

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

CONTRACT AWARD COVERPAGE

TO: ARDENT COMPANY, LLC 1307 DOLLEY MADISON BOULEVARD, SUITE 200 MC LEAN, VIRGINIA 22101	DATE ISSUED: JULY 1, 2021
	CONTRACT NO: 21-DES-ITB-591
	CONTRACT TITLE: CC20 – 18 TH STREET SOUTH 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. 21-DES-ITB-591 including any attachments or amendments thereto.

EFFECTIVE DATE: JULY 1, 2021

EXPIRES: MAY 31, 2023

RENEWALS: NONE

COMMODITY CODE(S): 91117, 91313, 91319

LIVING WAGE: N

ATTACHMENTS:

AGREEMENT No. 21-DES-ITB-591

EMPLOYEES NOT TO BENEFIT:

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

VENDOR CONTACT: ARASH HOOSHANGI

VENDOR TEL. NO.:

(703) 288-3250x210

EMAIL ADDRESS: ARASH@ARDENTCOMPANY.COM

COUNTY CONTACT: ARIEL YANG, DES-TRANSPORTATION PLAN

COUNTY TEL. NO.:

(703) 228-4019

COUNTY CONTACT EMAIL: AYANG@ARLINGTONVA.US

PURCHASING DIVISION AUTHORIZATION

Sy Gezachew

Title: Procurement Officer

Date: June 28, 2021

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

AGREEMENT NO. 21-DES-ITB-591

THIS AGREEMENT is made, on **July 1, 2021**, between **Ardent Company, LLC**, 1307 Dolley Madison Boulevard, Suite 200, Mc Lean, Virginia 22101 (“Contractor”) a Virginia Limited Liability Company authorized to do business in the Commonwealth of Virginia, and the **County Board of Arlington County, Virginia**. The County and the Contractor, for the consideration hereinafter specified, agree as follows:

1. CONTRACT DOCUMENTS

The Contract Documents consist of:

- Agreement No. 21-DES-ITB-591, and all modifications properly incorporated into the Agreement
- Exhibit A – Arlington County Invitation to Bid No. 2-DES-ITB-591, 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

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 street improvement located on 18th Street in Crystal City (the “Project”) and all other work shown, described, and required by the Contract Documents (hereinafter “the Work”).

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

3. PROJECT OFFICER

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

4. TIME FOR COMPLETION

Work under this Agreement shall achieve Substantial Completion no later than five-hundred fifty (550) 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 five-hundred fifty (550) day period shall be the Period of Performance for Substantial Completion. No Work shall be deemed Substantially Complete until it meets the requirements of Substantial Completion set forth in the General Conditions. Final Completion of the Work shall be completed no later than sixty (60) calendar days after the date of acceptance of Substantial Completion by the County Project Officer. Work will not reach Final Completion until it meets the requirements set forth in the General Conditions.

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

5. CONTRACT AMOUNT

The County will pay the Contractor in accordance with the terms of the Progress Payments and Retainage and Payment Terms sections below and at the prices shown in Exhibit C, but not more than \$2,227,700.00 for the Contractor's completion of the Work as required by the Contract Documents provided the Work is performed to the satisfaction of and is accepted by the Project Officer. The Contractor will complete the Work for the total amount specified in this section ("Contract Amount") unless such amount is modified as provided in this Agreement. The Contract Amount includes all of the Contractor's costs and fees (profit) and is inclusive of all anticipated or known site conditions, anticipated or known materials, labor, and equipment costs, or any other costs which should reasonably have been expected by the Contractor.

6. PROGRESS PAYMENTS AND RETAINAGE

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

All material and work covered by partial payments will become the property solely of the County at the time the partial payment is made. However, the Contractor will have the sole responsibility, care and custody for all materials and work upon which payments have been made until Substantial Completion.

When calculating payment for materials on-site, the County shall not pay for materials which are not scheduled for incorporation into the Work within sixty (60) days from the date of application for payment.

7. PAYMENT TERMS

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

8. PAYMENT OF SUBCONTRACTORS

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

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or

- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

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

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

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

9. RELEASE AND REQUEST FOR FINAL PAYMENT

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

10. LIQUIDATED DAMAGES

Time is of the essence under this Contract. The Work must be completed within the Time for Completion. The County and the Contractor agree that damages for failure to achieve Substantial Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1,758.00 per calendar day is in proportion to the actual loss that the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1,758.00 per day for each and every day beyond the time for Substantial Completion that the County determines Substantial Completion has not achieved. The County and the Contractor also agree that damages for failure to achieve Final Completion of the Work by the date specified under Time for Completion are not susceptible to exact determination but that \$1,758.00 per calendar day is in proportion to the actual loss the County would suffer from such delay. Therefore, the Contractor will pay the County as liquidated damages \$1,758.00 per day for each and every day beyond the time for Final Completion until Final Completion is achieved.

11. NON-APPROPRIATION

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

12. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR

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

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

13. COUNTY PURCHASE ORDER REQUIREMENT

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

14. LIEN

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

15. VALUE ENGINEERING PROPOSAL (VE)

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

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

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

- (e) a statement as to the time by which a Contract Amendment adopting the VE must be issued so as to obtain the maximum cost-effectiveness.

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

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

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

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

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

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

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

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

16. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

During the performance of its work pursuant to this Contract:

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

17. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED

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

18. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR

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

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

19. *SEXUAL HARASSMENT POLICY

If the Contractor employs more than five employees, the Contractor shall (i) provide annual training on the Contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the Contractor's

sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the Contractor owns or leases for business purposes and (b) the Contractor's employee handbook.

20. PROJECT STAFF

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

21. FAILURE TO DELIVER

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

22. UNSATISFACTORY WORK

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

23. TERMINATION

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

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

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

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

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

1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor

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

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

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

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

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

B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY

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

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

24. INDEMNIFICATION

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County

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

25. INTELLECTUAL PROPERTY INDEMNIFICATION

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

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

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys’ fees), charges, liability or exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys’ fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

26. COPYRIGHT

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

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

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

27. OWNERSHIP AND RETURN OF RECORDS

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

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

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

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

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

28. CONFIDENTIAL INFORMATION

The Contractor and its employees, agents and subcontractors will hold as confidential all County information obtained under this Contract. Confidential information includes, but is not limited to, nonpublic personal information; personal health information (PHI); social security numbers; addresses; dates of birth; other contact information or medical information about a person; and information pertaining to products, operations, systems, customers, prospective customers, techniques, intentions, processes, plans and expertise. The Contractor must take reasonable measures to ensure that all of its employees, agents and subcontractors are informed of and abide by this requirement.

29. ETHICS IN PUBLIC CONTRACTING

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

30. COUNTY EMPLOYEES

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

31. FORCE MAJEURE

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract.

32. AUTHORITY TO TRANSACT BUSINESS

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

33. RELATION TO THE COUNTY

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

34. ANTITRUST

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

35. REPORT STANDARDS

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

Whenever possible, proposals must comply with the following guidelines:

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

36. AUDIT

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

the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

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

37. ASSIGNMENT

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

38. AMENDMENTS

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

39. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES

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

40. DISPUTE RESOLUTION

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

41. APPLICABLE LAW, FORUM, VENUE, AND JURISDICTION

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

42. ARBITRATION

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

43. NONEXCLUSIVITY OF REMEDIES

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

44. NO WAIVER

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

45. SEVERABILITY

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

46. ATTORNEY'S FEES

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

47. SURVIVAL OF TERMS

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

48. HEADINGS

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

49. AMBIGUITIES

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

50. NOTICES

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

TO THE CONTRACTOR:

Arash Hooshangi
Ardent Company, LLC
PO Box 879
McLean, Virginia 22101
Email: arash@ardentcompany.com
Tel: 703.288.3250 Ext 210

TO THE COUNTY:

Ariel Yang, Project Officer
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 500
Arlington, Virginia 22201
Email : ayang@arlingtonva.us
Tel : (703) 228-4019

AND

Sharon T. Lewis, LL.M, MPS, VCO, CPPB
Purchasing Agent
Arlington County, Virginia
2100 Clarendon Boulevard, Suite 500
Arlington, Virginia 22201
Email: slewis1@arlingtonva.us

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

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

51. NON-DISCRIMINATION NOTICE

Arlington County does not discriminate against faith-based organizations.

52. INSURANCE, PAYMENT AND PERFORMANCE BONDS

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

53. 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.

54. COUNTERPARTS

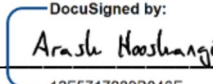
This Agreement may be executed in one or more counterparts and all of such counterparts shall together constitute one and the same instrument. Original signatures transmitted and received via facsimile or other electronic transmission (e.g., PDF or similar format) are true and valid signatures for all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

WITNESS these signatures:

THE COUNTY BOARD OF ARLINGTON
COUNTY, VIRGINIA

ARDENT COMPANY, LLC

AUTHORIZED SIGNATURE:  _____
27FC198F4A6D475...

AUTHORIZED SIGNATURE:  _____
12F5717989B046E...

NAME: SY GEZACHEV

NAME: Arash Hooshangi

TITLE: PROCUREMENT OFFICER

TITLE: Managing Director

DATE: 6/28/2021

DATE: 6/16/2021

CONSTRUCTION COST ESTIMATE DETAIL

PREPARED BY: _____

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME) Ardent Company, LLC IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER 2705082286A WAS ISSUED ON THE 29 DAY OF Feb, 2020 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).

21-DES-ITB-591

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)	1480	CY	\$45.00	\$66,600.00
01000-C1-SP121	WMATA Grate Cover (per plan details)	3	EA	\$1,500.00	\$4,500.00
				SUBTOTAL	\$71,100.00

C2 CONCRETE WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02750-C2-00020	Concrete Curb, Standard Header Curb C-3 (Arlington County Detail R-2.0), includes curb for aprons, ramps, etc.	990	LF	\$30.00	\$29,700.00
02750-C2-00060	Concrete Curb & Gutter, Standard C-2 and C-2R (Arlington County Detail R-2.0), includes curb & gutter for aprons, ramps, etc.	1650	LF	\$30.00	\$49,500.00
02611-C2-00110	Concrete Sidewalk, 4" Thickness (Arlington County Detail R-2.0)	940	SY	\$60.00	\$56,400.00
02611-C2-00190	CG-12 Detectable Warning Surface - Truncated Domes	12	SY	\$200.00	\$2,400.00
02611-C2-00170	Concrete Driveway Entrance, 6" Thick Residential (Arlington County Details R-2.4A, R-2.4B, R-2.4C, R-2.4D)	66	SY	\$80.00	\$5,280.00
02611-C2-00180	Concrete Driveway Entrance, 9" Thick Commercial (Arlington County Details R-2.4A, R-2.4B, R-2.4C, R-2.4D)	200	SY	\$100.00	\$20,000.00
02611-C2-SP010	Median Strip (per Arlington County Detail R-1.4)	255	SY	\$60.00	\$15,300.00
				SUBTOTAL	\$178,580.00

C3 ASPHALT WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02600-C3-00010	Asphalt Concrete, Planing or Milling (1/2" to 3" Depth)	1650	SY	\$5.00	\$8,250.00
02600-C3-00030	Asphalt Concrete, Base Course (VDOT BM-25.0A)	3176	TON	\$90.00	\$285,840.00
02600-C3-00060	Asphalt Concrete, Surface Course (VDOT SM-9.5A)	1059	TON	\$90.00	\$95,310.00

BIDDER Ardent Company

Signature _____

CONSTRUCTION COST ESTIMATE DETAIL

PREPARED BY: _____

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21-DES-ITB-591

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
				SUBTOTAL	\$389,400.00

C4 STORM SEWER UTILITY WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02500-C4-00620	15" Pipe, RCP Class III, In Place Up to 6' Deep	80	LF	\$70.00	\$5,600.00
02505-C4-00630	15" Pipe, RCP Class III, In Place 6' to 8' Deep	72	LF	\$70.00	\$5,040.00
02500-C4-00820	15" Pipe, RCP Class IV, In Place Up to 6' Deep	127	LF	\$70.00	\$8,890.00
02505-C4-01440	Underdrain, Standard VDOT UD-4	501	LF	\$10.00	\$5,010.00
02505-C4-00010	Storm Manhole MH-1 (Arlington County Detail D-3.0), In Place, DEPTH 8'	3	EA	\$1,500.00	\$4,500.00
02505-C4-00080	CB-2 (Arlington County Standards), In Place Up to 6' Deep	7	EA	\$3,000.00	\$21,000.00
02505-C4-00180	Curb Drop Inlet, Standard VDOT DI-2B (12" to 24" Pipe), In Place Up to 9' Deep, Inlet Throat Length 4' to 20'	2	EA	\$3,500.00	\$7,000.00
02505-C4-00600	Storm Manhole, Catch Basin, Drop Inlet, Yard Inlet, or Grate Inlet, Remove	4	EA	\$500.00	\$2,000.00
02500-C4-00011	Storm Manhole MH-1 (Arlington County Detail D-3.0), In Place, PER ADDITIONAL VF OVER 8'	10	VF	\$1.00	\$10.00
02505-C4-00090	CB-2 (Arlington County Standards), Each VF Over 6' Deep	25	VF	\$1.00	\$25.00
02500-C4-SP010	15" Pipe, RCP Class IV, In Place > 6' Deep	231	LF	\$70.00	\$16,170.00
02500-C4-SP020	18" Pipe, RCP Class IV, In Place > 6' Deep	104	LF	\$80.00	\$8,320.00
02500-C4-SP030	15" RCP Pipe Removal (not included in new installation)	289	LF	\$5.00	\$1,445.00
02500-C4-SP040	27" RCP Pipe Removal (not included in new installation)	13	LF	\$5.00	\$65.00
				SUBTOTAL	\$85,075.00

C5 GUARDRAIL

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

C6 WATERMAIN WORK

BIDDER Ardent Company

Signature _____

CONSTRUCTION COST ESTIMATE DETAIL

PREPARED BY: _____

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21-DES-ITB-591

CHECKED BY: _____

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

C7 SANITARY SEWER WORK

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

C8 TRAFFIC SIGNAL WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
13160-C8-03000	Traffic Signal Cost	1	LS	\$600,000.00	\$600,000.00
				SUBTOTAL	\$600,000.00

C9 STREET LIGHTING WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
14030-C9-00040	Furnish and Install 2 Inch Sch 40 PVC Conduit in Trench (Detail 14030-01)	309	LF	\$10.00	\$3,090.00
14040-C9-00170	Furnish and Install Junction Box and Lid SMALL (Detail 14040-01)	3	EA	\$600.00	\$1,800.00
14040-C9-00220	Enter Existing Junction Box	2	EA	\$250.00	\$500.00
14050-C9-00260	Furnish & Install # 6 TNNH Copper Cable	309	LF	\$1.00	\$309.00
14060-C9-00290	Install Streetlight Pole Foundation (Detail 14060-01)	3	EA	\$500.00	\$1,500.00
14060-C9-00350	Removal of Existing Foundation - up to 4' Deep	1	EA	\$500.00	\$500.00
14160-C9-00910	Decorative Post-Top Aluminum Streetlight Pole with Single Post-Top Luminaire per Arlington Lighting Standard 14112-01	3	EA	\$5,500.00	\$16,500.00
				SUBTOTAL	\$24,199.00

C10 PAVEMENT MARKING AND SIGNAGE WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02900-C10-00030	Twelve (12) Inch Transverse Markings	65	LF	\$4.00	\$260.00
02900-C10-00040	Eighteen (18) Inch Transverse Markings	170	LF	\$5.75	\$977.50
02900-C10-00050	Twenty Four (24) Inch Transverse Markings, Note: Used For Continental (Ladder) Crosswalk	940	LF	\$6.25	\$5,875.00
02900-C10-00070	Four (4) Inch Longitudinal Solid Line	6390	LF	\$0.60	\$3,834.00

BIDDER Ardent Company

Signature _____

CONSTRUCTION COST ESTIMATE DETAIL

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21-DES-ITB-591

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02900-C10-00080	Four (4) Inch Longitudinal Skip Line (Ten (10) Foot Line/Thirty (30) Foot Spacing), Note: Forty (40) LF Consists of Ten (10) LF of Marking and Thirty (30) LF of Space	1750	LF	\$0.60	\$1,050.00
02900-C10-00120	Six (6) Inch Longitudinal Solid Line	540	LF	\$3.00	\$1,620.00
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	550	LF	\$1.00	\$550.00
02900-C10-00230	Eight (8) Foot Letters, Note: 'Turn Only' (for example)	4	EA	\$100.00	\$400.00
02900-C10-00240	Single Arrows	2	EA	\$90.00	\$180.00
02900-C10-00290	Standard Bicycle Symbols (MUTCD, Chapter 9C, Figure 9C-3), "Bike Symbol", "Helmeted Bicyclist Symbol"	6	EA	\$190.00	\$1,140.00
02900-C10-00350	Colorized Bike Lane Coatings (per Supplemental Specification 02901)	617	SF	\$12.50	\$7,712.50
02900-C10-00410	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar), Install per Detail SG-1.0	4	EA	\$300.00	\$1,200.00
02900-C10-00430	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar), Relocate with New Post	9	EA	\$250.00	\$2,250.00
02900-C10-00440	Traffic Control Sign (Typical Stop, Yield, No Parking, Speed Limit, or Similar), Mount Sign to Light or Utility Pole	1	EA	\$200.00	\$200.00
02900-C10-00441	Remove Existing signs	10	EA	\$150.00	\$1,500.00
				SUBTOTAL	\$28,749.00

LANDSCAPE AND HARDSCAPE

C11 RESTORATION WORK

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
02800-C11-00020	Topsoil for Street Trees, Backfill Soil Mixture of 3/4 Existing Soil and 1/4 Organic Material (per Arlington County DPR Specification)	260	CY	\$30.00	\$7,800.00
02801-C11-00060	Sod, Tall Fescue/Bluegrass Mixture	1559	SY	\$3.00	\$4,677.00

BIDDER Ardent Company

Signature _____

CONSTRUCTION COST ESTIMATE DETAIL

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21-DES-ITB-591

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
02800-C11-00500	Tree/Stump Removal - Class A. Remove and Dispose, Up to 6" DBH to 12" DBH (Diameter at Breast Height)	4	EA	\$500.00	\$2,000.00
02800-C11-00602	Trees, Deciduous - 1.5 to 2.0" caliper	9	EA	\$300.00	\$2,700.00
02800-C11-00100	Brick Pavers, Including Concrete Base (Arlington County Detail R-2.1)	8	SY	\$200.00	\$1,600.00
				SUBTOTAL	\$18,777.00

C12 BUS STOP SHELTER AND FURNISHINGS

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

C13 EROSION AND SEDIMENT CONTROL WORK

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

C15 UNLISTED WORK

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

C16 MOT AND RE-MOBILIZATION WORK

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

C17 STORMWATER WORK

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

C18 NON COUNTY UTILITIES

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

CONTRACT TOTAL (EXCLUDING PERCENTAGE ITEMS) \$1,395,880.00

PCT PERCENTAGE LINE ITEMS

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNITPRICE	TOTAL
01500-C13-10000	Temporary Erosion and Sediment Controls	1	LS	20000.00	\$20,000.00

BIDDER Ardent Company

Signature _____

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21-DES-ITB-591

CHECKED BY: _____

MASTER ITEM #	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
01000-C16-00010	Maintenance of Traffic (MOT)	1	LS	699000.00	\$699,000.00
01000-C16-00030	Mobilization and De-Mobilization	1	LS	110000.00	\$110,000.00
01500-SA-00200	SWPPP Administration	1	LS	2820.00	\$2,820.00
PERCENTAGE LINE ITEMS SUBTOTAL					\$831,820.00

PROJECT TOTAL: **\$2,227,700.00**

BIDDER Ardent Company

Signature _____



ENGINEER
DEPARTMENT OF ENVIRONMENTAL SERVICES

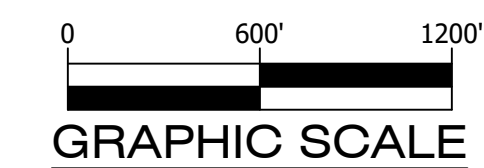
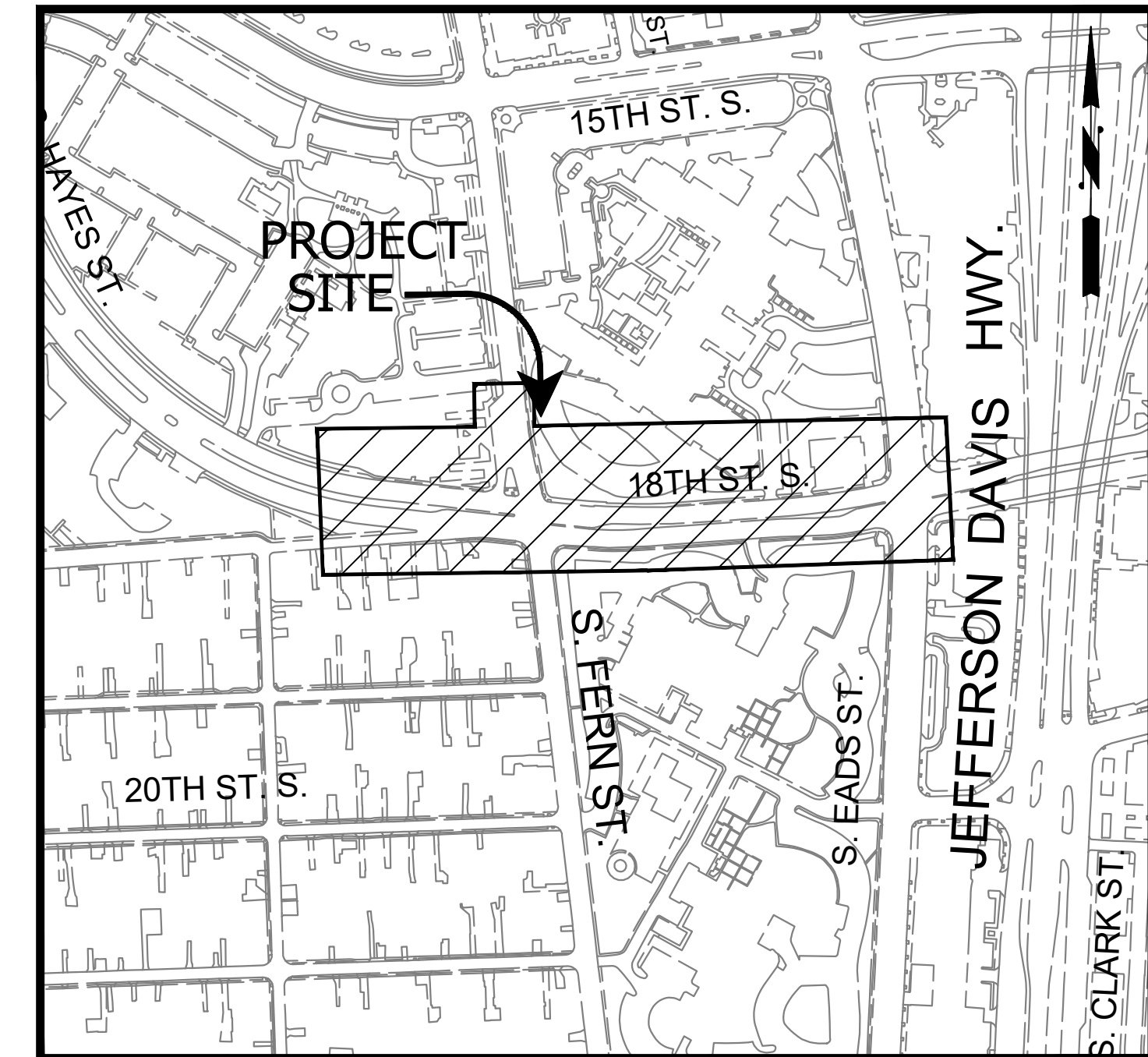
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813,
ARLINGTON, VA 22201
PHONE: 703.228.3629 FAX: 703.228.3606
WWW.ARLINGTONVA.US

OWNER
DEPARTMENT OF ENVIRONMENTAL SERVICES

DIVISION OF TRANSPORTATION & DEVELOPMENT
TRANSPORTATION PLANNING
2100 CLARENDON BOULEVARD, SUITE 900,
ARLINGTON, VA 22201
PHONE: 703.228.3344 FAX: 703.228.7974
WWW.ARLINGTONVA.US

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



CONSTRUCTION DRAWINGS FOR: 18TH STREET SOUTH - ROADWAY IMPROVEMENTS PROJECT FROM S. FERN STREET TO S. EADS STREET

PROJECT CODE: CC20



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis M. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	
REVISIONS	DATE

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
- ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (I.E. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE AS DIRECTED BY OFFICER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
- EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- 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 ADJACENT TO THE SITE.
- ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

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

TRAFFIC CONTROL

- CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.

- THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
- WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
- THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

- UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY FIRE VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
- IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
- THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

- ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSERVED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

WMATA NOTES:

- CONTRACTOR TO BE AWARE OF WMATA TPSS STRUCTURE LOCATED BETWEEN STATIONS 8+65 - 9+65 OF 18TH STREET S. CONSTRUCTION BASELINE. COORDINATION WITH WMATA PRIOR TO CONSTRUCTION IN THIS AREA WILL BE REQUIRED. TPSS STRUCTURE IS LOCATED APPROXIMATELY 5-6 FEET BELOW GROUND SURFACE

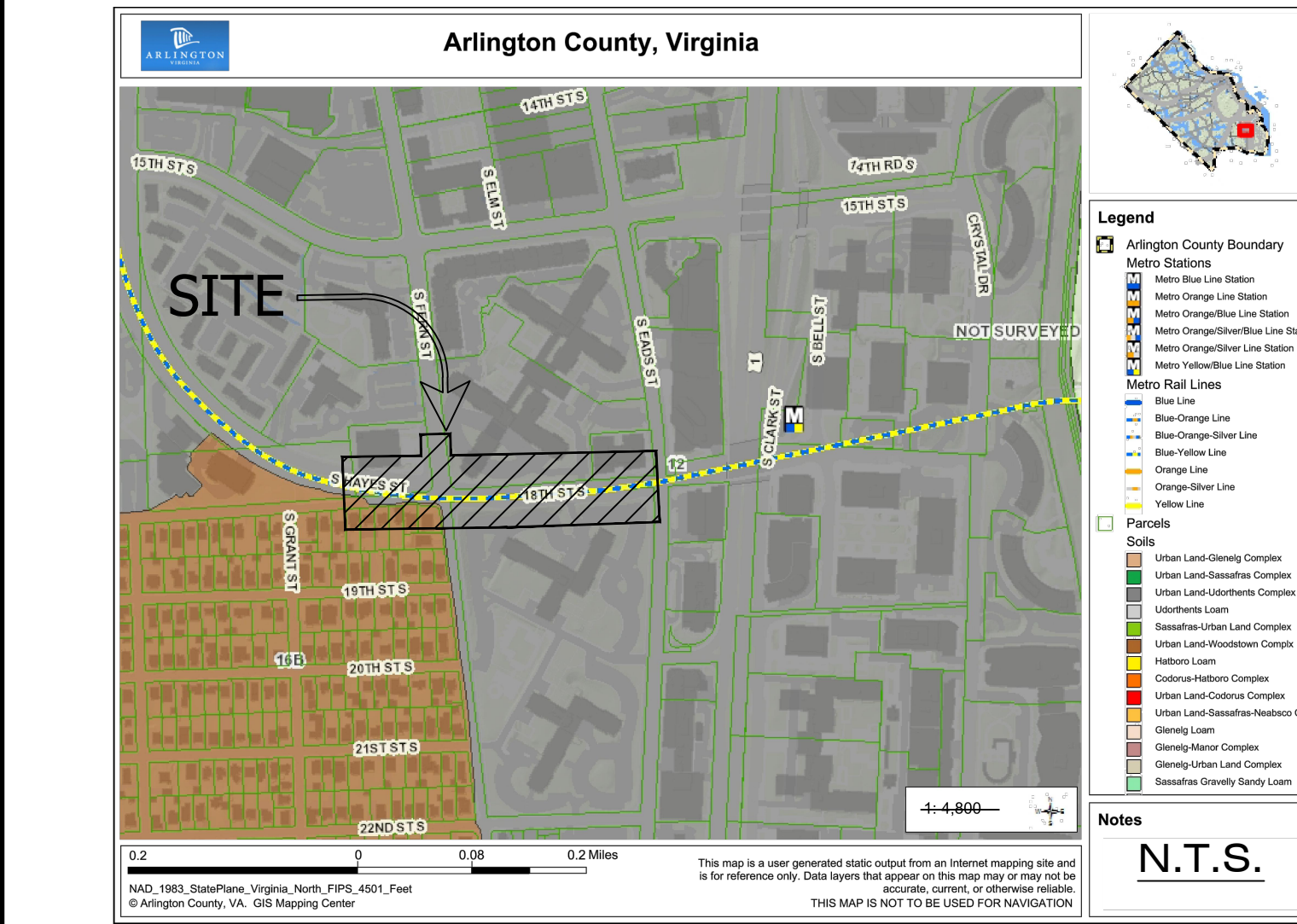
Sheet List Table

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C006.1	LEGEND
C002.1	DETAILS
C004.1	TYPICAL SECTIONS
C004.2	TYPICAL SECTIONS
C011.1	EXISTING CONDITION
C011.2	EXISTING CONDITION
C011.3	EXISTING CONDITION
C021.1	DEMOLITION PLAN
C021.2	DEMOLITION PLAN
C031.1	E&S CONTROL PLAN
C031.2	E&S CONTROL PLAN
C032.1	E&S CONTROL NOTES
C032.2	E&S CONTROL DETAILS
C035.1	STORMWATER PPP
C035.2	STORMWATER PPP
C041.1	PLAN AND PROFILE
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C042.2	RAMP DETAIL
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C044.2	CROSS-SECTIONS
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C045.2	GEOMETRIC PLAN
C045.3	GEOMETRIC PLAN
C045.4	UTILITY GEOMETRIC PLAN

C045.5	UTILITY GEOMETRIC PLAN
C045.6	UTILITY GEOMETRIC PLAN
C073.1	STORM SEWER DRAINAGE DIVIDES
C073.2	STORM SEWER PLAN
C073.3	STORM SEWER PLAN
C073.4	STORM SEWER PROFILES
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C091.1	LANDSCAPE PLAN
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C121.18	MAINT. OF TRAFFIC - ZONE 17
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C121.20	MAINT. OF TRAFFIC - ZONE 19

Traffic Sheet List Table

Sheet #	Sheet Title
T-1	COVER SHEET
T-2	TRAFFIC SIGNAL MODIFICATION PLAN
T-3	COMMUNICATION PLAN



SWM

STORMWATER MANAGEMENT #: SWM19-0213
LAND DISTURBANCE ACTIVITY #: LDA19235

ADT

18TH STREET SOUTH - 8,300 VPD (VDOT 2019)
SOUTH FERN STREET - 6,300 VPD (VDOT 2019)
SOUTH EADS STREET - 10,000 VPD (VDOT 2019)

STREET CLASSIFICATION

18TH STREET SOUTH - ARTERIAL TYPE B SOUTH
FERN STREET - NEIGHBORHOOD PRINCIPAL SOUTH
EADS STREET - MINOR ARTERIAL

POSTED SPEED

30 MPH @ 18th STREET SOUTH
25 MPH @ FERN STREET SOUTH

18TH STREET SOUTH
COVER SHEET
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME:
CC20-200-COVER.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_LACTIVE
PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE: AS NOTED

SHEET C000.1

18TH STREET SOUTH



APPROVALS	DATE
<i>Kamell</i>	6/18/2020
<i>Kamal N. Taktak</i>	6.26.20
<i>Chitra</i>	06.29.20
<i>Dennis W. Leach</i>	6/24/20
<i>Ariel Yang</i>	6/17/2020

REVISIONS	DATE

18TH STREET SOUTH

LEGEND
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME:
CC20-202-LEGEND.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE
PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING	— — — — —	— — — — —
CENTERLINE / BASELINE	— — — — —	— — — — —
COMMUNICATIONS CABLE	— COM — COM —	— COM — COM —
CONTOURS MAJOR;MINOR?	— — — 250 — — 250 — —	— — — 250 — — 250 — —
CRITICAL ROOT ZONE	— CRZ — CRZ —	— CRZ — CRZ —
EASEMENT	— — — — —	— — — — —
ELECTRIC (UNDERGROUND)	— UGE — UGE —	— UGE — UGE —
FENCE (MATERIAL NOTED)	— X — X — X — X — X —	— X — X — X — X — X —
FIBER OPTIC	— FO — FO —	— FO — FO —
GAS LINE	— GAS — GAS —	— GAS — GAS —
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	— X" G — X" G —	— X" G — X" G —
GUARDRAIL	— — — — —	— — — — —
HARDSCAPE FEATURE (MATERIAL NOTED)	— — — — —	— — — — —
LIMITS OF DISTURBANCE	— LOD — LOD —	— LOD — LOD —
LIMITS OF WORK	— LOW — LOW —	— LOW — LOW —
OVERHEAD WIRES	— — — — —	— — — — —
PAVEMENT MINI SKIP LINE	— — — — —	— — — — —
PAVEMENT SKIP LINE	— — — — —	— — — — —
PROPERTY LINE	— — — — —	— — — — —
RIGHT-OF-WAY LINE	— — — — —	— — — — —
ROOT PRUNING	— RP — RP —	— RP — RP —
SANITARY SEWER	— SAN — SAN —	— SAN — SAN —
X" SANITARY SEWER (SIZE INCLUDED IF AVAILABLE)	— X" S — X" S —	— X" S — X" S —
SILT FENCE	— SF — SF —	— SF — SF —
STORM (SIZE NOTED)	— STM — STM —	— — — — —
STREAM	— — — — —	— — — — —
STREET LIGHT CONDUIT	— SL — SL —	— SL — SL —
TELEPHONE (UNDERGROUND)	— UGT — UGT —	— UGT — UGT —
TREE LINE	— — — — —	— — — — —
TREE PROTECTION FENCE	— TP — TP —	— TP — TP —
WALL	— — — — —	— — — — —
WATER	— W — W —	— W — W —
X" WATER (SIZE INCLUDED IF AVAILABLE)	— X" W — X" W —	— X" W — X" W —

SYMBOL LEGEND

EXISTING FEATURE	PROPOSED FEATURE
EX CABLE PEDESTAL	EX CABLE PEDESTAL
EX ELECTRIC BOX	EX ELECTRIC BOX
EX FIRE HYDRANT	PROP FIRE HYDRANT
EX GAS VALVE	PROP GAS VALVE
EX GROUND LIGHT	EX GROUND LIGHT
EX GUY WIRES	EX GUY WIRES
EX IRON PIPE OR PIN	EX IRON PIPE OR PIN
EX LIGHT POLE	PROP LIGHT POLE
EX MAILBOX	EX MAILBOX
EX MONUMENT	EX MONUMENT
EX PARKING METER	EX PARKING METER
EX PAY STATION	PROP PAY STATION
EX SANITARY MANHOLE	PROP SANITARY MANHOLE
EX STORM BASIN	PROP STORM CATCH BASIN (TO SCALE)
EX STORM MANHOLE	PROP STORM MANHOLE
EX TELEPHONE PEDESTAL	EX TELEPHONE PEDESTAL
EX TRAFFIC CONTROL BOX	EX TRAFFIC CONTROL BOX
EX TRAFFIC SIGN	PROP TRAFFIC SIGN
EX TRASH CAN	PROP TRASH CAN
EX TRAVERSE	EX TRAVERSE
EX TREES, WOODED AREA	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE (TYPE INDICATED ELECTRIC, TELE, ETC)	EX UTILITY MANHOLE (TYPE INDICATED ELECTRIC, TELE, ETC)
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 YARD INLET	PROP YARD INLET (TO SCALE)
EX BENCHMARK	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE
	NORTH ARROW

LABEL LEGEND

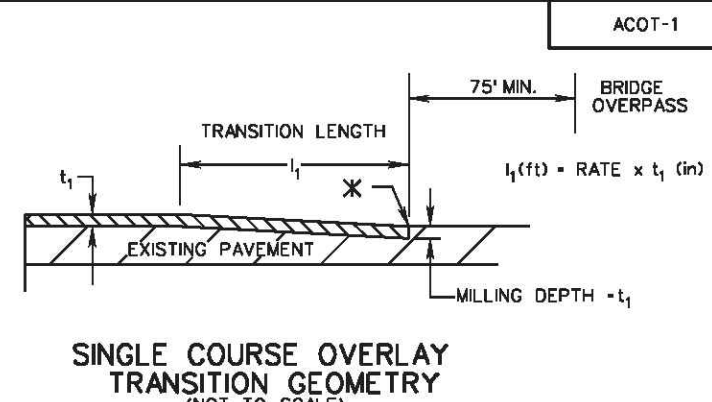
EXISTING	PROPOSED
EX SAN STRUC NO. EXISTING SANITARY STRUCTURE NUMBER	PROP SAN SEW STRUC NO. PROPOSED SANITARY SEWER STRUCTURE NUMBER
EX STRM SEW STRUC NO. EXISTING STORM SEWER STRUCTURE NUMBER	PROP STRM SEW STRUC NO. PROPOSED STORM SEWER STRUCTURE NUMBER

HATCH LEGEND

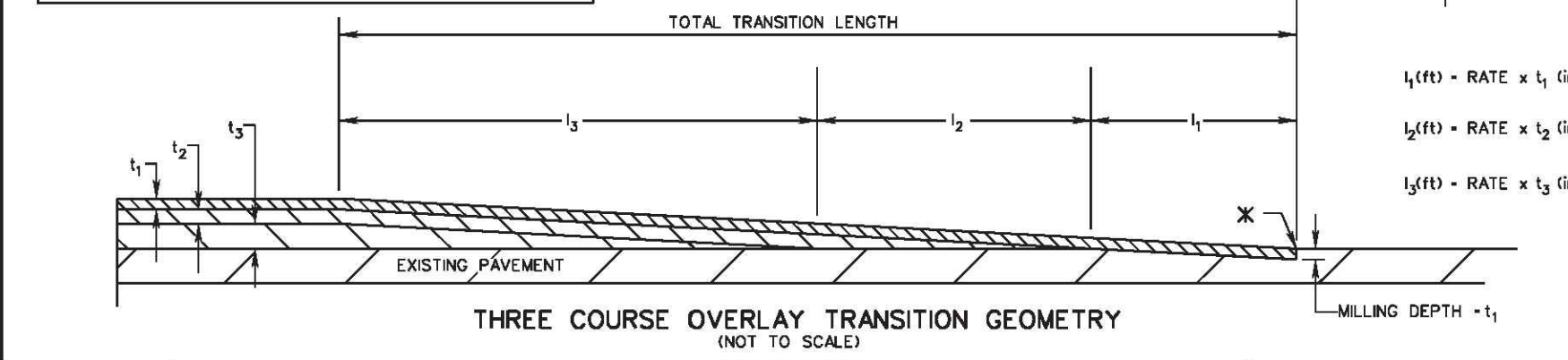
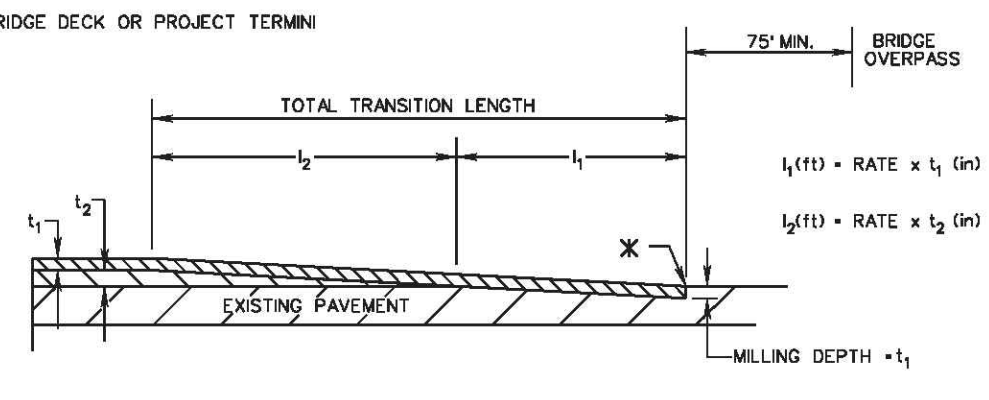
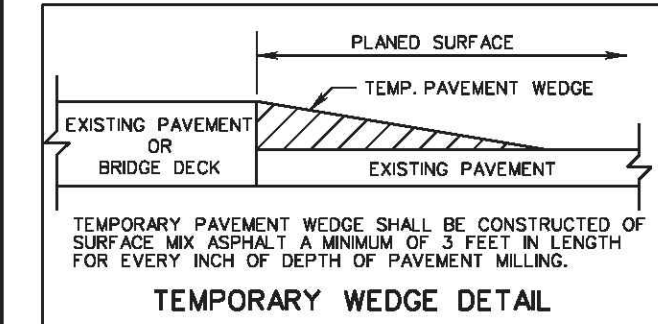
PROP MILL & OVERLAY SEE TYPICAL SECTION FOR DETAILS	
PROP FULL DEPTH ASPHALT SEE TYPICAL SECTION FOR DETAILS	
PROP CONCRETE	
REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES	
DEMOLITION AREA	

NOTES

1. TIE-IN REQUIREMENTS TO INTERSECTING ROADS OR STREETS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AT THE DISCRETION OF THE ENGINEER.
2. EXISTING PAVEMENT SURFACE SHALL BE PLANED TO TRANSITION TO THE TOP COURSE OF THE ASPHALT CONCRETE OVERLAY. ANY SUB-COURSE TERMINATION MAY BE NOTICED INTO THE EXISTING PAVEMENT OR BLENDED WITH THE NEXT COURSE OF PAVEMENT.
3. WHEN THERE IS A SPECIAL PROVISION FOR ROADABILITY INCLUDED IN THE CONTRACT, A DISTANCE OF 100 FEET (0.02 OF A MILE), MEASURED FROM THE LINE OF THE TIE-IN WILL BE EXEMPTED FROM PAY ADJUSTMENT.
4. TRANSITION SHALL BEGIN/END AT THE PROJECT LIMITS, AT BRIDGE APPROACH SLAB/ABUTMENT (OR AN INTERMEDIATE POINT DETERMINED BY THE ENGINEER), AND A MINIMUM OF 75 FEET FROM A VERTICAL PLANE OF THE NEAREST OUTER FACE OF THE BRIDGE OVERPASS.
5. NO OVERLAY OR MILLING SHALL BE PERMITTED ON THE BRIDGE DECK WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DISTRICT BRIDGE ENGINEER.



TRANSITION RATE		POSTED SPEED MPH					
RATE (FT/INCH)		25	35	45	55	65	70
20		25	35	40	45	50	



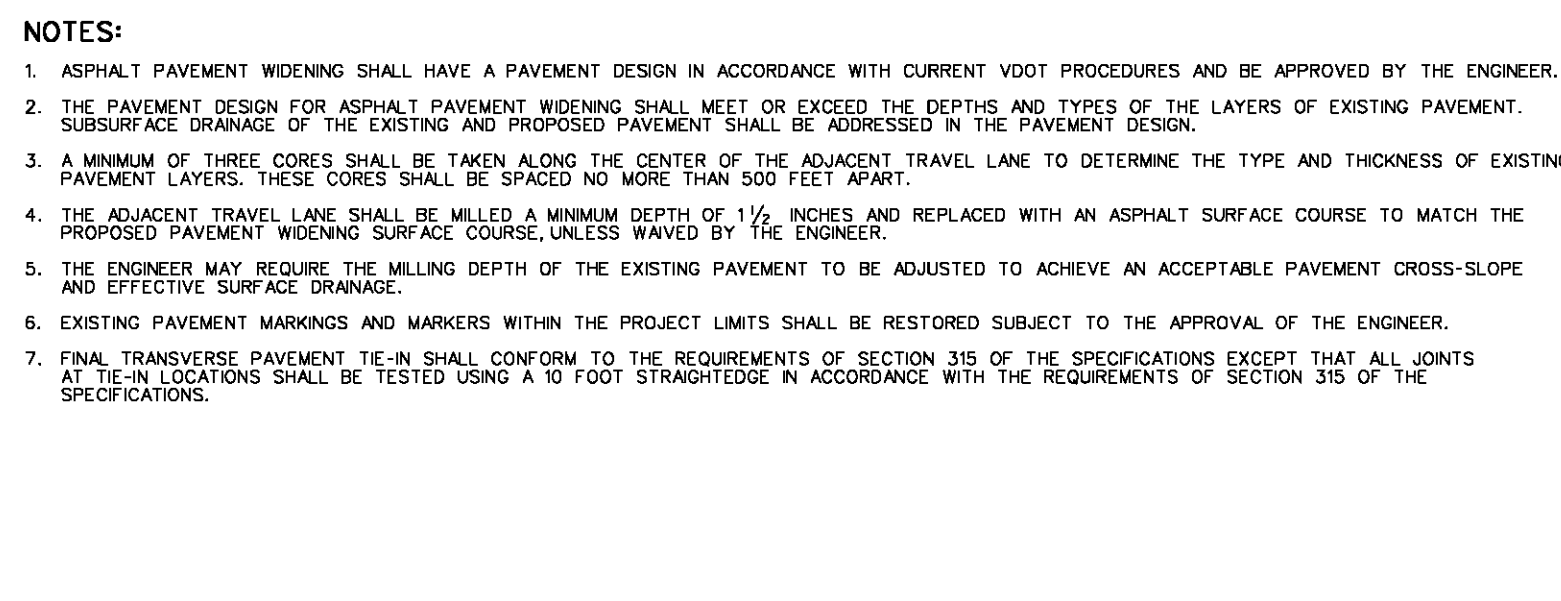
SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS
210	ASPHALT CONCRETE OVERLAY TRANSITIONS	REVISION DATE
315		7/12
515		305.01

ASPHALT CONCRETE OVERLAY TRANSITIONS
VDOT DETAIL

N.T.S.

NOTES

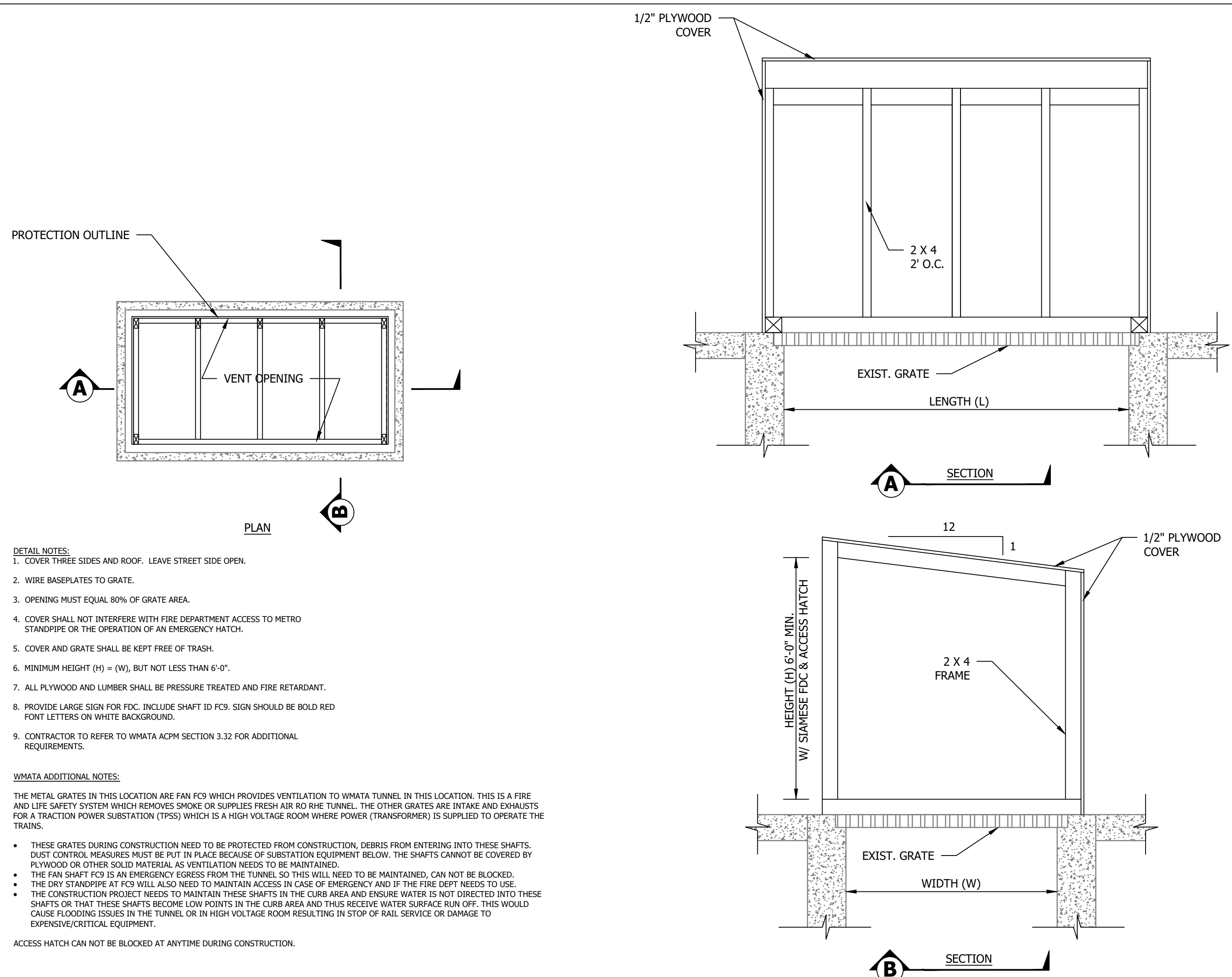
1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1 1/2 INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 1 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS.



SPECIFICATION REFERENCE	VDOT ROAD AND BRIDGE STANDARDS
315	ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC
	REVISION DATE
	303.02

ASPHALT PAVEMENT WIDENING
VDOT DETAIL

N.T.S.



- DETAIL NOTES:
1. COVER THREE SIDES AND ROOF. LEAVE STREET SIDE OPEN.
 2. WIRE BASEPLATES TO GRATE.
 3. OPENING MUST EQUAL 80% OF GRATE AREA.
 4. COVER SHALL NOT INTERFERE WITH FIRE DEPARTMENT ACCESS TO METRO STANDPIPE OR THE OPERATION OF AN EMERGENCY HATCH.
 5. COVER AND GRATE SHALL BE KEPT FREE OF TRASH.
 6. MINIMUM HEIGHT (H) = (W), BUT NOT LESS THAN 6'-0".
 7. ALL PLYWOOD AND LUMBER SHALL BE PRESSURE TREATED AND FIRE RETARDANT.
 8. PROVIDE LARGE SIGN FOR FDC. INCLUDE SHAFT ID FDC. SIGN SHOULD BE BOLD RED FONT LETTERS ON WHITE BACKGROUND.
 9. CONTRACTOR TO REFER TO WMATA ACPM SECTION 3.32 FOR ADDITIONAL REQUIREMENTS.

WMATA ADDITIONAL NOTES:

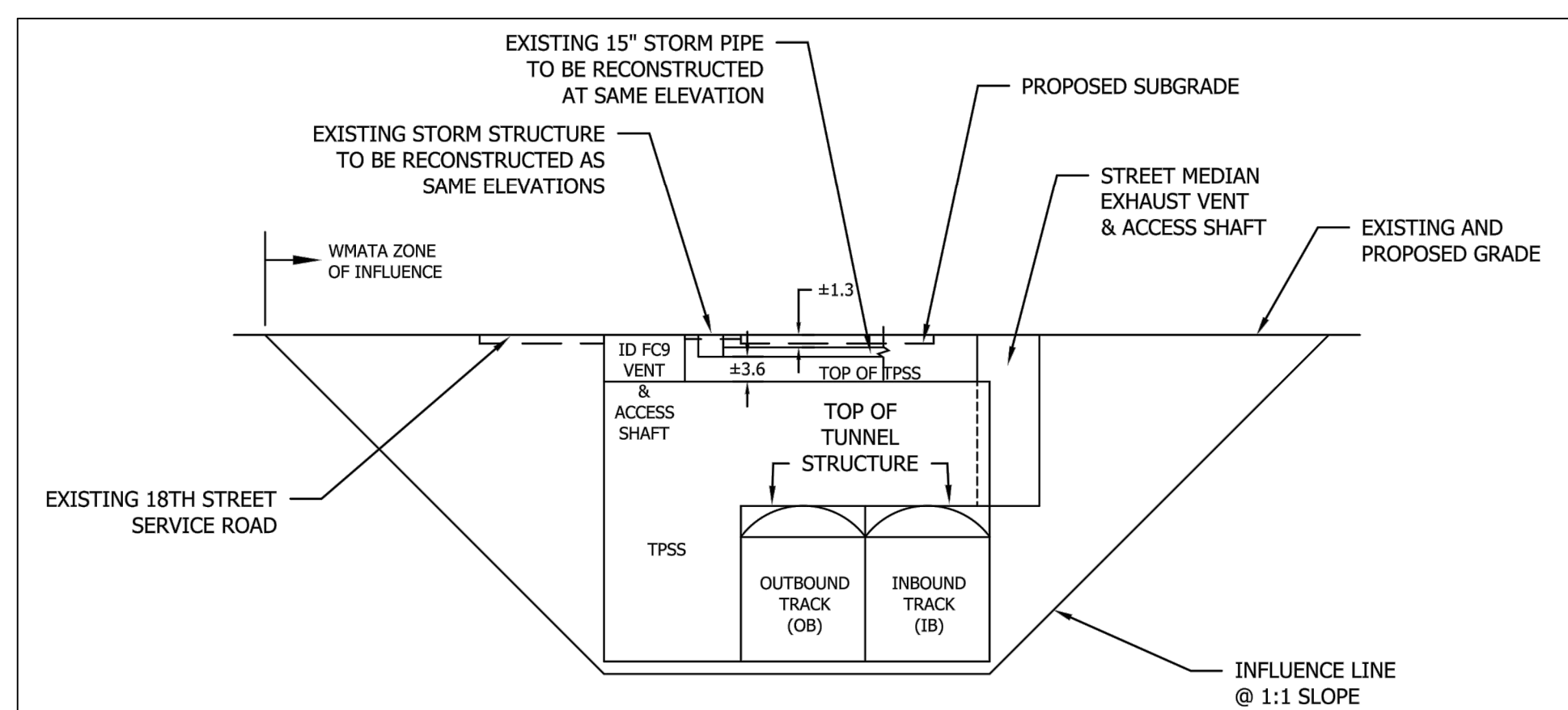
THE METAL GRATES IN THIS LOCATION ARE FAN FC9 WHICH PROVIDES VENTILATION TO WMATA TUNNEL IN THIS LOCATION. THIS IS A FIRE AND LIFE SAFETY SYSTEM WHICH REMOVES SMOKE OR SUPPLIES FRESH AIR TO THE TUNNEL. THE OTHER GRATES ARE INTAKE AND EXHAUSTS FOR A TRACTION POWER SUBSTATION (TPSS) WHICH IS A HIGH VOLTAGE ROOM WHERE POWER (TRANSFORMERS) IS SUPPLIED TO OPERATE THE TRAINS.

- THESE GRATES DURING CONSTRUCTION NEED TO BE PROTECTED FROM CONSTRUCTION, DEBRIS FROM ENTERING INTO THESE SHAFTS. DUST CONTROL MEASURES MUST BE PUT IN PLACE BECAUSE OF SUBSTITUTION EQUIPMENT BELOW. THE SHAFTS CANNOT BE COVERED BY PLYWOOD OR OTHER SOLID MATERIAL AS VENTILATION NEEDS TO BE MAINTAINED.
- THE FAN SHAFT FC9 IS AN EMERGENCY EGRESS FROM THE TUNNEL SO THIS WILL NEED TO BE MAINTAINED, CAN NOT BE BLOCKED.
- THE DRY STANDPIPE AT FC9 WILL ALSO NEED TO MAINTAIN ACCESS IN CASE OF EMERGENCY AND IF THE FIRE DEPT NEEDS TO USE.
- THE CONSTRUCTION PROJECT NEEDS TO MAINTAIN THESE SHAFTS IN THE CURB AREA AND ENSURE WATER IS NOT DIRECTED INTO THESE SHAFTS OR THAT THESE SHAFTS BECOME LOW POINTS IN THE CURB AREA AND THUS RECEIVE WATER SURFACE RUN OFF. THIS WOULD CAUSE FLOODING ISSUES IN THE TUNNEL OR IN HIGH VOLTAGE ROOM RESULTING IN STOP OF RAIL SERVICE OR DAMAGE TO EXPENSIVE CRITICAL EQUIPMENT.

ACCESS HATCH CAN NOT BE BLOCKED AT ANYTIME DURING CONSTRUCTION.

WMATA GRATE COVER PROTECTION
WMATA DETAIL

N.T.S.



WMATA TPSS ZONE OF INFLUENCE
FOR INFORMATIONAL PURPOSE ONLY

N.T.S.



DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Takab	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>[Signature]</i>	
Dennis M. Leach	
TRANSPORTATION DIRECTOR	6/17/2020
<i>[Signature]</i>	
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 DETAILS
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

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 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP

SCALE:
 AS SHOWN

SHEET C002.1

18TH STREET SOUTH



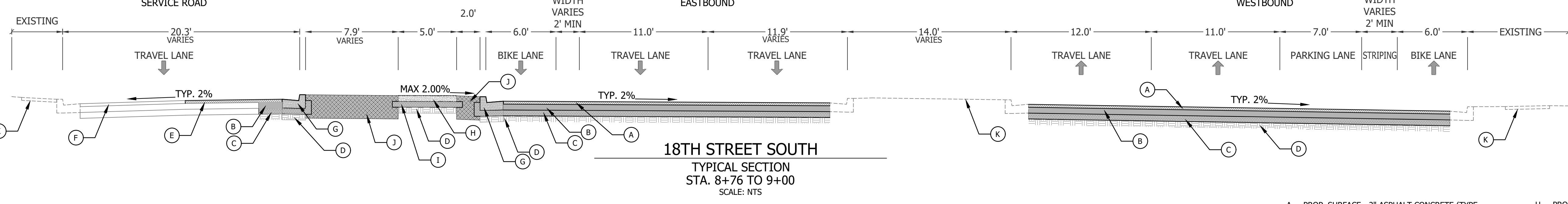
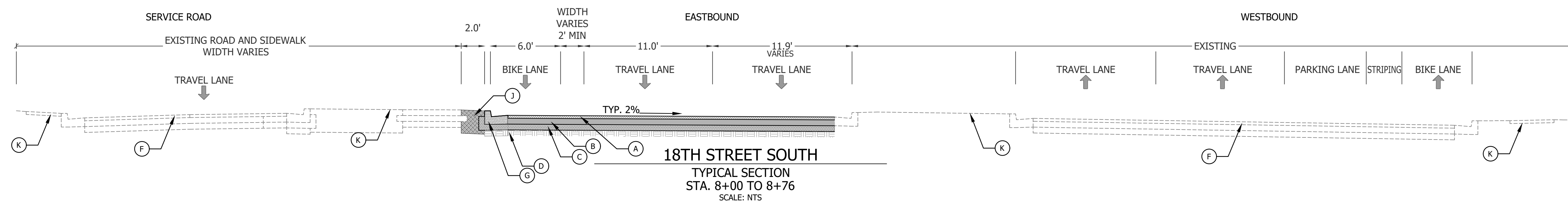
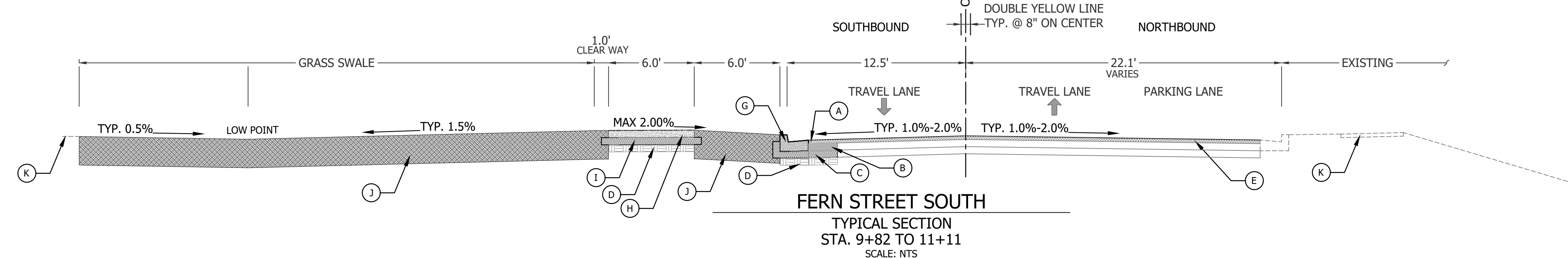
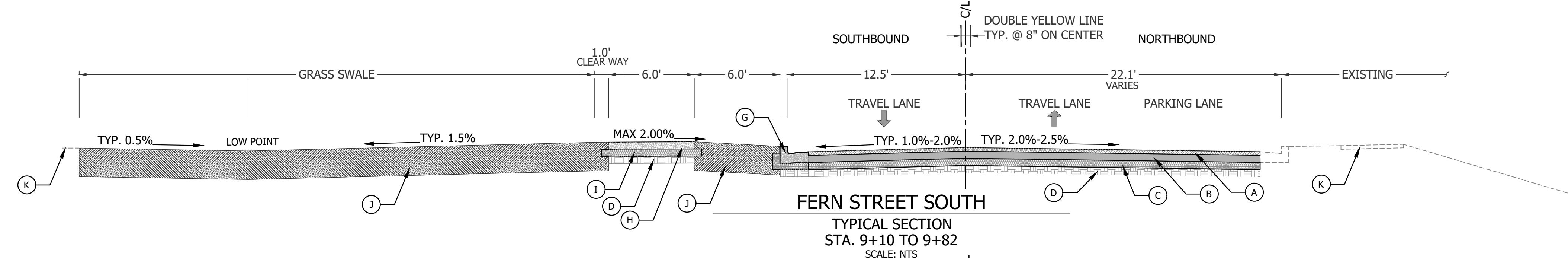
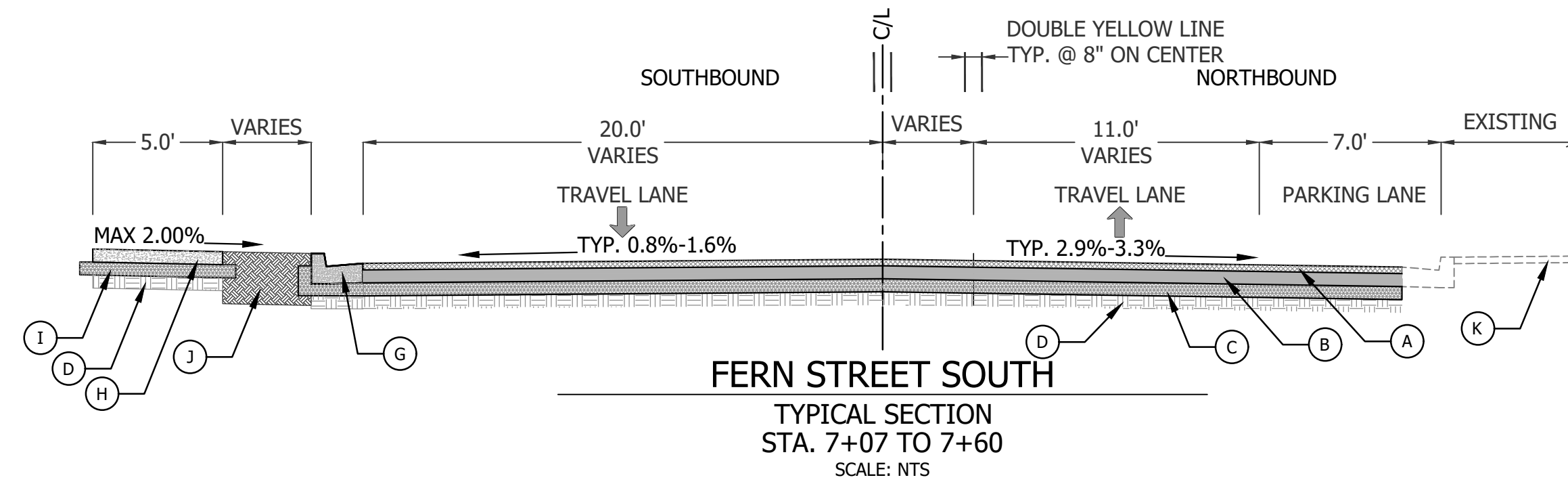
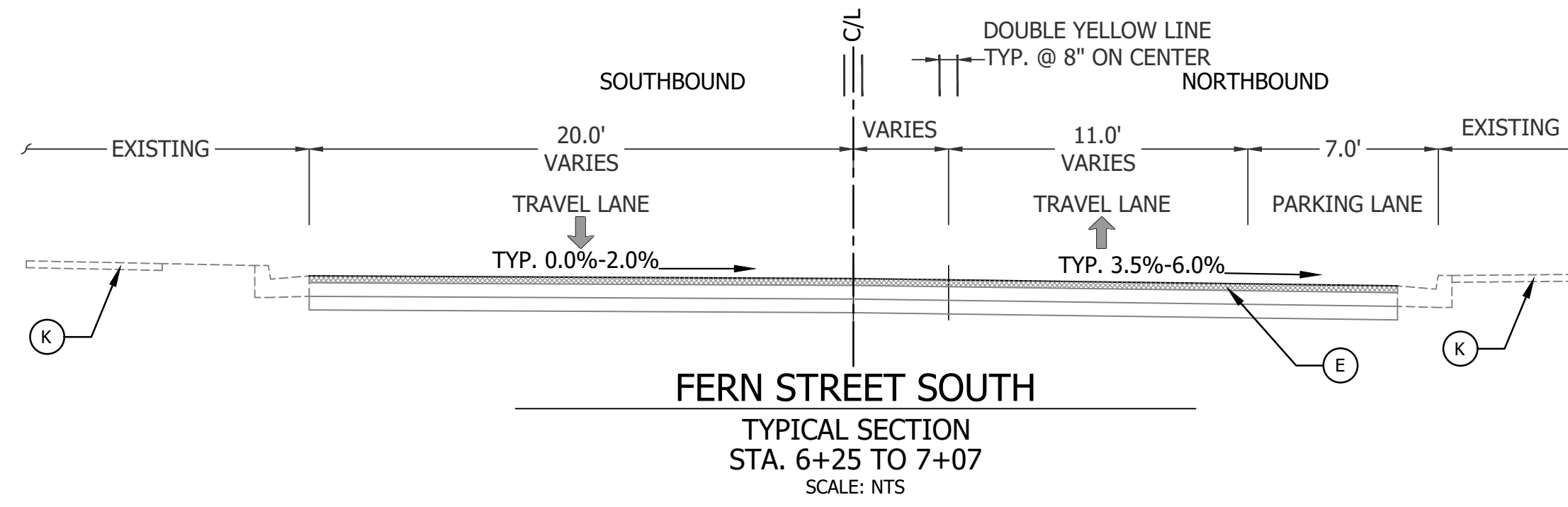
APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
<i>Kamal N. Taktak</i>	6.26.20
<i>[Signature]</i>	06.29.20
<i>[Signature]</i>	6/24/20
<i>[Signature]</i>	6/17/2020

REVISIONS	DATE

18TH STREET SOUTH
TYPICAL SECTIONS
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME: CC20-210-TYP_SECTION.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE
PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE: AS NOTED



- A. PROP. SURFACE - 2" ASPHALT CONCRETE (TYPE SM-9.5A) PER ARL SPECS
- B. PROP. BASE - 6" ASPHALT CONCRETE (TYPE BM-25.A) PER ARL SPECS
- C. PROP. COMPACTED SUBBASE - 6" AGGREGATE BASE MATERIAL (#21A) PER ARL SPECS
- D. UNDISTURBED SUBGRADE OR BACKFILL & STANDARD COMPACTED REQUIRED PER ARL SPECS
- E. EX. PAVEMENT MILL & OVERLAY OVER TACK COAT PER ARL SPECS (TYPE SM-9.5A)
- F. EX. ASPHALT PAVEMENT (BASE/SUBBASE)
- G. PROP. C-2 CURB & GUTTER & AGGREGATE BASE PER ARL STD R-2.0
- H. PROP. 4" STANDARD CONCRETE SIDEWALK PER ARL STD R-2.0
- I. PROP. 3" MIN. AGGREGATE BASE MATERIAL (#21A) PER ARL STD R-2.0 UNDER SIDEWALK
- J. PROP. TYP. 4"-6" TOPSOIL AND SEED PER ARL SPECS
- K. EXISTING TO REMAIN
- L. RAISED 4" THICK CONCRETE MEDIAN WITH HEADER CURB CONSTRUCTED. PER ARL STD. R-1.4 AND SPECS
- M. VDOT UD-4 UNDERDRAIN

NOTE:
SEE PLAN FOR PROPOSED ROAD/SIDEWALK AND PARKING PAVEMENT & LANDSCAPE RESTORATION LAYOUT. SEE CROSS SECTIONS SHEET FOR PROPOSED CROSS SLOPES AND ELEVATIONS

REVISED ON 11/08/2016



APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	
Ariel Yang	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
TYPICAL SECTIONS
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

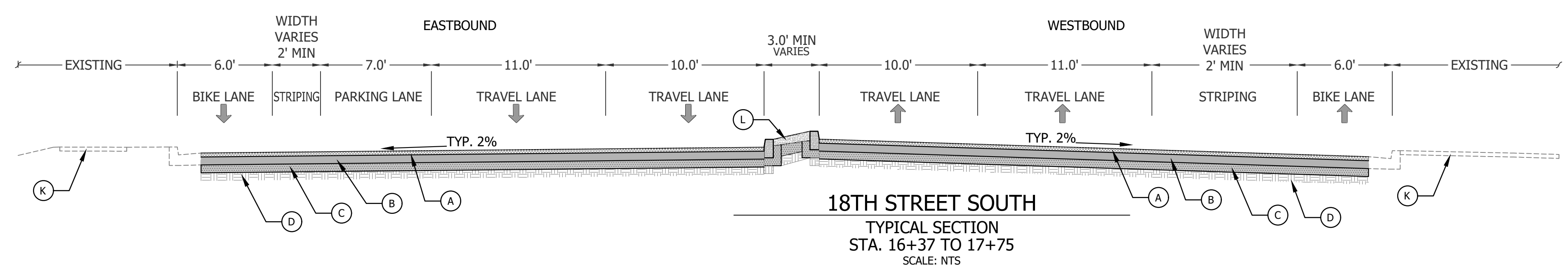
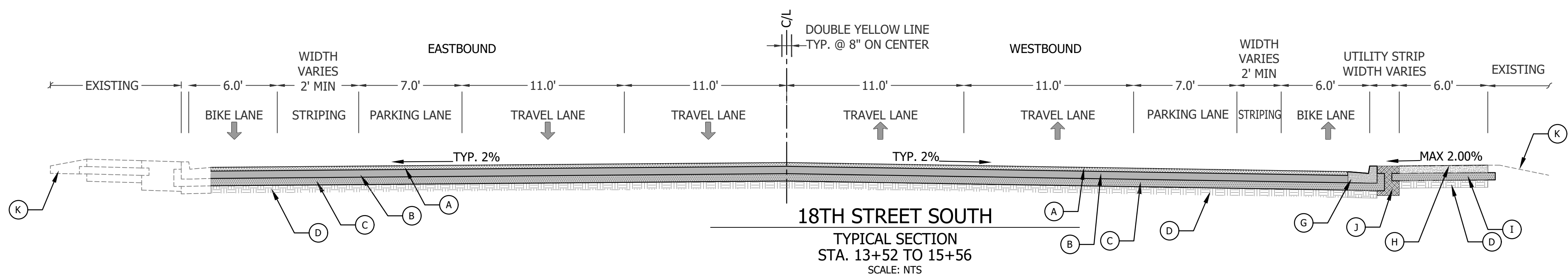
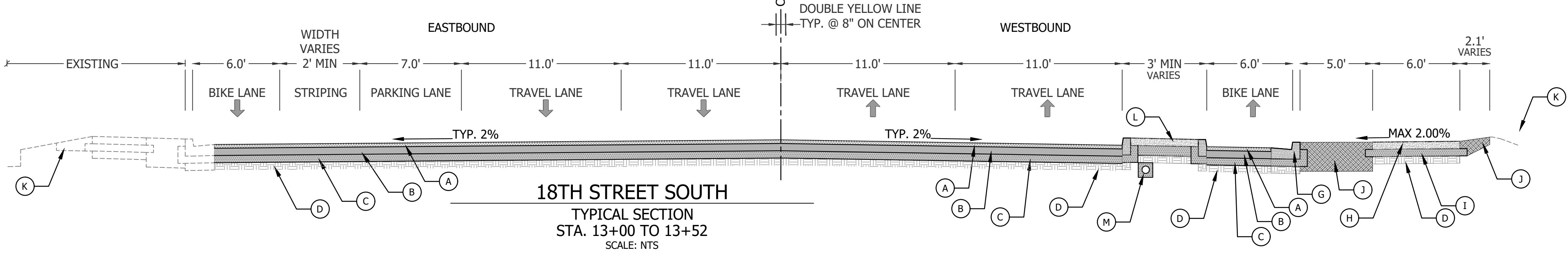
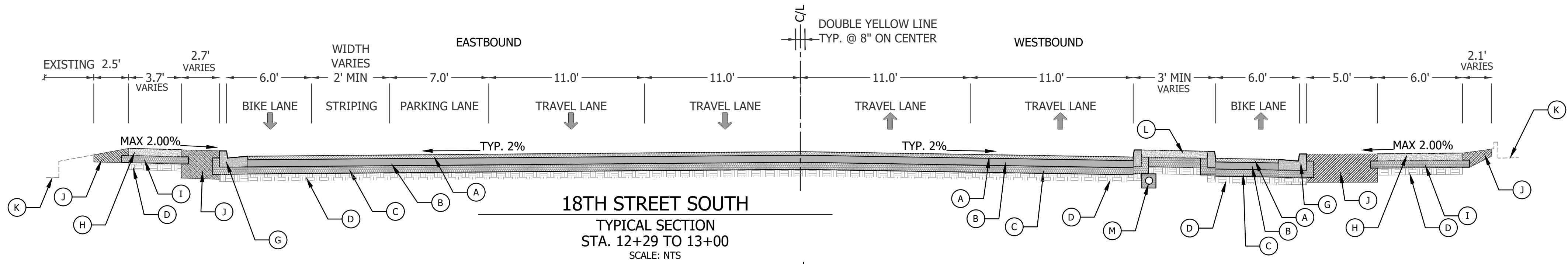
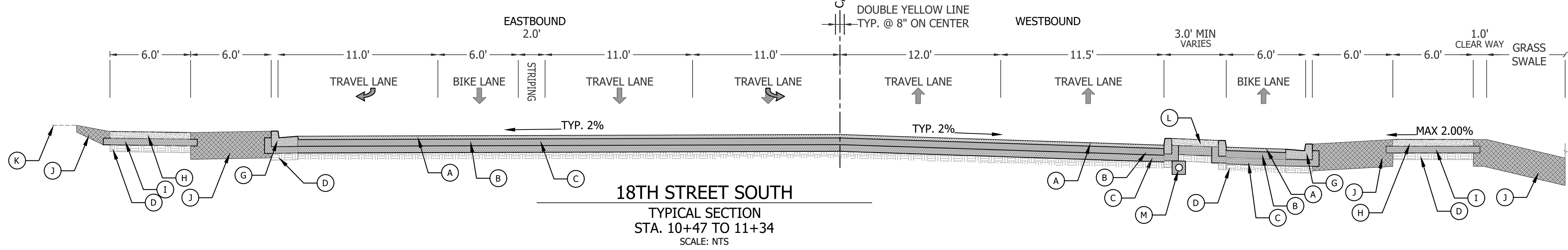
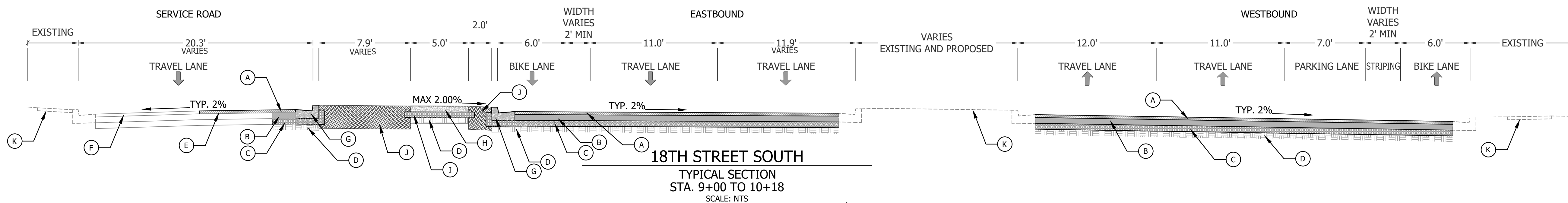
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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE: AS NOTED

SHEET C004.2

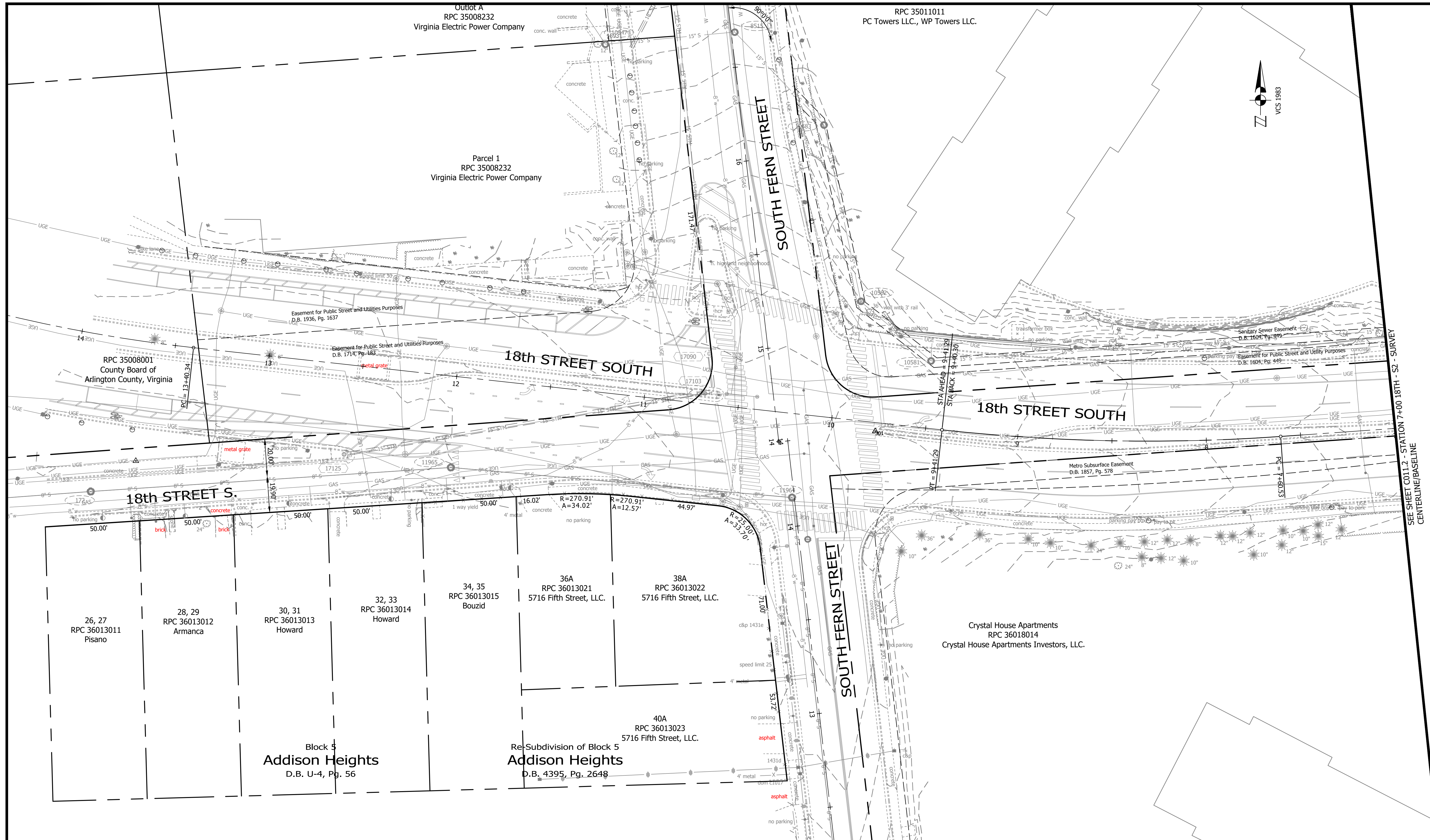
18TH STREET SOUTH



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REVISED ON 11/08/2016



ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis M. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 EXISTING CONDITION
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

- GENERAL NOTES:**
- THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF THE COUNTY SURVEY SECTION FROM AN ACTUAL GROUND SURVEY; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM DECEMBER 2014 TO APRIL 2015; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
 - HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
 - CONTOUR INTERVAL: 1'
 - BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND GIS DATA AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

- NOTES:**
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 - UTILITIES SHOWN WERE MARKED BY MID-ATLANTIC UTILITY LOCATION IN JUNE 2015 AND LOCATED BY ARLINGTON COUNTY SURVEY PERSONNEL.

SURVEY CONTROL

PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
200	6999342.5062	11894165.8183	39.65	GPS
201	6999438.1307	11894730.9714	41.44	GPS
202	6999089.9634	11894882.7259	43.47	TRV 202
203	6998793.2265	11894873.5154	43.70	TRV 203
204	6998509.6607	11894977.9298	44.36	TRV 204
300	6998535.6686	11894587.5405	47.62	TRV 300
301	6998495.8100	11894213.5573	54.17	TRV 301
302	6998480.0643	11893821.7028	58.88	TRV 302
303	6998434.8404	11893470.9261	58.88	TRV 303

CENTERLINE/BASELINE NOTES:

ALL CENTERLINES/BASELINES SHOWN ON THIS EXISTING CONDITION PLANS ARE FROM THE AVAILABLE SURVEY SECTION RECORDS.

DURING DESIGN STAGE OF THE PROJECT, NEW CONSTRUCTION BASELINES WILL BE ESTABLISHED/DRAWN BY THE DESIGN ENGINEER WHICH WILL BE USED TO REFERENCE ALL DESIGN INFORMATION AND DURING STAKEOUT TO PREPARE THE CUT-SHEET.

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JOSHUA M. BROCK, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM DECEMBER 2014 TO APRIL 2015; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX

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PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



REVISED ON 11/08/2016



APPROVALS	DATE
<i>Kamal N. Taktak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Acil Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
EXISTING CONDITION
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

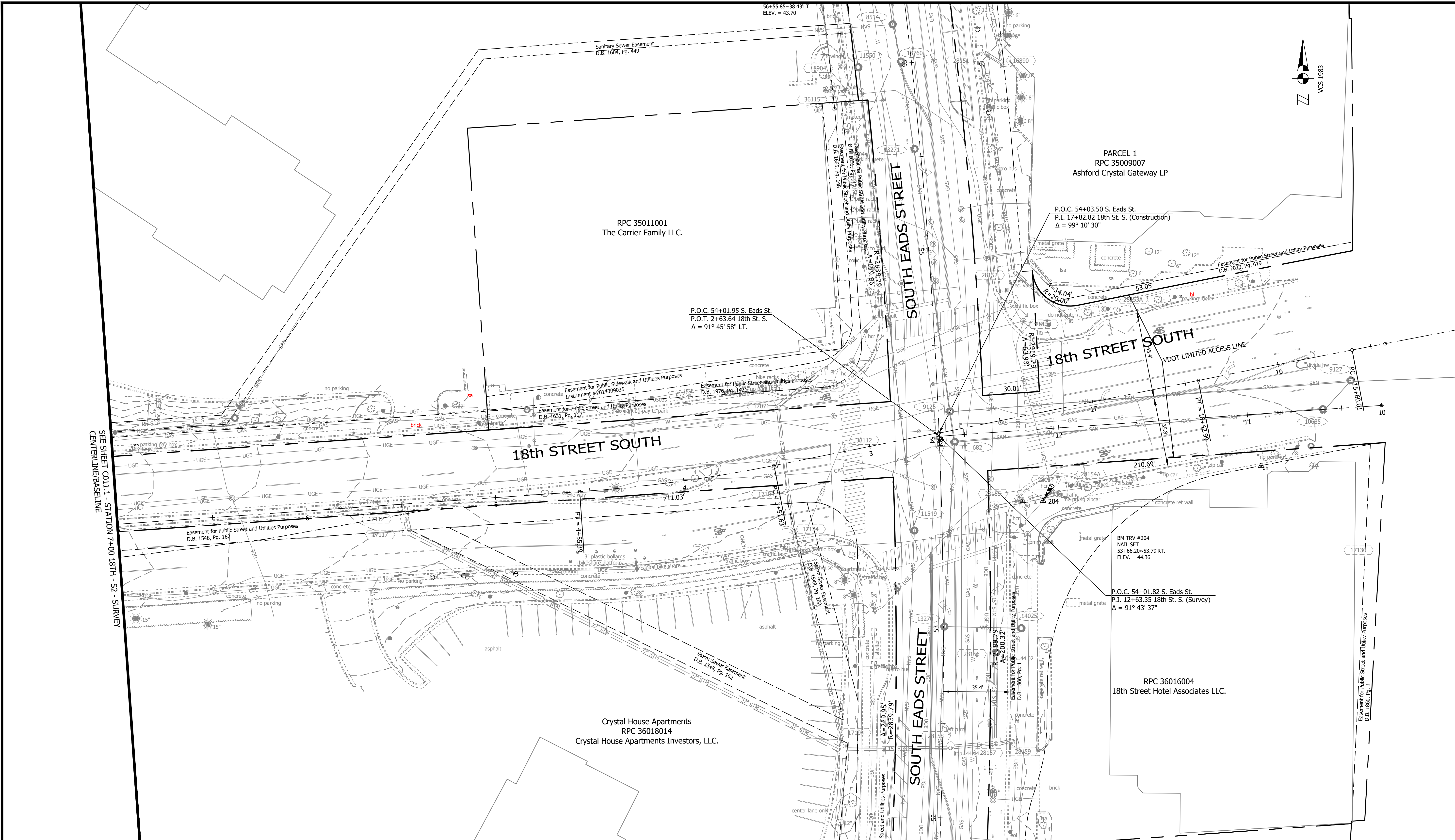
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PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

 HORIZ. SCALE: 1" = 25'



GENERAL NOTES:

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APPROVALS	DATE
<i>Kamal N. Tabbak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Tabbak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Acil Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

EXISTING CONDITION ROADWAY IMPROVEMENTS S FERN ST TO S EADS ST
 CC20
18TH STREET SOUTH

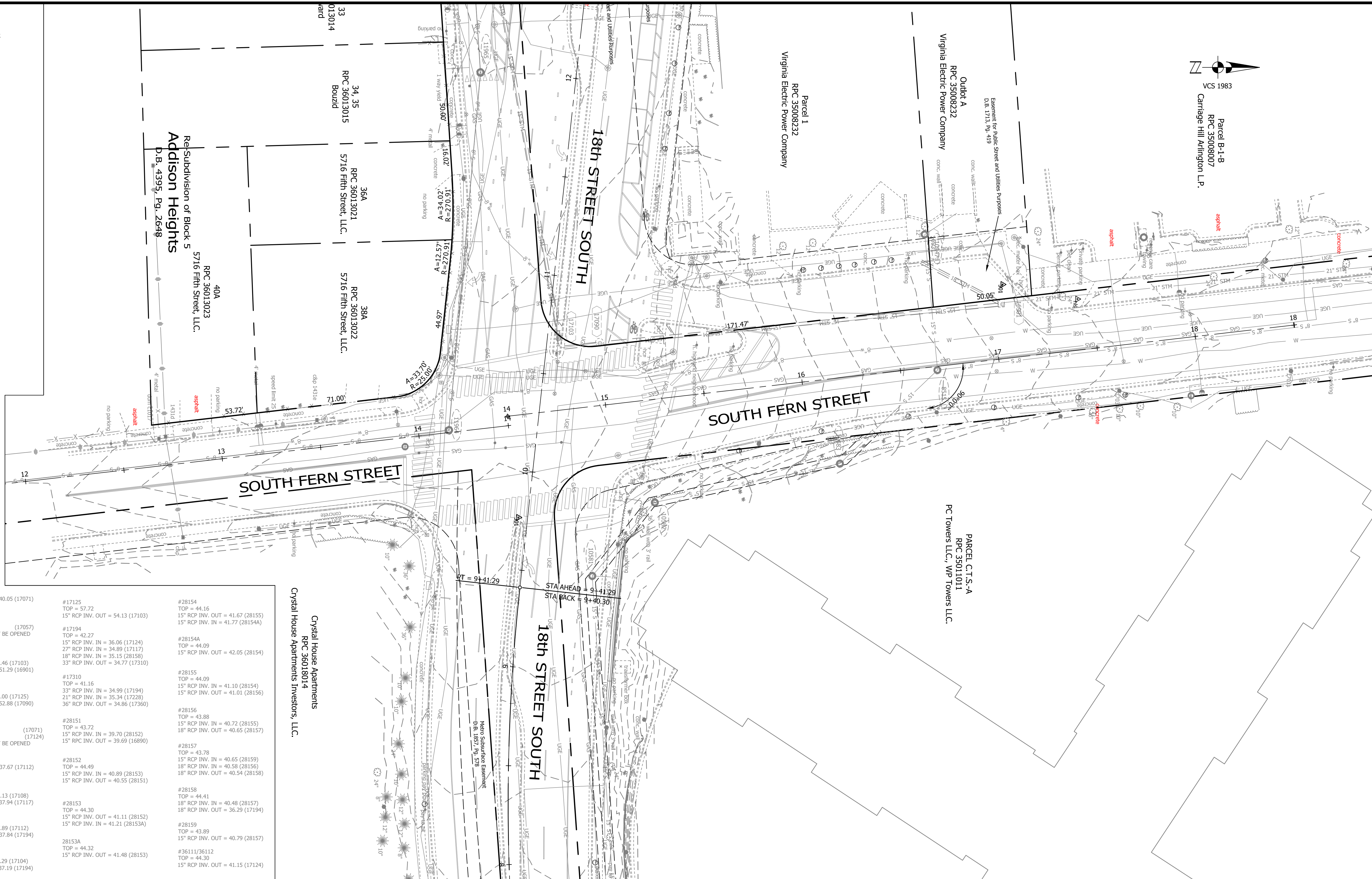
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CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX

FILENAME: CC20-214-EX. CONDITION.DWG
PATH: Q:\DATA\CC20\DESIGN\CC20_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

 HORIZ. SCALE: 1" = 25'



SANITARY SEWER

#169 TOP = 50.07 C/L INV. = 43.70	#10685 TOP = 44.81 C/L INV. = 29.26
#172 TOP = 58.63 C/L INV. = 48.79	#10947 TOP = 47.52 C/L INV. = 32.61
#682 TOP = 44.62 C/L INV. = 26.21	#11549 TOP = 44.94 C/L INV. = 19.97
#683 TOP = 44.68 C/L INV. = 27.23	#11550 TOP = 43.28 C/L INV. = 20.38
#8514 TOP = 44.15 C/L INV. = 26.68	#11964 TOP = 55.44 C/L INV. = 47.15
#8515 TOP = 47.28 STRUCTURE CANNOT BE OPENED	#11965 TOP = 56.96 C/L INV. = 48.17
#9126 TOP = 44.66 C/L INV. = 26.27	#13270 TOP = 44.45 C/L INV. = 25.93
#9127 TOP = 45.33 C/L INV. = 29.77	#13271 TOP = 44.43 C/L INV. = 26.45
#10580 TOP = 47.92 C/L INV. = 31.27	#13272 TOP = 44.70 C/L INV. = 27.03
#10581 TOP = 54.09 C/L INV. = 32.04	#13760 TOP = 44.23 C/L INV. = 26.60
#10582 TOP = 52.34 C/L INV. = 32.16	#14025 TOP = 44.28 C/L INV. = 38.00
#10583 TOP = 47.63 C/L INV. = 32.44	#41260 TOP = 41.47 C/L INV. = 34.13

STORM SEWER

#6064 (NEW STRUCTURE) TOP = 44.38 18" RCP INV. IN = 35.86 (16890) 18" RCP INV. OUT = 35.78 (16759)	#16674 TOP = 42.18 18" RCP INV. IN = 35.23 (16674) 21" RCP INV. IN = 35.18 (16901) 18" RCP INV. IN = 35.51 (16680) 21" RCP INV. OUT = 34.98 (16425)	#16680 TOP = 42.21 18" RCP INV. IN = 35.80 (28105) 18" RCP INV. OUT = 35.61 (16674)	#16716 TOP = 42.76 18" RCP INV. OUT = 36.28 (16674)	#16736 TOP = 45.09 15" RCP INV. IN = 33.87 (16811) 18" RCP INV. IN = 31.40 (16759) 27" RCP INV. IN = 30.69 (16887) 30" RCP INV. OUT = 30.49 (16502)	#16759 TOP = 44.63 18" RCP INV. IN = 34.93 (6064) 18" RCP INV. OUT = 34.81 (16736)	#16811 TOP = 44.24 15" RCP INV. IN = 37.34 (16904) 15" RCP INV. OUT = 37.24 (16736)	#16890 TOP = 44.14 15" RCP INV. IN = 39.75 (28151) 18" RCP INV. OUT = 39.70 (6064) Reverse flow from #28151	#16901 TOP = 45.20 15" RCP INV. IN = 42.35 (17090) 18" RCP INV. IN = 37.04 (16931) 21" RCP INV. OUT = 36.87 (16674)	#16904 TOP = 43.40 15" RCP INV. OUT = 38.18 (16811)	#16931 TOP = 47.11 18" RCP INV. OUT = 37.83 (16901)	#17057 TOP = 43.61 15" RCP INV. OUT = 40.05 (17071)	#17071 TOP = 44.02 15" RCP INV. IN = (17057) STRUCTURE CANNOT BE OPENED	#17090 TOP = 55.16 15" RCP INV. IN = 52.46 (17103) 15" RCP INV. OUT = 51.29 (16901)	#17103 TOP = 55.95 15" RCP INV. IN = 53.00 (17125) 15" RCP INV. OUT = 52.88 (17090)	#17104 TOP = 44.96 15" RCP INV. IN = (17071) 15" RCP INV. OUT = (17124) STRUCTURE CANNOT BE OPENED	#17108 TOP = 46.81 27" RCP INV. OUT = 37.67 (17112)	#17112 TOP = 46.67 27" RCP INV. IN = 38.13 (17108) 27" RCP INV. OUT = 37.94 (17117)	#17117 TOP = 46.67 27" RCP INV. IN = 37.89 (17112) 27" RCP INV. OUT = 37.84 (17194)	#17124 TOP = 45.11 15" RCP INV. IN = 37.29 (17104) 15" RCP INV. OUT = 37.19 (17194)	#17125 TOP = 57.72 15" RCP INV. OUT = 54.13 (17103)	#17194 TOP = 42.27 15" RCP INV. IN = 36.06 (17124) 27" RCP INV. IN = 34.89 (17117) 18" RCP INV. IN = 35.15 (28158) 33" RCP INV. OUT = 34.77 (17310)	#17310 TOP = 41.16 33" RCP INV. IN = 34.99 (17194) 21" RCP INV. IN = 35.34 (17228) 36" RCP INV. OUT = 34.86 (17360)	#28151 TOP = 43.72 15" RCP INV. IN = 39.70 (28152) 15" RCP INV. OUT = 39.69 (16890)	#28152 TOP = 44.49 15" RCP INV. IN = 40.89 (28153) 15" RCP INV. OUT = 40.55 (28151)	#28153 TOP = 44.30 15" RCP INV. OUT = 41.11 (28152) 15" RCP INV. OUT = 41.21 (28153A)	28153A TOP = 44.32 15" RCP INV. OUT = 41.48 (28153)	#28154 TOP = 44.16 15" RCP INV. OUT = 41.67 (28155) 15" RCP INV. IN = 41.77 (28154A)	#28154A TOP = 44.09 15" RCP INV. OUT = 42.05 (28154)	#28155 TOP = 44.09 15" RCP INV. IN = 41.10 (28154) 15" RCP INV. OUT = 41.01 (28156)	#28156 TOP = 43.88 15" RCP INV. IN = 40.72 (28155) 18" RCP INV. IN = 40.58 (28156) 18" RCP INV. OUT = 40.54 (28158)	#28157 TOP = 43.78 15" RCP INV. IN = 40.65 (28159) 18" RCP INV. IN = 40.58 (28156) 18" RCP INV. OUT = 40.54 (28158)	#28158 TOP = 44.41 18" RCP INV. IN = 40.48 (28157) 18" RCP INV. OUT = 36.29 (17194)	#28159 TOP = 43.89 15" RCP INV. OUT = 40.79 (28157)	#36111/36112 TOP = 44.30 15" RCP INV. OUT = 41.15 (17124)
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- NOTES:**
- TRAVERSE CONTROL SET BY ARLINGTON COUNTY. GPS COORDINATES ESTABLISHED IN NOVEMBER 2014 ON 200 AND 201. COORDINATE OF POINT 201 HELD FOR POSITION AND POINT 200 HELD FOR LINE. COORDINATES ARE NOT SCALED. ELEVATION OF POINT 200 (39.65) HELD FOR ELEVATION. OTHER CONTROL COORDINATES GENERATED BY CONVENTIONAL TRAVERSE AND DIFFERENTIAL LEVELING.
 - BUILDING LOCATIONS TAKEN FROM EXISTING GIS LOCATION, NOT FROM FIELD SURVEY LOCATIONS.
 - UTILITIES SHOWN WERE MARKED BY MID-ATLANTIC UTILITY LOCATION IN JUNE 2015 AND LOCATED BY ARLINGTON COUNTY SURVEY PERSONNEL.

SURVEY CONTROL

PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
200	6999342.5062	11894165.8183	39.65	GPS
201	6999438.1307	11894730.9714	41.44	GPS
202	6999089.9634	11894882.7259	43.47	TRV 202
203	6998793.2265	11894873.5154	43.70	TRV 203
204	6998509.6607	11894977.9298	44.36	TRV 204
300	6998535.6686	11894587.5405	47.62	TRV 300
301	6998495.8100	11894213.5573	54.17	TRV 301
302	6998480.0643	11893821.7028	58.88	TRV 302
303	6998434.8404	11893470.9261	58.88	TRV 303

CENTERLINE/BASELINE NOTES:

ALL CENTERLINES/BASELINES SHOWN ON THIS EXISTING CONDITION PLANS ARE FROM THE AVAILABLE SURVEY SECTION RECORDS.

DURING DESIGN STAGE OF THE PROJECT, NEW CONSTRUCTION BASELINES WILL BE ESTABLISHED/DRAWN BY THE DESIGN ENGINEER WHICH WILL BE USED TO REFERENCE ALL DESIGN INFORMATION AND DURING STAKEOUT TO PREPARE THE CUT-SHEET.

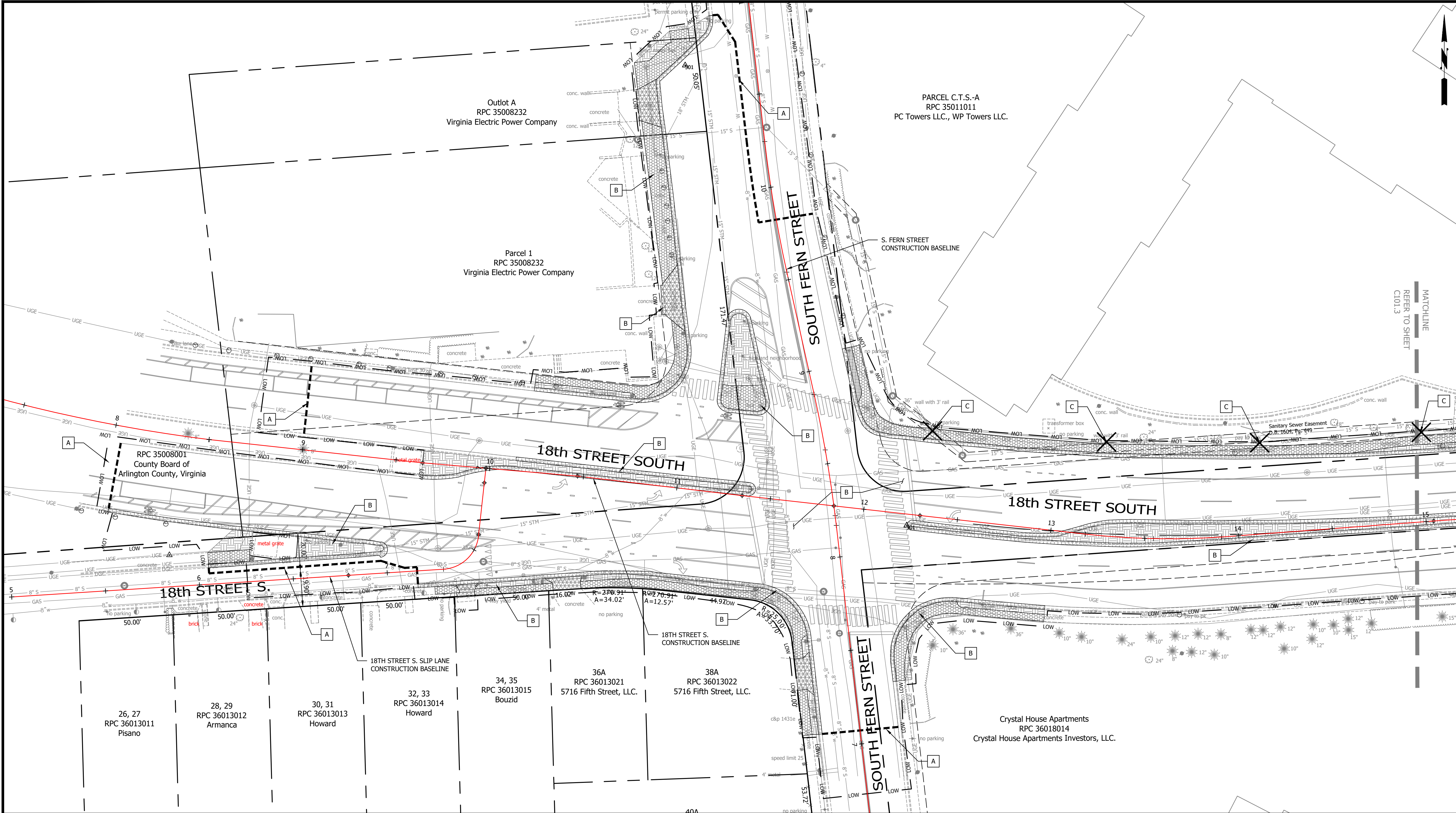
THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JOSHUA M. BROCK, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM DECEMBER 2014 TO APRIL 2015; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER <i>Kamal N. Taktak</i>	6.26.20
CONSTRUCTION MANAGEMENT SUPERVISOR <i>[Signature]</i>	06.29.20
WATER, SEWER, STREETS BUREAU CHIEF <i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR <i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
DEMOLITION PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20



- DEMOLITION KEY NOTES:**
- CAUTION: POTENTIAL UNDERGROUND UTILITY CONFLICT. THE PROVIDED TEST HOLE DATA IS APPROXIMATE, CONTRACTOR, TO FIELD VERIFY (TEST PIT) EXACT LOCATION AND DEPTH OF EXISTING UTILITY. USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF WMATA UNDERGROUND STRUCTURES WITHOUT PRIOR APPROVAL.
- A** CONTRACTOR SHALL MAKE A NEAT LINE SAWCUT EXISTING PAVEMENT (AT NEAREST JOINT WHERE POSSIBLE).
 - B** CONTRACTOR SHALL DEMOLISH/EXAVATE/REMOVE/DISPOSE EX. PAVEMENT, CURB & GUTTER, DRIVEWAY ENTRANCE AND CLEAR THE AREA.
 - C** CONTRACTOR TO COORDINATE WITH ARLINGTON COUNTY FOR THE REMOVAL / DISPOSAL OF EXISTING STREETLIGHT POLE. DEMOLISH / DISPOSE OF THE REMAINING FOUNDATION AND ASSOCIATED FIXTURES. REFER TO SHEET C111.1-C111.2 FOR ADDITIONAL INFORMATION.
 - D** CONTRACTOR SHALL REMOVE EX. TREE/TREE STUMPS & TREE EDGING. REFER TO SHEET C091.1-C091.2 FOR ADDITIONAL INFORMATION.

- DEMOLITION GENERAL NOTES:**
- CONTRACTOR SHALL PROTECT EXISTING POLES, UTILITIES, STRUCTURES, FROM DAMAGE.
 - EXISTING UNDERGROUND UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST ALL STRUCTURES TOP TO NEW GRADES PER ARLINGTON COUNTY DETAILS & SPECIFICATIONS AND IN COORDINATION WITH UTILITY OWNERS.
 - EXISTING STAND PIPE/FIRE HYDRANT TO REMAIN IN SERVICE. THE CONTRACTOR SHALL MAINTAIN UNIMPEDED ACCESS TO THE STAND PIPE/FIRE HYDRANT DURING CONSTRUCTION. THE CONTRACTOR SHALL ERCT SIGN(S) THAT CLEARLY IDENTIFY THE LOCATION OF THE STAND PIPE/FIRE HYDRANT.
 - EXISTING TREE REMOVAL AND PROTECTION SHALL COMPLY WITH E&S CONTROL PLAN.
 - EXISTING TRAFFIC SIGNALS SHALL BE PROTECTED DURING PROJECT CONSTRUCTION. EXISTING TRAFFIC SIGNAL POLES AND FOUNDATIONS SHALL BE REMOVED ONLY AFTER NEW INSTALLED TRAFFIC SIGNALS ACTIVATION PER SIGNAL TRAFFIC PLAN.
 - EXISTING STREET LIGHTS TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. REMOVED STREETLIGHT POLES AND FIXTURES SHALL BE RETURNED TO ARLINGTON COUNTY. CONTACT ARLINGTON COUNTY DIVISION OF TRANSPORTATION AT 703-228-6570.
 - SIDEWALK PAVEMENT AND LANDSCAPING WITHIN PROPOSED AND REMOVED TRAFFIC SIGNAL STRUCTURES AND UTILITY CUTS SHALL BE RESTORED TO COMPLY WITH EXISTING CONDITIONS OR PROPOSED PAVEMENT/LANDSCAPING.
 - EXISTING STREET SIGNS REMOVAL, PAVEMENT MARKING ERADICATION AND RESTORATION SHALL BE PERFORMED PER PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN, SEE SHEETS C101.1-C101.3
 - SEE TRAFFIC SIGNAL PLANS FOR ADDITIONAL ITEMS TO BE REMOVED/DEMOLISED/DISPOSED OF DURING CONSTRUCTION.
 - ALL CONSTRUCTION AND DEMOLITION DEBRIS WITHIN THE SHOWN LIMITS INCLUDING ASPHALT MILLING AND TRAFFIC SIGNAL RENOVATION SHALL BE REMOVED AND HAULED TO WASTE UNLESS OTHERWISE NOTED.

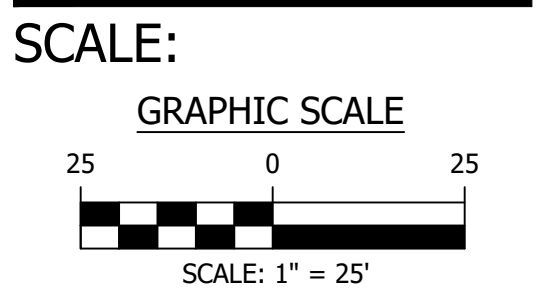
LEGEND

	PAVEMENT CONCRETE SAWCUT
	DEMOLITION OBJECT
	ASPHALT REMOVAL
	CONCRETE APRON REMOVAL
	CURB AND GUTTER REMOVAL
	SIDEWALK REMOVAL
	CLEAR AREA REMOVAL

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DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX

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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



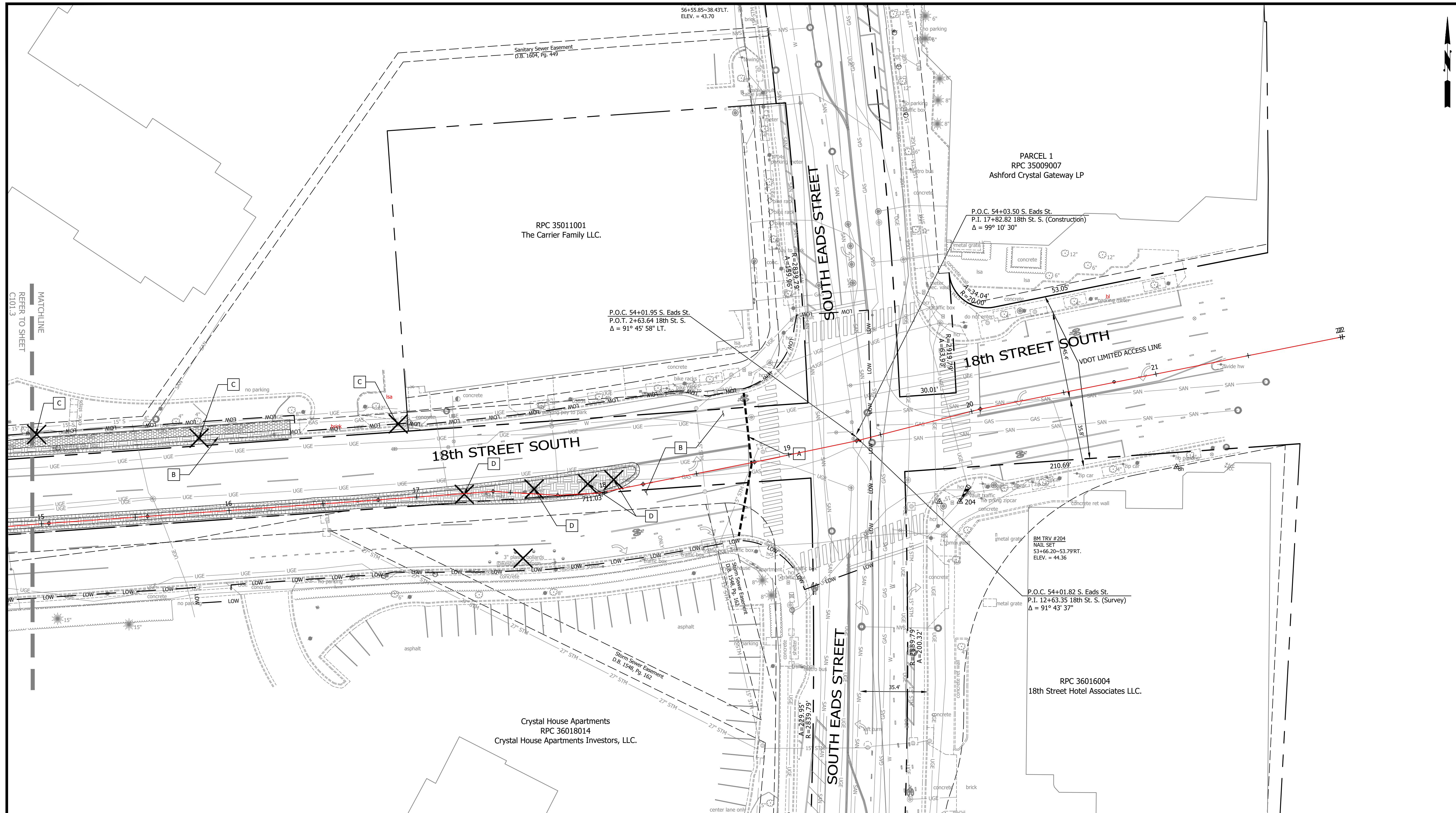
REVISED ON 11/08/2016



APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>[Signature]</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
DEMOLITION PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20



DEMOLITION KEY NOTES:

- CAUTION: POTENTIAL UNDERGROUND UTILITY CONFLICT. THE PROVIDED TEST HOLE DATA IS APPROXIMATE, CONTRACTOR, TO FIELD VERIFY (TEST PIT) EXACT LOCATION AND DEPTH OF EXISTING UTILITY. USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF WMATA UNDERGROUND STRUCTURES WITHOUT PRIOR APPROVAL.
- A.** CONTRACTOR SHALL MAKE A NEAT LINE SAWCUT EXISTING PAVEMENT (AT NEAREST JOINT WHERE POSSIBLE).
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 - D.** CONTRACTOR SHALL REMOVE EX. TREE/TREE STUMPS & TREE EDGING. REFER TO SHEET C091.1-C091.2 FOR ADDITIONAL INFORMATION.

DEMOLITION GENERAL NOTES:

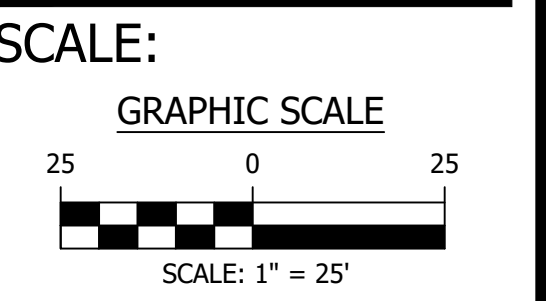
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10. ALL CONSTRUCTION AND DEMOLITION DEBRIS WITHIN THE SHOWN LIMITS INCLUDING ASPHALT MILLING AND TRAFFIC SIGNAL RENOVATION SHALL BE REMOVED AND HAULED TO WASTE UNLESS OTHERWISE NOTED.

LEGEND

	PAVEMENT CONCRETE SAWCUT
	DEMOLITION OBJECT
	ASPHALT REMOVAL
	CONCRETE APRON REMOVAL
	CURB AND GUTTER REMOVAL
	SIDEWALK REMOVAL
	CLEAR AREA REMOVAL

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 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



EROSION AND SEDIMENT CONTROL LEGEND

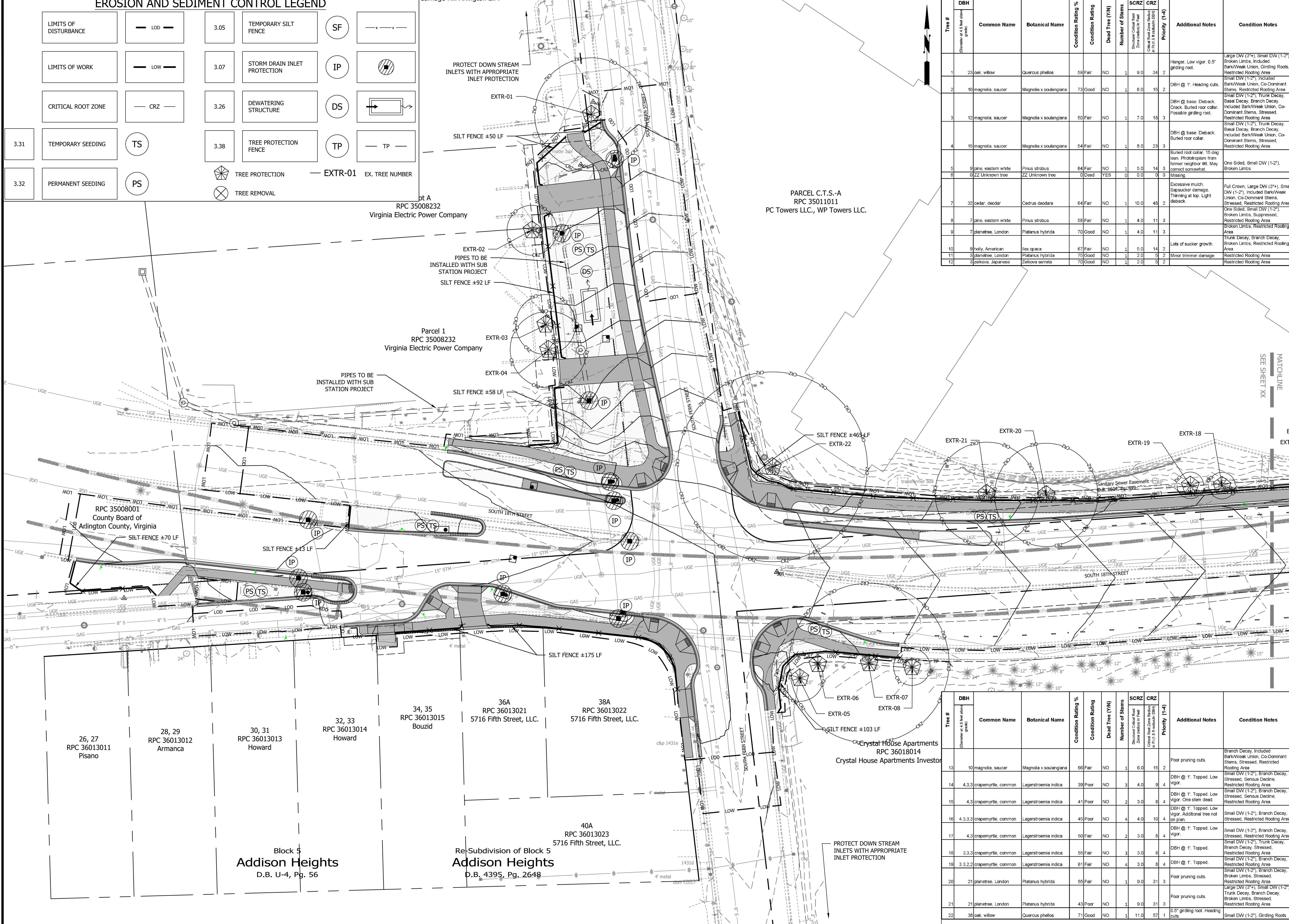
LIMITS OF DISTURBANCE	— LOD —	3.05	TEMPORARY SILT FENCE	SF	— — — —
LIMITS OF WORK	— LOW —	3.07	STORM DRAIN INLET PROTECTION	IP	
CRITICAL ROOT ZONE	— CRZ —	3.26	DEWATERING STRUCTURE	DS	
3.31	TEMPORARY SEEDING	TS	3.38	TREE PROTECTION FENCE	TP
3.32	PERMANENT SEEDING	PS		TREE PROTECTION	EXTR-01 EX. TREE NUMBER
				TREE REMOVAL	

Carrage Hill Arlington L.P.

Parcel A
RPC 35008232
Virginia Electric Power Company

Parcel 1
RPC 35008232
Virginia Electric Power Company

PARCEL C.T.S.-A
RPC 35011011
PC Towers LLC., WP Towers LLC.



Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
1	23	oak, willow	Quercus phellos	69	Fair	NO	1	9.0	34	2	Hanger, Low vigor, 0.5' girdling root.	Large DW (3"-4"); Small DW (1-2"); Broken Limbs, Included Bark/Weak Union, Girdling Roots, Restricted Rooting Area
2	10	magnolia, saucer	Magnolia x soulangeana	73	Good	NO	1	6.0	19	2	DBH @ 1'; Heading cuts.	Small DW (1-2"); Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
3	12	magnolia, saucer	Magnolia x soulangeana	50	Fair	NO	1	7.0	18	3	DBH @ base. Dieback.	Small DW (1-2"); Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
4	16	magnolia, saucer	Magnolia x soulangeana	64	Fair	NO	1	8.0	23	3	DBH @ base. Dieback. Buried root collar.	Small DW (1-2"); Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
5	9	pine, eastern white	Pinus strobus	64	Fair	NO	1	5.0	14	3	Buried root collar, 15 deg lean. Phototropism from former neighbor #6. May correct somewhat.	Small DW (1-2"); Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
6	0	ZZ Unknown tree	ZZ Unknown tree	0	Dead	YES	0	0.0	0	0	Missing	One Sided, Small DW (1-2"); Broken Limbs
7	32	cedar, deodar	Cedrus deodara	64	Fair	NO	1	10.0	48	2	Excessive mulch. Sapsucker damage. Thinning at top. Light bleed.	Full Crown, Large DW (3"-4"); Small DW (1-2"); Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
8	7	pine, eastern white	Pinus strobus	68	Fair	NO	1	4.0	11	3		Small DW (1-2"); Trunk Decay, Broken Limbs, Suppressed, Restricted Rooting Area
9	7	platanus, London	Platanus hybrida	70	Good	NO	1	4.0	11	3		Broken Limbs, Restricted Rooting Area
10	9	holly, American	Ilex opaca	67	Fair	NO	1	5.0	14	2	Lots of sucker growth.	Small DW (1-2"); Trunk Decay, Broken Limbs, Restricted Rooting Area
11	3	platanus, London	Platanus hybrida	75	Good	NO	1	2.0	5	2	Minor trimmer damage.	Restricted Rooting Area
12	3	zelkova, Japanese	Zelkova serrata	70	Good	NO	1	2.0	5	2		Restricted Rooting Area

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 040205098
3/1/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	6/17/2020
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
E&S CONTROL PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
13	10	magnolia, saucer	Magnolia x soulangeana	66	Fair	NO	1	6.0	15	2	Poor pruning cuts.	Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
14	4.3	crapemyrtle, common	Lagerstroemia indica	39	Poor	NO	3	4.0	9	4	DBH @ 1'; Topped. Low vigor.	Small DW (1-2"); Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
15	4.0	crapemyrtle, common	Lagerstroemia indica	41	Poor	NO	2	3.0	8	4	DBH @ 1'; Topped. Low vigor. One stem dead.	Small DW (1-2"); Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
16	4.3	crapemyrtle, common	Lagerstroemia indica	46	Poor	NO	4	4.0	10	4	DBH @ 1'; Topped. Low vigor. Additional tree not on plan.	Small DW (1-2"); Branch Decay, Stressed, Restricted Rooting Area
17	4.3	crapemyrtle, common	Lagerstroemia indica	50	Fair	NO	2	3.0	8	4	DBH @ 1'; Topped. Low vigor.	Small DW (1-2"); Branch Decay, Stressed, Restricted Rooting Area
18	3.3	crapemyrtle, common	Lagerstroemia indica	55	Fair	NO	3	3.0	8	4	DBH @ 1'; Topped.	Small DW (1-2"); Trunk Decay, Branch Decay, Stressed, Restricted Rooting Area
18	3.3	crapemyrtle, common	Lagerstroemia indica	61	Fair	NO	4	3.0	8	4	DBH @ 1'; Topped.	Small DW (1-2"); Trunk Decay, Branch Decay, Stressed, Restricted Rooting Area
20	21	platanus, London	Platanus hybrida	55	Fair	NO	1	9.0	31	3	Poor pruning cuts.	Small DW (1-2"); Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
21	21	platanus, London	Platanus hybrida	43	Poor	NO	1	9.0	31	3	Poor pruning cuts.	Large DW (3"-4"); Small DW (1-2"); Trunk Decay, Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
22	38	oak, willow	Quercus phellos	71	Good	NO	1	11.0	57	1	0.5' girdling root. Heading cuts.	Small DW (1-2"); Girdling Roots

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX

FILENAME: CC20-224-E_AND_S_PLAN.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD\ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

GRAPHIC SCALE

25 0 25
SCALE: 1" = 25'

SHEET C031.1

18TH STREET SOUTH

REVISED ON 11/08/2016

Block 5
Addison Heights
D.B. U-4, Pg. 56

Re-Subdivision of Block 5
Addison Heights
D.B. 4395, Pg. 2648

40A
RPC 36013023
5716 Fifth Street, LLC.

36A
RPC 36013021
5716 Fifth Street, LLC.

38A
RPC 36013022
5716 Fifth Street, LLC.

34, 35
RPC 36013015
Bouzid

32, 33
RPC 36013014
Howard

30, 31
RPC 36013013
Howard

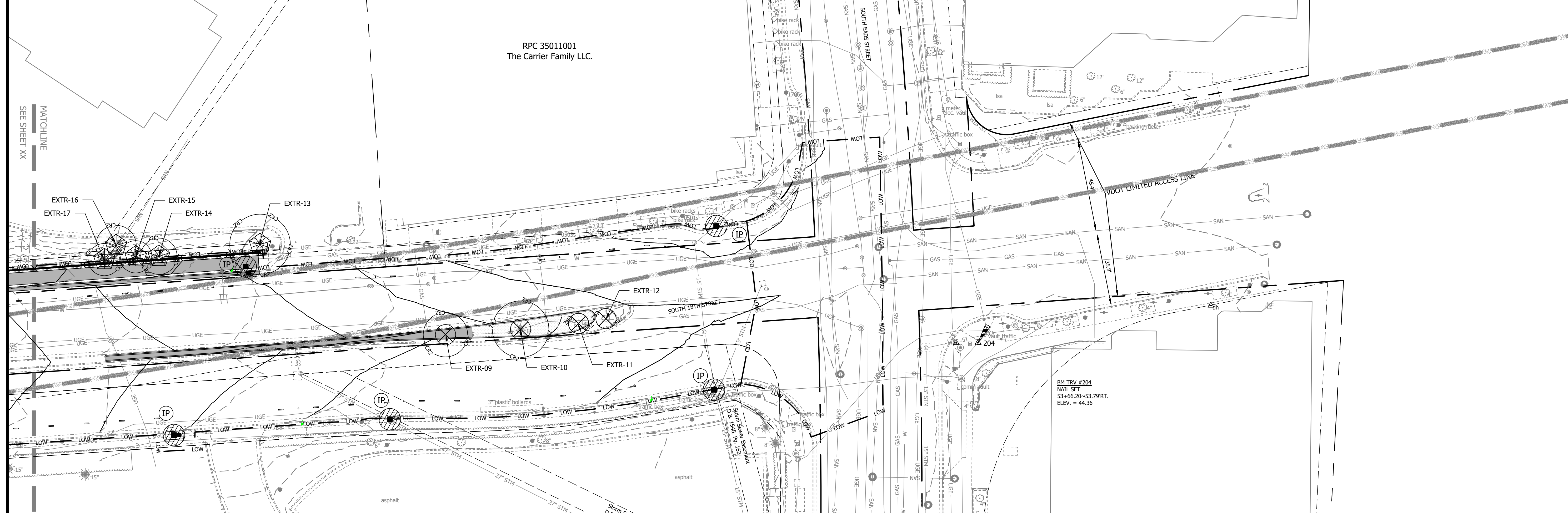
28, 29
RPC 36013012
Armanca

26, 27
RPC 36013011
Pisano

PROTECT DOWN STREAM
INLETS WITH APPROPRIATE
INLET PROTECTION

Crystal House Apartments
RPC 36018014
Crystal House Apartments Investor

Tree #	DBH (Diameter at 4.5 feet above ground)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ (Shaded Critical Root Zone Diameter in Feet)	CRZ (Critical Root Zone Diameter in Feet)	Priority (1-4)	Additional Notes	Condition Notes
1	23	oak, willow	Quercus phellos	56	Fair	NO	1	9.0	34	2	Hanger, Low vigor, 0.5' girdling root.	Large DW (3"-4"), Small DW (1-2") Broken Limbs, Included Bark/Weak Union, Girdling Roots, Restricted Rooting Area
2	10	magnolia, saucer	Magnolia x soulangeana	73	Good	NO	1	6.0	15	2	DBH @ 1': Heading cuts.	Small DW (1-2"), Included Bark/Weak Union, Co-Dominant Stems, Restricted Rooting Area
3	12	magnolia, saucer	Magnolia x soulangeana	50	Fair	NO	1	7.0	18	3	DBH @ base, Dieback Creek, Buried root collar, Possible girdling root.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
4	15	magnolia, saucer	Magnolia x soulangeana	54	Fair	NO	1	8.0	23	3	DBH @ base, Dieback Buried root collar.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
5	9	pine, eastern white	Pinus strobus	84	Fair	NO	1	5.0	14	3	Buried root collar, 15 deg lean, Photogram from former neighbor #6. May correct somewhat.	One Sided, Small DW (1-2"), Broken Limbs
6	0	ZZ Unknown tree	ZZ Unknown tree	0	Dead	YES	0	0.0	0	0	Missing	
7	32	cedar, deodar	Cedrus deodara	64	Fair	NO	1	10.0	48	2	Excessive mulch, Sapsucker damage, Thinning at top, Light dieback.	Full Crown, Large DW (3"-4"), Small DW (1-2"), Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
8	7	pine, eastern white	Pinus strobus	58	Fair	NO	1	4.0	11	3	One Sided, Small DW (1-2").	Broken Limbs, Suppressed, Restricted Rooting Area
9	7	platanus, London	Platanus hybrida	70	Good	NO	1	4.0	11	3	Broken Limbs, Restricted Rooting Area	
10	9	holly, American	Ilex opaca	67	Fair	NO	1	5.0	14	2	Lots of sucker growth.	Broken Limbs, Restricted Rooting Area
11	3	platanus, London	Platanus hybrida	75	Good	NO	1	2.0	5	2	Minor trimmer damage.	Restricted Rooting Area
12	3	zokova, Japanese	Zokova serrata	70	Good	NO	1	2.0	5	2		Restricted Rooting Area



Tree #	DBH (Diameter at 4.5 feet above ground)	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ (Shaded Critical Root Zone Diameter in Feet)	CRZ (Critical Root Zone Diameter in Feet)	Priority (1-4)	Additional Notes	Condition Notes
13	10	magnolia, saucer	Magnolia x soulangeana	66	Fair	NO	1	6.0	15	2	Poor pruning cuts.	Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
14	4.3,3	crapemyrtle, common	Lagerstroemia indica	39	Poor	NO	3	4.0	9	4	DBH @ 1': Topped, Low vigor.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
15	4.3	crapemyrtle, common	Lagerstroemia indica	41	Poor	NO	2	3.0	8	4	DBH @ 1': Topped, Low vigor, One stem dead.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
16	4.3,3,3	crapemyrtle, common	Lagerstroemia indica	45	Poor	NO	4	4.0	10	4	DBH @ 1': Topped, Low vigor, Additional tree not on plan.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
17	4.3	crapemyrtle, common	Lagerstroemia indica	50	Fair	NO	2	3.0	8	4	DBH @ 1': Topped, Low vigor.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
18	3.3,3	crapemyrtle, common	Lagerstroemia indica	55	Fair	NO	3	3.0	8	4	DBH @ 1': Topped.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
19	3.3,2,2	crapemyrtle, common	Lagerstroemia indica	61	Fair	NO	4	3.0	8	4	DBH @ 1': Topped.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
20	21	platanus, London	Platanus hybrida	55	Fair	NO	1	9.0	31	3	Poor pruning cuts.	Small DW (1-2"), Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
21	21	platanus, London	Platanus hybrida	43	Poor	NO	1	9.0	31	3	Poor pruning cuts.	Large DW (3"-4"), Small DW (1-2"), Trunk Decay, Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
22	38	oak, willow	Quercus phellos	71	Good	NO	1	11.0	57	1	0.5' girdling root, Heading cuts.	Small DW (1-2"), Girdling Roots

EROSION AND SEDIMENT CONTROL LEGEND

LIMITS OF DISTURBANCE	LOD	3.05	TEMPORARY SILT FENCE	SF		
LIMITS OF WORK	LOW	3.07	STORM DRAIN INLET PROTECTION	IP		
CRITICAL ROOT ZONE	CRZ	3.26	DEWATERING STRUCTURE	DS		
3.31	TEMPORARY SEEDING	TS	3.38	TREE PROTECTION FENCE	TP	
3.32	PERMANENT SEEDING	PS				

TREE PROTECTION
 TREE REMOVAL
 EXTR-01 EX. TREE NUMBER

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 040205098
3/1/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
	6/18/2020
	6.26.20
	06.29.20
	6/24/20
	6/17/2020

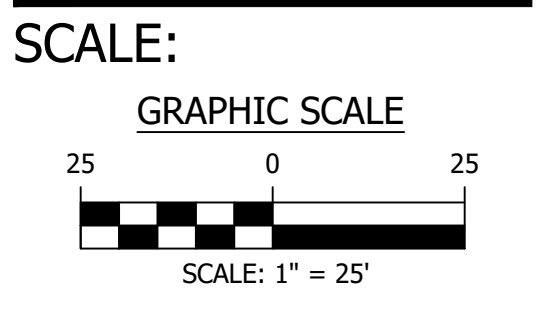
REVISIONS	DATE

**18TH STREET SOUTH
E&S CONTROL PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST**

CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME: CC20-224-E_AND_S_PLAN.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



REVISED ON 11/08/2016

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

18TH STREET SOUTH IMPROVEMENTS PROPOSED BETWEEN SOUTH EADS STREET AND SOUTH FERN STREET, ARLINGTON COUNTY, VA. THE PROJECT INCLUDES THE STREET REALIGNMENT OF CURBS, BIKE LANE, PARKING, MEDIANS, AND TRAVEL LANES.

EXISTING SITE CONDITIONS:

THE PROJECT SITE IS A BUSINESS AREA AND CONSISTS MOSTLY OF IMPERVIOUS AREA (ASPHALT ROADWAY AND CONCRETE SIDEWALK). SUFFICIENT STORM DRAINAGE SYSTEM IS IN PLACE AND THERE IS NO KNOWN RECORD OF FLOODING IN THE AREA.

ADJACENT PROPERTIES:

EAST - THE AREA TO THE EAST OF THE PROJECT CONSISTS OF SOUTH EADS STREET.
WEST - THE AREA TO THE WEST OF THE PROJECT CONSISTS OF THE CONTINUATION OF 18TH STREET SOUTH BEYOND FERN STREET.
NORTH - MULTI-STORY RESIDENTIAL HOUSING AND AN ELECTRICAL SUB STATION.
SOUTH - MULTI-STORY RESIDENTIAL HOUSING AND SINGLE FAMILY HOUSING.

OFF-SITE AREAS:

THE EXTENT OF OFFSITE CONSTRUCTION IS LIMITED TO CONNECTING TO PROPOSED IMPROVEMENTS TO THE EXISTING STREETS, AND CONNECTING PROPOSED UTILITIES TO EXISTING UTILITIES.

CRITICAL AREAS:

AS THE PROJECT AREA IS WITHIN THE EXISTING ROADWAY, THERE ARE NO EXISTING EROSION PROBLEMS IDENTIFIED.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

TOTAL LIMITS OF WORK.....= 3.1003 ACRES (135,050 SF)
TOTAL LAND DISTURBANCE.....= 2.7221 ACRES (118,576 SF)
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 2.5251 ACRES (109,993 SF)
POST-IMPROVEMENT IMPERVIOUS AREA.....= 2.3741 ACRES (103,415 SF)
INCREASED IMPERVIOUS AREA.....= -0.1510 ACRES (-6,578 SF)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE

SOIL #:	SOIL NAME:	HYDROLOGIC GROUP:	ERODABILITY:
12	URBAN LAND-UDORHTHENTS	VARIABLES (ASSUMED AS GROUP D)	N/A

URBAN LAND-UDORHTHENTS COMPLEX, 2% TO 15% SLOPES. THIS MAPPING UNIT CONSISTS OF AREAS WHERE MORE THAN 85% OF THE SURFACE IS URBAN LAND, COVERED BY BUILDINGS, ASPHALT, CONCRETE, OR OTHER IMPERVIOUS MATERIALS. THE OTHER 15% CONSISTS OF AREAS OF DEEP TO VERY DEEP, NEARLY LEVEL TO MODERATELY SLOPING, WELL AND MODERATELY WELL DRAINED SOILS. THE URBAN LAND AND UDORHTHENTS ARE SO INTERMINGLED IT WAS NOT PRACTICAL TO MAP THEM SEPARATELY. THIS UNIT IS ABOUT 85% URBAN LAND, 10% UDORHTHENTS, AND 5% OTHER SOILS.

THE UDORHTHENTS CONSIST OF MATERIAL THAT HAS BEEN GRADED, CUT, FILLED, OR OTHERWISE DISTURBED DURING URBANIZATION. THE DISTURBED MATERIAL IS LOAMY AND GENERALLY REFLECTS THE SOILS IN THE ADJACENT AREA.

WATERSHED INFORMATION:

ROACHES RUN WATERSHED - 461.00 AC
VIRGINIA HIGHLAND WATERSHED - 309.00 AC
REFER TO SHEET C081.1 FOR OUTFALL INFORMATION

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE. FLOOD ZONE X PER FIRM MAP 51013C0081C FFF. DATE 8/19/2013.

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

- PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED). MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
- INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PLAN.
- PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS SILT FENCE (SF) AND INLET PROTECTION (IP) FOR EXISTING STRUCTURES AS PER THE PLAN.
- SEED AND MULCH ALL EARTHEN CONTROLS.
- CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
- CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

- BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
- THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE. THE MINIMUM STANDARDS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

1. STRUCTURAL PRACTICES

- TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
 - A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.
 - ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
 - THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- SILT FENCE - VESCH 3.05
 - SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
 - SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
 - SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
- STORM DRAIN INLET PROTECTION - VESCH 3.07

- ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- d. DEWATERING STRUCTURE - VESCH 3.26
- SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
 - THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
 - THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.
- e. TREE PROTECTION - VESCH 3.38
- ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
 - SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENEED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENEED.
 - REPAIR OF DAMAGE:
 - ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
 - WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
 - DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
 - TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENEED BARK BACK INTO THE UNDAIMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
 - ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
 - CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
 - FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
 - TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
 - FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
 - FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
 - FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

- TEMPORARY SEEDING - VESCH 3.31
 - ALL DENUDEED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
 - SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
- PERMANENT SEEDING - VESCH 3.32
 - SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
- SODDING - VESCH 3.33
 - SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

- NO DISTURBED AREA WILL REMAIN DENUDEED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
- ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
- AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDEED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

- THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
- ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

1. PERIMETER CONTROLS

- SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
- WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
- SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
- HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.

2. EXPOSED SLOPES AND SOIL

- EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
- CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
- EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SOLE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
- SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.

3. STOCKPILES

- STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).

4. INLET PROTECTION

- INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.

IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S M54 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
 - WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S M54 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK
- PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDEED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

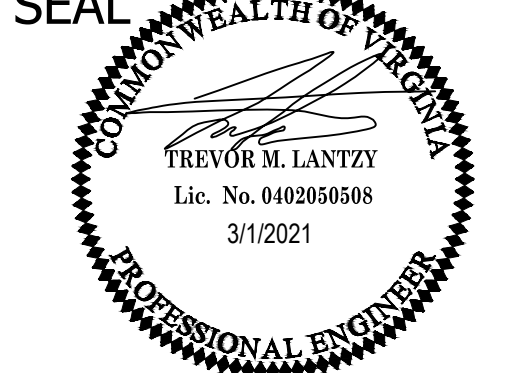
- THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATERWAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDEED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL



APPROVALS	DATE
<i>Camuel</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Debra</i>	
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
E&S CONTROL NOTES
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME:
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PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

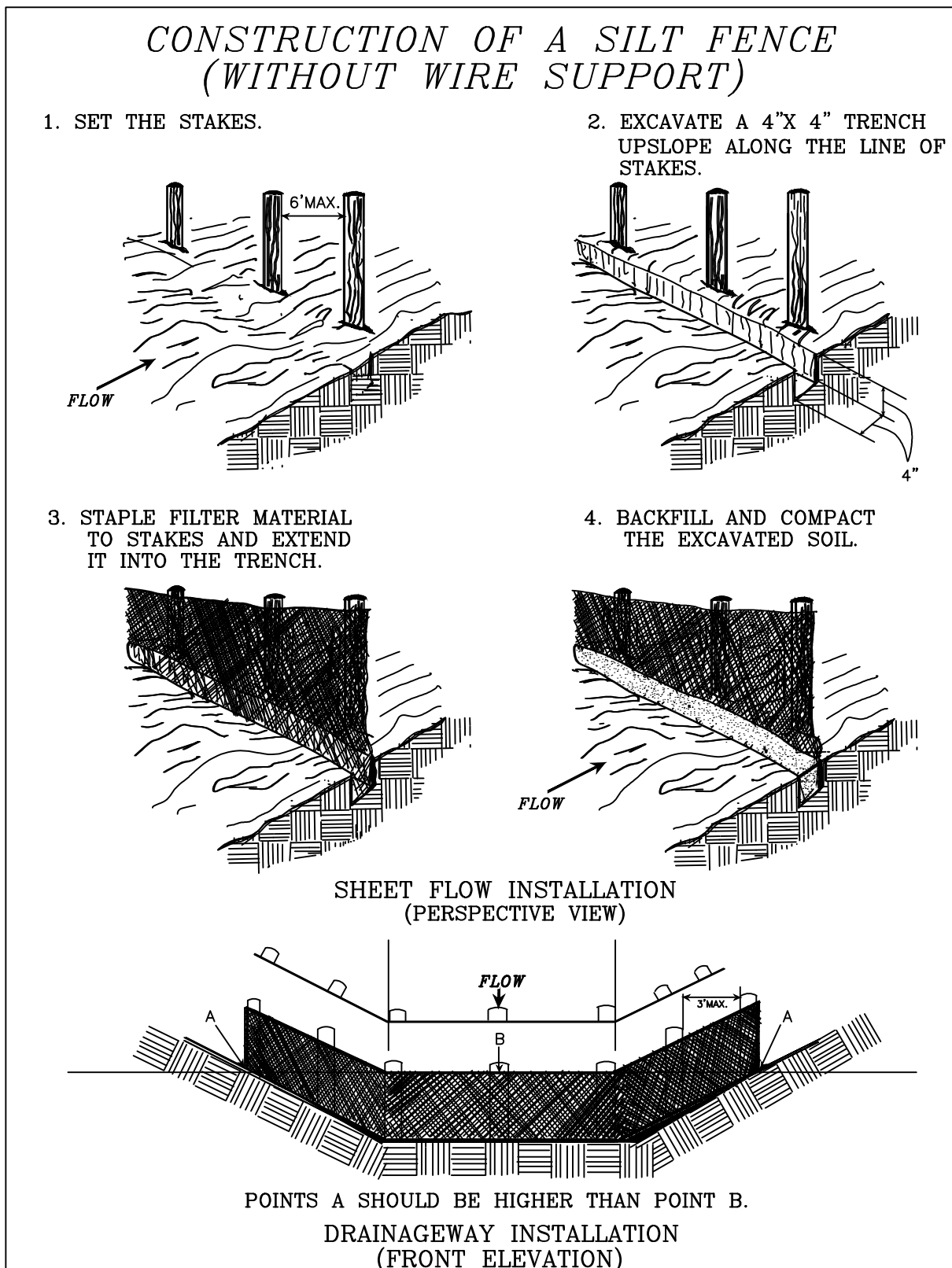
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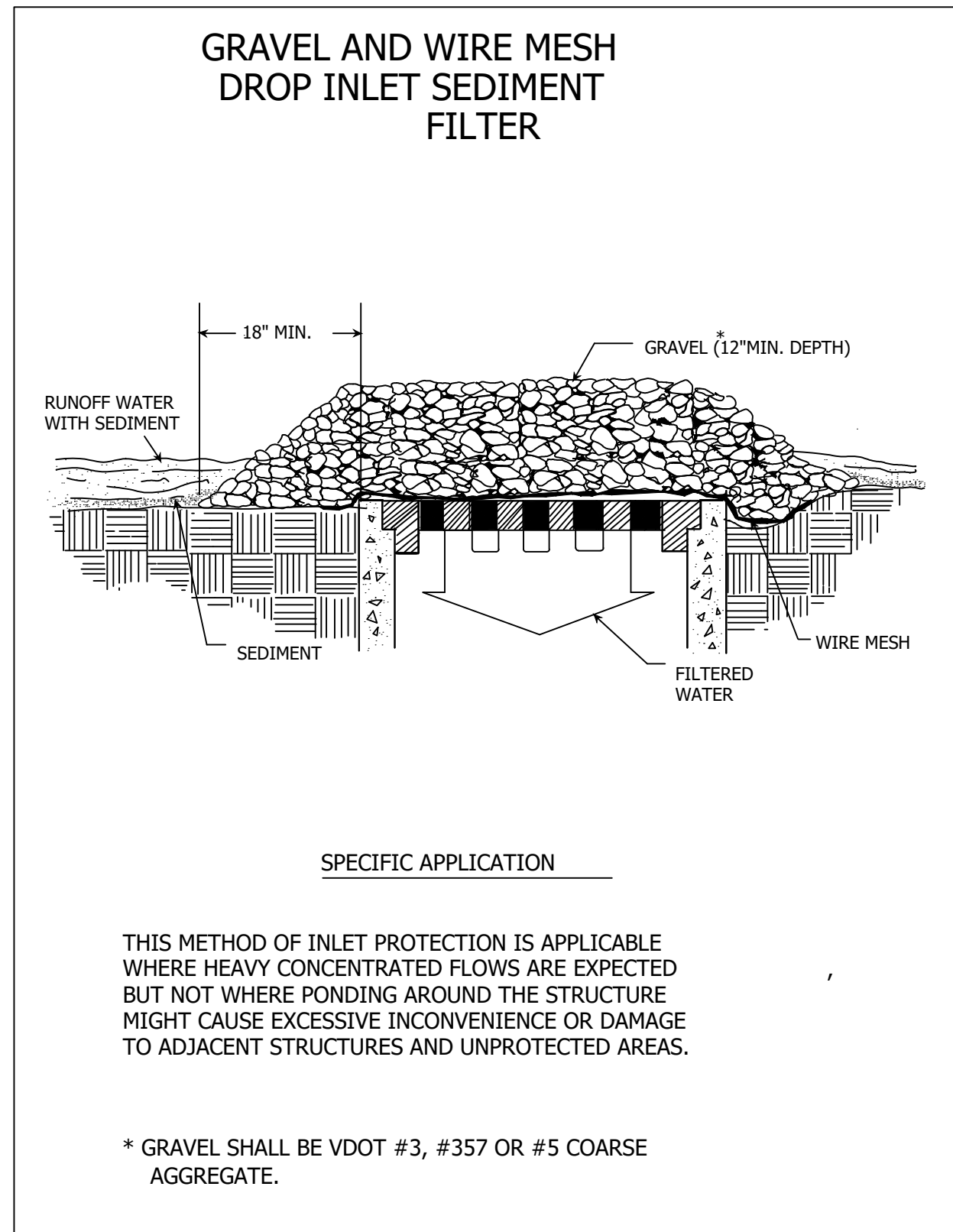
18TH STREET SOUTH

REVISED ON 11/08/2016

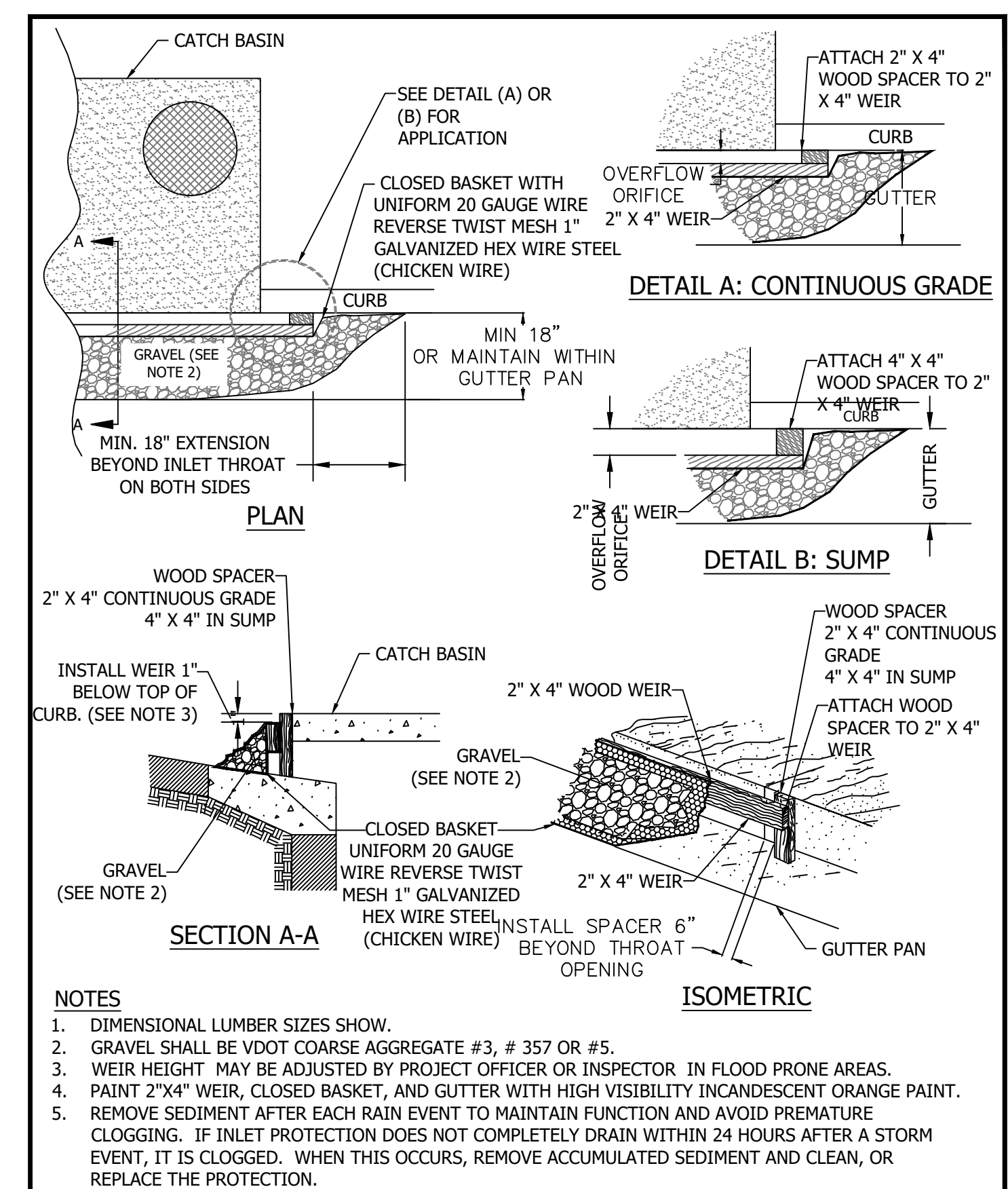
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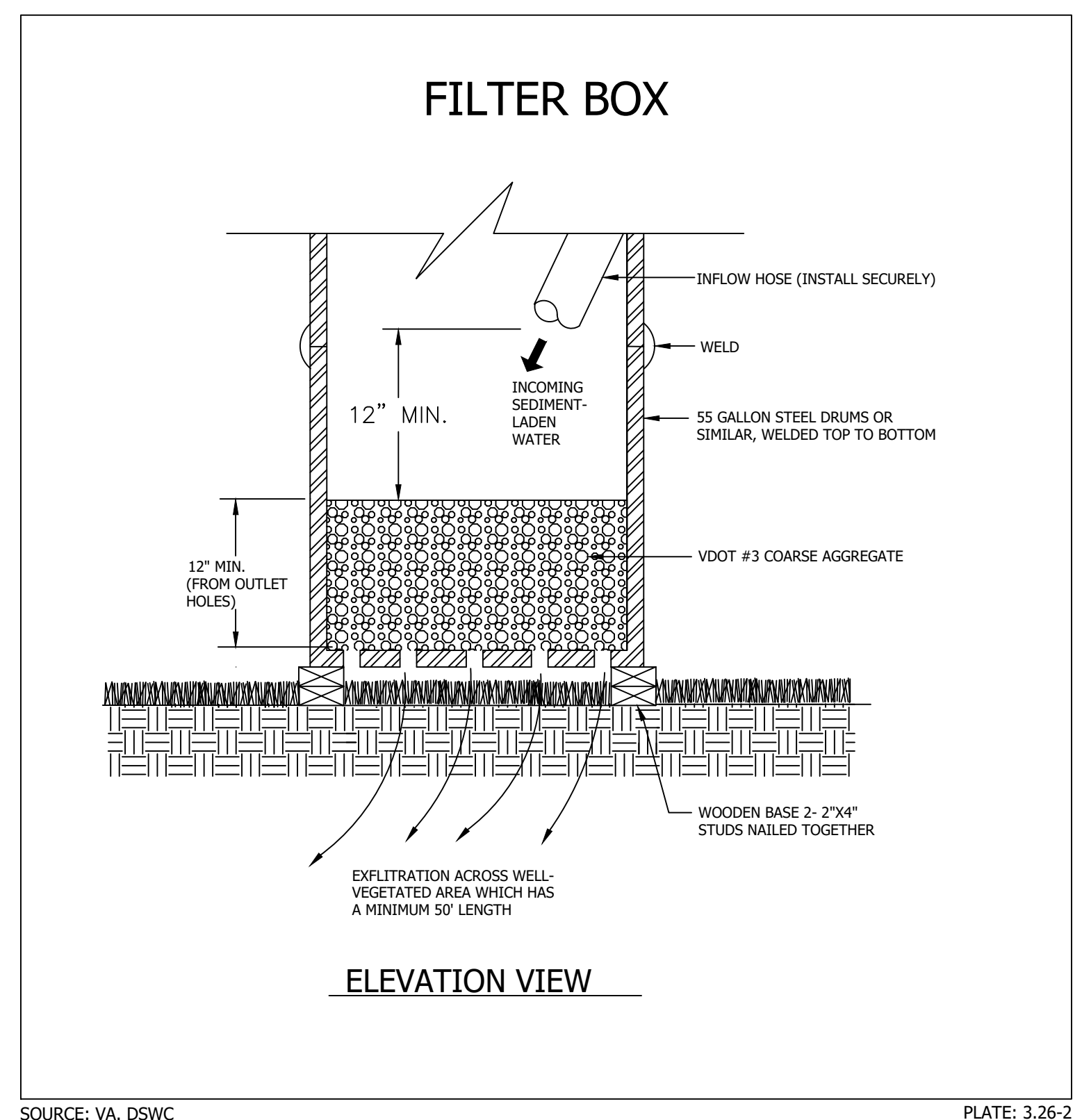
SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, VA DSWC Sherwood and Wyatt PLATE 3.05-2



SOURCE: VA. DSWC PLATE 3.07-2



CURB INLET PROTECTION		REVISION & DATE
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES		DRAWING NO. 3.07-7 (ACG)



SOURCE: VA. DSWC PLATE 3.26-2

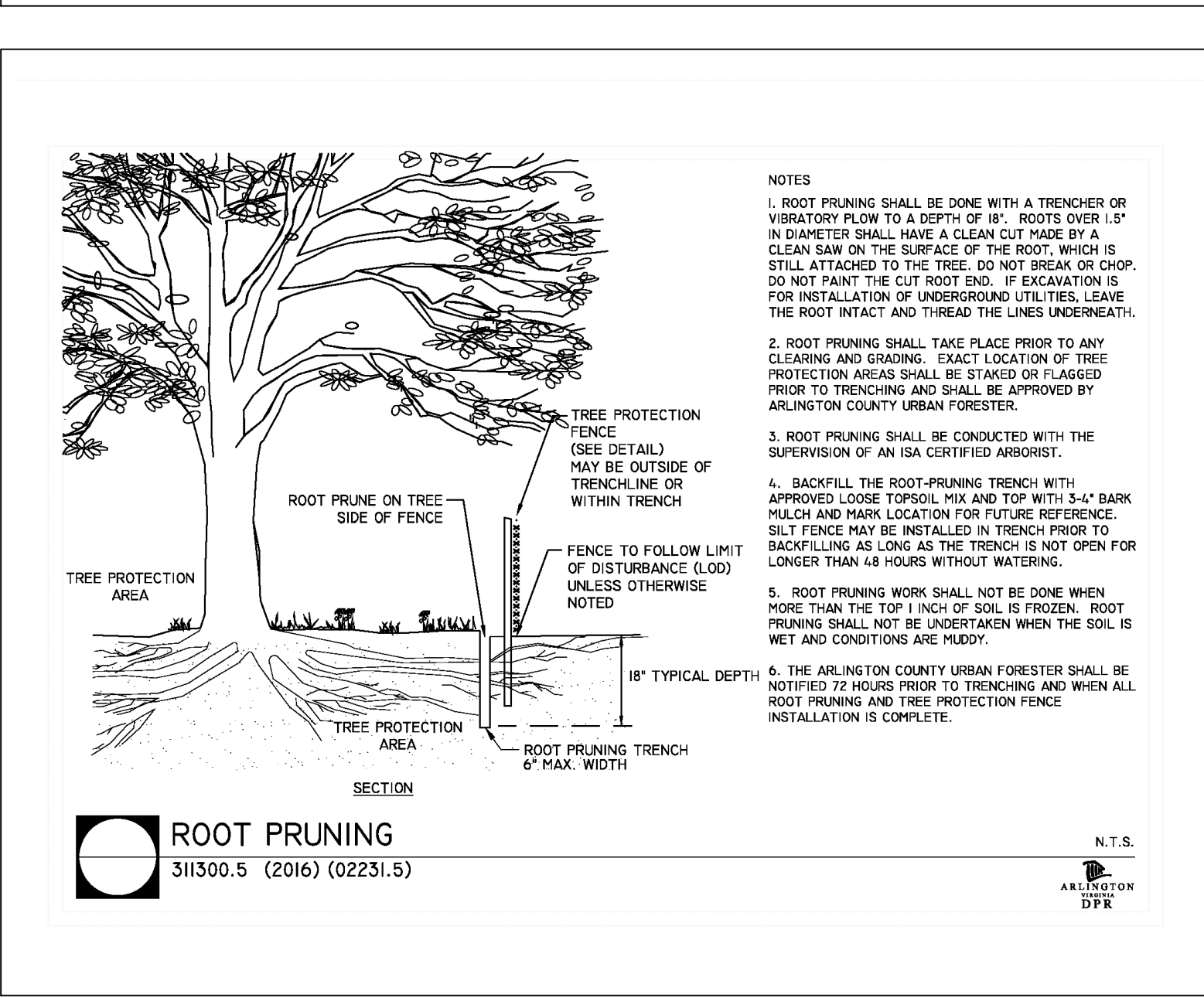
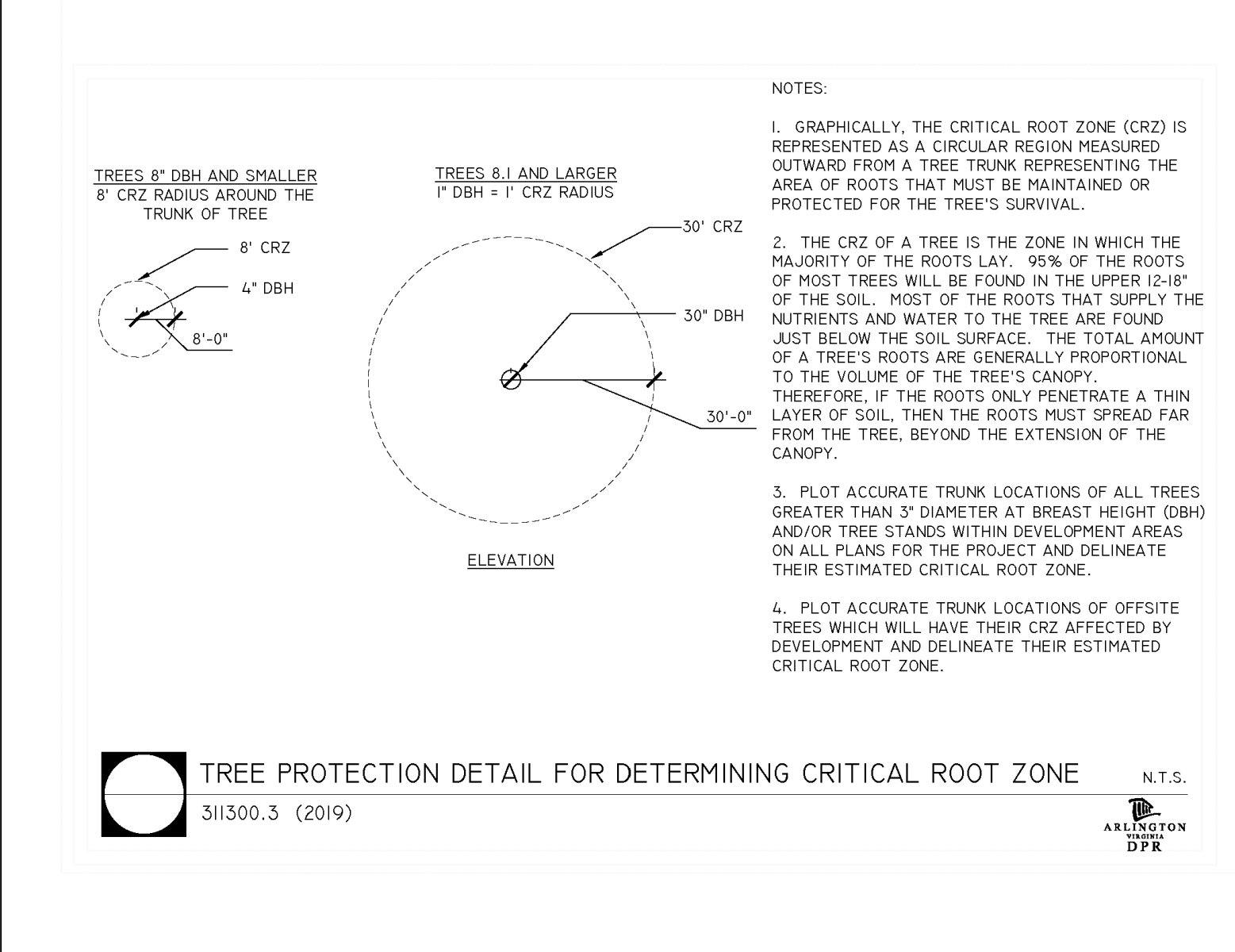


TABLE 3.32-D (Revised June 2003) PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

LAND USE	SEED ¹	SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ³		95-100%
	Perennial Ryegrass Kentucky Bluegrass ¹		0-5%
	TOTAL: 175-200 lbs		
High-Maintenance Lawn	Tall Fescue ³		TOTAL: 200-250 lbs
General Slope (3:1 or less)	Tall Fescue ³		128 lbs
	Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ²		2 lbs 20 lbs
	TOTAL: 150 lbs		
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ³		108 lbs
	Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ² Crownvetch ²		2 lbs 20 lbs 20 lbs
	TOTAL: 150 lbs		

NOTE:

- When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (V CIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by V CIA. A current turfgrass variety list is available at the local County Extension office or through V CIA at 804-746-8884 or at <http://sudan.ces.vt.edu/html/TurfPublicationsPublications2.html>
- Use seasonal nurse crop in accordance with seeding dates as stated below.

February 15 th - April	Annual Ryegrass
May 1 st - August 15 th	Foxtail Millet
August 16 th - October	Annual Ryegrass
November - February 15 th	Winter Ryegrass
- Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs/acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40

FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 500 lbs./acre (or 12 lbs./1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)

NOTE:

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in *Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites* at <http://www.cdr.state.va.us/aww/4.htm#pubs>

TABLE 3.31-B (Revised June 2003) TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS

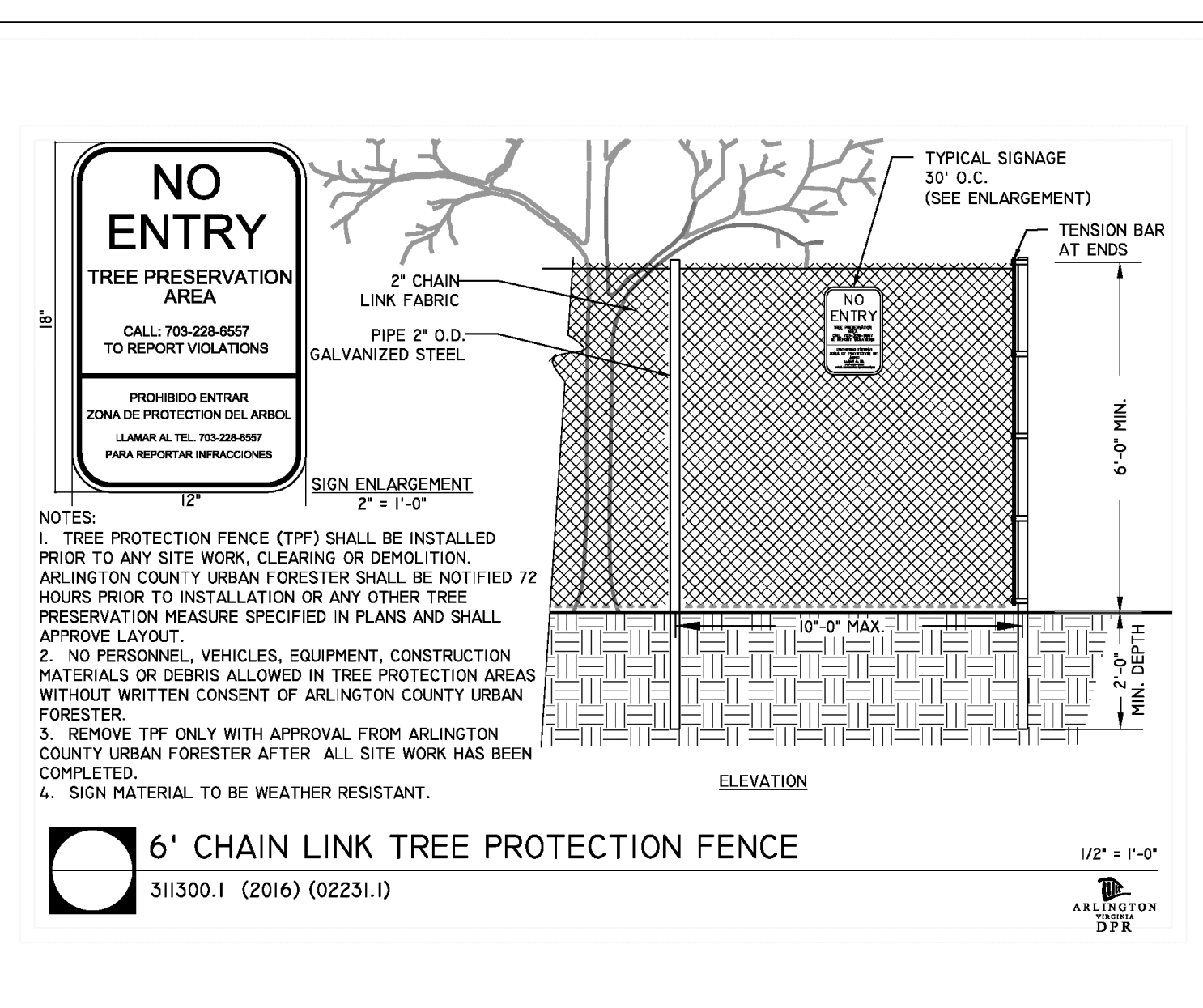
APPLICATION DATES	SEED	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Ryegrass (Secale cereale)		50-100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)		60-100 (lbs/acre)
May 1 - Aug. 31	German Millet		50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 fertilizer at a rate of 450 lbs./acre (or 10 lbs./1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs./1,000 sq. ft.)

NOTE:

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in *Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites* at <http://www.cdr.state.va.us/aww/4.htm#pubs>



ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTY
Lic. No. 0402050508
3/1/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
<i>Kamell</i>	6/18/2020
<i>Kamal N. Taktak</i>	6.26.20
<i>Debra</i>	06.29.20
<i>Dennis W. Leach</i>	6/24/20
<i>Ariel Yang</i>	6/17/2020

REVISIONS	DATE

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX

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PATH: Q:\DATA\CC20\DESIGN\CD_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

N/A

SHEET C032.2

18TH STREET SOUTH

REVISED ON 11/08/2016



APPROVALS	DATE
<i>Trevor M. Lantz</i> QUALITY CONTROL ENGINEER	6/18/2020
<i>Kamal N. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	6.26.20
<i>John P. ...</i> WATER, SEWER, STREETS BUREAU CHIEF	06.29.20
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	6/24/20
<i>Ariel Yang</i> PROJECT MANAGER	6/17/2020

REVISIONS DATE

REVISIONS	DATE

18TH STREET SOUTH
 STORMWATER PPP
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
 FILENAME: CC20-220-E_AND_S_NOTES_SWPPP.DWG
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP

SCALE:

N/A

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

SWPPP Document Type	Located Onsite & Available for Review?
<input checked="" type="checkbox"/> Dewatering (Std. & Spec. 3.26)	<input type="checkbox"/> Yes <input type="checkbox"/> NA
<input type="checkbox"/> Turbidity Curian (Std. & Spec. 3.27)	<input type="checkbox"/> Yes <input type="checkbox"/> NA
<input checked="" type="checkbox"/> Tree Protection (Arlington County Std. & Spec.)	<input type="checkbox"/> Yes <input type="checkbox"/> NA
<input type="checkbox"/> Others (describe)	<input type="checkbox"/> Yes <input type="checkbox"/> NA

Pre-Storm Erosion and Sediment Control Checklist

- The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.
- Perimeter controls (silt fences, hay bales, stone berms) used to prevent sediment from leaving the site shall be checked for undermining, holes, or deterioration and repaired/replaced if needed.
- Sediment that has accumulated against perimeter controls shall be removed if the depth exceeds more than 1/2 of the silt fence height.
- Exposed soil or slopes shall be covered with straw, traps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.
- Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or berms should be placed along the perimeter of the stock pile (downhill side). Stockpiled materials should not obstruct flow along the curb line.
- Inlet protection controls shall be inspected to ensure they are installed per approved ESC plan, are functioning properly, and maintained as needed.

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

- 1.0 SWPPP Documents Located Onsite & Available for Review
- | SWPPP Document Type | Located Onsite & Available for Review? |
|--|---|
| Registration Statement | <input type="checkbox"/> Yes <input type="checkbox"/> NA |
| Notice of Coverage Letter | <input type="checkbox"/> Yes <input type="checkbox"/> NA |
| Construction General Permit | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> NA |
| Pollution Prevention Plan | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> NA |
| Erosion & Sediment Control Plan (or agreement in lieu of Stormwater Management Plan) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> NA |

2.0 Authorized Non-Stormwater Discharges

- | External buildings wash down | Uncontaminated foundation or footing drains | Uncontaminated excavation dewatering | Landscape irrigation | Others (describe) |
|--|---|--|--|--|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |

3.0 Pollution Prevention Awareness

Employees will be given a "walk through" of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices identified in Sections 4.0 and 5.0 of this SWPPP that are applicable to their assigned job duties. A refresher meeting and "walk through" will be conducted on an as needed basis.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
<input type="checkbox"/>	Construction Entrance (Std. & Spec. 3.02)			
<input checked="" type="checkbox"/>	Silt Fence (Std. & Spec. 3.05)			
<input type="checkbox"/>	Culvert Inlet Protection (Std. & Spec. 3.08)			
<input type="checkbox"/>	Outlet Protection (Std. & Spec. 3.18)		NA	
<input checked="" type="checkbox"/>	Temporary Seeding (Std. & Spec. 3.31)	As required by 3.31	NA	Construction Activity Operator (See Cover Page of this SWPPP)
<input checked="" type="checkbox"/>	Permanent Seeding (Std. & Spec. 3.32)		NA	
<input type="checkbox"/>	Sodding (Std. & Spec. 3.33)		NA	
<input type="checkbox"/>	Mulching (Std. & Spec. 3.35)		NA	
<input type="checkbox"/>	Safety Fence (Std. & Spec. 3.01)			
<input checked="" type="checkbox"/>	Storm Drain Inlet Protection (Std. & Spec. 3.09)			

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COVER PAGE

For Construction Activities At:
 CC20 - 18th Street South
 Between S Fern St and S Eads St
 Arlington, VA 22202
 Latitude: 38.8572 N (decimal degrees)
 Longitude: -77.0545 W (decimal degrees)

Construction Activity Operator:
 Insert Company/Organization Name
 Insert Name
 Insert Address
 Insert City, State, Zip Code
 Insert Telephone Number
 Insert Email Address
 Insert 24-hour Emergency Contact

SWPPP Preparation Date:
 January 21, 2019

CERTIFICATION

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name: _____
 Title: _____
 Signature: _____
 Date: _____

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

RESPONSIBLE LAND DISTURBER LETTER FOR PERMITTING PURPOSES ONLY. CONTRACTOR TO SIGN AND SUPPLY ONE PRIOR TO THE START OF CONSTRUCTION.

_____ date

Qunqian Li, P.E.
 ESC Program Administrator
 Department of Environmental Services
 2100 Clarendon Boulevard, Suite 813
 Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
 CC20 - 18th Street South
 street address
 between S Fern St. & S Eads St.
 lot, block, section subdivision
 LDA19235
 permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

- Reviewing the erosion and sedimentation (E&S) plan for the project.
- Walking the site prior to construction to identify critical areas.
- Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
- Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
- Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
- Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
- Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-0596 with questions about this plan or my execution of the duties of the Responsible Land Disturber.

Sincerely,
Trevor Lantz
 Trevor Lantz, P.E.
 name printed
 P.E.# 0402050408
 professional registration (type and number)

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

8.0 Self Inspections Report & Corrective Action Log (make additional copies as necessary)

Qualified Inspector

Company/Organization: _____
 Name: _____
 Telephone Number: _____
 Qualifications: _____

Inspection Schedule

Discharges to impaired waters, surface waters within a TMDL watershed, or exceptional waters:

Once every 4 business days.

Inspection Date: _____

Type of Inspection: Regular Pre-storm event During storm event Post-storm event

Phase of construction: Pre-Con DEMO Clearing Building Grading Final Stabilization

Is a copy of the SWPPP available on site? Yes No Is the SWPPP complete? Yes No

Are there any discharges at the time of this inspection? Yes No If yes, describe: _____

Have any discharge occurred since the last inspection? Yes No If yes, describe: _____

Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed; Responsible Party & Notes	Date Corrective Action Taken
Are all construction exits preventing sediment from being tracked onto the adjacent streets?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are perimeter controls and sediment barriers adequately installed and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are storm drain inlets properly protected? (on-site and adjacent)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

- Pollution Prevention Practices:
- Clearing, grading, excavating and un-stabilized areas - Utilize erosion and sediment controls to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.
 - Paving operations - Cover storm drain inlets during paving operations and utilize pollution prevention materials such as drip pans and absorbent/tail dry for all paving machines to limit leaks and spills of paving materials and fluids.
 - Concrete washout and cement waste - Direct concrete wash water into a leak-proof container or leak-proof settling basin that is designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes.
 - Structure construction, stucco, painting and cleaning - Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix paint indoors, in a containment area or in a flat unpaved area. Prevent the discharge of soaps, solvents, detergents and wash water from construction materials, including the clean-up of stucco paint, form release oils and curing compounds.
 - Dewatering operations - Construction site dewatering from building footings or other sources may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.
 - Material delivery and storage - Designate areas of the construction site for material delivery and storage. Place near construction entrances, away from waterways, and avoid transport near drainage paths or waterways.
 - Material use during building process - Use materials only where and when needed to complete the construction activity. Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals.
 - Solid waste disposal - Designate a waste collection area on the construction site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterway. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible. Schedule waste collection to prevent the containers from overflowing.
 - Sanitary waste - Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities. Locate sanitary facilities in a convenient location away from waterways.
 - Landscaping operations - Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Apply nutrients in accordance with manufacturer's recommendations and not during rainfall events.
 - Others - If applicable, describe your Pollution Prevention Practice.

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
<input type="checkbox"/>	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
<input type="checkbox"/>	Rooftop Disconnection		
<input type="checkbox"/>	Sheet flow to Vegetated Filter (1 or 2)		
<input type="checkbox"/>	Grass Channel		
<input type="checkbox"/>	Rainwater Harvesting		Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Permeable Pavement (1 or 2)		

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

- 7.0 Spill Prevention & Response
- Most spills can be cleaned up following manufacturer specifications. Absorbent/dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at this location.
- 1st Priority: Protect all people
 2nd Priority: Protect equipment and property
 3rd Priority: Protect the environment
- Check for hazards (flammable material, noxious fumes, cause of spill) - If flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
 - Make sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
 - Stop the spill source.
 - Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
 - If possible, stop spill from entering drains (use absorbent or other material as necessary).
 - Stop spill from spreading (use absorbent or other material).
 - Stop spill from entering a storm sewer; contact locally's storm water department.
 - Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
 - Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Organization	Phone Number
Normal Working Hours	
DEQ Northern Regional Office	703-583-3800
Nights, Holidays & Weekends	
VA Dept. of Emergency Management 24 Hour Reporting Service	804-674-2400
Local Contacts	
Arlington County Fire & Police	703-558-2222
DES Water, Sewer, Streets 24-Hour Emergency	703-228-6555
Washington Gas Emergency	703-750-1400

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants										Responsible Party	
		Sediment	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice			
Clearing, grading, excavating, and un-stabilized areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X										(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X				X	X					(2)	
Concrete washout and cement waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		X	X								(3)	
Structure construction, stucco, painting, and cleaning	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X	X		(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X							X		(5)	
Material delivery and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X		(6)	
Material use during building process	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X	X	X	X	X	X	X		(7)	
Solid waste disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									X	X	(8)	
Sanitary waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X				X				(9)	
Landscaping operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X		X				X	X		(10)	
Others (describe)	<input type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X	X	X	X	X	X	X	(11)	

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

Best Management Practices (BMPs)	In Compliance with SWPPP?	Corrective Action Needed: Responsible Party & Notes	Date Corrective Action Taken
Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are washout facilities (e.g., concrete, paint, sludge) available, clearly marked and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Is trash/litter from work areas collected and contained in dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are non-stormwater discharges (e.g., wash water, de-watering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are natural resources (e.g., streams, wetlands, mature trees) area protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are vehicles and equipment fueling, cleaning and maintenance areas free of spills, leaks, or other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		
Are disturbed areas stabilized within 7 days, if areas denuded will remain undisturbed for 14 days?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA		

Non - Compliance
Describe any incidents of non-compliance not described above (use another page is necessary)

Certification

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator or Assigned Qualified Personnel Name: _____
Signature: _____
Date: _____

STORMWATER POLLUTION PREVENTION PLAN
CC20 - 18th Street South

9.0 Grading & Stabilization Activities Log

Date Grading Activity Initiated	Description of the Grading Activity (including location)	Date Grading Activity Ceased	Date Stabilization Measures Initiated	Description of the Stabilization Measure (including location)

10.0 SWPPP Modification & Update Log

Modification Date	Description of the Modification / Update (name & title that request the modification)	Modification Prepared By (name & title)

INSTRUCTIONS FOR COMPLETING the SINGLE FAMILY RESIDENCE, COMMON PLAN OF DEVELOPMENT or SALE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

General
A Stormwater Pollution Prevention Plan (SWPPP) must be developed prior to obtaining locality (e.g., City, County, Town) authorization to commence land disturbance.

SWPPP Cover Page
For a construction activity, enter the project's name and physical address (if available), including city (or town), state and zip code. Enter the latitude and longitude in decimal degrees of the construction activity.
Enter the Construction Activity Operator's company/organization name, the Operator's name and mailing address, including city (or town), state, and zip code, telephone number, email address (if available), and a 24-hour emergency contact.
Enter the SWPPP preparation date.

The Construction Activity Operator identified on the cover page of the SWPPP is responsible for certifying the information contained therein. Please sign this certification in blue. Please note that state statutes require the SWPPP to be signed as follows:
(1) For a corporation, by a responsible corporate officer;
(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;
(3) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official.

Section 1.0 SWPPP Documents Located Onsite & Available for Review
Utilize the provided checklist to ensure that the required SWPPP documents are located onsite and are available for review, if applicable.

Section 2.0 Authorized Non-Stormwater Discharges
Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Section 3.0 Pollution Prevention Awareness
Provide employees with a "walk through" of the project site and identify areas of possible pollution, erosion and sediment controls, and pollution prevention practices which are applicable to their assigned job duties. Conduct refresher meetings and perform additional "walk throughs" on an as needed basis.

Section 4.0 Erosion & Sediment Controls
Identify the erosion and sediment controls to be implemented at the project site. For each erosion and sediment control, enter the estimated installation date and estimated removal date. If an unlisted erosion and sediment control will be implemented at the project site, provide the applicable information here.

Section 5.0 Potential Sources of Pollution & Pollution Prevention Practices
Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutants, and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Section 6.0 Stormwater Management Controls
Identify the stormwater management controls to be implemented at the project site, if applicable. For each stormwater management control, enter the estimated installation date. If an unlisted stormwater management control will be implemented at the project site, provide the applicable information here.

Section 7.0 Spill Prevention & Response
Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Section 8.0 Inspections & Corrective Action Log
Enter the qualified inspector's company/organization name, the inspector's name, telephone number, and qualifications. Select the applicable inspection type, enter the construction activity inspection date, and enter the date and rainfall amount of the last measurable storm event (if applicable). Identify if the implemented best management practices are in compliance with the SWPPP. Enter corrective actions needed, the party responsible for implementing the corrective actions, and the date corrective actions were taken, if applicable. Make additional copies of the inspection and corrective action log as necessary.

Section 9.0 Grading & Stabilization Activities Log
Enter the date grading activities were initiated, a description of the grading activities including location, the date grading activities ceased, the date stabilization measures were initiated, and a description of the stabilization measures including location.

Section 10.0 SWPPP Modification & Update Log
Enter the SWPPP modification date, description of the SWPPP modification/update, and the name and title of the SWPPP modification preparer, if applicable.



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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APPROVALS	DATE
<i>Kenneth</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis M. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
STORMWATER PPP
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

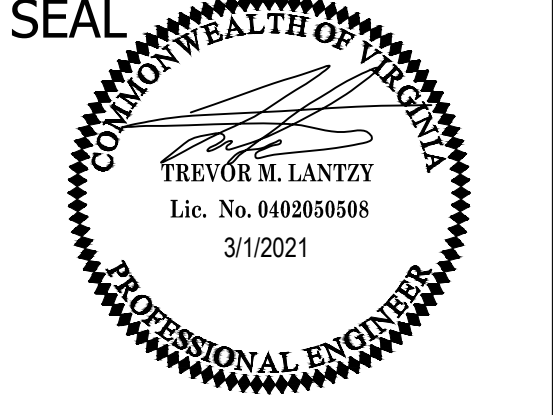
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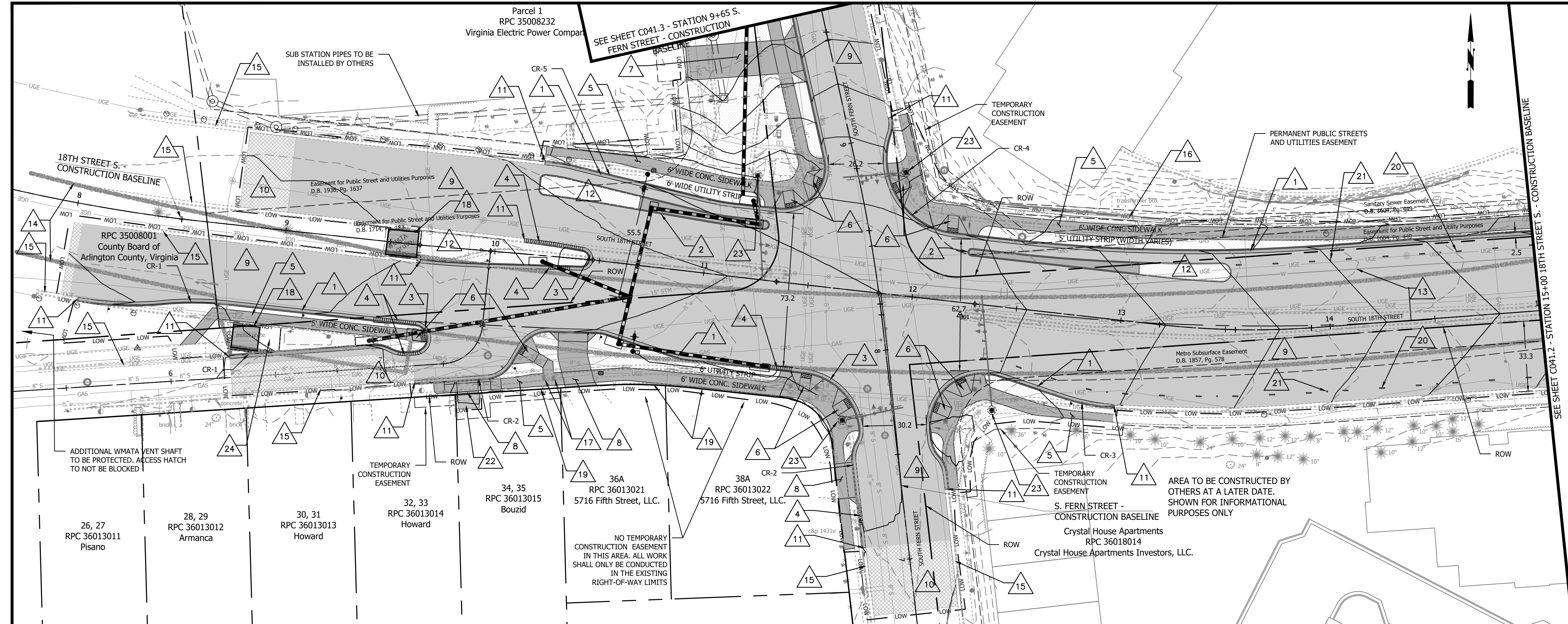
SHEET C035.2

18TH STREET SOUTH



APPROVALS	DATE
<i>Kamal</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Tabbak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Acil Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

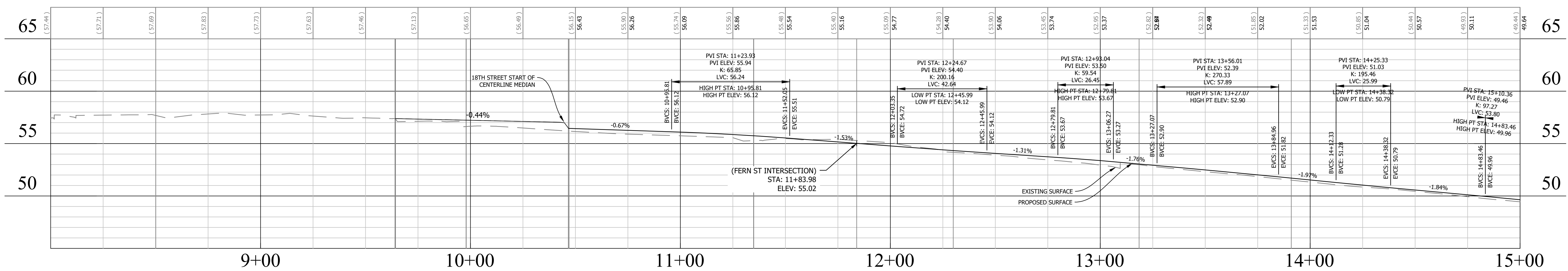
REVISIONS	DATE



- CONSTRUCTION NOTES:**
- ▲ PROP CURB AND GUTTER (C-2) ARL STD (R-2.0)
 - ▲ PROP HEADER CURB (C-3) ARL STD (R-2.0)
 - ▲ PROP REVERSE CURB & GUTTER (C-2-R) ARL STD (CR-2.0)
 - ▲ CONSTRUCT NEW CURB & GUTTER TRANSITION FROM C-2 PER ARL STD R-2.0 TO C-2R PER ARL STD R-2.0.
 - ▲ PROP 4" THICK SIDEWALK ARL STD (R-2.0)
 - ▲ PROP MODIFIED RAMP (CG-12) VDOT ROAD & BRIDGE STANDARDS (204 SHEETS) SEE CURB RAMP DETAIL SHEETS
 - ▲ PROP COMMERCIAL CONCRETE DRIVEWAY ENTRANCE (STANDARD) ARL STD (R-2.4A) TO MATCH EXISTING WIDTH.
 - ▲ PROP RESIDENTIAL CONCRETE DRIVEWAY ENTRANCE 2" DEPRESSION ARL STD (R-2.4B) TO MATCH EXISTING WIDTH.
 - ▲ INSTALL FULL DEPTH ASPHALT ROAD PAVEMENT. SEE TYPICAL PAVEMENT DEPTHS AND WP-1 DETAIL ON SHEETS C004.1 - C004.2 AND SHEET C002.1
 - ▲ MILL AND OVERLAY EX. ASPHALT PAVEMENT, ASPHALT OVERLAY TRANSITIONS PER VDOT STANDARD DRAWING ACOT-1.
 - ▲ MATCH EX CURB IN LINE AND GRADE.
 - ▲ RAISED CONCRETE MEDIAN PER ARL STD. DETAIL R-1.4.
 - ▲ EXISTING 8" WATER LINE WITH FIRE HYDRANT CONSTRUCTED PRIOR TO CONSTRUCTION BY ON CALL CONTRACTOR.
 - ▲ APPROXIMATE LOCATION OF WMATA TUNNEL.
 - ▲ EXISTING CURB AND GUTTER TO REMAIN. CONTRACTOR TO REPLACE ANY DAMAGED CURB AND GUTTER IN THE PROJECT AREA DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO ARLINGTON COUNTY. NOTIFY PROJECT OFFICER PRIOR TO CONSTRUCTION
 - ▲ EXISTING WALL TO REMAIN.
 - ▲ RELOCATE EXISTING WATER METER AND INSTALL FRAME AND COVER PROVIDED BY COUNTY ARL STD (W-8.0 AND W-9.0)
 - ▲ INSTALL GRATE COVER PER WMATA GRATE COVER PROTECTION DETAIL ON SHEET C002.1

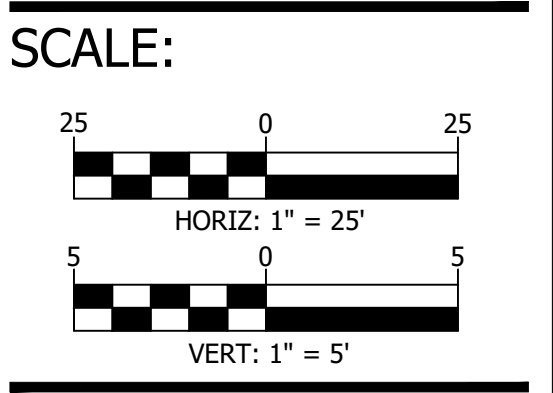
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- ▲ FLEXIBLE DELINEATOR. BETWEEN EVERY 3RD CYCLE LANE DELINEATOR. TO BE INSTALLED BY OTHERS.
- ▲ CONTRACTOR TO INSTALL BRICK PAVERS THAT MATCH THE PATTERN AND SPACING OF THE EXISTING BRICK PAVERS.
- ▲ CONTRACTOR TO INSTALL SIGNAL POLES AND FOUNDATIONS PER THE SIGNAL PLANS. SIGNAL FOUNDATIONS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA AND SUBMITTED FOR REVIEW.
- ▲ CONTRACTOR TO MAKE SURE THAT WMATA ACCESS SHAFT IS UNBLOCKED DURING CONSTRUCTION AT ALL TIMES.

PR. 18TH S CONSTRUCTION BL STATION: 8+00 - 15+00



18TH STREET SOUTH
PLAN AND PROFILE
ROADWAY IMPROVEMENTS
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PLOTTED BY: NSHARP



REVISED ON 11/08/2016



APPROVALS	DATE
<i>Kamal N. Taktak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Dennis W. Leach</i>	6/24/20
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<i>Acil Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

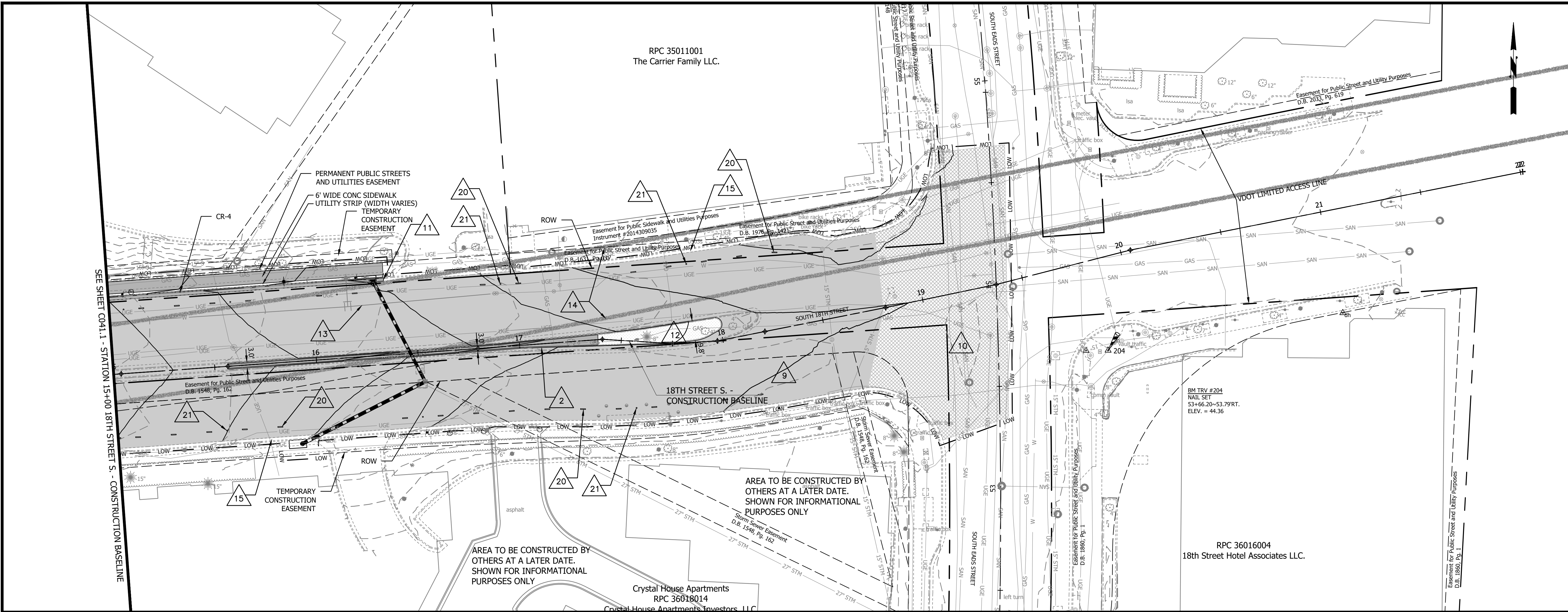
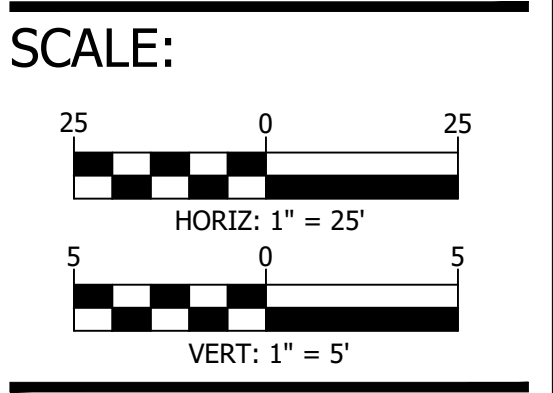
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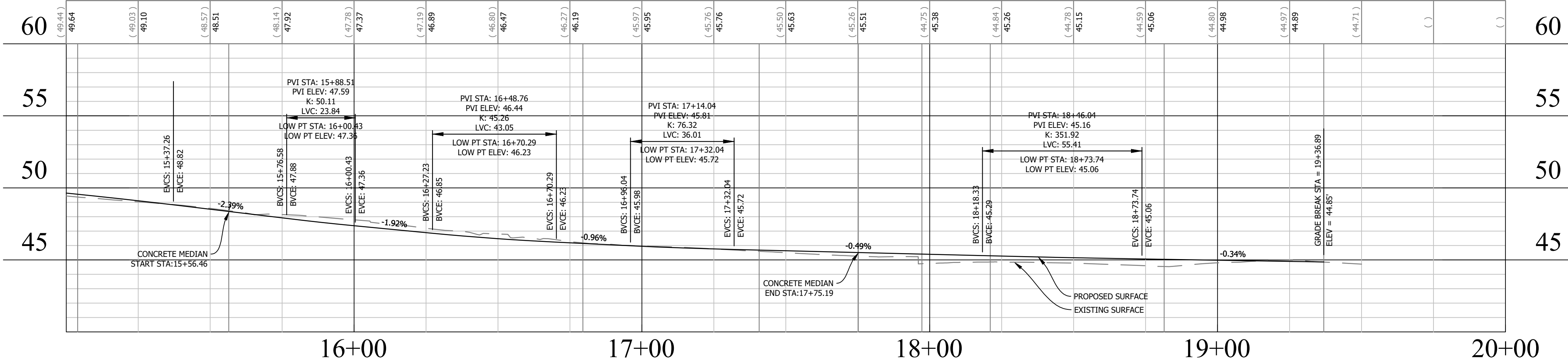
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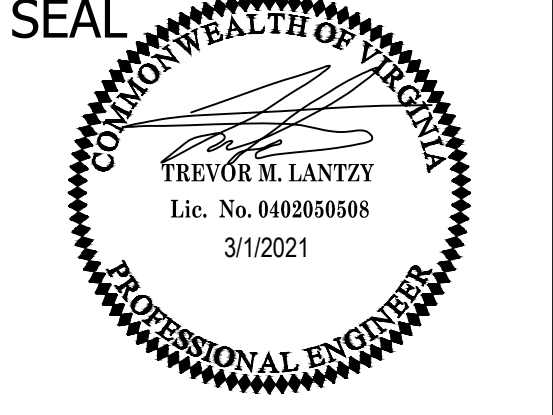
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PR. 18TH S CONSTRUCTION BL STATION: 15+00 - 20+00



REFER TO SHEET C042.7 FOR RAISED MEDIAN ELEVATIONS

REVISED ON 11/08/2016



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<i>Kamal N. Taktak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
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<i>Arnel Jung</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

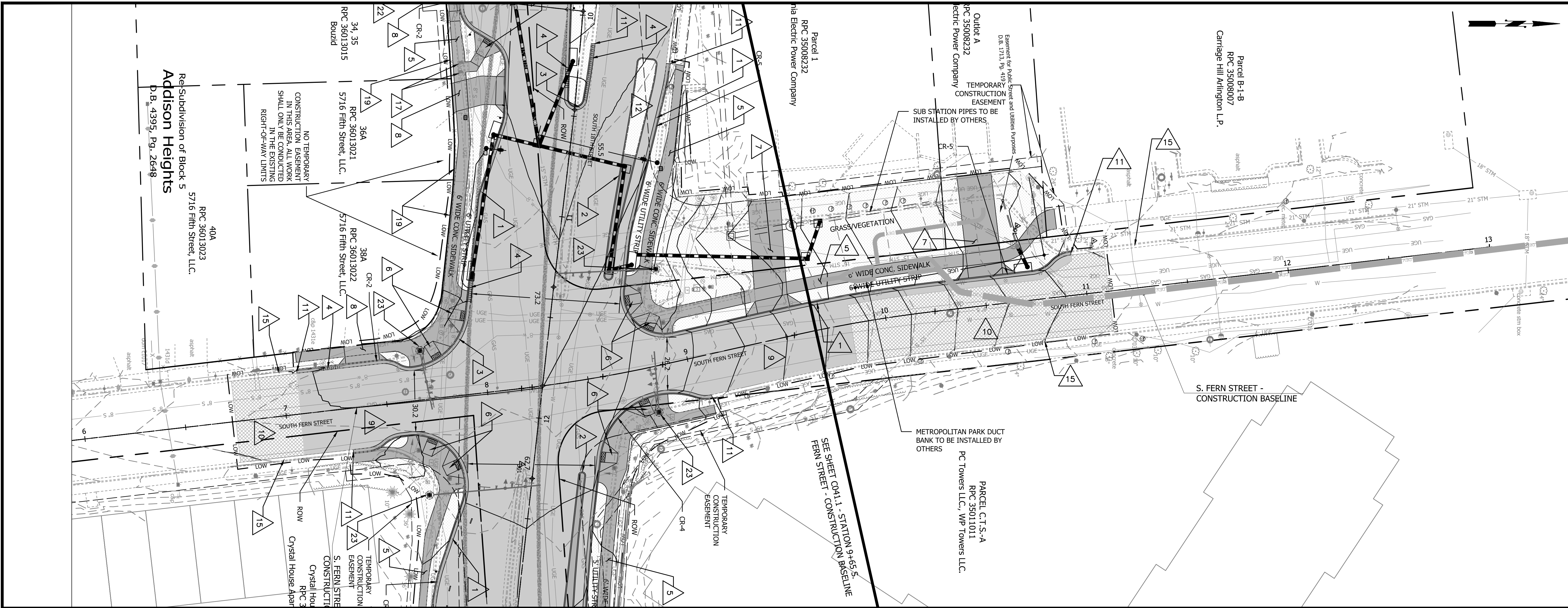
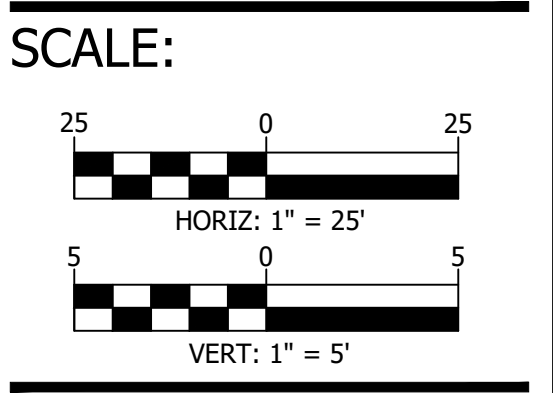
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18TH STREET SOUTH
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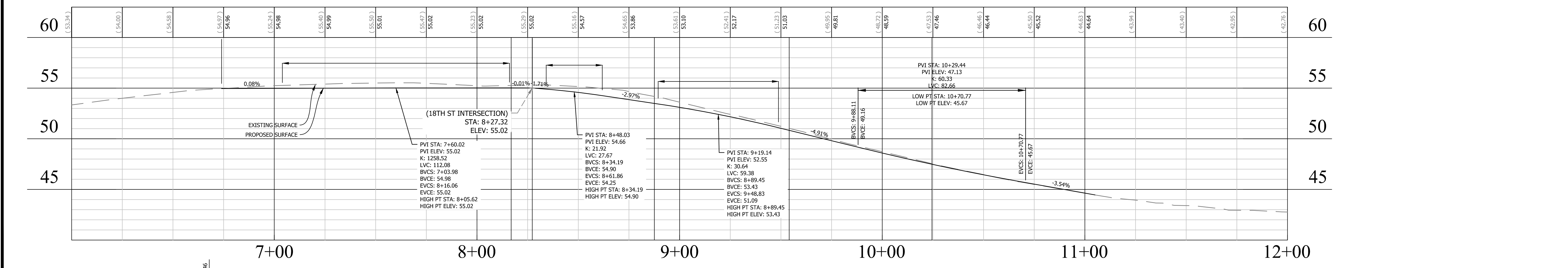
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 - ▲ EXISTING 8" WATER LINE WITH FIRE HYDRANT CONSTRUCTED PRIOR TO CONSTRUCTION BY ON CALL CONTRACTOR.
 - ▲ APPROXIMATE LOCATION OF WMATA TUNNEL.
 - ▲ EXISTING CURB AND GUTTER TO REMAIN. CONTRACTOR TO REPLACE ANY DAMAGED CURB AND GUTTER IN THE PROJECT AREA DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO ARLINGTON COUNTY. NOTIFY PROJECT OFFICER PRIOR TO CONSTRUCTION
 - ▲ EXISTING WALL TO REMAIN.
 - ▲ RELOCATE EXISTING WATER METER AND INSTALL FRAME AND COVER PROVIDED BY COUNTY ARL STD (W-8.0 AND W-9.0)
 - ▲ INSTALL GRATE COVER PER WMATA GRATE COVER PROTECTION DETAIL ON SHEET C002.1
 - ▲ EXISTING FENCE TO BE PROTECTED DURING CONSTRUCTION. IF DAMAGED OR REMOVED IT SHALL BE REPLACED WITH AN EQUAL OR BETTER QUALITY FENCE AT NO EXPENSE TO ARLINGTON COUNTY.
 - ▲ CYCLE LANE DELINEATOR. 15' SPACING BETWEEN DELINEATORS. TO BE INSTALLED BY OTHERS.
 - ▲ FLEXIBLE DELINEATOR. BETWEEN EVERY 3RD CYCLE LANE DELINEATOR. TO BE INSTALLED BY OTHERS.
 - ▲ CONTRACTOR TO INSTALL BRICK PAVERS THAT MATCH THE PATTERN AND SPACING OF THE EXISTING BRICK PAVERS.
 - ▲ CONTRACTOR TO INSTALL SIGNAL POLES AND FOUNDATIONS PER THE SIGNAL PLANS. SIGNAL FOUNDATIONS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF VIRGINIA AND SUBMITTED FOR REVIEW.
 - ▲ CONTRACTOR TO MAKE SURE THAT WMATA ACCESS SHAFT IS UNBLOCKED DURING CONSTRUCTION AT ALL TIMES.

PR. FERN S CONSTRUCTION BL STATION 6+00 - 12+00



REVISED ON 11/08/2016

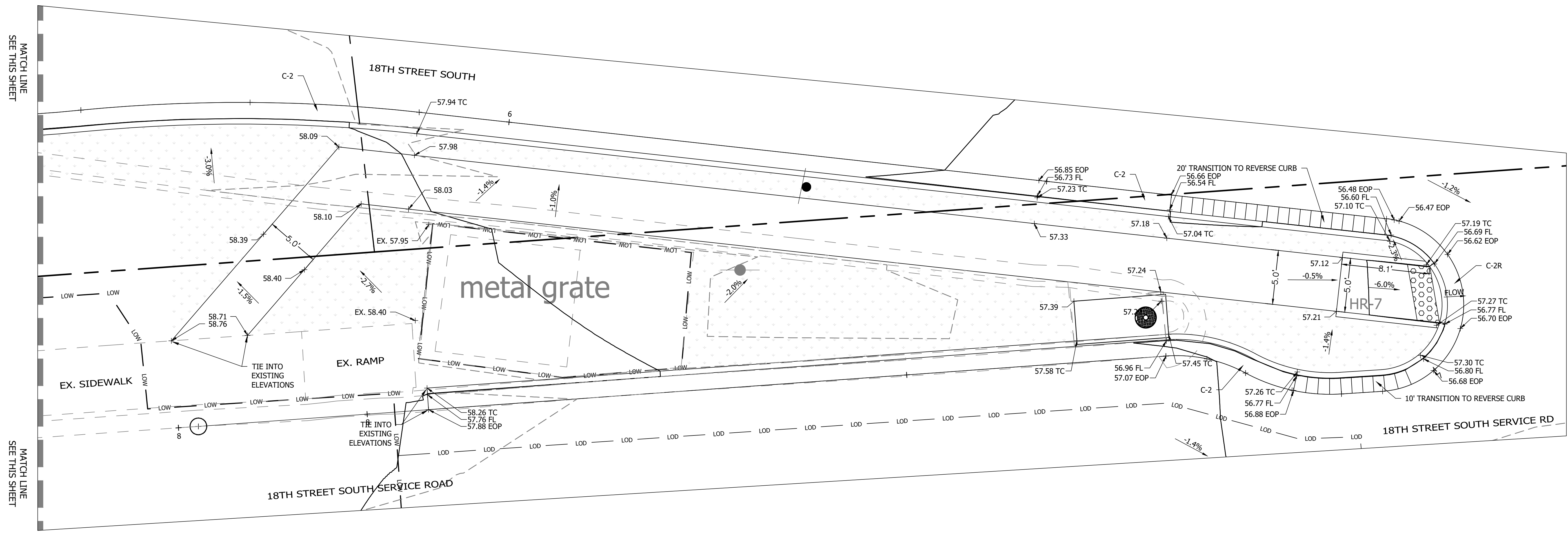
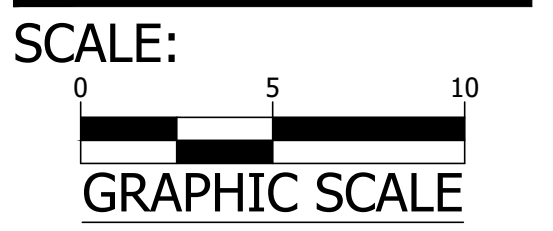


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

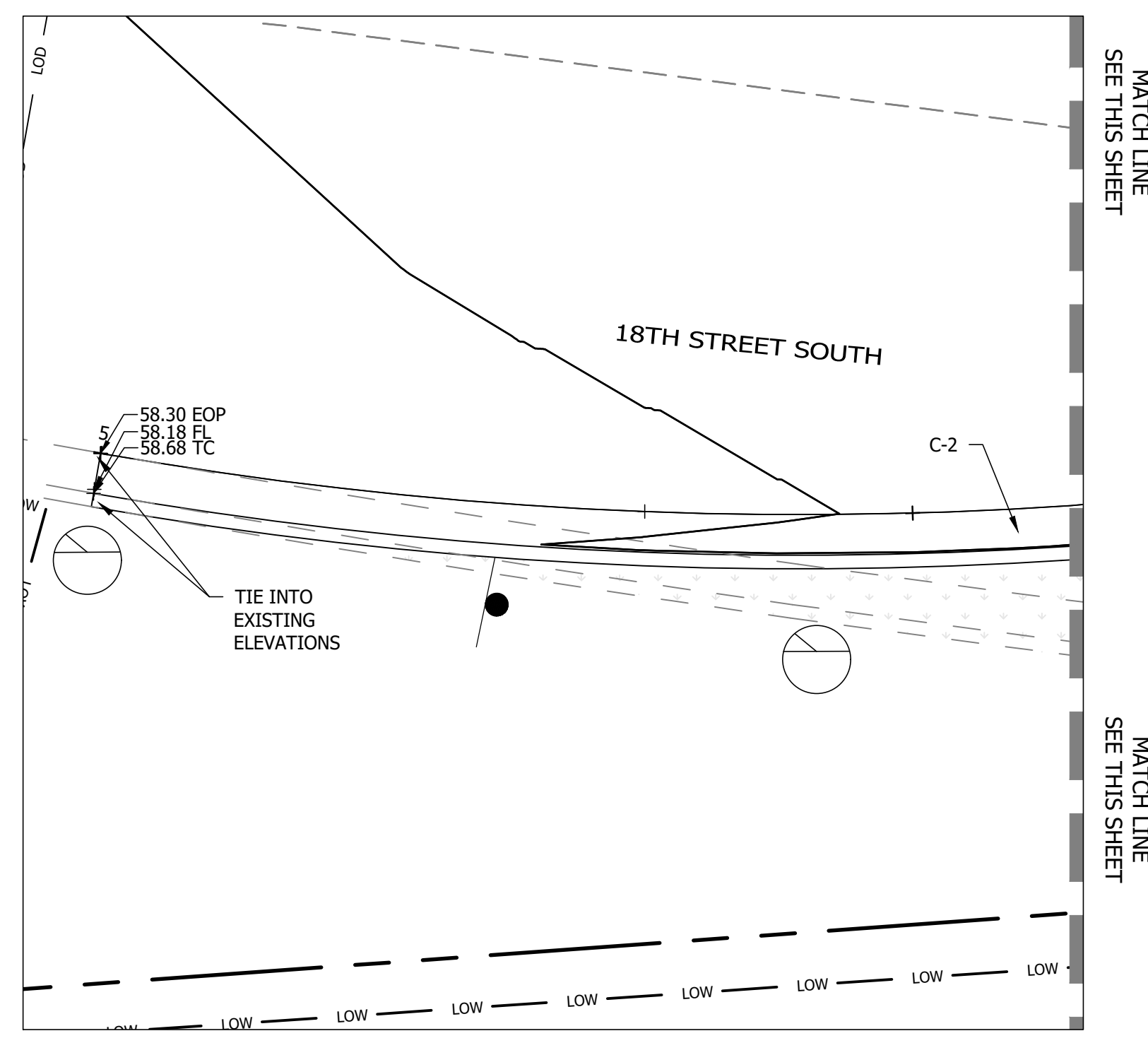
REVISIONS	DATE

18TH STREET SOUTH
RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
 CC20

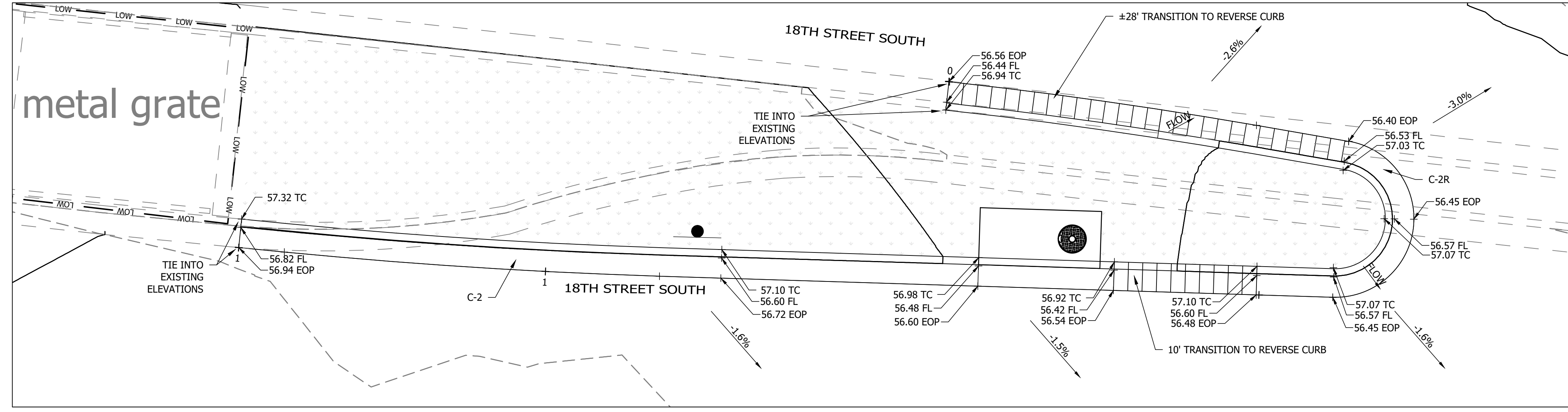
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



S 18TH ST LEFT OF SERVICE (EOP EASTBOUND) [CR-1]
CG-12 TYPE B
SERVICE ROAD ENTRANCE TO 18TH ST
 SCALE: 1" = 5'



EXISTING MEDIAN EXTENTION PLAN
MS-1A
18TH ST CENTERLINE - WEST OF S FERN ST
 SCALE: 1" = 5'



REVISED ON 11/08/2016

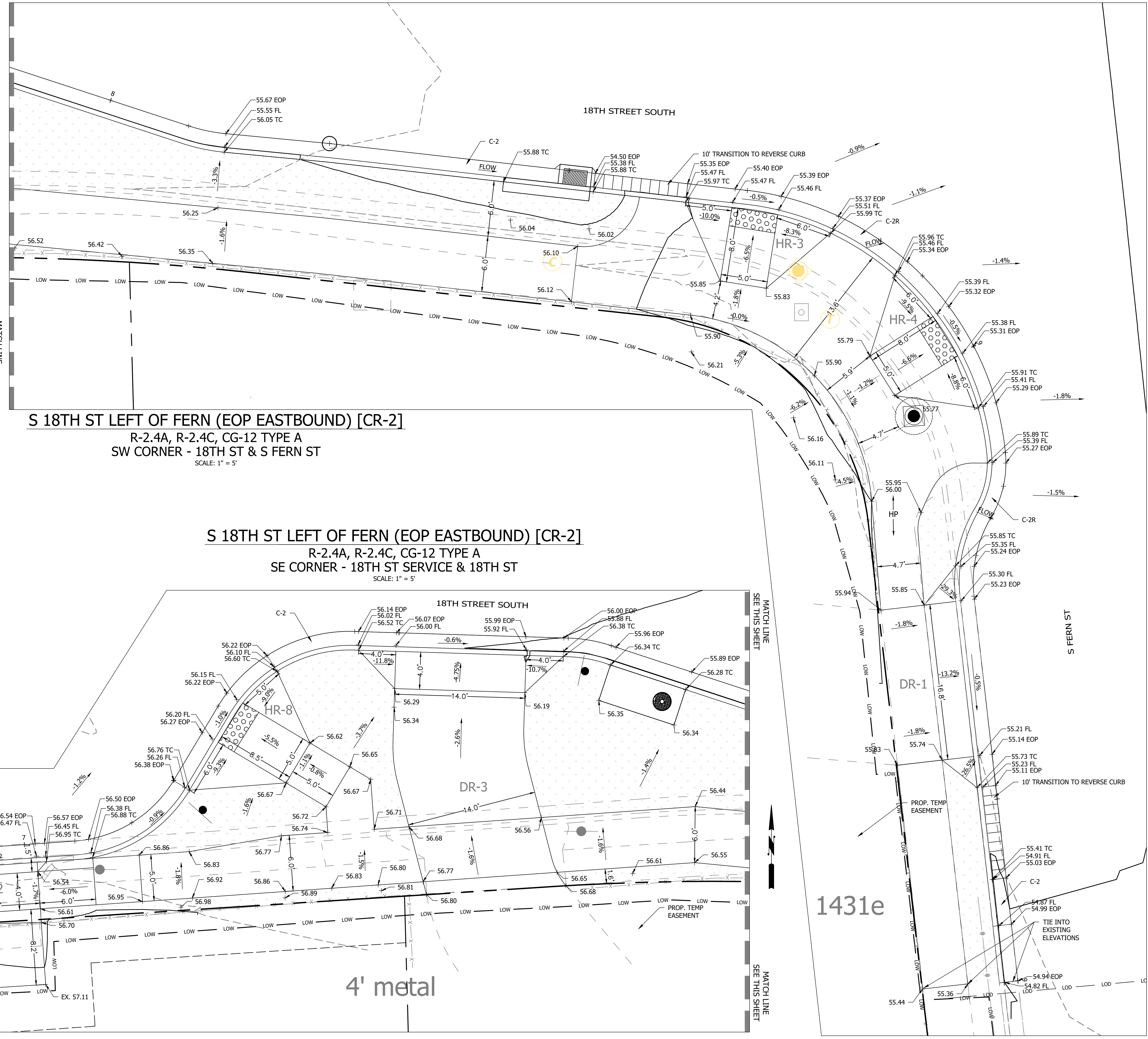
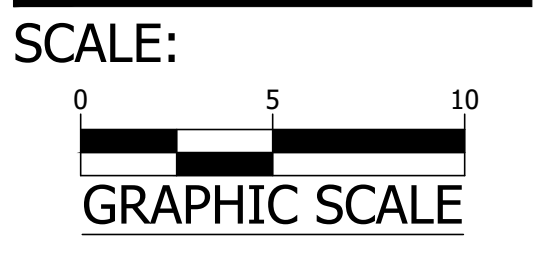


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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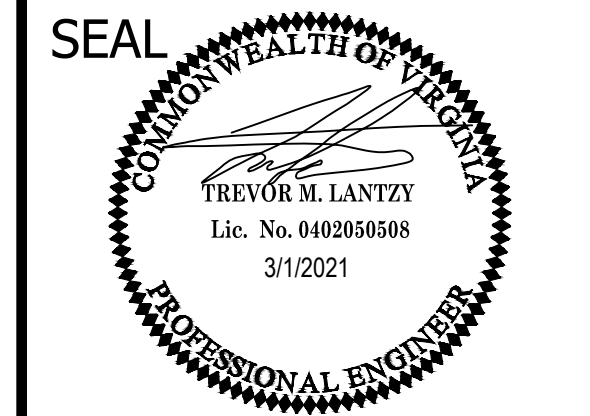
S 18TH ST LEFT OF FERN (EOP EASTBOUND) [CR-2]
 R-2.4A, R-2.4C, CG-12 TYPE A
 SW CORNER - 18TH ST & S FERN ST
 SCALE: 1" = 5'

S 18TH ST LEFT OF FERN (EOP EASTBOUND) [CR-2]
 R-2.4A, R-2.4C, CG-12 TYPE A
 SE CORNER - 18TH ST SERVICE & 18TH ST
 SCALE: 1" = 5'

4' metal

1431e

REVISED ON 11/08/2016

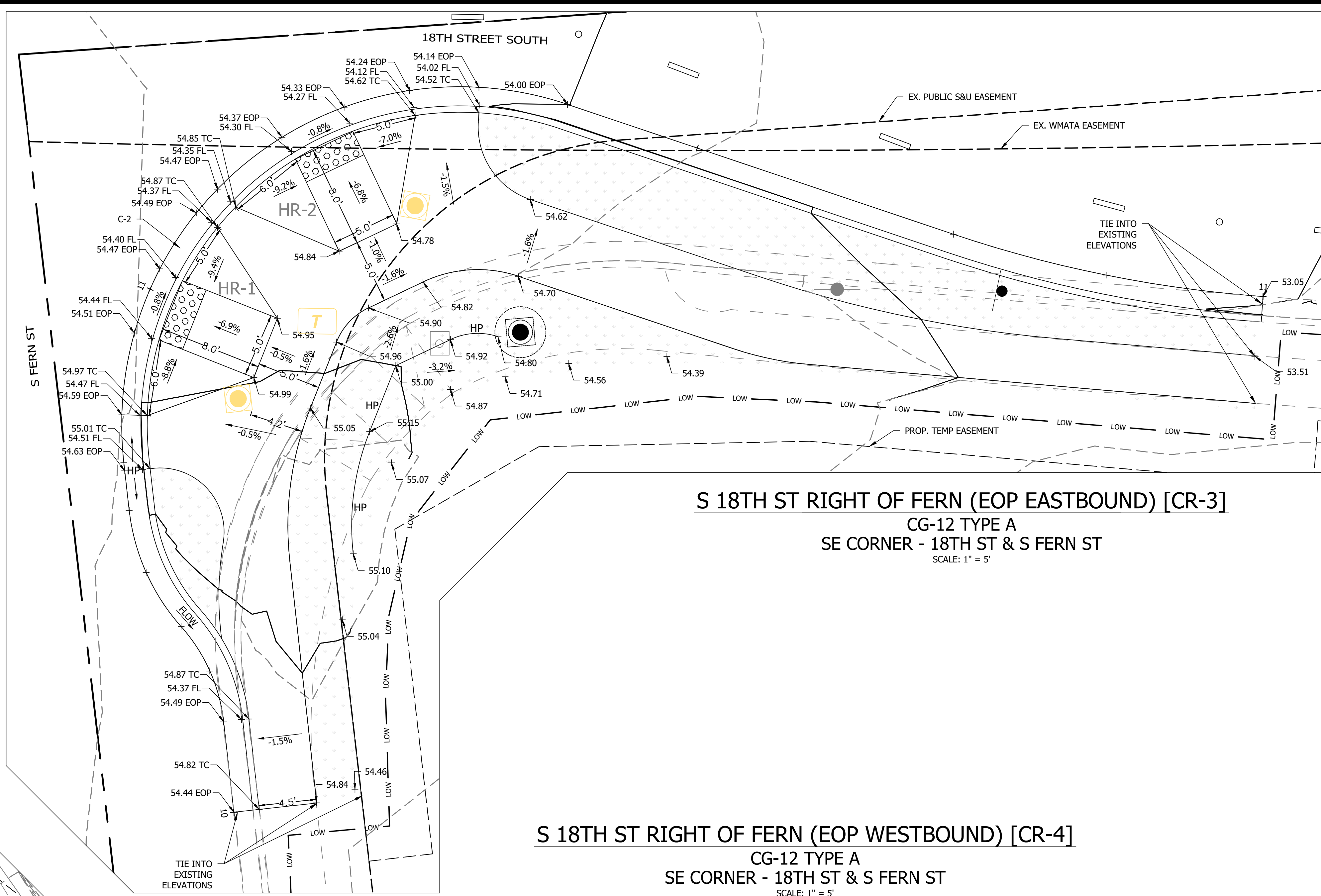
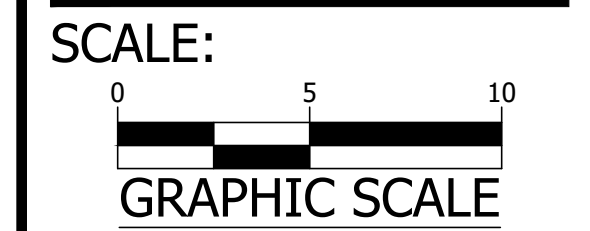


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

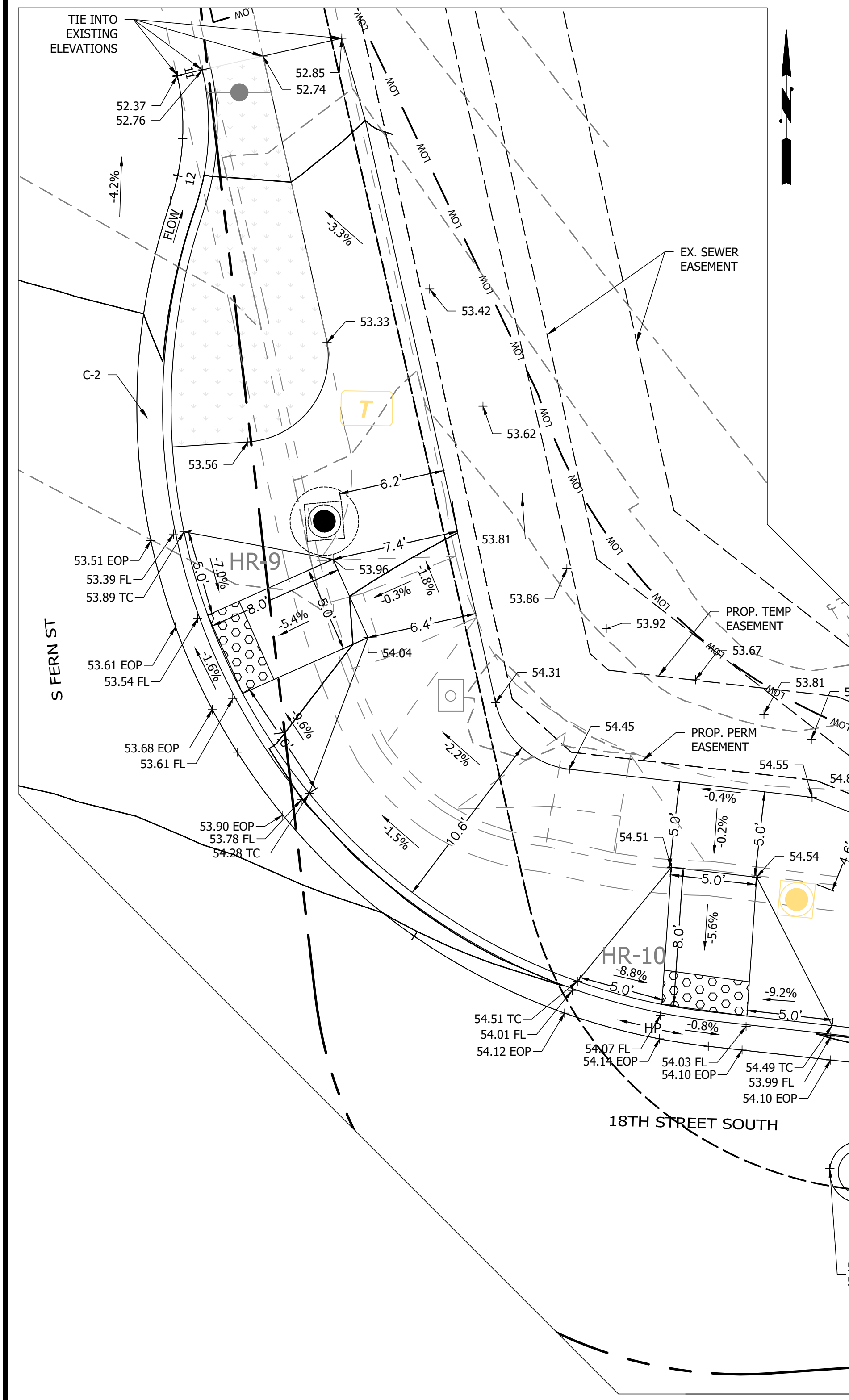
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18TH STREET SOUTH
RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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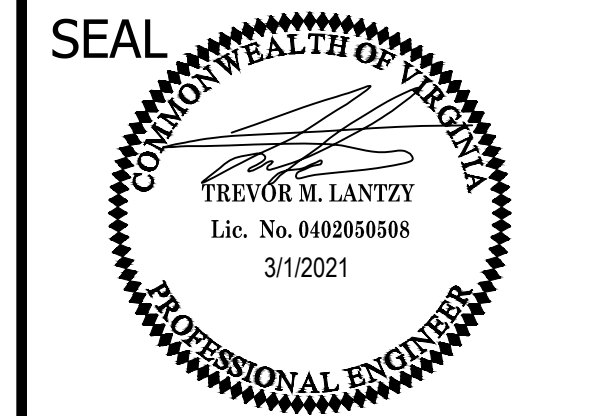


S 18TH ST RIGHT OF FERN (EOP EASTBOUND) [CR-3]
 CG-12 TYPE A
 SE CORNER - 18TH ST & S FERN ST
 SCALE: 1" = 5'



S 18TH ST RIGHT OF FERN (EOP WESTBOUND) [CR-4]
 CG-12 TYPE A
 SE CORNER - 18TH ST & S FERN ST
 SCALE: 1" = 5'

REVISED ON 11/08/2016

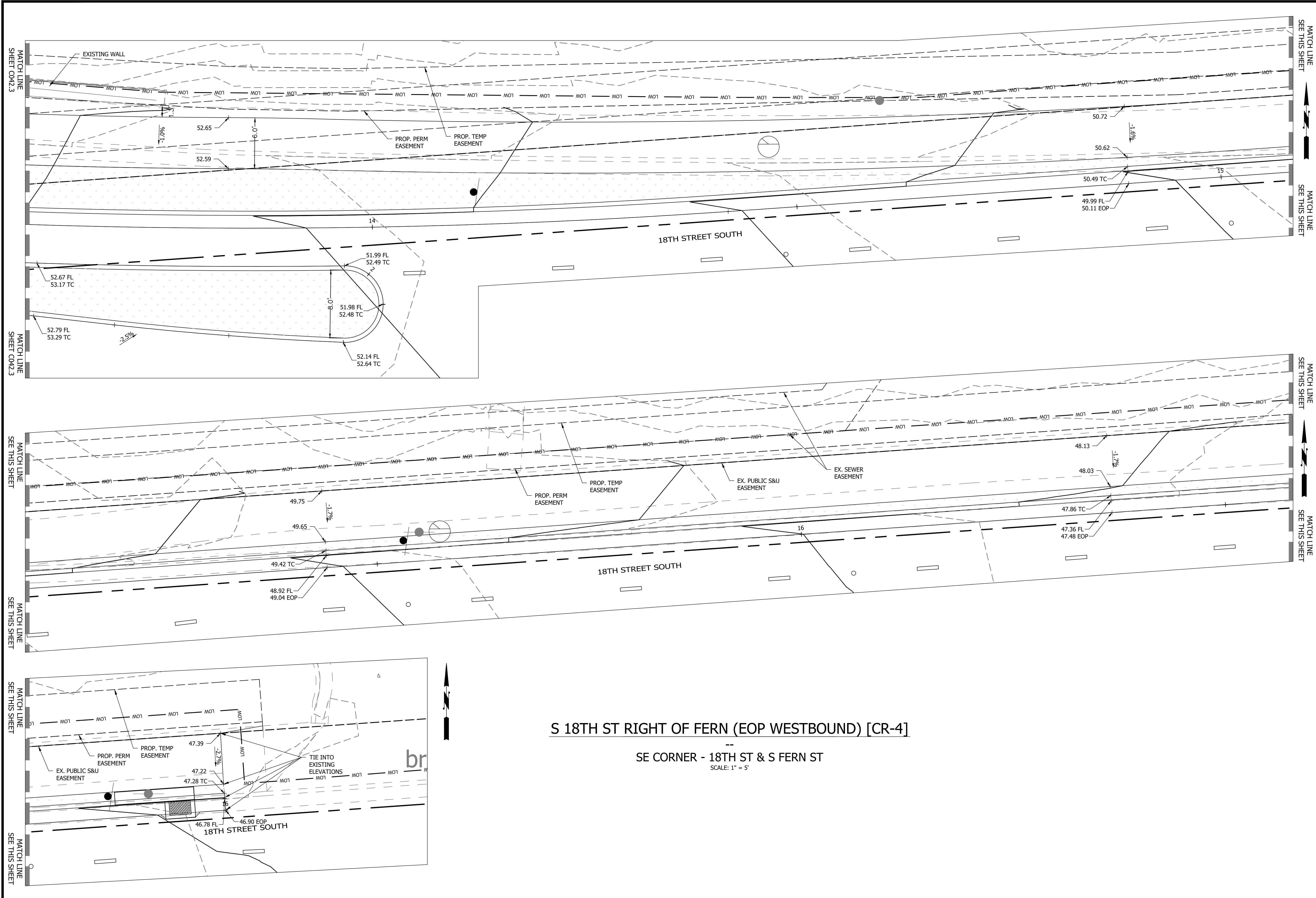
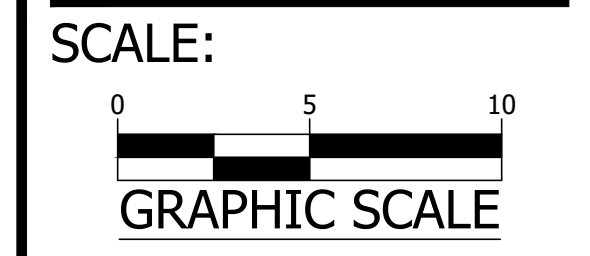


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

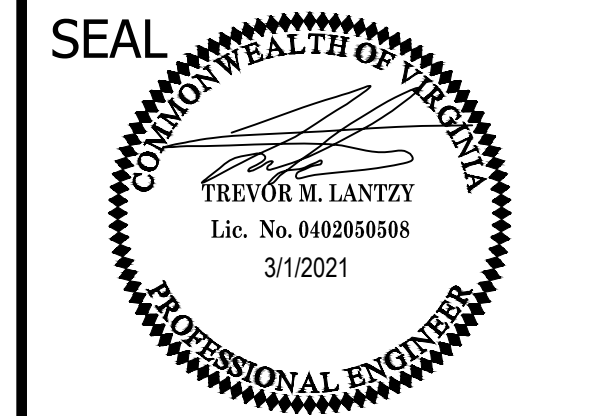
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S 18TH ST RIGHT OF FERN (EOP WESTBOUND) [CR-4]

SE CORNER - 18TH ST & S FERN ST
 SCALE: 1" = 5'

REVISED ON 11/08/2016



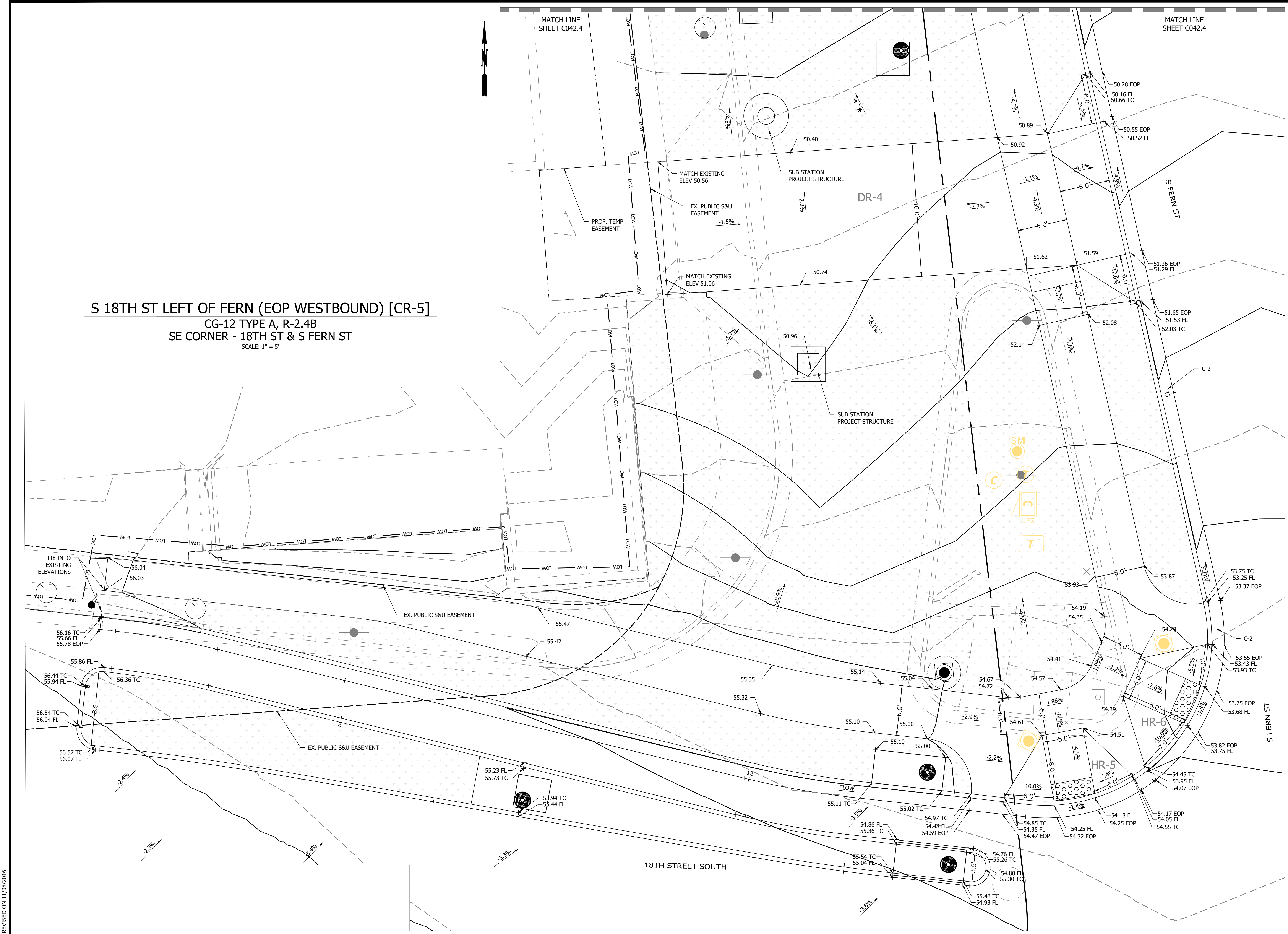
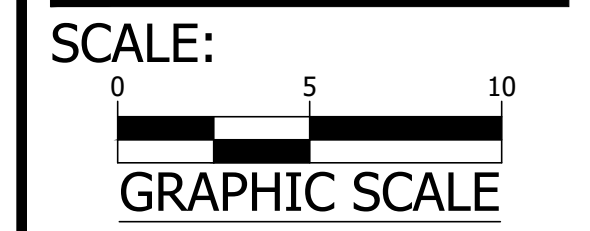
APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
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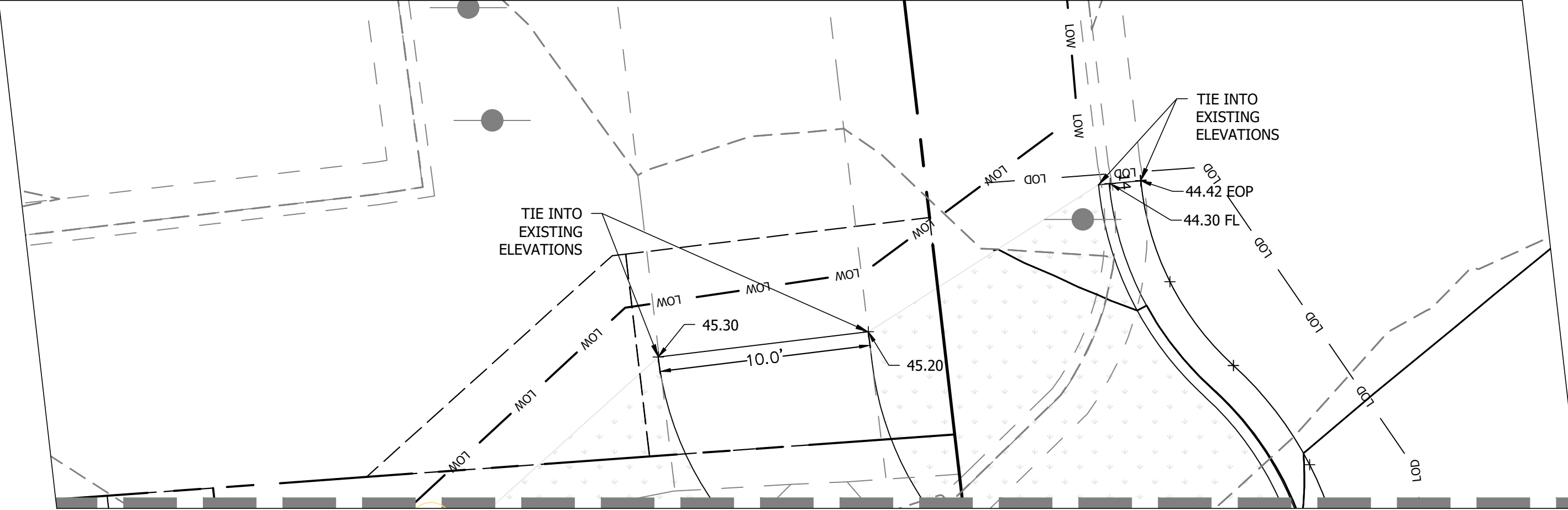
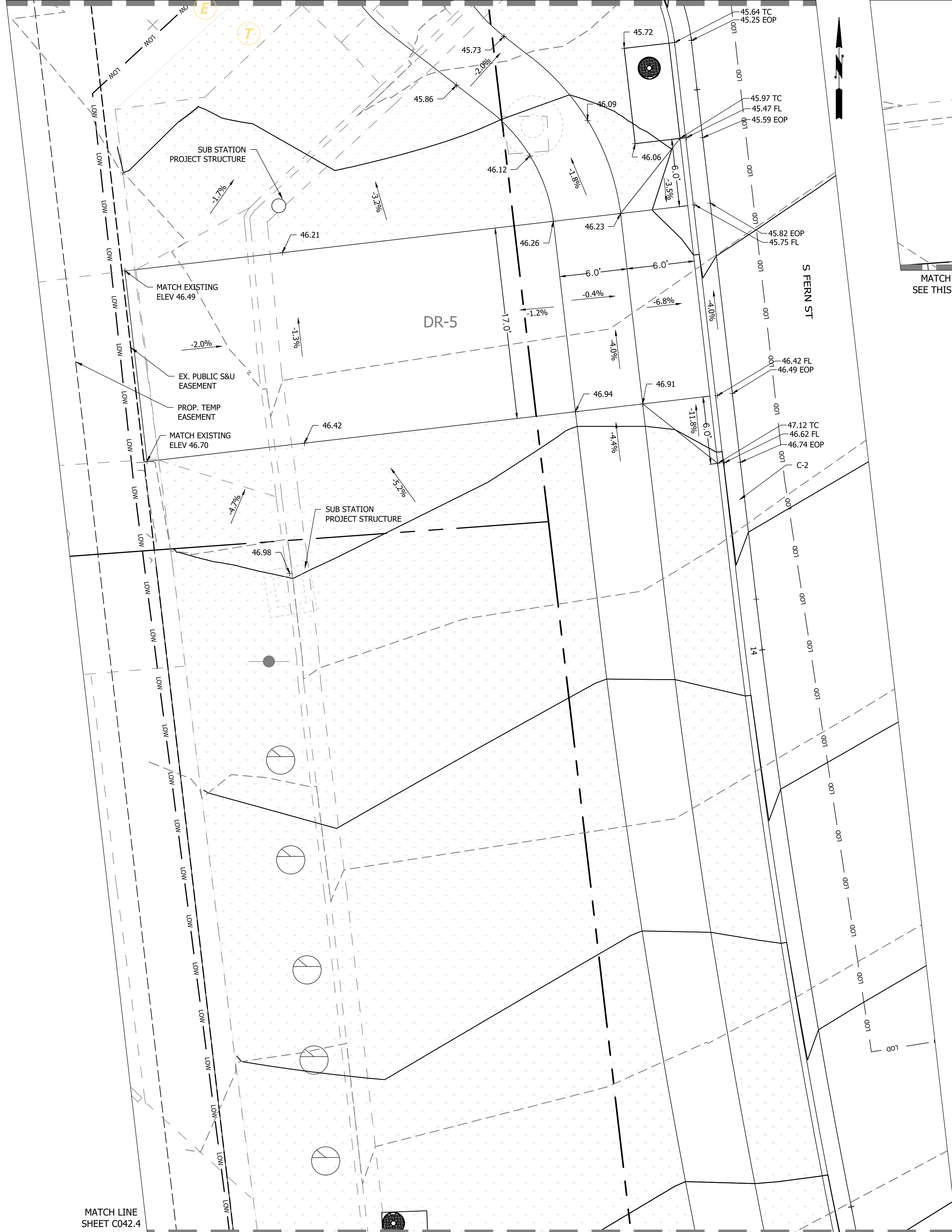


S 18TH ST LEFT OF FERN (EOP WESTBOUND) [CR-5]
 CG-12 TYPE A, R-2.4B
 SE CORNER - 18TH ST & S FERN ST
 SCALE: 1" = 5'

REVISED ON 11/08/2016

MATCH LINE
SEE THIS SHEET

MATCH LINE
SEE THIS SHEET



MATCH LINE
SEE THIS SHEET

MATCH LINE
SEE THIS SHEET

S 18TH ST LEFT OF FERN (EOP WESTBOUND) [CR-5]

R-2.4B
SE CORNER - 18TH ST & S FERN ST
SCALE: 1" = 5'



DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
 PHONE: 703.228.3629
 FAX: 703.228.3606

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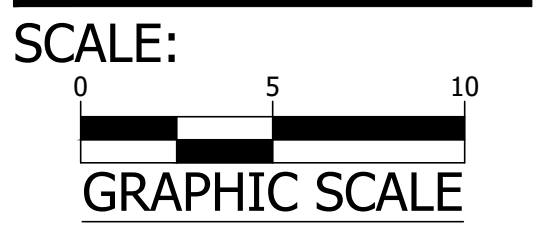


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 RAMP DETAIL
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

DESIGNED: NS
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 PLOTTED: MARCH 1 2021
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SHEET C042.6

18TH STREET SOUTH

REVISED ON 11/08/2016

MATCH LINE
SHEET C042.4

MATCH LINE
SHEET C042.4



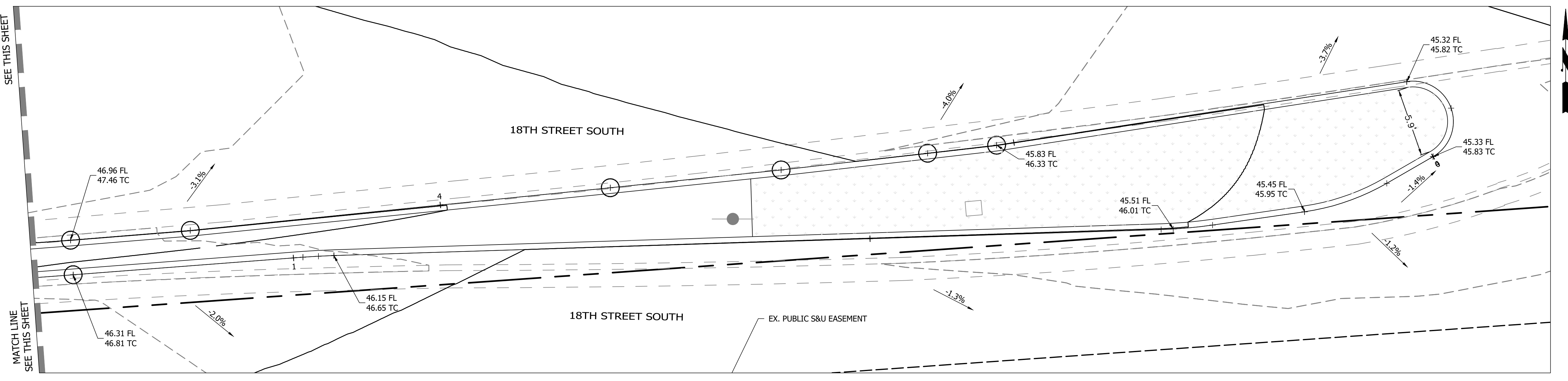
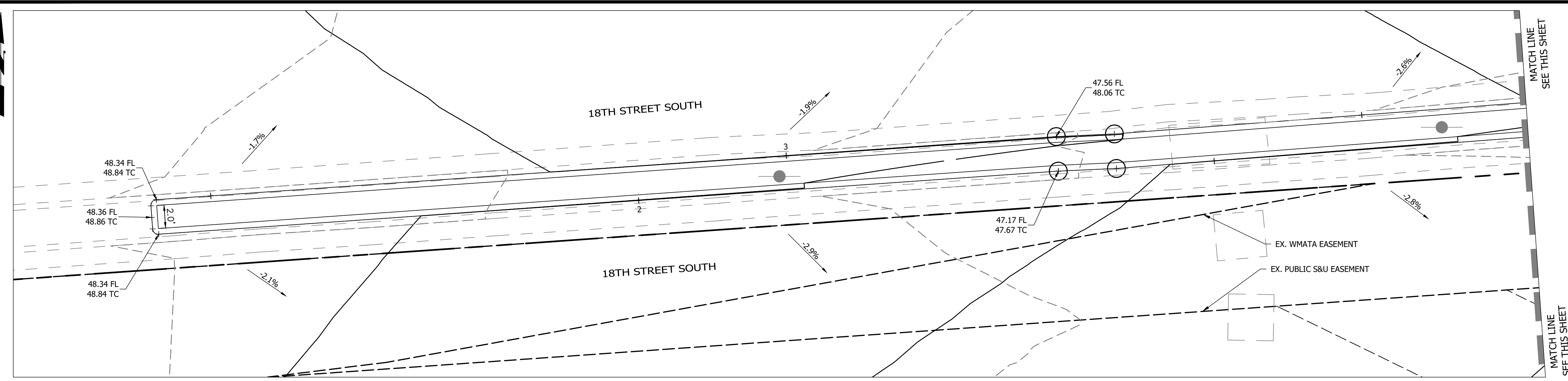
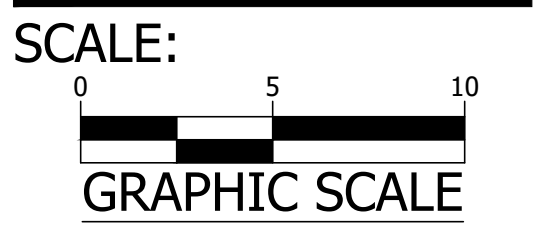
APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH

RAMP DETAIL
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

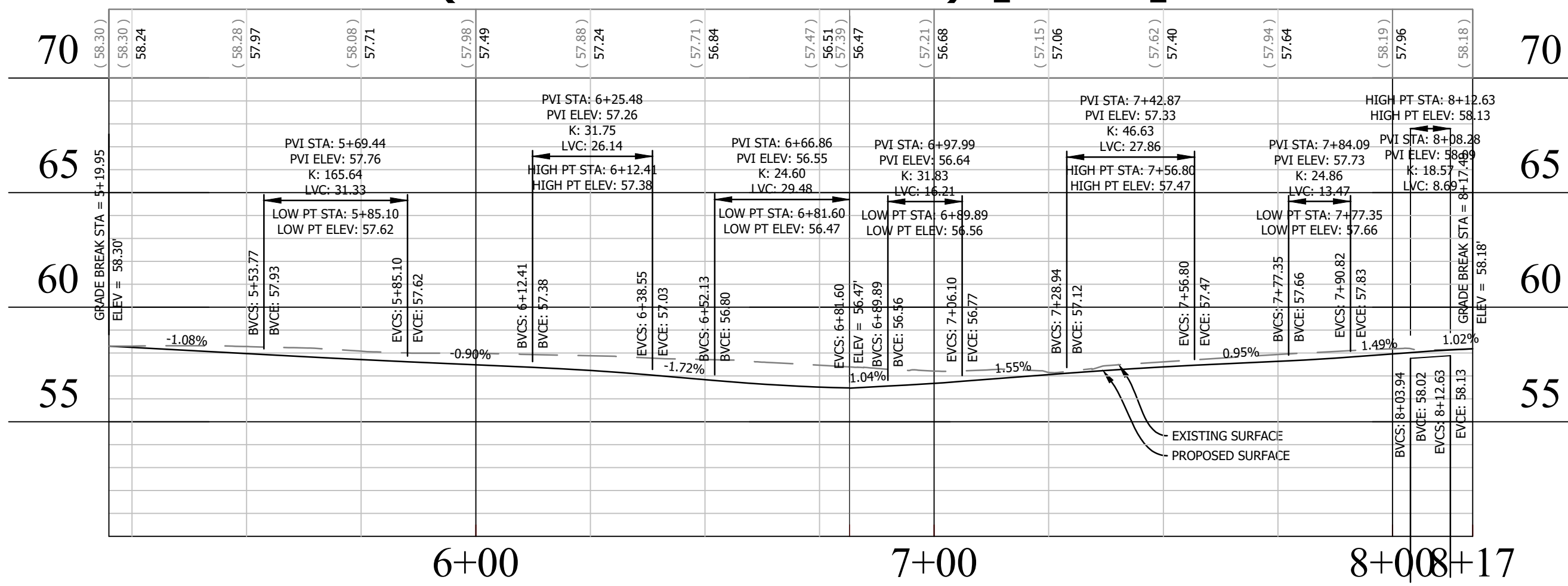
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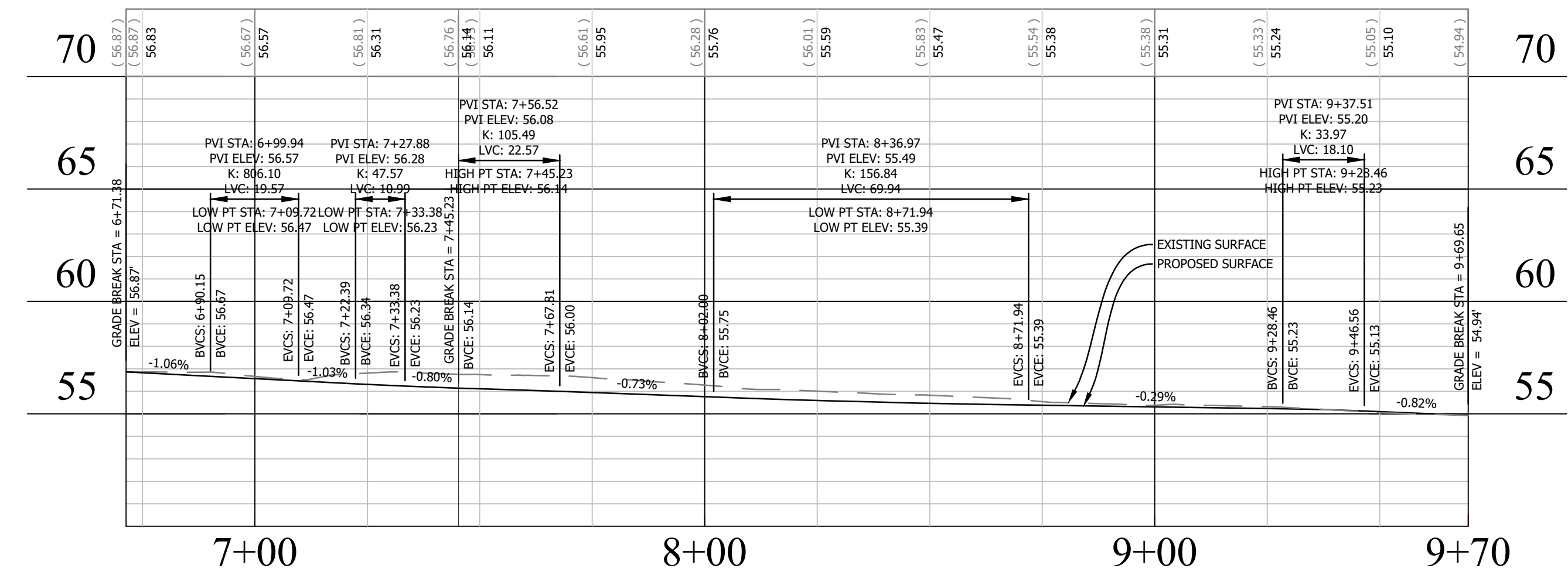
18TH STREET CENTER MEDIAN
MS-1A
18TH ST CENTERLINE - EAST OF S FERN ST
SCALE: 1" = 5'

REVISED ON 11/08/2016

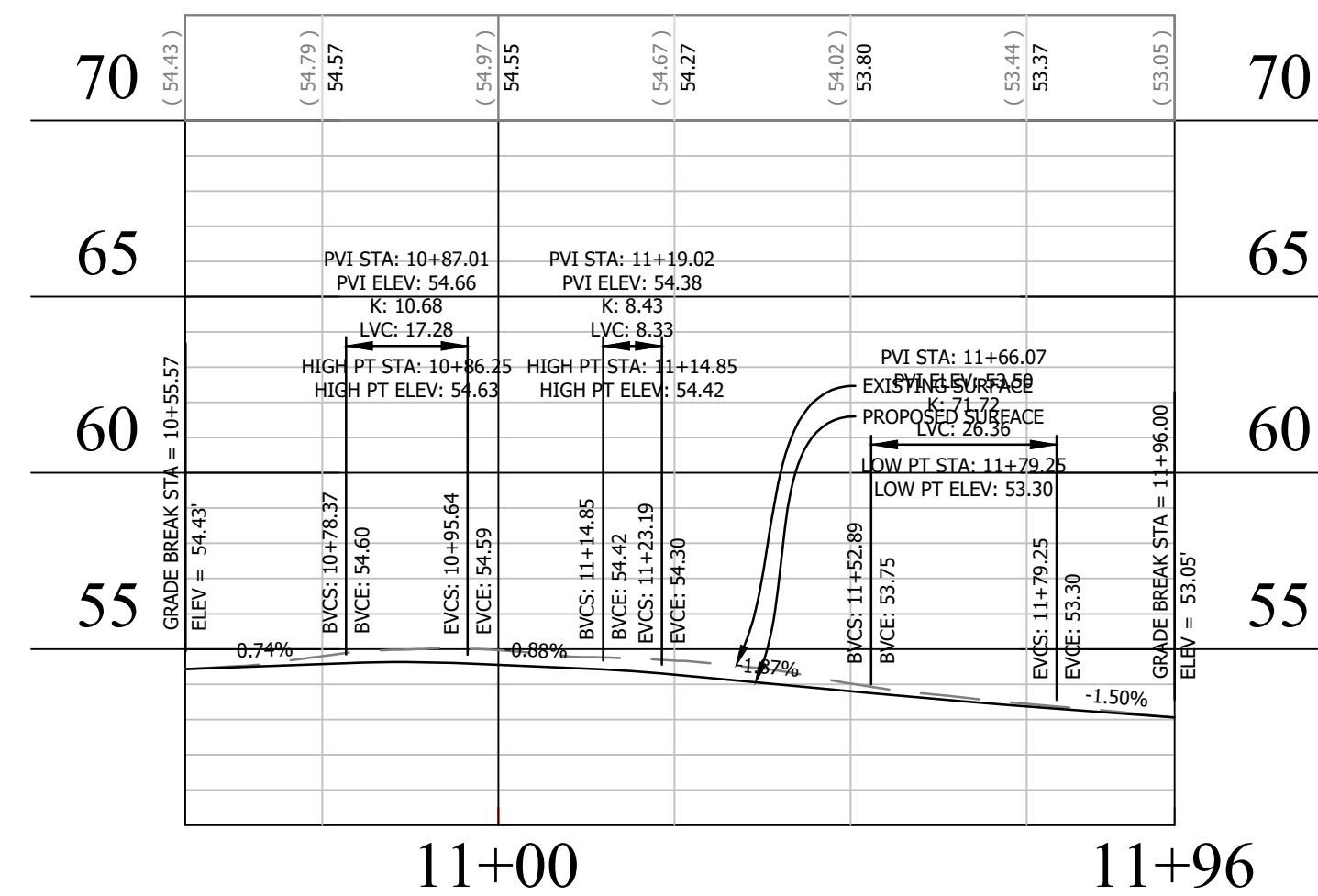
S 18TH ST LEFT OF SERVICE (EOP EASTBOUND) [CR-1]



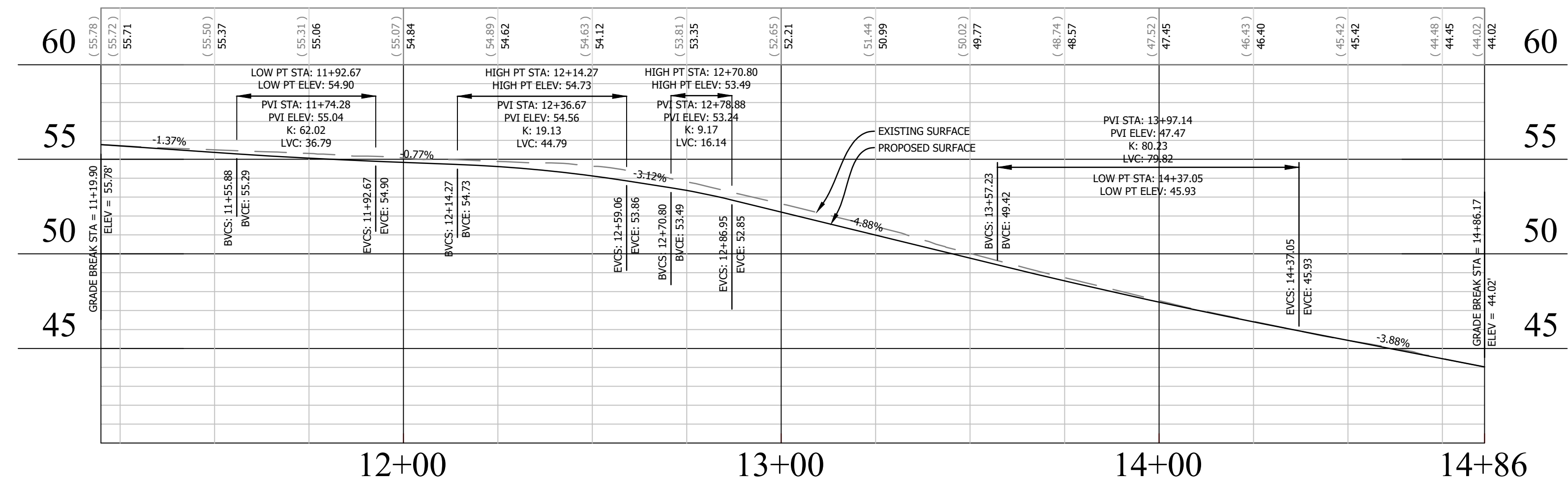
S 18TH ST LEFT OF FERN (EOP EASTBOUND) [CR-2]



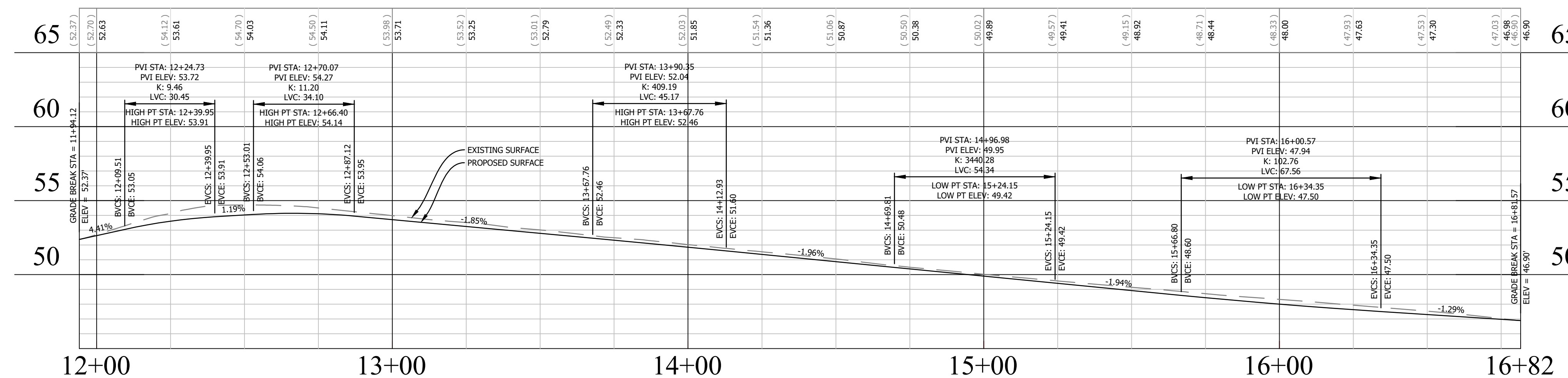
S 18TH ST RIGHT OF FERN (EOP EASTBOUND) [CR-3]



S 18TH ST LEFT OF FERN (EOP WESTBOUND) [CR-5]



S 18TH ST RIGHT OF FERN (EOP WESTBOUND) [CR-4]



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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FAX: 703.228.3606

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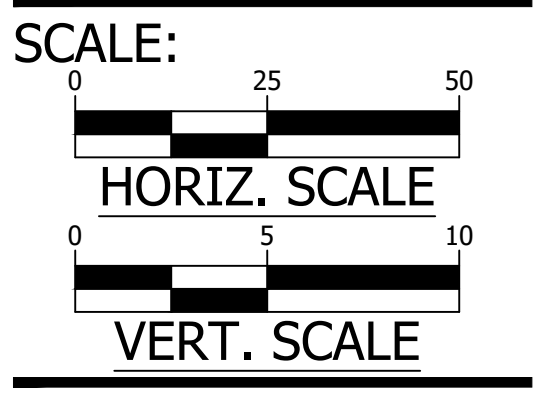
APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 CURB RETURN PROFILE
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

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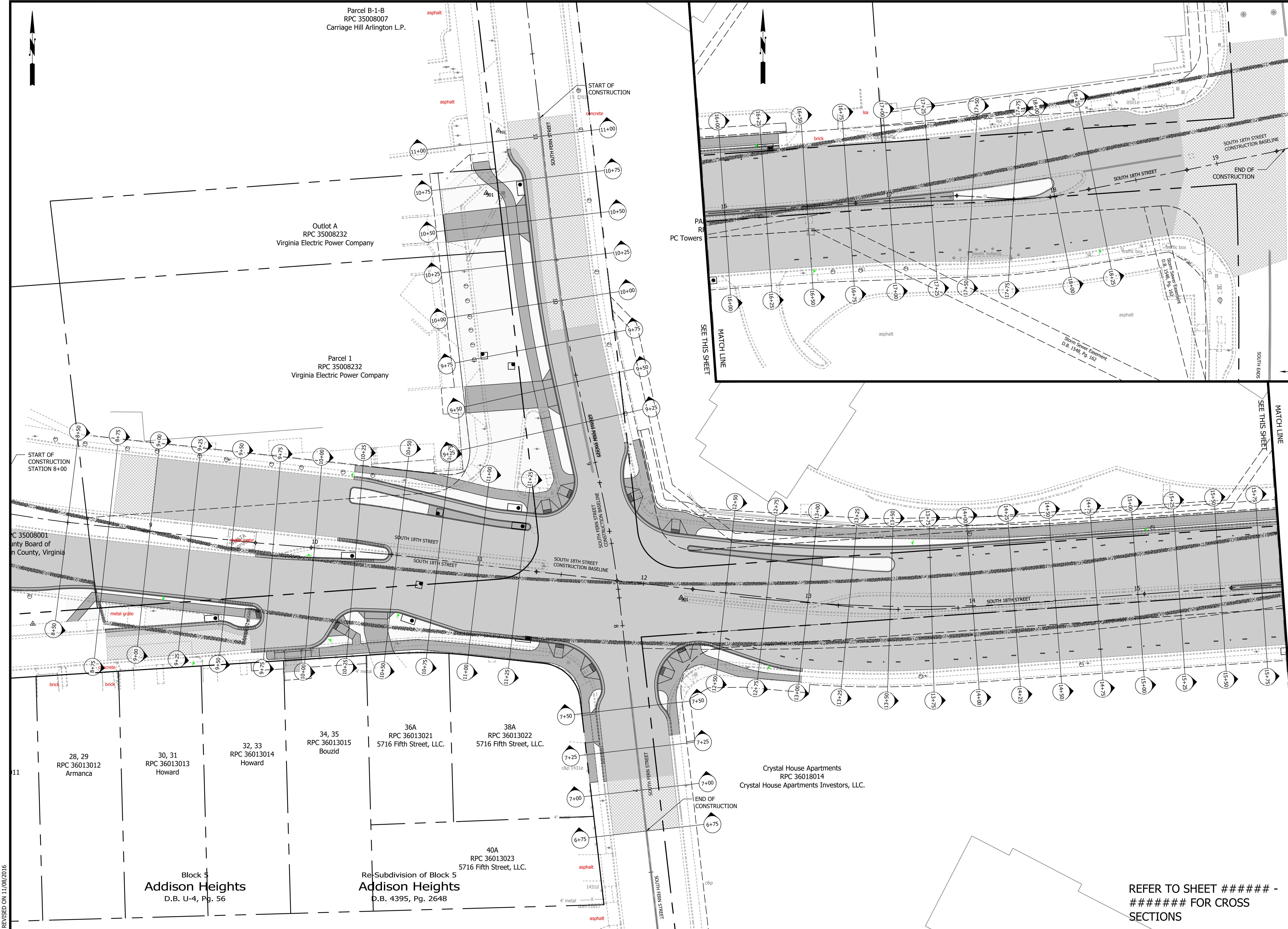
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SHEET C043.1

18TH STREET SOUTH

REVISED ON 11/08/2016



Parcel B-1-B
RPC 35008007
Carriage Hill Arlington L.P.

Outlot A
RPC 35008232
Virginia Electric Power Company

Parcel 1
RPC 35008232
Virginia Electric Power Company

Parcel 35008001
County Board of
Arlington County, Virginia

28, 29
RPC 36013012
Armanca

30, 31
RPC 36013013
Howard

32, 33
RPC 36013014
Howard

34, 35
RPC 36013015
Bouzid

36A
RPC 36013021
5716 Fifth Street, LLC.

38A
RPC 36013022
5716 Fifth Street, LLC.

Crystal House Apartments
RPC 36018014
Crystal House Apartments Investors, LLC.

40A
RPC 36013023
5716 Fifth Street, LLC.

Block 5
Addison Heights
D.B. U-4, Pg. 56

Re-Subdivision of Block 5
Addison Heights
D.B. 4395, Pg. 2648



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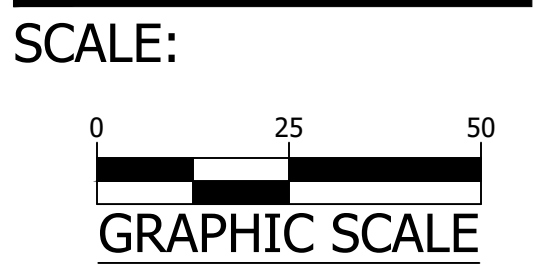


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Debra</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	6/17/2020
<i>Ariel Yang</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
CROSS SECTION EXHIBIT
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
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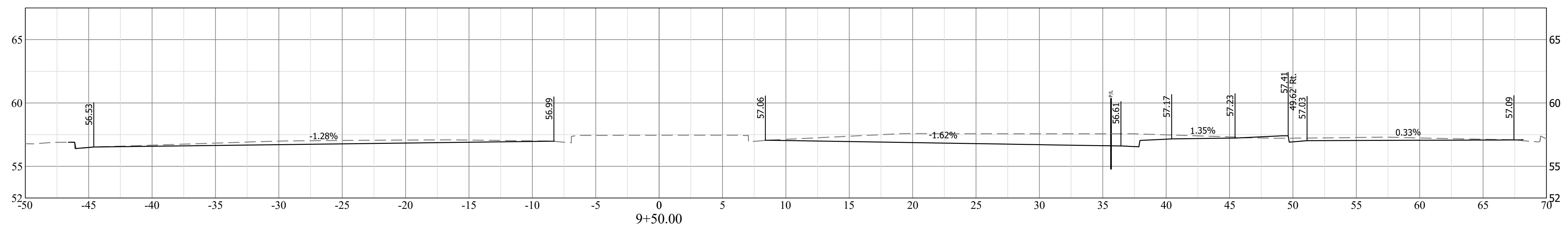
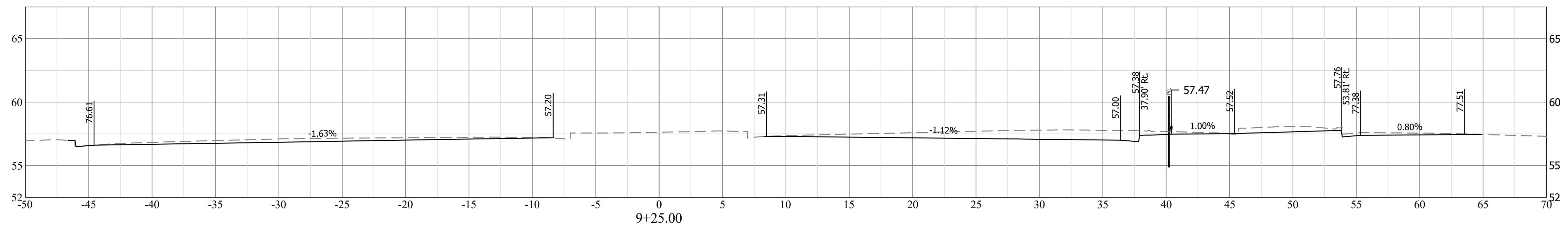
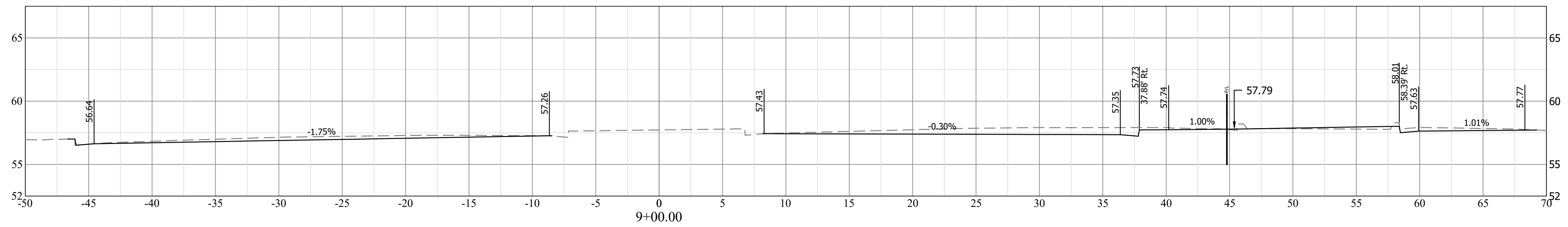
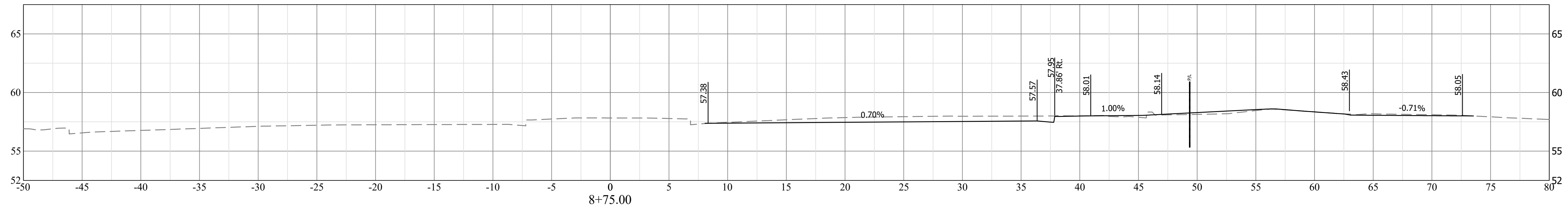
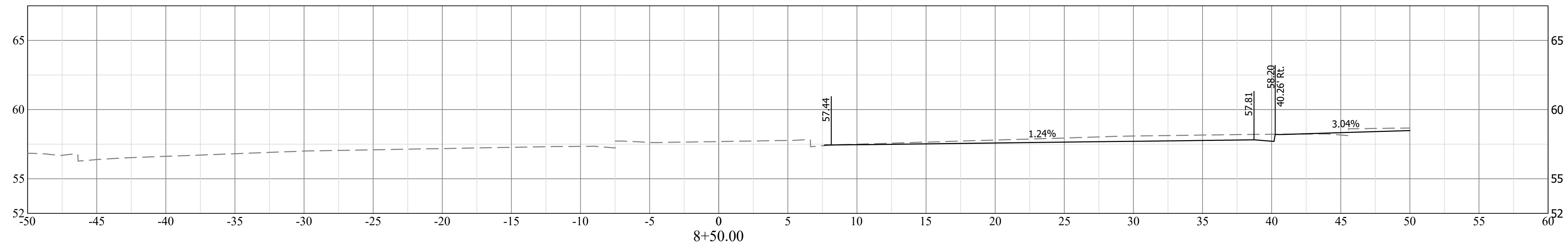
REFER TO SHEET ##### -
FOR CROSS
SECTIONS

SHEET C044.1

18TH STREET SOUTH

REVISED ON 11/08/2016

SOUTH 18TH STREET BASELINE



DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
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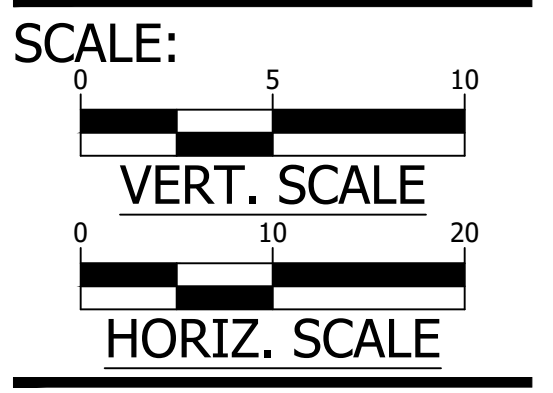


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Jung</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 CROSS-SECTIONS
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

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 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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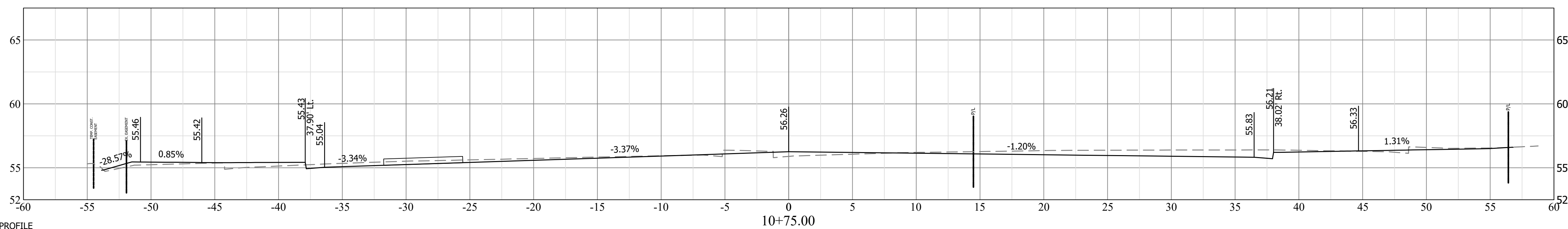
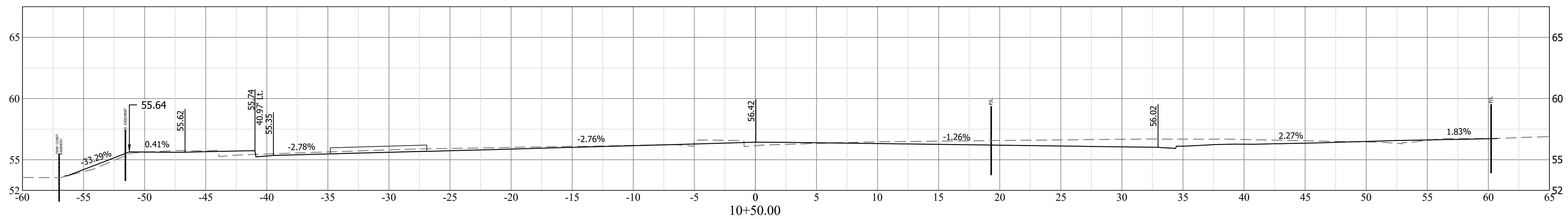
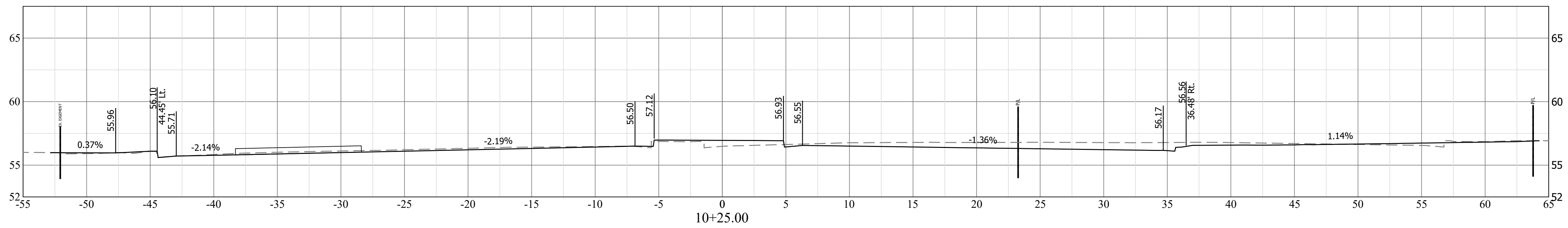
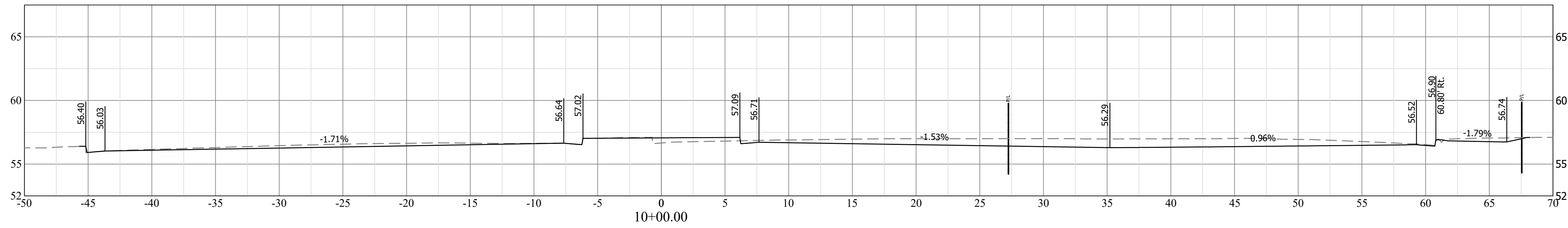
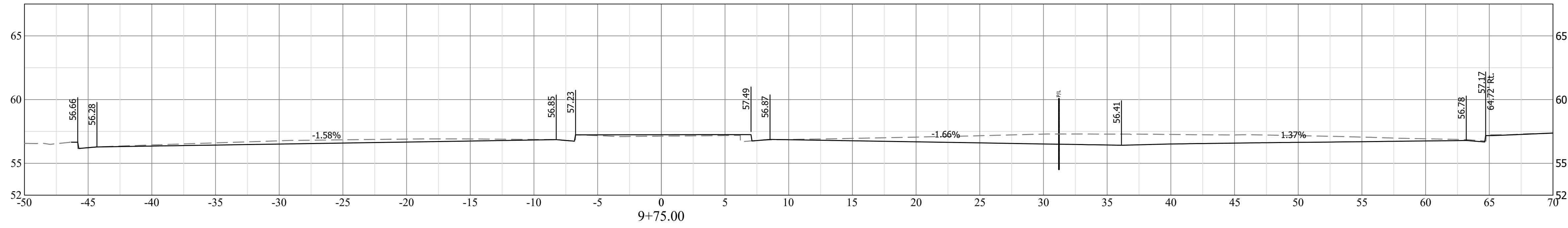
SHEET C044.2

18TH STREET SOUTH

REVISED ON 11/08/2016

- REFER TO PLAN AND PROFILE SHEET FOR SECTIONS THAT ARE TO BE MILL AND OVERLAY INSTEAD OF FULL DEPTH PAVEMENT
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SOUTH 18TH STREET BASELINE



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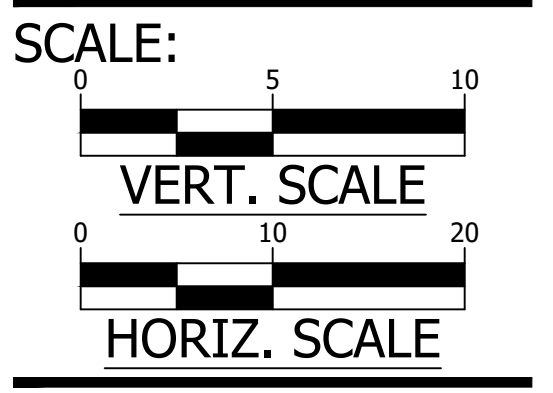


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 CROSS-SECTIONS
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

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SHEET C044.3

18TH STREET SOUTH

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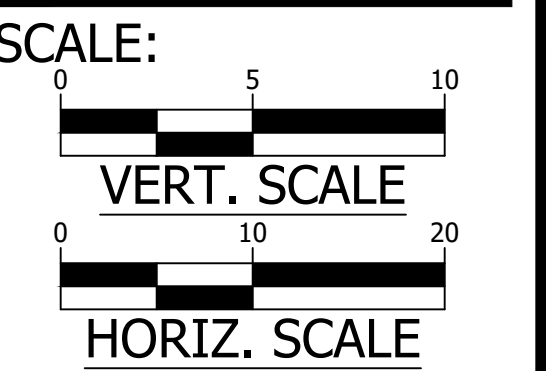
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QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
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REVISIONS DATE

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18TH STREET SOUTH
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 ROADWAY IMPROVEMENTS
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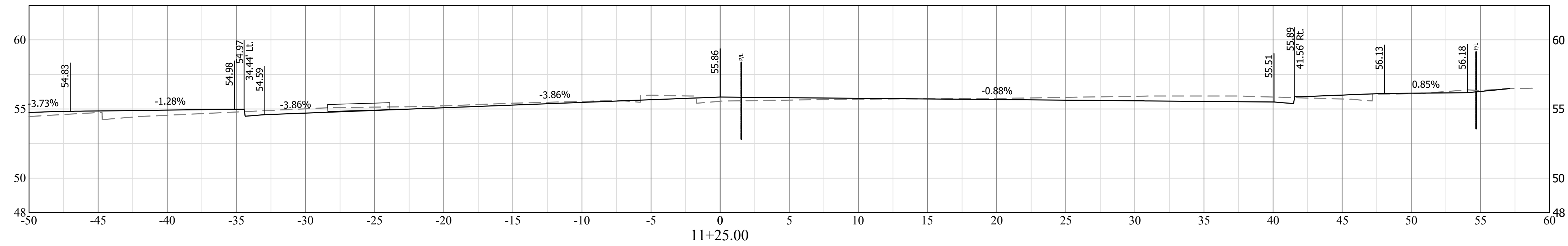
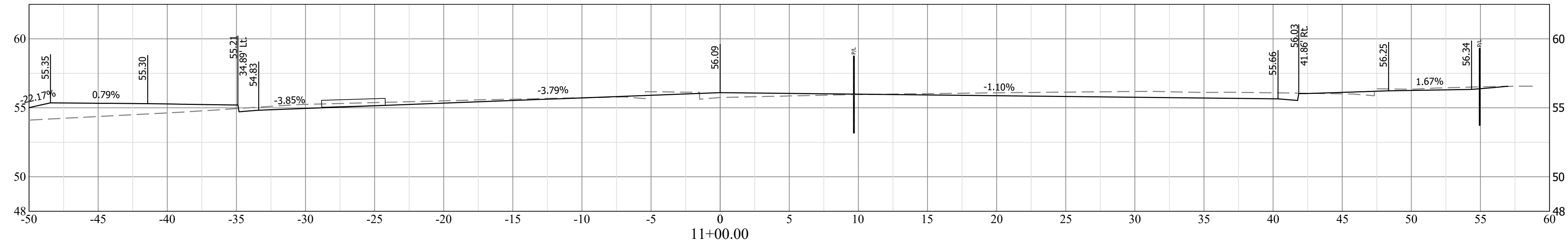
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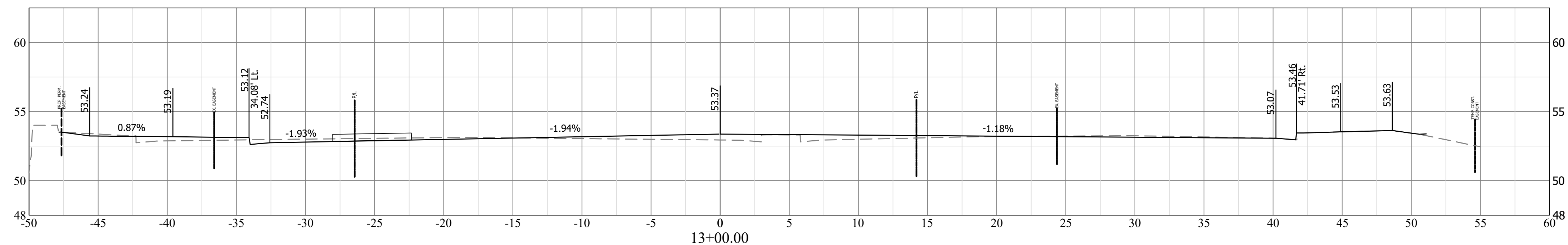
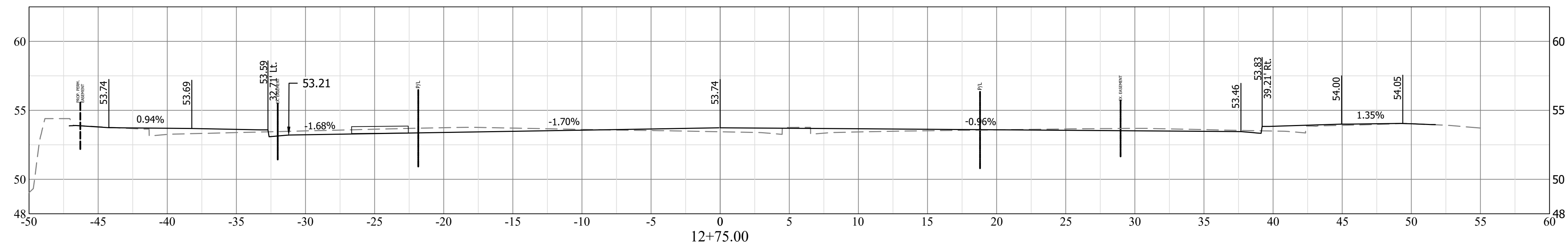
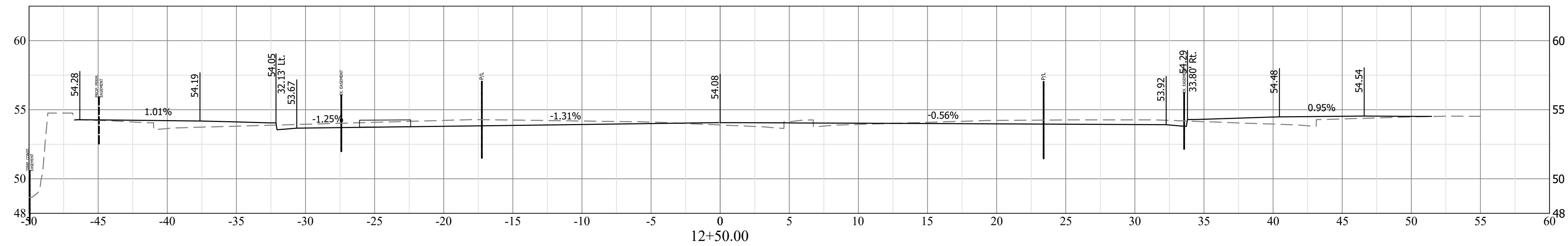
SHEET C044.4

18TH STREET SOUTH

SOUTH 18TH STREET BASELINE



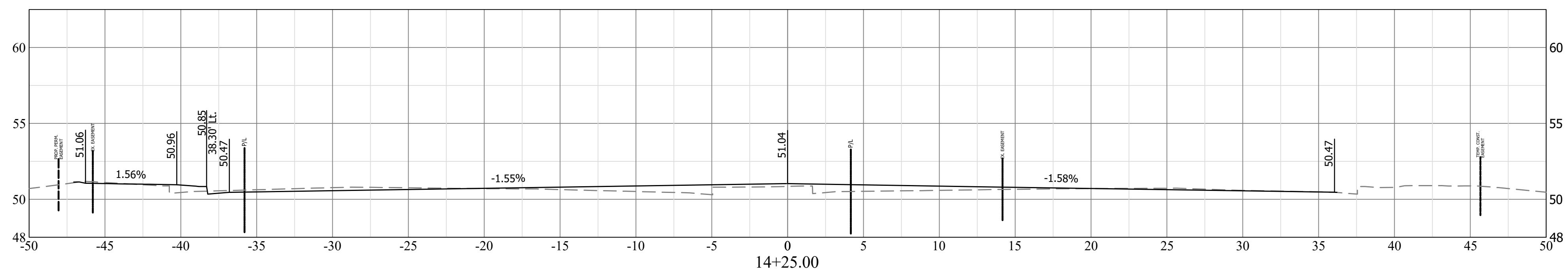
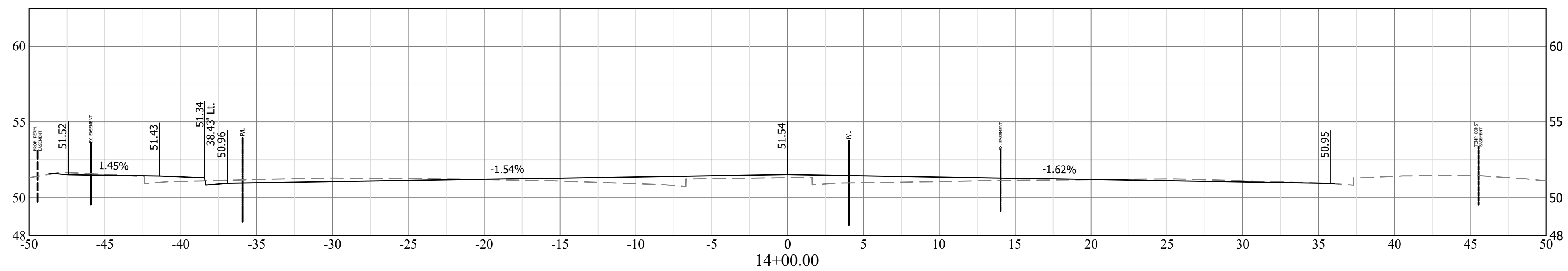
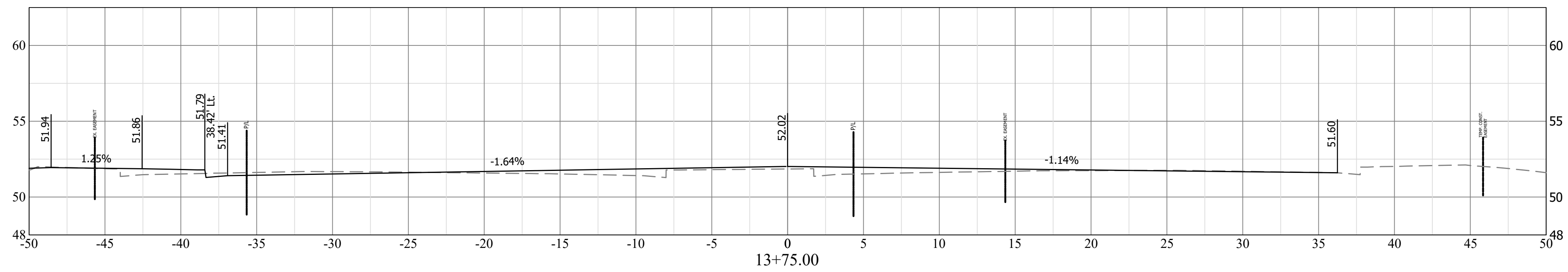
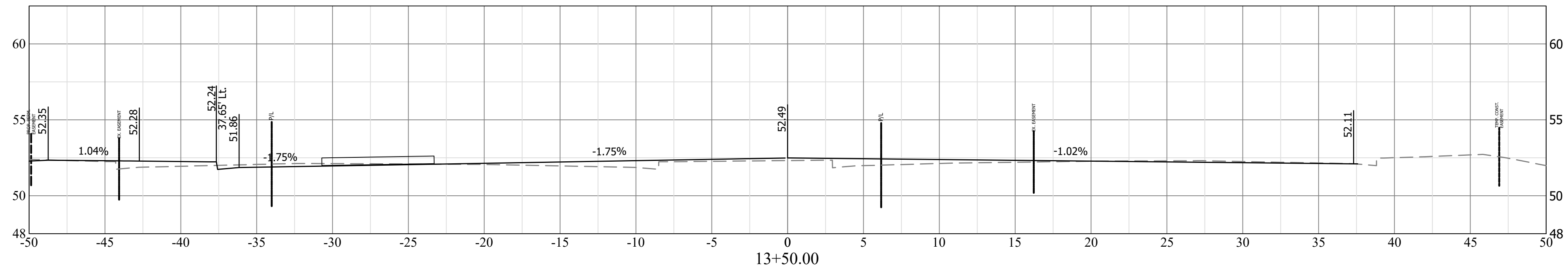
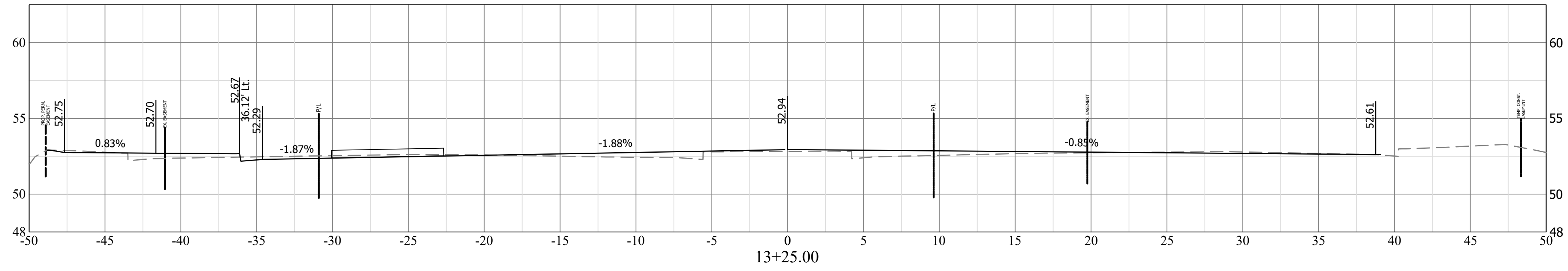
SOUTH 18TH STREET BASELINE



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SOUTH 18TH STREET BASELINE



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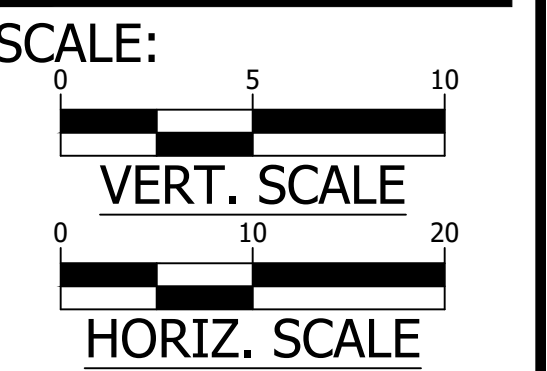


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
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Kamal N. Takab	
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Dennis W. Leach	6/24/20
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
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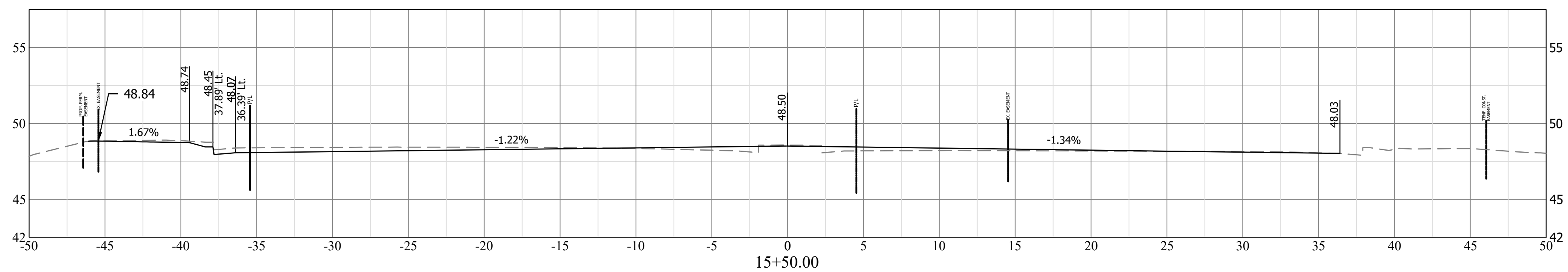
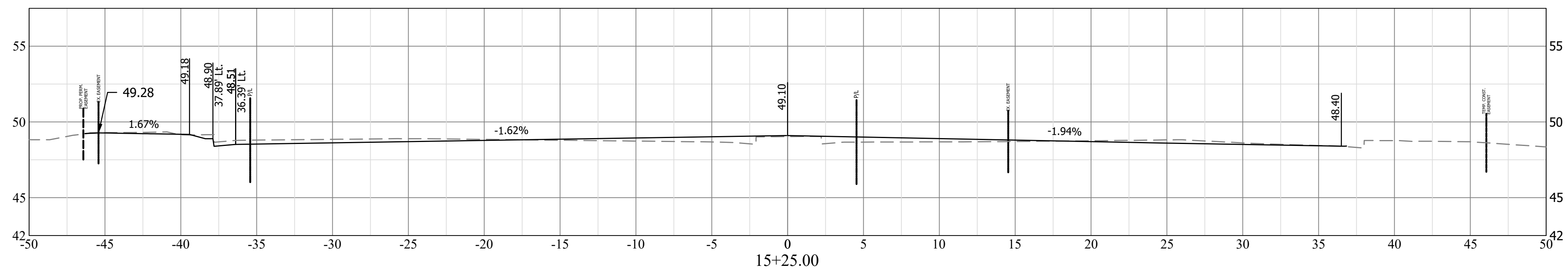
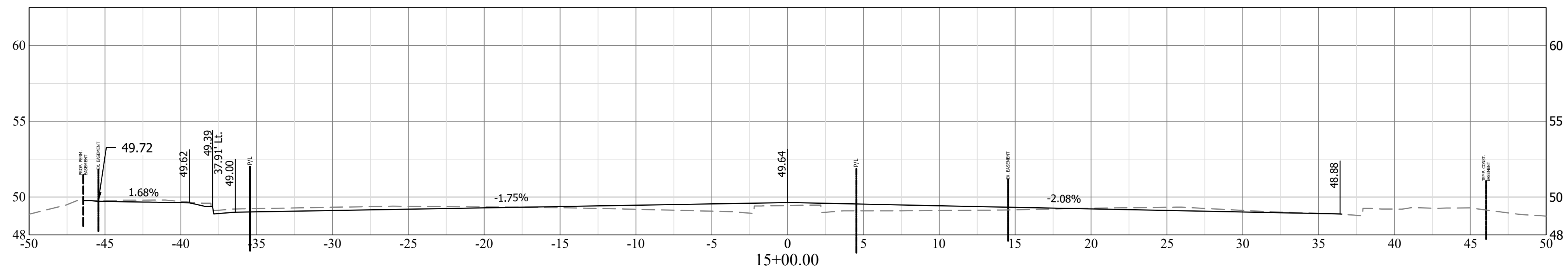
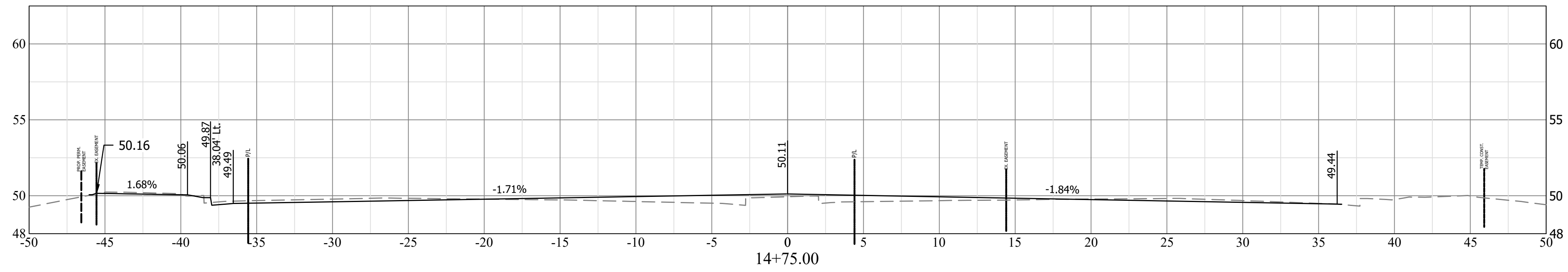
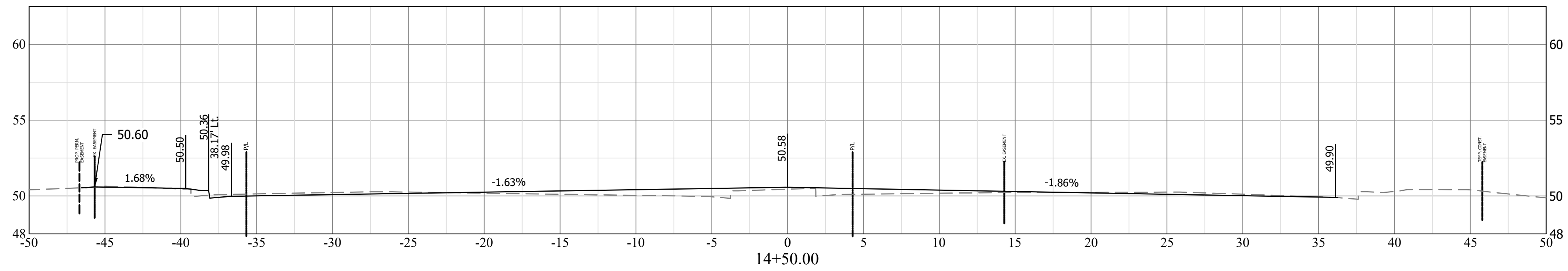
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SHEET C044.5

18TH STREET SOUTH

SOUTH 18TH STREET BASELINE



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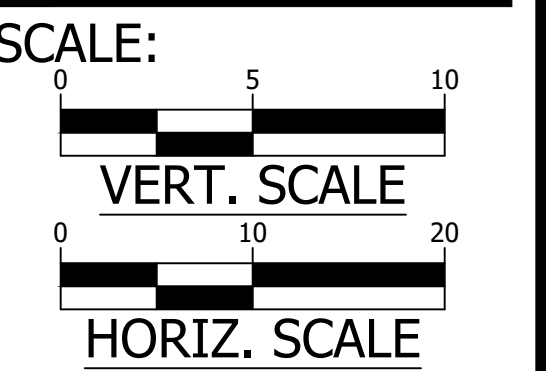


APPROVALS	DATE
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Dennis W. Leach	6/24/20
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
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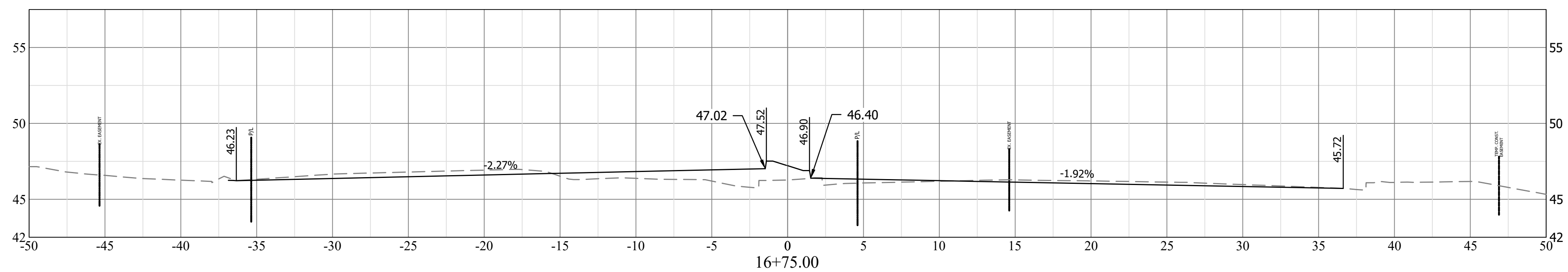
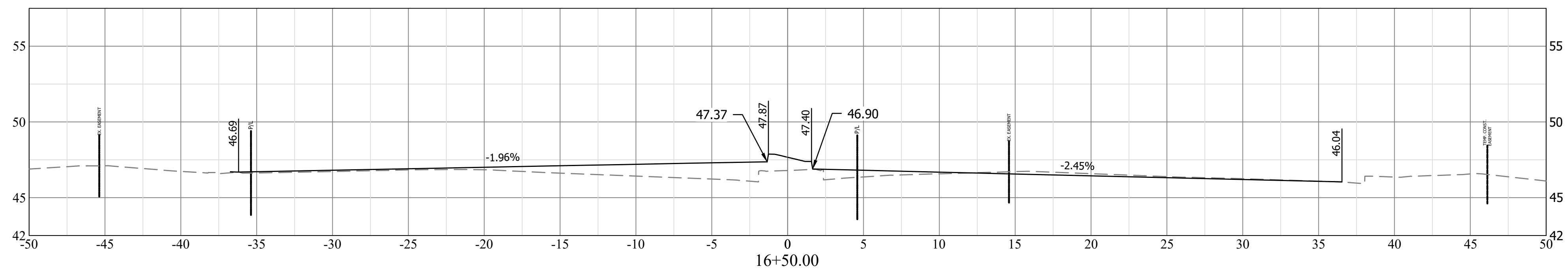
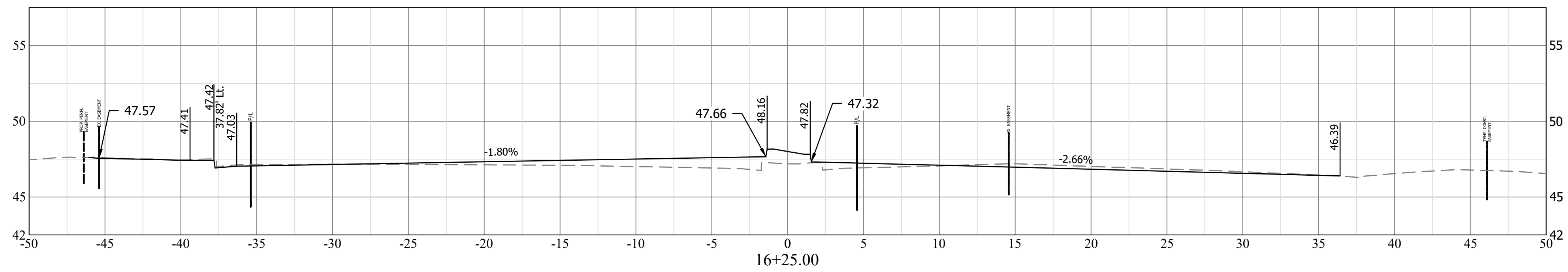
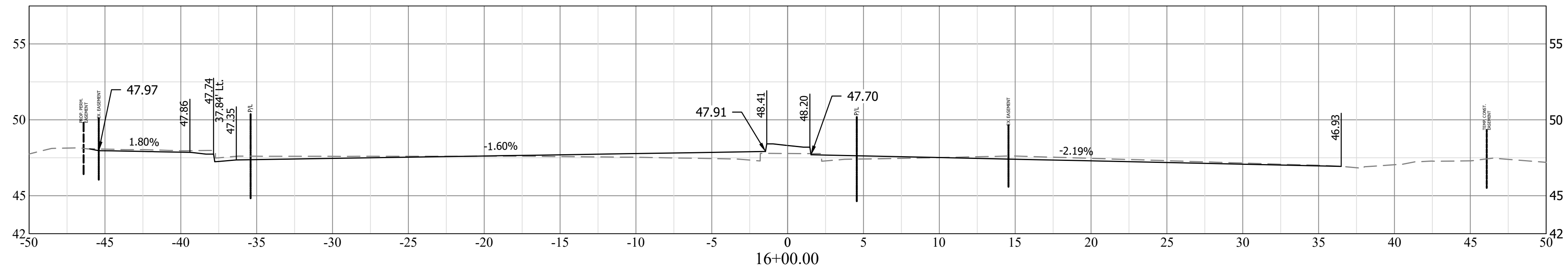
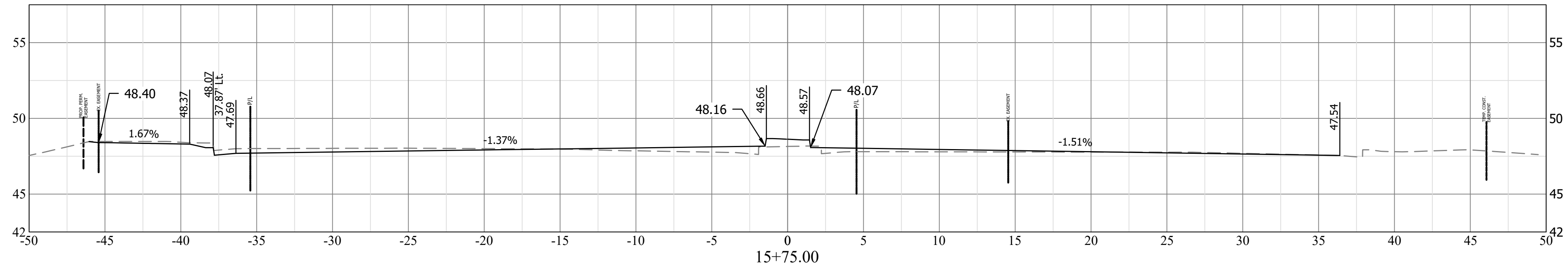
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SHEET C044.6

18TH STREET SOUTH

SOUTH 18TH STREET BASELINE



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REVISED ON 11/08/2016



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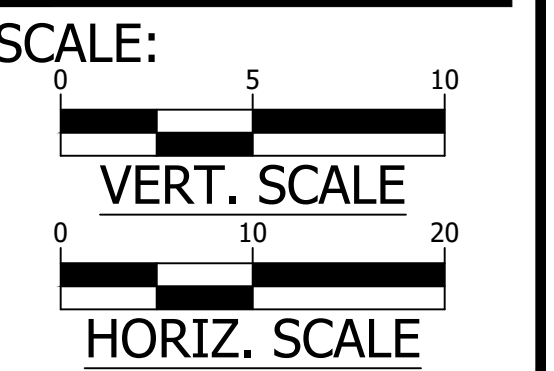


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Takah	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
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WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
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 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

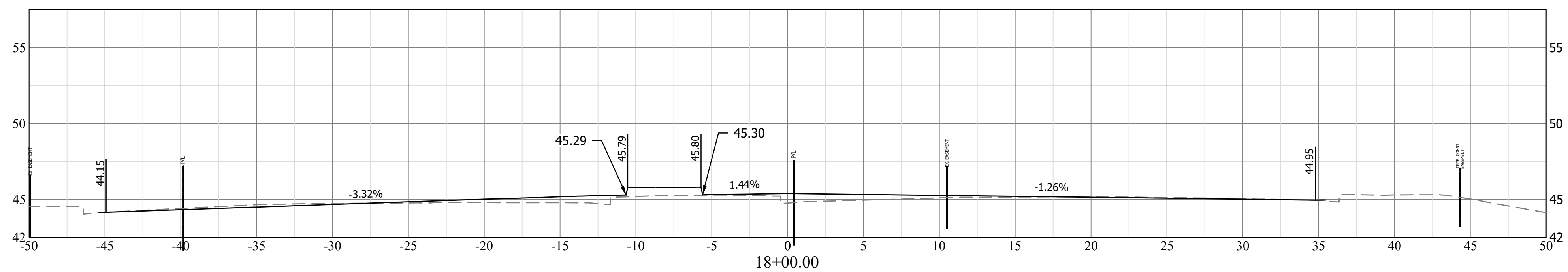
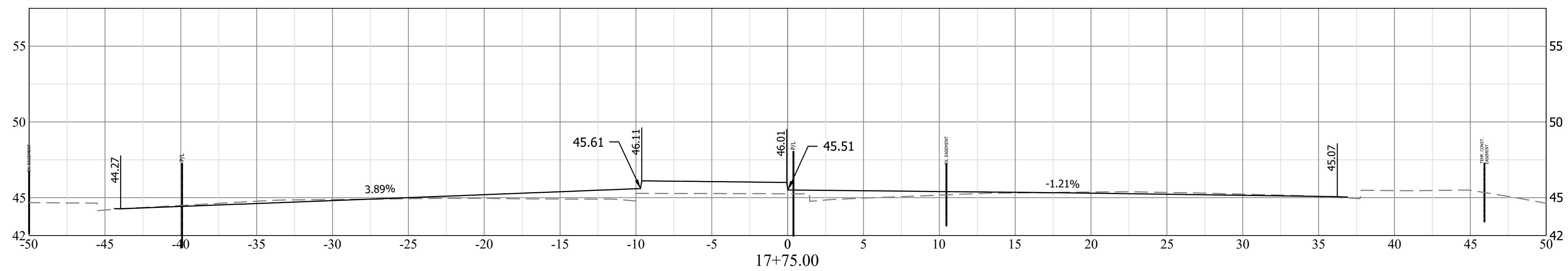
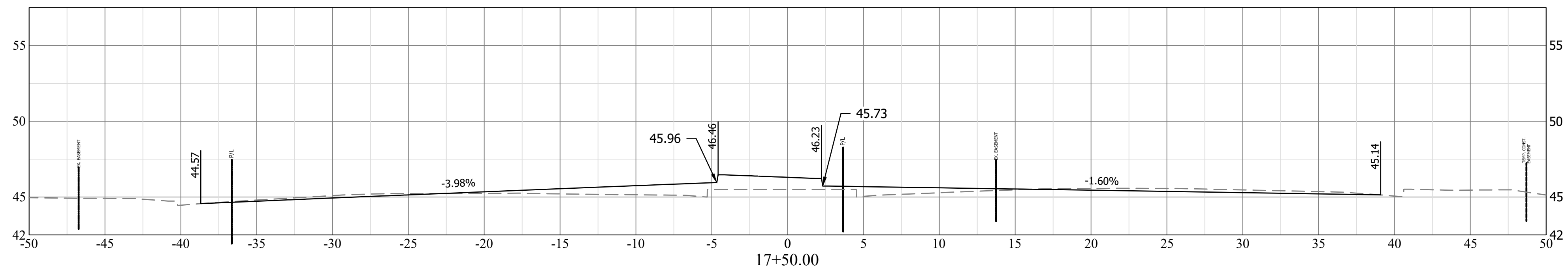
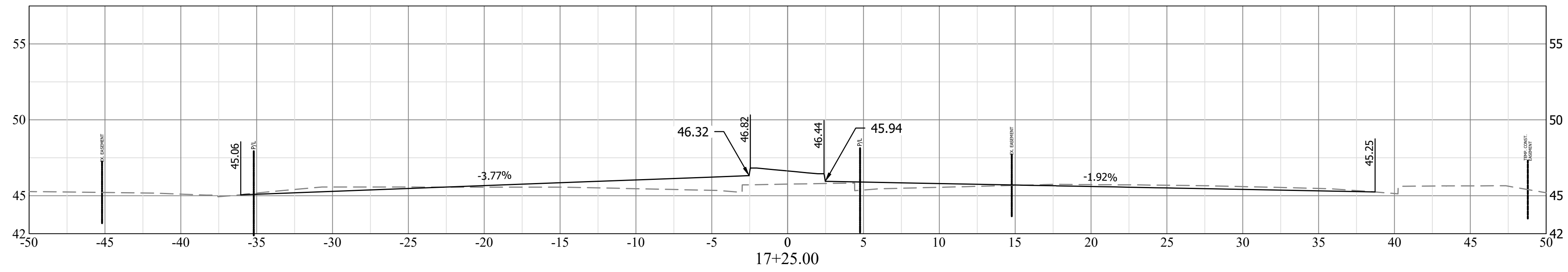
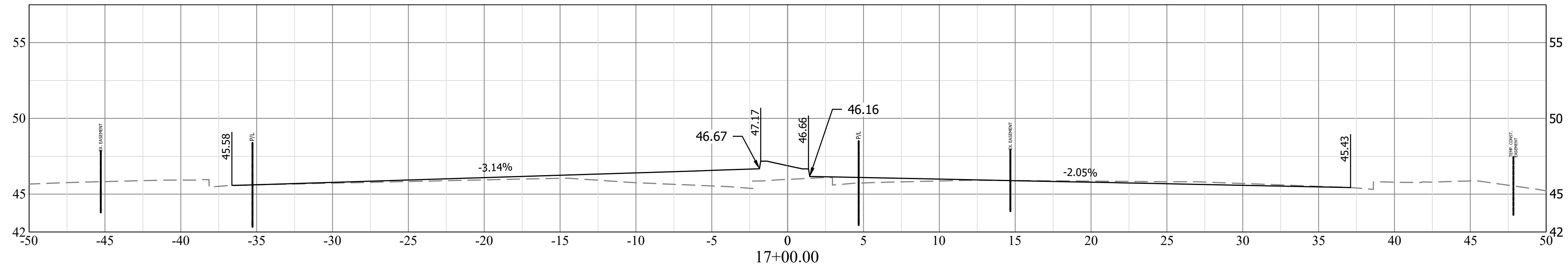
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SHEET C044.7

18TH STREET SOUTH

SOUTH 18TH STREET BASELINE



1. REFER TO PLAN AND PROFILE SHEET FOR SECTIONS THAT ARE TO BE MILL AND OVERLAY INSTEAD OF FULL DEPTH PAVEMENT
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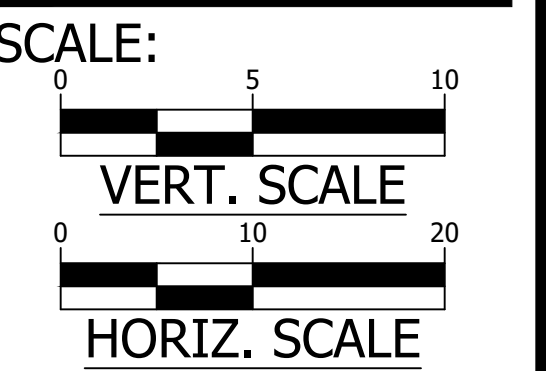


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WATER, SEWER, STREETS BUREAU CHIEF	
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TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 CROSS-SECTIONS
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

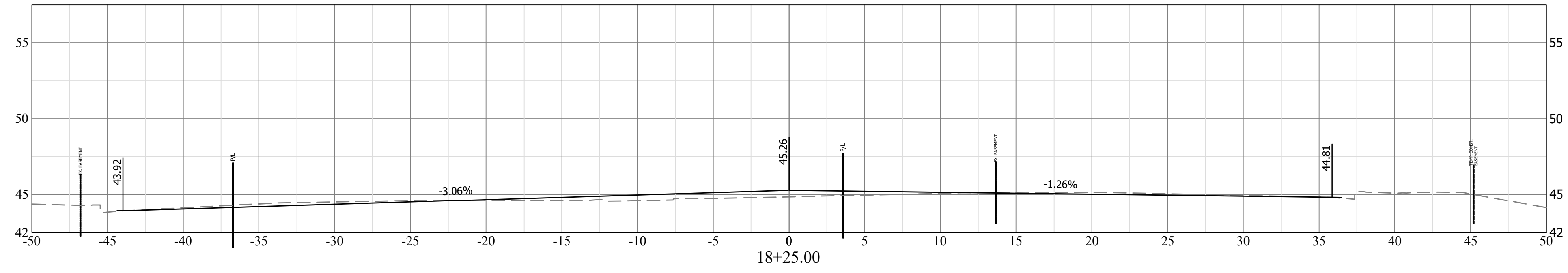
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SHEET C044.8

18TH STREET SOUTH

SOUTH 18TH STREET BASELINE



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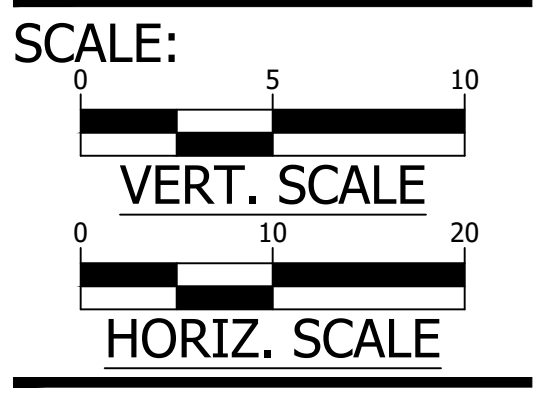


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
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<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
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WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
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18TH STREET SOUTH
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SHEET C044.9

18TH STREET SOUTH

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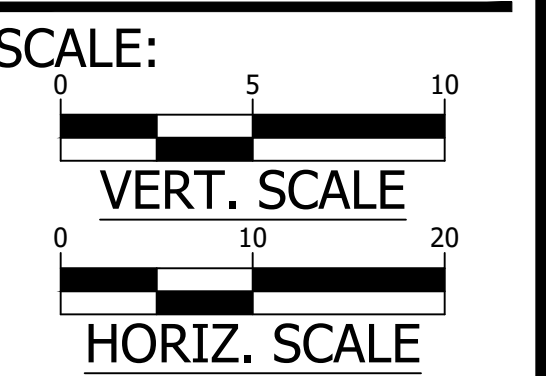


APPROVALS	DATE
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QUALITY CONTROL ENGINEER	6.26.20
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CONSTRUCTION MANAGEMENT SUPERVISOR	
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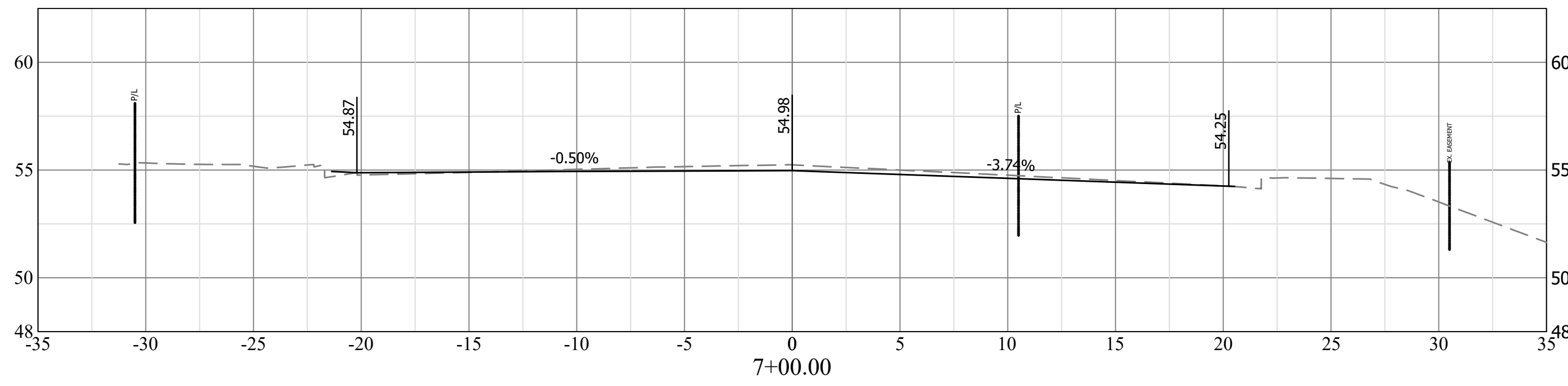
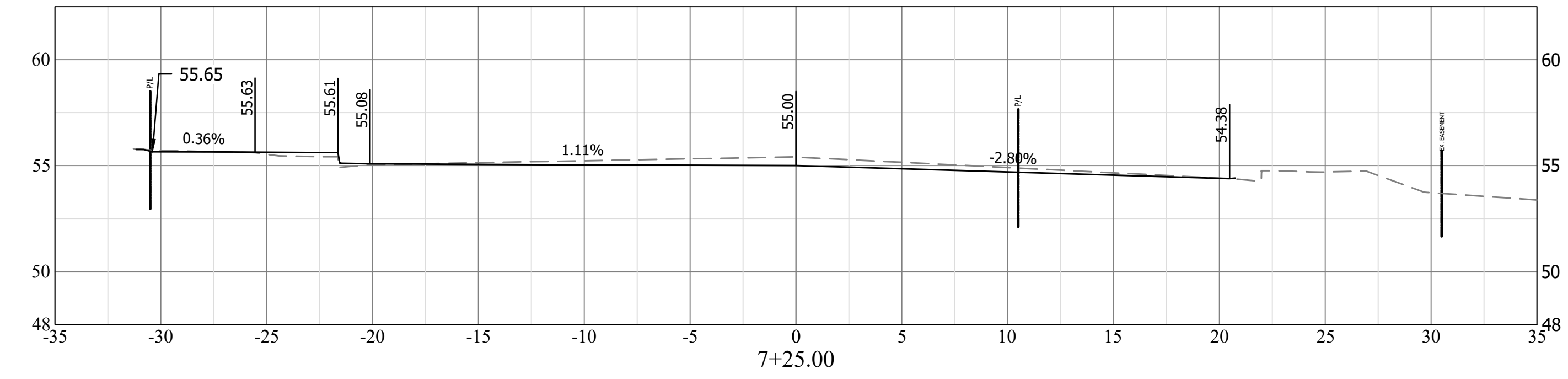
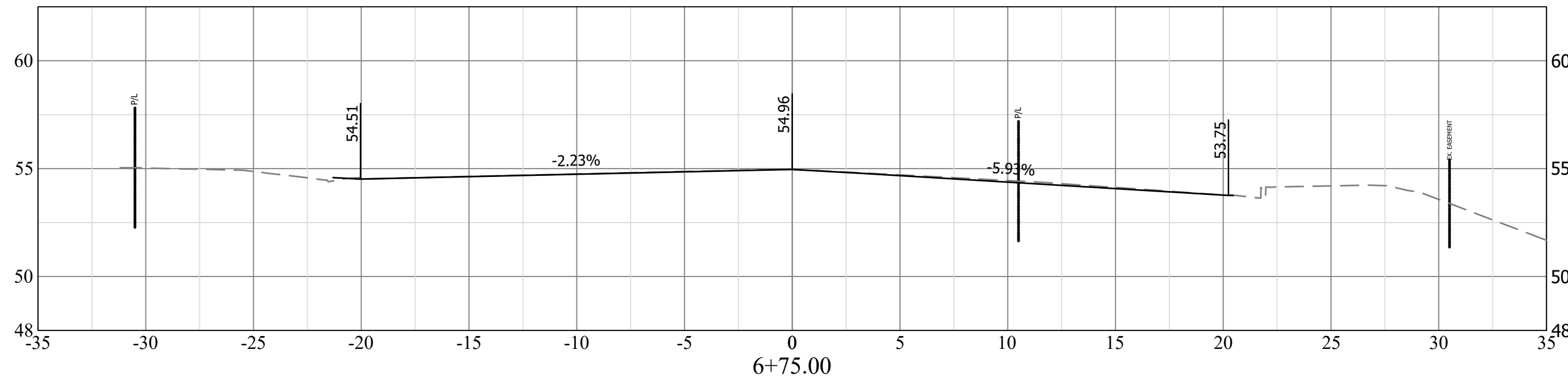
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18TH STREET SOUTH
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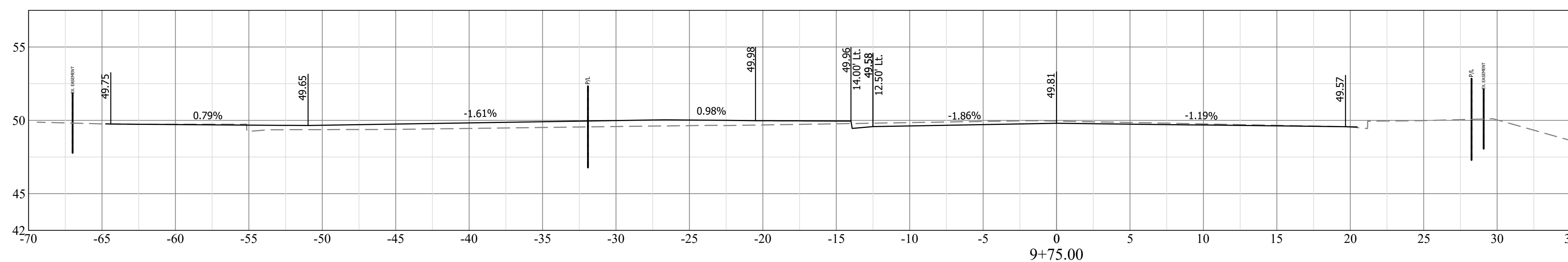
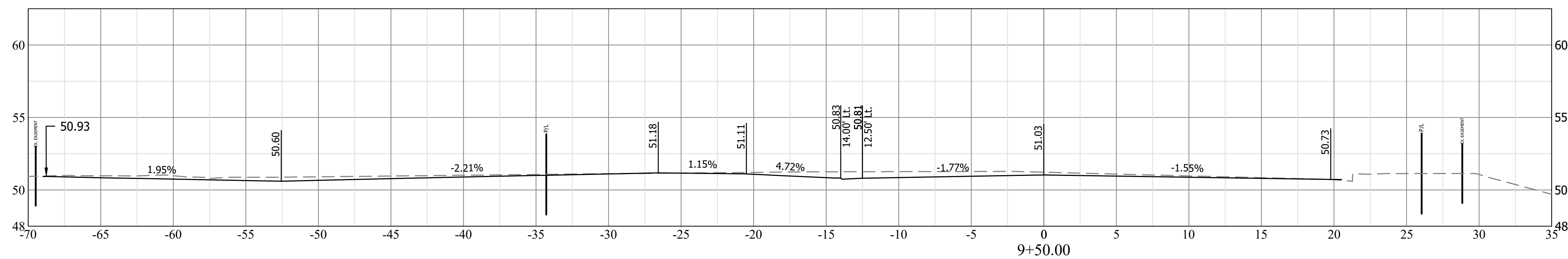
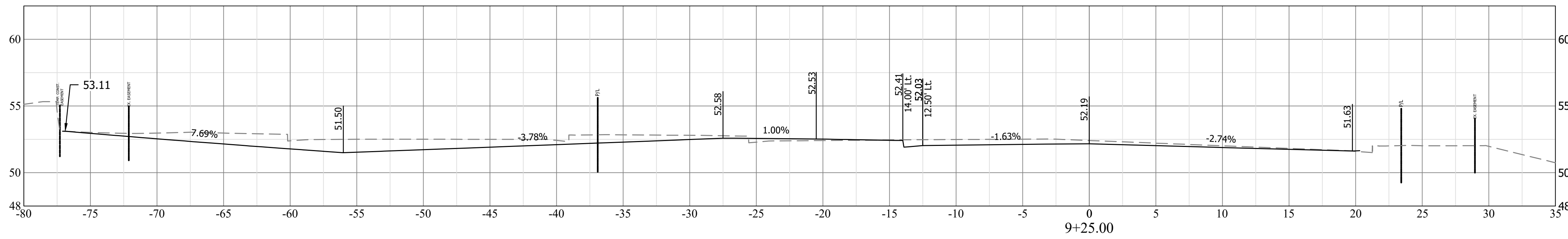
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SOUTH FERN STREET BASELINE

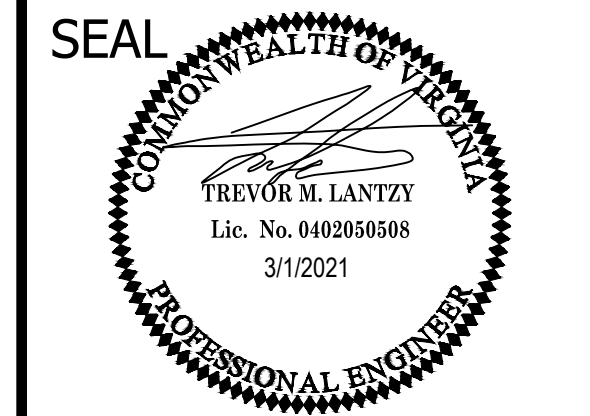


SOUTH FERN STREET BASELINE



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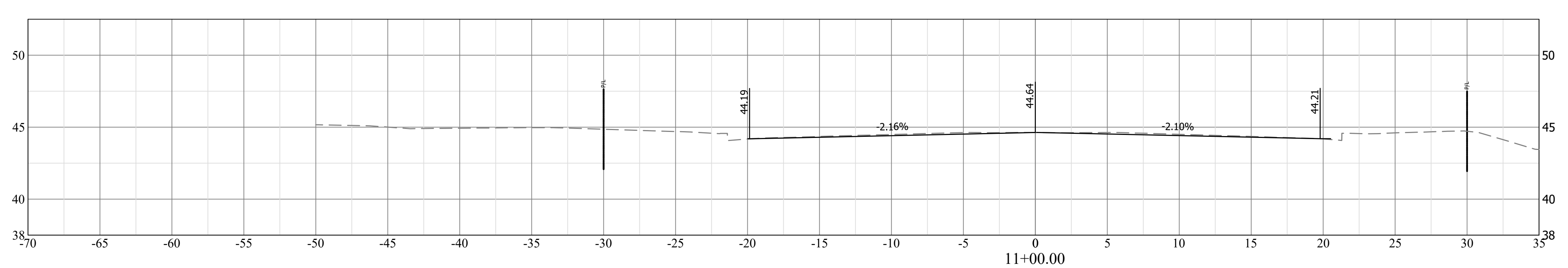
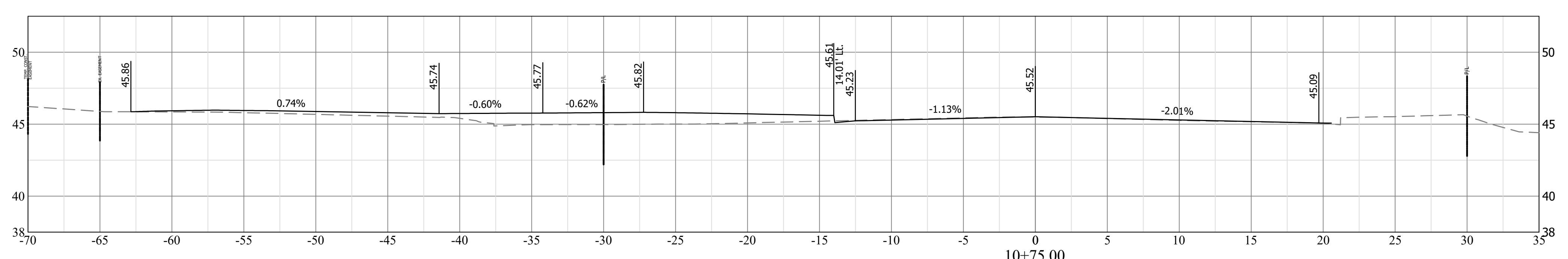
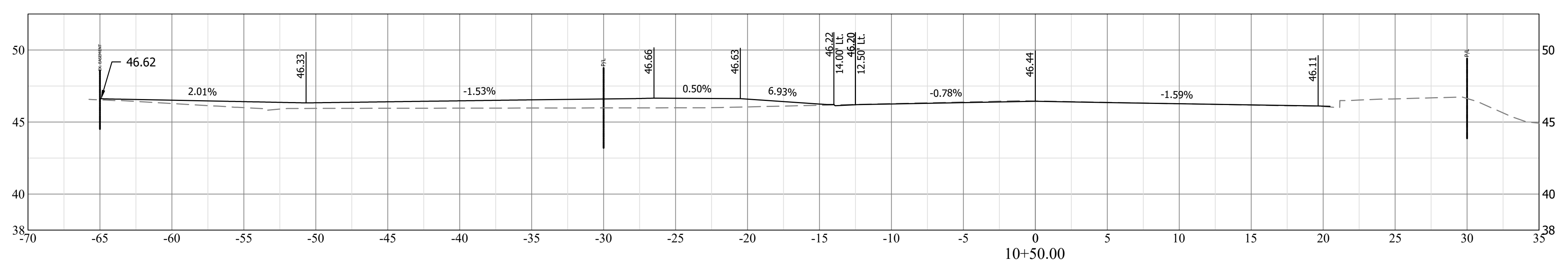
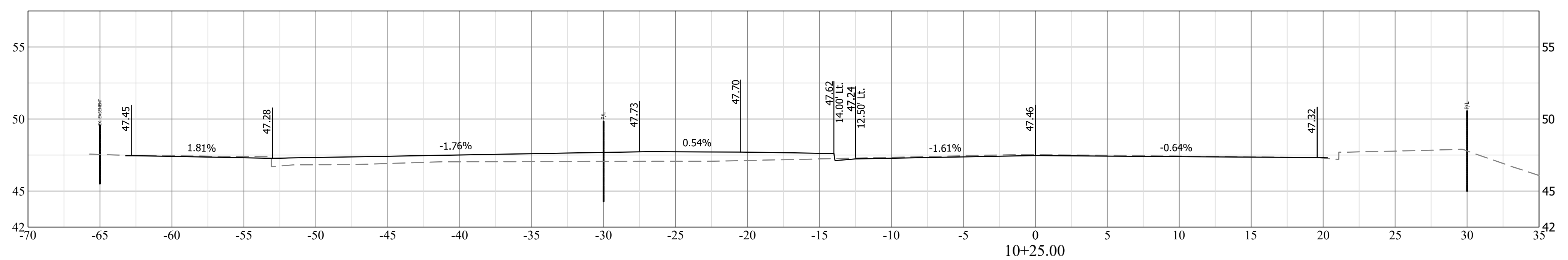
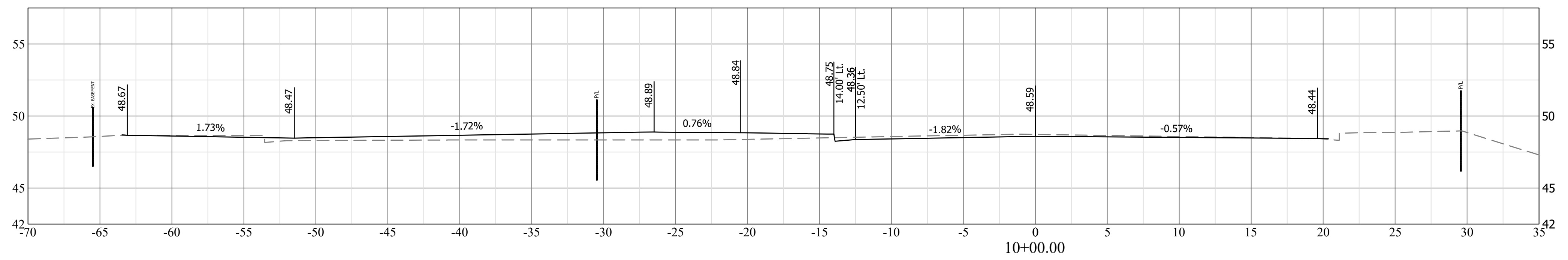
REVISED ON 11/08/2016



APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	6/17/2020
<i>Ariel Yang</i>	
PROJECT MANAGER	

REVISIONS	DATE

SOUTH FERN STREET BASELINE

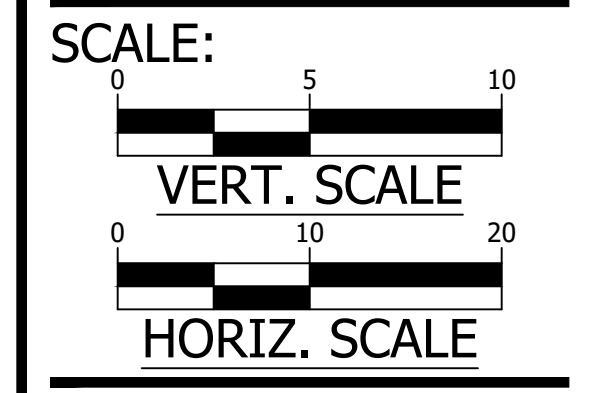


- REFER TO PLAN AND PROFILE SHEET FOR SECTIONS THAT ARE TO BE MILL AND OVERLAY INSTEAD OF FULL DEPTH PAVEMENT
- SEE TYPICAL SECTION ON SHEET C004.1 FOR PAVEMENT AND SIDEWALK INFORMATION

REVISED ON 11/08/2016

18TH STREET SOUTH
CROSS-SECTIONS
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



LINE AND CURVE TABLES LOCATED ON SHEET C045.3



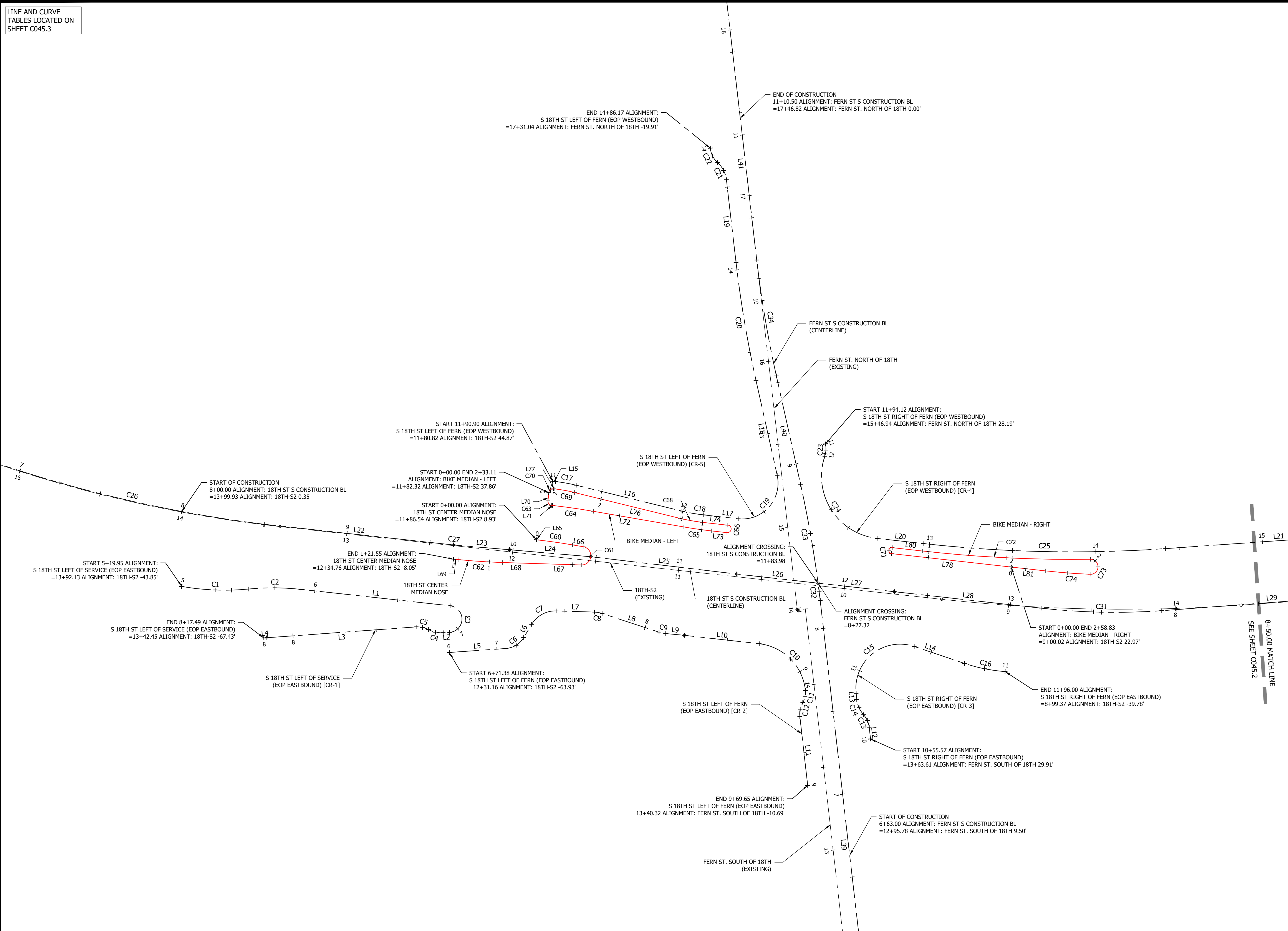
DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
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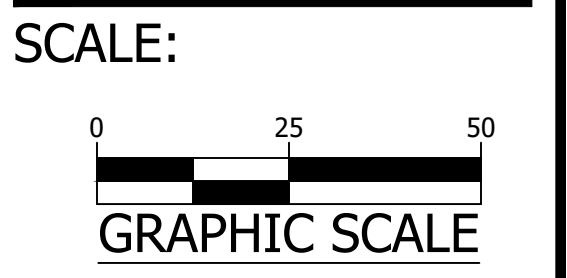
APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	6/24/20
Dennis W. Leach	
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE



18TH STREET SOUTH
 GEOMETRIC PLAN
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED BY: NSHARP



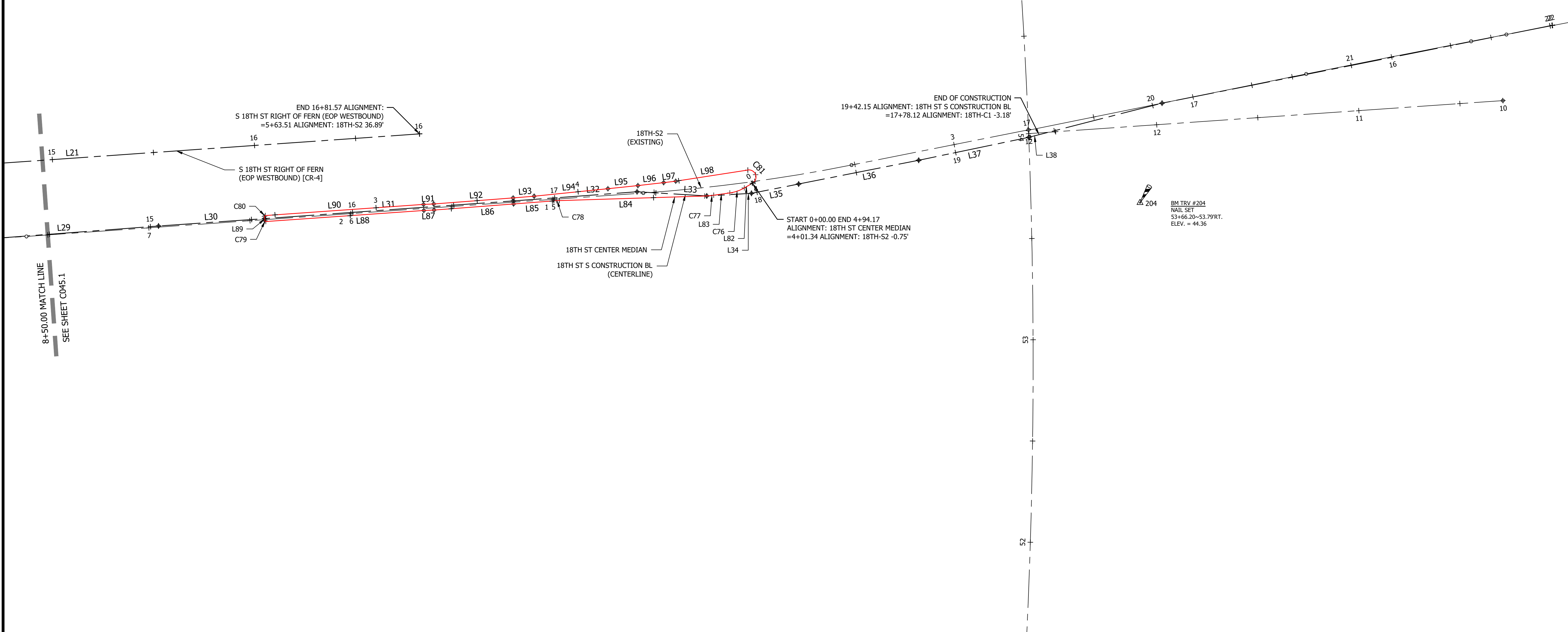
SHEET C045.1

18TH STREET SOUTH

REVISED ON 11/08/2016

LINE AND CURVE TABLES LOCATED ON SHEET C045.3

18TH ST CENTER MEDIAN										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C76	7.59'	20.00'	S70° 54' 54.06"W	7.55'	21° 44' 43"	3.84'	0+04.63	0+12.22	6998517.005, 11894782.659	6998514.538, 11894775.529
C77	4.48'	40.00'	S84° 59' 42.50"W	4.48'	6° 24' 54"	2.24'	0+20.28	0+24.76	6998513.387, 11894767.555	6998512.996, 11894763.096
C78	2.69'	60.00'	S86° 55' 11.57"W	2.69'	2° 33' 55"	1.34'	0+96.49	0+99.18	6998510.746, 11894691.398	6998510.602, 11894688.716
C79	0.79'	0.50'	N49° 00' 36.68"W	0.71'	90° 00' 00"	0.50'	2+41.70	2+42.48	6998500.391, 11894546.564	6998500.855, 11894546.030
C80	0.79'	0.50'	N40° 59' 23.32"E	0.71'	90° 00' 00"	0.50'	2+44.48	2+45.27	6998502.850, 11894545.890	6998503.383, 11894546.354
C81	9.70'	3.50'	S19° 22' 41.67"E	6.88'	158° 50' 28"	18.74'	4+84.46	4+94.17	6998525.810, 11894784.390	6998519.318, 11894786.674
L82	4.63'		S60° 02' 32.42"W				0+00.00	0+04.63	6998519.318, 11894786.674	6998517.005, 11894782.659
L83	8.06'		S81° 47' 15.71"W				0+12.22	0+20.28	6998514.538, 11894775.529	6998513.387, 11894767.555
L84	71.73'		S88° 12' 09.30"W				0+24.76	0+96.49	6998512.996, 11894763.096	6998510.746, 11894691.398
L85	19.97'		S85° 38' 22.99"W				0+99.18	1+19.15	6998510.602, 11894688.716	6998509.083, 11894668.799
L86	39.35'		S85° 38' 09.23"W				1+19.15	1+58.50	6998509.083, 11894668.799	6998506.089, 11894629.568
L87	5.04'		S87° 21' 17.76"W				1+58.50	1+63.54	6998506.089, 11894629.568	6998505.857, 11894624.531
L88	78.16'		S85° 59' 23.32"W				1+63.54	2+41.70	6998505.857, 11894624.531	6998500.391, 11894546.564
L89	2.00'		N4° 00' 36.68"W				2+42.48	2+44.48	6998500.855, 11894546.030	6998502.850, 11894545.890
L90	78.19'		N85° 59' 23.32"E				2+45.27	3+23.46	6998503.383, 11894546.354	6998508.852, 11894624.356
L91	5.04'		N87° 21' 17.76"E				3+23.46	3+28.50	6998508.852, 11894624.356	6998509.084, 11894629.393
L92	39.30'		N85° 38' 07.30"E				3+28.50	3+67.80	6998509.084, 11894629.393	6998512.075, 11894668.579
L93	10.41'		N85° 19' 52.50"E				3+67.80	3+78.21	6998512.075, 11894668.579	6998512.922, 1189478.951
L94	36.59'		N84° 11' 56.42"E				3+78.21	4+14.80	6998512.922, 11894678.951	6998516.621, 11894715.356
L95	14.89'		N84° 03' 40.54"E				4+14.80	4+29.69	6998516.621, 11894715.356	6998518.161, 11894730.162
L96	12.78'		N83° 28' 48.29"E				4+29.69	4+42.47	6998518.161, 11894730.162	6998519.612, 11894742.860
L97	6.02'		N83° 22' 33.79"E				4+42.47	4+48.49	6998519.612, 11894742.860	6998520.307, 11894748.839
L98	35.98'		N81° 12' 04.24"E				4+48.49	4+84.46	6998520.307, 11894748.839	6998525.810, 11894784.390



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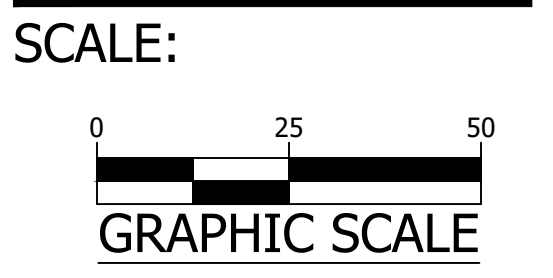


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	
Ariel Yang	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 GEOMETRIC PLAN
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



SHEET C045.2

18TH STREET SOUTH

REVISED ON 11/08/2016

18TH ST S CONSTRUCTION BL										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C26	250.08'	817.97'	S74° 09' 06.07"E	249.11'	17° 31' 02"	126.02'	6+00.00	8+50.08	6998609.497, 11893603.237	6998541.467, 11893842.878
C27	0.24'	10.00'	S84° 27' 03.66"E	0.24'	1° 20' 59"	0.12'	9+64.04	9+64.28	6998529.112, 11893956.165	6998529.090, 11893956.400
C31	72.49'	400.50'	S88° 47' 16.65"E	72.39'	10° 22' 16"	36.35'	13+18.50	13+90.99	6998491.222, 11894038.566	6998489.690, 11894380.944
L22	113.96'		S83° 46' 33.95"E				8+50.08	9+64.04	6998541.467, 11893842.878	6998529.112, 11893956.165
L23	33.66'		S85° 07' 33.38"E				9+64.28	9+97.94	6998529.090, 11893956.400	6998526.229, 11893989.942
L24	48.68'		S85° 05' 27.19"E				9+97.95	10+46.63	6998526.229, 11893989.948	6998522.063, 11894038.452
L25	87.92'		S83° 14' 28.24"E				10+46.95	11+34.87	6998522.030, 11894038.773	6998511.683, 11894126.083
L26	49.04'		S83° 36' 08.83"E				11+34.94	11+83.98	6998511.675, 11894126.146	6998506.211, 11894174.879
L27	46.01'		S83° 36' 08.83"E				11+83.98	12+29.99	6998506.211, 11894174.879	6998501.084, 11894220.606
L28	88.51'		S83° 36' 08.83"E				12+29.99	13+18.50	6998501.084, 11894220.606	6998491.222, 11894308.566
L29	112.96'		N85° 41' 22.64"E				13+90.99	15+03.96	6998489.690, 11894380.944	6998498.181, 11894493.589
L30	52.50'		N85° 59' 23.32"E				15+03.96	15+56.46	6998498.181, 11894493.589	6998501.852, 11894545.960
L31	123.04'		N85° 55' 57.18"E				15+56.46	16+79.50	6998501.852, 11894545.960	6998510.579, 11894668.688
L32	61.23'		N85° 45' 49.70"E				16+79.50	17+40.72	6998510.579, 11894668.688	6998515.102, 11894729.749
L33	34.47'		S86° 34' 31.96"E				17+40.72	17+75.19	6998515.102, 11894729.749	6998513.043, 11894764.152
L34	22.08'		N86° 41' 18.13"E				17+75.19	17+97.27	6998513.043, 11894764.152	6998514.319, 11894786.196
L35	23.76'		N78° 47' 46.51"E				17+97.27	18+21.03	6998514.319, 11894786.196	6998518.936, 11894809.506
L36	60.39'		N78° 47' 46.51"E				18+21.03	18+81.42	6998518.936, 11894809.506	6998530.669, 11894868.744
L37	55.47'		N78° 13' 45.15"E				18+81.42	19+36.89	6998530.669, 11894868.744	6998541.984, 11894923.043
L38	67.92'		N75° 36' 29.72"E				19+36.89	20+04.80	6998541.984, 11894923.043	6998558.865, 11894988.828

FERN ST S CONSTRUCTION BL										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C32	10.44'	675.00'	N7° 02' 29.55"W	10.44'	0° 53' 10"	5.22'	8+16.88	8+27.32	6998495.852, 11894176.158	6998506.211, 11894174.879
C33	60.25'	675.00'	N10° 02' 30.04"W	60.23'	5° 06' 51"	30.15'	8+27.32	8+87.57	6998506.211, 11894174.879	6998565.519, 11894164.377
C34	70.45'	675.00'	N9° 36' 32.22"W	70.41'	5° 58' 47"	35.26'	9+54.11	10+24.56	6998630.457, 11894149.863	6998699.884, 11894138.109
L39	316.88'		N6° 35' 54.70"W				5+00.00	8+16.88	6998181.071, 11894212.572	6998495.852, 11894176.158
L40	66.54'		N12° 35' 55.69"W				8+16.88	9+54.11	6998565.519, 11894164.377	6998630.457, 11894149.863
L41	275.44'		N6° 37' 08.75"W				10+24.56	13+00.00	6998699.884, 11894138.109	6998973.488, 11894106.359

18TH ST CENTER MEDIAN NOSE										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C60	21.71'	351.50'	S81° 55' 30.94"E	21.70'	3° 32' 17"	10.86'	0+00.05	0+21.76	6998532.196, 11894006.130	6998529.147, 11894027.618
C61	16.51'	5.50'	S5° 49' 09.93"W	10.97'	171° 57' 04"	78.18'	0+28.32	0+44.82	6998528.026, 11894034.082	6998517.109, 11894032.969
C62	26.34'	400.00'	N86° 19' 06.83"W	26.33'	3° 46' 22"	13.17'	0+92.01	1+18.35	6998518.587, 11893985.807	6998520.278, 11893959.527
L65	0.05'		S83° 41' 39.68"E				0+00.00	0+00.05	6998532.201, 11894006.081	6998532.196, 11894006.130
L66	6.56'		S80° 09' 22.21"E				0+21.76	0+28.32	6998529.147, 11894027.618	6998528.026, 11894034.082
L67	47.19'		N88° 12' 17.93"W				0+44.82	0+92.01	6998517.109, 11894032.969	6998518.587, 11893985.807
L68	47.19'		N88° 12' 17.93"W				0+44.82	0+92.01	6998517.109, 11894032.969	6998518.587, 11893985.807
L69	3.20'		N84° 25' 55.73"W				1+18.35	1+21.55	6998520.278, 11893959.527	6998520.589, 11893956.339

BIKE MEDIAN - LEFT										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C63	3.91'	2.50'	S38° 51' 48.64"E	3.53'	89° 39' 42"	2.49'	0+04.95	0+08.86	6998555.571, 11894012.970	6998552.826, 11894015.182
C64	24.70'	400.00'	S81° 55' 30.94"E	24.70'	3° 32' 17"	12.35'	0+09.40	0+34.10	6998552.767, 11894015.716	6998549.298, 11894040.168
C65	16.63'	276.50'	S81° 52' 45.52"E	16.63'	3° 26' 47"	8.32'	0+89.14	1+05.77	6998539.889, 11894094.396	6998537.540, 11894110.858
C66	7.07'	2.25'	N6° 23' 51.17"E	4.50'	180° 00' 00"	INFINITY	1+15.22	1+22.29	6998536.487, 11894120.248	6998540.959, 11894120.749
C68	13.59'	106.00'	N79° 55' 51.25"W	13.58'	7° 20' 35"	6.80'	1+37.60	1+51.18	6998542.665, 11894105.532	6998545.039, 11894092.166
C69	11.89'	94.00'	N79° 53' 03.15"W	11.89'	7° 14' 59"	5.95'	2+16.42	2+28.31	6998560.534, 11894028.798	6998562.621, 11894017.097
C70	3.95'	2.50'	S51° 13' 44.88"W	3.55'	90° 31' 25"	2.52'	2+29.16	2+33.11	6998562.717, 11894016.254	6998560.493, 11894013.484
L70	4.95'		S5° 58' 02.41"W				0+00.00	0+04.95	6998560.493, 11894013.484	6998555.571, 11894012.970
L71	0.54'		S83° 41' 39.68"E				0+08.86	0+09.40	6998552.826, 11894015.182	6998552.767, 11894015.716
L72	55.04'		S80° 09' 22.21"E				0+34.10	0+89.14	6998549.298, 11894040.168	6998539.889, 11894094.396
L73	9.45'		S83° 36' 08.83"E				1+05.77	1+15.22	6998537.540, 11894110.858	6998536.487, 11894120.248
L74	15.31'		N83° 36' 08.83"W				1+22.29	1+37.60	6998540.959, 11894120.749	6998542.665, 11894105.532
L76	65.23'		N76° 15' 33.66"W				1+51.18	2+16.42	6998545.039, 11894092.166	6998560.534, 11894028.798
L77	0.85'		N83° 30' 32.65"W				2+28.31	2+29.16	6998562.621, 11894017.097	6998562.717, 11894016.254

BIKE MEDIAN - RIGHT										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C71	5.67'	1.80'	N6° 23' 49.92"E	3.61'	180° 00' 00"	INFINITY	0+72.17	0+77.84	6998523.914, 11894218.921	6998527.499, 11894219.323
C72	100.91'	806.00'	S87° 11' 20.63"E	100.84'	7° 10' 24"	50.52'	0+96.00	1+96.91	6998525.475, 11894237.373	6998520.530, 11894338.094
C73	14.38'	4.50'	S0° 45' 56.87"W	9.00'	183° 04' 59"	167.22'	1+96.91	2+11.29	6998520.530, 11894338.094	6998511.534, 11894337.974
C74	26.98'	378.00'	N85° 38' 51.33"W	26.98'	4° 05' 25"	13.50'	2+11.29	2+38.28	6998511.534, 11894337.974	6998513.582, 11894311.073
L78	72.17'		N83° 36' 08.83"W				0+00.00	0+72.17	6998515.872, 11894290.644	6998523.914, 11894218.921
L80	18.16'		S83° 36' 08.83"E				0+77.84	0+96.00	6998527.499, 11894237.373	6998525.475, 11894237.373
L81	20.56'		N83° 36' 08.83"W				2+38.28	2+58.83	6998513.582, 11894311.073	6998515.872, 11894290.644

REVISED ON 11/08/2016

S 18TH ST LEFT OF SERVICE (EOP EASTBOUND)										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C1	40.36'	148.50'	S87° 46' 50.45"E	40.24'	15° 34' 22"	20.31'	5+19.95	5+60.31	6998504.248, 11893793.410	6998502.690, 11893833.617
C2	31.33'	151.50'	S89° 38' 35.71"E	31.27'	11° 50' 52"	15.72'	5+60.31	5+91.64	6998502.690, 11893833.617	6998502.495, 11893864.888
C3	23.74'	8.00'	S1° 18' 01.09"W	15.94'	170° 02' 22"	91.80'	6+81.60	7+05.34	6998492.654, 11893954.309	6998476.718, 11893953.947
C4	9.19'	16.50'	N77° 43' 20.26"W	9.07'	31° 54' 57"	4.72'	7+09.15	7+18.35	6998476.473, 11893950.142	6998478.403, 11893941.277
C5	7.63'	13.50'	N77° 57' 34.99"W	7.53'	32° 23' 27"	3.92'	7+18.35	7+25.98	6998478.403, 11893941.277	6998479.973, 11893933.912
L1	89.96'		S83° 43' 09.81"E				5+91.64	6+81.60	6998502.495, 11893864.888	6998492.654, 11893954.309
L2	3.81'		S86° 19' 12.00"W				7+05.34	7+09.15	6998476.718, 11893953.947	6998476.473, 11893950.142
L3	89.67'		S85° 50' 41.45"W				7+25.98	8+15.64	6998479.973, 11893933.912	6998473.476, 11893844.481
L4	1.84'		S85° 58' 03.23"W				8+15.64	8+17.49	6998473.476, 11893844.481	6998473.347, 11893842.641

S 18TH ST LEFT OF FERN (EOP EASTBOUND)										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C6	12.98'	13.50'	N58° 25' 34.07"E	12.48'	55° 04' 57"	7.04'	7+05.44	7+18.41	6998467.049, 11893987.790	6998473.585, 11893988.426
C7	17.54'	16.50'	N61° 20' 24.22"E	16.73'	60° 54' 36"	9.70'	7+27.69	7+45.23	6998481.547, 11894003.188	6998489.569, 11894017.865
C8	4.71'	16.50'	S80° 01' 29.62"E	4.70'	16° 21' 37"	2.37'	7+68.19	7+72.90	6998488.850, 11894040.813	6998488.036, 11894045.437
C9	4.11'	18.50'	S78° 12' 11.84"E	4.10'	12° 43' 01"	2.06'	8+08.81	8+12.92	6998476.848, 11894079.556	6998476.010, 11894083.568
C10	42.69'	31.50'	S44° 33' 35.84"E	39.50'	77° 39' 27"	25.35'	8+69.28	9+11.97	6998469.916, 11894139.597	6998441.771, 11894167.313
C11	7.32'	11.50'	S12° 30' 15.37"W	7.20'	36° 28' 16"	3.79'	9+11.97	9+19.29	6998441.771, 11894167.313	6998434.745, 11894165.755
C12	8.77'	13.53'	S12° 07' 06.31"W	8.62'	37° 08' 56"	4.55'	9+19.29	9+28.07	6998434.745, 118941	

LINE AND CURVE TABLES LOCATED ON SHEET C045.6



DEPARTMENT OF ENVIRONMENTAL SERVICES
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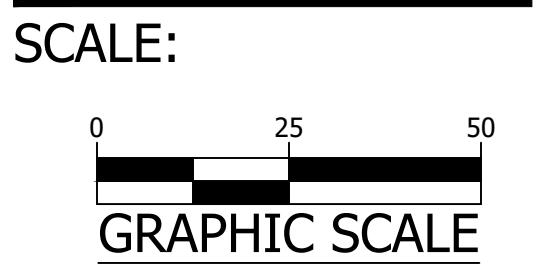


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>[Signature]</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

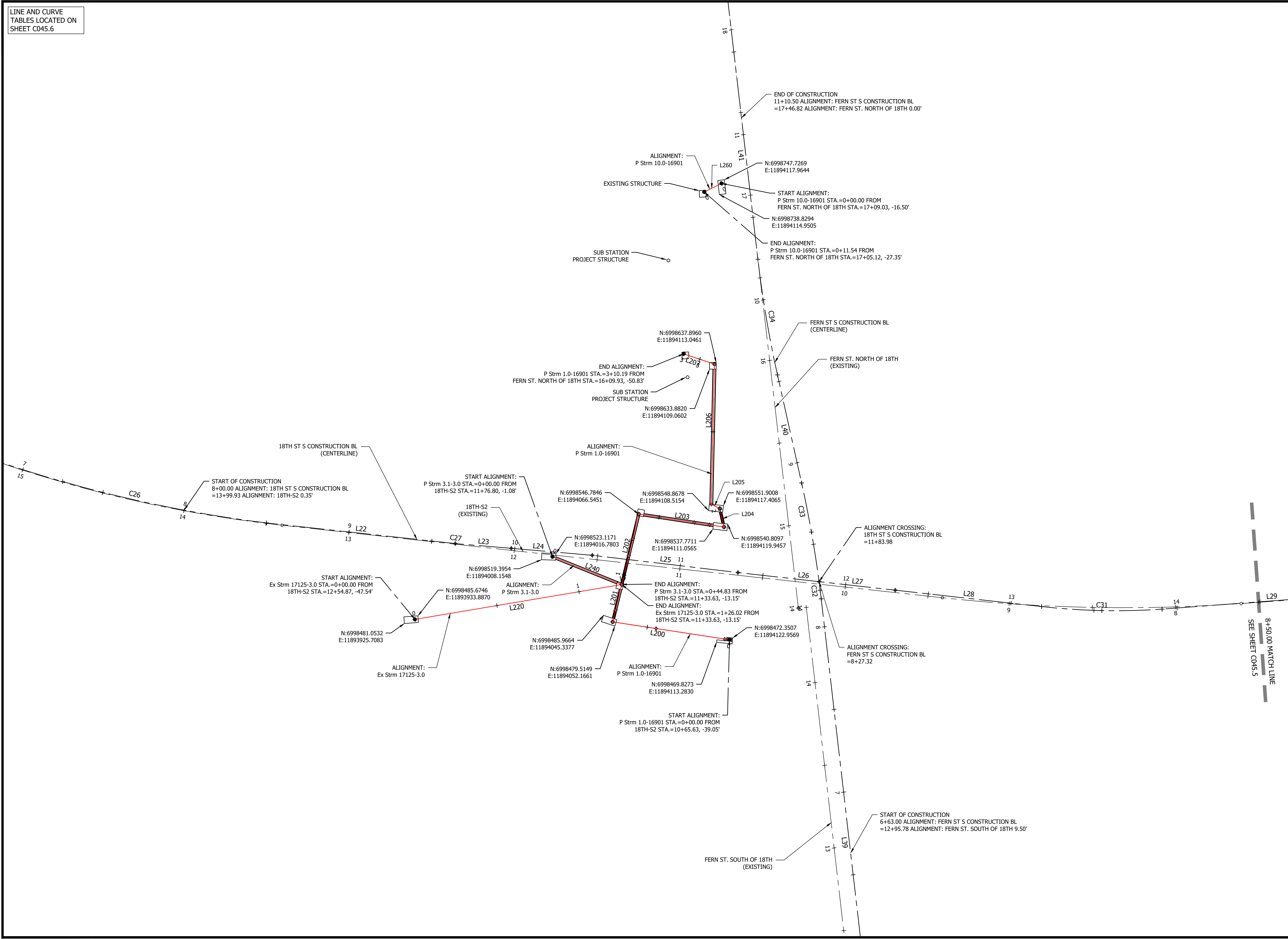
18TH STREET SOUTH
 UTILITY GEOMETRIC PLAN
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST

DESIGNED: NS
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 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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SHEET C045.4

18TH STREET SOUTH



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LINE AND CURVE
TABLES LOCATED ON
SHEET C045.6



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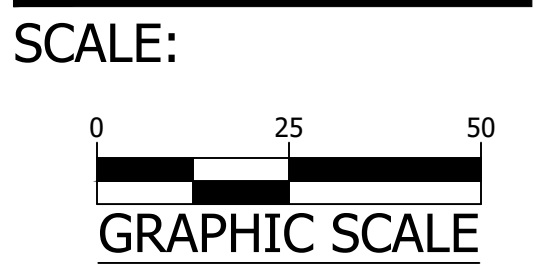


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

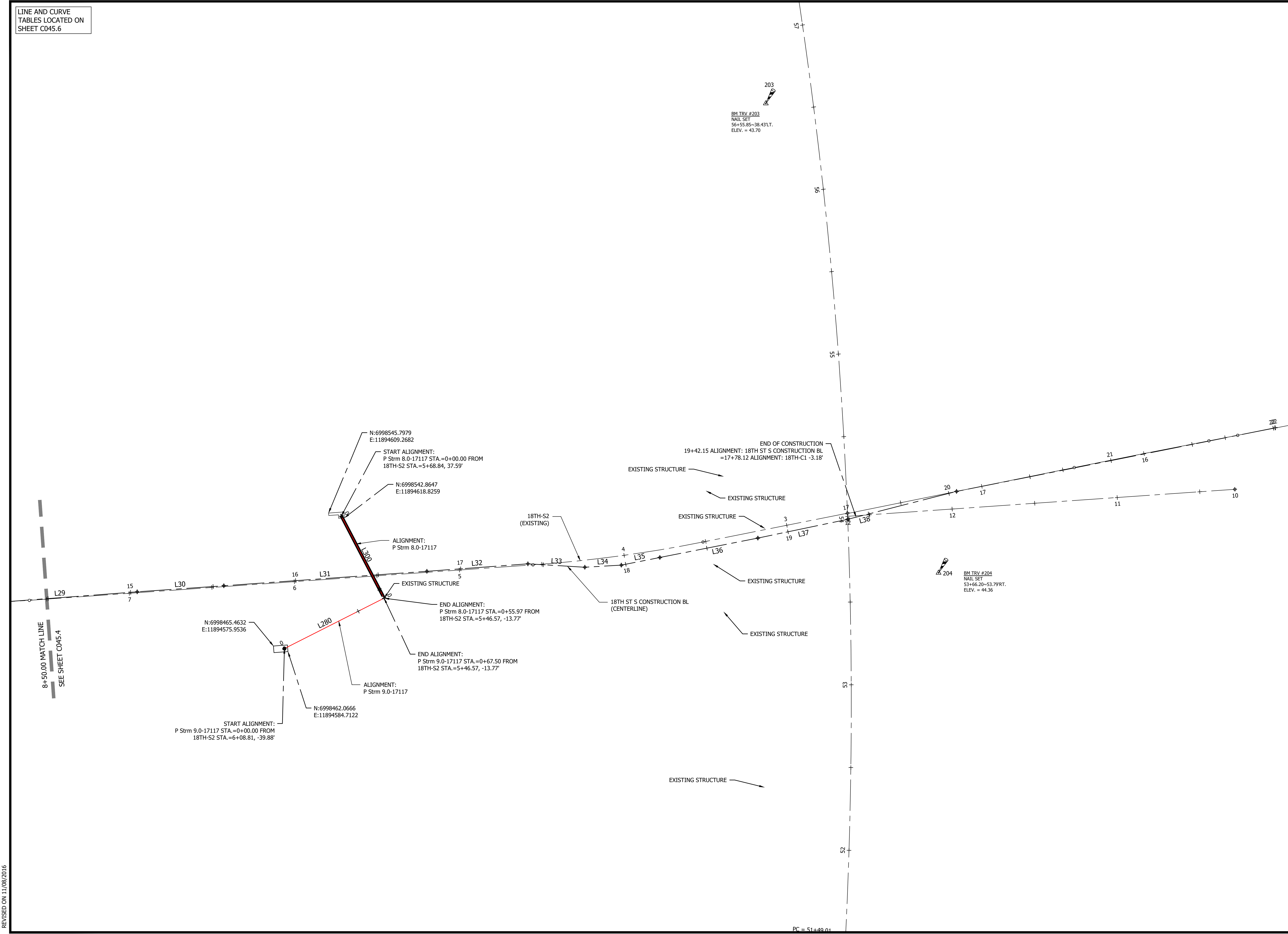
18TH STREET SOUTH
UTILITY GEOMETRIC PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST

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SHEET C045.5

18TH STREET SOUTH



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18TH ST S CONSTRUCTION BL										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C26	250.08'	817.97'	S74° 09' 06.07"E	249.11'	17° 31' 02"	126.02'	6+00.00	8+50.08	6998609.497, 11893603.237	6998541.467, 11893842.878
C27	0.24'	10.00'	S84° 27' 03.66"E	0.24'	1° 20' 59"	0.12'	9+64.04	9+64.28	6998529.112, 11893956.165	6998529.090, 11893956.400
C31	72.49'	400.50'	S88° 47' 16.65"E	72.39'	10° 22' 16"	36.35'	13+18.50	13+90.99	6998491.222, 11894308.566	6998489.690, 11894380.944
L22	113.96'		S83° 46' 33.95"E				8+50.08	9+64.04	6998541.467, 11893842.878	6998529.112, 11893956.165
L23	33.66'		S85° 07' 33.38"E				9+64.28	9+97.94	6998529.090, 11893956.400	6998526.229, 11893989.942
L24	48.68'		S85° 05' 27.19"E				9+97.95	10+46.63	6998526.229, 11893989.948	6998522.063, 11894038.452
L25	87.92'		S83° 14' 28.24"E				10+46.95	11+34.87	6998522.030, 11894038.773	6998511.683, 11894126.083
L26	49.04'		S83° 36' 08.83"E				11+34.94	11+83.98	6998511.675, 11894126.146	6998506.211, 11894174.879
L27	46.01'		S83° 36' 08.83"E				11+83.98	12+29.99	6998506.211, 11894174.879	6998501.084, 11894220.606
L28	88.51'		S83° 36' 08.83"E				12+29.99	13+18.50	6998501.084, 11894220.606	6998491.222, 11894308.566
L29	112.96'		N85° 41' 22.64"E				13+90.99	15+03.96	6998489.690, 11894380.944	6998498.181, 11894493.589
L30	52.50'		N85° 59' 23.32"E				15+03.96	15+56.46	6998498.181, 11894493.589	6998501.852, 11894545.960
L31	123.04'		N85° 55' 57.18"E				15+56.46	16+79.50	6998501.852, 11894545.960	6998510.579, 11894668.688
L32	61.23'		N85° 45' 49.70"E				16+79.50	17+40.72	6998510.579, 11894668.688	6998515.102, 11894729.749
L33	34.47'		S86° 34' 31.96"E				17+40.72	17+75.19	6998515.102, 11894729.749	6998513.043, 11894764.152
L34	22.08'		N86° 41' 18.13"E				17+75.19	17+97.27	6998513.043, 11894764.152	6998514.319, 11894786.196
L35	23.76'		N78° 47' 46.51"E				17+97.27	18+21.03	6998514.319, 11894786.196	6998518.936, 11894809.506
L36	60.39'		N78° 47' 46.51"E				18+21.03	18+81.42	6998518.936, 11894809.506	6998530.669, 11894868.744
L37	55.47'		N78° 13' 45.15"E				18+81.42	19+36.89	6998530.669, 11894868.744	6998541.984, 11894923.043
L38	67.92'		N75° 36' 29.72"E				19+36.89	20+04.80	6998541.984, 11894923.043	6998558.865, 11894988.828

FERN ST S CONSTRUCTION BL										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C32	10.44'	675.00'	N7° 02' 29.55"W	10.44'	0° 53' 10"	5.22'	8+16.88	8+27.32	6998495.852, 11894176.158	6998506.211, 11894174.879
C33	60.25'	675.00'	N10° 02' 30.04"W	60.23'	5° 06' 51"	30.15'	8+27.32	8+87.57	6998506.211, 11894174.879	6998565.519, 11894164.377
C34	70.45'	675.00'	N9° 36' 32.22"W	70.41'	5° 58' 47"	35.26'	9+54.11	10+24.56	6998630.457, 11894149.863	6998699.884, 11894138.109
L39	316.88'		N6° 35' 54.70"W				5+00.00	8+16.88	6998181.071, 11894212.572	6998495.852, 11894176.158
L40	66.54'		N12° 35' 55.69"W				8+87.57	9+54.11	6998565.519, 11894164.377	6998630.457, 11894149.863
L41	275.44'		N6° 37' 08.75"W				10+24.56	13+00.00	6998699.884, 11894138.109	6998973.488, 11894106.359

P STRM 1.0-16901										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L200	71.01'		N81° 18' 03.50"W				0+00.00	0+71.01	6998471.300, 11894121.078	6998482.039, 11894050.890
L201	23.08'		N13° 35' 24.48"E				0+71.01	0+94.09	6998482.039, 11894050.890	6998504.475, 11894056.313
L202	43.53'		N13° 35' 35.15"E				0+94.09	1+37.62	6998504.475, 11894056.313	6998546.784, 11894066.544
L203	51.78'		S81° 24' 02.01"E				1+37.62	1+89.39	6998546.784, 11894066.544	6998539.042, 11894117.737
L204	11.38'		N12° 53' 56.71"W				1+89.39	2+00.77	6998539.042, 11894117.737	6998550.135, 11894115.197
L205	5.68'		N62° 58' 06.13"W				2+00.77	2+06.45	6998550.135, 11894115.197	6998552.714, 11894110.142
L206	84.20'		N1° 17' 54.54"E				2+06.45	2+90.65	6998552.714, 11894110.142	6998636.893, 11894112.050
L207	19.54'		N71° 25' 35.77"W				2+90.65	3+10.19	6998636.893, 11894112.050	6998643.116, 11894093.529

EX STRM 17125-3.0										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L220	126.02'		N80° 26' 02.38"E				0+00.00	1+26.02	6998483.531, 11893932.041	6998504.475, 11894056.313

P STRM 3.1-3.0										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L240	44.83'		S68° 06' 56.69"E				0+00.00	0+44.83	6998521.183, 11894014.716	6998504.475, 11894056.313

P STRM 10.0-16901										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L260	11.54'		S63° 32' 50.89"W				0+00.00	0+11.54	6998745.514, 11894116.203	6998740.374, 11894105.873

P STRM 9.0-17117										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L280	67.50'		N63° 12' 34.07"E				0+00.00	0+67.50	6998463.922, 11894582.577	6998494.346, 11894642.831

P STRM 8.0-17117										
LINE OR CURVE #	LINE OR ARC LENGTH	RADIUS	LINE / CHORD BEARING	CHORD LENGTH	DELTA (Δ)	TANGENT	START STA OR PC	END STA OR PT	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L300	55.97'		S27° 29' 34.02"E				0+00.00	0+55.97	6998543.995, 11894616.994	6998494.346, 11894642.831

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BENCHMARK TABLE		
BM#	NORTHING	EASTING
200	6999342.5062	11894165.8183
201	6999438.1307	11894730.9714
202	6999089.9634	11894882.7259
203	6998793.2265	11894873.5154
204	6998509.6607	11894977.9298
300	6998535.6686	11894587.5405
301	6998495.8100	11894213.5573
302	6998480.0643	11893821.7028
303	6998434.8404	11893470.9261
REFER TO SHEET C011.1-C011.3 SURVEY CONTROL TABLE		



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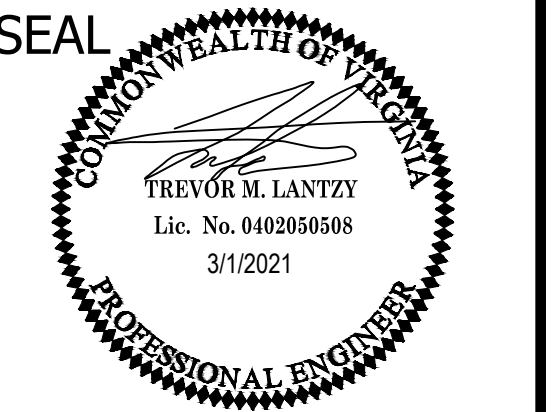
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<i>[Signature]</i> QUALITY CONTROL ENGINEER	6/18/2020
<i>[Signature]</i> Kamal N. Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	6.26.20
<i>[Signature]</i> Dennis M. Leach WATER, SEWER, STREETS BUREAU CHIEF	06.29.20
<i>[Signature]</i> Ariel Yang TRANSPORTATION DIRECTOR	6/24/20
<i>[Signature]</i> PROJECT MANAGER	6/17/2020

REVISIONS	DATE

18TH STREET SOUTH
 UTILITY GEOMETRIC PLAN
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

DESIGNED: NS
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 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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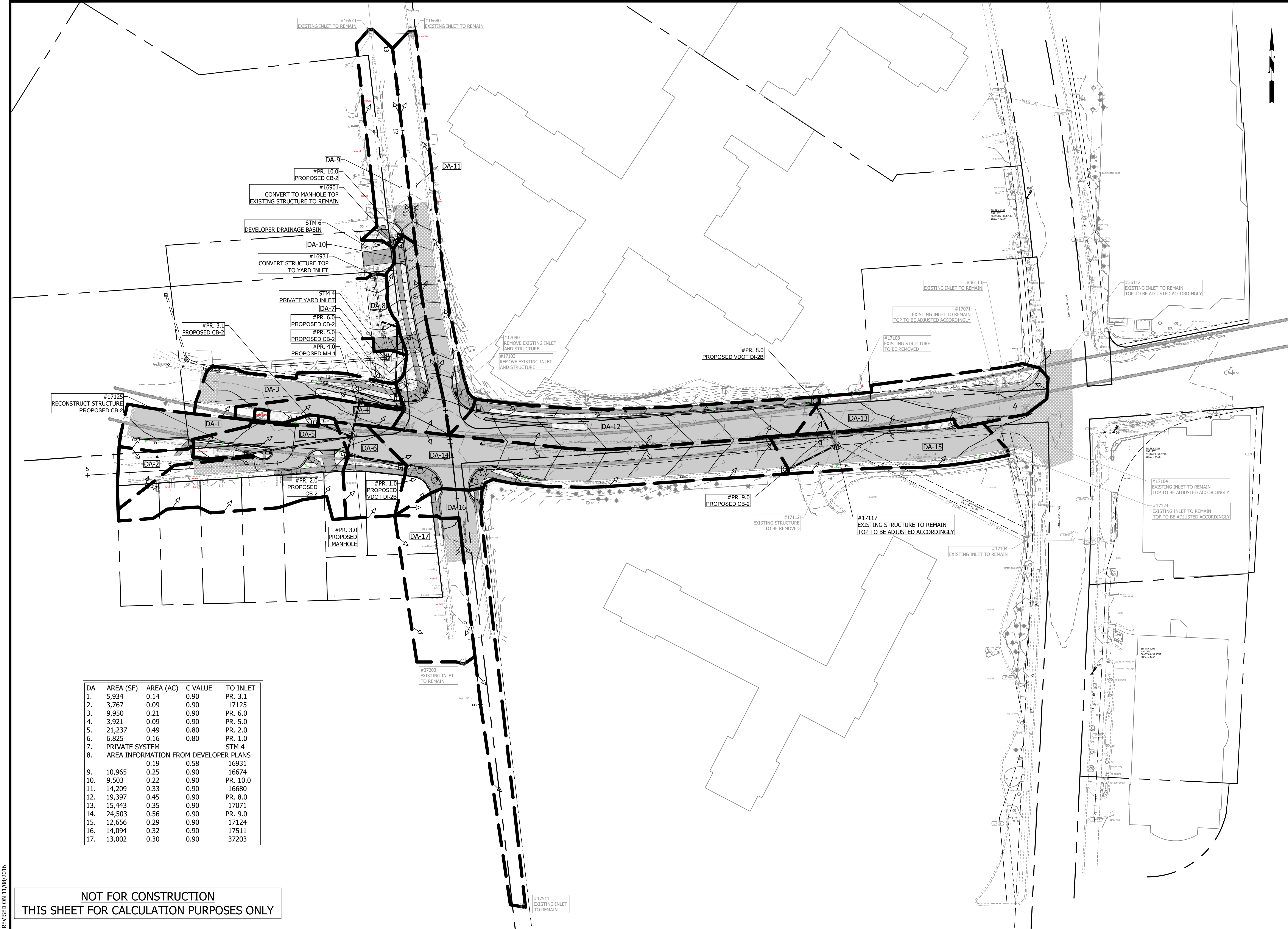
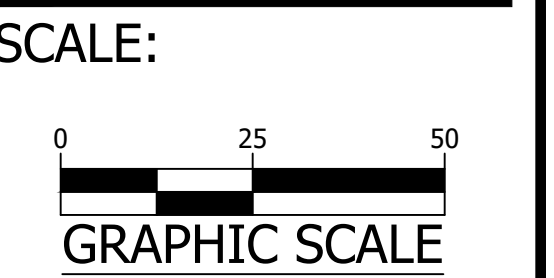
APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS DATE

REVISIONS	DATE

18TH STREET SOUTH
STORM SEWER DRAINAGE DIVIDES
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

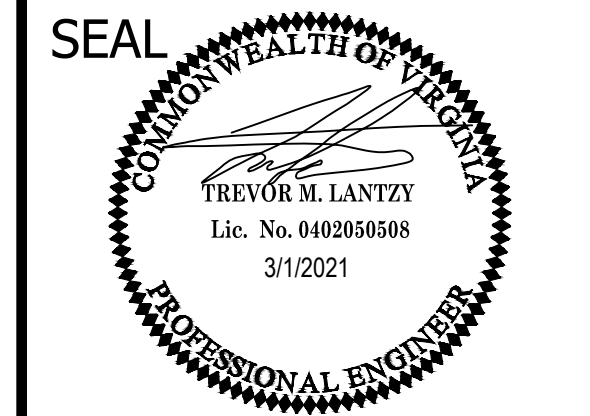
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PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE
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DA	AREA (SF)	AREA (AC)	C VALUE	TO INLET
1.	5,934	0.14	0.90	PR. 3.1
2.	3,767	0.09	0.90	17125
3.	9,950	0.21	0.90	PR. 6.0
4.	3,921	0.09	0.90	PR. 5.0
5.	21,237	0.49	0.80	PR. 2.0
6.	6,825	0.16	0.80	PR. 1.0
7.	PRIVATE SYSTEM			STM 4
8.	AREA INFORMATION FROM DEVELOPER PLANS			
		0.19	0.58	16931
9.	10,965	0.25	0.90	16674
10.	9,503	0.22	0.90	PR. 10.0
11.	14,209	0.33	0.90	16680
12.	19,397	0.45	0.90	PR. 8.0
13.	15,443	0.35	0.90	17071
14.	24,503	0.56	0.90	PR. 9.0
15.	12,656	0.29	0.90	17124
16.	14,094	0.32	0.90	17511
17.	13,002	0.30	0.90	37203

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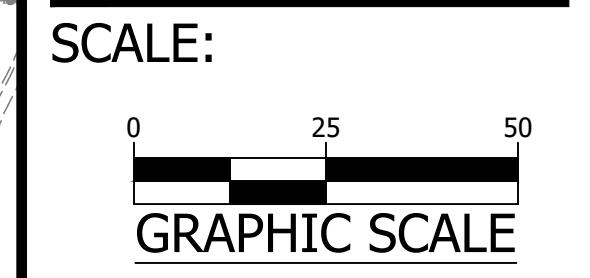


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Jung</i>	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE

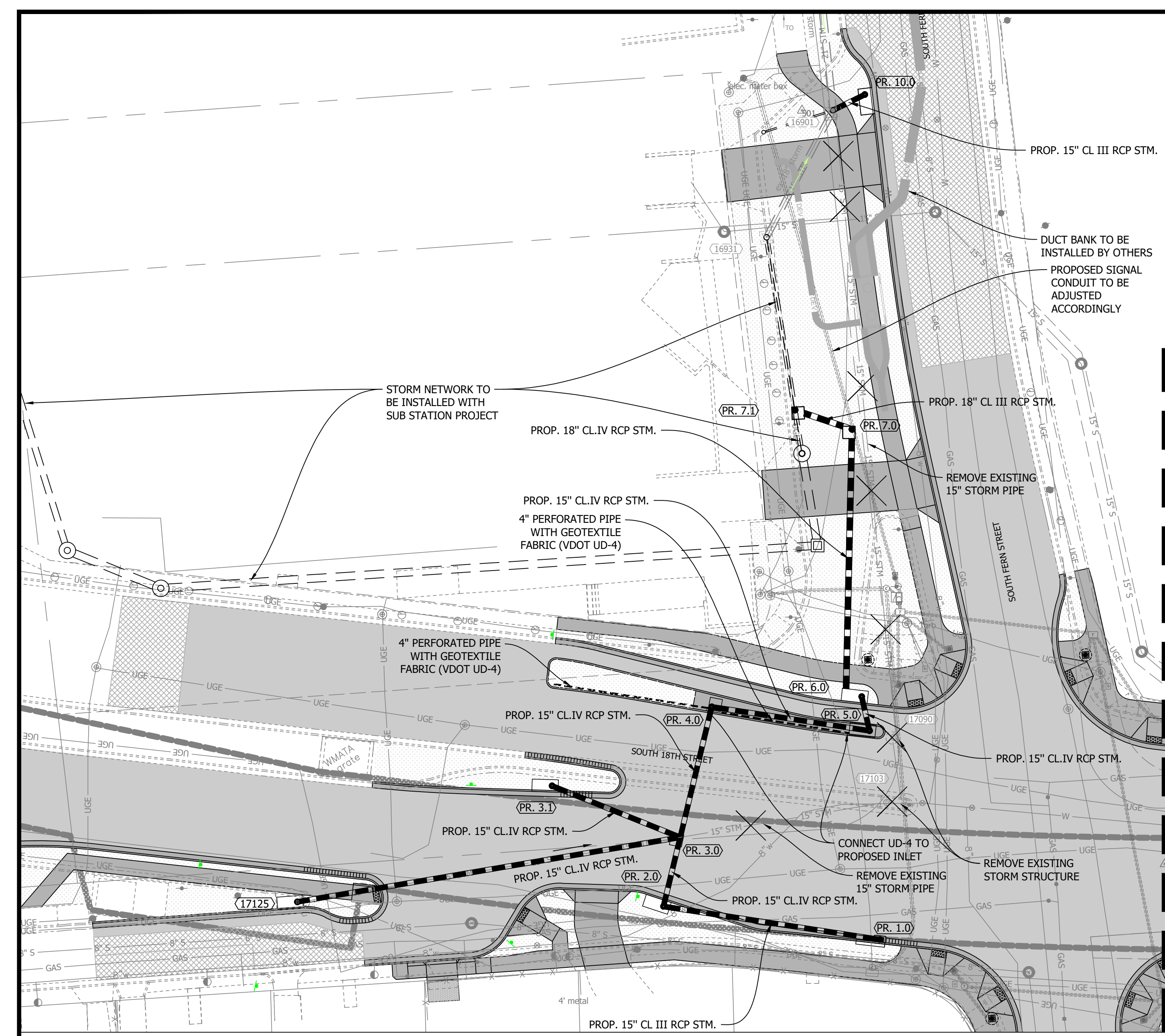
18TH STREET SOUTH
STORM SEWER PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
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PLOTTED: MARCH 1 2021
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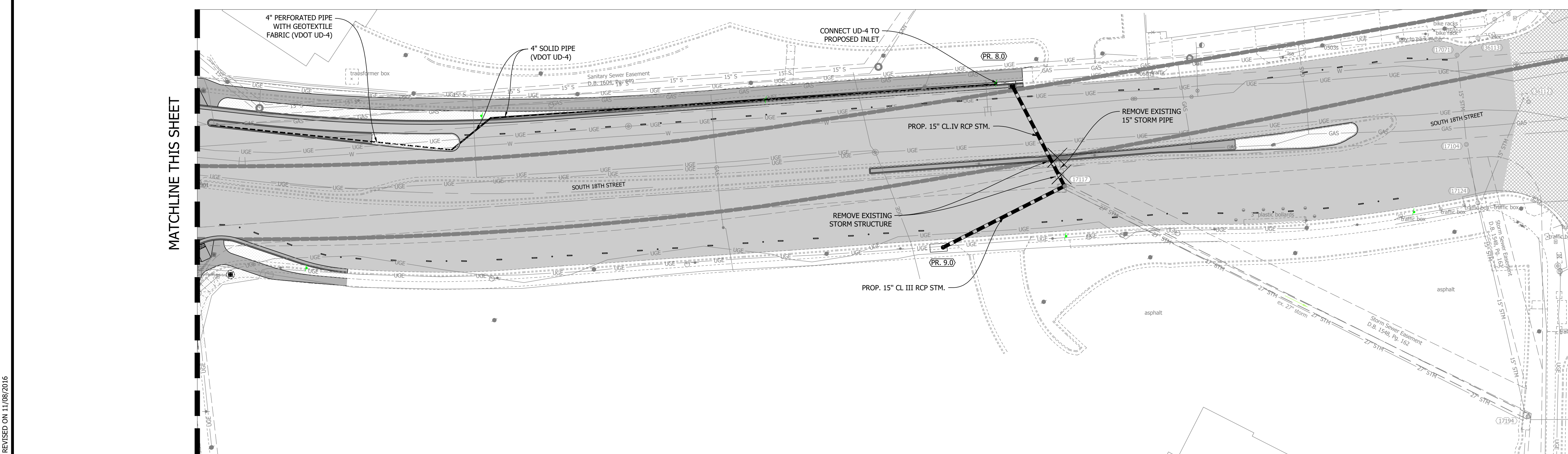


Structure #	Data
16901	TOP = 46.05 INV. IN = 37.04 (18" RCP) FROM 16931 INV. IN = 41.33 (15" RCP) FROM PR. 10.0 INV. OUT = 36.87 (21" RCP) TO 16674
17117	TOP = 46.55 INV. IN = 38.00 (15" RCP) FROM PR. 8.0 INV. IN = 40.98 (15" RCP) FROM PR. 9.0 INV. OUT = 37.84 (27" RCP) TO 17194
17125	TOP = 57.39 INV. OUT = 54.13 (15" RCP) TO PR. 3.0
PR. 1.0	TOP = 55.41 INV. OUT = 49.17 (15" RCP) TO PR. 2.0
PR. 2.0	TOP = 56.32 INV. IN = 48.10 (15" RCP) FROM PR. 1.0 INV. OUT = 45.15 (15" RCP) TO PR. 3.0
PR. 3.0	TOP = 56.13 INV. IN = 52.87 (15" RCP) FROM 17125 INV. IN = 46.00 (15" RCP) FROM PR. 3.1 INV. IN = 44.92 (15" RCP) FROM PR. 2.0 INV. OUT = 44.92 (15" RCP) TO PR. 4.0
PR. 3.1	TOP = 56.95 INV. OUT = 46.67 (15" RCP) TO PR. 3.0
PR. 4.0	TOP = 55.87 INV. IN = 44.48 (15" RCP) FROM PR. 3.0 INV. OUT = 43.75 (15" RCP) TO PR. 5.0
PR. 5.0	TOP = 55.37 INV. IN = 43.23 (15" RCP) FROM PR. 4.0 INV. OUT = 43.23 (15" RCP) TO PR. 6.0
PR. 6.0	TOP = 55.03 INV. IN = 43.12 (15" RCP) FROM PR. 5.0 INV. OUT = 42.87 (18" RCP) TO PR. 7.0
PR. 7.0	TOP = 50.23 INV. IN = 42.03 (18" RCP) FROM PR. 6.0 INV. OUT = 42.03 (18" RCP) TO PR. 7.1
PR. 7.1 *	TOP = 49.57 INV. IN = 42.53 (18" RCP) FROM STM 5 INV. IN = 41.83 (18" RCP) FROM PR. 7.0 INV. OUT = 41.73 (18" RCP) TO 16931
PR. 8.0	TOP = 46.91 INV. OUT = 38.57 (15" RCP) TO 17117
PR. 9.0	TOP = 47.45 INV. OUT = 42.33 (15" RCP) TO 17117
PR. 10.0	TOP = 45.76 INV. OUT = 41.50 (15" RCP) TO 16901

*STRUCTURE TO BE INSTALLED PART OF SUB STATION PROJECT. INVERTS FOR INFORMATIONAL PURPOSES ONLY



MATCHLINE THIS SHEET

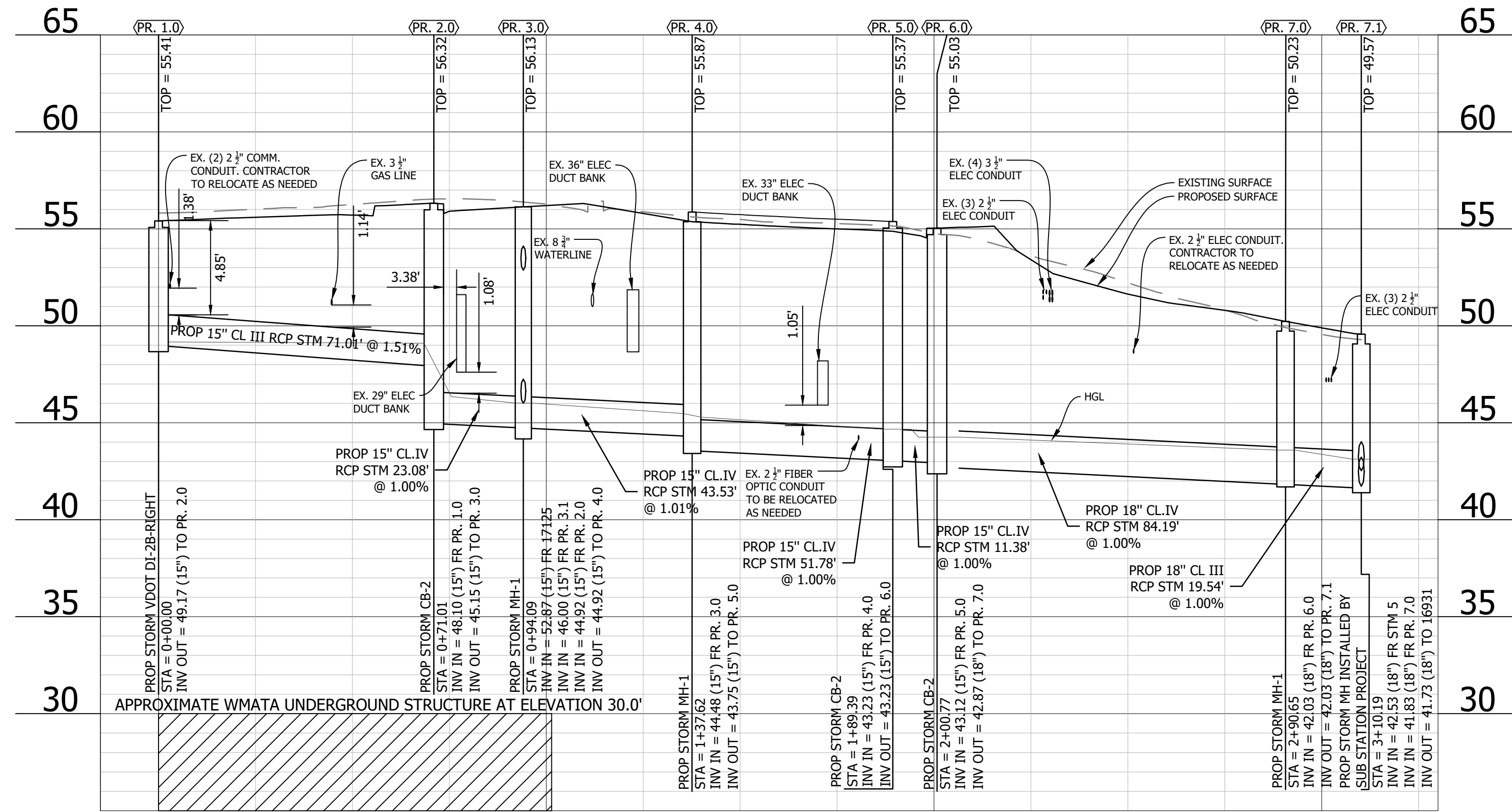


MATCHLINE THIS SHEET

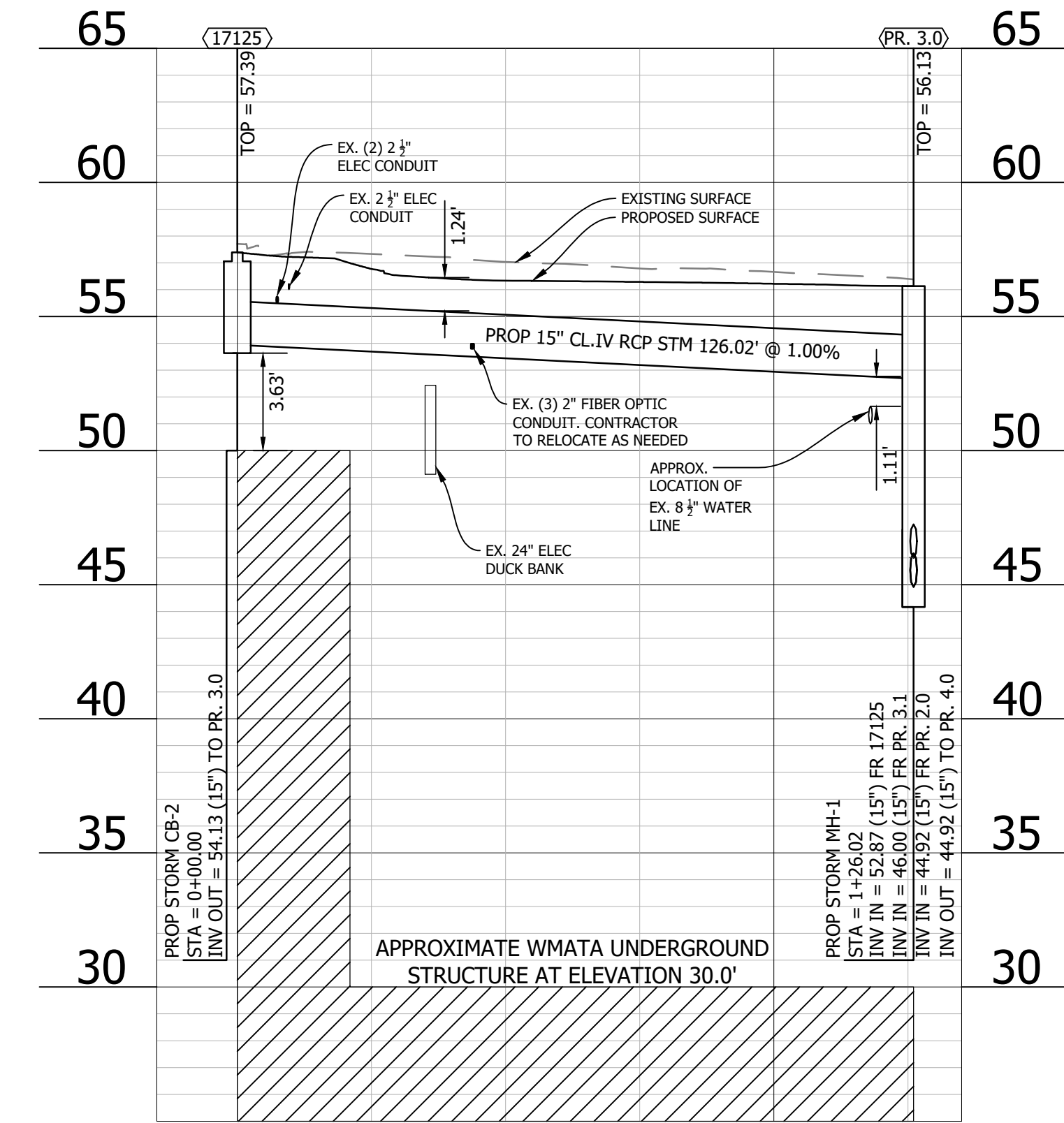
NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING PIPE DEPTHS PRIOR TO CONSTRUCTION.
2. MAINTAIN A MINIMUM OF 6" VERTICAL SEPARATION BETWEEN THE STORM PIPE AND OTHER UTILITIES.

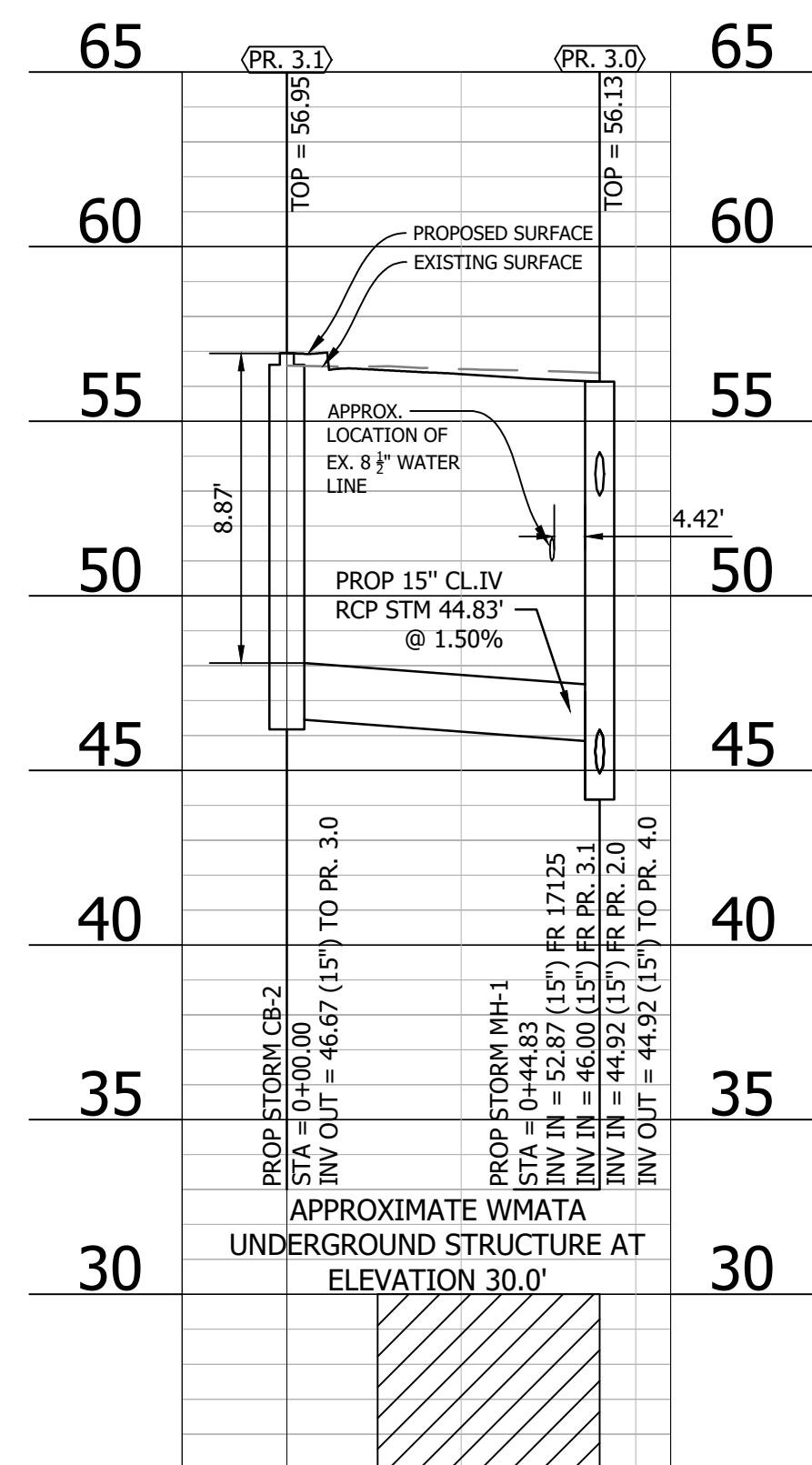
P STRM 1.0-16901



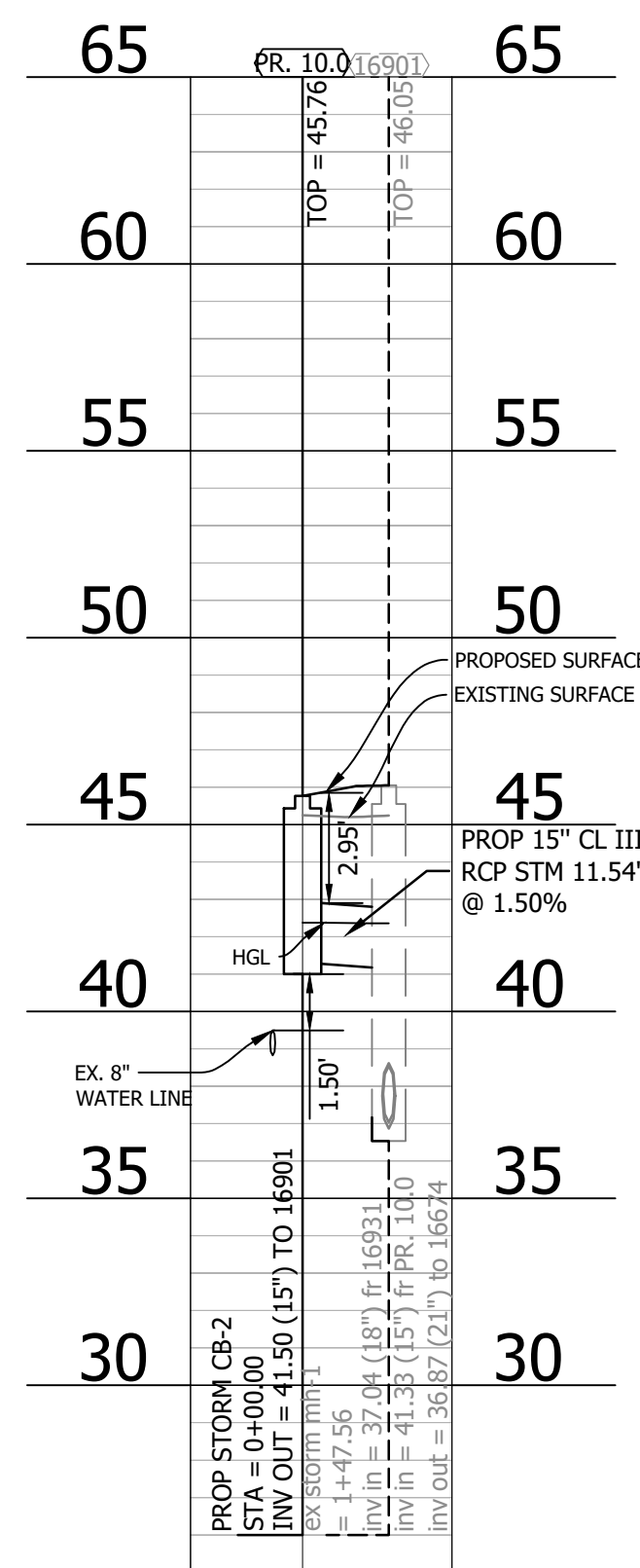
EX STRM 17125-3.0



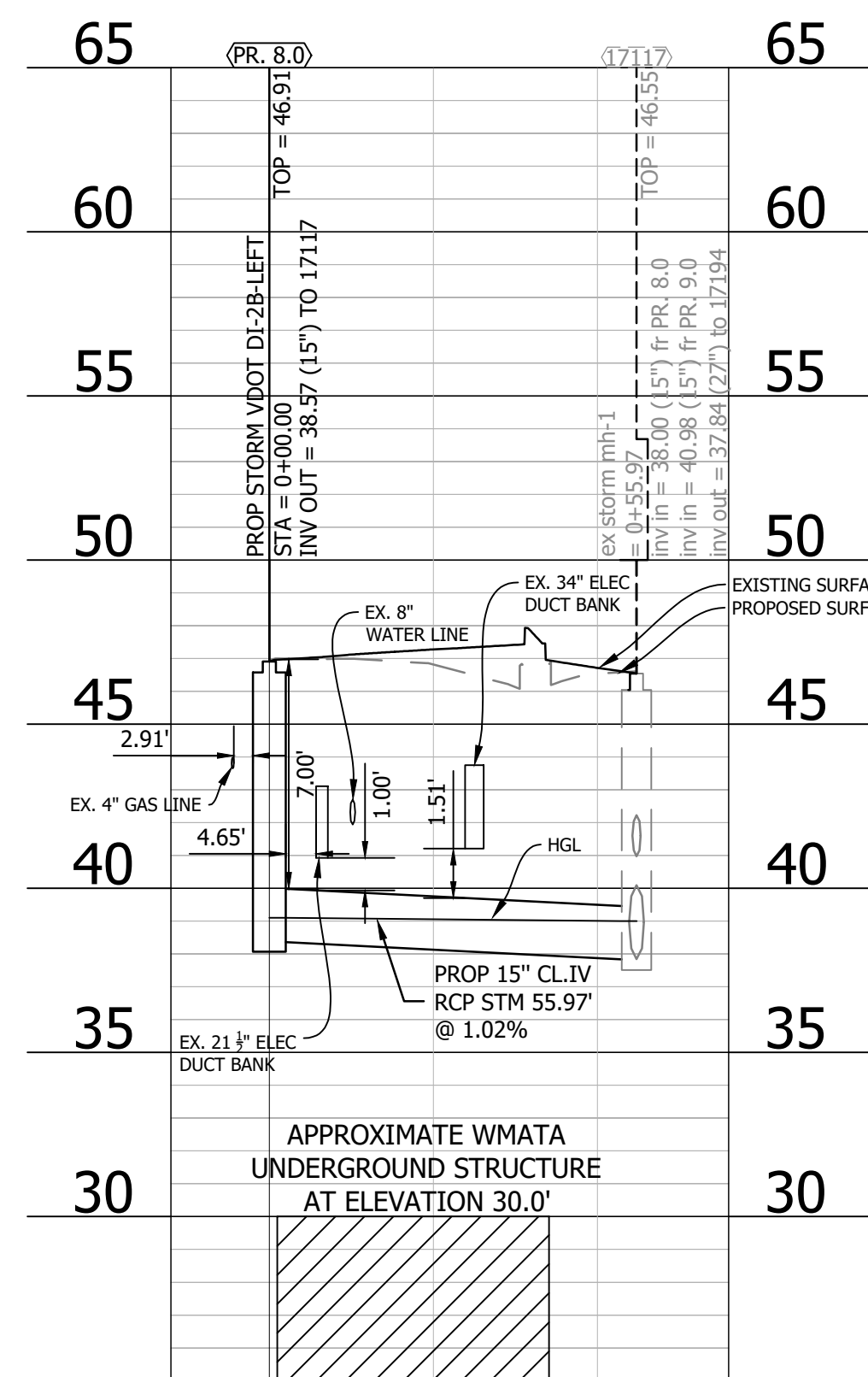
P STRM 3.1-3.0



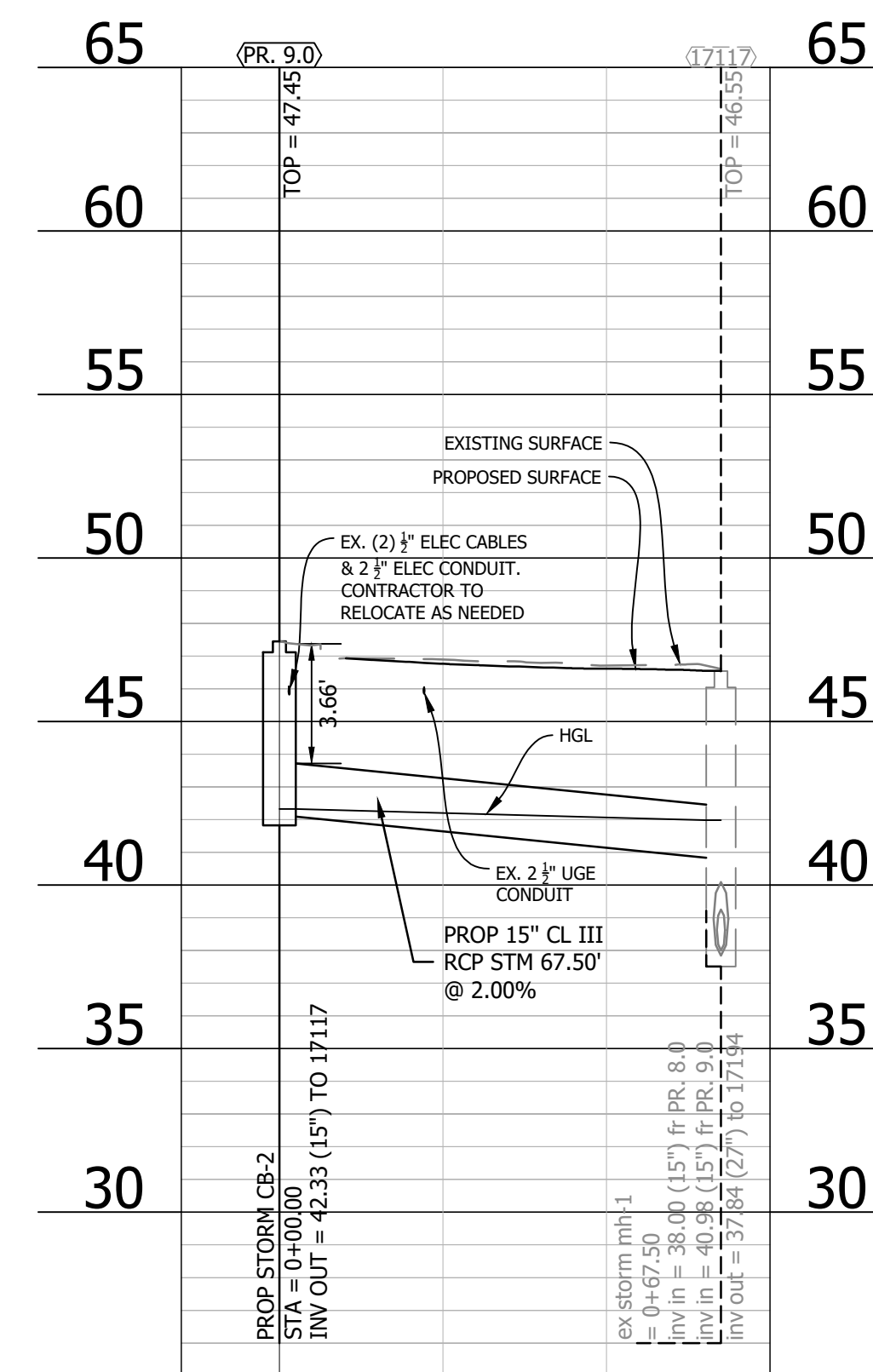
P STRM 10.0-16901



P STRM 8.0-17117



P STRM 9.0-17117

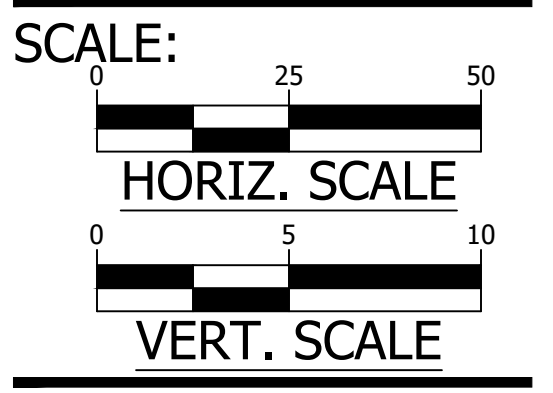


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
<i>Kamell N. Taktak</i>	6.26.20
<i>Chel</i>	06.29.20
<i>Dennis M. Leach</i>	6/24/20
<i>Ariel Yang</i>	6/17/2020

REVISIONS	DATE

**18TH STREET SOUTH
 STORM SEWER PROFILES
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST**

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PATH: Q:\DATA\CC20\DESIGN\CAD_LACTIVE



Storm Drain Design Computations

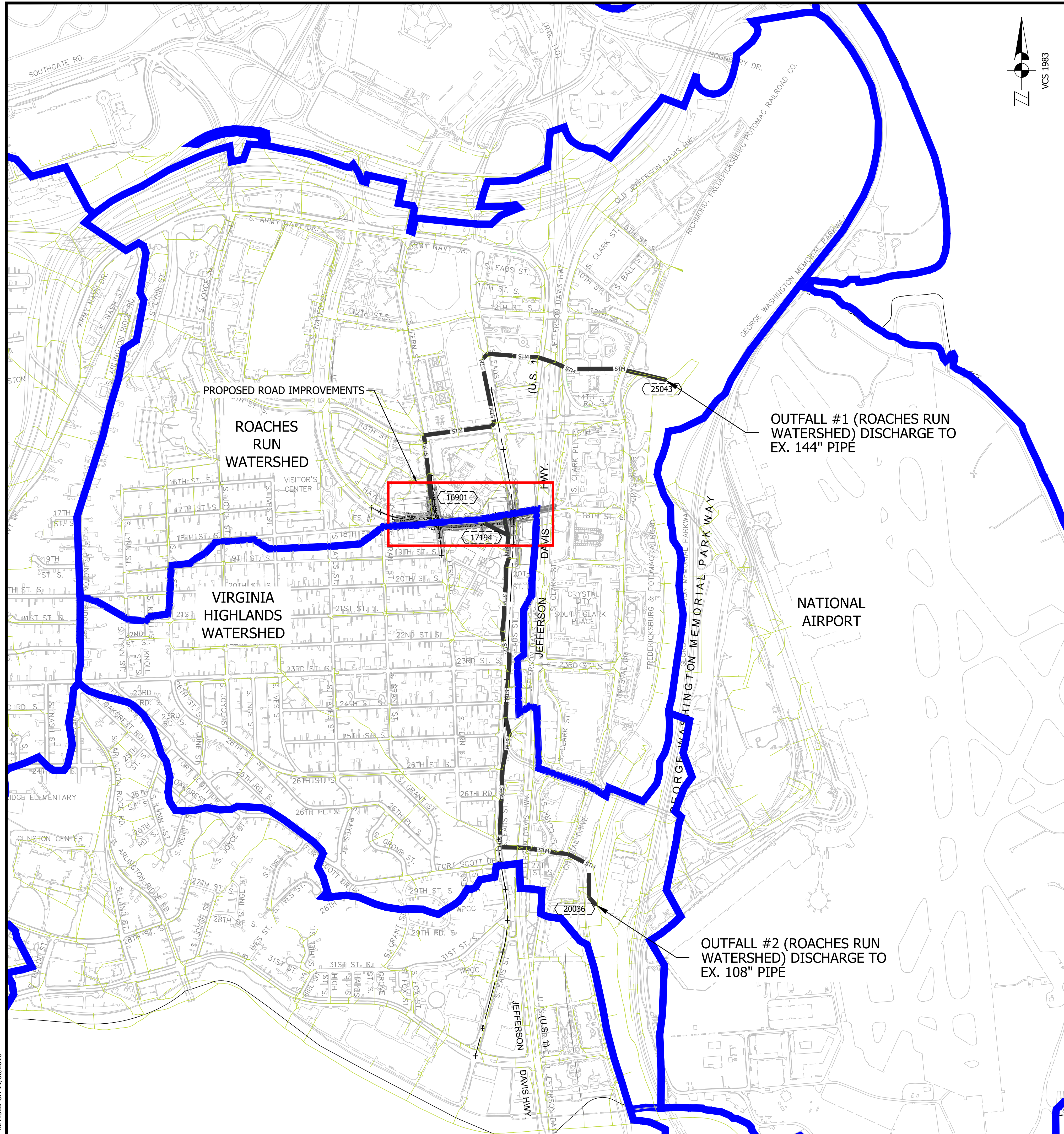
From Point	To Point	Drainage Area Acres	Runoff Coefficient C	CA		Inlet Time min	Time of Conc. min	Rainfall in/hr	Runoff Q cfs	Invert Elevations		Length ft	Slope %	Diameter in	Capacity cfs	Velocity fps	Flow Time min	Remarks	
				Incr.	Piped In					Upper End	Lower End								
PR. 1.0	PR. 2.0	0.16	0.80	0.13	0.00	5.00	5.00	6.79	0.87	49.17	48.10	71.01	1.51%	15	7.93	4.24	0.28		
PR. 2.0	PR. 3.0	0.49	0.80	0.39	0.00	5.00	5.28	6.70	3.48	45.15	44.92	23.08	1.00%	15	6.45	5.36	0.07		
17125	PR. 3.0	0.09	0.90	0.08	0.00	5.00	5.00	6.79	0.55	54.13	52.87	126.02	1.00%	15	6.46	3.21	0.65	Class V Pipe	
PR. 3.1	PR. 3.0	0.14	0.90	0.13	0.00	5.00	5.00	6.79	0.86	46.67	46.00	44.83	1.49%	15	7.90	4.21	0.18		
PR. 3.0	PR. 4.0	0.00	0.00	0.00	0.00	5.00	5.65	6.57	4.78	44.92	44.48	43.53	1.01%	15	6.49	5.79	0.13		
PR. 4.0	PR. 5.0	0.00	0.00	0.00	0.00	5.00	5.78	6.53	4.75	43.75	43.23	51.78	1.00%	15	6.47	5.76	0.15		
PR. 5.0	PR. 6.0	0.09	0.90	0.08	0.00	5.00	5.93	6.49	5.24	43.23	43.12	11.38	0.97%	15	6.35	5.78	0.03		
PR. 6.0	PR. 7.0	0.21	0.90	0.19	0.00	5.00	5.96	6.48	6.46	42.87	42.03	84.19	1.00%	18	10.49	6.24	0.22		
PR. 7.0	PR. 7.1	0.00	0.00	0.00	0.00	5.00	6.19	6.41	6.39	42.03	41.83	19.54	1.02%	18	10.63	6.29	0.05		
16931	16901	0.19	0.58	0.11	0.00	5.00	6.38	6.35	9.00	39.89	37.04	46.47	6.13%	18	26.01	13.37	0.06	Ex. Pipe to Remain	
PR. 10.0	16901	0.15	0.90	0.14	0.00	5.00	5.00	6.79	0.92	41.50	41.33	11.54	1.47%	15	7.84	4.27	0.04		
16901	16674	0.00	0.90	0.00	0.00	5.00	6.44	6.33	9.83	36.87	35.18	255.32	0.66%	21	12.89	5.90	0.72		
PR. 8.0	17117	0.45	0.90	0.41	0.00	5.00	5.00	6.79	2.75	38.57	38.00	55.97	1.02%	15	6.52	5.09	0.18		
PR. 9.0	17117	0.56	0.90	0.50	0.00	5.00	5.00	6.79	3.42	42.33	40.98	67.50	2.00%	15	9.14	6.91	0.16		
17117	17194	0.00	0.00	0.00	0.00	5.00	5.18	6.73	6.11	37.84	34.89	254.00	1.16%	27	33.38	6.39	0.66	Ex. Pipe to Remain	
17124	17194	0.29	0.90	0.26	0.00	5.00	5.00	6.79	1.77	37.19	36.06	107.00	1.06%	15	6.64	4.58	0.39	Ex. Pipe to Remain	
PR. 7.1	16931	0.00	0.00	0.00	0.31	1.31	5.00	6.24	6.39	8.36	41.73	41.16	56.82	1.00%	18	10.52	6.61	0.14	Sub Station Pipe (piped in flow of +/- 1.94cfs)

Storm Inlet Computations

Number	Type	Length (ft)	Station	Inlet				Flow										Curb Inlet					Operation			Sag Inlets Only					
				Drainage Area (acres)	C	CA	i (in/hr)	Q Incr (ft ³ /s)	Q Carryover (ft ³ /s)	Q _r (ft ³ /s)	S Gutter Slope (ft/ft)	Sx Crossslope (ft/ft)	T Spread (ft)	W (ft)	W/T	Sw (ft/ft)	Sw/Sx	E ₀	a (in)	S'w	Se (ft/ft)	L _r Computed Length (ft)	L/L _r	E (%)	Q _i Intercepted (ft ³ /s)	Q _b Carryover (ft ³ /s)	d (ft)	h (ft)	d/h	T Spread @ Sag (ft)	
PR. 1.0	DI-2B	8		0.16	0.80	0.128	4.00	0.51	0.00	0.512	0.0050	0.01000	7.83	1.50	0.19	0.0833	8.33	0.676	4.32	0.24	0.17	3.30	2.42	100%	0.51	0.000					
PR. 2.0	CB-2B	8		0.49	0.80	0.392	4.00	1.57	0.00	1.568	0.0080	0.01450	9.70	1.50	0.15	0.0833	5.75	0.503	4.24	0.24	0.13	7.10	1.13	100%	1.57	0.000					
PR. 3.0	Manhole			0.09	0.90	0.081	4.00	0.32	0.00	0.324	0.0136	0.01250	3.29	1.50	0.46	0.0833	6.67	0.958	4.28	0.24	0.24	3.01	2.66	100%	0.32	0.000					
17125	CB-2	8		0.09	0.90	0.081	4.00	0.32	0.00	0.324	0.0094	0.03500	2.46	1.50	0.61	0.0833	2.38	0.820	3.87	0.22	0.21	4.27	1.87	100%	0.32	0.000					
PR. 3.1	CB-2	8		0.14	0.90	0.126	4.00	0.50	0.00	0.504	0.0064	0.01540	5.55	1.50	0.27	0.0833	5.41	0.768	4.22	0.23	0.20	3.27	2.45	100%	0.50	0.000					
PR. 4.0	Manhole			0.09	0.90	0.081	4.00	0.32	0.00	0.324	0.0094	0.03500	2.46	1.50	0.61	0.0833	2.38	0.820	3.87	0.22	0.24	2.68	2.98	100%	0.32	0.000					
PR. 5.0	CB-2	8		0.09	0.90	0.081	4.00	0.32	0.00	0.324	0.0103	0.03500	3.85	1.50	0.39	0.0833	2.38	0.820	3.87	0.22	0.21	4.27	1.87	100%	0.32	0.000					
PR. 6.0	CB-2	8		0.21	0.90	0.189	4.00	0.76	0.00	0.756	0.0103	0.03500	3.85	1.50	0.39	0.0833	2.38	0.820	3.87	0.22	0.21	4.27	1.87	100%	0.76	0.000					
16931	DI-1			0.19	0.58	0.110	4.00	0.44	0.00	0.441	No Clogging 50% Clogging					Perimeter = 9.00 Area = 2.33 Ponding Depth (d) = 0.06			Overland Relief Elev. = 47.15 Inlet Top Elevation = 46.05			Ponding Elev. = 46.11		Ponding Elev. = 46.15							
16901	Manhole			0.15	0.90	0.135	4.00	0.54	0.00	0.540	0.0384	0.04060	2.08	1.50	0.72	0.0833	2.05	0.985	3.77	0.21	0.25	5.01	1.60	100%	0.54	0.000					
PR. 10.0	CB-2	8		0.15	0.90	0.135	4.00	0.54	0.00	0.540	0.0384	0.04060	2.08	1.50	0.72	0.0833	2.05	0.985	3.77	0.21	0.25	5.01	1.60	100%	0.54	0.000					
PR. 8.0	DI-2B	8		0.45	0.90	0.405	4.00	1.62	0.00	1.620	0.0126	0.02100	7.07	1.50	0.21	0.0833	3.97	0.600	4.12	0.23	0.16	7.42	1.08	100%	1.62	0.000					
PR. 9.0	CB-2	8		0.56	0.90	0.504	4.00	2.02	0.00	2.016	0.0278	0.02250	6.25	1.50	0.24	0.0833	3.70	0.651	4.10	0.23	0.17	9.87	0.81	95%	1.92	0.101					
17117	MH-1			0.29	0.90	0.261	4.00	1.04	0.00	1.044	0.0148	0.01670	6.28	1.50	0.24	0.0833	4.99	0.695	4.20	0.23	0.18	6.03	1.33	100%	1.04	0.000					
17124	CB-2	8		0.29	0.90	0.261	4.00	1.04	0.00	1.044	0.0148	0.01670	6.28	1.50	0.24	0.0833	4.99	0.695	4.20	0.23	0.18	6.03	1.33	100%	1.04	0.000					
PR. 7.0	Manhole																														
PR. 7.1	Manhole																														

Hydraulic Grade Line Computations

Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (ft)	D _o (in)	Q _o (cfs)	L _o (ft)	S _f (%)	H _f (ft)	V _o (ft/s)	H _o (ft)	Q _i	V _i (ft/s)	Q _v	Junction Loss					1.3 H _i (ft)	0.5 H _i (ft)	Final H (ft)	Inlet Water Surface Elev. (ft)	Rim Elev. (ft)
													V _i ² /2g (ft)	H _i (ft)	Angle (°)	H _o (ft)	H _i (ft)					
17194		36.69	27	6.11	254.00	0.0390%	0.10	6.39	0.16	34.89	0.8xDia + Pipe Inv. = 36.69	0.26	0.52	90	0.52	0.94	1.22	Starting WSEL = 36.69	38.01	46.55		
PR. 8.0		39.00	15	2.75	55.97	0.1812%	0.10	5.09	0.12	2.75	5.09	13.99	0.40	0.14	90	0.52						
PR. 9.0		41.98	15	3.42	67.50	0.2806%	0.19	6.91	0.22	3.42	6.91	23.64	0.74	0.26	90	0.52						
17124		37.06	15	1.77	107.00	0.0752%	0.08	4.58	0.10													
16674		36.58	21	9.83	255.32	0.3851%	0.98	5.90	0.14	35.18	0.8xDia + Pipe Inv. = 36.58	0.97	1.94	90	1.94	3.05	0.00	Starting WSEL = 36.58	40.62	46.05		
16901		40.62	18	9.00	46.47	0.7343%	0.34	13.37	0.69	9.00	13.37	120.39	2.78	0.97	90	2.00						
16931		42.36	18	8.36	56.82	0.6329%	0.36	6.61	0.17	8.36	6.61	55.20	0.68	0.24	90	0.47						
PR. 7.1		43.13	18	6.39	19.54	0.3701%	0.07	6.29	0.15	6.39	6.29	40.19	0.61	0.21	90	0.43						
PR. 7.0		43.59	18	6.46	84.19	0.3780%	0.32	6.24	0.15	6.46	6.24	40.32	0.61	0.21	90	0.42						
PR. 6.0		44.26	15	5.24	11.38	0.6584%	0.07	5.78	0.13	5.24	5.78	30.30	0.52	0.18	90	0.36						
PR. 4.0		44.67	15	4.75	51.78	0.5407%	0.28	5.76	0.13	4.75	5.76	27.38	0.52	0.18	90	0.36						
PR. 3.0		45.48	15	4.78	43.53	0.5473%	0.24	5.79	0.13	4.78	5.79	27.65	0.52	0.18	90	0.36						
PR. 2.0		46.02	15	3.48	23.08	0.2905%	0.07	5.36	0.11	3.48	5.36	18.64	0.45	0.16	90	0.31						
PR. 1.0		49.10	15	0.87	71.01	0.0181%	0.01	4.24	0.08													



STORMWATER MANAGEMENT PLAN (CHANNEL AND FLOOD PROTECTION)

OUTFALL #1 (ROACHES RUN WATERSHED)

CHANNEL PROTECTION
THE CHANNEL PROTECTION ANALYSIS FOR THE OUTFALL WAS PERFORMED TO THE 1% BASED ON THE PROPOSED LIMITS OF DISTURBANCE (LOD).

PROPOSED PROJECT LOD (OUTFALL #1) = 1.21 ACRES
TOTAL DRAINAGE AREA TO STR 25043 = 461.00 ACRES

SINCE 1.21 AC / 461.00 AC < 1%, THE ANALYSIS COMPLIES WITH THE 1% RULE.

GIVEN THAT THE 1% POINT IS LOCATED WITHIN A PIPE SYSTEM, NO EROSION WILL OCCUR AT THIS POINT. THEREFORE, THE CHANNEL PROTECTION REQUIREMENT HAS BEEN SATISFIED.

FLOOD PROTECTION

THERE IS CURRENTLY NO DATA TO DETERMINE IF THIS AREA CONTAINS LOCALIZED FLOODING. THEREFORE, LOCALIZED FLOODING IN THIS AREA IS UNKNOWN. BASED ON THIS INFORMATION, THE FLOOD PROTECTION CRITERIA HAS BEEN SATISFIED.

OUTFALL #2 (VIRGINIA HIGHLAND WATERSHED)

CHANNEL PROTECTION
THE CHANNEL PROTECTION ANALYSIS FOR THE OUTFALL WAS PERFORMED TO THE 1% BASED ON THE PROPOSED LIMITS OF DISTURBANCE (LOD).

PROPOSED PROJECT LOD (OUTFALL #2) = 1.51 ACRES
TOTAL DRAINAGE AREA TO STR 20036 = 309.00 ACRES

SINCE 1.51 AC / 309.00 AC < 1%, THE ANALYSIS COMPLIES WITH THE 1% RULE.

GIVEN THAT THE 1% POINT IS LOCATED WITHIN A PIPE SYSTEM, NO EROSION WILL OCCUR AT THIS POINT. THEREFORE, THE CHANNEL PROTECTION REQUIREMENT HAS BEEN SATISFIED.

FLOOD PROTECTION

THERE IS CURRENTLY NO DATA TO DETERMINE IF THIS AREA CONTAINS LOCALIZED FLOODING. THEREFORE, LOCALIZED FLOODING IN THIS AREA IS UNKNOWN. BASED ON THIS INFORMATION, THE FLOOD PROTECTION CRITERIA HAS BEEN SATISFIED.



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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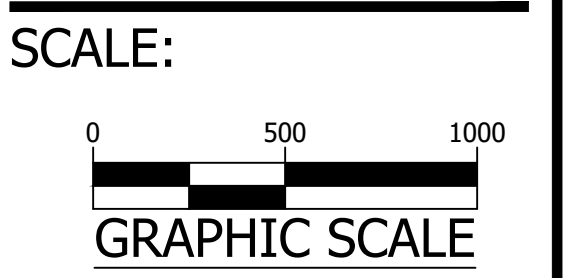


APPROVALS	DATE
<i>Kamal N. Tabak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Tabak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Debra</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	6/17/2020
<i>Ariel Yang</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
SWM DRAINAGE AREA MAP
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME: CC20-256-SWM_PLAN.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE
PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



SHEET C081.1

18TH STREET SOUTH

REVISED ON 11/08/2016

SWM NOTES

THE RUNOFF REDUCTION SPREADSHEET INFORMATION ON THIS PLAN IS FOR DATA TRACKING PURPOSES TO DOCUMENT THE AREA OF LAND DISTURBANCE AND TO CHARACTERIZE PRE- AND POST-DEVELOPMENT LAND USE CONDITIONS.

IN ACCORDANCE WITH ARLINGTON COUNTY'S CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN, APPROVED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) ON SEPTEMBER 1, 2015, LINEAR DEVELOPMENT PROJECTS CONDUCTED BY THE COUNTY ARE ADMINISTERED AND TRACKED AS FOLLOWS CONSISTENT WITH 9VAC25-870-69.A.4, 9VAC25-870-76, AND 9VAC25-870-92:

- POLLUTANT LOAD CHANGES WILL BE COMPUTED AS DESCRIBED IN SECTION 3.A OF THE ACTION PLAN.
- RETROFIT OPPORTUNITIES WILL BE EVALUATED FOR EACH PROJECT, USING THE SCREENING AND SELECTION CRITERIA APPLIED AND DESCRIBED IN THE ADOPTED STORMWATER MASTER PLAN.
- RETROFIT PROJECTS THAT MEET THE SCREENING CRITERIA AND ARE DETERMINED BY ARLINGTON TO BE FEASIBLE AND COST-EFFECTIVE WILL BE IMPLEMENTED WITH SPECIFIC LINEAR DEVELOPMENT PROJECTS. POLLUTANT LOAD REDUCTIONS FROM RETROFIT PROJECTS WILL BE COMPUTED AS DESCRIBED IN SECTION 5 OF THE ACTION PLAN.
- IN CASES WHERE RETROFIT PROJECTS ARE NOT FEASIBLE AND COST-EFFECTIVE FOR A PARTICULAR LINEAR PROJECT, ANY POC LOAD INCREASES THAT MIGHT OCCUR FOR THAT PROJECT WILL BE ADDRESSED BY LARGER OVERALL POC LOAD REDUCTIONS IN PLACE OR ADDED THROUGH TMDL ACTION PLAN IMPLEMENTATION.
- IN THE ABOVE MANNER ARLINGTON, AS THE MS4 OPERATOR AND THE CONSTRUCTION SITE OPERATOR FOR ITS LINEAR DEVELOPMENT PROJECTS, IMPLEMENTS LINEAR PROJECTS AND RETROFIT PROJECTS IN A MANNER THAT ACHIEVES THE MOST TMDL POC REDUCTION FOR THE LEAST COST, WHILE FULLY ACCOUNTING FOR LOAD CHANGES THAT OCCUR WITH LINEAR DEVELOPMENT PROJECT ACTIVITY CONSISTENT WITH THE DEQ CHESAPEAKE BAY TMDL SPECIAL CONDITION GUIDANCE.

PRE DEVELOPMENT CONDITIONS

THE PROJECT SITE CONSIST PRIMARILY OF IMPERVIOUS AREA (ASPHALT ROADWAY AND CONCRETE SIDEWALK) AND A SMALL AMOUNT OF PERVIOUS GRASS AREA.

POST DEVELOPMENT CONDITIONS

THE PROJECT CONSISTS OF REMOVING AND REPLACING EXISTING CURB, GUTTER AND SIDEWALK; INSTALLING ADA COMPLIANT RAMPS; REMOVING AND REPLACING EXISTING STREETLIGHTS; TRAFFIC SIGNAL WORK AT THE INTERSECTION OF 18TH STREET SOUTH AND SOUTH FERN STREET; AND MILLING AND PAVING THE ASPHALT ROADWAY.

VRRM CALCULATIONS

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

<input type="checkbox"/> 2011 BMP Standards and Specifications		<input checked="" type="checkbox"/> 2013 Draft BMP Standards and Specifications		CLEAR ALL		data input cells	
Project Name: 18TH STREET SOUTH -		Date: 5-Dec-18				constant values	
Linear Development Project? Yes						calculation cells	
						final results	

Site Information

Enter Total Disturbed Area (acres) → **2.7221** Check: **2013 Draft Stds & Specs**

Maximum reduction required:	20%	Linear project?	No
The site's net increase in impervious cover (acres) is:	0.0000	Land cover areas entered correctly?	✓
Post-Development TP Load Reduction for Site (lb/yr):	0.8756	Total disturbed area entered?	✓

Pre-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.1970	0.1970
Impervious Cover (acres)				2.5251	2.5251
Totals					2.7221

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.3480	0.3480
Impervious Cover (acres)				2.3741	2.3741
Area Check	OK.	OK.	OK.	OK.	2.7221

Constants

Annual Rainfall (inches)	43	Runoff Coefficients (Rv)			
Target Rainfall Event (inches)	1.00	Forest/Open Space	0.02	B Soils	0.03
Total Phosphorus (TP) EMC (mg/L)	0.26	Managed Turf	0.15	C Soils	0.22
Total Nitrogen (TN) EMC (mg/L)	1.86	Impervious Cover	0.95	D Soils	0.95
Target TP Load (lb/acre/yr)	0.41				
Pj (unitless correction factor)	0.90				

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-Development	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.1970	0.1970
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	7%	7%
Impervious Cover (acres)	2.5251	2.5251
Rv(impervious)	0.9500	0.9500
% Impervious	93%	93%
Total Site Area (acres)	2.7221	2.7221
Site Rv	0.8993	0.8993

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)		Land Cover Summary-Post		Land Cover Summary-Post	
Post ReDev. & New Impervious		Post-ReDevelopment		Post-Development New Impervious	
Forest/Open Space Cover (acres)	0.0000	Forest/Open Space Cover (acres)	0.0000		
Weighted Rv(forest)	0.0000	Weighted Rv(forest)	0.0000		
% Forest	0%	% Forest	0%		
Managed Turf Cover (acres)	0.3480	Managed Turf Cover (acres)	0.3480		
Weighted Rv (turf)	0.2500	Weighted Rv (turf)	0.2500		
% Managed Turf	13%	% Managed Turf	13%		
Impervious Cover (acres)	2.3741	ReDev. Impervious Cover (acres)	2.3741	New Impervious Cover (acres)	0.0000
Rv(impervious)	0.9500	Rv(impervious)	0.9500	Rv(impervious)	--
% Impervious	87%	% Impervious	87%		
Final Site Area (acres)	2.7221	Total ReDev. Site Area (acres)	2.7221		
Final Post Dev Site Rv	0.8605	ReDev Site Rv	0.8605		

Treatment Volume and Nutrient Load

Pre-Development	Post-Development	Final Post-Development	Post-ReDevelopment	Post-Development	
Pre-Development Treatment Volume (acre-ft)	0.2040	Final Post-Development Treatment Volume (acre-ft)	0.1952	Post-Development Treatment Volume (acre-ft)	--
Pre-Development Treatment Volume (cubic feet)	8,886.5917	Final Post-Development Treatment Volume (cubic feet)	8,502.8750	Post-Development Treatment Volume (cubic feet)	--
Pre-Development TP Load (lb/yr)	5.5834	Final Post-Development TP Load (lb/yr)	5.3423	Post-Development TP Load (lb/yr)	--
Pre-Development TP Load per acre (lb/acre/yr)	2.0500	Final Post-Development TP Load per acre (lb/acre/yr)	1.9600	Post-Development TP Load per acre (lb/acre/yr)	1.9600
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)	1.1161			Max. Reduction Required (Below Pre-Development Load)	0.2000
				TP Load Reduction Required for Redeveloped Area (lb/yr)	0.8756
				TP Load Reduction Required for New Impervious Area (lb/yr)	0

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.8756
Linear Project TP Load Reduction Required (lb/yr):	0.8756

¹ Adjusted Land Cover Summary: Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.
Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).
Column 1 shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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APPROVALS **DATE**

[Signature] 6/18/2020
QUALITY CONTROL ENGINEER 6.26.20
Kamal N. Taktak
CONSTRUCTION MANAGEMENT SUPERVISOR 06.29.20
[Signature]
WATER, SEWER, STREETS BUREAU CHIEF
Dennis W. Leach 6/24/20
TRANSPORTATION DIRECTOR
Ariel Yang 6/17/2020
PROJECT MANAGER

REVISIONS **DATE**

18TH STREET SOUTH
SWM COMPUTATIONS
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

SCALE:

N/A

SHEET C085.1

18TH STREET SOUTH

REVISED ON 11/08/2016



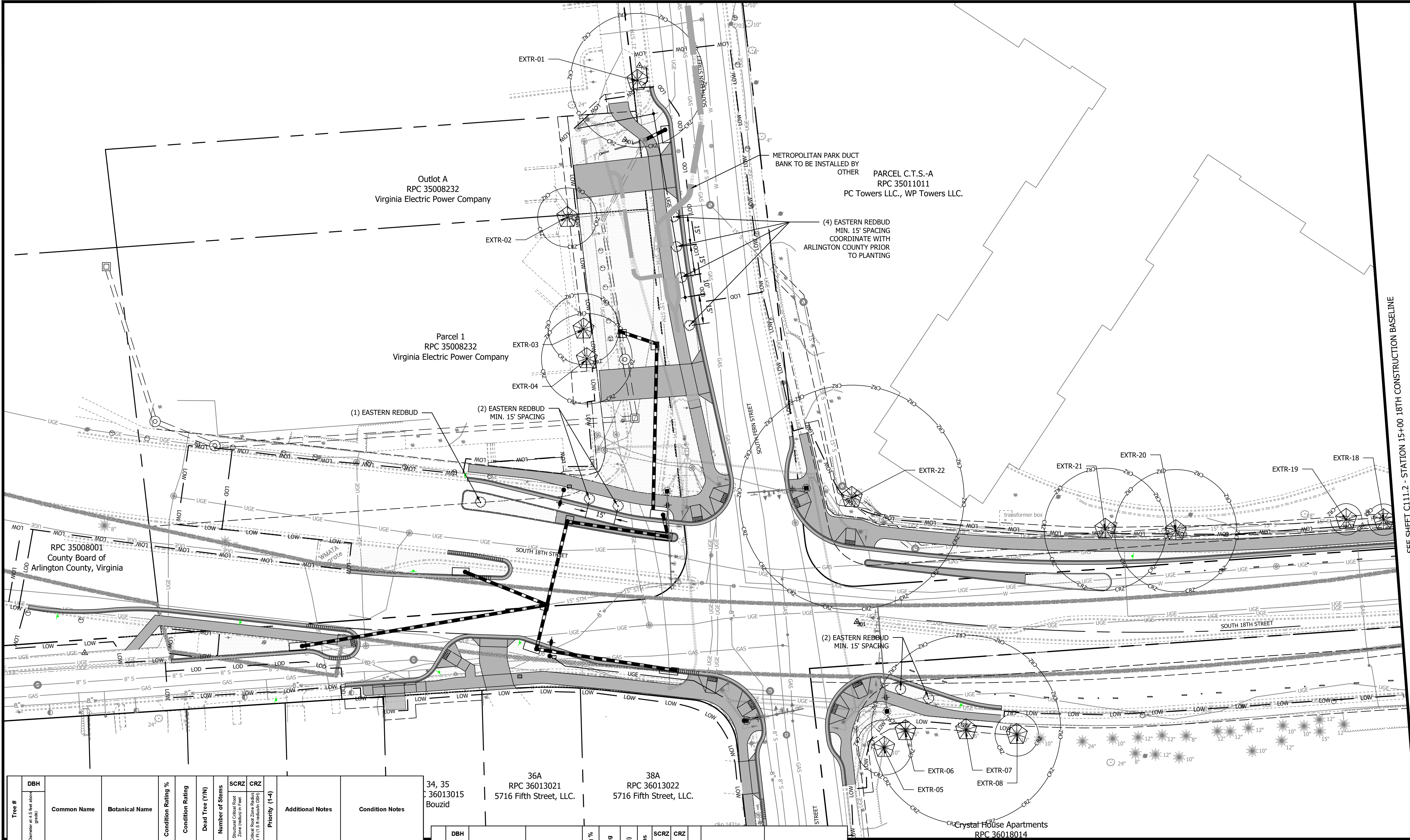
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<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH

LANDSCAPE PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

CC20



SEE SHEET C111.2 - STATION 15+00 18TH CONSTRUCTION BASELINE

Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
1	23	oak, willow	Quercus phellos	58	Fair	NO	1	9.0	34	2	Hanger. Low vigor. 0.5" girdling root.	Large DW (3"+), Small DW (1-2"), Broken Limbs, Included Bark/Weak Union, Girdling Roots, Restricted Rooting Area
2	10	magnolia, saucer	Magnolia x soulangeana	73	Good	NO	1	6.0	15	2	DBH @ 1' Topped.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
3	12	magnolia, saucer	Magnolia x soulangeana	50	Fair	NO	1	7.0	16	3	DBH @ base. Dieback. Crack. Buried root collar. Possible girdling root.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
4	15	magnolia, saucer	Magnolia x soulangeana	54	Fair	NO	1	8.0	23	3	DBH @ base. Dieback. Buried root collar.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
5	9	pine, eastern white	Pinus strobus	64	Fair	NO	1	5.0	14	3	Buried root collar. 10 deg lean. Phototropism from former neighbor #5. May correct somewhat.	One Sided, Small DW (1-2"), Broken Limbs
6	0	ZZ Unknown tree	ZZ Unknown tree	0	Dead	YES	0	0.0	0	0	Missing.	
7	30	cedar, deodar	Cedrus deodara	64	Fair	NO	1	10.0	48	2	Excessive mulch. Sapsucker damage. Thinning at top. Light dieback.	Full Crown, Large DW (3"+), Small DW (1-2"), Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
8	7	pine, eastern white	Pinus strobus	58	Fair	NO	1	4.0	11	3	One Sided, Small DW (1-2").	Small DW (1-2"), Trunk Decay, Broken Limbs, Suppressed, Restricted Rooting Area
9	7	platanetree, London	Platanus hybrida	70	Good	NO	1	4.0	11	3		Broken Limbs, Restricted Rooting Area
10	9	holly, American	Ilex opaca	67	Fair	NO	1	5.0	14	2	Lots of sucker growth.	Trunk Decay, Branch Decay, Broken Limbs, Restricted Rooting Area
11	3	platanetree, London	Platanus hybrida	75	Good	NO	1	2.0	5	2	Minor trimmer damage	Restricted Rooting Area
12	3	zelkova, Japanese	Zelkova serrata	70	Good	NO	1	2.0	5	2		Restricted Rooting Area

Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
13	10	magnolia, saucer	Magnolia x soulangeana	66	Fair	NO	1	6.0	15	2	Poor pruning cuts.	Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
14	4.3.3	crapemyrtle, common	Lagerstroemia indica	39	Poor	NO	3	4.0	9	4	DBH @ 1' Topped. Low vigor.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
15	4.3	crapemyrtle, common	Lagerstroemia indica	41	Poor	NO	2	3.0	8	4	DBH @ 1' Topped. Low vigor. One stem dead.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
16	4.3.3.3	crapemyrtle, common	Lagerstroemia indica	45	Poor	NO	4	4.0	10	4	DBH @ 1' Topped. Low vigor. Additional tree not on plan.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
17	4.3	crapemyrtle, common	Lagerstroemia indica	50	Fair	NO	2	3.0	8	4	DBH @ 1' Topped. Low vigor.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
18	3.3.3	crapemyrtle, common	Lagerstroemia indica	55	Fair	NO	3	3.0	8	4	DBH @ 1' Topped.	Small DW (1-2"), Trunk Decay, Branch Decay, Stressed, Restricted Rooting Area
19	3.3.2.2	crapemyrtle, common	Lagerstroemia indica	61	Fair	NO	4	3.0	8	4	DBH @ 1' Topped.	Small DW (1-2"), Branch Decay, Restricted Rooting Area
20	21	platanetree, London	Platanus hybrida	55	Fair	NO	1	9.0	31	3	Poor pruning cuts.	Small DW (1-2"), Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
21	21	platanetree, London	Platanus hybrida	45	Poor	NO	1	9.0	31	3	Poor pruning cuts.	Large DW (3"+), Small DW (1-2"), Trunk Decay, Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
22	38	oak, willow	Quercus phellos	71	Good	NO	1	11.0	57	1	0.5" girdling root. Heading cuts.	Small DW (1-2"), Girdling Roots

PROPOSED TREE INVENTORY

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
	9	CERCIS CANADENSIS	EASTERN REDBUD	2" CALLIPER	AS INDICATED	SINGLE STEM 7' CLEAR TRUNK

CONTRACTOR SHALL PLANT TREE, SEE DETAILS L1, L2 & L3 (SHEET C092.1)

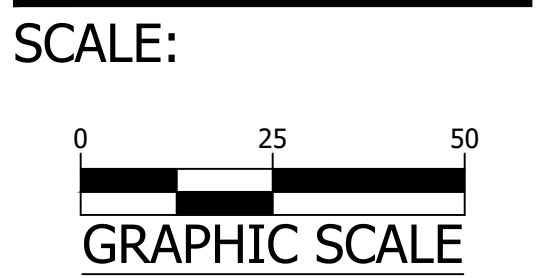
CONTRACTOR SHALL INSTALL GROUND COVER WITH TOPSOIL AND SOD TO THE PROPOSED ELEVATIONS PER ARLINGTON COUNTY DPR DESIGN STANDARDS

TREE PLANTING NOTES

- CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR INSPECTION.
- CONTRACTOR TO PREPARE TREE PLANTING STRIPS FOR THE REPLACEMENT TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.4A AND 02930.4B.
- CONTRACTOR TO PREPARE STREET TREE PLANTING PITS ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.3A, 02930.3B, AND 02930.11C
- CONTRACTOR TO PLANT THE TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.1 (ON FLAT LAND) OR 02930.2 (ON SLOPES)

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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



REVISED ON 11/08/2016



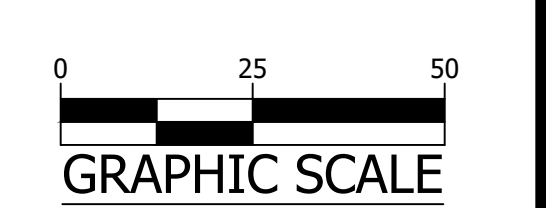
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CONSTRUCTION MANAGEMENT SUPERVISOR	
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WATER, SEWER, STREETS BUREAU CHIEF	
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TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
LANDSCAPE PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

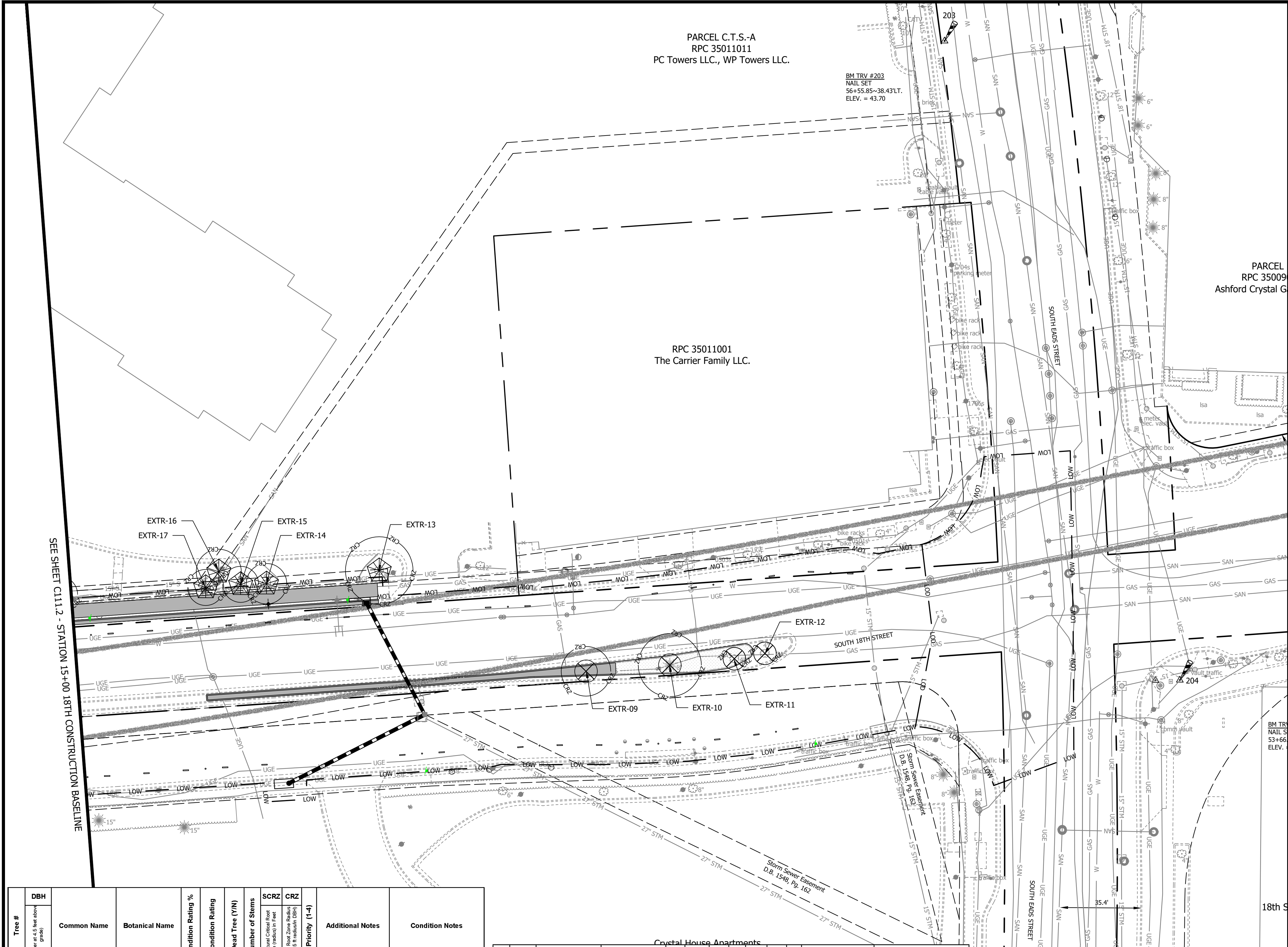
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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



SHEET C091.2

18TH STREET SOUTH



Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	Structural Critical Root Zone (radius in feet)	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
1	23	oak, willow	Quercus phellos	58	Fair	NO	1	9.0	34	2	2	Hanger. Low vigor. 0.5' girdling root.	Large DBH (3"+), Small DW (1-2"), Broken Limbs, Included Bark/Weak Union, Girdling Roots, Restricted Rooting Area
2	10	magnolia, saucer	Magnolia x soulangiana	73	Good	NO	1	6.0	15	2	2	DBH @ 1'. Heading cuts.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
3	12	magnolia, saucer	Magnolia x soulangiana	50	Fair	NO	1	7.0	16	3	3	DBH @ base. Dieback. Crack. Buried root collar. Possible girdling root.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
4	15	magnolia, saucer	Magnolia x soulangiana	54	Fair	NO	1	8.0	23	3	3	DBH @ base. Dieback. Buried root collar.	Small DW (1-2"), Trunk Decay, Basal Decay, Branch Decay, Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
5	9	pine, eastern white	Pinus strobus	64	Fair	NO	1	5.0	14	3	3	Buried root collar. 15 deg lean. Phototropism from former neighbor #5. May correct somewhat.	One Sided, Small DW (1-2"), Broken Limbs
6	0	ZZ Unknown tree	ZZ Unknown tree	0	Dead	YES	0	0.0	0	0	0	Missing.	
7	30	cedar, deodar	Cedrus deodara	64	Fair	NO	1	10.0	48	2	2	Excessive mulch. Sapsucker damage. Thinning at top. Light dieback.	Full Crown, Large DW (3"+), Small DW (1-2"), Included Bark/Weak Union, Co-Dominant Stems, Stressed, Restricted Rooting Area
8	7	pine, eastern white	Pinus strobus	58	Fair	NO	1	4.0	11	3	3	One Sided, Small DW (1-2").	Broken Limbs, Suppressed, Restricted Rooting Area
9	7	platanetree, London	Platanus hybrida	70	Good	NO	1	4.0	11	3	3		Broken Limbs, Restricted Rooting Area
10	9	holly, American	Ilex opaca	67	Fair	NO	1	5.0	14	2	2	Lots of sucker growth.	Trunk Decay, Branch Decay, Broken Limbs, Restricted Rooting Area
11	3	platanetree, London	Platanus hybrida	75	Good	NO	1	2.0	5	2	2	Minor trimmer damage.	Restricted Rooting Area
12	3	zelkova, Japanese	Zelkova serrata	70	Good	NO	1	2.0	5	2	2		Restricted Rooting Area

Tree #	DBH	Common Name	Botanical Name	Condition Rating %	Condition Rating	Dead Tree (Y/N)	Number of Stems	Structural Critical Root Zone (radius in feet)	SCRZ	CRZ	Priority (1-4)	Additional Notes	Condition Notes
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14	4.3.3	crapemyrtle, common	Lagerstroemia indica	39	Poor	NO	3	4.0	9	4	4	DBH @ 1'. Topped. Low vigor.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
15	4.3	crapemyrtle, common	Lagerstroemia indica	41	Poor	NO	2	3.0	8	4	4	DBH @ 1'. Topped. Low vigor. One stem dead.	Small DW (1-2"), Branch Decay, Stressed, Serious Decline, Restricted Rooting Area
16	4.3.3.3	crapemyrtle, common	Lagerstroemia indica	45	Poor	NO	4	4.0	10	4	4	DBH @ 1'. Topped. Low vigor. Additional tree not on plan.	Small DW (1-2"), Branch Decay, Stressed, Restricted Rooting Area
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18	3.3.3	crapemyrtle, common	Lagerstroemia indica	55	Fair	NO	3	3.0	8	4	4	DBH @ 1'. Topped.	Small DW (1-2"), Trunk Decay, Branch Decay, Stressed, Restricted Rooting Area
19	3.3.2.2	crapemyrtle, common	Lagerstroemia indica	61	Fair	NO	4	3.0	8	4	4	DBH @ 1'. Topped.	Small DW (1-2"), Branch Decay, Restricted Rooting Area
20	21	platanetree, London	Platanus hybrida	55	Fair	NO	1	9.0	31	3	3	Poor pruning cuts.	Small DW (1-2"), Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
21	21	platanetree, London	Platanus hybrida	45	Poor	NO	1	9.0	31	3	3	Poor pruning cuts.	Large DW (3"+), Small DW (1-2"), Trunk Decay, Branch Decay, Broken Limbs, Stressed, Restricted Rooting Area
22	38	oak, willow	Quercus phellos	71	Good	NO	1	11.0	57	1	1	0.5' girdling root. Heading cuts.	Small DW (1-2"), Girdling Roots

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
	9	CERCIS CANADENSIS	EASTERN REDBUD	2" CALLIPER	AS INDICATED	SINGLE STEM 7' CLEAR TRUNK

CONTRACTOR SHALL PLANT TREE, SEE DETAILS L1, L2 & L3 (SHEET C092.1)

CONTRACTOR SHALL INSTALL GROUND COVER WITH TOPSOIL AND SOD TO THE PROPOSED ELEVATIONS PER ARLINGTON COUNTY DPR DESIGN STANDARDS

- TREE PLANTING NOTES**
- CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR INSPECTION.
 - CONTRACTOR TO PREPARE TREE PLANTING STRIPS FOR THE REPLACEMENT TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.4A AND 02930.4B.
 - CONTRACTOR TO PREPARE STREET TREE PLANTING PITS ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.3A, 02930.3B, AND 02930.11C
 - CONTRACTOR TO PLANT THE TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.1 (ON FLAT LAND) OR 02930.2 (ON SLOPES)

REVISED ON 11/08/2016

NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

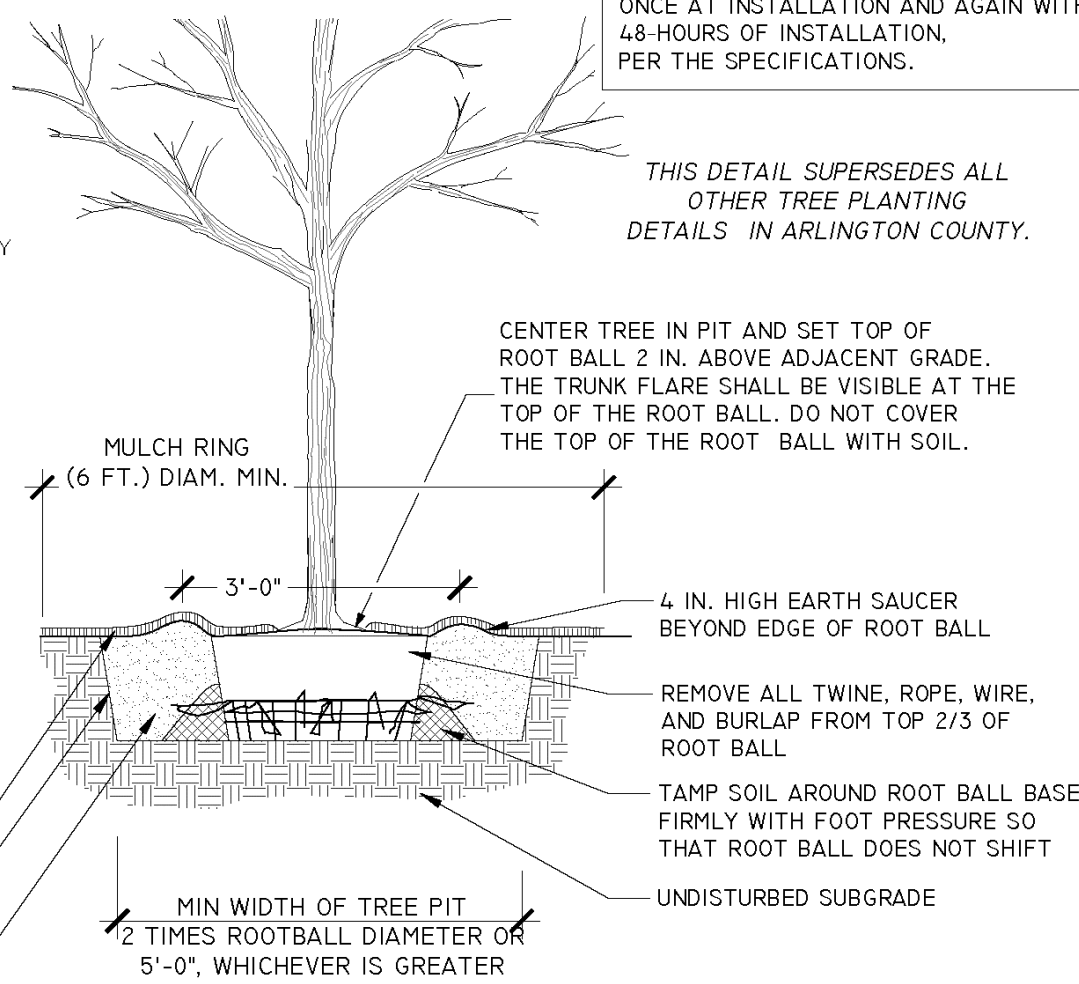
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.

3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

4. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

6. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO STAKING DETAILS.



ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.

THIS DETAIL SUPERSEDES ALL OTHER TREE PLANTING DETAILS IN ARLINGTON COUNTY.

L1 TREE PLANTING DETAIL

FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.1 (2019)

NOT TO SCALE



NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

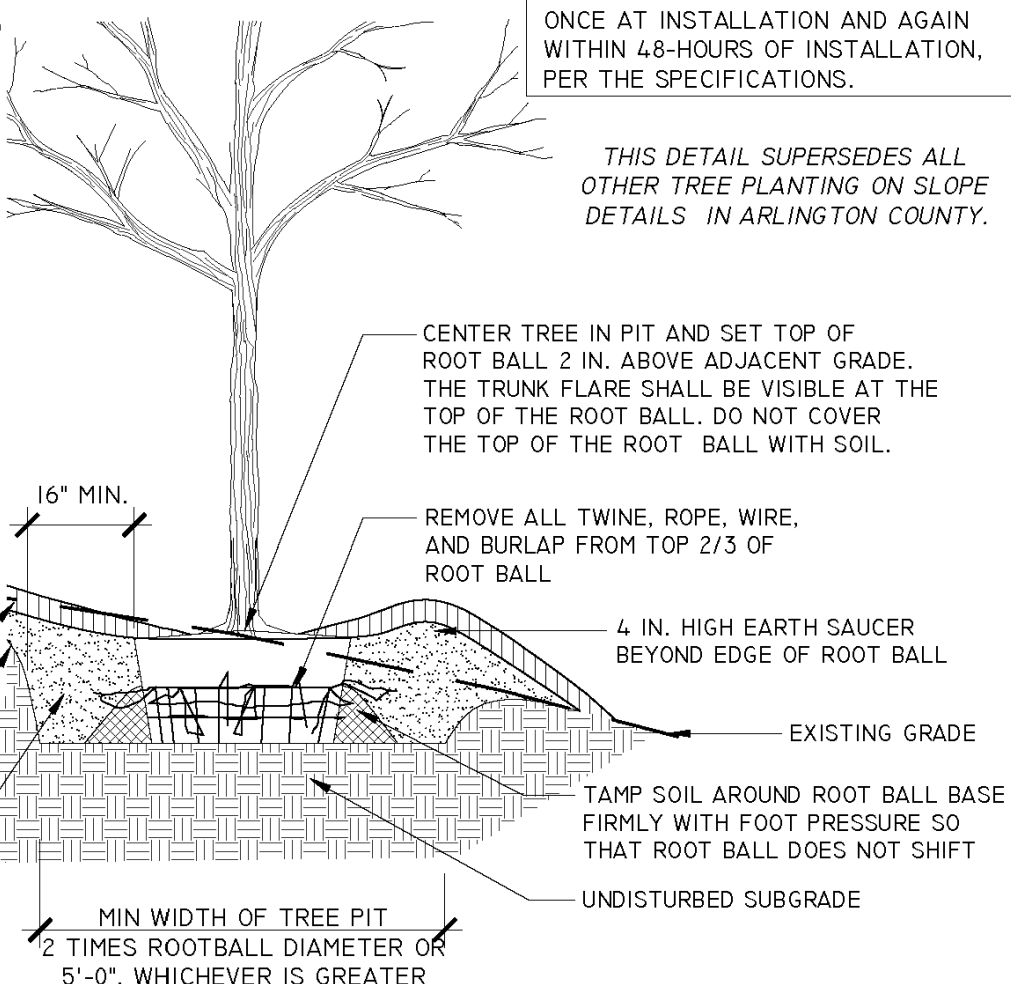
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.

3. UNLESS OTHERWISE DIRECTED BY THE ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

4. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

6. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO STAKING DETAILS.



ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.

THIS DETAIL SUPERSEDES ALL OTHER TREE PLANTING ON SLOPE DETAILS IN ARLINGTON COUNTY.

L2 TREE PLANTING ON SLOPE

FOR OPEN PLANTING AREAS FREE OF PAVING OR GRATES
329300.2 (2019)

1/2" = 1'-0"



NOTES

1. A PERMIT IS REQUIRED WHEN TREES ARE PLANTED IN PUBLIC RIGHT-OF-WAY OR IN A PUBLIC EASEMENT. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL ISSUE THE PERMIT ACCORDING TO THE PROVISIONS OF THE CURRENT ARLINGTON COUNTY ADMINISTRATIVE REGULATION 4.3.

2. TREE SPECIES SHALL BE SELECTED FROM THE 'ARLINGTON COUNTY STREET TREE LIST' OR PER SECTOR PLAN REQUIREMENTS.

3. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.

4. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.

5. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

6. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS:
(A) 5' X 12' OR LARGER IS STANDARD
(B) 4' X 15' MINIMUM IS ALLOWED PER SITE CONDITIONS AND COUNTY URBAN FORESTER'S APPROVAL.

7. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.

8. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES.

9. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER; PEAT MOSS MAY NOT BE USED).

10. IF THE QUANTITY OF ACCEPTABLE EXISTING SOIL IS INSUFFICIENT FOR THE PLANTING REQUIREMENTS, THE CONTRACTOR MAY USE TOPSOIL. SOIL TEST REPORT RESULTS FOR THE TOPSOIL WILL BE MADE AVAILABLE TO THE COUNTY URBAN FORESTER UPON REQUEST. CONTRACTOR SHALL SUBMIT TOPSOIL FOR APPROVAL TO COUNTY URBAN FORESTER THAT MEETS THE FOLLOWING SPECIFICATIONS:
(A.) TOPSOIL CONSISTS OF A SANDY LOAM WITH UNIFORM COMPOSITION AND IS FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER 1/2" IN LENGTH.
(B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF 1.0% ORGANIC MATTER
(C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIGRAMS PER CENTIMETER.

11. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

12. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.

13. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLUMPS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.

14. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST OF 20 GALLONS PER TREE.

15. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

L3 GENERAL NOTES FOR STREET TREE PLANTINGS

FOR TREES PLANTED IN RIGHT-OF-WAY
329300.3 (2016) (02930.5)



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takah</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis M. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS DATE

REVISIONS	DATE

18TH STREET SOUTH
LANDSCAPE NOTES AND DETAILS
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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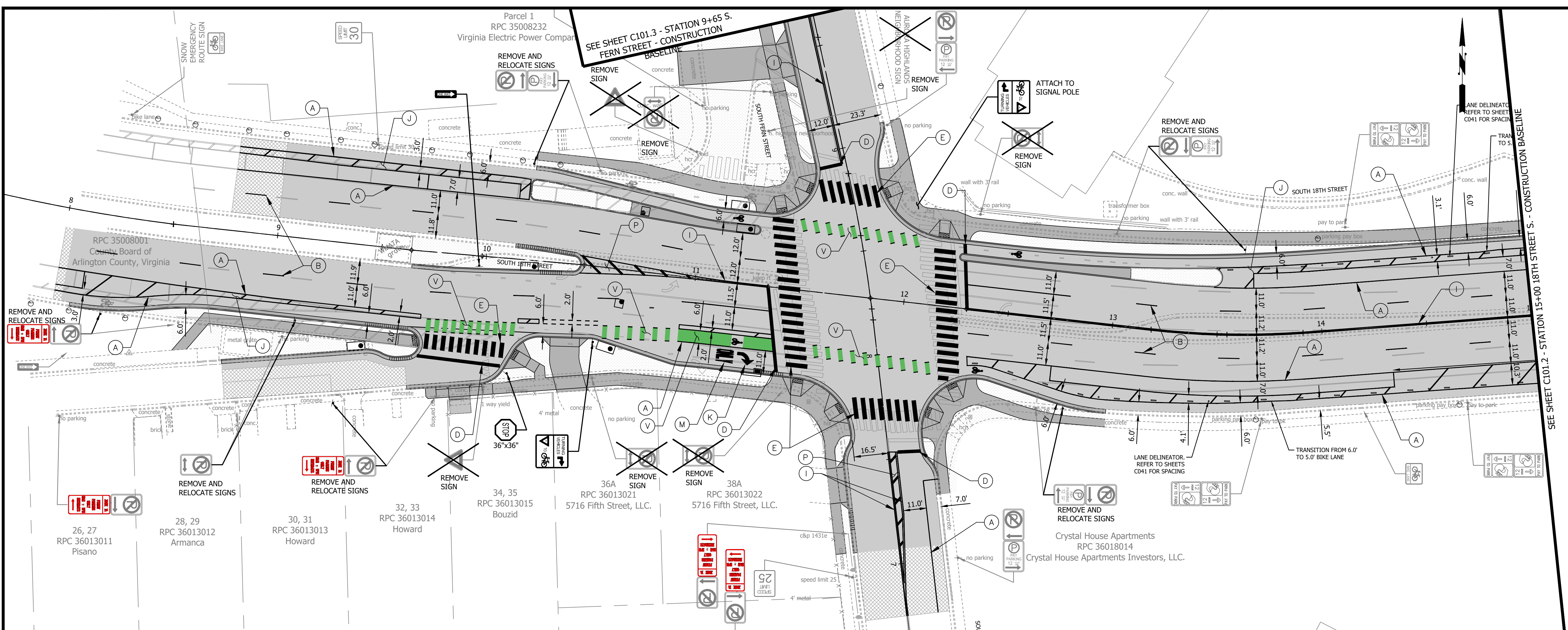
18TH STREET SOUTH

REVISED ON 11/08/2016



APPROVALS	DATE
<i>Cornell</i>	6/18/2020
Kamal N. Taktak	6.26.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
TRANSPORTATION DIRECTOR	6/17/2020
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STANDARD PAVEMENT MARKING LEGEND:

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(B) TYPE B CLASS 1.....WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C) TYPE B CLASS 1.....WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITION SKIPS
(D) TYPE B CLASS 1.....WHITE 18" WIDTH	STOP BARS
(E) TYPE B CLASS 1.....WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(F) TYPE B CLASS 1.....WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSSWALKS, BIKE LANES
(G) TYPE B CLASS 1.....YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
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(I) TYPE B CLASS 1.....YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
(J) TYPE B CLASS 1.....WHITE 6" WIDTH, 15' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
(K) TYPE B CLASS 1.....WHITE SINGLE ARROW	TURN LANES
(L) TYPE B CLASS 1.....WHITE COMBINATION ARROW	TURN LANES
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(O) TYPE B CLASS 1.....WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
(P) TYPE B CLASS 1.....YELLOW 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
(Q) ERADICATE EXISTING PAVEMENT MARKING	ERADICATION
(R) TYPE B CLASS 1.....WHITE 6" WIDTH	TRANSIT LANE LINES
(S) TYPE B CLASS 1.....WHITE 8" WIDTH, 2' LONG, 10' SPACING	TRANSIT LANE SKIPS
(T) TYPE B CLASS 1.....WHITE PREFERENTIAL LANE SYMBOL	TRANSIT LANES
(U) YIELD TRIANGLES	
(V) GREEN PAVEMENT MARKINGS	BIKE MARKINGS

SIGN AND PAVEMENT MARKING NOTES:

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- CONTACT DES-TRANSPORTATION ENGINEERING & OPERATIONS CONSTRUCTION MANAGEMENT SPECIALIST OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 TO APPROVE MARKING LAYOUT 48 HOURS PRIOR TO INSTALLATION OF MARKINGS.
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- SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
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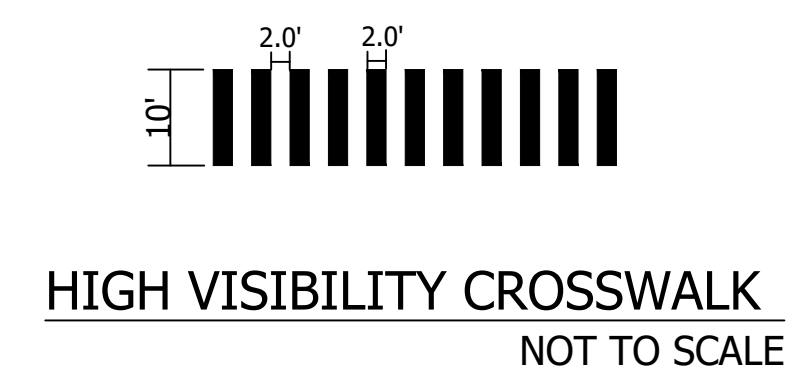
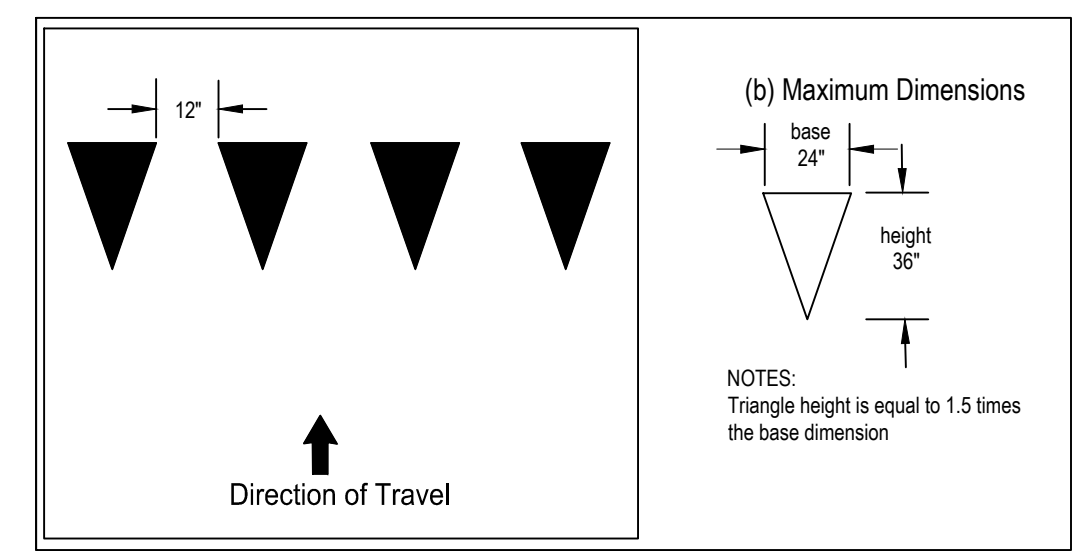


STRIPING LEGEND

(A) EXISTING STRIPING	(A) PROPOSED STRIPING
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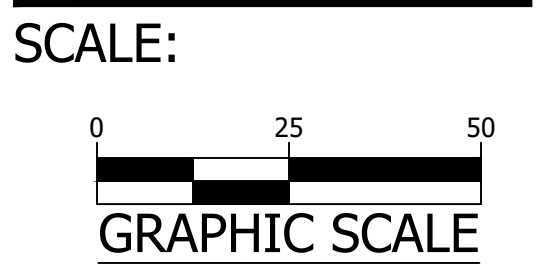
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18TH STREET SOUTH
STRIPING AND SIGNAGE PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

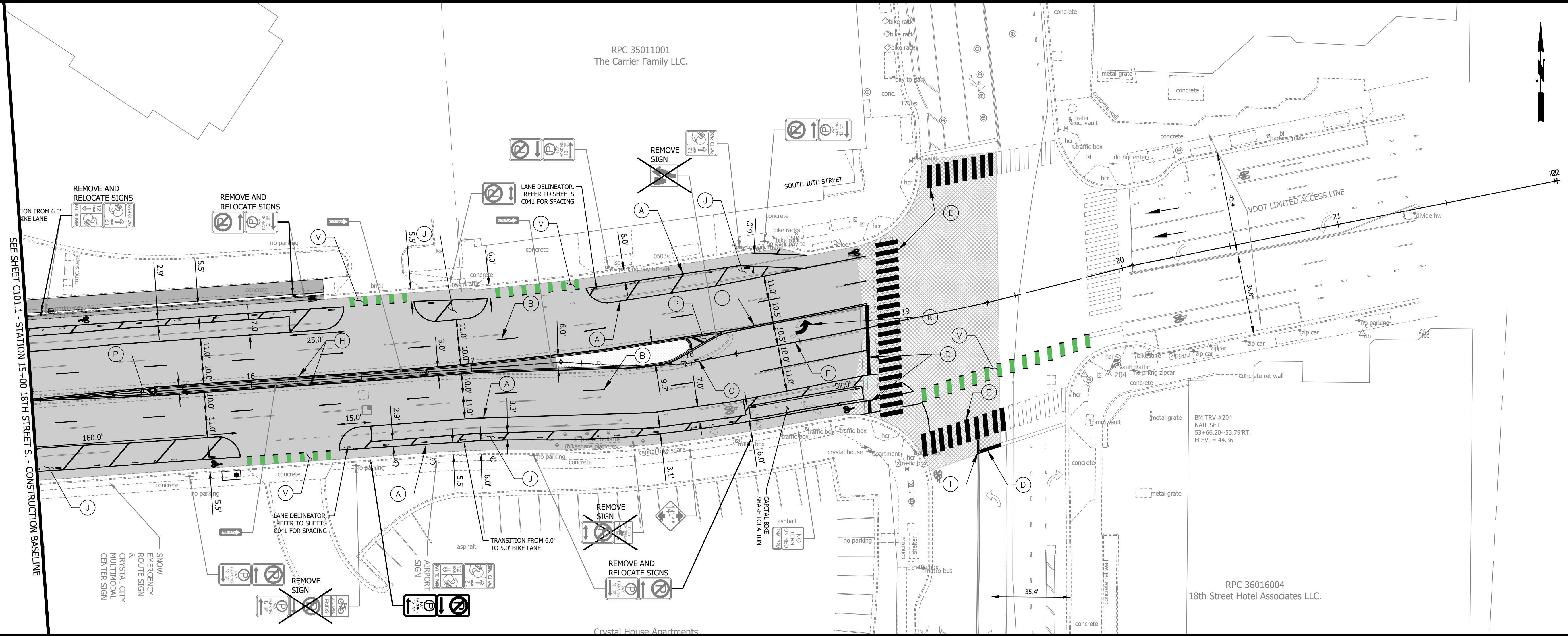
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PLOTTED BY: NSHARP





APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
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TRANSPORTATION DIRECTOR	6/17/2020
PROJECT MANAGER	

REVISIONS	DATE



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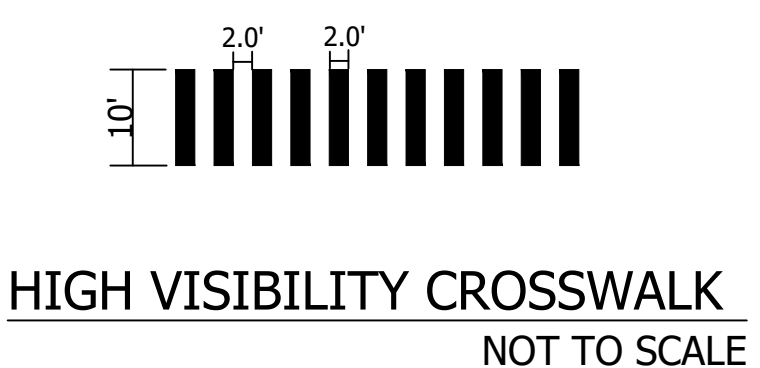
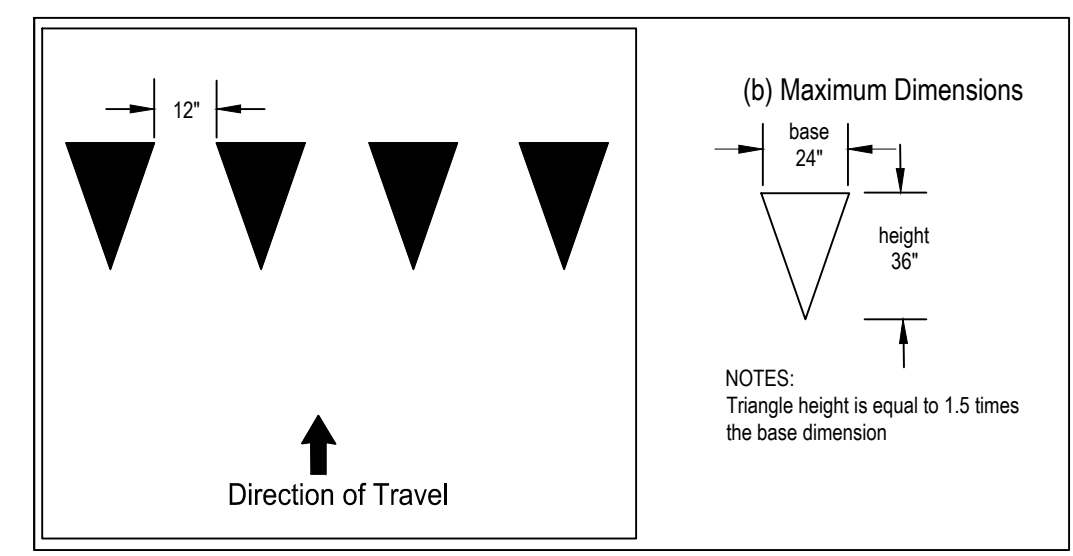
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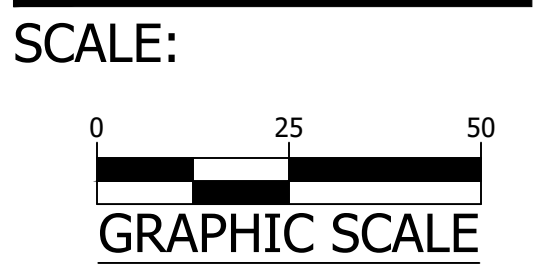
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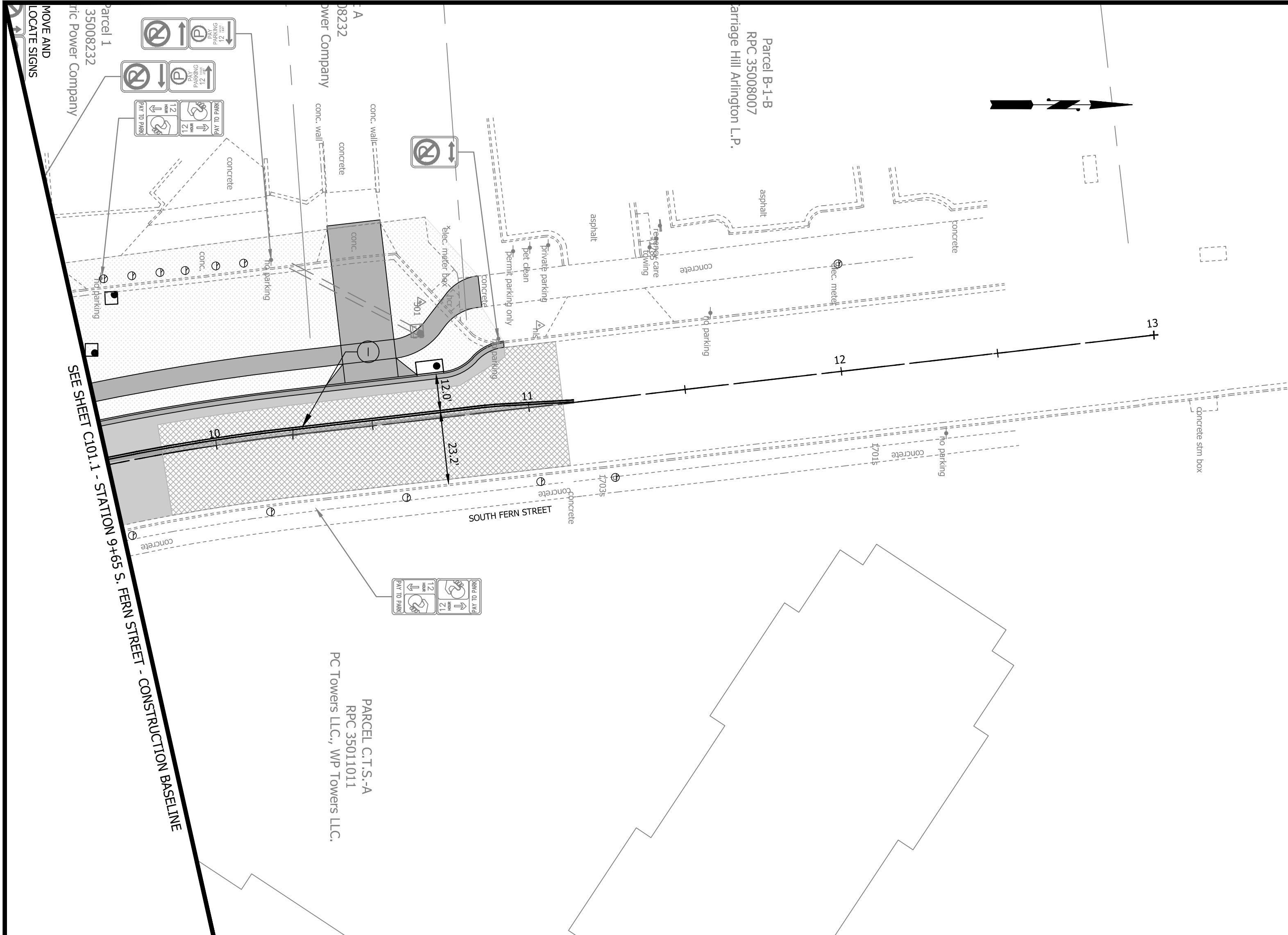


REVISED ON 11/08/2016

18TH STREET SOUTH
STRIPING AND SIGNAGE PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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<i>[Signature]</i> Kamal N. Taktak CONSTRUCTION MANAGEMENT SUPERVISOR	6.26.20
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<i>[Signature]</i> Dennis W. Leach TRANSPORTATION DIRECTOR	6/24/20
<i>[Signature]</i> Ariel Yang PROJECT MANAGER	6/17/2020

REVISIONS	DATE

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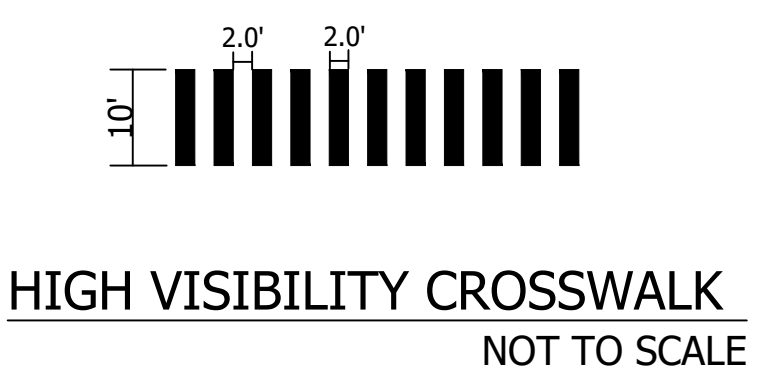
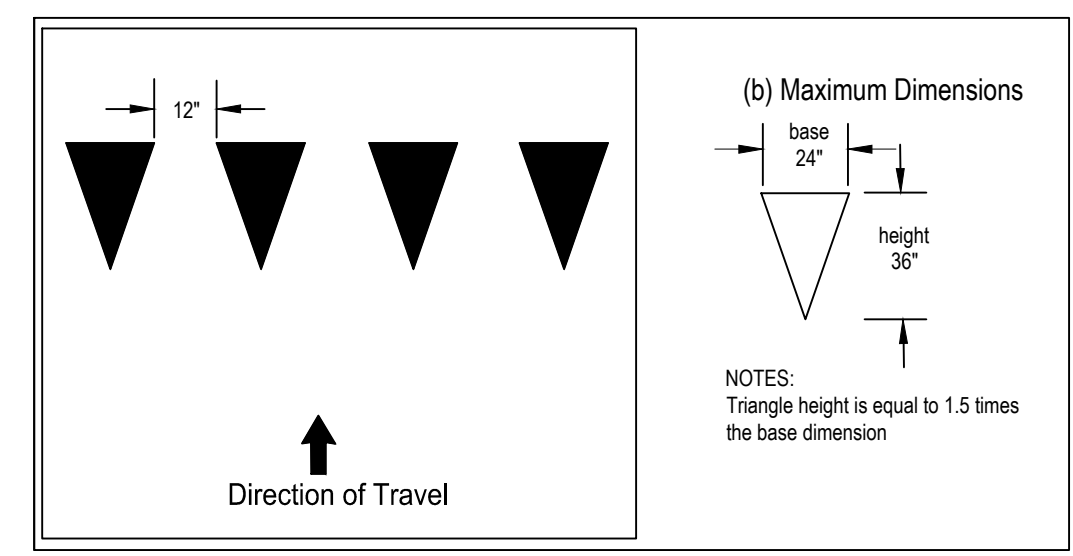


STRIPING LEGEND

(A) EXISTING STRIPING	(A) PROPOSED STRIPING
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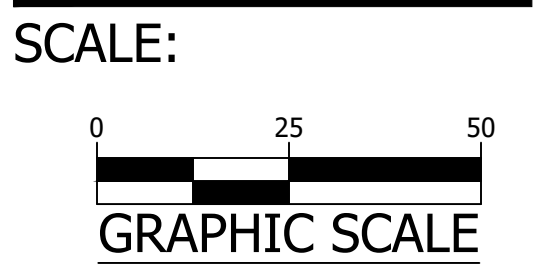
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EXISTING	PROPOSED



18TH STREET SOUTH
 STRIPING AND SIGNAGE PLAN
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
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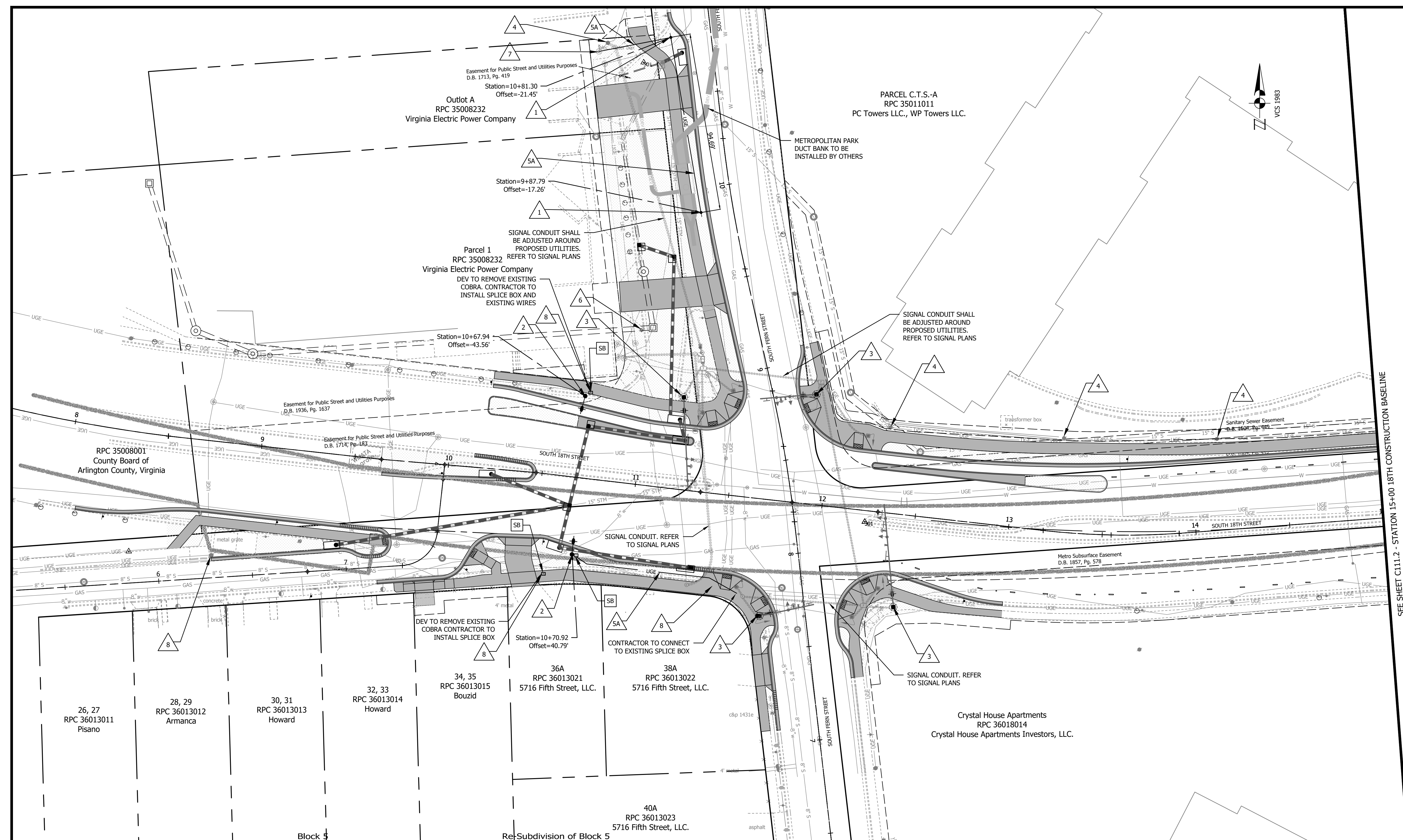
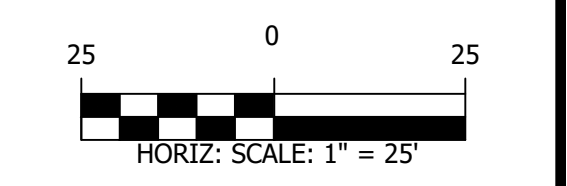
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18TH STREET SOUTH
STREETLIGHT PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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PLOTTED: MARCH 1 2021
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CONSTRUCTION NOTES:

- 1 CONTRACTOR SHALL FURNISH AND INSTALL LED CARLYLE FIXTURE ON 16' POLE WITH TYPE F-1 FOUNDATION (ARL STD. DWG #14060-1), SEE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
- 2 PROPOSED DOMINION ENERGY COBRA (250 COMPARABLE WATTAGE). CONDUIT AND POLES TO BE DESIGNED AND INSTALLED BY DOMINION ENERGY. CONTRACTOR TO COORDINATE WITH DOMINION ENERGY ON TIMING FOR INSTALLATION. REFER TO TABLE ON THIS SHEET.
- 3 PROPOSED TRAFFIC SIGNAL AND LIGHT RELOCATION. REFER TO SIGNAL PLANS FOR POWER SOURCE AND CONDUIT LAYOUT.
- 4 CONTRACTOR SHALL PROTECT EXISTING LIGHT POLES DURING CONSTRUCTION.
- 5A CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIA, ELECTRICAL CONDUIT PER ARL STD. DWG #14030-01.
- 5B CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIA, ELECTRICAL CONDUIT PER DOMINION ENERGY STANDARD SPECIFICATIONS.
- 6 CONTRACTOR SHALL UNINSTALL ARLINGTON COUNTY LIGHT POLE PER NOTES ON THIS SHEET.

GENERAL NOTES:

- 7 CONTRACTOR SHALL CONNECT TO EXISTING METER, THE METER CONNECTION WORK SHALL INCLUDE ALL COMPONENTS NEEDED TO COMPLETE THE WORK AND SHALL FOLLOW THE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
- 8 EXISTING DOMINION ENERGY LIGHT POLES TO BE REMOVED BY DOMINION ENERGY.
- 9 EXISTING LIGHT POLE SHALL BE CAREFULLY REMOVED DURING CONSTRUCTION AND THEN REPLACED IN THE SAME LOCATION.
- SB CONTRACTOR TO COORDINATE WITH DOMINION ENERGY TO OBTAIN SPLICE BOXES (SB). ALL SPLICE BOXES INSTALLED SHALL BE PER DOMINION ENERGY SPECIFICATIONS.

LIGHTING REMOVAL NOTES:

1. THE PROPOSED PROJECT IS ON TOP OF UNDERGROUND WMATA TUNNEL. BASED ON WMATA AS-BUILT INFORMATION (HUNTINGTON ROUTE, PLAN AND PROFILE, STA. 316+17.80 TO STA. 326-00.00), THE DEPTH OF THE SURFACE TOP IS APPROXIMATELY AT ELEVATION 30.00'.
2. CONTRACTOR IS RESPONSIBLE FOR USING THE PROPER MEANS AND METHODS OF CONSTRUCTION TO INSTALL THE APPROPRIATE TYPE OF FOUNDATIONS, POLES, LUMINARIES, CONDUITS, WIRING, GROUNDING AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION OF THE PROPOSED STREETLIGHTS. IT IS RECOMMENDED FOR CONTRACTOR TO PROBE OR EXPLORE THE AVAILABLE DEPTH IN ADVANCE TO DETERMINE THE APPROXIMATE TYPE OF STREETLIGHT FOUNDATION, PROBING AND EXPLORING ARE CONSIDERED INCIDENTAL FOR INSTALLING THE STREETLIGHT FOUNDATION AND NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE.
3. CONDUITS ALIGNMENT RUNS, STREETLIGHT FOUNDATIONS AND JUNCTION BOX LOCATIONS WERE DRAWN BASED ON AVAILABLE INFORMATION, FIELD LOCATE AND/OR ADJUST ALIGNMENTS AND PLACEMENTS IF NECESSARY DUE TO SITE CONDITION, FOLLOW THE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
4. CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH ARLINGTON COUNTY AND DOMINION VIRGINIA POWER.

DOMINION ENERGY LIGHTS

QUANTITY	COMPARABLE HID WATTAGE	FINISH COLOR	INITIAL LAMP LUMENS	LIGHTING PATTERN	CORRELATED COLOR TEMPERATURE (CCT)	INPUT WATTAGE	BILLING TIER	BASIC / PREMIUM	RECOMMENDED MOUNTING HEIGHT (FT.)	BUG RATING	LUMINAIRE STOCK #	WMIS CU CODE
2	250 (480 V)	GRAY	14575	TYPE III	4000 K	136	5	BASIC	30-35	3-0-3	42330028	LEDCC0X1534G4XX

CIRCUIT RUN #1 - VOLTAGE DROP TO METER AND TWO POLES

PANEL FEED	EX. METER	TO	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
CKT1-1	METER	IC-1	40	#6 AWG	1	1	0.48	0.01
CKT1-1	IC-1	IC-2	95	#6 AWG	1	2	0.97	0.05
TOTAL VOLTAGE DROP OF CIRCUIT RUN #1 AT LAST POLE (V):								0.06
PERCENT VOLTAGE DROP FOR CIRCUIT RUN #1 AT LAST POLE:								0.05

REVISED ON 11/08/2016



APPROVALS	DATE
<i>Kamal N. Taktak</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Acil Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

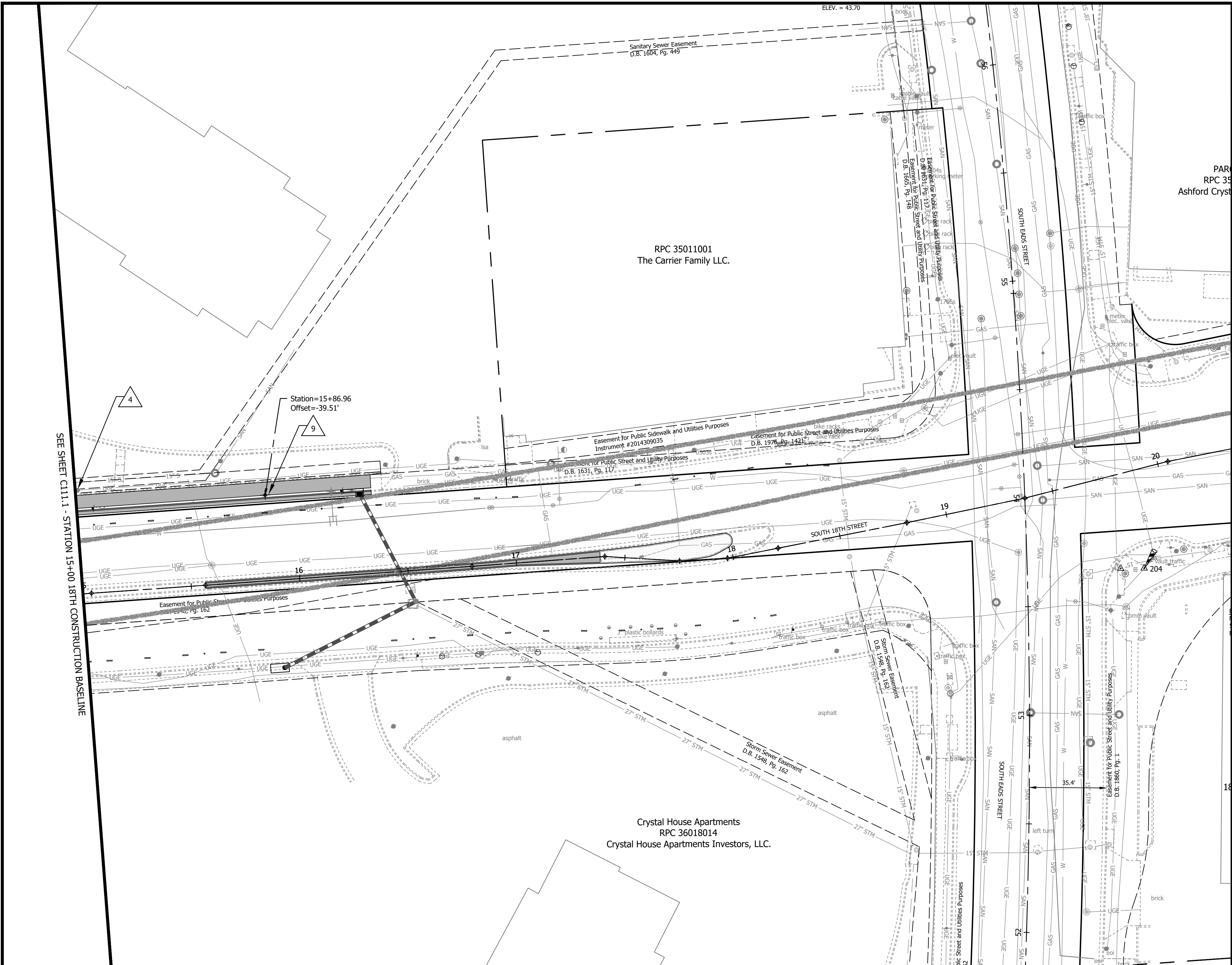
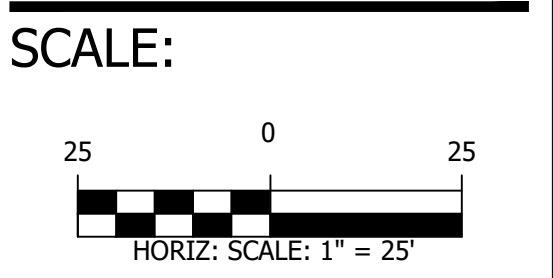
REVISIONS	DATE

18TH STREET SOUTH
STREETLIGHT PLAN
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX

FILENAME:
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PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE

PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL FURNISH AND INSTALL LED CARLYLE FIXTURE ON 16' POLE WITH TYPE F-1 FOUNDATION (ARL STD. DWG #14060-1). SEE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
 2. PROPOSED DOMINION ENERGY COBRA (250 COMPARABLE WATTAGE). CONDUIT AND POLES TO BE DESIGNED AND INSTALLED BY DOMINION ENERGY. CONTRACTOR TO COORDINATE WITH DOMINION ENERGY ON TIMING FOR INSTALLATION. REFER TO TABLE ON THIS SHEET.
 3. PROPOSED TRAFFIC SIGNAL AND LIGHT RELOCATION. REFER TO SIGNAL PLANS FOR POWER SOURCE AND CONDUIT LAYOUT.
 4. CONTRACTOR SHALL PROTECT EXISTING LIGHT POLES DURING CONSTRUCTION.
 - 5A. CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIA, ELECTRICAL CONDUIT PER ARL STD. DWG #14030-01.
 - 5B. CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIA, ELECTRICAL CONDUIT PER DOMINION ENERGY STANDARD SPECIFICATIONS.
 6. CONTRACTOR SHALL UNINSTALL ARLINGTON COUNTY LIGHT POLE PER NOTES ON THIS SHEET.

- GENERAL NOTES:**
7. CONTRACTOR SHALL CONNECT TO EXISTING METER, THE METER CONNECTION WORK SHALL INCLUDE ALL COMPONENTS NEEDED TO COMPLETE THE WORK AND SHALL FOLLOW THE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
 8. EXISTING DOMINION ENERGY LIGHT POLES TO BE REMOVED BY DOMINION ENERGY.
 9. EXISTING LIGHT POLE SHALL BE CAREFULLY REMOVED DURING CONSTRUCTION AND THEN REPLACED IN THE SAME LOCATION.
 - SB. CONTRACTOR TO COORDINATE WITH DOMINION ENERGY TO OBTAIN SPLICE BOXES (SB). ALL SPLICE BOXES INSTALLED SHALL BE PER DOMINION ENERGY SPECIFICATIONS.

- LIGHTING REMOVAL NOTES:**
1. THE PROPOSED PROJECT IS ON TOP OF UNDERGROUND WMATA TUNNEL. BASED ON WMATA AS-BUILT INFORMATION (HUNTINGTON ROUTE, PLAN AND PROFILE, STA. 316+17.80 TO STA. 326-00.00), THE DEPTH OF THE SURFACE TOP IS APPROXIMATELY AT ELEVATION 30.00'.
 2. CONTRACTOR IS RESPONSIBLE FOR USING THE PROPER MEANS AND METHODS OF CONSTRUCTION TO INSTALL THE APPROPRIATE TYPE OF FOUNDATIONS, POLES, LUMINARIES, CONDUITS, WIRING, GROUNDING AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION OF THE PROPOSED STREETLIGHTS. IT IS RECOMMENDED FOR CONTRACTOR TO PROBE OR EXPLORE THE AVAILABLE DEPTH IN ADVANCE TO DETERMINE THE APPROXIMATE TYPE OF STREETLIGHT FOUNDATION, PROBING AND EXPLORING ARE CONSIDERED INCIDENTAL FOR INSTALLING THE STREETLIGHT FOUNDATION AND NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE.
 3. CONDUITS ALIGNMENT RUNS, STREETLIGHT FOUNDATIONS AND JUNCTION BOX LOCATIONS WERE DRAWN BASED ON AVAILABLE INFORMATION, FIELD LOCATE AND/OR ADJUST ALIGNMENTS AND PLACEMENTS IF NECESSARY DUE TO SITE CONDITION, FOLLOW THE ARLINGTON COUNTY LIGHTING SPECIFICATIONS & STANDARDS.
 4. CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH ARLINGTON COUNTY AND DOMINION VIRGINIA POWER.

CIRCUIT RUN #1 - VOLTAGE DROP TO METER AND TWO POLES

PANEL FEED	EX. METER	020008997	0	#6 AWG	N/A	2	0.97	0.00
CKT1-1	METER	1C-1	40	#6 AWG	1	1	0.48	0.01
CKT1-1	1C-1	1C-2	95	#6 AWG	1	2	0.97	0.05

TOTAL VOLTAGE DROP OF CIRCUIT RUN #1 AT LAST POLE (V): 0.06
PERCENT VOLTAGE DROP FOR CIRCUIT RUN #1 AT LAST POLE: 0.05

DOMINION ENERGY LIGHTS

QUANTITY	COMPARABLE HID WATTAGE	FINISH COLOR	INITIAL LAMP LUMENS	LIGHTING PATTERN	CORRELATED COLOR TEMPERATURE (CCT)	INPUT WATTAGE	BILLING TIER	BASIC / PREMIUM	RECOMMENDED MOUNTING HEIGHT (FT.)	BUG RATING	LUMINAIRE STOCK #	WMIS CU CODE
2	250 (480 V)	GRAY	14575	TYPE III	4000 K	136	5	BASIC	30-35	3-0-3	42330028	LEDC0XX1534G4XX

REVISED ON 11/08/2016

CONSTRUCTION NOTES

- FOR ALL ARTERIAL STREETS, PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF THE PROJECT SITE AT EACH VEHICULAR APPROACH 3 WEEKS PRIOR TO STREET CLOSURE IN LOCATIONS DIRECTED BY THE PROJECT OFFICER.
- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS.
- CONTACT TRANSPORTATION ENGINEERING OPERATIONS AT 703-228-6598 OR 571-437-1077 AND THE PROJECT OFFICER TO APPROVE MARKING LAYOUT 48 HOURS PRIOR TO INSTALLATION OF MARKINGS.
- ONE LANE CLOSURE IN EACH DIRECTION OF TRAFFIC WILL BE PERMITTED FOR FINAL PAVEMENT OVERLAY.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC ON ANY INTERSECTION WITHIN THE WORK AREA.
- THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER
- WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER, THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
- ALL TEMPORARY BUS TRAVEL LANES TO BE A MINIMUM OF 11 FEET WIDE.

MOT NOTES:

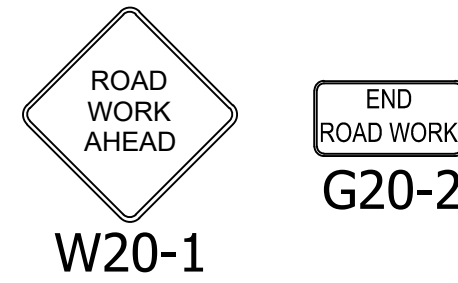
- PARKING SHALL BE RESTRICTED BY THE COUNTY AS PART OF THE RIGHT OF WAY PERMIT. CONTACT DES-PERMITTING SECTION, 703-228-4798, AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
- COORDINATE WITH DES-TRANSIT BUREAU AT 703-228-3049, AT LEAST 4 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO TRANSIT STOPS OR ROUTES. NOTE: ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE MINIMUM 11' WIDE.
- THE CONTRACTOR SHALL MAINTAIN ADA ACCESSIBLE PARKING SPACES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT DES - PERMITTING, 703-228-4798, TO COORDINATE RELOCATION OF EXISTING ADA ACCESSIBLE PARKING SPACES OR TO INSTALL TEMPORARY SIGNAGE OUT OF AND ADJACENT TO THE WORK ZONE AS CONSTRUCTION PROGRESSES. MULTIPLE RELOCATIONS MAY BE NECESSARY DURING EACH PHASE.
- NO WORK OR STORAGE SHALL BE CONDUCTED IN THE BUFFER AND TAPER AREAS.
- ALL PROJECT SIGNAGE AND TEMPORARY STRIPING SHALL FOLLOW TTC-53.0 AND TTC-60.0 OF THE VIRGINIA WORK AREA PROTECTION MANUAL (LATEST EDITION).

PEDESTRIAN NOTE:

- PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDBLOCK WORK SITES.
- A SAFE PEDESTRIAN PATH MUST BE MAINTAINED AROUND THE EXISTING AND PROPOSED TRAFFIC SIGNALS DURING CONSTRUCTION. IF A PEDESTRIAN PATH CAN NOT BE MAINTAINED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE PROJECT OFFICER FOR APPROVAL ON AN ALTERNATIVE PATH. ADDITIONAL MOT MIGHT BE REQUIRED.

MOT WARNING SIGNAGE:

- ROAD WORK AHEAD (W20-1) AND END ROAD WORK (G20-2) SIGNAGE SHALL BE PLACED AT THE AT THE BEGINNING AND END OF THE TOTAL PROJECT AREA. THESE SIGNS SHALL NOT BE REMOVED UNTIL THE CONSTRUCTION IS FINALIZED AND ALL MOT SIGNAGE MAY BE TAKEN DOWN.



- IF W20-1 AND G20-2 SIGNS NEED TO BE RELOCATED FOR ANY REASON, APPROVAL BY THE PROJECT OFFICER IS REQUIRED.
- REFER TO SHEET C121.2 FOR W20-1 AND G20-2 SIGN PLACEMENT. PLACEMENTS OF SIGNS SHALL BE AT THE EXTENTS OF THE PROJECT AREA

LEGEND

- WORK ZONE AREAS
- BUFFER AND TAPER AREAS
- PEDESTRIAN PATH
- CHANNELIZING DEVICES (BARRELS/DRUMS)
- LONGITUDINAL CHANNELIZING DEVICES (JERSEY BARRIER)
- TEMPORARY PAVEMENT
- FLAGGER
- M.O.T. SIGNAGE
- DIRECTION OF TRAFFIC
- ILLUMINATED FLASHING ARROW BOARD

ALL TEMPORARY PAVEMENT MARKINGS SHALL BE INCIDENTAL TO ALL MAINTENANCE OF TRAFFIC WORK.



DEPARTMENT OF ENVIRONMENTAL SERVICES
 FACILITIES & ENGINEERING DIVISION
 ENGINEERING BUREAU
 2100 CLARENDON BOULEVARD, SUITE 813
 ARLINGTON, VA 22201
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 FAX: 703.228.3606

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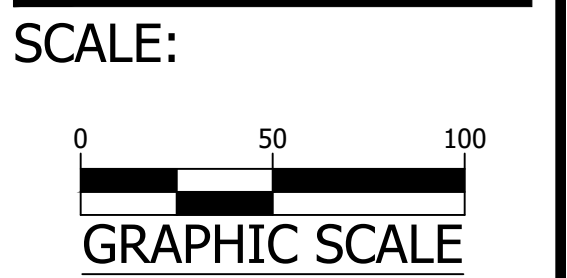


APPROVALS	DATE
<i>Kamell</i> QUALITY CONTROL ENGINEER	6/18/2020 6.26.20
<i>Kamal N. Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i> TRANSPORTATION DIRECTOR	6/24/20
<i>Ariel Yang</i> PROJECT MANAGER	6/17/2020

REVISIONS	DATE

18TH STREET SOUTH
 MAINT. OF TRAFFIC PLAN NOTES
 ROADWAY IMPROVEMENTS
 S FERN ST TO S EADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
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 PLOTTED BY: NSHARP



SHEET C121.1

18TH STREET SOUTH

REVISED ON 11/08/2016

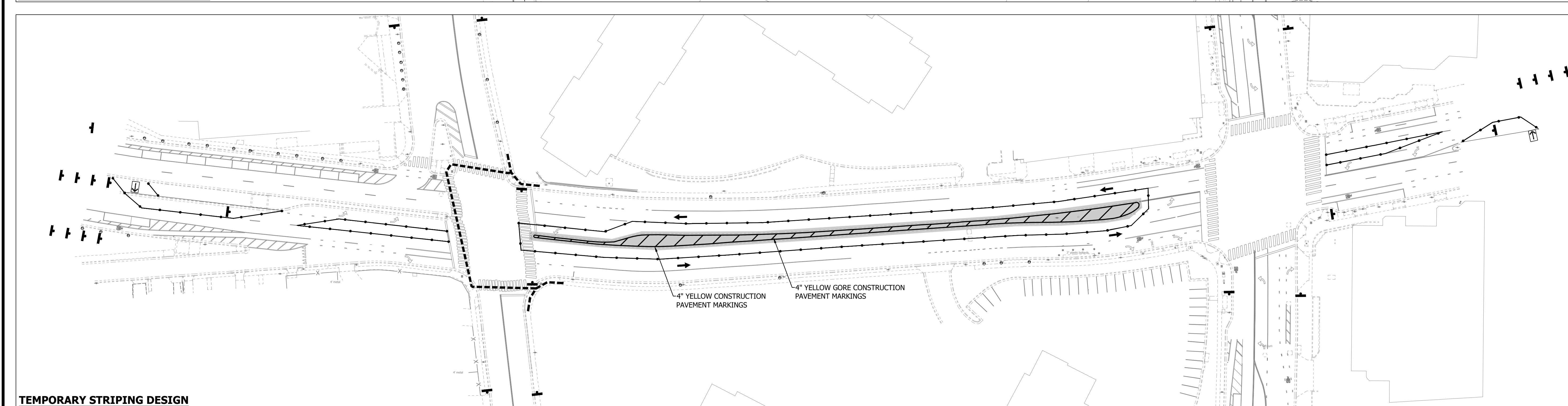
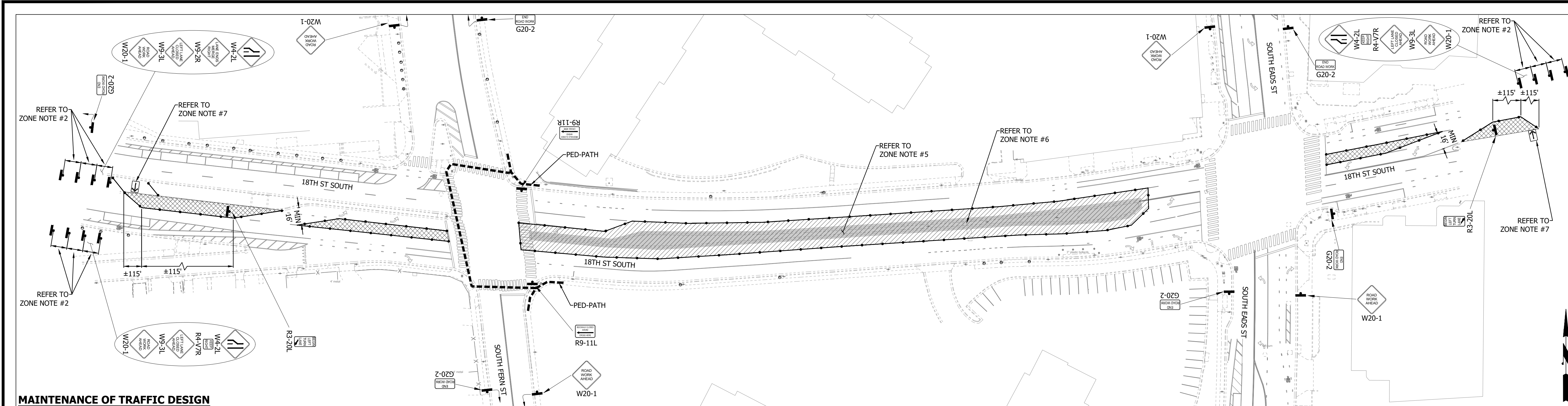
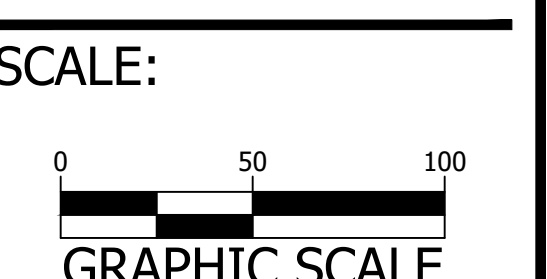


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Debra</i>	
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 1
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
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 CHECKED: TL
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 PLOTTED BY: NSHARP



MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 01	TTC-27.2	TTC-36.2	REMOVE EXISTING MEDIAN AND REPAVE WITH TEMP. ASPHALT. RAISING EXISTING STORM SEWER INFRASTRUCTURE. CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 WEEKS - 1 MONTH	MON.-FRI. 9:00AM-4:00PM

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND TESO.
 - TEMPORARY STRIPING:** MAINTAIN ALL EXISTING DIRECTIONAL ARROWS. IF DIRECTIONAL ARROW GETS COVERED OR DAMAGED DURING CONSTRUCTION, REPLACE WITH TEMPORARY DIRECTIONAL ARROW. REFER TO PLAN FOR STRIPING
 - OPTIONAL TTC'S:** REQUIRES APPROVAL BY THE PROJECT OFFICER PRIOR TO IMPLEMENTATION
42.2 INTERIOR LANE CLOSURE OPERATIONS ON A MULTI-LANE ROADWAY
-FIRST CHANNELIZING DEVICE SHALL BE PLACED GREATER THAN 50' FROM AN INTERSECTION
 - INSTALL A DRIVABLE TEMPORARY PAVEMENT SURFACE THAT SHALL BE PLACED WHERE THE EXISTING MEDIAN WAS REMOVED.
 - ADJUST STORM STRUCTURE TOP TO BE LEVEL WITH THE TEMPORARY PAVEMENT.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED IN THE EXISTING MEDIANS.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE ABOVE TABLE

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.

REFER TO SHEET C121.1 FOR ADDITIONAL NOTES FOR THE PLACEMENT OF W20-1 AND G20-2 SIGNAGE

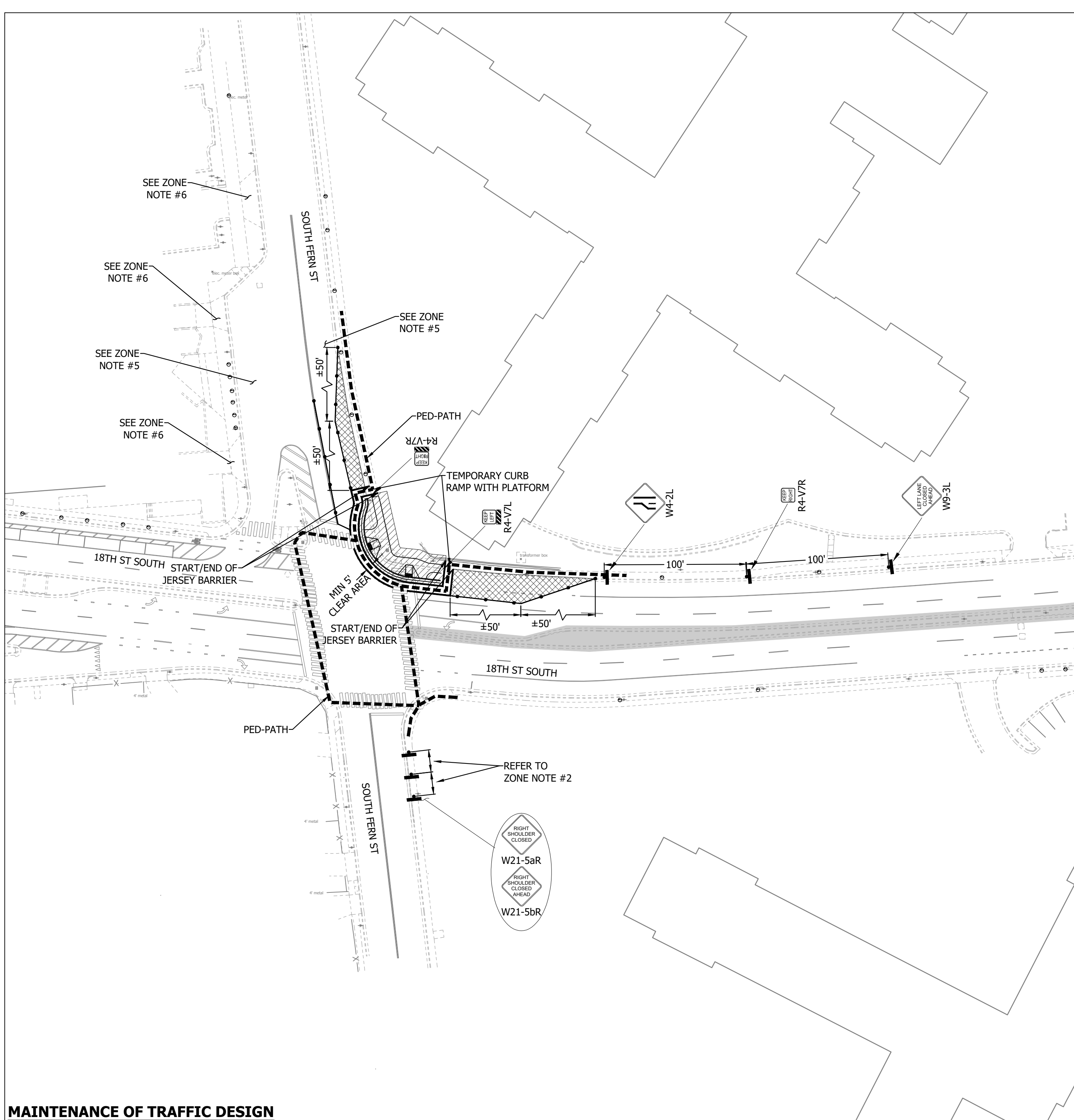
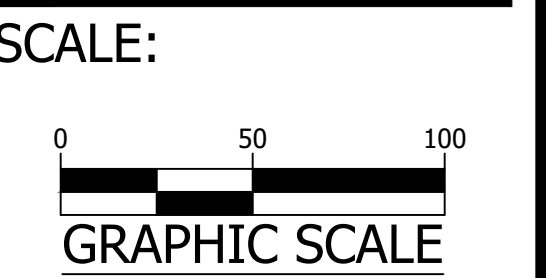


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>John</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	6/17/2020
<i>Ariel Yang</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 2
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

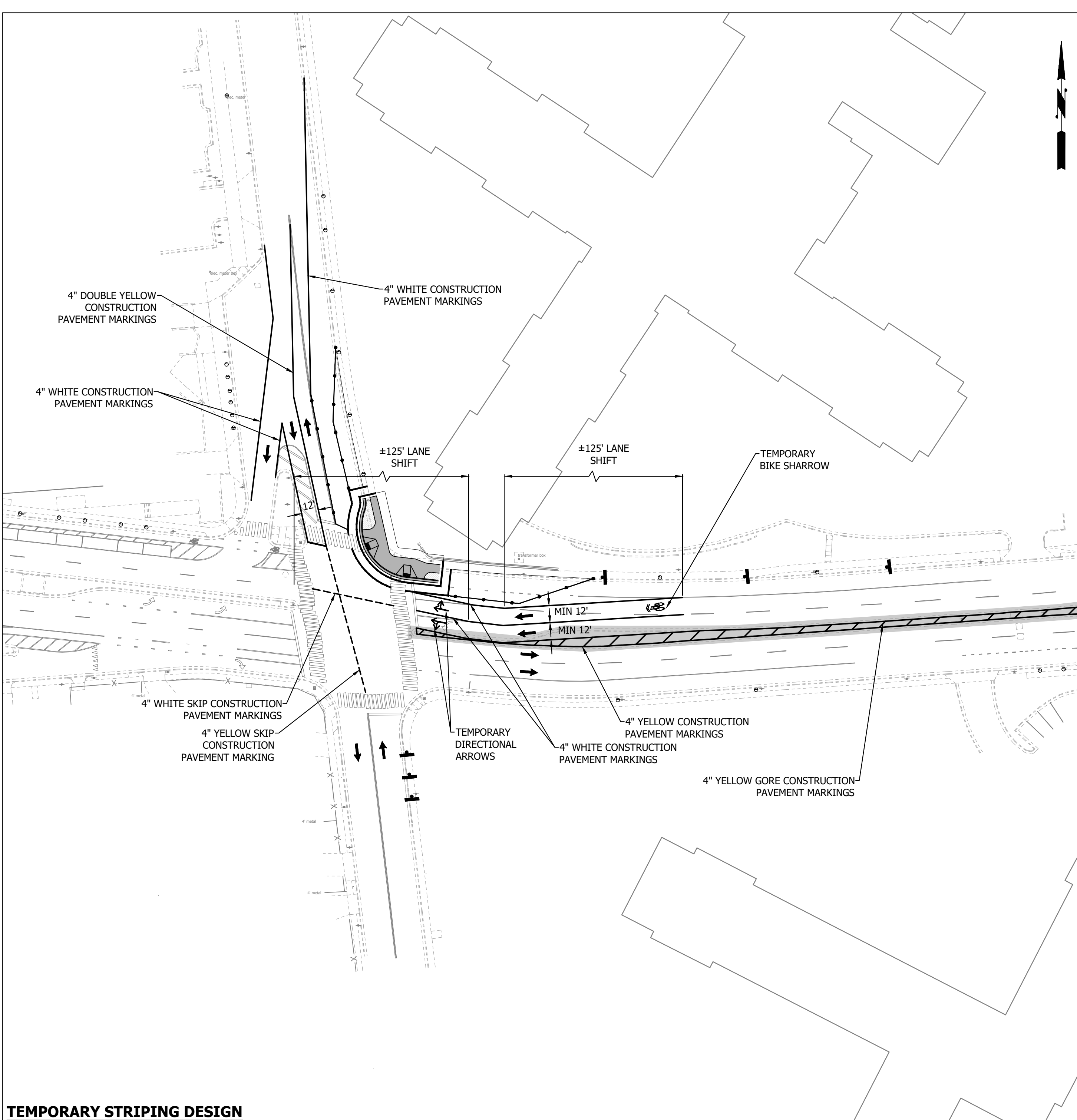
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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:					
MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 02	TTC-28.2	TTC-35.1 TTC-36.2	LONGITUDINAL CHANNELIZING DEVICES SHOULD BE IN PLACE TO PROTECT PEDESTRIANS AROUND THE WORK ZONE SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 WEEKS - 1 MONTH	MON.-FRI. 9:00AM-4:00PM

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**



TEMPORARY STRIPING DESIGN

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - CONTRACTOR TO MAINTAIN DRIVEWAY ACCESS AT ALL TIME.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE ABOVE TABLE AND THE SIDEWALK BYPASS AT AN INTERSECTION, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

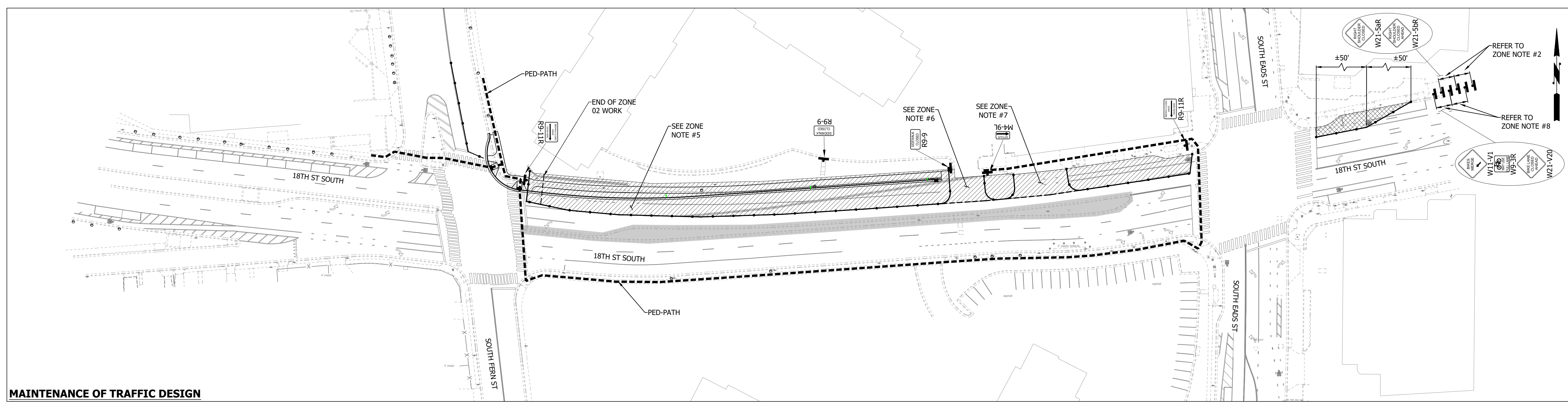
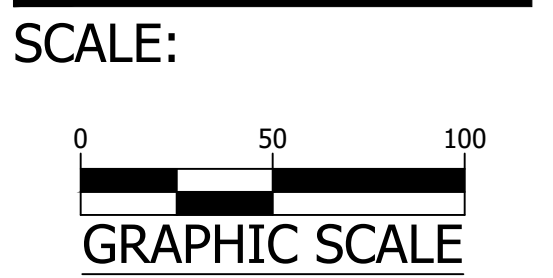


APPROVALS	DATE
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QUALITY CONTROL ENGINEER	6.26.20
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CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
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WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	6/17/2020
<i>[Signature]</i>	
PROJECT MANAGER	

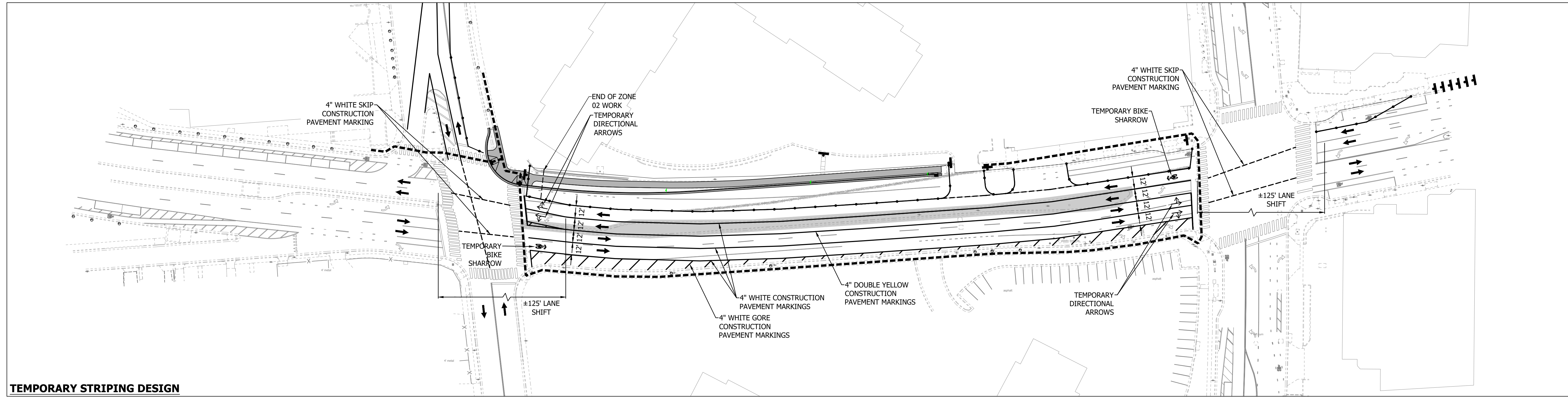
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 3
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST

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 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 03	TTC-4.2	TTC-35.1 *	M.O.T. DEVICES MAY REMAIN IN PLACE AS LONG AS TWO LANES IN EACH DIRECTION ARE MAINTAINED. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - CONSTRUCTION OF THE BIKE MEDIAN SHALL NOT BE DONE IN THIS ZONE. PAVE THE AREA SO THAT IT HAS A DRIVABLE SURFACE. MEDIAN SHALL BE CONSTRUCTED IN A LATER ZONE.
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NO MORE THEN 3-5 DAYS.
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ONLY HALF OF THE DRIVEWAY SHALL BE CLOSED AT A TIME TO ALLOW FOR VEHICLES TO ENTER AND EXIT. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK ON EACH HALF OF THE DRIVEWAY SHOULD TAKE NO MORE THEN 2-3 DAYS.
 - BIKE LANE CLOSURE SIGNAGE TO BE PLACED IN BETWEEN ROAD WARNING SIGNS AND BE VISIBLE FOR BOTH VEHICLES AND BIKES.

* PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE ABOVE TABLE AND THE BICYCLE LANE CLOSURE, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.

REVISED ON 11/08/2016

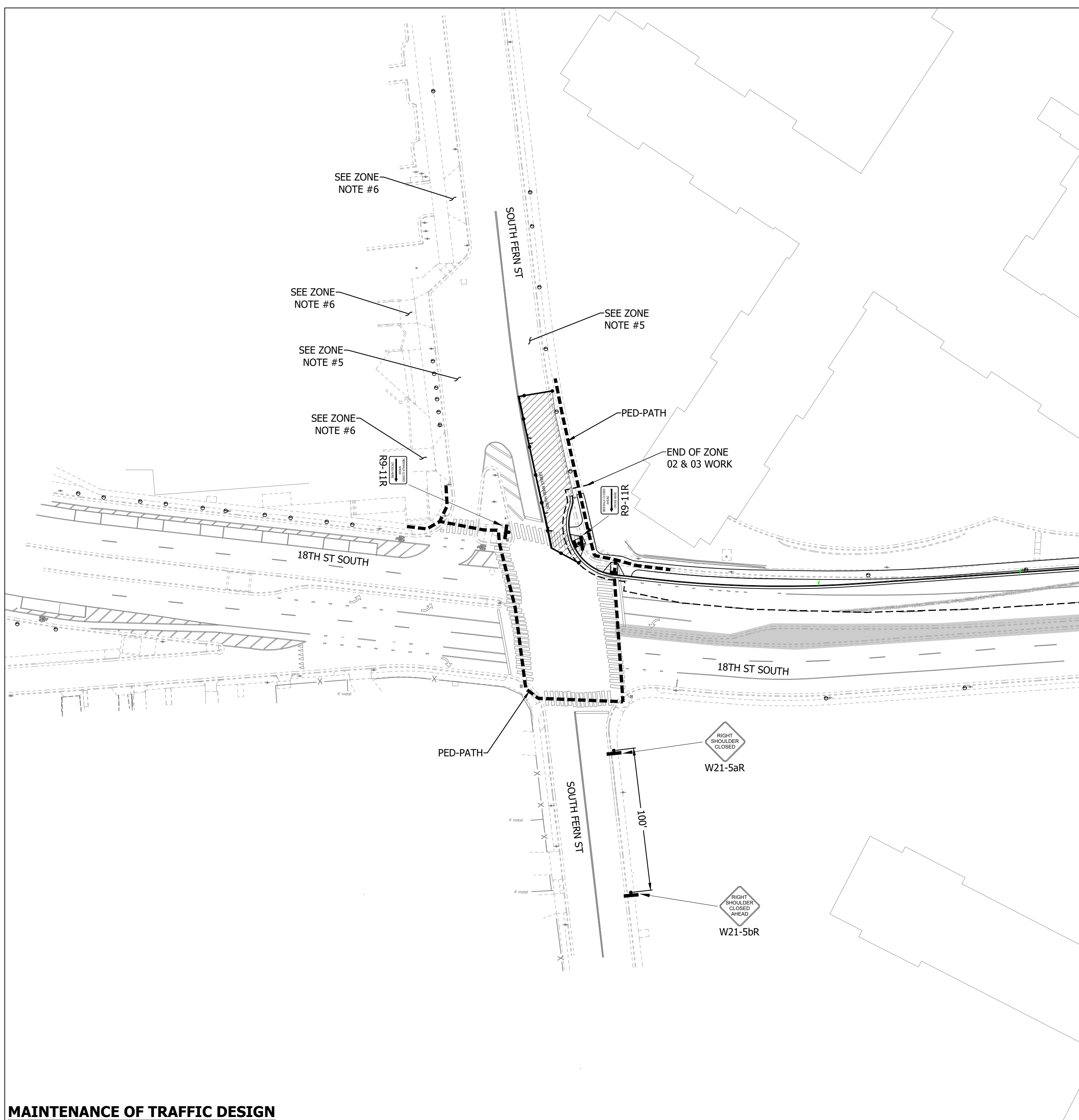
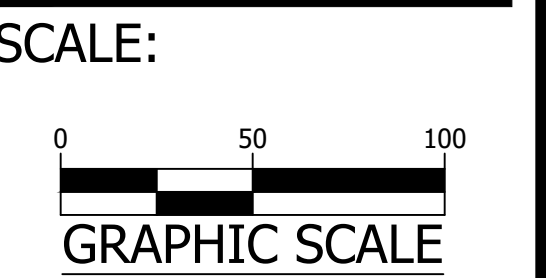


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 4
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

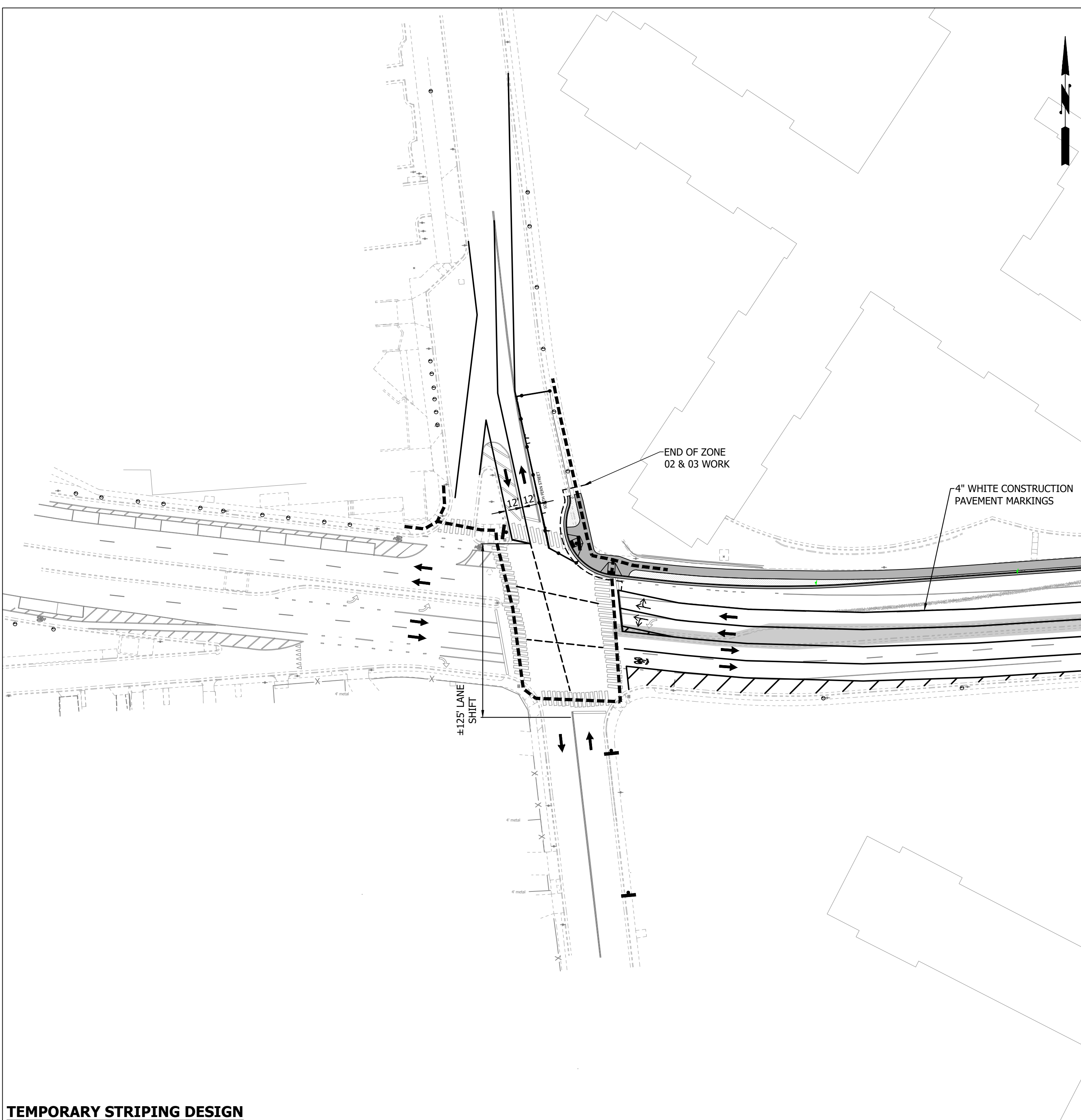
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:					
MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 04	TTC-4.2	TTC-35.1 TTC-36.2	M.O.T. DEVICES MAY REMAIN IN PLACE AS LONG AS A LANE IN EACH DIRECTION ARE MAINTAINED ON FERN. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 WEEK - 2 WEEKS	MON.-FRI. 9:00AM-4:00PM

**AT THE END OF EACH WORKING DAY,
 THE CONTRACTOR SHALL PULL BACK
 MOT CHANNELIZING DEVICES TO
 MAINTAIN TWO TRAVEL LANES IN
 EACH DIRECTION ON 18TH STREET.**



TEMPORARY STRIPING DESIGN

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - CONTRACTOR TO MAINTAIN DRIVEWAY ACCESS AT ALL TIME.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE ABOVE TABLE.

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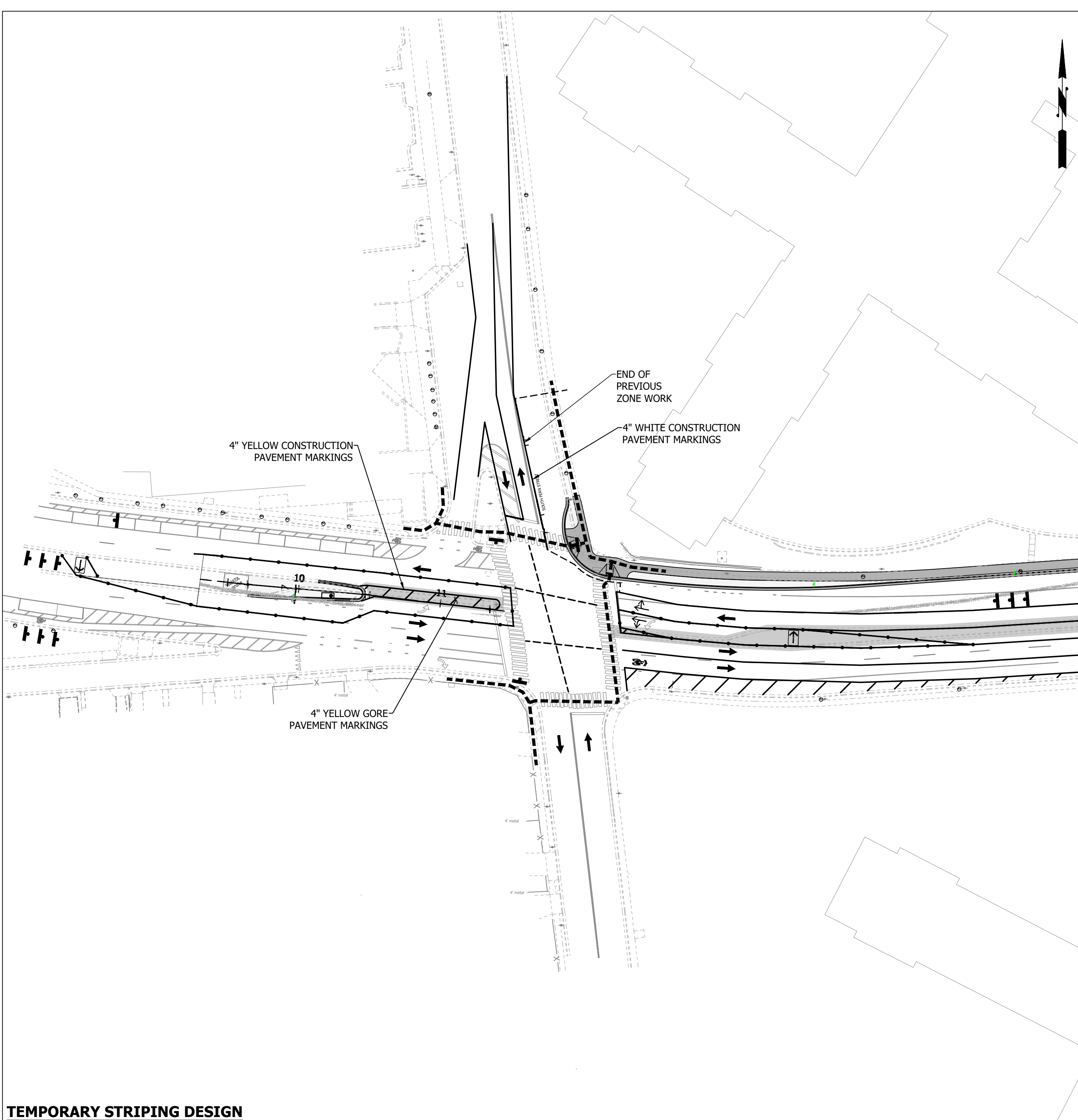
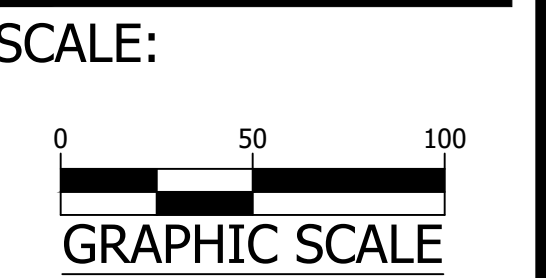


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Takab	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	
Ariel Yang	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

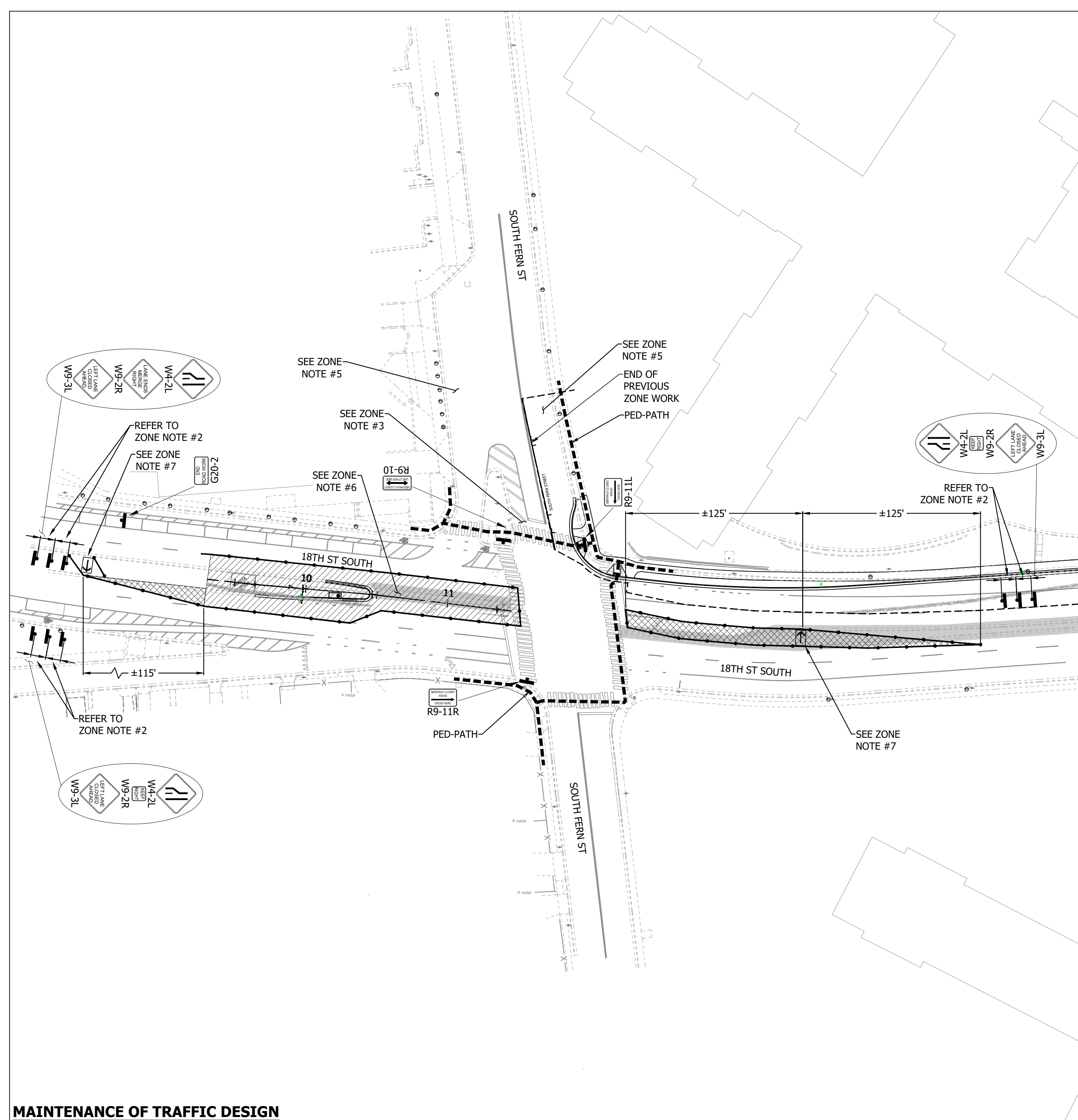
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 5
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



TEMPORARY STRIPING DESIGN



MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 04	TTC-17.2 TTC-27.2	TTC-35.1 TTC-36.2	REMOVE EXISTING MEDIAN AND REPAVE WITH TEMP. ASPHALT AS SHOWN ABOVE. ADJUST THE EXISTING STORM STRUCTURE AS NECESSARY. PROPOSED MEDIAN DESIGN SHALL BE CONSTRUCTED IN THIS ZONE AS WELL AS THE TEMP ASPHALT PAVING. THE ELEVATION DIFFERENCE BETWEEN THE PROPOSED CURB AND PAVEMENT SHALL BE TAPERED AT A 1:3 RATIO TO THE TEMP. AND EXISTING PAVEMENT. CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND RE OPEN CLOSED LANES. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 WEEK - 3 WEEKS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL
-ADJUST SOUTHBOUND FERN LANE STOP BAR AND ADD TEMP CROSS WALK
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - INSTALL A DRIVABLE TEMPORARY PAVEMENT SURFACE.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED IN THE BUFFER AREAS.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

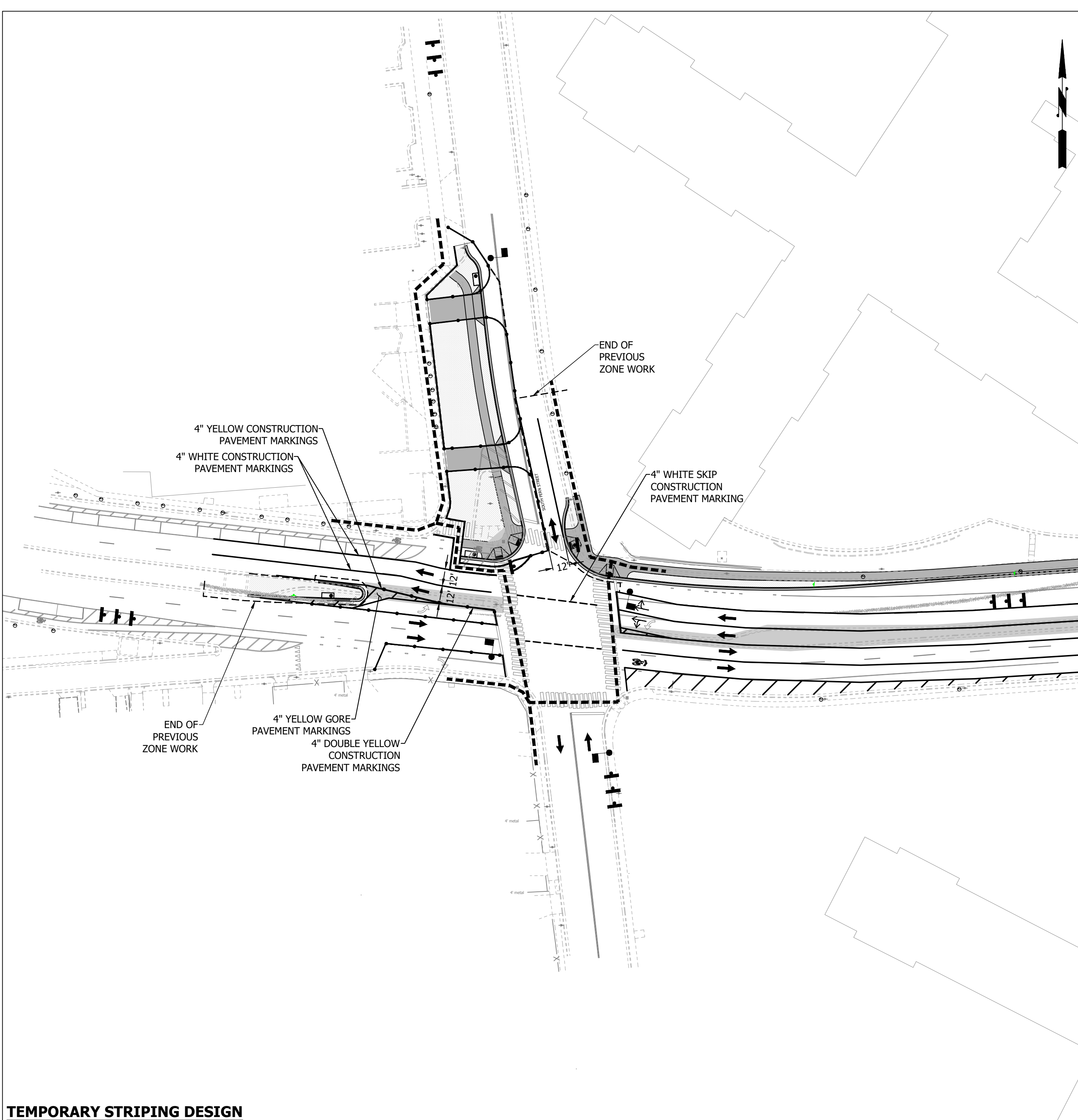
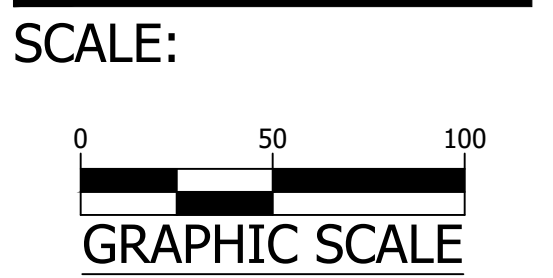


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

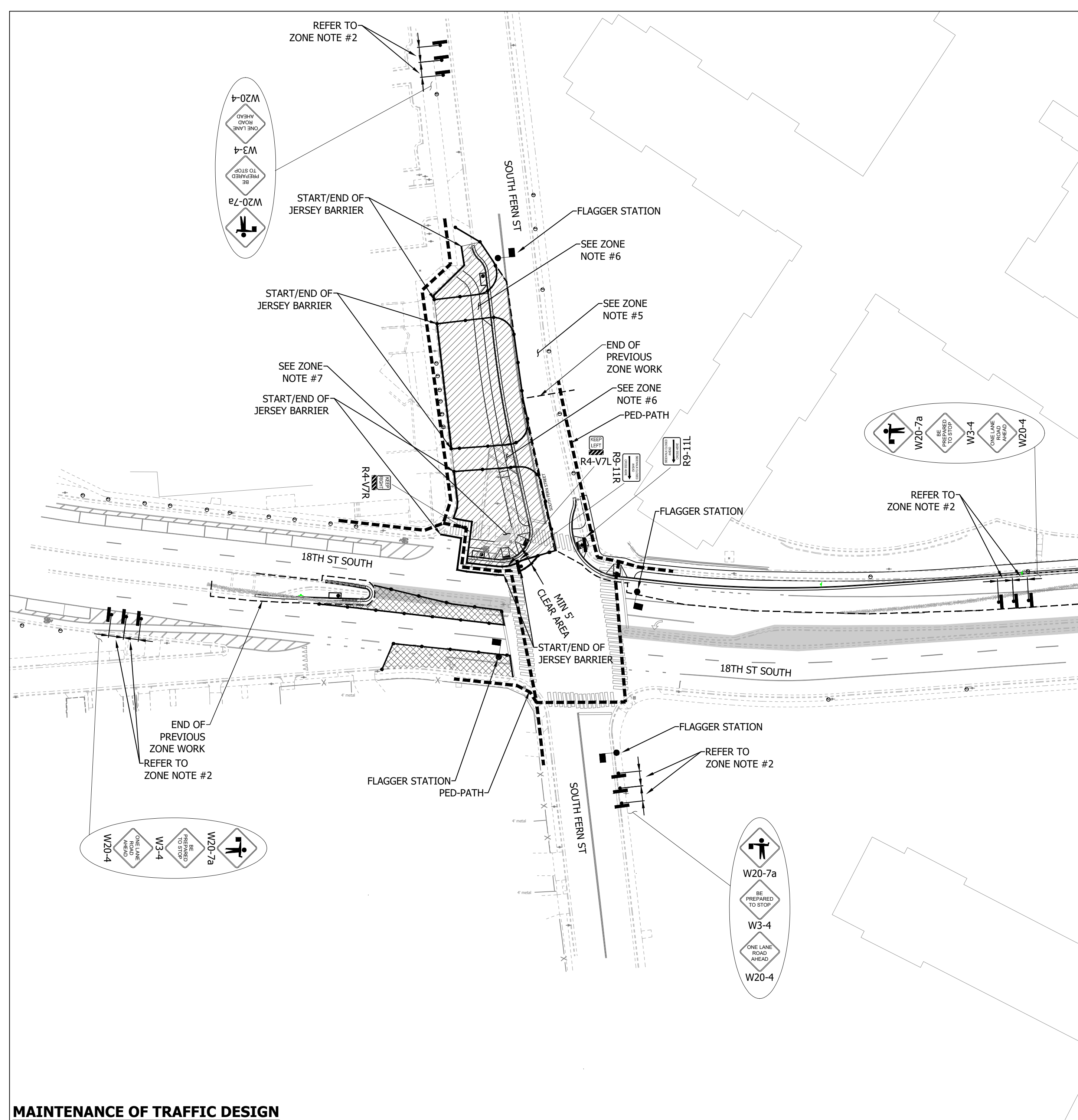
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 6
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



TEMPORARY STRIPING DESIGN



MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:					
MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 06	TTC-30.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND RE OPEN CLOSED LANES. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
-REMOVE AND RESTRIPE THE WESTBOUND SKIP LANE ON 18TH STREET.
-REMOVE THE FERN STREET SKIP LANE. AT THE END OF EACH DAY, THE CONTRACTOR SHALL MAKE SURE THAT IT IS CLEAR FOR DRIVES ON THE LANE CONFIGURATION.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NO MORE THEN 7-14 DAYS. MAINTAIN AT LEAST ONE DRIVEWAY ENTRANCE OPEN AT ALL TIMES.
 - CONTRACTOR TO ADD AN ASPHALT PATCH TO PROVIDE A SAFE ADA PEDESTRIAN PATH AROUND THE EXISTING POLE UNTIL POLE REMOVAL.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.

REVISED ON 11/08/2016

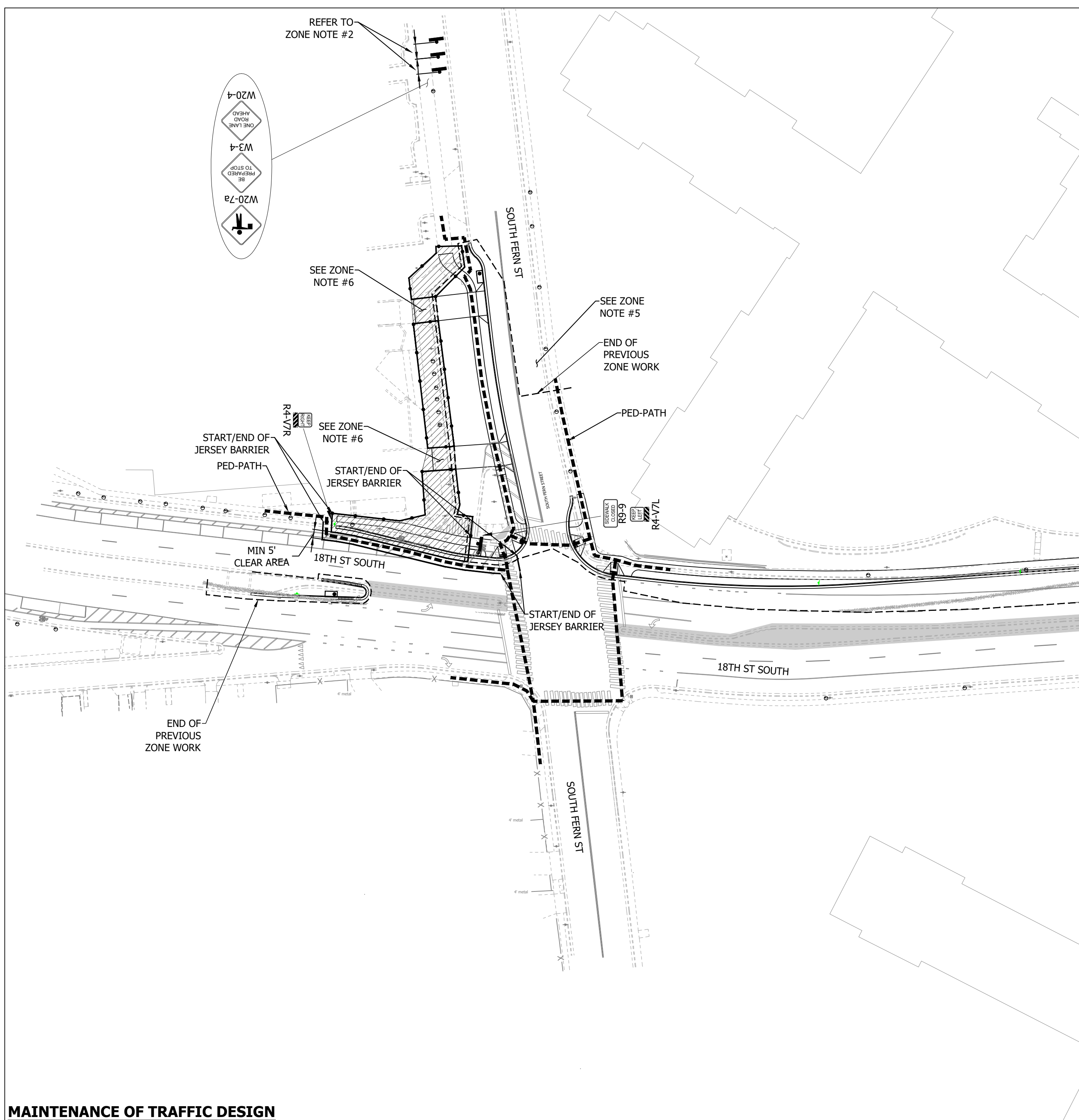
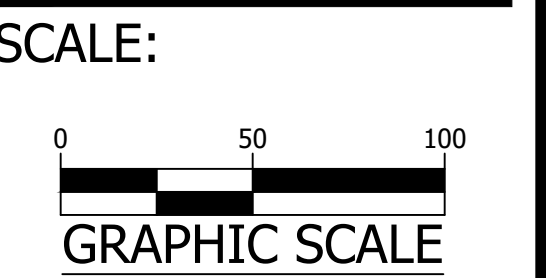


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Takah	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	
Ariel Yang	6/17/2020
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 7
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

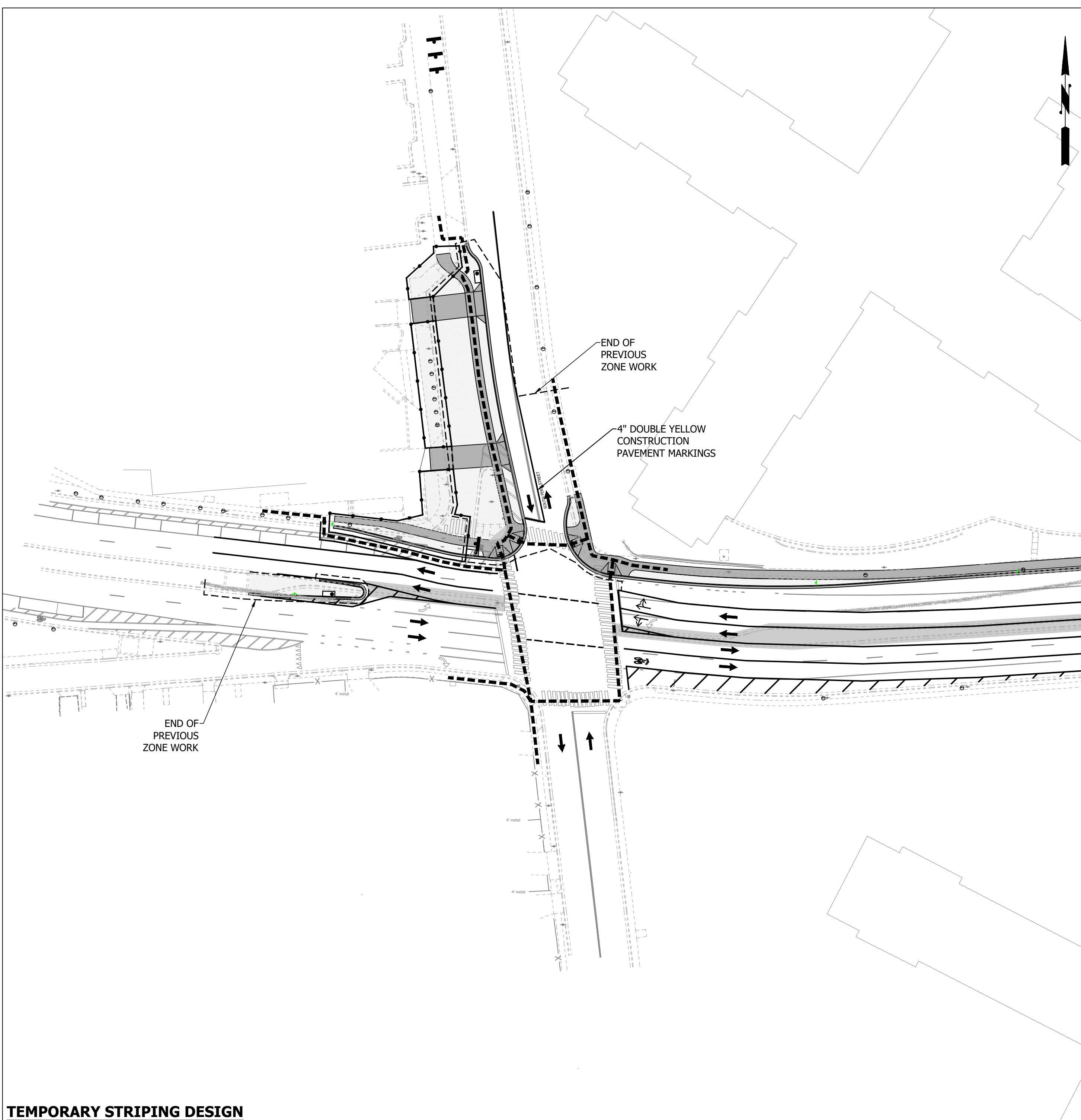
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:					
MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 07	TTC-23.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND RE OPEN CLOSED LANES. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

**AT THE END OF EACH WORKING DAY,
 THE CONTRACTOR SHALL PULL BACK
 MOT CHANNELIZING DEVICES TO
 MAINTAIN TWO TRAVEL LANES IN
 EACH DIRECTION ON 18TH STREET.**



TEMPORARY STRIPING DESIGN

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
 -STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 -REMOVE AND RESTRIPE THE WESTBOUND SKIP LANE ON 18TH STREET.
 -REMOVE THE FERN STREET SKIP LANE. AT THE END OF EACH DAY, THE CONTRACTOR SHALL MAKE SURE THAT IT IS CLEAR FOR DRIVES ON THE LANE CONFIGURATION.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.**
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NO MORE THEN 7-14 DAYS. MAINTAIN AT LEAST ONE DRIVEWAY ENTRANCE OPEN AT ALL TIMES.**
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

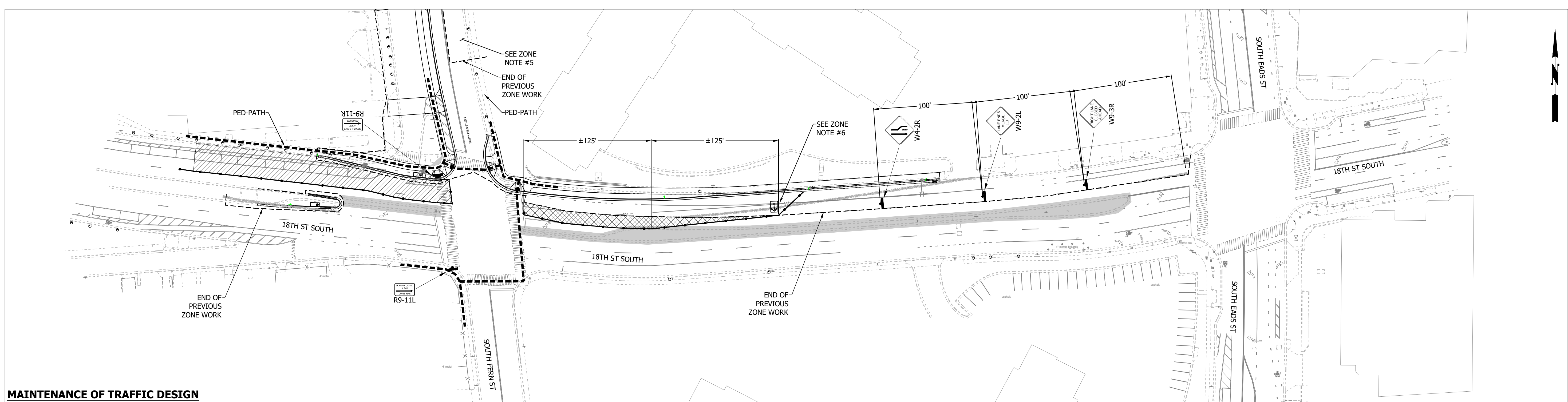
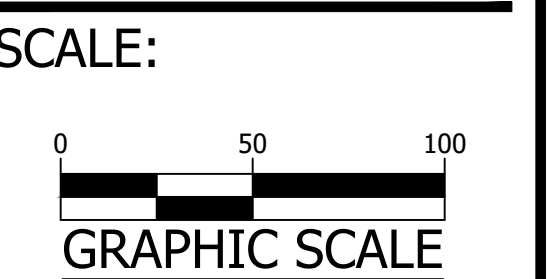


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
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WATER, SEWER, STREETS BUREAU CHIEF	
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Dennis W. Leach	
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

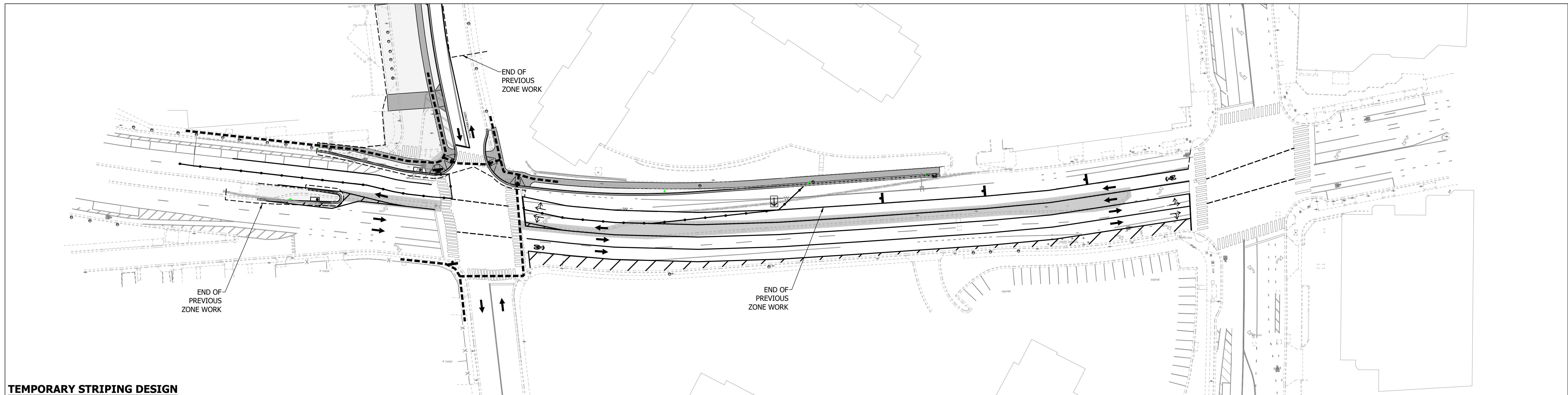
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18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 8
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 08	TTC-27.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 WEEKS - 1 MONTH	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

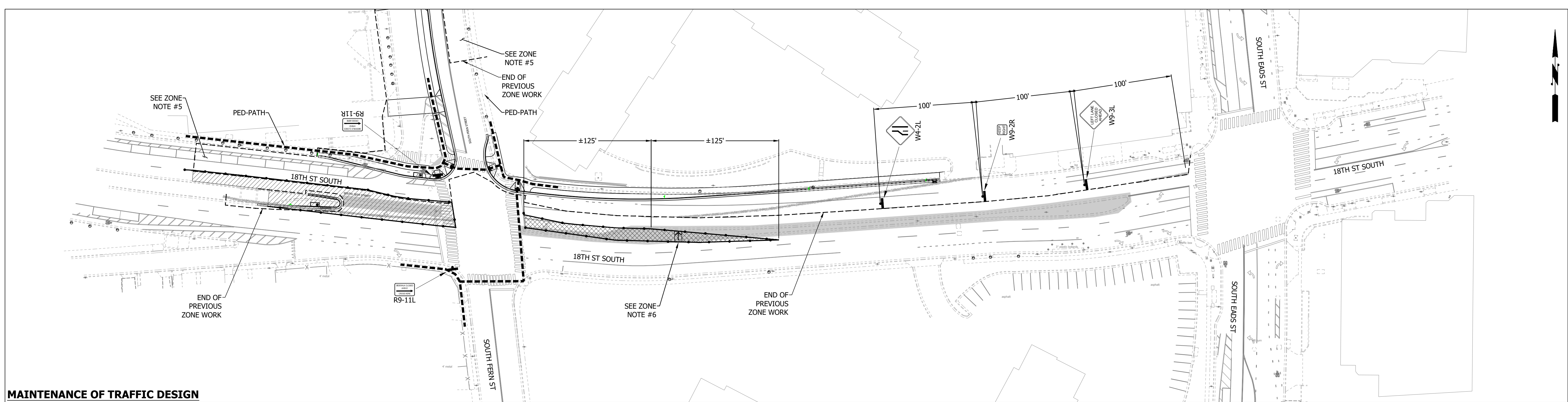
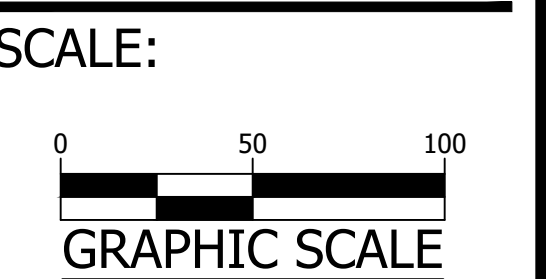


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Ariel Yang	
PROJECT MANAGER	

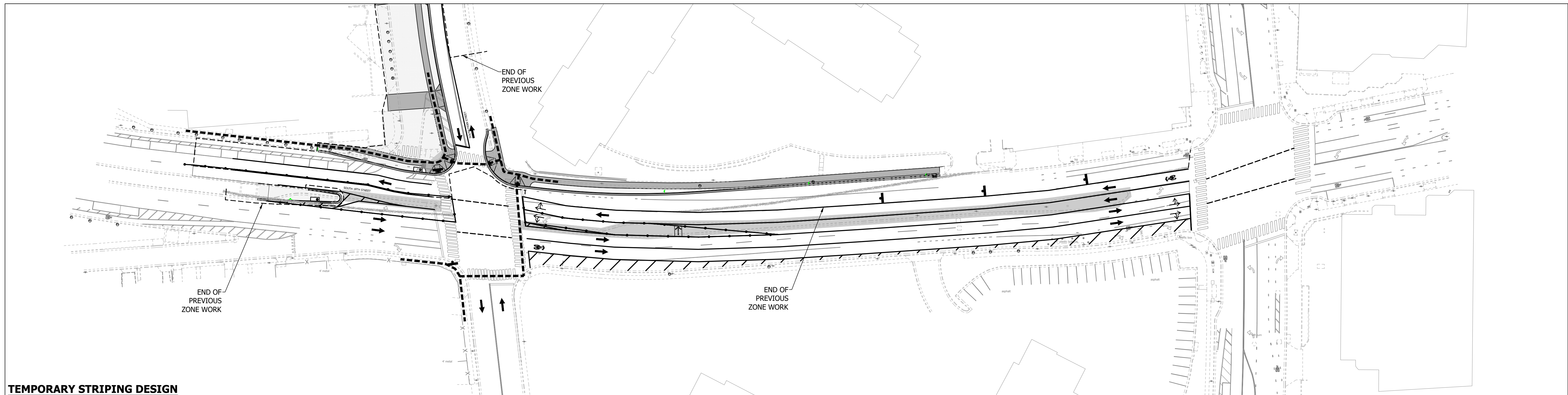
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 9
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 09	TTC-27.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 WEEKS - 1 MONTH	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**



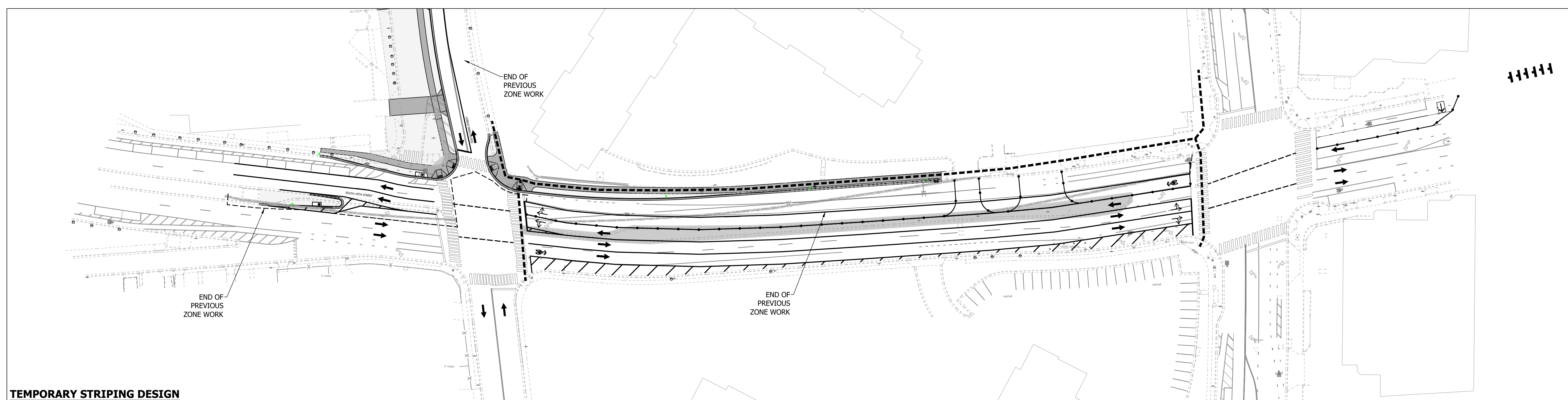
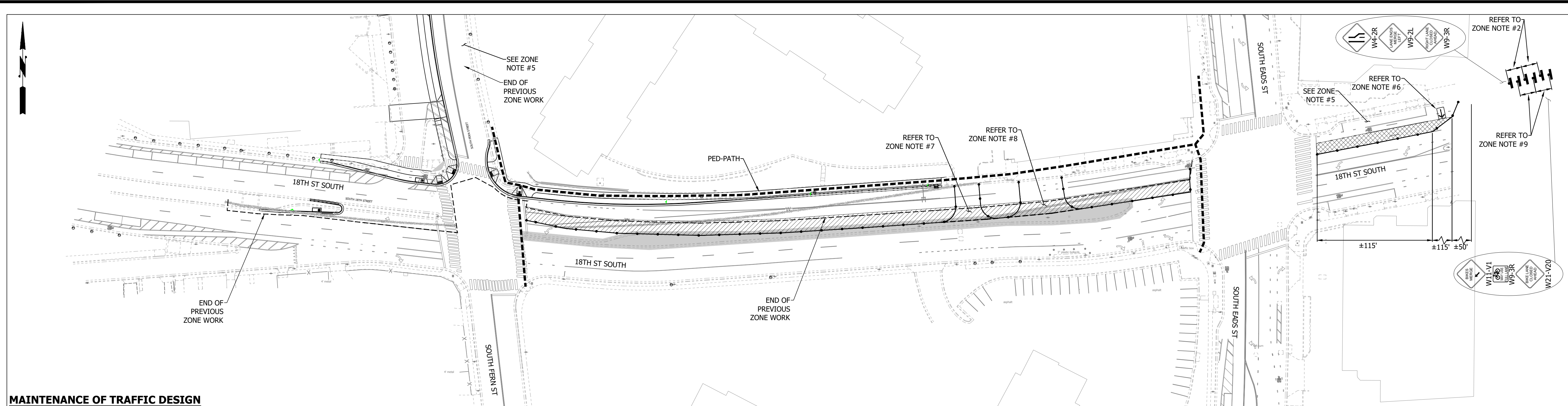
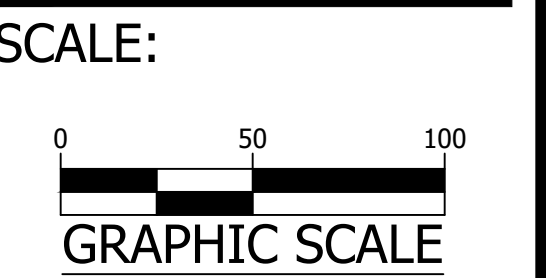
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Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
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WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	6/24/20
Dennis W. Leach	
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS DATE

REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 10
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
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 PLOTTED: MARCH 1 2021
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MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 10	TTC-27.2	*	CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND TESO.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
16.2 OUTSIDE LANE CLOSURE OPERATIONS ON A FOUR-LANE ROADWAY
-FIRST CHANNELIZING DEVICE SHALL BE PLACED GREATER THAN 50' FROM AN INTERSECTION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF THE DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NOT MORE THE 3-5 DAYS.
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF THE DRIVEWAY. ONLY HALF OF THE DRIVEWAY SHALL BE CLOSED AT A TIME TO ALLOW FOR VEHICLES TO ENTER AND EXIT. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK ON EACH HALF OF THE DRIVEWAY SHOULD TAKE NO MORE THEN 2-3 DAYS.
 - BIKE LANE CLOSURE SIGNAGE TO BE PLACED IN BETWEEN ROAD WARNING SIGNS AND BE VISIBLE FOR BOTH VEHICLES AND BIKES.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE AND THE BICYCLE LANE CLOSURE, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.

REVISED ON 11/08/2016

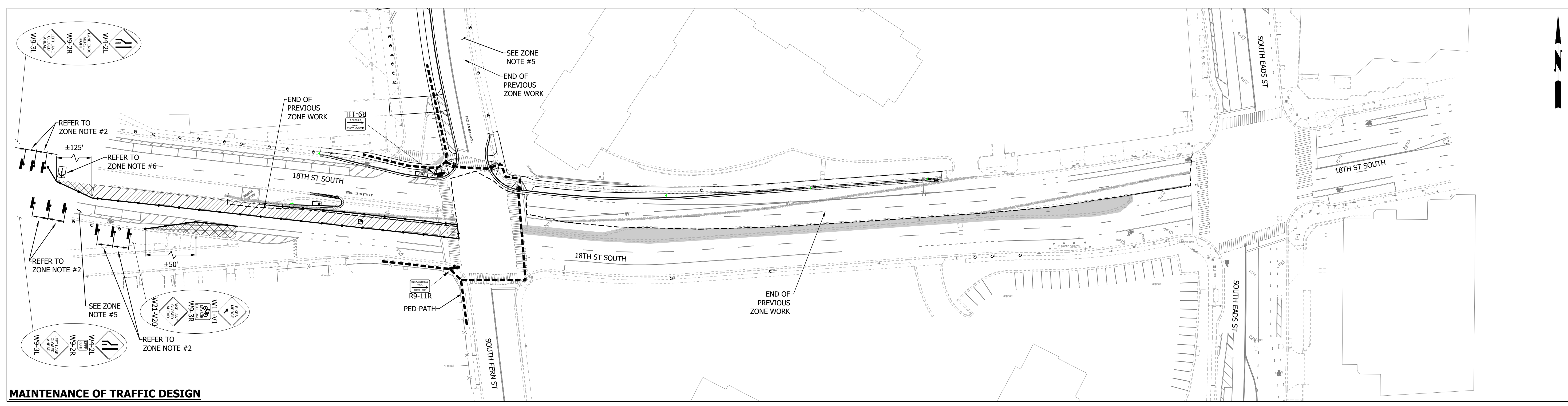
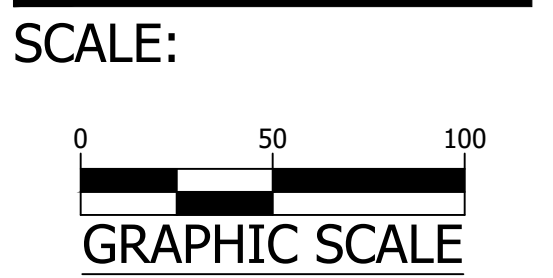


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis M. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

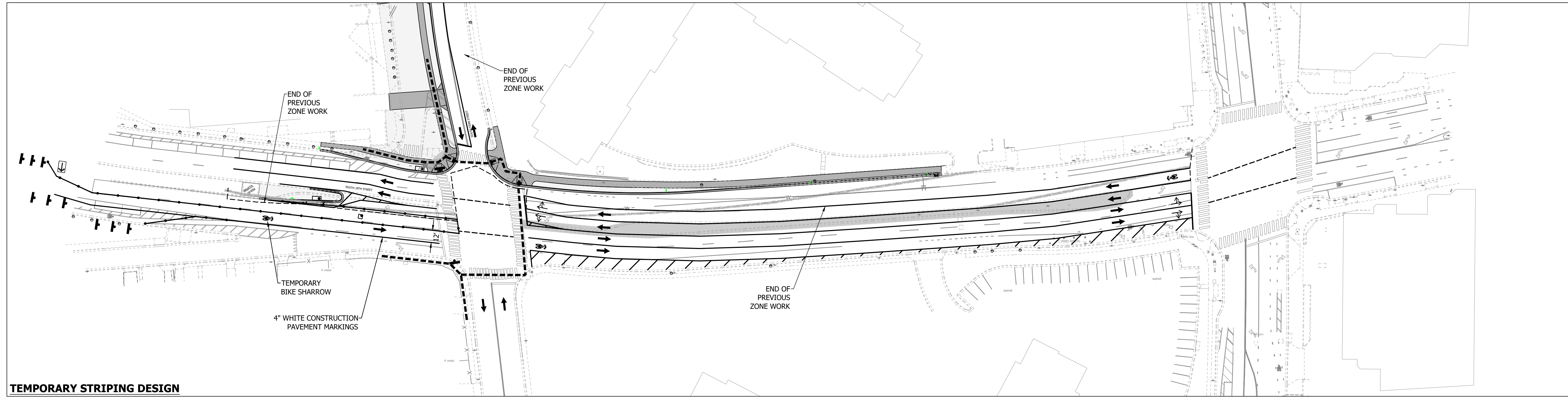
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 11
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
 FILENAME:
 CC20-286-MOT - ZONE 11.DWG
 PATH: Q:\DATA\CC20\DESIGN\CAD_ACTIVE
 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 11	TTC-26.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 2 MONTHS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
 -STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 -MINIMUM 50' TAPER FROM EXISTING STRIPING TO PROPOSED TEMP. STRIPING ON EASTBOUND 18TH STREET
 -MAKE SURE THAT TEMP. CROSSWALK STRIPING IS IN PLACE AS NEEDED.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE AND THE BICYCLE LANE CLOSURE, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

**AT THE END OF EACH WORKING DAY,
 THE CONTRACTOR SHALL PULL BACK
 MOT CHANNELIZING DEVICES TO
 MAINTAIN TWO TRAVEL LANES IN
 EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

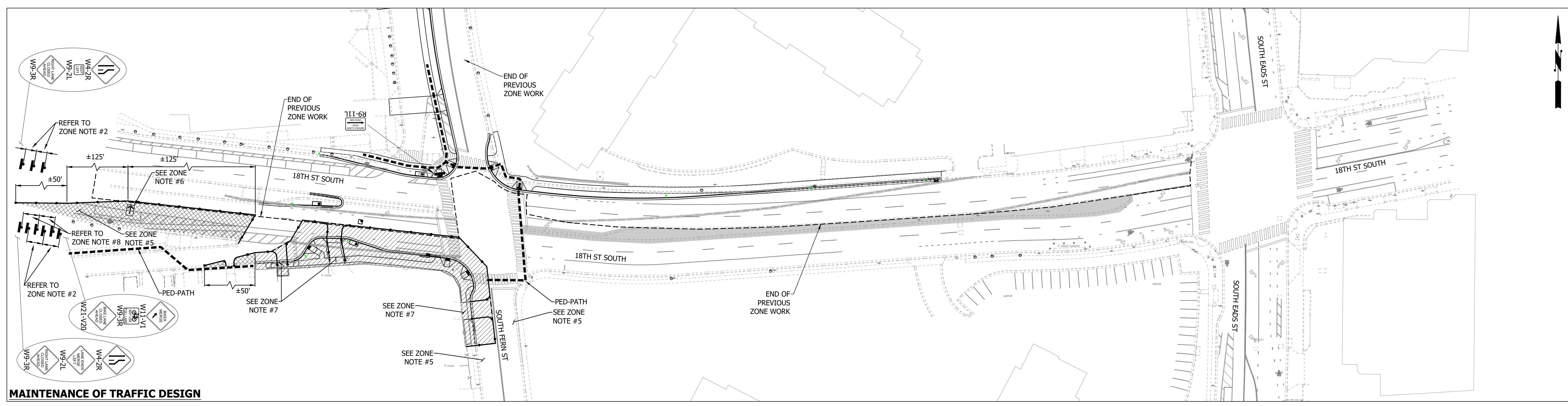
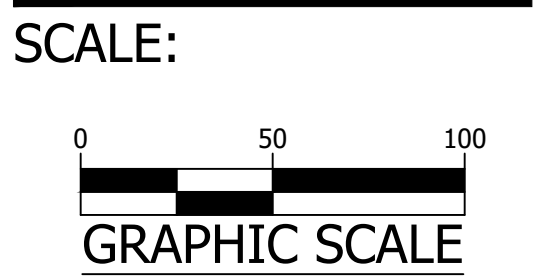


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	06.29.20
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>[Signature]</i>	6/17/2020
TRANSPORTATION DIRECTOR	6/17/2020
<i>[Signature]</i>	
PROJECT MANAGER	

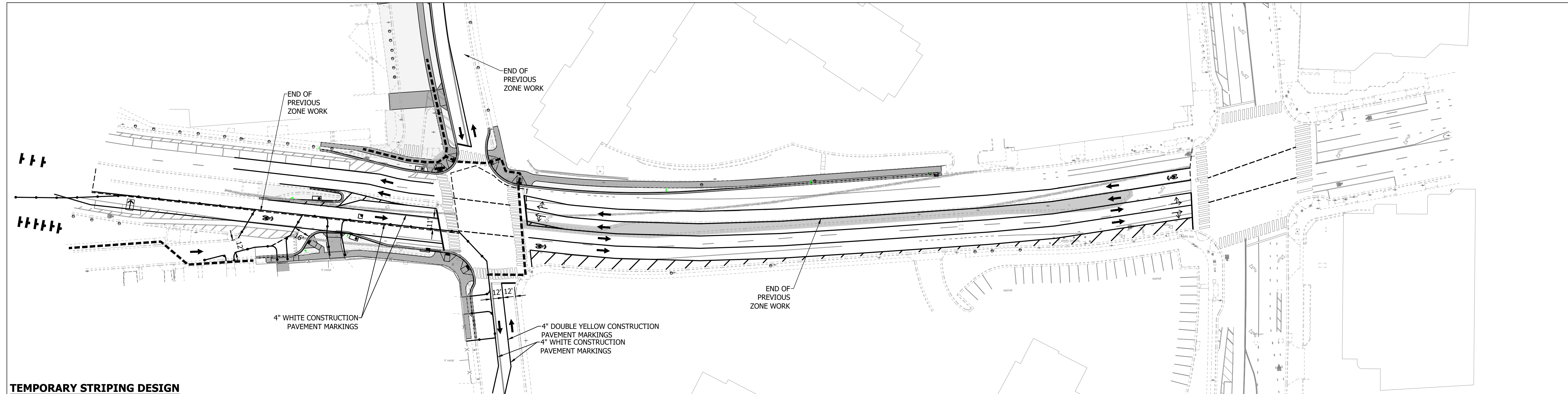
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 12
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
FILENAME: CC20-286-MOT - ZONE 12.DWG
PATH: Q:\DATA\CC20\DESIGN\CAD_LACTIVE
PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 12	TTC-16.2	TTC-35.1 TTC-36.2 *	A PEDESTRIAN PATH MUST BE MAINTAINED AT ALL TIMES DURING THIS ZONE. ONE SUGGESTION IS TO CONSTRUCT THE PROPOSED SIDEWALK FIRST AND ROUTE PEDESTRIANS THROUGH A 5' MIN CLEAR PROTECTED PATH IN THE STREET. AFTER, CONSTRUCT THE REST OF THE ZONE AND HAVE PEDESTRIANS UTILIZING THE NEWLY CONSTRUCTED SIDEWALK. OTHER OPTIONS ARE AVAILABLE WITH THE APPROVAL OF THE PROJECT OFFICER. SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 MONTHS - 3 MONTHS	MON-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
- WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&S.
- TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
-MINIMUM 50' TAPER FROM EXISTING STRIPING TO PROPOSED TEMP. STRIPING ON SOUTH FERN STREET.
- OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
- PARKING IN THIS AREA SHOULD BE BLOCKED OFF.**
- ILLUMINATED FLASHING ARROW BOARDS** SHALL BE PLACED OUTSIDE TRAVEL LANE
- COORDINATE WITH THE PROJECT OFFICER** PRIOR TO WORK AND CLOSURE OF THE DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NO MORE THEN 2-3 DAYS. AT THE END OF EACH WORKING DAY THE PROPERTY OWNER SHALL BE ABLE TO UTILIZE THEIR DRIVEWAY.
- BIKE LANE CLOSURE SIGNAGE** TO BE PLACED IN BETWEEN ROAD WARNING SIGNS AND BE VISIBLE FOR BOTH VEHICLES AND BIKES.

* PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE AND THE BICYCLE LANE CLOSURE, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

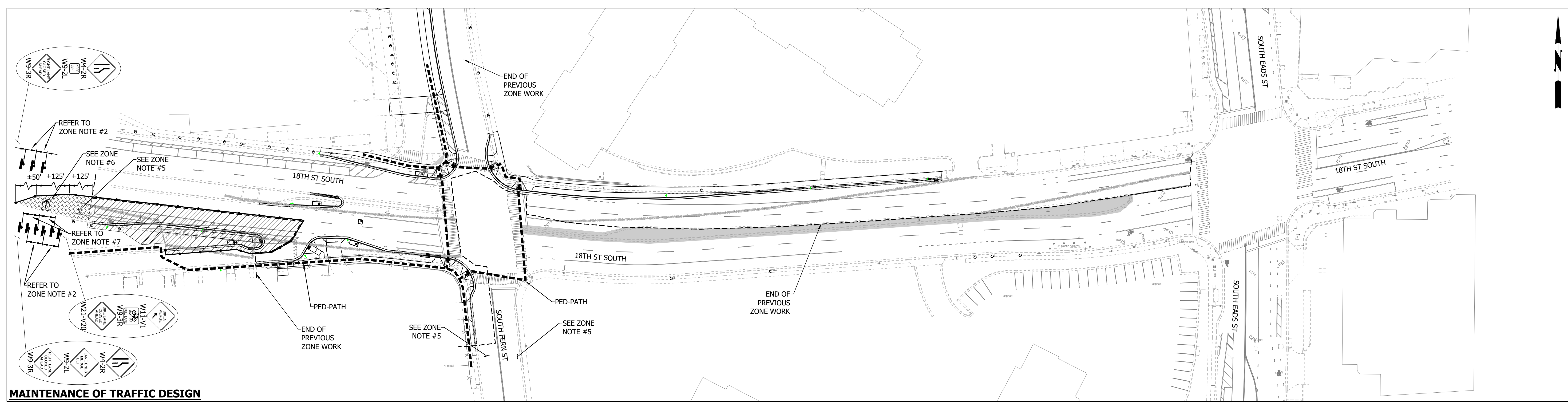
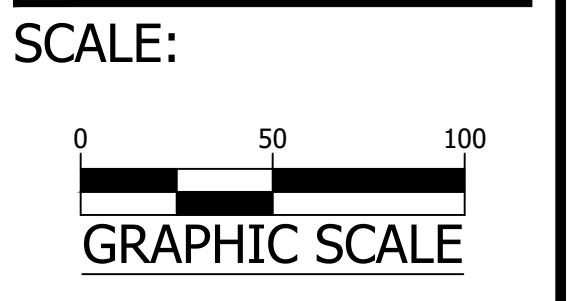


APPROVALS	DATE
<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Ariel Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

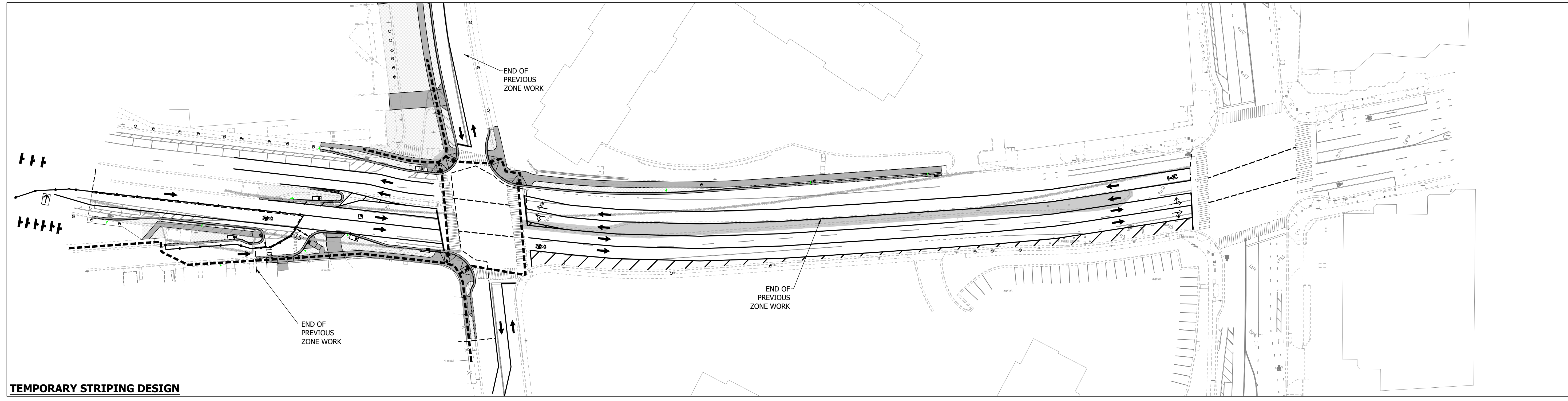
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 13
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

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 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

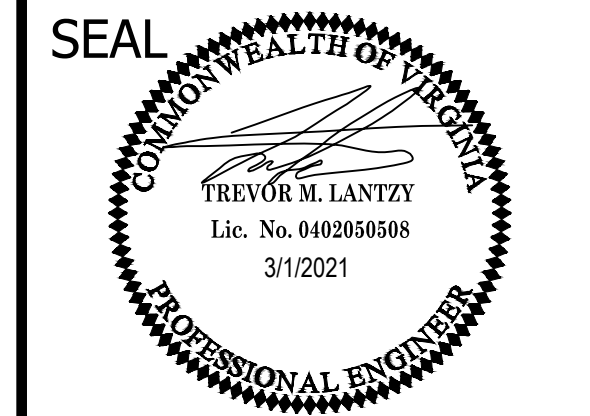
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	VEHICULAR	PEDESTRIAN			
ZONE# 13	TTC-16.2	TTC-35.1 TTC-36.2	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES A PEDESTRIAN PATH MUST BE MAINTAINED AT ALL TIMES DURING THIS ZONE. WHEN CONNECTING THE EXISTING SIDEWALK MAKE SURE TO MAINTAIN A SAFE PEDESTRIAN PATH SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 2 MONTHS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
-ADD/ADJUST CROSSWALK STRIPING AS NEEDED.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE
 - BIKE LANE CLOSURE SIGNAGE TO BE PLACED IN BETWEEN ROAD WARNING SIGNS AND BE VISIBLE FOR BOTH VEHICLES AND BIKES.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE AND THE BICYCLE LANE CLOSURE, FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (LATEST EDITION)

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

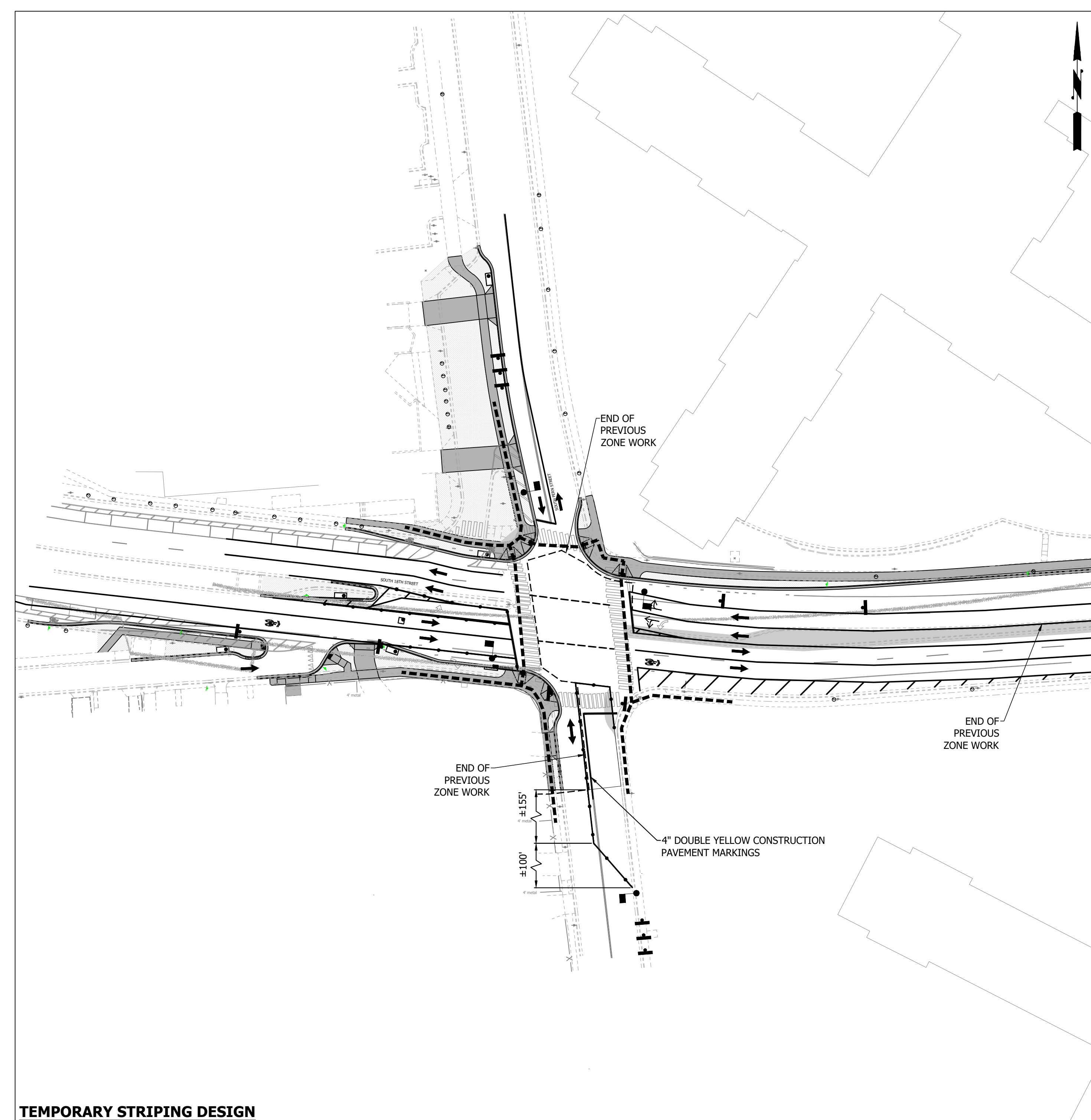
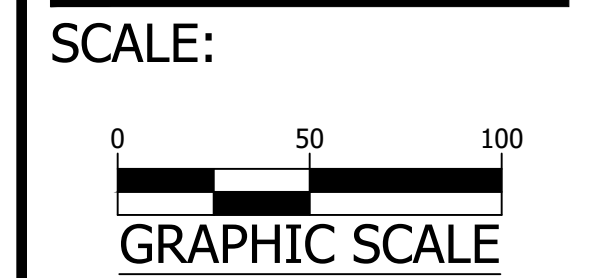


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Takab</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>John</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	6/17/2020
<i>Ariel Yang</i>	
PROJECT MANAGER	

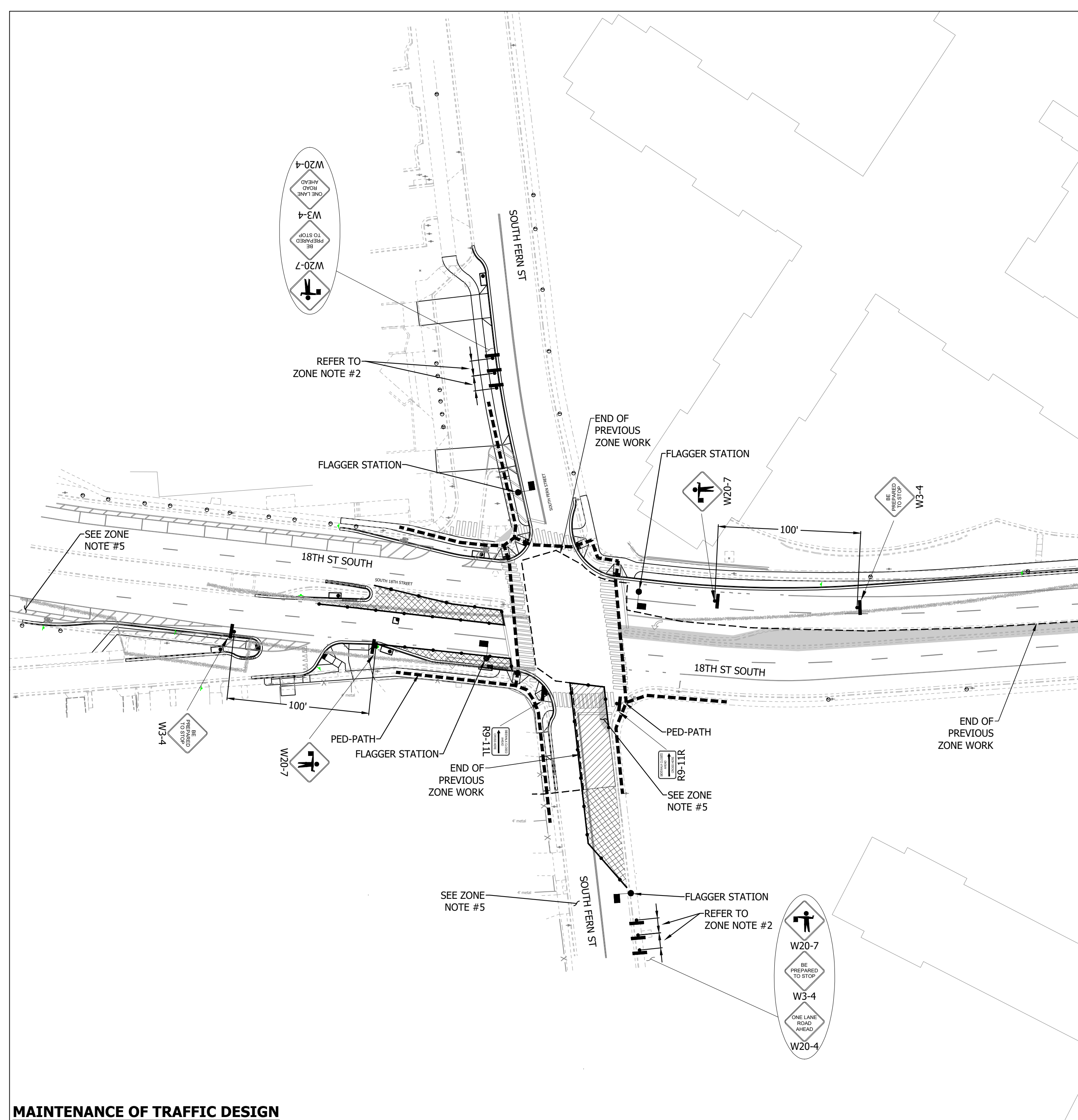
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 14
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
 FILENAME: CC20-286-MOT - ZONE 14.DWG
 PATH: Q:\DATA\CC20\DESIGN\CAD\ACTIVE
 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



TEMPORARY STRIPING DESIGN



MAINTENANCE OF TRAFFIC DESIGN

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
 -STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 -REMOVE FERN STREET TEMP STRIPING AROUND WORK ZONE AND REPLACE WITH 4" DOUBLE YELLOW CONSTRUCTION MARKING.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - INSTALL A DRIVABLE TEMPORARY PAVEMENT SURFACE
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE # 14	TTC-30.2	TTC-35.1 TTC-36.2 *	CONTRACTOR TO PULL BACK CHANNELIZING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 WEEKS - 1 MONTH	MON.-FRI. 9:00AM-4:00PM

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.

REVISED ON 11/08/2016

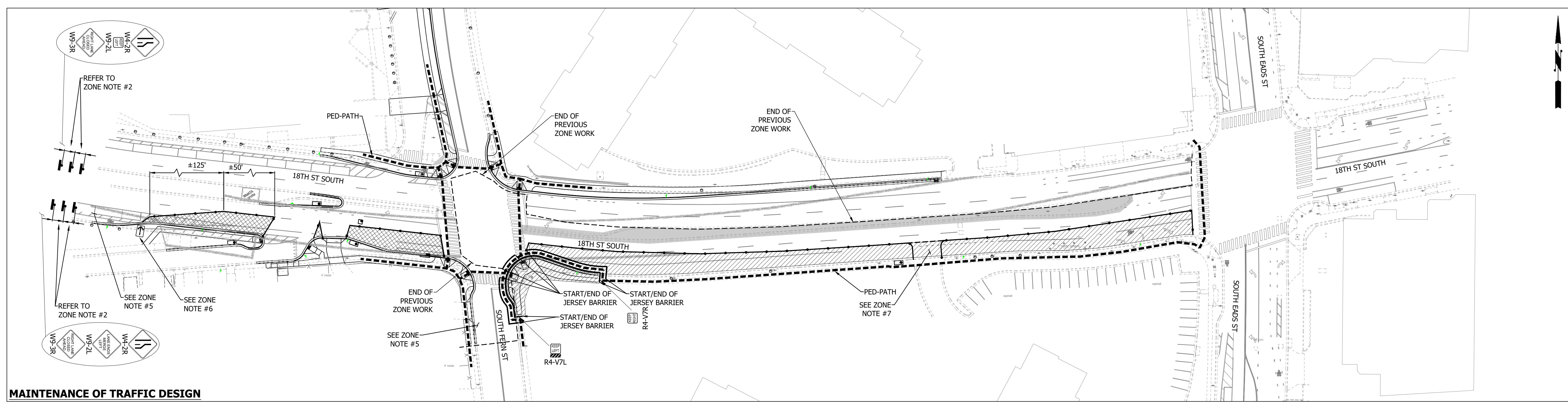
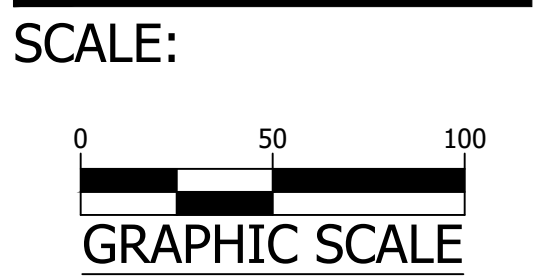


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

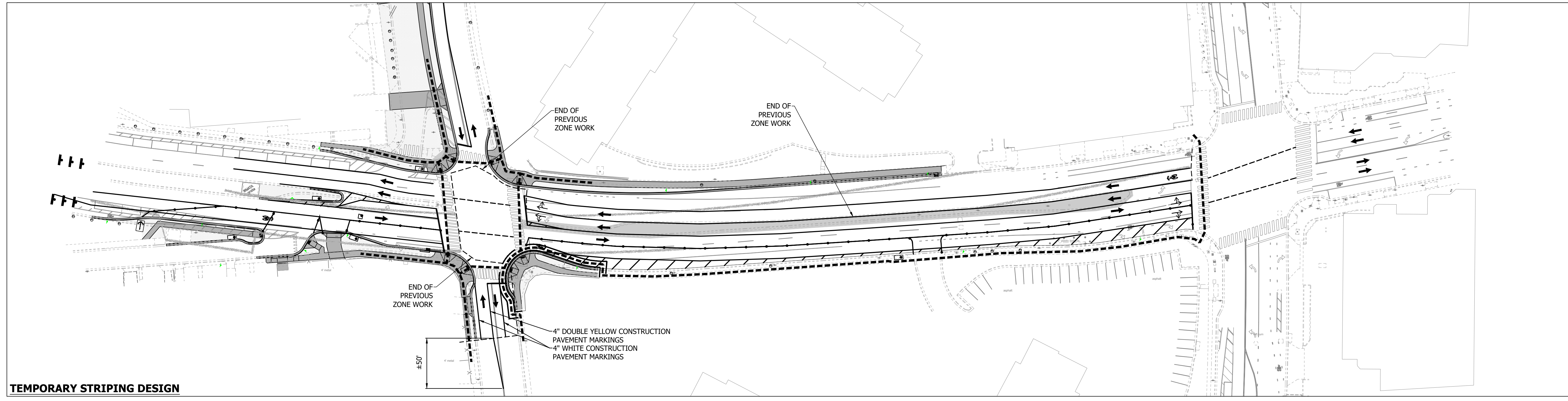
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 15
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE # 15	TTC-16.2	TTC-35.1 *	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 MONTHS - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE.
 - COORDINATE WITH THE PROJECT OFFICER PRIOR TO WORK AND CLOSURE OF THE DRIVEWAY. PROPERTY OWNER SHALL BE NOTIFIED THREE WEEKS BEFORE DRIVEWAY CLOSURE. ADDITIONAL SIGNAGE AND CHANNELIZATION DEVICES MAY BE REQUIRED FOR FOR THE CLOSURE. WORK IN THE DRIVEWAY AREA SHOULD TAKE NO MORE THE 3-5 DAYS.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

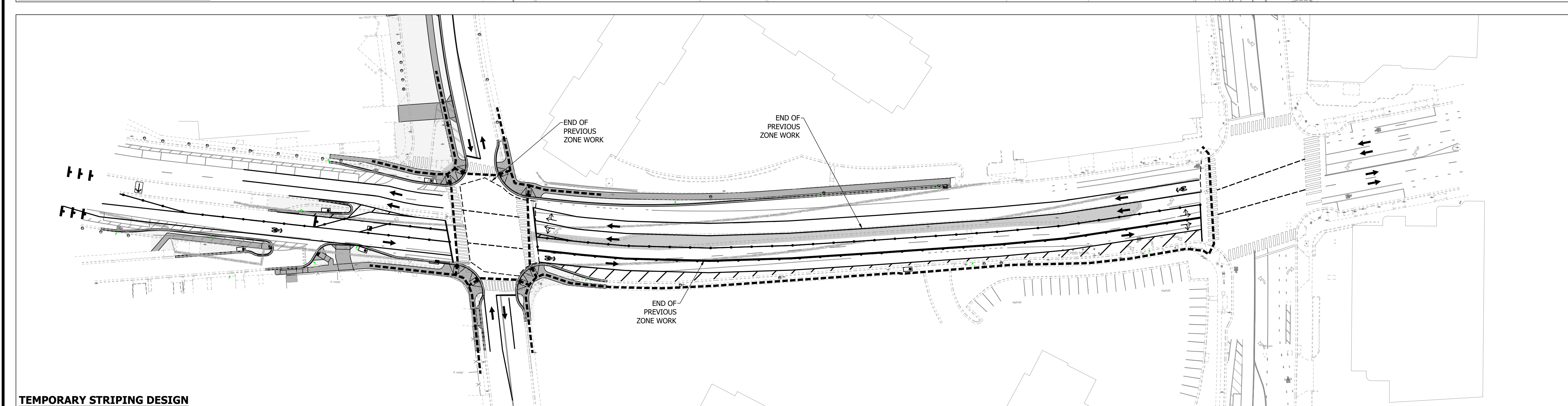
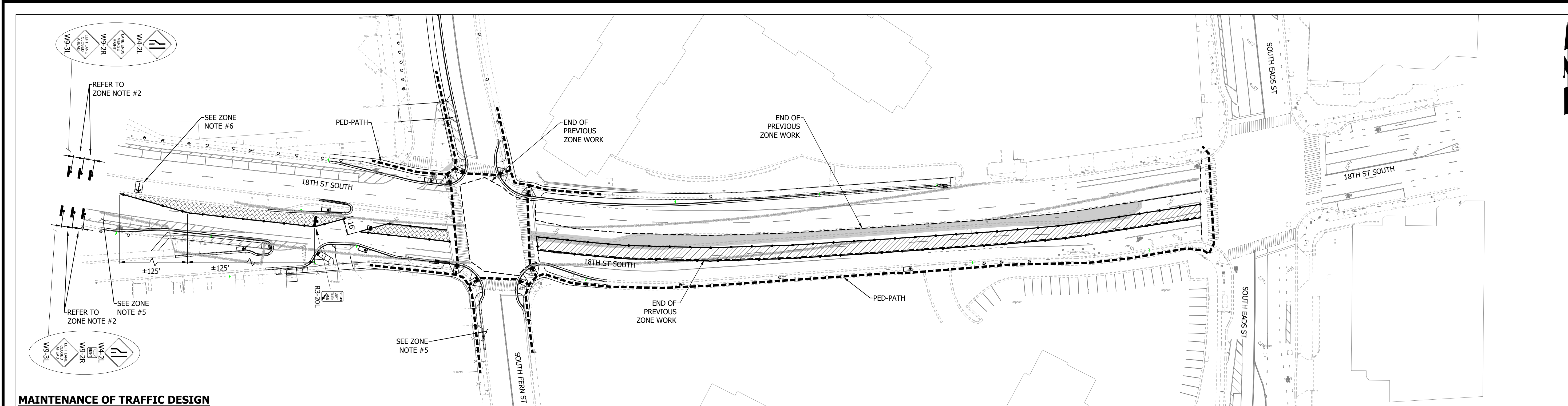
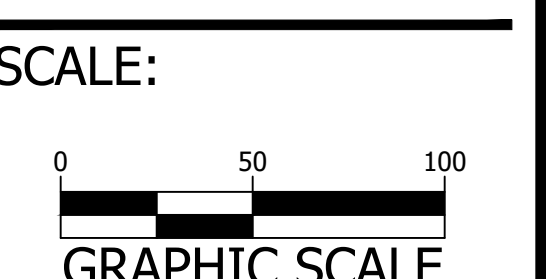


APPROVALS	DATE
<i>Kennell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Dennis W. Leach</i>	6/24/20
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

REVISIONS DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 16
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE # 16	TTC-27.2	*	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 MONTHS - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
17.2 INSIDE LANE CLOSURE OPERATIONS ON A FOUR-LANE ROADWAY
-FIRST CHANNELING DEVICE SHALL BE PLACED GREATER THAN 50' FROM AN INTERSECTION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE

**AT THE END OF EACH WORKING DAY,
 THE CONTRACTOR SHALL PULL BACK
 MOT CHANNELIZING DEVICES TO
 MAINTAIN TWO TRAVEL LANES IN
 EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

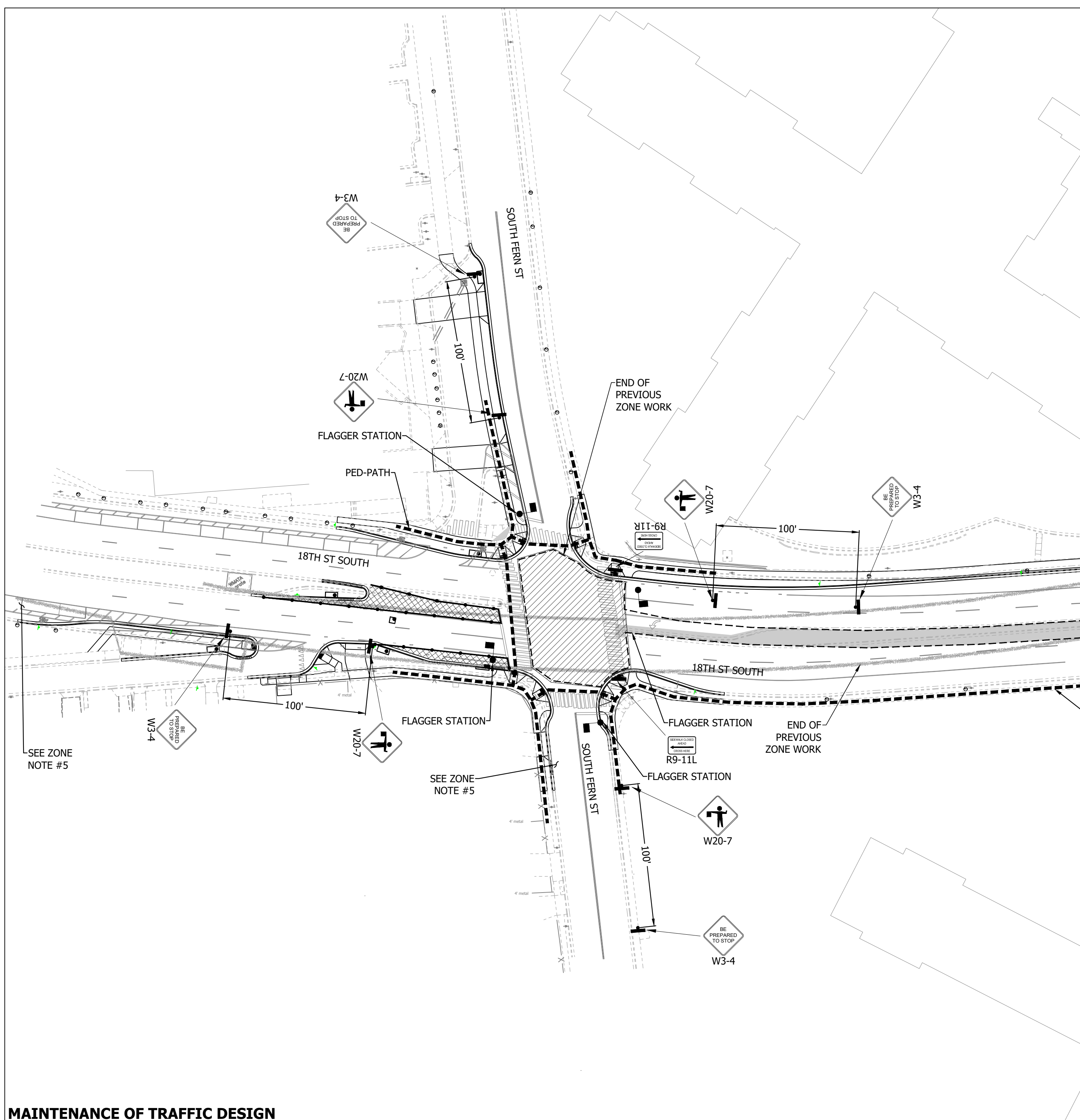
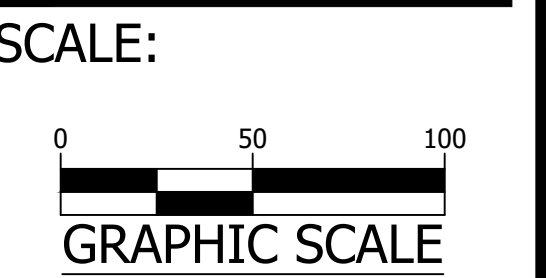


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Takah	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>[Signature]</i>	
Dennis W. Leach	
TRANSPORTATION DIRECTOR	6/17/2020
<i>[Signature]</i>	
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 17
ROADWAY IMPROVEMENTS
S FERN ST TO S LEADS ST
CC20

DESIGNED: NS
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: XXXX
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PLOTTED: MARCH 1 2021
PLOTTED BY: NSHARP

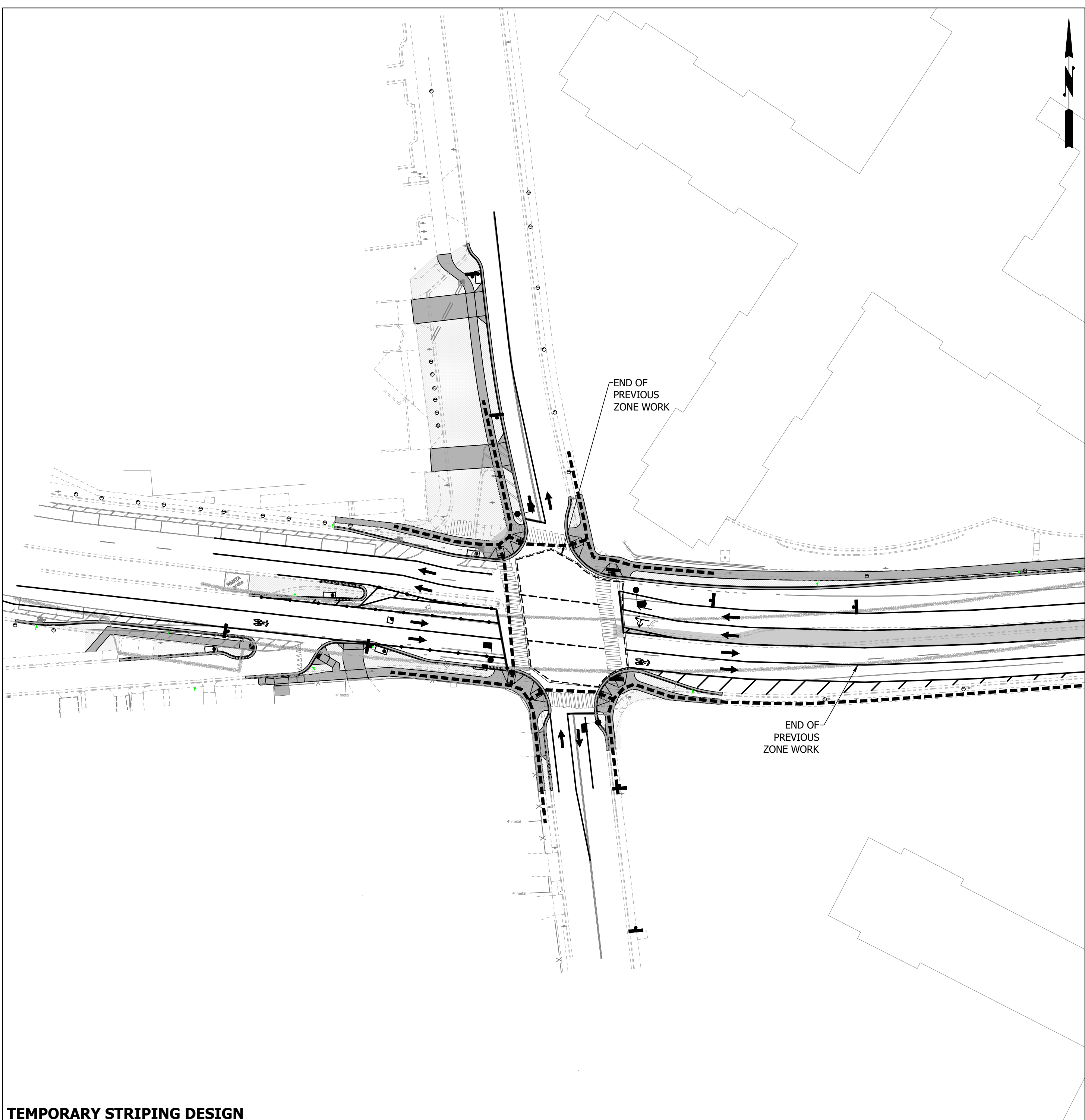


MAINTENANCE OF TRAFFIC DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 17	TTC-30.2	TTC-35.1 TTC-36.2 *	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	1 MONTH - 2 MONTHS	MON.-FRI. 9:00AM-4:00PM

AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PULL BACK MOT CHANNELIZING DEVICES TO MAINTAIN TWO TRAVEL LANES IN EACH DIRECTION ON 18TH STREET.



TEMPORARY STRIPING DESIGN

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE

REVISED ON 11/08/2016



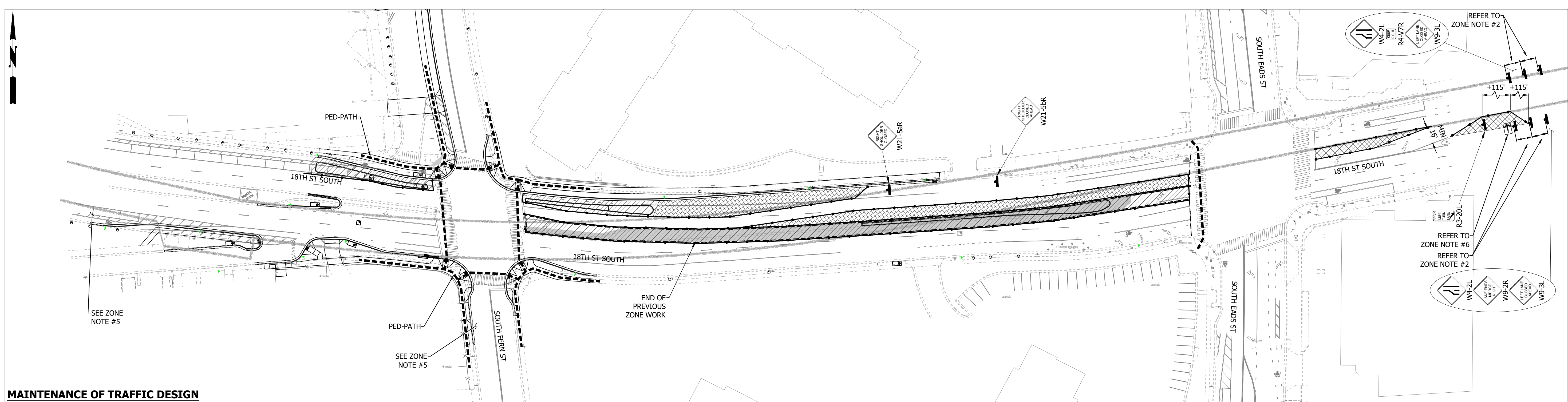
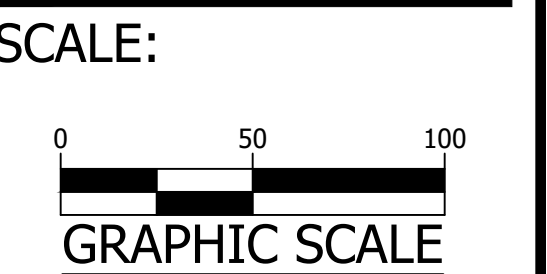
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<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
Dennis W. Leach	6/24/20
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS DATE

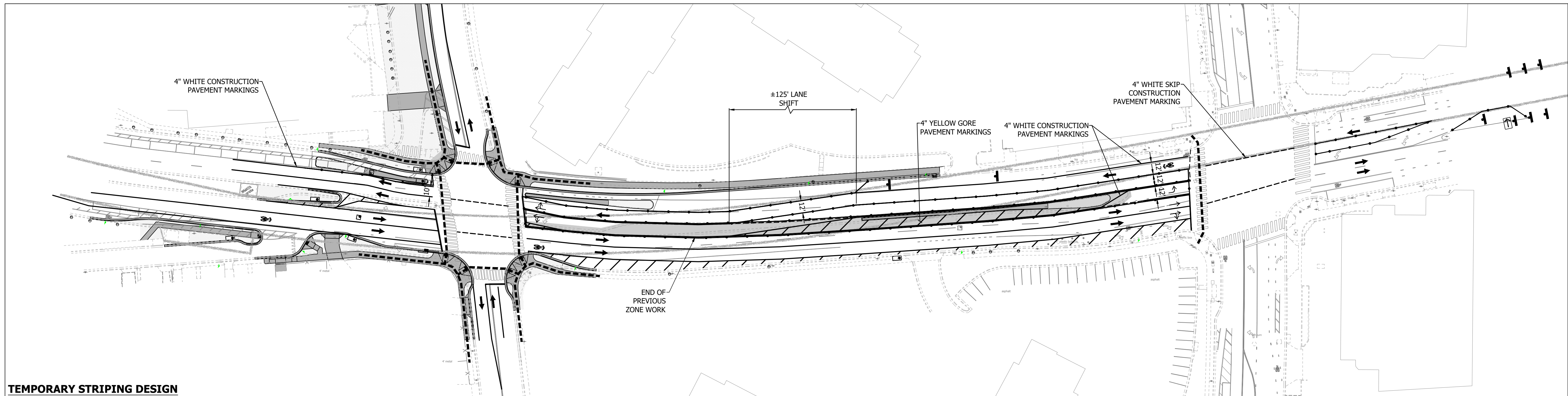
REVISIONS	DATE

18TH STREET SOUTH
MAINT. OF TRAFFIC - ZONE 18
ROADWAY IMPROVEMENTS
S FERN ST TO S EADS ST
CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MAINTENANCE OF TRAFFIC DESIGN



TEMPORARY STRIPING DESIGN

MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE# 18	TTC-4.2 TTC-27.2	TTC-35.1 TTC-36.2 *	CONTRACTOR TO PULL BACK CHANNELING DEVICES AT THE END OF THE WORK DAY AND REOPEN CLOSED LANES SHADOW VEHICLES SHALL BE UTILIZED AS SHOWN IN THE TTC	2 MONTHS - 3 MONTHS	MON.-FRI. 9:00AM-4:00PM

ZONE NOTES:

- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - TEMPORARY STRIPING:** REFER TO PLAN FOR STRIPING.
-STRIPING FROM PREVIOUS ZONE TO REMAIN UNLESS NOTED FOR REMOVAL.
-ADJUST THE DIRECTIONAL ARROWS AS SHOWN ABOVE.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
17.2 INSIDE LANE CLOSURE OPERATIONS ON A FOUR-LANE ROADWAY
-FIRST CHANNELING DEVICE SHALL BE PLACED GREATER THAN 50' FROM AN IMPLEMENTATION
 - PARKING IN THIS AREA SHOULD BE BLOCKED OFF.
 - ILLUMINATED FLASHING ARROW BOARDS SHALL BE PLACED OUTSIDE TRAVEL LANE.
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

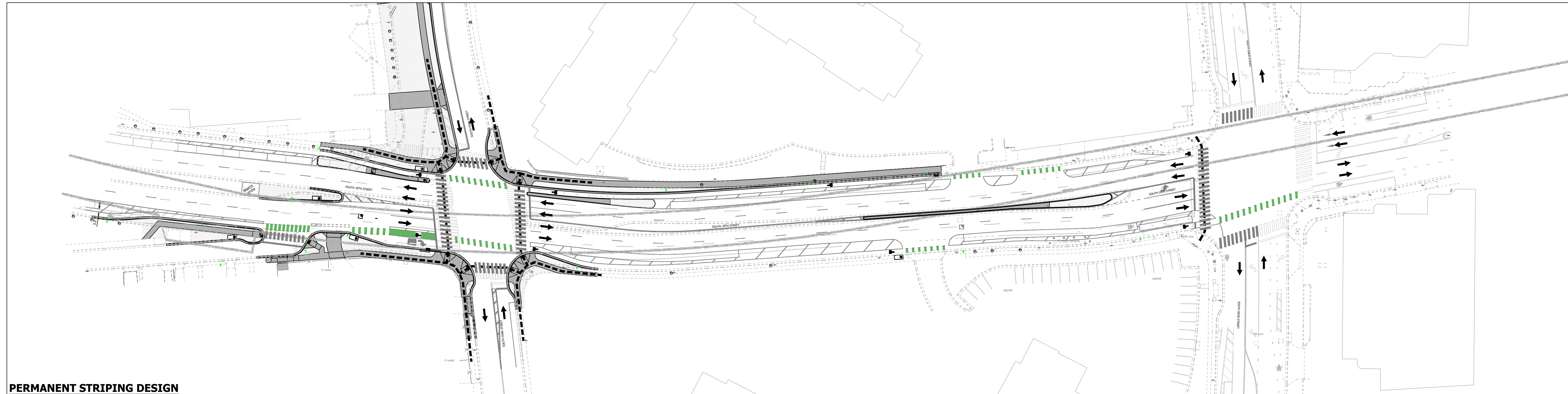
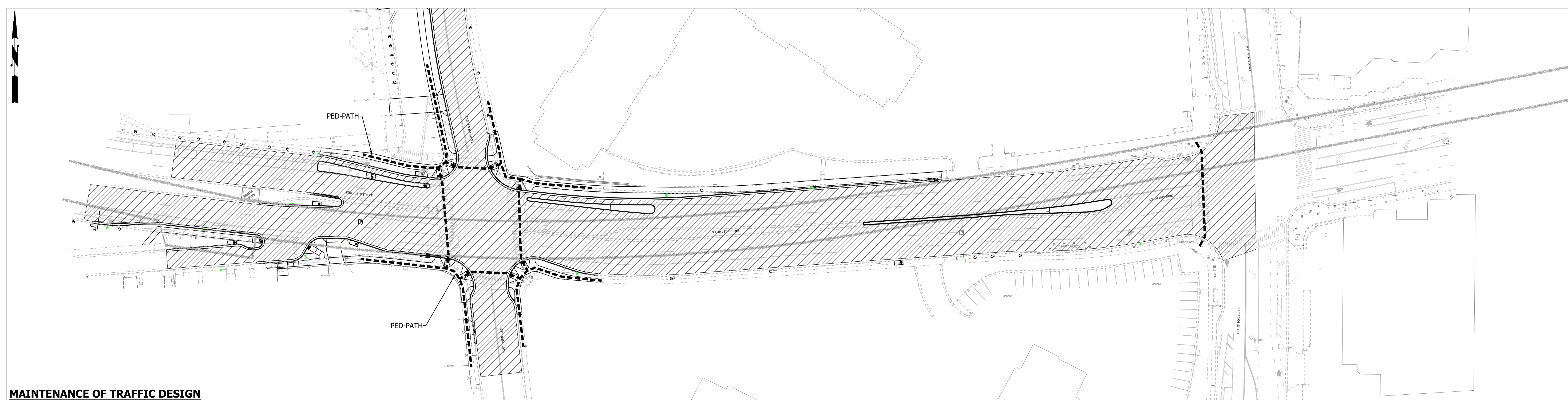
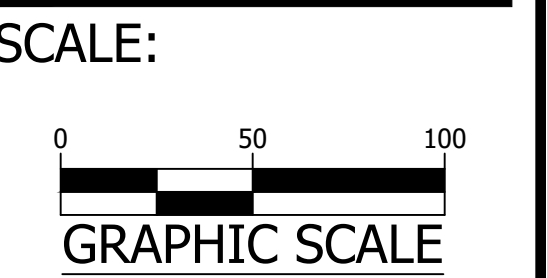


APPROVALS	DATE
<i>[Signature]</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>[Signature]</i>	
Kamal N. Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>[Signature]</i>	
WATER, SEWER, STREETS BUREAU CHIEF	
<i>[Signature]</i>	6/24/20
Dennis W. Leach	
TRANSPORTATION DIRECTOR	
<i>[Signature]</i>	6/17/2020
Ariel Yang	
PROJECT MANAGER	

REVISIONS	DATE

18TH STREET SOUTH
 MAINT. OF TRAFFIC - ZONE 19
 ROADWAY IMPROVEMENTS
 S FERN ST TO S LEADS ST
 CC20

DESIGNED: NS
 DRAWN: NS
 CHECKED: TL
 MISS UTILITY TRANSMITTAL #: XXXX
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 PLOTTED: MARCH 1 2021
 PLOTTED BY: NSHARP



MOT ZONE TABLE:

MOT ZONE#	TTC#		COMMENTS	DURATION	WORK HOURS
	VEHICULAR	PEDESTRIAN			
ZONE # 19	TTC-13.2 TTC-14.2	TTC-35.1 TTC-36.2 *	MILL AND OVERLAY ALL ASPHALT PAVEMENT IN THE PROJECT AREA FOR A FINISHED SURFACE COURSE. APPLY PERMANENT STRIPING.	1 WEEK - 2 WEEKS	MON.-FRI. 9:00AM-4:00PM

- ZONE NOTES:**
- SPEED REDUCTION:** CONTRACTOR SHALL PLACE W3-5A SIGN, WITH SPEED LIMIT OF 25 MPH, ON ALL APPROACHES FOR 18TH STREET.
 - WARNING SIGN SPACING:** MINIMUM 100' SPACING BETWEEN WARNING SIGNS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER AND T&E.
 - PERMANENT STRIPING:** REFER TO STRIPING PLAN.
 - OPTIONAL TTC'S:** REQUIRES APPROVE BY THE CONSTRUCTION MANAGER PRIOR TO IMPLEMENTATION
- * PEDESTRIAN ACCESS SHALL BE MAINTAINED AS SHOWN ON THIS SHEET, UTILIZING THE REFERENCED TTC IN THE MOT ZONE TABLE.

**AT THE END OF EACH WORKING DAY,
THE CONTRACTOR SHALL PULL BACK
MOT CHANNELIZING DEVICES TO
MAINTAIN TWO TRAVEL LANES IN
EACH DIRECTION ON 18TH STREET.**

REVISED ON 11/08/2016

Construction Drawings For: Traffic Signal Modification

18th Street South & South Fern Street (TS#210)

Project Number: 241-CC20

Signal Notes

A. POLES AND FOUNDATIONS

- MAST ARM LENGTH IS TO BE AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY.
- MAST ARM POLES SHALL BE DESIGNED TO THE PROPER HEIGHT TO ACCOMMODATE A STREET LIGHT LUMINAIRE AND INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS.
- MAST ARM POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. ALL POLES SHALL HAVE A 6-BOLT PATTERN.
- AT THE COUNTY'S REQUEST, THE CONTRACTOR SHALL DIG TEST PITS TO VERIFY THAT SIGNAL POLE FOUNDATIONS WILL NOT CONFLICT WITH UNDERGROUND UTILITIES AND THAT FOUNDATIONS WILL FIT WITHIN THE EXISTING RIGHT-OF-WAY.
- SIGNAL POLES AND MAST ARMS SHALL BE NON-ORNAMENTAL. COBRA LIGHTING SHALL BE LED.
- COBRA LIGHTING SHALL BE LED TYPE RFL-145W64LED4K-T-R2M-UNIV-DMG-PH8-RCD7-[USA-003]-BK. DECORATIVE POST-TOP LIGHTING SHALL BE HADCO DECORATIVE POST-TOP LUMINAIRE WITH RELUME LED KIT (UAZ XRE LED 57.69W).

B. CONTROLLER AND FOUNDATION

- NEW CONTROLLER CABINETS SHALL BE TS2, P TYPE WITH BATTERY BACKUP PER ARLINGTON COUNTY REQUIREMENTS.
- CONTROLLER SHALL BE INTELIGHT X-3 AND SHALL BE INSTALLED AND SET AS FOLLOWS:
2.1 TO REST IN PHASE 2 & 6 GREEN INTERVAL
2.2 TO START/RESTART IN PHASE 2 & 6 YELLOW CHANGE INTERVAL
- THE CONTROLLER CABINET AND FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS 66-01, 66-02, AND 70-01.
- THE COUNTY WILL PROVIDE SIGNAL TIMINGS TO THE CONTRACTOR FOR THE CONTROLLER WHEN THE INTERSECTION IS TOTALLY PREPARED FOR OPERATION. THE CONTRACTOR SHALL NOTIFY THE COUNTY IN WRITING 10 DAYS IN ADVANCE OF REQUIRING FINAL TIMINGS.

C. TRAFFIC SIGNAL HEADS

- ALL NEW VEHICULAR SIGNAL SECTIONS SHALL BE 12 INCHES IN DIAMETER CAST ALUMINUM WITH LED DISPLAYS.
- PEDESTRIAN SIGNAL HEAD SECTIONS SHALL BE CAST ALUMINUM WITH LED DISPLAYS (COUNTDOWN).
- ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR.

D. DETECTORS

- ALL NEW PEDESTRIAN PUSH BUTTON STATIONS SHALL CONFORM TO ARLINGTON COUNTY'S SPECIFICATIONS FOR ACCESSIBLE SIGNAL DESIGN AND SHALL USE POLARA NAVIGATOR VIBRO-TACTILE/AUDIO PUSH BUTTON ASSEMBLIES UNLESS OTHERWISE SPECIFIED.
- NEW OVERHEAD VIDEO DETECTION SHALL BE FLIR CAMERAS AND SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS.
- EMERGENCY VEHICLE PRE-EMPTION (EVP) EQUIPMENT (GTT MODEL M711 OR M721), OR APPROVED SUBSTITUTE, SHALL BE INSTALLED COMPLETE WITH DISCRIMINATOR CARDS, WIRING, ETC. IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS.
- EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD.

E. CONDUIT, CONDUCTORS, AND ELECTRICAL

- ALL JUNCTION BOXES SHALL HAVE THE WORDS "ARLINGTON COUNTY TRANSPORTATION" CAST IN THE LID. ALL JUNCTION BOXES SHALL BE INSTALLED PER STANDARDS 61-01, 61-02, 61-03, AND 61-04.
- METER PEDESTAL SHALL BE INSTALLED PER COUNTY STANDARDS. UNDERGROUND SERVICE SHALL BE OBTAINED FROM THE NEAREST UTILITY POLE OR SERVICE POINT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL AND COORDINATING WITH POWER SERVICE COMPANY FOR CONNECTION.
- CONDUIT SYSTEM SHALL BE ADDED TO CONNECT EXISTING COMMUNICATION CABLE PLANT TO THE NEW CONTROLLER CABINET LOCATION AS DIRECTED BY THE COUNTY ENGINEER.
- ALL CONDUIT ENTERING INTO JUNCTION BOXES SHALL NOT EXTEND OVER 3" MAXIMUM NOR 2" MINIMUM INSIDE THE JUNCTION BOXES, AND SHALL BE FITTED WITH BELL ENDS OR BUSHING.
- ALL JUNCTION BOXES SHALL HAVE A GROUND ROD INSTALLED. ALL JUNCTION BOXES SHALL BE PROPERLY CONNECTED TO THE INTERSECTION GROUNDING SYSTEM. METAL LIDS SHALL BE BONDED TO THE GROUNDING SYSTEM.
- CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES AT PROPOSED CONDUIT CROSSINGS PRIOR TO EXCAVATING CONDUIT TRENCHES OR BORING.
- ALL CONDUITS BENEATH ROADWAYS SHALL BE DIRECTIONAL DRILLED UNLESS DIRECTED OTHERWISE BY THE COUNTY CONSTRUCTION MANAGER. WHERE DIRECTED ON THE PLANS OR BY THE CONSTRUCTION MANAGER, THE CONTRACTOR SHALL INSTALL SPARE CONDUITS WITH PULL TAPE AND TRACER WIRE FOR ROAD CROSSINGS.
- ALL EXISTING CONDUIT AND CABLES ARE BASED ON RECORD DRAWINGS OR WERE ESTIMATED. CONTRACTOR SHALL VERIFY CONDUIT FILL CAPACITY IN EXISTING CONDUITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY IF CONDUIT CAPACITY IS NOT AVAILABLE IN EXISTING CONDUIT FOR NEW CABLES.
- NEW CCTV CAMERAS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY REQUIREMENTS. CONTRACTOR SHALL CONFIRM MOUNTING LOCATION OF CCTV CAMERA WITH COUNTY PRIOR TO INSTALLATION.
- CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
- ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
- REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES.

F. SIGNS

- ALL MAST ARM SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS. SIGNS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
- STREET NAME SIGNS SHALL HAVE A WHITE LEGEND ON GREEN BACKGROUND. CONTRACTOR SHALL SUBMIT SIGN DETAILS TO COUNTY TO REVIEW. THE DIMENSIONS PROVIDED ON PLANS ARE ESTIMATED.

G. DEMOLITION/SALVAGE

- ALL EXISTING SIGNAL EQUIPMENT IS TO BE REMOVED & RETURNED TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES LOCATED AT 4300 29TH ST S., ARLINGTON, VA 22206.
- ALL EXISTING SIGNAL POLE FOUNDATIONS SHALL BE DEMOLISHED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATIONS.

H. COMMUNICATIONS

- EXISTING COUNTY FIBER JUNCTION BOXES AND CONDUITS CONTAIN LIVE FIBER OPTIC CABLES. THE CONTRACTOR SHALL NOT CUT OR DAMAGE THE COUNTY'S EXISTING FIBER CABLES.
- ALL FIBER OPTIC CABLE INSTALLATION, REMOVAL, SPLICING, AND TESTING SHALL BE PERFORMED BY THE COUNTY AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MAY CONTRACT DIRECTLY WITH THE COUNTY'S FIBER CONTRACTORS. UPON REQUEST 703-228-7725, THE COUNTY WILL PROVIDE THE CONTACT INFORMATION FOR CURRENT QUALIFIED COUNTY FIBER CONTRACTORS.
- CONTACT ARLINGTON COUNTY DTS FOR FIBER OPTIC CABLE REMOVAL OR INSTALLATION AT LEAST 10 BUSINESS DAYS IN ADVANCE.
- CONTRACTOR SHALL FURNISH FIBER PATCH PANEL FOR INSTALLATION BY THE COUNTY. FIBER PIGTAIL SHALL BE APPROPRIATE LENGTH TO ALLOW FOR 50 FEET OF SLACK IN EACH INTERMEDIATE JUNCTION BOX. CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PATCH PANEL (INDICATING THE TAIL LENGTH) FOR COUNTY REVIEW PRIOR TO ORDERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF PROPOSED JUNCTION BOXES AND CONDUITS INCLUDING ALL APPURTENANCES SUCH AS GROUND RODS, TRACER WIRE, PULL TAPE, ETC.
- ALL NEW CONDUITS SHALL HAVE PULL TAPE INSTALLED BETWEEN JUNCTION BOXES AND TRACER WIRE INSTALLED WITHIN OR BESIDE AT LEAST ONE OF THE CONDUITS. TRACER WIRE SHALL BE CONNECTED TO THE GROUND RODS INSTALLED IN THE ADJACENT JUNCTION BOXES.
- DO NOT SPLICE TRACER WIRE.

I. INSPECTIONS

- THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER FOR INSPECTIONS THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONSTRUCTION MANAGER.
- THE COUNTY SHALL VERIFY POLE LOCATIONS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY MR. SHAHID MOHIUDDIN, 703-228-7555 TO SCHEDULE INSPECTION PRIOR TO EXCAVATION, AND AGAIN PRIOR TO POURING CONCRETE. STAKEOUT IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER WITHIN 7 BUSINESS DAYS OF SIGNAL ACTIVATION. ALL POWER AND COMMUNICATIONS SHALL BE IN OPERATION AT THE TIME OF ACTIVATION UNLESS APPROVED BY THE COUNTY CONSTRUCTION MANAGER.

Location Map

Scale: N.T.S.

Vicinity

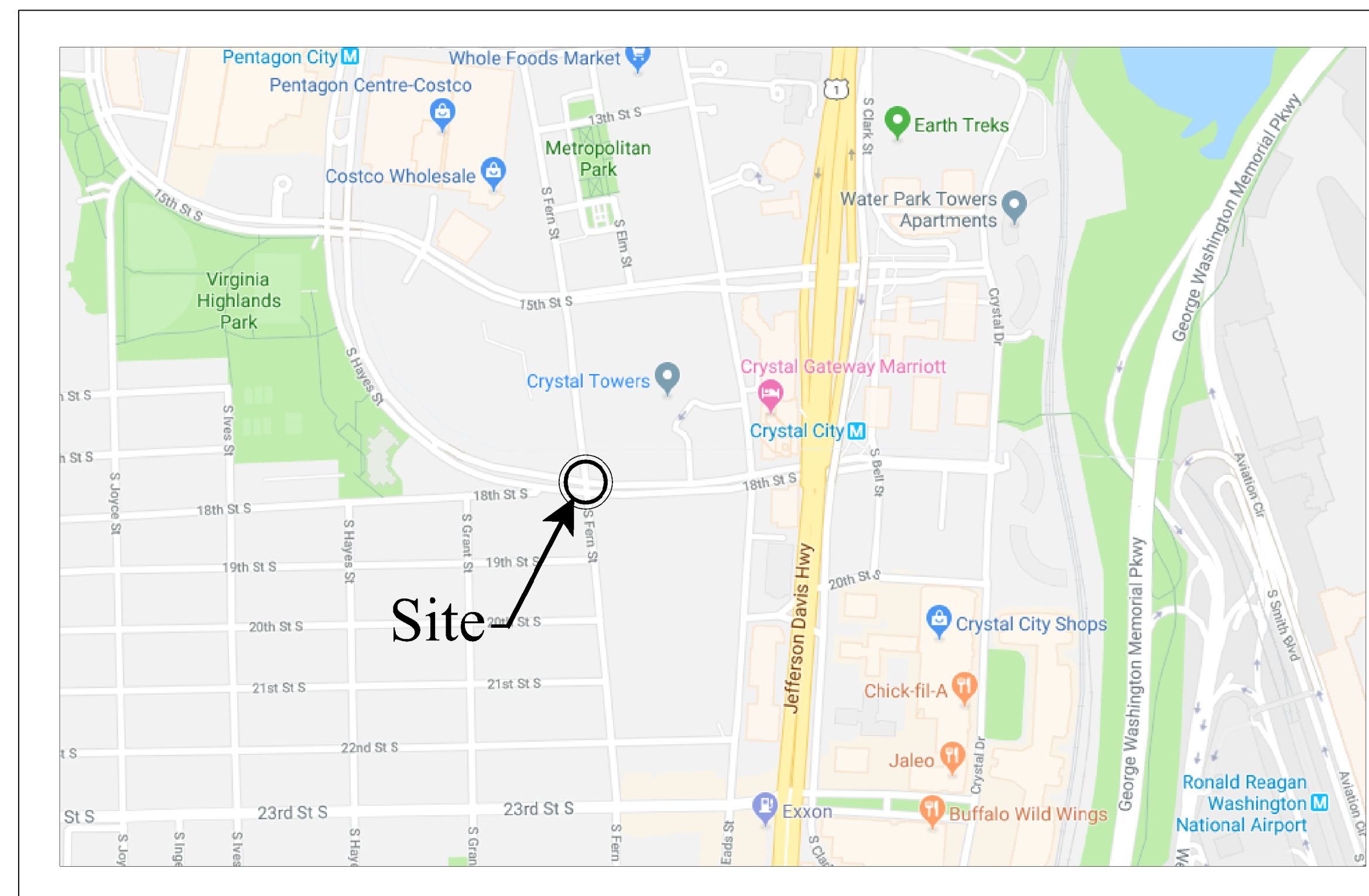


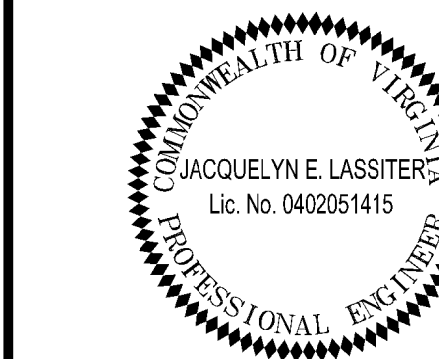
Table of Contents:

- T-1. Cover Sheet
- T-2. Traffic Signal Modification Plan
- T-3. Communications Plan

I CERTIFY THAT THIS PROJECT WAS BUILT IN SUBSTANTIAL CONFORMANCE WITH THIS PLAN, UNLESS DULY NOTED IN THE ABOVE REVISION BLOCK.

PROJECT MANAGER _____ DATE _____
CONSTRUCTION MANAGER _____ DATE _____

Seal



Approvals Date

<i>Kamell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Denis M. Leach</i>	6/24/20
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Michelle Yang</i>	6/17/2020
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions Date

Revisions	Date

Project Name and Location

Traffic Signal Design
18th Street South & South Fern Street
Cover Sheet

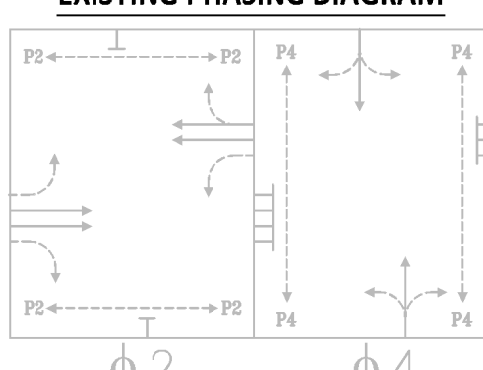
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Checked: JEL
Miss Utility Transmittal #:

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Plotted: June 30, 2020
Plotted by: Kharkwa

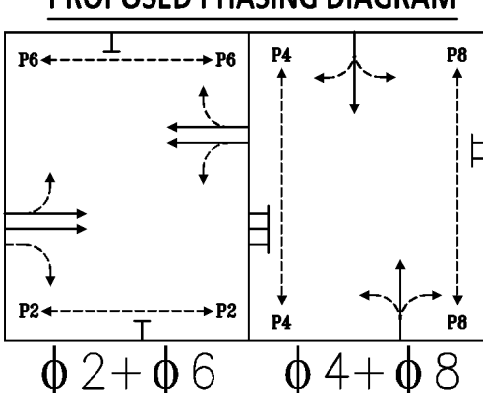
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Sheet
T-1

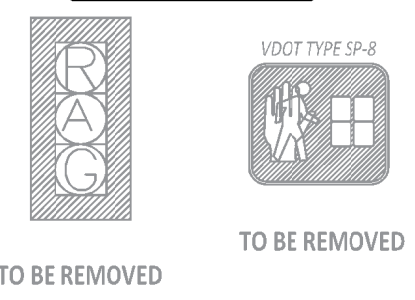
EXISTING PHASING DIAGRAM



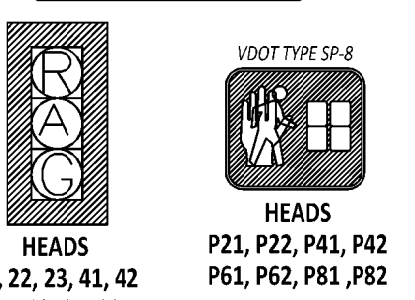
PROPOSED PHASING DIAGRAM



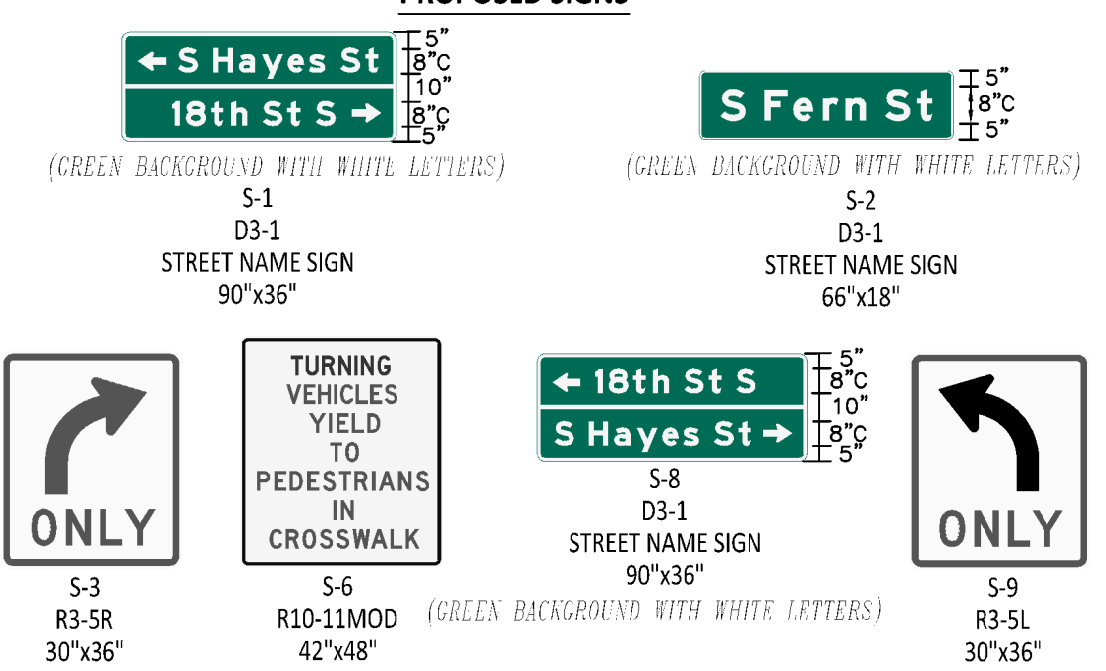
EXISTING SIGNALS



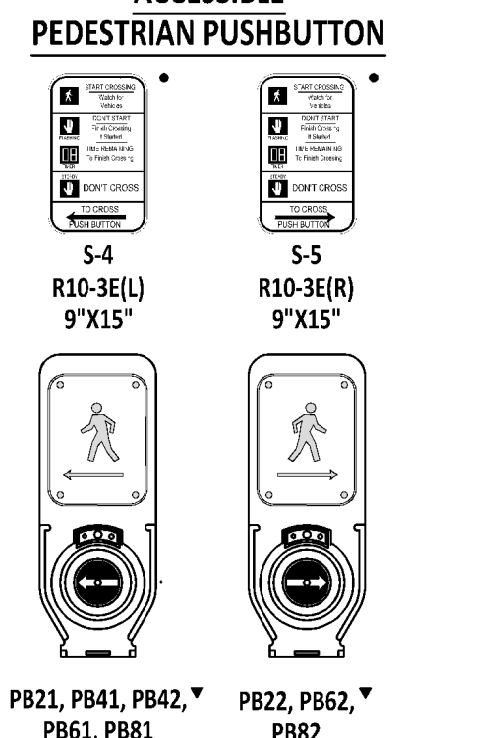
PROPOSED SIGNALS



PROPOSED SIGNS



ACCESSIBLE PEDESTRIAN PUSHBUTTON



PUSHBUTTON	WALK MESSAGE
PB41, PB42 PB81, PB82	"18TH STREET, WALK SIGN IS ON TO CROSS '18TH STREET."
PB21, PB22 PB61, PB62	"FERN STREET, WALK SIGN IS ON TO CROSS 'FERN STREET.'"*

* PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.

TEST HOLE LOCATIONS

No.	TYPE	LATITUDE	LONGITUDE	STA. ; OFFSET
1	MAST ARM POLE	38.8574813	-77.0559349	11+20 ; 49 LT
2	MAST ARM POLE	38.8574825	-77.0558869	11+90 ; 59 LT
3	MAST ARM POLE	38.8571699	-77.0555495	12+44 ; 49 RT
4	MAST ARM POLE	38.8571599	-77.0558001	11+74 ; 62 RT
5	PEDESTAL POLE 12'	38.8572033	-77.0558428	11+60 ; 48 RT
6	PEDESTAL POLE 12'	38.8574573	-77.0559008	11+31 ; 42 LT
7	PEDESTAL POLE 12'	38.8574897	-77.0558421	11+46 ; 56 LT
8	PEDESTAL POLE 12'	38.8574208	-77.0555914	12+20 ; 40 LT
9	PEDESTAL POLE 12'	38.8571974	-77.0555779	12+34 ; 40 RT
10	PEDESTAL POLE 12'	38.8571565	-77.0556275	12+22 ; 57 RT

COLOR SEQUENCE CHART

PHASE	2	4	6	8	2+6	4+8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	
21,22,23	G				G		Y
41,42		G				G	R
61,62			G				Y
81,82				G			R
P21,P22	WALK				WALK		BLANK
P41,P42		WALK				WALK	BLANK
P61,P62			WALK				BLANK
P81,P82				WALK			BLANK

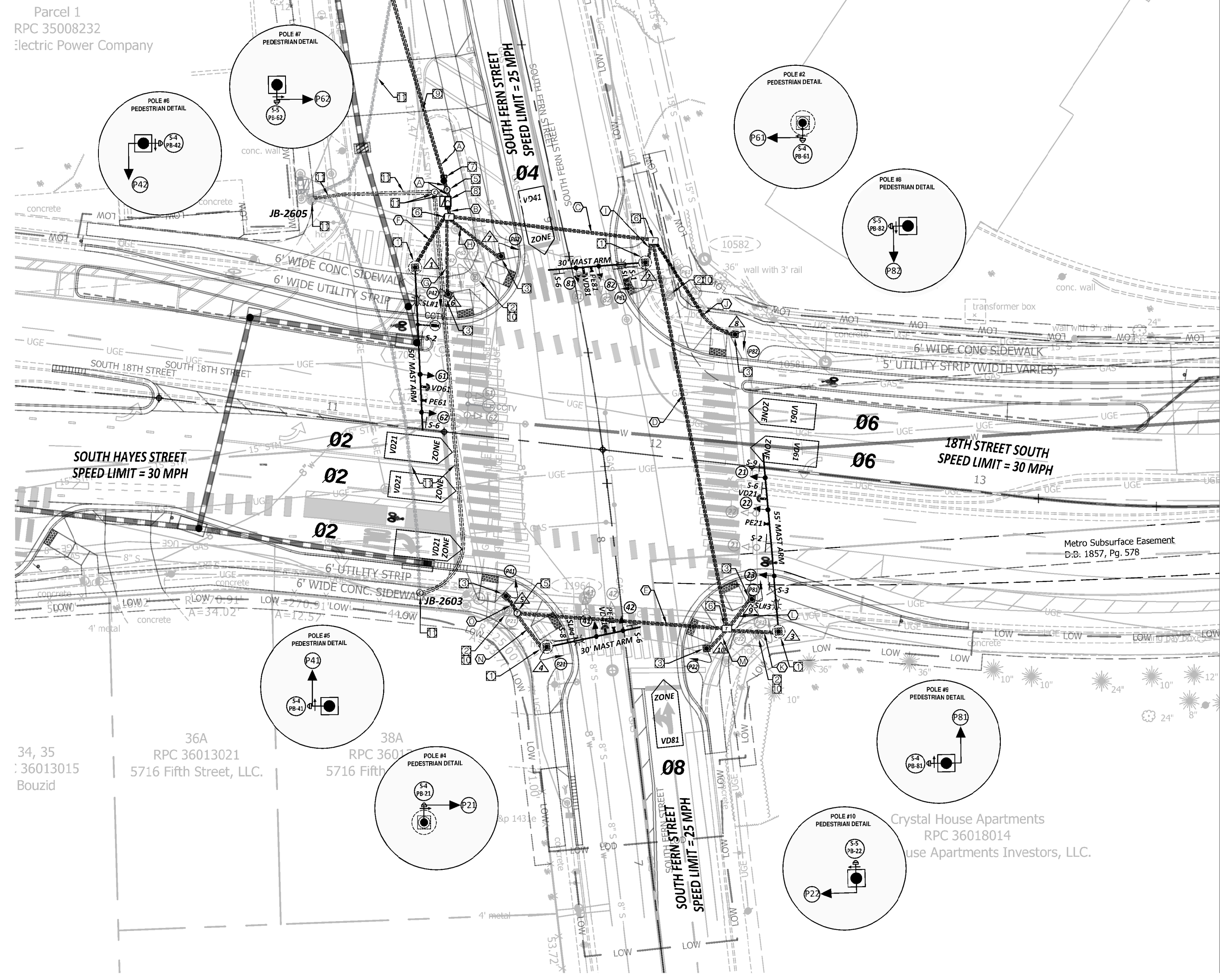
NOTE: BLANK SPACES REPRESENT A RED DISPLAY. WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL IS SERVICED; OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

POLE LOCATION DETAIL



CONDUIT & CABLE

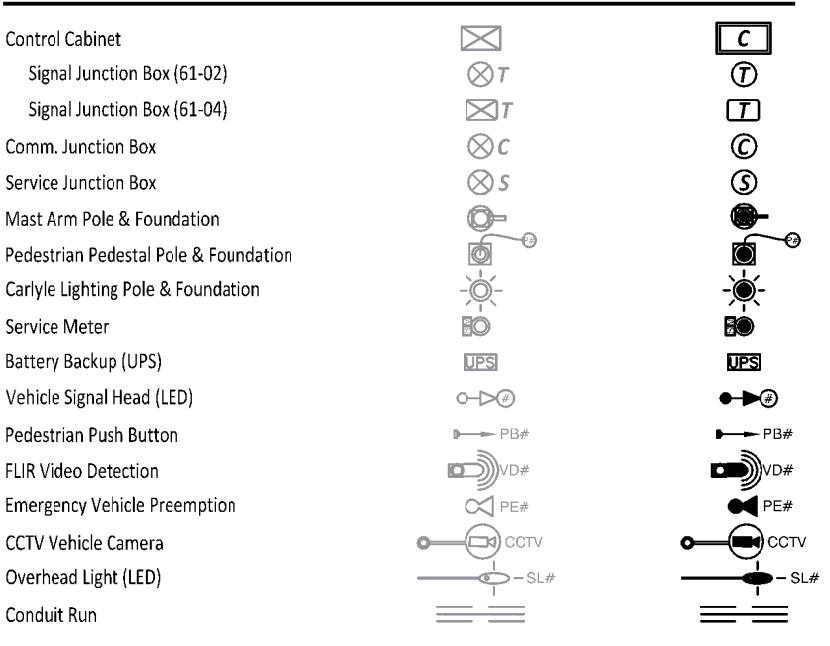
- A** 1-3" CONDUIT (TRENCHED)
1-#6 AWG ELECTRICAL SERVICE CABLE
1-#6 BARE COPPER GROUNDING WIRE
- B** 4-3" CONDUIT (TRENCHED)
3-2" CONDUIT (TRENCHED)
9-14/7c SIGNAL HEADS - 21,22,23,41,42,61,62,81,82
8-14/7c PEDESTRIAN SIGNALS - P21,P22,P41,P42,P61,P62,P81,P82
8-14/3c PEDESTRIAN PUSH BUTTON - PB21,PB22,PB41,PB42,P61,P62,P81,P82
4-12/2c UF CABLE FOR LUMINAIRE - SL1,SL2,SL3,SL4
4-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD21,VD41,VD61,VD81
4-14/5c OPTICOM GTT EVP - FE21,PE41,PE61,PE81
1- CABLE FOR CCTV CAMERA
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- C** 2-4" CONDUIT (DIRECT BORED)
7-14/7c SIGNAL HEADS - 21,22,23,41,42,61,81,82
6-14/7c PEDESTRIAN SIGNALS - P21,P22,P41,P61,P81,P82
6-14/3c PEDESTRIAN PUSH BUTTON - PB21,PB22,PB41,P61,P81,P82
5-12/2c UF CABLE FOR LUMINAIRE - SL2,SL3,SL4
3-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD21,VD41,VD81
3-14/5c OPTICOM GTT EVP - FE21,PE41,PE81
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- D** 2-4" CONDUIT (DIRECT BORED)
5-14/7c SIGNAL HEADS - 21,22,23,41,42
4-14/7c PEDESTRIAN SIGNALS - P21,P22,P41,P81
4-14/3c PEDESTRIAN PUSH BUTTON - PB21,PB22,PB41,P81
2-12/2c UF CABLE FOR LUMINAIRE - SL3,SL4
2-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD21,VD41
2-14/5c OPTICOM GTT EVP - FE21,PE41
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- E** 2-4" CONDUIT (DIRECT BORED)
2-14/7c SIGNAL HEADS - 41,42
2-14/7c PEDESTRIAN SIGNALS - P21,P41
2-14/3c PEDESTRIAN PUSH BUTTON - PB21,P81
1-12/2c UF CABLE FOR LUMINAIRE - SL4
1-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD41
1-14/5c OPTICOM GTT EVP - FE41
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- F** 2-3" CONDUIT (TRENCHED)
2-14/7c SIGNAL HEADS - 61,62
1-14/7c PEDESTRIAN SIGNAL - P42
1-12/2c UF CABLE FOR LUMINAIRE - SL1
1-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD61
1-14/5c OPTICOM GTT EVP - FE61
1- CABLE FOR CCTV CAMERA
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- G** 2-2" CONDUIT (TRENCHED)
1-14/3c PEDESTRIAN PUSH BUTTON - PB42
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- H** 2-2" CONDUIT (TRENCHED)
1-14/7c PEDESTRIAN SIGNAL - P62
1-14/3c PEDESTRIAN PUSH BUTTON - PB62
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- I** 3-3" CONDUIT (TRENCHED)
2-14/7c SIGNAL HEADS - 81,82
1-14/7c PEDESTRIAN SIGNAL - P82
1-14/3c PEDESTRIAN PUSH BUTTON - PB61
1-12/2c UF CABLE FOR LUMINAIRE - SL2
1-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD81
1-14/5c OPTICOM GTT EVP - FE81
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- J** 2-2" CONDUIT (TRENCHED)
1-14/7c PEDESTRIAN SIGNAL - P82
1-14/3c PEDESTRIAN PUSH BUTTON - PB82
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- K** 2-3" CONDUIT (TRENCHED)
3-14/7c SIGNAL HEADS - 21,22,23
1-12/2c UF CABLE FOR LUMINAIRE - SL3
1-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD21
1-14/5c OPTICOM GTT EVP - FE21
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- L** 2-2" CONDUIT (TRENCHED)
1-14/7c PEDESTRIAN SIGNAL - P81
1-14/3c PEDESTRIAN PUSH BUTTON - PB81
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- M** 2-2" CONDUIT (TRENCHED)
1-14/7c PEDESTRIAN SIGNAL - P22
1-14/3c PEDESTRIAN PUSH BUTTON - PB22
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- N** 2-3" CONDUIT (TRENCHED)
2-14/7c SIGNAL HEADS - 41,42
1-14/7c PEDESTRIAN SIGNAL - P21
1-14/3c PEDESTRIAN PUSH BUTTON - PB21
1-12/2c UF CABLE FOR LUMINAIRE - SL4
1-RG-59 COAXIAL CABLE FOR VIDEO DETECTION - VD41
1-14/5c OPTICOM GTT EVP - FE41
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)
- O** 2-2" CONDUIT (TRENCHED)
1-14/7c PEDESTRIAN SIGNAL - P41
1-14/3c PEDESTRIAN PUSH BUTTON - PB41
1-#6 BARE COPPER GROUNDING WIRE (PER CONDUIT USED)



DEMOLITION & CONSTRUCTION NOTES

1. INSTALL TRAFFIC SIGNAL POLE & FOUNDATION WITH LUMINAIRE, SIGNALS, SIGNS, AND EQUIPMENT AS SHOWN. CONTRACTOR SHALL SUBMIT THE TRAFFIC SIGNAL POLE FOUNDATION DESIGN WHICH SHALL BE SIGNED AND SEALED BY THE LICENSED PROFESSIONAL IN THE STATE OF VIRGINIA FOR COUNTY REVIEW AND APPROVAL.
2. REMOVE EXISTING SIGNAL POLE, SIGNAL HEADS, ASSOCIATED WIRING, AND REMOVE FOUNDATION 1' BELOW GRADE.
3. INSTALL 12" PEDESTAL POLE & COUNTY STD 66-04 FOUNDATION WITH PEDESTRIAN SIGNAL HEADS & PUSHBUTTON (S).
4. INSTALL 6" PEDESTRIAN BOLLARD POLE & COUNTY STD 66-04 WITH PEDESTRIAN PUSHBUTTON & SIGN.
5. INSTALL ARLINGTON STANDARD 61-03 JUNCTION BOX.
6. INSTALL ARLINGTON STANDARD 61-04 JUNCTION BOX.
7. INSTALL SERVICE METER PER ARLINGTON STD. 80-01 ELECTRICAL SIGNAL SERVICE.
8. INSTALL CONTROLLER, CABINET, CONCRETE STROP, UPS, AND ASSOCIATED EQUIPMENT.
9. CONTRACTOR TO COORDINATE POWER SUPPLY WITH DOMINION POWER. SEE SHEET T-3 FOR LOCATION OF EXISTING POWER SUPPLY.
10. REMOVE EXISTING SIGNAL POLE AND ASSOCIATED EQUIPMENT AFTER CONSTRUCTION OF PROPOSED SIGNAL. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE OPERATION OF THE EXISTING SIGNAL AND MAINTAINING INTERSECTION LIGHTING DURING CONSTRUCTION OF THE PROPOSED SIGNAL.
11. SEE SHEET T-3 FOR COMMUNICATION DETAILS.
12. INSTALL SPICE BOX AT THE EXISTING METER LOCATION.

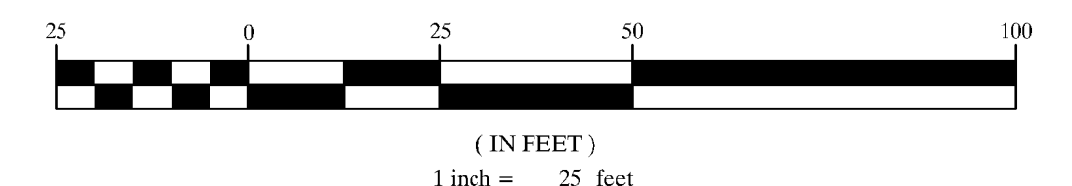
LEGEND



POLE SIGNAL MOUNTING

No.	STANDARD		LUM. LED	POLE SIGNAL MOUNTING				STREET NAME SIGN	STATION ; OFFSET	
	TYPE	SIG. M.A.		LUM. M.A.	VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS			VIDEO DETECTOR PREEMPTION & CCTV
1	MAST ARM POLE	50'	6'	145W	61, 62	-	S-6	VD61,PE1,CCTV	S-2	11+20 ; 49 LT
2	MAST ARM POLE	30'	6'	145W	81, 82, P61	PB61	S-4,S-6	VD81,PE1	S-1	11+90 ; 59 LT
3	MAST ARM POLE	55'	6'	145W	21, 22, 23	-	S-3,S-6,S-9	VD21,PE21	S-2	12+44 ; 49 RT
4	MAST ARM POLE	30'	6'	145W	41, 42, P21	PB21	S-4,S-6	VD41,PE41	S-8	11+74 ; 62 RT
5	PEDESTAL POLE 12'	-	-	-	P41	-	-	-	-	11+60 ; 48 RT
6	PEDESTAL POLE 12'	-	-	-	P42	PB42	S-4	-	-	11+31 ; 42 LT
7	PEDESTAL POLE 12'	-	-	-	P62	PB62	S-5	-	-	11+46 ; 56 LT
8	PEDESTAL POLE 12'	-	-	-	P82	PB82	S-5	-	-	12+20 ; 40 LT
9	PEDESTAL POLE 12'	-	-	-	P81	PB81	S-4	-	-	12+34 ; 40 RT
10	PEDESTAL POLE 12'	-	-	-	P22	PB22	S-5	-	-	12+22 ; 57 RT

GRAPHIC SCALE



DEPARTMENT OF ENVIRONMENTAL SERVICES
Engineering & Capital Projects Division
Engineering Bureau
2100 Clarendon Boulevard, Suite 813
Arlington, VA 22201
Phone: 703.228.3629
Fax: 703.228.3606



Approvals	Date
<i>Camell</i>	6/18/2020
QUALITY CONTROL ENGINEER	6.26.20
<i>Kamal N. Taktak</i>	
CONSTRUCTION MANAGEMENT SUPERVISOR	06.29.20
<i>Alufu</i>	
WATER, SEWER, STREETS BUREAU CHIEF	6/24/20
<i>Dennis W. Leach</i>	
TRANSPORTATION DIRECTOR	
<i>Ariel Yang</i>	6/17/2020
PROJECT MANAGER	

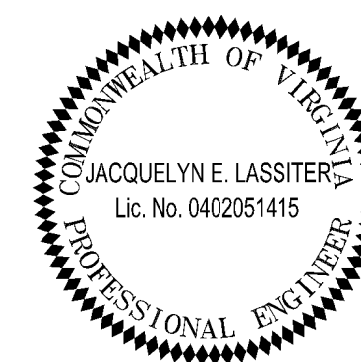
Revisions	Date

Project Name and Location
Traffic Signal Design
18th Street South & South Fern Street
Traffic Signal Modification Plan

Designed: AK
Drawn: AK
Checked: JFL
Miss Utility Transmittal #:
Filename: TSD_18th St. S. & S. Fern St.dwg
Path: I:\PROJECTS\40196310 - CAD MODELS AND SHEETS\18A FERN STD
Plotted: June 30, 2020
Plotted by: Kharkwa
Scale: 1" = 25'



Seal



Approvals Date

Samuel 6/18/2020

QUALITY CONTROL ENGINEER 6.26.20

Kamal W. Taktak

CONSTRUCTION MANAGEMENT SUPERVISOR 06.29.20

Alufu

WATER, SEWER, STREETS BUREAU CHIEF

Dennis W. Leach 6/24/20

TRANSPORTATION DIRECTOR

Neil Yang 6/17/2020

PROJECT MANAGER

Revisions Date

CONSTRUCTION NOTES

- 6 INSTALL ARLINGTON STANDARD 61-02 JUNCTION BOX.
- 13 TIE CONDUIT INTO EXISTING FIBER JUNCTION BOX.
- 14 CUT EXISTING INTERCONNECT AT SPLICE POINT AND RE-ROUTE THROUGH PROPOSED CONDUIT TO PROPOSED JUNCTION BOX. CONTRACTOR SHALL SALVAGE EXISTING FIBER PATCH PANEL FOR RE-USE. RESPLICE CABLE IN EXISTING JUNCTION BOX JB-2603.
- 15 PULL BACK EXISTING 12 STRAND FIBER OPTIC CABLE. COIL AT EXISTING CABINET.
- 16 PULL BACK EXISTING 24 STRAND FIBER OPTIC CABLE. COIL AT EXISTING CABINET.
- 17 RE-ROUTE EXISTING 12 STRAND FIBER OPTIC CABLE IN PROPOSED CONDUIT.
- 18 RE-ROUTE EXISTING 24 STRAND FIBER OPTIC CABLE IN PROPOSED CONDUIT.
- 19 RE-ROUTE EXISTING 24 STRAND FIBER OPTIC CABLE IN PROPOSED CONDUIT.
- 20 CONTRACTOR TO COORDINATE WITH DOMINION ENERGY ON FEEDING THE NEW SERVICE METER FROM EXISTING POWER SOURCE (DOM# 7351787) THROUGH SPLICE BOX.

NOTE:
CONDUIT INSTALLED PER TRAFFIC SIGNAL MODIFICATION PLAN (T-2) IS SHOWN IN GRAY SCALE ON THIS PLAN SHEET.

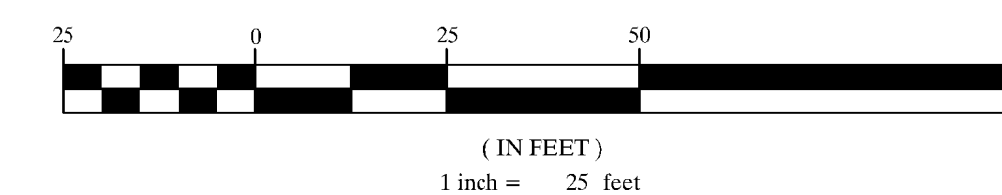
CONDUIT & CABLE

- P** 1-2" HDPE CONDUIT (TRENCHED)
1 - RE-ROUTED 12 STRAND FIBER OPTIC CABLE
1 - RE-ROUTED 24 STRAND FIBER OPTIC CABLE
- Q** 2-2" HDPE CONDUIT (TRENCHED)
1 - RE-ROUTED 12 STRAND FIBER OPTIC CABLE
1 - RE-ROUTED 24 STRAND FIBER OPTIC CABLE

LEGEND

	EXISTING	PROPOSED
Control Cabinet		
Signal Junction Box (S1-02)		
Signal Junction Box (S1-04)		
Comm. Junction Box		
Service Junction Box		
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation		
Curby Lighting Pole & Foundation		
Service Meter		
Battery Backup (UPS)		
Vehicle Signal Head (LED)		
Pedestrian Push Button		
FLIR Video Detection		
Emergency Vehicle Preemption		
CCTV Vehicle Camera		
Overhead Light (LED)		
Conduit Run		

GRAPHIC SCALE



Project Name and Location

Traffic Signal Design
18th Street South & South Fern Street
Communication Plan

Designed: AK
Drawn: AK
Checked: JEL
Miss Utility Transmittal #:

Filename: TSD_18th St. S. & S. Fern St.dwg
Path: I:\PROJECTS\40196310_CAD MODELS AND SHEETS\18A_FERN.TSD
Plotted: June 30, 2020
Plotted by: Kharkwa

Scale: 1" = 25'



Sheet
T-3