

AGREEMENT NO. 22-DES-ITB-364

THIS AGREEMENT is made, on 12/16/2021, between **Fort Myer Construction Corporation**, 2237 33rd Street NE, Washington, D.C. 20018 (“Contractor”) a Virginia corporation 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. 22-DES-ITB-364, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 22-DES-ITB-364, including DES General Conditions, Special Conditions, and Supplementary Specifications
- Exhibit B – Specifications, Drawings and Construction Notes incorporated herein by reference
- Exhibit C – Price Bid of Contractor

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 two Arlington County projects – 12th Street South and Transitway extension to Pentagon City (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 three hundred sixty-five (365) 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 three hundred sixty-five (365) 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 sixty (60) 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.

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 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 Contract 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. The number of the County Purchase Order pursuant to work has been performed must appear on all invoices.

8. PAYMENT OF SUBCONTRACTORS

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. 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.

10. 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 \$1,758.00 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 \$1,758.00 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 \$1,758.00 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 \$1,758.00 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.

11. 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.

12. 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).

13. 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.

14. 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.

15. VALUE ENGINEERING PROPOSAL (VE)

Unless otherwise provided, the Contractor may submit to the County a written VE for modifying the plans, specifications, or other requirements of the Agreement covering the work (Contract) for the purpose of reducing the total cost of the Contract without reducing the design capacity or quality of the finished product. If the VEP is accepted by the County, the net savings will be equally divided by the County and the Contractor.

Each VEP shall result in a net savings over the Contract cost without impairing essential functions and characteristics of the item(s) or of any other part of the project, including, but not limited to, service life, reliability, economy of operation, ease of maintenance, aesthetics, and safety. At least the following information shall be submitted with each VE:

- (a) a statement that the proposal is submitted as a VE;
- (b) a statement concerning the basis for the VE, benefits to the County, and an itemization of the Contract items and requirements affected by the VE;
- (c) a detailed estimate of the cost under the existing Contract and under the VE;
- (d) proposed specifications and recommendations as to the manner in which the VE changes are to be accomplished; and
- (e) a statement as to the time by which a Contract Amendment adopting the VE must be issued so as to obtain the maximum cost-effectiveness.

The County will process the VE in the same manner as prescribed for any other proposal that would necessitate issuance of an Amendment. The County may accept a VE in whole or part by issuing an

Amendment that will identify the VE on which it is based. The County will not be liable to the Contractor for failure to accept or act on any VE submitted pursuant to these requirements or for delays in the work attributable to any VE. Until a VE is put into effect by an Amendment, the Contractor shall remain obligated to the terms and conditions of the existing Agreement. If an executed Amendment has not been issued by the date on which the Contractor's proposal specifies that a decision should be made or such other date as the Contractor may subsequently have specified in writing, the VE shall be deemed rejected.

The Amendment effecting the necessary modification of the Contract will establish the net savings agreed on, provide for adjustment of the contract prices, and indicate the net savings. The Contractor shall absorb all costs incurred in preparing a VE. Reasonably incurred costs for reviewing and administering a VE will be borne by the County. The County may establish any reasonable conditions it deems appropriate for consideration, approval, and implementation of the VE. The Contractor's 50 percent share of the net savings shall constitute full compensation to it, including by way of illustration and not limitation compensation for time, for effecting all changes pursuant to the Amendment.

Unless specifically provided for in the Amendment authorizing the VE, acceptance of the VE and performance of the work thereunder will not change the Contract Term limit.

The County may adopt a VE for general use in contracts administered by the County if it determines that the VE is suitable for application to other contracts. A VE identical with or similar to a previously submitted VE will be eligible for consideration and compensation under these provisions if it has not been previously adopted for general application to other contracts administered by the County. When a VE is adopted for general use, compensation pursuant to these requirements will be applied only to those awarded contracts for which the VE was submitted prior to the date of adoption of the VE.

If a VEP is based on or is similar to a change in the plans, specifications, or special provisions adopted by the County prior to submission of the VE, as determined by the County, the County will not accept the VE.

The County will be the sole judge of the acceptability of a VE. The requirements herein apply to each VE initiated, developed, and identified as such by the Contractor at the time of its submission to the County. However, nothing herein shall be construed as requiring the County to consider or approve a VE, and the decision to enter into an Amendment to the contract to accommodate a VE shall be in the County's sole discretion.

Subject to the provisions contained herein, the County, or any other public agency with the County's permission, shall have the right to use all or part of an accepted VE without obligation or compensation of any kind to the Contractor.

If a VE is accepted by the County, any provisions herein that pertain to the adjustment of contract unit prices attributable to alterations of contract quantities will not apply to the items adjusted or deleted as a result of putting the VE into effect by an Amendment.

16. 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.

17. 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.

18. 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.

19. *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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

35. 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)

36. AUDIT

The Contractor must retain all books, records and other documents related to this Contract for at least five years, 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 years after the final payment, 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.

37. 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.

38. AMENDMENTS

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

39. 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.

40. 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.

41. 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.

42. ARBITRATION

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

43. 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.

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. 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:

Jose Rodriguez, President
Fort Myer Construction Corporation
2237 33rd Street, NE
Washington, D.C. 20018
Email: fortmyer@fortmyer.com
Tel: (202) 636-9535

TO THE COUNTY:

Neil Sharp Project Officer
Arlington County
Department of Environmental Services, Engineering Bureau
2100 Clarendon Boulevard, Suite 900
Email : nsharp@arlingtonva.us
Tel: (703) 228-7542

AND

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

51. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

52. 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.

53. COVID 19 VACCINATION POLICY FOR CONTRACTORS

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, should be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should be following a weekly testing protocol as established by the Contractor.

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. NVTA CONTRACT PROVISIONS

This work is funded in part by grants from the Northern Virginia Transportation Authority (NVTA). The Contractor is responsible for ensuring its compliance with all applicable NVTA requirements including the following:

The Contractor shall name NVTA and its Bond Trustee as an additional insured on any insurance policy issued for work to be performed for the project and present NVTA with satisfactory evidence thereof before any work on the Project commences or continues.

56. DRPT CONTRACT PROVISIONS

a. The Contractor, their agents and employees shall comply with all covenants and provisions of the Virginia Department of Rail and Public Transportation (DRPT) Master Agreement for the Use of Commonwealth Transportation Funds with the County Board of Arlington County VA dated July 1, 2020, and shall be made expressly a part of any subcontracts executed by the Contractor and shall be binding on all subcontractors, vendors, their agents and employees.

b. The Contractor shall name the Northern Virginia Transportation Commission (NVTC) and its Bond Trustee, the Commonwealth of Virginia, the Commonwealth Transportation Board (CTB), DRPT, the Virginia Department of Transportation (VDOT) and their officers, employees and agents as additional insureds on any insurance policy issued for the Work to be performed, and present satisfactory evidence of insurance coverage before commencing with any Work, so that they are protected from and against any losses actually suffered or incurred, except for losses to the extent caused the negligence or willful misconduct of such entity or person, from third party claims that are directly related to or arise out of: (a) any failure by the Contractor to comply with, to observe or to perform in any material respect any of the covenants, obligations, agreements, terms or conditions in this Project, or any breach by the Contractor of its representations or warranties in this Project; (b) any actual or willful misconduct or negligence of Contractor its employees or agents in direct connection with the Work; (c) any actual or alleged patent or copyright infringement or other actual or alleged improper appropriation or use of trade secrets, patents, proprietary information, know-how, trademarked or service-marked materials, equipment devices or processes, copyright rights or inventions by the Contractor in direct connection with the Work; (d) inverse condemnation, trespass, nuisance or similar taking of harm to real property committed or caused by the Contractor, its employees or agents in direct connection with the work; or (e) any assumed liabilities.

c. The Contractor shall indemnify, defend and hold harmless, NVTC and its Bond Trustee, the Commonwealth of Virginia, the CTB, VDOT, DRPT and their officers, agents, and employees of these entities from and against any all damages, claims, suits, judgments, expenses, actions and costs of every name and description, arising out of or resulting from any act or omission by the Contractor, its subcontractors, agent or employees in the performance of the Work.

d. The obligations of this Section shall survive the termination or completion of the Contract.

57. 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

FORT MYER CONSTRUCTION CORPORATION

AUTHORIZED DocuSigned by:
SIGNATURE: SY GezACHEW
27FC198F4A6D475...

AUTHORIZED DocuSigned by:
SIGNATURE: Christopher M. Kerns
084B6C9E6C054C9...

NAME: SY GEZACHEW

NAME: Christopher M. Kerns

TITLE: PROCUREMENT OFFICER

TITLE: Vice Pres. & Sr.Gen. Counsel

DATE: 12/16/2021

DATE: 12/6/2021

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

**INVITATION TO BID NO. 22-DES-ITB-364
ARLINGTON COUNTY PROJECT NO. CC16 & MA13**

ELECTRONIC SEALED BIDS WILL BE RECEIVED BY ARLINGTON COUNTY VIA VENDOR REGISTRY UNTIL 2:30 P.M. ON THE 1ST DAY OF OCTOBER 2021.

FOR THE PROVISION OF TWO ARLINGTON COUNTY - PROJECT. 12TH STREET SOUTH COMPLETE STREETS (CC16) AND TRANSITWAY EXTENSION TO PENTAGON CITY (MA13). THESE TWO PROJECTS WILL BE CONSTRUCTED CONCURRENTLY.

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:

[Join Microsoft Teams Meeting](#)
[+1 347-973-6905](#) United States, New York City (Toll)
Conference ID: 767 214 168#

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 11 a.m., September 14, 2021 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](#) or join by dialing +1-347-973-6905 and enter Conference ID135 893 051#. 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 PRIOR TO SUBMITTING A BID (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

Sy Gezachew
Procurement Officer
sgezachew@arlingtonva.us

TABLE OF CONTENTS

I. INFORMATION FOR BIDDERS..... 4

II. AGREEMENT AND CONTRACT TERMS AND CONDITIONS 16

III. ARLINGTON COUNTY CONSTRUCTION GENERAL CONDITIONS 32

VI. INSURANCE REQUIREMENTS 79

VII. ATTACHMENTS AND FORMS..... 84

BID FORM

INSURANCE CHECKLIST

ATTACHMENT A – PRICING SHEET

ATTACHMENT B – SPECIAL CONDITIONS

ATTACHMENT C – SUPPLEMENTAL SPECIFICATIONS

ATTACHMENT D.1 – MA13 CIVIL DESIGN SET & STATION DRAWINGS

ATTACHMENT D.2 – MA13 STATION DRAWINGS

ATTACHMENT E – CC16 CIVIL DESIGN SET

ATTACHMENT F – RFI FORM

ATTACHMENT G – LANE CLOSURE GUIDELINES

ATTACHMENT H – ARLINGTON COUNTY MASTER TRANSPORTATION PLAN

ATTACHMENT I – MATERIALS TESTING SPECIFICATION REFERENCE

ATTACHMENT J – STATE & FEDERAL ROADS IN ARLINGTON COUNTY, VIRGINIA

ATTACHMENT K – BIDDER QUALIFICATION MATRIX

ATTACHMENT L – CC16 TEST PIT DATA

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. 22-DES-ITB-364**. 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 SEPTEMBER 17, 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 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 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.

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 mailto: business@arlingtonva.us.

7. COVID-19 VACCINATION POLICY FOR CONTRACTORS

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety, and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, must be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should follow a weekly testing protocol as established by the Contractor. By submitting a bid, the Bidder certifies that it will comply with this provision and will ensure that its subcontractors, if any, do so as well. For questions, Bidder may email contractorvaccineinfo@arlingtonva.us.

8. 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.

9. 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.

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.

COMPANY QUALIFICATIONS:

Bidders shall have three (3) years of experience conducting public works infrastructure and street improvement projects in an urban environment. 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:

- State and County streets
- Curbs and gutters
- Sidewalks and walkways
- Driveway aprons
- Storm sewer pipes and inlets
- Wet Utilities
- Pavement markings and signage

- Electrical conduits
- Traffic signals and Street lighting
- Streetscapes and related site work
- Transit Shelters

Bidder shall provide a complete list of projects completed within the last five (5) years for Bidder qualification verification. Failure to qualify according to the foregoing requirements will result in bid rejection by the Arlington County Purchasing Office. The County will randomly contact at least five (5) of the references provided.

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

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:

The Site Supervisor listed under the staffing qualifications must have at least five (5) years of experience in overseeing projects of similar type and size.

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.

OSHA Certified Employee(s)

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.

Bidder shall submit resumes of the proposed Site Supervisor with its bid submission. Bidder must also submit certification of VDOT Flagger Certification Program, the American Traffic Safety Service Association Flagger Certification Program or any other VDOT approved flagger program of the Safety Project Officer(s) with its bid submission. Bidder must also submit certification of VDOT Erosion & Sediment Control Contractor Certification training and the OSHA 10 Certification with its bid submission.

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. USE OF BRAND NAMES/ "OR EQUIVALENT" BIDS

Unless identified as a "No Equivalent" item in the solicitation, the name of a certain brand, make or manufacturer does not restrict bidders to that specific brand, make or manufacturer. The use of the brand, make or manufacturer's identification is intended to convey the general type, style, character, and quality of the article described. When a brand name is specified and followed by the phrase "or approved equal," the brand name product may be substituted if a suitable equivalent considering quality, workmanship, economy of operation, and suitability for the intended use, is accepted by the County Purchasing Agent.

The County may accept any equivalent item(s) that it considers suitable for the intended use.

For those items not identified as “No Equivalent”, and followed by the phrase “or approved equal,” the County has established the following procedure for determining the equivalency of a particular item:

Bidder Submission of Proposed Equivalent Item(s):

- 1) Bidder shall submit to the County its proposed item(s) for determination of their equivalency to the Brand Name(s) specified.
- 2) Each proposed item must be described on a separate page, indicating the appropriate specification section number, product or fabrication or installation method to be replaced, and specifics of the proposed item. Attach any technical information, photographs, brochures and the relevant data listed below that supports the proposed item and will permit the County to fairly determine acceptability of the item proposed:
 - a. Reasons why the specified product cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the product specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and owners, if requested.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Statement of impact on the construction schedule. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - i. Cost information.
 - j. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
- 3) The County will consider factors provided in the project technical specifications, such as relative costs, equivalency of features, serviceability, and the design of the item proposed.
- 4) All pages of the submission shall be marked with the name, address and contact information of the bidder, and sent via email to the Office of the Purchasing Agent to arrive prior to the question deadline established in Section I., paragraph I. ADDITIONAL INFORMATION. E-mail transmittals will be accepted at sgezachew@arlingtonva.us.

County Review of Proposed Equivalent Item(s):

- 1) Approved item(s) will be added to the solicitation, in the form of an Addendum to the solicitation, and forwarded to all bidders of record.
- 2) Bidders whose item(s) have not been approved will be so advised in writing simultaneously with the issuance of the Addendum.

23. 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.

24. 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.

25. 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.

26. METHOD OF AWARD

The County will award to the lowest responsive and responsible bidder. The lowest bidder will be determined by the bidder who provides the lowest project total on Attachment A – Pricing Sheet.

27. 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](#).

28. 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.

29. 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.

30. 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.

31. EXPENSES INCURRED IN PREPARING BID

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

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. 22-DES-ITB-364

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. 22-DES-ITB-364, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 22-DES-ITB-364, including DES General Conditions, Special Conditions, and Supplementary Specifications
- Exhibit B – Specifications, Drawings and Construction Notes
- Exhibit C – Price Bid of Contractor

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 two Arlington County projects – 12th Street South and Transitway extension to Pentagon City (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 three hundred sixty-five (365) 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 three hundred sixty-five (365) 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 sixty (60) 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.

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.

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. The number of the County Purchase Order pursuant to work has been performed must appear on all invoices.

8. PAYMENT OF SUBCONTRACTORS

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. 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.

10. 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 \$1,758.00 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 \$1,758.00 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 \$1,758.00 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 \$1,758.00 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.

11. 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.

12. 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).

13. 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.

14. 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.

15. VALUE ENGINEERING PROPOSAL (VE)

Unless otherwise provided, the Contractor may submit to the County a written VE for modifying the plans, specifications, or other requirements of the Agreement covering the work (Contract) for the purpose of reducing the total cost of the Contract without reducing the design capacity or quality of the finished product. If the VEP is accepted by the County, the net savings will be equally divided by the County and the Contractor.

Each VEP shall result in a net savings over the Contract cost without impairing essential functions and characteristics of the item(s) or of any other part of the project, including, but not limited to, service life, reliability, economy of operation, ease of maintenance, aesthetics, and safety. At least the following information shall be submitted with each VE:

- (a) a statement that the proposal is submitted as a VE;
- (b) a statement concerning the basis for the VE, benefits to the County, and an itemization of the Contract items and requirements affected by the VE;
- (c) a detailed estimate of the cost under the existing Contract and under the VE;

- (d) proposed specifications and recommendations as to the manner in which the VE changes are to be accomplished; and
- (e) a statement as to the time by which a Contract Amendment adopting the VE must be issued so as to obtain the maximum cost-effectiveness.

The County will process the VE in the same manner as prescribed for any other proposal that would necessitate issuance of an Amendment. The County may accept a VE in whole or part by issuing an Amendment that will identify the VE on which it is based. The County will not be liable to the Contractor for failure to accept or act on any VE submitted pursuant to these requirements or for delays in the work attributable to any VE. Until a VE is put into effect by an Amendment, the Contractor shall remain obligated to the terms and conditions of the existing Agreement. If an executed Amendment has not been issued by the date on which the Contractor's proposal specifies that a decision should be made or such other date as the Contractor may subsequently have specified in writing, the VE shall be deemed rejected.

The Amendment effecting the necessary modification of the Contract will establish the net savings agreed on, provide for adjustment of the contract prices, and indicate the net savings. The Contractor shall absorb all costs incurred in preparing a VE. Reasonably incurred costs for reviewing and administering a VE will be borne by the County. The County may establish any reasonable conditions it deems appropriate for consideration, approval, and implementation of the VE. The Contractor's 50 percent share of the net savings shall constitute full compensation to it, including by way of illustration and not limitation compensation for time, for effecting all changes pursuant to the Amendment.

Unless specifically provided for in the Amendment authorizing the VE, acceptance of the VE and performance of the work thereunder will not change the Contract Term limit.

The County may adopt a VE for general use in contracts administered by the County if it determines that the VE is suitable for application to other contracts. A VE identical with or similar to a previously submitted VE will be eligible for consideration and compensation under these provisions if it has not been previously adopted for general application to other contracts administered by the County. When a VE is adopted for general use, compensation pursuant to these requirements will be applied only to those awarded contracts for which the VE was submitted prior to the date of adoption of the VE.

If a VEP is based on or is similar to a change in the plans, specifications, or special provisions adopted by the County prior to submission of the VE, as determined by the County, the County will not accept the VE.

The County will be the sole judge of the acceptability of a VE. The requirements herein apply to each VE initiated, developed, and identified as such by the Contractor at the time of its submission to the County. However, nothing herein shall be construed as requiring the County to consider or approve a VE, and the decision to enter into an Amendment to the contract to accommodate a VE shall be in the County's sole discretion.

Subject to the provisions contained herein, the County, or any other public agency with the County's permission, shall have the right to use all or part of an accepted VE without obligation or compensation of any kind to the Contractor.

If a VE is accepted by the County, any provisions herein that pertain to the adjustment of contract unit prices attributable to alterations of contract quantities will not apply to the items adjusted or deleted as a result of putting the VE into effect by an Amendment.

16. 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.

17. 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.

18. 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.

19. *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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

35. 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)

36. AUDIT

The Contractor must retain all books, records and other documents related to this Contract for at least five years, 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 years after the final payment, 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.

37. 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.

38. AMENDMENTS

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

39. 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.

40. 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.

41. 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.

42. ARBITRATION

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

43. 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.

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. 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

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

51. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

52. 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.

53. COVID 19 VACCINATION POLICY FOR CONTRACTORS

Due to the ongoing COVID-19 pandemic, the County has taken various steps to protect the welfare, health, safety and comfort of the workforce and public at large. As part of these steps, the County has implemented various requirements with respect to health and safety including policies with respect to social distancing, the use of face-coverings and vaccine mandates. To protect the County's workforce and the public at large, all employees and subcontractors of the Contractor who are assigned to this Contract, must be fully vaccinated against COVID-19. Any contractor employee or subcontractor who is not fully vaccinated should be following a weekly testing protocol as established by the Contractor.

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. NVTA CONTRACT PROVISIONS

This work is funded in part by grants from the Northern Virginia Transportation Authority (NVTA). The Contractor is responsible for ensuring its compliance with all applicable NVTA requirements including the following:

The Contractor shall name NVTA and its Bond Trustee as an additional insured on any insurance policy issued for work to be performed for the project and present NVTA with satisfactory evidence thereof before any work on the Project commences or continues.

56. DRPT CONTRACT PROVISIONS

a. The Contractor, their agents and employees shall comply with all covenants and provisions of the Virginia Department of Rail and Public Transportation (DRPT) Master Agreement for the Use of Commonwealth Transportation Funds with the County Board of Arlington County VA dated July 1, 2020, and shall be made expressly a part of any subcontracts executed by the Contractor and shall be binding on all subcontractors, vendors, their agents and employees.

b. The Contractor shall name the Northern Virginia Transportation Commission (NVTC) and its Bond Trustee, the Commonwealth of Virginia, the Commonwealth Transportation Board (CTB), DRPT, the Virginia Department of Transportation (VDOT) and their officers, employees and agents as additional insureds on any insurance policy issued for the Work to be performed, and present satisfactory evidence of insurance coverage before commencing with any Work, so that they are protected from and against any losses actually suffered or incurred, except for losses to the extent caused the negligence or willful misconduct of such entity or person, from third party claims that are directly related to or arise out of: (a) any failure by the Contractor to comply with, to observe or to perform in any material respect any of the covenants, obligations, agreements, terms or conditions in this Project, or any breach by the Contractor of its representations or warranties in this Project; (b) any actual or willful misconduct or negligence of Contractor its employees or agents in direct connection with the Work; (c) any actual or alleged patent or copyright infringement or other actual or alleged improper appropriation or use of trade secrets, patents, proprietary information, know-how, trademarked or service-marked materials, equipment devices or processes, copyright rights or inventions by the Contractor in direct connection with the Work; (d) inverse condemnation, trespass, nuisance or similar taking of harm to real property committed or caused by the Contractor, its employees or agents in direct connection with the work; or (e) any assumed liabilities.

c. The Contractor shall indemnify, defend and hold harmless, NVTC and its Bond Trustee, the Commonwealth of Virginia, the CTB, VDOT, DRPT and their officers, agents, and employees of these entities from and against any all damages, claims, suits, judgments, expenses, actions and costs of every name and description, arising out of or resulting from any act or omission by the Contractor, its subcontractors, agent or employees in the performance of the Work.

d. The obligations of this Section shall survive the termination or completion of the Contract.

57. 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: _____

NAME: _____

TITLE: _____

DATE: _____

AUTHORIZED
SIGNATURE: _____

NAME: _____

TITLE: _____

DATE: _____

III. ARLINGTON COUNTY CONSTRUCTION GENERAL CONDITIONS

TABLE OF CONTENTS

III. ARLINGTON COUNTY CONSTRUCTION GENERAL CONDITIONS..... 32

A. INTRODUCTION TO TERMS..... 34

B. DRAWINGS, SPECIFICATIONS, RELATED DATA AND RECORDS KEEPING 39

1. INTENT OF THE DRAWINGS AND SPECIFICATIONS 39

2. DISCREPANCIES AND ERRORS 39

3. DIFFERING SITE CONDITIONS 40

4. COPIES FURNISHED 40

5. USE OF CADD FILES 40

6. DOCUMENTS ON THE JOBSITE 41

7. OWNERSHIP OF DRAWINGS AND SPECIFICATIONS 41

8. SUBMITTALS 41

9. SAMPLES 42

10. TESTS 43

11. MATERIALS AND EQUIPMENT LIST 43

12. STANDARDS, SUBSTITUTIONS 44

13. SURVEYS AND CONTROLS 44

14. AS-BUILT DRAWINGS 45

15. WEB BASED RECORDS DOCUMENTATION 45

C. COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS 45

1. STATUS OF COUNTY PROJECT OFFICER OR DESIGNEE 45

2. LIMITATION ON COUNTY’S RESPONSIBILITIES 46

3. DISPUTES 46

4. INSPECTION OF WORK 46

5. INSPECTION OF MATERIALS 46

6. EXAMINATION OF COMPLETED WORK 47

7. RIGHT TO SUSPEND WORK 47

8. RIGHT TO CARRY OUT THE WORK 47

9. CONTRACTOR MANAGEMENT PERSONNEL 47

10. DRUG-FREE POLICY 48

11. LANDS BY COUNTY 48

12. LANDS BY CONTRACTOR 48

13. PROTECTION OF WORK AND PROPERTY 49

14. SEPARATE CONTRACTS 50

15. SUBCONTRACTS 51

16. ELIMINATED ITEMS 52

17. COUNTY ORDINANCES 52

D. MATERIALS AND WORKMANSHIP 52

1. MATERIALS FURNISHED BY THE CONTRACTOR 52

2. IBC AND VUSBC REQUIREMENTS 52

3. ADA COMPLIANCE 53

4. MANUFACTURER’S DIRECTIONS 53

5. WARRANTY 53

6. INSPECTION AND ACCEPTANCE OF MATERIALS 54

7. CONTRACTOR’S TITLE TO MATERIALS 54

8. TITLE TO MATERIALS AND WORK COVERED BY PARTIAL PAYMENTS 54

9. CONNECTING WORK 54

10. REJECTED WORK AND MATERIALS 55

11.	PROHIBITION AGAINST ASBESTOS CONTAINING MATERIALS	55
E.	LEGAL RESPONSIBILITY AND PUBLIC SAFETY	56
1.	SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK	56
2.	PUBLIC CONVENIENCE	57
3.	SAFETY AND ACCIDENT PREVENTION	57
4.	HAZARDOUS MATERIALS	58
5.	HAZARDOUS WASTE	59
6.	ASBESTOS	59
7.	CROSSING UTILITIES	60
8.	OVERHEAD HIGH VOLTAGE LINES SAFETY ACT	60
9.	SANITARY PROVISIONS	60
10.	SITE CLEAN-UP AND WASTE DISPOSAL	60
11.	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	61
F.	PROGRESS AND COMPLETION OF THE WORK.....	61
1.	NOTICE TO PROCEED	61
2.	TIME FOR COMPLETION	61
3.	SCHEDULE OF COMPLETION	61
4.	CONDITIONS FOR COMPLETION	62
5.	USE OF COMPLETED PORTIONS	64
G.	MEASUREMENT AND PAYMENT	65
1.	PAYMENTS TO CONTRACTOR	65
5.	PAYMENT FOR STORED MATERIALS	66
3.	PAYMENTS WITHHELD	66
4.	COUNTY ORDERED CHANGES IN WORK	66
5.	FORCE ACCOUNT WORK	69
6.	CLAIMS FOR EXTRA COST	73
7.	DAMAGES FOR DELAY; EXTENSION OF TIME OTHER THAN FOR WEATHER	74
8.	TIME EXTENSIONS FOR WEATHER	75
9.	RELEASE OF LIENS	76
10.	FINAL PAYMENT	77
	RELEASE AND REQUEST FOR FINAL PAYMENT	78

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.

2.2 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. 22-DES-ITB-364
ARLINGTON COUNTY PROJECT NO. CC16 & MA13

B I D F O R M

ELECTRONIC BIDS WILL BE RECEIVED BY THE COUNTY VIA VENDOR REGISTRY NOT LATER THAN 2:30 P.M., OCTOBER 1, 2021.

FOR PROVIDING CONSTRUCTION SERVICES 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:

(check the applicable option)

CORPORATION

LIMITED PARTNERSHIP

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 2 OF 6

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 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 – 365 **CALENDAR DAYS**
FINAL COMPLETION – 60 **CALENDAR DAYS** FROM
SUBSTANTIAL COMPLETION

LIQUIDATED DAMAGES: SUBSTANTIAL COMPLETION - **\$1,758.00** PER DAY
FINAL COMPLETION - **\$1,758.00** PER DAY

BID FORM, PAGE 3 OF 6

MINIMUM BIDDER QUALIFICATIONS:

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

COMPANY QUALIFICATIONS:

Proof of three (3) years of experience conducting public works infrastructure and street improvement projects in an urban environment. 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:

- State and County streets
- Curbs and gutters
- Sidewalks and walkways
- Driveway aprons
- Storm sewer pipes and inlets
- Wet Utilities
- Pavement markings and signage
- Electrical conduits
- Traffic signals and Street lighting
- Streetscapes and related site work
- Transit Shelters

Bidders must complete Attachment K - Bidder Qualification Matrix to confirm that your firm meets each qualification. Additionally, provide separate project information or details in your own format (separate form) as required.

List of projects completed within the last five (5) years for Bidder qualification verification. Failure to qualify according to the foregoing requirements will result in bid rejection by the Arlington County Purchasing Office. The County will randomly contact at least five (5) of the references provided. 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

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.

STAFF QUALIFICATION:

Resume of the proposed Site Supervisor and Safety Project Officer assigned to this work with their Bid. The Site Supervisor shall have at least 5 years of experience in overseeing projects of similar type and size.

Resume of Environmental Project Officer

Bidder must also submit certification of VDOT Flagger Certification Program, the American Traffic Safety Service Association Flagger Certification Program or any other VDOT approved flagger program of the Safety Project Officer(s) with its bid submission. Bidder must also submit certification of VDOT Erosion & Sediment Control Contractor Certification training and the OSHA 10 Certification with its bid submission.

BID FORM, PAGE 4 OF 6

COMPLETE THE PRICING SHEET PROVIDED WITH THE BID DOCUMENTS AS ATTACHMENT A TO ITB NO. 22-DES-ITB-364 AND SUBMIT IT WITH YOUR BID.

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

STIPULATED PRICE ITEMS

The Contractor agrees to perform related work for the following items at the stipulated prices shown:

#	ITEM DESCRIPTION	UNIT	PRICE
1	ROCK EXCAVATION	CY	\$150.00
2	OVER EXCAVATION	CY	\$65.00
3	TEST PITS	EA	\$550.00
4	SELECT MATERIAL	CY	\$70.00

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>.

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 a Bidder in connection with a procurement transaction will not be subject to public disclosure under the Virginia Freedom of Information Act. Pursuant to Section 4-111 of the Arlington County Purchasing Resolution, however, a Bidder seeking to protect submitted data or materials from disclosure must, before or upon submission of the data or materials, identify the data or materials to be protected and state the reasons why protection is necessary.

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.

BID FORM, PAGE 5 OF 6

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

LIMITS (FIGURES DENOTE MINIMUMS)

- 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.....\$2,000,000 CSL BI/PD each occurrence, \$4 Million annual aggregate
- 4. Premises/Operations.....\$500,000 CSL BI/PD each occurrence, \$ 1 Million annual aggregate
- 5. Automobile Liability.....\$1 Million BI/PD each accident, Uninsured Motorist
- 6. Owned/Hired/Non-Owned Vehicles..... \$1 Million BI/PD each accident, Uninsured Motorist
- 7. Independent Contractors.....\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
- 8. Products Liability.....\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
- 9. Completed Operations.....\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
- 10. Contractual Liability (Must be shown on Certificate).....\$1 Million CSL BI/PD each occurrence, \$ 1 Million annual aggregate
- 11. Personal and Advertising Injury Liability.....\$1 Million each offense, \$1 Million annual aggregate
- 12. Umbrella/Excess Liability.....\$1 Million Bodily Injury, Property Damage and Personal Injury
- 13. Per Project Aggregate
- 14. Professional Liability
 - a. Architects and Engineers \$1 Million per occurrence/claim
 - b. Asbestos Removal Liability\$2 Million per occurrence/claim
 - c. Medical Malpractice.....\$1 Million per occurrence/claim
 - d. Medical Professional Liability\$1 Million per occurrence/claim
- 15. Miscellaneous E&O/ Professional Liability\$1 Million per occurrence/claim
- 16. Motor Carrier Act End. (MCS-90) \$1 Million BI/PD each accident, Uninsured Motorist
- 17. Motor Cargo Insurance
- 18. Garage Liability.....\$1 Million Bodily Injury, Property Damage per occurrence
- 19. Garagekeepers Liability.....\$500,000 Comprehensive, \$500,000 Collision
- 20. Inland Marine-Bailee's Insurance..... \$ _____
- 21. Moving and Rigging Floater Endorsement to CGL
- 22. Dishonesty Bond.....\$ _____
- 23. Builder's Risk..... Provide Coverage in the full amount of contract
- 24. XCU Coverage Endorsement to CGL
- 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/\$6 Million Aggregate
 - a In addition to environmental impairment liability, 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\$2 Million per occurrence with MCS-90 and CA9948 (or equivalent endorsements specifically referenced in the certificate of insurance
- 31. Cyber insurance.....\$2 Million per occurrence/Aggregate
- 32. OTHER INSURANCE REQUIRED: _____

INSURANCE AGENT'S STATEMENT:

I have reviewed the above requirements with the bidder named below and have advised the bidder of required coverages not provided through this agency.

AGENCY NAME: _____ AUTH. SIGNATURE: _____

BIDDER'S STATEMENT:

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

BIDDER NAME: _____ AUTH. SIGNATURE: _____

II. ARLINGTON COUNTY DES ENGINEERING
SPECIAL CONDITIONS

Contents

PROJECT SUMMARY..... 3

SUPPLEMENTS TO THE GENERAL CONDITIONS 4

ARTICLE B – DRAWINGS, SPECIFICATIONS AND RELATED DATA 4

 SC-B.10 TESTS 4

 SC-B.13 SURVEYS AND CONTROLS 4

 SC-B.14 AS-BUILT DRAWINGS..... 5

ARTICLE C – COUNTY, COUNTY PROJECT OFFICER, AND CONTRACTOR RELATIONS..... 6

 SC-C.4 INSPECTION OF WORK 6

 SC-C.9 SUPERINTENDENCE BY CONTRACTOR 6

 SC-C.13 PROTECTION OF WORK AND PROPERTY..... 7

ARTICLE E – LEGAL RESPONSIBILITY AND PUBLIC SAFETY 7

 SC-E.1 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK..... 7

 SC-E.2 PUBLIC CONVENIENCE 7

 SC-E.10 SITE CLEAN-UP AND WASTE DISPOSAL 9

 SC-E.11 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)..... 9

ARTICLE F– PROGRESS AND COMPLETION OF THE WORK 10

 SC-F.2 TIME FOR COMPLETION 10

ARTICLE G– MEASUREMENT AND PAYMENT..... 11

 SC-G.1 PAYMENTS TO CONTRACTOR..... 11

SPECIAL CONDITIONS..... 12

 1. CONSTRUCTION STANDARDS..... 12

 2. PERMITS 13

 3. SPECIAL CONTRACTOR/SUBCONTRACTOR QUALIFICATIONS 14

 4. STAKEOUT AND CUT-SHEETS 14

 5. SCHEDULE, DURATION, AND PHASING REQUIREMENTS 14

 6. WORK HOURS..... 15

 7. GENERAL SITE SECURITY AND CONTROLS..... 15

ITB No. XXXXX

8. SPECIAL TRAFFIC MAINTENANCE CONSIDERATIONS 16

9. TRAFFIC SIGNALS AND STREETLIGHTS 16

10. BIORETENTION CONSTRUCTION AND MATERIALS 17

11. WORK ASSIGNMENTS..... 17

12. UNLISTED WORK 17

13. JOB SIZE LIMITATION & ESTIMATED ACTIVITY 17

14. OTHER COUNTY CONTRACTS 17

15. OTHER SPECIAL PROVISIONS..... 17

SUPPLEMENTS TO THE DES CONSTRUCTION STANDARDS AND SPECIFICATIONS..... 18

Supplemental Specifications List 19

PROJECT SUMMARY

This contract contains two Arlington County Projects. 12th Street South Complete Streets (CC16) and Transitway Extension to Pentagon City (MA13). These two projects will be constructed concurrently.

The 12th Street South Complete Streets project is along 12th Street South in Crystal City between South Eads Street and Long Bridge Drive. The project reconfigures the street section as a multimodal complete street featuring transit, environmental, and pedestrian facilities. The improvements include: installing sidewalks, asphalt pavement, street lights, storm water infrastructure improvements, landscaping, and traffic signals.

The Transitway Extension to Pentagon City project starts at Crystal Drive and 15th Street South and ends at 12th Street South and Long Bridge Drive. This project will have a designated bus only lane, which will be provided by restriping and removing the on-street parking currently located along Crystal Drive and 12th Street South. Two new Transit Stations are proposed, one on Crystal Dr north of 15th Street and another one on 12th Street and Long Bridge Drive. The construction will include a near level boarding platform, detectable warning surfaces, ADA accessibility features, prefabricated bus shelters, amenities such as benches, bike racks and trash receptacles and street improvements. A concrete bus pad will replace existing asphalt roadway pavement, in the roadway, in front of transit station to accommodate the additional loading in this area. The entire project area will include restriping to accommodate the bus lanes and new traffic patterns.

The Transitway transition at Crystal Drive and 12th Street S requires curb and road improvements in order to provide adequate road width for bus movements. Proposed curb improvements are proposed on the west side and east side of the roadway. The ramps and the curbs will be constructed to comply with ADA requirements. Rapid Flashing Beacons (RFB) are proposed at the proposed crosswalk to increase visibility.

The Contractor shall provide all resources to successfully perform the terms 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.

Click or tap here to enter text.

ITB No. XXXXX

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

Delete Paragraph B.13 in its entirety and insert the following in its place:

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

ITB No. XXXXX

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

ITB No. XXXXX

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

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 SUPERINTENDENCE BY CONTRACTOR

Add the following new language to Paragraph C.9:

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:

ITB No. XXXXX

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.

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.

ITB No. XXXXX

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.

Click or tap here to enter text.

ITB No. XXXXX

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.

Payment applications shall be submitted monthly including a detailed description of work performed services and products and the dollar amount. An updated schedule must accompany each application for payment. Arlington County Standards 01320.1.7.H

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: <https://transportation.arlingtonva.us/streets/street-maintenance/>
- **The Arlington County Department of Parks and Recreation (DPR) Specifications**, a copy of which may be downloaded at no charge from the internet at: <http://parks.arlingtonva.us/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: <http://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

ITB No. XXXXX

- **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: <http://topics.arlingtonva.us/building/discharging-chlorinated-water/>
- **The Arlington County Department of Environmental Services (DES) Bus Stop Guidelines and Standards Manual**, a copy of which may be downloaded at no charge from the internet at: https://projects.arlingtonva.us/wp-content/uploads/sites/31/2021/03/DES-Bus-Stop-2020-03-17-FINAL_Guidelines_and_Standards.pdf
- **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:

- **County Land Disturbing Activities (LDA) permit**
- **County Public Right-Of-Way (PROW) permit**
- **County Transportation Right-Of-Way(TROW) permits**
- **County Water Meter and Fire Hydrant permits**
- **County Building Permit**
- **County Electrical Permit**

All fees for County permits will be waived by Arlington County, and fees for non-County permits will be paid by Arlington County.

The County will obtain the County LDA and Building permit prior to the start of work. The Contractor shall transfer the County LDA and County Building permit in the Contractors name as the permittee and/or responsible party prior to the start of Work.

The Contractor shall provide a Responsible Land Disturber (RLD) that meets all the required qualifications of the permits. The Contractor shall complete and sign the RLD certificate and submit to the County Project Officer prior to the start of Work.

The Contractor shall obtain the County PROW permit, the County TROW permits, the County Water Meter and Fire Hydrant permits, and County Electrical Permit. The Contractor is

ITB No. XXXXX

responsible for investigating and satisfying all permit requirements for the above-mentioned permits.

3. SPECIAL CONTRACTOR/SUBCONTRACTOR QUALIFICATIONS

The Contractor shall have three (3) continuous years of services and construction contract experience conducting public works infrastructure and street improvement projects in an urban environment. The experience shall be work of similar size and scope, construction, re-construction, and maintenance.

The Contractor obtained project experience shall consist of the following:

- **State and County streets**
- **Curbs and gutters**
- **Sidewalks and walkways**
- **Driveway aprons**
- **Storm sewer pipes and inlets**
- **Wet Utilities**
- **Pavement markings and signage**
- **Electrical conduits**
- **Traffic signals and Street lighting**
- **Streetscapes and related site work**
- **Vertical Construction**

The Contractor shall provide a complete list of projects completed within the last five (5) years with reference contact information for each project for Bidder qualification verification. Failure to qualify according to the foregoing requirements will result in bid rejection by the Arlington County Purchasing Office. The County will randomly contact at least five (5) of the references provided.

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

ITB No. XXXXX

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. Submittals and review time shall be incorporated on the construction schedule to ensure materials are delivered on time and there's no construction delays.

The Contractor shall prepare and submit a detailed Baseline of "Initial" Construction Schedule Ten (10) business days after the Notice to Proceed. This schedule shall be submitted in MS Project and pdf format on eBuilder for the County review and approval. The Initial Schedule shall be develop using the Critical Path Method per the requirements described on the Arlington County Standards Section 01320.1.4.B-1.7. The Construction Schedule shall in all respects conform to and be consistent with the time requirements for the Project as set forth in this Construction Contract.

6. WORK HOURS

The Contractor shall comply with **normal daytime working hours** as defined in the County Noise Control Ordinance unless otherwise defined by the project plans and specifications, or approved by the Project Officer.

The Contractor shall comply with **restricted working hours** of 9:00 am to 3:00 pm when working in Arlington County arterial streets unless otherwise indicated on the Maintenance of Traffic Plans for each project.

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. SPECIAL TRAFFIC MAINTENANCE CONSIDERATIONS

9. 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.

ITB No. XXXXX

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.

10. BIORETENTION CONSTRUCTION AND MATERIALS

11. WORK ASSIGNMENTS

12. UNLISTED WORK

13. JOB SIZE LIMITATION & ESTIMATED ACTIVITY

14. OTHER COUNTY CONTRACTS

15. OTHER SPECIAL PROVISIONS

SUPPLEMENTS TO THE DES CONSTRUCTION STANDARDS AND SPECIFICATIONS

SECTION 02900 – PAVEMENT MARKINGS

PART 4 - MEASUREMENT AND PAYMENT

PARAGRAPH 4.3 Colored Asphalt Coating

Delete

A. Measurement of colored asphalt coating shall be per square foot of area completed. Payment for colored asphalt coating shall be per square foot and shall include all labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete the coating.

Add

A. Measurement of colored asphalt coating shall be per square yard of area completed. Payment for colored asphalt coating shall be per square yard and shall include all labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete the coating.

PARAGRAPH 4.4 Removal/Eradication of Existing Pavement Markings

Delete

A. Payment for pavement line markings (type, class, width) removal and/or eradication shall be paid by actual work performed as listed in the contract and shall include all labor, materials, tools, equipment, transportation, supplies, and incidentals required to remove and/or eradicate the line markings as specified.

Add

A. Payment for pavement line markings (type, class, width) removal and/or eradication shall be incidental to the work and no separate payment shall be made.

SECTION 05500 –STRUCTURE STEEL AND MISCELLANEOUS METAL

Remove this section in its entirety

Supplemental Specifications List

- **Section 02614** – Cast In Place Detectable Warning Surfaces
- **Section 07110** – Hot-Applied Rubberized Waterproofing
- **Section 10531** – Assembly and Installation of Transit Stations
- **Transitway Extension to Pentagon City Station Design Specifications**
 - **Section 03320** - Concrete Foundations for Transit Stations
 - **Section 05501** - Stainless Steel
 - **Section 10425** - Specialty Signs
 - **Section 16020** - Basic Electrical

ARLINGTON COUNTY DES ENGINEERING
SUPPLEMENTAL SPECIFICATIONS

- **Section 02614** – Cast In Place Detectable Warning Surfaces
- **Section 07110** – Hot-Applied Rubberized Waterproofing
- **Section 10531** – Assembly and Installation of Transit Station
- **Transitway Extension to Pentagon City Station Design Specifications**
 - **Section 03320** – Concrete Foundations For Transit Stations
 - **Section 05501** – Stainless Steel
 - **Section 10425** – Specialty Signs
 - **Section 16020** – Basic Electrical

SECTION 02614 – CAST IN PLACE DETECTABLE WARNING SURFACES

PART 1 - GENERAL

1.1 Description of Work

- A. Furnish and install prefabricated cast in place ADA compliant detectable warning surfaces at curb ramps and along station platforms as shown on the Approved Plans.

1.2 Related Work Specified Elsewhere

- A. 01330 - Submittal Procedures
- B. 01400 – Quality Requirements
- C. Warranty
 - 1. Cast-In Place Detectable Warning Surfaces shall include a standard manufacturer warranty.

PART 2 - PRODUCTS

2.1 Cast In Place Detectable Warning Surface

Cast In Place detectable warning surfaces shall be 24” x 48” (nominal) prefabricated vitrified polymer composite tiles for cast-in-place construction, as manufactured by, Armor-tile, Williamsville, NY or Owner approved equal.

Cast In Place detectable warnings shall be as indicated on the drawings.

- A. Size: Unless otherwise indicated, dimensions shall be 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface.
- B. Location: The cast in place detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line or other potential hazard.
- C. Domes: Truncated domes shall have a base diameter of 0.9 inches minimum to 1.4 inches maximum, a top diameter of 50% or 0.45 inch to 0.9 inches at the top, a height of 0.2 inch and a center-to-center spacing of 1.6 inches to 2.4 inches measured along one side of a square arrangement.
- D. Alignment: Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between domes.
- E. Color Contrast: There shall be a minimum of 70% contrast in light reflectance between the detectable warning and an adjoining surface. The material used to provide visual contrast shall be an integral part of the detectable warning surface.

SECTION 02614

CAST IN PLACE DETECTABLE WARNINGS SURFACES

- F. Color: Dark grey and black. Verify color with Owner prior to ordering.
- G. Water Absorption of Tile when tested by ASTM D 570-98 not to exceed 0.05%
- H. Slip Resistance of Tile when tested by ASTM C 1028-96 Wet/Dry Static Coefficient of Friction values are not to be less than 0.80 on top of domes and field area.
- I. Compressive Strength of Tile when tested by ASTM D 695-02 not to be less than 28,000 psi.
- J. Tensile Strength of Tile when tested by ASTM D 638-03 not to be less than 19,000 psi.
- K. Flexural Strength of Tile when tested by ASTM D 790-03 not to be less than 25,000 psi.
- L. Accelerated Weathering of Tile when tested by ASTM G 155-05a for 3000 hours shall exhibit the following result – $\Delta E < 4.5$, as well as no deterioration, fading or chalking or surface of tile color No 33538.
- M. Accelerated Aging and Freeze Thaw Test of Tile and Structural Embedment Flange System when tested ASTM D 1037-99 shall show no evidence of cracking, delamination, warpage, checking, blistering, color change, loosening of tiles or other detrimental defects.
- N. Salt and Spray Performance of Tile and Structural Embedment Flange System when tested to ASTM B 117-03 not to show any deterioration or other defects after 200 hours of exposure.

PART 3 - EXECUTION

- 3.1 Cast In Place detectable warning surfaces shall be installed in accordance with the manufacturer's specifications.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 Cast In Place Detectable Warning Surfaces shall be paid by the square foot per the plan dimensions as verified in the field by the Project Officer or his designee. Payment shall include the cost of demolition, excavation, labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete the work as specified.

END OF SECTION 02614

SECTION 07110 – HOT-APPLIED RUBBERIZED WATERPROOFING

PART 1 - GENERAL

1.1 Work Included

- A. The work shall consist of furnishing and installing hot-applied rubberized water proofing system for horizontal and vertical applications on below grade parking and/or other structures to prevent the penetration of water under hydrostatic pressure.

1.2 Related Work Specified Elsewhere

- A. Section 02611 Concrete Walks and Concrete Driveway Entrance
- B. Section 02612 Interlocking Concrete and Brick Pavers
- C. Section 07100 Waterproofing
- D. Warranty
 - 1. Hot-Applied Rubberized Waterproofing shall include a standard manufacturer warranty

1.3 Applicable Standards and Specifications

- A. Virginia Department of Transportation, Road and Bridge Specifications (VDOT)
- B. American Association of State Highway and Transportation Officials (AASHTO)
- C. American Society of Testing and Materials (ASTM)
- D. Canadian General Standards Board (CGSB)

1.4 Submittals

- A. General – Section 01330 Submittal Procedures
- B. Standard Submittal Package – Submit typical waterproofing drawing(s) indicating pertinent dimensions, general construction and product information.
- C. Manufacturer must submit proof of 10 projects with leak-free installations under similar conditions to this project and that have been installed for a minimum of 5 years. Proof of installation shall include addresses of installed system and contact names for owners of each location.
- D. Sample of material to be used in work is required at time of submittal.

1.5 Product Delivery, Storage and Handling

- A. Deliver products to the site in Manufacturer's original, intact, labeled containers. Handle and protect as necessary to prevent damage or deterioration during shipment, handling and storage. Store in accordance with manufacturer's installation instructions.

1.6 Basis of Design

- A. All hot-applied rubberized waterproofing shall be designed to meet the specified performance criteria of the project as manufactured by: Henry Company, 999 North Pacific Coast Highway, Suite 800, El Segundo, CA 90245 Toll Free: 800-486-1278. www.henry.com.
- B. Alternate Manufactures must demonstrate that their project meet or exceed the design criteria. Submittal of alternates must be made three weeks prior to scheduled ordering to allow proper evaluation time.

1.7 Quality Assurance

- A. The installation Contractor shall be certified by the material manufacturer as suitable for the execution of the work. The Contractor shall submit evidence that documents this requirement.
- B. The Contractor shall perform the work in accordance with the printed requirements of the waterproofing membrane manufacturer and this specification. One copy of the manufacturer's instructions shall be available at all times on the site.
- C. All components used in this section shall be produced by one manufacturer, including primary membrane, liquid sealants, primers, mastics, and adhesives.
- D. Warranty – Manufacturer's standard warranty shall apply.

PART 2 - PRODUCTS

2.1 General

- A. Primary Waterproofing Membrane
 1. Shall be 790-11 manufactured by Henry Company;
 2. or County approved equal.
- B. Asphalt Primer
 1. Shall be 930-18 or 910-01 manufactured by Henry Company;
 2. Or County approved equal
- C. Polyester Fabric Reinforcement
 1. Polyester Fabric unsaturated pun bonded polyester mat reinforcement sheet
- D. Meets ASTM D5329; chemically resistant to water, calcium, chloride, salt, mild acid, alkaline solutions, fertilizer, and animal waste.

PART 3 - EXECUTION

3.1 Examination

- A. It is the installing Subcontractor's responsibility to verify the substrate is dry and in accordance with Section 1.2 Related Work Specified Elsewhere and Section 1.3 Applicable Standards and Specifications prior to installation of waterproofing. Commencement of the Work or any parts thereof, indicates installer acceptance of the substrate.
 - 1. Verify substrates are in accordance with Waterproofing Manufacturer's published literature and as specified in this Section prior to installation.
 - 2. Substrates must be continuous and secured.
 - 3. Fill spalled areas with appropriate repair mortar to provide an even plane.
 - 4. Remove curing compounds or foreign matter detrimental to the adhesion.
- B. The installing Subcontractor must verify the following:
 - 1. Moisture detection survey:
 - a. Visual inspection
 - b. ASTM D4263 - Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
 - 2. Adhesion/Pull Test:
 - a. Complete a waterproofing adhesion test in accordance with Waterproofing Manufacturer's published literature prior to installation of waterproofing assembly.
- C. Do not apply waterproofing assembly components until substrate and environmental conditions are in accordance with Waterproofing Manufacturer's product specific Technical Data Sheets (TDS), and as specified in this Section.

3.2 Preparation

- A. Surfaces must be sound, dry, clean, and free of oil, grease, dirt, excess mortar, frost, laitance, loose and flaking particles, or other contaminants.
- B. Waterproofing Membrane Preparation:
 - 1. Heat waterproofing membrane in a mechanically agitating melter specifically designed for the preparation of hot rubberized asphalt membranes to a consistent temperature:
 - 2. Heating temperature: 356 °F (180 °C) to 392 °F (200 °C)

3.3 Installation

- A. Verify substrate is ready to receive the waterproofing assembly in accordance with the Waterproofing Manufacturer's TDS and guide specification.
- B. Air and substrate temperature limitations:
 - 1. None
- C. Primer:
 - 1. Apply primer in accordance with Waterproofing Manufacturer's TDS.
 - 2. Do not over spray primer; excessive and/or ponding primer is not recommended.

- D. Detailing/Flashing:
1. Install detailing and flashings per Waterproofing Manufacturer's details.
 2. Install prefabricated expansion joint assemblies prior to installation of waterproofing.
 3. Set drains at proper deck height and do not impede drainage.
 4. Secure flashing at drain with an integral clamping ring.
- E. Installation of Waterproofing Assembly:
1. Install one layer of waterproofing membrane at ninety (90) mils minimum to form a continuous monolithic membrane over horizontal and vertical surfaces.
 2. Fully embed polyester fabric into waterproofing membrane.
 3. Coat side and end laps of embedded polyester fabric with waterproofing membrane. Overlap of dry polyester fabric is not acceptable.
 4. Overlap polyester fabric a minimum of one-quarter (1/4) inch.
 5. Apply second layer of waterproofing membrane at one-hundred twenty-five (125) mils minimum to form a continuous monolithic membrane over previously coated areas.
 6. Total reinforced waterproofing membrane thickness shall be two-hundred and fifteen (215) mils minimum.
- F. Installation of Protection Course:
1. Install protection course in a shingle pattern starting at the low point(s) or drain location(s).
 2. Install protection course while waterproofing membrane is partially cured to a warm and tacky consistency.
 3. Install protection course in full continuous sheets.
 4. Overlap protection course dry adjoining edges approximately two (2) inches.
- G. Waterproofing Integrity Test; choose from the following:
1. Electronic Leak Detection (Alternate to Flood Test):
 - a. Conduct electronic leak detection upon waterproofing assembly completion and prior to overburden placement.
 - b. Contact pre-approved test provider several weeks in advance to coordinate schedule.
 - c. In the event of a breach of the membrane, repair and retest the system in accordance with project specifications.
 - d. Report results of testing to the Project Officer and Waterproofing Manufacturer. Submit results with the warranty application.
 - e. No other Work is to proceed without prior direction from the Project Officer.
- H. Flood Test:
1. Conduct flood test upon waterproofing assembly completion prior to overburden placement.
 2. Provide temporary stops and plugs for the roof drain(s) or scupper(s) within the test area.
 3. Flood test with a minimum of two (2) inches of water for no less than twenty-four (24) hours.
 4. In the event of a breach of the membrane, repair, and retest the system for no less than twenty-four (24) hours.
 5. Remove temporary stops and plugs.
 6. Report results of testing to the Project Officer and Waterproofing Manufacturer. Submit results with the warranty application.
 7. No other Work is to proceed without prior direction from the Project Officer.
- I. Installation of Insulation:

1. Refer to Insulation Manufacturer's published literature for a complete guide to required installation practices and exposure limitations.
 2. Loose lay insulation in full continuous sheets completely covering the field membrane to provide a continuous thermal resistance layer:
 - a. Stagger and firmly abut adjacent insulation.
 - b. Stagger board joints between layers.
 3. Cut insulation to fit around penetrations and drain(s).
 4. Provide temporary ballasting until installing permanent covering material.
- J. Installation of Drainage Composite:
1. Loose lay drainage composite in full continuous sheets completely covering the membrane to promote water drainage.
 2. Abut adjacent drainage composite panels overlapping the fabric approximately one (1) inch.
 3. Cut drainage composite to fit around penetrations and drain(s).
 4. Provide temporary ballasting until installing permanent covering material.
- K. Installation of Filter Fabric:
1. Install filter fabric in a shingle pattern starting at the low point(s) or drain location(s).
 2. Loose lay filter fabric in full continuous sheets completely covering the field membrane and all vertical waterproofed surfaces to promote debris obstruction.
 3. Overlap the filter fabric adjoining edges approximately six (6) inches.
 4. Provide temporary ballasting until installing permanent covering material.
- L. Installation of Paver Ballast:
1. Install paver ballast in accordance with Paver Ballast Manufacturer's published literature.
 2. Install paver ballast ensuring pavers are accurately aligned and leveled with upper surface of pavers in plane with adjacent units.
 3. Cut paver ballast to fit irregularly shaped areas and around protrusions.
 4. Refer to project specific drawings for specified location and layout.
- 3.4 Field Quality Control
- A. Final Observation and Verification:
1. Project Officer and Waterproofing Manufacturer to complete final inspection of waterproofing assembly as required by warranty.
 2. Contact Waterproofing Manufacturer for warranty issuance requirements.
- 3.5 Clean and Protect
- A. As the Work proceeds, and upon completion, promptly clean up and remove from the premises all rubbish and surplus materials resulting from the foregoing Work.
- B. Clean soiled surfaces, spatters, and damage caused by Work of this Section.
- C. Check area to ensure cleanliness and remove debris, equipment, and excess material from the site

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 Hot-Applied Rubberized Waterproofing shall be installed in accordance with the approved plans. In an event, it becomes necessary to deviate from the dimensions indicated on the approved drawings, the contractor must obtain approval by the Project Officer in advance prior to installation. Payment for HOT-APPLIED RUBBERIZED WATERPROOFING shall be in square foot of the waterproofing material installed and shall include the necessary excavation, preparation of the surface and all other items listed in the PART 2 – PRODUCTS as indicated on approved plans.

END OF SECTION 07110

SECTION 10531 – ASSEMBLY AND INSTALLATION OF TRANSIT STATIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide all labor, material and equipment to furnish and install, complete in place, the transit shelter unit and site furnishings in accordance with these specifications and to the lines, grades and dimensions shown on the approved plans.
- B. Coordinate delivery and storage of all transit station components as described on the approved plans.
- C. Contractor is responsible for construction of all works shown on the approved plans.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01330: Submittal Procedures
- B. Section 01400 – Quality Requirements
- C. Section 02611 – Concrete Walks and Concrete Driveway Entrance
- D. Section 03100 – Concrete Formwork, Reinforcement and Materials
- E. Section 05501 –Stainless Steel
- F. Section 16020 – Basic Electrical
- G. Warranty
 - 1. Items discussed under this specification shall include a standard manufacturer warranty.

1.3 Protection of Property

- A. Protect property pipes, stones and monuments from damage. The Contractor will be responsible for replacing disturbed markers by a registered surveyor of Virginia at no expense to the County.
- B. Protect street, roads, historical objects, adjacent property, vegetation and streetlights, transit stop amenities and other works to remain throughout the contract.

1.4 Delivery and Storage

- A. The Contractor is responsible for the storage and security of equipment and materials and that of their subcontractor(s). The County will not provide storage of equipment or materials provided by the Contractor and/or their subcontractor(s). Store Materials in clean, dry area in accordance

with manufacturer's instructions. Keep materials in original, unopened containers and packaging until installation. Do not store in direct contact with the sun or rain.

- B. Handle products to prevent breakage of containers and damage to products.
- C. Deliver products to the jobsite in original unopened containers or wrappings clearly labeled with manufacturer's name and brand designation, referenced specification number, type and class as applicable. If storing material on site, ensure it is safe and secure as such is the Contractors responsibility. County will not take position of materials until final completion.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 Transit Station Shelters

- A. Assemble and install transit shelters in accordance with Manufacturer's instructions.
- B. Transit shelters will generally conform to that shown on the drawings; however, minor variations are to be expected. Contractor shall provide Manufacture's drawings to the County for review prior to ordering.
- C. Transit Station Shelters include the assemble of the Solar-powered LED Light Panel Kit and the Shelter Name Box. Contractor to coordinate with the Project Officer prior to ordering Shelter Name Box.

3.2 Transit Station Amenities

- A. Assemble and install transit station amenities (benches, litter and recycling receptacles, bicycle racks, and other amenities) in accordance with manufacturer's instructions.

3.3 Transit Station Signs

- A. Assemble and install stainless steel flag station sign per the Transitway Extension To Pentagon City Station Design approved drawings.

3.4 Transit Station LCD Monitor Stanchion

- A. Assemble and install LCD Monitor Stanchion per the Transitway Extension To Pentagon City Station Design approved drawings.
- B. Transit Station LCD Monitor Stanchion will generally conform to that shown on the approved drawings; however, minor variations are to be expected. The Contractor shall provide the County with cut sheets from the Fabricator for review and approval.
- C. Contractor to have the LCD Monitor to be approved by the Project Officer prior to ordering.

3.5 Curb Rub Rail Installation

- A. Contractor to coordinate with the Project Officer to schedule the County's procurement of the Rub Rails. This shall be done at with ample time to allow for the fabrication and delivery to the Job Site.
- B. The Contractor shall provide accommodations to enable the Project Officer to inspect all materials upon delivery to the side and prior to utilizing the materials in the Work. The Contractor shall ensure that materials are stockpiled or otherwise stored such that the Project Officer has access to all aspects and components.
- C. Installation procedures shall confirm to the specifications and practices of the Rub Rail Provider.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 Transit Station Shelters shall be measured as each. Shelter Name Box shall be measured as each. Solar-powered LED Light Panel Kit shall be measured as each. Payment shall be at the unit price stated in the bid proposal and shall include all materials, labor and incidentals necessary for a complete installation of the Transit Station Shelter. Contractor pick-up from providers facility, delivery to the project site, and rigging of furnished Transit Station Shelters shall also be included for payment.
- 4.2 Transit Station Amenities (benches, litter and recycling receptacles, bicycle racks, and other amenities) shall be measured as each. Payment shall be at the unit price stated in the bid proposal and shall include all materials, labor and incidentals necessary for a complete installation of the Transit Station Amenities. Contractor pick-up from providers facility, delivery to the project site, and rigging of furnished Transit Station Amenities shall also be included for payment.
- 4.3 Transit Station Sign shall be measured as each. Payment shall be at the unit price stated in the bid proposal and shall include all materials, labor and incidentals necessary for a complete installation of the Transit Station Sign. Contractor pick-up from manufacture facility, delivery to the project site, and rigging of furnished Transit Station Shelters shall also be included for payment.
- 4.4 Transit Station LCD Monitor Stanchion shall be measured as each. Payment shall be at the unit price stated in the bid proposal and shall include all materials, labor and incidentals necessary for a complete installation of the Transit Station Shelter. Contractor pick-up from manufactures facility, delivery to the project site, and rigging of furnished Transit Station Shelters shall also be included for payment.
- 4.5 Curb Rub Rail Installation shall be measured as a Lump Sum. Payment shall be at the unit price stated in the bid proposal and shall include all materials, labor and incidentals necessary for a

SECTION 10531

ASSEMBLY AND INSTALLATION OF TRANSIT STATIONS

complete installation of the Curb Rub Rails. Contractor to pick-up from County facility, delivery to the project site, and fasteners to the Curb Rub Rails shall also be included for payment.

END OF SECTION 10531

Transitway Extension to Pentagon City Station Design

Specifications

July 27, 2021



DEPARTMENT OF ENVIRONMENTAL SERVICES

Division of Transportation

2100 Clarendon Boulevard, Suite 900 Arlington, VA 22201

Transitway Extension to Pentagon City Station Design Specifications

TABLE OF CONTENTS

SECTION 03320 CONCRETE FOUNDATIONS FOR TRANSIT STATIONS

SECTION 05501 STAINLESS STEEL

SECTION 10425 SPECIALTY SIGNS

SECTION 16020 BASIC ELECTRICAL

Transitway Extension to Pentagon City Station Design Specifications

SECTION 03320 CONCRETE FOUNDATIONS FOR TRANSIT STATIONS

PART 1 GENERAL

1.1 Description of Work

- A. This work is for spread footing foundations to support station flag signs as shown on the plans.

1.2 References

- A. Section 01330 Submittal Procedures
- B. Section 01400 Quality Requirements
- C. Section 03100 Concrete Formwork, Reinforcement and Materials

1.3 Submittals

- A. Conform to the requirements of Section 03100 Concrete Formwork, Reinforcement and Materials and the drawings.

PART 2 PRODUCTS

2.1 Materials

- A. Conform to the requirements of Section 03100 Concrete Formwork, Reinforcement and Materials and the drawings.

PART 3 EXECUTION

3.1 Construction of Spread Footing Foundations

- A. Conform to the requirements of Section 03100 Concrete Formwork, Reinforcement and Materials and the drawings.

3.2 Testing of Spread Footing Foundations

- A. Conform to the requirements of Section 03100 Concrete Formwork, Reinforcement and Materials and the drawings.

PART 4 MEASUREMENT AND PAYMENT

4.1 Flag Sign Foundations

- A. Flag sign foundations shall be measured and paid for by cubic yards of concrete based on the dimensions shown on the drawings. Payment will include formwork, reinforcement and other items necessary for spread footing construction. Payment shall include all labor, equipment, and materials necessary to for spread footing construction.

Transitway Extension to Pentagon City Station Design Specifications

SECTION 05501 STAINLESS STEEL

PART 1 – GENERAL

1.1 Description of Work

- A. Provide all plant labor, supervision, material and equipment to furnish and install all structural steel and miscellaneous metal items, with accessories, fasteners, anchors, etc., complete in place as shown on the approved plans.

1.2 Related Work Specified Elsewhere

- A. Section 01330 Submittal Procedures
- B. Section 01400 Quality Requirements
- C. Section 10425 - Specialty Signs

1.3 Applicable Specifications

- A. American Institute of Steel Construction (AISC)
- B. American Society for Testing and Materials (ASTM)
- C. American Welding Society (AWS)
- D. Nickel Development Institute (NiDI).
- E. Virginia Department of Transportation, Road and Bridges Specifications (VDOT)

1.4 Submittals

- A. Before any fabrication is begun, submit detailed shop drawings of all miscellaneous metal items showing sizes of metal components, method of assembly, hardware, and anchorage or connection to other work.
- B. Submittals shall include detailed descriptive literature of manufactured items specified herein.

1.5 Quality Assurance

- A. Fabrication and installation procedures shall conform to the specifications and practices of the American Institute of Steel Construction.

1.6 Delivery, Storage and Handling

- A. Delivery, storage, and handling of stainless-steel products should comply with guidelines set forth in Chapter 7 of NiDI “Design Manual for Structural Stainless Steel” and in “Stainless Steel Fabrication” published by the Specialty Steel Industry of North America.
- B. Deliver materials to site at such times and intervals to ensure continuity of installation and uninterrupted progress of work.
- C. Store materials to permit easy access for inspection and identification. Support stainless- steel members off ground on racks made from carbon steel-free surfaces such as wood, rubber or plastic. Materials showing evidence of damage will be rejected and shall be immediately removed from the site.

Transitway Extension to Pentagon City Station Design Specifications

- D. Handle stainless-steel so no parts are bent, broken, or otherwise damaged and avoid damage to other material and work. Store beams with webs vertical. Exercise care to avoid over stressing the steelwork.
- E. Mark weight on all members. Match-mark all shop pre-fitted members.
- F. Ship small parts, such as bolts, nuts, washers, pins, fillers, and small connecting plates and anchors in boxes, crates, or barrels. Pack separately each length and diameter of bolt and each size of nut and washer. Plainly mark an itemized list and description of the contents on the outside of each container.
- G. Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures. Replace damaged materials or structures as directed.
- H. Use isolating material to protect structural stainless-steel when using carbon steel lifting chains, hooks, cleats, and fork lifts. Avoid using chemicals such as oils and grease. Care shall be exercised to avoid abrasions and other damage.
- I. All fasteners and washers shall be delivered to the site, where they will be installed, in unopened containers.
- J. Quarantine tools as necessary to prevent contaminating or impregnating structural stainless-steel members and components with carbon steel.

PART 2 – MATERIALS

2.1 General

- A. Welding Electrodes for Stainless-Steel:
 - 1. Conform to AWS D1.6. Base selection of electrodes on the actual properties of the metal connected.
 - 2. Filler Metal Group A-70 ksi Minimum Tensile Strength
- B. Stainless-Steel Shapes and Bars shall be in conformance with ASTM A 276 Type 316.
- C. Stainless-Steel Tubes and Pipes shall be in conformance with ASTM A 554 Type 316.
- D. Stainless Steel Plate, Sheet, and Strip shall be in conformance with ASTM A 240, Type 316
- E. Stainless Steel Fasteners
 - 1. Anchor Bolts
 - a ASTM F593 H, Type S31600 (Alloy Group 2)
 - 2. Bolts
 - a ASTM F593
 - 3. Nuts and washers
 - a ASTM F594

Transitway Extension to Pentagon City Station Design Specifications

2.2 Expansion Anchors

- A. Expansion Anchors shall Hilti Kwik Bolt TZ – SS 316 or approved equal.

PART 3 – EXECUTION

3.1 General

- A. Furnish all bolts, nuts, screws, clips, washers, and any other fasteners necessary for proper installation of items specified or called for on the approved plans. For ferrous metal, use stainless steel.
- B. Metal for shop-fabricated items shall be well formed to shape and size, with crisp lines or angles. Shearing and punching shall leave clean, true lines and surfaces. Weld permanent connections and grind smooth where exposed to view. Dress all sharp edges.
- C. Verify all measurements at job.
- D. Field drilled or punched holes; do not use cutting torch. Shearing and punching shall leave true lines and surfaces.
- E. Construct to sizes indicated using rolled shapes and/or plates as detailed. Include wall and sill anchors for construction indicated.
- F. Set all work plumb, true, rigid, and neatly trimmed out.
- G. Grout plates, bolts, and similar items with non-shrink grout.
- H. Castings subject to foot or street traffic shall have bearing surfaces machined to prevent rocking and rattling.
- I. Protect all dissimilar metals from galvanized corrosion by pressure tapes, coatings or isolators.

3.2 Welding

A. Stainless Steel Welding

1. Welding shall be in accordance with AWS D1.6 "Structural Welding Code "Stainless Steel".
2. Contractor is responsible for selection of specific materials and procedures except as specifically noted in contract documents.
3. Connections have varying levels of restraint and thus necessary steps shall be taken by Contractor to control or accommodate the restraint.
4. Welding and fabrication procedures shall incorporate measures necessary to eliminate cracking.
5. When selecting materials and procedures, consideration shall be given to the need for materials and procedures in excess of code requirements.
6. The need for pre-heat and other procedures are to be based on the actual chemistry and mechanical properties of the steel and not solely on the specified properties of the steel.
7. Limit maximum interpass temperatures so as not to decrease toughness and

Transitway Extension to Pentagon City Station Design Specifications

strength of the weld metal.

8. Weld variables shall be consistent with the recommendations of the electrode manufacturer.
9. Welding Procedure Specifications shall be readily available to all welders, inspectors, and supervisors during the production process.

B. Field Welding:

1. Provide only where approved by the Engineer.
2. Protect adjacent fabrications and finished surfaces from marring or damage caused by field welding. Provide finish of field welds in conformance with the Architectural finish specified herein for exposed stainless steel.

3.3 Bolted Connections

- A. In general, use bolts for field connections only and then only as detailed. Draw all nuts tight and nick threads of permanent connections to prevent loosening. Use beveled washers where bearing is on sloped surfaces.

3.4 Protection of Surfaces

- A. Provide protection by strippable coating, protective sleeves, polyethylene sheets, boarding, or other suitable means during fabrication, shipment, site storage, and erection to prevent damage to the finished work due to stains, discolorations, scratches, or any other cause. Replace damaged elements at no expense to the County.
- B. After installation, and after danger of subsequent damage has passed, remove all protective coverings from all exposed surfaces, and clean those surfaces of all soil and discoloration, ready for acceptance.

3.5 Architecturally Exposed Steel

- A. All members exposed to view in the completed structure shall be classified as "Architecturally Exposed Structural Steel".
- B. Comply with the provisions of Section 10 of the AISC Code of Standard Practice for Steel Buildings and Bridges regarding architecturally exposed structural steel.
 1. Abutting cross sectional configurations shall match.
 2. Remove backing bars.
 3. Remove weld runoff tabs and grind smooth with stainless steel brush or other inert material.
 4. All surfaces and welds exposed to view shall be treated as finished surfaces.
- C. Exposed Welds:
 5. All exposed fillet welds shall be made smooth of uniform convex contour, radius and dimension for their full length; grind smooth using a stainless-steel brush or other inert material, if welds were not made to this criterion.
 6. Dressing of any welds for finish shall not reduce the specified effective throat

Transitway Extension to Pentagon City Station Design Specifications

or structural integrity of the weld.

- D. Weld show-through shall not be permitted.
- E. Remove weld splatter on architecturally exposed steel.
- F. All exposed corners shall be square and sharp, eased to a radius of 1/4 in.

3.6 Finishes

A. Cleaning:

- 1. After fabrication, clean and remove deposits of oil and grease from stainless-steel surfaces in accordance with AISC's "Code of Standard Practice."

B. Finishes of Architecturally Exposed Steel

- 1. All surfaces of architecturally exposed structural steel members shall be uniform in appearance, including smoothness and texture, when viewed in direct sunlight at a distance of 10 feet, at angles of incidence 0 degree to 90 degree at completion.
- 2. Surface Appearance: The condition of the steel to be exposed in use shall conform to a non-directional satin finish. The exposed surfaces, edges and ends of all plates and other components shall be free of any surface defects including weld splatter, burrs, dents, gouges, occlusions, streak, ridges and recesses.

3.7 Temporary Shoring and Bracing:

- A. Provide temporary shores, guys, braces, and other supports during erection to protect the structure against damage and to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads including, but not limited to, other loads such as wind and seismic forces.
- B. Leave temporary bracing in place as long as required for safety.
- C. Provide temporary works as necessary to erect the structure.
- D. Contractor is responsible for identifying need for temporary construction.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 This work is included in Section 10425 Specialty Signs and will not be measured and paid separately.

Transitway Extension to Pentagon City Station Design Specifications

SECTION 10425 SPECIALTY SIGNS

PART 1 – GENERAL

1.1 Description

A. This section specifies work pertaining to Specialty Signs. The extent and location of “Specialty Signs” is indicated on the contract drawings and includes:

1. LCD Monitor Stanchion
2. LCD Monitor
3. Station Flag Sign

1.2 Related Work Specified Elsewhere

- A. Section 01330 Submittal Procedures
- B. Section 01400 Quality Requirements
- C. Specification Section 03100– Concrete Formwork, Reinforcement and Materials
- D. Specification Section 05501 Stainless Steel
- E. Specification Section 16020 Basic Electrical

1.3 Quality Assurance

A. Codes, Regulations, Reference Standards, and Specifications

1. Comply with codes and regulations of the Authority Having Jurisdiction.
2. Americans with Disabilities Act (ADA): Accessibility Guidelines.
3. American Society for Testing and Materials (ASTM)
4. National Fire Protection Agency (NFPA): 70

B. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to Authorities Having Jurisdiction and marked for intended use.

C. Fabricator Qualifications: The sign company shall be an established firm regularly engaged in the fabrication and installation of specialty signs, having a minimum of five years’ experience in fabricating and installing signage units of a type and size similar to those shown in the contract drawings. The company shall also submit a list of sizable installations in which they provided signs and have successfully completed over a period of at least the last five years.

D. Performance Requirements:

1. Structural performance: Provide signs capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

a Wind Loads: Determine loads based on the following minimum design wind pressures:

- 1) Uniform Pressure of 25 lb./sq.ft. acting in any direction

Transitway Extension to Pentagon City Station Design Specifications

- b. Seismic Performance: Provide signs capable of withstanding effects of earthquake motions as determined by the Virginia Uniform Statewide Building Code.
- c. Thermal Movements: Provide signs that allow for thermal movements resulting from the following maximum change: -5 degrees F to 105 degrees F, in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections and other detrimental effects.

1.4 Submittals

A. Submit three sets of the following for approval in accordance with the Contract Documents and with the additional requirements as specified for each:

1. Manufacturer's Data: Submit manufacturer's technical data, catalog cuts, installation, and maintenance instructions for all sign types required, including sign materials, finishes, fillers and fasteners.
2. Shop Drawings: Submit shop drawings of all sign components, fittings, parts, wiring, and installation procedures, jointing, and complete anchoring and supporting systems for the various applications and mounting details. Drawings shall clearly show provisions for all performance functions described herein. Provide details and sections at full size. Differences from the contract drawings shall be clearly identified in writing. Show general assembly of components; relationship to adjoining construction; complete fabrication details of sign housing, hangers, mounting, lighting, and schematic and wiring diagrams for each type sign. Include calculations substantiating conformance with design criteria.
3. Samples: Submit samples of the color and finish of exposed materials and accessories required for signs for approval before proceeding. The review of samples will be for color, gloss, finish, and texture. When requested, furnish full-size samples of sign materials.
4. Certifications: Submit manufacturer's certificate indicating that all materials and products used on the project meet or exceed specified requirements.

1.5 Product Delivery, Storage, And Handling

- A. Ensure that all signs are adequately protected from damage during fabrication and installation. Deliver specialty signs in cartons or crates to provide protection during transit and storage at the work site. Storage of fabricated items is the responsibility of the Sign Subcontractor. Protect stored materials against corrosion, deterioration of any kind, and damage.
- B. Inspect specialty signs upon delivery for damage. Repair minor damages provided that the finished items are equal in all respects to new work; otherwise, remove and replace damaged items as indicated.
- C. Specialty signs shall be delivered to the work site in original unopened packages, clearly labeled with manufacturer's name, brand, specification identification data, and identification as shown on approved shop drawings or submittals.

Transitway Extension to Pentagon City Station Design Specifications

- D. Packaging shall be made with fixed labels clearly identifying the type and quantity of the specialty signs, and the station where these signs will be installed.
- E. Store specialty signs under cover. Place all units on at least 4-inch high sills on floors in a manner that will prevent damage and rusting. Avoid the use of non-vented plastic or canvas shelters, which could create a humidity chamber or contact with soil or exposure to the elements.
- F. Protect specialty signs to prevent scratches, stains, discoloration, or other damage. Protect finished surfaces from soiling and damage during delivery, storage, handling, and installation. Keep covered with polyethylene film or other protective covering. Replace items damaged during fabrication, handling, shipment, storage, or erection.
- G. Keep cementitious and bulk materials, such as cement and sand, dry and protected from contamination by foreign materials.

PART 2 – PRODUCTS

2.1 Framing, Fastening, Hardware, And Adhesives

A. Materials

1. Stainless Steel

B. Exposed Fasteners and Screw Heads: Tamper-resistant, Allen head type. Finish to match color of sign to which applied.

C. Nylon Washers: Manufacturer's standard.

D. Silicone Adhesive Sealant: Non-acid curing silicone adhesive sealant, either clear color or match the substrate, General Electric brand or equal.

2.2 LCD Monitor

The LCD (liquid crystal display) monitor shall consist of an MRI, Vartech, or equal screen with integral central processing unit (CPU) with the following features:

- 2000 nit Brightness for 5 years
- Dynamic Block Dimming
- Current Monitoring / Control
- Modular Access of Internal Components for Servicing
- Thermal Management System
- Digital Image Verification
- Performance Monitoring
- Aluminum frame with powder coat finish
- Electrical: 85-270 VAC, 47-63 Hz
- Operating Max Temperature: +40°C (+104°F)
- Operating Min Temperature: -30°C (-22°F)
- Internal, On-Board Media Player
 - Two full HD HDMI outputs
 - 1920 x 1200-pixel resolution @ 60Hz

Transitway Extension to Pentagon City Station Design Specifications

- Front side bus speed of 1066 MHz
- 100M Ethernet Port
- USB 2.0 and USB 3.0 ports
- Intel i5 Quad Core operating at 2.5Ghz
- 4GB DDR3 1333
- Solid State 40 GB SATA 3Ghz Disk Drive
- Windows 7 64-bit OS
- -20 to 70 degrees C operating
- -40 to 70 degrees C storage
- 5 to 95% humidity noncondensing

A 4G card shall be installed in the CPU located in the LCD display cabinet, capable of providing a 4G wireless internet connection.

The Contractor shall provide two (2) years of service and support for all display equipment included in the contract price.

PART 3 – EXECUTION

3.1 General

- A. The Sign Subcontractor shall furnish all labor, tools, materials, equipment, facilities, connections, brackets and accessories to fabricate, assemble, package, ship, deliver, handle, unload and install at the work site specialty signs and miscellaneous accessories in accordance with this section.
- B. Specialty Signs with the miscellaneous accessories shall be new, finished as specified, in full compliance with the specification, fully assembled as appropriate, securely packaged to prevent damage and containing all attachments, connection and brackets necessary to complete the installation without field modifications or additional materials.
- C. Inspection: Inspect surfaces and conditions under which the work will be performed. Do not proceed with the work until unsatisfactory conditions have been corrected.
- D. Prepare surfaces and apply County provided signage film and number plaque in strict accordance with the product manufacturer's printed instructions.
- E. Fabricate signs of the material and to the dimensions shown, with straight lines and flat planes.
- F. Install work plumb, level, true, and straight with no distortion, Shim as required using concealed stainless-steel shims.
- G. Electrical supply and connections to be internal to sign and sign support system, concealed from view. Provide flush access panels with tamper- proof fasteners.

PART 4 – MEASUREMENT AND PAYMENT

4.1 Signs

- A. Station Flag Sign will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment,

Transitway Extension to Pentagon City Station Design Specifications

tools, and incidentals necessary to complete the work, including furnishing and installing all wiring and attachments as shown in the drawings and required by the LED sign manufacturer.

B. LCD Monitor Stanchion will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, mounting supports and hardware, and incidentals necessary to complete the work.

C. LCD Monitor will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, mounting supports and hardware, and incidentals necessary to complete the work, including furnishing and installing the LCD Monitor and all wiring and attachments as shown in the drawings and required by the manufacturer.

Transitway Extension to Pentagon City Station Design Specifications

SECTION 16020 BASIC ELECTRICAL

PART 1 - GENERAL

1.1 Description of Work

- A. This work shall consist of furnishing and installing the following electrical components:
1. Raceways
 2. Sleeves for raceways and cables.
 3. Conductors.
 4. Connectors.
 5. Grounding.
 6. Supporting devices for electrical components.
 7. Electrical identification.
 8. Boxes, enclosures, and cabinets include the following:
 9. Pull and junction boxes.
 10. Enclosures and cabinets.
 11. Panelboards
 12. Overcurrent Protective Devices
 13. General Purpose Transformers
 14. Common electrical installation requirements.
 15. Cutting and patching for electrical construction.
- B. Work includes coordination with Dominion Energy, Arlington County and residents, business owners and property owners that are affected by the electrical work.
- C. All existing electrical service(s) shall be maintained during the construction period.

1.2 General

- A. Drawings and general provisions of the Contract apply to this Section.

1.3 Definitions

- A. EPDM: Ethylene-propylene-diene monomer rubber.
- B. EMT: Electrical metallic tubing.
- C. FMC: Flexible metal conduit.
- D. GFCI: Ground-fault circuit interrupter.
- E. HDPE: High Density Polyethylene
- F. IMC: Intermediate metal conduit.

Transitway Extension to Pentagon City Station Design Specifications

G. LFMC: Liquid-tight flexible metal conduit.

H. NBR: Acrylonitrile-butadiene rubber.

I. PVC: Polyvinyl Chloride

J. RGS: Rigid galvanized steel conduit.

K. RMS: Root mean square.

L. RNC: Rigid nonmetallic conduit.

1.4 Submittals

A. General Submittals shall comply with Arlington County and Virginia Department of Transportation Codes.

B. Product Data: For each type of product indicated.

C. Shop Drawings and Manufacturer's Data: Shop drawings shall be submitted to the Engineer and include, but not be limited to, the following:

1. Outline drawing showing plan, elevation views and mounting dimensions including locations of control cabinet, terminals, conduit entry, ground connections and weights.
2. Drawing of nameplate data with nameplate data filled in.
3. Enclosure types and details for types other than NEMA 250, Type 1.
4. Bus configuration, current, and voltage ratings.
5. Short-circuit current rating of panelboards and overcurrent protective devices.
6. UL listing for series rating of installed devices.
7. Features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
8. Wiring Diagrams: Diagram power, signal, and control wiring and differentiate between manufacturer-installed and field-installed wiring.

D. Certified Laboratory Test Reports: Submit to the Engineer, in triplicate, certified copies of reports for all tests required in accordance with referenced standards and as specified herein.

E. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

F. Spare Parts Data: As soon as practicable after acceptance of materials and equipment, furnish to the Engineer spare parts data for each different item of equipment listed. The data shall include a complete list of parts and supplies, with current unit prices and source of supply. The foregoing shall not relieve the Contractor of any responsibilities under the Warranty.

G. Maintenance Data: For panelboards and components to include in maintenance manuals.

16. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.

Transitway Extension to Pentagon City Station Design Specifications

17. Time-current curves, including selectable ranges for each type of overcurrent protective device.

H. Field Test Reports: Test reports shall conform to the criteria defined in NETA ATS-1995, and shall include the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. List of equipment required to set up and perform the procedure.
4. Description of the required procedure setup, including diagrams illustrating test equipment connections and identifying test points, where applicable.
5. Step-by-step instructions for performing the procedure identifying the points where data is to be recorded and the limits for acceptable data.
6. Provisions for recording pertinent test conditions and environment at time of test.
7. Instructions for recording data on data sheets and verifying that procedure steps have been completed.
8. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

1.5 Quality Assurance

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1. Comply with NFPA 101, Life Safety Code.
2. Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system.
3. American National Standards Institute (ANSI) Publications:
 - A13.1 Pipe Marking Standards
 - C2 National Electrical Safety Code
 - C57.12.01 General Requirements for Dry-Type Distribution and Power Transformers
 - C57.12.91 Test Code for Dry-Type Distribution and Power Transformers
 - C57.94 Recommended Practices for Installation, Application, Operation and Maintenance of Dry-Type General Purpose Distribution and Power Transformers
 - C57.96 Guide for Loading Dry-Type Transformers C80.1 Rigid Galvanized Steel Conduit
 - C80.3 Electric Metallic Tubing C80.6 Intermediate Metallic Conduit
 - Z55.1 Gray Finishes for Industrial Apparatus and Equipment

Transitway Extension to Pentagon City Station Design Specifications

4. National Electrical Manufacturers Association (NEMA) Publication:

- ST20 Dry Type Transformers for General Applications
- PB1 Panelboards
- AB1 Molded Case Circuit Breakers and Molded Case Switches
- FB1 Fittings, Cast Metal Boxes Metal Bodies for Conduits
- OS1 Sheet Steel Outlet Boxes, Device Boxes, Device Boxes, Covers, and Box Supports.
- TC2 PVC Conduit
- TC3 PVC Fittings
- 250 Enclosures for Electrical Equipment

5. Underwriter's Laboratories Inc. (UL) Publications:

- 924 Standard for Safety of Emergency Lighting and Power Equipment
- 1561 Dry-Type General Purpose and Power Transformers
- ST20 Dry Type Transformers for General Applications

6. Institute of Electrical and Electronic Engineers (IEEE) Publication:

- C57.12.58 Guide of Conducting a Transient Voltage Analysis for a Dry-Type Transformer Coil
- 467 Grounding and Bonding
- 468 Electrical Insulation System

1.6 Product Delivery, Storage and Handling

- A. Ship unit(s) securely packaged and labeled for safe handling in shipment and to avoid damage or distortion.
- B. Where necessary, brace electrical equipment housing for hoisting, lowering and skidding into position. Label temporary internal bracing:
- C. Store electrical equipment in secure and dry storage facility.

1.7 Coordination

- A. Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow.
- B. Set inserts and sleeves in poured-in-place concrete, masonry work, and other structural components as they are constructed.
- C. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work.
- D. Coordinate electrical service connections to components furnished by utility companies.

1. Coordinate installation and connection of exterior underground and overhead

Transitway Extension to Pentagon City Station Design Specifications

- utilities and services, including provision for electricity- metering components.
2. Comply with requirements of authorities having jurisdiction and of utility company providing electrical power and other services.
- E. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.
- F. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.
- G. Submit written notice as to when the installed systems will be tested so that the Construction manager may be present to witness the tests.
- H. Coordinate arrangement, mounting, and support of electrical equipment:
1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
 2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
 3. To allow right of way for piping and conduit installed at required slope.
 4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
- I. A representative of the manufacturer may be present to witness the tests and verify the results.

PART 2 - PRODUCTS

2.1 Raceways

- A. EMT: ANSI C80.3, zinc-coated steel, compression fittings.
- B. FMC: Zinc-coated steel.
- C. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
- D. LFMC: Zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket.
- E. RNC: NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings.
- F. Raceway Fitting: Specifically designed for the raceway type with which used.
- G. RGS: ANSI C80.1 with threaded fittings.

2.2 Sleeves for Raceways and Cables

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

Transitway Extension to Pentagon City Station Design Specifications

C. Sleeves for Rectangular Openings: Galvanized sheet steel.

1. Minimum Metal Thickness:

- a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and no side more than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
- b. For sleeve cross-section rectangle perimeter equal to, or more than, 50 inches (1270 mm) and 1 or more sides equal to, or more than, 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

D. Grouts: Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

E. Sleeve Seals: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.

1. Sealing Elements: EPDM or NBR interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
2. Pressure Plates: Plastic, carbon steel or stainless steel. Include two for each sealing element.
3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating or stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.3 Conductors

A. Conductors, No. 10 AWG and Smaller: Solid copper.

B. Conductors, Larger Than No. 10 AWG: Stranded copper.

C. Insulation: Thermoplastic, rated at 75 deg C minimum.

D. Equipment Grounding Conductors: Insulated with green-colored insulation.

E. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

F. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.

G. Copper Bonding Conductors: As follows:

1. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG copper conductor, 1/4 inch in diameter.
2. Bonding Conductor: No. 4 or No. 6 AWG, stranded copper conductor.
3. Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
4. Tinned Bonding Jumper: Tinned-copper tape, braided copper conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

H. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with

Transitway Extension to Pentagon City Station Design Specifications

insulators.

2.4 Connector Products

- A. Bolted Connectors: Bolted-pressure-type connectors, or compression type.
- B. Welded Connectors: Exothermic-welded type, in kit form, and selected per manufacturer's written instructions.

2.5 Grounding Electrodes

- A. Ground Rods: Copper-clad steel: 80% copper minimum.
 - 1. Size: 3/4 inches in diameter by 120 inches in length.

2.6 Supporting Devices

- A. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.
- B. Metal Items for Use Outdoors or in Damp Locations: PVC coated hot-galvanized steel.
- C. Slotted-Steel Channel Supports: Flange edges turned toward web, and 9/16-inch diameter slotted holes at a maximum of 2 inches o.c., in webs.
- D. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.
- E. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
- F. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for nonarmored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.
- G. Expansion Anchors: Carbon-steel wedge or sleeve type.
- H. Toggle Bolts: All-steel springhead type.
- I. Powder-Driven Threaded Studs: Heat-treated steel.

2.7 Electrical Identification

- A. Identification Devices: A single type of identification product for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, and these Specifications.
- B. Raceway and Cable Labels: Comply with ANSI A13.1, Table 3, for minimum size of letters for legend and minimum length of color field for each raceway and cable size.
 - 1. Type: Preprinted, flexible, self-adhesive, vinyl. Legend is overlaminated with a clear, weather- and chemical-resistant coating.
 - 2. Color: Black letters on orange background.
- C. Underground Warning Tape: Permanent, bright-colored, continuous- printed,

Transitway Extension to Pentagon City Station Design Specifications

vinyl tape with the following features:

1. Not less than 6 inches wide by 4 mils thick.
 2. Compounded for permanent direct-burial service.
 3. Embedded continuous metallic strip or core.
 4. Printed legend that indicates type of underground line.
- D. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
- E. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- F. Engraved-Plastic Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch minimum thickness for signs up to 20 sq. in. and 1/8-inch minimum thickness for larger sizes. Engraved legend in white letters on black background.
- G. Panelboard Nameplates: Label each panelboard with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws.
- H. Interior Warning and Caution Signs: Comply with 29 CFR, Chapter XVII, Part 1910.145. Preprinted, aluminum, baked-enamel-finish signs, punched or drilled for mechanical fasteners, with colors, legend, and size appropriate to the application.
- I. Exterior Warning and Caution Signs: Comply with 29 CFR, Chapter XVII, Part 1910.145. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch, galvanized-steel backing, with colors, legend, and size appropriate to the application. 1/4- inch grommets in corners for mounting.
- J. Fasteners for Nameplates and Signs: Self-tapping, stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.

2.8 Boxes, Enclosures, And Cabinets

A. Outlet and Device Boxes

1. Sheet Metal Boxes: NEMA OS 1.
2. Cast-Metal Boxes: NEMA FB 1, Type FD, cast box with gasketed cover.

B. Pull and Junction Boxes

1. Small Sheet Metal Boxes: NEMA OS 1.
2. Cast-Metal Boxes: NEMA FB 1, cast aluminum with gasketed cover.

C. Enclosures and Cabinets: NEMA 250, Type 1, with continuous hinge cover and flush latch.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
2. Front: Secured to box with concealed trim clamps. For surface- mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

Transitway Extension to Pentagon City Station Design Specifications

3. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
4. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.

2.9 Panelboards

A. Manufacturers: Panelboards and Accessories shall be subject to compliance with requirements, provide products by one of the following:

1. Eaton Corp.; Cutler-Hammer Products.
2. ABB/General Electric Co.; Electrical Distribution & Control Div.
3. Siemens Energy & Automation, Inc.
4. Square D Co.

B. Bus: Hard-drawn copper, 98 percent conductivity.

C. Main and Neutral Lugs: Mechanical type suitable for use with conductor material.

D. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.

E. Future Devices: Mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

F. Feed-through Lugs: Mechanical type suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.

G. Install equipment grounding connections for panelboards with ground continuity to main electrical ground bus.

H. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

I. Short Circuit Rating: UL label indicating series-connected rating with integral or remote upstream devices. Include size and type of upstream device allowable, branch devices allowable, and UL series-connected short-circuit rating.

2.10 Overcurrent Protective Devices

A. Manufacturers: Overcurrent Protective Devices, Controllers, Contactors, and Accessories shall be subject to compliance with requirements, provide products by one of the following:

1. Eaton Corp.; Cutler-Hammer Products.
2. ABB/General Electric Co.; Electrical Distribution & Control Div.
3. Siemens Energy & Automation, Inc.
4. Square D Co.

B. Molded-Case Circuit-Breaker Features and Accessories. Standard frame sizes, trip ratings, and number of poles.

Transitway Extension to Pentagon City Station Design Specifications

1. Lugs: Mechanical style, suitable for number, size, trip ratings, and material of conductors.
2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air- conditioning, and refrigerating equipment.

2.11 General Purpose Transformer

- A. Standards: Shall conform to NEMA ST20. All characteristics, definitions, terminology, voltage designations and tests shall be in accordance with ANSI/IEEE C57.12.01.
- B. Application: Suitable for outdoor application and step down of the incoming 480 volts to 240Y/120 volt.
- C. Listing: UL 1561
- D. Type: Two winding, low voltage, dry-type.
- E. Cooling: Self-cooled.
- F. Ratings:
 1. kVA: As shown on Contract Drawings
 2. Temperature Rise: 115°C
 3. Frequency (Hertz): 60
 4. Primary Volts: 480
 5. Secondary Volts: 240Y/120
 6. Basic Impulse Level (kV): 10
 7. Impedance: 6.4%
- G. Core and Coil Assembly: Coils shall be of the continuous wound construction and shall be impregnated with non- hygroscopic, thermosetting resin. Cores shall be constructed of high grade, non-aging silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Magnetic flux densities shall be kept well below the saturation point. The complete coil and core assembly shall be bolted to the base of the enclosure, but isolated therefrom by means of rubber vibration-absorbing mounts.
- H. Insulation System: UL component recognized 220°C insulation system.
- I. Enclosure: Shall be constructed of heavy gauge, sheet- steel, ventilated enclosure. The ventilating openings shall be designed to prevent
- J. accidental access to live parts in accordance with UL, NEMA and National Electrical Code standards for ventilated enclosures.
- K. Factory Tests: Shall be made at the factory and in accordance with ANSI C57.12.91, as applicable. At the conclusion of the tests, the Engineer shall be furnished with copies of all original test data for acceptance. The accuracy of the calibration of all instruments to be employed during the tests shall be ascertained and recorded at the beginning of the tests. Tests for transformers shall include,

Transitway Extension to Pentagon City Station Design Specifications

but not be limited to, the following:

1. No-load losses
2. Polarity check
3. Applied potential test
4. Induced potential test
5. Ratio check
6. Sound levels (*)
7. Temperature rise (*)
8. No-load losses (*)
9. Impedance (*)

(*) Certified test results of previously built similar units will be accepted in lieu of actual tests.

PART 3 - EXECUTION

3.1 Electrical Equipment Installation

- A. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.
- B. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.
- C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- D. Right-of-Way: Give to raceways and piping systems installed at a required slope.

3.2 Raceway Application

Use the following raceways for outdoor installations:

1. Exposed: RGS, LFMC or Stainless Steel.
2. Exposed: Flexible.
3. Underground, Grouped Run: PVC
4. Underground, Grouped Run: HDPE
5. Connection to Vibrating Equipment: LFMC.
6. Boxes and Enclosures: NEMA 250, Type 3R.

3.3 Sleeve Installation for Electrical Penetrations

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.

Transitway Extension to Pentagon City Station Design Specifications

- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core- drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
 - C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
 - D. Cut sleeves to length for mounting flush with both surfaces of walls.
 - E. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level.
 - F. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable, unless indicated otherwise.
 - G. Seal space outside of sleeves with grout for penetrations of concrete and masonry. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
 - H. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint.
 - I. Sleeve Seal: Install to seal exterior wall penetrations. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.
- 3.4 Raceway and Cable Installation
- A. Conceal raceways and cables, unless otherwise indicated, within finished walls, ceilings, and floors.
 - B. Install raceways and cables at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Locate horizontal raceway runs above water and steam piping.
 - C. Use temporary raceway caps to prevent foreign matter from entering.
 - D. Make conduit bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.
 - E. Use raceway and cable fittings compatible with raceways and cables and suitable for use and location.
 - F. Install raceways embedded in slabs in middle third of slab thickness where practical, and leave at least 1-inch concrete cover.
 - 1. Secure raceways to reinforcing rods to prevent sagging or shifting during concrete placement.
 - 2. Space raceways laterally to prevent voids in concrete.
 - 3. Install conduit larger than 1-inch trade size parallel to or at right angles to main reinforcement. Where conduit is at right angles to reinforcement, place conduit close to slab support.

Transitway Extension to Pentagon City Station Design Specifications

4. Make bends in exposed parallel or banked runs from same centerline to make bends parallel. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for exposed parallel raceways.
- G. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line with not less than 210-lb tensile strength. Leave at least 12 inches of slack at each end of the pull wire.
- H. Install telephone and signal system raceways, 2-inch trade size and smaller, in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements, in addition to requirements above.
- I. Connect motors and equipment subject to vibration, noise transmission, or movement with a maximum of 72-inch flexible conduit. Install LFMC in wet or damp locations. Install separate ground conductor across flexible connections.
- J. Set floor boxes level and trim after installation to fit flush to finished floor surface.

3.5 Wiring Installation

- A. Feeders: Type THHN/THWN insulated conductors in raceway.
- B. Underground Feeders and Branch Circuits: Type XHHW conductors in raceway.
- C. Branch Circuits: Type THHN/THWN insulated conductors in raceway.
- D. Remote-Control Signaling and Power-Limited Circuits: Type THHN/THWN insulated conductors in raceway for Classes 1, 2, and 3, unless otherwise indicated.
- E. Install splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors. Splices shall not be utilized without prior approval of Engineer.
- F. Install wiring at outlets with at least 12 inches of slack conductor at each outlet.
- G. Connect outlet and component connections to wiring systems and to ground. Tighten electrical connectors and terminals, according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.

3.6 Grounding

- A. Install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes.
 1. Drive ground rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.
 2. Interconnect ground rods with grounding electrode conductors. Use exothermic welds. Make connections without exposing steel or damaging copper coating.
- B. In raceways, use insulated equipment grounding conductors.

Transitway Extension to Pentagon City Station Design Specifications

- C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections, except those at test wells.
- D. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.
- E. Install equipment grounding conductors in all feeders and circuits.
- F. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- G. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers and supports is not transmitted to rigidly mounted equipment. Use exothermic-welded connectors for outdoor locations, unless a disconnect-type connection is required; then, use a bolted clamp. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.
- H. Bond interior metal piping systems and metal air ducts to equipment grounding conductors of associated pumps, fans, blowers, electric heaters, and air cleaners. Use braided-type bonding straps.
- I. Bond each aboveground portion of gas piping system upstream from equipment shutoff valve.

3.7 Connections

- A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- B. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.
- C. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.
- D. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond

Transitway Extension to Pentagon City Station Design Specifications

electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.

- E. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
- F. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.
- G. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

3.8 Electrical Supporting Device Application

- A. Damp Locations and Outdoors: PVC coated hot-dip galvanized materials, U-channel system components.
- B. Dry Locations: Steel materials.
- C. Support Clamps for PVC Raceways: Click-type clamp system.
- D. Selection of Supports: Comply with manufacturer's written instructions.
- E. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four; minimum of 200-lb design load.

3.9 Support Installation

- A. Install support devices to securely and permanently fasten and support electrical components.
- B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.
- C. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
- D. Size supports for multiple raceway installations so capacity can be increased by a 25 percent minimum in the future.
- E. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.
- F. Install 1/4-inch diameter or larger threaded steel hanger rods, unless otherwise indicated.
- G. Spring-steel fasteners specifically designed for supporting single conduits or tubing may be used instead of malleable-iron hangers for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to slotted channel and angle supports.
- H. Arrange supports in vertical runs so the weight of raceways and enclosed

Transitway Extension to Pentagon City Station Design Specifications

conductors is carried entirely by raceway supports, with no weight load on raceway terminals.

- I. Simultaneously install vertical conductor supports with conductors.
- J. Separately support cast boxes that are threaded to raceways and used for fixture support. Support sheet-metal boxes directly from the building structure or by bar hangers. If bar hangers are used, attach bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches from the box.
- K. Install metal channel racks for mounting cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices unless components are mounted directly to structural elements of adequate strength.
- L. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated:
 - 1. Wood: Fasten with wood screws.
 - 2. Masonry: Toggle bolts on hollow masonry units and expansion bolts on solid masonry units.
 - 3. New Concrete: Concrete inserts with machine screws and bolts.
 - 4. Steel: Welded threaded studs or spring-tension clamps on steel.
 - 5. Field Welding: Comply with AWS D1.1.
 - 6. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or other items.
 - 7. Light Steel: Sheet-metal screws.
 - 8. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load provided by manufacturer.

3.10 Identification Materials and Devices

- A. Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in the Contract Documents or required by codes and standards. Use consistent designations throughout Project.
- C. Self-Adhesive Identification Products: Clean surfaces before applying.
- D. Identify raceways and cables with color banding as follows:
 - 1. Bands: Pretensioned, snap-around, colored plastic sleeves or colored adhesive marking tape. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of two-color markings in contact, side by side.
 - 2. Band Locations: At changes in direction, at penetrations of walls and floors, at

Transitway Extension to Pentagon City Station Design Specifications

50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

3. Colors: As follows:

a. Fire Alarm System: Red.

b. Security System: Blue and yellow.

c. Telecommunication System: Green and yellow.

E. Tag and label circuits designated to be extended in the future. Identify source and circuit numbers in each cabinet, pull and junction box, and outlet box. Color-coding may be used for voltage and phase identification.

F. Install continuous underground plastic markers during trench backfilling, for exterior underground power, control, signal, and communication lines located directly above power and communication lines. Locate 6 to 8 inches below finished grade. If width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches, overall, use a single line marker.

G. Color-code 208/120-V system secondary service, feeder, and branch- circuit conductors throughout the secondary electrical system as follows:

1. Phase A: Black.

2. Phase B: Red.

3. Phase C: Blue.

4. Neutral: White.

5. Ground: Green.

H. Color-code 480/277-V system secondary service, feeder, and branch- circuit conductors throughout the secondary electrical system as follows:

1. Phase A: Yellow.

2. Phase B: Brown.

3. Phase C: Orange.

4. Neutral: White with a colored stripe or gray.

5. Ground: Green.

I. Install warning, caution, and instruction signs where required to comply with 29 CFR, Chapter XVII, Part 1910.145, and where needed to ensure safe operation and maintenance of electrical systems and of items to which they connect. Install engraved plastic-laminated instruction signs with approved legend where instructions are needed for system or equipment operation. Install metal-backed butyrate signs for outdoor items.

J. Install engraved-laminated emergency-operating signs with white letters on red background with minimum 3/8-inch high lettering for emergency instructions on power transfer, load shedding, and other emergency operations.

3.11 Panelboards Installation

A. Install panelboards and accessories according to NEMA PB 1.1.

Transitway Extension to Pentagon City Station Design Specifications

- B. Mounting Heights: Top of trim 74 inches above finished floor, unless otherwise indicated.
- C. Mounting: Plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
- D. Circuit Directory: Create a directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- E. Install filler plates in unused spaces.
- F. Provision for Future Circuits at Flush Panelboards: Stub four 1-inch empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future.
- G. Wiring in Panelboard Gutters: Arrange conductors into groups and bundle and wrap with wire ties after completing load balancing.
- H. Prepare for acceptance tests as follows:
 - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- I. Testing Agency: Engage a qualified independent testing agency to perform specified testing.
- J. Testing: After installing panelboards and after electrical circuitry has been energized, demonstrate product capability and compliance with requirements.
 - 1. Procedures: Perform each visual and mechanical inspection and electrical test indicated in NETA ATS, Section 7.6 for molded- case circuit breakers. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- K. Provide a full warranty for a period of two years, unless specified otherwise in the general conditions, materials, workmanship, and services provided. Replace, repair, or adjust any item or workmanship found to be unacceptable to the Owner. Contractor shall be responsible for damages caused by or resulting from defects in workmanship.
- L. Install equipment grounding connections for panelboards with ground continuity to main electrical ground bus.
- M. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- N. Balancing Loads: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes as follows:
 - 1. Measure as directed during period of normal system loading.
 - 2. Perform load-balancing circuit changes outside normal occupancy/working

Transitway Extension to Pentagon City Station Design Specifications

schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data-processing, computing, transmitting, and receiving equipment.

3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

3.12 Installation of Transformers

- A. Installation shall comply with ANSI C2, C57.94, and C57.96.
- B. Install transformers in position shown and in accordance with manufacturer's recommendations.
- C. Inspections: Before placing transformer(s) in service perform the following inspections:
 1. Verify selection of taps and ratio connections
 2. Check tightness and clearances of all electrical connections
- D. Tests:
 1. General: Shall be performed in accordance with ANSI C57.12.91, and NETA ATS-1995, as applicable.
 2. Before placing transformer(s) in service, test secondary voltage.

3.13 Lighting Installation

- A. Fixtures: Set level, plumb, and square with ceiling, walls, and structural steel secure according to manufacturer's written instructions and approved submittal materials. Install lamps in each fixture.
- B. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- C. Advance Notice: Give dates and times for field tests.
- D. Provide instruments to make and record test results.
- E. Tests: As follows:
 1. Verify normal operation of each fixture after installation.
 2. Report results in writing.
- F. Malfunctioning Fixtures and Components: Replace or repair, then retest. Repeat procedure until units operate properly.
- G. Clean fixtures internally and externally after installation. Use methods and materials recommended by manufacturer.
- H. Corroded Fixtures: Replace during warranty period.

3.14 Cutting and Patching

- A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other

Transitway Extension to Pentagon City Station Design Specifications

surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.

- B. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces by skilled mechanics of trades involved.

3.15 Field Quality Control

- A. Inspect installed components for damage and faulty work, including the following:
 - 1. Raceways.
 - 2. Building wire and connectors.
 - 3. Grounding.
 - 4. Supporting devices for electrical components.
 - 5. Electrical identification.
 - 6. Boxes, enclosures, and cabinets.
 - 7. Panelboards.
 - 8. General Purpose Transformers.
 - 9. Lighting.
 - 10. Cutting and patching for electrical construction.
 - 11. Touchup painting.
- B. All concealed electrical equipment shall be inspected prior to covering.
- C. Grounding System Verification: Verify and test that grounding system is installed in accordance with Contract Documents and resistance to earth does not exceed five ohms.
- D. Lighting and Receptacle System Operability: Verify by testing the operability of lighting and receptacle circuits.
- E. Verification and Testing for Electrical Door Strikes and Door Position Indicators: Verify by testing the integrity and operation of electric door strikes and door position indicators.

3.16 Refinishing and Touchup Painting

- A. Clean damaged and disturbed areas and apply primer, intermediate, and finish coats to suit the degree of damage at each location.
- B. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.
- C. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
- D. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

Transitway Extension to Pentagon City Station Design Specifications

3.17 Cleaning and Protection

- A. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.
- B. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basic Electrical Materials and Methods

- A. Ground Rods will be measured and paid for at the Contract unit price per each 10 ft length. The payment will be full compensation for lugs and welding, excavation, backfill, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
- B. Electrical conduit will be measured and paid for at the Contract unit price per linear foot measured along the center line of the conduit from end to end. The payment will be full compensation for all excavation, backfill, encasement concrete, hot mix asphalt, paint, pull wires, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
- C. Power Distribution Cabinet will be measured and paid for at the Contract unit price per each at the phasing and amperage specified. The payment will be full compensation for the disconnect switch, enclosures, circuit breakers, panels, contactors, photocell, meter socket, meter, shunts, cover plate, lightning arresters, wiring, conduit risers, wiring trough, conduit nipples and adapters, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
- D. Power Service Pedestal will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all enclosures, panel boards, circuit breakers, internal wiring, wiring devices, concrete collar, meter sockets, meter, shunts, cover plates, wiring, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
- E. Utility connection coordination with the utility company will not be measured, but the cost will be incidental to other pertinent items.
- F. Trenching and backfilling will not be measured but the cost will be incidental to the Contract unit price for the installation of the pertinent Conduit.
- G. Electrical Cable, Grounding Wire, and Communication Cable will be measured and paid for at the Contract unit price per linear foot for the type and sizes specified.
- H. Electrical Hand Holes, Pull and Junction Boxes will be measured and paid for at the Contract unit price per each unless otherwise specified in the Contract Documents. The payment will be full compensation for all excavation, aggregate drain, concrete, bolts, bricks, pipes, backfill, sealer, frames and covers, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

CONSTRUCTION COST ESTIMATE DETAIL**PREPARED BY: MANUEL E. FERNANDES**THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION**

IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

BIDDERS SHALL PROVIDE PRICES ON BOTH PROJECTS TO BE DEEMED RESPONSIVE. UNIT PRICES SHALL BE ENTERED FOR EACH PROJECT INDIVIDUALLY ON THERE RESPECTIVE TABS

CategoryNum	CATEGORY TITLE	MA13 Bid	CC16 Bid	Total Bid Amount
C1	GENERAL EARTH WORK	\$ 12,933.00	\$ 41,580.00	\$ 54,513.00
C2	CONCRETE WORK	\$ 311,920.75	\$ 274,236.25	\$ 586,157.00
C3	ASPHALT WORK	\$ 55,101.50	\$ 227,298.00	\$ 282,399.50
C4	STORM SEWER UTILITY WORK	\$ 14,451.00	\$ 151,897.00	\$ 166,348.00
C5	GUARDRAIL	\$ -	\$ -	\$ -
C6	WATERMAIN WORK	\$ -	\$ 90,856.00	\$ 90,856.00
C7	SANITARY SEWER WORK	\$ -	\$ -	\$ -
C8	TRAFFIC SIGNAL WORK	\$ -	\$ 1,087,802.00	\$ 1,087,802.00
C9	STREET LIGHTING WORK	\$ 156,076.00	\$ 343,064.00	\$ 499,140.00
C10	PAVEMENT MARKING AND SIGNAGE WORK	\$ 69,977.15	\$ 65,008.95	\$ 134,986.10
C11	LANDSCAPE AND HARDSCAPE RESTORATION WORK	\$ 13,662.30	\$ 47,743.00	\$ 61,405.30
C12	BUS STOP SHELTER AND FURNISHINGS	\$ 496,357.50	\$ -	\$ 496,357.50
C13	EROSION AND SEDIMENT CONTROL WORK	\$ -	\$ -	\$ -
C15	UNLISTED WORK	\$ -	\$ -	\$ -
C16	MOT AND RE-MOBILIZATION WORK	\$ -	\$ -	\$ -
C17	STORMWATER WORK	\$ -	\$ -	\$ -
C18	NON COUNTY UTILITIES	\$ -	\$ -	\$ -
PCT	PERCENTAGE LINE ITEMS	\$ 221,262.00	\$ 389,862.00	\$ 611,124.00
	SUB TOTAL	\$ 1,351,741.20	\$ 2,719,347.20	
GRAND TOTAL				\$ 4,071,088.40

CONSTRUCTION COST ESTIMATE DETAIL**PREPARED BY: MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
C1 GENERAL EARTH WORK					
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02200-C1-00130	Aggregate, VDOT #21-A (Compacted in Place per VDOT standards & Specs)	73	CY	\$161.00	\$11,753.00
07110-C1-SP010	Hot Fluid - Applied Rubberized Asphalt Waterproofing, per plan over underground parking garage. (Waterproofing Sealant)	200	SF	\$5.90	\$1,180.00
				SUBTOTAL	\$12,933.00

C2 CONCRETE WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02750-C2-00060	Concrete Curb & Gutter, Standard C-2 and C-2R (Arlington County Detail R-2.0), includes curb & gutter for aprons, ramps, etc.	240	LF	\$59.00	\$14,160.00
02611-C2-00110	Concrete Sidewalk, 4" Thickness (Arlington County Detail R-2.0)	530	SY	\$92.00	\$48,760.00
02611-C2-00190	CG-12 Detectable Warning Surface - Truncated Domes	44	SY	\$377.50	\$16,610.00
02614-C2-SP010	Cast In Place Detectable Warning Surface (Color per Plan)	35	SY	\$529.25	\$18,523.75
02750-C2-SP100	Concrete Curb & Gutter, Standard C-4 (Arlington County Detail R-2.0), includes curb & gutter for Transit Station	166	LF	\$61.50	\$10,209.00
03100-C2-SP200	10" Thick Reinforced Rigid Concrete Road Pavement, Per Plan Detail	1119	SY	\$182.00	\$203,658.00
				SUBTOTAL	\$311,920.75

C3 ASPHALT WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02600-C3-00010	Asphalt Concrete, Planing or Milling (1/2" to 3" Depth)	791	SY	\$15.50	\$12,260.50
02600-C3-00030	Asphalt Concrete, Base Course (VDOT BM-25.0A)	73	TON	\$217.00	\$15,841.00
02600-C3-00060	Asphalt Concrete, Surface Course (VDOT SM-9.5A)	120	TON	\$225.00	\$27,000.00

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: MANUEL E. FERNANDES

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
				SUBTOTAL	\$55,101.50

C4 STORM SEWER UTILITY WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02505-C4-00100	CB-2A or CB-2B (throat lengths from 8'-6" up to 16'-0"), In Place Up to 6' Deep, Arlington County Standards.	1	EA	\$14,451.00	\$14,451.00
				SUBTOTAL	\$14,451.00

C5 GUARDRAIL

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C6 WATERMAIN WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C7 SANITARY SEWER WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C8 TRAFFIC SIGNAL WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C9 STREET LIGHTING WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
14030-C9-00040	Furnish and Install 2 Inch Sch 40 PVC Conduit in Trench (Detail 14030-01)	1720	LF	\$34.50	\$59,340.00
14040-C9-00170	Furnish and Install Junction Box and Lid SMALL (Detail 14040-01)	3	EA	\$2,310.00	\$6,930.00
14040-C9-00220	Enter Existing Junction Box	3	EA	\$1,010.00	\$3,030.00
14050-C9-00260	Furnish & Install # 6 THHN Copper Cable	204	LF	\$11.50	\$2,346.00
14060-C9-00290	Install Streetlight Pole Foundation Type F-1 (Detail 14060-01)	2	EA	\$5,486.00	\$10,972.00
14100-C9-00630	Furnish and Install Meter Pan, Pedestal, Control Box and Components (Detail 14100-01)	2	EA	\$11,550.00	\$23,100.00

CONSTRUCTION COST ESTIMATE DETAIL**PREPARED BY: MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
14112-C9-00920	Decorative Post-Top Aluminum Streetlight Pole with Double Post Top Luminaires per Arlington Lighting Standard 14112-02	2	EA	\$16,170.00	\$32,340.00
13161-C9-SP010	Furnish and Install Junction Box and Lid LARGE (Detail 61-04 Type 4)	2	EA	\$4,504.50	\$9,009.00
13161-C9-SP020	Furnish and Install Junction Box and Lid LARGE (Detail 61-04 Type 5)	2	EA	\$4,504.50	\$9,009.00
				SUBTOTAL	\$156,076.00

C10 PAVEMENT MARKING AND SIGNAGE WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02900-C10-00050	Twenty Four (24) Inch Transverse Markings, Note: Used For Continental (Ladder) Crosswalk	213	LF	\$11.20	\$2,385.60
02900 C10-00060	Yield Line Markings (Twenty Four (24) Inch Triangle/Twelve (12) Inch Spacing), Note: LF is Width of Lane for Units	43	LF	\$31.40	\$1,350.20
02900-C10-00070	Four (4) Inch Longitudinal Solid Line	520	LF	\$1.65	\$858.00
02900-C10-00120	Six (6) Inch Longitudinal Solid Line	1410	LF	\$2.50	\$3,525.00
02900-C10-00230	Eight (8) Foot Letters, Note: 'Turn Only' (for example)	42	EA	\$110.00	\$4,620.00
02900-C10-00240	Single Arrows	2	EA	\$198.00	\$396.00
02900-C10-00350	Colorized Bike Lane Coatings (per Specification 02900)	40	SY	\$116.50	\$4,660.00
02619-C10-00410	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar)	8	EA	\$556.70	\$4,453.60
02619 C10 00440	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar), Mount Sign to Light or Utility Pole	1	EA	\$924.00	\$924.00
02619-C10-SP010	Removal of Existing Sign and Post	13	EA	\$140.75	\$1,829.75
02900-C10-SP100	Colorized Transit Lane Coatings (per Specification 02900)	330	SY	\$67.50	\$22,275.00
13183-C10-SP200	Furnish and Install Rectangular Rapid Flashing Beacon with Foundation, per 72-01 detail	2	EA	\$11,350.00	\$22,700.00
				SUBTOTAL	\$69,977.15

CONSTRUCTION COST ESTIMATE DETAIL**PREPARED BY: MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
LANDSCAPE AND HARDSCAPE RESTORATION					
C11 WORK					
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02801-C11-00040	Shredded hardwood mulch; Aged 6 months minimum - Free of Trash & Debris	3	CY	\$115.00	\$345.00
02801-C11-00060	Sod, Tall Fescue/Bluegrass Mixture	62	SY	\$23.00	\$1,426.00
02800-C11-00500	Tree/Stump Removal - Class A. Remove and Dispose, Up to 6" DBH to 12" DBH (Diameter at Breast Height)	6	EA	\$693.00	\$4,158.00
02800-C11-00100	Brick Pavers, Including Concrete Base (Arlington County Detail R-2.1)	34	SY	\$227.45	\$7,733.30
				SUBTOTAL	\$13,662.30

C12 BUS STOP SHELTER AND FURNISHINGS

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
10530-C12-00010	Bus Shelter Pad (Detail R-2.10)	65	SY	\$254.50	\$16,542.50
10530-C12-00100	Install 6' Free-standing Bench	4	EA	\$3,690.00	\$14,760.00
10530-C12-00130	Install Bus Shelter Litter Receptacle	2	EA	\$3,267.00	\$6,534.00
10530-C12-00131	Install Bus Shelter Recycling Receptacle	2	EA	\$3,387.00	\$6,774.00
10530-C12-00185	Solar-powered LED Light Panel Kit	4	EA	\$6,295.00	\$25,180.00
10530-C12-SP010	Install Modified Bicycle Rack per plans	6	EA	\$1,087.00	\$6,522.00
10530-C12-SP020	Install 4' Free-standing Bench	6	EA	\$3,883.00	\$23,298.00
10530-C12-SP030	Install Bus Shelter Unit, 5' x 20' Shelter per plans	4	EA	\$33,245.00	\$132,980.00
10530-C12-SP040	Furnish and Install Shelter Name Box and all components to shelter	2	EA	\$2,895.00	\$5,790.00
16020-C12-SP100	Furnish and install Electrical and Communication Station Utility System per the Approved Station Design Plan Set (including but not limited to: conduit, wiring, junction boxes, etc.)	1	LS	\$108,807.00	\$108,807.00
10425-C12-SP110	Furnish and Install Station Flag Sign per Approved Station Design Plan Set	2	EA	\$29,704.00	\$59,408.00
10425-C12-SP120	Furnish and Install Bolt Down LCD Monitor Stanchion per Approved Station Design Plan Set	2	EA	\$23,317.50	\$46,635.00
10425-C12-SP130	Furnish and Install LCD Monitor per Approved Station Design Plan Set	2	EA	\$12,848.00	\$25,696.00

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: MANUEL E. FERNANDES

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
10425-C12-SP140	Install Station Flag Sign Foundation, per Approved Station Design Plan Set	3	CY	\$3,167.00	\$9,501.00
10531-C12-SP200	Install Transit Station Rub Rail	1	LS	\$7,930.00	\$7,930.00
				SUBTOTAL	\$496,357.50

C13 EROSION AND SEDIMENT CONTROL WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C15 UNLISTED WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C16 MOT AND RE-MOBILIZATION WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C17 STORMWATER WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C18 NON COUNTY UTILITIES

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

CONTRACT TOTAL (EXCLUDING PERCENTAGE ITEMS)	\$1,130,479.20
----------------------------------------------------	-----------------------

PCT PERCENTAGE LINE ITEMS

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
01500-C13-10000	Temporary Erosion and Sediment Controls	1	LS	\$25,000.00	\$25,000.00
01000-C16-00010	Maintenance of Traffic (MOT)	1	LS	\$100,000.00	\$100,000.00
01000-C16-00030	Mobilization and De-Mobilization	1	LS	\$92,000.00	\$92,000.00
01500-SA-00200	SWPPP Administration	1	LS	\$4,262.00	\$4,262.00
				PERCENTAGE LINE ITEMS SUBTOTAL	\$221,262.00



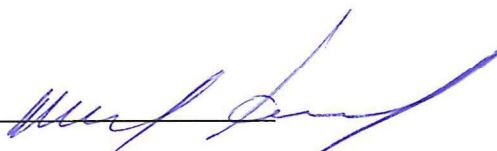
CONSTRUCTION COST ESTIMATE DETAIL

PREPARED BY: MANUEL E. FERNANDES

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
PROJECT TOTAL :					\$1,351,741.20



CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: **MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
C1	GENERAL EARTH WORK				
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02200-C1-00130	Aggregate, VDOT #21-A (Compacted in Place per VDOT standards & Specs)	440	CY	\$94.50	\$41,580.00
				SUBTOTAL	\$41,580.00

C2	CONCRETE WORK				
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02750-C2-00020	Concrete Curb, Standard Header Curb C-3 (Arlington County Detail R-2.0), includes curb for aprons, ramps, etc.	115	LF	\$52.00	\$5,980.00
02750-C2-00060	Concrete Curb & Gutter, Standard C-2 and C-2R (Arlington County Detail R-2.0), includes curb & gutter for aprons, ramps, etc.	1339	LF	\$61.75	\$82,683.25
02611-C2-00110	Concrete Sidewalk, 4" Thickness (Arlington County Detail R-2.0)	1301	SY	\$91.00	\$118,391.00
02611-C2-00190	CG-12 Detectable Warning Surface - Truncated Domes	18	SY	\$411.00	\$7,398.00
02611-C2-00180	Concrete Driveway Entrance, 9" Thick Commercial (Arlington County Details R-2.4A, R-2.4B, R-2.4C, R-2.4D)	188	SY	\$318.00	\$59,784.00
				SUBTOTAL	\$274,236.25

C3	ASPHALT WORK				
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02600-C3-00010	Asphalt Concrete, Planing or Milling (1/2" to 3" Depth)	4344	SY	\$6.25	\$27,150.00
02600-C3-00030	Asphalt Concrete, Base Course (VDOT BM-25.0A)	553	TON	\$186.00	\$102,858.00
02600-C3-00060	Asphalt Concrete, Surface Course (VDOT SM-9.5A)	705	TON	\$138.00	\$97,290.00
				SUBTOTAL	\$227,298.00

C4	STORM SEWER UTILITY WORK				
MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02500-C4-00820	15" Pipe, RCP Class IV, In Place Up to 6' Deep	196	LF	\$224.00	\$43,904.00

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: **MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02500-C4-00850	18" Pipe, RCP Class IV, In Place Up to 6' Deep	83	LF	\$243.00	\$20,169.00
02500-C4-00030	Storm Manhole MH-2 (Arlington County Detail D-3.3), In Place, DEPTH 8'	2	EA	\$13,850.00	\$27,700.00
02505-C4-00120	PCB-2, In Place Up to 6' Deep, Arlington County Standards	5	EA	\$9,293.00	\$46,465.00
02505-C4-00470	Catch Basin Structure Top, Remove & Replace	1	EA	\$4,636.00	\$4,636.00
02505-C4-00520	Convert Catch Basin to Manhole	1	EA	\$5,818.00	\$5,818.00
02505-C4-00600	Storm Manhole, Catch Basin, Drop Inlet, Yard Inlet, or Grate Inlet, Remove	1	EA	\$3,205.00	\$3,205.00
				SUBTOTAL	\$151,897.00

C5 GUARDRAIL

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C6 WATERMAIN WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02550-C6-00190	Connect To Existing 12-Inch Water Main	2	EA	\$8,395.00	\$16,790.00
02550-C6-00250	Remove Existing Fire Hydrant	2	EA	\$2,875.00	\$5,750.00
02550-C6-00270	Install New Fire Hydrant (includes Fire Hydrant, Gate Valve with Valve Box and up to 20 LF 6-inch DIP CL-52)	2	EA	\$18,400.00	\$36,800.00
02550-C6-00300	Cut & Cap 12-Inch Water Main	2	EA	\$5,404.00	\$10,808.00
02550-C6-00030	12-Inch Water Main, DIP CL-52, Upto 6' Deep	48	LF	\$371.00	\$17,808.00
02550-C6-00540	Abandon Existing Water Main (All sizes and depths)	20	LF	\$145.00	\$2,900.00
				SUBTOTAL	\$90,856.00

C7 SANITARY SEWER WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C8 TRAFFIC SIGNAL WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
13160-C8-03000	Traffic Signal Cost	1	LS	\$1,087,802.00	\$1,087,802.00
				SUBTOTAL	\$1,087,802.00

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: **MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
---------------	-------------	-----	------	------------	-------

C9 STREET LIGHTING WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
14030-C9-00030	Furnish and Install 2 inch SCH 80 HDPE Direct Bore Conduit (Detail 14030-01)	915	LF	\$98.20	\$89,853.00
14040-C9-00180	Furnish and Install Junction Box and Lid LARGE (Detail 14040-02)	2	EA	\$2,887.00	\$5,774.00
14050-C9-00260	Furnish & Install # 6 TNNH Copper Cable	5000	LF	\$11.50	\$57,500.00
14060-C9-00290	Install Streetlight Pole Foundation (Detail 14060-01)	11	EA	\$5,486.00	\$60,346.00
14112-C9-00910	Decorative Post-Top Aluminum Streetlight Pole with Single Post-Top Luminaire per Arlington Lighting Standard 14112-01	11	EA	\$11,781.00	\$129,591.00
				SUBTOTAL	\$343,064.00

C10 PAVEMENT MARKING AND SIGNAGE WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02900-C10-00040	Eighteen (18) Inch Transverse Markings	240	LF	\$8.60	\$2,064.00
02900-C10-00050	Twenty Four (24) Inch Transverse Markings, Note: Used For Continental (Ladder) Crosswalk	1005	LF	\$8.50	\$8,542.50
02900-C10-00070	Four (4) Inch Longitudinal Solid Line	1565	LF	\$1.25	\$1,956.25
02900-C10-00080	Four (4) Inch Longitudinal Skip Line (Ten (10) Foot Line/Thirty (30) Foot Spacing), Note: Forty (40) LF Consists of Ten (10) LF of Marking and Thirty (30) LF of Space	975	LF	\$1.25	\$1,218.75
02900-C10-00160	Six (6) Inch Longitudinal Skip Line (Two (2) Foot Line/ Four (4) Foot Spacing), Note: Twelve (12) LF Consists of Two (2) LF of Marking and Four (4) LF of Space	955	LF	\$2.15	\$2,053.25
02900-C10-00170	Twelve (12) Inch Yellow Longitudinal Centerline, Two - Four (4) Inch Yellow Lines with Four (4) Inch Separation	310	LF	\$2.45	\$759.50
02900-C10-00240	Single Arrows	13	EA	\$167.50	\$2,177.50
02900-C10-00250	Combination Arrows	5	EA	\$246.00	\$1,230.00

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: **MANUEL E. FERNANDES**

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02900-C10-00290	Standard Bicycle Symbols (MUTCD, Chapter 9C, Figure 9C-3), "Bike Symbol", "Helmeted Bicyclist Symbol"	2	EA	\$301.20	\$602.40
02900-C10-00300	Standard Bicycle Symbols (MUTCD, Chapter 9C, Figure 9C-9), "Shared Lane Marking"	8	EA	\$363.00	\$2,904.00
02900-C10-00320	Six (6) Foot Bicycle Lane Arrow (Only for Multi-Use or Bikes Opposing Traffic)	2	EA	\$347.00	\$694.00
02619-C10-00410	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar)	8	EA	\$556.50	\$4,452.00
02619-C10-00420	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar), Relocate with Existing Post	6	EA	\$492.00	\$2,952.00
02900-C10-SP001	Eight (8) Inch Yellow Gore Markings, Ten (10) Foot Spacing @ 45 Degree	370	LF	\$2.60	\$962.00
02900-C10-SP002	Detectable Directional Wayfinding Centerline	112	LF	\$289.65	\$32,440.80
				SUBTOTAL	\$65,008.95

LANDSCAPE AND HARDSCAPE**C11 RESTORATION WORK**

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02800-C11-00030	Topsoil for Street Trees, Purchased Mixture (per Arlington County DPR Specification)	214	CY	\$172.50	\$36,915.00
02801-C11-00060	Sod, Tall Fescue/Bluegrass Mixture	385	SY	\$11.50	\$4,427.50
02800-C11-00500	Tree/Stump Removal - Class A. Remove and Dispose, Up to 6" DBH to 12" DBH (Diameter at Breast Height)	3	EA	\$693.50	\$2,080.50
02800-C11-00603	Trees, Deciduous - 2.0 to 2.5" caliper	15	EA	\$288.00	\$4,320.00
				SUBTOTAL	\$47,743.00

C12 BUS STOP SHELTER AND FURNISHINGS

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C13 EROSION AND SEDIMENT CONTROL WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
---------------	-------------	-----	------	-----------	-------

CONSTRUCTION COST ESTIMATE DETAILPREPARED BY: MANUEL E. FERNANDES

THE UNDERSIGNED CERTIFIES THAT **FORT MYER CONSTRUCTION CORPORATION** IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER **2701015396** WAS ISSUED ON THE **22nd** DAY OF **JUNE 1976**. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR AGREES TO PERFORM RELATED WORK FOR THE FOLLOWING ITEMS AT THE FOLLOWING STIPULATED PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
				SUBTOTAL	\$0.00

C15 UNLISTED WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C16 MOT AND RE-MOBILIZATION WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C17 STORMWATER WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

C18 NON COUNTY UTILITIES

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
				SUBTOTAL	\$0.00

CONTRACT TOTAL (EXCLUDING PERCENTAGE ITEMS)	\$2,329,485.20
----------------------------------------------------	-----------------------

PCT PERCENTAGE LINE ITEMS

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
01500-C13-10000	Temporary Erosion and Sediment Controls	1	LS	\$ 50,000.00	\$50,000.00
01000-C16-00010	Maintenance of Traffic (MOT)	1	LS	\$ 165,600.00	\$165,600.00
01000-C16-00030	Mobilization and De-Mobilization	1	LS	\$ 170,000.00	\$170,000.00
01500-SA-00200	SWPPP Administration	1	LS	\$ 4,262.00	\$4,262.00
	PERCENTAGE LINE ITEMS SUBTOTAL				\$389,862.00

PROJECT TOTAL :	\$2,719,347.20
------------------------	-----------------------

