



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

CONTRACT AWARD COVERPAGE

| | |
|--|--|
| TO: SAGRES CONSTRUCTION CORPORATION 3680 WHEELER AVENUE, SUITE 300 ALEXANDRIA, VIRGINIA 22304 | DATE ISSUED: MARCH 31, 2022 |
| | CONTRACT NO: 22-DES-ITB-560 |
| | CONTRACT TITLE: Fort Myer Heights Watermain Improvement Project |

THIS IS A NOTICE OF AWARD OF CONTRACT AND NOT AN ORDER. NO WORK IS AUTHORIZED UNTIL THE VENDOR RECEIVES A VALID COUNTY PURCHASE ORDER ENCUMBERING CONTRACT FUNDS.

The contract documents consist of the terms and conditions of AGREEMENT No. 22-DES-ITB-560 including any attachments or amendments thereto.

EFFECTIVE DATE: APRIL 1, 2022
EXPIRES: FEBRUARY 28, 2023
RENEWALS: NONE
COMMODITY CODE(S): 95926,91359
LIVING WAGE: N

ATTACHMENTS:
AGREEMENT No. 22-DES-ITB-560

EMPLOYEES NOT TO BENEFIT:
NO COUNTY EMPLOYEE SHALL RECEIVE ANY SHARE OR BENEFIT OF THIS CONTRACT NOT AVAILABLE TO THE GENERAL PUBLIC.

| | |
|---|---|
| <u>VENDOR CONTACT:</u> DEJAN DRAGACEVAC | <u>VENDOR TEL. NO.:</u> (703) 924-7220 |
| <u>EMAIL ADDRESS:</u> DAN@SAGRESCONSTRUCTION.COM | |
| <u>COUNTY CONTACT:</u> NICK TAKTAK (DES AND ENG) | <u>COUNTY TEL. NO.:</u> (703) 228-7527 |
| <u>COUNTY CONTACT EMAIL:</u> NTAKTAK@ARLINGTONVA.US | |

PURCHASING DIVISION AUTHORIZATION

Sy Gezachew Title: Procurement Officer Date march 31, 2022



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

AGREEMENT NO. 22-DES-ITB-560

THIS AGREEMENT is made, on 3/31/2022, between Sagres Construction Corporation, 3680 Wheeler Avenue, Suite 300, Alexandria, Virginia 22304 ("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-560, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 22-DES-ITB-560, including DES General Conditions, Special Conditions, and Supplementary Specifications, incorporated herein by reference.
- Exhibit B – Specifications, Drawings and Construction Notes
- Exhibit C – Price Bid of Contractor
- Exhibit D – VDOT Lane Closure Guidelines
- Exhibit E – VDOT Permit
- Exhibit F – Arlington County materials testing Specification Reference
- Exhibit G – RFI Form Template
- Exhibit H – Test Holes Reports
- Exhibit I – List of State and Federal Roads in Arlington County
- Exhibit J – LDA Permit
- Exhibit K – Special Provisions for Pavement Open Cut
- Exhibit L – Insurance Coverage Checklist

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 Fort Myer Heights Watermain Improvement Project (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.

The County has authorized the consultant identified below to act as the County representative for specific purposes to perform specified duties and responsibilities, and to have the rights and authorities as assigned in connection with completion of the Work in accordance with the Contract Documents until such time as the County may notify the Contractor otherwise:

Volkert, Inc.
6225 Brandon Avenue, Suite 540
Springfield, VA 22150

The County will notify the Contractor after contract award of the specific roles and responsibilities of the Consultant(s).

4. TIME FOR COMPLETION

Work under this Agreement shall achieve Substantial Completion no later than two hundred forty-three (243) 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 two hundred forty-three (243) day period shall be the Period of Performance for Substantial Completion. No Work shall be deemed Substantially Complete until it meets the requirements of Substantial Completion set forth in the General Conditions. Final Completion of the Work shall be completed no later than thirty (30) calendar days after the date of acceptance of Substantial Completion by the County Project Officer. Work will not reach Final Completion until it meets the requirements set forth in the General Conditions.

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

5. CONTRACT AMOUNT

The County will pay the Contractor in accordance with the terms of the Progress Payments and Retainage and Payment Terms sections below and at the prices shown in Exhibit C 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. PERFORMANCE OF WORK BY THE CONTRACTOR

The Contractor shall perform on site, and with its own organization, at least seventy-five percent (75%) of the total work in place to be performed under the Contract. Prior to award, the Contractor must demonstrate to the Project Officer's satisfaction that both of these standards will be met during contract performance. Labor and work to be counted when determining whether the Contractor has met the self-performance requirement shall not include any work that the Contractor performs under the supervision of a subcontractor.

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

12. 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.

13. 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).

14. 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.

15. 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.

16. 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.

17. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

18. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED

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

19. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR

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

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

20. *SEXUAL HARASSMENT POLICY

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

21. 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, unless exempt pursuant to a valid reasonable accommodation under state or federal law.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

35. 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.

36. 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.

37. 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)

38. 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.

39. 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.

40. AMENDMENTS

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

41. 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.

42. 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.

43. 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.

44. ARBITRATION

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

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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:

Dejan Dragacevac
3680 Wheeler Ave., Suite 300
Alexandria, Virginia 22304
Tel. (703) 924.7220
Email. dan@sagresconstruction.com

TO THE COUNTY:

Kamal Taktak, Project Officer
Department of Environmental Services – Engineering Bureau
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Phone: (703) 228-7527
Email: kataktak@arlingtonva.us

AND

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

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

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

53. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

54. 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.

55. MATERIAL CHANGES

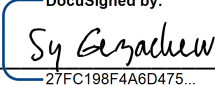
The Contractor shall notify Purchasing Agent within seven days of any material changes in its operation that relate to any matter attested regarding certifications on its bid form.

56. COUNTERPARTS

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

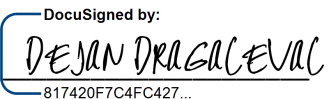
WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON
COUNTY, VIRGINIA

AUTHORIZED
SIGNATURE:  _____
27FC198F4A6D475...

NAME: SY GEZACHEV

SAGRES CONSTRUCTION CORPORATION

AUTHORIZED
SIGNATURE:  _____
817420F7C4FC427...

NAME: DEJAN DRAGACEVAC

TITLE: PROCUREMENT OFFICER

DATE: 3/31/2022

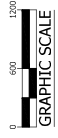
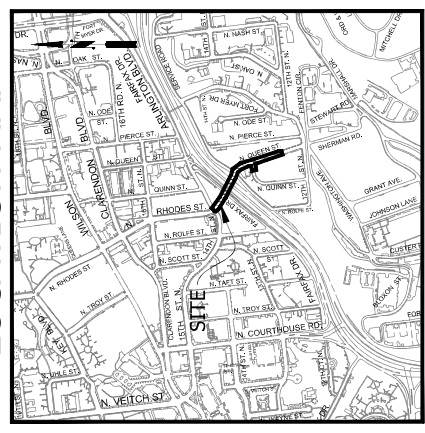
TITLE: Vice President

DATE: 3/23/2022

CONSTRUCTION DRAWINGS FOR: FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

N. Rhodes Street - 14th St. N. to N. Quinn St. PROJECT NUMBER: W108

LOCATION MAP



SEAL: ARLINGTON COUNTY ENGINEER, JOHN W. WILSON, No. 98261, State of Virginia, Mechanical, Civil, Electrical, and Structural.

APPROVALS table with columns for Name, Title, and Date. Includes approvals from Amy Williams (Quality Control Engineer), Pamela Tabbal (Construction Management Supervisor), Denise M. Leach (Transportation Director), and a Project Manager.

REVISIONS table with columns for Date and Description.

COVER table with columns for Description and Date.

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT W108 N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

GENERAL CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY SPECIFICATIONS FOR WATERMAIN AND SANITARY SEWER INSTALLATION... 2. PROTECTION OF EXISTING UTILITIES... 3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES... 4. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 611 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES... 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIVING OUT THE WORK AND SHALL RETAIN A RECORD COPY OF ALL OUT SHEETS FOR REVIEW... 6. RECORDS AND SHALL BE CONSIDERED TO BE APPROPRIATE, WHEN CONSTRUCTION ACTIVITY REACHES THE PROXIMITY TO EXISTING UTILITIES... 7. EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY... 8. THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR AROUND THE SITE... 9. ALL NEARBY EXISTING UTILITIES SHALL BE PROTECTED AND SHALL BE INCORPORATED INTO THE DESIGN AND SHALL BE CONSIDERED TO BE APPROPRIATE, WHEN CONSTRUCTION ACTIVITY REACHES THE PROXIMITY TO EXISTING UTILITIES... 10. THE CONTRACTOR SHALL CONFIRM ALL UTILITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION OF THIS PROJECT... 11. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARDS.

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 2. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 3. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 4. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 5. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 6. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 7. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 8. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 9. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 10. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 11. THE CONTRACTOR SHALL PRESERVE ALL EXISTING UTILITIES, INCLUDING TRAFFIC CONTROL, STREPPING, AND SIGNAGE... 12. 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 ON THE COUNTY'S INFRASTRUCTURE NETWORK.

Sheet List Table

Table with 2 columns: Sheet Number and Sheet Title. Lists sheets from C000A to C122A, including COVER, LEGEND, EXISTING CONDITIONS PLAN, EROSION & SEDIMENT CONTROL PLAN, etc.

ADT

N. RHODES ST., 5300 AADT (VOOT 2019 AADT) ARLINGTON ROAD, (RTT 50 E): 53,000 AADT (VOOT 2019 AADT) ARLINGTON ROAD, (RTT 50 W): 53,000 AADT (VOOT 2019 AADT) FAIRFAX DRIVE, 25,000 AADT (VOOT 2019 AADT)

STREET CLASSIFICATION

N. RHODES ST. - MAJOR ARTERIAL N. QUINN ST. - MAJOR ARTERIAL N. COURT HOUSE RD. - MAJOR ARTERIAL FAIRFAX DRIVE - 2.5 MPH - NEIGHBORHOOD PRINCIPAL ARTERIAL

POSTED SPEED

N. RHODES ST/IN. QUINN ST. - 25 MPH ARLINGTON ROAD (RTT 50 E) - 45 MPH ARLINGTON ROAD (RTT 50 W) - 45 MPH FAIRFAX DRIVE - 2.5 MPH

FIRE DEPARTMENT NOTES:

- 21. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED... 22. ACCESS TO BUILDINGS FOR FIREIGHTERS SHALL BE MAINTAINED AT ALL TIMES... 23. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS... 24. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS...

TREE PROTECTION

- 11. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARDS.

SCALE:

(AS SHOWN)

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU, SUITE 813
2100 CLAYTON BLDG, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.222.8200
FAX: 703.222.8206

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 19, 2021

SCALE: N/A

LEGEND

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST., N. TO N. QUINN ST.

LABEL LEGEND

| EXISTING | PROPOSED |
|---------------------------------------|---------------------------------------|
| EXISTING SANITARY STRUCTURE NUMBER | PROPOSED SANITARY STRUCTURE NUMBER |
| EXISTING STORM SEWER STRUCTURE NUMBER | PROPOSED STORM SEWER STRUCTURE NUMBER |

HATCH LEGEND

| |
|---|
| PROP MILL & OVERLAY |
| PROP FULL DEPTH ASPHALT |
| PROP CONCRETE |
| PROP ASPHALT CURB & GUTTER OR LADGAWK. SEE CONSTRUCTION NOTES |
| DEMOLITION AREA |

SYMBOL LEGEND

| EXISTING | PROPOSED |
|--|--|
| EX CABLE REINFORC. | PROP CABLE REINFORC. |
| EX ELECTRIC BOX | PROP ELECTRIC BOX |
| EX FIRE HYDRANT | PROP FIRE HYDRANT |
| EX GAS VALVE | PROP GAS VALVE |
| EX OVERHEAD LIGHT | PROP OVERHEAD LIGHT |
| EX CITY WIRES | PROP CITY WIRES |
| EX IRON PIPE OR PIP | PROP IRON PIPE OR PIP |
| EX LIGHT POLE | PROP LIGHT POLE |
| EX RAILROAD | PROP RAILROAD |
| EX MONUMENT | PROP MONUMENT |
| EX PAVING METER | PROP PAVING METER |
| EX PAY STATION | PROP PAY STATION |
| EX SANITARY MANHOLE | PROP SANITARY MANHOLE |
| EX STORM MAIN | PROP STORM MAIN (TO SCALE) |
| EX STORM MANHOLE | PROP STORM MANHOLE |
| EX TELEPHONE FIBER OPT. | PROP TELEPHONE FIBER OPT. |
| EX TRAFFIC CONTROL BOX | PROP TRAFFIC CONTROL BOX |
| EX TRAFFIC SIGN | PROP TRAFFIC SIGN |
| EX TRASH CAN | PROP TRASH CAN |
| EX TRUNK | PROP TRUNK |
| EX TREE, WOODED AREA | PROP TREE REMOVAL |
| EX UTILITY MANHOLE (EXC. ELECTRIC, TELE, ETC.) | PROP UTILITY MANHOLE |
| EX UTILITY POLE | PROP UTILITY POLE |
| EX WATER MANHOLE | PROP WATER MANHOLE |
| EX WATER METER | PROP WATER METER |
| EX WATER VALVE | PROP WATER VALVE |
| EX WARD INLET | PROP WARD INLET (TO SCALE) |
| EX BENCHMARK | PROP BENCHMARK (UNLESS TO BE ADJUSTED) |

LINETYPE LEGEND

| EXISTING | PROPOSED |
|------------------|-----------------------|
| CONCRETE MANHOLE | PROP CONCRETE MANHOLE |
| CURB | PROP CURB |
| ELECTRIC | PROP ELECTRIC |
| FIRE | PROP FIRE |
| GAS | PROP GAS |
| IRON | PROP IRON |
| PIPE | PROP PIPE |
| RAILROAD | PROP RAILROAD |
| STORM | PROP STORM |
| TELEPHONE | PROP TELEPHONE |
| TRUNK | PROP TRUNK |
| UTILITY | PROP UTILITY |
| WATER | PROP WATER |
| WOOD | PROP WOOD |

APPROVALS

DATE: 08/11/2021

QUALITY CONTROL ENGINEER: Amy Plucine

CONSTRUCTION MANAGEMENT SUPERVISOR: Kamel Tabbar

DATE: 8.12.21

DESIGNED: LD

DRAWN: LD

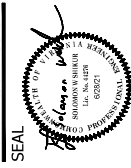
CHECKED: SS

PLOTTED: AUGUST 19, 2021

SCALE: N/A

C006.1

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT W108



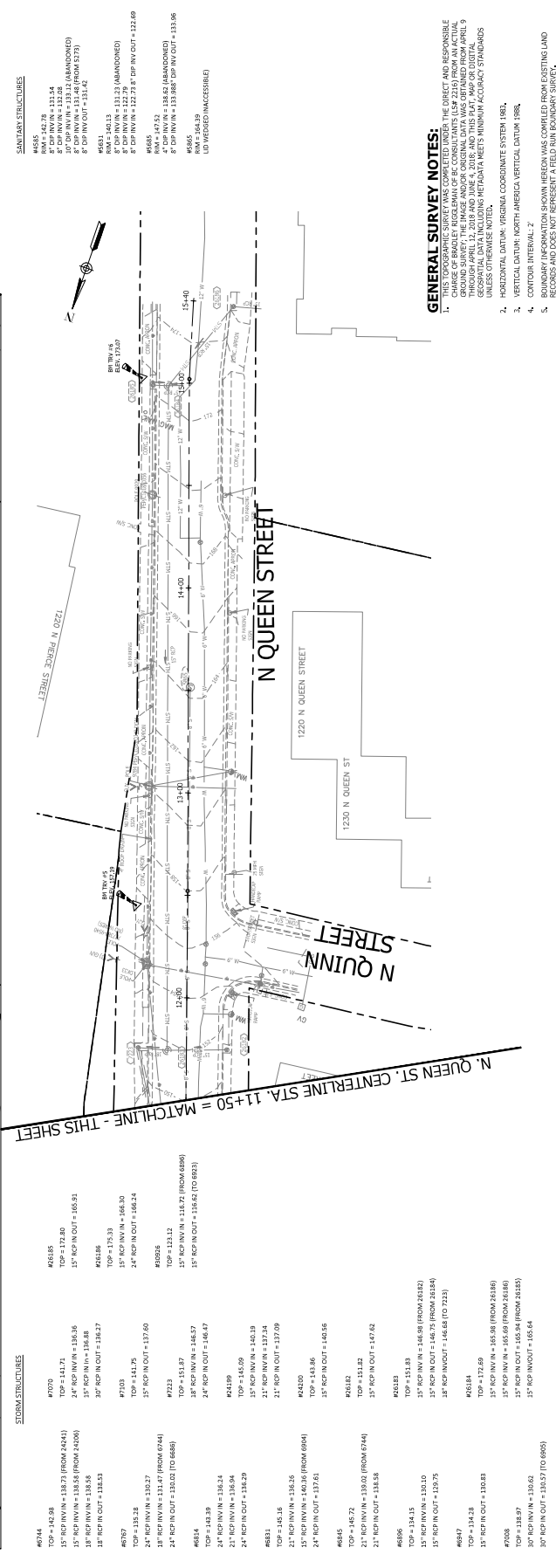
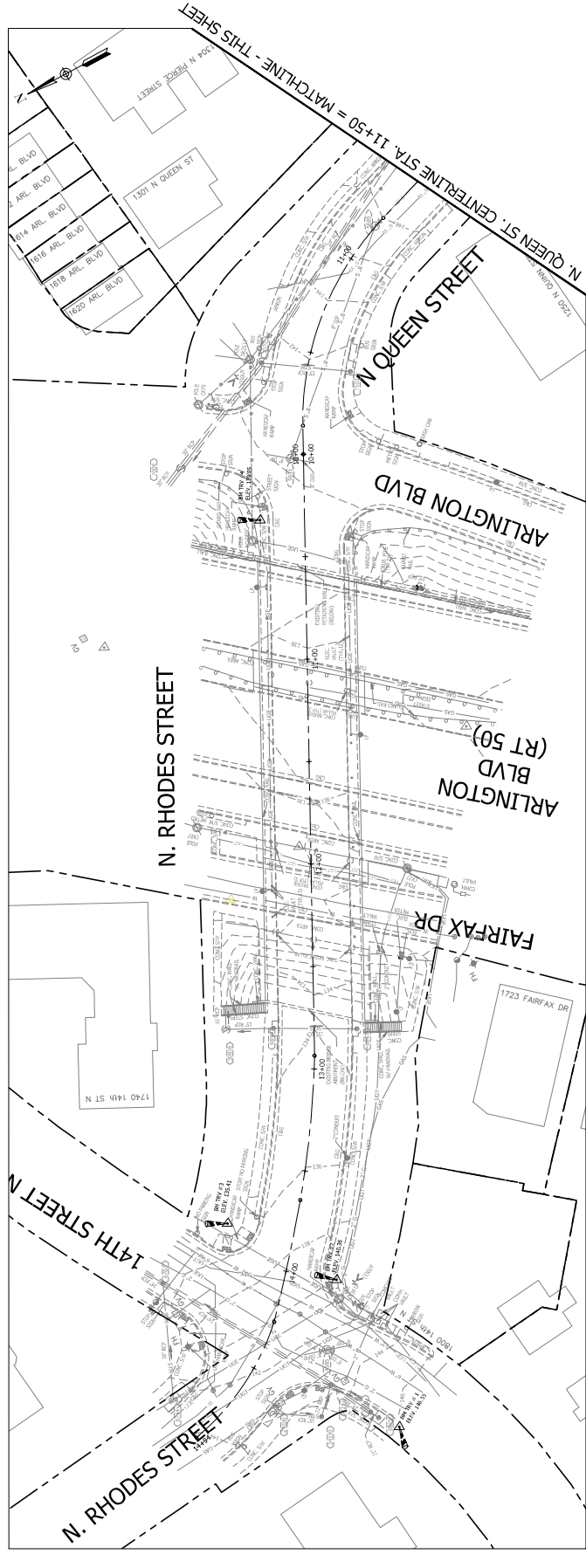
| APPROVALS | DATE |
|------------------------------------|------------|
| <i>Amy Williams</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER | 8.12.21 |
| <i>Kenneth Tabb</i> | |
| CONSTRUCTION MANAGEMENT SUPERVISOR | 08.18.2021 |
| <i>David M. Leach</i> | |
| TRANSPORTATION DIRECTOR | 08/18/21 |
| PROJECT MANAGER | 08/12/2021 |
| <i>[Signature]</i> | |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |

EXISTING CONDITIONS PLAN
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 19 2021

SCALE:
0 35 50
GRAPHIC SCALE



GENERAL SURVEY NOTES:

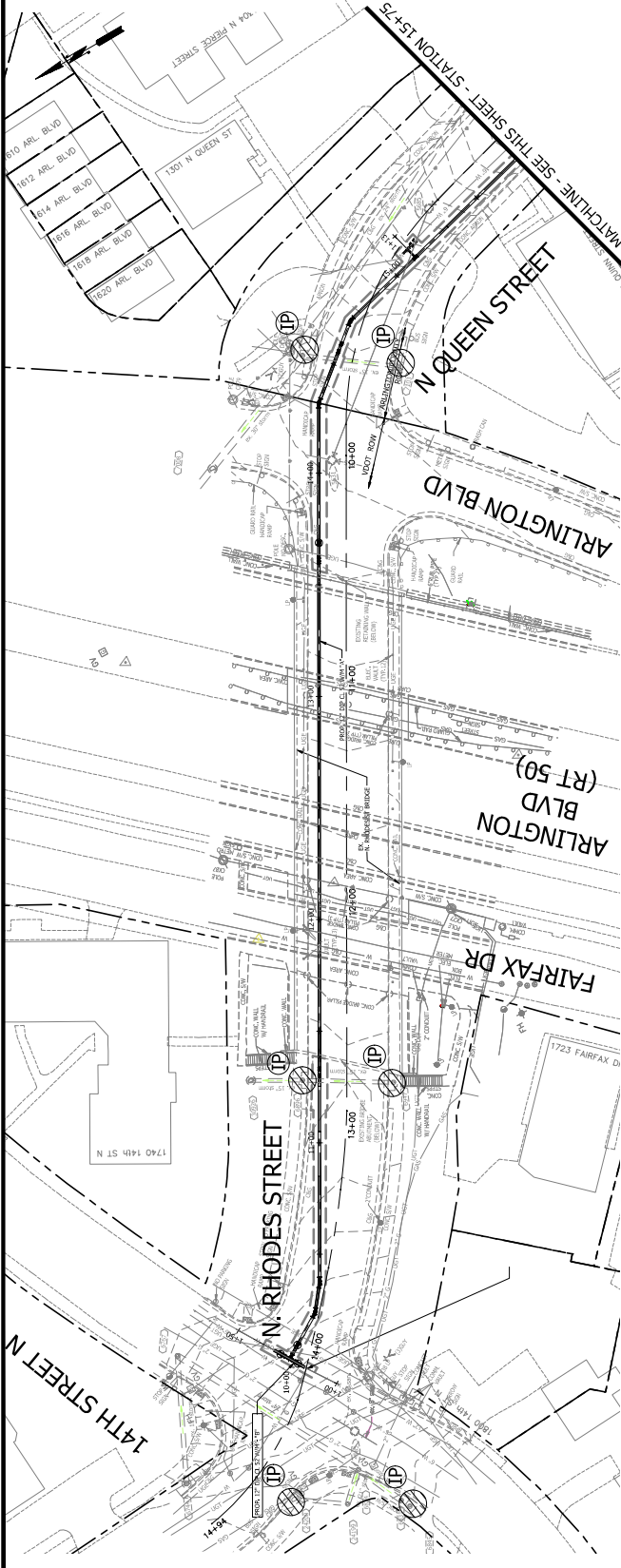
1. ALL SURVEY DATA IS THE PROPERTY OF THE DIRECTOR AND RESPONSIBLE CHARGE OF BRADLEY PROGRAM OF BC CONSULTANTS (LSP #219) FROM AN ACTUAL FIELD SURVEY CONDUCTED BY BRADLEY CONSULTANTS FROM APRIL 9 THROUGH APRIL 14, 2018 AND JUNE 2018, AND THIS PLAN, MAP OR COSTAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS AS SET FORTH IN THE FEDERAL REGISTER.
2. ALL SURVEY DATA IS IN NAD 83 UTM NORTH AMERICA COORDINATE SYSTEM 1881.
3. VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
4. CONTROLS INTERVAL: 3'
5. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD SURVEY.

SANITARY STRUCTURES

| | |
|-------|--|
| #6685 | 15' RCP IN/IN = 131.54 |
| #6686 | 15' RCP IN/IN = 131.09 |
| #6687 | 15' RCP IN/IN = 131.46 (FROM 6173) |
| #6688 | 15' RCP IN/IN = 131.41 |
| #6689 | 15' RCP IN/IN = 131.43 |
| #6690 | 15' RCP IN/IN = 131.23 (ABANDONED) |
| #6691 | 15' RCP IN/IN = 132.78 (15' RCP IN/OUT = 132.69) |
| #6692 | 15' RCP IN/IN = 132.78 (15' RCP IN/OUT = 132.69) |
| #6693 | 15' RCP IN/IN = 132.62 (ABANDONED) |
| #6694 | 15' RCP IN/IN = 133.85 (15' RCP IN/OUT = 133.96) |
| #6695 | 15' RCP IN/IN = 133.85 (15' RCP IN/OUT = 133.96) |
| #6696 | 15' RCP IN/IN = 133.85 (15' RCP IN/OUT = 133.96) |
| #6697 | 15' RCP IN/IN = 133.85 (15' RCP IN/OUT = 133.96) |

STORM STRUCTURES

| | |
|-------|--------------|
| #7074 | TOP = 142.98 |
| #7075 | TOP = 141.71 |
| #7076 | TOP = 141.71 |
| #7077 | TOP = 141.71 |
| #7078 | TOP = 141.71 |
| #7079 | TOP = 141.71 |
| #7080 | TOP = 141.71 |
| #7081 | TOP = 141.71 |
| #7082 | TOP = 141.71 |
| #7083 | TOP = 141.71 |
| #7084 | TOP = 141.71 |
| #7085 | TOP = 141.71 |
| #7086 | TOP = 141.71 |
| #7087 | TOP = 141.71 |
| #7088 | TOP = 141.71 |
| #7089 | TOP = 141.71 |
| #7090 | TOP = 141.71 |
| #7091 | TOP = 141.71 |
| #7092 | TOP = 141.71 |
| #7093 | TOP = 141.71 |
| #7094 | TOP = 141.71 |
| #7095 | TOP = 141.71 |
| #7096 | TOP = 141.71 |
| #7097 | TOP = 141.71 |
| #7098 | TOP = 141.71 |
| #7099 | TOP = 141.71 |
| #7100 | TOP = 141.71 |



ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU, SUITE 813
2100 CLAYBANK ROAD
ARLINGTON, VA 22204
TEL: 703.222.8200
FAX: 703.222.8205
COPYRIGHT © 2018 ARLINGTON COUNTY
VIRGINIA - ALL RIGHTS RESERVED



| APPROVALS | DATE |
|---|------------|
| <i>Amy Williams</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER <i>Kenneth Tabb</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>David M. Leach</i> | 08.18.2021 |
| TRANSPORTATION DIRECTOR <i>David M. Leach</i> | 08/18/21 |
| PROJECT MANAGER <i>LDZCN</i> | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 19 2021

SCALE:
0 10 20
HORIZ. SCALE

C031.1

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL PLAN

March 26, 2020
date

Division 1.1.2.F.
ESC Program Administrator
Department of Environmental Services
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for Fort Myer Heights Watermain Improvement
street address

N. Rhodes Street
From 14th Street N. to N. Quinn Street
lot block, section and address

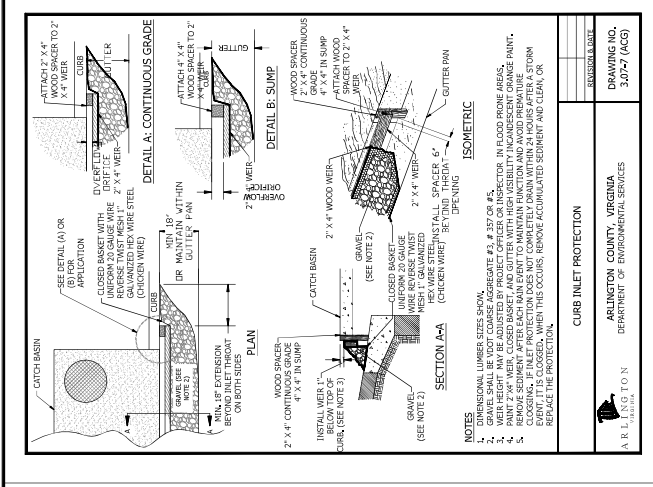
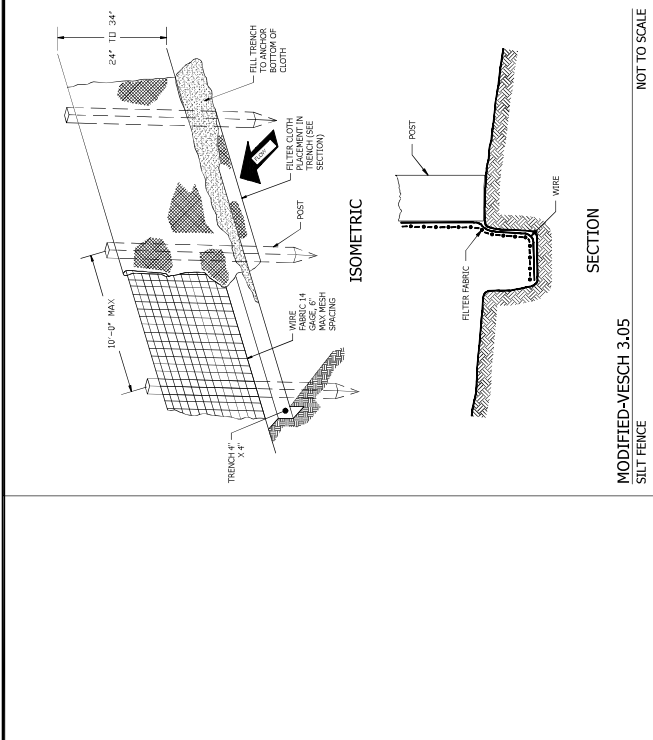
permit number

Dear Mr. Li:
I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that the permittee is responsible for the following:

1. Preparing the site plan and sedimentation plan (S&S) plan for this project.
2. Making the site plan for submission to identify critical areas.
3. Conducting a pre-construction meeting with utility reviewing and site, contractor to present the S&S plan and measures to be installed. Call 703-228-6766 to schedule pre-construction meeting.
4. Submitting the permit application to the Department of Environmental Services, including the S&S plan, and adequate to address erosion and sedimentation. Inspect the site 48 hours after a storm generating storm, and report to the owner the presence of turbidity or any functioning E&S controls when they are observed.
5. Reporting to the owner the presence of turbidity or any functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days, to areas marked that will remain exposed for more than one year.
7. Calling 703-228-6766 or 1-800-744-4475, to report any areas that the applicant for permit that are to be disturbed for more than one year.

I may be contacted at 703-228-2859, with questions about this plan or any execution of the duties of Responsible Land Disturber.

Sincerely,
Signature
Solomon Shkar
name printed
VA PE 84279
professional registration (type and number)



ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
2105 CLAYBURN BLVD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.6000
FAC: 703.228.2600
COPYRIGHT © 2018 ARLINGTON COUNTY
VIRGINIA-ALL RIGHTS RESERVED

SEAL

Solomon Shkar
SOLOMON SHKAR
REGISTERED PROFESSIONAL ENGINEER
No. 84279
EXPIRES 08/31/2021

APPROVALS

Amel Haidar
Amel Haidar
QUALITY CONTROL ENGINEER
Kamel Haidar
8.12.21

DATE 08/11/2021

Debra M. Leach
Debra M. Leach
CONSTRUCTION MANAGEMENT SUPERVISOR
10.15.2021

DATE 08/18/21

David M. Leach
David M. Leach
TRANSPORTATION DIRECTOR
08/12/2021

PROJECT MANAGER

REVISIONS

DATE

ARLINGTON
VIRGINIA

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO.
3.07-7 (A/C)

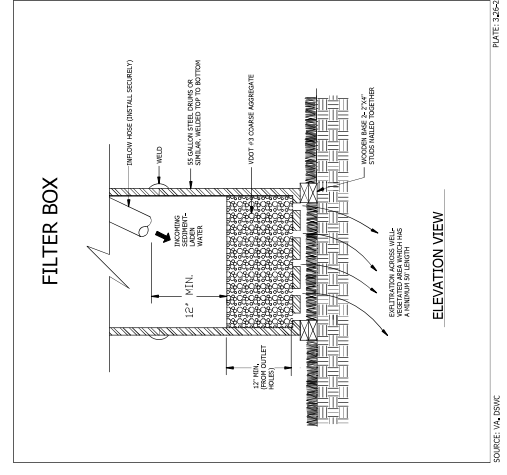
SCALE:

AS SHOWN

C032.2



HYDROLOGIC SOILS MAP
NOT TO SCALE



NOT TO SCALE

MODIFIED-VESCH 3.05 SILT FENCE

EROSION AND SEDIMENT CONTROL LEGEND

3.05 TEMPORARY SILT FENCE

3.07 STORM DRAIN INLET PROTECTION

3.06 TRANSPIRES STRUCTURE

EROSION AND SEDIMENT CONTROL LEGEND

SOURCE: VA, DSWC

DATE: 3.26.20

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

W108

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 19, 2021

SCALE:

AS SHOWN

C032.2

STORMWATER POLLUTION PREVENTION PLAN

1.0 SWPPP Documents Located On-site & Available for Review

| SWPPP Document Title | Located On-site & Available for Review? |
|----------------------------|---|
| Regulatory Documents | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Map of Coverage Area | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Pollution Prevention Plan | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Stormwater Management Plan | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Site Map | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

2.0 Authorized Non-Stormwater Discharges

Unauthorized discharges are prohibited on-site. A release (intentional or unintentional) of any of the following substances is prohibited:

| | |
|--|--|
| Oil, grease, paint | Antifreeze |
| Automotive fluids | Acid |
| Household waste | Solvents |
| Refrigerants | Flammable, combustible, or toxic liquids |
| Flammable, combustible, or toxic gases | Flammable, combustible, or toxic solids |
| Flammable, combustible, or toxic sludges | Flammable, combustible, or toxic powders |

3.0 Pollution Prevention Awareness

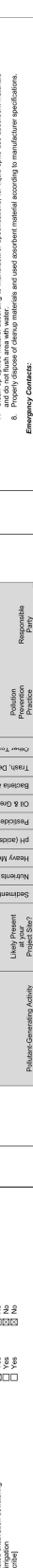
Employees will be given a "walk through" of the site. Each employee will be shown Erosion and Sediment Control and Pollution Prevention Practices (located in Sections 4.0 and 5.0 of this SWPPP) that are essential to the site's success. A release (intentional or unintentional) of any of the following substances is prohibited:

4.0 Erosion & Sediment Controls

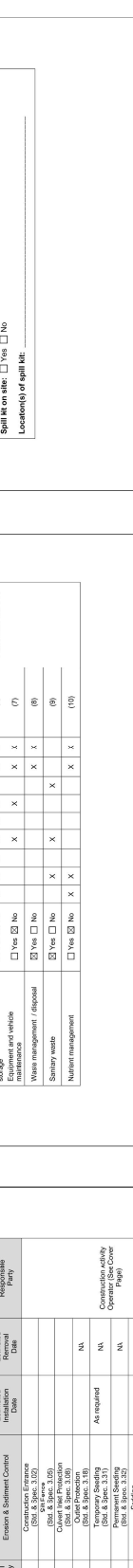
| Best Management Practice (BMP) | Estimated Installation Date | Estimated Removal Date | Responsible Party |
|--------------------------------|-----------------------------|------------------------|---|
| Erosion & Sediment Control | As required | As required | Construction Activity Operator (Site Cover) |
| Straw Waterways | As required | As required | Construction Activity Operator (Site Cover) |
| Temporary Sealing | As required | As required | Construction Activity Operator (Site Cover) |
| Permanent Sealing | As required | As required | Construction Activity Operator (Site Cover) |
| Straw Waterways | As required | As required | Construction Activity Operator (Site Cover) |
| Storm Drain Inlet Protection | As required | As required | Construction Activity Operator (Site Cover) |

5.0 Potential Sources of Pollution & Pollution Prevention Practices

| Potential Source | Likely Present at this Site? | Pollution Prevention Practices | Responsibility |
|--|---|---|----------------|
| Cleaning, grinding, excavating, and other dust generating activities | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Water sprays, sweeping, and other dust control measures | (1) |
| Paving and other concrete work | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Concrete curbs, washout, and cement wash | (2) |
| Washing / cleaning | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Washing / cleaning | (3) |
| Diverting operations | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Diverting operations | (4) |
| Material / chemical use and equipment maintenance | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Material / chemical use and equipment maintenance | (5) |
| Sanitary waste | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Sanitary waste | (6) |
| Nutrient management | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Nutrient management | (7) |
| | | | (8) |
| | | | (9) |
| | | | (10) |



The Maryland Standard P-4 for a filter bag is provided as an acceptable option for use in Arlington County for stormwater filter bags. The use of match, oak wood, wood chips, or sand is not acceptable.



CONSTRUCTION SPECIFICATIONS:

- TRIPY SEAL AROUND THE PUMP DISCHARGE HOSE WITH A STRIP OR SIMILAR DENCE.
- PLACE FILTER BAG ON SUFFICIENT GRADE (E.G. MATCH, LEAFWOOD CHIPMONT, WOODCHIPS, SAND, OR STRAW) TO ALLOW FOR PROPER DRAINAGE AND FLOW TO THE DOWNSTREAM COLLECTION POINT.
- CONTROL DAMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE DAMPING RATE.
- REMOVE AND REPAIR / REPLACE FILTER BAG UPON COMPLETION OF RAMMING OPERATIONS OR WHEN THE BAG IS OVERFLOPPED (I.E. WATER IS SEEING THROUGH THE BAG) AND ALLOW THE BAG TO DRY FOR 24 HOURS BEFORE RE-INSTALLATION.
- USE A MINIMUM OF TWO FILTER BAGS PER BAG AND USE A MINIMUM OF TWO BAGS PER BAG.
- REPLACE FILTER BAGS IF BAGS ARE FULL, DAMAGED, OR OTHERWISE DAMAGED. DURING OPERATION KEEP FLOW RATE BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE HOSE IF IT BECOMES DAMAGED.



NOTE: 1. THE SEDIMENT FILTER SOCK IS TO BE INSTALLED ONLY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS FULLY CONSTRUCTED AND OPENED TO PUBLIC TRAFFIC.

2. THE SEDIMENT FILTER SOCK IS TO BE INSTALLED ONLY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS FULLY CONSTRUCTED AND OPENED TO PUBLIC TRAFFIC.

3. THE SEDIMENT FILTER SOCK IS TO BE INSTALLED ONLY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS FULLY CONSTRUCTED AND OPENED TO PUBLIC TRAFFIC.

4. THE SEDIMENT FILTER SOCK IS TO BE INSTALLED ONLY AT THE BEGINNING OF CONSTRUCTION AND TO BE REMOVED AFTER THE STREET IS FULLY CONSTRUCTED AND OPENED TO PUBLIC TRAFFIC.

ARLINGTON COUNTY, VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL SERVICES
 DR. LINDA D. N.

STORMWATER POLLUTION PREVENTION PLAN

7.0 Spill Prevention & Response

Most spills can be cleaned up using a spill kit. Absorbent dry, available containers, spill kits, and absorbent booms are suggested minimum spill response items that should be available at the project site.

1. Priority: Protect all people, property, and the environment.

2. Priority: Protect the environment.

3. Priority: Protect all people, property, and the environment.

- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.

Emergency Contacts:

Arlington County Fire & Police: 703-556-2222
 Washington Gas Emergency: 703-556-1400
 Washington State Police: 804-674-4300

Spill Kit on site: Yes No
 Locations of spill kit: _____

STORMWATER POLLUTION PREVENTION PLAN

8.0 Spill Prevention & Response

Most spills can be cleaned up using a spill kit. Absorbent dry, available containers, spill kits, and absorbent booms are suggested minimum spill response items that should be available at the project site.

1. Priority: Protect all people, property, and the environment.

2. Priority: Protect the environment.

3. Priority: Protect all people, property, and the environment.

- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.
- Check for hazards (flammable material, noxious fumes, cover of spill) - if flammable liquid, turn off engines, extinguish fire, and remove vehicles to a safe area.

Emergency Contacts:

Arlington County Fire & Police: 703-556-2222
 Washington Gas Emergency: 703-556-1400
 Washington State Police: 804-674-4300

Spill Kit on site: Yes No
 Locations of spill kit: _____

APPROVALS

DATE: 08/11/2021

QUALITY CONTROL ENGINEER: *[Signature]*

CONSTRUCTION MANAGEMENT SUPERVISOR: *[Signature]*

DATE: 08/18/21

PROJECT MANAGER: *[Signature]*

DATE: 08/12/2021

DESIGNED: LD
 DRAWN: LD
 CHECKED: SS

SCALE: _____

AS SHOWN

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 2105 CAMPBELL ROAD, SUITE B13
 ARLINGTON, VA 22201
 PHONE: 703.556.2000
 FAX: 703.556.2009

COPYRIGHT © 2018 ARLINGTON COUNTY
 VIRGINIA - ALL RIGHTS RESERVED

ARLINGTON COUNTY SWPPP 122016

C032.3

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT - VMS

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU, SUITE 813
2100 CAMPBELL AVENUE
ARLINGTON, VA 22204
TEL: 703.245.2600
FAX: 703.245.2606
COPYRIGHT © 2018 ARLINGTON COUNTY
VIRGINIA--ALL RIGHTS RESERVED

SEAL



| APPROVALS | DATE |
|--|------------|
| <i>Amy Placencia</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER <i>Kenneth Rabba</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>Walter S. Jones</i> | 08/18/21 |
| VEGETATION SUPERVISOR <i>Doreen M. Leach</i> | 08/18/21 |
| TRANSPORTATION DIRECTOR <i>[Signature]</i> | 08/12/2021 |
| PROJECT MANAGER | |
| REVISIONS | DATE |
| | |
| | |
| | |
| | |

GEOMETRIC CONTROL PLAN - 1
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

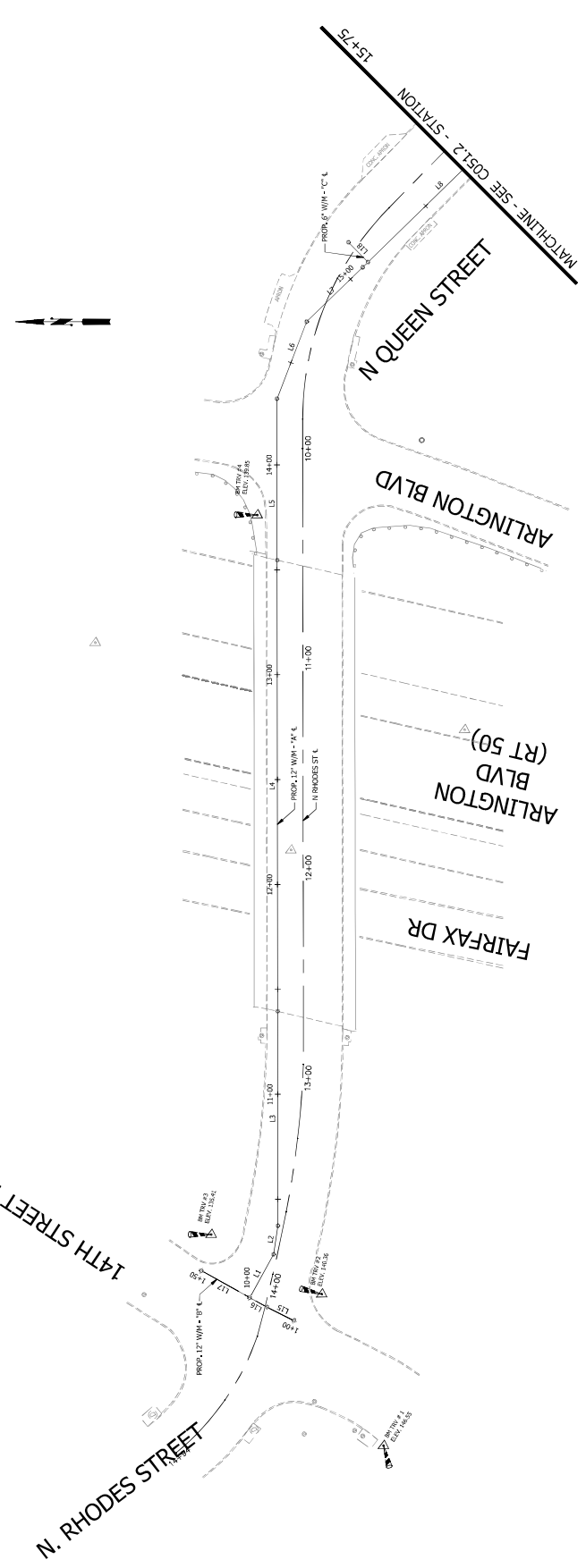
DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23, 2021

SCALE:



C045.1

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT W108



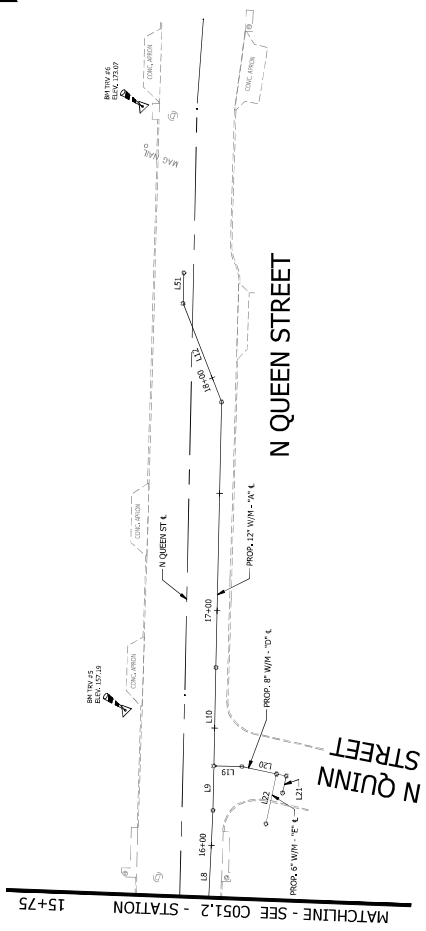
PROP. 12" W/M - "A" (RHODES ST-QUEEN ST)
ALIGNMENT: PROP.12-INCH W/M - "A"

| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|-----------------|----------|-------------|-----------|------------------|----------------|
| L1 | S 34° 18' 14" E | 23.88' | 10+00.00 | 10+23.88 | 70103346.7 | 11887941.1 |
| L2 | S 44° 19' 31" E | 13.25' | 10+23.88 | 10+37.13 | 70103354.9 | 11887941.1 |
| L3 | S 69° 03' 27" E | 102.17' | 10+37.13 | 11+39.30 | 70103021.7 | 11887942.8 |
| L4 | S 69° 04' 30" E | 215.01' | 11+39.30 | 13+54.30 | 70102626.8 | 11887943.36 |
| L5 | S 69° 02' 39" E | 76.89' | 13+54.30 | 14+31.19 | 70102649.9 | 11887941.15 |
| L6 | S 44° 59' 29" E | 30.47' | 14+31.19 | 14+70.03 | 70103284.5 | 118877946 |
| L7 | S 17° 08' 38" E | 37.19' | 14+70.03 | 15+07.22 | 70102994.2 | 118879647 |
| L8 | S 17° 18' 46" E | 136.84' | 15+07.22 | 16+44.06 | 70102647.8 | 118879423 |

PROP. 12" W/M - "B" (RHODES ST-QUEEN ST)
ALIGNMENT: PROP.12-INCH W/M - "B"

| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|-----------------|----------|-------------|-----------|------------------|----------------|
| L15 | N 53° 39' 07" E | 14.26' | 1+00.00 | 1+14.26 | 70103204.8 | 118873943.3 |
| L16 | N 50° 07' 41" E | 94.0' | 1+14.26 | 1+208.26 | 70103234.3 | 118873943.1 |
| L17 | N 50° 07' 13" E | 26.33' | 1+208.26 | 1+234.59 | 70103334.7 | 11887403.8 |

| BENCHMARK TABLE | | | | | |
|-----------------|----------------|-----------------|---------|--|--|
| BM# | NORTHING | EASTING | ELEV. | | |
| TRV #1 | 7,010,316.0953 | 11,887,313.4451 | 146.552 | | |
| TRV #2 | 7,010,303.2831 | 11,887,389.6765 | 140.364 | | |
| TRV #3 | 7,010,337.3192 | 11,887,438.9039 | 135.412 | | |
| TRV #4 | 7,010,162.1221 | 11,887,734.5510 | 139.852 | | |
| TRV #5 | 7,009,934.5340 | 11,887,898.4930 | 157.168 | | |
| TRV #6 | 7,009,690.2378 | 11,887,979.5790 | 173.073 | | |



ARLINGTON
 VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU, SUITE 813
 2105 CAMPBELL AVENUE
 ARLINGTON, VA 22204
 TEL: 703.228.2800
 FAX: 703.228.2800

COPYRIGHT © 2018 ARLINGTON COUNTY
 VIRGINIA - ALL RIGHTS RESERVED



APPROVALS **DATE**

QUALITY CONTROL ENGINEER Amy P. Moore 08/11/2021
 8.12.21
 CONSTRUCTION MANAGEMENT SUPERVISOR Kenneth Tabb 8.12.21

DESIGNED BY: Amy P. Moore 08/18/21
 DRAWN BY: Kenneth Tabb 08/18/21
 CHECKED BY: Denise M. Leach 08/18/21
 TRANSPORTATION DIRECTOR

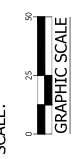
PROJECT MANAGER 08/12/2021

REVISIONS **DATE**

GEOMETRIC CONTROL PLAN - 2

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
 W108
 N. RHODES ST., 14TH ST., N. TO N. QUINN ST.

DESIGNED: LD
 DRAWN: LD
 CHECKED: SS
 PLOTTED: AUGUST 23, 2021



C045.2

PROP. 12" W/M - "A" \pm (RHODES ST-QUEEN ST)
 ALIGNMENT: PROP 12-INCH W/M - "A"

| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|-----------------|----------|-------------|-----------|------------------|----------------|
| L8 | S 17° 18' 46" E | 106.89' | 15+08.12 | 16+14.06 | 7010031.76 | 7009961.76 |
| L9 | S 18° 48' 50" E | 18.68' | 16+14.06 | 16+32.74 | 7009961.76 | 7009943.08 |
| L10 | S 18° 48' 50" E | 44.56' | 16+32.74 | 16+77.30 | 7009943.08 | 7009924.52 |
| L11 | S 41° 17' 23" E | 45.00' | 17+89.02 | 18+34.06 | 7009924.52 | 7009906.17 |
| L12 | S 18° 45' 02" E | 13.00' | 18+34.06 | 18+47.06 | 7009906.17 | 7009893.64 |

PROP. 6" W/M - "C" \pm (QUEEN ST)
 ALIGNMENT: PROP 6-INCH W/M - "C"

| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|-----------------|----------|-------------|-----------|------------------|----------------|
| L18 | N 72° 41' 14" E | 13.23' | 1+00.00 | 1+13.23 | 7010064.44 | 7010051.21 |

PROP. 8" W/M - "D" \pm (QUINN ST)
 ALIGNMENT: PROP 8-INCH W/M - "D"

| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|-----------------|----------|-------------|-----------|------------------|----------------|
| L19 | S 71° 11' 10" W | 11.00' | 10+00.00 | 10+11.00 | 7009943.02 | 7009932.02 |
| L20 | S 81° 59' 52" W | 19.34' | 10+11.00 | 10+30.34 | 7009932.02 | 7009912.68 |
| L21 | N 7° 50' 08" W | 7.49' | 10+30.34 | 10+37.83 | 7009912.68 | 7009905.19 |

PROP. 6" W/M - "E" \pm (QUINN ST)
 ALIGNMENT: PROP 6-INCH W/M - "E"

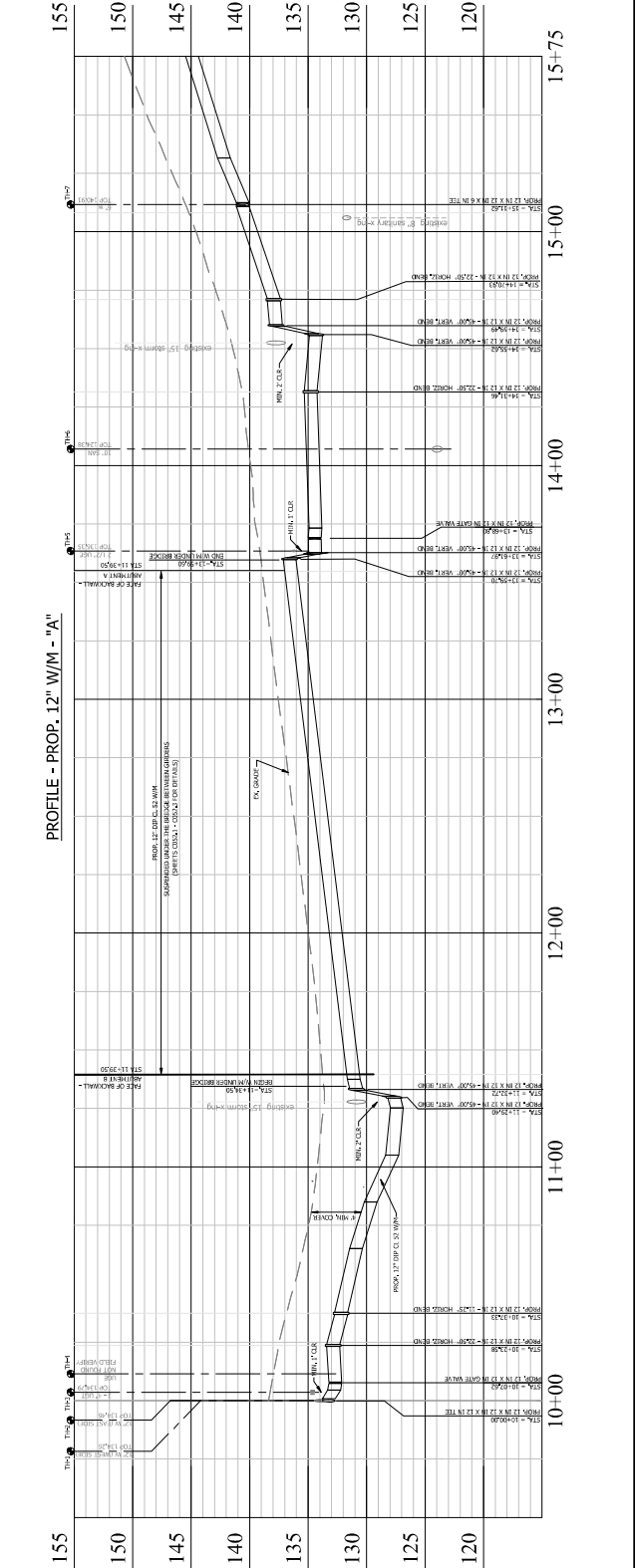
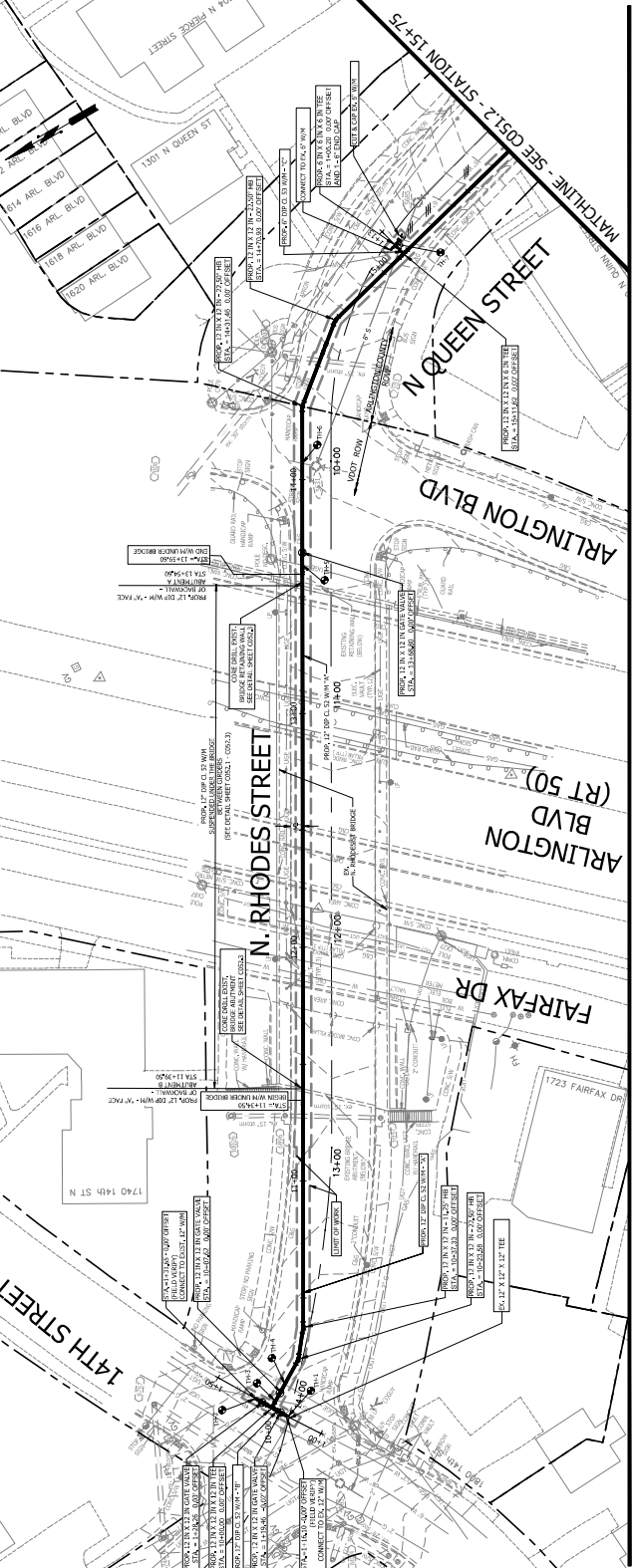
| Line # | Bearing | Distance | STA (Start) | STA (End) | Northing (Start) | Northing (End) |
|--------|----------------|----------|-------------|-----------|------------------|----------------|
| L22 | N 8° 00' 08" W | 21.70' | 1+00.00 | 1+21.70 | 7009927.97 | 7009906.27 |

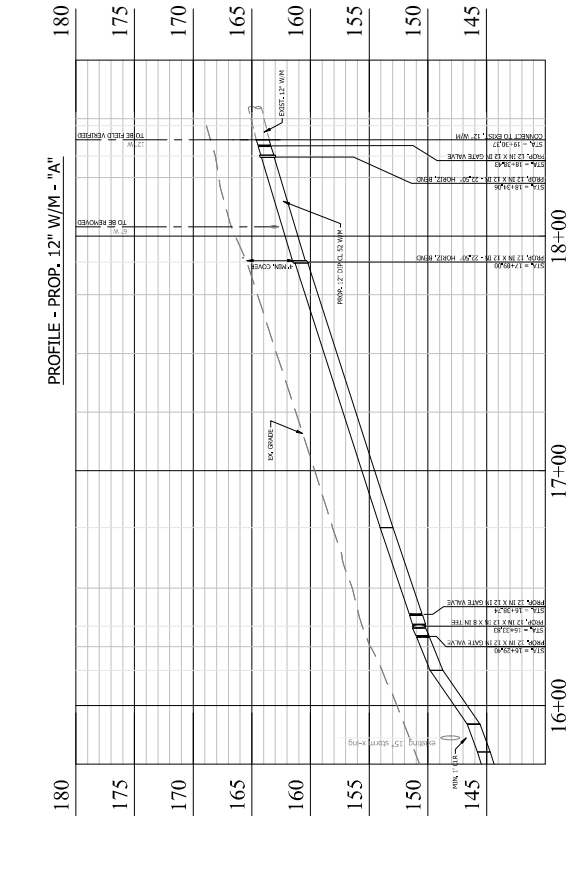
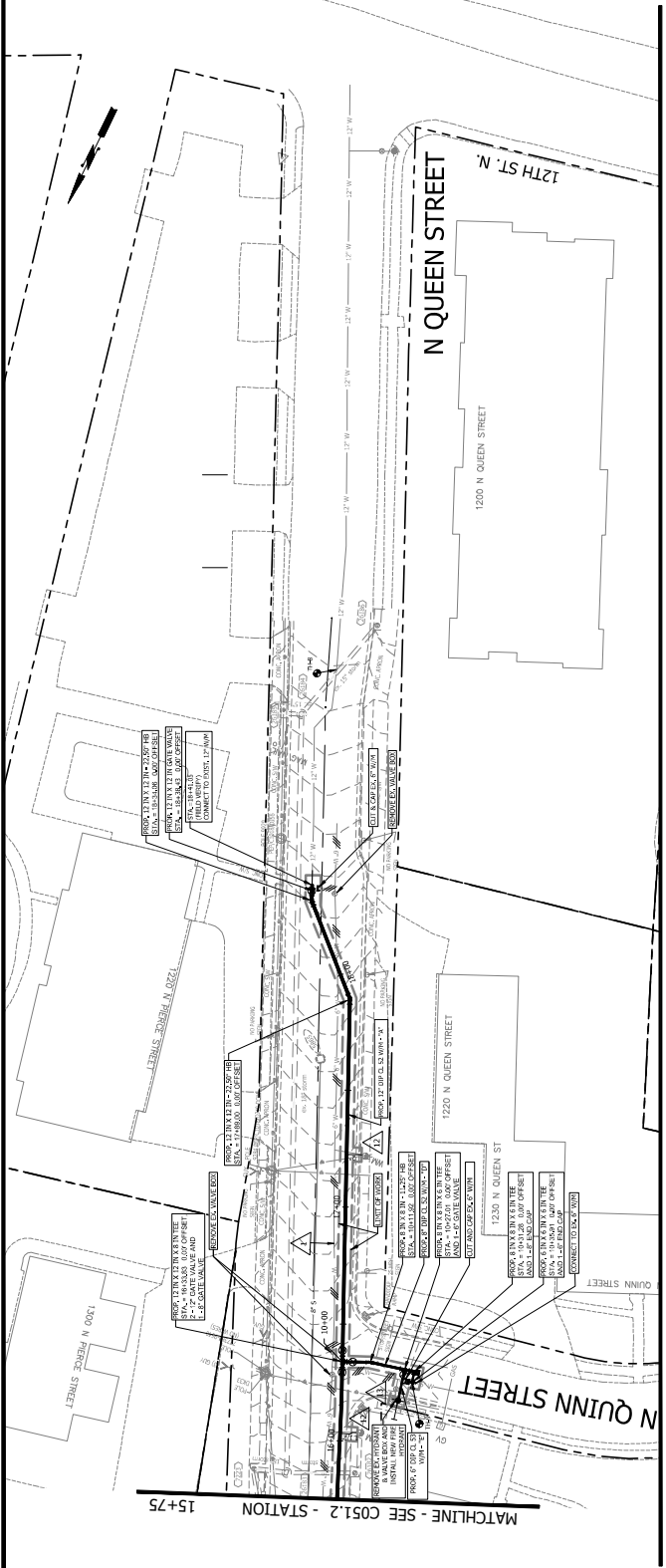
BENCHMARK TABLE

| BM# | NORTHING | EASTING | ELEV. |
|--------|----------------|-----------------|---------|
| TRV #1 | 7,010,316.0953 | 11,887,313.4451 | 146.552 |
| TRV #2 | 7,010,303.2831 | 11,887,389.6765 | 140.364 |
| TRV #3 | 7,010,337.3192 | 11,887,438.9039 | 135.412 |
| TRV #4 | 7,010,162.1221 | 11,887,734.5510 | 139.852 |
| TRV #5 | 7,009,934.5340 | 11,887,898.4930 | 157.168 |
| TRV #6 | 7,009,690.2378 | 11,887,979.5790 | 173.073 |

WATERMAIN CONSTRUCTION NOTES:

- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF NEW WATER MAIN. ALL EXISTING WATER MAINS SHALL BE REMOVED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
- PROPOSED BRIDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. EXISTING UTILITIES SHALL BE IDENTIFIED BY DIRECT PIPES AND DETAIL ADDITIONAL BRIDS SHALL BE IDENTIFIED BY DASHED LINES. THE INSTALLATION OF WATER MAINS SHALL BE SHOWN ON THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
- SEE DETAIL INSTRUCTION ON SHEET C051.1 FOR WATERMAIN NOTES AND DETAILS FOR THE WATERMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPOSED PIPES.
- SEE SHEET PAVEMENT IMPROVEMENT AND 2.1.8 PIPE FRENCH RESTRAINT FOR RACK WITH SLOPED CURB AND DETAIL ADDITIONAL BRIDS SHALL BE IDENTIFIED BY DASHED LINES. THE WATERMAIN INSTALLATION AND TESTING.
- ALL DISBURSED CURB AND GUTTER AND SIDEWALK SHALL BE RESTORED TO ORIGINAL FINISH AND ARLINGTON COUNTY STANDARDS WITHIN 100' STREETSIDE WITHIN FOOT CURE OF W.M.
- DISBURSED CURB AND GUTTER AND SIDEWALK SHALL BE RESTORED TO ORIGINAL FINISH AND ARLINGTON COUNTY STANDARDS WITHIN 100' STREETSIDE WITHIN FOOT CURE OF W.M.
- ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
- IF IN PLAN VIEW DENOTES TEST HOLE WATER MAIN AND CROSSINGS.
- REFER TO PROFILE VIEW FOR ELEVATION INFORMATION.
- TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE MADE AT THE INTERSECTION OF THE WATER MAIN AND ARE INCIDENTAL TO THE WATER MAIN WORK.
- ALL WATER MAIN JOINTS INCLUDING ALL TEES, BRIDS, PLUS VALVES, FIRE HYDRANTS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATION 0509. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PIPE. ALL TEES SHALL BE INSTALLED WITH JOINT RESTRAINT SHALL BE INSTALLED WITH JOINT RESTRAINT SHALL ALSO BE RESTORED WITH CONCRETE THRUST BLOCKS AND SHALL BE IDENTIFIED BY DASHED LINES. WATERMAIN NOTES & DETAILS - 3.
- SEE SHEET C051.1 FOR THE WATERMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPOSED PIPES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPOSED PIPES.
- EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO INSTALL A NEW FIRE HYDRANT IN PLACE AND REMOVE THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABILIZED THE VOID.



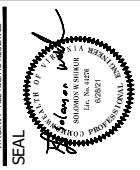


- WATERMAIN CONSTRUCTION NOTES:**
- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF NEW WATER MAIN TO BE INSTALLED IN PLACE FOR THIS ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
 - PROPOSED BRIDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING BRIDS AND INSTALL ADDITIONAL BRIDS AS NECESSARY TO MAINTAIN THE PROPOSED WATER MAIN AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPOSED BRIDS TO THE COUNTY.
 - SEE DETAIL INSTRUCTION ON SHEET C051.2 FOR THE WATERMAIN NOTES & DETAILS - 3 FOR THE WATERMAIN INSTALLATION OF THE PROPOSED PIPES.
 - SEE DETAIL INSTRUCTION WORKING (WP 2) & PIPE TRENCH REPAIRMENT FOR A/C WITH ASPHALT OVERLAY DETAILS ON SHEET C051.2 FOR THE WATERMAIN INSTALLATION AND THE WATERMAIN INSULATION AND TESTING.
 - ALL UNPOLISHED CURB AND GUTTER AND SIDEWALK SURFACES FOR THE INSTALLATION OF PROPOSED WATER MAIN SHALL BE RESTORED TO ORIGINAL ARLINGTON COUNTY STANDARDS WITHIN RIGHT OF WAY.
 - DEPOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE RAISED UP TO THE EXISTING FINISH GRADE WITH TOP SOIL AND SOI.
 - TH # IN PLAN VIEW DENOTES TEST HOLE WATER MAIN CROSSINGS.
 - REFER TO PROFILE VIEW FOR ELEVATION INFORMATION.
 - TEST FITS SHALL BE MADE TO VERIFY EXACT LOCATION OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LOCATION AND ARE INCIDENTAL TO THE WATER MAIN WORK.
 - ALL WATER MAIN JOINTS INCLUDING ALL TEES, BRIDS, PLUS VALVES, FIRE HYDRANTS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATION 0550. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL DETAILS AS SHOWN ON THE PLAN PRIOR TO INSTALLATION OF PIPE. ALL TEES, BRIDS, AND VALVES SHALL BE INSTALLED IN CONNECTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AND SHALL BE INSTALLED TO THE WATERMAIN NOTES & DETAILS 2-3.
 - REMOVE EXISTING 12" WATER MAIN, INSTALL COPPER TUBING AND CONNECT TO EXISTING SERVICE LINE.
 - EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO REMOVE ALL EXISTING FIRE HYDRANT AND SET MAIN BEHIND THE VALVE. REMOVE THE EXISTING VALVE IN PLACE AND REMOVE THE VALVE BOX AND STABLED THE VOID.

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES & ENGINEERING DIVISION
 ENVIRONMENTAL SERVICES & ENGINEERING DIVISION
 2100 CLAYMAN DRIVE, SUITE 813
 ARLINGTON, VA 22201
 TEL: 703.228.3000
 FAX: 703.228.3000

COPYRIGHT © 2018 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED



APPROVALS

DATE: 08/11/2021

QUALITY CONTROL ENGINEER: *Daniel M. Leach*

CONSTRUCTION MANAGEMENT SUPERVISOR: *Kenneth T. Rabold*

DATE: 08/18/2021

TRANSPORTATION DIRECTOR: *Daniel M. Leach*

DATE: 08/18/2021

PROJECT MANAGER: *[Signature]*

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

W108

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

WATERMAIN PLAN & PROFILE - 2

DESIGNED: LD
 DRAWN: LD
 CHECKED: SS
 PLOTTED: AUGUST 23, 2021

SCALE: 1" = 10'

VERT. SCALE: 1" = 10'

HORIZ. SCALE: 1" = 10'

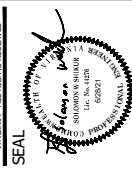
C051.2



- WATERMAIN CONSTRUCTION NOTES:**
1. --- INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF NEW WATER MAIN. ALL CHANGES IN PLACE FOR THE ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
 2. PROPOSED BRIDS SHOWN ON THE PLAN ARE BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXISTING DEPTH OF EXISTING BRIDS AND INSTALL ADDITIONAL BRIDS AS NECESSARY TO MAINTAIN THE PROPOSED PLAN AT NO ADDITIONAL COST TO THE COUNTY.
 3. SEE DETAIL INSTRUCTION ON SHEET C051.3 - WATERMAIN NOTES & DETAILS FOR THE WATERMAIN CONSTRUCTION OF THE PROPOSED BRIDS.
 4. SEE DETAIL INSTRUCTION W108-340-P-1 & APPENDIX A FOR THE PROPOSED PIPE TRENCH REINFORCEMENT FOR A/C WITH APPROXIMATE OVERLAY DEPTH ON SHEET C051.3 - WATERMAIN NOTES & DETAILS FOR THE PROPOSED RESTORATION AFTER THE COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
 5. ALL DEMOLISHED CURB AND GUTTERS AND SIDEWALKS FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED TO ORIGINAL ARLINGTON COUNTY STANDARDS WITHIN 100' OF THE WATERMAIN.
 6. DEMOLISHED CURB AND GUTTERS AND SIDEWALKS SHALL BE RESTORED TO ORIGINAL ARLINGTON COUNTY STANDARDS WITHIN 100' OF THE WATERMAIN.
 7. ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND 500.
 8. THE # IN PLAN VIEW DENOTES TEST HOLE NUMBER FOR THE WATERMAIN UTILITY AND PROPOSED WATER MAIN CROSSING.
 9. REFER TO PROFILE VIEW FOR ELEVATION INFORMATION.
 10. TEST FITS SHALL BE MADE TO VERIFY EXACT LOCATION OF EXISTING WATER MAINS TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST FITS SHALL BE MADE AT THE INTERSECTION OF THE WATER MAIN CROSSING TO THE WATER MAIN WORK.
 11. ALL WATER MAIN JOINTS INCLUDING ALL TEES, BRIDS, PLUS VALVES, FIRE HYDRANTS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH THE ARLINGTON COUNTY SPECIFICATION 0550. THE CONTRACTOR SHALL VERIFY THE EXISTING DETAILS ASSIGNED FOR PROPOSED JOINTS PRIOR TO INSTALLATION OF PIPE. ALL TEES, BRIDS, AND VALVES SHALL BE INSTALLED IN CONNECTION WITH JOINT RESTRAINT SHALL ALSO BE RESTORED WITH CONCRETE THRUST BLOCKS AND SHALL BE INSTALLED IN ACCORDANCE WITH WATERMAIN NOTES & DETAILS - 3.
 12. BEFORE BACKFILLING THE TRENCH, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITY AND CONTACT TO THE UTILITY COMPANY.
 13. EXISTING FIRE HYDRANT TO BE REMOVED AND DISPOSED. THE CONTRACTOR IS REQUIRED TO VERIFY THE LOCATION OF EXISTING FIRE HYDRANT BEFORE THE VALVE IS REMOVED. THE CONTRACTOR SHALL PLACE AND REMOVE THE VALVE BOX AND STABILIZE THE VOID.

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 2100 CLAYTON ROAD, SUITE 813
 ARLINGTON, VA 22201
 TEL: 703.228.3600
 FAX: 703.228.3600
 COPYRIGHT © 2018 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED



APPROVALS

DATE: 08/11/2021
 PROJECT MANAGER: Amy Williams
 QUALITY CONTROL ENGINEER: Kenneth Tabb
 CONSTRUCTION MANAGEMENT SUPERVISOR: [Signature]
 VERIFICATION OF STREETS BARS: 08/18/2021
 TRANSPORTATION DIRECTOR: [Signature]
 PROJECT MANAGER: [Signature]

REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |

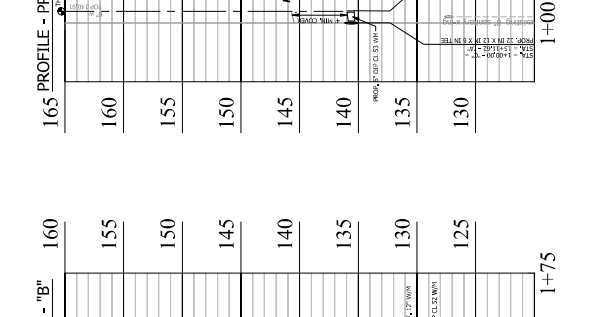
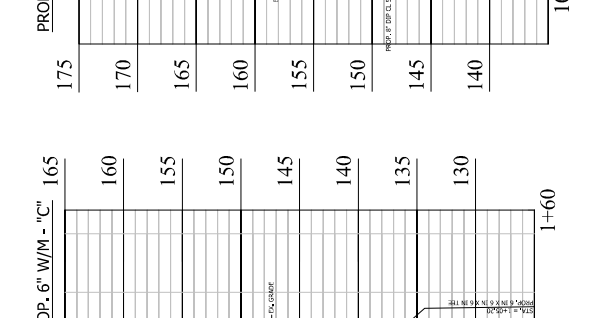
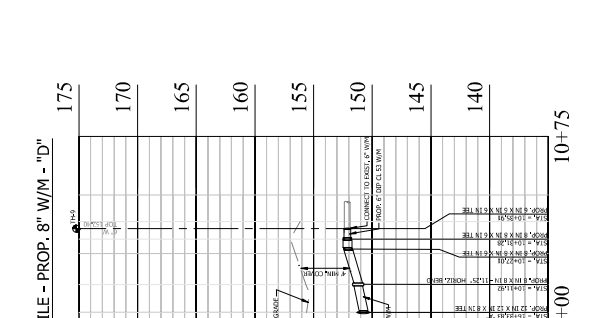
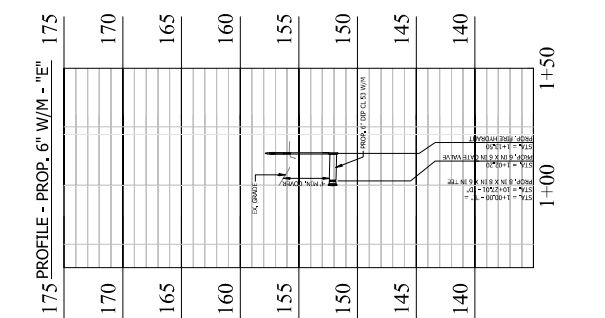
WATERMAIN PLAN & PROFILE - 3

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
 N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
 W108

DESIGNED: LD
 DRAWN: LD
 CHECKED: SS
 PLOTTED: AUGUST 23, 2021

SCALE: 1" = 20'
 VERT. SCALE: 1" = 10'
 HORIZ. SCALE: 1" = 20'

C051.3





DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CAMPBELL AVENUE, SUITE 813
 ARLINGTON, VA 22204
 TEL: 703.228.3000
 FAX: 703.228.3006
 COPYRIGHT © 2018 ARLINGTON COUNTY
 VIRGINIA. ALL RIGHTS RESERVED.



| APPROVALS | DATE |
|------------------------------------|------------|
| <i>Daniel M. Leach</i> | 08/11/2021 |
| <i>Kenneth T. Tabak</i> | 08/12/21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR | 08/18/2021 |
| <i>Walter J. Smith</i> | 08/18/2021 |
| QUALITY CONTROL ENGINEER | 08/19/21 |
| <i>Daniel M. Leach</i> | 08/19/21 |
| TRANSPORTATION DIRECTOR | 08/12/2021 |
| PROJECT MANAGER | |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

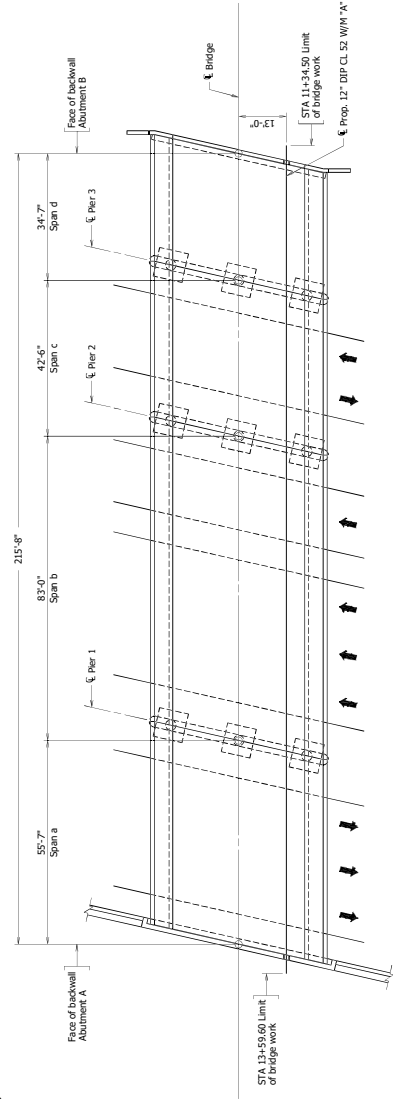
GENERAL PLAN AND ELEVATION
 N RHODES ST - 14TH ST N TO N QUINN ST
 W108
 IMPROVEMENT
 FORT MYER HEIGHTS WATERMAIN

DESIGNED: DCS
 DRAWN: DCS
 CHECKED: ALE
 PLOTTED: AUGUST 20 2021
 SCALE:
 1/16" = 1'-0"

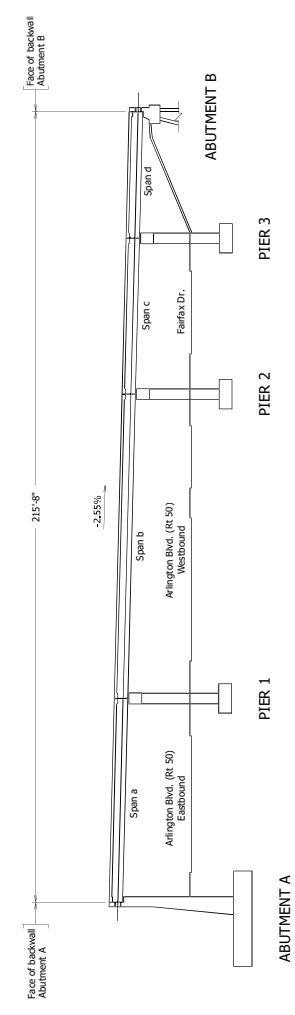
Plan no.
 170-01B
 C052.1

GENERAL NOTES:

Width: 5'-0" sidewalk, 16'-0" roadway, 5'-0" sidewalk.
 Overall width: 16'-0" face-to-face of rail.
 Span layout: 55'-7" - 83'-0" - 42'-6" - 34'-7" steel rolled beam spans.
 Specifications:
 Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.
 Design: AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017, and VDOT Modifications.
 Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.
 Bridge No. of existing bridge is 5004, Plan No. is 170-01 and 170-01A.
 Dimensions shown for the existing structure were developed from the existing plans and are approximate. All dimensions that relate to the existing structure shall be field verified.



PLAN



DEVELOPED SECTION ALONG C-C



| APPROVALS | DATE |
|--|------------|
| <i>Amey P. Williams</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER <i>Kenneth T. Tabak</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>Walter C. Stevens</i> | 08.18.2021 |
| VEGETATION SUPERVISOR <i>Debra M. Leach</i> | 08/19/21 |
| TRANSPORTATION DIRECTOR <i>DP</i> | 08/12/2021 |
| PROJECT MANAGER | |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

FRAMING PLAN AND TRANSVERSE SECTION

N RHODES ST - 14TH ST N TO N QUINN ST

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT W108

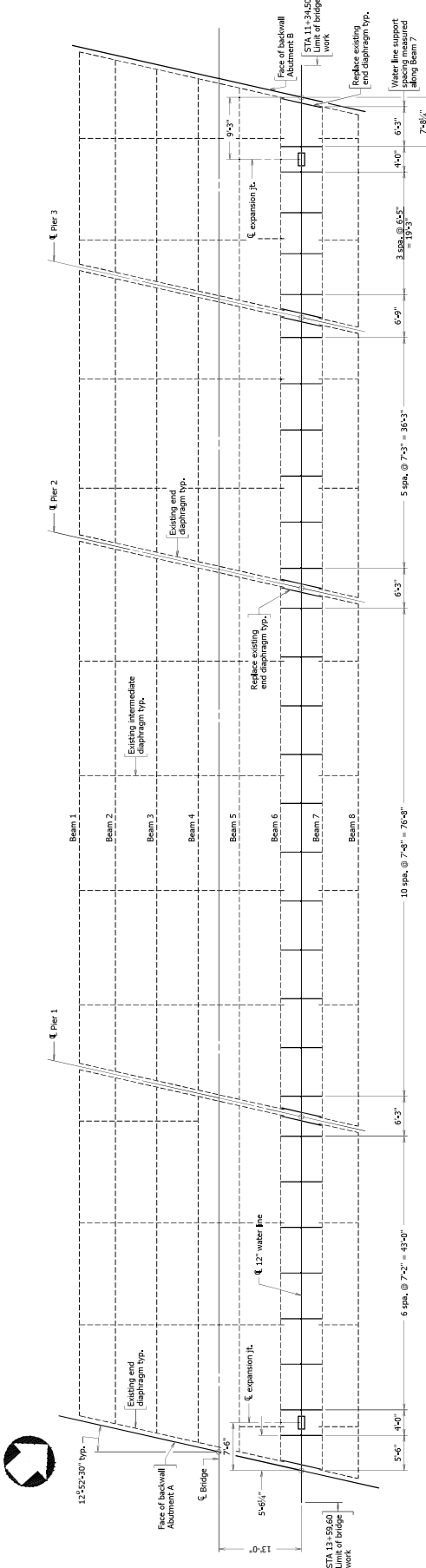
DESIGNED: DCS
DRAWN: DCS
CHECKED: ABE
PLOTTED: AUGUST 20, 2021

SCALE:

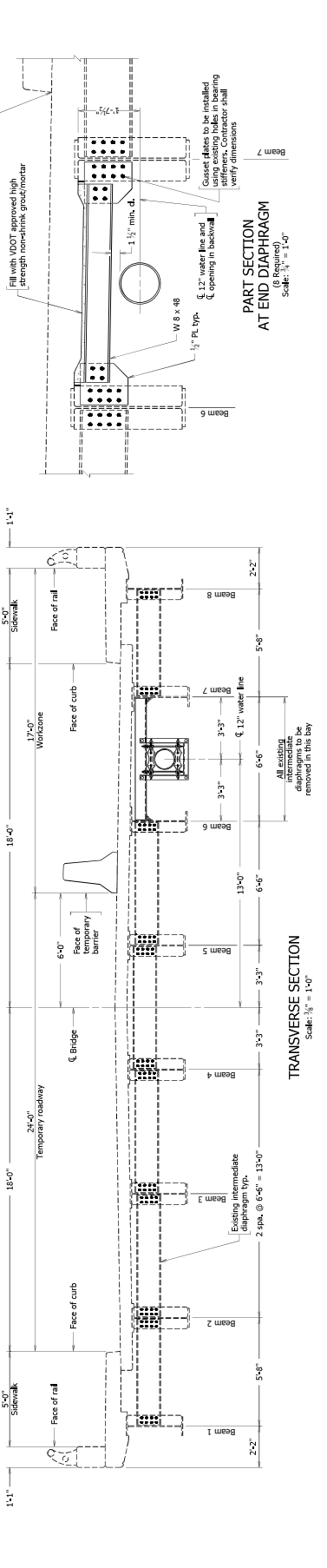
AS SHOWN

C052.2

Notes:
The Contractor shall adjust the support spacing as necessary to avoid conflict with existing connector plates while maintaining 8'-0" maximum spacing.



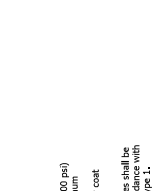
FRAMING PLAN
Scale: 1/8" = 1'-0"



TRANSVERSE SECTION
Scale: 1/8" = 1'-0"

PART SECTION AT END DIAPHRAGM
(8 Required)
Scale: 1/4" = 1'-0"

Plan no.
170-01B



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION
 ENGINEERING BRANCH
 2100 CALVERT AVENUE, ARLINGTON, VA 22201
 PHONE: 703.228.3000
 FAX: 703.228.3000
 COPYRIGHT © 2014 ARLINGTON COUNTY VIRGINIA-ALL RIGHTS RESERVED

DESIGNED: DCS
 DRAWN: DCS
 CHECKED: ALE
 PLOTTED: AUGUST 20, 2013

SCALE: AS SHOWN

WATERMAIN NOTES & DETAILS

N. RHODES ST - 14TH ST N TO N QUINN ST

W108

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

APPROVALS

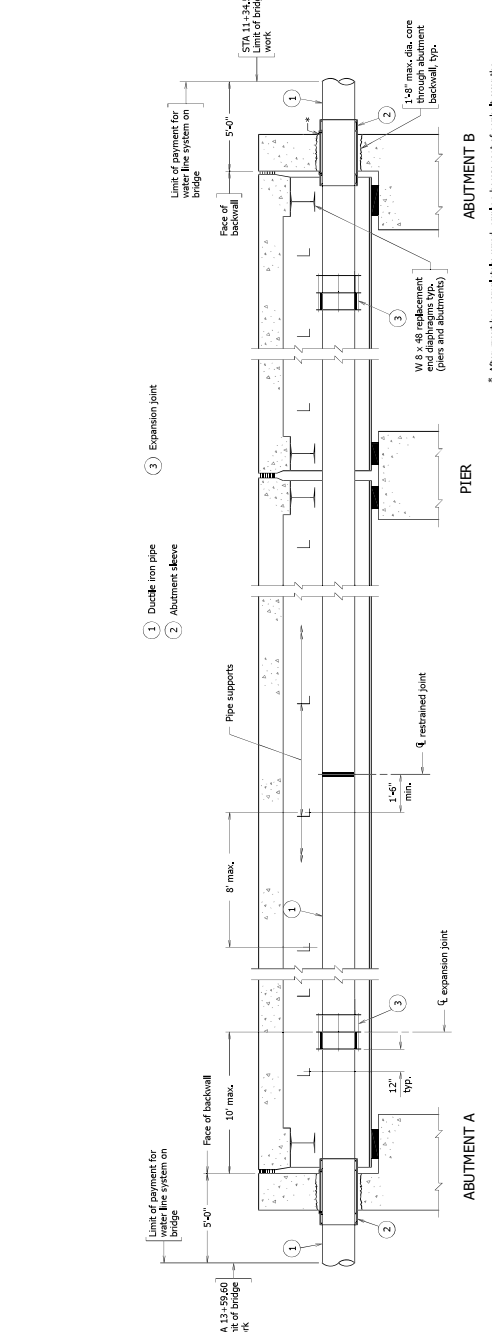
| NAME | DATE |
|------------------------------------|------------|
| <i>Amel Hussein</i> | 08/11/2013 |
| QUALITY CONTROL ENGINEER | |
| <i>Kamel Tabbal</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR | |
| <i>Debra M. Leach</i> | 08/19/21 |
| TRANSPORTATION DIRECTOR | |
| <i>DOCK GRIFFIN</i> | 08/12/2013 |
| PROJECT MANAGER | |

REVISIONS

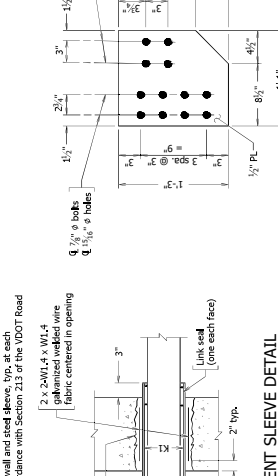
| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |

Notes:

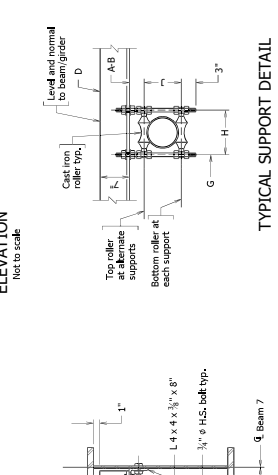
- Material - Ductile iron with restrained joint
- Installation - Installation shall be in accordance with Section 231.03
- Hydrostatic test pressure shall be 150 psi minimum
- Specifications: ANSI/AWWA C151/A21.51
- Installation: Installation shall be in accordance with Section 231.03
- Steel sleeve - ACP 51-C-9 1/2" O.D.
- Expansion joint - Dresser style # 63, Type 3
- Calibration - Miscellaneous backflow: Backflow preventers shall be installed in accordance with Section 231.03
- Water line system shall be paid for on a lump sum basis, when no measurement shall be made, and shall be paid for at the contract lump sum price, which price shall include asphalt sealer, welded gaskets, expansion joints, testing, disinfecting (when required), end fittings, pipe, expansion joints, hangers, rollers, rods, abutment sleeves, link diaphragms with gasket plates, hangers, rollers, rods, abutment sleeves, link diaphragms, and all other materials and equipment necessary for the installation of the water line system as indicated herein and within the pay limits shown hereon. Such price shall be full compensation for completing all materials, labor, tool, equipment and incidentals necessary to complete the work.
- Removal of existing diaphragms and core drilling abutment backwalls shall be in accordance with Section 113 of the VDOT Road and Bridge Specifications, Section 411 of the VDOT Road and Bridge Specifications, and Section 411 of the VDOT Road and Bridge Specifications.
- The Contractor shall prepare all detail drawings that shall be in accordance with the VDOT Road and Bridge Specifications using Method 3. The Contractor shall prepare and spot coat all coatings damaged during repairs using a zinc rich primer on the VDOT approved epoxide resin. All galvanized material shall be in accordance with Section 231.03 of the VDOT Road and Bridge Specifications.



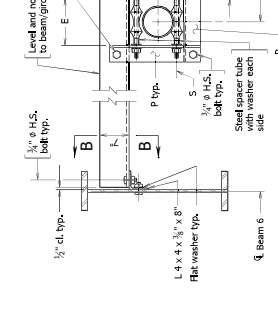
ABUTMENT A



ABUTMENT B

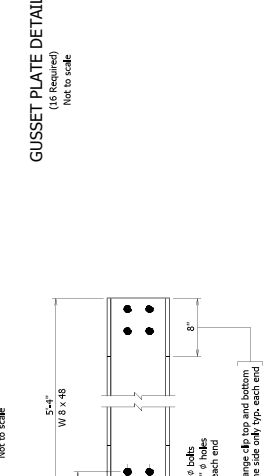


PIER

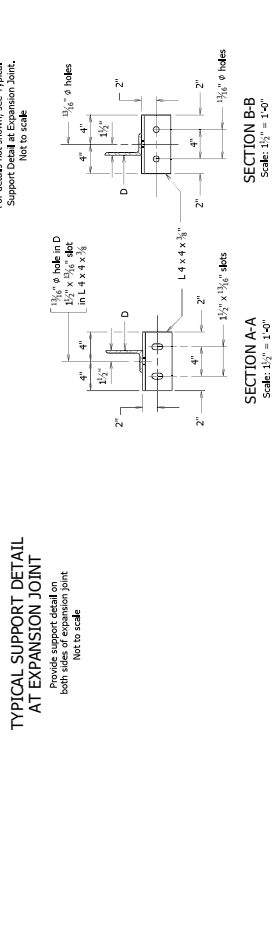


TYPICAL SUPPORT DETAIL AT EXPANSION JOINT

ABUTMENT SLEEVE DETAIL



TYPICAL SUPPORT DETAIL FOR ABUTMENT TO BEAM/GIRDER SUPPORT DETAIL AT EXPANSION JOINT



END DIAPHRAGM DETAIL

GUSSET PLATE DETAIL



DIMENSIONS

| Pipe Ø | A | B | C | D | E | F | G | H | J | K | L | P | S |
|--------|---------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 12" | 11 1/2" | 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" | 1 8 5/8" |

*** The Contractor shall verify and/or adjust these values based on the manufacturer's requirements at no additional cost to the County. ***
 + + + The Contractor shall verify and/or adjust these values based on the manufacturer's requirements at no additional cost to the County. + + +
 G = diameter of rod
 S = diameter of shaft

Plan no. 170-01B

C052.3

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
2100 CLAYTON BUREAU DRIVE, SUITE 813
ARLINGTON, VA 22201
TEL: 703.228.5000
FAX: 703.228.5006

COPYRIGHT © 2018 ARLINGTON COUNTY
VIRGINIA - ALL RIGHTS RESERVED

SEAL



DATE: 08/11/2021

APPROVALS: *Daniel M. Leach*
QUALITY CONTROL ENGINEER
Kenneth Tabb
8.12.21

CONSTRUCTION MANAGEMENT SUPERVISOR
DATE: 08.18.21

DATE: 08.18.21

TRANSPORTATION DIRECTOR
DATE: 08/18/21

PROJECT MANAGER
DATE: 08/12/2021

REVISIONS

DATE

WATERMAIN NOTES & DETAILS - 2

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
W108

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

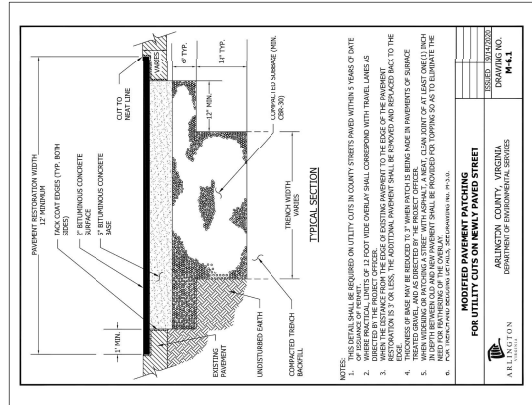
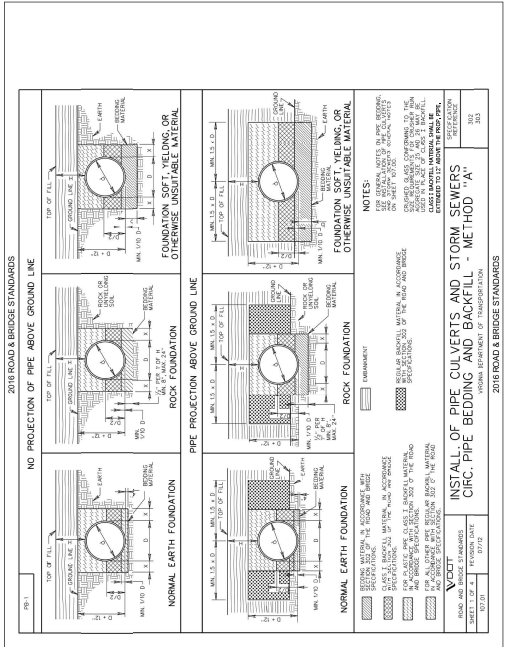
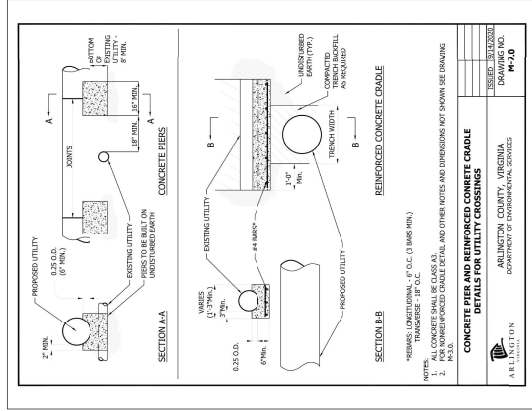
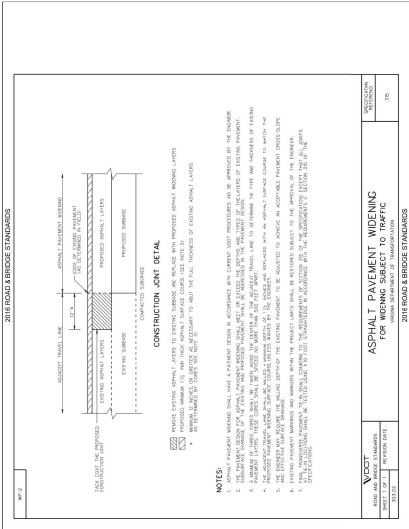
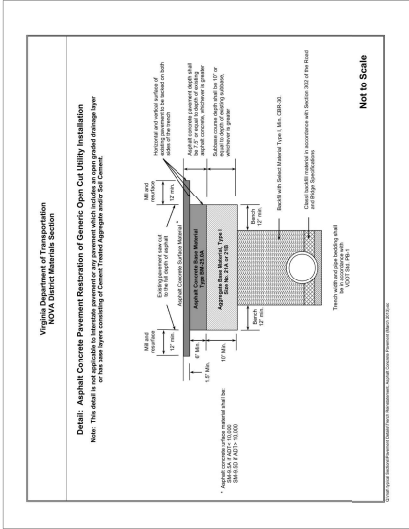
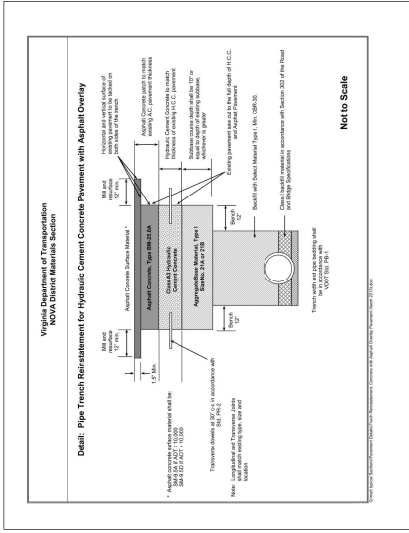
DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23, 2021

SCALE:

AS SHOWN

C052.4





| APPROVALS | DATE |
|------------------------------------|------------|
| Project Manager | 08/11/2021 |
| Quality Control Engineer | 8.12.21 |
| Construction Management Supervisor | 08.18.2021 |
| Virginia State Streets Director | 08/18/21 |
| Transportation Director | 08/18/2021 |
| Project Manager | 08/12/2021 |

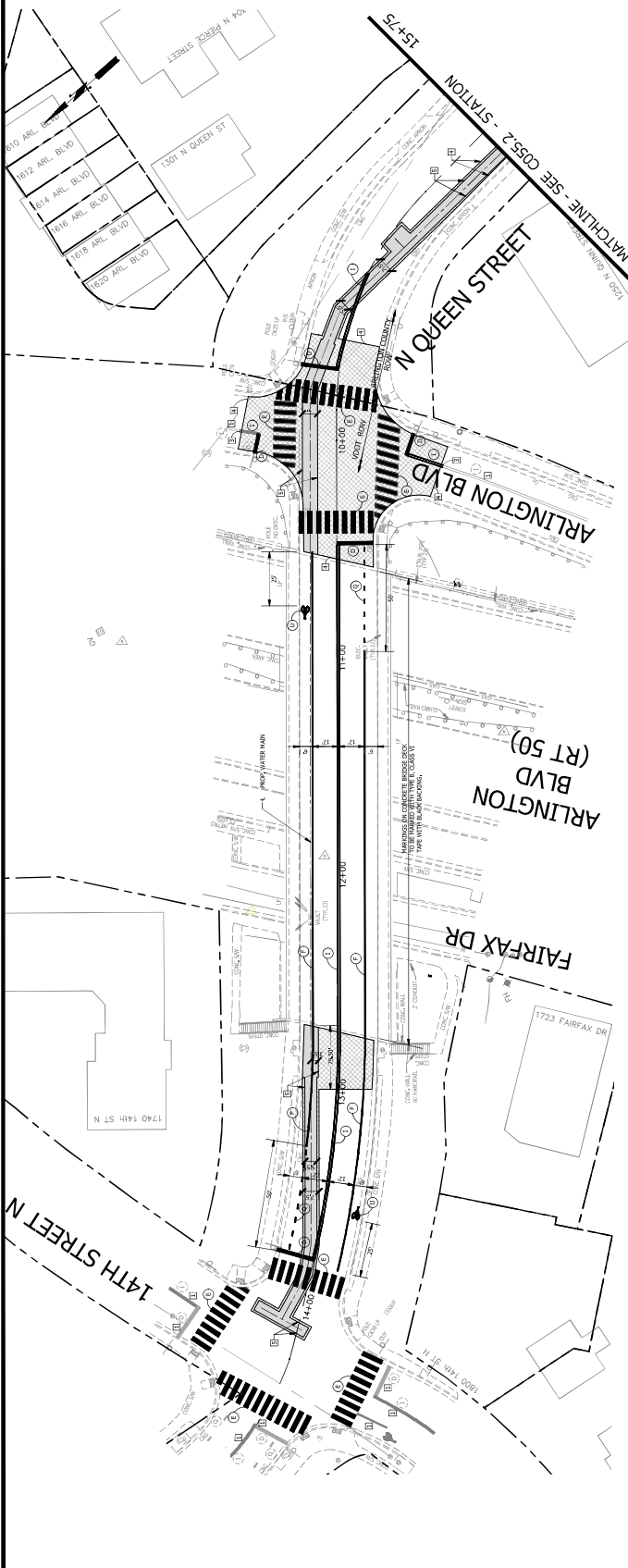
| REVISIONS | DATE |
|-----------|------|
|-----------|------|

PAYING AND PAVEMENT MARKING PLAN - 1
 FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
 W108
 N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

DESIGNED: LD
 DRAWN: LD
 CHECKED: SS
 PLOTTED: AUGUST 23, 2021

SCALE:

GRAPHIC SCALE



PAVEMENT LEGEND:

- EXIST. PAVEMENT TO BE REMOVED AND REPLACE WITH NEW PAVEMENT
- MILL AND RESURFACE EXISTING PAVEMENT (PROVIDE 2" MIN. MILLING DEPTH)

CONSTRUCTION NOTES:

- EXISTING PAVEMENT MARKINGS TO REMAIN.
- ERADICATE EXISTING PAVEMENT MARKINGS, THE INTO EXISTING PAVEMENT MARKINGS.
- LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT TO BE INDICATED BY 4" WIDE WHITE LINE.
- LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT TO BE INDICATED BY 4" WIDE WHITE LINE.
- AS PER ARLINGTON STS. DIV. PLAN 12708.

NOTE:
 ALL PAVEMENT MARKINGS SHALL BE PERFORMED IN ACCORDANCE WITH VDOT STANDARD PLAN.

LEGEND

| EXISTING | PROPOSED |
|----------|----------|
| | |
| | |
| | |
| | |
| | |

HIGH VISIBILITY CROSSWALK NOT TO SCALE

BIKE SYMBOL DETAIL

- PAVEMENT MARKING NOTES:**
- STREET MARKINGS SHALL BE PLACED IN A MINIMUM OF 4" IN ADVANCE OF A MARKED CROSSWALK IF MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
 - CONTACT DCI-TRANSPORTATION ENGINEERING & OPERATIONS CONSTRUCTION MANAGEMENT SPECIALIST OR HIS DESIGNEE AT 703-228-8588 OR 571-437-1077 TO APPROVE MARKING LAYOUT 48 HOURS PRIOR TO INSTALLATION OF MARKINGS.
 - PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 8TH EDITION, 2009:
 - ARLINGTON COUNTY MARKING STANDARDS.
 - ALL MARKINGS SHALL BE THERMOPLASTIC FOR ARLINGTON COUNTY MARKING STANDARDS.
 - STOP BARS SHALL BE A MINIMUM OF 4" IN ADVANCE OF A MARKED CROSSWALK IF MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
 - STOP BARS SHALL BE LOCATED 30' BACK FROM STOP BAR FOR ADDITIONAL APPROX FOLLOWS COUNTY MARKING STANDARDS.
 - CROSSWAHS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
 - LEFT TURN LINES SHALL BE LOCATED 30' BACK FROM STOP BAR FOR ADDITIONAL APPROX FOLLOWS COUNTY MARKING STANDARDS.
 - CORNER DETAIL MARKINGS SHALL BE 7" WIDE UNLESS OTHERWISE NOTED AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT CURBS OR WHERE OTHERWISE INDICATED.
 - SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 330' APART UNLESS OTHERWISE SPECIFIED.
 - BIKE LANE MARKINGS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.
 - EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.
 - FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKINGS SPECIFICATION, DETAILS MK-1 TO MK-12.

- SIGN NOTES:**
- FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE, HEAVY DUTY ANCHOR BUSHINGS WITH 1/2" CONCRETE PATCH AND 1/2" DRIKER RIVET WITH WASHER.
 - CONTACT TRMO CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-8588 OR 571-437-1077 48 HRS PRIOR TO POURING CONCRETE. ALTERNATIVE CONTACT AT 703-228-7888 OR 571-417-9497.

STANDARD PAVEMENT MARKING LEGEND

| | | |
|------------------|---|--|
| ① TYPE B CLASS 1 | WHITE 4" WIDTH | PARKING LINES, EDGE LINES, LANE LINES |
| ② TYPE B CLASS 1 | WHITE 4" WIDTH, 1/2" LONG, 30' SPACING | DASHED LANE LINES |
| ③ TYPE B CLASS 1 | WHITE 4" WIDTH, 2" LONG, 1/2" SPACING | LANE TRANSITIONS, TURN LANE STRIPS |
| ④ TYPE B CLASS 1 | WHITE 6" WIDTH | STOP BARS |
| ⑤ TYPE B CLASS 1 | WHITE 8" WIDTH | STOP BARS |
| ⑥ TYPE B CLASS 1 | WHITE 6" WIDTH | TURF LINES, CROSS WAHS |
| ⑦ TYPE B CLASS 1 | YELLOW 4" WIDTH, 1/2" LONG, 30' SPACING | TURF LINES, TRANSVERSE CROSS WAHS, BIKE LINES |
| ⑧ TYPE B CLASS 1 | YELLOW 4" WIDTH, 1/2" LONG, 30' SPACING | DIVIDED TRAFFIC, TWO WAY TURN LINES |
| ⑨ TYPE B CLASS 1 | YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING | EDGE LINES |
| ⑩ TYPE B CLASS 1 | YELLOW 4" WIDTH, 1/2" SPACING @ 95 DEGREE | GENERAL LINES |
| ⑪ TYPE B CLASS 1 | WHITE SINGLE ARROW | TURN LINES, SAFETY ZONES |
| ⑫ TYPE B CLASS 1 | WHITE COMBINATION ARROW | TURN LINES |
| ⑬ TYPE B CLASS 1 | WHITE 8" LETTERS | PAVEMENT LETTERS (STOP, YIELD, BUS ONLY, etc.) |
| ⑭ TYPE B CLASS 1 | WHITE 12" WIDTH, 20' SPACING @ 94 DEGREE | LANE TRANSITIONS, TURN LANE STRIPS |
| ⑮ TYPE B CLASS 1 | WHITE 12" WIDTH, 20' SPACING @ 94 DEGREE | GORE MARKINGS |
| ⑯ TYPE B CLASS 1 | WHITE 6" WIDTH, 2" LONG, 4" SPACING | LANE TRANSITIONS |
| ⑰ TYPE B CLASS 1 | WHITE 6" WIDTH, 2" LONG, 4" SPACING | CORB EXTENSIONS |
| ⑱ TYPE B CLASS 1 | WHITE 4" WIDTH, DOUBLE LINE, 4" SPACING | WOOD STOP BARS |
| ⑲ TYPE B CLASS 1 | YELLOW 6" WIDTH, 2" LONG, 4" SPACING | LANE TRANSITIONS |
| ⑳ TYPE B CLASS 1 | WHITE BIKE SYMBOL | |

SEAL



| APPROVALS | DATE |
|------------------------------------|------------|
| <i>Amy Williams</i> | 08/11/2021 |
| <i>Kenneth Rabala</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR | 08.18.21 |
| VERIFIED AS-BUILT STREETS BUREAU | 08/18/21 |
| <i>Doreen M. Leach</i> | 08/18/21 |
| TRANSPORTATION DIRECTOR | |
| PROJECT MANAGER | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |

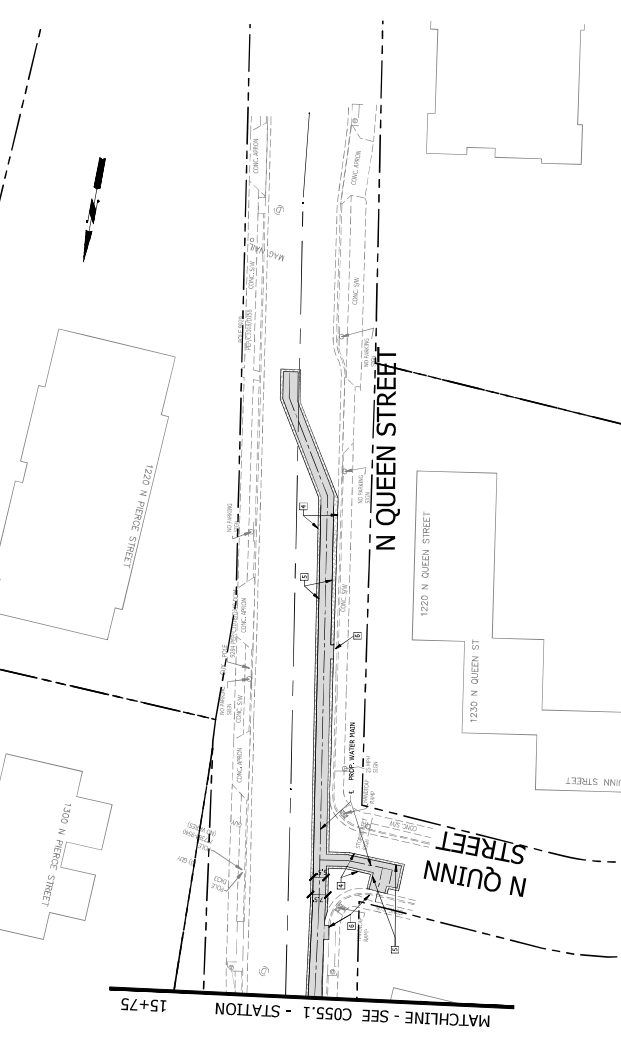
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

PAVING AND PAVEMENT MARKING PLAN - 2

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23, 2021



C055.2



PAVEMENT LEGEND:

| | |
|--|---|
| | EXIST. PAVEMENT TO BE REMOVED (FULL DEPTH SAW, CUT AND REPLACE WITH NEW PAVEMENT) |
| | NEW AND RESURFACE EXISTING PAVEMENT (FULL DEPTH SAW, CUT AND MILLING DEPTH) |

CONSTRUCTION NOTES:

- EXISTING PAVEMENT MARKINGS TO REMAIN.
- ERASE EXISTING PAVEMENT MARKINGS.
- TELE INTO EXISTING PAVEMENT MARKINGS.
- LIMIT OF MILL & RESURFACE OF EXIST. PAVEMENT
- LIMIT OF FULL DEPTH PAVEMENT REPLACEMENT AS PER ADDITIONAL STA. DATA, P&E.

LEGEND

| EXISTING | PROPOSED |
|----------|----------|
| | |
| | |
| | |
| | |
| | |

HIGH VISIBILITY CROSSWALK
NOT TO SCALE

BIKE SYMBOL DETAIL

- PAVEMENT MARKING NOTES:**
- STREET MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ARLINGTON COUNTY PUBLIC WORKS DEPARTMENT.
 - PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE FOLLOWING AND ANY OTHER SPECIFICATIONS:
 - ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
 - STOP BARS SHALL BE A MINIMUM OF 4" IN ADVANCE OF A MARKED CROSSWALK IF THE CROSSWALK IS NOT TO BE USED FOR A PERIOD OF 30 DAYS FROM THE NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.
 - CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
 - LEFT TURN LINES SHALL BE LOCATED 30' BACK FROM STOP BARS FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.
 - ONE-WAY PARKING LINES SHALL BE 7" WIDE UNLESS OTHERWISE NOTED AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT CURBS OR WHERE OTHERWISE INDICATED.
 - SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 230' APART UNLESS OTHERWISE SPECIFIED.
 - BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.
 - EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.
 - FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATION, DETAILS MK-1 TO MK-12

- SIGN NOTES:**
- FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE HEAVY DUTY ANCHOR BOLTS WITH WASHERS AND NUTS. USE 1/2" CORNER BOLT WITH FLANGED NUT AND 1/2" DRIVE RIVET WITH WASHER.
 - CONTACT TEMA CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-4699 OR 571-425-1074 PRIOR TO POURING CONCRETE. ALTERNATIVE CONTACT AT 703-228-3788 OR 571-411-7497.

- STANDARD PAVEMENT MARKING LEGEND**
- TYPE B CLASS 1 WHITE 4" WIDTH
 - TYPE B CLASS 1 WHITE 4" WIDTH, 10' LONG, 30' SPACING
 - TYPE B CLASS 1 WHITE 4" WIDTH, 2' LONG, 10' SPACING
 - TYPE B CLASS 1 WHITE 4" WIDTH, 2' LONG, 10' SPACING
 - TYPE B CLASS 1 WHITE 4" WIDTH, 2' LONG, 10' SPACING
 - TYPE B CLASS 1 WHITE 4" WIDTH, 2' LONG, 10' SPACING
 - TYPE B CLASS 1 YELLOW 4" WIDTH, 10' LONG, 30' SPACING
 - TYPE B CLASS 1 YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING
 - TYPE B CLASS 1 WHITE 6" WIDTH, 10' SPACING @ 95 DEGREE
 - TYPE B CLASS 1 WHITE SINGLE ARROW
 - TYPE B CLASS 1 WHITE COMBINATION ARROW
 - TYPE B CLASS 1 WHITE 6" LETTERS
 - TYPE B CLASS 1 WHITE 6" WIDTH, 2' LONG, 10' SPACING
 - TYPE B CLASS 1 WHITE 12" WIDTH, 20' SPACING @ 94 DEGREE
 - TYPE B CLASS 1 WHITE 6" WIDTH, 2' LONG, 4" SPACING
 - TYPE B CLASS 1 WHITE 4" WIDTH, DOUBLE LINE, 4" SPACING
 - TYPE B CLASS 1 YELLOW 6" WIDTH, 2' LONG, 4" SPACING
 - TYPE B CLASS 1 WHITE BIKE SYMBOL
- PAVEMENT LINES, EDGE LINES, LANE LINES
DAGGER LANE LINES
LANE TRANSITIONS, TURN LANE SHIPS
STOP BARS
CROSS MARKINGS
TURN LINES, TRANSVERSE CROSS MARKS, BIKE LINES
DIVIDED TRAFFIC, TWO WAY TURN LINES
EDGE LINES
CENTER LINES
HATCH LINES, SAFETY ZONES
TURN LINES
PAVEMENT LETTERS (STOP, YIELD, BIG, ONLY, etc.)
LANE TRANSITIONS, TURN LANE SHIPS
GOFF MARKINGS
LANE TRANSITIONS
CURE EXTENSIONS
WOOL STOP BARS
LANE TRANSITIONS

SEAL



| APPROVALS | DATE |
|---|------------|
| <i>Amy P. Moore</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER <i>Kenneth Rabala</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>Walter S. Williams</i> | 08.18.2021 |
| VEGETATION SPECIALIST <i>Doreen M. Leach</i> | 08/18/21 |
| TRANSPORTATION DIRECTOR <i>[Signature]</i> | 08/12/2021 |
| PROJECT MANAGER <i>[Signature]</i> | |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |

PHASE 1
MAINTENANCE OF TRAFFIC PLAN - 1
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
W108

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23 2021

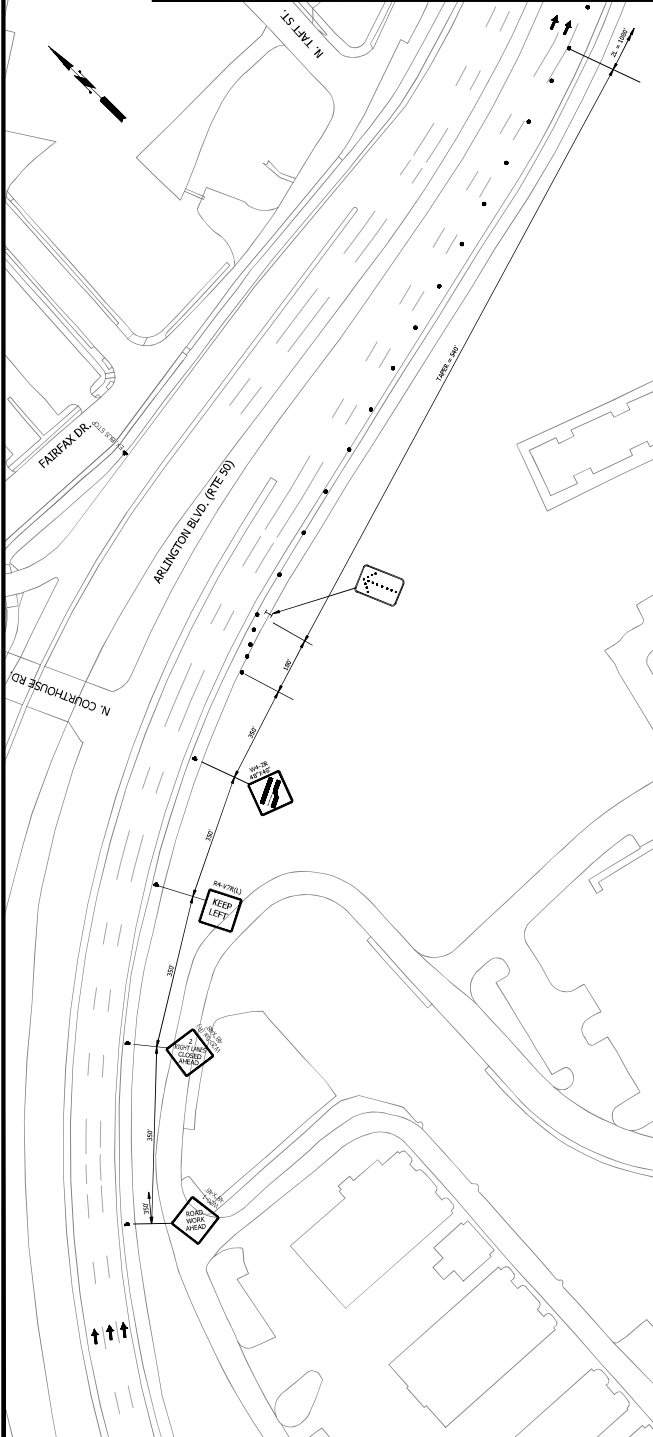
SCALE:

NOT TO SCALE

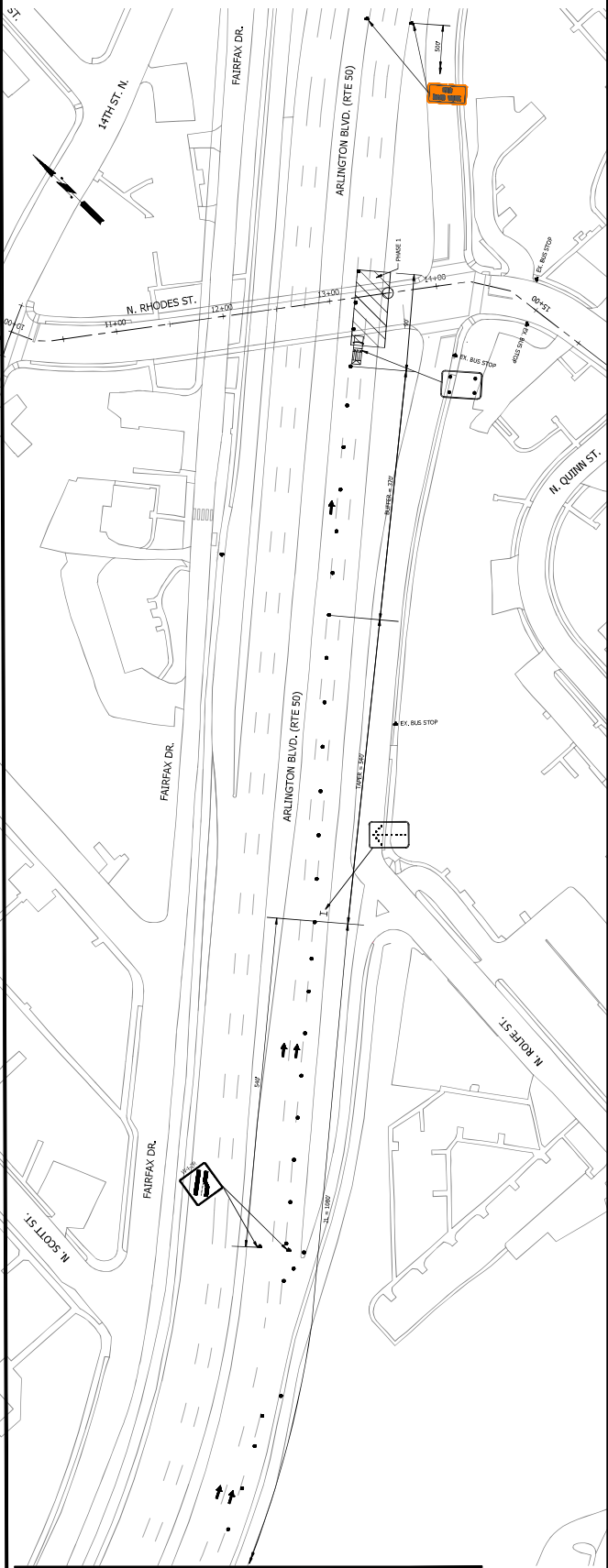
C121-1

- NOTES:**
1. PHASE 1 WORK SHALL BE COMPLETED IN 8 CALENDAR DAYS.
 2. TYPICAL SIGNS SHOWN IN THIS PHASE.
 3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
 4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE CONSIDERED TO BE UNDER THE BRIDGE (UB) CATEGORY.

MATCHLINE A-A - SEE THIS SHEET



MATCHLINE A-A - SEE THIS SHEET



SEAL



| APPROVALS | DATE |
|--|------------|
| Raymond P. Moore QUALITY CONTROL ENGINEER | 08/11/2021 |
| Kenneth T. Rabala 8.12.21 | |
| CONSTRUCTION MANAGEMENT SUPERVISOR | |
| WALTER S. STREETS, III 08.18.2021 | |
| Doreen M. Leach 08/18/21 | |
| TRANSPORTATION DIRECTOR | |
| PROJECT MANAGER | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |

PHASE 2
MAINTENANCE OF TRAFFIC PLAN - 2
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
W108

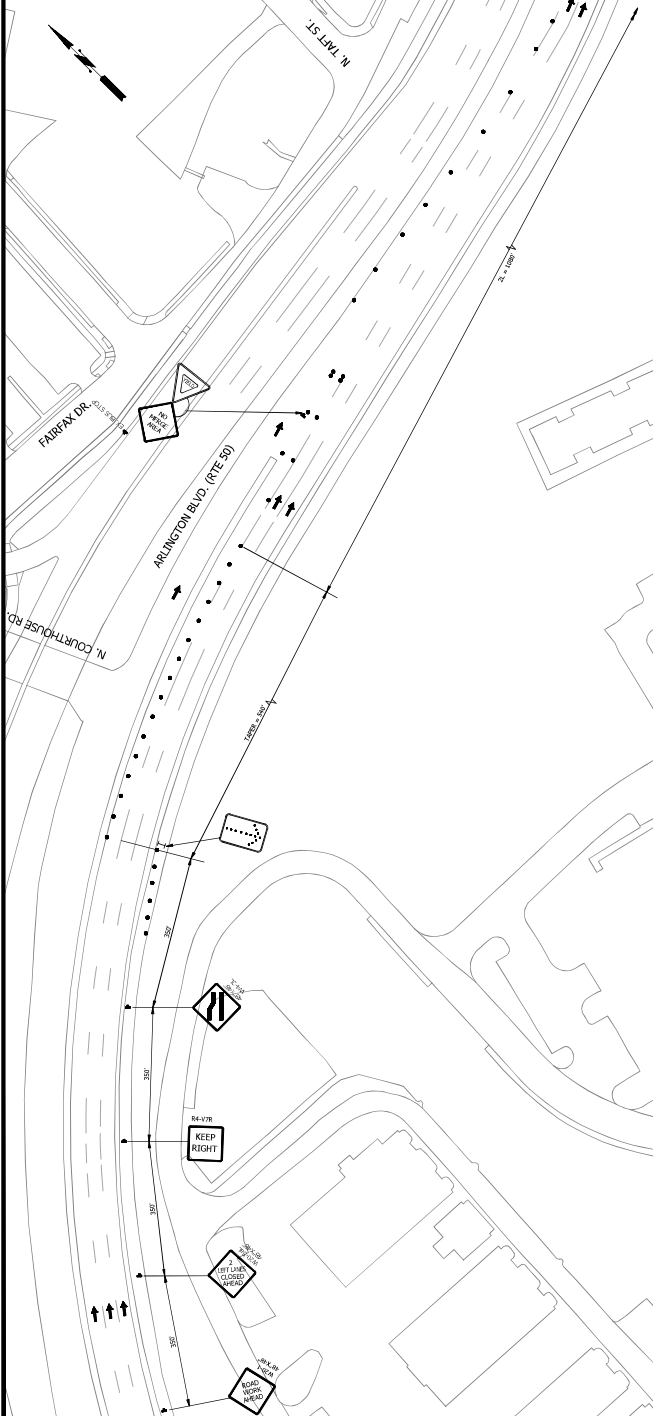
DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23 2021

SCALE:
NOT TO SCALE

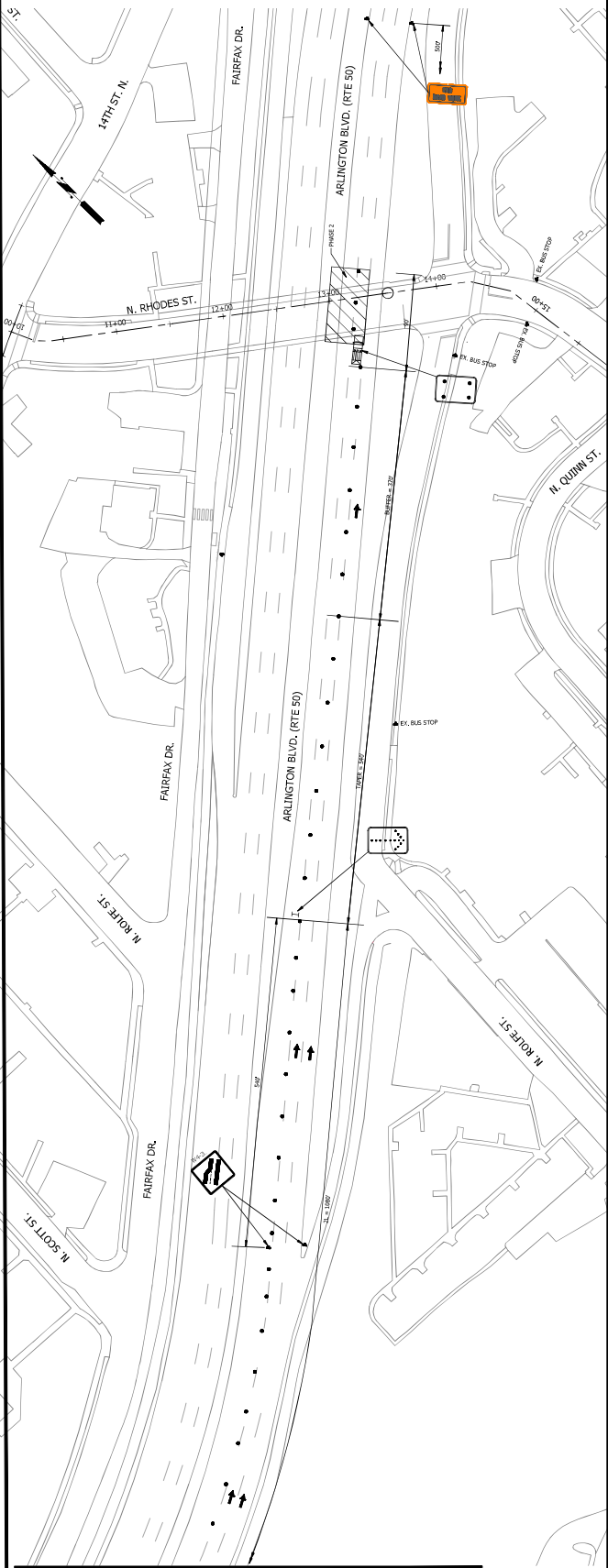
C121.2

- NOTES:**
1. PHASE 2 WORK SHALL BE COMPLETED IN 11 CALENDAR DAYS.
 2. ALL TRAFFIC CONTROL DEVICES SHALL BE USED IN THIS PHASE.
 3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
 4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE NIGHT BETWEEN 12:00 AM AND 5:00 AM.

MATCHLINE A-A - SEE THIS SHEET



MATCHLINE A-A - SEE THIS SHEET



SEAL



| APPROVALS | DATE |
|---|------------|
| QUALITY CONTROL ENGINEER <i>Amy Williams</i> | 08/11/2021 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>Kenneth Rabala</i> | 8.12.21 |
| VEGETATION SPECIALIST <i>Diana M. Leach</i> | 08/18/21 |
| TRANSPORTATION DIRECTOR <i>[Signature]</i> | 08/12/2021 |
| PROJECT MANAGER <i>[Signature]</i> | |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |

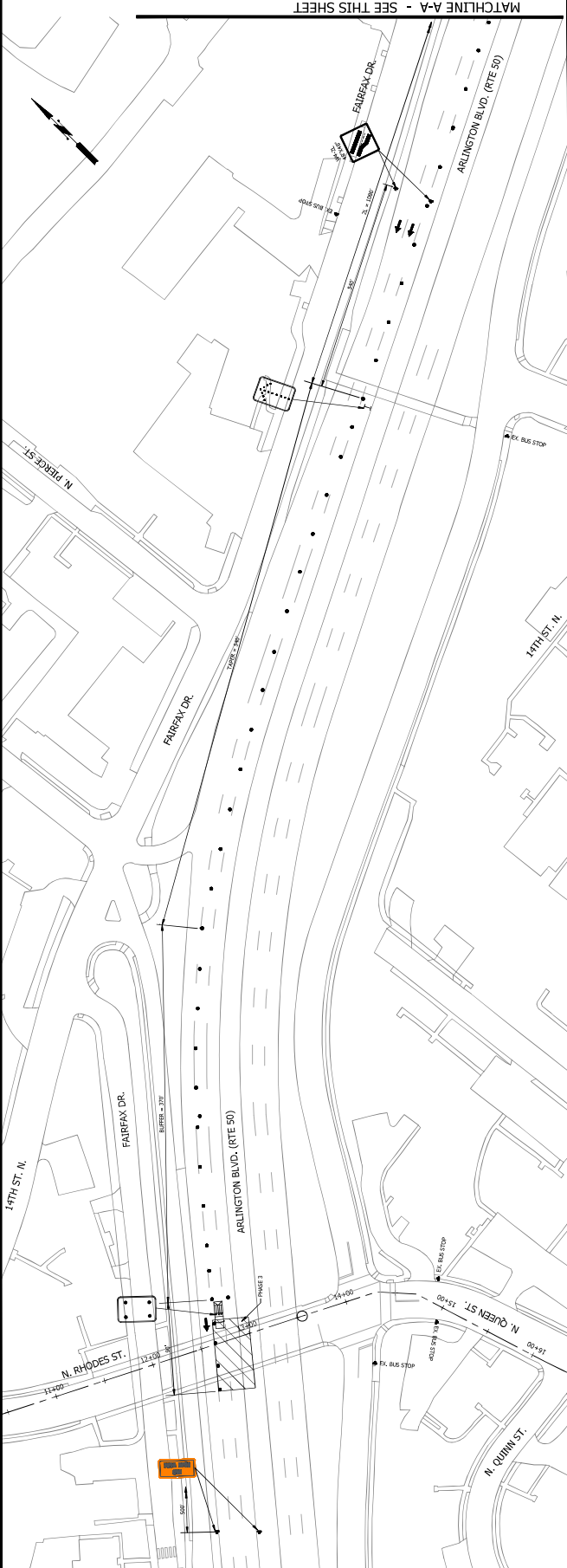
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
PHASE 3
MAINTENANCE OF TRAFFIC PLAN - 3

DESIGNED: LD
DRAWN: LD
CHECKED: JS
PLOTTED: AUGUST 23, 2021

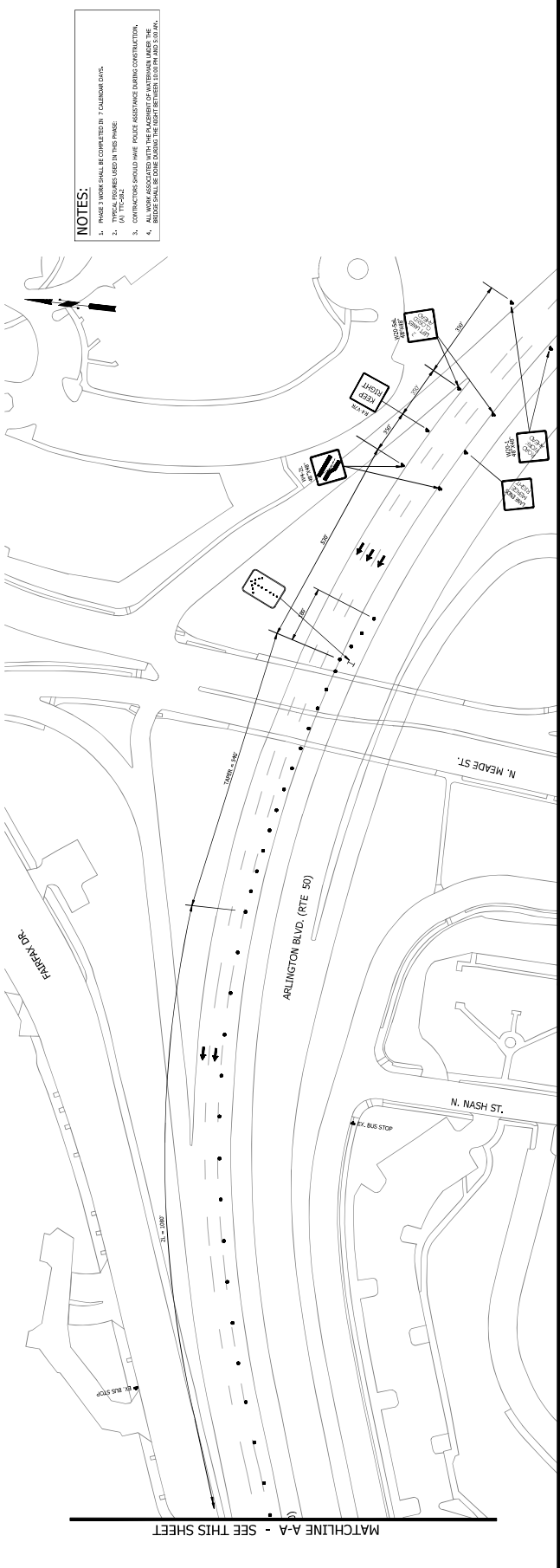
SCALE:

NOT TO SCALE

C121.3



MATCHLINE A-A - SEE THIS SHEET



MATCHLINE A-A - SEE THIS SHEET

- NOTES:**
- PHASE 3 WORK SHALL BE COMPLETED BY 7:00 AM ON 8/24/21.
 - TRAFFIC CONTROL SHALL BE USED IN THIS PHASE.
 - CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
 - ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE HOURS BETWEEN 5:00 PM AND 5:00 AM.

SEAL



APPROVALS DATE
QUALITY CONTROL ENGINEER 08/11/2021
Amy Williams

CONSTRUCTION MANAGEMENT SUPERVISOR 8.12.21
Kenneth Rabala

DESIGNER 08/18/21
TRANSPORTATION DIRECTOR
Diana M. Leach

PROJECT MANAGER 08/12/2021
[Signature]

REVISIONS DATE

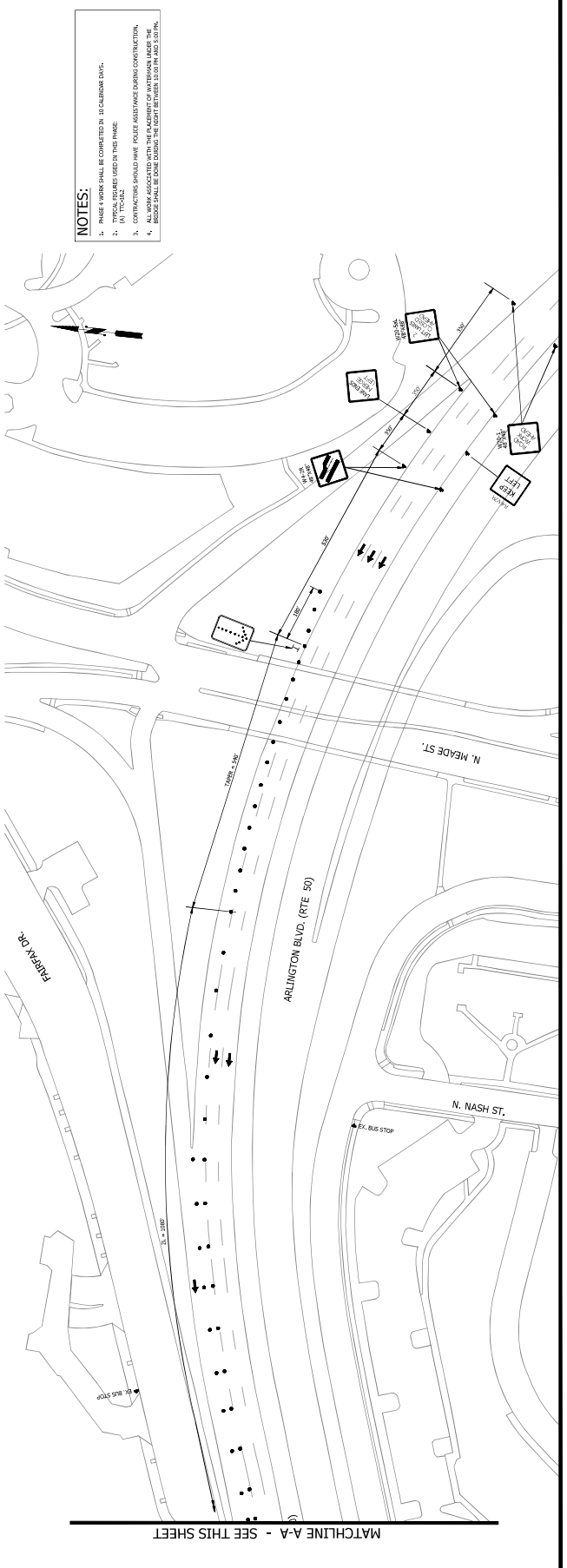
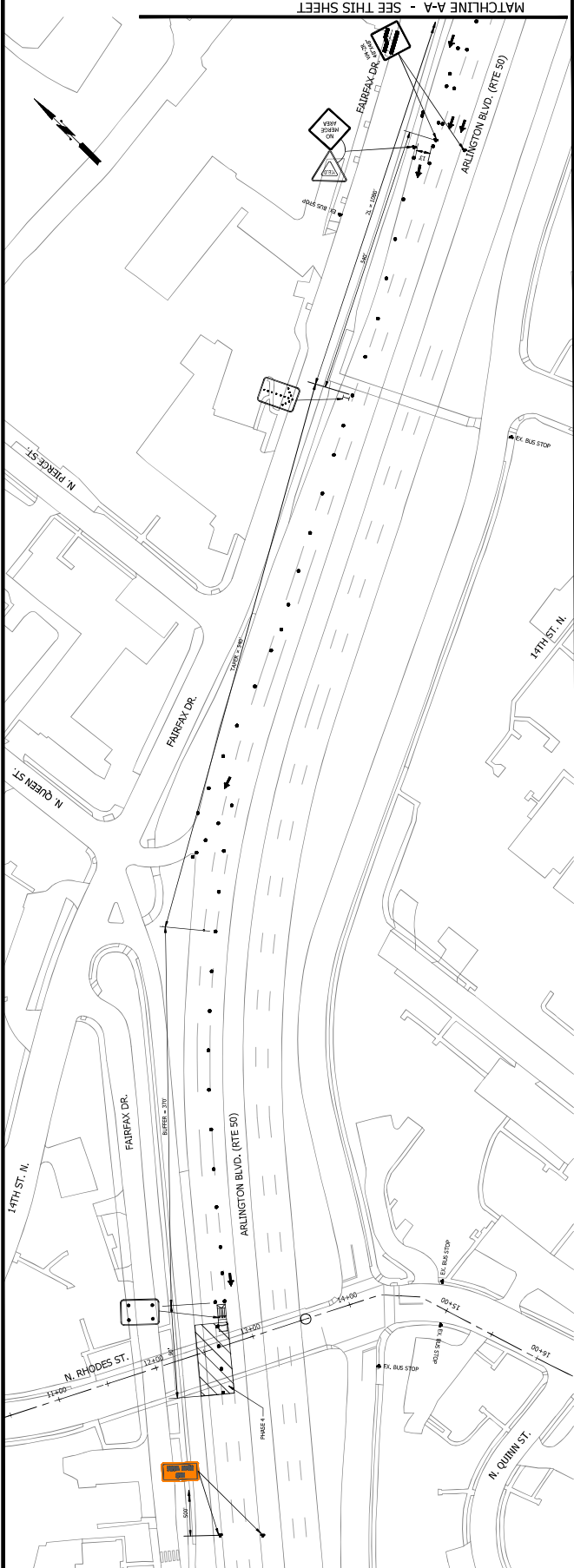
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
PHASE 4
MAINTENANCE OF TRAFFIC PLAN - 4

DESIGNED: LD
DRAWN: LD
CHECKED: JS
PLOTTED: AUGUST 23, 2021

SCALE:

NOT TO SCALE

C121.4



- NOTES:**
1. PHASE 4 WORK SHALL BE COMPLETED BY 10 CALIFORNIA DATE.
 2. ALL WORK SHALL BE COMPLETED BY 10 CALIFORNIA DATE.
 3. CONTRACTORS SHOULD HAVE POLICE ASSISTANCE DURING CONSTRUCTION.
 4. ALL WORK ASSOCIATED WITH THE PLACEMENT OF WATERMAIN UNDER THE BRIDGE SHALL BE DONE DURING THE HOURS BETWEEN 10:00 PM AND 5:00 AM.

ARLINGTON

VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU - OFFICE 813
 2100 CLARINDON BLVD., SUITE 813
 ARLINGTON, VA 22204
 TEL: 703.246.8400
 FAX: 703.246.8688

© 2019 ARLINGTON COUNTY
 VIRGINIA - ALL RIGHTS RESERVED

SEAL



ROBERT L. RUFFOLO
 PROFESSIONAL ENGINEER
 STATE OF VIRGINIA
 NO. 98282

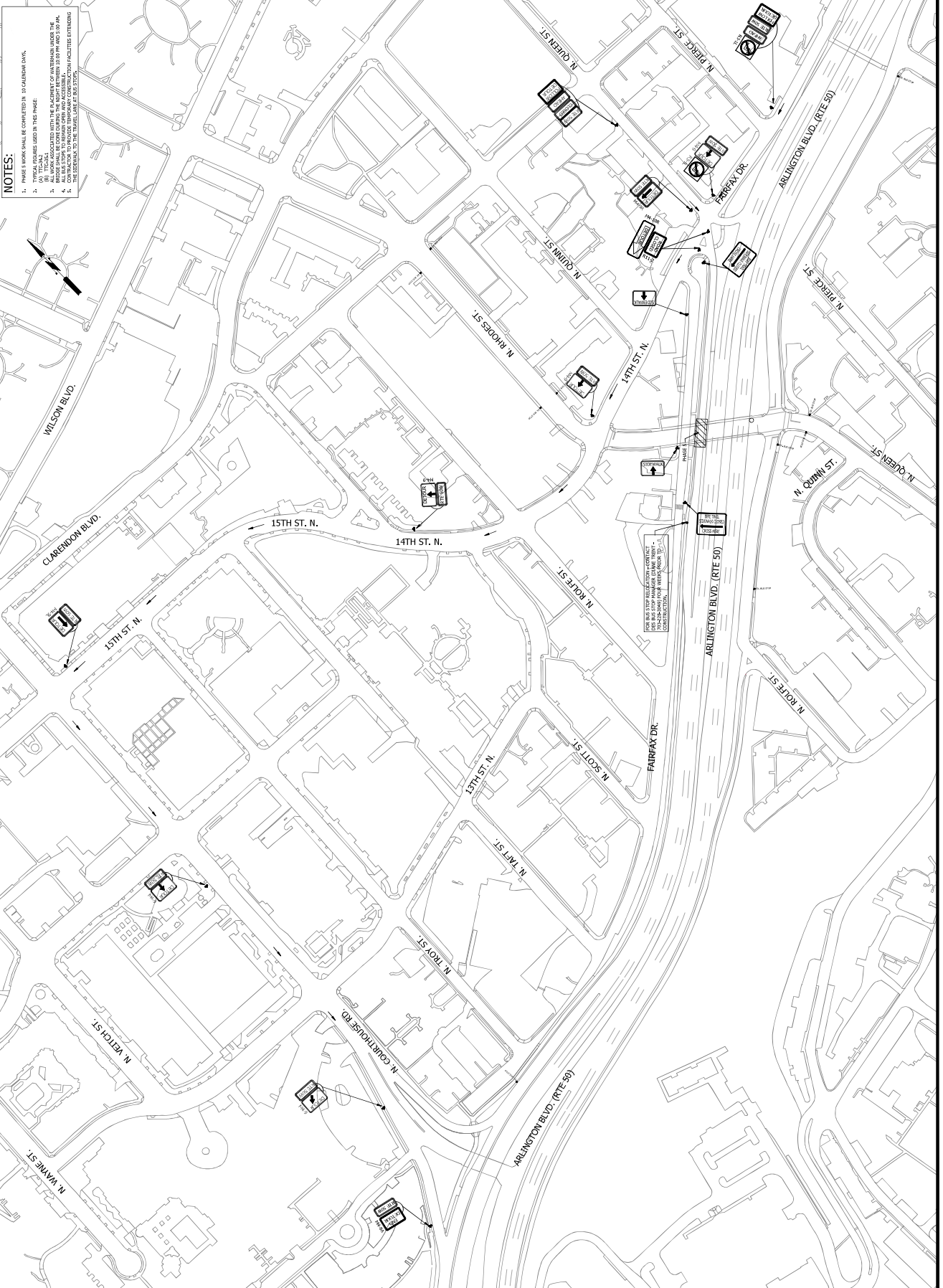
| APPROVALS | DATE |
|---|------------|
| <i>Robert Ruffolo</i> QUALITY CONTROL ENGINEER | 08/11/2021 |
| <i>Kenneth Rabold</i> CONSTRUCTION MANAGEMENT SUPERVISOR | 8.12.21 |
| <i>Dennis W. Leach</i> VEHICLE SERVICE STREETS ENGINEER | 08.18.2021 |
| <i>Dennis W. Leach</i> TRANSPORTATION DIRECTOR | 08/18/21 |
| <i>[Signature]</i> PROJECT MANAGER | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |

PHASE 5
 MAINTENANCE OF TRAFFIC PLAN - 5
 N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
 W108
 FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

DESIGNED: LD
 DRAWN: LD
 CHECKED: JS
 PLOTTED: AUGUST 23 2021
 SCALE: 1" = 100'

C121-5



FORT MYER HEIGHTS WATERMAIN IMPROVEMENT - W108

SEAL



| APPROVALS | DATE |
|--|------------|
| <i>Raymond J. Williams</i> QUALITY CONTROL ENGINEER | 08/11/2021 |
| <i>Kenneth T. Rabala</i> CONSTRUCTION MANAGEMENT SUPERVISOR | 8.12.21 |
| <i>Doreen M. Leach</i> TRANSPORTATION DIRECTOR | 08/18/21 |
| <i>[Signature]</i> PROJECT MANAGER | 08/12/2021 |

REVISIONS

DATE

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |

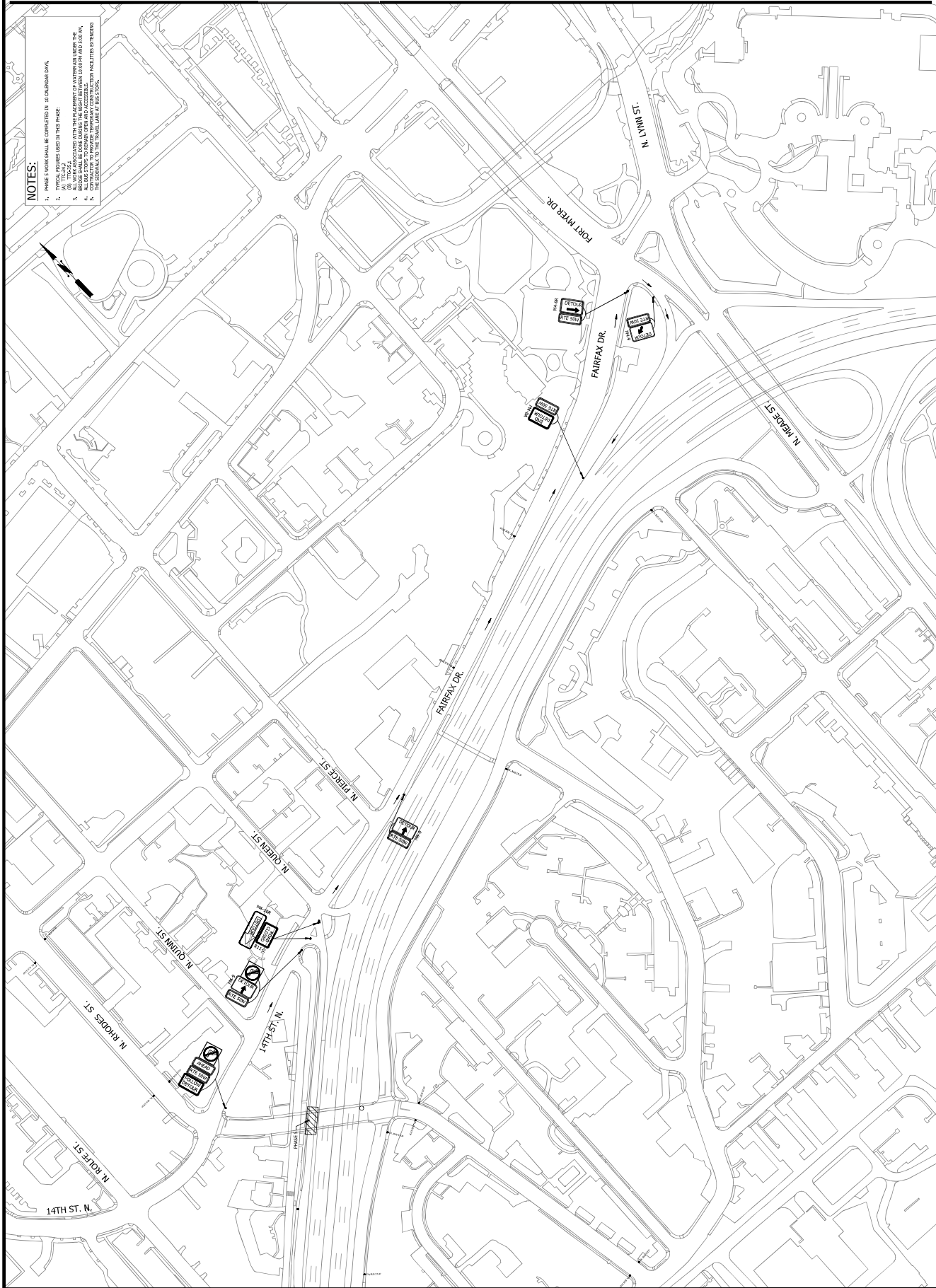
FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
PHASE 5 - DETOUR PLAN

DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23 2021

SCALE: 1" = 100'

C121-51

- NOTES:**
1. PHASE 5 WORK SHALL BE COMPLETED IN 30 CALENDAR DAYS.
 2. TYPICAL PROFILES USED IN THIS PHASE:
 3. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR WATERMAIN UNDER THE ARLINGTON WATER MAINS MANUAL, REVISED 2018.
 4. BEFORE WORK BEGINS, THE REPORT BETWEEN 140TH AND 50th PK, AND THE REPORT BETWEEN 140TH AND 50th PK, SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR TO PROTECT EXISTING UTILITIES AND FACILITIES EXTENDING TO THE BOUNDARY OF THE PROJECT.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.



SEAL



| APPROVALS | DATE |
|---|------------|
| QUALITY CONTROL ENGINEER <i>Amy Williams</i> | 08/11/2021 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>Kenneth Rabala</i> | 8.12.21 |
| VEHICLE SERVICE STREETS SUPERVISOR <i>Debra M. Leach</i> | 08.18.21 |
| TRANSPORTATION DIRECTOR <i>Debra M. Leach</i> | 08/18/21 |
| PROJECT MANAGER <i>W08</i> | 08/12/2021 |

REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |
| | | |
| | | |

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W08
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
PHASE 6

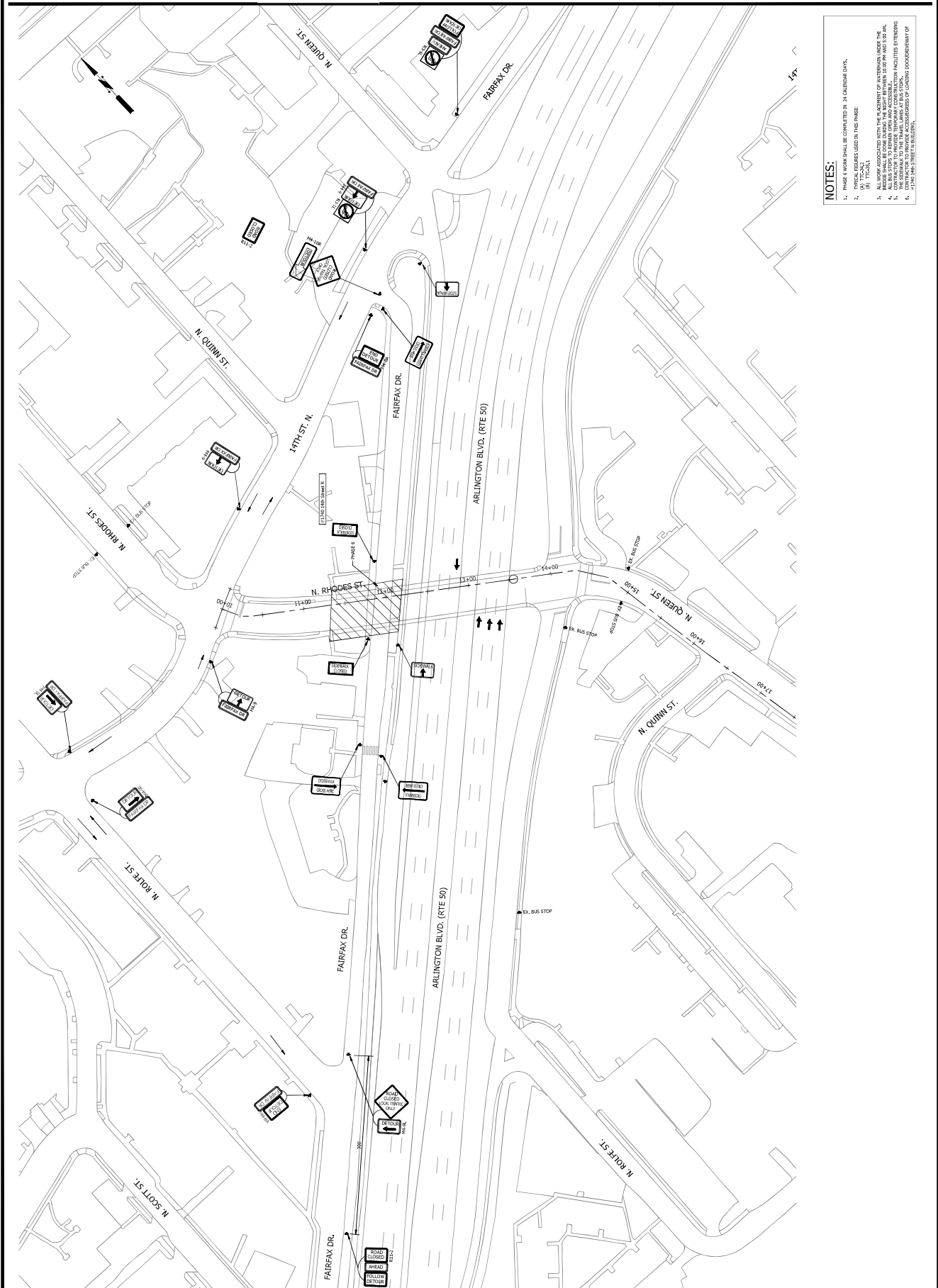
DESIGNED: LD
DRAWN: LD
CHECKED: SS
PLOTTED: AUGUST 23, 2021

SCALE:

NOT TO SCALE

C121-6

- NOTES:**
1. FIELD & WORK SHALL BE COMPLETED BY 14 CALENDAR DAYS.
 2. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 3. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 4. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 5. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 6. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 7. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 8. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 9. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.
 10. ALL WORK SHALL BE COMPLETED BY THE ABOVE DATE.



SEAL



| APPROVALS | DATE |
|---|------------|
| <i>Amy Placencia</i> | 08/11/2021 |
| QUALITY CONTROL ENGINEER <i>Kenneth Tabb</i> | 8.12.21 |
| CONSTRUCTION MANAGEMENT SUPERVISOR <i>James M. Leach</i> | 08/18/21 |
| TRANSPORTATION DIRECTOR <i>James M. Leach</i> | 08/18/21 |
| PROJECT MANAGER <i>[Signature]</i> | 08/12/2021 |

REVISIONS

DATE

PHASE 1 TO 6 - N. RHODES ST.
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
W108

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23, 2021

SCALE:

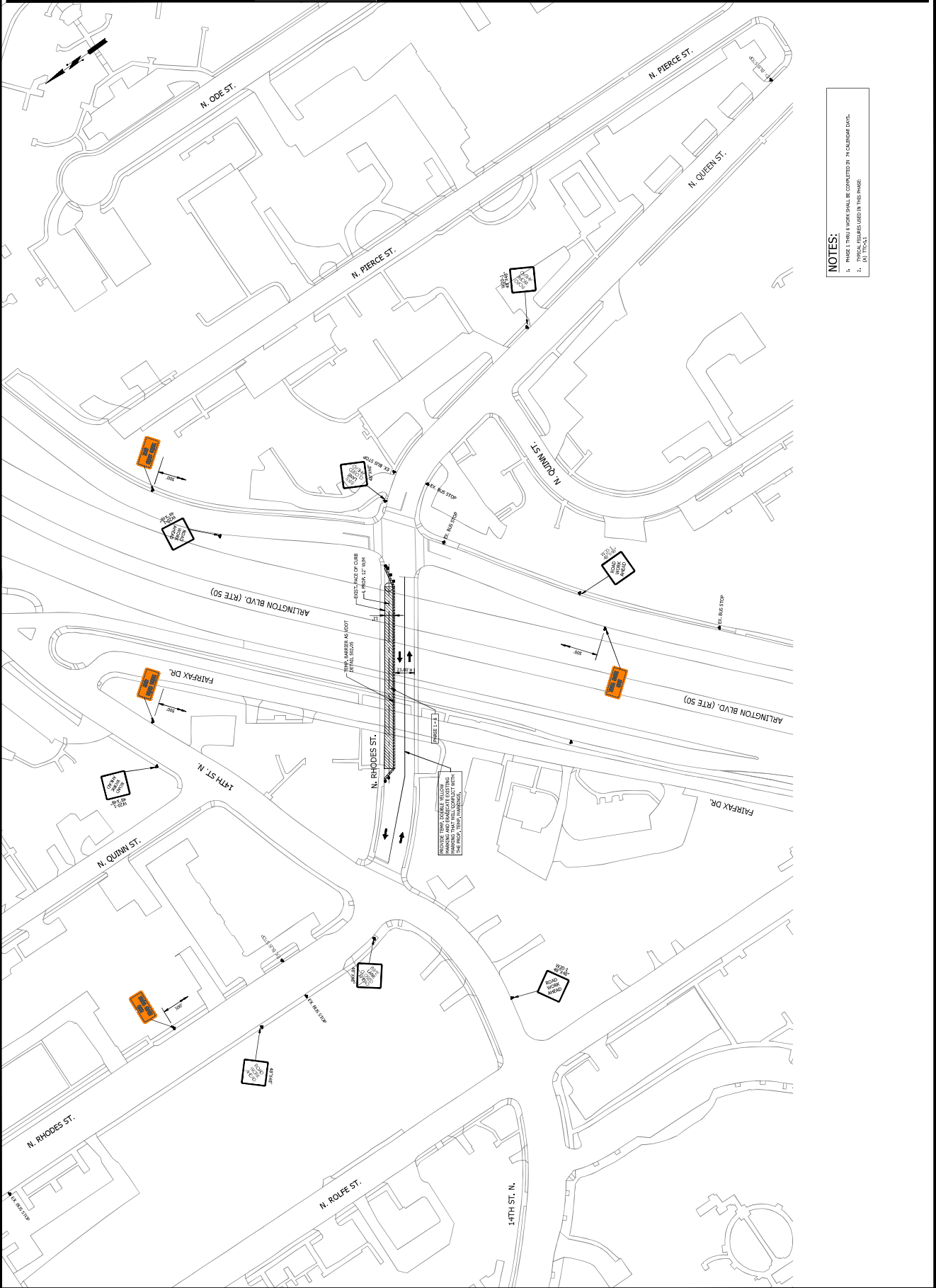
NOT TO SCALE

C121.7

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT - W108

NOTES:

1. PHASE 1 THRU 6 WORK SHALL BE COMPLETED BY 14 CALENDAR DAYS.
2. TYPICAL FIGURES USED IN THIS PHASE:
(A) 175' x 11'



SEAL



| APPROVALS | DATE |
|---|------------|
| <i>Amy Placino</i> QUALITY CONTROL ENGINEER | 08/11/2021 |
| <i>Kenneth Rabala</i> CONSTRUCTION MANAGEMENT SUPERVISOR | 8.12.21 |
| <i>Doreen M. Leach</i> TRANSPORTATION DIRECTOR | 08/18/21 |
| <i>[Signature]</i> PROJECT MANAGER | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |
| | |

MAINTENANCE OF TRAFFIC PLAN - 8
PHASE 7 TO 18

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.
W108

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

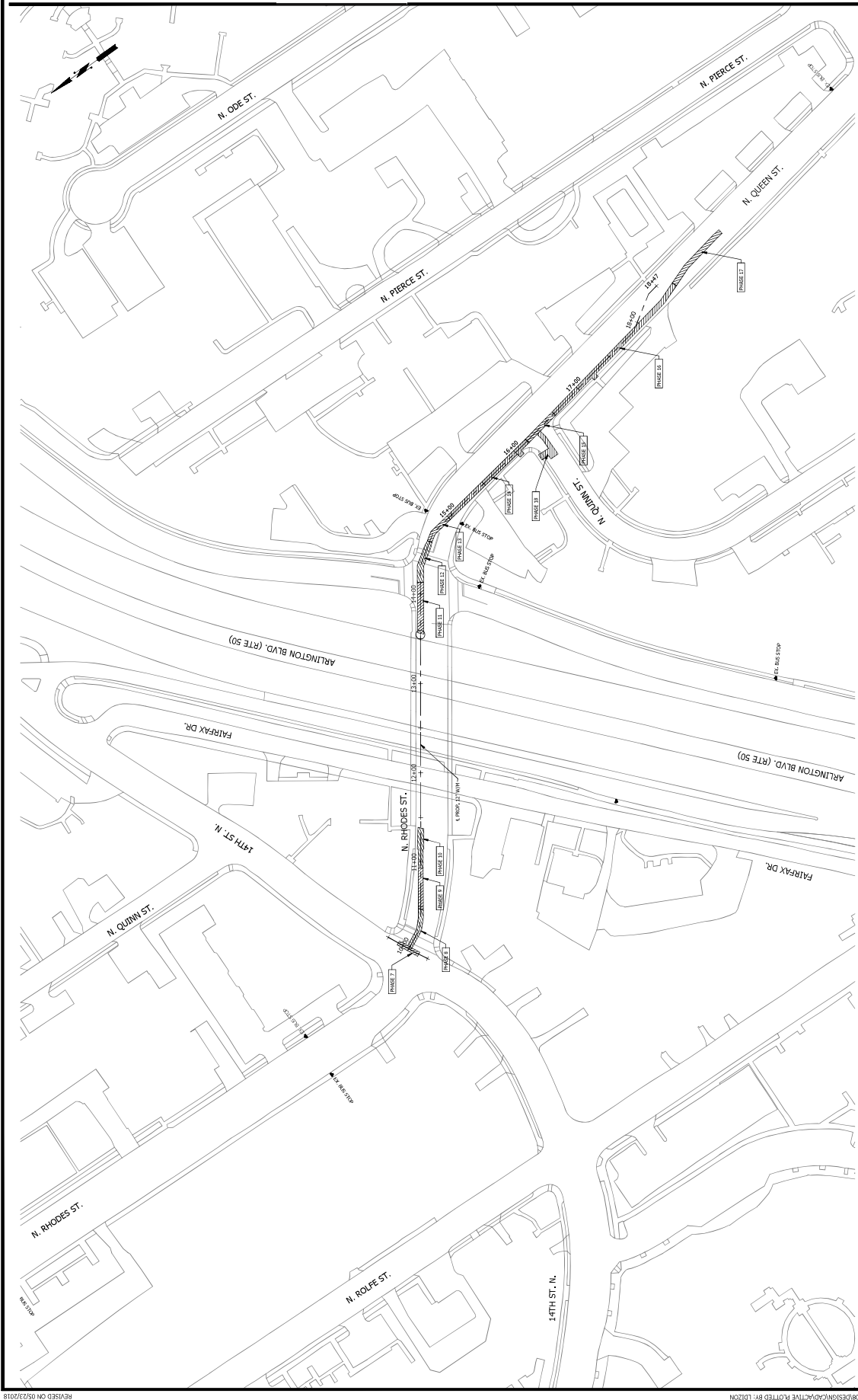
DESIGNED: LD
DRAWN: LD
CHECKED: SS

PLOTTED: AUGUST 23 2021

SCALE:



- NOTES:**
- FOR THE TYP. FIGURES AND DIMENSION OF EACH PHASING, SEE SHEETS C121A-1 THROUGH C121A-7.
 - ALL BUS STOPS TO BE MAINTAINED AND ACCESSIBLE.
 - ALL PHASING TO BE MAINTAINED THROUGHOUT THE PROJECT.
 - THE BEGINNING TO THE TRAVEL LANE AT BUS STOPS.



DEPARTMENT OF ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION

2105 CLAYBANK ROAD, SUITE 813 ARLINGTON, VA 22201

PHONE: 703.228.2600 FAX: 703.228.2606

COPYRIGHT © 2018 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED

SEAL



APPROVALS DATE 08/11/2021

QUALITY CONTROL ENGINEER 8.11.21

CONSTRUCTION MANAGEMENT SUPERVISOR 08.11.2021

DESIGNER DATE 08/19/21

PROJECT MANAGER DATE 08/12/2021

REVISIONS DATE

Table with columns: PHASE#, IT/C#, COMMENTS, DURATIONS. Lists construction phases from Phase 1 to Phase 18 with corresponding tasks and durations.

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT N. RHODES ST. - 14TH ST. N. TO N. QUINN ST. W108

DESIGNED: LD DRAWN: LD CHECKED: JS PLOTTED: AUGUST 23, 2021

SCALE: AS SHOWN

MOT NOTES & DETAILS - 1

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT PROJECT N. RHODES ST. - FROM 14TH ST. N. TO N. QUINN ST. TRANSPORTATION MANAGEMENT PLAN (TMP)

THE DEPARTMENT NOTES:

- 1. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNRESTRICTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 504.4 AND 504.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.

MAINTENANCE OF TRAFFIC (MOT) GENERAL NOTES:

- 1. TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.

REVIEWED By Brianna Fry at 9:09 am, Jul 12, 2021



GENERAL TRIP NOTES:

- 1. PROJECT IS A "TYPE A" TYPE "A" PROJECT. THIS PROJECT SUPPORTS FOR THE IMPROVEMENT OF FORT MYER HEIGHTS WATERMAIN IMPROVEMENT. THE DESIGN FOR THE FORT MYER HEIGHTS WATERMAIN IMPROVEMENT PROJECT INCLUDES INSTALLATION OF A NEW 12" WATERMAIN.

Table with columns: MON. TO THU., FRI., SAT., SUNDAY. Shows work hours for different days.

- 3. THE WORKING HOURS WITHIN ARLINGTON COUNTY RIGHT-OF-WAY ARE AS FOLLOWS:

10. THE CONTRACTOR SHALL RETAIN PEDESTRIAN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

11. THE CONTRACTOR SHALL: A. DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TRAFFIC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK.

12. ALL AREAS EXCAVATED BELOW THE EXISTING SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING ELEVATION OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.

13. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.

14. EACH PHASE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR: A. NOTIFYING THE VDOT PROJECT MANAGER/RESIDENTIAL ADMINISTRATOR OF SCHEDULED WORK PLANS AT LEAST 48 HOURS PRIOR TO BEGINNING EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

16. NOTIFYING THE VDOT REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) 48 HOURS IN ADVANCE IN ORDER TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VIA TRAFFIC FOR ADDITIONAL INFORMATION. PLEASE CALL CARLENE K. VIBERT AT 571-584-0298.

17. HAVING THE LIST OF LOCAL EMERGENCY RESPONSE AGENCIES AVAILABLE AT THE WORK SITE AT ALL TIMES.

18. IMMEDIATELY REPORTING ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.

19. NOTIFY THE PROJECTS CONSTRUCTION MANAGER AND CORRESPONDING ENGINEER OF ANY INCIDENTS AND DIRECTED TRAFFIC DELAYS.

20. TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE ACCIDENTS.

21. EMERGENCY CONTACTS DURING THE DURATION OF THE PROJECTS ARE AS FOLLOWS:

- KAMAL TAYLOR - CONSTRUCTION MANAGEMENT SUPERVISOR - 703-228-2927
- SLOMON SHOUR - ENGINEERING DESIGN TEAM SUPERVISOR - 703-228-2909
- WALTER SMITH AND STREET OPERATOR - 703-228-2949
- EMERGENCY CALL - 911
- VDOT PROJECT CONSTRUCTION INSPECTOR - 180

22. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

23. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

24. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

25. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

26. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.

- Guidance:**
- The minimum distance between the sign and work vehicle shall be 130FT/150FT on Limited Access Highways and on all other roadways 50FT/60FT when the posted speed limit is greater than 45 mph, and 50FT/50FT when the posted speed limit is 45 mph or less.
 - The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as the OBSTRUCTED WORK (W21-5) sign. The SLOGLIDER WORK sign may be used for work adjacent to the edge of the roadway. The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical with Standard CG-2 and CG-6 on urban roadways, or outside of the clear zone for rural roadways. All signs and flagging operations shall be eliminated when the work is completed.

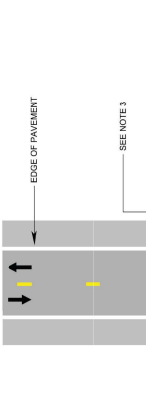
Options:

- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, flashing lights, and flagging operations shall be eliminated.

Standard:

- When the work is completed, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, flashing lights, and flagging operations shall be eliminated.

1: Revision 1 - 01/2015
2: Revision 2 - 01/2019



Work Beyond the Shoulder Operation
(Figure TTC-1-1)

1: Revision 1 - 01/2015
2: Revision 2 - 01/2019

- Standard:**
- On divide highways having a median wider than 8', right and left sign assemblies shall be required.
 - Sign spacing shall be 130FT/150FT for limited access highways, 100FT/100FT for other roadways, the sign advance shall be 300FT/300FT on all other roadways 50FT/60FT when the posted speed limit is greater than 45 mph, and 50FT/50FT when the posted speed limit is 45 mph or less.
 - When closing a lane, the sign spacing shall be 130FT/150FT for limited access highways, 100FT/100FT for other roadways, the sign advance shall be 300FT/300FT on all other roadways 50FT/60FT when the posted speed limit is greater than 45 mph, and 50FT/50FT when the posted speed limit is 45 mph or less.
 - The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical with Standard CG-2 and CG-6 on urban roadways, or outside of the clear zone for rural roadways. All signs and flagging operations shall be eliminated when the work is completed.

Options:

- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, flashing lights, and flagging operations shall be eliminated.

Standard:

| Speed Limit (mph) | Sign Spacing (feet) | Sign Advance (feet) | Remarks |
|-------------------|---------------------|---------------------|----------------|
| 35 | 135 | 150 | Limited Access |
| 40 | 150 | 165 | Limited Access |
| 45 | 165 | 180 | Limited Access |
| 50 | 180 | 195 | Limited Access |
| 55 | 195 | 210 | Limited Access |
| 60 | 210 | 225 | Limited Access |
| 65 | 225 | 240 | Limited Access |
| 70 | 240 | 255 | Limited Access |
| 75 | 255 | 270 | Limited Access |
| 80 | 270 | 285 | Limited Access |
| 85 | 285 | 300 | Limited Access |
| 90 | 300 | 315 | Limited Access |
| 95 | 315 | 330 | Limited Access |
| 100 | 330 | 345 | Limited Access |

| Location | Sign Spacing (feet) | Sign Advance (feet) | Remarks |
|--------------|---------------------|---------------------|---------|
| Urban | 50 | 50 | Minimum |
| Suburban | 75 | 75 | Minimum |
| Rural | 100 | 100 | Minimum |
| Interchange | 250 | 250 | Minimum |
| Construction | 150 | 150 | Minimum |

- Quantifying work space shall be at the following: Shoulder Type = 1%, Minimum 60'.
- The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical with Standard CG-2 and CG-6 on urban roadways, or outside of the clear zone for rural roadways. All signs and flagging operations shall be eliminated when the work is completed.
- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, flashing lights, and flagging operations shall be eliminated.

1: Revision 1 - 01/2015
2: Revision 2 - 01/2019

- Guidance:**
- Sign spacing distance shall be 150FT/150FT when the posted speed limit is 45 mph or less, and 500FT/500FT when the posted speed limit is greater than 45 mph.
 - Crew should be positioned where establishing the limits of the work space to ensure maximum possible light advance in advance of the flagger station and to ensure that the sign spacing is not less than 150FT/150FT.
 - The minimum efficient traffic flow in a flagging operation is two vehicles per minute. The maximum flow is three vehicles per minute. The minimum efficient traffic flow is two vehicles per minute.
 - When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.

Options:

- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.

| Speed Limit (mph) | Sign Spacing (feet) | Sign Advance (feet) | Remarks |
|-------------------|---------------------|---------------------|----------------|
| 35 | 150 | 150 | Limited Access |
| 40 | 165 | 165 | Limited Access |
| 45 | 180 | 180 | Limited Access |
| 50 | 195 | 195 | Limited Access |
| 55 | 210 | 210 | Limited Access |
| 60 | 225 | 225 | Limited Access |
| 65 | 240 | 240 | Limited Access |
| 70 | 255 | 255 | Limited Access |
| 75 | 270 | 270 | Limited Access |
| 80 | 285 | 285 | Limited Access |
| 85 | 300 | 300 | Limited Access |
| 90 | 315 | 315 | Limited Access |
| 95 | 330 | 330 | Limited Access |
| 100 | 345 | 345 | Limited Access |

| Location | Sign Spacing (feet) | Sign Advance (feet) | Remarks |
|--------------|---------------------|---------------------|---------|
| Urban | 50 | 50 | Minimum |
| Suburban | 75 | 75 | Minimum |
| Rural | 100 | 100 | Minimum |
| Interchange | 250 | 250 | Minimum |
| Construction | 150 | 150 | Minimum |

- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.
- When the work is completed, advance warning signs, flashing lights, and flagging operations shall be eliminated.

1: Revision 1 - 01/2015
2: Revision 2 - 01/2019



APPROVALS

DATE: 08/11/2021

QUALITY CONTROL ENGINEER: *Amel Hossain*

CONSTRUCTION MANAGEMENT SUPERVISOR: *Kamal Tallab*

TRANSFORMATION DIRECTOR: *Debra M. Leach*

PROJECT MANAGER: *Amel Hossain*

DESIGNED: LD

DRAWN: LD

CHECKED: SS

PLOTTED: AUGUST 23, 2021

SCALE:

AS SHOWN

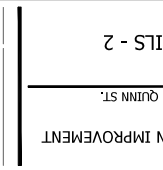
C122.2

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT

W108

N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

MOT NOTES & DETAILS - 2

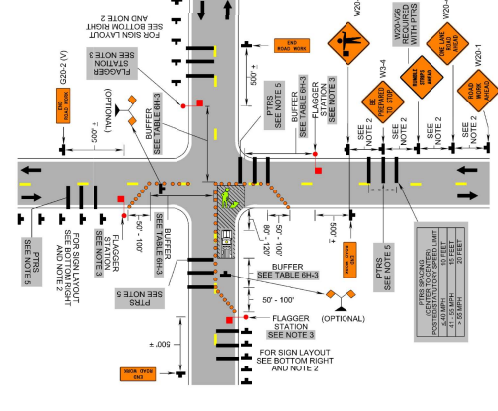


Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-2-3)

1: Revision 1 - 01/2015
2: Revision 2 - 01/2019

- Guidance:
- The control of traffic through the intersection in order of preference should be:
 - Obtain the services of law enforcement personnel.
 - Obtain the services of utility workers to alter road and street as approved and directed by the *BARRIERS* Traffic Engineer.
 - Place a state certified flagger on each leg of the intersection controlling a single lane of traffic. Appropriate spacing as shown should be used for lane enforcement and flagging operations. For detour operations, spacing as shown should be used for lane enforcement and flagging operations. For detour operations, spacing as shown should be used for lane enforcement and flagging operations. For detour operations, spacing as shown should be used for lane enforcement and flagging operations.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
- Standards:
- When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
- Guidance:
- When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.

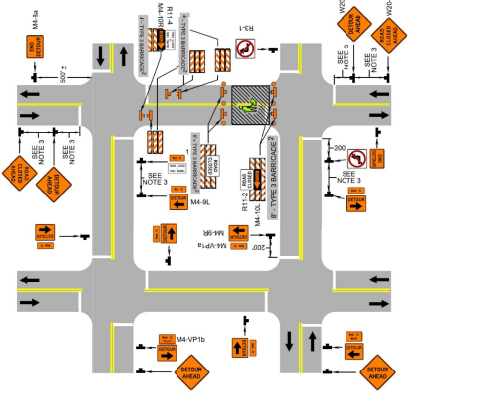
1: Revision 1 - 4/1/2016
2: Revision 2 - 9/1/2019



2: Revision 2 - 9/1/2019

- Guidance:
- This plan should be used for streets without posted route numbers.
 - On multi-lane streets, detour signs with an advance time arrow should be used in advance of a turn.
 - Sign spacing distance should be 225-237' where the posted speed limit is 35 to 45 mph, and 100-200' where the posted speed limit is 45 mph or greater.
 - If the road is opened for a significant distance beyond the intersection and/or there are significant transportation points beyond the intersection, the ROAD CLOSED (R1-1) and Detour Arrow (W02-1) signs should be placed in the center of the intersection. The ROAD CLOSED (R1-1) and Detour Arrow (W02-1) signs should be placed in the center of the intersection.
 - In urban areas, signs on an open road Type 3 barricade should not cover more than half of the top two feet of a sign. In rural areas, signs on an open road Type 3 barricade should not cover more than half of the top two feet of a sign.
- Standards:
- When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
- Guidance:
- When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.
 - When a single lane of traffic is being maintained, the posted speed limit is 45 mph or less, 500-600' where the posted speed limit is greater than 45 mph.

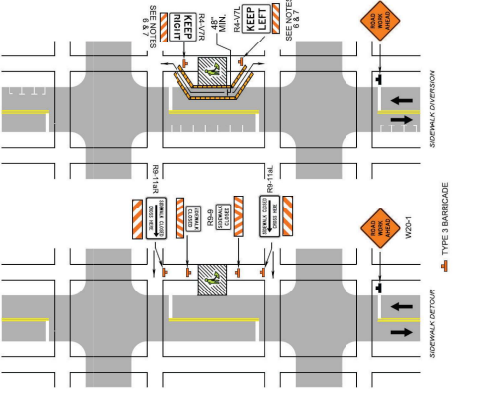
2: Revision 2 - 9/1/2019



1: Revision 1 - 4/1/2016
2: Revision 2 - 9/1/2019

- Standards:
- When crosswalks or other pedestrian facilities are closed or reduced, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in its existing pedestrian facility.
 - When high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalk from vehicular traffic.
 - When a temporary sidewalk is used, it should be constructed using approved materials and construction methods to ensure adequate communication to be provided for pedestrians who have visual disabilities.
 - Temporary markings should be considered for operations exceeding three days in duration.
- Guidance:
- When a temporary sidewalk is used, it should be constructed using approved materials and construction methods to ensure adequate communication to be provided for pedestrians who have visual disabilities.
 - When a temporary sidewalk is used, it should be constructed using approved materials and construction methods to ensure adequate communication to be provided for pedestrians who have visual disabilities.

2: Revision 2 - 9/1/2019



2: Revision 2 - 9/1/2019

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU, SUITE 813
2100 CAMDEN AVENUE
ARLINGTON, VA 22201
PHONE: 703.226.2606
FAX: 703.226.2606
COPYRIGHT © 2018 ARLINGTON COUNTY
VIRGINIA - ALL RIGHTS RESERVED



| APPROVALS | DATE |
|---|------------|
| <i>Amy Helmer</i> QUALITY CONTROL ENGINEER | 08/11/2021 |
| <i>Kenneth Tabb</i> CONSTRUCTION MANAGEMENT SUPERVISOR | 8.12.21 |
| <i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR | 08/18/21 |
| <i>[Signature]</i> PROJECT MANAGER | 08/12/2021 |

| REVISIONS | DATE |
|-----------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

FORT MYER HEIGHTS WATERMAIN IMPROVEMENT
W108
N. RHODES ST. - 14TH ST. N. TO N. QUINN ST.

DESIGNED: LD
DRAWN: LD
CHECKED: JS
PLOTTED: AUGUST 23, 2021
SCALE:

AS SHOWN

C122.3

EXHIBIT C

DEPARTMENT OF ENVIRONMENTAL SERVICES

Revised: 7/05/2019

Engineering Bureau

2100 Clarendon Boulevard, Suite 813, Arlington, VA 22201
TEL 703.228.6506 FAX 703.228.3606 www.arlingtonva.usDATE: 1/14/2021

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME)Sagres Construction Corporation IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER 2705060249 Class A WAS ISSUED ON THE 31st DAY OF January, 2001. 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).

PREPARED BY: _____

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) | 92 | CY | \$50.00 | \$4,600.00 |
| | | | | SUBTOTAL | \$4,600.00 |

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 | 24 | LF | \$150.00 | \$3,600.00 |
| 02611-C2-00110 | Concrete Sidewalk, 4" Thickness (Arlington County Detail R-2.0) | 16 | SY | \$170.00 | \$2,720.00 |
| 03100-C2-00220 | Concrete Pier, Cradle, or Encasement (Arlington County Detail M-7.0) | 10 | CY | \$500.00 | \$5,000.00 |
| | | | | SUBTOTAL | \$11,320.00 |

C3 ASPHALT WORK

| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNIT PRICE | TOTAL |
|----------------|---|-----|------|-----------------|--------------------|
| 02600-C3-00010 | Asphalt Concrete, Planing or Milling (1/2" to 3" Depth) | 605 | SY | \$15.00 | \$9,075.00 |
| 02600-C3-00030 | Asphalt Concrete, Base Course (VDOT BM-25.0A) | 25 | TON | \$250.00 | \$6,250.00 |
| 02600-C3-00070 | Asphalt Concrete, Surface Course (VDOT SM-9.5D) | 78 | TON | \$250.00 | \$19,500.00 |
| 03100-C3-00150 | Remove and Replace 8" to 10" Reinforced Concrete Paving VDOT Standards PR-3, PR-4, PR-5 and PR-6) | 123 | SY | \$150.00 | \$18,450.00 |
| | | | | SUBTOTAL | \$53,275.00 |

BIDDER Sagres Construction Corp. Signature 

DEPARTMENT OF ENVIRONMENTAL SERVICES
Engineering Bureau
2100 Clarendon Boulevard, Suite 813, Arlington, VA 22201
TEL 703.228.6506 FAX 703.228.3606 www.arlingtonva.us

Revised: 7/05/2019

DATE: 1/14/2021

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME)Sagres Construction Corporation IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER 2705060249 Class A WAS ISSUED ON THE 31st DAY OF January, 2001. 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).

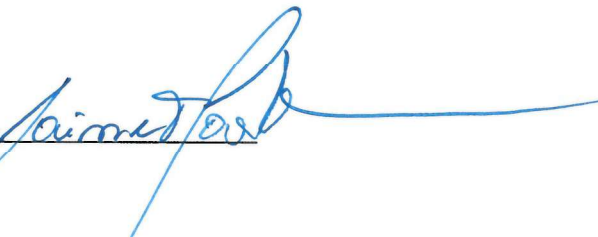
PREPARED BY: _____

CHECKED BY: _____

| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNIT PRICE | TOTAL |
|--------------------------|--|-----|------|-----------------|---------------------|
| C6 WATERMAIN WORK | | | | | |
| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNITPRICE | TOTAL |
| 02550-C6-00140 | 12-Inch Gate Valve & Valve Box | 7 | EA | \$6,500.00 | \$45,500.00 |
| 02550-C6-00150 | 8-Inch Gate Valve & Valve Box | 1 | EA | \$3,500.00 | \$3,500.00 |
| 02550-C6-00160 | 6-Inch Gate Valve & Valve Box | 1 | EA | \$2,500.00 | \$2,500.00 |
| 02550-C6-00190 | Connect To Existing 12-Inch Water Main | 3 | EA | \$7,500.00 | \$22,500.00 |
| 02550-C6-00210 | Connect To Existing 6-Inch Water Main | 2 | EA | \$5,500.00 | \$11,000.00 |
| 02550-C6-00250 | Remove Existing Fire Hydrant | 1 | EA | \$1,500.00 | \$1,500.00 |
| 02550-C6-00270 | Install New Fire Hydrant | 1 | EA | \$6,900.00 | \$6,900.00 |
| 02550-C6-00330 | Cut & Cap 6-Inch Water Main | 2 | EA | \$2,500.00 | \$5,000.00 |
| 02550-C6-00350 | Remove Existing Valve Boxes | 4 | EA | \$1,250.00 | \$5,000.00 |
| 02550-C6-00030 | 12-Inch Water Main, DIP CL-52, Upto 6' Deep | 654 | LF | \$490.00 | \$320,460.00 |
| 02550-C6-00050 | 8-Inch Water Main, DIP CL-52, Upto 6' Deep | 34 | LF | \$390.00 | \$13,260.00 |
| 02550-C6-00070 | 6-Inch Water Main, DIP CL-53, Upto 6' Deep | 20 | LF | \$390.00 | \$7,800.00 |
| 02550-C6-00710 | Service Re-Taps - 1 1/2-inch and 2-inch (TAP MAIN, INSTALL COPPER TUBING, CONNECT TO EXISTING SERVICE LINE, ABANDON CORPORATION COCK FROM EXISTING SERVICE LINE, BACKFILL, EXCAVATION & PAVEMENT RESTORATIONS)--UP TO 10 FT. | 2 | EA | \$2,950.00 | \$5,900.00 |
| 02550-C6-00720 | Service Re-Taps - 1 1/2-inch and 2-inchPER ADDITIONAL LINEAR FOOT OVER 10 FT. | 20 | LF | \$125.00 | \$2,500.00 |
| 02550-C6-SP001 | Install 12" DIP CL-52 watermain through the abutmentand under the deckof N. Rhodes Street Bridge over Route 50 as detailed on Sheet C052.1 through C052.3 of the watermain improvement plan | 1 | LS | \$380,000.00 | \$380,000.00 |
| 02550-C6-SP002 | Temporary Barrier | 265 | LF | \$50.00 | \$13,250.00 |
| | | | | SUBTOTAL | \$846,570.00 |

BIDDER Sagres Construction Corp.

Signature



DEPARTMENT OF ENVIRONMENTAL SERVICES
Engineering Bureau
2100 Clarendon Boulevard, Suite 813, Arlington, VA 22201
TEL 703.228.6506 FAX 703.228.3606 www.arlingtonva.us

Revised: 7/05/2019

DATE: 1/14/2021

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME)Sagres Construction Corporation IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER 2705060249 Class A WAS ISSUED ON THE 31st DAY OF January, 2001. 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).

PREPARED BY: _____

CHECKED BY: _____

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

C10 PAVEMENT MARKING AND SIGNAGE WORK

| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNITPRICE | TOTAL |
|-----------------|---|-----|------|-----------------|--------------------|
| 02900-C10-00040 | Eighteen (18) Inch Transverse Markings | 79 | LF | \$9.00 | \$711.00 |
| 02900-C10-00050 | Twenty Four (24) Inch Transverse Markings, Note: Used For Continental (Ladder) Crosswalk | 808 | LF | \$12.00 | \$9,696.00 |
| 02900-C10-00120 | Six (6) Inch Longitudinal Solid Line | 170 | LF | \$3.00 | \$510.00 |
| 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 | 100 | LF | \$3.00 | \$300.00 |
| 02900-C10-00170 | Twelve (12) Inch Yellow Longitudinal Centerline, Two - Four (4) Inch Yellow Lines with Four (4) Inch Separation | 430 | LF | \$3.50 | \$1,505.00 |
| 02900-C10-00290 | Standard Bicycle Symbols (MUTCD, Chapter 9C, Figure 9C-3), "Bike Symbol", "Helmeted Bicyclist Symbol" | 2 | EA | \$390.00 | \$780.00 |
| 02900-C10-SP001 | Type B, Class VI, Four (4) Inch Contrast | 440 | LF | \$4.00 | \$1,760.00 |
| 02900-C10-SP002 | Type B, Class VI, Six (6) Inch Contrast | 418 | LF | \$5.00 | \$2,090.00 |
| | | | | SUBTOTAL | \$17,352.00 |

BIDDER Sagres Construction Corp.Signature 

DEPARTMENT OF ENVIRONMENTAL SERVICES
Engineering Bureau
2100 Clarendon Boulevard, Suite 813, Arlington, VA 22201
TEL 703.228.6506 FAX 703.228.3606 www.arlingtonva.us

Revised: 7/05/2019

DATE: 1/14/2021

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME)Sagres Construction Corporation IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER 2705060249 Class A WAS ISSUED ON THE 31st DAY OF January, 2001. 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).

PREPARED BY: _____

CHECKED BY: _____

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

C13 EROSION AND SEDIMENT CONTROL WORK

| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNITPRICE | TOTAL |
|-----------------|---|-----|------|-----------------|--------------------|
| 01500-C13-10000 | Temporary Erosion and Sediment Controls | 1 | LS | \$15,000.00 | \$15,000.00 |
| | | | | SUBTOTAL | \$15,000.00 |

| | |
|--|---------------------|
| CONTRACT TOTAL (EXCLUDING PERCENTAGE ITEMS) | \$948,117.00 |
|--|---------------------|

PCT PERCENTAGE LINE ITEMS

| MASTER ITEM # | DESCRIPTION | QTY | UNIT | UNITPRICE | TOTAL |
|-----------------|----------------------------------|-----|------|---------------------------------------|---------------------|
| 01000-C16-00010 | Maintenance of Traffic (MOT) | NA | % | 15.0% | \$142,217.55 |
| 01000-C16-00030 | Mobilization and De-Mobilization | NA | % | 5% | \$47,405.85 |
| | | | | PERCENTAGE LINE ITEMS SUBTOTAL | \$189,623.40 |

| | |
|---------------|-----------------------|
| TOTAL: | \$1,137,740.40 |
|---------------|-----------------------|

| | |
|------------------------|-----------------------|
| CONTRACT TOTAL: | \$1,137,740.40 |
|------------------------|-----------------------|

BIDDER Sagres Construction Corp.Signature 