from insurers authorized to do business in the Commonwealth of Virginia and acceptable to the County. The insurers must also have a policyholders' with a rating of "A-VII" in the latest edition of the A.M. Best Co.'s Insurance Reports, unless the County grants specific approval for an exception, in the same manner as described in 1.16 above.
 - 1.18 The Contractor shall be responsible for payment of any deductibles applicable to the coverages.
 - 1.19 The Contractor must disclose the amount of any deductible or self-insurance component applicable to the General Liability, Automobile Liability, Professional Liability, Intellectual Property or any other policies, if any. The County reserves the right to request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible. Thereafter, at its option, the County may require a lower deductible, funds equal to the deductible be placed in escrow, a certificate of self-insurance, collateral, or other mechanism in the amount of the deductible to ensure additional protection for the County.
2. Contractor's Insurance:
- 2.1 The Contractor shall purchase the following insurance coverages, including the terms, provisions and limits shown in the Insurance Checklist.

2.1.1 Commercial General Liability - Such Commercial General Liability policy shall include any or all of the following as indicated on the Checklist:

- i. General aggregate limit is to apply per project;
- ii Premises/Operations;
- iii. Actions of Independent Contractors;
- iv. Products/Completed Operations to be maintained for five (5) years after completion of the Work;
- v. Contractual Liability, including protection for the Contractor from claims arising out of liability assumed under this Contract;
- vi. Personal Injury Liability including, including but not limited to, coverage for offenses related to employment and copyright infringement;
- vii. Explosion, Collapse, or Underground (XCU) hazards.

2.1.2 Business Automobile Liability, including coverage for any owned, hired, or non-owned motor vehicles, Uninsured Motorists coverage, and automobile contractual liability.

2.1.3 Workers' Compensation - statutory benefits as required by Virginia law or the U.S. Longshoremen's and Harbor Workers' Compensation Act, or other laws as required by labor union agreements, including standard Other States coverage; Employers' Liability coverage. The policy shall not contain any provision or definition which would serve to eliminate third party action over claims, including exclusion for bodily injury to an employee of the insured, employees of the premises owner, or employees of the general contractor to which the insured is subcontracted; or employees of the insured's subcontractor.

2.1.4 General Environmental Remediation Projects

In addition to the Insurance Requirements specified in the general provision or elsewhere in the Contract Documents, the Contractor shall not commence work under this Contract until all insurance as required hereafter has been obtained, and certified copies, naming the County as an additional insured, of such insurance have been submitted and accepted by the Purchasing Agent.

- i. An environmental remediation contractor or subcontractor shall be responsible for purchasing and maintaining Business Automobile Liability insurance and Workers' Compensation insurance as described in 2.1.2 and 2.1.3.
- ii. Acceptance by Arlington County of insurance submitted by the Contractor does not relieve or decrease in any manner the liability of the Contractor for performance of environmental remediation Work under the Contract.
- iii. The Contractor is responsible for any losses, claims, and costs of any kind, which exceed the Contractor's limits of liability, or which may be outside the coverage scope of the policies. The limits and coverage requirements may be revised at the option of the Arlington County Risk Manager. The requirements outlined shall in

no way be construed to limit or eliminate the liability of the Contractor, which arises from performance of work under the Contract.

2.1.5 Environmental Impairment Liability, including coverage of insureds' on-site clean up, with the following minimum limits of liability:

| | |
|----------------------------|----------------------------|
| Bodily Injury and Property | 3,000,000 each occurrence |
| Damage Liability | 6,000,000 annual aggregate |

The County Board of Arlington County, Virginia, is to be named in Additional Name Insured or a Broad Form Contractual Endorsement may be added to the policy as respects any liability that may arise out of or result from the handling of Work on this Project including specifically but without limitation thereto, the indemnity provisions in the Agreement. Such policies will be endorsed to provide that they are primary to an insurance carried by the County Board of Arlington County, Virginia.

2.1.6 Should any of the Work hereunder involve the cleanup, remediation and/or removal of bio-solids, bio-hazards waste, or any hazardous or toxic materials, trash, debris, refuse, or waste, the Contractor shall provide, or shall require its subcontractor performing the work to provide, the following coverage in addition to the above requirements:

- a) Environmental Liability and Cleanup Coverage – with limits of not less than \$2,000,000 per occurrence.
- b) Business Automobile Liability – for transportation or regulated and/or hazardous waste, products, or materials with limits of not less than \$1,000,000, per occurrence. Said coverage shall include County as an additional insured and shall include both the MCS-90 and CA 9948 (or equivalent) endorsements, which shall be specifically referenced on the certificate of insurance.

2.2 The Contractor shall take reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to, its employees on the job, and others. The Contractor shall comply with all applicable provisions of federal, state and municipal safety laws, insurance requirement's, standard industry practices, the requirements of the operations and this contract, the Contractor, directly through its subcontractors, shall effect and properly maintain at all times, as required by the conditions and progress of the work, necessary safeguards for safety and protection of the public, including securing areas, posting danger signs, placarding, labeling or posting other forms of warning against hazards.

3. Commercial General or other Liability Insurance - Claims-made Basis:

3.1 If Commercial General or other liability insurance purchased by the Contractor has been issued on a claims-made basis, the Contractor must comply with the following additional conditions. The limits of liability and the extensions to be included as described in the Insurance Checklist remain the same. The Contractor must either:

- i. Agree to provide insurance, copies of the endorsement and certified documentation evidencing the above coverages and naming the County as an additional insured for a period of five (5) years after final payment under the Contract. Such documentation shall evidence a retroactive date, no later than the beginning of the Contractors or subcontractors' work under this Contract, or

- ii. Purchase an extended (minimum five [5] years) reporting period endorsement for the policy or policies in force during the term of this Contract and evidence the purchase of this extended reporting period endorsement by means of a copy of the endorsement itself. The extended reporting period will begin upon final payment under the Contract.

4. Builder's Risk Insurance

- 4.1 The Contractor shall purchase and maintain builders risk insurance with a limit equal to the initial Contract Amount and any amendments to the Contract which affect the project cost on a replacement cost basis. Builder's risk insurance shall be maintained until Final Payment under the Contract has been made or until no person or entity other than the County has an insurable interest in the covered property, whichever is earlier. The builders risk insurance shall include the County as defined in Section 1.6, Contractor, subcontractors and sub-subcontractors as named insureds.
- 4.2 Insurance shall be on an all-risks policy form including the perils of fire, theft, vandalism, malicious mischief, lightning, wind, force majeure, collapse, and earthquake. Coverage is to apply for demolition occasioned by enforcement of any applicable legal requirements, and Architect's fees. Coverage for the peril of flood shall not be required unless otherwise required in the Contract Documents.
- 4.3 Unless otherwise provided in the Contract Documents, the builders risk insurance shall also cover materials to be incorporated into the project which are stored off the site.
- 4.4 The Contractor shall purchase and maintain Boiler and Machinery insurance, if required by the contract documents or by law, with a limit satisfactory to the County. The Boiler and Machinery insurance shall cover objects during installation and until Final Acceptance by the County. The County shall be included as a named insured.
- 4.5 Any loss under builder's risk insurance shall be payable to the County as fiduciary for the insureds, as their interests may appear, subject to any mortgagee clause. The Contractor shall pay subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require subcontractors to make payments to their sub-subcontractors in similar manner. The County, as fiduciary, shall have the right to adjust and settle a loss with insurers.
- 4.6 The insurance company providing the builders risk coverage shall grant permission for the County to partially occupy or use the premises under construction prior to final acceptance without removing or affecting the coverage.

VII. ATTACHMENTS AND FORMS

ARLINGTON COUNTY, VIRGINIA
OFFICE OF THE PURCHASING AGENT

INVITATION TO BID NO. 23-DES-ITBPW-586

B I D F O R M

ELECTRONIC BIDS WILL BE RECEIVED BY THE COUNTY VIA VENDOR REGISTRY NOT LATER THAN 3:00 P.M., AUGUST 7, 2023

FOR PROVIDING N. GLEBE ROAD ROADSIDE DITCH RESTORATION IDENTIFIED HEREIN IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, TERMS AND CONDITIONS OF THIS SOLICITATION

THE FULL LEGAL NAME OF THE ENTITY SUBMITTING THIS BID MUST BE WRITTEN IN THE SPACE BELOW. THIS BID FORM AND ALL OTHER DOCUMENTS THAT REQUIRE A SIGNATURE MUST BE FULLY AND ACCURATELY COMPLETED AND SIGNED BY A PERSON WHO IS AUTHORIZED TO BIND THE BIDDER, OR THE BID MAY BE REJECTED.

SUBMITTED BY:

(legal name of entity)

AUTHORIZED SIGNATURE:

PRINT NAME AND TITLE:

ADDRESS:

CITY/STATE/ZIP:

TELEPHONE NO.:

E-MAIL ADDRESS:

THIS ENTITY IS INCORPORATED

IN:

THIS ENTITY IS A:

CORPORATION

LIMITED PARTNERSHIP

(check the applicable option)

GENERAL PARTNERSHIP

UNINCORPORATED ASSOCIATION

LIMITED LIABILITY COMPANY

SOLE PROPRIETORSHIP

IS BIDDER AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA?

YES NO

IDENTIFICATION NO. ISSUED TO THE ENTITY BY THE

SCC:

Any Bidder exempt from Virginia State Corporation Commission (SCC) authorization requirement must include a statement with its bid explaining why it is not required to be so authorized.

BID FORM, PAGE 1 OF 7

VIRGINIA CONTRACTOR'S LICENSE NUMBER: _____

ENTITY'S DUN & BRADSTREET D-U-N-S NUMBER: (if available): _____

HAS YOUR FIRM OR ANY OF ITS PRINCIPALS BEEN DEBARRED, ENJOINED, OR SUSPENDED FROM SUBMITTING BIDS TO ARLINGTON COUNTY, VIRGINIA, OR ANY OTHER STATE OR POLITICAL SUBDIVISION WITHIN THE PAST THREE YEARS? YES NO

HAS YOUR FIRM DEFAULTED ON ANY PROJECT IN THE LAST THREE YEARS? YES NO

HAS YOUR FIRM HAD ANY TYPE OF BUSINESS, CONTRACTING OR TRADE LICENSE, REGISTRATION OR CERTIFICATION REVOKED OR SUSPENDED IN THE PAST THREE YEARS? YES NO

HAS YOUR FIRM AND ITS PRINCIPALS/OWNERS BEEN CONVICTED OF ANY CRIME RELATING TO ITS CONTRACTING BUSINESS IN THE PAST TEN YEARS? YES NO

HAS YOUR FIRM BEEN FOUND IN VIOLATION OF ANY LAW APPLICABLE TO ITS CONTRACTING BUSINESS (LICENSING LAWS, TAX LAWS, WAGE AND HOUR LAWS, PREVAILING WAGE LAWS, ENVIRONMENTAL) WHERE THE RESULT OF SUCH VIOLATION WAS THE PAYMENT OF A FINE, BACK PAY DAMAGES, OR ANY OTHER PENALTY IN THE AMOUNT OF \$5000 OR MORE? YES NO

IS YOUR FIRM PREQUALIFIED BY THE VIRGINIA DEPT. OF TRANSPORTATION? YES NO

BIDDER STATUS: MINORITY OWNED: WOMAN OWNED: NEITHER:

The undersigned certifies that (Bidder Name) _____ is currently registered with the Virginia State Board of Contractors as required by the Code of Virginia. Certificate Number _____ for a Class _____ License was issued on the _____ day of _____, 20____. The undersigned further certifies that the registration fee and all renewal fees required under law have been paid.

TIME LIMIT FOR PROJECT: SUBSTANTIAL COMPLETION – **60 CALENDAR DAYS**
FINAL COMPLETION – **30 CALENDAR DAYS** FROM
SUBSTANTIAL COMPLETION

LIQUIDATED DAMAGES: SUBSTANTIAL COMPLETION - **\$1,048.00** PER DAY
FINAL COMPLETION - **\$1,048.00** PER DAY

BID FORM, PAGE 2 OF 7

BIDDER SUBMISSION REQUIREMENTS:

In a separate attachment, Bidders shall provide the following documentation:

- List of 3 similar projects recently completed projects that involving the same material, equal rip rap size, and comparable length. For each project, Bidders shall list the following information:
 - Project Name
 - Project description and Bidder’s scope of work within the project
 - Project manager’s name, telephone number and email address
 - Work start date, scheduled completion, and actual completion date
 - Initial contract cost and final contract cost

- Resume of the proposed Project Manager with their Bids assigned to this work, who shall have at least 3 years of experience in overseeing projects of similar type and size.

- Bid Surety in the amount of not less than 5% of the bid.

COMPLETE THE PRICING SHEET PROVIDED WITH THE BID DOCUMENTS AS ATTACHMENT A TO ITB NO. 23-DES-ITBPW-586 AND SUBMIT IT WITH YOUR BID.

FAILURE TO SUBMIT THE PRICING SHEET WITH THE BID WILL DEEM THE BIDDER NONRESPONSIVE.

THE UNDERSIGNED UNDERSTANDS AND ACKNOWLEDGES THE FOLLOWING:

THE OFFICIAL COPY OF THE SOLICITATION DOCUMENTS, WHICH INCLUDES ANY ADDENDA, IS THE ELECTRONIC COPY THAT IS AVAILABLE FROM THE VENDOR REGISTRY WEBSITE AT:

[HTTPS://VRAPP.VENDORREGISTRY.COM/BIDS/VIEW/BIDSLIST?BUYERID=A596C7C4-0123-4202-BF15-3583300EE088.](https://vrapp.vendorregistry.com/bids/view/bidslst?buyerid=A596C7C4-0123-4202-BF15-3583300EE088)

VENDORS ARE REQUIRED TO REGISTER ON [VENDOR REGISTRY](#) IN ORDER TO SUBMIT A RESPONSE TO THIS INVITATION TO BID. **NO RESPONSES WILL BE ACCEPTED AFTER THE BID DUE DATE AND TIME.**

POTENTIAL BIDDERS ARE RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF ALL SOLICITATION DOCUMENTS THEY RECEIVE FROM ANY SOURCE, INCLUDING THE COUNTY.

The undersigned acknowledges receipt of the following Addenda:

ADDENDUM NO. 1 DATE: _____ INITIAL: _____

ADDENDUM NO. 2 DATE: _____ INITIAL: _____

ADDENDUM NO. 3 DATE: _____ INITIAL: _____

TRADE SECRETS OR PROPRIETARY INFORMATION:

Trade secrets or proprietary information submitted by an Offeror in connection with a procurement transaction will not be subject to public disclosure under the Virginia Freedom of Information Act. Pursuant to Section 4-112 of the Arlington County Purchasing Resolution, however, an Offeror seeking to protect submitted data or materials from disclosure must, before or upon submission of the data or materials, identify the specific data or materials to be protected and state the reasons why protection is necessary. Please note that designation of an entire bid, proposal, or prequalification application or of line-item prices or the total bid amount is prohibited.

Please mark one:

- No, the bid that I have submitted does not contain any trade secrets and/or proprietary information.
- Yes, the bid that I have submitted does contain trade secrets and/or proprietary information.

If Yes, you must clearly identify below the exact data or materials to be protected and list all applicable page numbers, sections, and paragraphs of the bid that contain such data or materials:

State the specific reason(s) why protection is necessary and why the identified information constitutes a trade secret or is proprietary:

If you fail above to identify the data or materials to be protected or to state the reason(s) why protection is necessary, you will not have invoked the protection of Section 4-111 of the Purchasing Resolution. Accordingly, upon the award of a contract, the bid will be open for public inspection consistent with applicable law.

CERTIFICATION OF NON-COLLUSION: The undersigned certifies that this bid is not the result of or affected by (1) any act of collusion with another person engaged in the same line of business or commerce (as defined in Virginia Code §§ 59.1-68.6 *et seq.*) or (2) any act of fraud punishable under the Virginia Governmental Frauds Act (Virginia Code §§ 18.2-498.1 *et seq.*).

CONTACT PERSON AND MAILING ADDRESS FOR DELIVERY OF NOTICES

Provide the name and address of the person who is designated to receive notices and other communications regarding this solicitation. Refer to the "Notices" section in the draft Contract Terms and Conditions for information regarding delivery of notices.

NAME: _____

ADDRESS: _____

E-MAIL: _____

INSURANCE CHECKLIST

CERTIFICATE OF INSURANCE MUST SHOW ALL COVERAGE AND ENDORSEMENTS MARKED "X".

COVERAGES REQUIRED
MINIMUMS)

LIMITS (FIGURES DENOTE

- 1. Workers' Compensation.....Statutory limits of Virginia
- 2. Employer's Liability.....\$500,000/accident, \$500,000/disease, \$500,000/disease policy limit
- 3. Commercial General Liability..... \$1,000,000 CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 4. Premises/Operations.....\$1, Million CSL BI/PD each occurrence, \$ 2 Million annual aggregate
 - 7. Independent Contractors.....\$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 8. Products Liability..... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 9. Completed Operations..... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 10. Contractual Liability (Must be shown on Certificate.... \$1 million CSL BI/PD each occurrence, \$2 Million annual aggregate
 - 11. Personal and Advertising Injury Liability.....\$1 million each offense, \$2 Million annual aggregate
 - 21. Moving and Rigging Floater.....Endorsement to CGL
 - 24. XCU Coverage.....Endorsement to CGL
- 5. Automobile Liability.....\$1 million CSL BI/PD each accident, Uninsured Motorist
 - 6. Owned/Hired/Non-Owned Vehicle.....\$1 million BI/PD each accident, Uninsured Motorist
 - 16. Motor Carrier Act (MCS-90) and CA9948 (or equivalent) Endorsements\$ 2 million BI/PD each accident, Uninsured Motorist
- 12. Umbrella/Excess Liability.....\$1 million Bodily Injury, Property Damage and Personal Injury
- 13. Per Project Aggregate for General Liability or Umbrella/Excess Liability (check coverage)
- 14. Professional Liability/ Errors and Omission (E&O)
 - a. Architects and Engineers.....\$1 million per occurrence/claim
 - b. Asbestos Removal Liability\$3 million per occurrence/claim
 - c. Medical Malpractice.....\$2.55 million per occurrence/claim or the statutory VA annual claim cap whichever is greater
- 15. Miscellaneous E&O.....\$1 million per occurrence/claim
- 17. Motor Cargo Insurance.....\$ _____ (to the total value of the goods being transported)
- 18. Garage Liability.....\$1 million Bodily Injury, Property Damage per occurrence
- 19. Garage Keepers Liability.....\$1Million Comprehensive, \$1 Million Collision
- 20. Inland Marine-Bailee's Insurance..... \$ _____ (maximum value of goods under Contractor's care)
- 22. Crime Liability/ Employee Dishonesty insurance or Dishonesty Bond.....\$ _____
(Maximum value of revenue or goods that can be taken at one time)
- 23. Builder's Risk.....\$ _____ (Provide Coverage in the full amount of contract)
- 25. USL&H.....Federal Statutory Limits
- 26. Carrier Rating shall be Best's Rating of A-VII or better or its equivalent
- 27. Notice of Cancellation, nonrenewal or material change in coverage shall be provided to County at least thirty (30) days prior to action.
- 28. The County shall be named Additional Insured on all policies except Workers Compensation, Errors, and Omissions/Professional Liability and auto.
- 29. Certificate of Insurance shall show Bid Number and Bid Title.
- 30. Environmental Impairment Liability, including coverage of on-site clean up.....BI/PD \$3 Million per occurrence or \$6 Million Aggregate
 - a. If work requires clean up, remediation, and/or removal of bio -solids, bio-hazards waste, and any hazardous or toxic

material via transportation request Business Auto Liability add #16 from this checklist.

 31. Cyber insurance with Technology E&O..... \$2 Million per occurrence

 32. OTHER INSURANCE REQUIRED: _____

BIDDER'S STATEMENT:

If awarded the contract, I will comply with contract insurance requirements.

BIDDER NAME: _____

AUTH. SIGNATURE: _____

ESCROW AGREEMENT

The following pages contain the escrow agreement authorized by 2.2-4334 of the Code of Virginia. Its use is at the Contractor's option. If the Contractor elects to use the escrow procedures, indicate by completing the applicable section of the Bid Form. If the Contractor indicates that it elects to use the escrow procedures, the Contractor must submit the completed escrow agreement to the County, signed by all parties except the County, no later than fifteen (15) days after the date of the notice of award or intent to award issued by the County Purchasing Agent. Escrow agreements received after that time will not be considered.

ESCROW AGREEMENT

THIS AGREEMENT, made and entered into on the date of execution of this agreement by the County by, between and among the County Board of Arlington, Virginia (County), _____ (Contractor), _____ and _____ (Name of Bank), _____ (Address of Bank), a trust company, bank, or savings and loan institution with its principal office located in the Commonwealth of Virginia (hereinafter referred to collectively as Bank) and (Surety) provides:

- I. The County and the Contractor have entered into a Contract with respect to _____ (Contract). This Agreement is pursuant to, but in no way amends or modifies, the Contract. Payments made hereunder or the release of funds from escrow shall not be deemed approval or acceptance of performance by the Contractor.
- II. In order to assure full and satisfactory performance by the Contractor of its obligations under the Contract, the County is required thereby to retain certain amounts otherwise due the Contractor. The Contractor has, with the approval of the County, elected to have these retained amounts held in escrow by the Bank. This agreement sets forth the terms of the escrow. The Bank shall not be deemed a party to, bound by, or required to inquire into the terms of, the Contract or any other instrument or agreement between the County and the Contractor.
- III. The County shall from time to time pursuant to its Contract pay to the Bank amounts retained by it under the Contract. Except as to amounts actually withdrawn from escrow by the County, the Contractor shall look solely to the Bank for the payment of funds retained under the Contract and paid by the County to the Bank.

The risk of loss by diminution of the principal of any funds invested under the terms of this Contract shall be solely upon the Contractor.

Funds and securities held by the Bank pursuant to this Escrow Agreement shall not be subject to levy, garnishment, attachment, lien, or other process whatsoever. Contractor agrees not to assign, pledge, discount, sell or otherwise transfer or dispose of his interest in the escrow account or any part thereof, except to the Surety.

- IV. Upon receipt of checks or warrants drawn by the County and made payable to it as escrow agent, the Bank shall promptly notify the Contractor, negotiate the same and deposit or invest and reinvest the proceeds in approved securities in accordance with the written instructions of the Contractor. In no event shall the Bank invest the escrowed funds in any security not approved.
- V. The following securities, and none other, are approved securities for all purposes of this Agreement:
 - (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury Certificates of Indebtedness or United States Treasury Bills,
 - (2) Bonds, notes and other evidences of indebtedness unconditionally guaranteed as to the payment of principal and interest by the United States,

- (3) Bonds or notes of the Commonwealth of Virginia,
- (4) Bonds of any political subdivision of the Commonwealth of Virginia, if such bonds carried, at the time of purchase by the Bank or deposit by the Contractor, a Standard and Poor's or Moody's Investors Service rating of at least "A", and
- (5) Certificates of deposit issued by commercial Banks located within the Commonwealth, including, but not limited to, those insured by the Bank and its affiliates.
- (6) Any bonds, notes, or other evidences of indebtedness listed in Sections (1) through (3) may be purchased pursuant to a repurchase agreement with a bank, within or without the Commonwealth of Virginia having a combined capital, surplus and undivided profit of not less than \$25,000,000, provided the obligation of the Bank to repurchase is within the time limitations established for investments as set forth herein. The repurchase agreement shall be considered a purchase of such securities even if title, and/or possession of such securities is not transferred to the Escrow Agent, so long as the repurchase obligation of the Bank is collateralized by the securities themselves, and the securities have on the date of the repurchase agreement a fair market value equal to at least 100% of the amount of the repurchase obligation of the Bank, and the securities are held by a third party, and segregated from other securities owned by the Bank.

No security is approved hereunder which matures more than five years after the date of its purchase by the Bank or deposit by the Contractor.

- VI. The Contractor may from time to time withdraw the whole or any portion of the escrowed funds by depositing with the Bank approved securities in an amount equal to, or in excess of, the amount so withdrawn. Any securities so deposited or withdrawn shall be valued at such time of deposit or withdrawal at the lower of par or market value, the latter as determined by the Bank. Any securities so deposited shall thereupon become a part of the escrowed fund.

Upon receipt of a direction signed by the County Comptroller, the Bank shall pay the principal of the fund, or any specified amount thereof, to the Treasurer of Arlington County, Virginia for the account of the County. Such payment shall be made in cash as soon as is practicable after receipt of the direction.

Upon receipt of a direction signed by the County Comptroller, the Bank shall pay and deliver the principal of the fund, or any specified amount thereof, to the Contractor, in cash or in kind, as may be specified by the Contractor. Such payment and delivery shall be made as soon as is practicable after receipt of the direction.

- VII. For its services hereunder, the Bank shall be entitled to a reasonable fee in accordance with its published schedule of fees or as may be agreed upon by the Bank and the Contractor. Such fee and any other costs of administration of this Agreement shall be paid from the income earned upon the escrowed fund and, if such income is not sufficient to pay the same, by the Contractor.

- VIII. The net income earned and received upon the principal of the escrowed fund shall be paid over to the Contractor in quarterly or more frequent installments. Until so paid or applied to pay the

Bank's fee or any other costs of administration, such income shall be deemed a part of the principal of the fund.

IX. The Surety undertakes no obligation hereby but joins in this Agreement for the sole purpose of acknowledging that its obligations as surety for the Contractor's performance of the contract are not affected hereby.

WITNESS the following:

_____, CONTRACTOR

By: _____ (Officer/Partner/Owner)

Date: _____

Bank Attest: _____ (Bank Officer)

Bank: _____

By: _____ (Vice President)

Date: _____

Surety Attest: _____ (Surety Company)

By: _____ (Resident Virginia Agent)

(Address)

Date: _____

By: _____ (Attorney in fact)

Date: _____

THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA

By: _____ (Purchasing Agent)

Date: _____

EXHIBIT B



COMMONWEALTH of VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Gary G. Pan
COMMISSIONER

Main Street Centre
600 East Main Street, Suite 207
Richmond, Virginia 23219
PHONE (804) 371-2327
FAX (804) 371-6524

Virginia Department of Labor and Industry Wage Determination Decision

| | |
|----------------------------|---|
| Project Name | N. Glebe Rd. Roadside Ditch Restoration |
| County Project Code | 23-DES-ITBPW-586 |
| DOLI Project Number | ARLC-23-0016 UPDATE |
| County or Independent City | Arlington County |
| Publication Date | 06/28/2023 |
| Construction Type | Highway |

| Wage Determinations | Wage | Fringe |
|--|---------|---------|
| Carpenter, Includes Form Work | \$20.97 | |
| Cement Mason/Concrete Finisher | \$20.70 | \$8.03 |
| Electrician, Includes Traffic Signalization | \$30.55 | \$11.51 |
| Fence Erector | \$15.28 | |
| Ironworker, Reinforcing | \$34.18 | |
| Ironworker, Structural | \$34.18 | |
| Laborer: Asphalt, Includes Raker, Shoveler, Spreader and Distributor | \$19.06 | \$1.75 |
| Laborer: Common or General | \$21.41 | \$8.11 |
| Laborer: Grade Checker | \$14.88 | |
| Laborer: Pipelayer | \$20.48 | |
| Laborer: Power Tool Operator | \$15.69 | |
| Operator: Asphalt Spreader and Distributor | \$20.58 | \$2.31 |

| Wage Determinations | Wage | Fringe |
|--|---------|--------|
| Operator: Backhoe/Excavator/Trackhoe | \$23.93 | |
| Operator: Bobcat/Skid Steer/Skid Loader | \$19.00 | \$3.49 |
| Operator: Broom/Sweeper | \$17.40 | \$2.01 |
| Operator: Bulldozer, Including Utility | \$20.64 | |
| Operator: Crane | \$29.46 | |
| Operator: Drill | \$24.89 | |
| Operator: Gradall | \$19.26 | |
| Operator: Grader/Blade | \$23.21 | |
| Operator: Hydroseeder | \$16.64 | |
| Operator: Loader | \$18.92 | |
| Operator: Mechanic | \$22.84 | |
| Operator: Milling Machine | \$23.19 | \$2.94 |
| Operator: Pavement Planer | \$21.14 | |
| Operator: Pavement Planer Groundsmen | \$19.75 | |
| Operator: Paver (Asphalt, Aggregate, and Concrete) | \$20.33 | \$2.81 |
| Operator: Piledriver | \$21.83 | \$4.08 |
| Operator: Roller | \$18.92 | |
| Operator: Roller (Finishing) | \$18.73 | \$3.23 |
| Operator: Screed | \$22.13 | \$4.89 |
| Pavement Marking Operator | \$22.16 | |
| Pavement Marking Truck Driver | \$18.78 | |
| Traffic Control: Flagger | \$13.64 | |
| Truck Driver: 1/Single Axle Truck | \$19.35 | |
| Truck Driver: Fuel and Lubricant Service | \$18.25 | |
| Truck Driver: Heavy 7CY & Under | \$15.53 | |
| Truck Driver: Heavy Over 7CY | \$18.05 | |
| Truck Driver: Multi Axle | \$20.34 | \$2.89 |

Additional Notes

All wage rates to be used on a contract will be set at the time the contract is awarded. While DOLI maintains a list of wage determinations online for reference purposes, only the wage determinations made in an official Wage Determination Decision, sent by DOLI to the contracting agency, can be used to ascertain the exact rates to be paid for a specific contract.

All rates are determined by DOLI and any appeals of specific classifications may be made through the Wage Determination Appeal form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Appeal-for-Wage-Determination-Clarification.pdf>

Any additional classifications may be requested through the Additional Wage Classification form available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/Request-for-Additional-Wage-Classification.pdf>
Understand your duties as a contractor under Virginia law by referencing our Contractor Responsibilities information sheet available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/PREVAILING-WAGE-CONTRACTOR-RESPONSIBILITIES.pdf>

Your employees have specific rights, which can be found on our List of Employee Rights information sheet available at <http://www.doli.virginia.gov/wp-content/uploads/2021/04/PREVAILING-WAGE-EMPLOYEE-RIGHTS.pdf>
Any further questions should be directed to PrevailingWage@doli.virginia.gov

EXHIBIT D

CONTRACTOR PERFORMANCE EVALUATION FORM

ARLINGTON COUNTY GOVERNMENT

Contractor Performance Evaluation Form

Contractor Name: _____ Contract No.: _____

Date: _____ Project/Contract Name: _____

Interim Evaluation _____ Final Evaluation _____

Scope of Work/Services Provided:

Contract Start Date: ___/___/___ Contract End Date: ___/___/___ Actual Completion Date: ___/___/___

Please rate the effectiveness of the Contractor's performance on the Contract/Project across the following dimensions:

Evaluation Criteria: Unacceptable Poor Satisfactory Excellent

Written comments to explain assigned ratings are required for any performance ratings below "satisfactory" or an "excellent" in any category.

Evaluation Questions

1. Quality of Workmanship

Rate the quality of the Contractor's workmanship. Were there quality-related or workmanship problems on the Contract? Was the Contractor responsive to remedial work required?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

2. Problem Solving and Decision Making

Rate the Contractor's ability to provide effective and creative problem solving, coordination and fair decision making on Contract/Project.

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

3. Project Schedule

Rate the Contractor's performance with regard to adhering to contract schedules. Did the Contractor meet the contract schedule, or the schedule as revised by approved change orders? If not was the delay attributable to the Contractor?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

4. Subcontractor Management

Rate the Contractor's ability, effort and success in managing and coordinating subcontractors (if no subcontractors rate the Contractor's overall project management). Was the Contractor able to effectively resolve problems?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

5. Safety

Rate the Contractor's safety procedures on this Contract/Project? Were there any OSHA violations or serious safety accidents?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

6. Environmental Compliance

Did the Contractor comply with local, state, and federal environmental standards in the performance of the Contract? Did the Contractor comply in good faith with local erosion and sedimentation control requirements and/or any Stormwater Pollution Prevention Plan?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

7. Change Orders

Did the Contractor unreasonably claim change orders or extras? Were the Contractor's prices on change orders and extra work reasonable?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

8. Paperwork Processing

Rate this Contractor's performance in completing and submitting required project paperwork (i.e. change orders, submittal, drawings, invoices, workforce reports, etc.) Did the Contractor submit the required paperwork promptly and in proper form?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

9. Supervisory Personnel

Rate the general performance of this Contractor's supervisory personnel. Did they have the knowledge, management skills and experience to run a project of this size and scope?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

10. Expertise, Knowledge and Experience

Rate this Contractor's personnel. Were they dedicated, experienced and qualified for the duration of project.

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

11. Project/Contract Closeout

Rate the Contractor's performance on timeliness and quality of closeout deliverables such as As-Built Drawings, Operation and Maintenance Manuals, and training. Did the Contractor complete the tasks or Project on schedule; was the punch list completed within the allotted time?

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

12. Level of Overall Performance

___ Unacceptable ___ Poor ___ Satisfactory ___ Excellent ___ N/A

Based on these comments, would you recommend this Contractor for comparable work in the future?

Yes No

Please provide any comments regarding the Contractor's performance or the quality of its work. The Contractor can also provide any comments or clarification on the evaluation in the box below.

(Project Officer or Contractor, use additional sheets, if Necessary):

Signatures and Certifications:

1. The information contained in this evaluation form represents, to the best of my knowledge, a true and accurate analysis of the Contractor’s performance record on this Contract; and,
2. The contents on the evaluation form and the ratings were not negotiated with the Contractor or its representative for any reason.

Evaluator’s Signature: _____ Date: _____

Evaluator’s (PjO) Printed Name _____ Evaluator’s Title: _____

Contractor’s signature below acknowledges receipt and the opportunity to respond:

Contractor Signature: _____ Date: _____

Contractor Printed Name: _____ Title: _____

EVALUATION RATINGS DEFINITIONS

| Rating | Definition | Notes |
|--------------|---|--|
| Excellent | Performance meets contractual requirements and exceeds many to the County’s benefit. The contractual performance of the element or sub-element being evaluated was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective. | To justify an Exceptional rating, identify multiple significant events and state how they were of benefit to the County. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified. |
| Satisfactory | Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory. | To justify a Satisfactory rating, there should have been only minor problems, or major problems the contractor recovered from without impact to the contract/order. There should have been NO significant weaknesses identified. A fundamental principle of assigning ratings is that contractors will not be evaluated with a rating lower than Satisfactory solely for not performing beyond the requirements of the contract/order. |
| Poor | Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being evaluated reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor’s proposed actions appear only marginally effective or were not fully implemented. | To justify poor performance, identify a significant event in each category that the contractor had trouble overcoming and state how it impacted the County. A poor rating should be supported by referencing the management tool that notified the contractor of the contractual deficiency (e.g., management, quality, safety, or environmental deficiency report or letter). |

| | | |
|----------------------|--|--|
| Unacceptable | Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective. | To justify an Unsatisfactory rating, identify multiple significant events in each category that the contractor had trouble overcoming and state how it impacted the County. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating. An Unsatisfactory rating should be supported by referencing the management tools used to notify the contractor of the contractual deficiencies (e.g., management, quality, safety, or environmental deficiency reports, or letters). |
| Not Applicable (N/A) | N/A (not applicable) should be used if the ratings are not going to be applied to a particular area for evaluation. | |

END

EXHIBIT E

ARLINGTON COUNTY DES ENGINEERING
SPECIAL CONDITIONS

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PROJECT SUMMARY

This channel repair project includes the restoration of the existing ditch along N. Glebe Rd (Route 120), a section of which was damaged following a major water main break in November 2019. Restoration includes 500 feet of ditch downstream and about 1,000 feet of ditch upstream of the watermain break to be restored with Class II riprap, as well as new guardrail installation to replace a previous guardrail and temporary jersey wall, and restoration of the Potomac Heritage Trail which crosses this ditch in the downstream segment underneath George Washington Memorial Parkway. The work also includes tree removal and planting/seeding, erosion and sediment controls, and all other related incidental work described and required in the contract documents. Work must be completed at night by utilizing the overnight closure of N Glebe Road as outlined in Exhibit H - VDOT Permit.

The Contractor shall provide all resources to successfully perform the scope of this contract in accordance with project plans, and in compliance with Arlington County and VDOT Standards and Specifications. The Contractor shall perform the work complete, in place, tested, and ready for continuous service.

All work within the VDOT Right-Of-Way shall be performed in accordance with the VDOT Standards and Specifications, unless otherwise noted. All work within the County Right-Of-Way shall be in accordance with the Arlington County Standards and Specifications, unless otherwise noted.

SUPPLEMENTS TO THE GENERAL CONDITIONS

These Conditions modify the Arlington County Construction General Conditions. All provisions that are not modified or deleted by these Supplemental Conditions shall remain in full force and effect.

The address system used in these Supplemental Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE B – DRAWINGS, SPECIFICATIONS AND RELATED DATA

SC-B.10 TESTS

Add the following new language to Paragraph B.10:

All materials testing shall be in compliance with the Arlington County Materials Testing Specification Reference. This document specifies the method and frequency of testing for Arlington County projects. A copy of this document is included in the bid documents. This shall be incidental to the work and no separate payment will be made.

The Contractor shall engage the services of a geotechnical company, acceptable to both the County and VDOT, to conduct all materials testing per the County and VDOT Specifications.

If it is observed that samples for testing are being improperly taken or that samples are being taken from an area that is not fully representative of all project conditions, then Contractor shall take and test additional samples at the County Project Officer's request from areas designated by the County Project Officer and at the Contractor's expense.

In addition, the Contractor shall provide the County with unfettered site access as needed for VDOT/County personnel or VDOT/County consultants to enter the site, inspect, and perform any additional testing for any and all materials (including soil, concrete, asphalt, etc.).

Compaction results must meet VDOT Specifications and be certified by a Geotechnical Engineer licensed in Virginia. This work shall be at no cost to the County.

SC-B.13 SURVEYS AND CONTROLS

Unless otherwise stated, the County will provide horizontal and vertical reference points necessary for the Contractor to proceed with the Work. The Contractor shall carefully preserve all reference points, and in the case of destruction thereof by the Contractor or due to the negligence of the Contractor or of any subcontractor, the Contractor shall be responsible for expense and damage resulting therefrom and shall be responsible for any mistakes or construction errors that may be caused by the loss or disturbance of such

reference points. The Contractor shall be responsible for laying out the Work and shall retain a professional land surveyor licensed in the Commonwealth of Virginia to survey and provide all necessary construction layouts and to establish all control lines, grades, and elevations during construction.

SC-B.14 AS-BUILT DRAWINGS

The Contractor shall maintain a set of red-line drawings. Red-line drawings shall be in accordance with Supplemental Specification 01720, Project Record Documents. A copy of the red line drawings showing work completed shall be submitted monthly to the County prior to the issuance of the monthly progress payment.

For storm, sanitary and water main installations performed with this contract, the contractor shall provide Arlington County with As-Builts that are in accordance with Arlington County DES Construction Standards and Specifications Section 02550, Section 3.3; and Section 02500, Part 3.

ARTICLE C – COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS

SC-C.1 STATUS OF COUNTY PROJECT OFFICER OR DESIGNEE

TBD

Add the following new language to Paragraph C.1:

The County Project Officer will coordinate and consult with the VDOT Field Inspector as appropriate when working within the VDOT Right-Of-Way.

SC-C.4 INSPECTION OF WORK

Add the following new language to Paragraph C.4:

Contractor shall notify the Project Officer at least 3 working days prior to disturbing any existing, or installing any new, traffic signs, signals, or other traffic control devices. The Contractor shall allow 3 working days for the inspection and approval of the premarkings prior to placing the permanent markings.

SC-C.9 CONTRACTOR MANAGEMENT PERSONNEL

Add the following new language to Paragraph C.9:

Emergency Contact:

The Contractor shall have a qualified and experienced person who can clearly communicate technical matters regarding the subject project. This person shall be available via phone to respond to emergency situations on the project 24 hours a day.

Project Manager:

The Contractor shall have a qualified and experienced Project Manager assigned to this work with a minimum of three (3) years of experience in overseeing projects of similar type and size. Bidder shall submit resume of the proposed Project Manager with their Bids.

Site Supervisor:

The Contractor shall have a qualified and experienced site supervisor who can clearly communicate technical matters on-site at all times when construction activity is occurring or when the site is not in a secure state.

Safety Project Officer:

The Contractor shall have at least one (1) employee certified by VDOT in Basic Work Zone Traffic Control on-site at all times that work is occurring and be responsible for the following:

- Placement, maintenance, and removal of work zone traffic control devices,

- Compliance with permit requirements and conditions, approved plans and specifications, the Virginia Work Area Protection Manual, and the Manual of Uniform Traffic Control Devices.

The flagger shall be certified in accordance with the VDOT Flagger Certification Program, the American Traffic Safety Services Association Flagger Certification Program or any other VDOT approved flagger program. The flagger shall have his/her certification card with them at all times while performing flagging activities.

The Contractor shall have at least one (1) employee certified in OSHA 10 on-site at all times that work is occurring. The employee shall have served as a Project Safety Officer on at least three (3) prior projects. If the Contractor has multiple employees with these requirements, the Contractor shall clearly identify which employee shall serve as the Project Safety Officer.

Environmental Project Officer:

The Contractor shall have at least one (1) employee that has successfully completed the VDOT Erosion & Sediment Control Contractor Certification training. The Contractor employee shall be on-site during all land disturbance activities. The Contractor shall be responsible for ensuring compliance with all applicable local, State, and Federal erosion and sediment control regulations and permits during land disturbance activities.

If the Contractor proposes to deviate from the approved Erosion and Sediment Control Plan, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes.

SC-C.13 PROTECTION OF WORK AND PROPERTY

Add the following new language to Subparagraph C.13.c:

The Contractor shall be responsible for all damages caused by their construction activities. The Contractor shall perform or provide repairs, replacements, and restoration to all property that has been damaged resulting from construction operations performed by the Contractor, and shall meet the following requirements:

1. Restore all areas to conditions that existed prior to construction. Remove and Replace damaged items with items equal to or better than the damaged items.

Add the following new language to C.13:

- g. The Contractor shall contact "Miss Utility" at 811 for marking the locations of existing underground utilities (i.e. Water, sewer, gas, telephone, electric, and cable tv) at least 72 hours prior to any excavation or construction. The Contractor is required to identify and protect all other utility lines found in the work site area

belonging to other owners that are not members of "Miss Utility". Private water and/or sewer laterals will not be marked by "Miss Utility" or the County. The Contractor shall locate and protect these services during construction.

ARTICLE E – LEGAL RESPONSIBILITY AND PUBLIC SAFETY

SC-E.1 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

Add the following new language at the end of E.1:

When construction activity reaches in proximity to existing utilities, the trench(es) shall be opened a sufficient distance ahead of the work or test pits shall be made to verify the exact location and inverts of the utility to allow for possible changes in the line or grade as directed by the Project Officer. This shall be incidental to the work and no separate payment shall be made.

SC-E.2 PUBLIC CONVENIENCE

Add the following new language to Paragraph E.2:

The Contractor shall set up controls at the beginning of each work day and take down controls at the end of each work day for the duration of the project. At all times the Contractor shall maintain safe two-way vehicular traffic, and safe accessible pedestrian traffic in conformance with County and VDOT standards.

At all times the Contractor shall use the personnel and traffic control signs and devices necessary to comply with the Virginia Work Area Protection Manual and Part VI of the "National Manual on Uniform Traffic Control Devices." The Contractor has sole responsibility for ensuring that its operations are conducted in a safe manner and notwithstanding any other provision to the contrary, shall fully indemnify Arlington County, its officers, agents and employees for any damage or injury related to traffic operations which is caused by negligent or otherwise improper or deficient performance under the Contract or nonperformance of the terms of the Contract. All personnel, signs, barricades and any other items necessary for the maintenance of traffic and safety shall be provided by the Contractor.

When conditions warrant due to traffic volumes, patterns, or special events, the County may suspend or otherwise direct the Contractor's activities to protect the public and or the County's transportation network.

When the project includes a VDOT and/or County approved MOT Plan (or Plans), the Contractor shall strictly abide by this plan. If the Contractor proposes to deviate from the approved MOT Plan for a County road, it shall be the Contractor's responsibility to coordinate and obtain approval from the County Project Officer prior to implementing any changes. If the Contractor proposes to deviate from the approved MOT Plan for a VDOT road, it shall be the Contractor's responsibility to coordinate and obtain approval directly from VDOT prior to implementing any changes.

Prior to any lane closures within the VDOT Right-of-Way, the County Project Officer and VDOT Field Inspector must be notified in advance of such lane closure in accordance with VDOT requirements.

The Contractor shall not be entitled to any additional payment for changes to MOT which are the result of the Contractor's work schedule or resource allocation, weather delays, or other factors not controlled by the County.

Failure of the Contractor to correct any MOT deficiency immediately upon notification may result in the project being shut down until the deficiency is corrected, and a reduction from the amount of payment due in the amount of \$1,000.00 per violation. Repeated violations of this provision may result in contract termination.

The Contractor shall install project information signs (size - 36"x48") at least two (2) different locations for each site. Signs will be supplied by the County. Sign posts and incidentals necessary for a complete installation of the signs shall be furnished by the Contractor. Signs shall be installed at least two (2) weeks prior to the start of the construction. The Contractor shall coordinate the location of the signs with the Project Officer. After the project has been completed the Contractor shall remove and return the signs to the County Project Officer. The cost for this work shall be considered incidental to other items within the Contract and no separate payment will be made.

At the close of each work day, the area of work shall be confined to the smallest area possible, but in no event larger than the area designated in the Construction Documents, so that the maximum use of the street and sidewalk shall be restored and the hazard to traffic reduced to the minimum.

The Contractor shall preserve all bus stops, including maintaining adequate accessibility through and adjacent to the construction for buses and their passengers. The Contractor shall not close, relocate, or otherwise modify a bus stop without prior request of the Project Officer. Any relocation or closure of a bus stop will require at least four weeks advance notice for coordination with the county's bus stop coordinator.

SC-E.10 SITE CLEAN-UP AND WASTE DISPOSAL

Add the following new language to Paragraph E.10:

The County's Earth Products Recycling Yard (located at 4300 29th Street South, Arlington, VA) shall **not** be used on an as-needed basis for unspecified quantities of waste (due in part to the limited size of the Yard). Although atypical, the Yard **may** be considered, on a case-by-case basis, for disposal of specific types/quantities of waste from County construction projects. In such cases disposal arrangements must be approved by the County Project Officer, be made in advance, depend on available space and the type/quantity of waste, and

comply with certain requirements (for example, concrete shall be broken into pieces no longer than 24" in any dimension, contain less than 20% soil content, and be free of rebar).

SC-E.11 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Delete Paragraph 2.

ARTICLE F— PROGRESS AND COMPLETION OF THE WORK

SC-F.2 TIME FOR COMPLETION

Delete Paragraph F.2 and replace with the following language:

It is hereby understood and mutually agreed by and between the Contractor and the County that the Commencement Date, the rate of progress, and the Time for Completion of the Work to be done hereunder are essential conditions of the Contract. The Contractor agrees that the Work shall be started promptly upon receipt of a written Notice to Proceed in accordance with the accepted schedule. Additional time shall not be allowed for holidays or weather delays except as allowed in the contract.

ARTICLE G– MEASUREMENT AND PAYMENT

SC-G.1 PAYMENTS TO CONTRACTOR

Add the following new language to Section G.1:

Payments will be based on actual quantities and site measurements of the approved work taken in the field by the County Project Officer using the Contract Unit Prices. Any Work that is not shown on the approved plans that has not been previously authorized in writing by the Project Officer shall be at the Contractor's expense, and at no cost to the County.

No additional payment for any incidentals will be made unless specifically requested through, and authorized by, the County Project Officer prior to the work. Such determination of additional payment will be at the sole discretion of the County Project Officer, and will be based upon the determination that there exist exceptional conditions which will necessitate significant expenditures of material and/or labor above and beyond the typical installation conditions which could be anticipated in Arlington County.

SPECIAL CONDITIONS

These Special Conditions include any project-specific requirements in addition to the General Condition, Supplementary Specifications, and the County Standards Referenced herein.

1. **CONSTRUCTION STANDARDS**

All work shall conform to project plans and specifications along with the current edition of following County and VDOT construction standards and specifications:

- **The Arlington County Department of Environmental Services (DES) Bike Parking Standards**, a copy of which may be downloaded at no charge from the internet at: <https://info.arlingtontransportationpartners.com/arlington-county-bike-parking-standards>
- **The Arlington County Department of Environmental Services (DES) Construction Standards and Specifications**, a copy of which may be downloaded at no charge from the internet at: <http://topics.arlingtonva.us/building/construction-standards-specifications/>
- **The Arlington County Department of Environmental Services (DES) Traffic Signal Specifications**, a copy of which may be downloaded at no charge from the internet at: <https://transportation.arlingtonva.us/traffic-signal-specification-updates/>
- **The Arlington County Department of Environmental Services (DES) Streetlight Specifications**, a copy of which may be downloaded at no charge from the internet at: <https://transportation.arlingtonva.us/streets/street-lights/lighting-standards-specifications-updates/>
- **The Arlington County Department of Environmental Services (DES) Pavement Marking Specifications**, a copy of which may be downloaded at no charge from the internet at: marking-standards-rev-2.0-3.30.2020.pdf (arlingtonva.us)
- **The Arlington County Department of Parks and Recreation (DPR) Specifications**, a copy of which may be downloaded at no charge from the internet at: <https://www.arlingtonva.us/Government/Departments/Parks-Recreation/About/Design-Standards>
- **The Virginia Department of Transportation (VDOT) Road and Bridge Standards and Specifications**, a copy of which may be downloaded at no charge from the internet at: <http://www.virginiadot.org/business/const/spec-default.asp>
- **The Virginia Work Area Protection Manual (WAPM)**, a copy of which may be downloaded at no charge from the internet at: <https://www.virginiadot.org/business/trafficeng-WZS.asp>
- **Manual on Uniform Traffic Control Devices(MUTCD)**, a copy of which may be downloaded at no charge from the internet at: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm

- **The Arlington County Department of Environmental Services (DES) Dechlorination and Disposal Procedures**, a copy of which may be downloaded at no charge from the internet at: <https://www.arlingtonva.us/Government/Programs/Water-Utilities/Discharging-Chlorinated-Water>
- **The Supplementary Specifications listed within the Contract.**

In case of a discrepancy, the following order of priority will apply, with the highest governing item appearing first and the least governing item appearing last:

The Contract Bid Items
 Special Conditions
 Contract Drawings
 Supplemental Specifications
 Arlington County Construction Standards and Specifications
 External Agency Specifications

2. PERMITS

Permits required for the project include, but are not limited to:

- **VDOT Land Use permit**
- **National Park Service (NPS) permit**
- **Nationwide Permit**

All permits have been obtained prior to construction.

3. SPECIAL CONTRACTOR/SUBCONTRACTOR QUALIFICATIONS

Contractor shall have five (5) continuous years of experience conducting public works infrastructure and stream restoration projects. The experience shall be work of similar size and scope, construction, re-construction, and maintenance. The Contractor's obtained project experience shall consist of the following:

- In-Stream Projects
- Planting and maintenance of ecological restoration planting in the Chesapeake Bay watershed over the past five years
- Guardrail installation

4. STAKEOUT AND CUT-SHEETS

The Contractor shall be responsible for laying out the work and shall retain a professional land surveyor licensed in the Commonwealth of Virginia to provide all necessary construction layouts and establish all control lines, grades, and elevation during

construction. The Contractor shall submit a copy of all cut-sheets for review, per the Arlington County Specifications. All cut-sheets for layout and construction shall be provided as submittals at least seven (7) calendar days prior to construction of the work included on that cut-sheet. The cost of all necessary surveying services shall be considered incidental to the work and no separate payment shall be made.

5. SCHEDULE, DURATION, AND PHASING REQUIREMENTS

The Contractor shall provide a schedule for all work listed on plans including any additional work not specifically mentioned on plans but was agreed upon with the County prior to work commencing.

Work Duration per task order shall be calculated in accordance with Supplements to the General Condition "SC-F.2 TIME FOR COMPLETION". The Time for completion shall be used as the basis for the project schedule.

Contractor shall make sure that the submittals/shop drawings are reviewed and accepted and materials ordered and delivered on site as no additional time will be granted for this.

6. WORK HOURS

The Contractor shall comply with **restricted working hours** as defined by VDOT and as noted on the approved VDOT permit when working within the VDOT Right-Of-Way. For restricted work hours in VDOT ROW, see attached "Lane Closure Guidelines in NOVA District". The Contractor is responsible for satisfying all VDOT Permit requirements found at: <http://www.virginiadot.org/business/fairfax-permits-main.asp>.

In addition, the County reserves the right to restrict working days and hours to accommodate special site conditions as required.

7. GENERAL SITE SECURITY AND CONTROLS

The Contractor is responsible for securing its work area for safety and security. The Contractor shall confine its construction and presence to the Limits of Work, unless otherwise approved by the County Project Officer.

The Contractor shall provide, erect, and maintain barricades, fences, and/or signage as required to protect the general public, workers, and adjoining properties at no additional cost to the County. Before leaving the site at the end of each day, the Contractor shall replace any and all sections of the security fence or barricade moved or removed during work hours.

The Contractor shall maintain clear vehicular access to existing driveways and entrances at all times unless such access is otherwise addressed on County-approved project plans, precluding concrete pouring and curing of such access points, unless otherwise directed by the County Project Officer.

Homeowners shall be notified by the Contractor a minimum of fourteen (14) calendar days in advance of any driveway closure, and driveways can only be closed for a maximum of five (5) calendar days.

The Contractor shall monitor parking of construction personnel's private vehicles and ensure that the public has unobstructed access to and through parking areas.

8. CONSTRUCTION EQUIPMENT

The Contractor shall confirm that prior to moving on to the Project Area, all equipment, is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Verify that all equipment has been pressure washed and is free of exotic species prior to start-up of operations and moving of equipment to Project Area.

Equipment shall be considered free of soil, seeds, and other debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools are not required.

Contractor shall notify the Contracting Officer at least 2 days prior to moving any equipment onto the Project Area. Notification will include identifying the location of the equipment's most recent operations. The Contractor shall arrange for the Contracting Officer to inspect each piece of equipment prior to it being placed in service.

Use of the smallest feasible equipment and use of tracked equipment is desirable to minimize tree impacts during construction. The Contractor shall submit an equipment schedule to the Project Officer for approval prior to mobilization to the project site.

9. SPECIAL TRAFFIC MAINTENANCE CONSIDERATIONS

The Contractor shall observe all traffic control and maintenance requirements as stipulated by NPS, VDOT and the County.

10. TRAFFIC SIGNALS AND STREETLIGHTS

Materials and construction of the communications conduit, streetlights, and traffic signals shall abide by the latest versions of the 'Arlington County Traffic Signal Specifications and Standards' and 'Arlington County Lighting Specifications and Standards. All materials for these areas shall be approved by Arlington County Transportation Engineering and Operations Bureau. The County Project Officer will facilitate the material specification submissions for review by the Transportation Engineering and Operations Bureau.

The Contractor shall abide by VDOT's requirement to submit signal foundation details for review. These details include, but are not limited to soil tests to verify the detail design, along with any other supporting information required by VDOT in their submission package.

Details shall be created for each signal pole foundation and shall be for both three feet and four feet diameter foundations. The County will assist only in the submission of these details to VDOT, if requested. The Contractor is responsible for satisfying all VDOT requirements. The Contractor shall incorporate all costs for this in relevant items and no payment will be made by the County. The submission shall be submitted with enough time for VDOT to adequately review it. The Contractor cannot claim any time delay or any additional compensation due to such delay.

Prior to removal of the existing signal equipment and materials, the Contractor shall meet with the Project Officer to verify which equipment will be returned to the County, when and where the returned equipment will be delivered, and which equipment will be disposed. All costs associated with this shall be incidental to other items in the Contract.

Installation of electrical service for temporary services such as signals, streetlights, signal cabinets, construction trailers, or for equipment use are incidental to the contract.

Intercepting existing streetlight conduits and splicing into existing cables are incidental to the contract.

References to a CCTV camera shall mean to both furnish and install the CCTV camera, unless specifically excluded.

As part of the luminaire installation, Contractor shall install house-side shields in each fixture. These shields will be provided by the County. If requested, the County will demonstrate how to install the shields. The Contractor shall contact the Streetlights Operations Team Manager at (703) 228-6531 to obtain the shields prior to ordering any streetlight materials to ensure they will be available at the time of construction, and to request a demonstration on how to install the shields. Failure to do so will be at the Contractor's expense for time if construction is stopped because the shields are not available. The installation of the shields is considered incidental to the contract and no additional payments shall be made for this work.

11. PAVEMENT RESTORATION FOR UTILITY CUTS

Pavement restoration for utility cuts in VDOT Right-Of-Way shall be in accordance with the detail shown in the LUP-OC NOVA Land Use Permit's Special provisions for pavement open cuts.

12. TEST PITS

Protecting existing utilities is the Contractor's responsibility and any test pits performed to protect the existing utilities shall be incidental to the work and no separate payment shall be made for that purpose.

13. GENERAL EXCAVATION

During construction if the need arises for additional excavation not included in the Contract Documents, the Contractor shall request in writing the need for additional excavation. The Contractor must request approval from the County Project Officer prior to performing the work.

If over-excavation is approved by the County Project Officer, and the additional excavation is not authorized by a change order, the excavation will be incidental to the lump sum bid price.

Failure by the Contractor to obtain written approval from the County Project Officer prior to performing any additional excavation will be performed at the Contractor's expense and there will be no cost to the County.

Excavation and shoring of any pits or shafts for trenchless or open trench methods of pipe installation, and any shoring left in place during installation shall be considered incidental to the installation of the pipe and shall be included in the lump sum price for installation of the pipe.

All sheeting, shoring, and bracing shall be in accordance with the current version of VDOT Specifications. Sheeting and shoring, if utilized may be abandoned in place up to five (5) feet below grade which shall be backfilled, etc. in accordance with the construction documents.

The maximum length of open trench shall be no more than one hundred (100) feet in roadways and three hundred (300) feet elsewhere unless written permission is obtained from the County Project Officer

No excavation shall remain open within the roadway or sidewalk without the approval of the County except when the excavation can be safely bridged with the use of steel plates or other materials acceptable to the County. When areas of excavation do remain open with the use of steel plates, warning signs shall be posted.

Steel plates may not be used within the VDOT Right-Of-Way from November 1st through April 1st. If steel plates are used during the allowable time period of April 2nd through October 31st, then their use shall comply with the most current VDOT Standards and Specifications.

14. EARTH WORK

The proposed work involves little excavation or soil disturbance. Limited bed excavation will occur or allow placement of Class II riprap. The County expects that the excavated material will be re-usable to place and compact in the fill areas. The cost of staging of excavated material to be reused for fill and placing and compacting the fill areas is incidental to the unit cost of excavation included on bid sheet. Haul-off of unsuitable excavated material will be paid per cy in accordance with the quoted unit price on the bid sheet. If needed, unit cost of

rock excavation and select borrow is stipulated on stipulated price items document included in the bid documents.

15. BYPASS PUMPING/TEMPORARY FLOW DIVERSION/DEWATERING

The Contractor shall utilize temporary pumps to divert stream flows during construction as required. All equipment used for these purposes shall comply with the requirements of the Arlington County Noise Ordinance. The Contractor shall be responsible for the installation, operation, and removal of the temporary pumps. The Contractor shall be responsible for utilizing pumps sufficient to bypass the normal flow and dewater the work area.

The Contractor shall furnish, install, operate and maintain all sumps, pumps, casings, wellpoints, dewatering device, portable dams/barriers and other equipment needed to perform the temporary flow diversion and dewatering of the construction site as needed for proper execution of the construction work.

The Contractor shall furnish to the County in writing, a plan for diverting flows and removal of water from the work area before beginning the construction work. Acceptance of this plan will not relieve the Contractor of responsibility for completing the work as specified

Bypass pumping of stream flows shall be in accordance with Supplemental Specification 01501.

16. TREE PROTECTION AND TRIMMING

Minimizing damage to existing trees is very important. If roots for trees not marked 'to be removed' on the Construction Plans are found during construction, the Contractor shall notify the Project Officer. The Project Officer shall consult with the National Park Service (NPS), then the Project Officer shall determine if additional root pruning is required. The additional root pruning performed by the Contractor shall be considered incidental to the lump sum bid price.

17. SUBSTANTIAL COMPLETION AND WARRANTY

The determination of substantial completion will be made by the Project Officer. Floodplain and upland landscaping must have been installed and approved and site restoration must be complete, as determined by the Project Officer, for the project to be determined substantially complete. The warranty period (one year for the project overall and two years for landscaping) shall start on the date of substantial completion as determined by the Project Officer.

EXHIBIT F

SUPPLEMENTAL SPECIFICATIONS

TABLE OF CONTENTS

COUNTY SPECIFICATIONS MODIFIED:

| <u>SECTION NO.</u> | <u>DESCRIPTION</u> |
|--------------------|----------------------------------|
| 01720 | PROJECT RECORD DOCUMENTS |
| 02100 | CLEARING AND GRUBBING |
| 02200 | EARTHWORK |
| 02210 | RIPRAP |
| 311300 | TREE PROTECTION AND ROOT PRUNING |
| 329100 | PLANTING PREPARATION |
| 329200 | SEEDING AND SODDING |

COUNTY SPECIFICATIONS ADDED:

| <u>SECTION NO.</u> | <u>DESCRIPTION</u> |
|--------------------|-----------------------------------|
| 01501 | PUMP AROUND DIVERSION |
| 01520 | EXISTING CONDITIONS DOCUMENTATION |
| 01700 | CONSTRUCTION SURVEY |
| 02221 | IMPORTED STREAM BED MATERIAL |

Delete specification 01720 in its entirety and replace with:

PART 1 - GENERAL

1.1 Purpose of Section

This section outlines the requirements for keeping record drawings (As-Built Drawings) and other data in accordance with the General Conditions and in accordance with the following specifications. The Contractor shall prepare and submit to the Project Officer a certified As-Built Survey of the completed construction that fully illustrates all construction completed within the Limits of Disturbance.

1.2 Record Drawings

- A. The Contractor shall maintain one complete set of drawings specifically for the purpose of recording changes during the construction of the project. During the course of construction, the Record Drawings shall be updated daily by the end of each working day.
- B. Record Drawings will be neat, accurate and complete. The Record Drawings will be available for periodic inspection by the Project Officer
- C. Record Drawings shall include the following, as a minimum in addition to the items identified in Part 3: Execution:
 - 1. Details not shown on original Contract Drawings.
 - 2. Actual locations (horizontal and vertical) of all utilities uncovered during the course of the work.
 - 3. Any changes in grade and location of duct banks and appurtenances.
 - 4. Any changes, additions or deletions made by Change order or Addenda.
 - 5. Final coordinates of all structures built or modified under this Contract.
- D. The Contractor shall certify the Record Drawings as accurate and complete.

1.3 Submission Requirement

The Contractor shall submit the Record Drawings in digital format (AutoCAD 2018 and Adobe PDF) and as 2 full size hardcopy sets bearing a Professional Licensed Surveyor (LS) seal) to the Project Officer upon completion of a major milestone construction stage, including grading completion, or substantial completion of the Project. Final payment will not be issued until the Record Drawing has been accepted by the Project Officer. The Contractor shall make any necessary corrections and resubmit until acceptable to the County Project Officer.

PART 3 – EXECUTION

The As-built Survey is only required within the Limits of Disturbance as identified on the approved plans or in the field by the Project Officer and must include the following surveyed features:

1. Plan View of the project area that should include the following information:
 - a. Limits of grading;
 - b. Alignment based on stream thalweg;
 - c. Left and right top of bank;
 - d. Left and right toe of bank;
 - e. Key floodplain break points (e.g., top and toe of terraces, benches and berms);
 - f. Stormwater pipe outfall inlet and outlet inverts
 - g. Elevation contour lines at one-foot increments within the grading limits;
 - h. Location of utility lines within the disturbance areas verified prior to construction;
 - i. Surveyed benchmarks (e.g. permanent and property boundaries);
 - j. Other features flagged by the Project Officer; and
 - k. Limits of floodplain berm removal areas.
2. Cross-section locations required to be surveyed shall be marked by the Engineer or Project Officer in the field and on the working plans. The contractor shall establish and monument permanent cross sections with control points surveyed for horizontal and vertical datum. The total number of cross-sections required shall be eight (8) consisting of four (4) riffle and four (4) pool cross sections. The record drawings shall include the following cross-section information:
 - a. Plot of the cross sections including station overlaid on typical cross sections; and
 - b. Plot of the cross sections including channel, relevant floodplain, and flood prone area. Relevant floodplain shall include all floodplain benches and existing floodplain within the flood prone area. The Contractor shall incorporate the As-built Survey layer into the design plan sheets and mark-up all changes that took place in the field so that the completed as-built plans can accurately show design conditions and field changes.
3. The thalweg longitudinal profile survey shall be conducted upon the entire length of channel constructed within the Limits of Disturbance. Survey points shall be collected of the thalweg at the head of each bed feature and the head and tail of each grade control structure. The record drawings shall include the following information on the longitudinal survey:
 - a. Plot of the entire as-built thalweg with notes on deviation from the design thalweg, overlaid on the design thalweg;
 - b. Plot of the entire as-built water surface;
 - c. Plot of the entire as-built top of bank (TOB), overlaid on the design TOB; and
 - d. Plot of the entire as-built bankfull elevation, overlaid on the design bankfull elevation.

PART 4 - MEASUREMENT AND PAYMENT

Project As-Built Drawings are considered a subsidiary obligation of the contract, and therefore no payment shall be made for this work. Final payment will not be released until the project closeout is complete, including the County's receipt and approval of the certified As-Built Drawings.

END SECTION

Replace Section 02100 in its entirety as follows:

PART 1 - GENERAL

1.1 Description of Work

- A. Provide all labor, material and equipment to perform all clearing and grubbing as called for on the approved plans and as specified herein, or as necessary to complete the Work. Clearing and grubbing shall consist of removing and disposing off-site of all trees, shrubs, stumps, vegetation and debris within the Limits of Disturbance unless otherwise designated on the approved plans or specified by the Project Officer and authorized by the County Urban Forester.

1.2 Related Work Specified Elsewhere

- A. 01500 –Erosion and Sediment Control and Pollution Prevention
- B. 02200- Earthwork
- C. 311300- Tree Protection and Root Pruning

1.3 Applicable Standards and Specifications

- A. Underground Utility Protection Ordinance (Chapter 55 of the Arlington County Code)
- B. Erosion and Sediment Control Ordinance (Chapter 57 of the Arlington County Code)
- C. Trash, Recycling, and Care of Premises (Chapter 10 of the Arlington County Code)
- D. American Association of Nurserymen (A.A.N.)
- E. International Society of Arboriculture (I.S.A.) National Arborist Association (N.A.N.)

1.4 Protection of Vegetation

- A. Protect existing trees and vegetation outside the limits of clearing and grubbing and existing trees and shrubs designated to be saved inside the limits of clearing and grubbing by methods approved by the Urban Forester (DPR) and outlined in Specification 311300 Tree Protection and Root Pruning.

1.5 Protection of Property

- A. Protect property pipes, stones and monuments from damage. The Contractor shall be responsible for replacing disturbed markers by a registered surveyor at no expense to the County as approved by the Project Officer.
- B. Protect street, roads, historical objects, adjacent property, vegetation and other works to remain throughout the contract.
- C. The location of existing utilities has been indicated on the drawings based on the best information available. The completeness or accuracy of the information is not guaranteed. Contractor shall notify "Miss Utility" in accordance with the provisions stipulated in the Underground Utility Protection Ordinance (Chapter 55), of the Arlington County Code.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 Clearing

- A. The area of clearing (limits of disturbance) shall be maintained within the limits shown on the approved plans. The Contractor shall ensure the specifications in the County's Tree Protection and Planting Standards are followed throughout the duration of the work. Trees and other vegetation that shall not be removed shall be properly protected to avoid damage and limit adverse impacts. Contractor shall refer to Specification 311300, "Tree Protection and Root Pruning".
- B. Minor adjustment in proposed stream alignment may be required to protect individual trees as determined by the Engineer. Following construction layout of the project by the Contractor, the Engineer shall also designate trees suitable for salvaging and placing in select stream and floodplain locations as determined in the field by the Engineer.

3.2 Grubbing

- A. The area of grubbing shall be maintained within the limits of disturbance shown on the approved plans. Remove stumps and matted roots to a depth of 6 inches below existing ground surface. Refill excavations made by removal of stumps or roots as specified for backfill in Section 02200.

3.3 Trimming of Tree Branches and Roots

- A. Trees may be trimmed to remove branches or roots which interfere with construction when so approved by the Project Officer and as authorized by the County Urban Forester and the Landscape Architect. Contractor shall refer to Specification 311300, "Tree Protection and Root Pruning".

3.4 Salvage

- A. Unless otherwise indicated on the plans, remove only those trees which directly interfere with the construction of the project. Trees designated by the Project Officer to be salvaged shall be either mechanically dug with a tree spade or hand dug, balled and burlapped with root ball sizes as specified by the American Association of Nurserymen.
- B. Material, which is to be salvaged, may also include trees to be placed in the stream and floodplain in accordance with Section 3.1B.
- C. Material, which is to be salvaged, as a result of clearing operations, shall include live plants suitable for replanting. Shrubbery is to be transplanted as trees using A.A.N. Standards. If required, temporarily replant the shrub and at the completion of construction replace according to A.A.N. Standards.
- D. Place any desirable topsoil in well-drained stockpiles, not to exceed 7 feet in height, and protect per Section 01500.

3.5 Disposal

- A. Dispose of trees and shrubs in accordance with the Trash, Recycling, and Care of Premises Ordinance of the Arlington County Code. When approved by the Project Officer, material may be dumped within the Contract area where directed. Trees can be retained as snags as approved by the Project Officer and authorized by the County Urban Forester.
- B. Do not burn materials on the site. The County Fire Marshal may consider granting a waiver from open burning restrictions in cases where the State Air Pollution Control Board has granted a waiver to the Contractor or permit holder. The responsibility for obtaining all waivers shall be the Contractor's or permit holders.
- C. Remove material from the site as it accumulates. Do not allow waste material to accumulate for more than 48 hours.

PART 4 - MEASUREMENT AND PAYMENT

All work completed under this section will be measured and paid for per quantity of Clearing and Grubbing completed and accepted by the Engineer.

Payment will be made under:

| Pay Item | Pay Unit |
|-----------------------------|-----------------|
| 02100 Clearing and Grubbing | Acres (AC) |

END SECTION

This Section shall conform to the Arlington County Construction Standards and Specifications of Section 02200 except as modified herein.

Modify the following portions of Section 02200:

PART 1 – GENERAL

9. Construction Tolerance

Delete: Compact, shape, slope and dress to yield the grades and slopes illustrated on the approved plans. In backfilled or other non-paved areas, grades shall be within 0.10 foot of the design grade. Slopes shall not be steeper than 2(H) : 1(V) and shall not deviate from a theoretical plane surface by more than 0.5 feet.

Add: The Contractor shall perform grading as necessary to attain final surface elevations as shown on the plans. Field modifications shall be approved by the Engineer. Unless otherwise noted on the plan slopes shall not be steeper than 2(H) : 1(V) and shall not deviate from a theoretical plane surface by more than 0.5 feet. Final tolerances shall be:

Elevations and horizontal locations for channel grade and stream dimensions shall be:

- a. vertical tolerance of +/- 0.1 feet (1.2 inches)
- b. horizontal tolerance of +/- 0.2 feet (2.4 inches)

Final wetland and floodplain grades shall be:

- a. vertical tolerance of +/- 0.2 feet (2.4 inches)
- b. horizontal tolerance of +/- 0.4 feet (4.8 inches).

PART 2 – MATERIALS

13. Select Borrow

Add: The Contractor shall provide the proposed source(s) for all imported materials prior to initiation of work. Provide a certification from the borrow source that the soil material is clean relative to environmental contaminants.

The County is concerned with import of invasive, exotic, or non-native species of plants and weeds within borrow sources. The Contractor shall not secure borrow material sources that knowingly contain invasive species of plants and weeds.

The Contractor will allow the County the option of inspecting borrow site sources prior to material acquisition or import to the Park. The County shall be provided 2 weeks notice of proposed borrow source for weed free site inspection. If site is found to contain invasive weeds the County will reject the proposed source.

If vendor inspection certificates or weed free assessment reports are available for proposed borrow sources, the Contractor shall provide copies to the Project Officer.

PART 3 – EXECUTION

20. Backfilling – General

Add:

- b. During placement and compaction of earthfill, the moisture content of the materials being placed shall be maintained within the specified range. Moisture content of the earthfill material shall be at or near optimum as determined by the Engineer based upon the following qualitative assessment: When kneaded in the hand, the material will form a ball which does not readily separate when struck sharply with a pencil and will not extrude out of the hand when squeezed tightly.

- i. In areas where new channels are to be constructed or old channel areas are to be filled, the Contractor shall compact at a minimum of 4 passes with a sheepsfoot, rubber tired, or vibratory roller as required on each layer of earthfill. Earthfill shall be placed in layers no greater than 12 inches thick

22. Final Grading & Topsoil

Add:

- e. Except as otherwise specified, earth foundation surfaces shall be graded to remove surface irregularities and shall be scarified to a minimum depth of two (2) inches

- f. Channel banks will be graded evenly and smoothly at the slopes and dimensions indicated on the plans and sections. The top of slopes and embankments will match surrounding adjacent grade such that after compaction and settlement, grades will be at proper elevation. Contractor will be required to address any settlement that occurs during the warranty period to revise ground elevations to meet the tolerances for finished grade. Existing drainage patterns should remain unchanged on the adjacent floodplain, unless otherwise noted in the plans and sections.

PART 4 - MEASUREMENT AND PAYMENT

26. Excavation

Delete: Excavation, including backfill, shall be considered incidental to other work. Therefore, no separate payment shall be made for Excavation.

Add: Excavation in excess of that shown on the approved plans will not be compensated, unless specifically approved in advance by the Project Officer. Payment will include all labor, materials, and equipment and will include excavation, handling, storage of materials, backfilling, compaction, testing, and all other activities necessary to comply with these Specifications. Payment for excavation documented by an approved change order shall be measured by the cubic yard as approved by the Project Officer.

Add: 31. Haul-off of Unsuitable Materials

Payment for removal from the site of unsuitable materials will include all loading, transportation, dumping, and all other activities necessary to complete the task. Quantity of haul-off material will be measured in cubic yards as approved by the Project Officer. Payment for haul-off documented by an approved change order shall be measured by the cubic yard as approved by the Project Officer.

Payments will be made under:

| Pay Item | Pay Unit |
|---------------------------------------|------------------|
| 02200 Excavation | Cubic Yards (CY) |
| 02200 Haul-off of Unsuitable Material | Cubic Yards (CY) |

END SECTION

Replace Section 02210 in its entirety as follows:

PART 1 - GENERAL

1.1 Description of Work

- A. Provide all labor, material, equipment and incidentals to furnish and place the riprap as called for on the approved plans and as specified herein.

1.2 Related Work Specified Elsewhere

- A. Section 02200 Earthwork
- B. Section 03100 - Concrete Formwork, Reinforcement and Materials
- C. Section 04100 - Mortar and Grout

1.3 Applicable Specifications

- A. Virginia Department of Transportation, Road and Bridge Specifications (VDOT)

1.4 Definitions

- A. Derrick Stone – Stone with special shape or size resulting from the method of production.¹
- B. Mean High Water (MHW) - is a Tidal Datum representing the average of all the daily tidal high water heights observed over a period of several years.

PART 2 - PRODUCTS

2.1 General

- A. Stone for riprap and bedding shall be as specified in VDOT Section 204 and shall be sound, durable and free from seams, cracks and other structural defects or imperfections tending to destroy its resistance to weathering.

¹ *Engineering and design.* (1990). Dept. of the Army, U.S. Army Corps of Engineers

- B. Riprap bedding shall be reasonably well graded crush stone within the following limits:

| Sieve Size | Total Percent Passing |
|-------------------|------------------------------|
| 3-inch | 100 |
| 1-1/2-inch | 75-95 |
| 3/4-inch | 50-85 |
| No. 4 | 25-55 |
| No. 16 | 10-25 |
| No. 50 | 2-10 |

- C. C. Grade A, B, or C sand may be used in mortared or grouted riprap

2.2 Dry Riprap

- A. Dry riprap, Class I, shall meet VDOT Section 414.02(a).
B. Dry riprap, Class II, shall meet VDOT Section 414.02(a).
C. Dry riprap, Class III, shall meet VDOT Section 414.02(a).

2.3 Mortared Riprap

- A. Stone for this purpose shall, as far as practicable, be selected as to size and shape in order to secure fairly large, flat-surfaced stone which shall produce a nearly true and even surface with a minimum of voids. Place the stone upon a slope not steeper than the natural angle of repose of the fill material. Fifty percent of the mass shall be broad flat stones, 2 cubic feet or more in volume, laid with the flat surface uppermost and parallel to the slope.
B. Mortar mix shall conform to the requirements of Section 04100.

2.4 Grouted Riprap

- A. Grout for grouted riprap shall consist of one part of Portland cement and three parts of sand, thoroughly mixed with water to produce grout having a thick, creamy consistency. The stones shall be of the same sizes and placed in the same manner as specified for dry riprap, Class 1.

2.5 Stone Riprap

- A. Stone riprap for pier and abutment protection shall range in size up to derrick stone and shall be graded from coarse to fine in such a manner as to provide a minimum of voids.

2.6 Concrete Slab Riprap

- A. The concrete slabs for riprap shall consist of Class A concrete, cast-in-place 6 inches thick, unless otherwise noted on the approved plans. The slabs shall be of two types: plain or reinforced concrete. If reinforcement is required, it shall be furnished as shown on the approved plans.

2.7 Dumped Riprap

- A. Type (1) Core Riprap: Core riprap shall be reasonably well graded. It shall be composed of compact, angular pieces of derrick stone weighing no less than 500 pounds and no more than 4,000 pounds each, averaging 2,000 pounds, except that approximately ten percent by weight may consist of pieces weighing from 10 to 250 pounds each. Neither the width nor thickness of any piece of riprap shall be less than one-third of its length.
- B. Type (2), Heavy Riprap: Heavy riprap shall be reasonably well graded. It shall be composed of compact, angular pieces of derrick stone weighing no less than three tons and no more than ten tons each, averaging four tons. Neither the width nor thickness on any piece of riprap shall be less than one-third of its length.

2.8 Imbricated Rip Rap

- A. Imbricated riprap should be angular and blocky in shape such that they are stackable and should be sufficiently large to resist displacement by both the design storm event and the site-specific lateral earth stresses. Therefore, the length of the longest axis of each stone should be greater of 1/3 the height of the proposed wall and the size necessary to resist the design stream flow. A typical minimum axis length is 24 inches (0.6 meters).
- B. Materials for imbricated riprap construction and installation should meet the following requirements:
 - 1. Filters: Synthetic filter fabric may be used based on VDOT Specifications. Whenever possible, however, granular filters with a minimum thickness of 6 inches (15 cm) should be used with a graduation as follows:

| Percent Less Than | U.S. Standard Sieve Size |
|--------------------------|---------------------------------|
| 100 | 2 1/2 in (64 mm) |
| 85 - 100 | 1 in (25 mm) |
| 60 - 100 | 1/2 in (13 mm) |
| 35 - 70 | No. 10 |
| 20 - 50 | No. 40 |
| 3 - 20 | No. 200 |

PART 3 - EXECUTION

3.1 Riprap Bedding

- A. Riprap bedding of the thickness indicated on the plans shall be placed on the embankment to form a backing for the riprap. Where approved by the Project Officer a construction fabric or matting

may be substituted for backing, as shown on the approved plans. Spread riprap bedding uniformly on the prepared base, in a satisfactory manner, to the lines indicated on the approved plans or as directed. Placing of material by methods which shall tend to segregate particle sizes within the bedding base during placing of bedding shall be repaired before proceeding with the Work. Compaction of the bedding material shall not be required, but it shall be finished to present a reasonably even surface free from mounds or depressions.

3.2 Dry Riprap

- A. Place the stones upon a slope not steeper than the natural angle of repose of the fill material. Lay with joints as close as practicable and lay the courses from the bottom of the bank upward, the larger stones being placed in the lower courses. Fill the open joints with spall.
- B. For Class 2 and Class 3 riprap, use stones having one broad flat surface when possible, and lay the flat surface on a horizontal earth bed prepared for it and so placed as to overlap the underlying course, the intent being to secure a lapped or – “shingled” surface which shall shed a maximum amount of water. Fifty percent of the mass shall be of stones having a volume of two cubic feet or more. These stones shall be placed first and roughly arranged in close contact. Then fill the spaces between the larger stones with stone of suitable size so placed as to leave the surface evenly stepped, conforming to the contour required, and capable of shedding water to the maximum degree practically attainable.

3.3 Mortared Riprap

- A. Place these stones first and roughly arranged in close contact, the largest stones being placed near the base of the slope. Fill the spaces between larger stones with stones of suitable size, leaving the surface reasonably smooth and tight and conforming to the contour required. In general, lay the stone with a degree of care that shall ensure for plane surfaces a maximum variation from a true plane of not more than 1-1/2 inches in four feet. Warped and curved surfaces shall have the same general degree of accuracy as specified for plane surfaces.
- B. As each of the larger stones is placed, surround it by fresh mortar and shove adjacent stones into contact. After the larger stones are in place, fill all the spaces or openings between them with mortar, and place the smaller stones by shoving them into position, forcing excess mortar to the surface, ensuring that each stone is carefully and firmly bedded laterally.
- C. After the stones have been placed and mortared as described, all excess mortar forced up shall be spread uniformly to completely fill the surface voids. Point all surface joints roughly with flush joints or with shallow, smooth-raked joints.

3.4 Grouted Riprap

- A. Care is to be taken during placing to keep earth or sand from filling the spaces between the stones. After the stones are in place, completely fill the spaces between them with grout from bottom to top and sweep the surface with a stiff broom. Do not grout riprap in freezing weather.
- B. In hot, dry weather, protect the grouted riprap from the sun and keep moist for at least three days after grouting by the use of saturated burlap.

3.5 Stone Riprap for Foundations

- A. Deposit in an approved manner at locations shown on the approved plans or where designated by the Project Officer.

3.6 Concrete Slab Riprap

- A. Except as modified herein, construction of the slabs shall conform to specification for Concrete Formwork, Reinforcement and Materials - Section 03100.
- B. The concrete shall be of such consistency that it can be placed without the use of top forms.
- C. Dig a trench of the dimensions shown on the approved plans at the toe of the slope and dress the slope to the lines and grades specified.
- D. Place the riprap in blocks of dimensions as shown on the plans, alternate blocks being poured and the remaining panels filled in later. Unless otherwise shown, the blocks shall be laid in horizontal courses and successive courses shall break joints with preceding ones. The joint details shall be as shown on the approved plans, but if not shown, the horizontal joints shall be normal to the slope and all joints shall be close joints without filler.

3.7 Dumped Riprap

- A. Immediately prior to placing riprap bedding in any area, the prepared base shall be inspected by the Project Engineer and no material shall be placed thereon until that area has been approved.
- B. Place dumped riprap on the embankment as soon as practicable after the riprap bedding has been finished and inspected. Place stone for dumped riprap on the bedding material in such a manner as to produce a reasonably well graded mass of rock with a practicable percentage of voids and construct to the lines and grades shown on the approved plans, or as directed. Riprap shall be to its full course thickness in one operation and in such a manner as to avoid displacing the underlying material. Do not place dumped riprap in layers. The larger stones shall be reasonably well distributed. The finished riprap shall be free from pockets of small stones and clusters of larger stones. Hand-placing to a limited extent may be required, but only to an extent necessary to secure the results specified and as required to form reasonably uniform slopes. A tolerance of plus-six inches or minus-four inches from the lines and grades shown on the plans shall be allowed in the finished surface, but the extremes of such tolerance shall not be continuous over an area greater than 200 square feet.
- C. The desired distribution of the various sizes of stones throughout the mass may be obtained, at the option of the Contractor, either by selective loading at the quarry or other source, by controlled dumping of successive loads during final placing or by a combination of these methods. Do not place riprap by dumping into chutes or other similar methods likely to cause segregation of the various sizes. The Contractor shall maintain the riprap protection until accepted and any material displaced by any cause shall be replaced at his expense to the lines and grades shown on the plans.
- D. The slopes above Mean High Water (MHW) shall be finished to a reasonably smooth and compact surface within an allowable tolerance of two inches from the surface lines, cross-sections and elevations indicated on the plans. Tolerances for underwater portions shall be six inches. The

degree of finish for graded slopes of the embankment shall be that obtainable from either blade grader or scraper operations, as the Contractor may elect.

3.8 Imbricated Riprap

- A. Remove unsuitable material and replace with suitable material following Section 02200 when directed by Project Officer. Excavate loose material at toe of embankment until stable foundation is reached. Subgrade should be smooth, firm and free from protruding objects or voids for proper positioning of the first layer of stones.
- B. Place graded granular filter or filter fabric on the prepared subgrade.
 - 1. If filter fabric is used place carefully and loosely on prepared slope and secure. Overlap adjacent strips a minimum of 8 inches. If geotextile is torn or damaged, repair or replace.
- C. Stack rock layers with staggered joints so each stone rests firmly on two stones in the tier below. Use smaller stones to fill voids. Upon completion of first layer, fill toe trench with Class III riprap.
- D. The height of imbricated revetment is dictated by the size of the stone used. The height shall not exceed 3 times the length of the longest axis and shall not be greater than 10 feet.
- E. Place granular backfill concurrently with stone placement. The backfill slope angle should be 2H:1V or flatter, but greater than 0 degrees.
- F. After backfill is in place, cover with geotextile per VDOT section 245 and layer topsoil sufficient to support native vegetation cover.

PART 4 - MEASUREMENT AND PAYMENT

4.1 4.1 Riprap Bedding

- A. Riprap bedding shall be considered a subsidiary requirement for the placement of dry riprap and dumped riprap. Payment for riprap bedding shall be included in the unit price bid for dry riprap or dumped riprap.

4.2 Dry Riprap

- A. Dry riprap shall be measured in square yards actually placed, by class, and payment shall include the riprap bedding in-place and shall be at the unit price stated in the bid proposal.

4.3 Mortared Riprap

- A. Mortared riprap shall be measured in square yards actually placed. Payment shall be at the unit price stated in the bid proposal.

- 4.4 Grouted Riprap
- A. Grouted riprap shall be measured in square yards actually placed. Payment shall be at the unit price stated in the bid proposal.
- 4.5 Stone Riprap
- A. Stone riprap shall be measured in units of volume or weight. Payment shall be at the unit price stated in the bid proposal.
- 4.6 Concrete Slab Riprap
- A. Concrete slab riprap shall be measured in units of square yards actually placed. Payment shall be at the unit price stated in the bid proposal.
- 4.7 Dumped Riprap
- A. Dumped riprap shall be measured in tons as evidenced by railroad bills of lading or truck delivery tickets. Payment shall include the riprap bedding in place shall be at the unit price stated in the bid proposal.
- 4.8 Imbricated Riprap
- A. Imbricated riprap shall be measured in cubic yards actually placed. Payment shall include the riprap bedding in place and shall be at the unit price stated in the bid proposal.
- 4.9 Excavation
- A. Demolition, excavation and restoration shall be considered incidental to the Work for the placement of all types of riprap and therefore, no separate payment shall be made for excavation.

Payment will be made under:

| Pay Item | Pay Unit |
|--|-------------------|
| 02210 Grouted Riprap, 24" | Square Yards (SY) |
| 02210 Class 2 Reinforced Bed Material | Cubic Yards (CY) |
| 02210 Class 2 Abutment Protection (grouted) | Cubic Yards (CY) |
| 02210 Imbricated Riprap | Cubic Yards (CY) |
| 02210 Rock Stepping Stone Crossing (grouted) | Lump Sum (LS) |

END SECTION

Replace SECTION 311300 in its entirety.

PART 1 - GENERAL

1.1 SUMMARY

This Section includes the following:

1. Protection of existing trees to remain:
 - a. Tree Protection Fencing
 - b. Pruning of existing trees roots that are affected by execution of the work, whether temporary or permanent construction.
 - c. Aeration and Root Protection Matting
 - d. Trunk protection

1.2 Provide all labor, materials, tool and equipment as required to have tree protection applied on all areas called for on the approved plans (or in the Contract Documents).

1.3 In addition to the specifications contained herein, work shall be performed in accordance with the standards laid out in ANSI A300 (Part 5) for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction).

1.4 Related Work Specified Elsewhere:

- A. 01500 Erosion and Sediment Control and Pollution Prevention
- B. 02100 Clearing and Grubbing
- C. 02200 Earthwork
- D. 329100 Planting Preparation
- E. 329200 Seeding and Sodding
- F. 329300 Exterior Plants

1.5 Applicable References

- A. ANSI A300 Tree Care Operations: Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance, Part 1 Pruning

- B. Arlington County Stormwater Management Ordinance Guidance Manual

1.6 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Tree Protection Area: Areas outside of the limits of disturbance or protected from disturbance by root matting or other techniques, defined to protect trees inside and outside of the project limits.
- C. Reforestation Area: Areas intended for reforestation by trees and other vegetation.
- D. ISA: International Society of Arboriculture
- E. CBAY: Chesapeake Bay, typically referring to CBAY watershed.
- F. Urban Forester/County Urban Forester: Refers to the Arlington County Urban Forester
- G. Landscape Architect: Refers to an Arlington County Landscape Architect or their designee.

1.7 SUBMITTALS

- A. Product Data: For each type of product indicated in Section 2.0. List products to be used and firms, including qualifications to perform work.
- B. Certification: Contractor's arborist shall certify that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged. Contractor shall submit a letter with a certified arborist seal.
- C. Maintenance Requirements: Contractor's arborist shall submit requirements for the care and protection trees affected by construction during and after completing the work.
- D. Contract arborist Qualifications: Contractor shall submit a copy of valid ISA certification to the Project Officer for approval with confirmation by Urban Forester.
- E. Provide schedules for performance of work.

1.8 QUALITY ASSURANCE

- A. Contractor shall ensure that tree and plant protection methods are implemented by an arborist certified by the International Society of Arboriculture (ISA) to provide for the care of the trees and plants impacted by construction activities.
- B. The Contractor shall identify to the Project Officer at least one authorized on-site Point of Contact (POC) who is, by training or experience, familiar with the policies, regulations and

standards applicable to the work being performed. The POC and the certified arborist may be the same individual.

- C. Crews shall be directly supervised by an ISA certified arborist.
- D. All workers, through related training and on the job experience, shall be familiar with the technical aspects of arboricultural work and equipment used in such operations.
- E. Trucks and mechanized equipment shall not enter Tree Protection Areas, unless approved by the Project Officer as authorized by Urban Forester.
- F. No stump grinding shall be performed within the Tree Protection Areas, unless approved by the Project Officer as authorized by Urban Forester.
- G. Where stump grinding is authorized, it shall be with small machines specifically designed for that purpose. No stumps shall be excavated except as described herein. Stumps shall be ground not more than 8" below grade and care must be taken to minimize damage to root of the trees to remain.
- H. All work in or near Tree Protection Areas shall be carefully performed by Contractor in order to avoid damage to tree trunks, branches, root system, and other existing plant materials and soils that are to remain.
- I. Silt shall not be allowed to collect in Tree Protection or Reforestation Areas. Silt accumulating in such areas shall constitute damage and shall require remedial activity. All silt shall be removed from Tree Protection Areas within 24 hours of siltation. The methods and procedures for silt removal within Tree Protection and Reforestation Areas shall be approved by the Project Officer as authorized by the Urban Forester.
- J. Pruning shall conform to the techniques and standards specified in the current edition of ANSI A300 (Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices) Part 1 (Pruning)."
 - 1. Pruning shall remove only dead, dying, damaged or broken limbs greater than 1" – 1.5" in diameter.
 - 2. Pruning for clearance shall be reviewed and approved by Project Officer as authorized by the Urban Forester.
- K. Urban Forester Notification: The Contractor shall notify the Project Officer 72 hours prior to the following events, so that the County's Urban Forester can be notified and be present at a pre-construction site meeting (refer to Section 3) and to observe work:
 - 1. Tree protection fencing installation
 - 2. Other tree protection operations
 - 3. Work within Tree Protection Areas.
 - 4. Tree planting.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Temporary Tree Protection Fence: Unless otherwise indicated in approved plans, tree protection fence shall be two-inch wire mesh fabric measuring 72 inches in height mounted on 1.9" O.D. steel pipes driven 24 inches into the ground, placed 120 inches on-center maximum. Refer to Arlington County DPR standard detail on approved plans.
- B. Tree Protection Signs: Shall be of heavy-duty sheet aluminum or weatherproof plastic material measuring 12 inches by 18 inches. Signs shall state "NO ENTRY, TREE PROTECTION AREA, CALL 703-228-6557 TO REPORT VIOLATIONS" in both English and Spanish. Signs shall be mounted on fence every 50 feet maximum.
- C. Topsoil: Refer to Section 329100 – Plant Preparation.
- D. Bark Mulch: Refer to Section 329100 –Plant Preparation
- E. Temporary Root Protection Matting: If required in approved plans, temporary root protection matting shall be a double-sided geocomposite, geonet core with non-woven covering such as Tendrain 770-2, as manufactured by Tenax Corporation, Baltimore, MD or approved equal. Four to six (6) inches of wood chip mulch shall be applied to area to receive root protection matting prior to installation. Matting shall be installed in a single layer. See DPR Standard Detail, 'Temporary Root Protection Matting within CRZ'.
- F. Trunk protection: Trunk protection shall be double side geocomposite, geonet core with non-woven covering (such as Tenax Tendrain 770/2) or an approved equal.
- G. Landscape nails: When required, spikes shall be 12" as indicated on the drawings.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prior to the construction activities, the Contractor and Certified Arborist shall meet on-site with the Project Officer and Urban Forester to review the exact location of Tree Protection Areas and the protective measures required.
- B. Temporary Tree Protection Fencing: Install temporary tree protection fencing and signs around tree protection zones to protect indicated trees and vegetation from construction damage. Maintain Tree Protection fence and remove when construction is complete and after approval by Project Officer as authorized by the County Urban Forester.
- C. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

- D. No personnel, vehicles, equipment, construction materials, or construction debris shall be allowed inside the tree protection areas at any time during demolition and construction without the written consent of the Project Officer and as authorized by the Urban Forester. If a violation is observed, the Contractor shall be notified by the Project Officer and shall immediately rectify the situation. Continued and subsequent violations shall result in a fine of \$500 per day of violation.
- E. Special Demolition Procedures:
 - 1. Demolition of walks and hardscape within tree protection areas shall be directly supervised by an ISA certified arborist.
 - 2. Mechanized equipment shall not enter tree protection areas (TPAs) or reforestation areas.
 - 3. Backfill of voids created by demolition within the TPAs and reforestation areas shall be loosely placed approved topsoil (refer to Section 329100, Plant Preparation). Only the amount of topsoil necessary to fill the void without spreading over existing grades shall be allowed.

3.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations as approved by the Project Officer and authorized by County Urban Forester.
- B. Do not excavate within Tree Protection Areas, unless otherwise indicated.
- C. Where utility trenches are required within Tree Protection Areas, Contractor shall perform root pruning in accordance with Section 3.3 of this Specification prior to the utility trenching, unless otherwise directed by the Project Officer as authorized by the County Urban Forester.
- D. Where excavation is proposed within the critical root zone of protected trees, the Contractor shall perform root pruning in accordance with Section 3.3 of this Specification and as indicated in approved plans prior to excavation, unless otherwise directed by the Project Officer as authorized by the County Urban Forester.
- E. Where new finish grade is indicated below existing grade around trees, Contractor shall slope grade outside of tree protection zones. Maintain existing grades within tree protection zones.

3.3 ROOT PRUNING:

- A. When required, root pruning locations shall be indicated on the approved plans. Exact location and depth shall be confirmed on site with Project Officer and Urban Forester during the pre-construction meeting.
- B. Root pruning shall take place on the tree side of the tree protection fence.
- C. Root Pruning shall be done with a trencher or vibratory plow to a depth of 12 inches. A root pruning trench shall be no more than 6 inches wide.

- D. If excavation is for the installation of underground utilities, leave the root intact and thread the lines underneath. Refer to Arlington County Department of Parks & Recreation Design Standards Detail, 'Root Protection in Utility Trench'.
- E. Roots over 1.5" in diameter shall have a clean cut made by a clean saw on the surface of the root, which is still attached to the tree. Do not break or chop.
- F. Do not paint the cut root end.
- G. Backfill the root pruning trench with approved loose topsoil (per Specification 329100) and top with 3-4" bark mulch and mark location for future reference.
- H. Do not unnecessarily cut tree roots extending into grading limits. When roots are exposed by the work, cut them back cleanly with sharp hand pruning shears, lopping shears or hand saws, and backfill with approved topsoil immediately. Backfill around tree roots immediately after completion of construction in vicinity of the trees. Backfill around trees and roots shall be compacted to no more than 80% unless otherwise directed by the Project Officer.
- I. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities, unless authorized by Urban Forester. Cut roots with clean, sharp pruning instruments; do not break or chop, following ANSI A300 standards. All root pruning shall be performed by an ISA certified arborist. Refer to Arlington County Department of Parks & Recreation, Design Standards Detail, Root Pruning', as shown on plans and available online at: <http://parks.arlingtonva.us/design-standards/>

3.4 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots as approved by Project Officer and per directions and authorization of Arlington County Urban Forester or contract arborist's written instructions.
- B. The Contractor shall be responsible for any damage to trees within the Tree Protection Area caused by the Contractor's personnel, vehicles, or equipment at the site. Any damage to a tree to remain shall result in a payment by the Contractor to the Project Officer for the amount of damage based on the latest edition of the Council of Tree and Landscape Appraisers Guide for Plant Appraisal published by the International Society of Arboriculture (ISA). All trees are to be valued as landscape trees.

3.5 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material and displaced trees from Owner's property and legally dispose.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 The measurement of TREE PROTECTION FENCE shall be for LINEAR FOOT of fence including all appurtenances as delivered to the site, furnished, installed, maintained and removed at project completion in accordance with the plans and specifications.
- 4.2 The unit price for TREE PROTECTION FENCE shall include the cost of all labor, materials, equipment and incidental expenses necessary to complete the work, including typical signage.
- 4.3 The measurement of ROOT PRUNING shall be for LINEAR FOOT of root pruning performed on the project in accordance with the plans and specifications.
- 4.4 The unit price for ROOT PRUNING shall include the cost of all labor, materials, equipment and incidental expenses necessary to complete the work.
- 4.5 The measurement of ROOT PROTECTION MATTING shall be for SQUARE FOOT of matting as delivered to the site, furnished, installed, maintained and removed at project completion in accordance with the plans and specifications.
- 4.6 The unit price for ROOT PROTECTION MATTING shall include the cost of all labor, materials, equipment and incidental expenses necessary to complete the work including anchor/landscaping nails, in accordance with the approved plans and specifications. Unless otherwise specified on the approved plan, excavation for ROOT Protection Matting installation is considered incidental to the work and shall not be paid separately.
- 4.7 The measurement of TRUNK PROTECTION to be paid for under this item shall be the number of EACH to be furnished and installed at individual trees in accordance with the approved plans and specifications.
- 4.8 The unit price for TRUNK PROTECTION shall include the cost of all labor, materials, and other expenses necessary to complete the work in accordance with the approved plans and specifications.

END SECTION

Replace SECTION 329100 in its entirety.

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes soil amendments, mulching and topsoil.
- B. Provide all labor, materials, tools and equipment as required to have topsoil, planting soil mix, amendments, and mulch applied per the specifications on all areas disturbed by construction to receive plant materials as indicated in the approved plans.
- C. Related Work Specified Elsewhere:
 - 1. Section 01500 Erosion and Sediment Control and Pollution Prevention
 - 2. Section 02200 Earthwork
 - 3. Section 02100 Clearing and Grubbing
 - 4. Section 02228 Erosion Control Matting
 - 5. Section 02540 Bioretention
 - 6. Section 311300 Tree Protection and Root Pruning
 - 7. Section 329200 Seeding and Sodding
 - 8. Section 329300 Exterior Plants and Exterior Plant Details 329300.1 through 329300.11C
 - 9. [Specification for Restoration of Graded and Compacted Soils that will be Vegetated \(Full Version\), Virginia Polytechnic University.](#)
- D. Applicable References
 - 1. Arlington County Stormwater Management Ordinance Guidance Manual
 - 2. Virginia DEQ Stormwater Design Specification No. 9
 - 3. Virginia Agricultural Liming Materials Act, Code of Virginia Section 3.1-126.1
- E. In addition to the specifications contained herein, work shall be performed in accordance with the:
 - 1. Drawings and general provisions of the contract, including general and supplementary conditions
 - 2. Arlington County Department of Parks & Recreation Design Standards as shown on the plans and available online at: <http://parks.arlingtonva.us/design-standards/>

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Existing Topsoil: Existing, native surface topsoil formed under natural conditions with the duff layer retained during excavation period and stockpiled.

- C. Imported Topsoil: Soil obtained off-site that meets the specifications herein for topsoil and is suitable for use in planting soil mix/backfill soil mixture when existing topsoil quantities are insufficient.
- D. Planting Soil Mix/Backfill Soil Mixture: Existing topsoil modified as specified to be suitable for planting.
- E. Bioretention Media: Specialized soil mixture used in bioretention per the Virginia DEQ Stormwater Design Specification No. 9: Bioretention, Version 2.0, January 1, 2013 and the latest edition of the Arlington County Stormwater Management Ordinance Guidance Manual.
- F. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing topsoil or planting soil mix.
- G. Urban Forester/County Urban Forester: Refers to the Arlington County Urban Forester
- H. Landscape Architect: Refers to an Arlington County Landscape Architect or their designee.
- I. Soil Profile Rebuilding: Refers to a technique to re-build topsoil by mixing organic matter into native soil developed by Virginia Polytechnic University.

1.3 SUBMITTALS

- A. Samples of all materials specified shall be submitted to the Project Officer for approval and authorization by the Landscape Architect and Urban Forester. All approvals shall be in writing.
- B. Samples:
 1. Existing Topsoil: Provide 1-pound sample of existing topsoil with the following soil test reports.
 - a. Fertility: pH, nitrate nitrogen, ammonia nitrogen, phosphate phosphorous, potassium, calcium, magnesium, zinc, iron, manganese.
 - b. Suitability: total salinity, boron, sodium, potassium, calcium, magnesium, chloride, sulfate.
 - c. Physical properties including organic content and particle size distribution.
 2. Imported Topsoil: If imported topsoil is required, Contractor shall provide a 1-pound sample of the imported topsoil with the soil test reports as noted above for "Existing Topsoil."
 3. Bioretention Media : The Contractor shall submit a 1-pound soil sample with soil test reports indicating compliance with DEQ's Stormwater Design Specification No. 9: Bioretention, Arlington County's Stormwater Management Ordinance Guidance Manual, and the approved plans. In lieu of providing a sample and soil test results, the contractor may purchase Bioretention Media from a vendor who has been pre-approved by the Office of Sustainability and Environmental Management (OSEM). The list of vendors can be found on the Stormwater Management – Notices to Industry page of Arlington County's web site at <https://building.arlingtonva.us/codes-ordinances/stormwater-management/notices-to-industry/> (listed under Bioretention).
 4. Mulches and Organic Matter/Compost: Sample of mulch and organic matter/compost may be requested in lieu of inspection.

5. Product certificates: Contractor shall submit for each type of manufactured product, to be approved by the Project Officer as authorized by the Landscape Architect and Urban Forester and complying with the following:
 - a. Manufacturer's certified analysis for standard products.

1.4 QUALITY ASSURANCE TESTING

- A. Contractor shall have all existing and imported topsoil to be used for seeding and sodding and for planting areas tested by a state laboratory or recognized commercial soil-testing laboratory in order to determine recommendations for the types and quantities of soil amendments. The results of this test shall determine the rates and types of fertilizers, lime, soil conditioners, and other amendments, if necessary.
 1. Soil tests shall use a representative sample of on-site soils. If existing soil has been undisturbed and is suitable as determined by the soil test, no additional amendments are required.
 2. Adjustments should be made based on soil test results.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall conform to those stipulated below, unless otherwise approved in writing by the Project Officer as authorized by the Landscape Architect and County Urban Forester.
- B. Specified materials to be applied in amounts and methods herein stipulated.
- C. Delivery tickets indicating date, weight, analysis and vendor's name, to be submitted to Project Officer.

2.2 SOIL AMENDMENTS

- A. Lime: Application rates for liming materials and lime material type chosen shall be determined by required soil tests and approved by the Project Officer as authorized by the Landscape Architect and Urban Forester.
 1. When required and unless test results indicate otherwise, lime material shall be dry and free flowing pulverized limestone (hydrated or burnt lime may be substituted except when hydroseeding) that contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground limestone shall be ground to such fineness that at a minimum of 50% shall pass through a 100-mesh sieve and 98% - 100% shall pass through a 20-mesh sieve. Lime material shall meet the Virginia Agricultural Liming Materials Act, Code of Virginia Section 3.1-126.1.
 2. Contractor shall spread lime with approved equipment.

- B. Fertilizer: Fertilizer type and application rate shall be determined by results of required soil tests and approved by the Project Officer as authorized by the Landscape Architect and Urban Forester:
1. When required and unless test results indicate otherwise, commercial-grade complete fertilizer shall be of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - a. Composition: 10 percent nitrogen, 20 percent phosphorous, and 10 percent potassium, by weight.
 2. All fertilizers shall be uniform in composition, free flowing, and suitable for application with approved equipment.
 3. Fertilizers shall be delivered to the site fully labeled according to applicable state fertilizer laws and shall bear the name, trade name, or trademark and warranty of the product.
 4. Delay mixing fertilizer with planting soil if planting shall not proceed within 2 days.
 5. Contractor shall spread fertilizer with approved equipment.
 6. For trees and shrubs, fertilizer shall consist of a granular slow release (3 - 4 month) 19-6-12 analysis or equal

C. Organic Matter/Compost

Well-composted, trash-free, stable, and weed-free organic matter such as composted bark, leaf mold or other plant debris material that has been composted to a point of decay and is mature.

1. pH ranges of 5.5 to 8; moisture content 35 to 55 percent by weight
2. 100 percent passing through 1-inch sieve
3. Peat moss shall not be used.
4. Organic amendments shall be commercially prepared and shall comply with the U.S. Compost Council Seal of Testing Assurance Program's Test Methods for the Examination of Composting and Compost (STA/TMECC) criteria, or as modified in approved plan documents.
5. See Section 2.4 (Planting Soil Mix/Backfill Mixture) and 2.5 (Imported Topsoil) for requirements for organic matter amendment.

2.3 EXISTING TOPSOIL

- A. Existing topsoil is to be used to extent possible.. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS. Topsoil must not be a mixture of contrasting textured subsoils.
- B. Contractor shall verify suitability of stockpiled soil to produce or to be amended to produce viable soil as described herein.
- C. Prior to use for lawn areas or in planting soil mix/backfill soil mixture, Contractor shall remove from existing topsoil all stones, roots, plants, sod, clods, and clay lumps larger than 1/2 -inch in any direction, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris and other extraneous materials that are harmful to plant growth. Prior to use for natural areas/specialty seeding, Contractor shall confirm that topsoil contains less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.

- D. After removal of debris and extraneous materials noted above, the Contractor shall obtain soil tests for the existing soil per the requirements in section 1.4 "Quality Assurance Testing."
- E. Contractor shall submit topsoil test results to the Project Officer for approval as authorized by the Landscape Architect and Urban Forester.
- F. Contractor shall supplement the existing topsoil as recommended in soil test results to achieve a viable planting soil. Contractor shall supplement with imported topsoil per the specifications from off-site sources when quantities of approved, existing topsoil are insufficient.
- G. Contractor shall submit a sample of the topsoil that has been amended based on soil test results for approval by the Project Officer as authorized by Landscape Architect and Urban Forester prior to use.
- H. Topsoil installed on grade shall attempt to match existing soil texture, except for situations where clay subsoil exists. In the event that clay subsoil exists, use loam or silt loam topsoil.

2.4 PLANTING SOIL MIX/BACKFILL SOIL MIXTURE

- A. The planting soil mix/backfill soil mixture shall be composed of $\frac{3}{4}$ approved existing topsoil and $\frac{1}{4}$ approved organic matter (See Section 2.2 "Soil Amendments") as described in the Arlington County DPR Standard planting details, unless otherwise indicated by the Project Officer as authorized by the Landscape Architect and Urban Forester.

2.5 IMPORTED TOPSOIL

- A. Contractor shall add imported topsoil when required on the drawings, when quantity of existing topsoil is insufficient or when determined to be necessary due to soil testing results.
- B. Imported topsoil shall be natural, original surface soil in friable condition meeting the following criteria:
 1. The soil shall be loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand.
 2. Imported topsoil shall contain 5% or more organic matter (3-5% for natural areas/specialty seeding)
 3. Soluble salts (salinity) shall not exceed 500 ppm
 4. Soil pH between 5.5 to 6.5
 5. For lawns, planting beds and pits, soil fertility shall be "High" in natural nutrients based on the coordinated ratings in pounds per acre as established by the National Soil and Fertilizer Research Committee.
- C. The imported topsoil shall also contain less than 3 percent (5 percent by volume for natural area/specialty seeding) subsoil, hardpan material, stones and clods larger than 1/2 inch (1 1/2 inch for natural areas/specialty seeding) in diameter in any direction. It shall also be free of sticks, tree or shrub roots, debris and other material undesirable for plant growth. The area and the imported topsoil shall be free of undesirable plant such as, but not limited to, Bermuda grass, nut sedge, mugwort, quack grass, Johnson grass, poison ivy, thistle, or noxious weeds as set forth in the Federal Seed Act.

- D. Imported topsoil which has been manufactured by blending materials which individually do not meet the requirements of this specification shall not be accepted even though the resulting blend meets the organic matter, mechanical analysis, pH and soluble salts requirements. Agricultural limestone at not more than 5 pounds per cubic yard of topsoil any be used to adjust the pH provided it is well mixed in a manner which does not destroy the structure of the soil.

2.6 BIORETENTION MEDIA

- A. Bioretention Media shall comply with Virginia DEQ Stormwater Design Specification No. 9: Bioretention, Version 2.0, January 1, 2013 and Arlington County's Stormwater Management Ordinance Guidance Manual. The contractor may purchase Bioretention Media from a vendor who has been pre-approved by the Office of Sustainability and Environmental Management (OSEM). The list of vendors can be found on the Stormwater Management – Notices to Industry page of Arlington County's website: <https://building.arlingtonva.us/codes-ordinances/stormwater-management/notices-to-industry/> (listed under Bioretention).

2.7 MULCHES

- A. Straw Mulch for Seeded Areas: Provide air-dry, clean, mildew and seed-free, salt hay or threshed straw of wheat, rye, oats or barley.
- B. Wood Cellulose Fiber Mulch (WCFM) for Seeded Areas: Consists of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - 1. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - 2. WCFM, including dye, must contain no germination or growth inhibiting factors.
 - 3. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogenous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold see in contact with the soil without inhibiting the growth of grass seedlings.
 - 4. WCFM material shall not contain elements or compounds at concentration levels that will be phytotoxic.
 - 5. WCFM must conform to the following physical requirements:
 - a. Fiber length – approximately 10 mm
 - b. Fiber diameter - approximately 1 mm
 - c. pH – 4.0 to 8.5
 - d. Ash content – 1.6 maximum
 - e. Water holding capacity – 90% minimum
- C. Wood Chip Bark Mulch for Planted Areas: Wood Chip Bark Mulch shall be double-shredded hardwood bark mulch, uniform in size and free of stones, clods, non-organic debris or other foreign material and aged for at least 6 months from an approved source. Insufficiently or improperly aged mulch containing high bacterial counts or high levels of bark or other materials resistant to decomposition shall not be used. Mulch shall not contain the trunk of trees. Mulch shall not be obtained from recycled waste yard.

- D. Compost Mulch: Shall be in compliance with Section 2.2.C “Organic Matter/Compost” herein.

2.8 SOIL STABILIZATION/ EROSION CONTROL MATTING

- A. Erosion control matting shall be in accordance with Section 02228 Erosion Control Matting
 - a.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Unless otherwise identified on the approved plans, all identified areas within the project limits shall have approved topsoil spread on them and be prepared for seeding and sodding by bringing ground surfaces to grades shown on the drawings. Planting pits and bed areas identified on the approved plans shall be prepared in accordance with the applicable DPR Landscape Standard details.
 - 1. No seeding shall be done on frozen ground or when the temperature is 32F or lower. Refer to specification 329200, “Seeding and Sodding.”
 - 2. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties, sidewalks and areas.
 - 3. Rototilling shall not be performed within the critical root zone of trees to be preserved.
 - 4. The soil shall not be tilled or amended when the soil’s moisture capacity is above field capacity or when the soil is frozen.
 - 5. Contractor shall identify utilities, existing irrigation and underground utilities. All areas on either side of the utility marking shall be amended by hand.
 - 6. Contractor shall verify that no foreign or deleterious material or liquid has been deposited in soil within a planting area. Planting shall not occur on soil treated with soil sterilants or chemicals for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
 - 7. Contractor shall proceed with installation only after both unsatisfactory conditions have been corrected and rough grading has been completed and approved by the Project Officer as authorized by the Landscape Architect and Urban Forester.
 - 8. Contractor shall protect structures, utilities, sidewalks, pavements and other facilities, trees, shrubs and plantings from damage caused by planting operations.
 - a. Protect adjacent and adjoining areas from hydro-seeding and hydro-mulching overspray.
 - b. Protect grade stakes set by others until directed to move them.
 - 9. Surfaces shall conform to finish grade and be free of water retaining depressions. Soil shall be friable, free of clay and of uniformly firm texture.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 1/2 inch in any direction and sticks, roots, rubbish, and other extraneous matter including grass vegetation and turf, and legally dispose of them off of Arlington County property. Do not mix into surface soil.

1. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix. Delay mixing amendments with soil if planting shall not proceed within 2 days.
 2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
 3. Spread planting soil mix to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- C. Soil Profile Rebuilding: remediate existing soils, where specified, using Soil Profile Rebuilding, in accordance with the Specification for Restoration of Graded and Compacted Soils that will be Vegetated (Full Version), Virginia Polytechnic University (available at <https://www.urbanforestry.frec.vt.edu/SRES/>).
- D. Natural Areas/Specialty Seeding: Rototilling or loosening of existing soil shall be minimized to prevent germination of invasive plant species in the soil seed bank. Unless otherwise approved by the Project Officer, as authorized by the Landscape Architect and Urban Forester, existing topsoil shall be applied uniformly to a depth of 5 to 8 inches and lightly compacted to achieve a minimum depth of 4 inches only where the following conditions apply:
1. The slope is flatter than 2:1
 2. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 3. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 4. The original soil to be vegetated contains material toxic to plant growth.
 5. The soil is so acidic that treatment with limestone is not feasible.

The final surface shall be ready to accept seed without any additional preparation and shall be free of depressions and irregularities. Do not spread if topsoil or subsoil is frozen, muddy or excessively wet.

- E. Tree Pits:
1. The contractor shall excavate and prepare tree pits to the length, width and depth specified in the construction plans and corresponding DPR planting detail.
 2. Individual tree pits shall be photo documented using a rigid tape measure. The photograph shall clearly show the depth of each tree pit. Each photograph shall be identified by location using the file name.
 3. The contractor shall email the photographs to the Project Officer, Landscape Architect and Urban Forester.
 4. The contractor must obtain written approval from the Project Officer, as authorized by the Landscape Architect or Urban Forester before proceeding to fill the tree pits with approved planting soil mix/backfill soil mixture.
 5. The County reserves the right to request the contractor verify the depth of any tree pits at no additional project cost.
- F. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:

1. Remove stones larger than 1/2 inch in any dimension and sticks, roots, trash, and other extraneous matter. Legally dispose of them off of Arlington County property. Do not mix into surface soil
 2. Loosen surface soil to a depth of at least 6 inches, apply soil amendments and fertilizers according to the planting soil mix proportion and mix thoroughly into the top 4 inches of soil.
- G. Finish Grading: Grade landscape areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Adjust for the thickness of sod, where applicable. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- H. The Contractor shall construct bioretention in accordance with the approved plans.
- I. Contractor shall avoid unnecessary compaction of the soil during grading.
- J. Contractor shall ensure appropriate slopes of the swales, berms and final grades.
- K. Immediately following each day's work, contractor shall clean all dirt, excess soil, debris and trash from the site. Contractor shall protect and store additional soils in stockpiles protected from saturation, erosion, weed growth and contamination with plastic sheeting or tarps.
- L. Amendments for seeding and sodding areas shall be applied after determining by soils test as follows:
1. Lime as specified shall be spread uniformly over designated area. Rate depends on soil tests. Soil tests shall be made before lime application at 8 to 10 plugs per acre taken by the method prescribed the United States Department of Agriculture.
 2. Fertilizer shall be spread after the lime has been applied. Rate shall be as recommended per the soil tests.
 3. Fertilizer shall be spread with approved equipment and at an even rate over the area to be seeded or sodded.
 4. Work lime and fertilizer into top 4 inches of topsoil and grade to smooth surface ready for seeding.
- M. Restore areas if eroded or otherwise disturbed after finish grading and before planting.
- N. Prepared lawns and planting areas shall be inspected and approved by Project Officer as authorized by the Landscape Architect prior to seeding, sodding or planting.
- O. If the graded areas develop volunteer weed growth, the growth shall be eliminated at the expense of the Contractor.

3.2 SOIL STABILIZATION/EROSION CONTROL MATTING

- A. Prepare planting area as specified.
- B. Moisten prepared planting area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

- C. Apply seed and straw mulch per the approved plans and Sections 02228 Erosion Control Matting and 329200 Seeding and Sodding.
- D. Install Soil Stabilization/Erosion Control Matting in accordance with Section 02228 Erosion Control Matting
- E. Plant shrubs, trees and plugs through erosion control matting by carefully separating fabric layers to allow space for planting.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 The measurement of PLANTING SOIL MIX/BACKFILL MIXTURE to be paid for shall be per CUBIC YARD of planting mix in accordance with the plans, specifications and to the satisfaction of the Project Officer.
- 4.2 The unit price for PLANTING SOIL MIX/BACKFILL MIXTURE shall include the cost of furnishing all labor, materials, equipment and incidental expenses, including but not limited to soil amendments, organic matter, and soil stabilization materials, necessary to complete the work, all in accordance with the plans, specifications and approval of the Project Officer.
- 4.3 The measurement of TOPSOIL/IMPORTED TOPSOIL to be paid for shall be per SQUARE YARD of measured over the area where topsoil is applied in accordance with the plans, specifications and to the satisfaction of the Project Officer.
- 4.4 The unit price for TOPSOIL/IMPORTED TOPSOIL shall include the cost of furnishing all labor, materials, equipment, maintenance, hauling, preparation, installation and incidental expenses, necessary to complete the work, all in accordance with the plans, specifications and approval of the Project Officer.
- 4.5 The measurement of WOOD CHIP BARK MULCH to be paid for shall be per CUBIC YARD of Mulch in accordance with the plans, specifications and to the satisfaction of the Project Officer.
- 4.6 The unit price for WOOD CHIP BARK MULCH shall include the cost of furnishing all labor, materials, equipment and incidental expenses necessary to complete the work, all in accordance with the plans, specifications and approval of the Project Officer.

Unless otherwise specified on the project drawings, supplemental specifications or special conditions, excavation is considered incidental to the work and therefore no separate payments shall be made for excavation.

END SECTION

Replace SECTION 329200 in its entirety.

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes, but is not limited to the provision of all material, services, labor, and equipment necessary to perform the following as required per the plans for the establishment of turf, meadow (grassland/wildflower) and other natural areas:
 - 1. Seeding
 - 2. Sodding
 - 3. Hydro-seeding

- B. Related Work Specified Elsewhere:
 - 1. Section 01500 – Erosion and Sediment Control and Pollution Prevention
 - 2. Section 02200 – Earthwork
 - 3. Section 02228 – Erosion Control Matting
 - 4. Section 329100 – Planting Preparation
 - 5. Section 311300 – Tree Protection and Root Pruning
 - 6. Section 329300 – Exterior Plants

- C. In addition to the specifications contained herein, Work shall be performed in accordance with the:
 - 1. Drawings and general provisions of the contract, including general and supplementary conditions.
 - 2. Arlington County Department of Parks & Recreation (DPR) Design Standards as shown on the plans and available online at: <http://parks.arlingtonva.us/design-standards/>.

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.

- B. Existing Topsoil: Existing, native surface topsoil formed under natural conditions with the duff layer retained during excavation period and stockpiled.

- C. Imported Topsoil: Soil obtained off-site that meets the specifications for topsoil and is suitable for use in planting soil/backfill soil mixture when existing soil quantities are insufficient. Refer to Section 329100 “Planting Preparation.”

- D. Planting Soil Mix/Backfill Soil Mixture: Existing soil modified as specified to be suitable for planting. Refer to Section 329100 “Planting Preparation.”

- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

- F. Turfgrass: narrow-leaved grass species that form a uniform, long-lived ground cover that can tolerate traffic and low mowing heights
- G. VCIA: Virginia Crop Improvement Association, the official Seed Certifying Agency in the Commonwealth of Virginia; a nonprofit organization of seed growers duly chartered under the laws of Virginia
- H. Urban Forester/County Urban Forester: Refers to the Arlington County Urban Forester
- I. Landscape Architect: Refers to an Arlington County Landscape Architect or their designee.

1.3 SUBMITTALS

- A. Samples of all materials shall be submitted to the Project Officer for approval as authorized by the Landscape Architect prior to delivery to site.
- B. Contractor shall submit qualifications per section 1.4 "Quality Assurance" to Project Officer for approval.
- C. Samples:
 - 1. Turfgrass Seed Mix: Certification of grass seed including the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and the date of packaging.
 - 2. Sod: Sod grower's name, together with substantiating information as to field location from which sod is to be cut and species, percent purity and mixture of grass sod to be applied.
 - 3. Special Seed Mixes: Contractor shall submit product data per Section 2.4 "Specialty Seed".

1.4 QUALITY ASSURANCE

- A. Contractor qualifications:
 - 1. Evidence of completion of at least three (3) projects of similar nature and scope to this project completed within the last five (5) years that have resulted in successful turf, meadow or other natural area establishment.
 - 2. Contractor shall be a member in good standing of either the National Association of Landscape Professionals or the American Nursery and Landscape Association.
 - 3. Experience: Three to Five years of relevant installation experience. .
- B. Contractor shall maintain an experienced full-time supervisor on Project site when work is in progress.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall conform with this Section, unless otherwise approved in writing by the Project Officer as authorized by the Landscape Architect.
- B. Specified materials to be applied in amounts and methods herein stipulated.
- C. Delivery tickets indicating date, weight, product data including all analyses for purity and other information as required herein, and vendor's name, to be submitted to Project Officer for approval.

2.2 TURFGRASS SEED

- A. Turfgrass seed shall be fresh, clean, dry new crop seed complying with purity and germination requirements stipulated herein. All cultivars must be on the current "Virginia Turfgrass Variety Recommendations" or in the top 25 for transitional zone sites-overall of the latest National Turfgrass Evaluation Program (NTEP) as approved by Project Officer and as authorized by the Landscape Architect.
- B. Unless otherwise specified on the approved plans, the Turf-type Tall Fescue component shall be comprised of a minimum of two cultivars with each cultivar comprising neither less than 30 percent nor more than 70 percent of the blend. The use of K-31 Tall Fescue or Common Kentucky Bluegrass in the mix is prohibited. The mix shall have 2.5 percent maximum inert matter, 0.5 percent maximum crop seed, and 0.1 percent maximum weed seed and 0.0 percent noxious weed. The mix shall comply with the current Virginia Seed Law and Virginia Seed Regulations and approximate the following:

| Kind of Seed | % by Weight | % Purity | % Germination |
|-----------------------|--------------------|-----------------|----------------------|
| Turf-type Tall Fescue | 80 | 97 | 85 |
| Bluegrass | 10 | 97 | 80 |
| Perennial Ryegrass | 10 | 97 | 90 |

- C. Substitution of seed type or percent only on approval of Project Officer as authorized by the Landscape Architect. Seed to be free of noxious weed seed.

2.3 SOD

- A. Cultivated Grass Sod shall be certified and obtained from State Certified nurseries and have been grown on natural native mineral soils comparable to those afforded at the job site. Sod containing netting is not acceptable. Sod grower's information and sod information to be submitted for approval by Project Officer per section 1.3 "Submittals." Sod shall be inspected by the Landscape Architect prior to installation. Failure to obtain advance approval or obtain

required inspection shall constitute grounds for rejection of all sod delivered to the site. Invoices for all sod to clearly state point of origin and have attached to them a facsimile of the Grower's Nursery Certificate issued by the U.S. Department of Agriculture or Certified Delivery Ticket per truckload. All grass sod shall meet the following basic requirements.

1. Sod shall be free of disease and soil borne insects.
2. Sod shall be free of clover, broadleaf weeds and noxious weeds. Sod considered free of such weeds if less than 2 such plants are found per 100 square feet of area.
3. Sod shall be of uniform color and density and contain:

| Kind of Seed | % by Weight |
|-----------------------|--------------------|
| Turf Type Tall Fescue | 90 |
| Kentucky Bluegrass | 10 |

4. All cultivars must be on the current approved list of the Virginia Cooperative Extension's Virginia Turfgrass Variety Recommendations and the sod shall be certified by the VCIA Sod Certification Program. Provide appropriate certifications at the time of installation.
5. Sod shall be free of netting.
6. Sod sample shall be submitted to and approved by Project Officer and authorized by the Landscape Architect before cutting. Sod placed on the job shall conform to the approved sample or shall be removed and replaced at the Contractor's expense.
7. Sod shall have been mowed prior to stripping and shall have been maintained for a minimum of three months.
8. Sod shall be relatively free of thatch. Thatch build up that significantly detracts from the appearance of the sod may be sufficient cause for rejection.
9. Sod shall be machine stripped at a uniform soil thickness of approximately 3/4-inch. Measurement for thickness to exclude tip growth and thatch.
10. Individual pieces of sod shall be cut to supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be 5%. Broken pads, torn or uneven ends shall not be permitted.
11. Root development shall be such that standard size pieces shall support their own weight and retain their size and shape when suspended vertically from a firm grasp on uppermost 10% of the area.
12. Under moderate moisture conditions, weight shall not exceed 7 pounds per square foot. Minimum weight shall not be less than 4 lbs. per square foot.

2.4 SPECIALTY SEED (MEADOW AND OTHER NATURAL AREAS)

- A. Specialty seed shall be as specified in the approved plans.
 1. Seed carrier: Inert material, sharp clean sand mixed with seed at a ratio of not less than two parts seed carrier to one part seed.
- B. Contractor shall supply the germination test results and the percent purity of the seeds upon delivery to the site to the Project Officer. All seed shall be cleaned, processed, analyzed for purity, stored, and germination tested within the 6 months preceding the date of sowing before being used.

- C. Seed tags shall be provided to the Project Officer upon request to verify seed type and application rate.

2.5 SOILS & SOIL AMENDMENTS

- A. Refer to Section 329100 Planting Preparation soils and soil amendment specifications.

2.6 MULCHES

- A. Refer to Section 329100 Planting Preparation for mulch specifications.

2.7 SOIL STABILIZATION/EROSION CONTROL MATTING

- A. Refer to Section 02228 Erosion Control Matting for specifications.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Refer to Section 329100 Planting Preparation for specifications.

3.2 SEEDING - TURFGRASS

- A. Only areas shown as turf on the approved plan, shall be seeded with the specified turfgrass seed mix.
- B. Seeding shall take place between August 15th and October 15th or between March 15th and May 15th. Approval from Project Officer and authorization by the Landscape Architect shall be required before seeding is to begin.
- C. Apply planting soil mix to areas to be seeded with turfgrass in accordance with Section 329100 Planting Preparation
- D. No seeding shall be done during windy weather (winds over 5 mph) or when ground is wet or otherwise non-tillable. No seed shall be done on frozen ground or when the temperature is 32 or lower.
- E. Seed shall be uniformly distributed by hydro-seeding methods as specified:
 - 1. Slurry
 - a. Seed as specified at a rate of 350 lbs./acre.
 - b. Mulch: virgin wood fiber type applied at a rate of 1200 lbs./acre.
 - c. Tackifier: Guar type or approved equal applied at a rate of 40 lbs./acre.
 - d. Fertilizer: 19-19-19 granular applied at a rate of 500 lbs./acre.
 - e. Lime: Flowable liquid lime at a rate of 5 gallons per acre.

- f. Dye: Slurry must be green with dye added if not included with the mulch.
 - g. Application rate: 3000 gallons per acre. Agitation must be maintained throughout mixing and application.
 - h. Slurry shall be applied within 8 hours of the start of mixing.
2. In lieu of hydro-seeding, seed may be drilled, or an alternate method may be used. If an alternate method is used, seeding shall have to be run in two directions. The second direction being at right angles to the first direction. Requests for using alternate methods shall be approved by the Project Officer prior to application of seed.
- a. Sow seed at the rate of 5 to 8 lb./1000 sq. ft.
 - b. Rake seed lightly into top 1/8 inch of topsoil, roll lightly, and water with fine spray.
 - c. Protect seeded areas with slopes not exceeding 6:1 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
 - d. Stabilization areas indicated on the approved plan or exceeding 6:1 slope shall be protected with soil stabilization/erosion control matting per Section 02228 Erosion Control Matting.

3.3 SODDING

- A. All sod shall be transplanted within 24 hours from the time it is harvested unless stacked at its destination in a manner satisfactory to the Project Officer. Do not lay down if dormant or if the ground is frozen or muddy.
- B. All sod in stacks shall be kept moist and protected from exposure to air and sun and from freezing. Any sod permitted to dry out may be rejected whenever, in judgment of Project Officer, its survival after placing is doubtful. No payment shall be made for rejected sod. In any event, no more than forty-eight hours shall lapse between cutting and planting of sod is permitted.
- C. Before placing or depositing sod upon any surfaces, all shaping and redressing of such surfaces as described in Section 329100 Planting Preparation shall be completed. The bed area for sod shall be dug out so that when the sod is installed the adjacent soil shall be flush with the top of the sod root mat. Areas shall be watered lightly before the placing of sod; sod shall not be placed on dry surfaces. Completed areas to be sodded shall be a smooth, uniform, well-tilled surface true to line and cross section. Any raking required shall be done immediately prior to placement of the sod at no additional cost to Owner.
- D. No sod shall be placed at any time temperature is below 32 degrees Fahrenheit. No frozen sod shall be used, and no sod shall be placed upon frozen, powder dry or excessively wet soil.
- E. Apply planting soil mix to areas to be sodded in accordance with Section 329100 "Planting Preparation" Sod shall be lifted from trucks or storage piles by hand and placed with closed joints and no overlapping. All cracks, seams and voids shall be closed with small pieces of sod. After laying sod shall be sprinkled thoroughly and then tamped. "Tamping" consists of firmly closing seams between strips by use of hand tampers or approved rollers. All sod shall be thoroughly rolled after closing all seams. Correct any slipping of sod.

- F. Adequate water and watering equipment must be on hand before sodding begins and sod shall be kept moist until root system adheres to original seed bed and becomes established and accepted by Project Officer.
- G. Sod shall be laid with long edges parallel to contours, except in swales or ditches where it shall be placed perpendicular to the flow line. Only sod placed in swales or ditches shall be staked using 2 stakes per roll of sod. Stakes shall be wood wedges ½" x 1" x 12". Successive strips to be neatly matched and all joints staggered. Sod shall be laid in all areas indicated on landscape plans.

3.4 SPECIALTY SEEDING

- A. Prepare planting area per Section 329100 Planting Preparation or in accordance with the approved plan.
- B. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. Specialty seed shall be applied as soon as the ground thaws.
- C. Process:
 - 1. Specialty seed mix shall be applied prior to installation of Erosion Control Matting.
 - 2. Do not seed against existing trees or vegetation to remain.
 - 3. Seed shall be installed as follows:

Dry Seeding: Including via conventional drop or broadcast spreaders.

- a. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or Planting Summary Notes and Details.
- b. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
- c. Do not drop or broadcast seed when wind velocity exceeds 5 mph.

Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

- a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
- b. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.

Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

- a. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
- b. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- c. Mix seed and fertilizer on site and seed immediately and without interruption.
- d. When hydroseeding do not incorporate seed into the soil.

4. Apply straw or wood cellulose fiber mulch (WCFM) (see Section 329100 Planting Preparation) to all newly seeded areas immediately after seeding.
Straw mulch: apply at 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply to achieve a uniform distribution and depth so the soil is not exposed. When using a straw mulch anchoring tool apply at 2.5 tons per acre.
Wood cellulose fiber mulch: apply at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 5. Water newly planted areas and keep moist until established.
 6. Install erosion control matting in accordance with Section 02228 Erosion Control Matting.
 7. Plant shrubs, trees and perennials through erosion control matting in accordance with Sections 329100 Planting Preparation and Section 329300 Exterior Plants.
- D. Remove non-degradable erosion-control measures after seeding establishment.

3.5 PROTECTION FOR SEEDED OR SODDED TURFGRASS

- A. Install post and rope barriers around seeded areas. Tie cloth or ribbon to rope at 10' intervals.
- B. Install "KEEP OFF LAWN" signs at appropriate locations.
- C. Remove non-biodegradable erosion control measures after plant establishment period.

3.6 MAINTENANCE FOR SEEDED OR SODDED TURFGRASS

- A. Maintain surfaces and supply additional topsoil where necessary, including areas affected by erosion.
- B. Water to ensure uniform seed germination and to keep surface of soil damp:
 1. Each watering shall consist of 1 gallon per 3 sq. yd. of seed or sod
 2. Apply water slowly so that surface of soil shall not puddle and crust
- C. Cut lawn areas when grass reached height of 3". Maintain minimum height of 2". Do not cut more than 1/3 of blade at any one mowing.
- D. After first mowing of lawn, water grass sufficiently to moisten soil from 3" to 5" deep.
- E. Reseed damaged grass areas showing root growth failure, deterioration, bare or thin spots and erosion.

3.7 MAINTENANCE FOR SPECIALTY SEEDING AREAS

- A. Repair eroded areas and reseed as needed to ensure site stabilization.
- B. Water to ensure uniform seed germination and to keep surface of soil damp:
 1. Apply water slowly so that surface of soil shall not puddle and crust

- C. Inspection and removal of invasive plant species shall be undertaken monthly during the growing season until substantial completion. Manual removal methods only shall be used, unless otherwise approved by the Project Officer, as authorized by the Landscape Architect.

3.8 GUARANTEE

- A. The Contractor shall be responsible for maintaining all sodded and seeded areas in a healthy, vigorous condition in accordance with Section 3.6 "Maintenance for Seeded and Sodded Turfgrass" and Section 3.7 "Maintenance for Specialty Seeding Areas" as applicable at his/her own expense until all contracted work is completed, inspected and accepted by Project Officer as authorized by the Landscape Architect
- B. The Contractor shall, at his own expense, replace any seed or sod which has died or been damaged during the establishment period.
- C. Cost of seed and sod shall be withheld from final payment until final approval is given by Project Officer.

3.9 ACCEPTANCE

- A. Seeded turfgrass areas shall be accepted when an even, healthy, close and uniform stand of turf, 3" tall, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10sq. ft. and bare spots not exceeding 4 by 4 inches is properly established. Bare spots in excess of 4" shall be re-seeded at a rate per section 3.22 of this specification.
- B. Sodded areas shall be accepted provided all requirements, including maintenance, have been complied with and sod is well established in a healthy, vigorous growing condition. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.
- C. Specialty seeded areas shall be accepted when 1) post-installation coverage requirements have been met in accordance with the approved plan or 2) the site has achieved sufficient cover to be considered fully stabilized in the judgment of the Arlington County SWPPP Inspector.
- D. Upon completion, all debris and waste material resulting from seeding/sodding/mulching activities shall be removed from the project area and legally disposed of. Any damaged areas shall be restored to their original condition.
- E. Unless otherwise specified on the approved plans, upon acceptance by the Project Officer at Final Completion, Arlington County shall assume maintenance responsibilities.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 The measurement of RIPRARIAN BUFFER SEED to be paid for shall be per POUND of seed in accordance with the approved plans and specifications.
- 4.2 The unit price for RIPRARIAN BUFFER SEED shall include the cost of furnishing all labor, materials, equipment and incidental expenses necessary to complete the work, including but not limited to erosion control, mulch, protection and maintenance, all in accordance with the approved plans and specifications.
- 4.3 The measurement of STABILIZATION to be paid for shall be per SQUARE YARD of seeded area in accordance with the approved plans and specifications.
- 4.4 The unit price for STABILIZATION shall include the cost of furnishing all labor, materials, equipment and incidental expenses necessary to complete the work, including but not limited to erosion control, mulch, protection and maintenance, all in accordance with the approved plans and specifications.

END SECTION

COUNTY SPECIFICATIONS ADDED:

PART 1 - GENERAL

This work consists of furnishing and installing Pump Around Diversion and all materials, labor, and equipment required for the installation, maintenance, and removal of the Pump Around Diversion.

The work includes:

1. Control of surface water runoff to prevent flooding of excavations, trenches, and adjacent properties, and the saturation and loosening of soils.
2. Removal of subsurface water from excavations and trenches.
3. Provision of equipment and facilities to remove sediment and control the rates and volumes of disposal of surface and subsurface waters removed from the work areas.
4. Provisions for the protection of adjacent and down gradient properties and environmental resources.

PART 2 – MATERIALS

1. Diesel Pump
2. Sump Pit
3. Sand Bags
4. Filter Bag

PART 3 – EXECUTION

The Contractor shall design the dewatering systems to:

1. Effectively reduce the hydrostatic pressure and lower the groundwater levels to a minimum of 2 feet below the bottom of excavations;
2. Develop a substantially dry and stable sub grade for the proposed work;
3. Prevent damage to adjacent properties, buildings, structures, utilities and other facilities;
4. Ensure that, after 12 hours of initial pumping, no soil particles will be present in the discharge;
5. Retain all sediments on-site within the work area;
6. Locate dewatering facilities where they will not interfere with utilities and construction work to be done by others; and
7. Modify dewatering equipment and procedures when operations threaten to cause damage to new or existing facilities or adjacent areas not within the Limits of Disturbance.

The Contractor shall control surface water to:

1. Intercept and divert surface water runoff away from excavations through the use of dikes, curbing, walls, ditches, pipes, sumps or other approved means.
2. Provide and maintain ditches of adequate size to collect and prevent surface and subsurface water seepage from entering the excavations.

3. Divert the water to settling basins or other approved equipment required to reduce the amount of fine particles before discharge into drainage pipes and natural water courses.

The Contractor shall dewater excavated areas to:

1. Perform dewatering operations to lower the groundwater level in excavations as required to provide a stable, dry sub grade for the prosecution of the proposed work;
2. Maintain dewatering operations in a manner that prevents buildup of excessive hydrostatic pressure and damage to structures and the sub grade;
3. Not allow water to accumulate in excavations. Contractor shall provide and maintain ample means and devices to remove promptly, and to dispose of properly, all water entering excavations and to keep them dry until the proposed work is completed;
4. Not discharge water to protected environmental resources without treatment to remove suspended solids and sediments;

No pipe shall be laid in water. No masonry shall be laid in water, and no water shall be allowed to inundate new concrete and new brick masonry within 48 hours after installation. Contractor shall constantly guard against the possibility of flotation of pipe or structures after installation. Backfill or other means shall be placed promptly to prevent this occurrence. If a drainage system or water course is silted or becomes blocked due to dewatering operation, it shall be cleaned by the Contractor at no additional cost to the Owner. Any enforcement actions or fines resulting from improper dewatering and/or discharge of turbid water and sediment to protected areas shall be the sole responsibility of the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

All work completed under this section will be measured and paid for per each Pump Around Diversion.

This work includes all materials, labor, and equipment required by the above specification.

Payment will be made under:

| Pay Item | Pay Unit |
|-----------------------------|-----------------|
| 01501 Pump Around Diversion | PER WEEK (WK) |

END SECTION

PART 1 - GENERAL

Recording video footage of the existing site conditions within the limits of disturbance and of existing roads, entrances, gates, and vegetation prior to the start of construction by the Contractor is highly recommended to document the condition of the site and prevent claim of damages not incurred by the Contractor. If recording video footage is not possible, the Contractor is required to take photographs at 50 foot intervals looking downstream at the stream channel. The photographs shall be taken from the left bank.

PART 4 - MEASUREMENT AND PAYMENT

There will be no direct payment for Video Existing Conditions. Work and materials for Existing Conditions Documentation will not be paid separately but will be considered incidental to 01550 Mobilization.

END SECTION

PART 1 – GENERAL

Construction Survey shall be performed in accordance with 18VAC10-20-382.B.11 of the Virginia Board of Land Surveyors and shall include but not be limited to the layout of the stream channel, temporary and permanent easements, and all sensitive areas associated with the implementation of the design as indicated in the plans.

PART 3 – EXECUTION

Prior to any clearing activities, the Contractor shall install temporary stakes to mark the limits of disturbance, staging and stockpile areas, the easement boundaries, and stream thalweg for approval by the Engineer.

Stakeout of the stream channel in its entirety shall be performed in such a way that the Engineer can verify the layout of the stream channel prior to construction activities commencing. The Contractor shall mark the proposed location of the thalweg of the channel at 50-foot intervals, at the head of each riffle, and at maximum pool depth locations within the proposed channel. Upon completion of the stakeout and prior to beginning construction, the Contractor shall give the Engineer a 48-hour notice in order to approve the stream alignment. Stakes should be maintained until approved by the Engineer. There will be no additional payment for re-staking.

The Contractor shall maintain a level and rod on-site at all times for use by the Engineer to evaluate stream grades. This condition will not alleviate the Contractor's responsibility to make certain that the stream is constructed in accordance with the project plans and provisions.

PART 4 – MEASUREMENT AND PAYMENT

Contractor shall incorporate the cost of the Construction Survey in the bid amount or the unit prices of the bid items, as applicable. No additional payment will be made by the County.

END SECTION

PART 1 – GENERAL

This work consists of constructing the Imported Stream Bed Material with imported stone in the sections of channel when no salvaged bed material is available. Stream bed material is installed once channel excavation is complete and adjacent step pool, step run, or plunge pool structures are constructed.

PART 2 – MATERIALS

Imported material shall meet the following size distribution:

| | Min (mm) | Max (mm) | Min (inches) | Max (inches) |
|-----|-------------|-------------|-----------------|-----------------|
| D16 | 25 | 50 | 1 | 2 |
| D35 | 76 | 102 | 3 | 4 |
| D50 | 203 | 254 | 8 | 10 |
| D84 | 356 | 406 | 14 | 16 |

Cobble-Gravel void ratio is estimated at over 20%. Therefore, course sand and Bank Run Gravel shall be added to the imported Cobble-Gravel-Sand material prior to placement in the stream reach. See construction specifications for details relative to mixing, placing, and compacting stream bed material.

Material Composition

| Material | Size | Quantity (Volume) | Percent |
|-----------------|-------------------------|-------------------|----------|
| Course Sand | 0.04 - 0.08" (1 - 2 mm) | 0.75 bucket | 7 - 12% |
| Bank Run Gravel | 0.08 – 2.5" (2 – 64 mm) | 2 buckets | 35 - 40% |
| Rock/Cobble | Well Graded 8 - 12" | 2 buckets | 35 - 40% |
| Rock/Boulder | 12 - 16" | 0.5 bucket | 12 - 17% |

The above material table is for general information only and may vary in product name and size depending on availability and supplier. Contractor should provide the supplier with the material size distribution matrix so the supplier may evaluate what combination of currently available products will meet the specified distribution.

PART 3 – EXECUTION

Imported Stream Bed Material shall be constructed according to the Construction Details and Stream Typical Sections Detail shown on the approved plans, or as directed by the Project Officer in the field.

1. Excavate the stream bed.

2. No bedding shall be placed until foundation preparation is completed and the foundation and excavations have been inspected and approved by the Project Officer.
3. The cobble/gravel/sand mixture shall be placed and spread uniformly and neatly in one horizontal layer on the prepared sub-grade surfaces to a depth of 18 inches as indicated in the Stream Typical Section Detail.
4. The bedding layer shall be compacted by at least 4 passes, over the entire surface, of the track of a crawler-type tractor weighing not less than 8 tons or an equivalent method approved by the Project Officer.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement of quantities shall be made for this work. Payment for imported stream bed material is considered incidental to line item 02210 Class 2 Reinforced Bed Material; therefore, no separate payment shall be made for this work.

Commonwealth Of Virginia

Department Of Transportation

Land Use Permit



| | |
|-----------|------------|
| Permit No | 947-150330 |
| Status | APPROVED |

This permit only grants permission to use whatever rights the Commonwealth Transportation Board and the Department of Transportation have in the right of way and no more, and it is the obligation of the permittee to secure any other releases or permission that may be needed in order to perform the work.

Effective Date Mar 03, 2023 Expiration Date Mar 02, 2024 Reinstatement Date

| | | | | |
|------------------------------|--|--|--|---------------------------------|
| Permittee Information | | Your Job# 28460.01, N Glebe Road Channel Repair | Surety & Account Receivable Information | |
| Owner & Address | County of Arlington 2100 Clarendon Boulevard Suite 900 Arlington VA 22201 | Agent | Name Arlington County | Surety Account VAAR00617 |
| Contact | Bi Wu | Contact | Surety Type Resolution | Amount 10,000,000.00 |
| Phone# | 703-228-0595 | Phone# | Obligation Amount 1,000.00 | Surety Holder CUSTOMER |
| Fax# | 703-228-3719 | Fax# | | |
| 24 Hr# | 571-326-7680 | 24 Hr# | | |

AUTHORIZATION: In compliance with your application, permission is hereby given insofar as the Commonwealth Transportation Board has the right, power, and authority under sections 33.2 - 210;33.2 - 240;33.2 - 241 of the Code of Virginia as amended, to grant by Special Agreement and/or by Land Use Permit for you to perform the work and or activity(s) described below:

Location

| | | | |
|-------------------|------------------|------------------|--------------------|
| County/City/Town | Arlington County | Highway Route(s) | 120 - N Glebe Road |
| From Route Number | 123 | From Route Name | Chain Bridge Road |
| To Route Number | NIS | To Route Name | N Old Glebe Road |

Work Description

Utility maintenance joint effort project between Arlington County and VDOT. The plan is proposing a roadside ditch (approx. 1180 ft long) repair along N Glebe Rd near Chain Bridge Rd and George Washington Mem Pkwy. All work shall conform to the provisions as listed on the LUP-SPG Special Provisions Form. WORK HOURS: Monday thru Thursday 9:30am-3pm, and Friday 9:30am-2pm. Information Sign Required; see item#7, General Requirements, LUP-SPG. LOCATION INSPECTOR: Mark Kaldmaa (703)259-2777. Lane closure request forms must be submitted to the inspector by COB Wednesday the week before the lane closure is needed and also entered into LCAMS/VA Traffic. All lane closures require the applicant to call VDOT TOC at 703-877-3401 before setup and after removal of MOT.

| Payment Reference | Payment Date | Payment Type | Payment Amount |
|-------------------|--------------|--------------|----------------|
| 72230758 | 2/28/2023 | Credit Card | \$100.00 |

Applicant has compiled with VA Code Section 56-265.15 Affidavit is attached.

TERMS:Applicable as stated in the VDOT Land Use Permit Regulations (current edition) and/or as per approved plans, and/or regulatory instructions, including but not limited to the LUP-SPG and/or agreement(s) attached hereto.

COMMONWEALTH TRANSPORTATION BOARD

By:

Mar 03, 2023

Robert Burton

- C** Call before you dig
- A** Allow the required time for marking
- R** Respect and protect the marks/flags
- E** Excavate carefully

Call Miss Utility
811

[] When checkbox is marked, by approving this permit, the issuing official certifies that the entrance was designed in accordance with Appendix F of the Road Design Manual

FINAL INSPECTION & SURETY REQUIREMENTS: Upon completion of the work or activity(s) authorized under this Land Use Permit, the permittee shall contact the following office in writing or by electronic communication to request final inspection and release of the surety obligation for this permit.

NOVA District - Fairfax Permits
4975 Alliance Drive Suite 1N
Fairfax, VA VA 22030

EXHIBIT K



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

October 31, 2022

Northern Virginia Regulatory Section
NAO-2020-01103/VMRC#22-V1909 (unnamed tributary to Potomac River)

Arlington County DES
Attn: Jon Lawler, P.E.
4200 28th St S.
Arlington, VA 22206

Dear Jon Lawler:

This is regarding your Department of the Army permit application number NAO-2020-01103 (VMRC #22-V1909) to impact approximately 1,100 linear feet of an unnamed tributary to Potomac River to repair and stabilize an existing stream channel. All work will occur along North Glebe Road, south of the intersection of North Glebe Road and the George Washington Memorial Parkway in Arlington County, Virginia. These impacts are detailed on the enclosed drawings entitled "North Glebe Road Repair," submitted on behalf of the applicant by Wetland Studies and Solutions, Inc. and dated June 1, 2020, and date stamped as received by this office on August 11, 2022 (attached).

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit (3), attached. Certain Corps Nationwide Permits were published in the December 27, 2021, Federal Register notice (86 FR 73522) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

Provided the Regional Conditions and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. To assist in your compliance with NWP General Condition #30, enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required compensatory mitigation.

Please be aware that a permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification may not be valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

This verification is valid until the Nationwide Permit is modified, reissued, or revoked. This Nationwide Permit 3 is scheduled to be modified, reissued, or revoked prior to March 14, 2026.

It is incumbent upon you to remain informed of changes to the Nationwide Permits. We will issue a public notice when the Nationwide Permits are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the Nationwide Permit to complete the activity under the present terms and conditions of this Nationwide Permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the Nationwide Permit verification expires unless the district engineer removes those conditions. Activities completed under the authorization of a Nationwide Permit which was in effect at the time the activity was completed continue to be authorized by that Nationwide Permit.

In granting an authorization pursuant to this permit, we relied on the information and data provided by the permittee. If we determine that this information is false or incomplete, we may suspend or revoke, in whole or in part, this authorization and institute appropriate legal proceeding.

If you have additional questions or concerns about this permit authorization, please contact me at (757) 201-7194 or by email at Theresita.M.Crockett-Augustine@usace.army.mil.

Sincerely,

Theresita Crockett-Augustine

Theresita Crockett-Augustine
Environmental Scientist
Northern Virginia Regulatory Section

Enclosures

cc:
WSSI



U.S. Army Corps
Of Engineers
Norfolk District

**CERTIFICATE OF COMPLIANCE
WITH
ARMY CORPS OF ENGINEERS PERMIT**

Permit Number: NAO-2020-01103
VMRC Number: 22-V1909
Corps Contact: Theresita Crockett-Augustine
Permittee Name: Arlington County DES
Date of Issuance: October 31, 2022
Permit Type: NWP 3 Maintenance

Within 30 days of completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification, and return it to the following address:

US Army Corps of Engineers - Norfolk District
Fredericksburg Field Office
Attn: Ms. Theresita Crockett-Augustine
10300 Spotsylvania Avenue, Suite 230
Fredericksburg, VA 22408

Or scan and send via email to Theresita.M.Crockett-Augustine@usace.army.mil

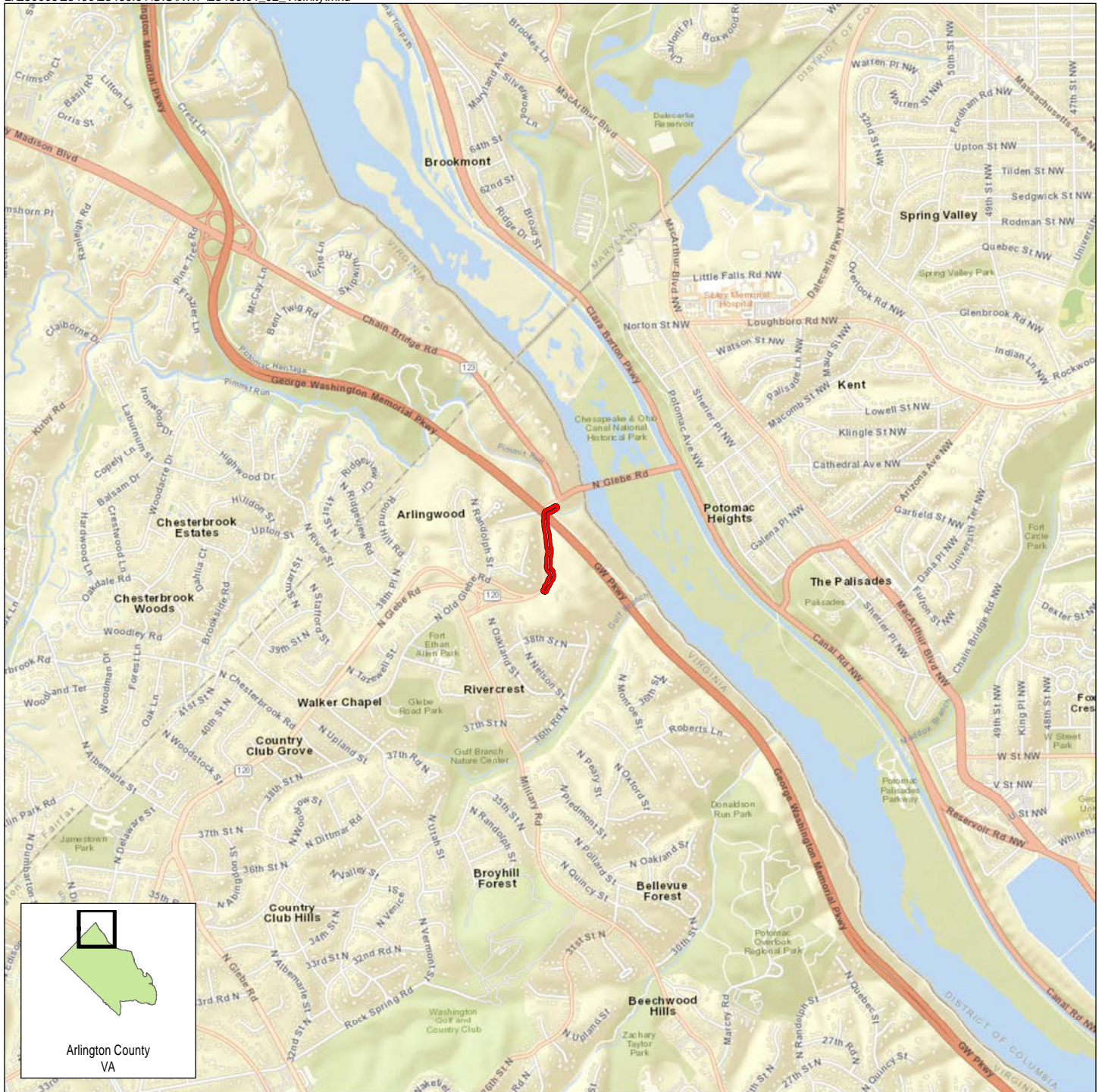
Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit and required mitigation has been completed in accordance with the permit conditions.

Signature of Permittee

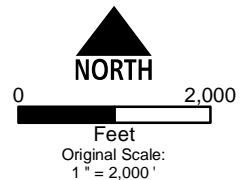
Date

L:\28000s\28400\28460.01\GIS\NWPI\28460.01_02_Vicinity.mxd



 Study Area

Vicinity Map
North Glebe Road Channel Repair
WSSI #28460.01



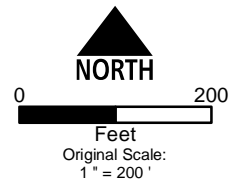
Source: World Street Map - ESRI

L:\28000s\28400\28460.01\GIS\NWPI\28460.01_04_2019_VBMP.mxd

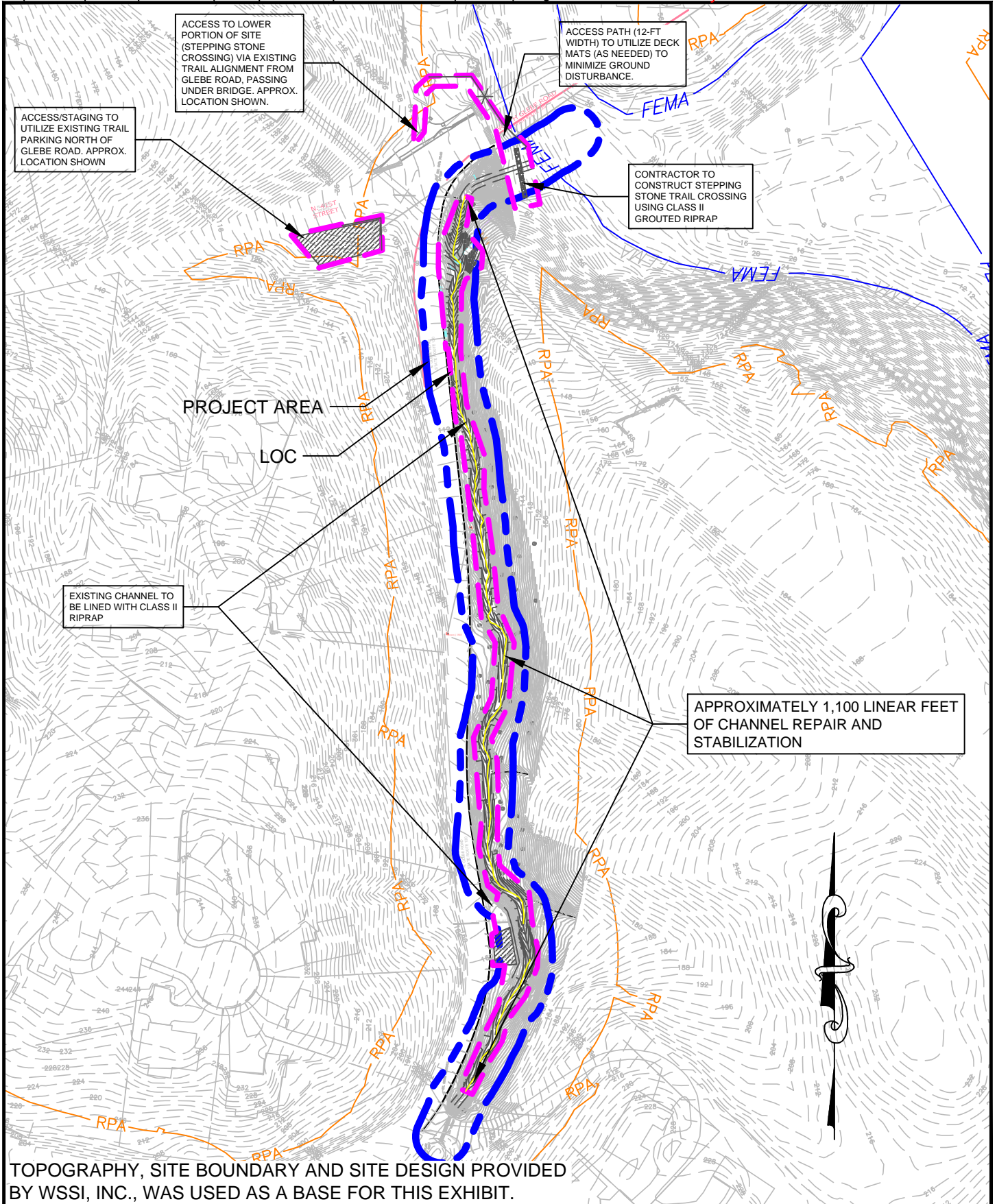


 Study Area

**Spring 2019 Natural Color Imagery
North Glebe Road Channel Repair
WSSI #28460.01**



Source: Virginia Base Mapping Program (VBMP)



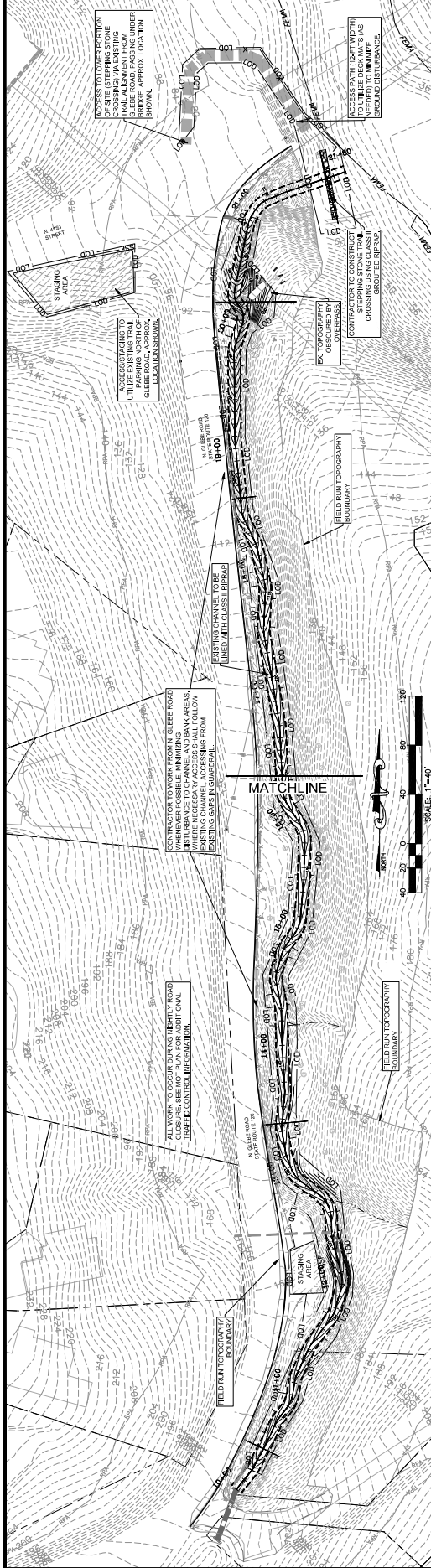
TOPOGRAPHY, SITE BOUNDARY AND SITE DESIGN PROVIDED BY WSSI, INC., WAS USED AS A BASE FOR THIS EXHIBIT.

Applicant:
 Arlington County DES
 2100 Clarendon Blvd, Suite 813
 Arlington, Virginia 22201

**NORTH GLEBE ROAD
 CHANNEL REPAIR**
 Proposed Impacts to Nontidal
 Waters of the U.S.
 Arlington County, Virginia

**Overall WOTUS
 Impact Map**
 Date: June 2020
 Scale: 1" = 150'
 Sheet: 2 of 7

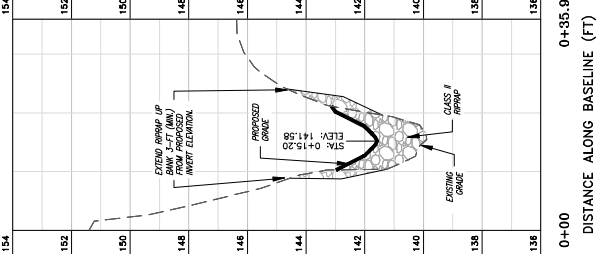
Agent:
 Wetland Studies and Solutions, Inc.
 5300 Wellington Branch Drive, Suite 100
 Gainesville, VA 20155
 (Phone) 703-679-5600 (Fax) 703-679-5601



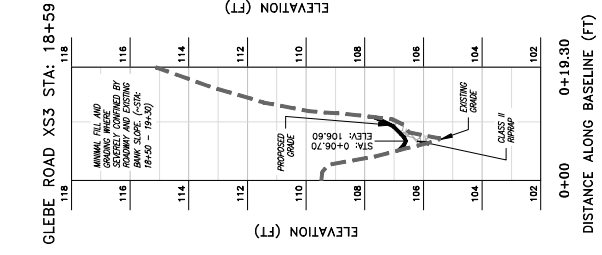
CROSS SECTION NOTES:
 1. ALL CROSS SECTION VIEWS SHOWN FACING DOWNSTREAM.
 2. TYPICAL BANKFULL CHANNEL DIMENSIONS: WIDTH = 10 FT., DEPTH = 1.5 FT.
 3. TYPICAL SECTION - CONTRACTOR TO PLACE 2-FT (MIN.) THICKNESS OF CLASS II RIPRAP UNLESS PRECLUDED BY EX. BEDROCK.

CROSS SECTION SCALE
 H: 1" = 10"
 V: 1" = 2"

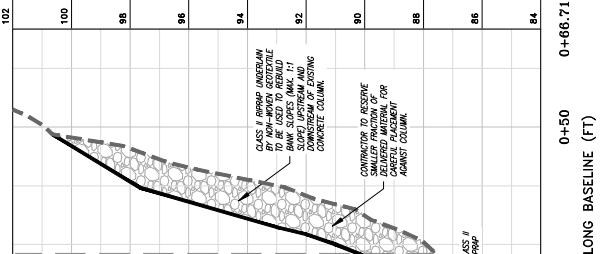
GLEBE ROAD XS2 STA: 13+37



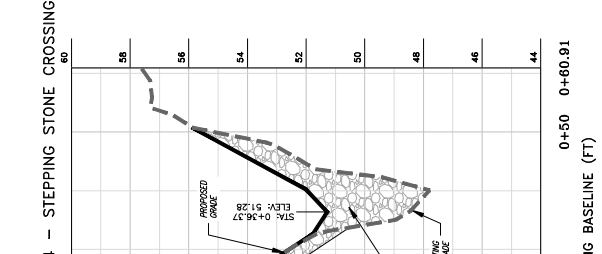
GLEBE ROAD XS3 STA: 18+59



GLEBE ROAD XS4 STA: 20+22



GLEBE ROAD XS5 STA: 21+64 - STEPPING STONE CROSSING



| REVISIONS | |
|-----------|-------------|
| No. | Description |
| | |
| | |
| | |
| | |
| | |

DATE: XXXX, 200X
 SCALE: AS NOTED
 Horizontal Datum: NAD 83
 Vertical Datum: NAVD 83
 Boundary and Topo Sources: [unclear]
 Author: (S. Saray, Inc. Wetland)

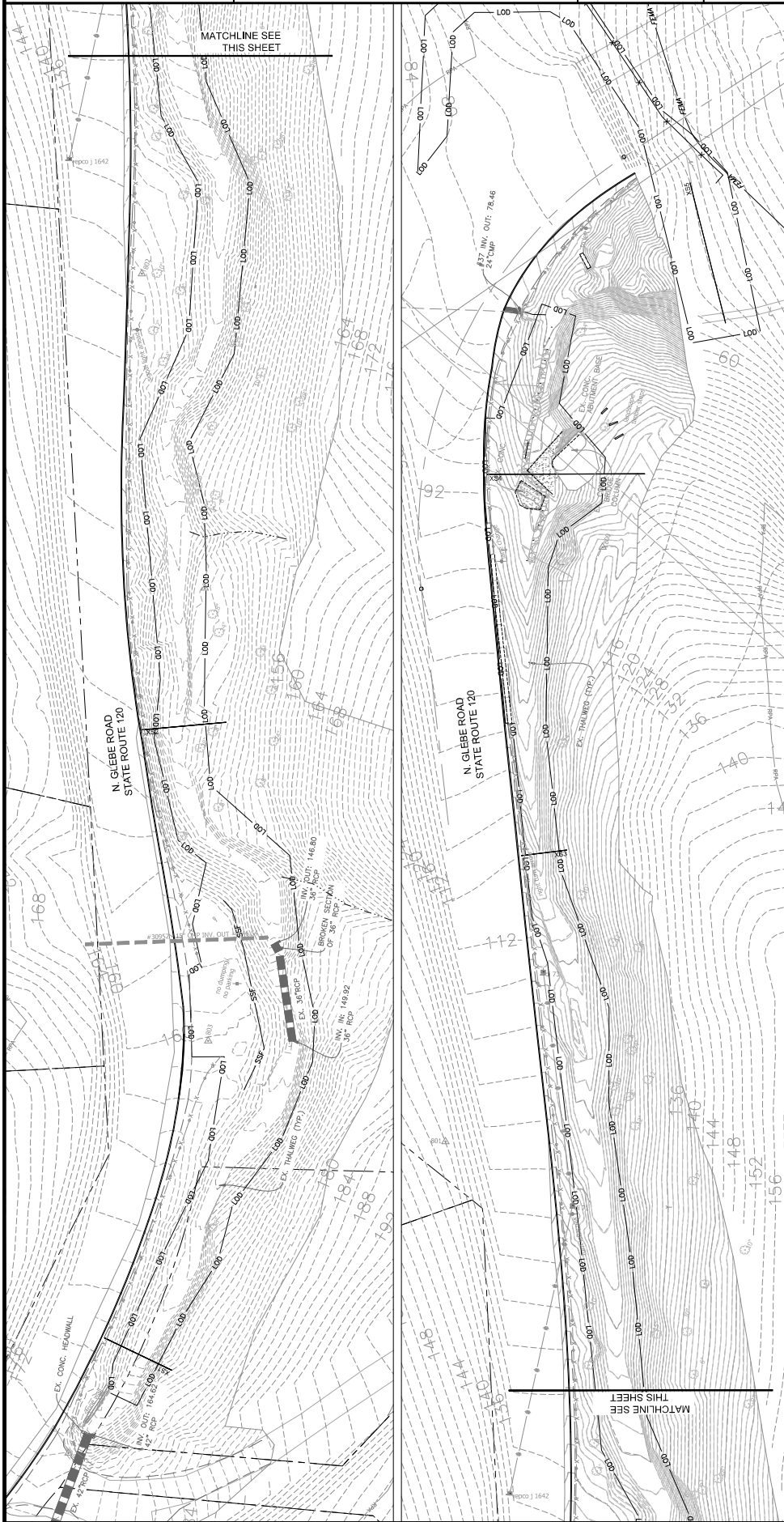
Sheet # 2 of 18

5300 Wellington Branch Drive, Suite 100
Charlottesville, Virginia 22915
Phone: 703.579.8000 • Fax: 703.671.9501
www.wetland.com

DAVEY COMPANY

Grading Plan and Longitudinal Profile
 FINAL DESIGN
 N GLEBE ROAD CHANNEL REPAIR
 Arlington, Virginia
 Copyright © 2020 Wetland Stokes and Solutions, Inc.

| | |
|--|-------------------------|
| DATE: XXXXX, 20XX | SCALE: 1" = 20' |
| Vertical Datum: NAVD83 | Horizontal Datum: NAD83 |
| Boundary and Topo Source: [Blank] | Map Scale: [Blank] |
| Author (GIS Survey Data, WSS): [Blank] | Drawn: [Blank] |
| Checked: [Blank] | Reviewed: [Blank] |
| Approved: [Blank] | Project No: [Blank] |
| Sheet # | 3 of 18 |



EXISTING CONDITIONS LEGEND

- GUARDRAIL
- OVERHEAD UTILITY
- EXISTING EASEMENT
- EXISTING INFRASTRUCTURE
- EXISTING CONTOURS
- INTERMITTENT STREAM
- SURVEYED TREE

SCALE: 1"=20'

20 10 0 20 40 60

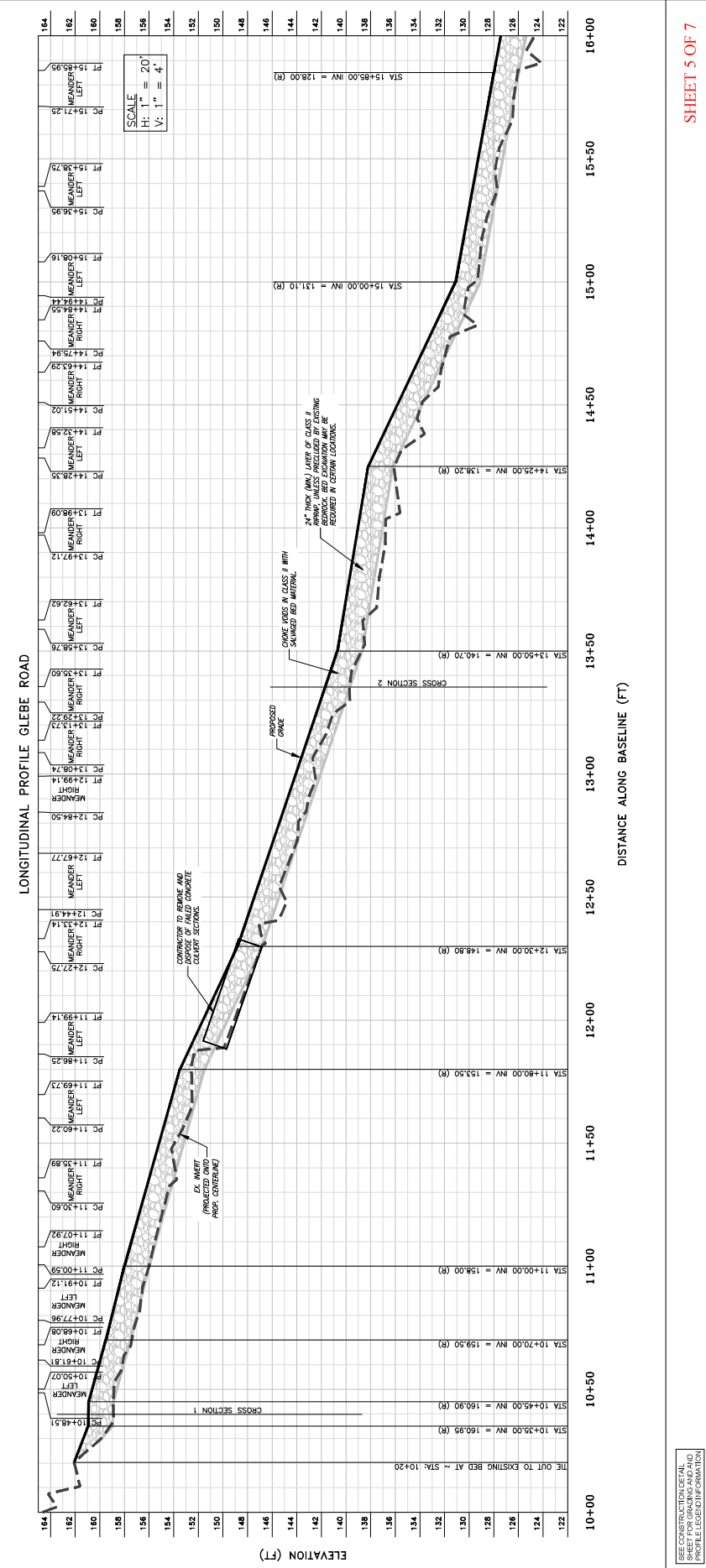
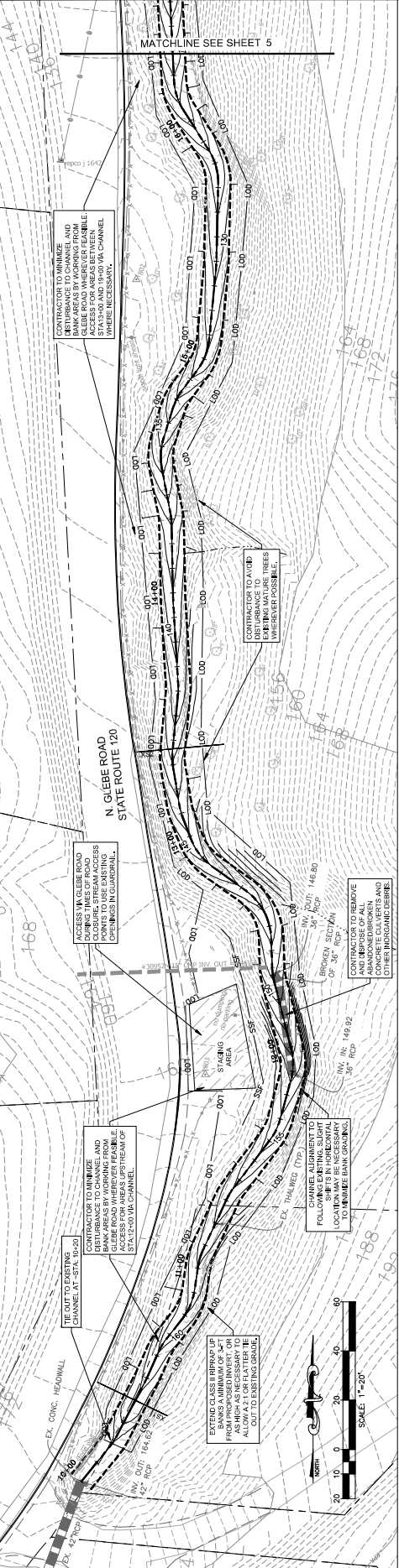
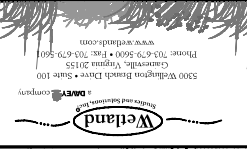
SHEET 4 OF 7

SURVEY NOTES:
 1. This map has been historically oriented to the Virginia Coordinate System of (NAVDS83) by field location of monument shown on drawings provided by the Virginia Department of Transportation. The survey was conducted on April 15-14, 2020.
 2. All information used collected by Wetland Stokes and Solutions, Inc. and data incorporated with County-provided information.
 3. One foot contour interval is provided by County staff as provided for the project. Additional topographic information is available from County available GIS data. A boundary is shown to depict the interface of the two data sources.

| | | |
|---|-----------------------|-----------------|
| Vertical Datum: NAVD 83 | DATE: XXXXX, 20XX | SCALE: 1" = 20' |
| Horizontal Datum: NAD 83 | PROJECT NO. NA01870 | REVISIONS |
| Boundary and Elevation Sources: Airport GIS Survey Data, WSSAAS | Author: J. [redacted] | Date |
| Drawn: [redacted] | Checked: [redacted] | By |
| Revised: [redacted] | Revised: [redacted] | By |
| Scale: [redacted] | Scale: [redacted] | By |
| Scale: [redacted] | Scale: [redacted] | By |



Grading Plan and Longitudinal Profile
ARLINGTON, VIRGINIA
FINAL DESIGN
N GLEBE ROAD CHANNEL REPAIR



CONTRACTOR TO MINIMIZE DISTURBANCE TO CHANNEL AND GLEBE ROAD WHEREVER FEASIBLE...
ACCESS TO GLEBE ROAD DURING TIMES OF FLOOD...
CONTRACTOR TO AVOID DISTURBANCE TO TREES...
CONTRACTOR TO REMOVE CONCRETE CURBS AND ABANDONED DRIVEWAYS...
CHANNEL ALIGNMENT TO FOLLOW SHIFTS IN HORIZONTAL ALIGNMENT...
EXTEND CLASS B RIPRAP TO BANKS A MINIMUM OF 5 FT...
EX. CONC. HEADWALL

CONTRACTOR TO MINIMIZE DISTURBANCE TO CHANNEL AND GLEBE ROAD WHEREVER FEASIBLE...
ACCESS TO GLEBE ROAD DURING TIMES OF FLOOD...

CONTRACTOR TO AVOID DISTURBANCE TO TREES...
WHENEVER POSSIBLE...

CONTRACTOR TO REMOVE CONCRETE CURBS AND ABANDONED DRIVEWAYS...
WHERE POSSIBLE...

CHANNEL ALIGNMENT TO FOLLOW SHIFTS IN HORIZONTAL ALIGNMENT...
TO MINIMIZE BANK EROSION...

EXTEND CLASS B RIPRAP TO BANKS A MINIMUM OF 5 FT...
AS HIGH AS NECESSARY TO ALLOW A 2 FOOT FLATTER TO CUT TO EXISTING GROUND...

CONTRACTOR TO MINIMIZE DISTURBANCE TO CHANNEL AND GLEBE ROAD WHEREVER FEASIBLE...

ACCESS TO GLEBE ROAD DURING TIMES OF FLOOD...

CONTRACTOR TO AVOID DISTURBANCE TO TREES...
WHENEVER POSSIBLE...

CONTRACTOR TO REMOVE CONCRETE CURBS AND ABANDONED DRIVEWAYS...
WHERE POSSIBLE...

CHANNEL ALIGNMENT TO FOLLOW SHIFTS IN HORIZONTAL ALIGNMENT...
TO MINIMIZE BANK EROSION...

EXTEND CLASS B RIPRAP TO BANKS A MINIMUM OF 5 FT...
AS HIGH AS NECESSARY TO ALLOW A 2 FOOT FLATTER TO CUT TO EXISTING GROUND...

CONTRACTOR TO MINIMIZE DISTURBANCE TO CHANNEL AND GLEBE ROAD WHEREVER FEASIBLE...

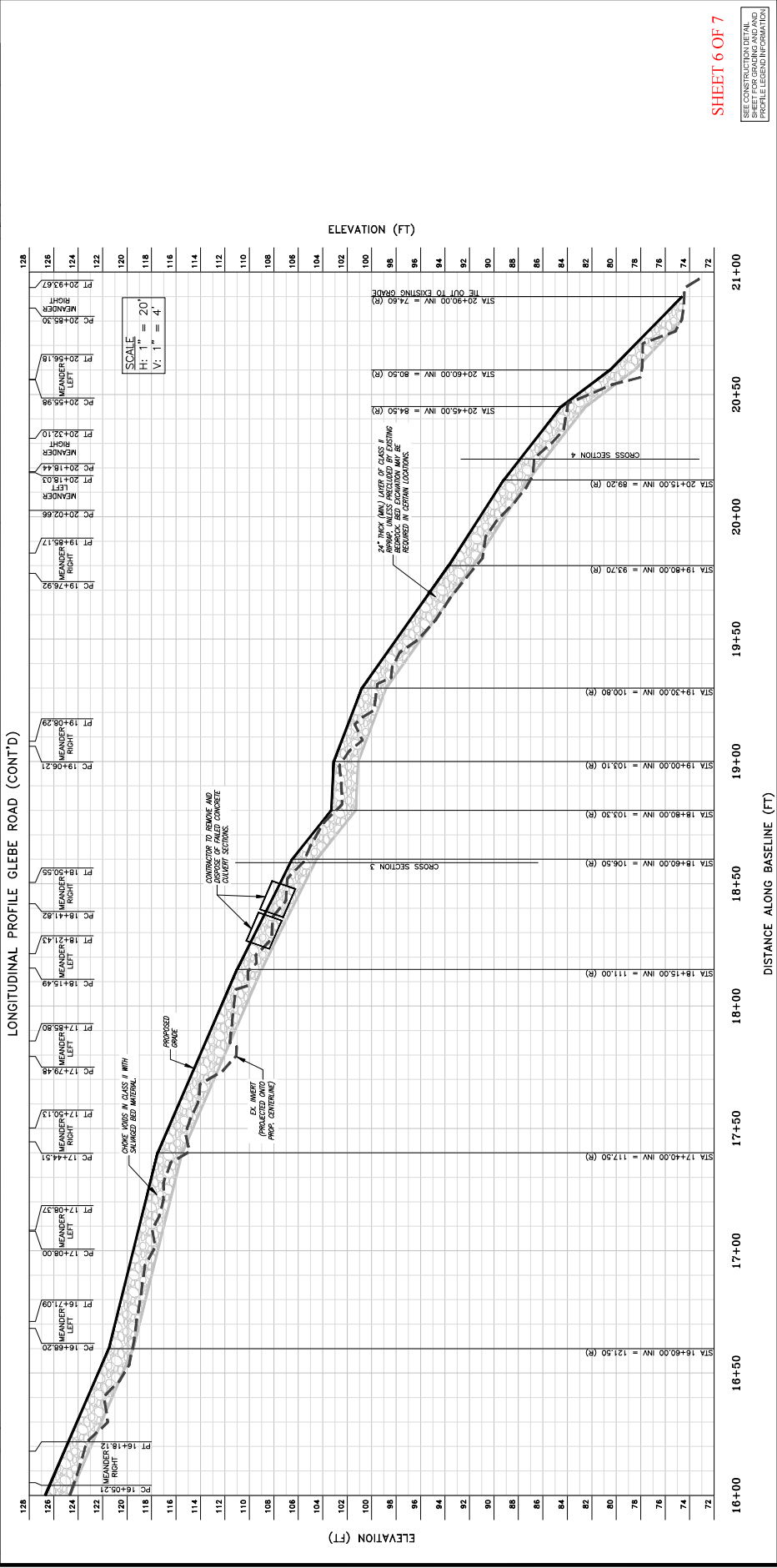
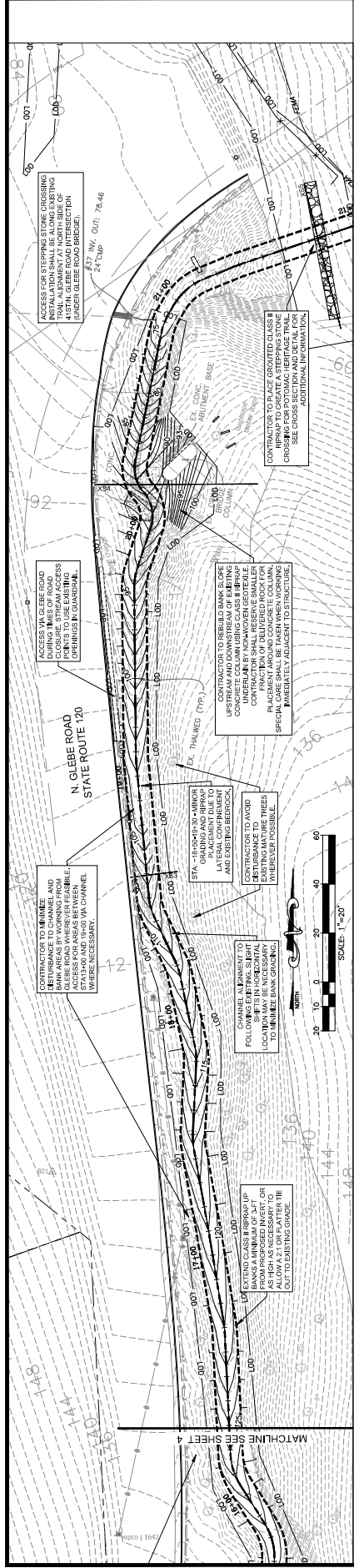
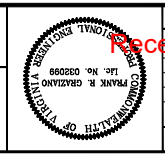
ACCESS TO GLEBE ROAD DURING TIMES OF FLOOD...

CONTRACTOR TO AVOID DISTURBANCE TO TREES...
WHENEVER POSSIBLE...

CONTRACTOR TO REMOVE CONCRETE CURBS AND ABANDONED DRIVEWAYS...
WHERE POSSIBLE...

CHANNEL ALIGNMENT TO FOLLOW SHIFTS IN HORIZONTAL ALIGNMENT...
TO MINIMIZE BANK EROSION...

EXTEND CLASS B RIPRAP TO BANKS A MINIMUM OF 5 FT...
AS HIGH AS NECESSARY TO ALLOW A 2 FOOT FLATTER TO CUT TO EXISTING GROUND...



SEE CONSTRUCTION DETAIL FOR CHANNEL CROSS SECTION PROFILES LEGEND INFORMATION

SHEET 6 OF 7

16+00 17+00 17+50 18+00 18+50 19+00 19+50 20+00 20+50 21+00

EXHIBIT L



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

September 29, 2016

MEMORANDUM

TO: NOVA District Staff

FROM: Hari Sripathi, P.E.
Regional Operations Director

A handwritten signature in black ink, appearing to read "HSripathi".

SUBJECT: Lane Closures in Nova District

As a follow up to the Lane Closures in Nova District memorandum dated April 27, 2012, enclosed are the updated guidelines for lane closures.

These updated guidelines will be effective immediately. All existing and previously approved projects are encouraged to review their respective contract documents and make adjustments if possible.

Lane Closure Guidelines

-For Northern Virginia-



**Virginia Department of Transportation
Northern Region Operations**

September 21, 2016

Instruction

The purpose of this memorandum is to present guidelines for lane closure hours for construction, maintenance, permits, and special events in Northern Virginia.

The first version of the lane closure guidelines was issued in April 2012. In the past four years, there have been completed and on-going roadway construction projects in the NoVA District, such as I-495 and I-95 express lanes and the I-66 spot improvements. As these guidelines are applied and implemented, modifications and updates to these guidelines have become necessary. Same as the previous version, the modifications were made based on traffic volume; roadway characteristics; comments from staff; and considering the public tolerance for the lane closure during certain time periods of the day.

It should be noted that these guidelines must be used as a starting point for discussion at the project level. On large scale projects with robust community outreach and a Traffic Management Plan, these hours could be extended. If project staff would like to modify these hours for interstate or major arterials, they must work with NRO Traffic Operations staff for recommendations and obtain final approval from their functional Assistant District Administrator (ADA).

Please review the existing contracts and discuss the deviations from these hours with your functional ADA.

Restriction of Operations:

In addition to the allowable lane closure hours specified in the tables, the restrictions listed below shall be followed.

1. Peak Hours Lane Closures

Any lane reductions (temporary or permanent) during the peak periods (Monday to Friday, 6:00AM to 9:00AM and 3:30PM to 6:30PM) on roads with an AADT above or equal to 10,000 vehicles requires consultation with the Regional Operations Director (ROD) and Public Affairs Manager.

2. Complete Roadway Closures

If there are complete road closures on any road for construction or maintenance work, the ROD and Public Affairs Manager must be consulted.

Complete Roadway Closures shall be limited to 20 to 30 minutes intermittent stoppage for some specific work activities.

If the closure duration is above 30 minutes, it shall be approved separately with full Maintenance of Traffic and Traffic Management Plans.

3. Construction in Residential Subdivisions

Road work within residential subdivisions and/or cul-de-sac streets should be conducted during daytime hours to avoid night time noise issues.

4. Express Lanes (I-95 & I-495)

All I-95 and I-495 Express Lane closures shall be coordinated with the Express Lanes Operations Center at least 5 business days in advance using their Authorization to Work form (available from the Express Lanes Operations Center at (571) 419-6046. Complete road closures on the I-95 Express Lanes and I-495 Express Lanes will be limited to 30 minutes or less

5. Holiday

In addition to the Sunday or Holiday work limitations, mobile, short duration, short-term stationary or intermediate-term stationary temporary traffic control zone lane closures on mainline lanes, shoulders or ramps shall not be performed during the following Holiday time periods without the written permission of the Engineer. Additionally, long-term stationary temporary traffic control zones shall not be initially put in place, adjusted, or removed during the following Holiday time periods without the written permission of the Engineer (VDOT 2016 Standard Specifications, updated 7/2016):

- **January 1:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Martin Luther King, Jr. Day and Lee Jackson Day*:** From Noon on the preceding Thursday to Noon on the following Tuesday.
- **Presidents Day*:** As indicated below.
- **Easter*:** As indicated below.
- **Memorial Day:** As indicated below.
- **July 4:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Labor Day:** As indicated below.
- **Columbus Day*:** As indicated below.
- **Veterans Day*:** From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Thanksgiving Day:** From Noon on the Wednesday preceding Thanksgiving Day until Noon on the Monday following Thanksgiving Day.
- **Christmas Day:** From Noon on the preceding day until Noon on the following day, except as indicated below.

If the Holiday occurs on a Friday or Saturday: From Noon on the preceding Thursday to Noon on the following Monday.

If the Holiday occurs on a Sunday or Monday: From Noon on the preceding Friday to Noon on the following Tuesday.

***Note:**

For low volume roadways (minor arterial), lane closures will not be allowed during the holidays; however, there will be no restriction to the preceding day and the following day.

| INTERSTATE 395 & INTERSTATE 95 | | | | | |
|---|---|---|--------------------------|-------------------------------|------------------------------|
| WEEKDAY | | Northbound | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | 14th St. Bridge to Springfield Interchange | 10:00AM to 3:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:00PM to 5:00AM | | | |
| Segment 2 | Springfield Interchange to Rt.123 | 9:30AM to 3:30PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:00PM to 5:00AM | | | |
| Segment 3 | Rt.123 to Prince William / Stafford County line | 9:30AM to 3:30PM | 10:00PM to 4:30AM | 11:00PM to 4:00AM | 12:00AM to 4:00AM |
| | | 9:00PM to 5:00AM | | | |
| Segment 4 | Prince William / Stafford County line to Rt.3 Exit 130 | 9:30AM to 3:30PM | 10:00PM to 4:30AM | n/a | 12:00AM to 4:00AM |
| | | 9:00PM to 4:30AM | | | |
| Segment 5 | Rt.3 Exit 130 to Caroline / Hanover County line | 9:00AM to 3:30PM | 10:00PM to 4:30AM | n/a | 12:00AM to 4:00AM |
| | | 9:00PM to 5:30AM | | | |
| All lanes open at 12:00 noon on Friday | | | | | |
| WEEKDAY | | Southbound | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | 14th St. Bridge to Springfield Interchange | 10:00AM to 2:30PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:30PM to 5:00AM | | | |
| Segment 2 | Springfield Interchange to Rt.123 | 9:00AM to 2:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:30PM to 5:00AM | | | |
| Segment 3 | Rt.123 to Prince William / Stafford County line | 9:00AM to 2:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:30PM to 6:00AM | | | |
| Segment 4 | Prince William / Stafford County line to Rt.3 Exit 130 | 9:00AM to 2:00PM | 10:00PM to 5:30AM | n/a | 12:00AM to 4:00AM |
| | | 9:30PM to 6:00AM | | | |
| Segment 5 | Rt.3 Exit 130 to Caroline / Hanover County line | 9:00AM to 3:00PM | 10:00PM to 5:30AM | n/a | 12:00AM to 4:00AM |
| | | 9:30PM to 6:00AM | | | |
| All lanes open at 11:00am on Friday | | | | | |

| INTERSTATE 395 & INTERSTATE 95 | | | |
|---|---|-------------------------------|------------------------------|
| WEEKEND | Northbound/Southbound* | | |
| | Single-Lane Closures or Shoulder | Multiple-Lane Closures | Complete Road Closure |
| Friday to Saturday | 10:00PM to 7:00AM | 11:00PM to 6:00AM | 12:00AM to 5:00AM |
| Saturday to Sunday | 10:00PM to 7:00AM | 11:00PM to 6:00AM | 12:00AM to 5:00AM |
| Sunday to Monday | 10:00PM to 5:00AM | 11:00PM to 4:00AM | 12:00AM to 4:00AM |

* For special operations, depending on time of year, additional hours may be allowed with proper ADA/ROD approval.

| | REVERSIBLE LANES (HOV & EXPRESS LANES)* | |
|----------------|---|--------------------------------|
| | Single-Lane Closures or Shoulder | Complete Road Closure** |
| WEEKDAY | 9:30PM (Sunday to Thursday) to 4:00AM (Monday to Friday) | 11:00PM to 4:00AM |
| WEEKEND | 11:00PM (Friday to Saturday) to 9:00AM (Saturday to Sunday) | 11:00PM to 4:00AM |

* Direction of traffic control for all lane closures in reversible lanes will need to be adjusted as necessary to face direction of traffic.
 ** Complete Road Closure on Express Lanes limited to 30 minutes or less.

| INTERSTATE 495 (BELTWAY) | | | | | |
|--|---|---|--------------------------------|-------------------------------|------------------------------|
| WEEKDAY | | Inner Loop | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | A. L. Bridge to Springfield Interchange | 10:00AM to 3:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 5:00AM |
| | | 9:30PM to 5:00AM | | | |
| Segment 2 | Springfield Interchange to W.W. Bridge | 10:00AM to 3:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 5:00AM |
| | | 9:30PM to 5:00AM | | | |
| All lanes open at 12:00 noon on Friday | | | | | |
| WEEKDAY | | Outer Loop | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | A. L. Bridge to Springfield Interchange | 9:30AM to 2:30PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 5:00AM |
| | | 9:30PM to 5:00AM | | | |
| Segment 2 | Springfield Interchange to W.W. Bridge | 10:00AM to 3:00PM | 10:00PM to 5:00AM | 11:00PM to 5:00AM | 12:00AM to 5:00AM |
| | | 9:30PM to 5:00AM | | | |
| All lanes open at 12:00 noon on Friday | | | | | |
| WEEKEND | | Inner/Outer Loop | | | Complete Road Closure |
| | | Single-Lane Closures or Shoulder | Multiple-Lane Closures | | |
| Friday to Saturday | | 10:00PM to 8:00AM | 11:00PM to 7:00AM | | 12:00AM to 5:00AM |
| Saturday to Sunday | | 10:00PM to 9:00AM | 11:00PM to 8:00AM | | 12:00AM to 5:00AM |
| Sunday to Monday | | 9:30PM to 5:00AM | 11:00PM to 5:00AM | | 12:00AM to 5:00AM |
| EXPRESS LANES | | | | | |
| | | Single-Lane Closures or Shoulder | Complete Road Closure** | | |
| WEEKDAY | 9:30PM (Sunday to Thursday) to 4:00AM (Monday to Friday) | | 11:00PM to 4:00AM | | |
| WEEKEND | 11:00PM (Friday to Saturday) to 9:00AM (Saturday to Sunday) | | 11:00PM to 4:00AM | | |
| ** Complete Road Closure on Express Lanes limited to 30 minutes or less. | | | | | |

| INTERSTATE 66 | | | | | |
|--|---|----------------------------------|---------------------|------------------------|-----------------------|
| WEEKDAY | | Eastbound | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | Prince William County line to Route 286 | 10:00AM to 3:30PM | 9:00PM to 5:00AM | 10:00PM to 5:00AM | 12:00AM to 4:00AM |
| | | 8:00PM to 5:00AM | | | |
| Segment 2 | Route 286 to Beltway | 11:00AM to 3:30PM | 10:00PM to 5:00AM** | 11:00PM to 5:00AM** | 12:00AM to 4:00AM |
| | | 9:00PM to 5:00AM | | | |
| Segment 3 | Beltway to TR Bridge (Inside Beltway) | 9:30PM to 5:00AM | n/a | n/a | 12:00AM to 4:00AM |
| All lanes open at 12:00 noon on Friday | | | | | |
| WEEKDAY | | Westbound | | | |
| | | Single-Lane Closures or Shoulder | Two-Lane Closures | Multiple-Lane Closures | Complete Road Closure |
| Segment 1 | Prince William County line to Route 286 | 9:00AM to 2:30PM | 9:30PM to 6:00AM | 10:30PM to 5:00AM | 12:00AM to 4:00AM |
| | | 9:00PM to 6:00AM | | | |
| Segment 2 | Route 286 to Beltway | 9:00AM to 2:00PM* | 10:00PM to 5:00AM** | 11:00PM to 5:00AM** | 12:00AM to 4:00AM |
| | | 9:30PM to 5:00AM | | | |
| Segment 3 | Beltway to TR Bridge (Inside Beltway) | 9:30AM to 2:00PM* | 10:00PM to 5:00AM** | n/a | 12:00AM to 4:00AM |
| | | 10:00PM to 5:00AM | | | |
| All lanes open at 12:00 noon on Friday | | | | | |
| * Only be considered for three lane segment. | | | | | |
| ** Consider opening shoulder lane, where Applicable. | | | | | |

| WEEKEND | | Eastbound/Westbound | | |
|--------------------|--|----------------------------------|------------------------|-----------------------|
| Outside Beltway | | Single-Lane Closures or Shoulder | Multiple-Lane Closures | Complete Road Closure |
| Friday to Saturday | | 9:00PM to 9:00AM | 10:00PM to 6:00AM | 12:00AM to 5:00AM |
| Saturday to Sunday | | 9:00PM to 9:00AM | 10:00PM to 6:00AM | 12:00AM to 5:00AM |
| Sunday to Monday | | 8:00PM to 5:00AM | 9:00PM to 5:00AM | 12:00AM to 4:00AM |
| Inside Beltway | | Single-Lane Closures or Shoulder | Multiple-Lane Closures | Complete Road Closure |
| Friday to Saturday | | 10:00PM to 6:00AM | n/a | 12:00AM to 5:00AM |
| Saturday to Sunday | | 10:00PM to 6:00AM | n/a | 12:00AM to 5:00AM |
| Sunday to Monday | | 9:30PM to 5:00AM | n/a | 12:00AM to 4:00AM |

| ROUTE 267 CONNECTOR | | | | |
|---|---|------------------------------|---|------------------------------|
| WEEKDAY | Eastbound | | Westbound | |
| | Single-Lane Closures or Shoulder | Complete Road Closure | Single-Lane Closures or Shoulder | Complete Road Closure |
| Monday to Friday | 11:00AM to 3:00PM | 12:00AM to 4:00AM | 9:30AM to 3:00PM | 12:00AM to 4:00AM |
| | 9:30PM to 5:00AM | | 9:00PM to 5:00AM | |
| All lanes open at 12:00 noon on Friday | | | | |

| WEEKEND | Eastbound/Westbound | |
|--------------------|---|------------------------------|
| | Single-Lane Closures or Shoulder | Complete Road Closure |
| Friday to Saturday | 10:00PM to 8:00AM | 12:00AM to 5:00AM |
| Saturday to Sunday | 11:00PM to 8:00AM | 12:00AM to 5:00AM |
| Sunday to Monday | 9:00PM to 5:00AM | 12:00AM to 4:00AM |

| Single-Lane Closures* or Shoulder | | | | | |
|-----------------------------------|--------------------|-------------------|--------------------|--------------------|-------------------|
| ARTERIAL | WEEKDAY | | WEEKEND | | |
| | Monday to Thursday | Friday | Friday to Saturday | Saturday to Sunday | Sunday to Monday |
| Major Arterials** | 9:30AM to 3:00PM | 9:30AM to 2:00 PM | 10:00PM to 9:00AM | 10:00PM to 8:00AM | 10:00PM to 5:00AM |
| | 10:00PM to 5:00AM | | | | |
| All Other Roadways | 9:00AM to 3:30PM | 9:00AM to 2:00 PM | 10:00PM to 9:00AM | 9:00PM to 9:00AM | 10:00PM to 5:00AM |
| | 9:00PM to 5:00AM | | | | |

| Multiple-Lane Closures | | | | | |
|------------------------|--------------------|---------------------------|--------------------|--------------------|-------------------|
| ARTERIAL | WEEKDAY | | WEEKEND | | |
| | Monday to Thursday | Friday | Friday to Saturday | Saturday to Sunday | Sunday to Monday |
| Major Arterials** | 10:00PM to 5:00AM | Not allowed until 11:00PM | 11:00PM to 5:00AM | 11:00PM to 6:00AM | 11:00PM to 5:00AM |
| All Other Roadways | 9:00PM to 5:00AM | Not allowed until 10:00PM | 10:00PM to 6:00AM | 10:00PM to 6:00AM | 10:00PM to 5:00AM |

*Single-lane closures only permitted for multiple-lane roadways.

**Major Arterials defined as Primary Roads, high volume Secondary Roads, and all other routes that connect directly to Interstates.

EXHIBIT M

Arlington County, VA Materials Testing Specification Reference (September 2020)

| MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL) | VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version) | MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS) | LOCATION OF SAMPLING | REMARKS |
|---|--|--|----------------------|---------|
|---|--|--|----------------------|---------|

| SOILS AND AGGREGATES | | | | |
|---|-----------|--|------------------|--|
| 1. Embankments | | | | |
| (a) Density, Any Method | 303.04(h) | One (1) test per 2500 yd ³ or less plus: (a) for fills less than 500 ft. length one (1) test on every other 6-in. layer bottom to top of fill starting with the second lift; (b) for fills from 500-2000 ft. length, two (2) tests per 6-in. layer within top five (5) ft. of fill; (c) for fills greater than 2000 ft length, break into equal segments not to exceed 2000 ft. and use same frequency for each section as for fills 500 to 2000 ft. in length. | Roadway | When tests are not run due to gravel, muck, rock, etc. give station and depth on report in lieu of test, with reason. For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |
| 2. Finished Sub-grade (Both Cut and Fill Sections) | | | | |
| (a) Density, Any Method | 305.03 | One (1) test per 2000 continuous linear ft. of roadway and one test minimum per intersection per construction location | Roadway (24 ft.) | For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |

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| | | | | |
|---|---------------------------|---|--|--|
| (b) Density, Any Method | 305.03 | One (1) test per continuous section/block/or intersection | Curb, Comb. Curb and Gutter | For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |
| (c) Density, Any Method | 305.03 | One (1) test per continuous section/block/or intersection | Sidewalk | For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |
| 3. Central Mix Aggregate (Treated or Untreated) Base, Subbase, and Select Material | | | | |
| (a) Density, Any Method | 305.03, 308.03, & 309.05, | One (1) test per 1/2 mile or less per continuous lane application width per layer. If testing by nuclear method, each test shall consist of average of five (5) readings. | Roadway. Location of five (5) nuclear readings at randomly selected sites. | For nuclear tests, use Backscatter, Control Strip Method, VTM-10. With nuclear method, set up roller pattern and control strip for each layer or lift placed. See Notes 1 and 2. |
| (b) Density, Any Method | 305.03, 308.03, & 309.05, | One (1) test per continuous section/block/or intersection | Curb, Comb. Curb and Gutter | For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |
| (c) Density, Any Method | 305.03, 308.03, & 309.05, | One (1) test per continuous section/block/or intersection | Sidewalk | For nuclear test, use Direct Transmission Method, VTM-10. See Notes 1 and 2. |

Arlington County, VA Materials Testing Specification Reference (September 2020)

| MATERIAL AND TEST (REF. - VDOT TEST METHODS MANUAL) | VDOT ROAD AND BRIDGE SPECIFICATION 2002 (Or Latest Version) | MINIMUM RATE OF SAMPLING (REF. - VDOT MANUAL OF INSTRUCTIONS) | LOCATION OF SAMPLING | REMARKS |
|---|--|--|--------------------------------|--|
| 4. Backfill for Pipes and Box Culverts | 302.03, 303.04(g), 401.03(i) | Minimum one test per lift on alternating sides of pipe for each 300 feet of pipe or portion thereof. Test pattern is to begin after first 4" compacted layer above the structures bedding and continue to 1' above top of pipe or box culvert structure. For rate of testing greater than 1' above top of pipe refer to contract documents and Rate of Sampling for embankments. | Alternating sides of structure | For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents) |
| 5. Backfill for Drop Inlets | 302.03, 303.04(g) | Minimum one test every other lift around the perimeter beginning after the first 4" compacted layer above the bedding and continue to top of the structure. Stagger tests to ensure consistent compaction effort has been achieved. | Perimeter of structure | To include drop inlets, junction boxes, etc. For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents) |
| 6. Backfill for Manholes | 302.03, 303.04(g) | | Perimeter of structure | For nuclear test, use Direct Transmission Methods, VTM-10. See Notes 1 and 2. Backfill lifts shall be compacted in horizontal layers not more than 6 inches in thickness, loose measurement. (Or as Specified by the Contract Documents) |

Arlington County, VA Materials Testing Specification Reference (September 2020)

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|---|--|--|----------------------|---------|
|---|--|--|----------------------|---------|

| HYDRAULIC CEMENT CONCRETE | | | | |
|---|-----|--|--|--|
| 1. Sidewalk, Curb, Comb. Curb and Gutter | | | | |
| (a) Temperature Measurements | 217 | One test per batch (truck), and when making compressive specimens. | At job site, and prior to placing concrete in forms. | If test on any batch fails, recheck batch immediately before rejecting. Enter results of tests in project records. |
| (b) Air Content | 217 | One test per batch (truck), and when making compressive specimens | At job site, and prior to placing concrete in forms | Any of 3 approved methods may be used for this test. However, with any test method used, with readings indicating concrete to be outside of specification must be confirmed first with test by Pressure Method before rejection of concrete. Enter results in project records. |
| (c) Consistency (Slump Test). | 217 | One test per batch (truck), and when making compressive specimens. | At job site, and prior to placing concrete in forms. | If test on any batch fails, recheck batch immediately before rejecting. Enter results in project records. |

Arlington County, VA Materials Testing Specification Reference (September 2020)

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| | | | | |
|-----------------------------|-----|---|--------------|--|
| (d) Compressive Strength... | 217 | <p>For <u>miscellaneous concrete</u>, one set of 3 cylinders shall be made for each 250 cubic yards, with a minimum of one set of 3 per day. Any one set to be made from same batch.</p> <p>For <u>structural concrete</u>, one set of 3 cylinders shall be made for each 100 cubic yards of concrete placed, with a minimum of 2 sets of 3 cylinders each per structure per class of concrete. Any one set to be made from same batch.</p> | At job site. | <p><u>Molding and Curing</u> Molds shall be placed on a rigid horizontal surface free from vibration and other disturbances during the first 24 hours, all test specimens shall be stored under conditions that maintain the temperature immediately adjacent to the specimens in the range of 60°F to 80°F, and prevent loss of moisture.</p> <p><u>Testing</u> Except when high-early strength concrete is specified, compressive strength testing will be performed at 28 days.</p> |
|-----------------------------|-----|---|--------------|--|

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|---|--|--|-----------------------------|----------------|
|---|--|--|-----------------------------|----------------|

| ASPHALT PAVEMENT | | | | |
|---|---|---|---|--|
| (a) In-Place Pavement Density by Nuclear Method (Roller Pattern)/ (Control Strip) (Asphalt Pavement) | Roads and Bridges Section 315.05 VTM-76 AASHTO T-166 | Establish Roller pattern and Control Strip according to VTM-76. Ten (10) stratified random sample to establish target density. Verify minimum density achieved with cores per VTM-76. QC technician shall be certified and pass State proficiency | Field | Contractor/Asphalt Producer shall provide Certified Asphalt Paving Technician for density testing |
| (b) In-place Pavement Density by Nuclear Method and/or VDOT cores Test Section) (Asphalt Pavement) | Roads and Bridges Section 315.05 VTM-76 AASHTO T-166 | Test Section- Lot Size: 5000 ft. per Lane width. Ten (10) stratified random samples per lot for nuclear gauge and/or five(5) stratified random plug/cores per lot QC technician shall be certified and pass State proficiency | Field | Contractor/Asphalt Producer shall provide Certified Asphalt Paving Technician for density testing |
| (c) Temperature Measurements | Roads and Bridges 211.08 | One temperature measurement initially on first and fifth loads, each type mix each production day, and thereafter minimum of one per hour of production time for each mix type, by Producer's Certified Asphalt | QC - Processing or mixing plant from back of truck QA – Field | The Contractor should take and record temperature measurements of the asphalt concrete at the beginning of paving operations and thereafter at a rate of not less than one measurement every hour. The |

Arlington County, VA Materials Testing Specification Reference (September 2020)

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|---|--|--|----------------------|---------|
|---|--|--|----------------------|---------|

| | | | | |
|--|--|---|--|--|
| | | Concrete Technician. If any test outside of tolerance, minimum of 3 additional tests made in different points of the load, and 4 tests averaged and average used as temperature of load or batch. | | Project Officer may increase the frequency of temperature measurements at any time. The temperature should be checked using an appropriate heat-sensing device (i.e. probe thermometer, infrared thermometer, etc.). |
|--|--|---|--|--|

Note 1. Density tests are reported on Forms TL-53, TL-54, TL-55, TL-124, TL-125 (Sand Cone Method), and TL-125A (One-Point Proctor Method).

Note 2. If there is a breakdown in the nuclear testing equipment, then density testing shall continue using other approved methods.

ARLINGTON COUNTY, VA
REQUEST FOR INFORMATION FORM

PROJECT:

RFI NUMBER:
PROJECT NO.:

FOR CONTRACTOR ROUTING:

Contractor:
Work Category:

Transmittal No.:
Date:

- TO (County Project Officer) (Consultant) (Other)
Action Faxed to Emailed Mailed Pages

REGARDING:

SPEC. SECTION: DWG. NO.:

EXPLANATION OF ISSUE: (Provide complete description of request with sketches or photos if necessary, and present status of work)

RECOMMENDATION / SUGGESTED SOLUTION:

- RESPONSE PRIORITY: EARLIEST CONVENIENCE RUSH (WORK IN PROGRESS)
REASON FOR REQUEST: Existing Condition Non-conformance Clarification / Interpretation Agency Generated Other

CONTRACTOR

BY: DATE: Dist:

ARCHITECT'S/ENGINEER'S ROUTING: (for A/E use only)

To: Date: Return to: Date

TO: (contractor) Faxed to Emailed Mailed Hand delivered

RESPONSE:

- The above is considered a change. The following document will be used for processing:
The above is consistent with the intent of and reasonably inferable from Contract Documents, or makes minor changes in the Work without change in Contract Sum or Contract Time.
This RFI is returned without response for the following reason: Incomplete or lack of detailed information. Related to "means & methods". Lack of adequate Coordination Drawings. Is a "Substitution Request". Response required by others.

FROM:

BY: DATE: Dist: File

