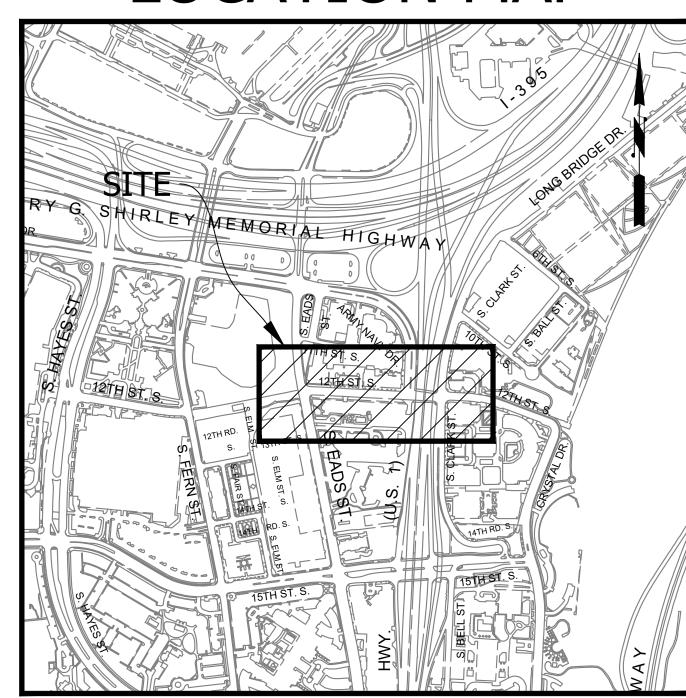
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

WWW.ARLINGTONVA.US

FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 OWNER DES/OD/WSS

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



GRAPHIC SCALE

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

Amy Pflaum
QUALITY CONTROL ENGINEER
Kamal Taktak

CONSTRUCTION MANAGEMENT SUPER 05.10.

WATER, SEWER, STREETS BUREAU CH

Dennis M. Leach 05/17

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS DA

GRAPHIC SC

CONSTRUCTION DRAWINGS FOR:

12TH STREET SOUTH BETWEEN S. EADS ST. AND S. CLARK ST.

PROJECT NUMBER: CC16

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- 1. 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.
- 2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA
- PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.

 3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES

BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.

- 4. 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.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
- 9. 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

10. THE CONTRACTOR SHALL CONFINE <u>ALL</u> 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

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

TRAFFIC CONTROL

- 12. 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
- 13. 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.
- 14. 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.
- 15. 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. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR 703-228-3049
- 16. 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

- 17. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER 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.
- 18. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-5555 AND THE PROJECT OFFICER.
- 19. 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:

- 20. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- 21. 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.
- 22. 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.

PROJECT DESCRIPTION:

THE PURPOSE OF THE 12TH STREET S PROJECT IS TO EXTEND THE TRANSITWAY FROM S. CLARK STREET TO SEADS ST. AND PROVIDE PEDESTRIAN & STREETSCAPE IMPROVEMENTS AS SHOWN IN THE CRYSTAL CITY SECTOR PLAN. THE PROJECT WILL ALSO CONNECT TO THE CYCLE TRACK PROPOSED WITH THE ARMY NAVY DRIVE COMPLETE STREETS PROJECT AND IMPROVE BIKE CONNECTIVITY TO CRYSTAL CITY. IMPROVEMENTS INCLUDE CURB AND GUTTER, SIDEWALKS, TRAFFIC SIGNALS, BIKE LANES, AND STORM IMPROVEMENTS.

Sheet List

C051.1

C072.1

C073.1

C081.1

Watermain Plan and Profile

Storm Sewer Plan

Storm Sewer Plan

Storm Sewer Profiles

Storm Computations

SWM Calculations

SWM Drainage Area Map

Storm Sewer Drainage Divides

Number	Sheet Title		
0000.1	Cover	C091.1	Tree Removal Plan
2006.1	Legend	C091.2	Landscape Plan
002.1	Details	C092.1	Landscape Notes and Details
2004.1	Typical Sections	C101.1	Sign and Marking Plan
C011.1	Existing Conditions Plan	C101.2	Sign and Marking Plan
C011.2	Existing Conditions Plan	C102.1	Final Sign and Marking Plan
C011.3	Property Easement Exhibit	C102.2	Final Sign and Marking Plan
C011.4	Property Easement Exhibit	C111.1	Streetlight Plan
021.1	Demolition Plan	C111.2	Streetlight Plan
021.2	Demolition Plan	C120.1	Maintenance of Traffic - Transportation
031.1	Erosion and Sediment Control Plan		Management Plans
031.2	Phase 1 Erosion and Sediment Control Plan	C120.2	Maintenance of Traffic - Transportation Management Plans
	Phase 2	C121.1	Maintenance of Traffic - Phase 1
C032.1	Erosion and Sediment Control Notes	C122.1	Maintenance of Traffic - Phase 2A
032.2	Erosion and Sediment Control Notes and Details	C122.2	Maintenance of Traffic - Phase 2B
032.3	Erosion and Sediment Control Notes	C123.1	Maintenance of Traffic - Phase 3
2032.3	and Details	C124.1	Maintenance of Traffic - TTC Details
C032.4	Erosion and Sediment Control Notes and Details	C124.2	Maintenance of Traffic - TTC Details
032.5	Sewershed and Soil Survey	C124.3	Maintenance of Traffic - TTC Details
035.1	Stormwater Pollution Prevention Plan	T300.1	Index of Sheets Signal & Notes
035.2	Stormwater Pollution Prevention Plan	T300.2	Signal Plan
C041.1	Plan and Profile	T300.3	Signal Plan
C041.2	Plan and Profile	T300.4	Signal Plan
042.1	Ramp Details	T300.5	Signal Plan
042.2	Ramp Details	T301.1	Signal Detail Plan
042.3	Driveway Details	T302.1	Signal Communication Plan
2043.1	Edge of Pavement Profiles	T302.2	Signal Communication Plan
043.2	Edge of Pavement Profiles	T303.1	Interim and Ultimate Plan
C044.1	Cross Section Exhibit	T303.2	Interim and Ultimate Plan
C044.2	Cross Sections		
C044.3	Cross Sections		
C044.4	Cross Sections		
045.1	Geometric Control Plan		

SWM#: 20-0251

ADT

5300 - 12TH ST. S (FROM S. EADS ST. TO CRYSTAL DR) - 2017 - VDOT 6200 - 12TH ST. S (FROM S. EADS ST. TO ARMY NAVY DR) - 2020 - KITTLESON 12th Street Transitway Extension Traffic STudy

STREET CLASSIFICATION

12TH STREET SOUTH - TYPE B - PRIMARILY URBAN MIXED-USE ARTERIAL

POSTED SPEED

12TH STREET SOUTH- 25 MPH (DESIGN SPEED, NOT POSTED BUT OBTAINED FROM

BETWEEN S. EADS ST. AND S. CLARK ST.

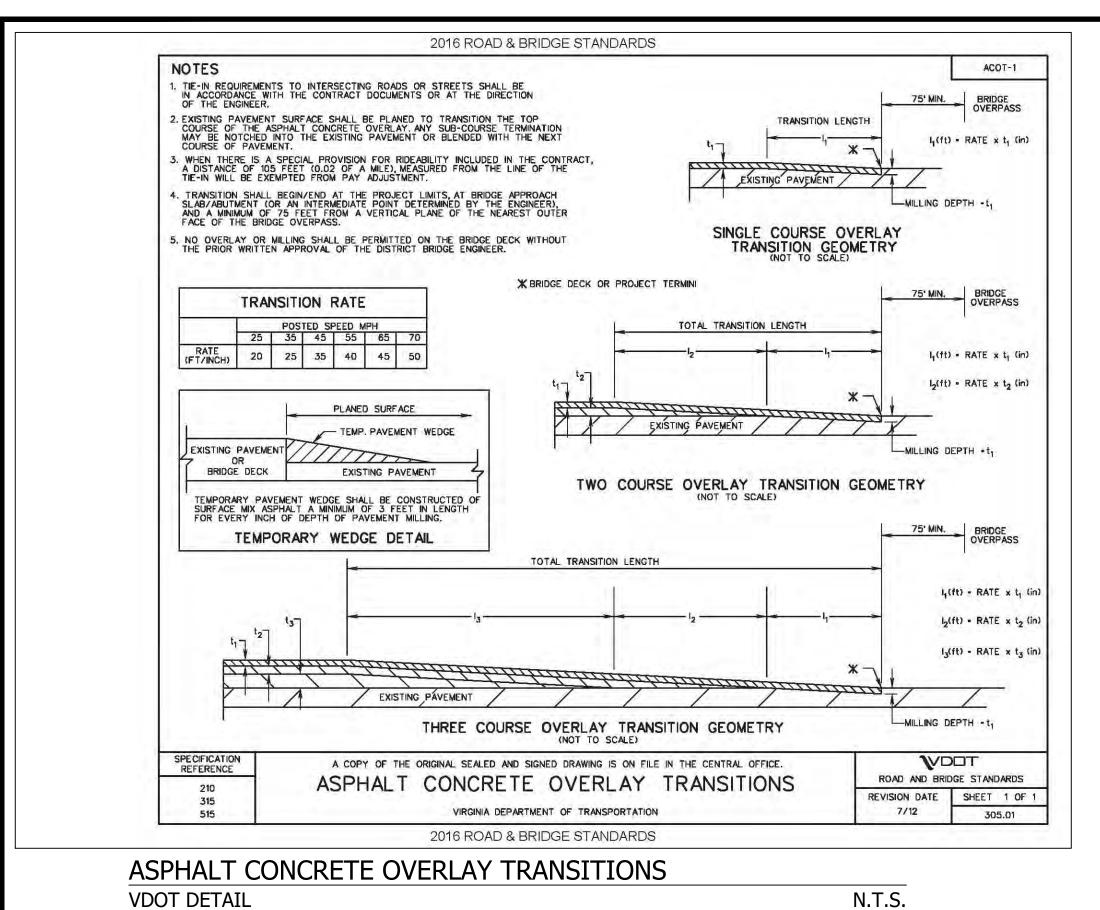
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DRAWN: CB

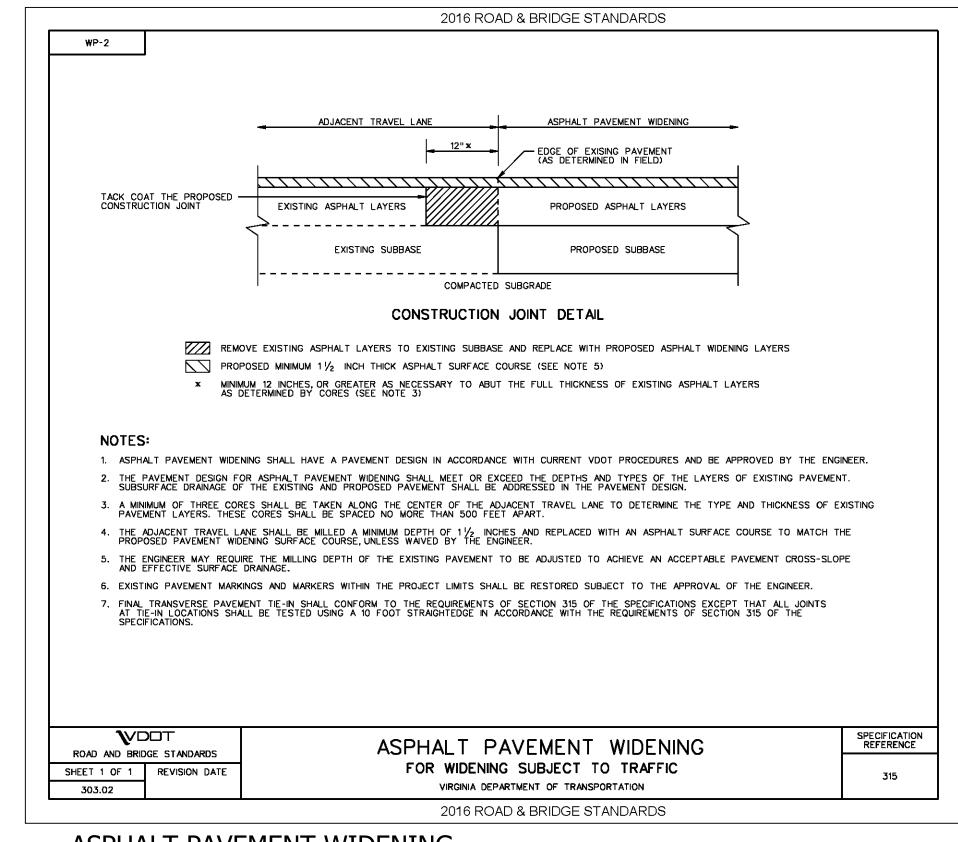
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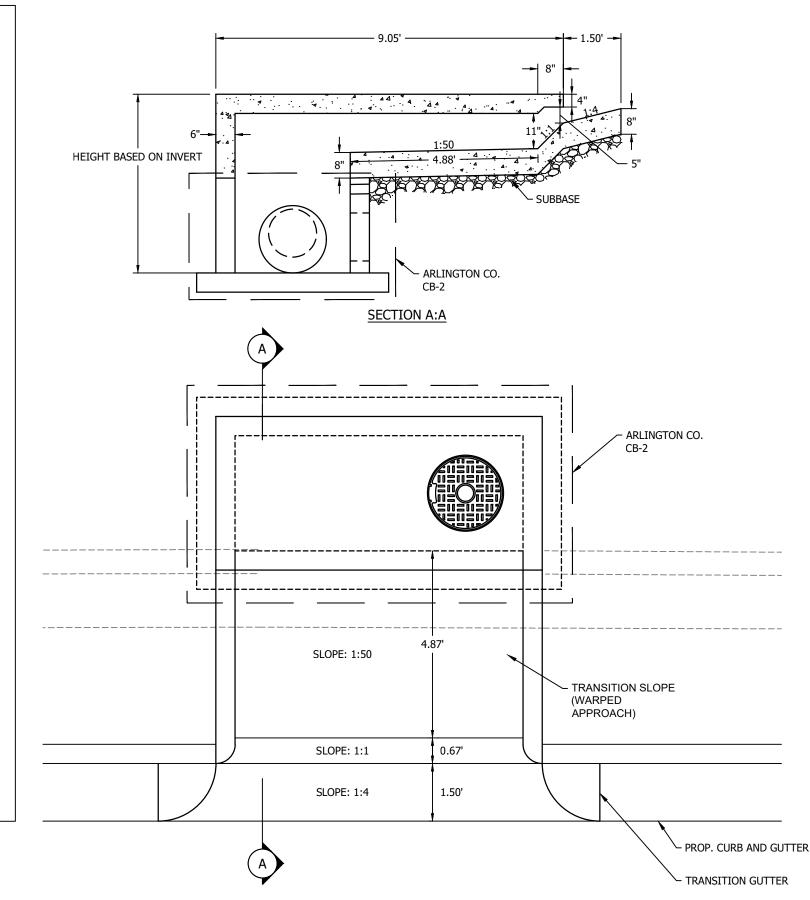
SCALE:

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1. SEE SHEET C073.1 STORM SEWER PROFILES FOR STRUCTURE INVERT INFORMATION.

2. CONTRACTOR TO PROVIDE SHOP DRAWINGS SIGNED AND SEALED BY A VIRGINIA LICENSED STRUCTURAL ENGINEER. 3. SEE ARLINGTON COUNTY STANDARD DRAWING D-1.1 FOR GENERAL NOTES RELATED TO STANDARD CATCH BASINS.

EXTENDED THROAT DETAIL FOR PR. STR 15374

FAX: 703.228.3606 COPYRIGHT © 2021 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED TREVOR M. LANTZY Lic. No. 0402050508 4/23/2021 **APPROVALS** DATE Amy Pflaum QUALITY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR 05.10.202 WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR
4/26/21 PROJECT MANAGER **REVISIONS** 1"= 2.5' 12TH DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021 SCALE: **AS SHOWN** C002.1

ARLINGTON VIRGINIA

DEPARTMENT OF **ENVIRONMENTAL SERVICES**

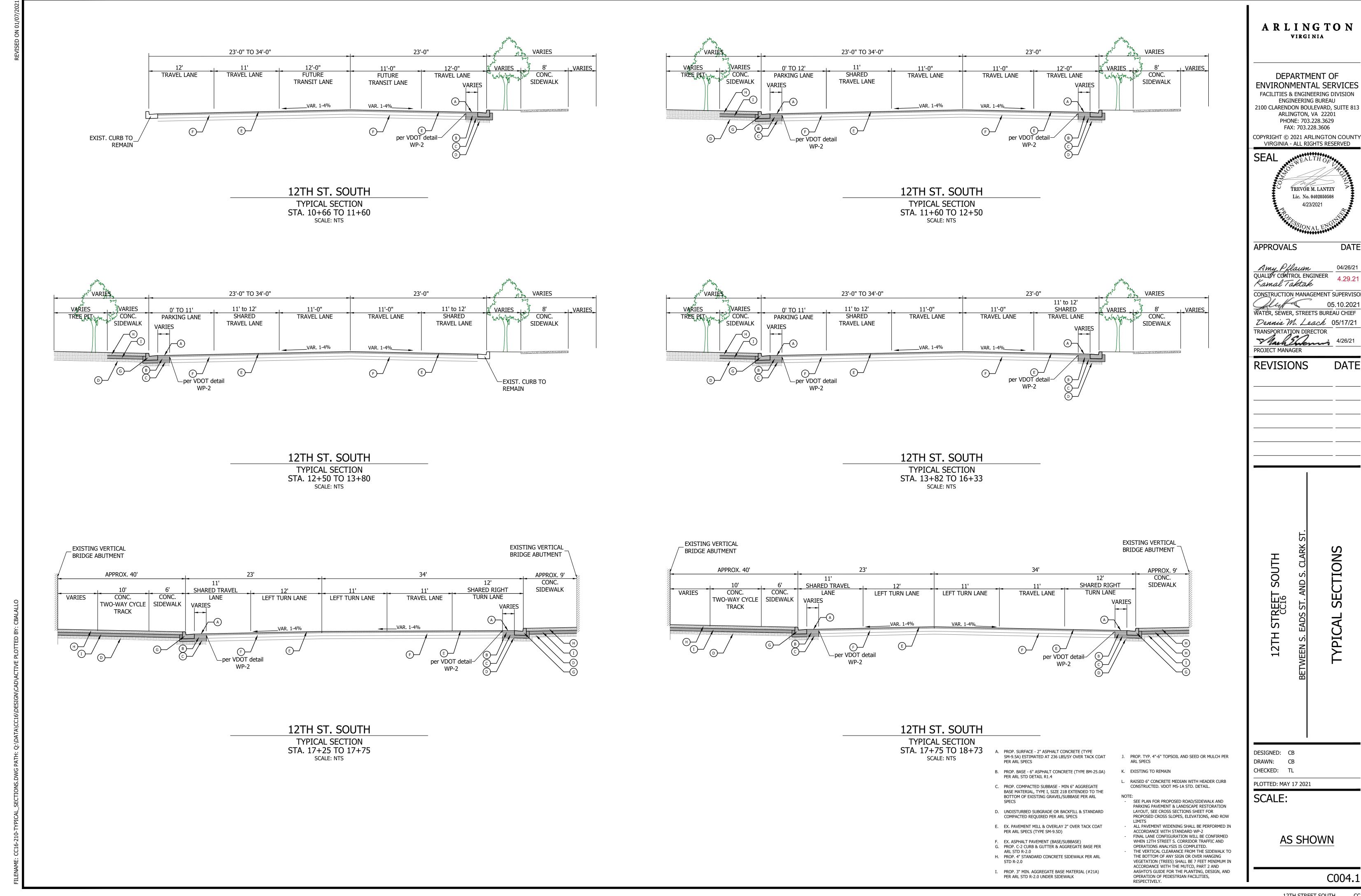
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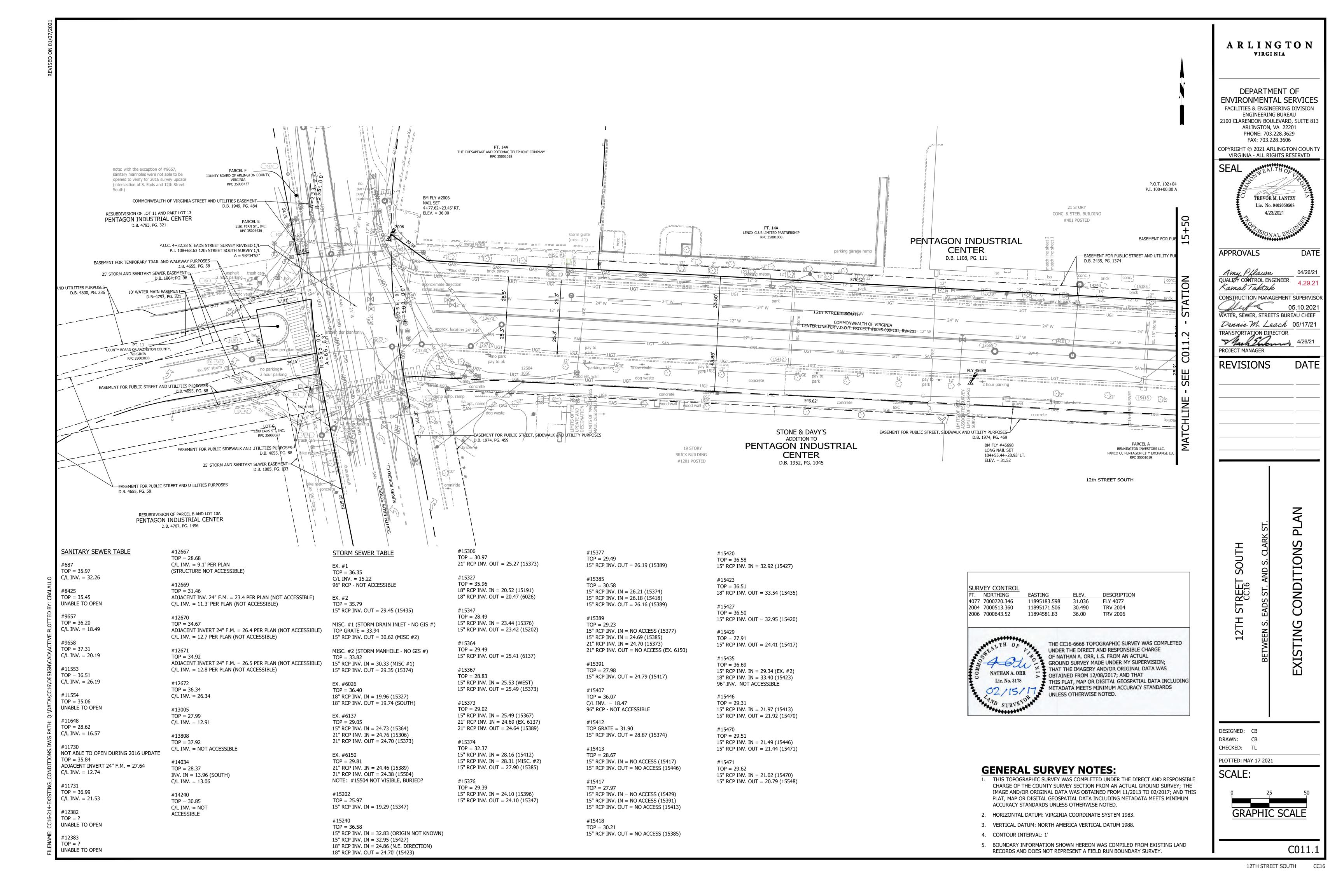
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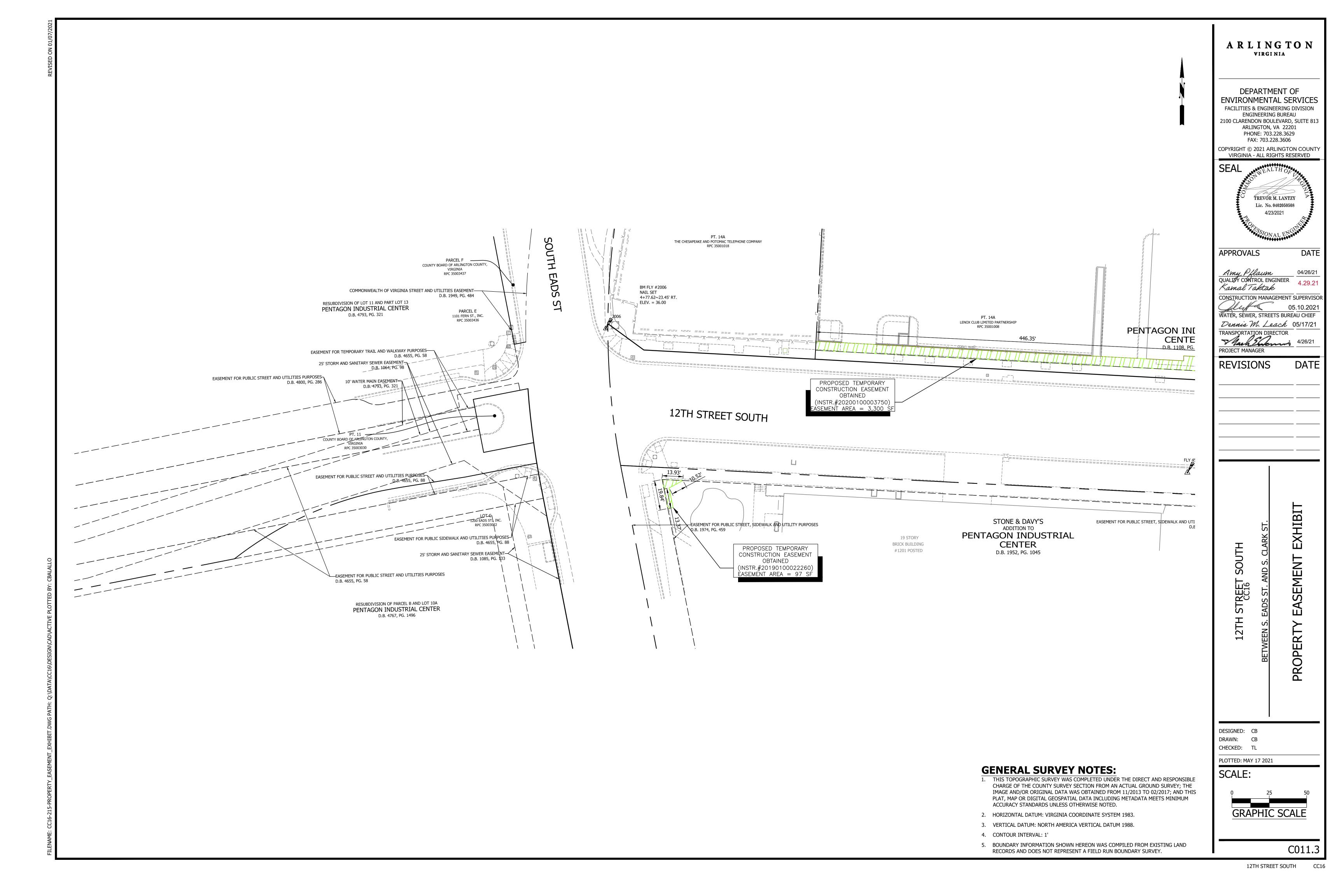
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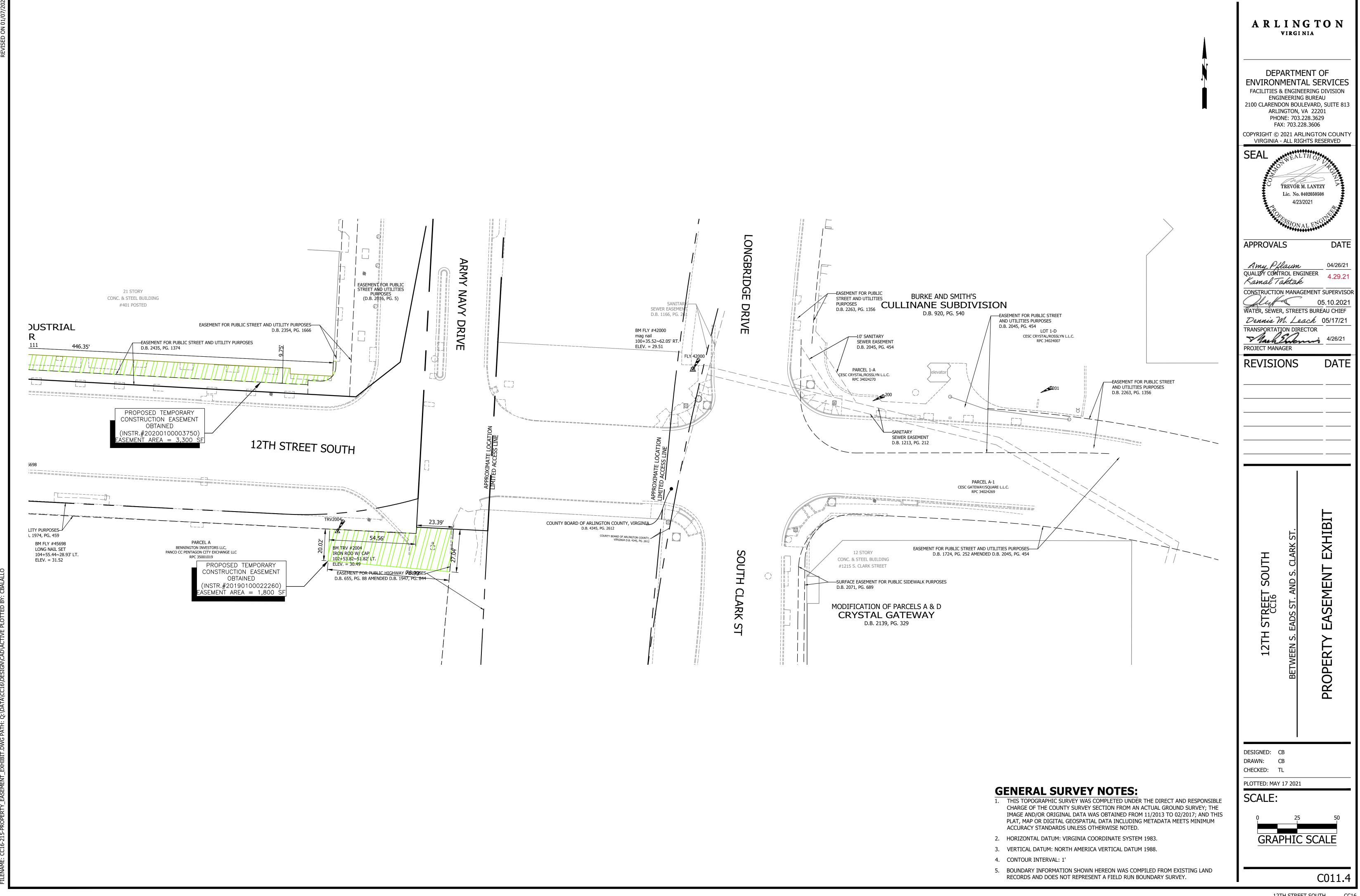
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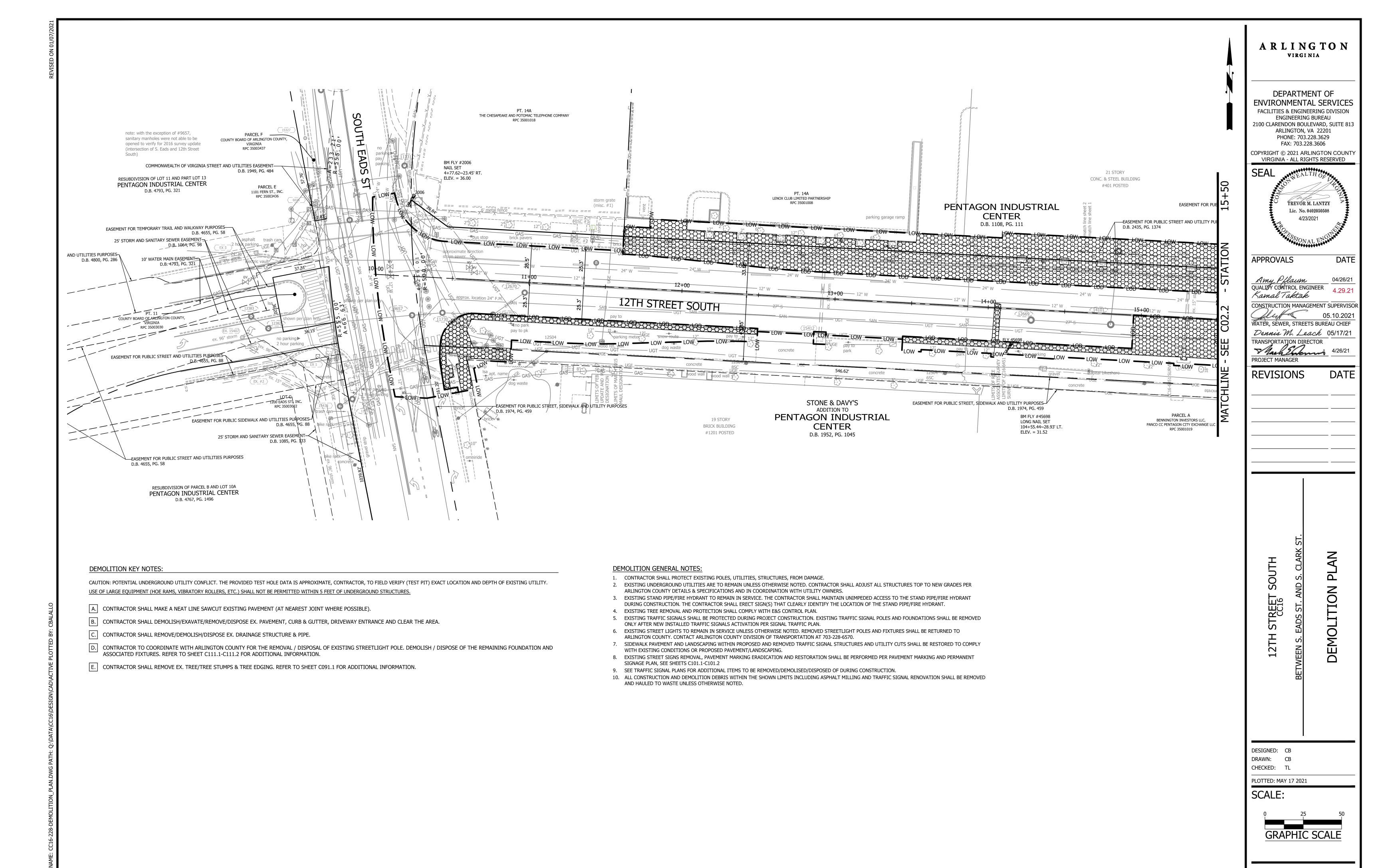
PHONE: 703.228.3629











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 UNDERGROUND STRUCTURES.

- 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 SHALL REMOVE/DEMOLISH/DISPOSE EX. DRAINAGE STRUCTURE & PIPE.
- D. 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.
- E. CONTRACTOR SHALL REMOVE EX. TREE/TREE STUMPS & TREE EDGING. REFER TO SHEET C091.1 FOR ADDITIONAL INFORMATION.

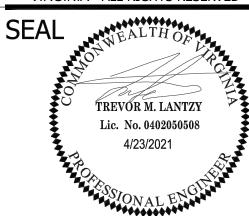
DEMOLITION GENERAL NOTES:

- 1. CONTRACTOR SHALL PROTECT EXISTING POLES, UTILITIES, STRUCTURES, FROM DAMAGE.
- 2. 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.
- 3. 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 ERECT SIGN(S) THAT CLEARLY IDENTIFY THE LOCATION OF THE STAND PIPE/FIRE HYDRANT.
- 4. EXISTING TREE REMOVAL AND PROTECTION SHALL COMPLY WITH E&S CONTROL PLAN.
- 5. 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.
- 6. 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. 7. 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.
- 8. EXISTING STREET SIGNS REMOVAL, PAVEMENT MARKING ERADICATION AND RESTORATION SHALL BE PERFORMED PER PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN, SEE SHEETS C101.1-C101.2
- 9. SEE TRAFFIC SIGNAL PLANS FOR ADDITIONAL ITEMS TO BE REMOVED/DEMOLISED/DISPOSED OF DURING CONSTRUCTION.
- 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.

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

Amy Pflaum QUALIDY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

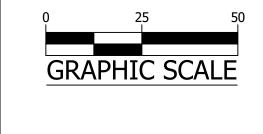
Mach Sherring

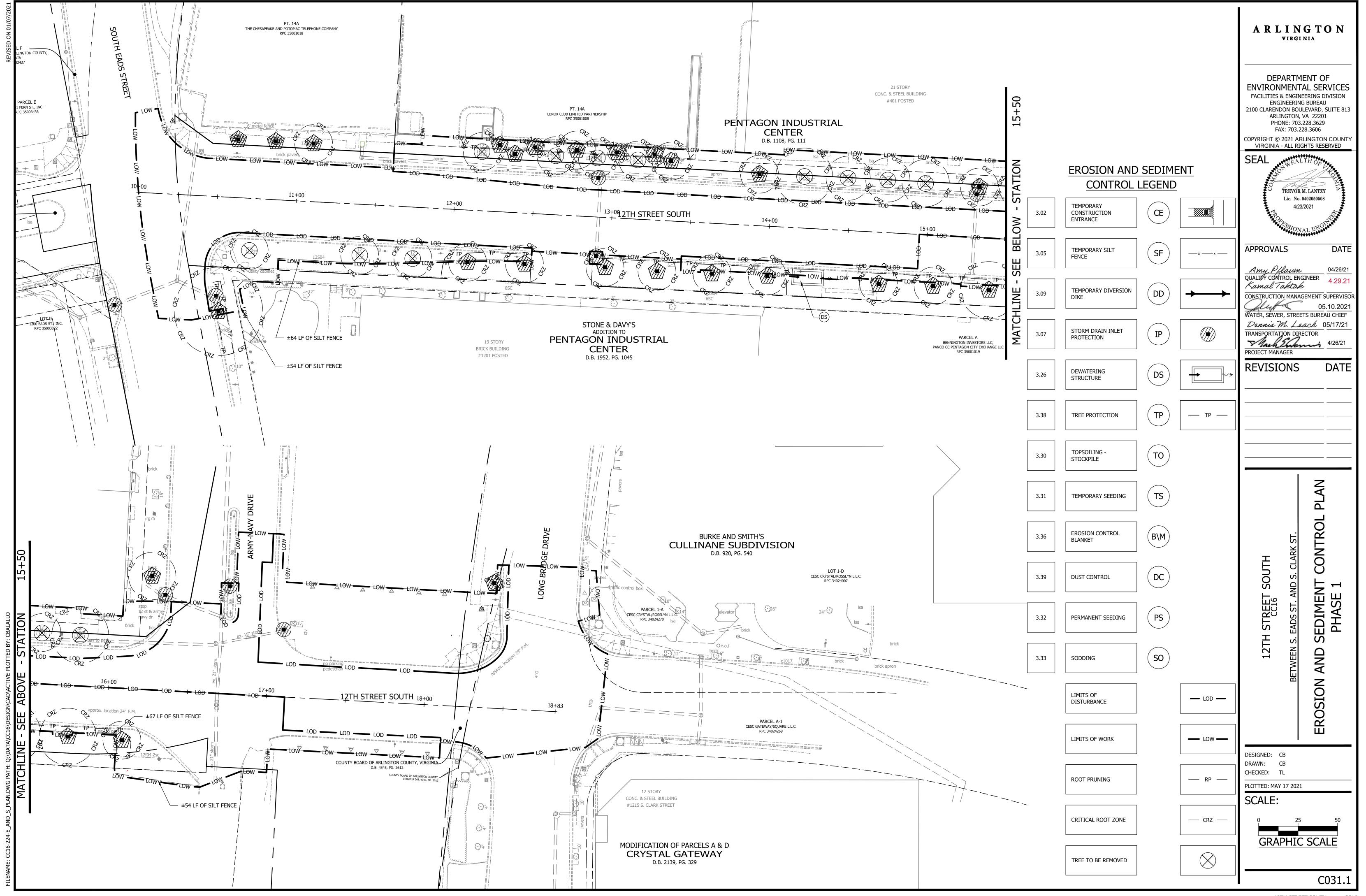
PROJECT MANAGER

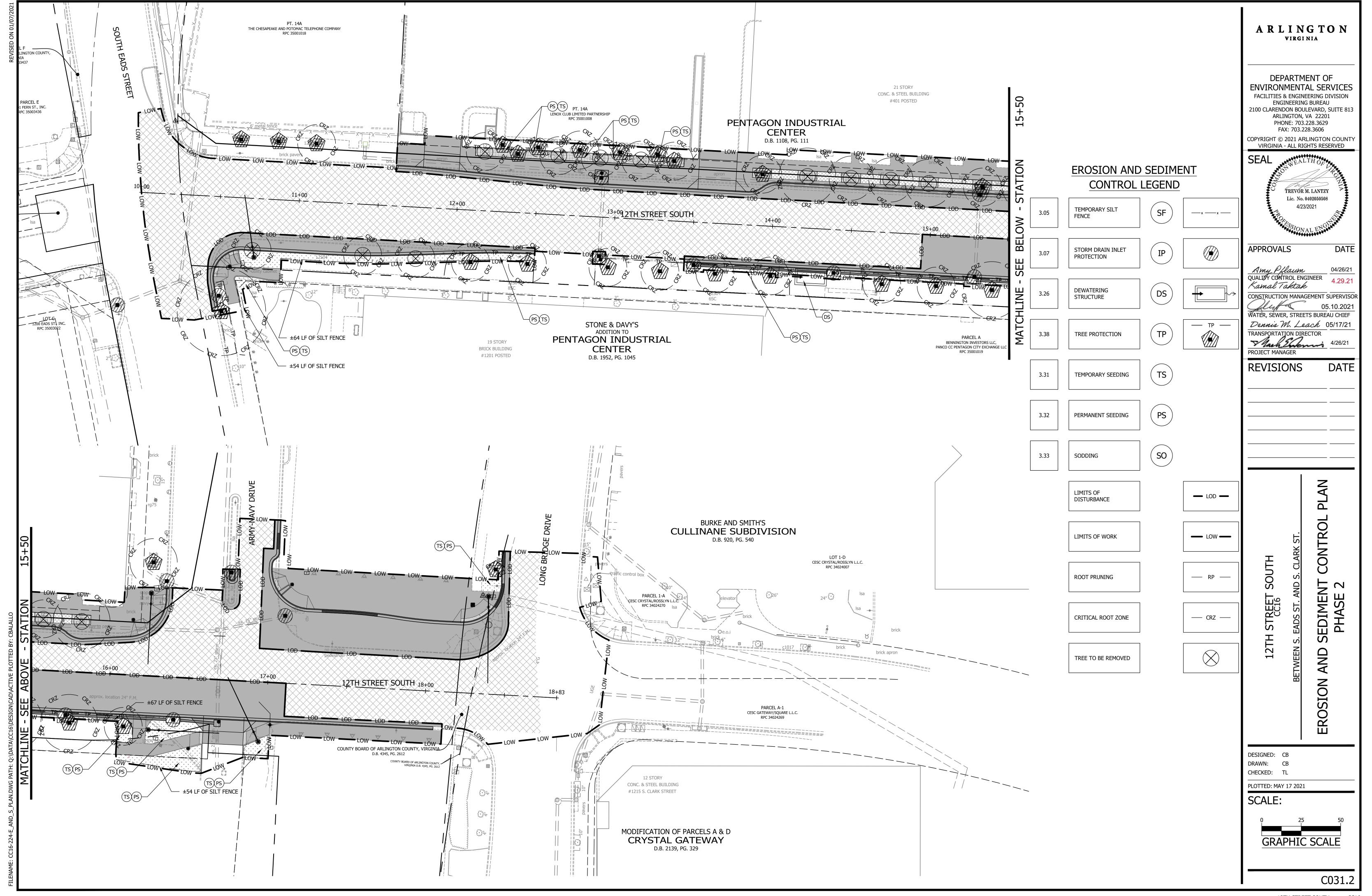
REVISIONS

DESIGNED: CB DRAWN: CB CHECKED: TL

PLOTTED: MAY 17 2021 SCALE:







EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PROJECT SITE IS LOCATED AT 12TH STREET SOUTH BETWEEN S. EADS ST AND LONG BRIDGE DRIVE, ARLINGTON, VA. THE PURPOSE OF THE LAND DISTURBING ACTIVITY IS TO REMOVE AND REPLACE CURB, GUTTER, AND SIDEWALKS; INSTALL ADA COMPLIANT CURB CUT RAMPS; REMOVE AND REPLACE EXISTING STREETLIGHTS AND TRAFFIC SIGNALS; MILL AND PAVE ASPHALT ROADWAY, AND INSTALL PAVEMENT MARKINGS AND SIGNAGES. THE PURPOSE OF THE PROJECT IS TO PROVIDE A DEDICATED TRANSIT LANE.

EXISTING SITE CONDITIONS:

THE PROJECT SITE IS AT 12TH STREET SOUTH BETWEEN S. EADS ST ADN LONG BRIDGE DRIVE. IT IS LOCATED ON A HEAVILY URBANIZED ENVIRONMENT. 12TH STREET SOUTH IS A 2 LANE STREET WITH STREET PARKING ON EACH SIDE OF THE ROAD.

ADJACENT PROPERTIES:

THE PROPERTIES LOCATED TO THE NORTH AND SOUTH ARE PRIVATELY OWNED AND USED MAINLY AS RETAIL BUSINESS, AND HIGH RISE APARTMENT

OFF-SITE AREAS:

INLET PROTECTION IS REQUIRED OUTSIDE TH EPROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

CONTRACTOR MATERIAL STORAGE/LAYDOWN AND PARKING AREAS ARE NOT PROVIDED FOR THIS PROJECT.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES WITHIN THE LIMITS OF DISTURBANCE. 12TH STREET SOUTH BETWEEN ARMY NAVY DRIVE AND LONG BRIDGE DRIVE IS LOCATED UNDERNEATH A VDOT BRIDGE STRUCTURE. THE BRIDGE SHALL NOT BE DISTURBED DURING CONSTRUCTION OF THE PROJECT.

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

STORMWATER RUNOFF CONSIDERATIONS:

NO ADDITIONAL IMPERVIOUS AREA WILL BE ADDED TO THIS PROJECT.

PROJECT TOTAL LIMIT OF WORK (LOW) = 76,757 SQFT (1.7621 ACRES) TOTAL LAND DISTURBANCE..... 37,803 SQFT (0.8678 ACRES)

PRE-IMPROVEMENT IMPERVIOUS AREA..... = 32,152 SOFT (0.7381 ACRES) POST-IMPROVEMENT IMPERVIOUS AREA.... = 31,640 SQFT (0.7264 ACRES) INCREASED IMPERVIOUS AREA..... 512 SQFT (-0.0118 ACRES)

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE

HYDROLOGIC GROUP: ERODABILITY: SOIL#: SOIL NAME: URBAN LAND-UDORTHENTS VARIES N/A

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 EFF. DATE 8/19/2013.

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

- a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
- b. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
- c. INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
- d. PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF), AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.
- e. SEED AND MULCH ALL EARTHEN CONTROLS.
- f. 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.
- g. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

- a. BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
- b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- c. 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
- d. 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

a. SILT FENCE - VESCH 3.05

- a.a. 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.
- a.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY
- REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY
- a.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING. a.d. 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. a.e. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY
- ONE-HALF THE HEIGHT OF THE BARRIER.
- a.f. 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.
- b. STORM DRAIN INLET PROTECTION VESCH 3.07
- b.a. 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.
- b.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
- b.c. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.
- c. DEWATERING STRUCTURE VESCH 3.26
- c.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE. c.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE
- STRUCTURE FROM FUNCTIONING AS DESIGNED.
- c.c. 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.

d. TREE PROTECTION - VESCH 3.38

- d.a. 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:
- d.a.a. 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 LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF

THE TREE HAS BEEN LOOSENED.

- d.a.b. 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 LOOSENED BARK BACK INTO THE UNDAMAGED 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.
- d.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID
- d.b.a. 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
- 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

- a. TOPSOILING (STOCKPILE) VESCH 3.30
- a.a. TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- b. TEMPORARY SEEDING VESCH 3.31
- b.a. ALL DENUDED 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.
- b.b. 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.

c. PERMANENT SEEDING - VESCH 3.32

- c.a. 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. d. SODDING - VESCH 3.33
- d.a. 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:

- 1. NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT. 2. 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.
- 3. 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.
- 4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING. 5. 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.
- 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
- 7. 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.
- 8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

- 1. 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.
- 2. 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.
- 3. 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:
- a. 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.
- b. 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.
- c. CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
- 4. 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.
- 5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEOUATELY 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.
- 6. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- 7. 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

- 1. 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.
- 2. 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.
- 3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- 4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 5. 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.
- 6. 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
- 7. 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.
- 8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- 9. 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.
- 10. 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.
- 11. 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

- a. 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).
- b. WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED
- c. 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.
- d. 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

- a. 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.
- b. 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.
- c. EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE 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.
- d. 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

- a. 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
- a. 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)

1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 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:

- a. 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.
- 2. 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 MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM
- 3. 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:
- 1. NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- 2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3. EFFLUENT FROM DEWATERING 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. 4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- 5. STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- 6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- 9. 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. 10. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED 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:
- 1. 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.
- 2. 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.

OR DOWNSTREAM WATER WAYS. 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. 4. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH

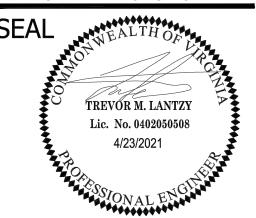
3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES

THE APPROVAL OF THE COUNTY INSPECTOR. 5. 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.

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 Amy Pflaum 04/26/21 OUALIDY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISO

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/2 TRANSPORTATION DIRECTOR Mach Enemis PROJECT MANAGER

REVISIONS

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DESIGNED: CB DRAWN: CB

PLOTTED: MAY 17 2021

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THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE

THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT

PLATE 3.07-1

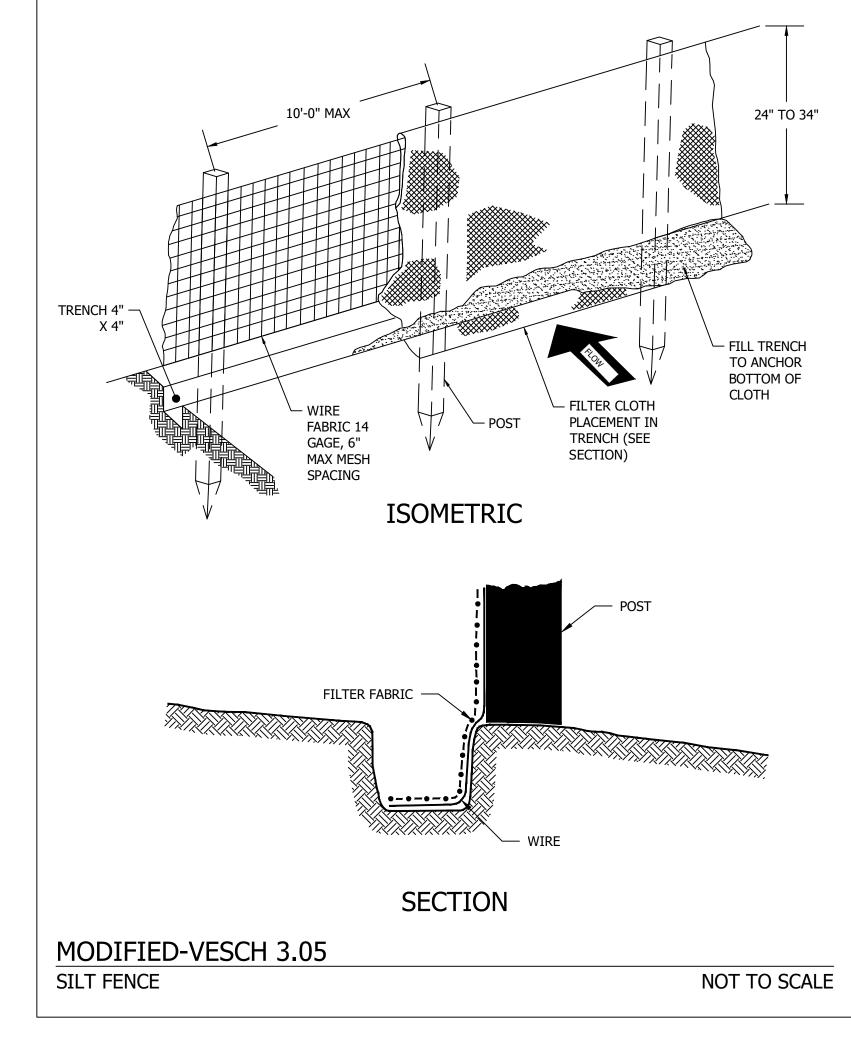
INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER

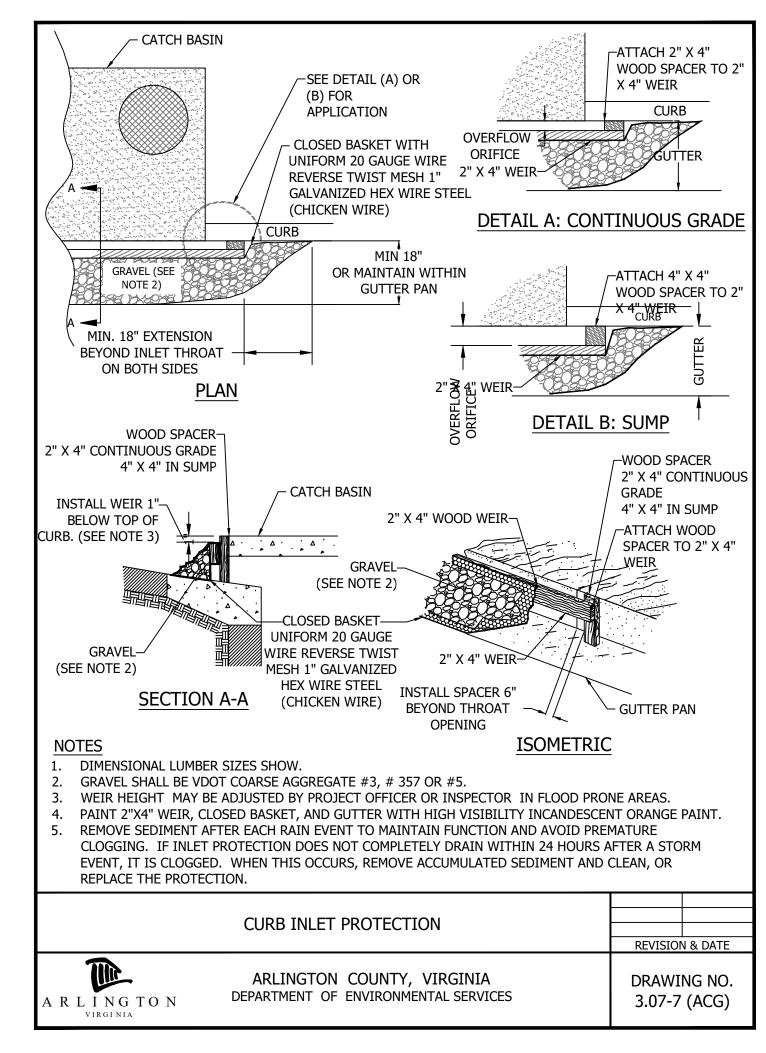
EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT

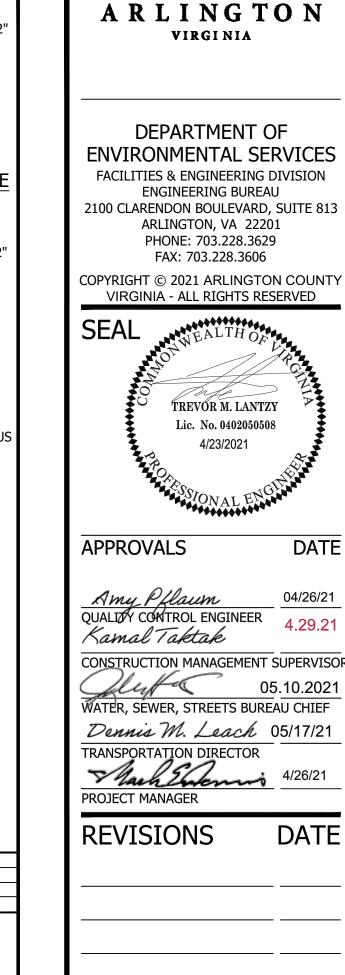
IN STREET OR HIGHWAY MEDIANS.

SOURCE: N.C. Erosion and Sediment Control Planning and Design Manual, 1988

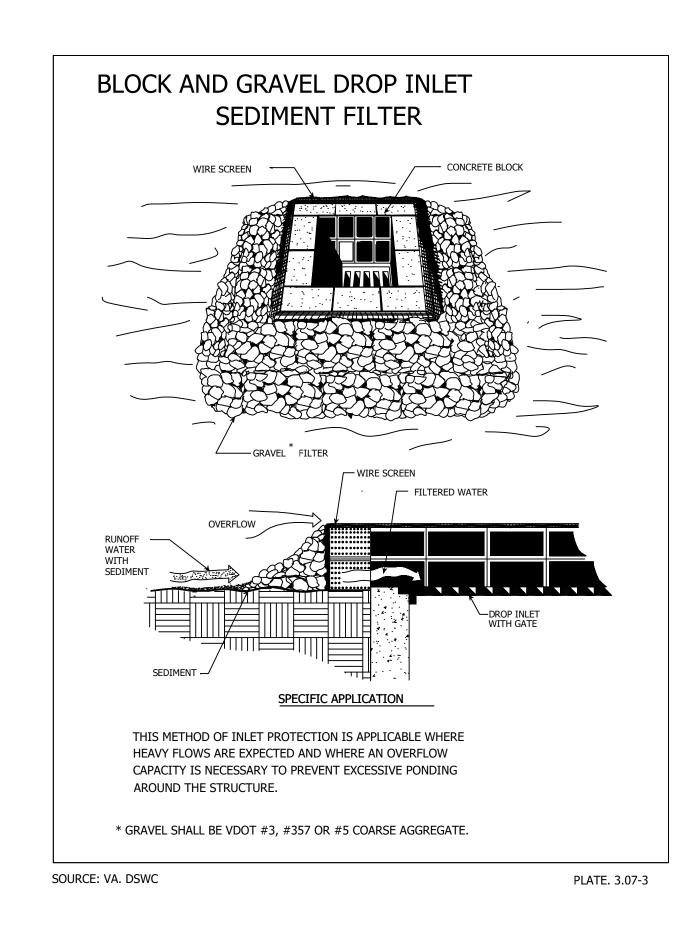
APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS

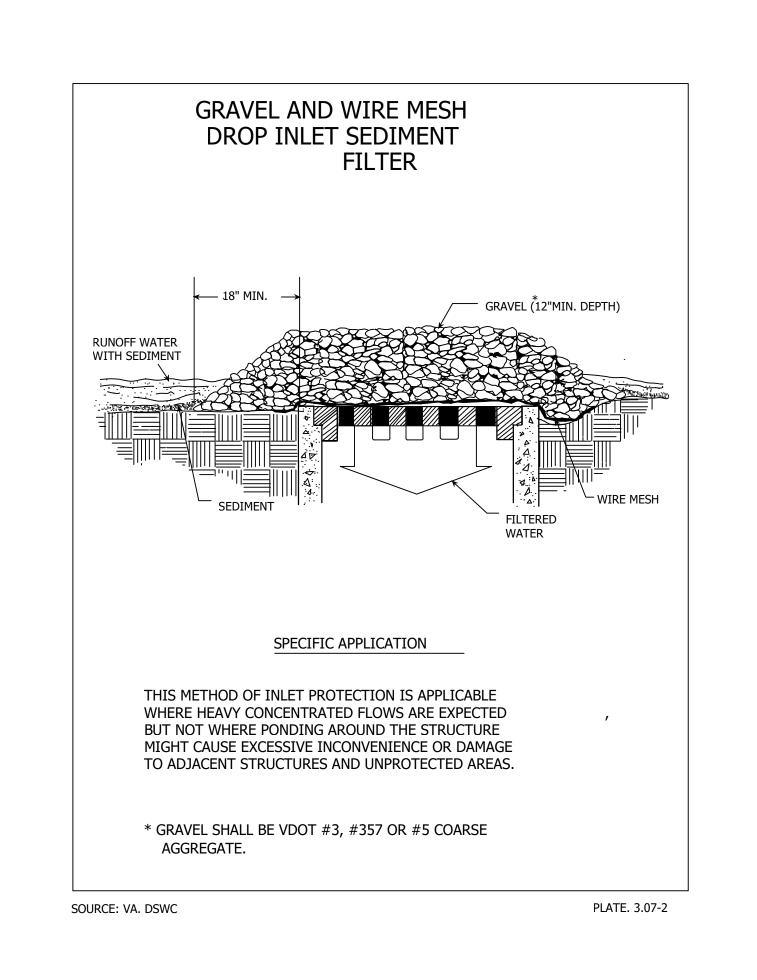


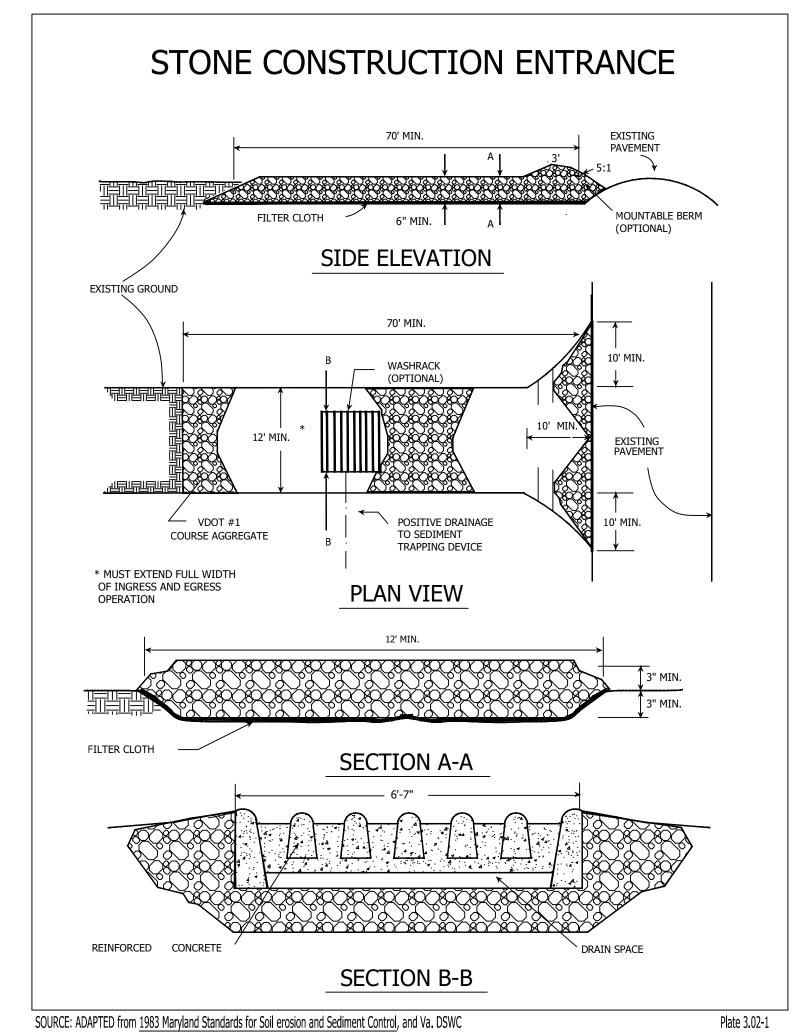


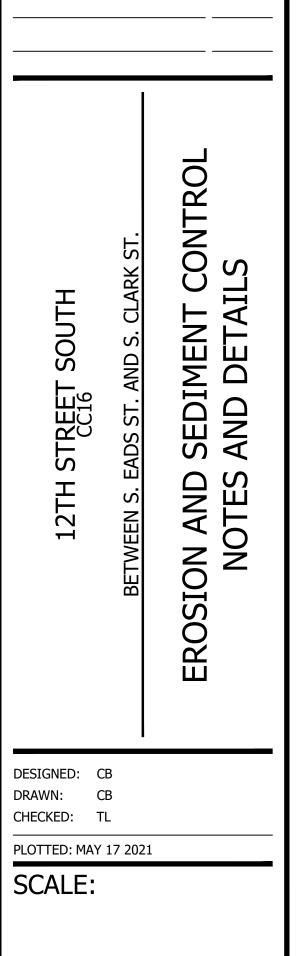


DATE



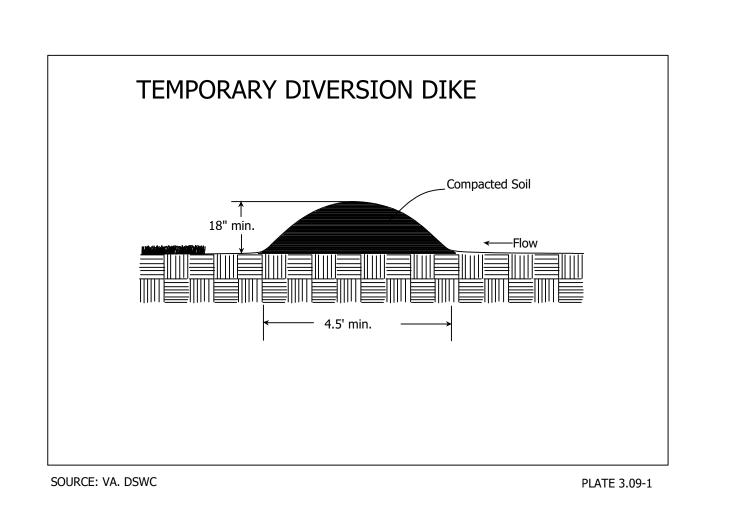


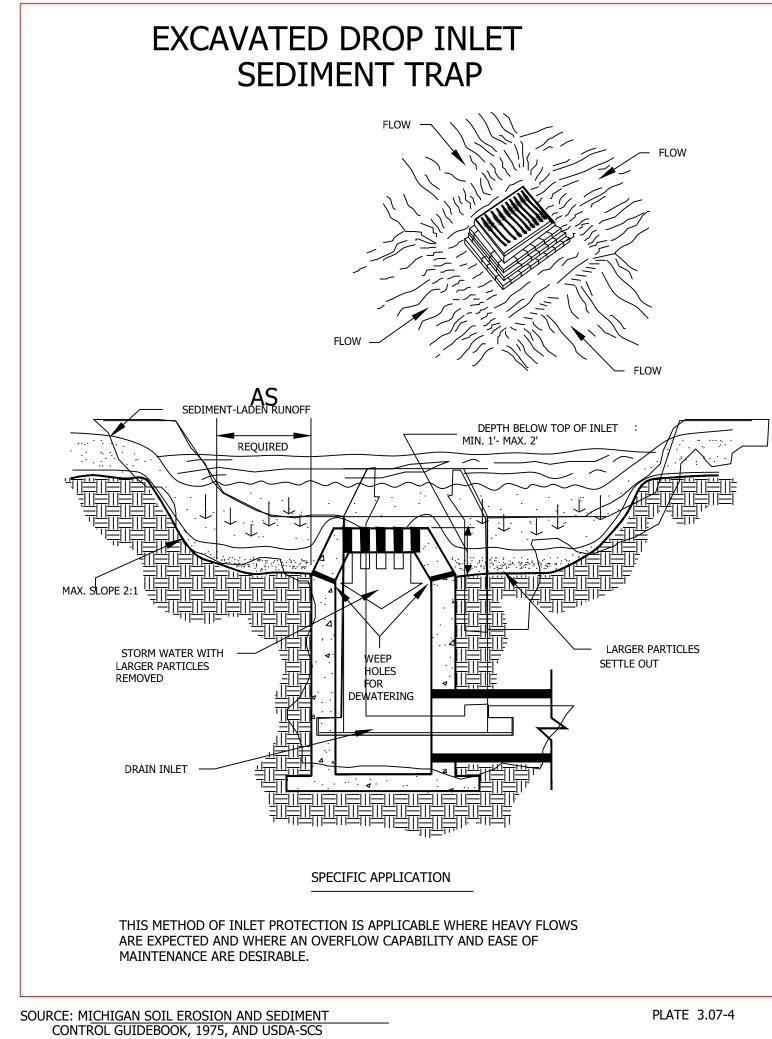




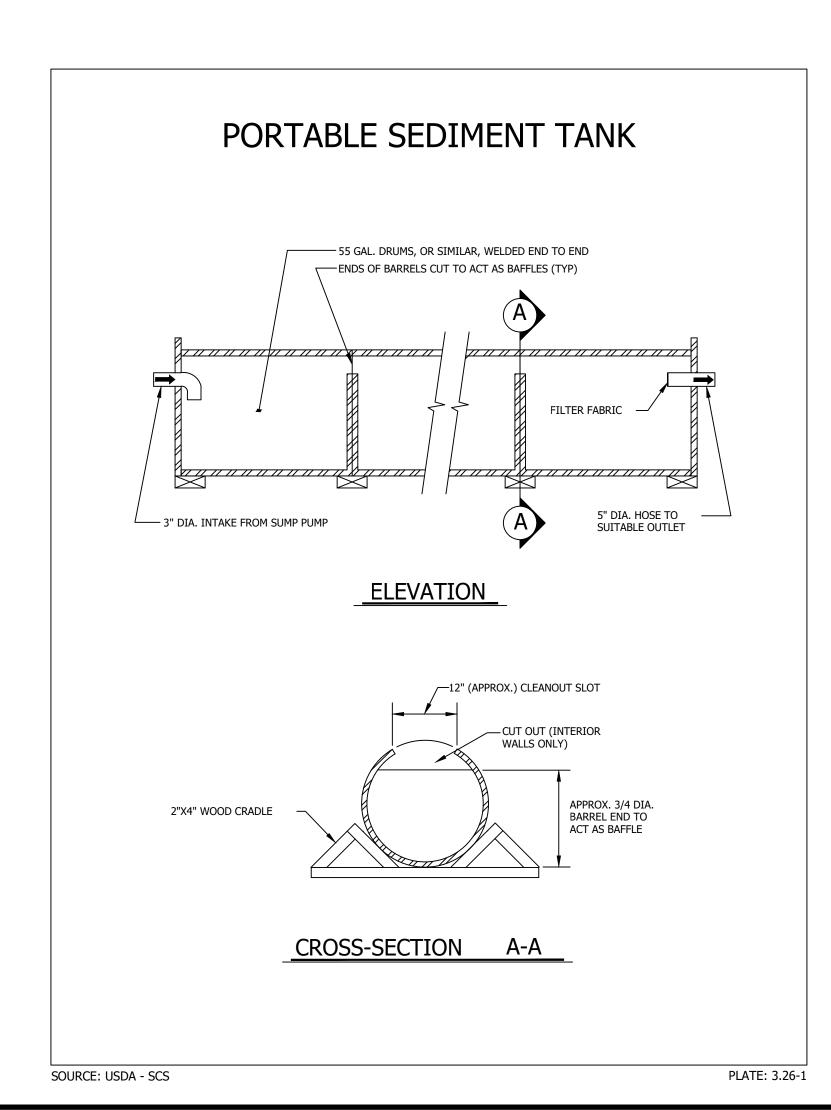
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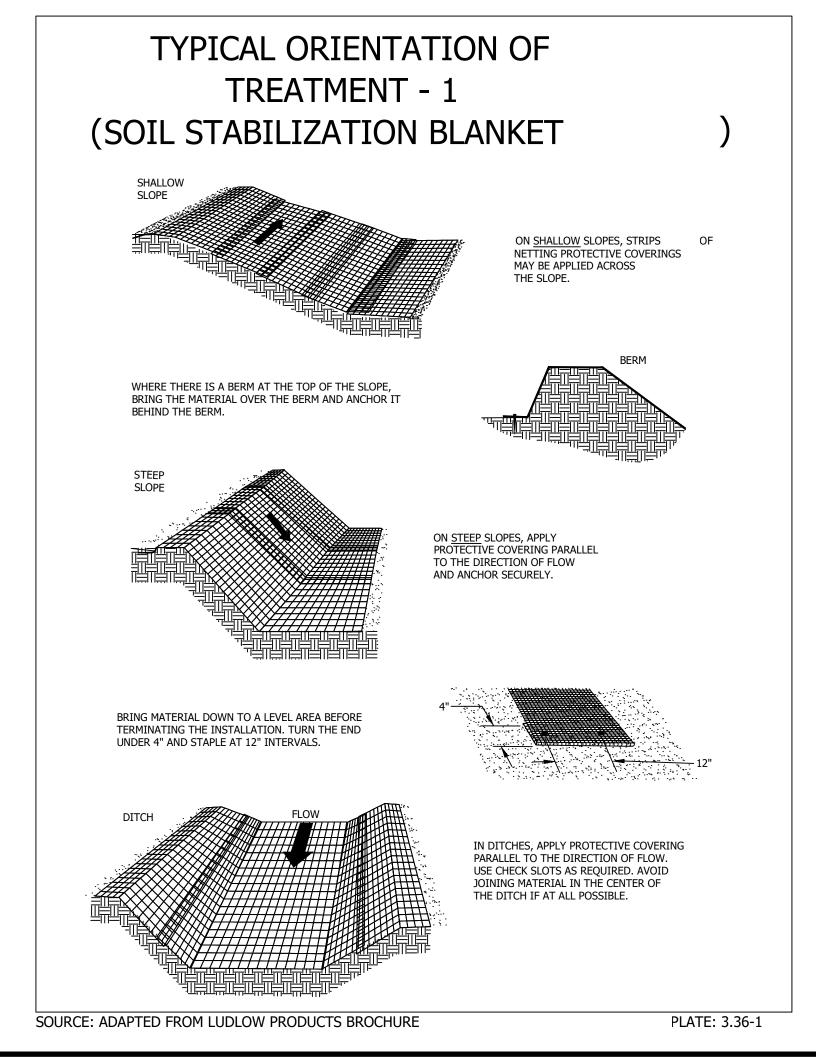
AS SHOWN

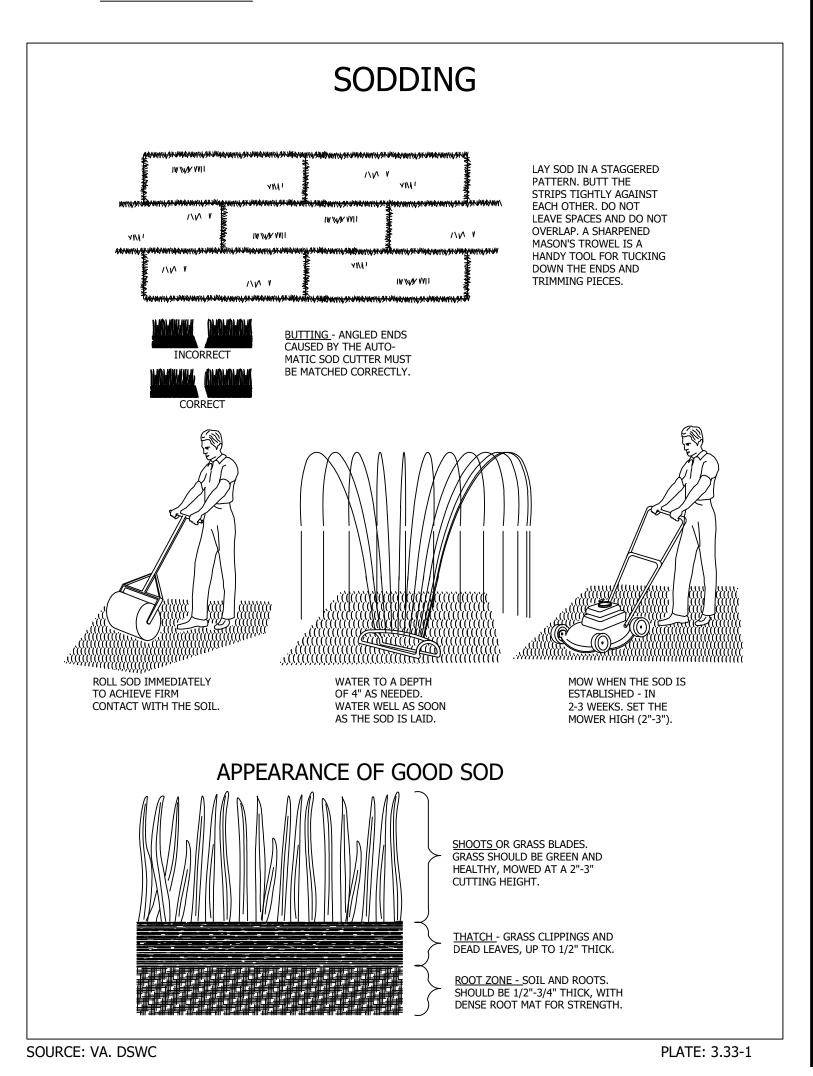












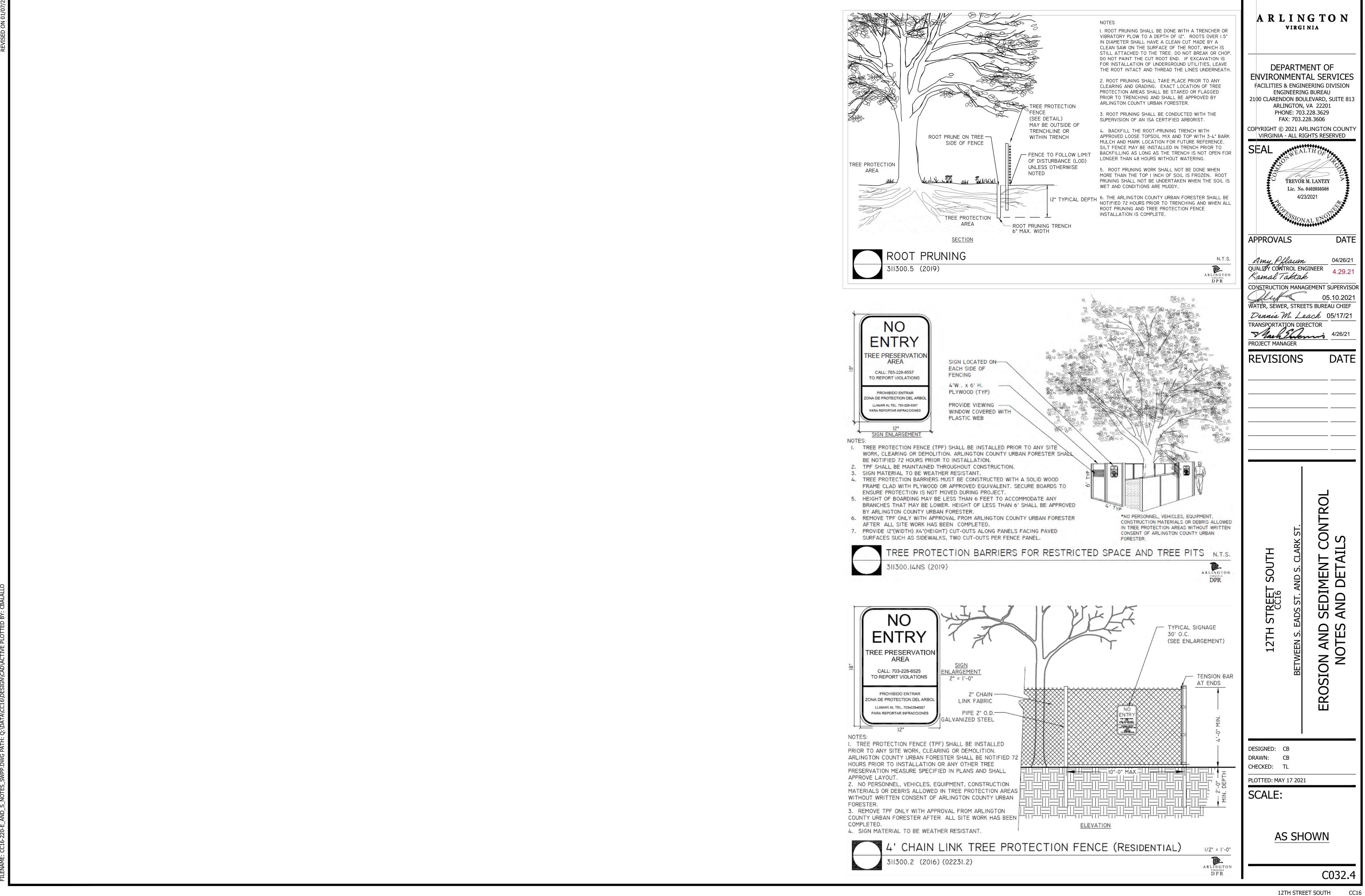
ARLINGTON VIRGINIA DEPARTMENT OF **ENVIRONMENTAL SERVICES FACILITIES & ENGINEERING DIVISION** ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 COPYRIGHT © 2021 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED TREVOR M. LANTZY Lic. No. 0402050508 **APPROVALS** DATE Amy Pflaum QUALIDY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

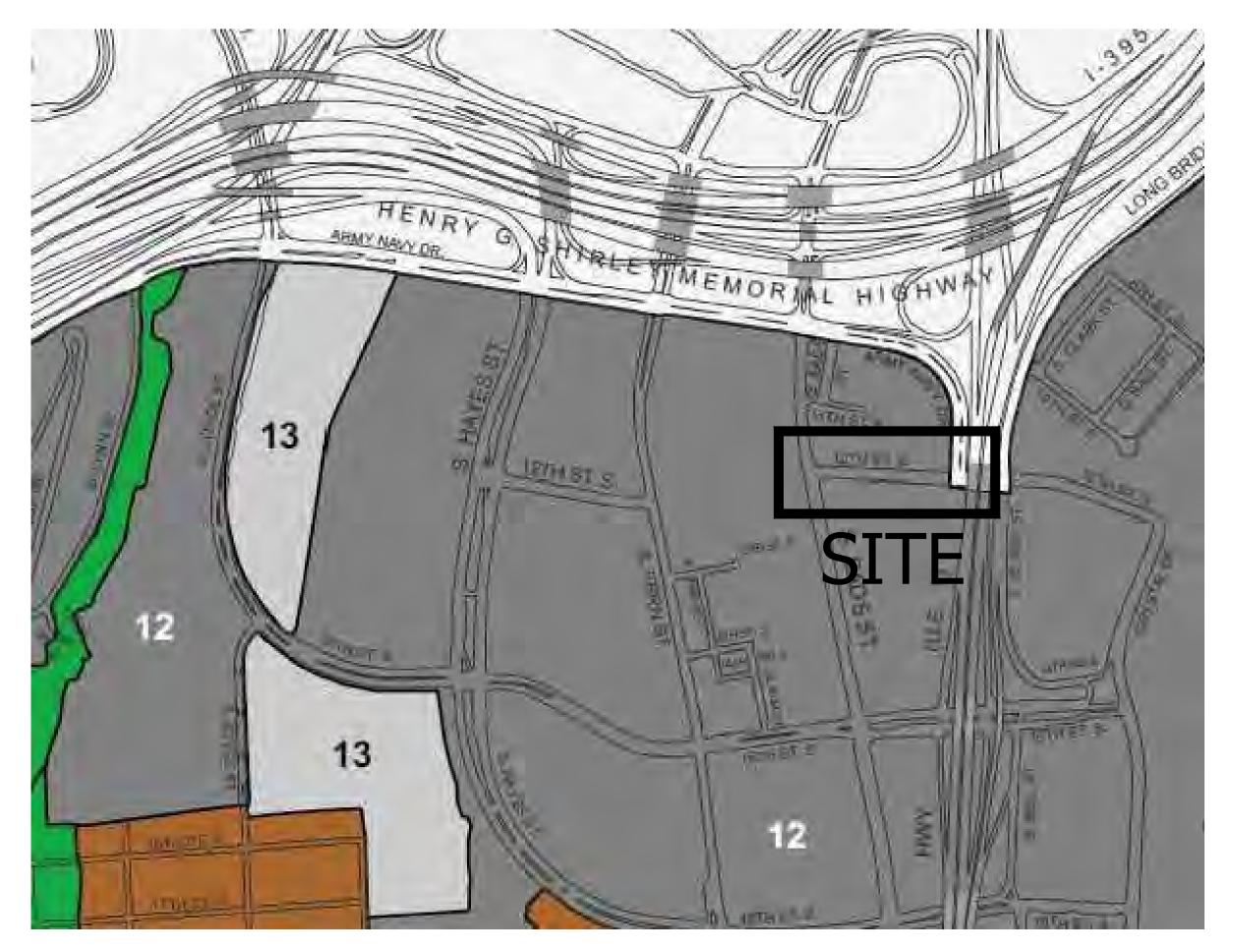
PROJECT MANAGER **REVISIONS** SEDIMENT CONTRO AND DETAILS STREET CC16 EROSION AND S 2ТН DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021

C032.3

AS SHOWN

SCALE:





13 Udonhents, Joamy

These soils are in areas that have been reworked by machinery and consist of mostly loamy materials placed over various drainage classes on terraces and floodplains occurring along perennial streams in the Piedmont and Coastal Plain. Slope varies but is generally less than 10 percent.

The source of fill material in this unit is variable, consisting of sandy, gravelly, clayey, silty, and micaceous soil material. These reworked areas were created to provide sites for buildings, roads, recreational facilities and flood control. The thickness of the fill is quite variable, but is generally more than 2 feet.

Included with these soils in mapping are soils that are often shaped to some extent but otherwise resemble undisturbed soils surrounding the unit. Also included are some filled areas that have non-soil materials such as concrete rubble in addition to the soil material.

Permeability and available water capacity are quite variable. Internal dramage is highly variable and the probability of ponding and excessive runoff is possible after heavy rainfall.

Most areas have been stabilized and are used for building sites, roads, and recreational development. Some areas are completely covered with buildings and other impervious surfaces. Remaining open areas are generally used for ornamental planting and recreational fields

12

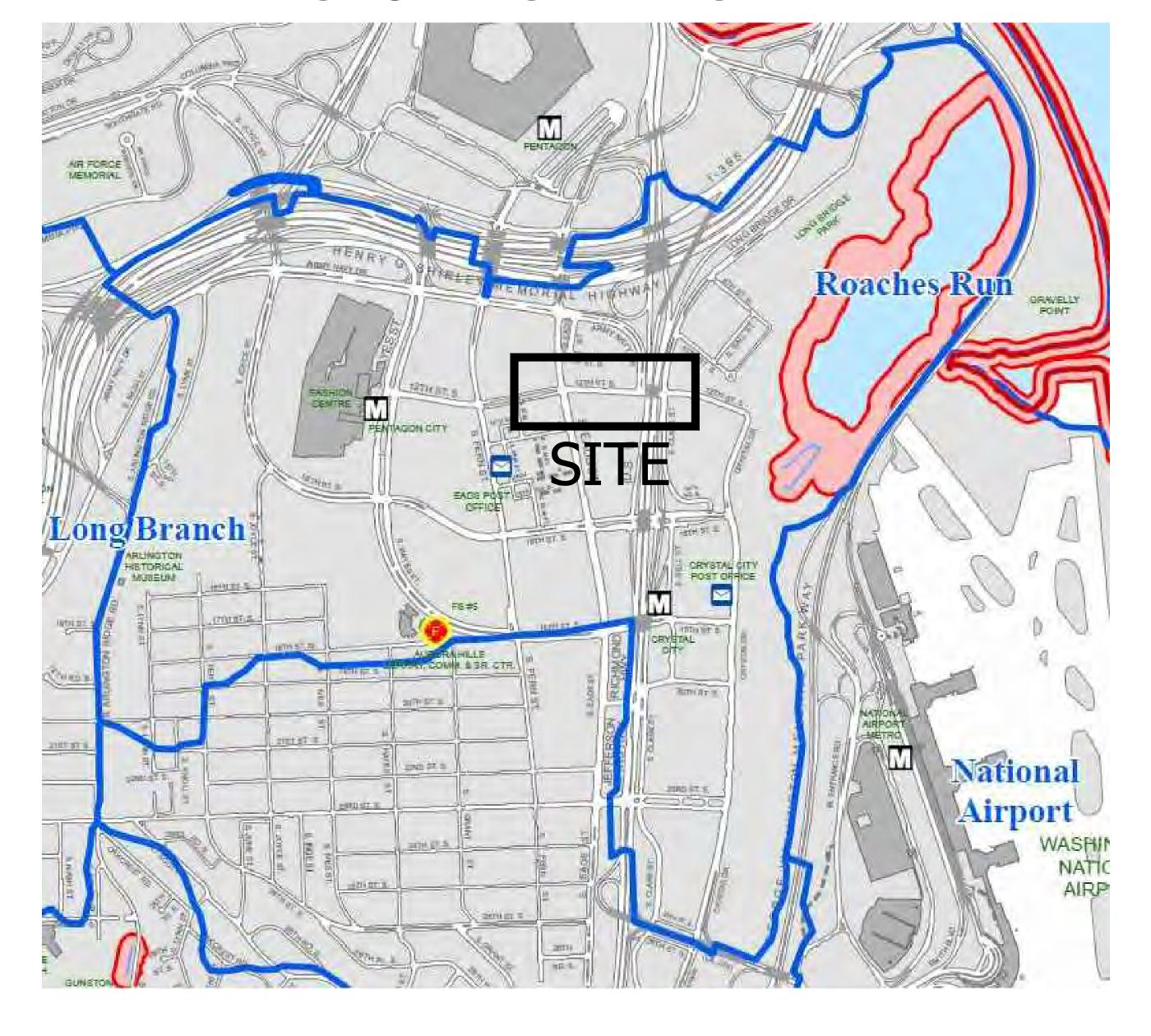
Urban land-Udorthents complex, 2 to 15 percent slopes. This mapping unit consists of areas where more than 85 percent of the surface is Urban land, covered by buildings, asphalt, concrete, or other impervious materials. The other 15 percent consists of areas of deep to very deep, nearly level to moderately sloping, well and moderately well drained soils. The Urban land and Udorthents are so intermingled it was not practical to map them separately. This complex occurs throughout the survey area but is largely located in the Rosslyn-Ballston and Crystal City areas. This unit is about 85 percent Urban land, 10 percent Udorthents, and 5 percent other soils.

The Udorthents consist of material that has been graded, out; filled, or otherwise disturbed during urbanization. The disturbed material is loamy and generally reflects the soils in the adjacent area.

Included in this mapping unit are small areas of soils that have not been disturbed. Also included are mode rately steep and steep slopes.

It is not pratical to examine nor attempt to identify the soil or soil-like material of this unit.

ROACHES RUN STORM SEWERSHED



ARLINGTON
VIRGINIA

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

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FAX: 703.228.3606

SEAL
TREVOR M. LANTZY
Lic. No. 0402050508
4/23/2021

APPROVALS

Amy Pflaum
QUALIDY CONTROL ENGINEER
Kamal Taktak

04/26/21
4.29.21

WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 05/17/2

PROJECT MANAGER

4/26/2

REVISIONS D

ARK ST.
SURVEY

12TH STREET SOUTH
CC16
WEEN S. EADS ST. AND S. CLARK ST.

SOIL

AND

SEWERSHED

GNED: CB

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

N/A

C032.5

Yes
Yes
Yes
Yes

Estimated

Removal

Date

NA

NA

NA

NA

NA

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

Installation

Date

by 3.31

Located Onsite & Available for Review?

☐ NA

□ NA □ NA

No No

Responsible

Party

Construction Activity

Operator (See Cover

Page of this SWPPP)

Likely Present at Your Project Site?

1.0 SWPPP Documents Located Onsite & Available for Review

Erosion & Sediment Control Plan (or agreement in lieu of)

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge

Uncontaminated foundation or footing drains

Uncontaminated excavation dewatering

3.0 Pollution Prevention Awareness

4.0 Erosion & Sediment Controls

Erosion & Sediment Control

Construction Entrance

(Std. & Spec. 3.02)

(Std. & Spec. 3.05)

Culvert Inlet Protection (Std. & Spec. 3.08)

Outlet Protection

(Std. & Spec. 3.18)

Temporary Seeding

(Std. & Spec. 3.31)

Permanent Seeding

(Std. & Spec. 3.32)

(Std. & Spec. 3.33)

(Std. & Spec. 3.35) Safety Fence (Std. & Spec 3.01) Storm Drain Inlet Protection (Std. & Spec 3.08)

Silt Fence

SWPPP Document Type

Notice of Coverage Letter

Pollution Prevention Plan

Construction General Permit

Stormwater Management Plan

External buildings wash down

Landscape irrigation

Others [describe]

that apply

 \times

Registration Statement

(Std. & Spec 3.26

Turbidity Curtain

Tree Protection

(Arlington County Std. & Spec.)

Others [describe]

(Std. & Spec 3.27)

ARLINGTON, VA 22201

CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

PROJECT MANAGER **REVISIONS**

0

ON TREET CC16 Ċί

POLLUTI(PLAN TER ORMW,

DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021

SCALE:

7

C035.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COVER PAGE

For Construction Activities At:

CC16 12th Street South 12th Street South between S. Eads St. and S. Clark St. Arlington, VA 22202

Latitude: 38.86224 N (decimal degrees)

Longitude: -77.051966 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:

November 17, 2020

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:

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN

5.0 Potential Sources of Pollution & Pollution Prevention Practices

			1	Polluta	ants							
Pollutant-Generating Activity	Likely Present at your Project Site?	Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party
Clearing, grading, excavating, and un-stabilized areas	X Yes ☐ No	х							х		(1)	
Paving operations	☑ Yes ☐ No	х					х		х		(2)	
Concrete washout and cement waste	X Yes ☐ No			х	X				Х		(3)	
Structure construction, stucco, painting, and cleaning	☐ Yes 🏻 No			х	х				х	х	(4)	
Dewatering operations	¥Yes ☐ No	Х	X						х		(5)	
Material delivery and storage	X Yes ☐ No	х	х	х	×		X	Ī,	х	x	(6)	Construction Activity Operator (See Cover
Material use during building process	☐ Yes 🏻 No		х	х	Х		Х		Х	х	(7)	Page of this SWPPP)
Solid waste disposal	X Yes ☐ No		-						х	х	(8)	
Sanitary waste	☐ Yes 🏻 No		х		х			Х			(9)	
Landscaping operations	⊠ Yes □ No	х	х			х			х	х	(10)	
Others [describe]	☐ Yes ☐ No	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	(11)	

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN

Pollution Prevention Practices:

Arlington County - SWPPP 9/2016

- (1) 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/oil dry for all paving machines to limit leaks and spills of paving materials and
- (3) 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
- 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
- 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 (7) 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 overfilling. 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.
- (10) 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.
- (11) 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
Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale		NÁ	Common Plan Construction Activity Operator
	Rooftop Disconnection	Insert Date	
	Sheet flow to Vegetated Filter (1 or 2)	Insert Date	Constanting
	Grass Channel	Insert Date	 Construction Activity Operator (See Cover Page
П	Rainwater Harvesting	Insert Date	of this SWPPP)
Ð	Permeable Pavement (1 or 2)	Insert Date	

Arlington County - SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
	Infiltration (1 or 2)	Insert Date	
	Bioretention (1 or 2)	Insert Date	Construction Activity Operator (See Cover Page
	Others [describe]	Insert Date	of this SWPPP)
	Exempted	NA	NA

7.0 Spill Prevention & Response

Arlington County - SWPPP 9/2016

Most spills can be cleaned up following manufacturer specifications. Absorbent/oil 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

Protect the environment

Stop spill from spreading (use absorbent or other material)

- 1. 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 2. 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).
- If spilled material has entered a storm sewer; contact locality's storm water department. 8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.

9. Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:
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

Date Corrective

Action Taken

Corrective Action Needed;

Responsible Party & Notes

DEPARTMENT OF
ENVIRONMENTAL SERVICE
FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 8 ARLINGTON, VA 22201
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SEAL

TREVOR M. LANTZY

Lic. No. 0402050508

4/23/2021

APPROVALS

Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER
Kamal Taktak

CONSTRUCTION MANAGEMENT SUPERVISOR

DATE

TRANSPORTATION DIRECTOR

Mach Solvenia | 4/26/21 |
PROJECT MANAGER

REVISIONS DATE

WATER, SEWER, STREETS BUREAU CHIEF

NOITN

TH STREET SOUTH
S. EADS ST. AND S. CLARK ST.
POLLUTION PREVEN

12TH 9
BETWEEN S. EA
STORMWATER P(

DESIGNED: CB
DRAWN: CB
CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

N/A

C035.2

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

Qualified Inspector

Company/Organization:

Name:
Telephone Number:
Qualifications:

Inspection Schedule

November 17, 2020

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

3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and

4. Regularily inspecting the site during construction to ensure that all E&S controls are functioning and are

5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.

6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain

highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection

adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and

undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant

___ with questions about this plan or my execution of the duties of

Reviewing the erosion and sedimentation (E&S) plan for the project.

7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.

Walking the site prior to construction to identify critical areas.

provide a copy of the inspection findings to the county.

Qianqian Li, P.E.

street address

permit number

Dear Mrs. Li:

ESC Program Administrator

Arlington, Virginia 22201

CC16 - 12TH ST. SOUTH

lot, block, section subdivision

that these responsibilities include:

for more than one year.

telephone number

professional registration (type and number)

Responsible Land Disturber.

Trevor Lantzy, P.E. name printed

P.E.# 0402050508

Department of Environmental Sevices

2100 Clarendon Boulevard, Suite 813

between S Eads St and Long Bridge Dr

Re: Erosion and Sediment Control Permit Application for:

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 peing tracked onto the adjacent streets?	☐ Yes☐ No☐ NA		
Are perimeter controls and sediment barriers adequately installed and maintained?	☐ Yes☐ No☐ NA		
Are storm drain inlets properly protected? (on-site and adjacent)	Yes No		
Are discharge points and eceiving waters free of any sediment deposits?	☐ Yes ☐ No ☐ NA		

Arlington County – SWPPP 9/2016

INSTRUCTIONS for COMPLETING the SINGLE FAMILY RESIDENCE, COMMON PLAN of DEVELOPMENT of STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Arlington County - SWPPP 9/2016

including the possibility of fine and imprisonment for knowing violations."

Operator or Assigned Qualified Personnel Name: ___

Best Management

Practices (BMPs)

Are all slopes and disturbed

worked properly stabilized?

Are washout facilities (e.g.,

Is trash/litter from work areas

discharges (e.g., wash water,

Are natural resources (e.g.,

streams, wetlands, mature

trees) area protected with

barriers or similar BMPs?

Are vehicle and equipment

maintenance areas free of

contaminants stored inside or

fueling, cleaning and

spills, leaks, or other deleterious material?

Are materials that are

potential stormwater

Are disturbed areas

stabilized within 7 days, if

areas denuded will remain undisturbed for 14 days?

under cover?

Certification

collected and contained in

concrete, paint, stucco) available, clearly marked and

maintained?

dumpsters?

controlled?

Are non-stormwater

dewatering) properly

areas not actively being

Compliance

SWPPP?

□ NA

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

"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,

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/site 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 the certification in INK. Please note that state statues require the SWPPP to be signed as follows:

(1) For a corporation: by a responsible corporate effect:

(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

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.

<u>Section 5.0</u> 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 pollutant(s), 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.

<u>Section 10.0</u> 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.

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC16 12th 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)

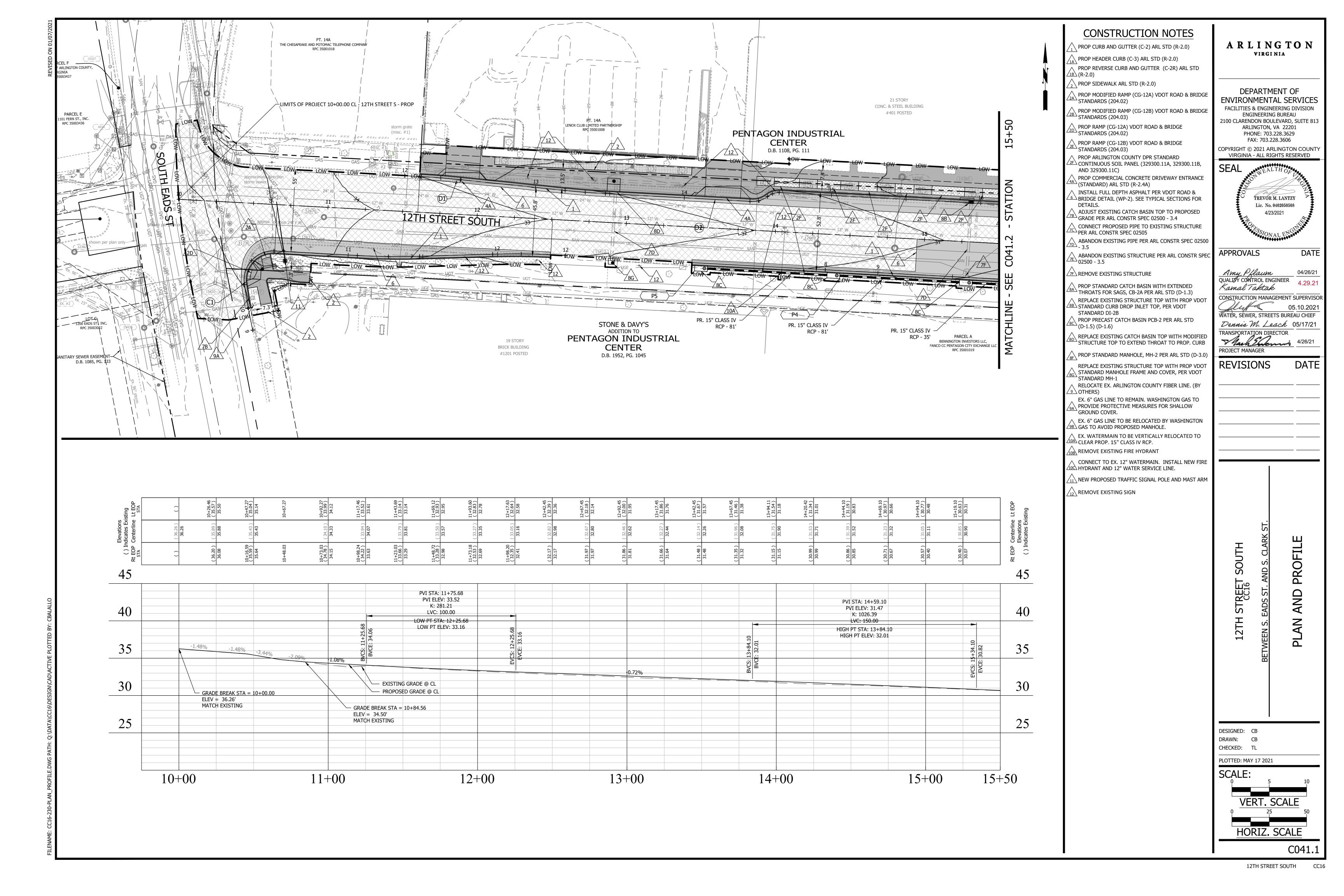
10.0 SWPPP Modification & Update Log

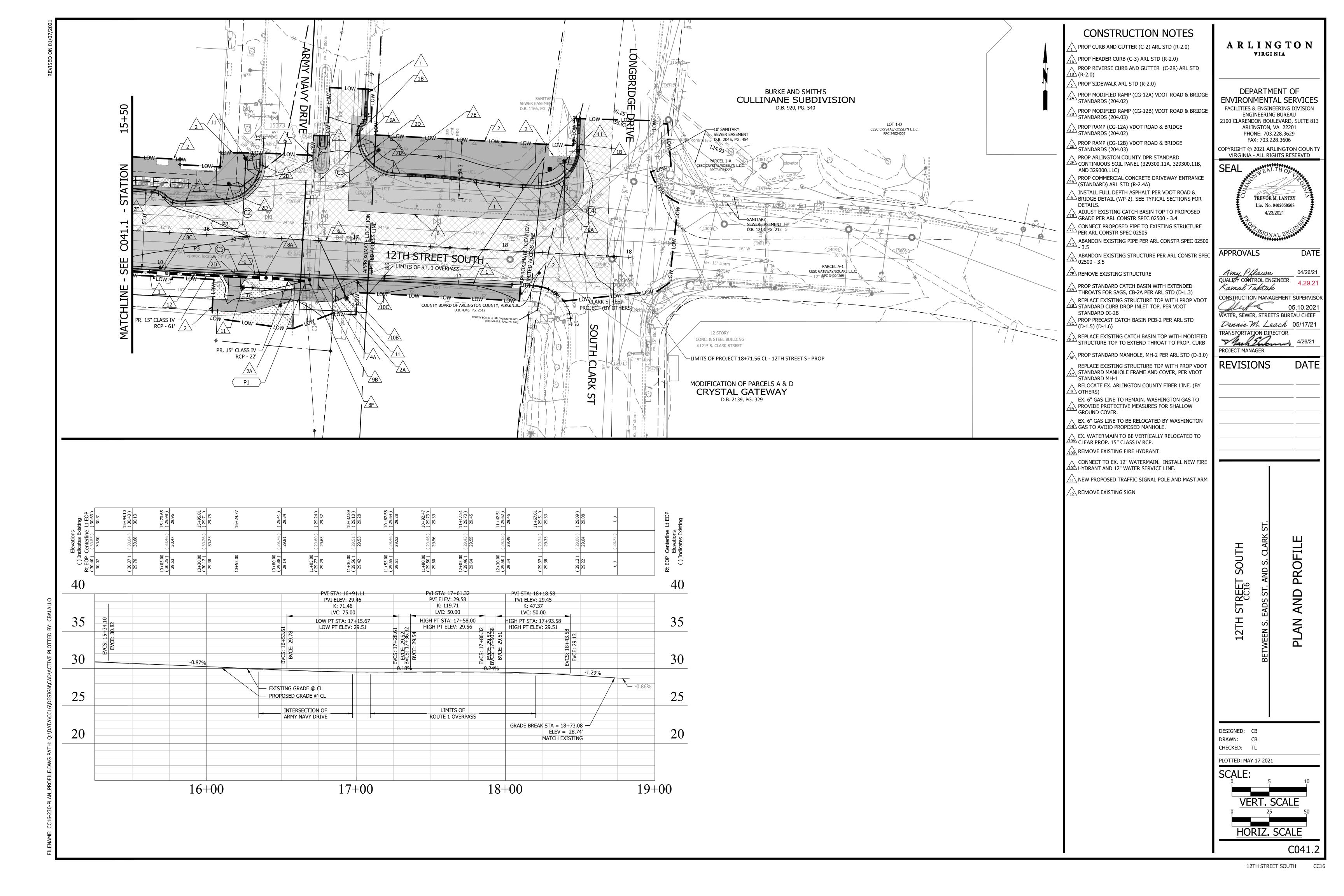
Modification Date	Description of the Modification / Update (name & title that request the modification)	Modification Prepared By (name & title)

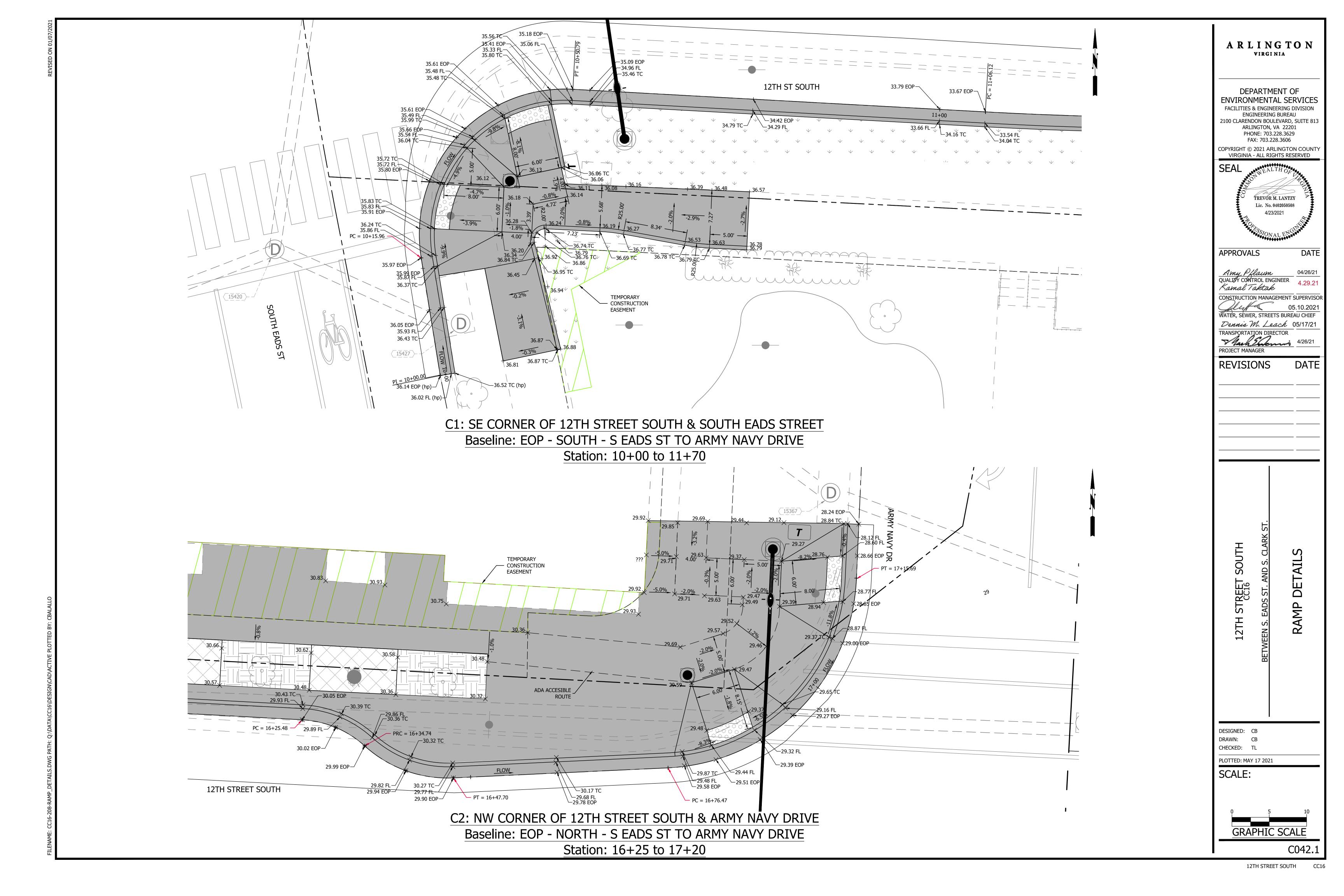
Arlington County – SWPPP 9/2016

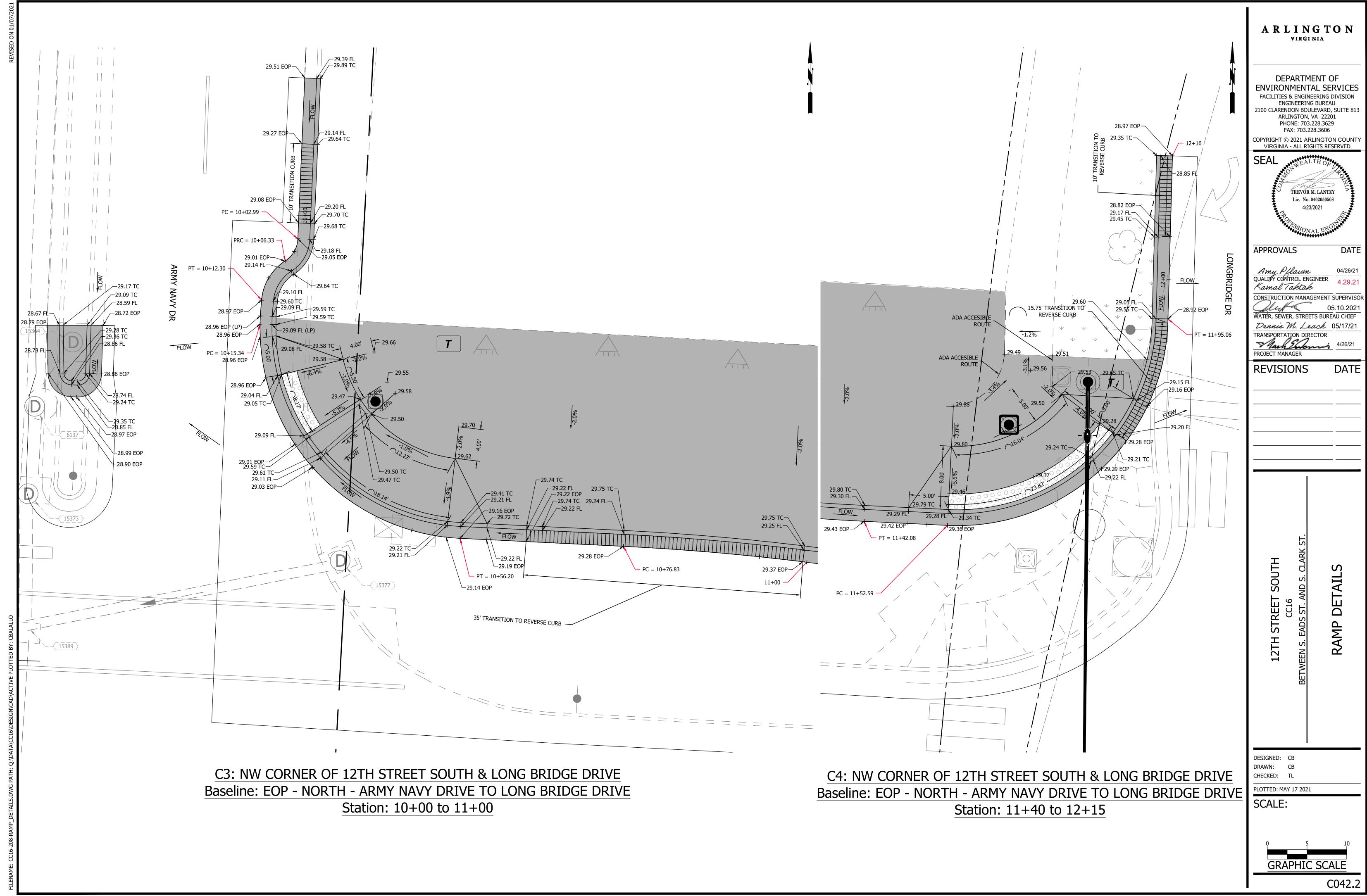
12TH STREET SOUTH CC16

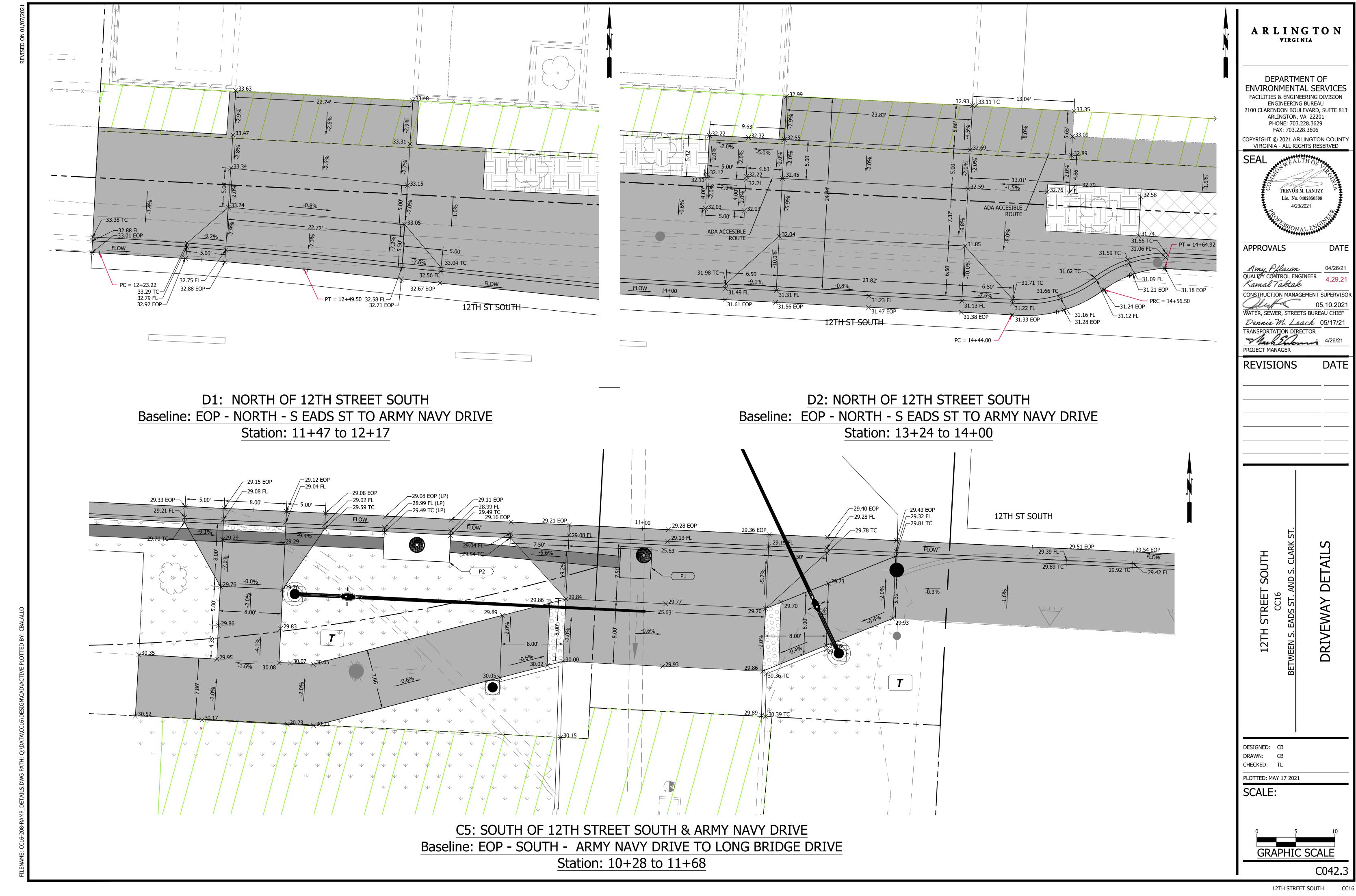
16-220 S NOTES CWP

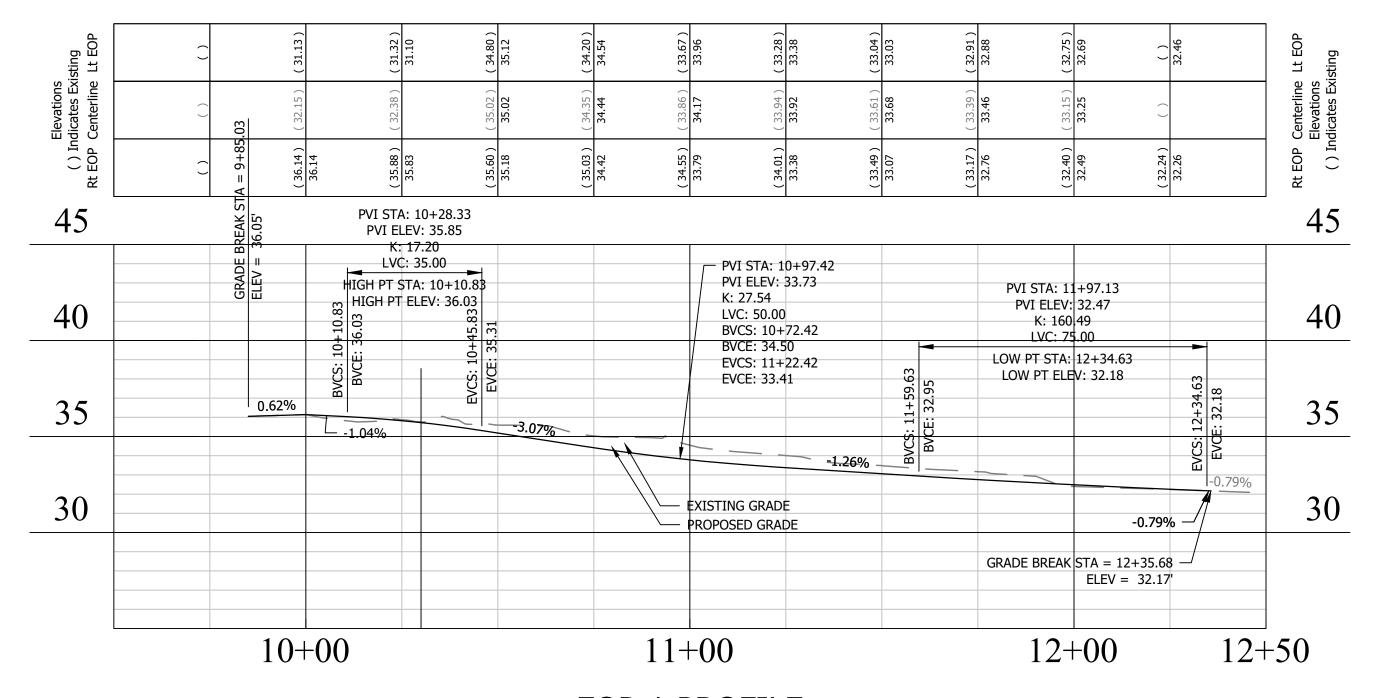




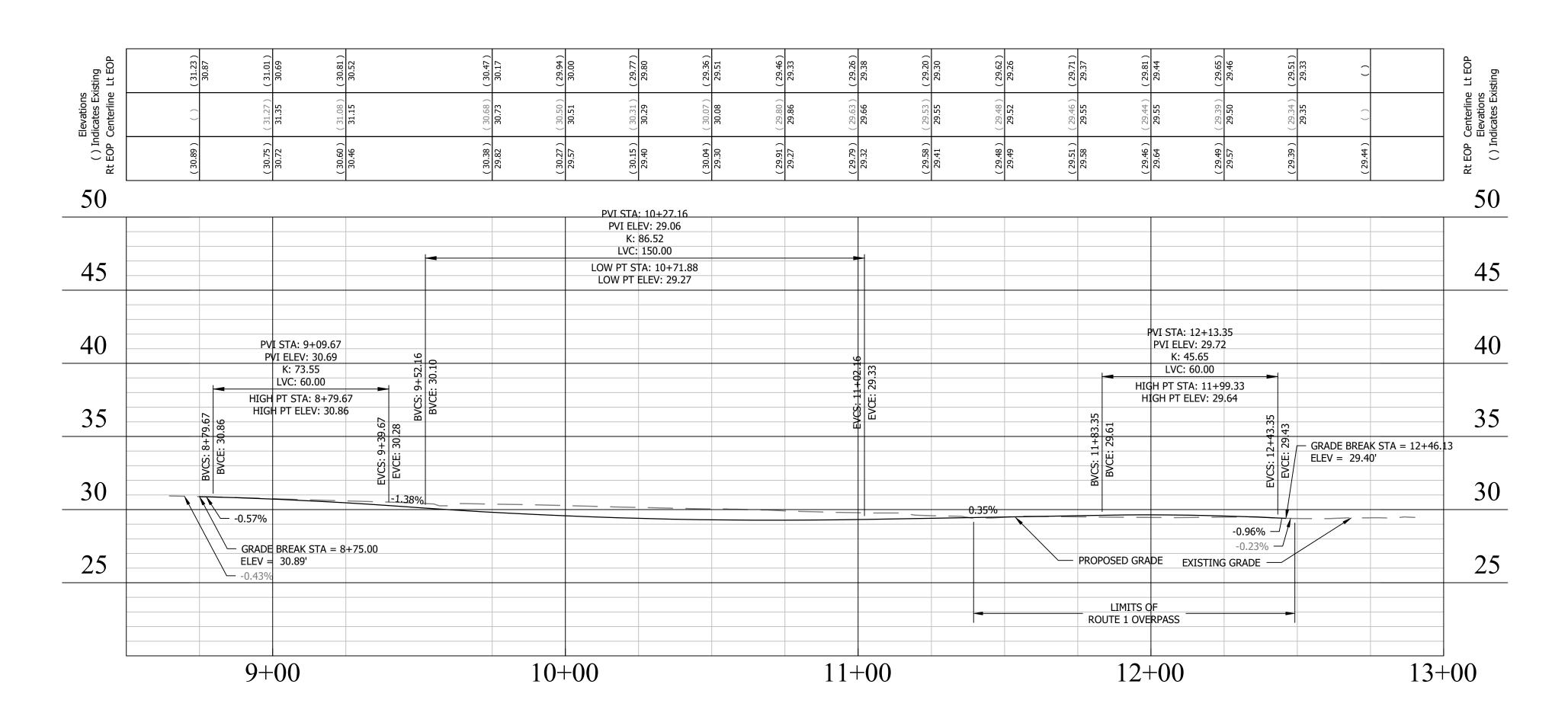








EOP-1 PROFILE EOP - SOUTH - S EADS ST TO ARMY NAVY DR HOR. SCALE: 1" = 25' VER. SCALE: 1" = 5'



EOP-2 PROFILE EOP - SOUTH - ARMY NAVY DRIVE TO LONG BRIDGE DRIVE HOR. SCALE: 1" = 25' VER. SCALE: 1" = 5'

NOTE: FOR EDGE OF PAVEMENT ALIGNMENT LOCATIONS, SEE SHEET C045.1 GEOMETRIC CONTROL PLAN.

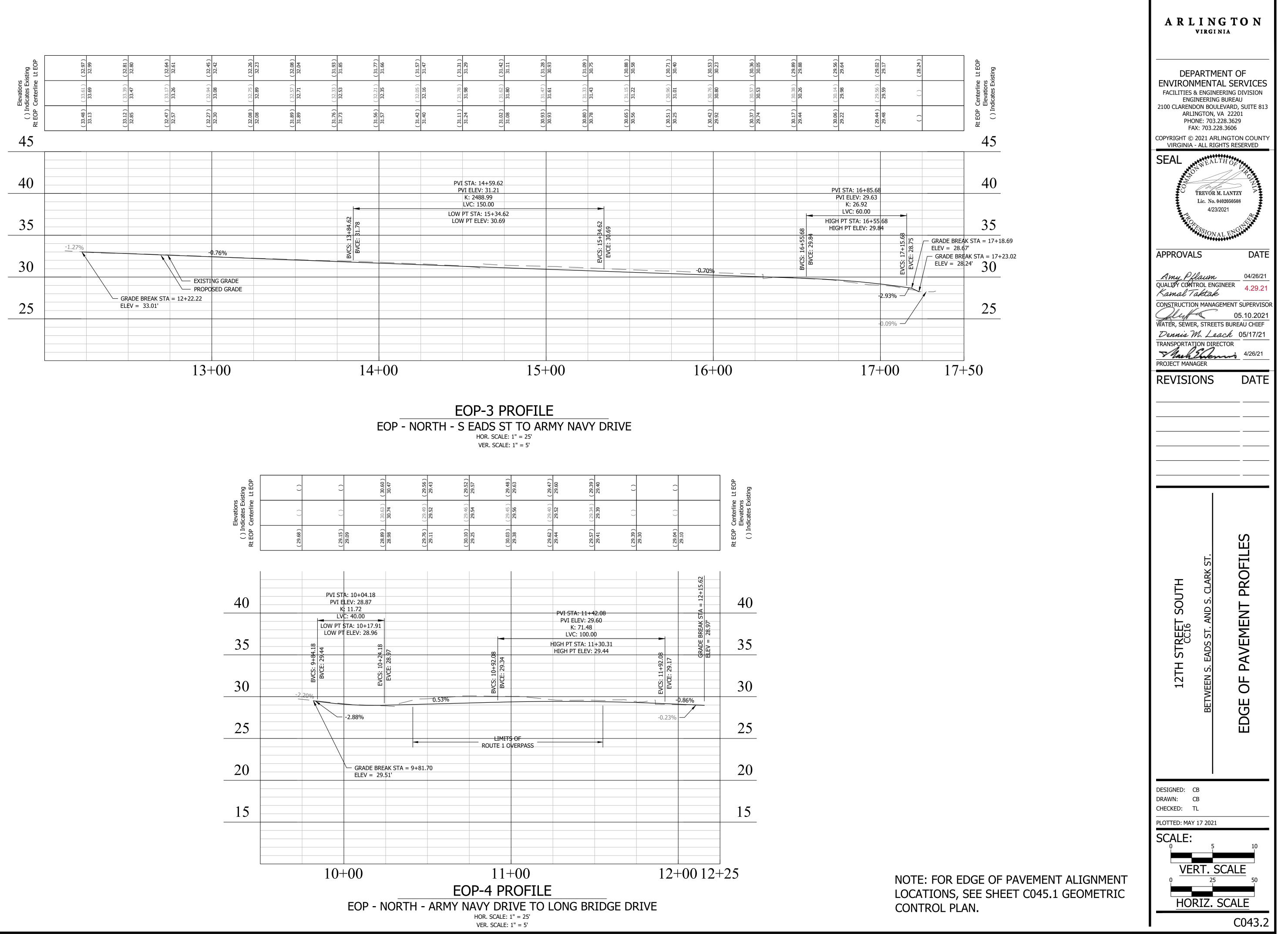
ARLINGTON VIRGINIA DEPARTMENT OF **ENVIRONMENTAL SERVICES** FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 COPYRIGHT © 2021 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED TREVOR M. LANTZY Lic. No. 0402050508 4/23/2021 **APPROVALS** DATE Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER
Kamal Taktak
4.29.21 CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

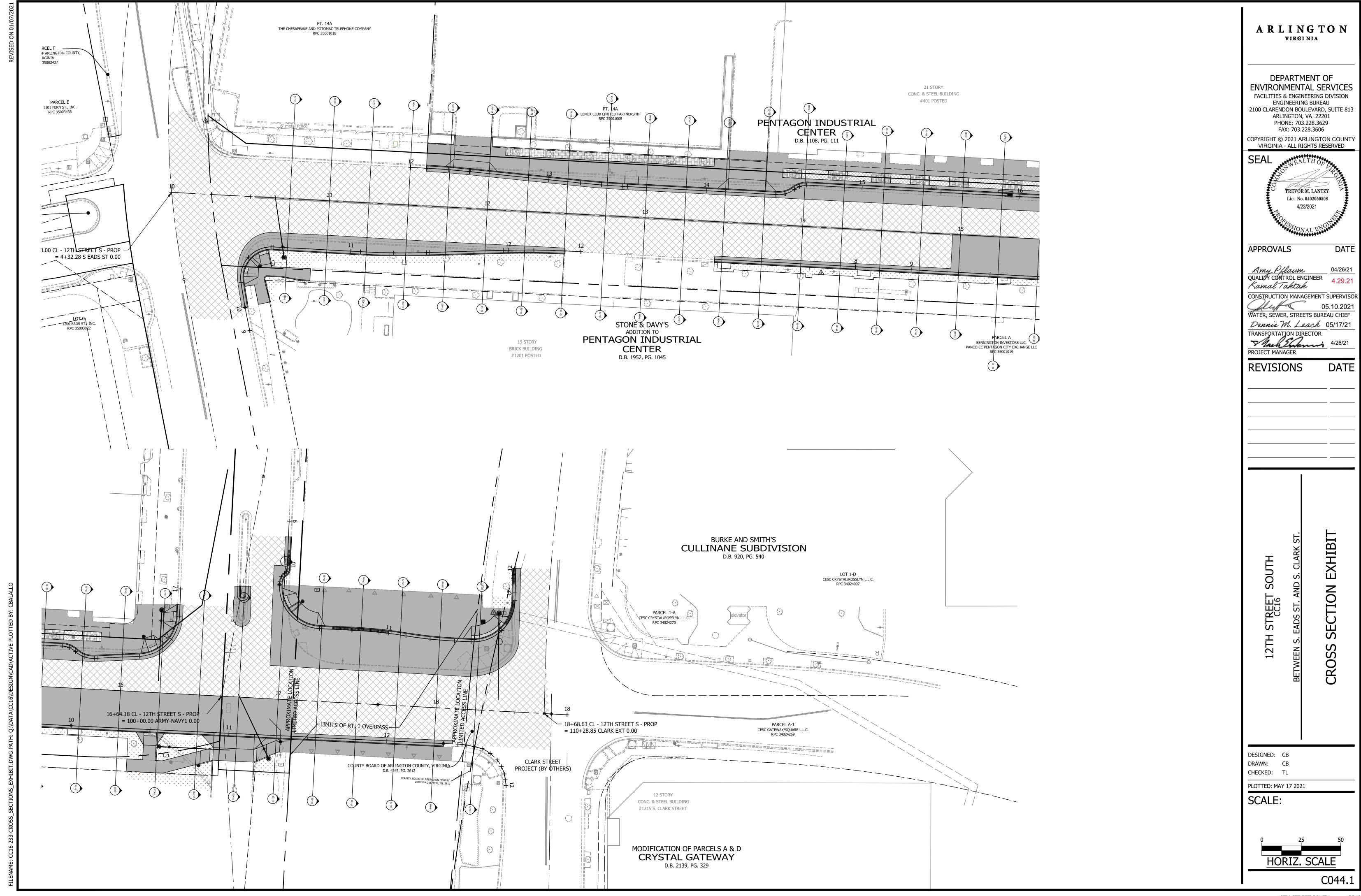
Audio 4/26/21

PROJECT MANAGER **REVISIONS PAVEMENT** STREET CC16 12TH OF EDGE DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021 SCALE: VERT. SCALE

HORIZ. SCALE

C043.1





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

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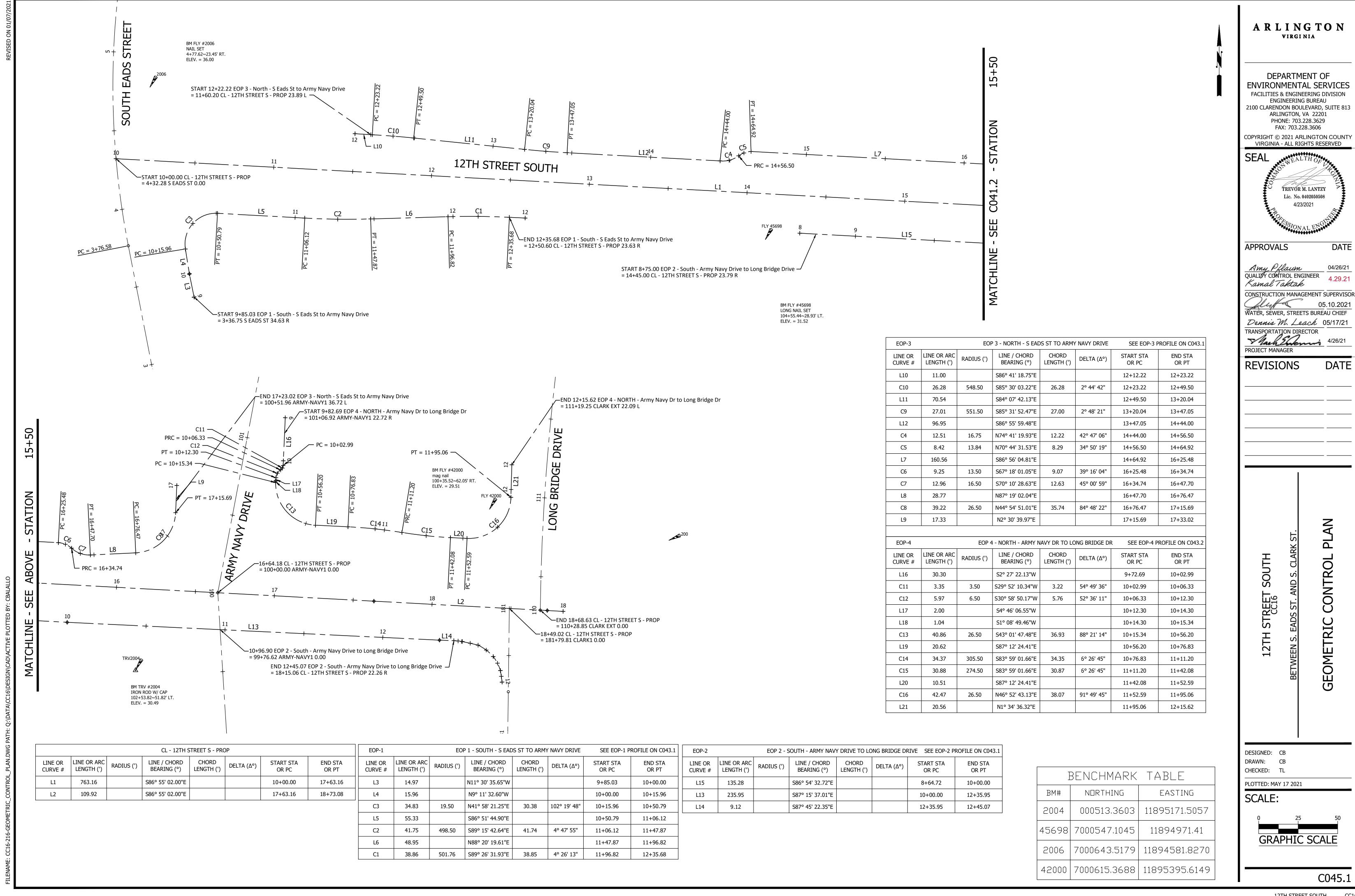
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

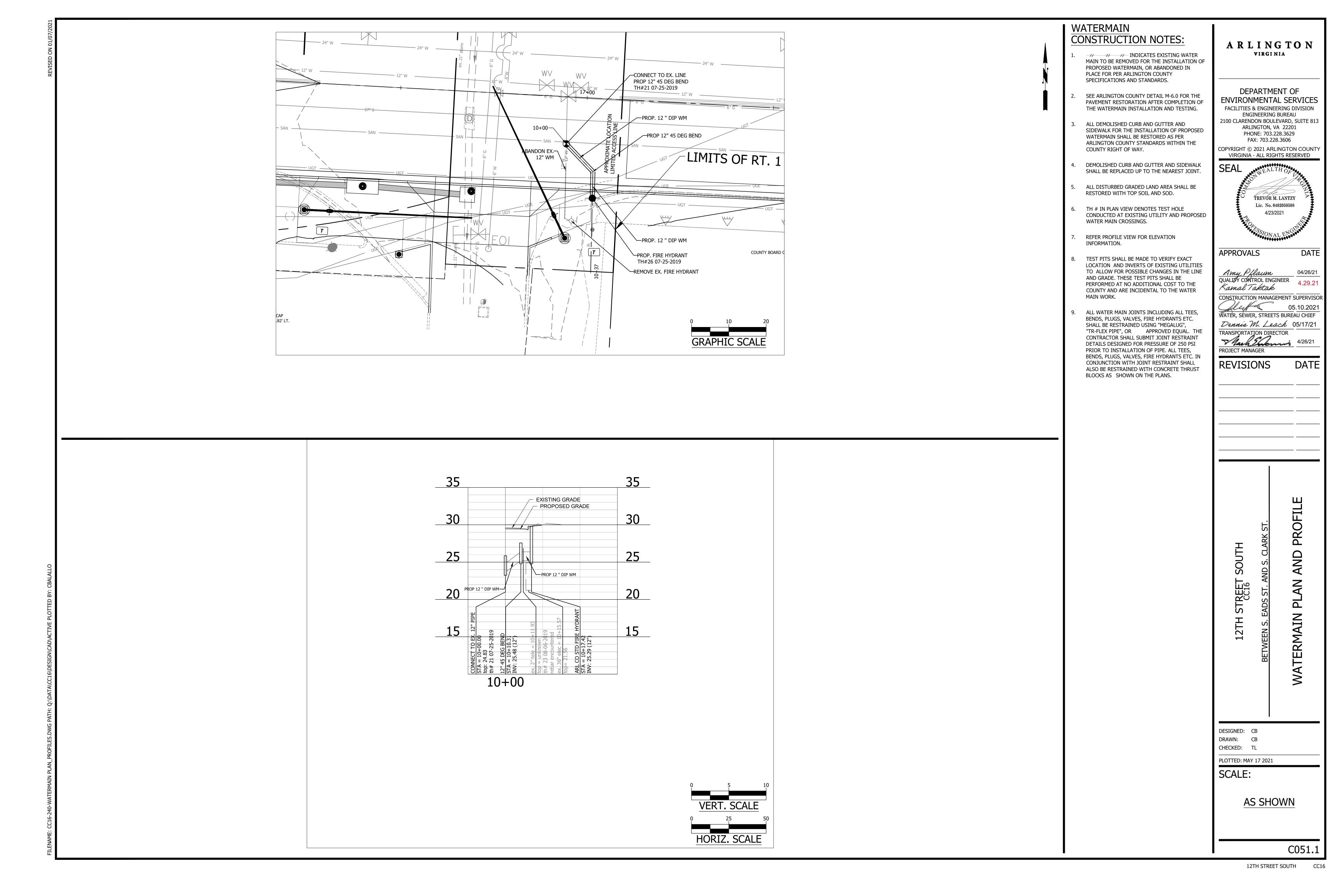
ARLINGTON VIRGINIA DEPARTMENT OF **ENVIRONMENTAL SERVICES** FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 COPYRIGHT © 2021 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED TREVOR M. LANTZY Lic. No. 0402050508 APPROVALS DATE Amy Pflaum
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Kamal Taktak

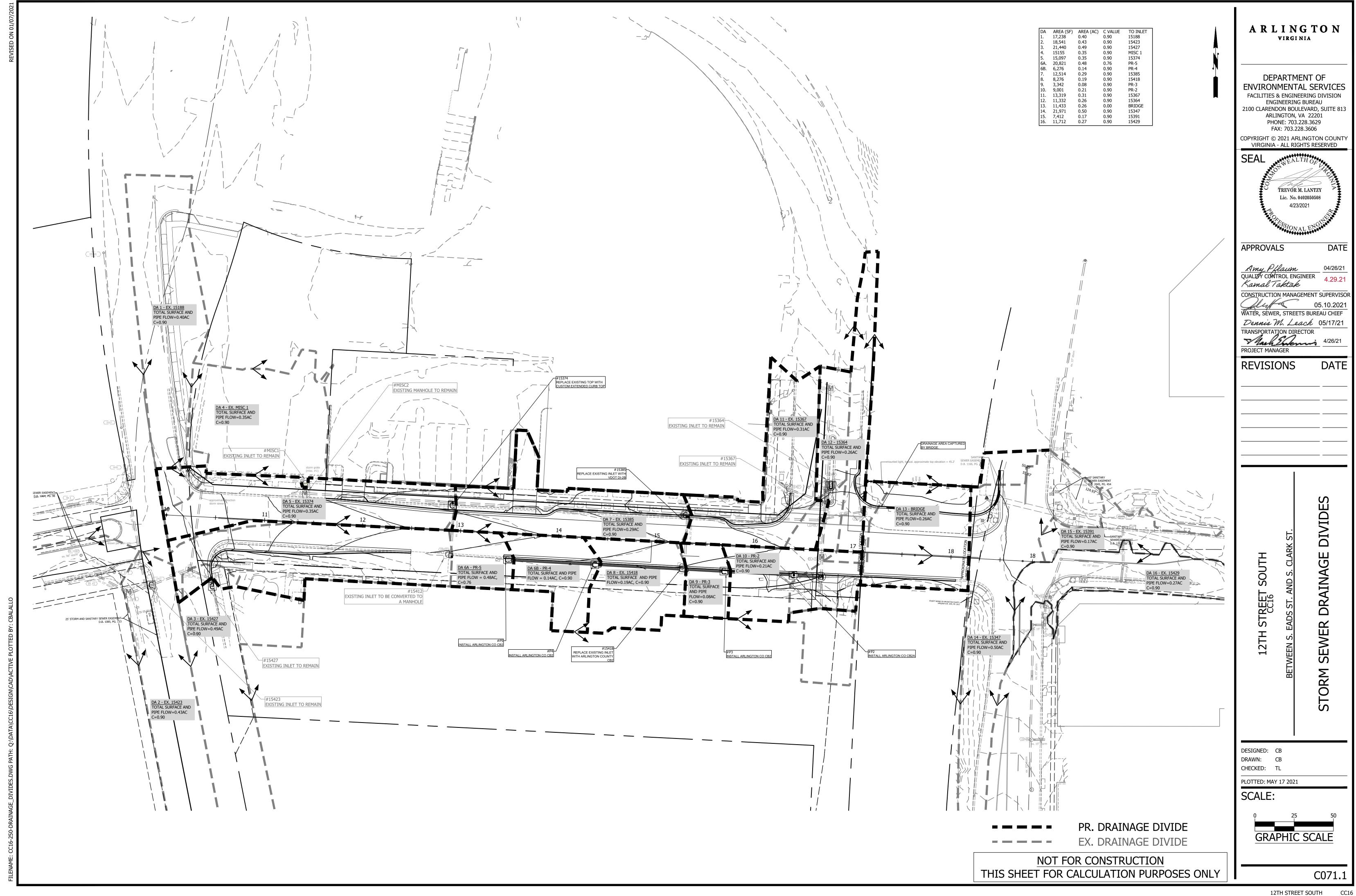
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4.29.21 CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

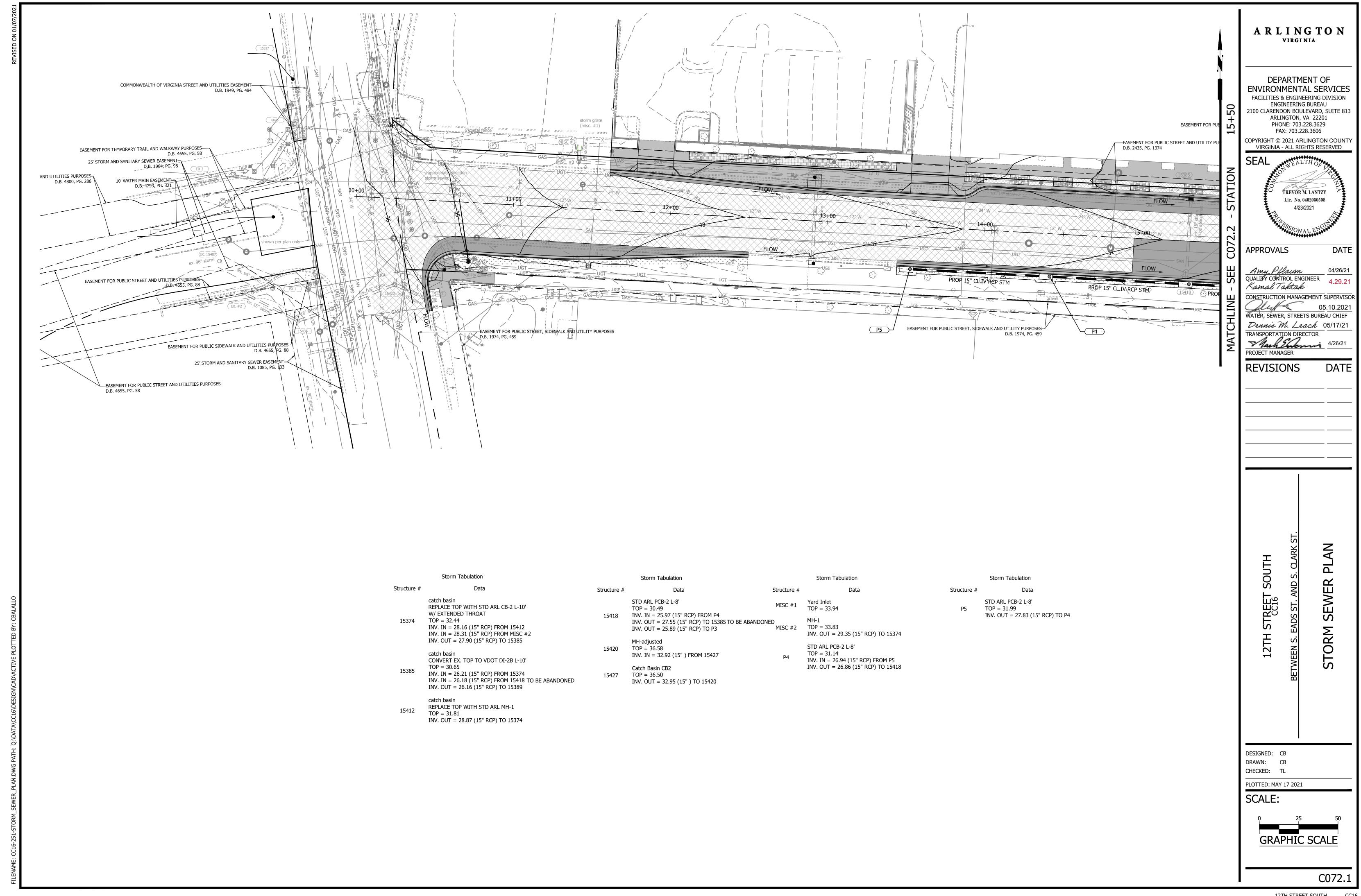
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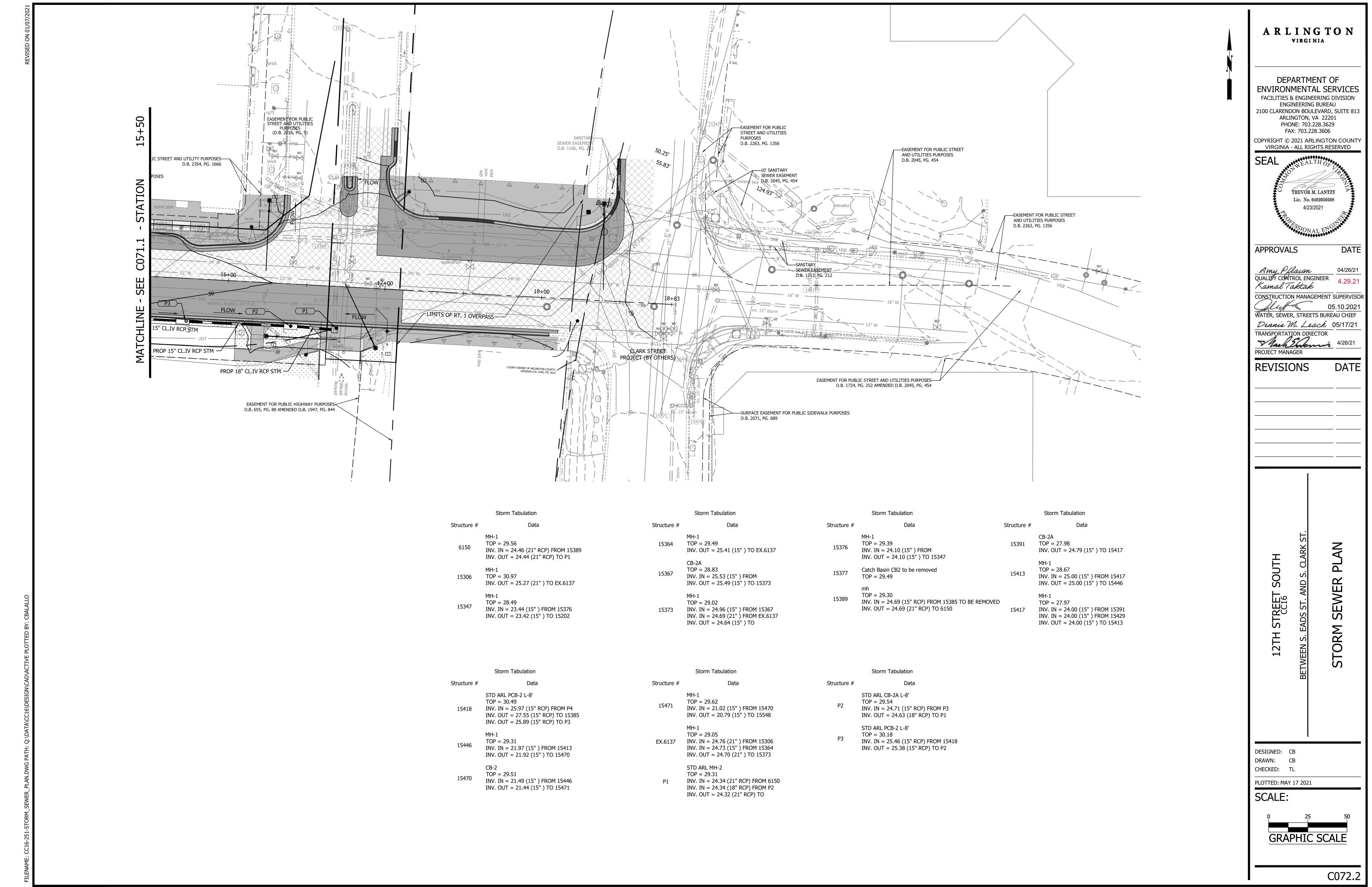
PROJECT MANAGER **REVISIONS** 12TH DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021 SCALE: VERT. SCALE HORIZ. SCALE C044.4











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HORIZ. SCALE

C073.1

													St	orm I	nlet C	omput	ations													
	1	nlet					Flow										Curb Inle	t							Operation			Inlets	Only	
Numbe	Туре	Length (ft)	Station	Drainage Area (acres)	С	CA	i (in/hr)	Q Incr (ft³/s)	Q Carryover (ft³/s)	Q _T (ft³/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 _T Computed Length (ft)	L/L _T	E (%)	Q _i Intercepted (ft ³ /s)	Q _b Carryover (ft³/s)	d (ft)	h (ft)	d/h	T Spread @ Sag (ft)
15364	DI-2C	4		0.26	0.90	0.234	4.00	0.94	0.00	0.938		0.01370		2.00		0.0833											0.24	0.46	0.00	7.22 *
15367	CB-2A	8		0.31	0.90	0.275	4.00	1.10	0.00	1.101		0.03540		2.00		0.0833											0.21	0.42	0.00	3.28
15374	CB-2	8		0.35	0.90	0.312	4.00	1.25	0.00	1.248	0.0124	0.02650	5.47	1.50	0.27	0.0833	3.14	0.693	4.02	0.22	0.18	6.11	1.31	100%	1.25	0.000	0.23			
15385	DI-2A	8		0.29	0.90	0.259	4.00	1.03	0.00	1.034	0.0069	0.02700	5.69	1.50	0.26	0.0833	3.09	0.671	4.01	0.22	0.18	4.81	1.66	100%	1.03	0.000	0.24			
15418	CB-2	8		0.19	0.90	0.171	4.00	0.68	0.00	0.684	0.0117	0.02130	4.61	1.50	0.33	0.0833	3.91	0.803	4.12	0.23	0.20	4.33	1.85	100%	0.68	0.000	0.19			
PR3	CB-2	8		0.08	0.90	0.069	4.00	0.28	0.00	0.276	0.0114	0.02130	2.43	1.50	0.62	0.0833	3.91	0.981	4.12	0.23	0.25	2.63	3.04	100%	0.28	0.000	0.14			
PR2	CB-2A	8		0.21	0.90	0.189	4.00	0.76	0.00	0.756		0.03390		1.50		0.0833											0.21	0.42	0.00	4.01
15347	CB-2A	8		0.50	0.90	0.454	4.00	1.82	0.00	1.816		0.03060		1.50		0.0833											0.22	0.42	0.00	4.56
PR4	CB-2	8		0.14	0.90	0.126	4.00	0.50	0.00	0.504	0.0086	0.02083	4.27	1.50	0.35	0.0833	4.00	0.838	4.13	0.23	0.21	3.40	2.36	100%	0.50	0.000	0.18			
PR5	CB-2	8		0.48	0.76	0.363	4.00	1.45	0.00	1.453	0.0086	0.03120	5.80	1.50	0.26	0.0833	2.67	0.642	3.94	0.22	0.17	6.03	1.33	100%	1.45	0.000	0.26			

							Sto	orm Di	rain D	esign	Com	outati	ons						
From	То	Drainage Area	Runoff Coefficient		CA		Inlet Time	Time of Conc.		Runoff Q	Inv	ert itions	Length	Slope	Diameter	Capacity	Velocity	Flow Time	Damanda
Point	Point	Acres	С	Incr.	Piped In	Accum.	min	min	in/hr	cfs	Upper End	Lower End	ft	%	in	cfs	fps	min	Remarks
MISC 1	MISC 2	0.35	0.90	0.31	0.00	0.31	5.00	5.00	6.79	2.13	30.62	30.33	7.38	3.93%	15	12.81	7.73	0.02	
MISC 2	15374	0.00	0.00	0.00	0.00	0.31	5.00	5.02	6.78	2.12	29.35	28.31	151.64	0.69%	15	5.35	4.11	0.62	
15374	15385	0.35	0.90	0.31	0.00	0.63	5.00	5.63	6.58	4.11	27.90	26.21	235.13	0.72%	15	5.48	4.90	0.80	
15385	15389	0.29	0.90	0.26	0.00	0.88	5.00	6.43	6.34	5.60	26.16	24.69	133.42	1.10%	15	6.78	6.17	0.36	
15412	15374	0.00	0.00	0.00	0.00	0.00	5.00	5.00	6.79	0.00	28.87	28.16	50.35	1.41%	15	7.67	-	0.00	No Flow
PR5	PR4	0.48	0.76	0.36	0.00	0.36	5.00	5.00	6.79	2.47	27.83	26.94	88.77	1.00%	15	6.47	4.92	0.30	2
PR4	15418	0.14	0.90	0.13	0.00	0.49	5.00	5.30	6.69	3.27	26.86	25.97	88.77	1.00%	15	6.47	5.29	0.28	
15418	PR3	0.19	0.90	0.17	0.09	0.75	5.00	5.58	6.60	4.93	25.89	25.46	43.22	1.00%	15	6.44	5.78	0.12	
PR3	PR2	0.08	0.90	0.07	0.00	0.82	5.00	5.71	6.56	5.35	25.38	24.71	66.63	1.01%	15	6.48	5.90	0.19	
PR2	PR1	0.21	0.90	0.19	0.00	1.01	5.00	5.89	6.50	6.53	24.63	24.34	29.12	1.00%	18	10.48	6.25	0.08	

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15364 6137 0.26 0.90 0.23 0.00 0.23 5.00 5.00 6.79 1.59 25.41 24.73 8.55 7.95% 15 18.22 9.13 0.02

								Hyd	raulic	Grade	Line Co	mputa	tions									
													Junction L	oss.								
Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (ft)	D _o (in)	Q _o (cfs)	L _o (ft)	Sf _o (%)		V _o (ft/s)	H _o (ft)	Qi	V _i (ft/s)	Q _i V _i	V _i ²/2g (ft)	H _i (ft)	Angle (°)	H _Δ (ft)	H _t (ft)	1.3 H _t (ft)	0.5 H _t (ft)	Final H (ft)	Inlet Water Surface Elev. (ft)	Rim Elev. (ft)
PR1						ıtlet Pipe Dia. =			t Pipe Inv. =	24.34	0.8xDia +	- Pipe Inv. =	25.74		let WSEL =				Starti	ng WSEL =	25.74	
6150		25.74	21	8.65	20.49	0.2977%	0.06	5.09	0.10					0.18		0.35	0.63	0.00		0.69	26.43	29.52
	15389									8.69	5.71	49.60	0.51	0.18	90	0.35						
15389	45005	26.43	21	8.69	35.39	0.3005%	0.11	5.71	0.13			0.4.55	1 250	0.21		0.41	0.75	0.00		0.85	27.29	29.34
	15385									5.60	6.17	34.57	0.59	0.21	90	0.41						
15305	15373	27.20	45	F 60	122.42	0.75140/	1 100	C 17	0.15	3.39	3.82	12.93	0.23	0.08	90	0.16	0.54	0.70	1	1.70	20.00	20.52
15385	15374	27.29	15	5.60	133.42	0.7514%	1.00	6.17	0.15	4.11	4.90	20.15	0.37	0.13 0.13	90	0.26 0.26	0.54	0.70		1.70	28.99	30.52
15374	155/4	28.99	15	4.11	235.13	0.4054%	0.95	4.90	0.09	4.11	4.90	20.15	0.37	0.13	90	0.28	0.37	0.48	1	1.43	30.42	32.37
15574	MISC 2	20.99	13	4.11	233.13	0.405470	0.95	4.50	0.09	2.12	4.11	8.73	0.26	0.09	90	0.18	0.37	0.46		1.43	30.42	32.37
	15412									0.00	0.00	0.00	0.00	0.00	90	0.00						
MISC 2	15712	30.42	15	2.12	151.64	0.1081%	0.16	4.11	0.07	0.00	0.00	0.00	0.00	0.32	30	0.65	1.04	0.00	I	1.20	31.63	33.83
MISC 2	MISC 1	30.72	13	2.12	131.01	0.100170	0.10	7.11	0.07	2.13	7.73	16.43	0.93	0.32	90	0.65	1.01	0.00	l	1.20	31.03	33.03
MISC 1	111001	31.63	15	2.13	7.38	0.1083%	0.01	7.73	0.28	2110	7175	10110	0.55	0132	30	0.03	0.28	0.36		0.37	32.00	33.94
PR2		25.74	18	6.53	29.12	0.3867%	0.11	6.25	0.15					0.19		0.38	0.72	0.00		0.83	26.57	29.60
(1)	PR3	2517 1		0.55	29.12	0.000770	0.11	0.25	0.12	5.35	5.90	31.56	0.54	0.19	90	0.38	0.72	0.00		0.00	20.07	25.00
PR3		26.57	15	5.35	66.63	0.6863%	0.46	5.90	0.14					0.18		0.36	0.68	0.00		1.14	27.71	30.11
	15418									4.93	5.78	28.51	0.52	0.18	90	0.36						
15418		27.71	15	4.93	43.22	0.5821%	0.25	5.78	0.13				•	0.15		0.30	0.59	0.76		1.01	28.72	30.49
	PR4				•			•	•	3.27	5.29	17.30	0.43	0.15	90	0.30			•			
PR4		28.72	15	3.27	88.77	0.2566%	0.23	5.29	0.11					0.13		0.26	0.50	0.65		0.88	29.60	31.14
	PR5									2.47	4.92	12.12	0.38	0.13	90	0.26						
PR5		29.60	15	2.47	88.77	0.1458%	0.13	4.92	0.11			·					0.11	0.15		0.28	29.88	31.99
15373		27.29	21	3.39	14.38	0.0457%	0.01	3.82	0.06					0.14		0.29	0.49	0.00		0.50	27.78	29.06
	6137									1.56	2.08	3.25	0.07	0.02	90	0.05						
	15367		_							1.87	5.16	9.64	0.41	0.14	90	0.29						
6137		27.78	21	1.56	7.14	0.0097%	0.00	2.08	0.02					0.11		0.91	1.03	0.00		1.03	28.82	29.11
	15306									4.70	4.46	20.98	0.31	0.11	90	0.22						
.=	15364									1.59	9.13	14.53	1.29	0.45	90	0.91			1			
15412		30.42	15	0.00	50.35	0.0000%	0.00	0.00	0.00	ļ							0.00	0.00		0.00	30.42	32.35
15367		27.78	15	1.87	37.58	0.0837%	0.03	5.16	0.12	 							0.12	0.16		0.19	27.98	28.83
15364		28.82	15	1.59	8.55	0.0607%	0.01	9.13	0.39								0.39	0.50		0.51	29.33	29.49

ARLINGTON VIRGINIA

DEPARTMENT OF

FAX: 703.228.3606

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

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> TREVOR M. LANTZY Lic. No. 0402050508

APPROVALS DATE

Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER
Kamal Taktak
4.29.21

CONSTRUCTION MANAGEMENT SUPERVISOR O5.10.2021 WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

TRANSPORTATION DIRECTOR

Auch 1972

PROJECT MANAGER

4/26/21

REVISIONS

DUE TO THE SCOPE OF THE PROJECT, NO EXISTING PIPES 21" AND LARGER WERE UPSIZED WITH THIS PROJECT. PER COORDINATION WITH THE OFFICE OF SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT (OSEM), THERE HAVE BEEN NO FLOODING ISSUES REPORTED WITHIN THE PROJECT AREA. THEREFORE, OSEM IS NOT PLANNING TO UPSIZE THE PIPES WITHIN THE PROJECT AREA AT

WITH A NET IMPERVIOUS AREA DECREASE OF APPROXIMATELY 0.01 ACRES, THE PROJECT WILL BE IMPROVING THE OVERALL STORM SEWER SYSTEM BY DECREASING THE AMOUNT OF FLOW (CFS) ALL PROPOSED PIPES AND INLETS WITHIN THE PROJECT AREA HAVE BEEN DESIGNED IN ORDER TO

THE MAXIMUM ALLOWABLE SPREAD AND PONDING DEPTH FOR THE TRAVEL LANES IS BASED ON VDM

7. ALL INLETS ADJACENT TO VEHICLE TRAVEL LANES ARE TO BE UNDER $\frac{1}{2}$ THE TRAVEL LANE. ALL INLETS ADJACENT TO PARKING FACILITIES ARE TO HAVE THE SPREAD UNDER $\frac{1}{2}$ THE TRAVEL LANE. (12' TRAVEL LANES SHALL HAVE <6' OF SPREAD).

1. THIS PROJECT CONSISTS OF THE ROAD IMPROVEMENTS ALONG 12th STREET S BETWEEN S EADS ST

THE IMPERVIOUS AREA WITHIN THE PROJECT AREA BY APPROXIMATELY 0.01 ACRES. DUE TO THE MODIFICATIONS TO THE EXISTING ROAD NEW INLETS HAVE BEEN PROPOSED

AND LONG BRIDGE DRIVE. THE PROJECT INCLUDES NEW LANE CONFIGURATION, MILL AND OVERLAY, PAVEMENT REPLACEMENT, AND MINOR STORMWATER MODIFICATIONS. THE PROJECT IS DECREASING

THROUGHOUT THE PROJECT AREA. THE PROPOSED INLETS WILL BE CONNECTED TO THE EXISTING

STORM WATER CALCULATION NOTES

DRAINAGE NETWORK.

CREATED WITHIN THE PROJECT AREA.

ADEQUATELY CONVEY THE 10-YEAR STORM EVENT.

* INLET 15364 IS TO BE REMOVED WITH ARLINGTON COUNTY PROJECT CP01 ARMY NAVY DRIVE

COMPLETE STREETS.

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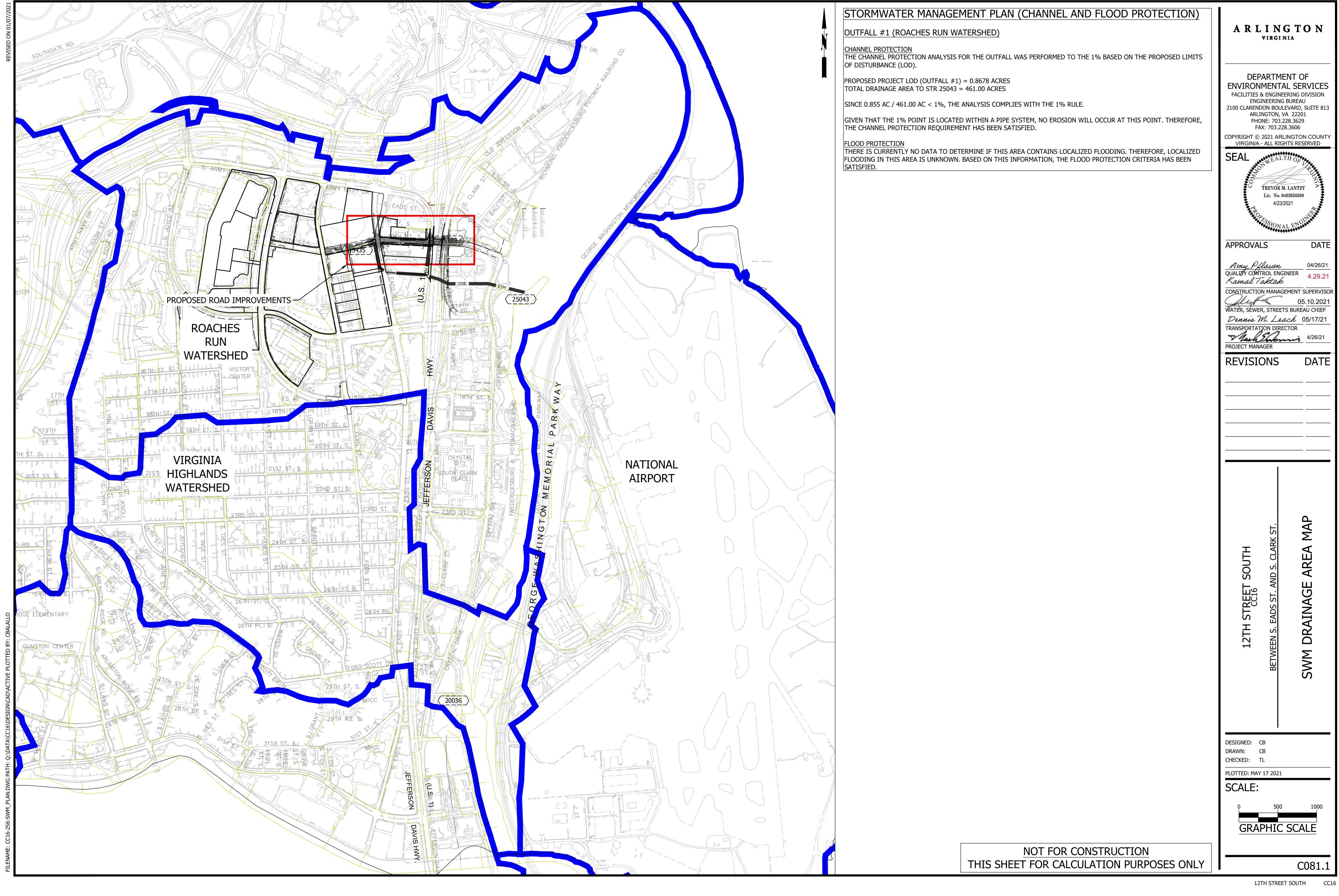
DESIGNED: CB DRAWN: CB CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:

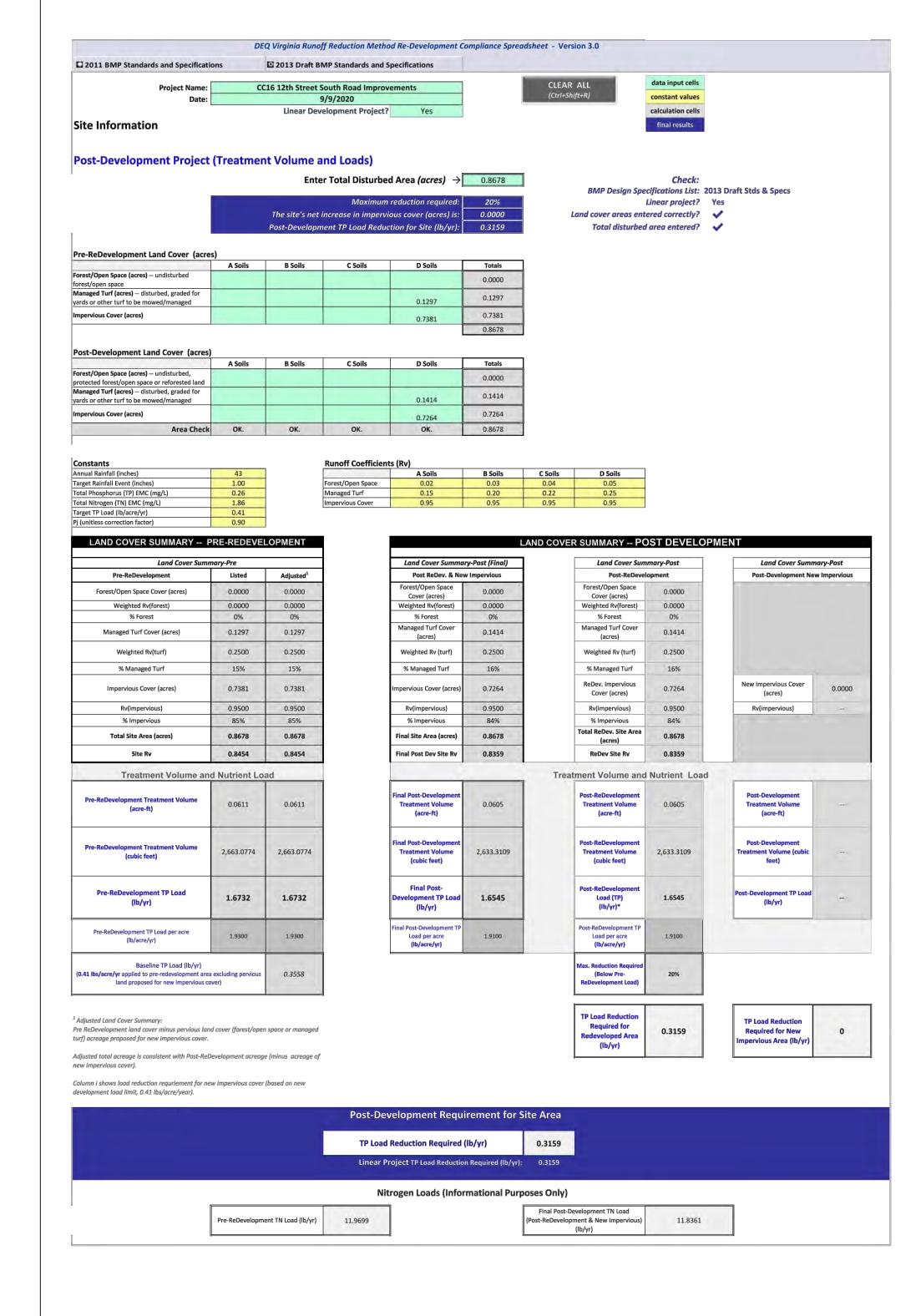
C075.1

12TH STREET SOUTH CC16



RUNOFF REDUCTION NOTES:

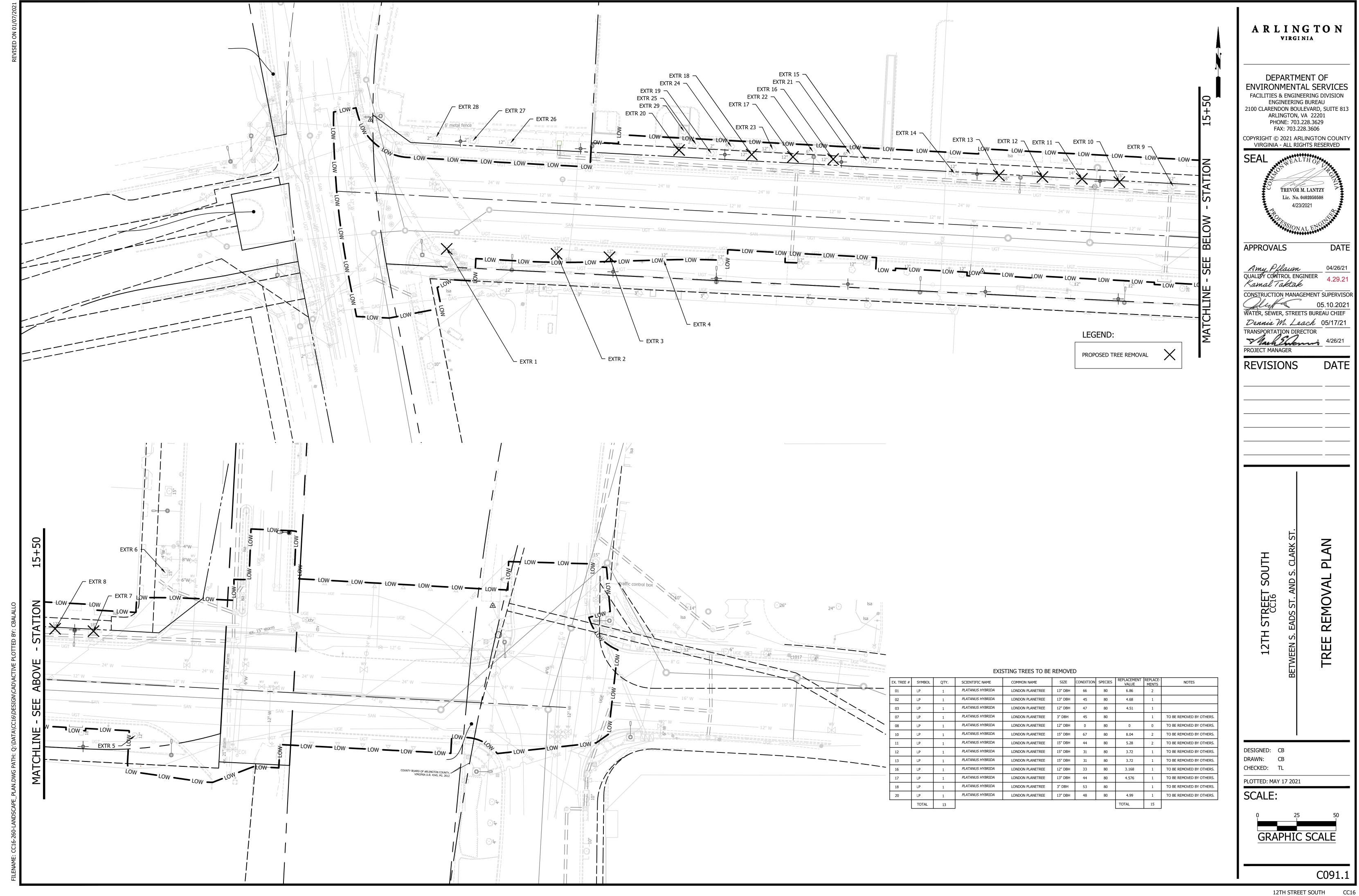
- 1. THE RUNOFF REDUCTION SPREADSHEET ON THIS PLAN IS FOR DATA TRACKING PURPOSES TO DOCUMENT THE AREA OF LAND DISTURBANCE AND TO CHARACTERIZE PRE- AND POST- DEVELOPMENT LAND USE CONDITIONS.
- IN ACCORDANCE WITH ARLINGTON COUNTY'S CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN, APPROVED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL OUALITY (DEG) ON SEPTEMBER 1, 2015, LINEAR DEVELOPMENT PROJECTS CONDUCTED BY THE COUNTY ARE ADMINISTERED AND TRACKS 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 SPECIFIED 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 ACHIEVED 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.

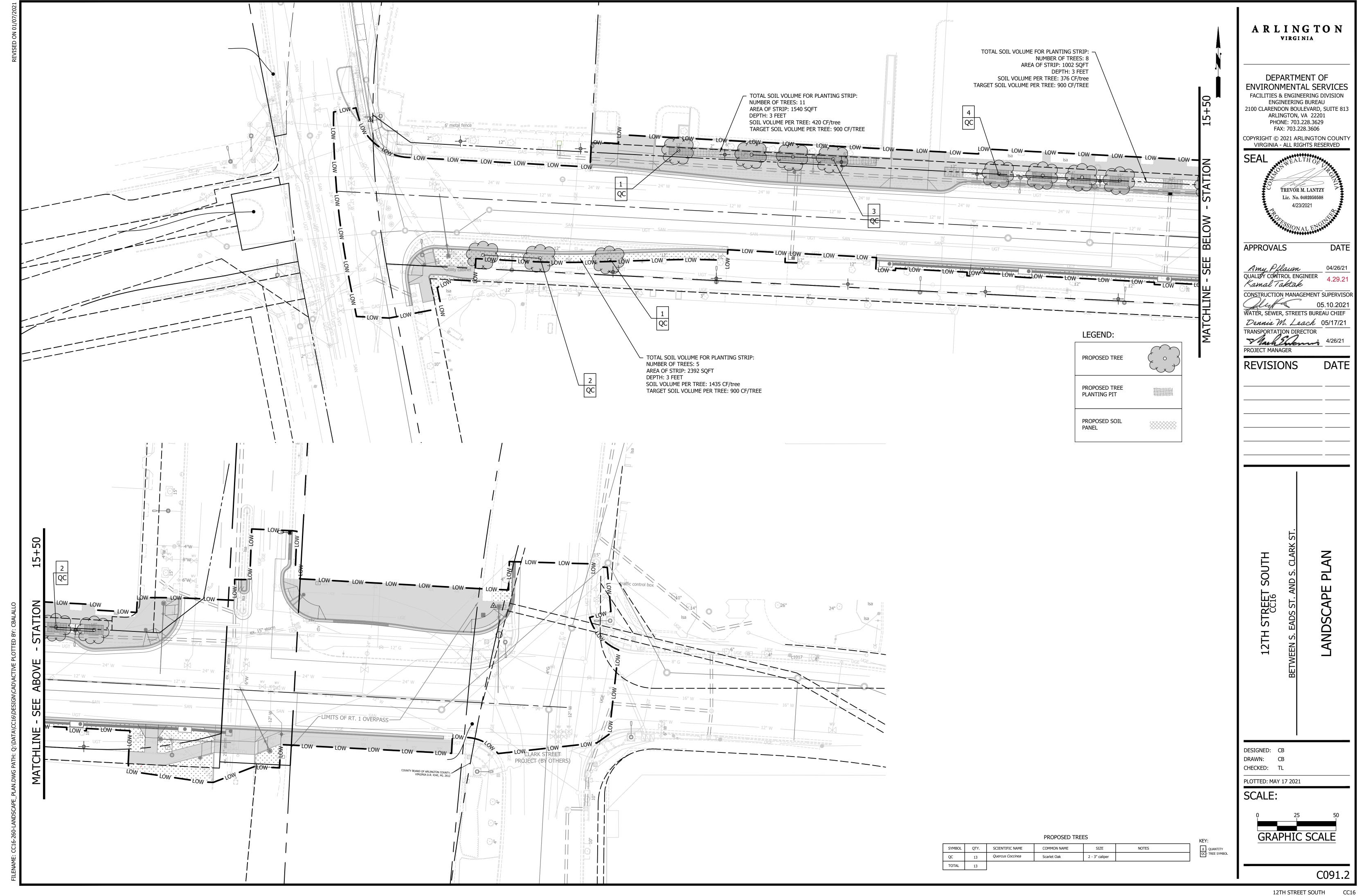


ARLINGTON VIRGINIA DEPARTMENT OF **ENVIRONMENTAL SERVICES** FACILITIES & ENGINEERING DIVISION ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 COPYRIGHT © 2021 ARLINGTON COUNTY VIRGINIA - ALL RIGHTS RESERVED TREVOR M. LANTZY Lic. No. 0402050508 4/23/2021 DATE APPROVALS Amy Pflaum 04/26/21
QUALITY CONTROL ENGINEER 4.29.21 Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR Mach Enemi 4/26/21 PROJECT MANAGER **REVISIONS** TREET CC16 S 7 DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021 SCALE:

12TH STREET SOUTH CC16

C085.1





Priority - this is meant to capture a tree's "priority for preservation" relating to tree preservation planning on development projects. The tree is rated using it's condition as a guide, but assesor also takes into account other factors, such as: species desireability, species longevity, uniqueness, aesthetics both of the tree itself and it's relation to the site and other factors as seen fit. This is meant to be a qualitative rating based solely on the site at the time of the inventory (and does not account for

Priority 1 = highest priority for protection (i.e. particularly good condition, unique tree and/or should be protected at all reasonable cost). Priority 2 = good or high fair condition tree well worth protecting though not uniquely valuable. Priority 3 = fair condition average tree that will not be missed if it were gone, not worth any specia protection measures. Priority 4 = trees that should be removed under most any curcumstances (invasive/undesireable

species, poor or dead trees, particularly high risk situations, etc).

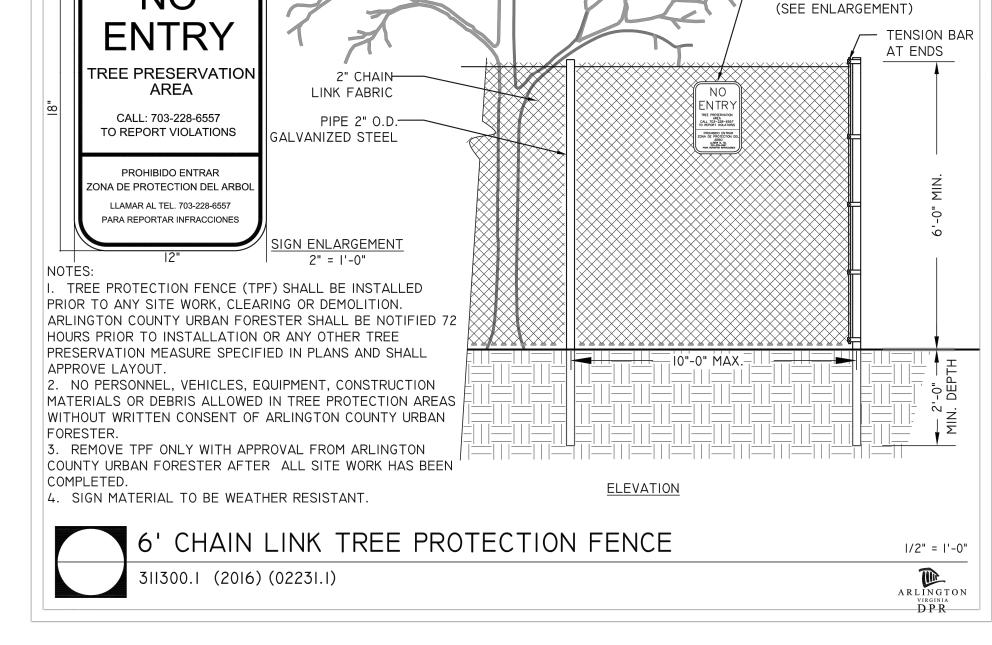
TREE PLANTING NOTES

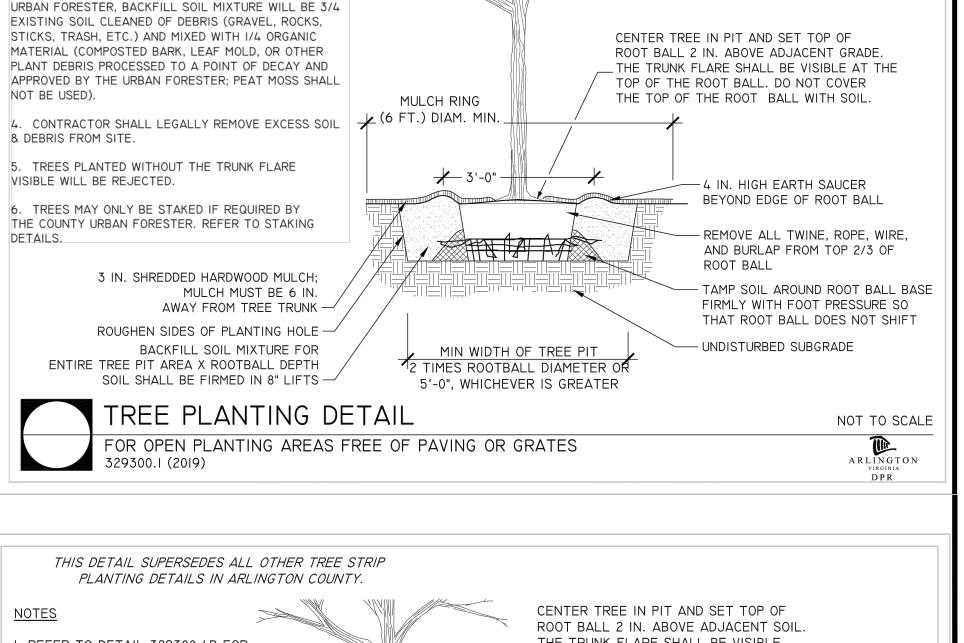
CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR CONTRACTOR TO PREPARE TREE PLANTING STRIPS FOR THE REPLACEMENT TREES ACCORDING TO

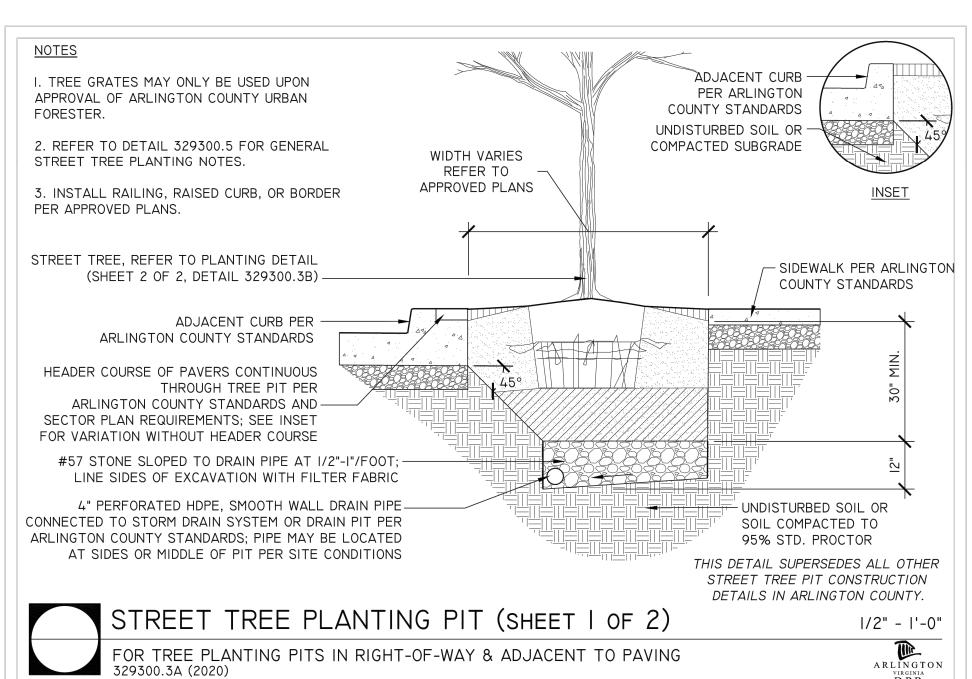
ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 3293000.4A, 329300.4B. 1.1. ALL PLANTS TO HAVE TREE TAGS FOR INSPECTION PRIOR TO INSTALLATION 1.2. ALL PLANTS TO BE INSTALLED PER CONTRACT SPECIFICATIONS 1.3. THE CONTRACTOR IS RESPONSIBLE FOR CALLING MS. UTILITY PRIOR TO THE SCHEDULED DATE

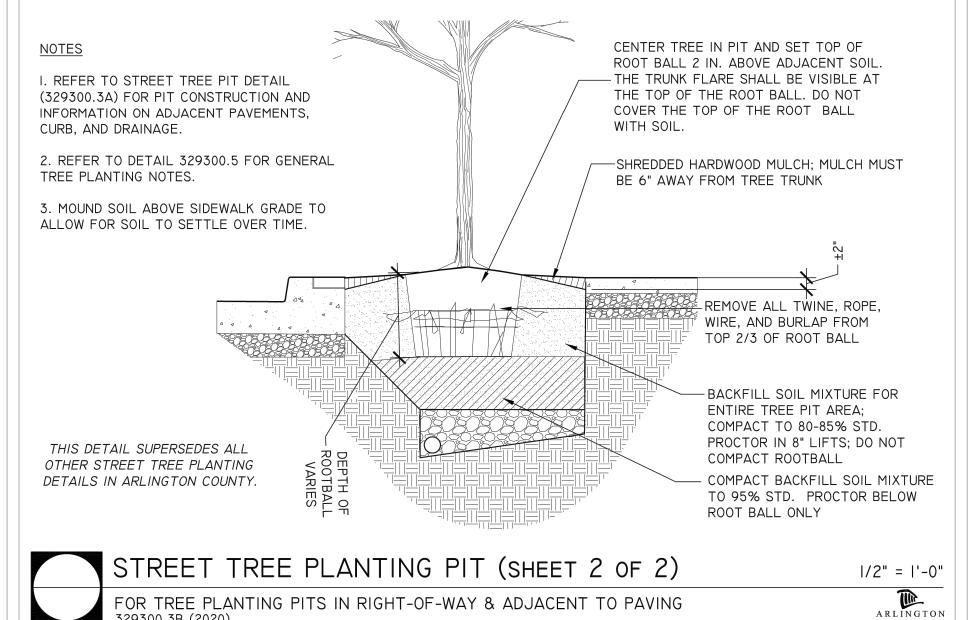
CONTRACTOR TO PREPARE STREET TREE PLANTING PITS ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 329300.3A, 329300.3B AND 329300.11C

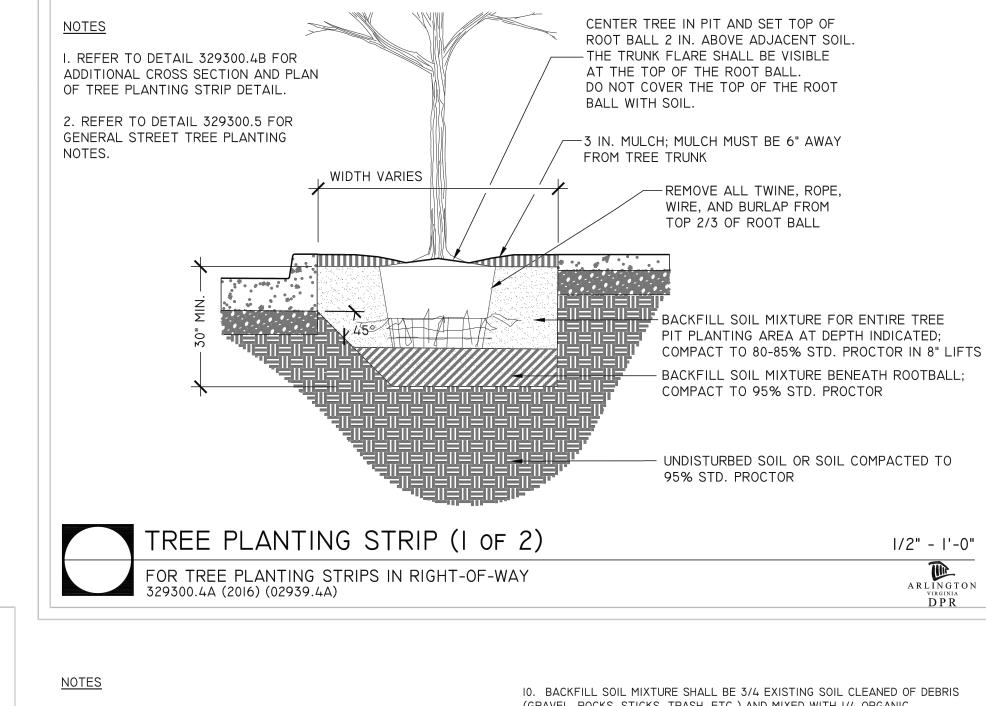
3. CONTRACTOR TO PLANT THE TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 329300.1 (ON FLAT LAND) OR 329300.2 (ON SLOPES)

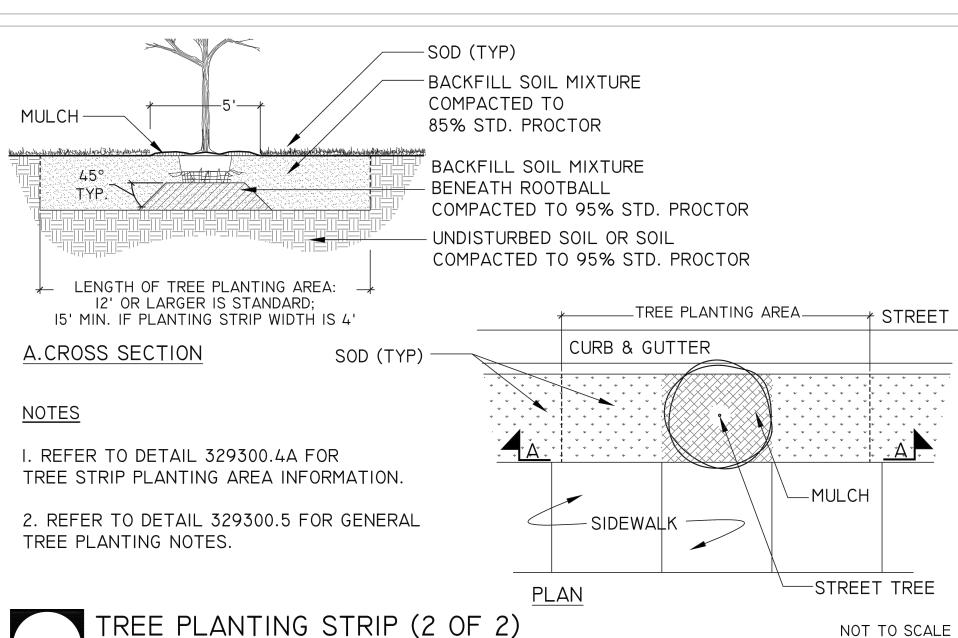






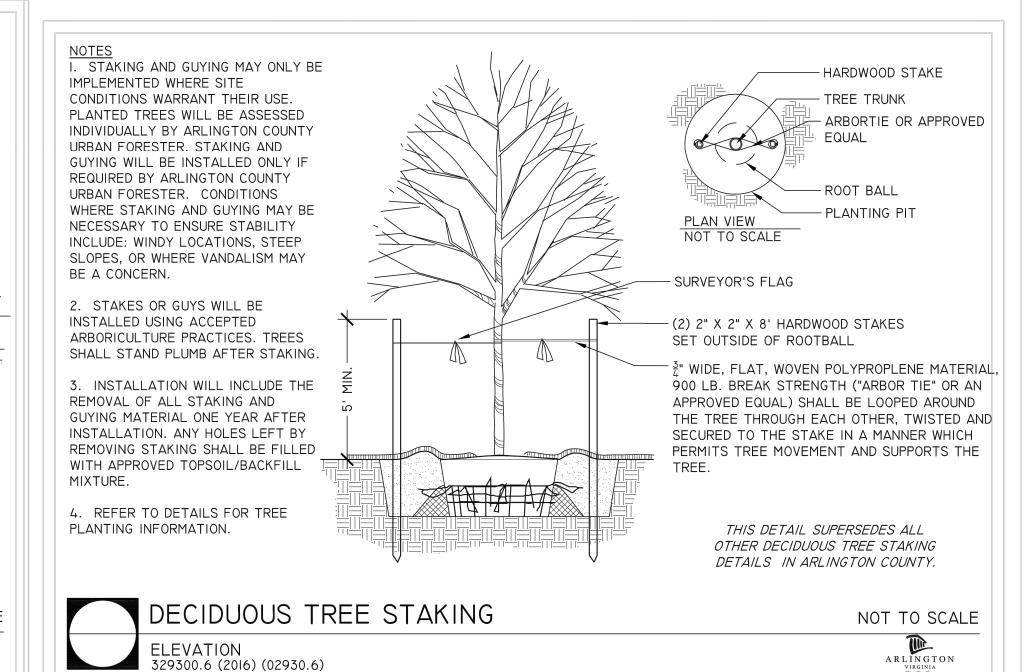






FOR TREE PLANTING STRIPS IN RIGHT-OF-WAY

329300.4B (2018)



(GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC I. NOTIFY THE DPR URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE SCHEDULED INSTALLATION OF TREE PITS AND PLANTING OF ANY STREET TREES

2. 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.

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

4. 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.

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

FOR INSPECTION.

. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN

HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO

3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY

OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A

2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA

NOT PRUNE INTO OLD WOOD ON EVERGREENS.

FOR TREE PIT WITHOUT ADVERSELY IMPACTING

ΔΟ, ΙΔΟΕΝΤ

SITE FEATURES.

TYPICAL SIGNAGE

DPR

30' O.C.

6. 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.

7. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS: SEE PLAN 8. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.

9. 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.

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.

II. 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 I/2" IN LENGTH (B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF I.0% ORGANIC MATTER (C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO

PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIOHMS PER CENTIMETER. 12. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

13. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN

FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.

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

15. 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.

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

GENERAL NOTES FOR STREET TREE PLANTINGS FOR TREES PLANTED IN RIGHT-OF-WAY

AS SHOWN

DESIGNED: CB

DRAWN: CB

CHECKED: TL

SCALE:

ARLINGTON
VIRGINIA
DPR

PLOTTED: MAY 17 2021

C092.

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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TREVŐR M. LANTZY

Lic. No. 0402050508

4/23/2021

DATE

APPROVALS

Amy Pflaum

Kamal Taktak

OUALIDY CONTROL ENGINEER

TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS

Mach Enemis

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/2

ALL PLANTS MUST BE WATERED TWICE:

THIS DETAIL SUPERSEDES ALL

OTHER TREE PLANTING

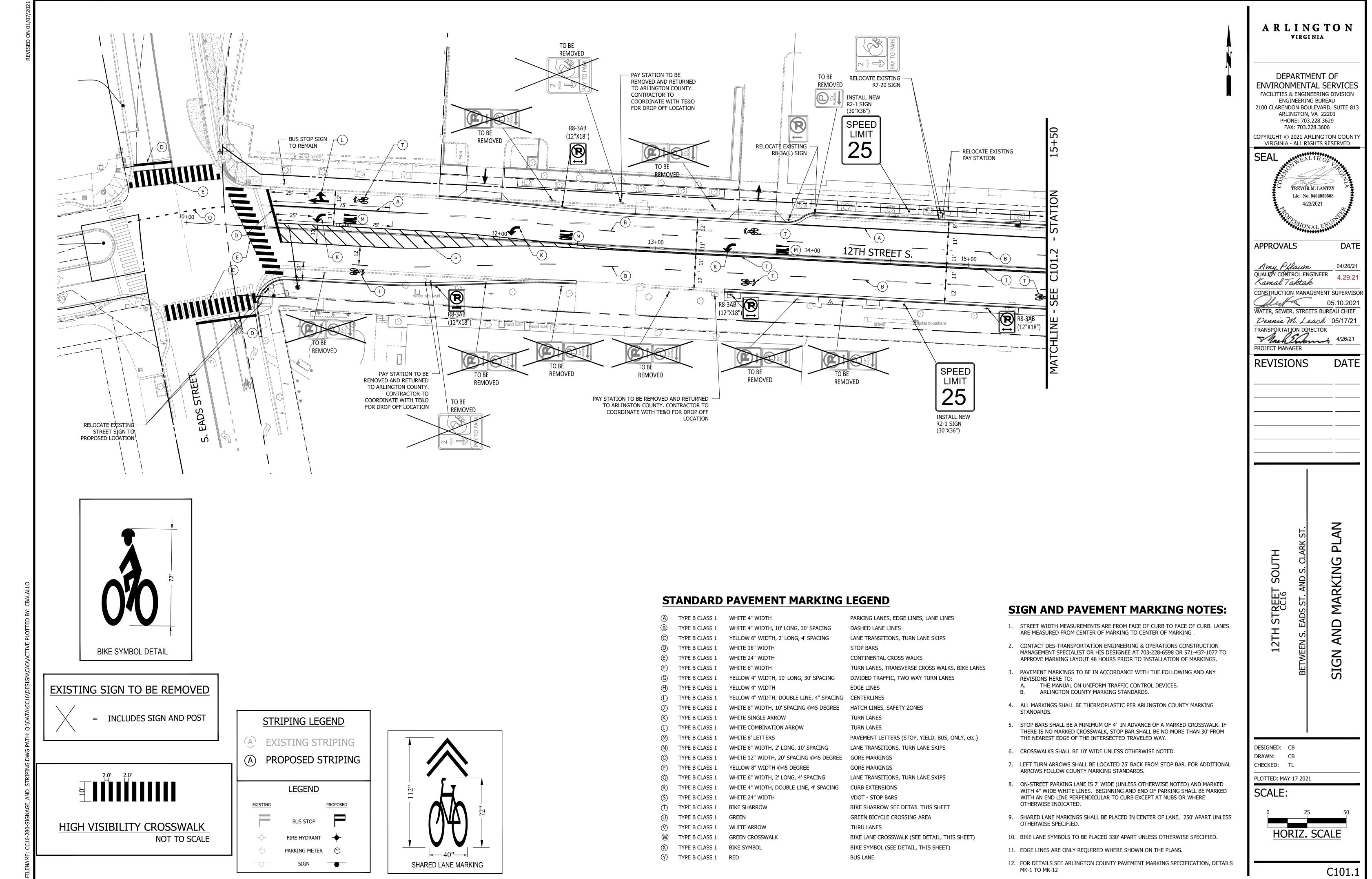
DETAILS IN ARLINGTON COUNTY.

48-HOURS OF INSTALLATION,

PER THE SPECIFICATIONS.

ONCE AT INSTALLATION AND AGAIN WITHI

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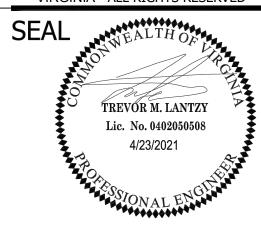




DEPARTMENT OF

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

Amy Pflaum QUALITY CONTROL ENGINEER Kamal Taktak

DATE

CONSTRUCTION MANAGEMENT SUPERVISO WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

PROJECT MANAGER

REVISIONS

Ŋ TREET CC16 Ċί

SIGN

DESIGNED: CB DRAWN: CB

CHECKED: TL

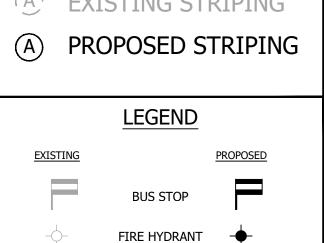
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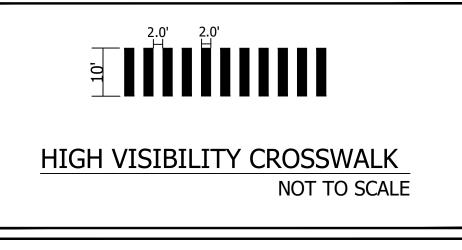
HORIZ. SCALE

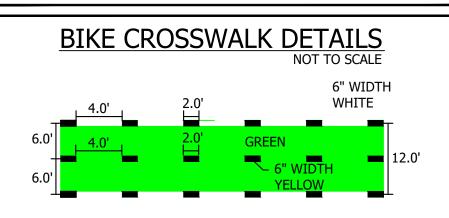
C101.2

STRIPING (A) EXISTING



PARKING METER

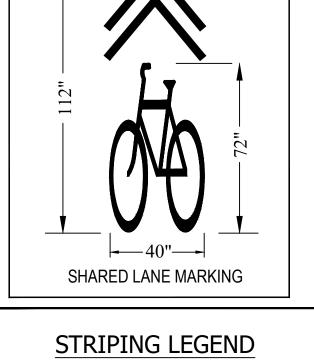




BIKE SYMBOL DETAIL

EXISTING SIGN TO BE REMOVED

INCLUDES SIGN AND POST



	$oldsymbol{eta}$	TYPE B CLASS 1	YELLOW 4" WIDTH	EDGE LINES
\mathbf{V}	1	TYPE B CLASS 1	YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINE
	①	TYPE B CLASS 1	WHITE 8" WIDTH, 10' SPACING @45 DEGREE	HATCH LINE
40"——	(K)	TYPE B CLASS 1	WHITE SINGLE ARROW	TURN LANES
NE MARKING	(TYPE B CLASS 1	WHITE COMBINATION ARROW	TURN LANES
	M	TYPE B CLASS 1	WHITE 8' LETTERS	PAVEMENT I
G LEGEND	\mathbb{N}	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANS
G LLGLIND	0	TYPE B CLASS 1	WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARK
	P	TYPE B CLASS 1	YELLOW 8" WIDTH @45 DEGREE	GORE MARK
IG STRIPING	Q	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANS
	R	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTEN
SED STRIPING	S	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STO
	\bigcirc	TYPE B CLASS 1	BIKE SHARROW	BIKE SHARR
	0	TYPE B CLASS 1	GREEN	GREEN BICY
GEND	\bigcirc	TYPE B CLASS 1	WHITE ARROW	THRU LANE
PROPOSED	(W)	TYPE B CLASS 1	GREEN CROSSWALK	BIKE LANE (
<u>FROFOSLD</u>	\otimes	TYPE B CLASS 1	BIKE SYMBOL	BIKE SYMBO
SSTOP	\bigcirc	TYPE B CLASS 1	RED	BUS LANE
' ,	\bigcirc	DETECTABLE DIREC	TIONAL WAYFINDING TILE	

STANDARD PAVEMENT MARKING LEGEND

WHITE 18" WIDTH

WHITE 24" WIDTH

WHITE 6" WIDTH

TYPE B CLASS 1 WHITE 4" WIDTH

TYPE B CLASS 1

WHITE 4" WIDTH, 10' LONG, 30' SPACING DASHED LANE LINES YELLOW 6" WIDTH, 2' LONG, 4' SPACING LANE TRANSITIONS, TURN LANE SKIPS STOP BARS CONTINENTAL CROSS WALKS TURN LANES, TRANSVERSE CROSS WALKS, BIKE LANES YELLOW 4" WIDTH, 10' LONG, 30' SPACING DIVIDED TRAFFIC, TWO WAY TURN LANES EDGE LINES CENTERLINES HATCH LINES, SAFETY ZONES TURN LANES TURN LANES PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY, etc.) LANE TRANSITIONS, TURN LANE SKIPS GORE MARKINGS GORE MARKINGS LANE TRANSITIONS **CURB EXTENSIONS** VDOT - STOP BARS BIKE SHARROW SEE DETAIL THIS SHEET GREEN BICYCLE CROSSING AREA THRU LANES BIKE LANE CROSSWALK (SEE DETAIL, THIS SHEET) BIKE SYMBOL (SEE DETAIL, THIS SHEET)

PARKING LANES, EDGE LINES, LANE LINES

PAVEMENT MARKING NOTES:

- 1. STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.
- 2. 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.
- 3. PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY **REVISIONS HERE TO:**
- THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ARLINGTON COUNTY MARKING STANDARDS.
- 4. ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
- 5. STOP BARS SHALL BE A MINIMUM OF 4' IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHALL BE NO MORE THAN 30' FROM THE
- 6. CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
- 7. LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL
- ARROWS FOLLOW COUNTY MARKING STANDARDS.
- 8. ON-STREET PARKING LANE IS 7' WIDE (UNLESS OTHERWISE NOTED) AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT NUBS OR WHERE OTHERWISE INDICATED.
- 9. SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
- 10. BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.
- 11. EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.

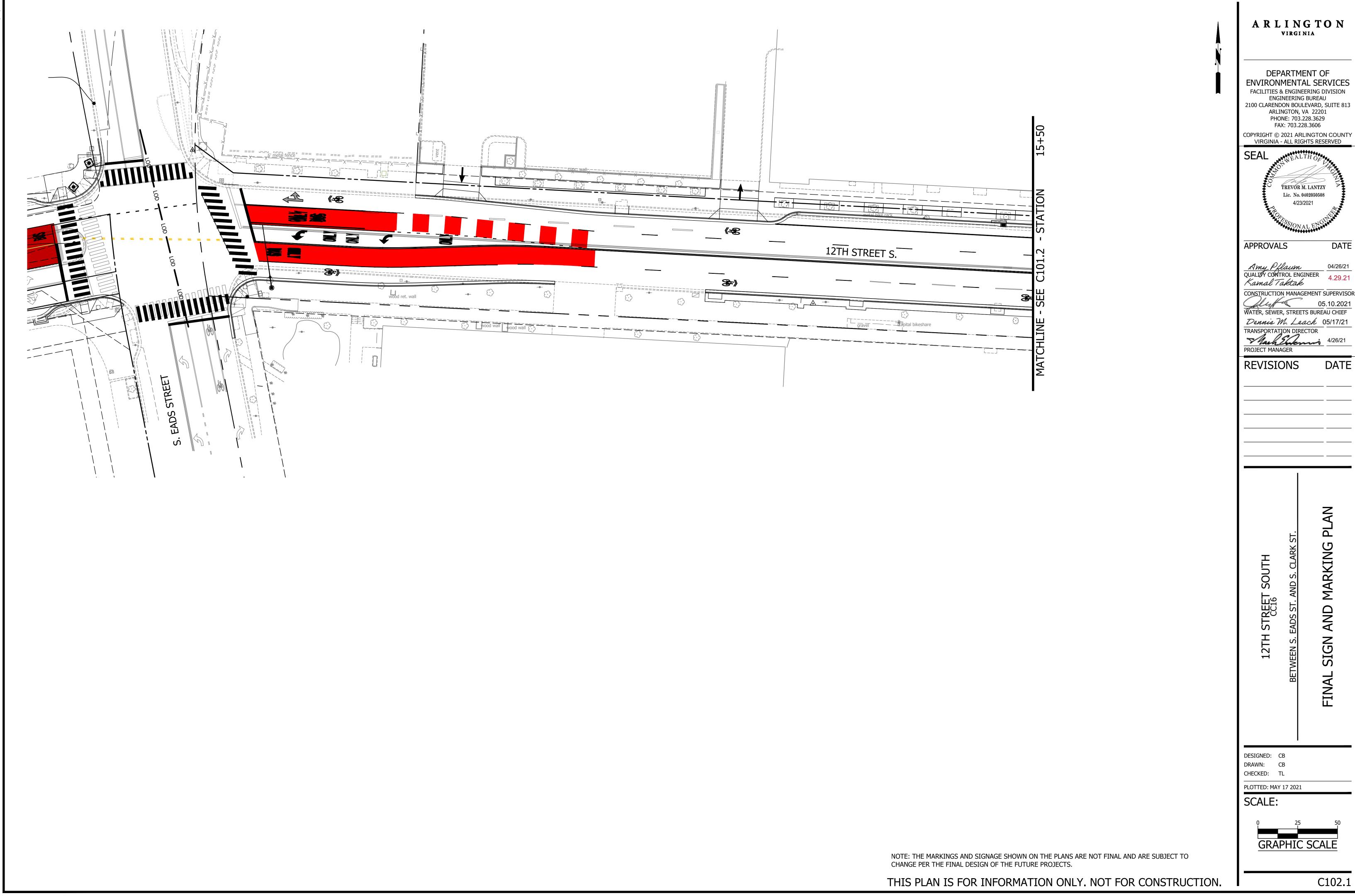
NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.

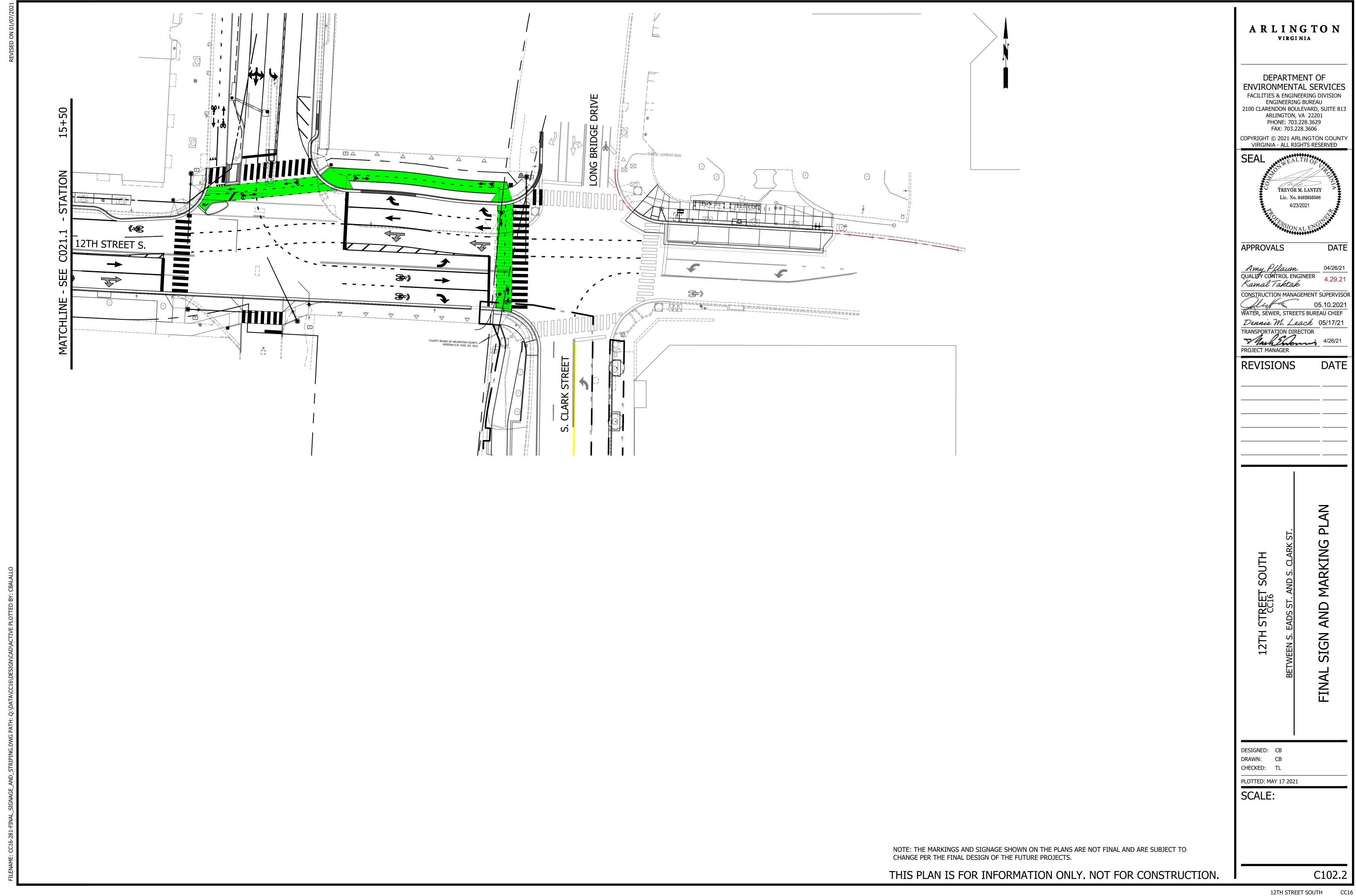
12. FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATION, DETAILS MK-1 TO MK-12

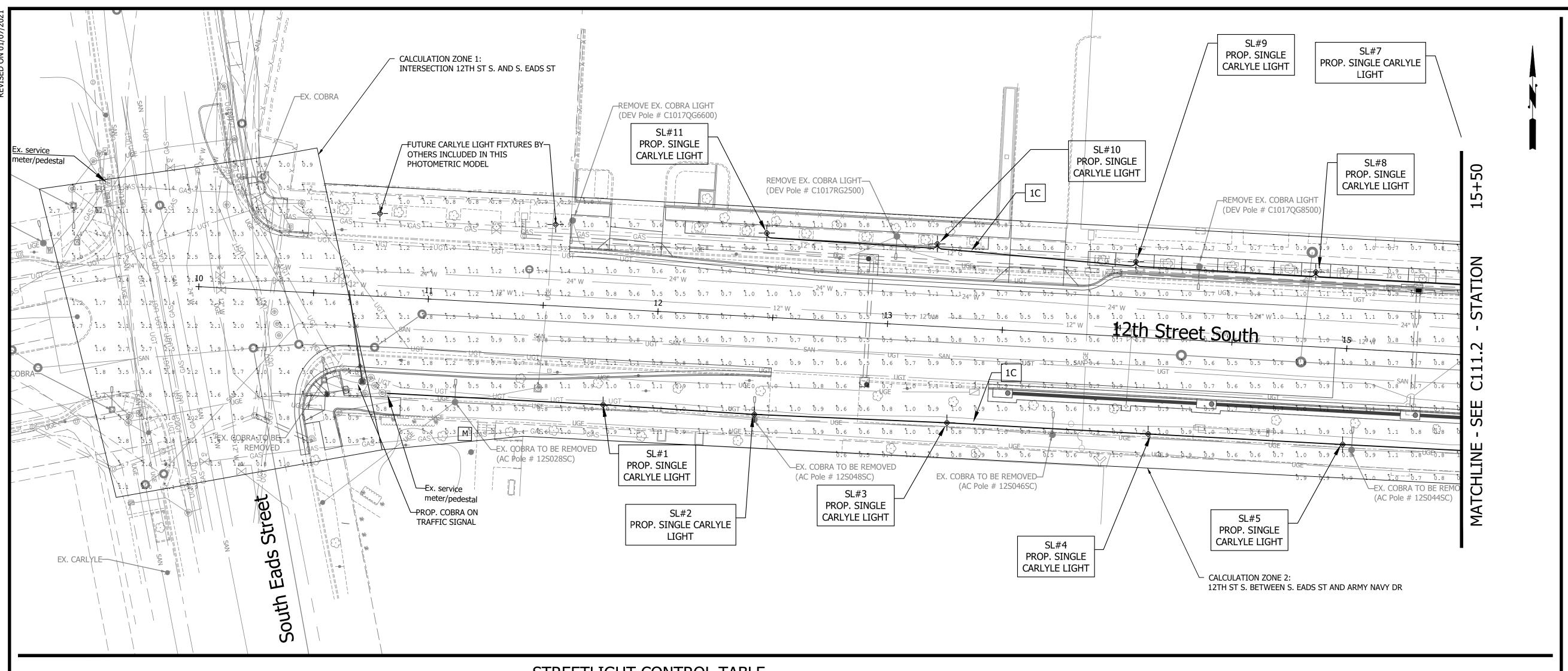
SIGN NOTES:

- 1. FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE HEAVY DUTY ANCHOR (30"X2.50") WITH HARDWARE FOR 2" POST. USE $\frac{5}{16}$ " CORNER BOLT WITH FLANGED NUT AND 3" DRIVER RIVET WITH WASHER.
- 2. CONTACT TE&O CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 48 HRS PRIOR TO POURING CONCRETE. ALTERNATIVE CONTACT AT 703-228-3788 OR 571-414-7497.

12TH STREET SOUTH CC16







CONSTRUCTION NOTES AND LEGENDS:

SL# CONTRACTOR SHALL FURNISH AND INSTALL LED SINGLE POST-TOP LUMINAIRE FIXTURE ON 16' POLE, 24" DIA. AND 48" DEPTH FOUNDATION PER AC LIGHTING STANDARD DRAWING NO. 14060-01 & 14112-01 AND AC LIGHTING SPECIFICATION SECTION 14060, 14080 &

JB CONTRACTOR SHALL INSTALL JUNCTION BOX PER AC LIGHTING SPECIFICATION SECTION: JUNCTION BOXES AND LIGHTING STANDARDS

JB1 - SMALL JUNCTION BOX (DRAWING NO. 14040-01) JB2 - LARGE JUNCTION BOX (DRAWING NO. 14040-02)

1C CONTRACTOR SHALL FURNISH AND INSTALL 1 - 2" SCHEDULE 40 PVC OR 1-2" SCHEDULE 80 HDPE/SDR11 CONDUIT 24" BELOW FINISH GRADE PER AC LIGHTING STANDARD DRAWING NO. 14030-01

STREETLIGHT CONTROL TABLE

	S	REETLIGI	HT CONTE	ROL
SL #	POLE ID	STATION (12th Street S.)	OFFSET (© POLE)	TYPE
SL#1	12S0412S	11+78.4	41.9 (RIGHT)	SINGLE CARLYLE
SL#2	12S0410S	12+44.3	42.4' (RIGHT)	SINGLE CARLYLE
SL#3	12S0408S	13+28.1	41.5' (RIGHT)	SINGLE CARLYLE
SL#4	12S0406S	14+15.8	41.6' (RIGHT)	SINGLE CARLYLE
SL#5	12S0404S	15+00.5	41.8' (RIGHT)	SINGLE CARLYLE
SL#6	12S0402S	15+77.6	41.4' (RIGHT)	SINGLE CARLYLE

	ST	REETLIG	HT CON	TROL
SL #	POLE ID	STATION 12th Street S.)	OFFSET (© POLE)	TYPE
SL#7	12S0401S	15+68.3	32.7' (LEFT)	SINGLE CARLYLE
SL#8	12S0403S	14+84.3	32.5' (LEFT)	SINGLE CARLYLE
SL#9	12S0405S	14+06.4	32.8' (LEFT)	SINGLE CARLYLE
SL#10	12S0407S	13+19.8	35.9' (LEFT)	SINGLE CARLYLE
SL#11	12S0409S	12+45.5	36.6' (LEFT)	SINGLE CARLYLE

STREETLIGHT JUNCTION BOXES CONTROL TABLE

		Calculation	n Summa	ry				
Zone	e Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
1:	Intersection: 12th St S and S Eads St	Illuminance	Fc	2.19	4.5	0.5	4.38	9.00
2:	12th St S between S Eads St and Army NavY Dr	Illuminance	Fc	0.95	3.7	0.3	3.17	12.33
3:	Intersection: 12th St S and Army Navy Dr	Illuminance	Fc	2.03	4.8	0.3	6.77	16.00
4:	12th St S between Army Navy Dr and S Clark St	Illuminance	Fc	0.81	3.4	0.1	8.10	34.00
5:	Intersection: 12th St S and S Clark St	Illuminance	Fc	2.25	4.6	0.3	7.50	15.33
		•		•	•	-		

S	REETLIGI	HT CONTROL	
JB # JUNCTION BOX ID	STATION 12th Street S.)	OFFSET (CENTER JUNCTION BOX)	TYPE
JB2 #1	15+88.6	40.3' (RIGHT)	LARGE JUNCTION BOX
JB2 #2	15+72.4	31.4' (LEFT)	LARGE JUNCTION BOX

		CC16 - 12th STR	KEET SOU	TH_ SC	HEDULE	OF ELEC	TRICAL	SER	VICE
CIRCUIT		STREETLIGHTS SERVED	CONNECTI	ED LOAD	PHASE AND	BRANCH CIRCUIT	FRAME	TRIP	REMARKS
NUMBER		STREETEIGHTS SERVED	KW	AMPS	VOLTS	BREAKER S	SIZE	SIZE	KLMAKKS
CKT-1	RUN A/B	POLE NO. 1, 2 3, 4, 5, 6, 7, 8, 9, 10 and 11	0.759	6.33	1/120	2	100	20	11 - single luminaire carlyle pole (1 - 69W LED PER POLE)
		TOTAL	0.76	6.33					CARLYLE SINGLE LUMINAIRE LED = 0.48 AMPERE
									CARLYLE = 69 WATTS

STREET LIGHT VOLTAGE	DROP CALCULATION			
Per AC Streetlight Stand	lards and Specification - A	Acceptable Voltage Dro	op is 5% max at the furthest i	receptacle
Streetlight Types:				
1. 11 each - Single Carly	e - 69W GX4 350mA Type	V 4000K LED		
Amperes required per L	ED Light is 0.48A			
For #6 AWG copper cab	e, effective impedance u	sed in the calculation	is 0.3951 ohms/1000 ft.	

(SL#1, #3, #5, #	4 7, #9 & #1	11)						
CKT#	FROM	то	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. M	ETER	5	#6 AWG	N/A	6	6.48	0.01
CKT1-1A	METER	SL#1	94	#6 AWG	1	1	1.08	0.04
CKT1-1A	SL#1	SL#3	150	#6 AWG	1	2	2.16	0.13
CKT1-1A	SL#3	SL#5	173	#6 AWG	1	3	3.24	0.22
CKT1-1A	SL#5	SL#7	166	#6 AWG	1	4	4.32	0.28
CKT1-1A	SL#7	SL#9	170	#6 AWG	1	5	5.40	0.36
CKT1-1A	SL#9	SL#11	170	#6 AWG	1	6	6.48	0.44
			Total Voltag	ge Drop of C	ircuit Run#	1A at last p	oole (V):	1.48
			Percent Vol	tage Drop f	or Circuit Ru	ın # 1A at la	st pole:	1.24%

CKT#	FROM	то	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
PANEL FEED	EX. MI	ETER	5	#6 AWG	N/A	5	5.40	0.01
CKT1-1B	METER	SL#2	160	#6 AWG	1	1	1.08	0.07
CKT1-1B	SL#2	SL#4	172	#6 AWG	1	2	2.16	0.15
CKT1-1B	SL#4	SL#6	162	#6 AWG	1	3	3.24	0.21
CKT1-1B	SL#6	SL#8	180	#6 AWG	1	4	4.32	0.31
CKT1-1B	SL#8	SL#10	170	#6 AWG	1	5	5.40	0.36
			Total Voltag	e Drop of C	ircuit Run#	1B at last p	ole (V):	1.10
			Percent Vol	tage Drop f	or Circuit Ru	n # 1B at la	st pole:	0.92%

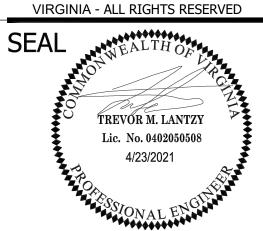
GENERAL NOTES:

- CONDUIT RUN LOCATIONS ARE APPROXIMATE ONLY. FIELD LOCATE ALIGNMENT.
- INSTALLING CONDUITS EITHER BY TRENCHING AND/OR BORING WILL BE AT THE CONTRACTOR DISCRETION. HOWEVER, AT ANY ROADWAY CROSSING E.G. INTERSECTIONS AND DRIVEWAY ENTRANCES SHALL BE INSTALLED BY BORING ONLY UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER FOR THIS PROJECT, MEASUREMENT AND PAYMENT FOR TRENCHING AND/OR DIRECT BORE WILL BE CONSIDERED AS THE SAME UNIT BID PRICE.
- CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 24" BELOW THE SURFACE.
- CONTRACTOR SHALL COORDINATE LOCATION OF THE CONDUIT WITH THE PLACEMENT OF PROPOSED LANDSCAPING.
- CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH DOMINION VIRGINIA POWER.
- THE METERED SERVICE PEDESTAL SHALL BE MIDWEST COMPANY MODEL NUMBERS R281C1P6H OR R208CP6HP AND NO SUBSTITUTIONS WILL BE ALLOWED. SEE SECTION 14100: ELECTRICAL SERVICE FOR MORE DETAILS.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO NEC STANDARDS.
- ALL FOUNDATIONS OF POLES THAT ARE TO BE RELOCATED OR REMOVED SHALL BE REMOVED A MINIMUM OF 12 INCHES BELOW GRADE AND BACKFILLED.
- CONTRACTOR TO COORDINATE THE **EXACT LOCATION OF SERVICE METERS** AND ASSOCIATED CONDUIT WITH ARLINGTON COUNTY AND DOMINION VIRGINIA POWER.
- THE PROPOSED PROJECT WILL PROVIDE TEST HOLES INFORMATION. HOWEVER, THIS DOES NOT REMOVE THE RESPONSIBILITIES FROM THE CONTRACTOR TO INVESTIGATE THE SITE PRIOR TO START OF ANY CONSTRUCTION ACTIVITIES.
- 11. CONTRACTOR IS RESPONSIBLE FOR USING THE PROPER MEANS AND METHODS OF CONSTRUCTION TO INSTALL THE PROPOSED STREETLIGHTS, CONDUITS AND FOUNDATIONS. IT IS RECOMMENDED FOR CONTRACTOR TO PROBE OR EXPLORE THE WORK SITE UTILITY NOT SHOWN ON THE PLAN. PROBING AND EXPLORING ARE CONSIDERED INCIDENTAL FOR INSTALLING THE PROPOSED STREETLIGHT COMPLETE AND NO
- 12. ALL ELECTRICAL UTILITIES FED/UNDERGROUND CONDUCTOR SHALL COMPLY WITH THE LATEST VERSION OF ARLINGTON COUNTY LIGHTING STANDARDS AND SPECIFICATIONS.

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 COPYRIGHT © 2021 ARLINGTON COUNT



APPROVALS DATE

QUALITY CONTROL ENGINEER Kamal Taktak

CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

TRANSPORTATION DIRECTOR
4/26/21 PROJECT MANAGER

REVISIONS

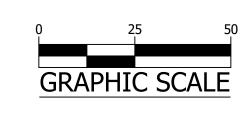
AREA FOR ANY POSSIBLE CONFLICT WITH SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE.

ETLIGHT Ŋ REET CC16 S TRE 7

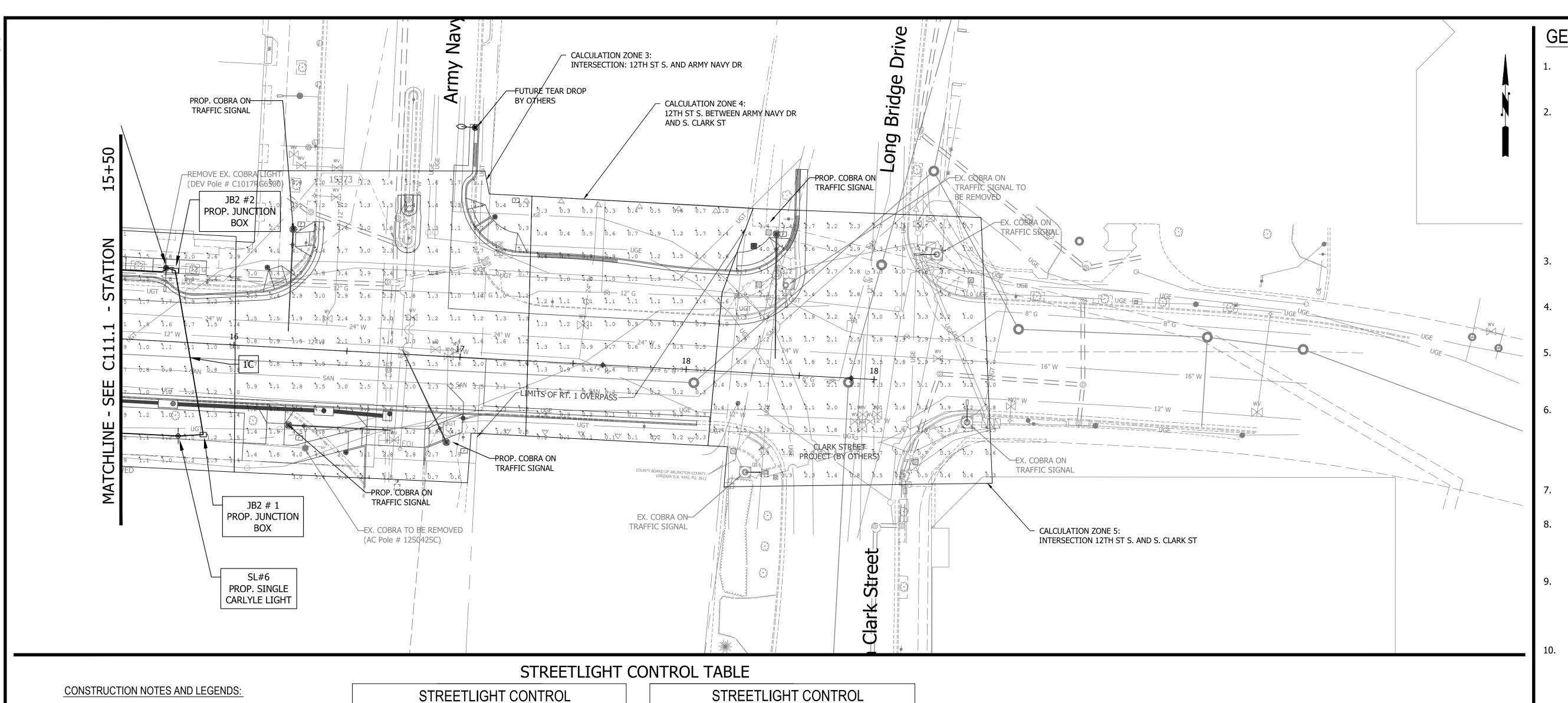
DESIGNED: **CB** DRAWN: CB CHECKED: TL

PLOTTED: MAY 17 2021

SCALE:



C111.1



SL# CONTRACTOR SHALL FURNISH AND INSTALL LED SINGLE POST-TOP LUMINAIRE FIXTURE ON 16' POLE, 24" DIA. AND 48" DEPTH FOUNDATION PER AC LIGHTING STANDARD DRAWING NO. 14060-01 & 14112-01 AND AC LIGHTING SPECIFICATION SECTION 14060, 14080 &

JB CONTRACTOR SHALL INSTALL JUNCTION BOX PER AC LIGHTING SPECIFICATION SECTION: JUNCTION BOXES AND LIGHTING STANDARDS

JB1 - SMALL JUNCTION BOX (DRAWING NO. 14040-01) JB2 - LARGE JUNCTION BOX (DRAWING NO. 14040-02)

1C CONTRACTOR SHALL FURNISH AND INSTALL 1 - 2" SCHEDULE 40 PVC OR 1-2" SCHEDULE 80 HDPE/SDR11 CONDUIT 24" BELOW FINISH GRADE PER AC LIGHTING STANDARD DRAWING NO. 14030-01

			11 001111	102
SL#	POLE ID	STATION (12th Street S.)	OFFSET (@ POLE)	TYPE
SL#1	12S0412S	11+78.4	41.9 (RIGHT)	SINGLE CARLYLE
SL#2	12S0410S	12+44.3	42.4' (RIGHT)	SINGLE CARLYLE
SL#3	12S0408S	13+28.1	41.5' (RIGHT)	SINGLE CARLYLE
SL#4	12S0406S	14+15.8	41.6' (RIGHT)	SINGLE CARLYLE

15+00.5 41.8' (RIGHT) SINGLE CARLYLE

15+77.6 41.4' (RIGHT) SINGLE CARLYLE

	ST	REETLIG	HT CON	TROL
SL#	POLE ID	STATION 12th Street S.)	OFFSET (© POLE)	TYPE
SL#7	12S0401S	15+68.3	32.7' (LEFT)	SINGLE CARLYLE
SL#8	12S0403S	14+84.3	32.5' (LEFT)	SINGLE CARLYLE
SL#9	12S0405S	14+06.4	32.8' (LEFT)	SINGLE CARLYLE
SL#10	12S0407S	13+19.8	35.9' (LEFT)	SINGLE CARLYLE
SL#11	12S0409S	12+45.5	36.6' (LEFT)	SINGLE CARLYLE

STREETLIGHT JUNCTION BOXES CONTROL TABLE

			Calculatio	n Summa	iry				
Ī	Zone	e Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Ī	1:	Intersection: 12th St S and S Eads St	Illuminance	Fc	2.19	4.5	0.5	4.38	9.00
Ī	2:	12th St S between S Eads St and Army NavY Dr	Illuminance	Fc	0.95	3.7	0.3	3.17	12.33
Ī	3:	Intersection: 12th St S and Army Navy Dr	Illuminance	Fc	2.03	4.8	0.3	6.77	16.00
Ī	4:	12th St S between Army Navy Dr and S Clark St	Illuminance	Fc	0.81	3.4	0.1	8.10	34.00
Ī	5:	Intersection: 12th St S and S Clark St	Illuminance	Fc	2.25	4.6	0.3	7.50	15.33

SL#5

12S0404S

SL#6 | 12S0402S |

SI	REETLIGI	HT CONTROL	
JB # JUNCTION BOX ID	STATION 12th Street S.)	OFFSET (CENTER JUNCTION BOX)	TYPE
JB2 #1	15+88.6	40.3' (RIGHT)	LARGE JUNCTION BOX
JB2 #2	15+72.4	31.4' (LEFT)	LARGE JUNCTION BOX

		CC16 - 12th STR	EET SOU	11H_ 5C	HEDULE	OF ELEC	IRICAL	SER	VICE
CIRCUIT	0 -	STREETLIGHTS SERVED	CONNECTI	ED LOAD	PHASE AND	BRANCH CIRCUIT	FRAME	TRIP	REMARKS
NUMBER		STREETEIGHTS SERVED	KW	AMPS	VOLTS	BREAKER S	SIZE	SIZE	KEMAKO
CKT-1	RUN A/B	POLE NO. 1, 2 3, 4, 5, 6, 7, 8, 9, 10 and 11	0.759	6.33	1/120	2	100	20	11 - single luminaire carlyle pole (1 - 69W LED PER POLE)
		TOTAL	0.76	6.33					CARLYLE SINGLE LUMINAIRE LED = 0.48 AMPERE
									CARLYLE = 69 WATTS

Streetlight Ty	pes:							
1. 11 each - Si	ngle Carly	le - 69W	GX4 350mA	Type V 400	OK LED			
Amperes requ	uired per L	ED Light	is 0.48A					
For #6 AWG c	opper cab	le, effec	tive impeda	nce used in	the calculat	tion is 0.39!	51 ohms/1000 f	t.
CIDCLUT BUIL	#44 VOI	TACED	OD FDOM F	UCTINIC NAT	TED (CEDIAL	NO WWW	(V) TO CIV (C) C	A DI VI E DOI EC
			KOP FROIVI E	USTING IVIE	TER (SERIAL	NO. XXXX	XX) TO SIX (6) C	ARLYLE POLES
(SL#1, #3, #5, #			СКТ	WIRE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS	AMPERES	VOLTAGE DROP IN THIS
CKT# PANEL FEED	FROM	TO	LENGTH	#6 AWG		ON CKT	THRU CABLE	SECTION
CKT1-1A	EX. MI METER	SL#1	5 94	#6 AWG	N/A 1	1	6.48 1.08	0.01
CKT1-1A	SL#1	SL#1	150	#6 AWG	1	2	2.16	0.04
CKT1-1A	SL#3	SL#5	173	#6 AWG	1	3	3.24	0.13
CKT1-1A	SL#5	SL#7	166	#6 AWG	1	4	4.32	0.22
CKT1-1A	SL#7	SL#9	170	#6 AWG	1	5	5.40	0.36
CKT1-1A	SL#9	SL#11	170	#6 AWG	1	6	6.48	0.36
CK11-1A	3L#9	3L#11	Total Voltag				1	1.48
			Percent Vol					1.48
			referit voi	tage Diop i	or circuit ite	11 # 1A at 16	ast pole.	1.24/0
CIRCUIT RUN POLES (SL#2, #			ROP FROM EX	ISTING ME	TER (SERIAL		(X) TO FIVE (5)	
CKT#	FROM	то	CKT LENGTH	WIRE SIZE	QTY. OF LIGHTS ON POLE	TOTAL QTY. OF LIGHTS ON CKT	AMPERES THRU CABLE	VOLTAGE DROP IN THIS SECTION
	EX. MI		5	#6 AWG	N/A	5	5.40	0.01
PANEL FEED	TO VIEW TO THE TOTAL TOT		160	#6 AWG	1	1	1.08	0.07
CKT1-1B	METER	SL#2				2	2.16	0.15
CKT1-1B CKT1-1B	SL#2	SL#4	172	#6 AWG	1			
CKT1-1B CKT1-1B CKT1-1B				#6 AWG #6 AWG	1	3	3.24	0.21
CKT1-1B CKT1-1B	SL#2	SL#4	172			3 4	3.24 4.32	0.21 0.31
CKT1-1B CKT1-1B CKT1-1B	SL#2 SL#4	SL#4 SL#6	172 162 180 170	#6 AWG #6 AWG #6 AWG	1 1 1	3 4 5	4.32 5.40	0.31 0.36
CKT1-1B CKT1-1B CKT1-1B CKT1-1B	SL#2 SL#4 SL#6	SL#4 SL#6 SL#8	172 162 180	#6 AWG #6 AWG #6 AWG	1 1 1	3 4 5	4.32 5.40	0.31

Per AC Streetlight Standards and Specification - Acceptable Voltage Drop is 5% max at the furthest receptacle

16-Feb-21

PROJECT: CC16 - 12th Street South Complete Street Project

STREET LIGHT VOLTAGE DROP CALCULATION

GENERAL NOTES:

CONDUIT RUN LOCATIONS ARE APPROXIMATE ONLY. FIELD LOCATE ALIGNMENT.

INSTALLING CONDUITS EITHER BY TRENCHING AND/OR BORING WILL BE AT THE CONTRACTOR DISCRETION. HOWEVER, AT ANY ROADWAY CROSSING E.G. INTERSECTIONS AND DRIVEWAY ENTRANCES SHALL BE INSTALLED BY BORING ONLY UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER FOR THIS PROJECT, MEASUREMENT AND PAYMENT FOR TRENCHING AND/OR DIRECT BORE WILL BE CONSIDERED AS THE SAME UNIT BID PRICE.

CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 24" BELOW THE SURFACE.

CONTRACTOR SHALL COORDINATE LOCATION OF THE CONDUIT WITH THE PLACEMENT OF PROPOSED LANDSCAPING.

CONTRACTOR SHALL COORDINATE SERVICE DISCONNECTS AND CONNECTIONS WITH DOMINION VIRGINIA POWER.

THE METERED SERVICE PEDESTAL SHALL BE MIDWEST COMPANY MODEL NUMBERS R281C1P6H OR R208CP6HP AND NO SUBSTITUTIONS WILL BE ALLOWED. SEE SECTION 14100: ELECTRICAL SERVICE FOR MORE DETAILS.

ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO NEC STANDARDS.

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CONTRACTOR TO COORDINATE THE **EXACT LOCATION OF SERVICE METERS** AND ASSOCIATED CONDUIT WITH ARLINGTON COUNTY AND DOMINION VIRGINIA POWER.

THE PROPOSED PROJECT WILL PROVIDE TEST HOLES INFORMATION. HOWEVER, THIS DOES NOT REMOVE THE RESPONSIBILITIES FROM THE CONTRACTOR TO INVESTIGATE THE SITE PRIOR TO START OF ANY CONSTRUCTION ACTIVITIES.

11. CONTRACTOR IS RESPONSIBLE FOR USING THE PROPER MEANS AND METHODS OF CONSTRUCTION TO INSTALL THE PROPOSED STREETLIGHTS, CONDUITS AND FOUNDATIONS. IT IS RECOMMENDED FOR CONTRACTOR TO PROBE OR EXPLORE THE WORK SITE UTILITY NOT SHOWN ON THE PLAN. PROBING AND EXPLORING ARE CONSIDERED INCIDENTAL FOR INSTALLING THE PROPOSED STREETLIGHT COMPLETE AND NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE.

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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DATE APPROVALS Amy Pflaum

QUALITY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR
4/26/21 PROJECT MANAGER

REVISIONS

AREA FOR ANY POSSIBLE CONFLICT WITH

12. ALL ELECTRICAL UTILITIES FED/UNDERGROUND CONDUCTOR SHALL COMPLY WITH THE LATEST VERSION OF ARLINGTON COUNTY LIGHTING STANDARDS AND SPECIFICATIONS.

ETLIGHT S REET CC16 S TRE .7 DESIGNED: CB DRAWN: CB CHECKED: TL PLOTTED: MAY 17 2021

C111.2

HORIZ. SCALE

SCALE:

TRANSPORTATION MANAGEMENT PLAN (TMP) (TYPE B - CATEGORY IV)

Temporary Traffic Control Plan

MAINTENANCE OF TRAFFIC GENERAL NOTES:

UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THE FOLLOWING:

- 1. THE CONTRACTOR SHALL FOLLOW THE MAINTENANCE OF TRAFFIC (M.O.T.) REQUIREMENTS SET FORTH IN THIS PLAN. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH RELEVANT STANDARDS AND GUIDELINES AS SET FORTH IN THE LATEST ADOPTED VERSIONS OF THE FOLLOWING:
 - 2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2 SEPTEMBER 1 2019) 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1 AND 2) 2011 VIRGINIA SUPPLEMENT TO 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1) 2016 VDOT ROAD AND BRIDGE STANDARDS 2020 VDOT ROAD AND BRIDGE SPECIFICATIONS
 - 2016 VDOT LANE CLOSURE GUIDELINES FOR NORTHERN VIRGINIA (SEPTEMBER 21, 2016) 2013 ARLINGTON COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS
- 2. ACCESS TO ALL ROADWAYS, DRIVEWAYS AND PROPERTIES SHALL BE MAINTAINED AND PROVIDED AT ALL TIMES.
- 3. PAVING DURING CONSTRUCTION PHASES SHALL BE CARRIED THROUGH BASE COURSE. FINAL SURFACE COURSE SHALL BE PLACED ONLY AFTER SUBSTANTIAL COMPLETION OF MAJOR PHASES.
- 4. CONSTRUCTION SIGNS ARE TO BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 512 OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.
- 5. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROMPTLY REMOVED AT THE COMPLETION OF WORK.
- ALL TEMPORARY CONSTRUCTION PAVEMENT MARKING SHALL BE TYPE D, CLASS II.
- 7. REMOVAL OF EXISTING PAVEMENT MARKING SHALL BE ACCORDING TO SECTION 512.03 (J) OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.
- 8. THE CONTRACTOR IS REQUIRED TO MEET ALL OF THE DROP-OFF REQUIREMENTS SHOWN IN FIGURE 2 OF APPENDIX A OF THE VIRGINIA WORK AREA PROTECTION MANUAL. COST OF PLACING AND REMOVING THE WEDGE IS CONSIDERED INCIDENTAL.
- 9. ALL NEW AND TEMPORARY PAVEMENT MARKINGS SHALL TIE INTO THE EXISTING PAVEMENT MARKINGS AT TIE-IN POINTS. ALL OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED.
- 10. THE ALLOWABLE LANE CLOSURE HOURS SHALL BE IN ACCORDANCE WITH TABLE 1 SHOWN ON SHEET C120.2. THE CONTRACTOR WILL NOT BE ALLOWED TO PERFORM ANY LANE CLOSURES DURING PEAK HOURS. ALL TEMPORARY LANE CLOSURES MUST CONFORM TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL STANDARDS.
- 11. UNLESS PREAPPROVED OR OTHERWISE NOTED, ALLOWABLE HOURS FOR ALL LANE AND SHOULDER CLOSURES SHALL BE IN ACCORDANCE WITH THE INFORMATION SHOWN ON TABLE 1 ON SHEET C120.2, AND THE LANE CLOSURES IN NOVA DISTRICT MEMORANDUM, DATED SEPTEMBER 29, 2016.
- 12. ANY REQUEST FOR DEVIATION FROM THE ALLOWABLE LANE CLOSURE HOURS MUST BE SUBMITTED TO VDOT AND ARLINGTON COUNTY FOR REVIEW A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WORK.
- 13. LANE AND SHOULDER CLOSURE HOURS OF OPERATION MAY BE ADJUSTED BY VDOT AND ARLINGTON COUNTY DURING THE CONTRACT AT ANY TIME, AS NECESSARY, IF HEAVY VOLUME OR SIGNIFICANT QUEUING ROUTINELY DEVELOP AS A RESULT OF THE PROJECT.
- 14. WHEN SHOULDER CLOSURES WITH BARRIER OPERATIONS ARE PERFORMED THE CONTRACTOR MUST CONFORM TO 2011 VIRGINIA WORK AREA PROTECTION MANUAL TTC-7.1 STANDARD. BARRIER MUST INCLUDE PANELS, DELINEATORS AND LIGHTS IN ACCORDANCE WITH TTC-7.1.
- 15. TEMPORARY CONNECTIONS AND PHASED CONSTRUCTION SHALL BE CONSTRUCTED AND COMPLETED IN A MANNER WHICH WILL MINIMIZE DISRUPTION OF TRAFFIC.
- 16. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED BY THE CONTRACTOR AS NECESSARY FOR EACH PHASE. THE MESSAGES ON THE PCMS SHALL BE DISPLAYED UPON APPROVAL FROM VDOT AND ARLINGTON COUNTY ENGINEER. THE FIRST MESSAGE SHALL BE DISPLAYED THREE (3) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION TO NOTIFY THE PUBLIC OF THE DATE CONSTRUCTION WILL BEGIN. ANY CHANGE OF TRAFFIC PATTERNS MUST ALSO BE COMMUNICATED VIA PCMS THREE (3) WEEKS PRIOR TO THE START OF THOSE CHANGES.
- 17. AS DETAILED IN SECTION 105.14(b) OF THE 2020 ROAD AND BRIDGE SPECIFICATIONS, REMOVAL OF SNOW AND CONTROL OF ICE ON ROADS OPEN TO PUBLIC TRAVEL WILL BE PERFORMED BY VDOT FOR VDOT ROADWAYS. FOR COUNTY ROADS, THE OPERATION WILL BE PERFORMED BY THE ARLINGTON COUNTY.
- 18. THE CONTRACTOR MUST NOTIFY AND/OR COORDINATE WITH THE VARIOUS LOCAL AREA EMERGENCY SERVICES (AND SCHOOLS, DEPENDING ON TIME OF YEAR) OF ALL CLOSURES, TIMES AND ANY DETOUR ROUTES FOR SITUATIONAL
- 19. CONTRACTOR SHALL ONLY REFER TO AND FOLLOW THE SOC SHOWN ON THIS PLAN. ANY DEVIATION FROM THE SOC SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
- 20. CONTRACTOR SHALL BE RESPONSIBLE OF INSTALLING APPLICABLE WORK ZONE SIGNS PER VA WAPM TTC 35.1 AND 36.2 FOR ALL SIDEWALK AND CROSSWALK CLOSURES DURING CONSTRUCTION.
- 21. THE CONTRACTOR SHALL NOT BEGIN ANY LANE AND/OR SHOULDER CLOSURES IF HEAVY TRAFFIC OR SIGNIFICANT QUEUING AND BACKUPS ARE ALREADY PRESENT.
- 22. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT
- 23. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY ENGINEER SHALL RESTRICT PARKING BY CONTACTING THE DES - PERMITTING SECTION AT 703-228-4798.
- 24. DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.
- 25. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE ENGINEER. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
- 26. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL OR AS APPROVED BY THE ENGINEER.
- 27. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS SHOWN OTHERWISE ON THE PLANS.
- 28. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH
- 29. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER THE ADA REQUIREMENTS.
- 30. WHEN NECESSARY, 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 MID-BLOCK WORK SITES.
- 31. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.

- 32. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE
- 33. 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.
- 34. 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.
- 35. THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO THE TRANSIT STOPS OR ROUTES. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE A MINIMUM OF 11' WIDE UNLESS SHOWN OTHERWISE ON THE PLANS.
- 36. AT SIGNALIZED INTERSECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT, TRAFFIC SENSORS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF THIS PROJECT. THIS PAY ITEM IS COVERED UNDER THE PROPOSED TRAFFIC SIGNALS WORK.
- 37. CONTRACTOR SHALL COVER ANY EXISTING TRAFFIC SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THE MOT PLANS.
- 38. CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.
- 39. CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
- 40. CONTRACTOR SHALL PROVIDE 1 WEEK ADVANCE NOTIFICATION TO THE ARLINGTON COUNTY SIGNAL CONSTRUCTION MANAGER, TRANSPORTATION ENGINEERING AND OPERATION (TE&O) PRIOR TO CHANGING THE MOT PHASES AND/OR
- 41. IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDE THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY VDOT AND ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O). THE MOT PLAN CONTAIN TYPES OF SIGNAGES AND BARRICADES USED, AND RECOMMENDED PHASES AND SEQUENCES OF CONSTRUCTION.
- 42. EACH MOT PHASE AND STAGE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE/STAGE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 43. CONTRACTOR SHALL MAINTAIN A MINIMUM OF SINGLE TRAVEL LANE AT ALL TIMES DURING CONSTRUCTION WITH A MINIMUM CLEAR ROADWAY WIDTH NO LESS THAN THOSE SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 44. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COSTS FOR PLACING, MAINTAINING AND REMOVING BACKFILLED MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR RELATED ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 45. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF
- 46. UNLESS SPECIFIED ON THE PLANS, ALL EXISTING TURN LANES SHALL BE MAINTAINED AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION.
- 47. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AS DEFINED IN THE VA WAPM SHALL BE MAINTAINED.
- 48. ALL WORK AREAS (AND THE LIMITS THEREOF) AND LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL, (REVISION 2), THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 1 AND 2), THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS, (REVISION 2), THE 2008 VDOT ROAD AND BRIDGE STANDARDS AND LANE CLOSURES IN NOVA DISTRICT MEMORANDUM (SEPTEMBER 29 2016), AND SHALL BE DIRECTED OR
- 49. THE FOLLOWING TRAFFIC CONTROL SPECIFICATIONS FROM THE VIRGINIA WORK AREA PROTECTION MANUAL WILL BE USED AS NEEDED: TTCS-4.2, 16.2, 17.2, 28.2, 35.1, 36.2, 53.0, 57.2, 58.1.
- 50. THE STAGING AREA TO STORE EOUIPMENT AND MATERIALS WITHIN THE RIGHT OF WAY ARE NOT IDENTIFIED FOR EACH MOT PHASE. THE CONTRACTOR MUST MAKE ARRANGEMENTS FOR THESE AREAS ACCORDING TO VDOT POLICIES.
- 51. HAULING TRUCKS ENTERING AND EXITING THE WORK ZONE MUST HAVE A "WORK VEHICLE DO NOT FOLLOW" (G20-V1) VEHICLE-MOUNTED SIGN MOUNTED IN A CONSPICUOUS POSITION ON THE REAR OF THE VEHICLE ENTERING THE WORK SPACE TO LOAD/UNLOAD MATERIALS.
- 52. UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.
- 53. THE TRANSPORTATION MANAGEMENT PLAN AND TEMPORARY TRAFFIC CONTROL / SEQUENCE OF CONSTRUCTION (TMP/TTC) IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE OR STAGE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. ANY CHANGES TO THE TMP/TTC PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION THAT MAY AFFECT
- 54. PAVEMENT MARKINGS IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE ERADICATED/COVERED IN COMPLIANCE WITH VDOT'S ROAD AND BRIDGE SPECIFICATIONS SECTION 512.03(L).
- 55. THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING ROADWAYS AND COMMERCIAL/RESIDENTIAL ENTRANCES DURING CONSTRUCTION WITH TRAFFIC DRUMS OR OTHER CHANNELIZING DEVICES AS DIRECTED BY THE ENGINEER.
- 56. THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF SIGNS REMOVAL IS ALLOWED, CONTRACTOR SHALL STORE THE SIGNS PER VDOT STANDARDS. DEPENDING ON THE CONDITION OF THE CONSTRUCTION SIGNS, CONTRACTOR MAY BE REQUIRED TO REPLACE THEM IF DIRECTED BY THE ENGINEER.
- 57. ALL WORK VEHICLES SHALL BE EQUIPPED WITH WARNING LIGHTS WHICH SHALL BE A HIGH INTENSITY AMBER ROTATING, FLASHING, OSCILLATING OR STROBE LIGHT OR IN COMBINATION. THESE WARNING LIGHTS SHALL MEET THE STANDARDS AND REQUIREMENTS OF THE VA WAPM SHOWN IN SECTION 6F.95.
- 58. TEMPORARY LANE WIDTHS SHALL NOT BE LESS THAN 11' FOR TRAVEL LANES UNLESS NOTED OTHERWISE ON PLANS.
- 59. THE CONTRACTOR SHALL STORE ALL EQUIPMENT AND MATERIALS BEHIND BARRIERS/TRAFFIC DRUMS AND NOT WITHIN THE ESTABLISHED CLEAR ZONE OF THE TRAVEL LANES AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS.
- 60. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR THE MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
- 61. THE RECOMMENDED PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) MESSAGES AS ADVANCE NOTIFICATION OR AS PART OF THE LANE CLOSURE/DETOUR DURING CONSTRUCTION ARE SHOWN ON EACH APPLICABLE PLAN SHEET. ALL PCMS UNITS SHOWN ON PLANS SHALL BE PLACED THREE (3) WEEKS PRIOR TO THE START OF EACH MOT SUB-PHASE AS ADVANCE NOTIFICATION. AFTER THE ADVANCE NOTIFICATION, ALL PROPOSED PCMS UNITS SHALL REMAIN AT THE RECOMMENDED LOCATION FOR ONE (1) WEEK AND WILL BE ACTIVATED FOR USE DURING LANE CLOSURE/DETOUR ONLY.

- 62. CERTIFIED FLAGGERS SHALL CARRY VALID CERTIFICATION CARDS AT ALL TIMES DURING CONSTRUCTION.
- 63. THE CONTRACTOR SHALL COORDINATE WORK AT COMMERCIAL/RESIDENTIAL ENTRANCES WITH AFFECTED PROPERTY AND BUSINESS OWNERS. CONTRACTOR SHALL ADHERE TO THE NOTES PROVIDED ON THIS PLAN SHEET, IN ADDITION TO THE GENERAL NOTES PROVIDED ON TTC PLAN SHEET C120.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.
- 64. THE CONTRACTOR SHALL PERFORM NECESSARY ADJUSTMENT DURING BOTH WORKING AND NON-WORKING HOURS TO ENSURE THE PROTECTION AND SAFETY OF ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT AND THE CONSTRUCTION
- 65. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS PEDESTRIAN ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.
- 66. THE CONTRACTOR SHALL NOT LEAVE ANY PORTION OF THE WORK ZONE WITH ANY OPEN TRENCHES UNATTENDED WHERE BARRIER IS NOT PRESENT. ON AREAS WHERE BARRIER IS NOT PRESENT, THE CONTRACTOR SHALL NOT MAKE PAVEMENT EXCAVATIONS OR OPENINGS TO A GREATER EXTENT THAT CANNOT BE REPLACED AND REPAYED DURING THE SAME WORKING DAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 67. THE CONTRACTOR SHALL PROVIDE SHADOW VEHICLE PARKED AT 80-120 FEET IN ADVANCE OF THE FIRST WORK CREW WITH TYPE B ARROW BOARD IN CAUTION MODE OR AT LEAST ONE HIGH INTENSITY AMBER ROTATING, FLASHING OR

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION (SOC) OF THESE MAINTENANCE OF TRAFFIC PLANS CONSISTS OF THE WORK FOR BOTH CC16 12TH STREET S. BETWEEN S. EADS ST AND S. CLARK ST, AND MA13 - SEGMENT I TRANSITWAY EXTENSION TO PENTAGON CITY AT CRYSTAL DR. AND 12TH ST S PROJECTS. THE SOC FOR PHASE 1 ARE FOR ONE OF THE PROPOSED BUS STATIONS IN PROJECT MA13 - SEGMENT 1, WHILE THE REMAINING PHASE 2 AND PHASE 3 SOC ARE FOR PROJECT CC16. CONTRACTOR SHALL OBTAIN A COPY OF THE FINAL MA13 - SEGMENT 1 CONSTRUCTION PLANS FROM THE ENGINEER AND PLAN THE WORK FOR BOTH PROJECTS ACCORDINGLY.

PHASE 1A: CONSTRUCT BUS SHELTER, CATCH BASIN, RCP PIPES AND SIDEWALKS AS PART OF PROJECT MA13 - SEGMENT I CLOSE THE EXISTING WB 12TH STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE) PER 2011 VA WAPM, REVISION 2 (SEP 1, 2019).

CLOSE THE EXISTING SIDEWALKS AS SHOWN ON PLANS WITH WATER-FILLED JERSEY BARRIERS AND DIVERT PEDESTRIANS ONTO THE PROPOSED 5 FEET PATHWAY.

PHASE 1B: CONSTRUCT ADA RAMP AND REMAINING SIDEWALKS AS PART OF PROJECT MA13 - SEGMENT I. CONTINUE TO CLOSE THE EXISTING WB 12TH STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE).

CLOSE THE PROPOSED RAMP AREA AT THE NE QUADRANT AS SHOWN ON PLANS.

MAINTAIN MINIMUM OF 5 FEET PEDESTRIAN ACCESS ON SIDEWALKS.

MAINTAIN 5 FEET PEDESTRIAN ACCESS ON SIDEWALKS.

CLOSE THE EAST LEG CROSSWALK USING TYPE III BARRICADE AND WORK ZONE SIGNS PER TTC-36.2 TO DIVERT PEDESTRIANS ACROSS 12TH STREET S.

PHASE 1C: CONSTRUCT BUS PAD AND INSTALL PAVEMENT MARKINGS AND SIGNS AS PART OF PROJECT MA13 - SEGMENT I. CONTINUE TO CLOSE THE EXISTING WB 12 STREET S PARKING LANE USING TTC-4.2 (SHOULDER CLOSURE).

PHASE 2A: CONSTRUCT STORMWATER STRUCTURES, ALL UNDERGROUND UTILITIES, AND CURB AND GUTTERS. CLOSE THE EXISTING PARKING LANES ON BOTH EB AND WB 12TH STREET S BETWEEN S. EADS STREET AND ARMY

NAVY DRIVE USING TTC-4.2 AS SHOWN ON PLANS. CLOSE PARTIAL NORTHERN SIDEWALKS UNDER US 1 (RICHMOND HIGHWAY) BETWEEN ARMY NAVY DRIVE AND LONG

BRIDGE DRIVE/ S CLARK STREET AS SHOWN ON PLANS. PROVIDE FLAGGERS TO MAINTAIN ACCESS TO PRIVATE PARKING GARAGE ENTRANCE (ACROSS ARMY NAVY DRIVE)

DURING CONSTRUCTION. THIS PARKING GARAGE ENTRANCE SHALL BE FULLY OPEN FOR ACCESS BEFORE THE END OF MAINTAIN 5 FEET MINIMUM PEDESTRIAN PATHWAY ON BOTH NORTHERN AND SOUTHERN SIDEWALKS AS SHOWN ON

MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING

PHASE 2B: CONSTRUCT REMAINING DRIVEWAYS, SIDEWALKS, RAMPS AND MEDIAN ON THE NORTH SIDE OF 12TH STREET S.

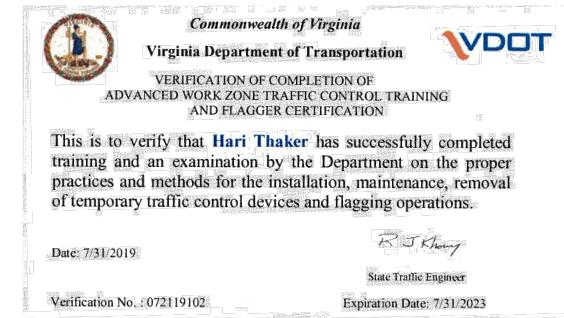
CONTINUE TO CLOSE THE NEWLY CONSTRUCTED WB 12TH STREET S PARKING LANE WITH WATER-FILLED JERSEY BARRIERS TO PROVIDE THE MINIMUM 5-FEET PEDESTRIAN PATHWAY AS SHOWN ON PLANS. CLOSE THE EB ARMY NAVY DRIVE INSIDE LANE USING TTC-17.2 AS SHOWN ON PLANS TO CONSTRUCT THE MEDIAN

NOSE AT THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE. THE MEDIAN NOSE REMOVAL AND INSTALLATION WORK SHALL BEGIN AT THE END OF PHASE 2B CONSTRUCTION AS NOTED ON PLANS. MAINTAIN 5-FEET MINIMUM PEDESTRIAN PATHWAY ON BOTH NORTHERN AND SOUTHERN SIDEWALKS AS SHOWN ON

MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING CONSTRUCTION.

PHASE 3: PERFORM MILLING AND PAVING OPERATIONS, SIGNING AND PAVEMENT MARKINGS, AND TRAFFIC SIGNALS INSTALLATIONS.

- PRIOR TO STARTING PHASE 3 CONSTRUCTION WORK OR IMMEDIATELY AFTER PHASE 2B, THE CONTRACTOR SHALL PROVIDE THE TEMPORARY MARKINGS AND TRAFFIC SIGNALS AT THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE AS SHOWN ON PLANS TO PROVIDE THE INTERIM TRAFFIC SIGNALIZATION AND MAINTAIN THE NORTH CROSSWALK AT THE INTERSECTION.
- 2. THE CONTRACTOR SHALL REFER TO ALL ASSOCIATED NOTES SHOWN ON SHEET C123.1 FOR THE THE INTERIM TRAFFIC SIGNALIZATION SHOWN FOR THE INTERSECTION OF 12TH STREET S/ ARMY NAVY DRIVE DURING
- BEGIN MILLING/PAVING OPERATIONS BY CLOSING THE OUTSIDE LANES ON 12TH STREET S WITHIN PROJECT LIMITS USING TTC-16.2 PER 2011 VA WAPM, REVISION 2 (SEP 1, 2019). MILL THE OUTSIDE LANES ON 12TH STREET S WHILE MAINTAINING THE TRAFFIC ON INSIDE LANES.
- CLOSE THE INSIDE LANES ON 12TH STREET S USING TTC-17.2 PER 2011 VA WAPM REVISION 2 (SEP 1, 2019)
- MILL THE INSIDE LANES ON 12TH STREET S WITHIN PROJECT LIMITS WHILE MAINTAINING THE TRAFFIC ON OUTSIDE MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES/EXITS AND STORE FRONT DOORS AT ALL TIMES DURING
- CONSTRUCTION. INSTALL PROPOSED SIGNS AND PAVEMENT MARKINGS PER THE FINAL SIGNING AND PAVEMENT MARKING PLANS.
- COMPLETE THE TRAFFIC SIGNALS INSTALLATIONS AT ARMY NAVY DRIVE AND LONG BRIDGE DRIVE/ S CLARK STREET.



ARLINGTON VIRGINIA

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OUALIDY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR Mach Entermi PROJECT MANAGER

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PLOTTED: MAY 18 2021 SCALE:

C120.

TRANSPORTATION MANAGEMENT PLAN (TMP) (TYPE B - CATEGORY IV)

Temporary Traffic Control Plan

TEMPORARY TRAFFIC CONTROL PLAN

This project shall have a Type B, Category IV TMP in accordance with VDOT's Location and Design Division IIM-LD 241.7/TE 351.5. The components of the Temporary Traffic Control Plan (TTCP) include detailed plans, notes, typical sections and cross sections.

TMP REQUIREMENTS

During the first day of each MOT phase and/or stage, the Engineer and Construction Manager shall inspect the work zone to ensure the temporary traffic control setting is in compliance with the TMP. On the third to fifth day of the TMP implementation, the Construction Manager shall conduct an on-site review of the work zone's performance in coordination with VDOT and recommend to the Contractor any required changes to the TMP to enhance the work zone's safety and mobility.

The following TMP requirements shall be provided as incidental items to the project:

- 1. Designate a person assigned to the project who will have the primary responsibility, with sufficient authority, for implementing the TMP and other safety and mobility aspects of the permit work. This person shall coordinate with the Arlington County Construction Manager and VDOT for the duration of construction.
- 2. Ensure that personnel assigned to the project are trained in traffic control to the level commensurate with their responsibilities in accordance with VDOT's work zone traffic control training guidelines.
- Perform reviews of the Construction Area to ensure compliance with contract documents at regularly scheduled intervals at the direction of the Engineer. Maintain a copy of the temporary traffic control plans at the work site at all times.
- 4. Schedule all phases of construction in such a manner that all above and under ground utilities and facilities including electric, gas, water, storm sewer, sanitary sewer, traffic signals, lighting, telecommunication and other communication will not be interrupted during construction.

The VDOT Engineer reserves the right to monitor traffic conditions impacted by the work and the VDOT Engineer shall have the authority to impose additional restrictions for other holidays or special local events as determined necessary in the event that safety or other conditions warrant. VDOT has the authority to change or alter the work time frame(s) accordingly.

2. For towing and traffic enforcement within the approved construction site, the Contractor shall contact the local police contacts (as listed in the Incident Response Section of the Transportation Operations Plan).

ESTIMATED CONSTRUCTION SCHEDULE

To be provided by the Contractor

DETAIL PLANS / DETAIL DRAWINGS

Sequence of Construction.

 Location of Work zones. - Type and location of temporary lane usage and markings during construction closures.

Type and location of temporary traffic control devices.

- Reference to TTC figures to be used during different phases of Construction.

Not Applicable

TYPICAL SECTIONS

The typical sections to be used during construction vary along the project corridor and are shown within the plan sheets. See MOT sheets. Travel lanes with a minimum width of 11' are to be maintained during all construction operations along 12th Street S. unless noted otherwise on plans.

LIMITATIONS OF OPERATION

All work areas (and the limits thereof) and lane closures shall be in accordance with the 2011 Virginia Work Area Protection Manual and Lane Closures in NOVA District Memorandum (September 29, 2016), and shall be directed or approved by the Engineer. The Department reserves the right to change work when such changes are in the best interest of the traveling public. The Contractor shall not conduct operations when the weather causes unsafe conditions for the traveling public as determined by the Engineer. Lane closure restrictions are listed in Table 1 on this sheet.

Additional lane closures or work that restricts traffic flow will not be permitted on holidays from the day before a holiday until the day after the holiday, unless otherwise approved by VDOT. When a holiday falls on a Friday, additional lane closures are not permitted from Thursday through Monday. When a holiday falls on a Monday, additional lane closures are not permitted from Friday through Tuesday. Furthermore, as the Thanksgiving Day holiday occurs on a Thursday, work will not be permitted from Wednesday until 9:30 a.m. on the following Monday.

TRANSPORTATION OPERATIONS PLAN

The Transportation Operations Plan documents the processes used in the event of an incident within the work zone. This plan

- Notification process to the Traffic Operations Center Emergency response agencies contact list
- Procedures to respond to traffic incidents in work zones
- 4. Procedures to clear incidents

Incident Management procedures are area and situation specific; however, follow National Incident Management System (NIMS) guidelines. The implementation of the processes is the responsibility of the field TMP manager.

1. Notification Process to the Traffic Operations Center

VDOT must review and approve all lane closures for interstate highways and all state maintained roadways.

VDOT has a "Limitations of Operations/Maintenance of Traffic" document that governs all work zones for interstate highways and all state maintained roadways. This document stipulates the acceptable lane closure times, number of required lanes to be in operation as well as other pertinent information regarding what is expected within the work area.

All lane closures are submitted by the Contractor via VDOT's "Lane Closure Advisory Management System" (LCAMS) website at http://vdot.openlcams.com. LCAMS provides a collaborative method to plan and monitor projects, resolve conflicts, and exchange information about existing and scheduled activities across the region. Each user (the Contractor) is granted access after training and the website is open to the public to view closures.

All lane and/or shoulder closures shall be entered into LCAMS at least ten (10) days in advance and shall not be later than close of business Wednesday the week prior to the scheduled lane closure(s). When proposed closures information including location, purpose, specific lane(s) to be closed, time and duration of closure are entered into the LCAMS, the program will alert the contractor/user regarding other work scheduled at that proposed time duration and closures in the vicinity areas. Any conflicts generated from LCAMS shall be resolved by contractor/user no later than close of business Thursday the week prior to the scheduled closure(s).

On the day the closure is scheduled, the inspector is responsible for calling the Arlington County Traffic Management Center (TMC) at (703) 228-5000 and VDOT Traffic Operations Center (TOC) at (703) 877-3449 to confirm the lane closure start/end times for each day of work. The contractor must contact the County and VDOT Northern Region Transportation Operations Center (TOC) 15-45 minutes prior to executing lane and/or shoulder closures and contact TOC once work has been completed and lane and/or shoulder closures have been removed. If scheduled work is no longer going to take place, the inspector shall notify TOC as soon as possible. The contractor shall be responsible for maintaining project lane closure information on LCAMS and VaTraffic throughout the duration of the project in accordance with IIM-OD-16-03, dated December 16, 2016.

2. Emergency Response Agencies Contact List

VDOT's NRO (Northern Region Operations) TOC - (703) 877-3449 Arlington County Traffic Management Center (TMC) - (703) 228-5000 Virginia State Police - (703) 845-6300 Arlington County Police - (703) 558-2222 911 Emergency Center - 911 Project Construction Manager - (XXX) XXX-XXXX

Construction Management Supervisor, DES - Kamal Taktak (703) 228-7527 DES Operation Manager, TE&O - Scott Sedwick (703) 228-0650 Assistant Bureau Chief, Engineering Bureau, DES - Adil Chauhan (703) 228-7542 DES R-O-W Permitting Section - (703) 228-4798 Transit Bureau - (703) 228-3049 Water, Sewer and Street Operation - (703) 228-6555

3. Notification Process for Incidents and Related Traffic Delays

Throughout the County and VDOT NOVA District, the ITS and TOC control room operators monitor traffic flow and are able to quickly detect traffic delays and incidents on the interstate, highways, and bridges. When traffic slows due to an incident, control room operators are then able to send this information to VA511 and the HAR and activate electronic message signs to immediately notify commuters and travelers of current roadway conditions. The TOC operators also contact emergency personnel if needed and dispatch Safety Service Patrol (SSP).

In case of an emergency, 911 should be called immediately. Once 911 has been notified, the contractor will immediately notify VDOT of the event, who will then distribute the information to the appropriate agencies through their communications networks.

In the case of a non-emergency incident or an unexpected traffic disruption that does not require emergency personnel (i.e. utility break, construction delay, etc.), the contractor will contact VDOT immediately, who will then distribute the information to the appropriate agencies through their communications networks. In addition to Emergency Responders listed in Section 2, Public Safety and Emergency Management officials should be notified of impacts arising from traffic incidents and other construction activities. 4. Procedures to Clear Incidents

The following is a set of procedures and a list of local emergency contact agencies that shall be communicated with in the event of traffic incidents that occur in the Work Zone:

- a) Contractor will notify State (or local) Police and the Arlington County Coordinator and Construction Manager in Charge at
- b) Depending upon the severity of an incident, the contractor may have to shut down work. Lane closures or shoulder work
- should not begin if heavy traffic or significant queuing and backups are already present. c) Upon arrival on scene, State Police will determine the response necessary to guide the traveling public around the incident.
- Local Police can assist in controlling traffic on ramps or along side streets. Inspector will notify Construction Manager (County and Contractor) and Area Construction Engineer of an incident and take
- pictures as necessary, especially pictures of contractor's Work Zone to verify the proper setup. Process for notification of incident includes the Contractor calling:
 - Project/Maintenance of Traffic Coordinator Contractor To Provide
 - Construction Manager Contractor To Provide
 - Project Construction Manager (XXX) XXX-XXXX
- District Work Zone Safety Coordinator Brian Fry (703) 259-2394
- District Traffic Engineer Ivan Horodyskyj (703) 259-2330 District Public Affairs Manager - Jenni McCord (703) 259-2926
- The State (or local) Police report of the incident will be reviewed by the Area Construction Engineer to determine if any modifications of the Temporary Traffic Control Plans are necessary. If it is determined that it is necessary to alter the plan, a meeting will be called with the contractor, the Area Construction Engineer, Arlington County personnel, Construction Manage VDOT traffic safety representatives and the State (or local) Police (if necessary) to discuss modification and implementation of an improved traffic control plan. The contractor must continually monitor lane closures and/or detour routes and make spot adjustments as needed/available to ease undue backups, delays, or queuing.

PUBLIC COMMUNICATIONS PLAN

Once this TMP and related TTCPs are approved by the County and VDOT, the contractor shall submit four (4) sets of all relevant information necessary for the proposed closures to the Department thirty (30) days in advance of establishing the work zone. The department will review and offer comments. A pre-activity meeting with the contractor will be held by the Project Management Team to address any deficiencies and finalize the timeline. As part of this pre-activity meeting, the Project Management Team shall enlist the input of all outside entities that will participate in or be affected by the lane closures. These parties shall include: VDOT to review TTCPs; VDOT's Traffic Operations Center (TOC) to aid in alerting the public as well as offer alternate routes; Virginia State and Local Police; and VDOT Public Affairs to coordinate the dissemination of information to the public.

Arlington County will begin the public outreach effort following the successful completion of the pre-activity meeting concerning sequence of construction work. The public outreach information will include, but not limited to lane closures, detour routes and traffic delays. Such information will be provided before and during work deployment as required. Methods to communicate work zone information may include, but not be limited to, direct mailings, public meetings, newsletters, flyers, portable message signs, 511 system, project website, and/or media.

As part of the public outreach and communication the following shall occur:

- 1. The contractor will be required to have weekly coordination meetings with the Arlington County in order to provide the County with updates for distribution. This meeting will cover any potential design changes and/or other types of changes which may impact the traffic operations through the projects.
- 2. Arlington County will provide information to road users, the general public, area residents and appropriate public entities regarding the project, the impacts expected from the project's work zones as well as changing conditions on the project.

The following shall occur upon the implementation of lane closures:

- The Project Management Team will observe traffic movement.
- The Project Management Team will monitor any complaints and or comments received by the Public Affairs office. The Project Management Team will review observations, complaints and comments to examine if additional measures are
- warranted.

Roles and Responsibilities

The County Communication Strategy and Plan will be directed by the Arlington County Project Manager and his project team. The following are the key personnel of the 12th Street S. between S. Eads St and S. Clark St (CC16), and Transitway Extension to Pentagon City at Crystal Dr and 12th St S. (MA13 - Segment 1) projects who will be the point of contact for all communications, issues and disputes throughout construction:

Project Management and Media Inquiries Project Manager (CC16) - Mark Dennis (703) 228-3916 Project Manager (MA13) - Diana Isaza (703) 228-4523 Media Specialist (CC16 & MA13) - Eric Balliet (703) 228-3770

Project Design for CC16 & MA13

Design Engineer Team Supervisor - Trevor Lantzy (703) 228-0596 Design Engineer - Christopher Balallo (703) 228-3474

Local Business Coordinator--The County media specialist will be responsible to reach out to local business organization (e.g.

National Landing (formerly the Crystal City BID)), other business organizations and businesses prior to and throughout the

TABLE 1: ALLOWABLE LANE CLOSURE HOURS

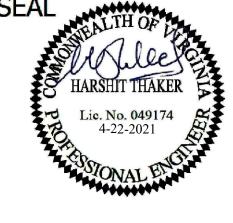
VDOT R-O-W:		LANE CLOSURES (N	IAJOR ARTERIALS)	
	MON. TO THU.	FRIDAY	SATURDAY	SUNDAY
DAYTIME	9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	*Not Allowed	*Not Allowed
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed	*Not Allowed
Arlington County R-O-W:	LANE	CLOSURES (MINOR ART	ERIAL)	
	MON. TO FRI.	SATURDAY	SUNDAY	
DAYTIME	9:00 AM TO 4:00 PM	*Not Allowed	*Not Allowed	1
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed	

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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Amy Pflaum OUALIAY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR PROJECT MANAGER **REVISIONS**

Š STREET CC16

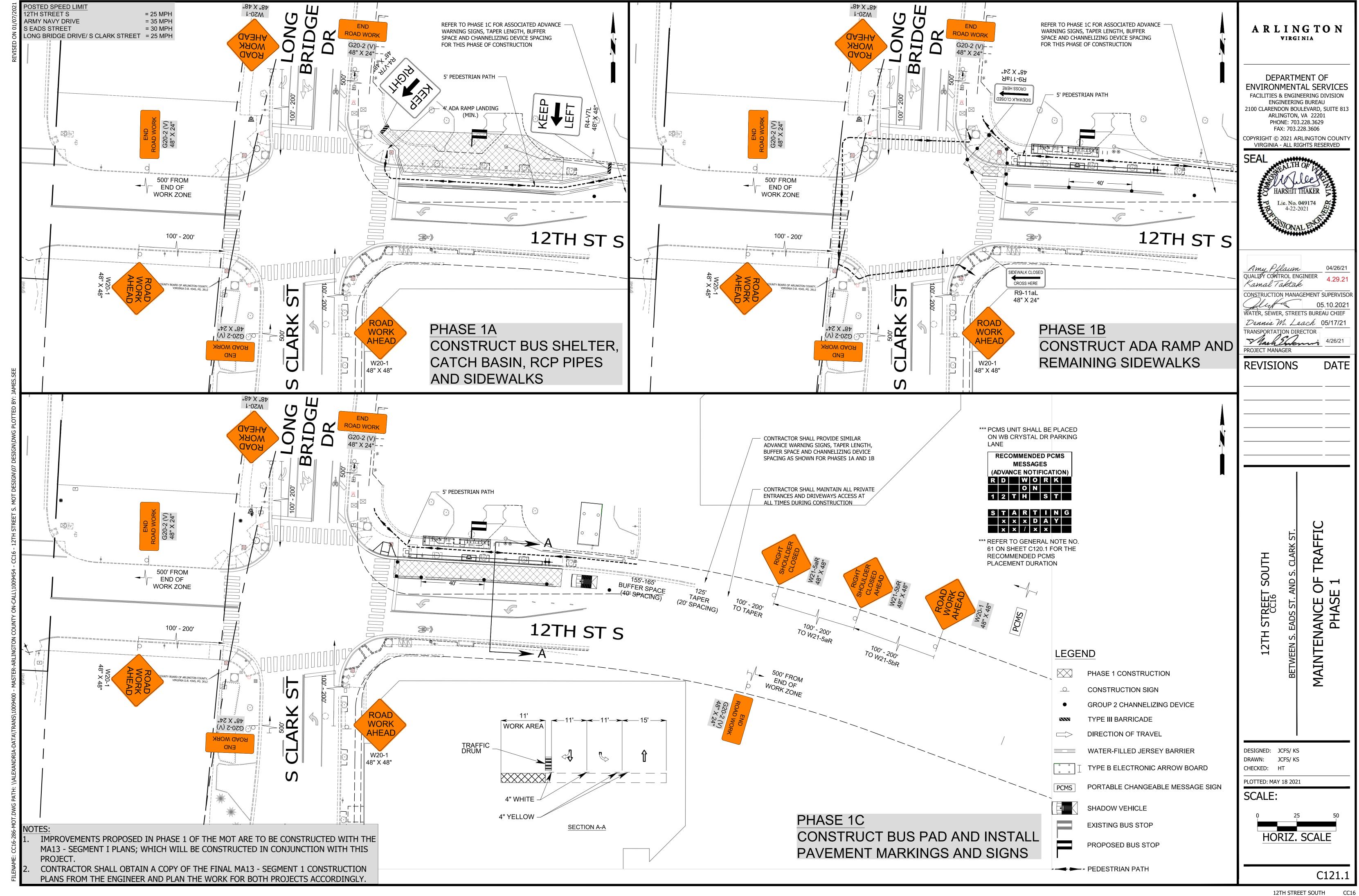
MAINTENAN TRANSPORTATION

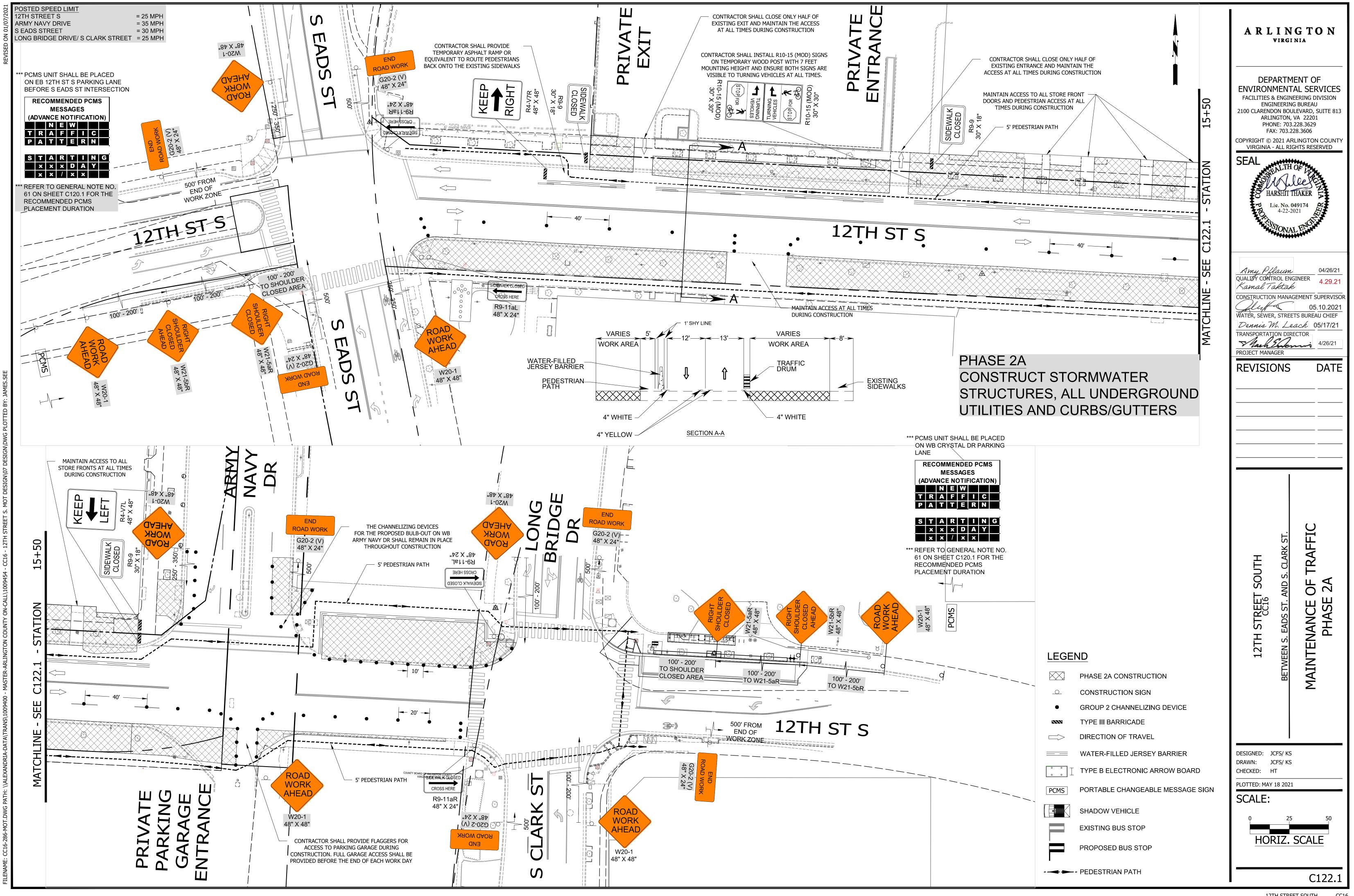
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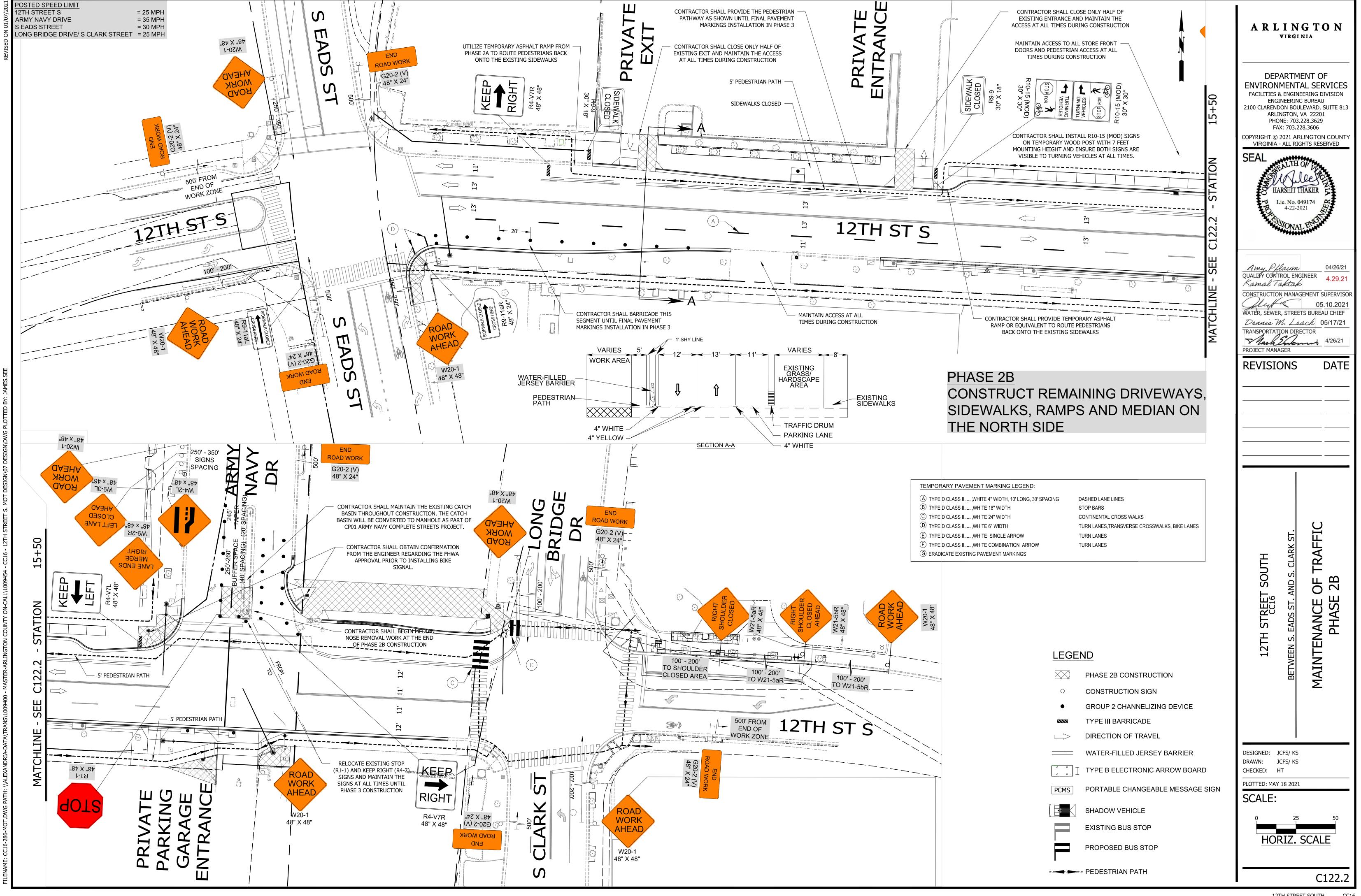
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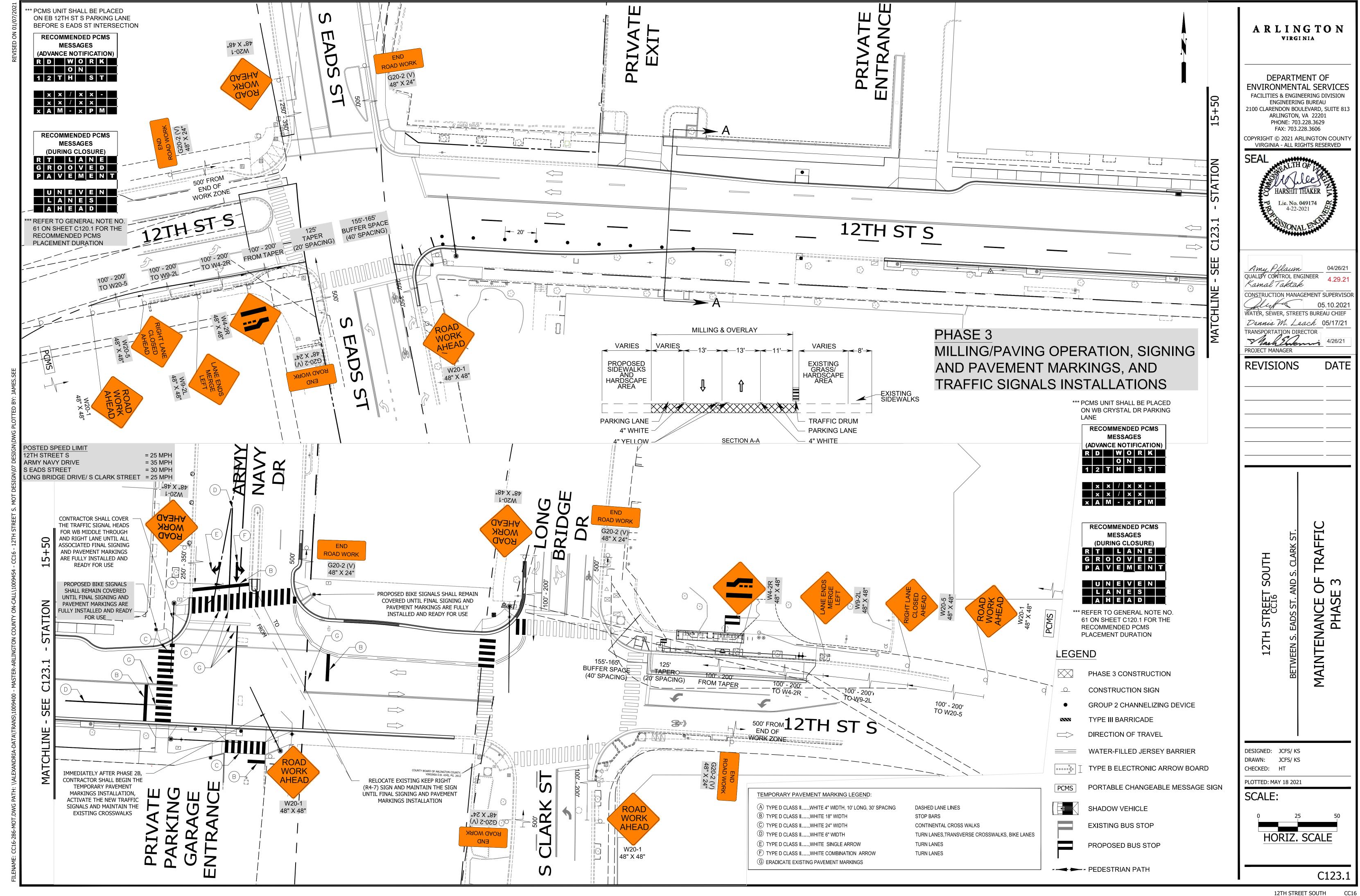
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September 2019

1. For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5bR), RIGHT SHOULDER CLOSED (W21-5aR)¹), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed.

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

3. The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area. 4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating, lights. 6 Taner length (L) shall be at the following:

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						Taper	Leng	gth L						
	Speed	L	ane Wid	th (Feet))		Speed			Lane Wid	th (Feet	t)		
	Limit (mph)	9	10	11	12	Remarks		Limit (mph)	9	10	11	12	Re	marks
	25	95	105	115	125	L=S2W/60		50	450	500	550	600) L	_=SW
	30	135	150	165	180	L=S ² W/60		55	495	550	605	660) L	.= SW
	35	185	205	225	245	L=S ² W/60		60	540	600	660	720) L	_=SW
	40	240	270	295	320	L=S ² W/60		65	585	650	715	780) L	_=SW
	45	405	450	495	540	L=SW		70	630	700	770	840) L	_=SW
	Limite	d Acces	s highw	ays sha	ll use a	a 1000' mergi	ng ta	aper rega	ardless	of the po	sted sp	eed,	for shi	fting
						taper see	Tab	le 6H.2 ²						
L						Shoulder Tape	er = 1	∕₃ L Minin	num					
7.	Channe	lizing d	levice s _l	pacing s	hall b	e at the follo	owir	ıg:						
						Channelizing	Dev	rice Spa	cing					
	Loo	otion	Spe	ed Limit		Location		Speed L	-imit				Speed	d Limit
		Location (mph)			Spacing		(mph	1)	Locatio	n Spaci	ng 📗	(m	ph)	
	Эра	cing	0 -3	5 36 +		Spacing		0 -35	36 +				0 -35	36 +
	Tran	sition	20'	40'		Travelway		40'	80'	*Construc	tion Acce	ess	80'	120'
	*Const	truction	access s	pacing m	ay be i	ncreased to the	nis di	stance, b	ut shall	not excee	ed one a	ccess	per 1/4	mile.

8. On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

9. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit. 10. A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.

11. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019

1: Revision 1 - 4/1/2015 2: Revision 2 – 9/1/2019 Page 6H-40

Typical Traffic Control Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2) **NOTES**

September 2019

1. On divided highways having a median wider than 8', right and left sign assemblies shall be

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

signs cannot be installed.² 4. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.

5. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

3. When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side

6. Taper length (L) and channelizing device spacing shall be at the following:

	8 ()											
					Taper	Len	gth L					
Speed	L	ane Wic	th (Fee	t)			Speed	La	ane Wid	th (Fee	t)	
Limit (mph)	9	10	11	12	Remarks		Limit (mph)	9	10	11	12	Remarks
25	95	105	115	125	L=S ² W/60		50	450	500	550	600	L=SW
30	135	150	165	180	L=S2W/60		55	495	550	605	660	L= SW
35	185	205	225	245	L=S2W/60		60	540	600	660	720	L=SW
40	240	270	295	320	L=S2W/60		65	585	650	715	780	L=SW
45	405	450	495	540	L=SW		70	630	700	770	840	L=SW
	Limited	Access	highwa	ys shall	use a 1000'	mer	ging tape	r regard	less of t	he pos	ted spe	ed.
	Shiftin	g Taper	s see Ta	able 6H-	2. ²		;	Shoulde	r Taper	= 1/3 L N	/linimun	n
Channe	lizing c	levice s	pacing	shall b	e at the foll	owii	ıg:					

Transition 20' 40' Travelway *Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile. 8. An arrow board shall be used when a lane is closed. When more than one lane is closed, a

separate arrow board shall be used for each closed lane (see Figure TTC-18).

9. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit. 10. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truckmounted attenuator shall be used.

11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or¹ oscillating lights.

12. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

Outside Lane Closure Operation on a Four-Lane Roadway

(Figure TTC-16.2)

13. PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.2 14. The supplemental PTRS may be eliminated.²

1: Revision 1 - 4/1/2015 2: Revision 2 – 9/1/2019

2: Revision 2 – 9/1/2019

Page 6H-42 September 2019

Typical Traffic Control Inside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-17.2) **NOTES**

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less. 3. When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side

signs cannot be installed.2 4. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than

the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired. 5. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

					Taper I	ength L					
Speed	L	ane Wic	dth (Fee	t)		Speed	L	ane Wid	th (Fee	t)	
Limit (mph)	9	10	11	12	Remarks	Limit (mph)	9	10	11	12	Remarks
25	95	105	115	125	L=S2W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S2W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S ² W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S2W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
	Limited	Access	highwa	ys shall	use a 1000' n	nerging tape	r regard	less of t	the post	ted spe	ed.
	Shiftin	g Taper	s see Ta	able 6H-	2. ²		Shoulde	r Taper	= 1/3 L N	/linimun	n

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile. 8. An arrow board shall be used when a lane is closed. When more than one lane is closed, a

separate arrow board shall be used for each closed lane (see Figure TTC-18). 9. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit. 10. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truckmounted attenuator shall be used.

11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or loscillating lights but can be used to supplement the amber rotating, flashing, or¹ oscillating lights.

12. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

13. PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.2

14. The supplemental PTRS may be eliminated.

1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019

September 2019

Typical Traffic Control Lane Closure Operation in an Intersection (Figure TTC-28.2) **NOTES**

1. The control of traffic through the intersection in order of preference should be:

a. Obtain the services of law enforcement personnel.

Page 6H-64

b. Detour the effective routes to other roads and streets as approved and directed by the District² Traffic c. Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.

Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34. 2. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where

the posted speed limit is greater than 45 mph. 3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily

traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.²

4. Channelizing device spacing shall be on 20' centers or less.

5. PTRS shall be used as noted in Section 6F.99.

6. If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscilllating¹ light should be parked 80'-120' in advance of the first work crew.

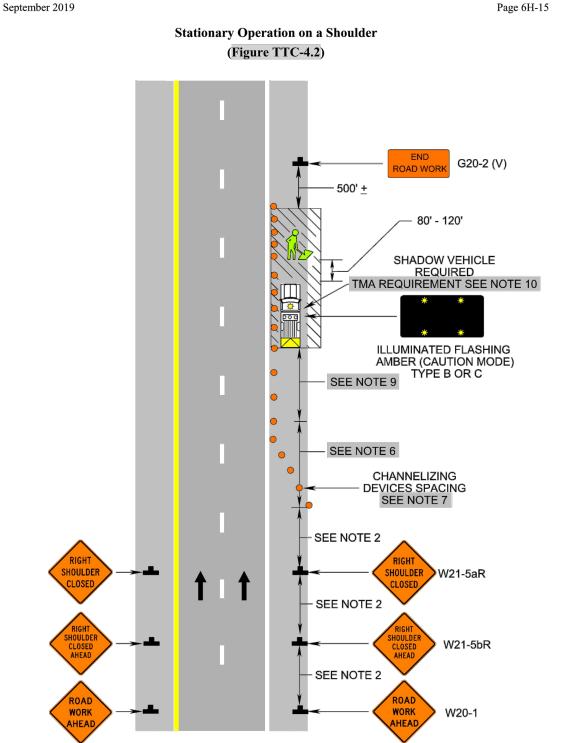
7. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.

8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 – 4/1/2015

September 2019 September 2019 Page 6H-41



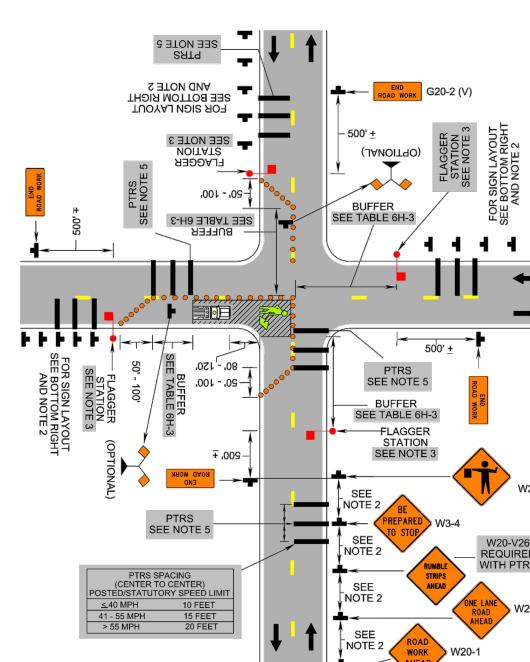
SHADOW VEHICLE REQUIRED (TMA REQUIREMENT SEE NOTE 10) (AMBER CAUTION MODE SUPPLEMENTAL PTRS OPTIONAL TYPE B OR C SEE NOTE 14 SEE _ NOTE 2 ILLUMINATED FLASHING ARROW BOARD SEE NOTES 4 & 8

Inside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-17.2) SHADOW VEHICLE REQUIRED
(TMA REQUIREMENT SEE NOTE 10) ILLUMINATED FLASHING (AMBER CAUTION MODE TYPE B OR C SUPPLEMENTAL PTRS OPTIONA SEE NOTE 14 SEE NOTE 9 SEE NOTE 6 ILLUMINATED FLASHING ARROW BOARD TYPE C SEE NOTES 4 & 8 SEE NOTES 2 & 4 KEEP W9-2R

Page 6H-43

2: Revision 2 – 9/1/2019

September 2019 Page 6H-65 Lane Closure Operation in an Intersection (Figure TTC-28.2)



2: Revision 2 – 9/1/2019

MAINTENANCE OF TTC DETAII TREET CC16 N \sim

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PLOTTED: MAY 18 2021

SCALE:

C124.

12TH STREET SOUTH CC16

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

- 2. Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.
- 3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
- 4. Temporary markings should be considered for operations exceeding three days in duration.
- 5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
- 6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
- 7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

8. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.²

Page 6H-80

Typical Traffic Control Crosswalk Closure and Pedestrian Detour Operation (Figure TTC-36.2) **NOTES**

September 2019

Page 6H-81

September 2019

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility. 2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

- 3. Audible information devices should be considered where midblock closings and changed crosswalk areas
- cause inadequate communication to be provided to pedestrians who have visual disabilities. 4. Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.
- 5. Temporary markings should be considered for operations exceeding three days in duration.
- 6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or
- ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic. 7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.
- 8. In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs
- shall be used in TTC zones.2 9. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.²

10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD¹ for crosswalk¹ lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

11. The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line. 12. Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.

1: Revision 1 - 4/1/2015 2: Revision 2 – 9/1/2019

September 2019

Page 6H-114 September 2019

Typical Traffic Control Signing for Project Limits (Figure TTC-53.0) **NOTES**

1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

- 2. The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a
 - series may be adequately placed prior to the condition they are warning about. 3. The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail
 - installations, shoulder restoration, etc.) occur along a highway. 4. The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest
- whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign. 5. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- 6. For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the
- first sign motorist encounter. 7. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign
- spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
- 8. All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.

Page 6H-122 July 2019

Typical Traffic Control End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway (Figure TTC-57.2) **NOTES**

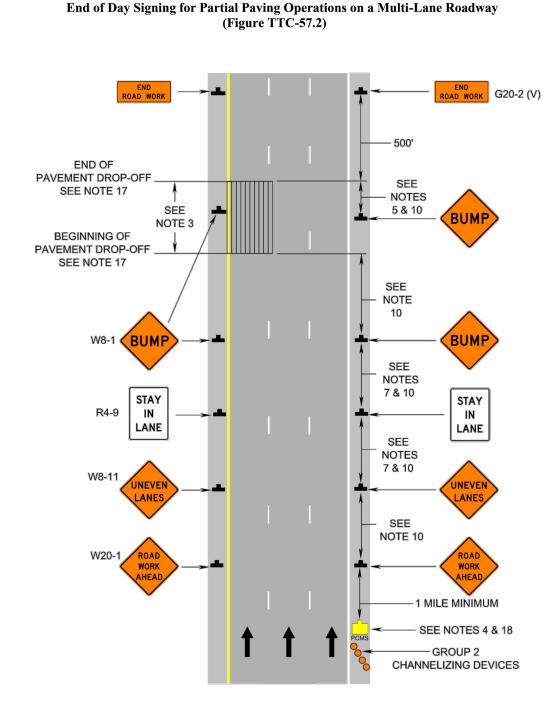
1. On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.

- 2. The maximum pavement edge drop-off between traffic lanes shall be 2 inches or less. 3. Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.
- 4. A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.
- 5. A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.¹ 6. The District² Traffic Engineer shall determine speed reductions.
- 7. The UNEVEN LANES (W8-11), STAY IN LANE (R4-9), and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand¹. Additional UNEVEN LANES signs shall be installed every 2 miles and on entrance
- 8. Where conditions warrant, ROUGH ROAD (W8-8) and BUMP signs shall be installed 500' \pm in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500'
- ± in advance of unaffected roadway surface on exit ramps. 9. All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.
- Guidance: 10. Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit
- is 45 mph or less.
- 11. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area. 12. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip
- line for lane division lines may be added as directed by the engineer. 13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.
- 14. If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends
- over a distance in excess of 1 mile. 15. The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where
- 16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.

- 17. A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the
- milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details. 18. A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the
- PCMS in a taper for delineation (see Figure 6F-6). 1: Revision 1 – 4/1/2015; 2: Revision 2 – 9/1/2019

Page 6H-123



SIDEWALK DETOUR

September 2019

2: Revision 2 – 9/1/2019

(Figure TTC-35.1) R4-V7L KEEP LEFT CROSS HERE R9-11aL SEE NOTES 6 & 7

TYPE 3 BARRICADE

Sidewalk Closure and Bypass Sidewalk Operation

2: Revision 2 – 9/1/2019

SIDEWALK DIVERSION

Page 6H-79

Crosswalk Closure and Pedestrian Detour Operation (Figure TTC-36.2) 6" TEMPORARY SIDEWALK CLOSED AHEAD CROSS HERE TYPE 3 BARRICADE

1: Revision 1 – 4/1/2015 2: Revision 2 – 7/1/2018

Signing for Project Limits (Figure TTC-53.0) SEE NOTE 2 4 4 4 4 - SEE NOTE 7 PROJECT LIMITS + 009 ---- SEE NOTES 2 & 7 G20-1 (V)

Page 6H-115

SEE NOTES

C124.2

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REVISIONS

SOUTH

STREET CC16

2TH

DESIGNED: JCFS/ KS

DRAWN: JCFS/ KS

PLOTTED: MAY 18 2021

CHECKED: HT

SCALE:

12TH STREET SOUTH CC16

MAINTENANCE OF TTC DETAIL

Page 6H-124

July 2019 **Typical Traffic Control**

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway (Figure TTC-58.1)

1. On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.

NOTES

- 2. The maximum pavement edge drop-off shall be 2 inches or less.
- 3. Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface. 4. A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate
- messages shall be used. 5. A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.¹
- 6. The District² Traffic Engineer shall determine speed reductions.
 7. The ROUGH ROAD (W8-8), UNMARKED PAVEMENT AHEAD (W8-V4) and BUMP signs shall
- be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.
- 8. PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand¹. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.
- 9. Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350' ± in advance of the affected roadway surface on entrance ramps, and $\overline{B}UMP$ signs shall be installed 500' \pm in
- advance of unaffected roadway surface on exit ramps.

 10. All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.

11. For sign spacing distances see Table 6H-5.

- Option:

 12. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the
- 13. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.

 14. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an
- elevation difference of less than 2 inches between the shoulder and the travel lane.

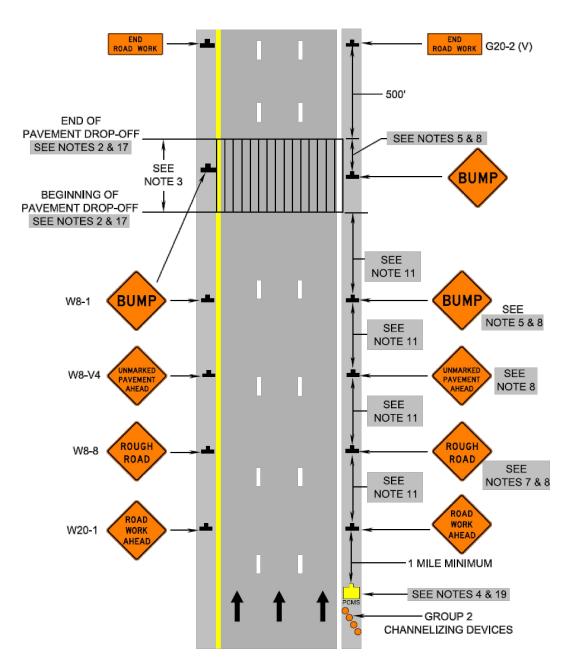
Standard:

- 15. If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile. 16. The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off,
- adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.
- 17. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.
- 18. A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the
- milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details. 19. A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).

1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019

Page 6H-125

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway (Figure TTC-58.1)



1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019

ARLINGTON VIRGINIA

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TRANSPORTATION DIRECTOR PROJECT MANAGER

REVISIONS

SOUTH STREET CC16 12TH

DESIGNED: JCFS/ KS DRAWN: JCFS/ KS CHECKED: HT

PLOTTED: MAY 18 2021

SCALE:

C124.3

Signal Notes

A. POLES AND FOUNDATIONS

- 1. MAST ARM LENGTH IS TO BE AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY.
- 2. 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.
- 3. MAST ARM POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. ALL POLES SHALL HAVE A 6-BOLT PATTERN.
- 4. 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
- 2. CONTROLLER SHALL BE INTELIGHT X-3 AND SHALL BE INSTALLED AND SET AS FOLLOWS: 2.1 TO REST IN PHASE 4 GREEN INTERVAL
- 2.2 TO START/RESTART IN PHASE 3 YELLOW CHANGE INTERVAL
- 3. THE CONTROLLER CABINET AND FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS 66-01. 66-02, AND 70-01.
- 4. 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

- 1. ALL NEW VEHICULAR SIGNAL SECTIONS SHALL BE 12 INCHES IN DIAMETER CAST ALUMINUM WITH LED DISPLAYS.
- 2. PEDESTRIAN SIGNAL HEAD SECTIONS SHALL BE CAST ALUMINUM WITH LED DISPLAYS (COUNTDOWN).
- 3. ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR.
- 4. ALL BIKE SIGNAL HEADS ARE TO BE INSTALLED ONLY AFTER WRITTEN FHWA APPROVAL.

D. DETECTORS

- 1. ALL NEW PEDESTRIAN PUSH BUTTON STATIONS SHALL CONFORM TO ARLINGTON COUNTY'S SPECIFICATIONS FOR ACCESSIBLE SIGNAL DESIGN AND SHALL USE POLARA VIBRO-TACTILE/AUDIO PUSH BUTTON ASSEMBLIES (INCLUDING CCU) UNLESS OTHERWISE SPECIFIED.
- 2. NEW OVERHEAD VIDEO DETECTION SHALL BE FLIR CAMERAS AND SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION.
- 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.
- 4. EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION.

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.
- 4. 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.
- 5. 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.
- 7. 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.
- 8. 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.
- 10. CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
- 11. ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
- 12. REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES. 13. MULE TAPE SHOULD BE LEFT IN ALL CONDUITS AND SECURED AT BOTH ENDS.
- 14. ALL 90 DEGREE BENDS AND CONDUIT ENCASED IN CONCRETE SHALL BE RIGID GALVANIZED STEEL AND SHALL EXTEND 6 INCHES OUT OF THE CONCRETE BEFORE ADAPTING TO PVC OR HDPE.

- 1. 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.
- 2. 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.
- 2. 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 703-228-7726. 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.
- 5. 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.
- 6. 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.
- 7. 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.
- 2. 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.
- 3. 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.

ALL TRAFFIC SIGNALS ARE OWNED, MAINTAINED AND OPERATED BY ARLINGTON COUNTY. TRAFFIC SIGNAL DESIGN SHALL BE IN ACCORDANCE WITH LATEST ARLINGTON COUNTY TRAFFIC SIGNAL STANDARDS AND SPECIFICATIONS.

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

ROJECT MANAGER	DATE
ONSTRUCTION MANAGER	DATE

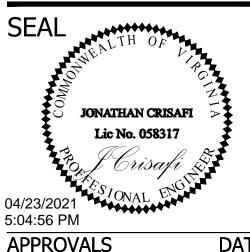
Index of Sheets

SHEET NO.:	SHEET DESCRIPTION:
300.1	INDEX OF SHEETS, SIGNAL NOTES
300.2-300.5	SIGNAL PLAN
301.1	SIGNAL DETAIL PLAN
302.1-302.2	SIGNAL COMMUNICATION PLAN
303.1-303.2	INTERIM AND ULTIMATE PLAN

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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DATE

Amy Pflaum QUALITY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISO fluta WATER, SEWER, STREETS BUREAU CHIEF

TRANSPORTATION DIRECTOR Mach Entermino PROJECT MANAGER

Dennis M. Leach 05/17/21

REVISIONS

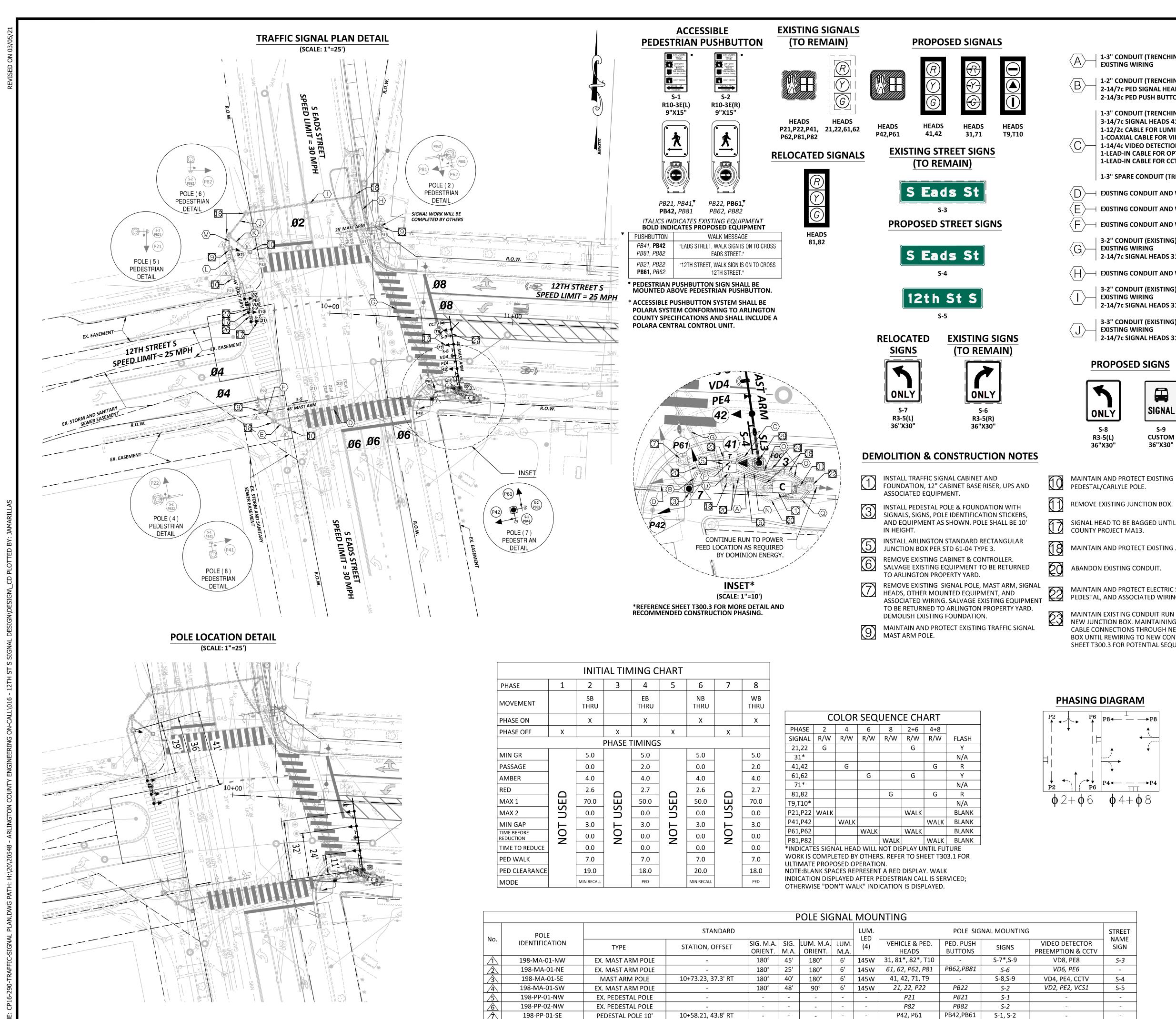
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DESIGNED: PMH & JCC DRAWN: PMH & JGA CHECKED: JFR

PLOTTED: APRIL 23 2021 SCALE:

T300.



198-CP-01-SW

ITALICS INDICATES EXISTING EQUIPMENT
* INDICATES RELOCATED EQUIPMENT

EX. CARLYLE POLE 16'

CONDUIT & CABLE RUNS

1-3" CONDUIT (TRENCHING) **EXISTING WIRING** 1-2" CONDUIT (TRENCHING) 2-14/7c PED SIGNAL HEAD P42,P61

2-14/3c PED PUSH BUTTON PB42,PB61 1-3" CONDUIT (TRENCHING) 3-14/7c SIGNAL HEADS 41,42,71,T9

1-12/2c CABLE FOR LUMINAIRE SL3 1-COAXIAL CABLE FOR VIDEO DETECTION VD4 1-14/4c VIDEO DETECTION POWER VD4 1-LEAD-IN CABLE FOR OPTICOM GTT EVP PE4 1-LEAD-IN CABLE FOR CCTV CAMERA 1-3" SPARE CONDUIT (TRENCHING)

EXISTING CONDUIT AND WIRING

3-2" CONDUIT (EXISTING)

3-2" CONDUIT (EXISTING)

3-3" CONDUIT (EXISTING)

2-14/7c SIGNAL HEADS 31,T10

EXISTING CONDUIT AND WIRING

2-14/7c SIGNAL HEADS 31,T10

2-14/7c SIGNAL HEADS 31,T10

S-9

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

EXISTING CONDUIT AND WIRING EXISTING CONDUIT AND WIRING

PROPOSED SIGNS



S-8 CUSTOM R3-5(L) 36"X30" 36"X30"

SIGNAL HEAD TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13.

MAINTAIN AND PROTECT EXISTING JUNCTION BOX.

MAINTAIN AND PROTECT ELECTRIC SERVICE METER, PEDESTAL, AND ASSOCIATED WIRING.

MAINTAIN EXISTING CONDUIT RUN "G" THROUGH NEW JUNCTION BOX. MAINTAINING EXISTING CABLE CONNECTIONS THROUGH NEW JUNCTION BOX UNTIL REWIRING TO NEW CONTROLLER. SEE SHEET T300.3 FOR POTENTIAL SEQUENCING

P6 | P8← _ _ → P8

STREET

NAME

SIGN

S-3

S-4

S-5

PB41

S-1

75W

P41

P6

ABANDON OR REUSE REMAINING CONDUIT RUN "G" (BETWEEN NEW JUNCTION BOX AND EXISTING MANHOLE) TO FACILITATE CONDUIT RUN "O". IF ABANDONING CONDUIT RUN, INSTALL NEW CONDUIT RUN "O" BETWEEN NEW JUNCTION BOX AND EXISTING MANHOLE.

→ EXISTING CONDUIT AND WIRING

2-14/7c SIGNAL HEADS 31,T10

1-3" CONDUIT (TRENCHING)

1-3" CONDUIT (TRENCHING)

1-2" CONDUIT (TRENCHING)

1-2" CONDUIT (TRENCHING)

| 1-2" CONDUIT (TRENCHING)

1-12/2c CABLE FOR LUMINAIRE SL3

2-14/7c PED SIGNAL HEAD P42,P61

1-6/4c ELECTRICAL SERVICE CABLE

2-14/3c PED PUSH BUTTON PB42,PB61

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

2-14/7c PED SIGNAL HEAD P42,P61

3-14/7c SIGNAL HEADS 41,42,71,T9

2-14/3c PED PUSH BUTTON PB42,PB61

1-14/4c VIDEO DETECTION POWER VD4

1-COAXIAL CABLE FOR VIDEO DETECTION VD4

1-3" CONDUIT (EXISTING)

EXISTING WIRING

EXISTING CONDUIT AND WIRING

RELOCATE EXISTING SIGN ALONG MAST ARM TO PROPOSED LOCATION.

SIGN TO BE BAGGED UNTIL COMPLETION OF COUNTY PROJECT MA13.

INSTALL ORNAMENTAL TRAFFIC SIGNAL MAST ARM POLE & FOUNDATION WITH LUMINAIRE, SIGNALS, SIGNS, POLE IDENTIFICATION STICKER, AND

4. CONTRACTOR TO CONTACT UTILITY COMPANIES FOR

LEGEND	EXISTING	PROPOSED
Controller Cabinet	\boxtimes	C
Signal Junction Box (61-02)	Ī	⑦
Signal Junction Box (61-04)	T	T
Comm. Junction Box (61-02)	©	©
Fiber Optic Junction Box (61-04)	FOC	FOC
Service Junction Box	(5)	(3)
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation		— (P##)
Service Meter		•
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	○ - > (##)	● ##
Pedestrian Push Button	—ţ⊅ PB#	- ↓ ▶ PB#
Video Detection	☞ VD#	☞ VD#
Emergency Vehicle Preemption	∝ PE#	⇔ PE#
CCTV Vehicle Camera	©── CCTV	€ CCTV
Overhead Light (LED)	—— ↓ - SL#	— → - SL
Conduit Run		=======
Vahisla Count Station		_

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

1-LEAD-IN CABLE FOR OPTICOM GTT EVP PE4 1-LEAD-IN CABLE FOR CCTV CAMERA COPYRIGHT © 2021 ARLINGTON COUNT VIRGINIA - ALL RIGHTS RESERVED 1-3" CONDUIT (TRENCHING) **EXISTING WIRING** 2-14/7c SIGNAL HEADS 31,T10

JONATHAN CRISAFI Lic No. 058317 04/23/2021 5:05:09 PM

Amy Pflaum

APPROVALS DATE

04/26/21

QUALITY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISO 05.10.2021 WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR Mach Enemis

PROJECT MANAGER **REVISIONS**

EQUIPMENT AS SHOWN.

CONDUIT AND CABLE NOTES:

1. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.

2. CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.

3. FIELD VERIFY MEASUREMENTS BEFORE CONSTRUCTION.

FIELD LOCATIONS.

5. CONTRACTOR SHALL RECONNECT ALL EXISTING AND REMAINING SIGNAL EQUIPMENT TO NEW CABINET/CONTROLLER LOCATION. EXISTING WIRING CAN BE REUSED IF SUFFICIENT LENGTH IS AVAILABLE, OTHERWISE NEW WIRING, IN KIND, IS TO BE INSTALLED.

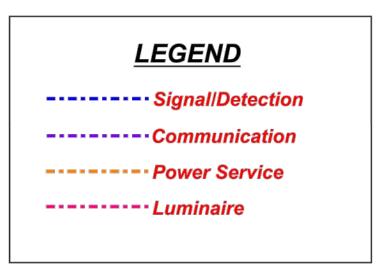
LEGEND	EXISTING	PROPOSED
Controller Cabinet	\boxtimes	C
Signal Junction Box (61-02)	①	<u></u>
Signal Junction Box (61-04)	T	T
Comm. Junction Box (61-02)	©	©
Fiber Optic Junction Box (61-04)	FOC	FOC
Service Junction Box	(\$)	③
Mast Arm Pole & Foundation		
Pedestrian Pedestal Pole & Foundation	(P##)	- P##
Service Meter	©	
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	○ - > (##)	◆→ ##
Pedestrian Push Button	—ţ⊅ PB#	↓ ⊅ PB#
Video Detection	☞ VD#	☞) VD#
Emergency Vehicle Preemption	⋈ PE#	⇔ PE#
CCTV Vehicle Camera	⊕— CCTV	€ CCTV
Overhead Light (LED)	—— ÷ - SL#	- → SLi
Conduit Run		=======
Vehicle Count Station	-	-

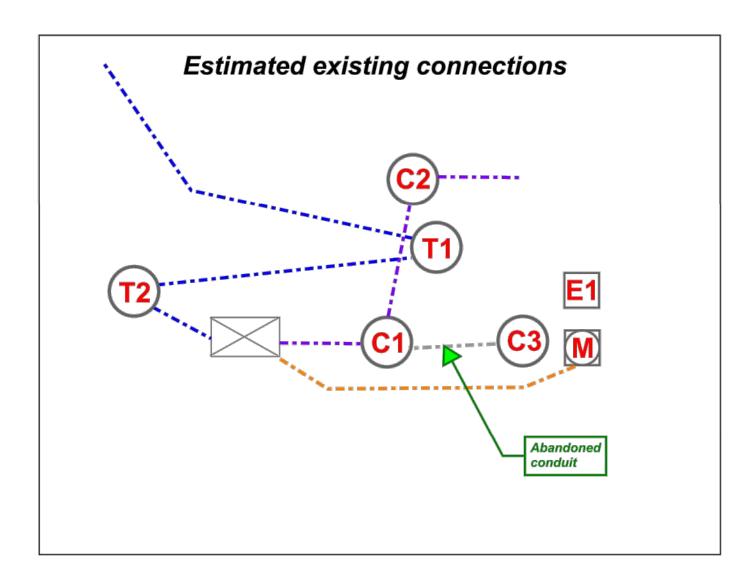
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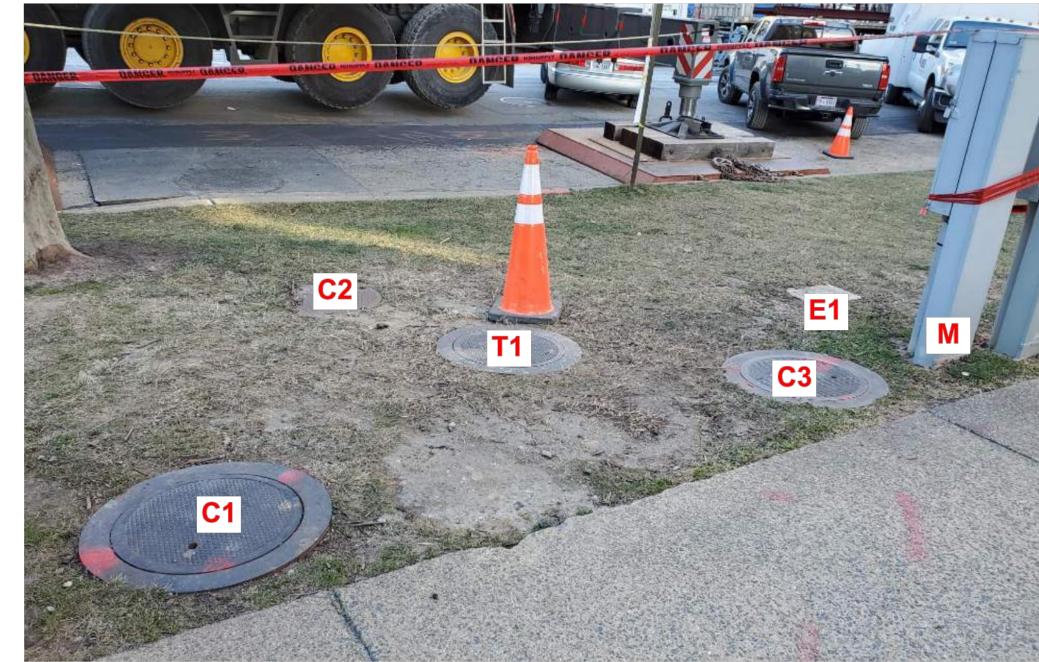
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CHECKED: JFR

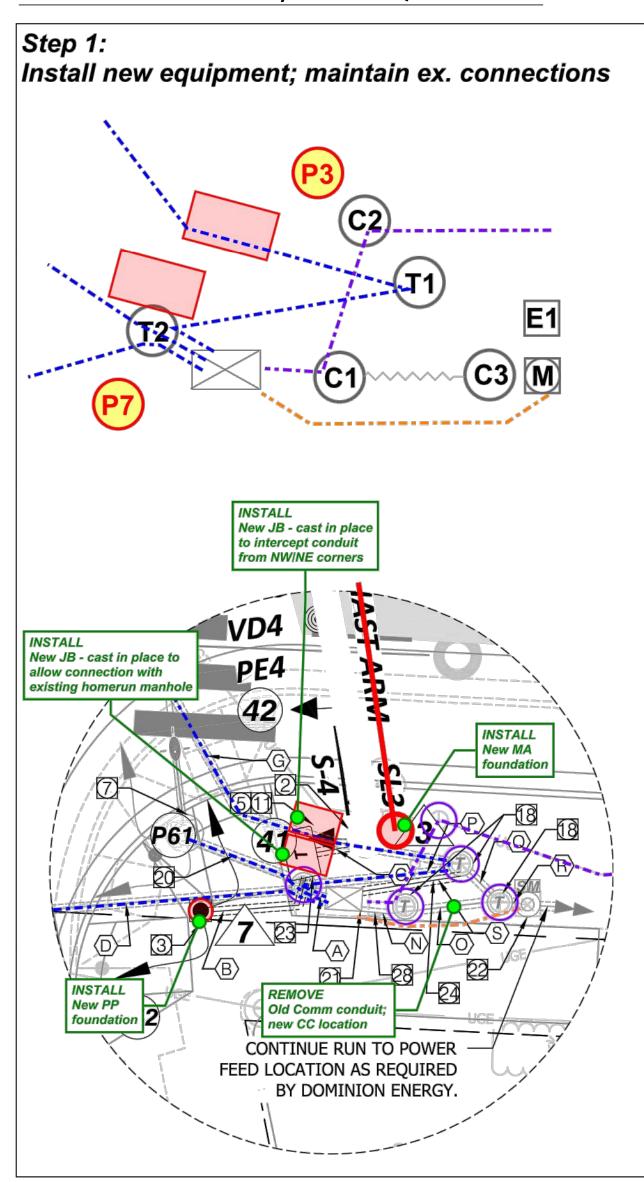
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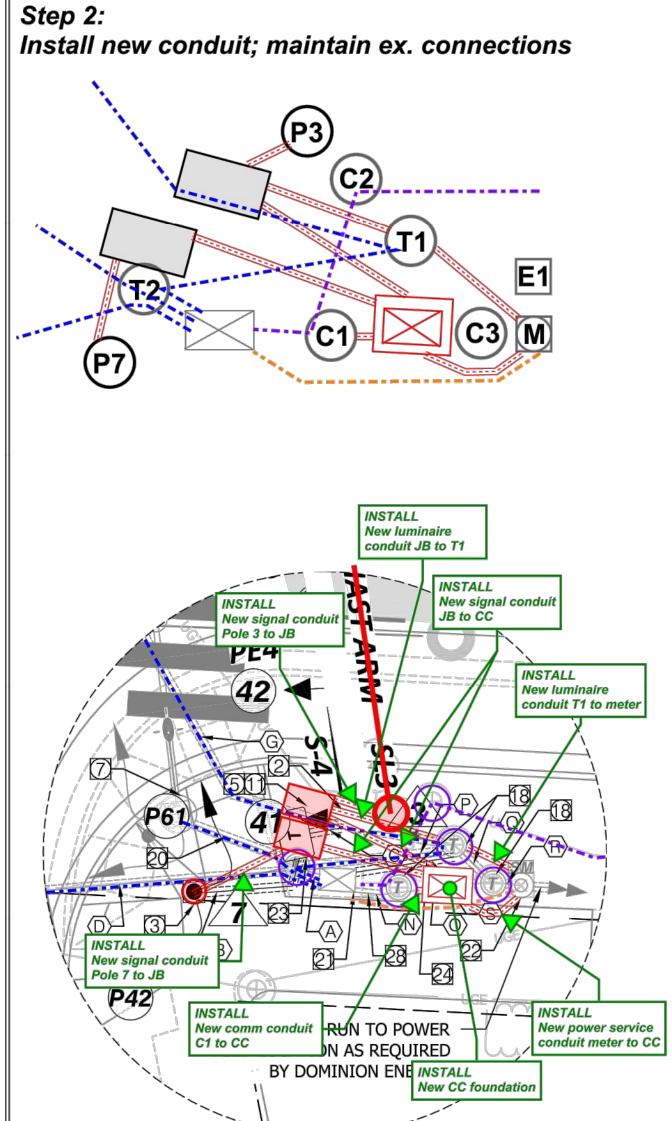


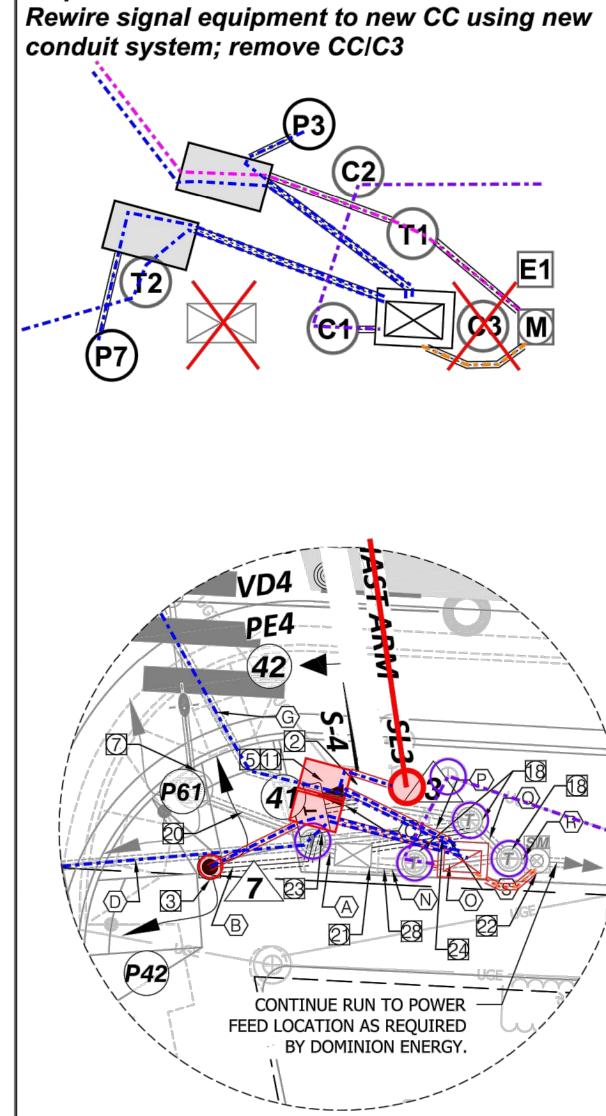




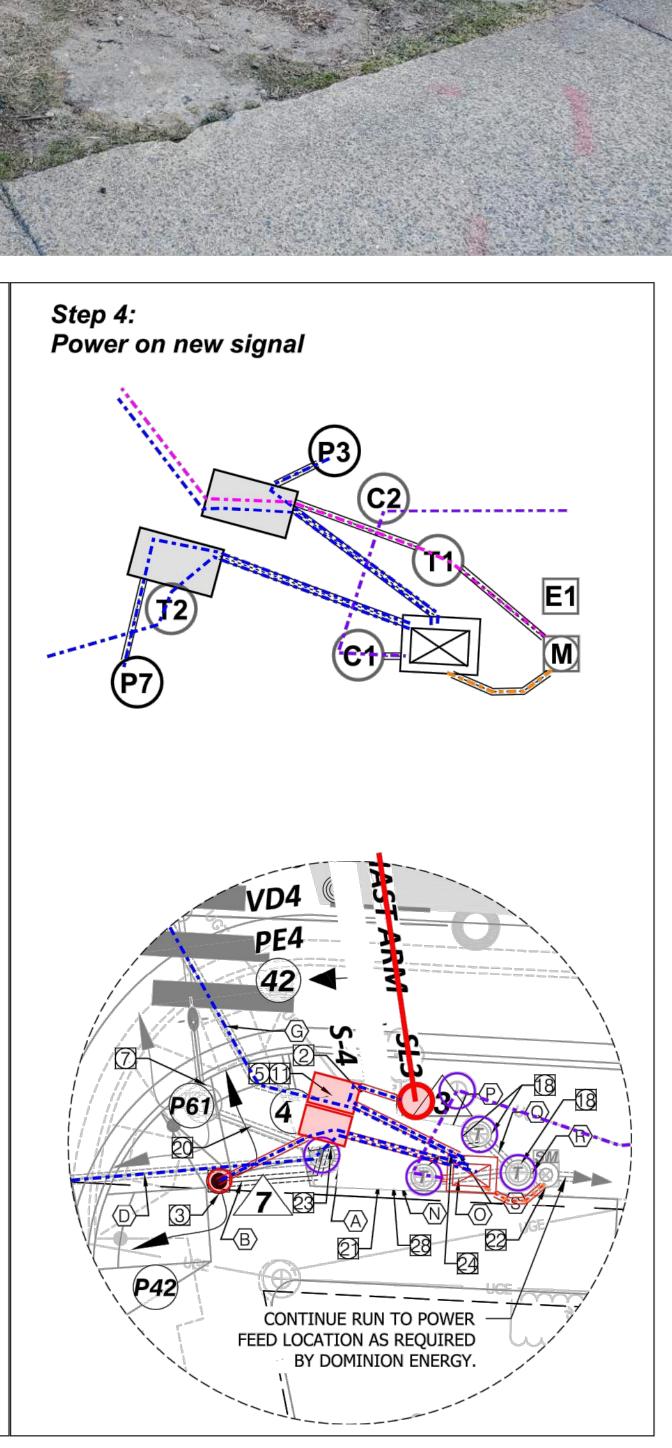
POTENTIAL CONSTRUCTION/WIRING SEQUENCE DETAIL







Step 3:



GENERAL NOTES:

- 1. FOR INFORMATIONAL PURPOSES ONLY. ULTIMATE CONSTRUCTION SEQUENCE TO BE DETERMINED BY CONTRACTOR.
- 2. CONTRACTOR MUST BE RESPONSIBLE FOR KEEPING EXISTING SIGNAL OPERATING DURING THIS INSTALLATION.
- 3. ALL EXISTING UTILITIES ARE TO BE MAINTAINED AND PROTECTED DURING CONSTRUCTION.

DESIGNED: PMH & JCC DRAWN: PMH & JGA

PLOTTED: APRIL 23 2021

HORIZ. SCALE

CHECKED: JFR

SCALE:

T300.3

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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DATE

APPROVALS

Amy Pflaum QUALITY CONTROL ENGINEER Kamal Taktak

CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

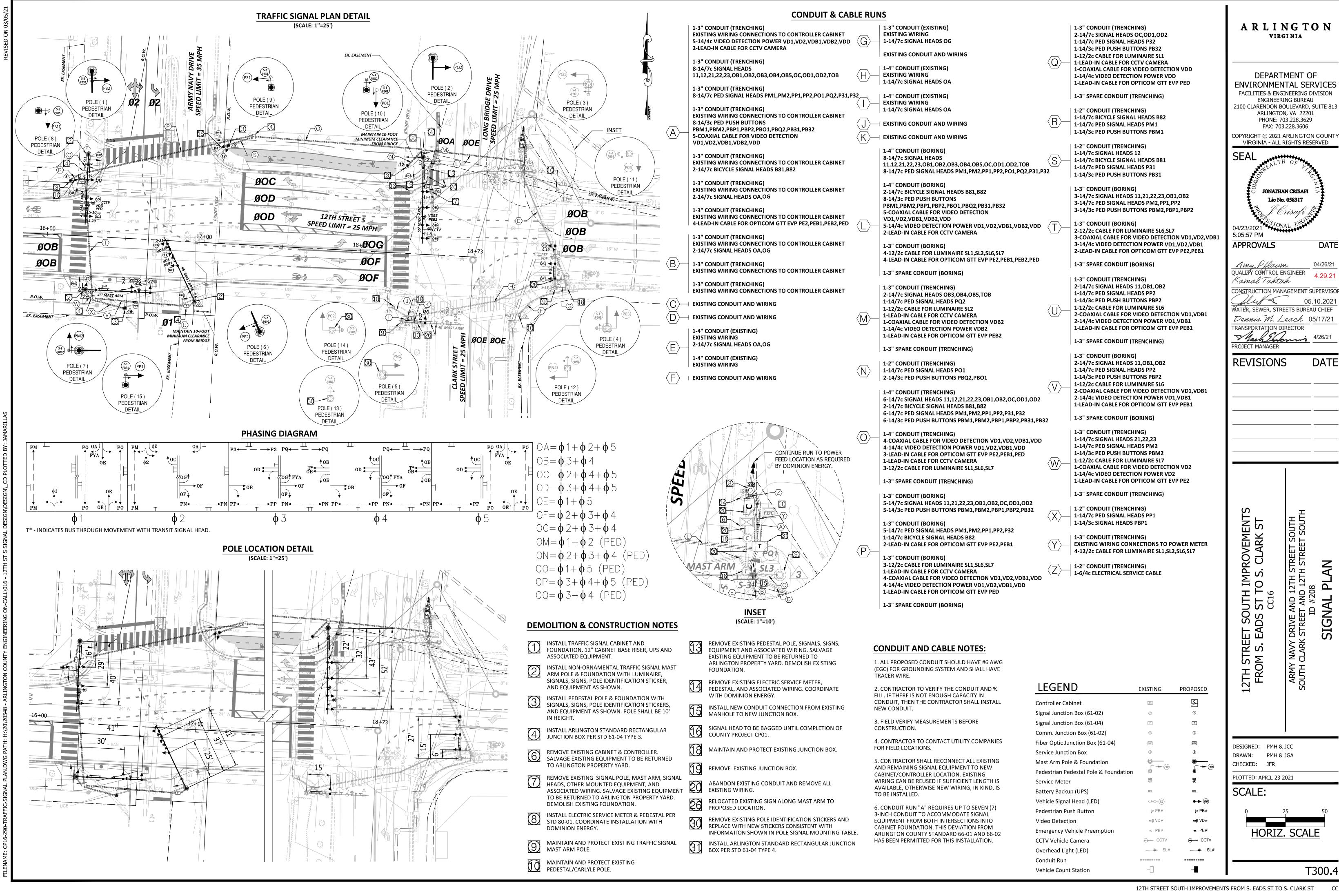
Dennis M. Leach 05/17/21

TRANSPORTATION DIRECTOR

Au Succession | 4/26/21

PROJECT MANAGER

REVISIONS



		INITI	AL TIN	1ING C	HART			
PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
PHASE ON	Х	Х	Х	Х	Х			
PHASE OFF						Х	Х	Х
			PHASE ⁻	rimings	5			
MIN GR	7.0	7.0	7.0	7.0	7.0			
PASSAGE	0.0	0.0	0.0	2.0	0.0			
AMBER	4.0	4.1	4.0	4.0	4.0			
RED	2.7	3.2	2.6	2.6	2.3			
MAX 1	20.0	30.0	40.0	40.0	15.0	ij		
MAX 2	0.0	0.0	0.0	0.0	0.0	USEI	NOT USED	NOT USED
MIN GAP	3.0	3.0	3.0	3.0	3.0	NOT	<u> </u>	<u> </u>
TIME BEFORE REDUCTION	0.0	0.0	0.0	0.0	0.0	9	9	9
TIME TO REDUCE	0.0	0.0	0.0	0.0	0.0	_		
PED WALK	7.0	7.0	7.0	7.0	7.0			
PED CLEARANCE	20.0	16.0	20.0	19.0	8.0			
MODE	MIN RECALL	MIN RECALL	PED	MIN RECALL	MIN RECALL			

ITALICS INDICATES EXISTING EQUIPMENT

* INDICATES RELOCATED EQUIPMENT

** POLE IDENTIFICATION LISTED HERE SHOULD REFLECT FINAL CONSTRUCTION AND LABELING

COLOR SEQUENCE CHART								
PHASE	1	2	3	4	5			
SIGNAL	R/W	R/W	R/W	R/W	R/W	FLASH		
11,12	G					R		
21,22,23		-G /G				R		
ТОВ						BLANK		
OB3,OB4,OB5			G	G		Υ		
OA	-FYA→	- G-			-FYA→	₽÷		
OB1,OB2			G	G		Υ		
OC		-G-		- G-	G	− R +		
OD1,OD2			G	G	G	Υ		
OE1,OE2,OE3,OE4	G				G	R		
OF1,OF2		G	G	G		Υ		
OG		-G	- FYA	+FYA		+ FYA		
B81,B82*						N/A		
PM1,PM2	WALK	WALK				BLAN		
PN1,PN2		WALK	WALK	WALK		BLAN		
PO1,PO2,PO3,PO4	WALK				WALK	BLANI		
PP1,PP2			WALK	WALK	WALK	BLAN		
P31,P32			WALK			BLANI		
PQ1,PQ2			WALK	WALK		BLANK		

*INDICATES SIGNAL HEAD WILL NOT DISPLAY UNTIL FUTURE WORK IS COMPLETED BY OTHERS. REFER TO SHEET T303.2 FOR ULTIMATE PROPOSED OPERATION.

WALK" INDICATION IS DISPLAYED.

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

	POLE SIGNAL MOUNTING												
No	POLE IDENTIFICATION	STANDARD						LUM. LED	POLE SIGNAL MOUNTING				STREET
No.		ТҮРЕ	STATION, OFFSET	SIG. M.A. ORIENT.	SIG. M.A.	LUM. M.A. ORIENT.	LUM. M.A.	(4)	VEHICLE & PED. HEADS	PED. PUSH BUTTONS	SIGNS	VIDEO DETECTOR PREEMPTION & CCTV	NAME SIGN
1	208-MA-01-NW	MAST ARM POLE	16+23.41, 52.4' LT	180°	45'	180°	6'	145W	OC, OD1, OD2, P32	PB32	S-2, S-9, S-10, S-20	VDD, PED, CCTV	S-5
2	208-MA-01-MN	MAST ARM POLE	18+36.59, 61.9' LT	180°	55'	180°	6'	145W	OB3, OB4, OB5, TOB, PQ2	-	S-8, S-11, S-18	VDB2, PEB2, CCTV	S-7
3	208-MA-01-NE	EX. MAST ARM POLE	-	180°	36'	180°	6'	145W	OE1, OE2, PQ1	PBQ1	S-1, S-13, S-16	VDE1, PEE1, VCS1	S-3
4	208-MA-01-SE	EX. MAST ARM POLE	-	180°	30'	180°	6'	145W	OF1*, OF2*, OG, <i>PO3</i>	PBO3	S-1, S-15, S-19	VDF, PEF	S-6*
<u>\$</u>	208-MA-01-MS**	EX. MAST ARM POLE	-	180°	40'	180°	6'	145W	OA, OE3, OE4, PN1	-	<i>S-14</i> , S-17*	VDE2, PEE2	S-12*
6	208-MA-02-MS	MAST ARM POLE	16+95.97, 37.9' RT	180°	45'	180°	6'	145W	11, OB1, OB2, PP2	PBP2	S-2, S-21	VD1, VDB1, PEB1	-
\uparrow	208-MA-01-SW	MAST ARM POLE	16+25.92, 34.0' RT	180°	45'	180°	6'	145W	21, 22, 23, PM2	PBM2	S-1, S-8, S-22	VD2, PE2	S-4, S-5
8	208-PP-01-NW	PEDESTAL POLE 10'	16+12.89, 35.0' LT	-	-	-	-	-	B82, PM1	PBM1	S-1	-	-
9	208-PP-01-MN	PEDESTAL POLE 10'	17+12.10, 62.7' LT	-	-	-	-	-	12, B81, P31	PB31	S-2	-	-
10	208-PP-02-MN	PEDESTAL POLE 10'	18+26.94, 55.9' LT	-	-	-	-	-	PO1	PBQ2, PBO1	S-1, S-1	-	-
11	208-PP-01-NE	EX. PEDESTAL POLE	-	-	-	-	-	-	PO4	PBO4	S-2	-	-
12	208-PP-01-SE	EX. PEDESTAL POLE	<u>-</u>	-	-	-	-		PN2	PBN2	S-2	-	-
13	208-PP-01-MS**	EX. PED BOLLARD POLE		-	-	-	ı		-	PBN1	S-1	-	-
14	208-PP-02-MS**	EX. PEDESTAL POLE	<u>-</u>	-	-	-	-	-	PO2	PBO2	S-2	-	-
15	208-PP-01-SW	PEDESTAL POLE 10'	16+51.88, 44.6' RT	-	-	_	-	_	PP1	PBP1	S-1	-	-

EXISTING SIGNALS (TO REMAIN)



HEADS HEADS PN1,PN2,PO2, OE1,OE2, PO3,PO4,PQ1 OE3,OE4

RELOCATED SIGNALS

HEADS OF1,OF2

EXISTING STREET SIGNS

(TO REMAIN)

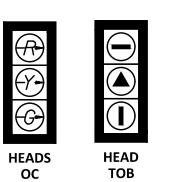
12th St S

S-3

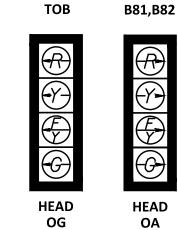
HEAD

HEADS PM1,PM2,PO1, 11,12,21, PP1,PP2,P31, OB1,OB2,OB3, P32,PQ2 OB4,OB5, OD1, OD2

PROPOSED SIGNALS







HEADS

SIGNAL S-18 CUSTOM

36"X30"



ONLY

S-8

R3-5(L)

36"X30"



EXISTING SIGNS

(TO REMAIN)

S-14

R3-6(L) 36"X30"

PROPOSED SIGNS

S-10

R3-6(L) 36"X30"

S-13 R3-6(R) 36"X30"

ONLY

S-16 R3-5(L)

36"X30"

ONLY

S-9

R3-5(R) 36"X30"

MUST

S-15

R3-6(L)

36"X30"



RIGHT TURN ONLY EXCEPT BUSES

S-11

CUSTOM 24"X24"

TURNING POPULATION TO TO S-22

PROPOSED STREET SIGNS



Army Navy Dr



RELOCATED STREET SIGNS



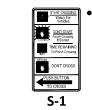


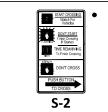
RELOCATED SIGNS

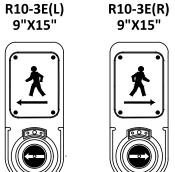


36"X30"

ACCESSIBLE PEDESTRIAN PUSHBUTTON









PBM1, PBM2, PBP2, PBN2, PBO2, PBO4, PBP1, PBN1, PB31, PB32 **PBO1,** *PBO3,*

ITALICS INDICATES EXISTING EQUIPMENT **BOLD INDICATES PROPOSED EQUIPMENT**

PBQ1, PBQ2

PUSHBUTTON	WALK MESSAGE
PBN1, PBN2	"CLARK STREET, WALK SIGN IS ON TO CROSS CLARK STREET."
PBP1, PBP2 PB31, PB32	"ARMY NAVY DRIVE, WALK SIGN IS ON TO CROSS ARMY NAVY DRIVE."
PBQ1, PBQ2	"LONG BRIDGE DRIVE, WALK SIGN IS ON TO CROSS LONG BRIDGE DRIVE."
PBM1, PBM2 PB01 , <i>PB02</i> <i>PB03</i> , <i>PB04</i>	"12TH STREET, WALK SIGN IS ON TO CROSS 12TH STREET."

PEDESTRIAN PUSHBUTTON SIGN SHALL BE MOUNTED ABOVE PEDESTRIAN PUSHBUTTON.

* ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATIONS AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.

LEGEND	EXISTING	PROPOSED
Controller Cabinet		C
Signal Junction Box (61-02)	(7)	T
Signal Junction Box (61-04)	T	T
Comm. Junction Box (61-02)	©	©
Fiber Optic Junction Box (61-04)	FOC	FOC
Service Junction Box	(3)	(3)
Mast Arm Pole & Foundation	(DHH)	
Pedestrian Pedestal Pole & Foundation	-(7##)	
Service Meter		
Battery Backup (UPS)	UPS	UPS
Vehicle Signal Head (LED)	O-I> (##)	●→ ##
Pedestrian Push Button	→ PB#	↓ ₽ PB#
Video Detection	☞ VD#	☞ VD#
Emergency Vehicle Preemption	∝ PE#	⇔ PE#
CCTV Vehicle Camera	⊕— CCTV	⊕ CCT\
Overhead Light (LED)	—— - - SL#	- → s
Conduit Run	=======	=======
Vehicle Count Station	_	-

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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Lic No. 058317 04/23/2021 5:06:15 PM APPROVALS DATE

Amy Pflaum QUALITY CONTROL ENGINEER Kamal Taktak

CONSTRUCTION MANAGEMENT SUPERVISO WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

REVISIONS DATE

DESIGNED: PMH & JCC DRAWN: PMH & JGA CHECKED: JFR

PLOTTED: APRIL 23 2021

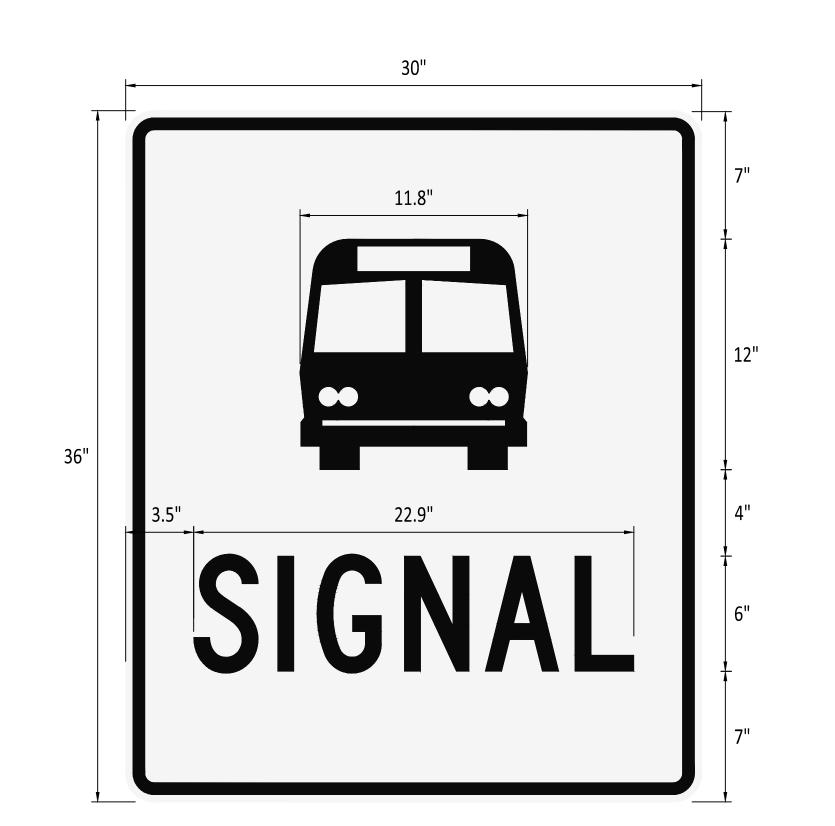
SCALE:

HORIZ. SCALE T300.5

RIGHT TURN ONLY EXCEPT BUSES SIGN REFER TO SHEET(S): T300.4

1" = 5"

1" = 5"

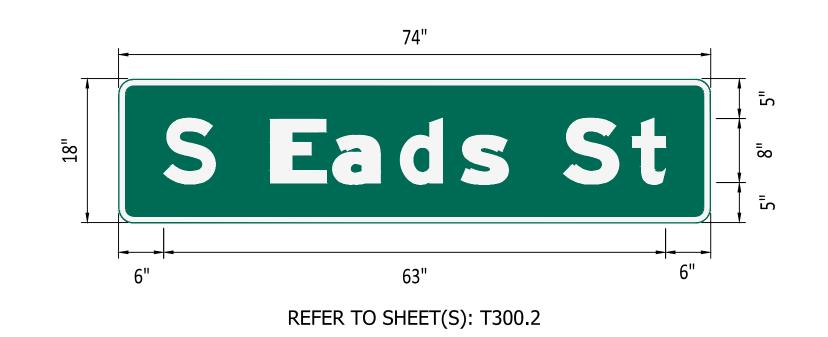


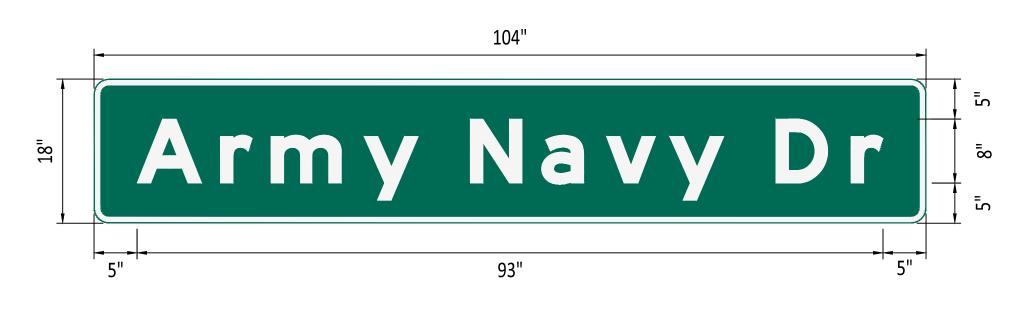
TRANSIT SIGNAL SIGN

REFER TO SHEET(S): T300.2, T300.4



REFER TO SHEET(S): T300.2, T300.4





REFER TO SHEET(S): T300.4

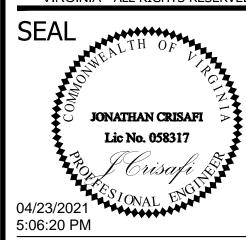


REFER TO SHEET(S): T300.4

TREET NAME SIGNS	
MENSIONING DETAIL	1"=12"

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APPROVALS DATE

Amy Pflaum QUALIDY CONTROL ENGINEER Kamal Taktak CONSTRUCTION MANAGEMENT SUPERVISO WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 05/17/21 TRANSPORTATION DIRECTOR

Au Succession 2/26/21

PROJECT MANAGER

4/26/21

REVISIONS

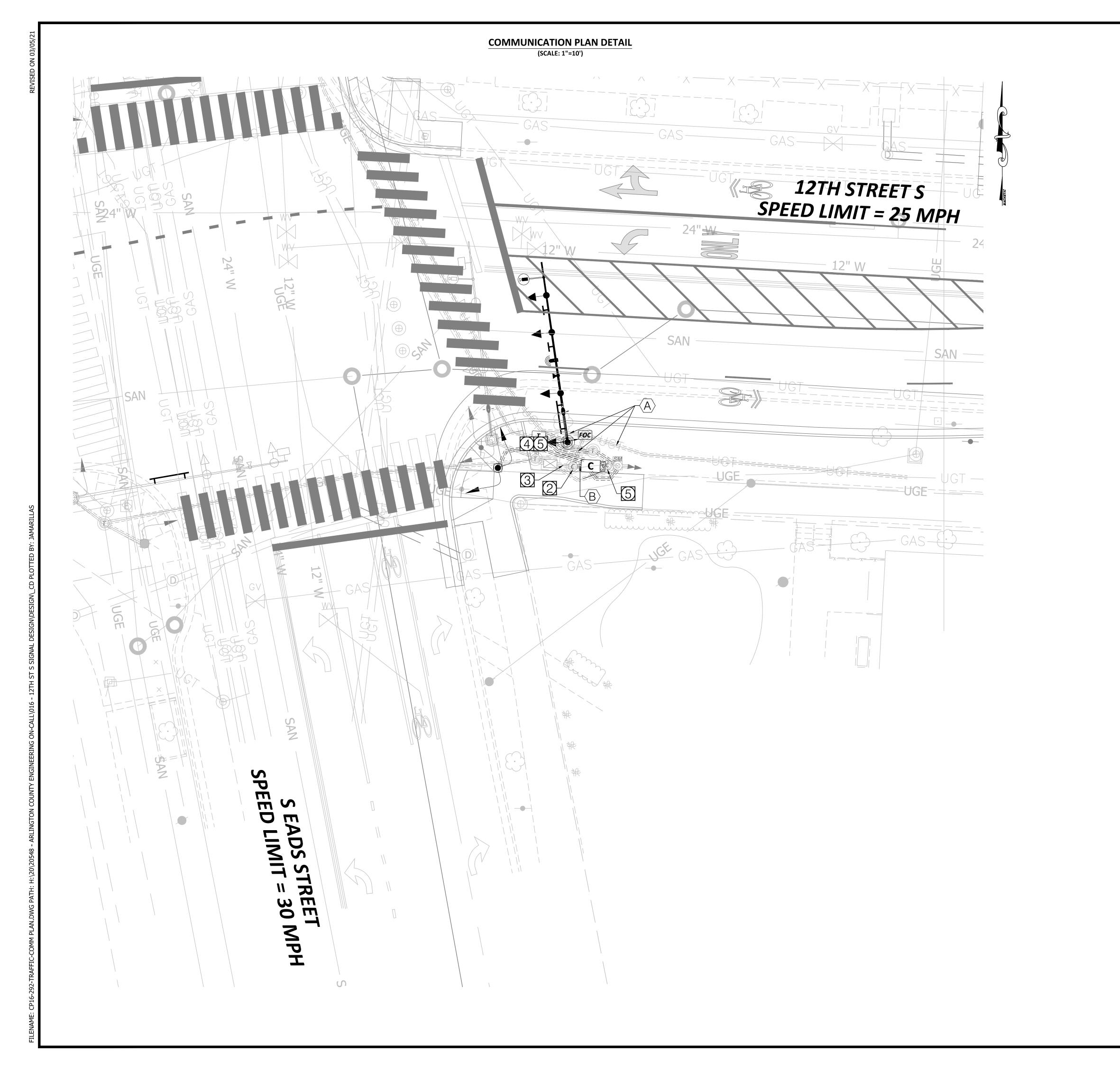
DESIGNED: JGA CHECKED: JCC

PLOTTED: APRIL 22 2021

SCALE:

AS SHOWN

T301.1



CONDUIT & CABLE RUNS

1- 2" CONDUIT (EXISTING)
EXISTING FIBER OPTIC CABLE

1- 2" CONDUIT (TRENCHING) 1- 12-STRAND FIBER OPTIC CABLE

1-2" CONDUIT (SPARE)

DEMOLITION & CONSTRUCTION NOTES

INSTALL NEW CONDUIT CONNECTION FROM EXISTING MANHOLE TO NEW CONTROLLER CABINET.

RECOVER EXISTING FIBER OPTIC CABLE AND ABANDON EXISTING CONDUIT.

INSTALL ARLINGTON STANDARD RECTANGULAR COMMUNICATIONS JUNCTION BOX PER STD 31-04 TYPE 3.

REMOVE EXISTING COMMUNICATIONS JUNCTION BOX.

CONDUIT AND CABLE NOTES:

- 1. ALL PROPOSED CONDUITS SHOULD BE HDPE SCHEDULE 40.
- 2. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.
- 3. PROPOSED COMMUNICATION CONDUIT SHOULD HAVE A PULL WIRE FOR FUTURE FIBER OPTIC CABLE.

LEGEND

Controller Cabinet

Battery Backup (UPS)

Conduit Run

Comm. Junction Box (61-02)

Fiber Optic Junction Box (61-04)

EXISTING

FOC

UPS

====

PROPOSED

FOC

UPS

====

VIRGINIA

ARLINGTON

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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JONATHAN CRISAFI

5:06:27 PM APPROVALS

Amy Pflaum QUALIDY CONTROL ENGINEER Kamal Taktak

DATE

CONSTRUCTION MANAGEMENT SUPERVISO WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

TRANSPORTATION DIRECTOR

Aud Survey 1/26/21

PROJECT MANAGER

4/26/21

REVISIONS

EET AND 12 ID #198

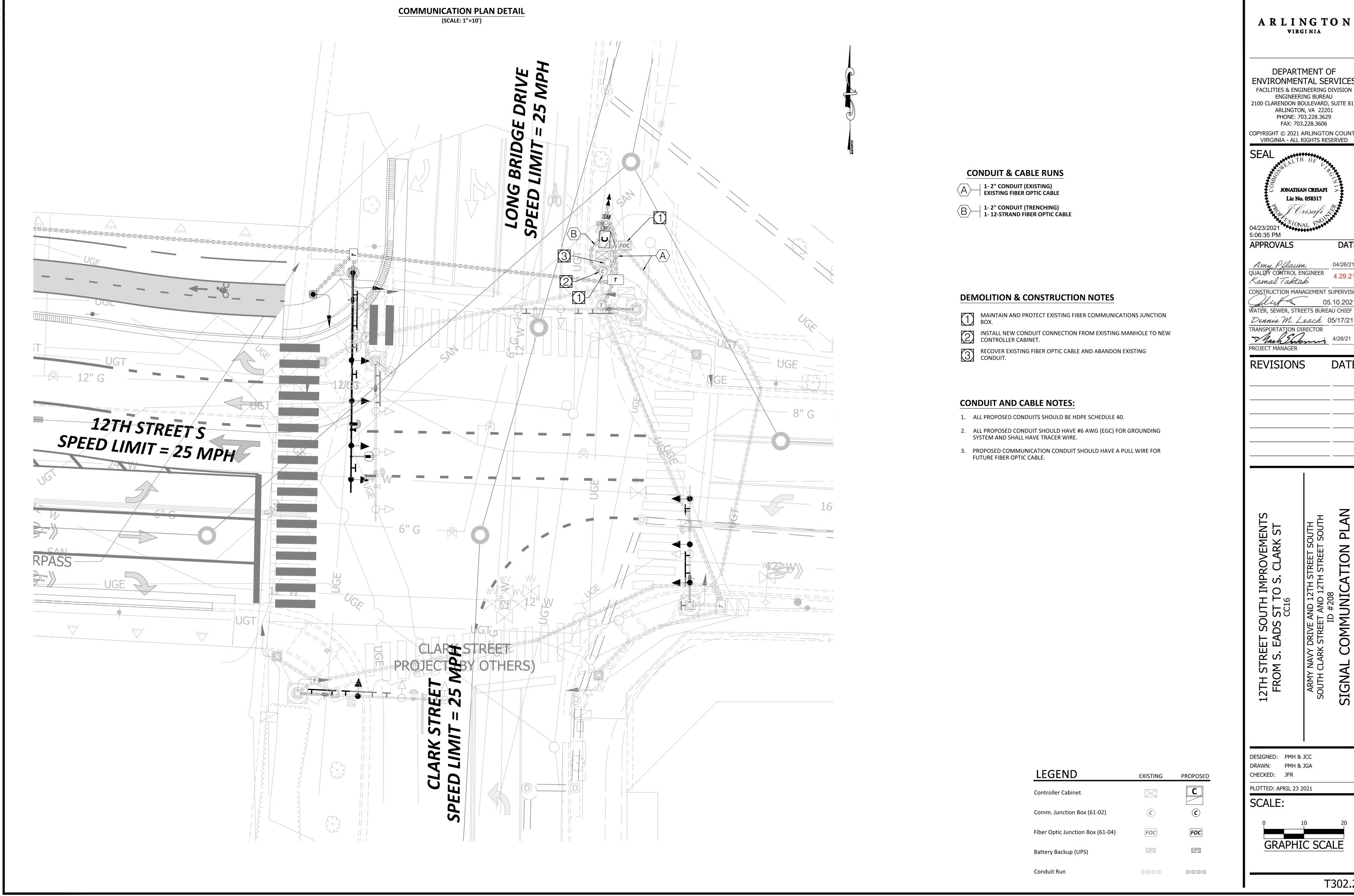
COMMUNICATION SIGNAL

DESIGNED: PMH & JCC DRAWN: PMH & JGA CHECKED: JFR

PLOTTED: APRIL 23 2021 SCALE:

GRAPHIC SCALE

T302.1



ARLINGTON VIRGINIA

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

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JONATHAN CRISAFI Lic No. 058317

DATE

CONSTRUCTION MANAGEMENT SUPERVISOR

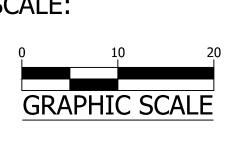
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 05/17/21

ARMY NAVY DRIVE AND 12TH STREET SOUTH
SOUTH CLARK STREET AND 12TH STREET SOUTH
ID #208
SIGNAL COMMUNICATION PLAN

SIGNAL

DESIGNED: PMH & JCC DRAWN: PMH & JGA

PLOTTED: APRIL 23 2021



T302.2

