CONSTRUCTION DRAWINGS FOR:

**ENGINEER** DEPARTMENT OF **ENVIRONMENTAL SERVICES** 

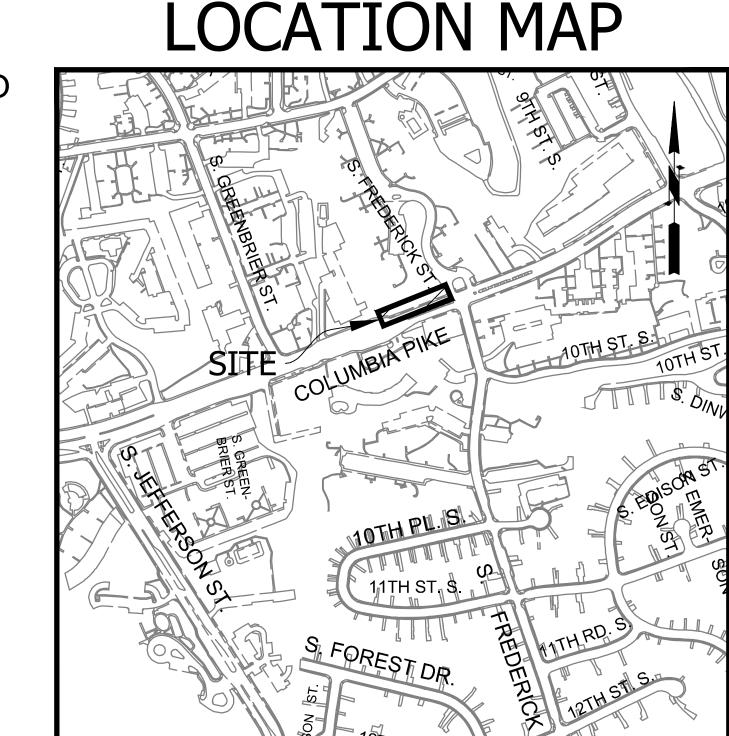
**FACILITIES & ENGINEERING DIVISION** ENGINEERING BUREAU 2100 CLARENDON BOULEVARD, SUITE 813 ARLINGTON, VA 22201 PHONE: 703.228.3629 FAX: 703.228.3606 WWW.ARLINGTONVA.US

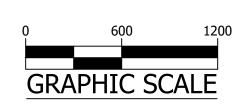
**OWNER** DES/DTD/PLAN

CONSULTANT

**VOLKERT INC** 6225 BRANDON AVENUE, SUITE 540 SPRINGFIELD, VA 22150 PHONE: 703.642.8100 FAX: 703.642.8106 WWW.VOLKERT.COM

CONTRACTOR TO BE DETERMINED





# ARLINGTON

**DEPARTMENT OF ENVIRONMENTAL SERVICES** 



**APPROVALS** 

Christopher () Balallo dward Sanders 9/24/2

Dennis M. Leach 09/28/2 TRANSPORTATION DIRECTOR Susan Finotti

PROJECT MANAGER

**REVISIONS** 

## DESIGN

CODE, 2018 EDITION; INTERNATIONAL BUILDING CODE, 2018 EDITION.

S. FREDERICK STREET

COLUMBIA PIKE RETAINING WALL

## GENERAL CONSTRUCTION NOTES

PROJECT NUMBER: D07S

. 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.

PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.

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

THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL

- TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
- . ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

## STORMWATER AND ENVIRONMENTAL PROTECTION

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

## TREE PROTECTION

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

## TRAFFIC CONTROL

COLUMBIA PIKE ON NORTH WEST CORNER OF

**GENERAL NOTES:** 

- 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
- 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. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
- 15. WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
- 16. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
- 17. 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

- 18. 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.
- 19. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
- 20. 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:

- 21. 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.
- 22. 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.
- 23. 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.

# SHEET LIST

000.1	COVER
000.2	LEGEND
001	RETAINING WALL PLAN
002	RETAINING WALL PROFILE
003	RETAINING WALL CROSS SECTIONS
004	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
005	EROSION AND SEDIMENT CONTROL PLAN
005.1	STORMWATER POLLUTION PREVENTION PLAN
006	MAINTENANCE OF TRAFFIC PLAN
007	RETAINING WALL SECTIONS AND DETAILS
800	TYPICAL SECTIONS
009	HR-1 TYPE II PEDESTRIAN RAILING
010	TREE IDENTIFICATION PLAN

TREE IDENTIFICATION TABLE

SWM# SWM# 21-0218

24,000 - COLUMBIA PIKE (FROM FAIRFAX COUNTY LINE TO GLEBE RD) - 2019 - VDOT

STREET CLASSIFICATION

POSTED SPEED

COLUMBIA PIKE - ARTERIAL STREET TYPE D

COLUMBIA PIKE - 35 MPH

AINING

DESIGNED: AH DRAWN: AH CHECKED: BCG

PLOTTED: SEPTEMBER 28 2021

SCALE:

COLUMBIA PIKE RETAINING WALL

000.3

	LINETYPE	LEGEND	<u>S</u>	YMBOL LEGE	<u>ND</u>	
<u>FEATURE</u>	EXISTING	<u>PROPOSED</u>	EXISTING FEATURE	<u>P</u> l	ROPOSED FEATURE	
BUILDING			EX CABLE PEDESTAL	С		
CENTERLINE / BASELINE			EX ELECTRIC BOX	E		
COMMUNICATIONS CABLE	COM	COM	EX FIRE HYDRANT		PROP FIRE HYDRANT	•
CONTOURS - MAJOR, MINOR		250	EX GAS VALVE	•	PROP GAS VALVE	0
CRITICAL ROOT ZONE	——————————————————————————————————————	—— CRZ ——— CRZ ———	EX GROUND LIGHT	<b>€</b>		
EASEMENT			EX GUY WIRES	>-		
ELECTRIC (UNDERGROUND)	——————————————————————————————————————	UGE	EX IRON PIPE OR PIN	•		
FENCE (MATERIAL NOTED)	—x——x——x——x—	—x——x——x——x—	EX LIGHT POLE	•	PROP LIGHT POLE	<b>+</b>
FIBER OPTIC	—— FO —— FO ——	—— FO ——	EX MAILBOX			
GAS LINE	——— GAS ———	—— GAS ———	EX MONUMENT	•		
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	— #" g — #" g — #" g —		EX PARKING METER	$\Theta$		
GUARDRAIL	. <u>0 0 0 0 0 0</u> 0.	. <u>o o o o o o</u> o.	EX PAY STATION	PS	PROP PAY STATION	PS
HARDSCAPE FEATURE (MATERIAL NOTED)			EX SANITARY MANHOLE	0	PROP SANITARY MANHOLE	0
LIMITS OF DISTURBANCE	LOD	LOD LOD	EX STORM BASIN		PROP STORM CATCH BASIN (TO SCALE)	0
LIMITS OF WORK	LOW	— LOW — LOW —	EX STORM MANHOLE	[0]	PROP STORM MANHOLE	0
OVERHEAD WIRES		——————————————————————————————————————	EX TELEPHONE PEDESTAL	T		
PAVEMENT MINI SKIP LINE			EX TRAFFIC CONTROL BOX			
PAVEMENT SKIP LINE			EX TRAFFIC SIGN	-	PROP TRAFFIC SIGN	•
PROPERTY LINE			EX TRASH CAN	<b>₩</b>	PROP TRASH CAN	₩
RIGHT-OF-WAY LINE			EX TRAVERSE	2		
ROOT PRUNING	——————————————————————————————————————	RP	EX TREES, WOODED AREA	And the state of t	PROPOSED TREE	+
SANITARY SEWER	SAN	—— SAN——— SAN——				
SANITARY SEWER UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#"s				PROPOSED TREE REMOVAL	X
SANITARY SEWER OVER 20"			EX UTILITY MANHOLE TYPE INDICATED ELEC, TELE, ETC	<b>(</b>		
SILT FENCE	—x—x—x—x—	_xxxx	EX UTILITY POLE	iii .	PROP UTILITY POLE	•
STORM (SIZE NOTED)	STM		EX WATER MANHOLE	Θ	PROP WATER MANHOLE	
STREAM	· · ·	· · ·	EX WATER METER		PROP WATER METER	•
STREET LIGHT CONDUIT	—— SL ———	SL	EX WATER VALVE	$\otimes$	PROP WATER VALVE	•
TELEPHONE (UNDERGROUND)	—— UGT———	—— UGT———	EX YARD INLET	CTC	PROP YARD INLET (TO SCALE)	
TREE LINE			EX BENCHMARK	0	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)	<u></u>
TREE PROTECTION FENCE	TP	—— TP ——		1	DETAIL NUMBER (SEE NOTE)	<b>D#</b> )
WALL			NORTH ARROW	A N	CURVE NUMBER (SEE CURVE TABLE)	<b>C</b> #)
WATERLINE UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#" W				LINE NUMBER (SEE LINE TABLE)	(L#)
WATERLINE OVER 20"	=======				TEST HOLE	lacktriangle

SYMBOL	LEGENI
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PROPOSED FEATURE **EXISTING FEATURE** EX STRIPING PROP STRIPING PROP BUS STOP EX BUS STOP

## LABEL LEGEND

**EXISTING** PROPOSED PROPOSED SANITARY SEWER STRUCTURE NUMBER EXISTING SANITARY (XXXX) XXXX STRUCTURE NUMBER EXISTING STORM SEWER STRUCTURE NUMBER PROPOSED STORM SEWER STRUCTURE NUMBER  $\langle \overline{x} \overline{x} \overline{x} \overline{x} \rangle$  $\langle XXXX \rangle$ 

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

## **ABBREVIATIONS**

COUNTY CITY ARLINGTON COUNTY CITY OF ALEXANDRIA 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

Drudopher J. Baldlo 9/23/21
DESIGN TEAM ENGINEER SUPERVISOR Edward Sanders 9/24/2021 CONSTRUCTION MANAGEMENT SUPERVISOR 09.27.2021 WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 09/28/21 TRANSPORTATION DIRECTOR

Susan Finotti 9/23/21 PROJECT MANAGER **REVISIONS** DATE

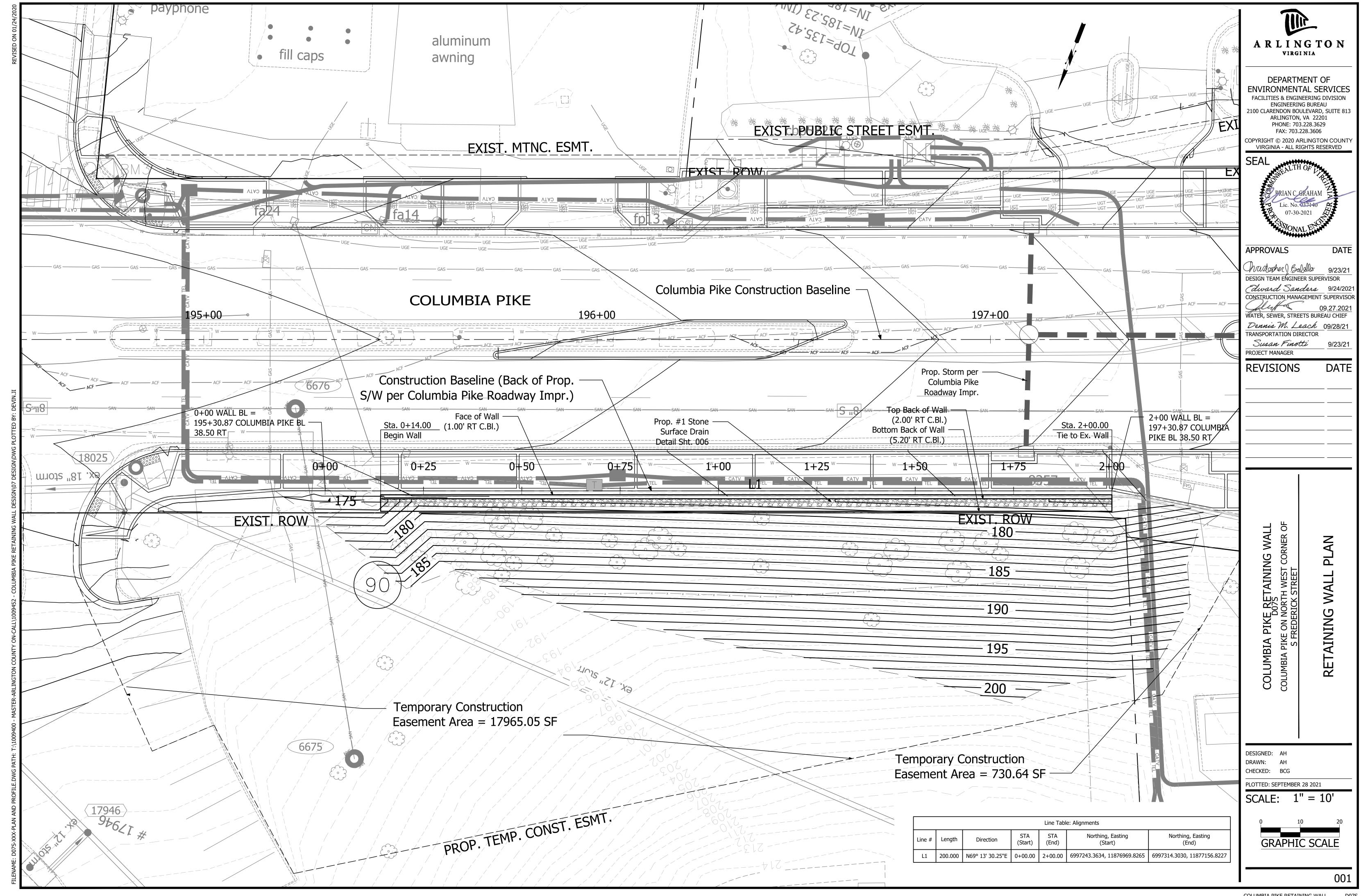
COLUMBIA PIKE RETAINING WALL D07S COLUMBIA PIKE ON NORTH WEST CORNER OF S FREDERICK STREET

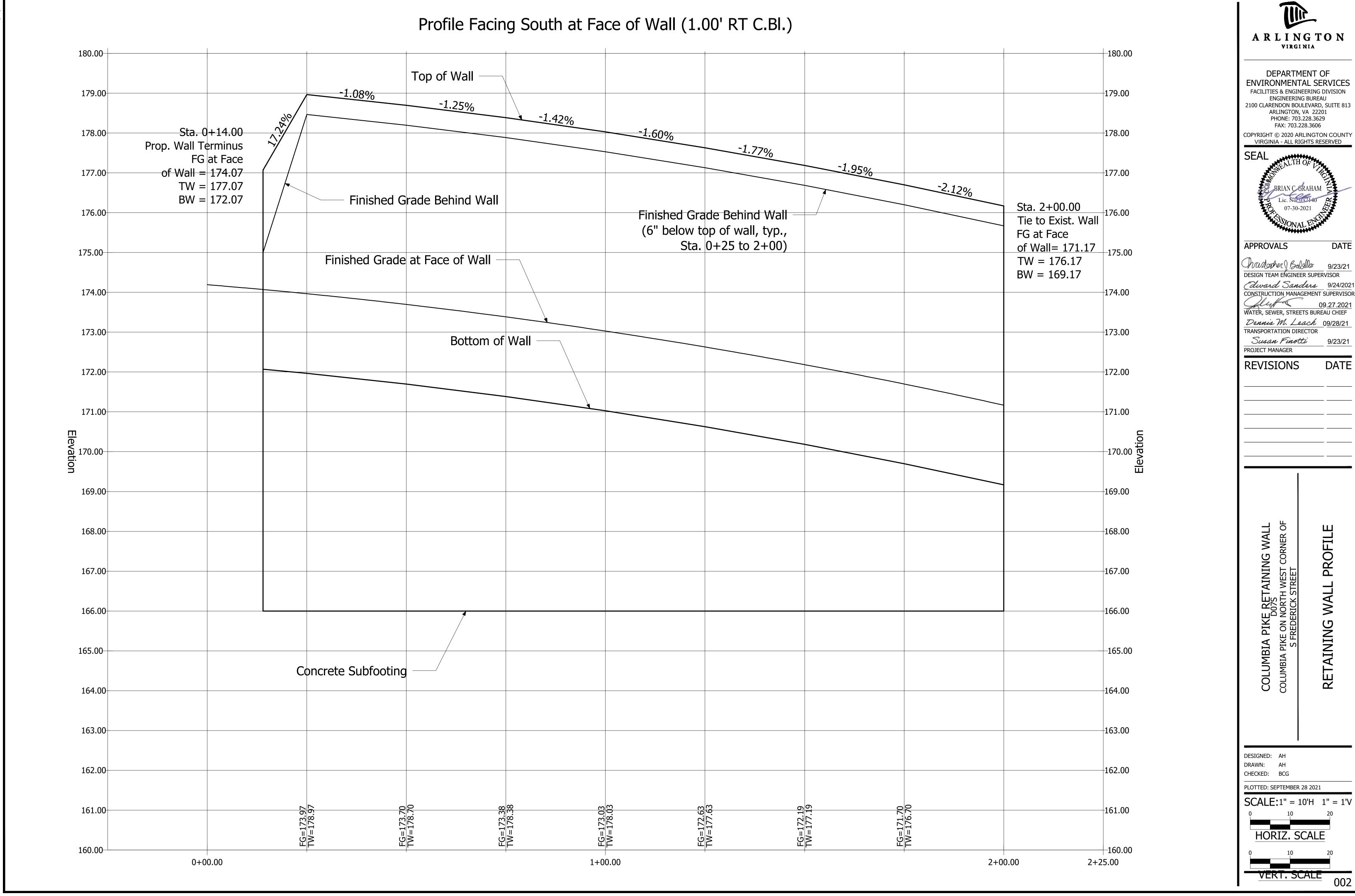
DESIGNED: BD DRAWN: BD

CHECKED: BCG PLOTTED: SEPTEMBER 28 2021

SCALE:

000.2





DATE

9/23/21

DATE

SECTIONS

**CROSS** 

WALL

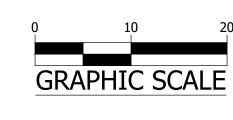
RETAINING

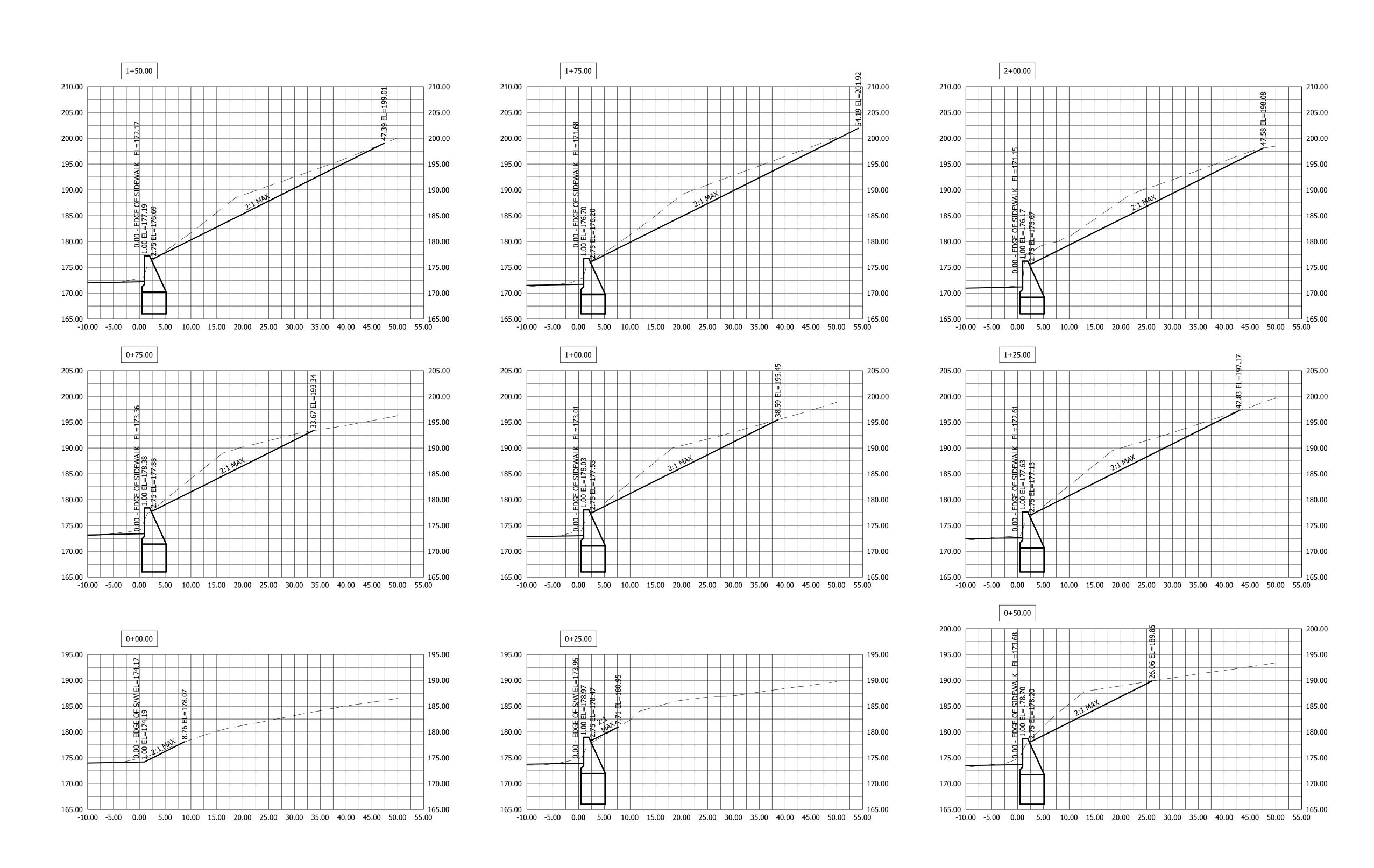
DESIGNED: AH

DRAWN: AH CHECKED: BCG

PLOTTED: SEPTEMBER 28 2021

SCALE: 1'' = 10'





## EROSION AND SEDIMENT CONTROL NARRATIVE

#### PROJECT DESCRIPTION:

THE COLUMBIA PIKE RETAINING WALL PROJECT PROPOSES TO REPLACE A PORTION OF THE FAILING RETAINING WALL ALONG THE NORTH SIDE OF COLUMBIA PIKE. THE TOTAL PROJECT WORK AREA IS 12,738 SF (0.29 AC). THE IMPERVIOUS AREA WILL BE NOT BE INCREASED BY THE PROPOSED IMPROVEMENT. PROJECT WORK INCLUDES:

- REMOVING AND INSTALLING OF NEW RETAINING WALL AND DRAINAGE STONE
- STABILIZING OF THE UPSTREAM SLOPE AND REMOVAL OF TREES ON SLOPE • REMOVING AND REPLACING OF PORTIONS OF CONCRETE SIDEWALK AND BRICK BANDING.

#### EXISTING SITE CONDITIONS:

THE PROJECT IS LOCATED ON THE NORTH SIDE OF COLUMBIA PIKE, TO THE WEST OF THE S FREDERICK ST INTERSECTION. THE ROADWAY IS A PRIMARY ROAD WITH THE CLASSIFICATION OF URBAN PRINCIPAL ARTERIAL. THE LOW POINT OF THE PROJECT IS LOCATED NEAR THE WEST APPROACH OF THE BRIDGE. THE SITE IS LOCATED WITH IN POTOMAC RIVER-FOUR MILE RUN SUB- WATERSHED WITH THE 8 DIGIT HYDROLOGIC UNIT CODE (HUC) OF 02070010 AND IT HAS HYDROLOGIC SOIL GROUP OF MAINLY B/D. THE SOIL TYPE IS "URBAN LAND-UDORTHENTS COMPLEX," THE SITE IS GENERALLY SLOPED NEAR 50%.

## ADJACENT PROPERTIES:

TO THE SOUTH, COLUMBIA PIKE'S ROADWAY AND SIDEWALK ARE ADJACENT. THERE IS RESIDENTIAL PROPERTY ON THE PROPOSED SLOPE AND TO THE

## **OFF-SITE AREAS:**

A MINIMAL AMOUNT OF OFFSITE BORROW MAY BE REQUIRED FOR TOPSOIL IN PROJECT SITE. THE LOCATION AND ENSURING MAINTENANCE OF THE BORROW AREAS IS THE CONTRACTOR'S RESPONSIBILITY.

#### **CRITICAL AREAS:**

THERE ARE NO CRITICAL AREAS ASSOCIATED WITH THE PROJECT SITE.

#### EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA SHALL INCLUDE PERIMETER CONTROLS SUCH AS SILT FENCE TO PREVENT SILTY WATER FROM LEAVING THE SITE, INLET PROTECTION TO PREVENT SEDIMENT FROM ENTERING THE EXISTING STORM SEWER SYSTEM, AND STABILIZATION WITH SOD, MULCH, OR SEEDING AND STRAW OR HAY. FOR SPECIFICS REGARDING INSTALLATION, MAINTENANCE, INSPECTION, AND REMOVAL, REFER TO OTHER SECTIONS OF THIS NARRATIVE AND THE PLANS.

## PERMANENT STABILIZATION:

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

ADDITIONAL IMPERVIOUS AREA WILL NOT BE ADDED TO THIS PROJECT.

STORMWATER RUNOFF CONSIDERATIONS:

TOTAL LAND DISTURBANCE. .... 12,738 SF (0.29 AC) EX. IMPERVIOUS AREA. . 1,545 SF (0.04 AC) PROP. IMPERVIOUS AREA. . 1,545 SF (0.04 AC)

INCREASED IMPERVIOUS AREA ...... 0.00 SF (0.00 AC)

EX. PERVIOUS AREA . .. 11,193 SF (0.26 AC) PROP. PERVIOUS AREA .. .. 11,193 SF (0.26 AC)

## SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE:

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

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA)

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE.

## EROSION & SEDIMENT CONTROL PROJECT PHASING

## 1. EXISTING CONDITION:

- a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, COUNTY URBAN FORESTER, AND COUNTY INSPECTOR.
- b. INSTALL INLET PROTECTION (IP) AT STORM DRAIN INLETS.
- c. Perform initial perimeter clearing to install remainder of perimeter controls such as silt fence (SF) per the phase I plan. d. SEED AND MULCH ALL EARTHEN CONTROLS.
- e. 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.
- f. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.
- 2. PROPOSED CONDITION: a. BEGIN SITE GRADING
- b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
- c. ONCE THE SITE IS BROUGHT TO NEAR FINAL GRADE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER
- d. THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND

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.

## 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, EROSION CONTROL BLANKET AND MULCHING - VESCH 3,36 AND 3,35

- c.a. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION. d. DUST CONTROL - VESCH 3.39
- d.a. DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER

## e. PERMANENT SEEDING - VESCH 3.32

- e.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.
- f.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.
- 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
- 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
- 5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
- 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
- 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.

ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.

## 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.

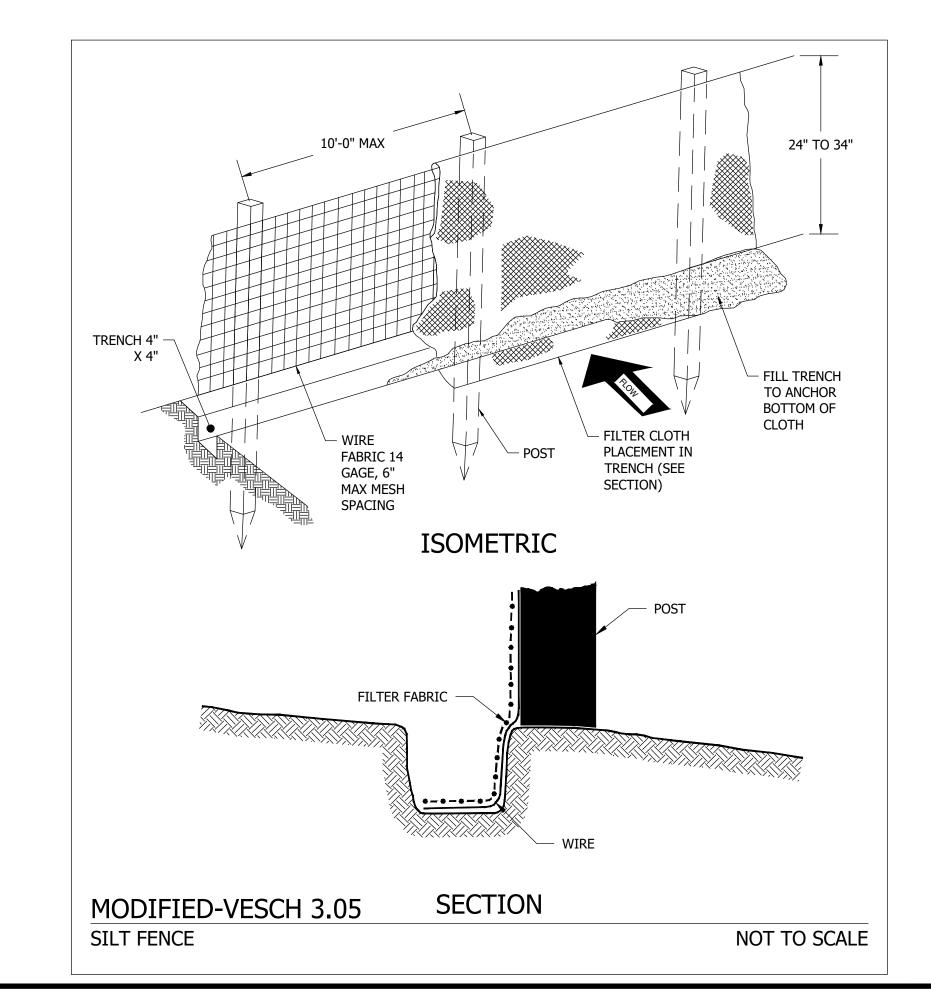
IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

## 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.

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





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



**APPROVALS** 

Mulopher () Balallo DESIGN TEAM ENGINEER SUPERVISOR Toward Sanders 9/24/20 CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 09/28/2 TRANSPORTATION DIRECTOR

**REVISIONS** 

Susan Finotti

PROJECT MANAGER

AINING 

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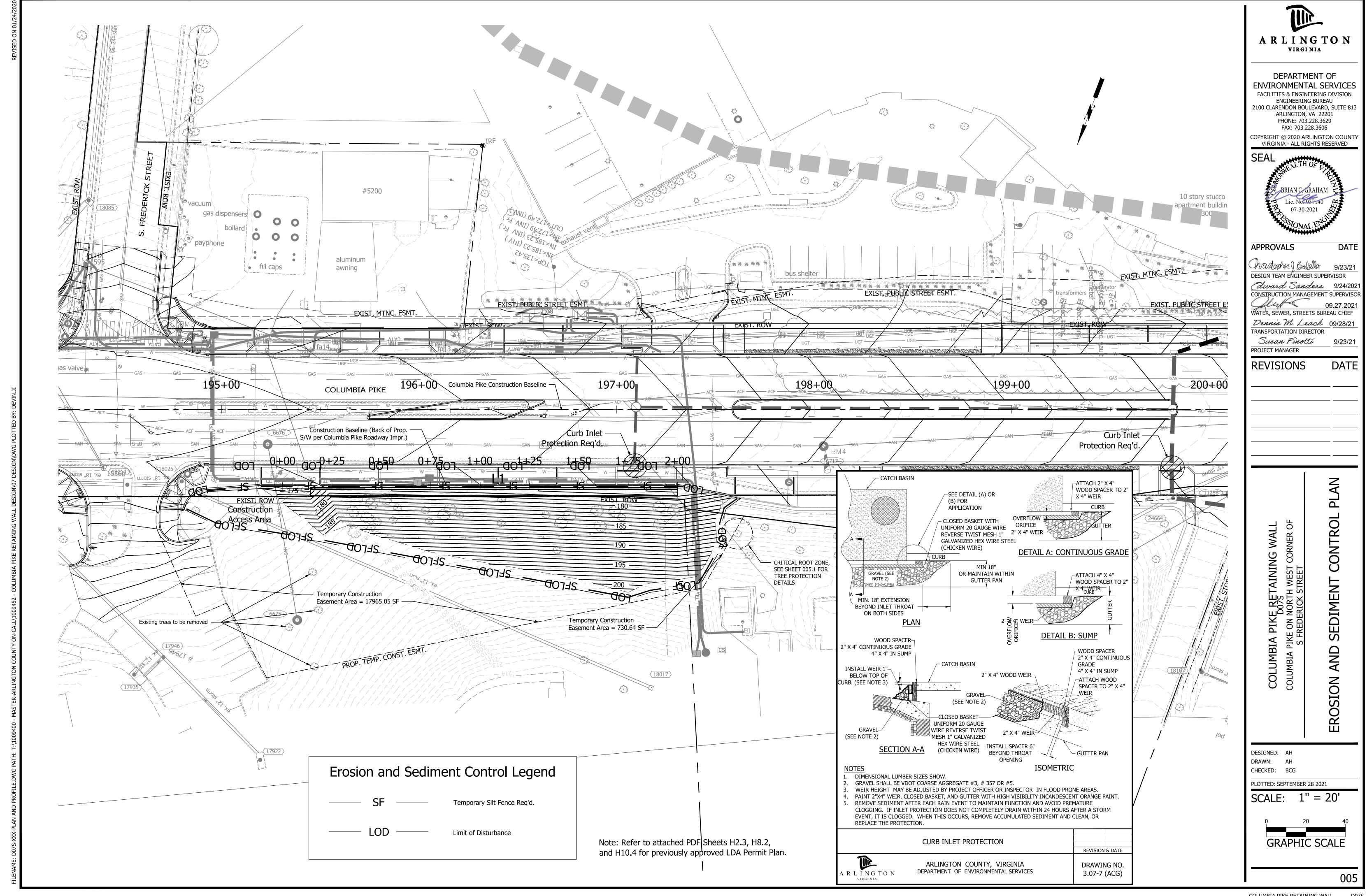
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DESIGNED: AH DRAWN: AH

CHECKED: BCG

PLOTTED: SEPTEMBER 28 2021

SCALE:



#### STORMWATER POLLUTION PREVENTION PLAN

## 5.0 Potential Sources of Pollution & Pollution Prevention Practices

Poliutant-Generating Activity	Likely Present at your Project Site?	Sedment	Nutrients	Hoavy Motals	per (appear and passe) Hq	Oli & Greitine	Bederlu	Trash, Debns, Sords	Other Toxic Chemican	Pollution Prevention Practice
Clearing, grading, excavating, and un-stabilized areas	☑ Yes ☐ No	X						×		(1)
Paving operations	⊠ Yes ☐ No	X				X		×		(2)
Concrete washout and cement waste	⊠ Yes □ No			х	×	177		×		(3)
Structure construction, painting, and cleaning	☑ Yes ☐ No			*	×			×	х	(4)
Dewatering operations	Yes 🗌 No	×	×				11	×		(5)
Material delivery and storage	⊠ Yes □ No	X.	X	X-	X	X.		х	X-	(6)
Material use during building process	▼ Yes □ No		X	×	X	X		х	*X-1	(7)
Solid waste disposal	⊠ Yes ☐ No		la i					X	¥.	(8)
Sanitary waste	⊠ Yes ☐ No		8		Х		X			(9)
Landscaping operations	☑ Yes ☐ No	8	8					(8)	X.	(10)
Other	☐ Yes ☐ No									(11)

## Pollution Prevention Practices:

- (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 VFDES permit for discharges of stormwater from construction activities.
- (2) 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 fluids.
- Concrete washout and cement waste Direct concrete wash water into a leak-proof container or leak-proof settling basin that is designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes.
- (4) Structure construction, stucco, painting and cleaning Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent

## STORMWATER POLLUTION PREVENTION PLAN

## 7.0 Spill Prevention & Response

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

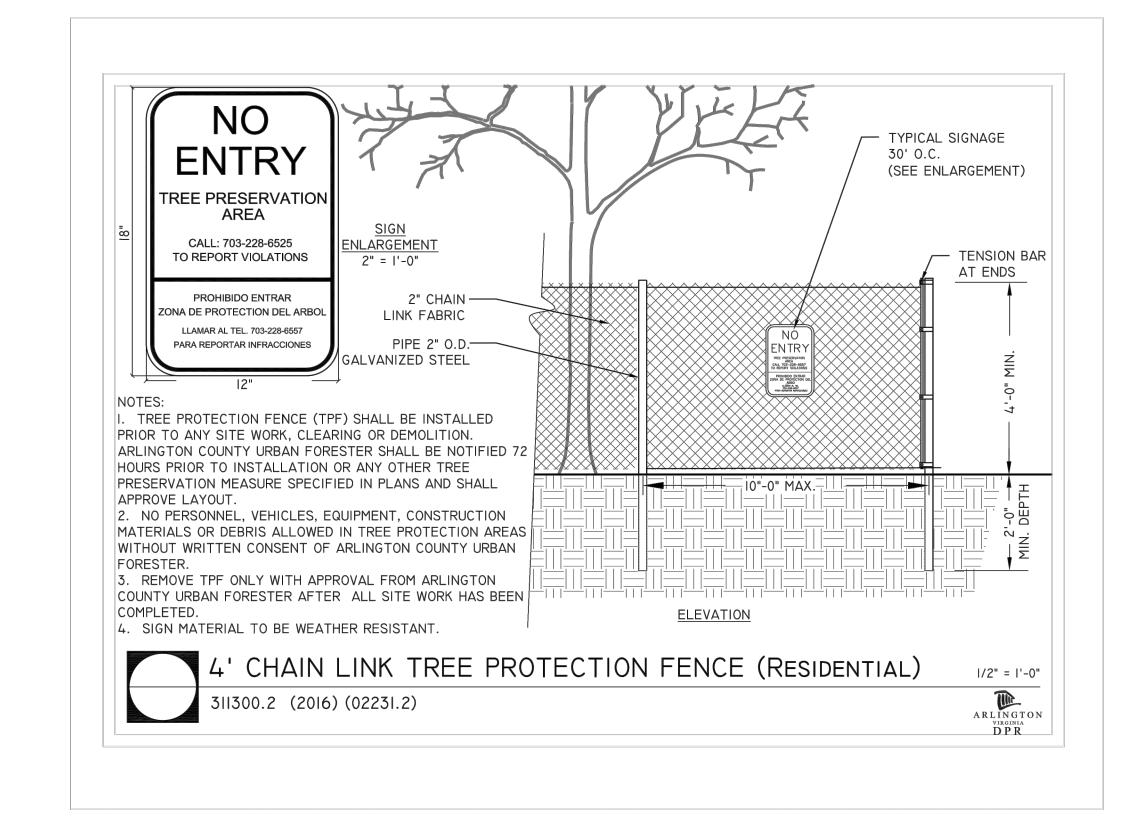
- 1. Check for hazards (flammable material, noxious fumes, cause of spill) if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911.
- 2. Make sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person:
- Stop the spill source.
- 4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential
- If possible, stop spill from entering storm drains (use absorbent or other material as necessary). Stop spill from spreading (use absorbent or other material)
- 7. If spilled material has entered a storm drain or surface waters; contact OSEM (703-228-0772 or
- 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

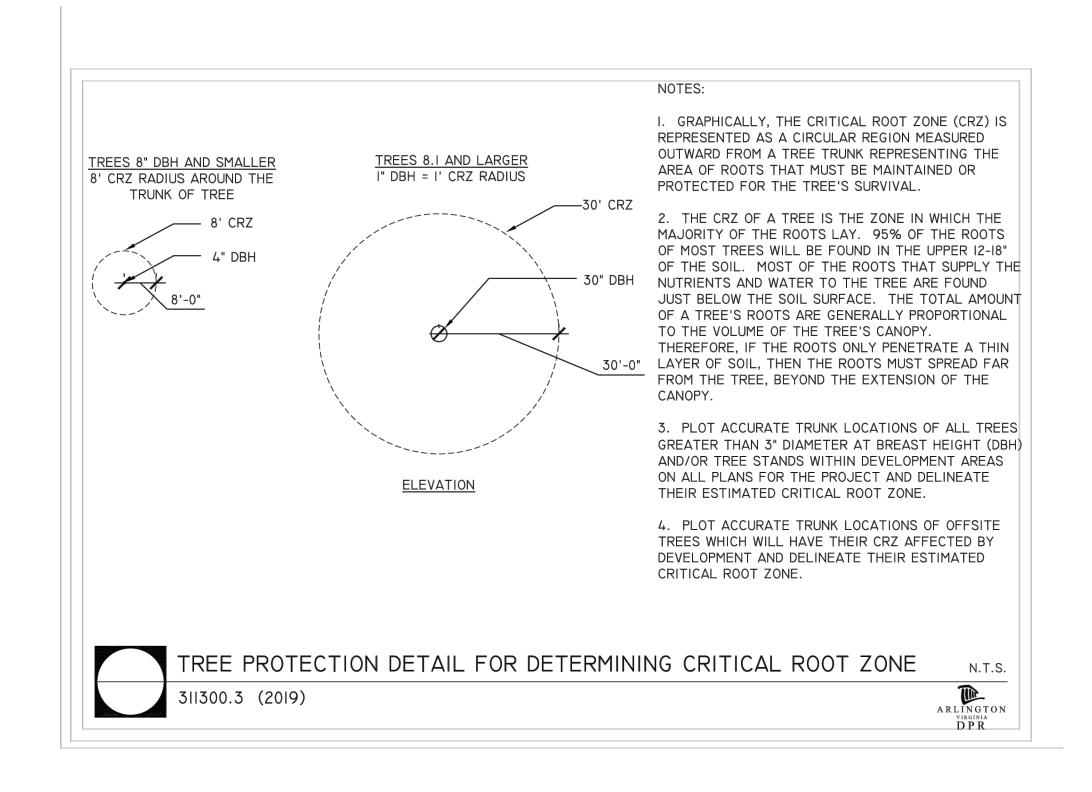
specifications

**Emergency Contacts:** Arlington County Fire & Police

DES Water, Sewer, Streets 24-Hour Emergency Washington Gas Emergency

703-558-2222 703-228-6555 703-750-1400







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

DATE

**APPROVALS** 

Christopher () Balallo DESIGN TEAM ENGINEER SUPERVISOR Edward Sanders 9/24/202 CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 09/28/21 TRANSPORTATION DIRECTOR 9/23/21

Susan Finotti PROJECT MANAGER

**REVISIONS** 

**AINING** 

STORMW

DESIGNED: BD DRAWN: BD CHECKED: BCG

PLOTTED: SEPTEMBER 28 2021

SCALE:

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## **CONSTRUCTION NOTES:**

- 1. CONSTRUCTION WORK ALONG COLUMBIA PIKE (RTE. 244) WILL EXTEND FROM 50' EAST FROM S.FREDERICK STREET TO 300' WEST FROM S.FREDERICK STREET.
- ALL TRAFFIC CONTROL DEVICES MUST BE INSTALLED IN STRICT COMPLIANCE WITH VA WORK AREA PROTECTION MANUAL (2019). THE CONTRACTOR SHALL FURNISH, INSTALL AND OPERATE TWO (2) VARIABLE MESSAGE BOARDS DURING CONSTRUCTION AS
- CONTRACTOR SHALL INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) WITH PROJECT START DATE INFORMATION APPROXIMATELY 500' BEFORE AND AFTER THE PROJECT SITE LIMIT THREE (3) WEEKS IN ADVANCE PRIOR TO START OF ANY ROADWAY AND LANE CLOSURE
- 5. AT END OF WORK DAY, ALL EXCAVATION SHALL BE COVERED WITH BASE ASPHALT OR STEEL PLATES AND SHALL BE OPENED FOR
- TRAFFIC. USE OF STEEL PLATES ON COLUMBIA PIKE FROM NOVEMBER 1 TO APRIL 1 MUST BE COORDINATED WITH THE WATER, SEWER, AND STREETS BUREARU. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE WALKWAYS FOR PEDESTRIANS WITHIN THE CONSTRUCTION AREA FOR ANY SIDEWALK CLOSURE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND IMPLEMENT VDOT TTC-36.2 (2019)
- MAINTENANCE OF TRAFFIC PLANS AND DETAILS SHOWN HERE SHALL BE FOLLOWED BY THE CONTRACTOR DURING CONSTRUCTION. SHOULD THE CONTRACTOR DESIRE TO FOLLOW AN ALTERNATE PLAN, HE SHALL SUBMIT THE PLANS PRIOR TO CONSTRUCTION TO
- THE COUNTY FOR REVIEW AND APPROVAL, AND ALTERNATIVE PLAN PREPARATION SHALL BE AT NO COST TO THE COUNTY. WORK HOURS SHALL BE FROM 7:00 AM TO 9:00 PM MONDAY THROUGH FRIDAY, 10:00 AM TO 6:00 PM SATURDAYS, WITH THE FOLLOWING EXCEPTIONS:
- 8.1. BOTH EASTBOUND LANES MUST BE OPEN TO TRAFFIC FROM 7:00 AM TO 9:30 AM MONDAY THROUGH FRIDAY
- 8.2. BOTH WESTBOUND LANES MUST BE OPEN TO TRAFFIC FROM 3:30 PM TO 7:00 PM MONDAY THROUGH FRIDAY. 8.3. ALL INTERSECTIONS MUST BE FULLY OPEN TO TRAFFIC FROM 7:00 AM TO 9:30 AM AND 3:30 PM TO 7:00 PM MONDAY THROUGH SATURDAY.
- WORK HOURS DURING HOLIDAYS TO BE IDENTIFIED BY THE COUNTY.
- 10. CONTRACTOR SHALL REMOVE EXIST. PAVEMENT MARKING IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS. 11. CONTRACTOR TO CONTACT ARLINGTON COUNTY DEPT. OF TRANSPORTATION PRIOR TO INSTALLATION OF PERMANENT PAVEMENT
- MARKINGS DISTURBED DURING CONSTRUCTION.
- 12. TRAFFIC CONTROL PLAN IS BASED ON VDOT TTC-16.2, TTC-36.2 (2019 EDITION). 13. THE MINIMUM LANE WIDTH FOR COLUMBIA PIKE (RTE. 244) IS 11'. THE MINIMUM LANE WIDTH FOR ALL SIDE STREETS IS 10'
- EXCEPT FOR ALONG BUS ROUTES. CONTRACTOR SHALL INSTALL THE CORRECT TYPICAL TRAFFIC CONTROL (TTC). 14. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC AT ANY INTERSECTION WITHIN THE WORK
- 15. COLUMBIA PIKE SPEED LIMIT POSTED IS 35 MPH FROM CARLIN SPRING ROAD TO S DINWIDDIE STREET AND 30 MPH ELSEWHERE. 16. CONTRACTOR TO PLACE ALL ADVANCE WARNING SIGNS WITHIN A ONE BLOCK AREA VERSUS SPREADING OUT OVER SEVERAL BLOCKS.
- 17. 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.
- 18. 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 PREVENT CODE. 19. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROAD (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.

## **GENERAL NOTES:**

## 1. PUBLIC COMMUNICATION PLAN

## THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

- A. NOTIFYING THE PROJECT CONSTRUCTION MANAGER AND THE ENGINEER TWO WEEKS IN ADVANCE OF ANY SCHEDULED WORK PLAN THAT MAY CAUSE TRAFFIC DELAYS.
- B. NOTIFYING THE PROJECT CONSTRUCTION MANAGER AND THE ENGINEER OF ANY UNSCHEDULED TRAFFIC DELAYS THAT MAY OCCUR.

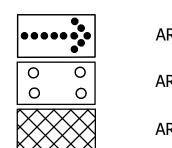
## 2. TRANSPORTATION OPERATIONS PLAN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:

- A. NOTIFYING THE VDOT REGIONAL TRANSPORTATION OPERATIONS CENTER (TOC) 48 HOURS IN ADVANCE IN ORDER TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA-TRAFFIC.
- B. POST A LIST OF LOCAL EMERGENCY RESPONSE AGENCIES INSIDE THE PROJECT'S CONSTRUCTION OFFICE/TRAILER OR MADE READILY AVAILABLE AT THE WORK SITE AT ALL TIMES.
- C. IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE **WORK ZONE**
- D. NOTIFY THE PROJECT'S CONSTRUCTION MANAGER AND THE ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.
- E. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERIFY OF ANY FUTURE ACCIDENTS.

## **CONTACT NUMBERS:**

- KAMAL TAKTAK CONSTRUCTION MANAGEMENT SUPERVISOR, DES 703-228-7527
- SCOTT SEDWICK DES OPERATION MANAGER, TE&O 703-228-0650 ADIL CHAUHAN - ASSISTANT BUREAU CHIEF, ENGINEERING BUREAU, DES -703-228-7542
- DES R-O-W PERMITTING SECTION 703-228-4798 ARLINGTON COUNTY TRANSIT BUREAU - 703-228-3049
- ARLINGTON COUNTY WATER, SEWER AND STREET OPERATION 703-228-6555
- ARLINGTON COUNTY POLICE 703-558-2222 • EMERGENCY CALL - 911
- VDOT FIELD ENGINEER TBD



LEGEND

ARROW PANEL

ARROW PANEL ON TRAILER

RESTRICTED AREA **UNDER CONSTRUCTION\*** 

CHANNELIZING DEVICE 

SIGN LOCATION

INCLUDED WITHIN MOT WORK ZONES AND ARE PROTECTED PER VA WAPM. AREA UNDER CONSTRUCTION

NOTES:

MEET ADA STANDARDS.

3. A SHADOW VEHICLE WITH EITHER A TYPE B OR C ARROW BOARD OPERATING IN THE CAUTION MODE OF AT LEAST ONE HIGH INTENSITY AMBER ROTATING, FLASHING, OR OSCILAATING LIGHT SHALL BE PARKED 80'-120' IN ADVANCE OF THE FIRST WORK CREW.

September 2019

2: Revision 2 - 9/1/2019

1: Revision 1 - 4/1/2015

2: Revision 2 - 7/1/2018

September 2019

2. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL AREAS OF WORK ARE

4. WORK ZONE AND TEMPORARY TRAFFIC CONTROLS MAY BE ADJUSTED BY INSPECTOR FOR SAFETY REASON WITH PRIOR APPROVAL FROM COUNTY.

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL TEMPORARY CROSSINGS

RESTRICTED AREA UNDER CONSTRUCTION TO BE UTILIZED ONLY WHEN ACTUAL UTILITY WORK OR PAVEMENT REPLACEMENT IS BEING PERFORMED. COORDINATE WITH ARLINGTON COUNTY PROJECT MANAGER WEEK BEFORE INTERRUPTING BUS ROUTE OR 2 DAYS BEFORE INTERRUPTING GENERAL VEHICULAR MOVEMENTS. FLAGGERS MAY BE PROVIDED AT INTERSECTIONS TO ASSIST BUSSES IN MAKING THEIR TURNS. POLICE MAY ALSO BE REQUIRED AT SIGNALIZED INTERSECTIONS.

#### September 2019 **Typical Traffic Control** Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2)

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. 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.

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

Taper Length L													
Speed	L	Lane Width (Feet)					Speed		Lane Wid	th (Feet	)		
Limit (mph)	9	9 10 11 12 Remarks			Limit (mph)	9	10	11	12	Remari			
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=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
					use a 1000'	mer							
	Shiftin	g Taper	s see Ta	able 6H-	2.2			Should	der Taper	= 1/3 L M	linimur	n	
Channe	lizing d	levice s <sub>l</sub>	pacing	shall b	e at the follo	owir	ıg:						
					Channelizing	j De	vice Spa	cing					
Locatio	Location		(mph)		ation	- 1	Speed Limit (mph)		Location Spacing			Speed Limit (mph)	
Spacing	,	0 -3	0 -35 36 + Spa		cing	- (	0 -35	36 +			0	-35	36 +
Transitio	on	20'	40'	Trav	/elway	- 4	40'	80'	* Constru	ction Acce	ess 80	)'	120'
*Constru	iction ac	cess spa	cing ma	y be inc	reased to this	dist	ance, but	shall n	ot exceed	one acc	ess per	1/4 m	ile.

- 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
- 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 1 oscillating lights but can be used to supplement the amber rotating, flashing, or<sup>1</sup> 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. 14. The supplemental PTRS may be eliminated.2

1: Revision 1 - 4/1/2015

1: Revision 1 - 4/1/2015

2: Revision 2 – 9/1/2019

#### Page 6H-80 September 2019 **Typical Traffic Control** Crosswalk Closure and Pedestrian Detour Operation (Figure TTC-36.2)

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

**NOTES** 

- 2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk. Guidance: 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. Standard: 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 9. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) ign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade.
- 10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD<sup>1</sup> 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.

The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.2

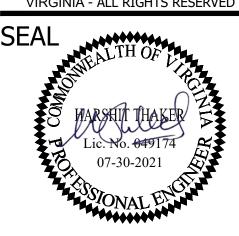
Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2) SEE NOTE 10) TYPE B OR C SUPPLEMENTAL SEE NOTES 4 & 8 PCMS - SEE NOTE 3 ---

**Crosswalk Closure and Pedestrian Detour Operation** (Figure TTC-36.2) 6" TEMPORARY MID-BLÖCK CRO CROSS HERE TYPE 3 BARRICADE

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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**APPROVALS** 

Page 6H-41

Page 6H-81

Thristopher () Balallo DESIGN TEAM ENGINEER SUPERVISOR Edward Sanders 9/24/20: CONSTRUCTION MANAGEMENT SUPERVISOR

DATE

WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach 09/28/21 TRANSPORTATION DIRECTOR

Susan Finotti PROJECT MANAGER

**REVISIONS** DATE

AINING 27

DESIGNED: DJ DRAWN: DJ CHECKED: BCG

SCALE:

PLOTTED: SEPTEMBER 28 2021

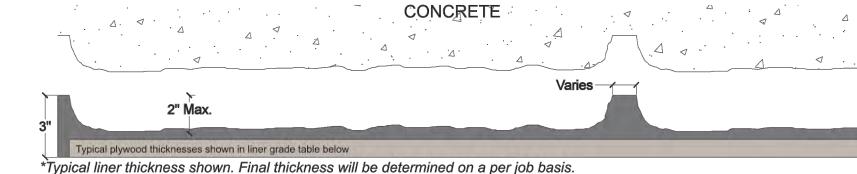
**AINTENAN** 

**GRAPHIC SCALE** 

customrock Pattern #1106-R2 Random Cut Stone (12" Coursing) FORMLINER

## **General Information:**

Elastomeric formliners are high end liners that capture pattern details with precision. They couple strength with excellent pattern reproduction. The embedded plywood allows ease of handling and installation for cast in place and precast form systems. They have a multiple reuse factor, subject to pattern configuration and proper handling.



\*Typical liner thickness shown. Final thickness will be determined on a per job basis. \*\*Representational pattern layout shown. Layout made up of multiple liner modules.



## 12" Coursing 20" - 52" (width) Care and Handling:

- Keep out of the sunlight and covered when not in use
- Keep away from steam, acids, and certain fuels • Do not expose to temperatures >150°F (65.5°C)
- · For further instructions refer to the application guide

Available Grades:	Duraform	Hi-Lite	Multi-Lite	Cut-Lite
Description:	High reuse /	High reuse /	Medium reuse /	Low reuse /
	Heavy Weight /	Lightweight /	Lightweight /	Lightweight /
	3/4" Plywood Typical	1/2" Plywood Typical	1/2" Plywood Typical	1/2" Plywood Typical

Custom Rock Formliner • 2020 West 7th Street • St. Paul, MN 55116 • (800) 637-2447 www.customrock.com

#### NOTES:

- 1. HIGHLY PLASTIC SOILS {ELASTIC SILT (MH) AND FAT CLAY (CH)}, OR SOFT SOILS SHALL BE REMOVED FROM THE BEARING SUBGRADE TO AN ELEVATION OF 166.0 DURING EXCAVATION. TESTING SHALL BE PERFORMED BY GEOTECHNICAL ENGINEER AT LEAST 2 FEET BELOW THE BOTTOM OF UNDERCUT TO DETERMINE THE SOIL CLASSIFICATION. THE BEARING SUBGRADE AND UNDERCUT SHALL BE OBSERVED AND APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION OF THE RETAINING WALL.
- 2. COST OF REMOVING AND DISPOSING OF THE EXISTING CONCRETE WALL, ALL EXCAVATION, AGGREGATE MATERIAL, POROUS BACKFILL, WEEP HOLES, JOINT MATERIAL, WATERSTOPS, GEOTEXTILE FABRIC AND ALL ASSOCIATED MATERIALS SHALL BE INCIDENTAL TO THE PRICE OF THE RETAINING WALL (CLASS C1 CONCRETE) AND WILL NOT BE MEASURED FOR SEPARATE PAYMENT.
- 3. ALL TEMPORARY SHORING INCLUDING TRENCH BOXES UTILIZED BY THE CONTRACTOR DURING RETAINING WALL EXCAVATION SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER HOLDING A VALID LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA. THE CONTRACTOR SHALL DETERMINE THE METHODS AND MEANS OF SUPPORT REQUIRED FOR THE LOADS IMPOSED BY THE SOILS AND ANY LOADS IMPOSED BY CONSTRUCTION EQUIPMENT DURING THE CONSTRUCTION OF THE PROJECT THE COST OF THE DESIGN, INSTALLATION, AND REMOVAL OF THE TEMPORARY SHORING, WHEN NO LONGER REQUIRED, SHALL BE INCIDENTAL TO THE PRICE BID FOR THE RETAINING WALL (CLASS C1 CONCRETE) AND WILL NOT BE MEASURED FOR SEPARATE PAYMENT.
- 4. GROUNDWATER WAS ENCOUNTERED DURING THE GEOTECHNICAL INVESTIGATION AT A DEPTH OF APPROXIMATELY 15' BELOW CURRENT ROADWAY SURFACE. IN THE EVENT THAT GROUNDWATER INFILTRATES THE EXCAVATED AREA, THE CONTRACTOR SHALL UTILIZE A TEMPORARY DEWATERING SYSTEM. THE CONTRACTOR SHALL DETERMINE THE METHODS AND MEANS FOR DEWATERING THE EXCAVATED AREA AND THIS COST SHALL BE INCIDENTAL TO THE PRICE BID FOR THE RETAINING WALL (CLASS C1 CONCRETE) AND WILL NOT BE MEASURED FOR SEPARATE PAYMENT.
- 5. COST FOR REMOVING AND REPLACING SIDEWALK SHALL BE INCIDENTAL TO THE PRICE BID FOR THE RETAINING WALL (CLASS C1 CONCRETE) WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NÉCESSARY TO RESTORE THE SIDEWALK TO ITS ORIGINAL CONDITION INCLUDING REPLACING ALL AGGREGATE, CONCRETE, DOWELS, EXPANSION JOINTS, BRICK BANDS AND FINISHES IN ACCORDANCE WITH THE DETAILS PROVIDED IN THE PLANS. SIDEWALK DEMOLITION SHALL BE TO THE NEAREST JOINT AND THE AREA SHALL BE LIMITED TO WHAT IS NECESSARY TO CONSTRUCT THE RETAINING WALL. ANY PORTION OF THE SIDEWALK OR CURB THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE COUNTY.

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



**APPROVALS** 

Christopher () Balallo DESIGN TEAM ENGINEER SUPERVISOR Edward Sanders 9/24/202

DATE

DATE

CONSTRUCTION MANAGEMENT SUPERVISOR WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 09/28/21 TRANSPORTATION DIRECTOR Susan Finotti 9/23/21

PROJECT MANAGER

**REVISIONS** 

**DETAIL** AND SECTIONS

WALL

RETAINING

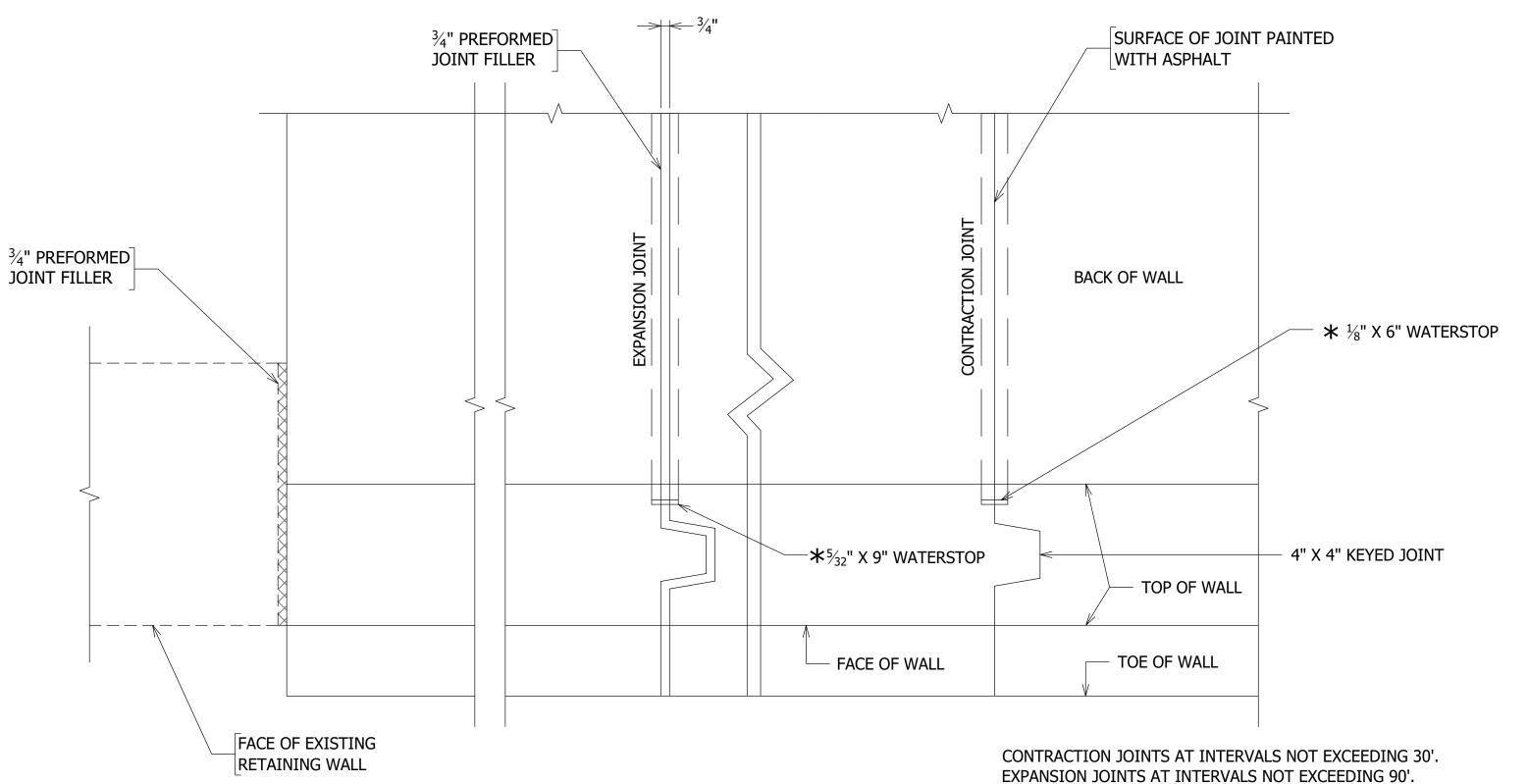
WALL PIKE RETAINING NO NORTH WEST CORI

DESIGNED: DJ DRAWN: DJ

CHECKED: BCG PLOTTED: SEPTEMBER 28 2021

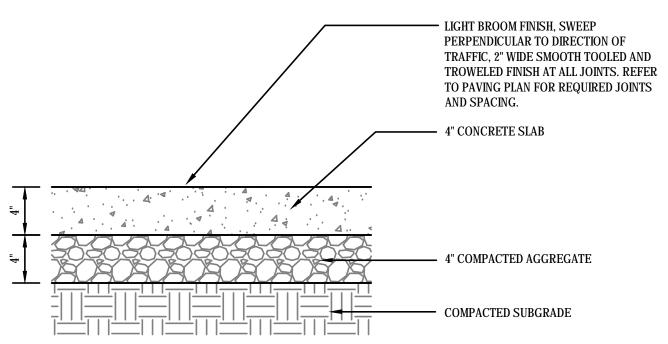
SCALE:

**AS SHOWN** 



PLAN

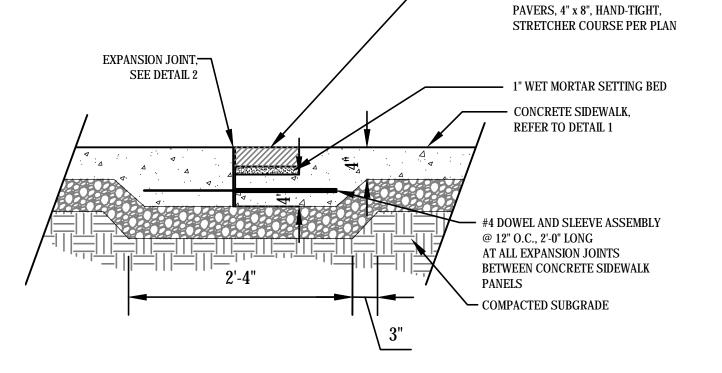
NOT TO SCALE



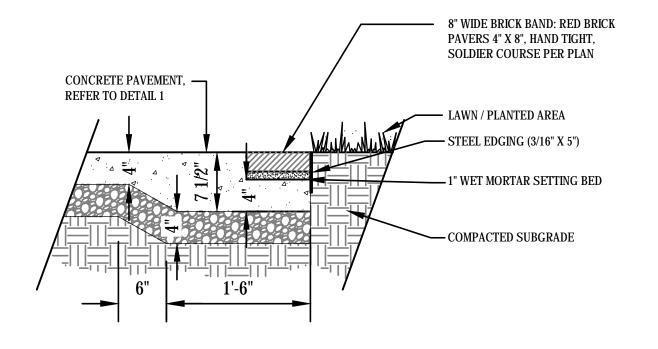
— SELF-LEVELING SEALANT, COLOR TO MATCH 3/8" WIDE x 1" DEEP COLOR OF ADJACENT PAVING / BACKER ROD, TOOLED JOINT NO BOND TO SEALANT / 1/2" POLYSTYRENE FOAM EXPANSION JOINT CONTROL JOINT

EXPANSION JOINT

CONTROL JOINTS SHALL BE PROVIDED APPROX. 4'-0" O.C. EXPANSION JOINTS SHALL BE PROVIDED @ 30' INTERVALS MAX. AND AT MEETING OF ALL PAVEMENTS, WALLS, STEPS, VERTICAL SURFACES, ETC... 1/4" RADIUS ON ALL TOOLED EDGES.

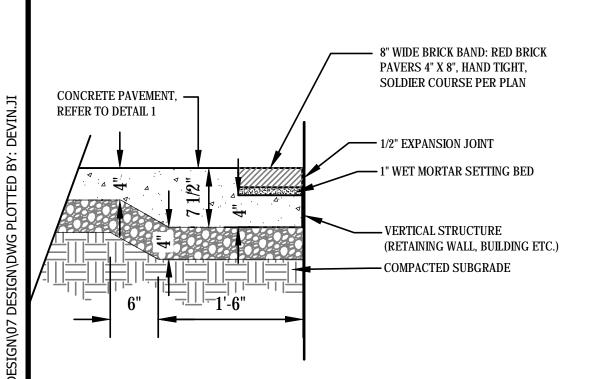


8" WIDE BRICK BAND: RED BRICK

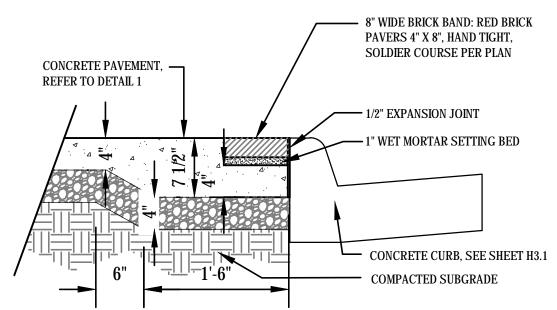


BRICK BAND SET IN CONCRETE

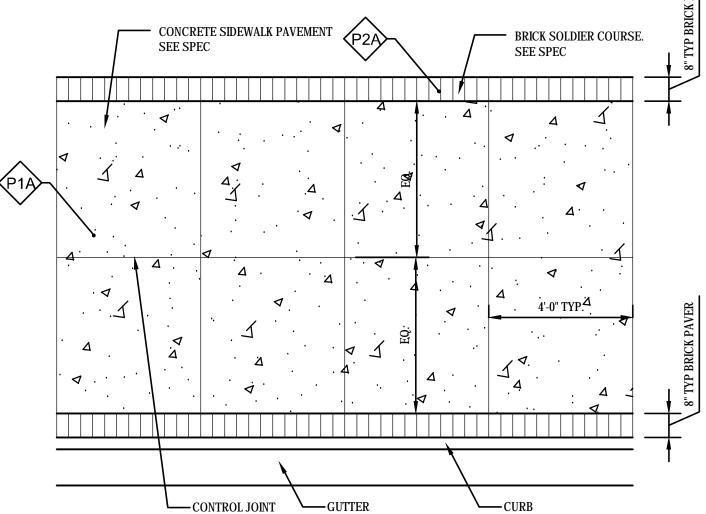
BRICK BAND AT LAWN



CONCRETE SIDEWALKS





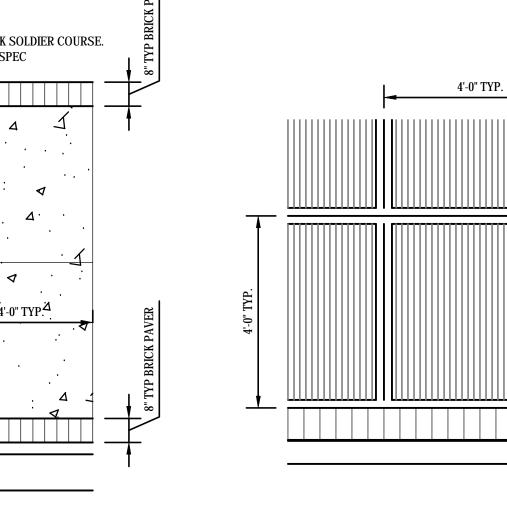




## PAVEMENT SCHEDULE

DAVING MATERIAL CLECEND

PAVING M	ATERIALS LEGEND						
KEY	TYPE	SIZE (NOMINAL)	COLOR	FINISH / TYPE	PATTERN	MANUFACTURER	DETAIL REF.
P1A	CONCRETE			LIGHT BROOM FINISH			
P2A	PAVERS - SOLDIER COURSE	4" X 8"	RED	REGIMENTAL RED	SOLDIER COURSE	BELDEN, OR APPROVED EQUAL	



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

DATE

**APPROVALS** 

DESIGN TEAM ENGINEER SUPERVISOR

Cdward Sanders 9/24/202 CONSTRUCTION MANAGEMENT SUPERVISOR

WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 09/28/21

TRANSPORTATION DIRECTOR

Susan Finotti

PROJECT MANAGER

**REVISIONS** 

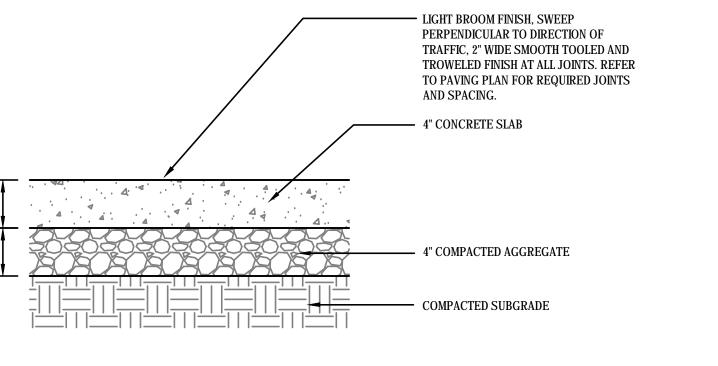
DESIGNED: DJ DRAWN: DJ

CHECKED: BCG PLOTTED: SEPTEMBER 28 2021

SCALE:

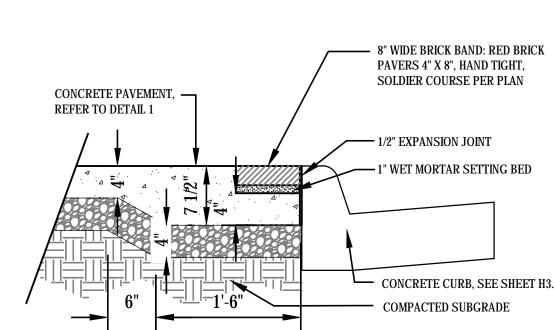
**AS SHOWN** 

COLUMBIA PIKE RETAINING WALL



CONCRETE SIDEWALK JOINTS

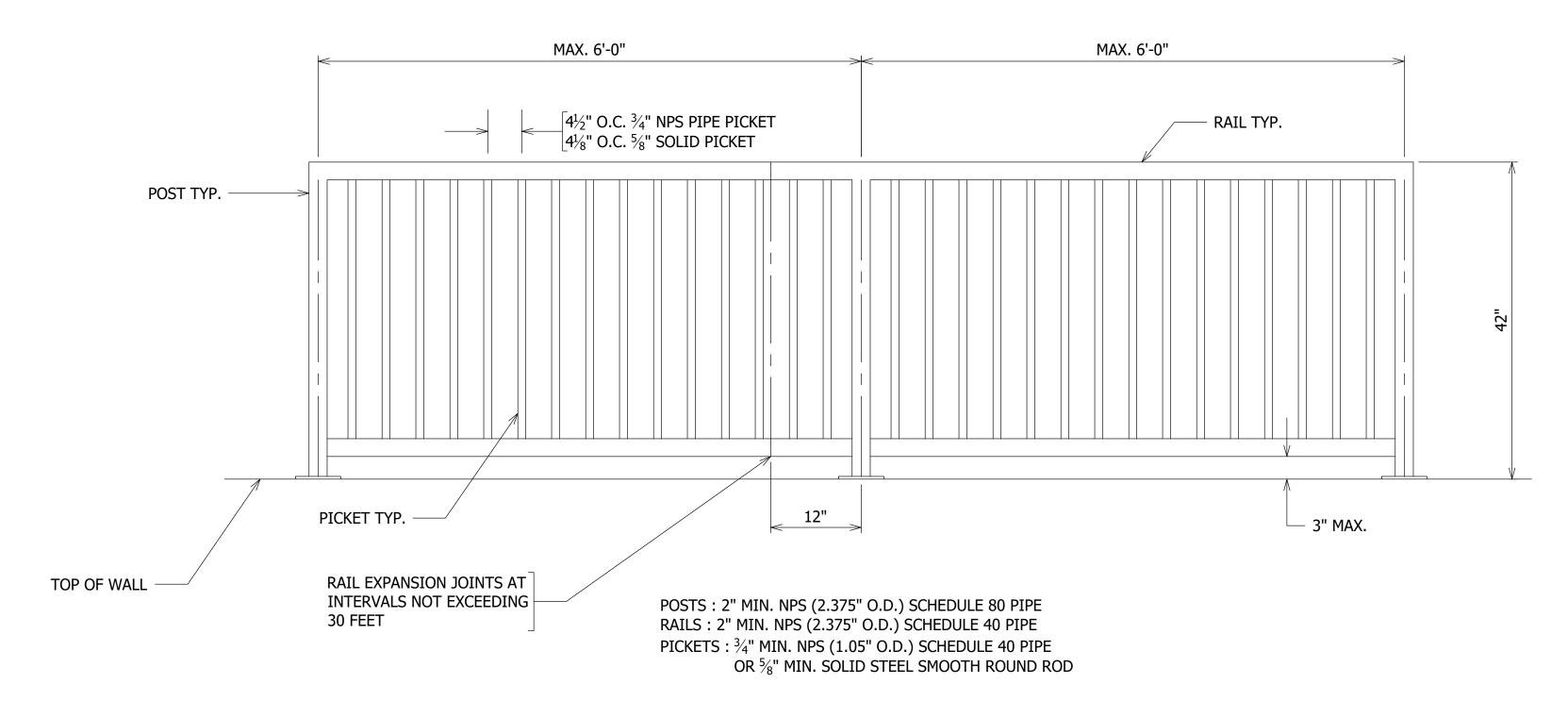
EXPANSION JOINTS FLUSH WITH FINISH GRADE OF WALK. SMOOTH TROWELED FINISH AT ALL EDGES AND JOINTS



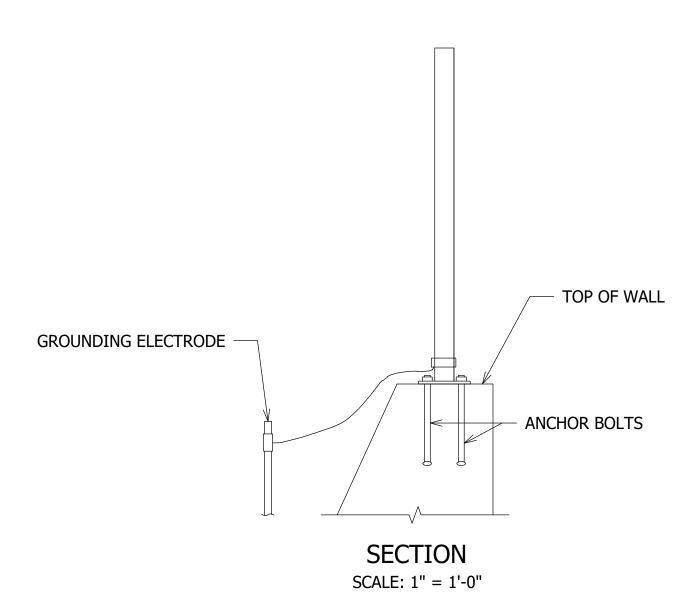
BRICK BAND AT VERTICAL STRUCTURE

— 2" TOOLING AT EACH SIDE OF CONTROL JOINTS, TYP. **BROOM FINISH** (ALIGNED WITH GRID PATTERN APPROXIMATELY PERPENDICULAR TO BACK OF CURB

— CONTROL JOINT TYP.



ELEVATION SCALE: 1" = 1'-0"



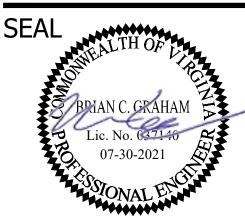
#### NOTES:

- 1. THE CONTRACTOR SHALL SUBMIT DRAWINGS DETAILING ALL ASPECTS OF FABRICATION AND INSTALLATION OF RAILING, INCLUDING ANCHOR BOLTS, FOR APPROVAL BY THE ENGINEER, PRIOR TO INSTALLATION. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, HOLDING A VALID LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA.
- 2. ALL RAILING COMPONENTS AND ALL FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE CURRENT VDOT ROAD AND BRIDGE SPECIFICATIONS TO ACHIEVE A UNIFORM COATING ON ALL SURFACES, VENTING AND DRAINAGE HOLES FOR GALVANIZING SHALL BE INCLUDED IN THE SHOP DRAWINGS.
- 3. ALL FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A307, ASTM A563 AND ASTM F844. ALL ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH AASHTO M314, GRADE 36.
- 4. A CHEMICAL ANCHOR SYSTEM FROM VDOT'S APPROVED MATERIAL LIST MAY BE USED IN LIEU OF CAST IN PLACE ANCHORS AND SHALL BE INCLUDED IN THE SHOP DRAWINGS.
- 5. POSTS SHALL BE MITERED TO MATCH GRADE OF THE TOP OF WALL.
- 6. HANDRAILS SHALL MATCH THE GRADE OF THE TOP OF WALL.
- 7. ALL POSTS AND PICKETS SHALL BE SET PLUMB.
- 8. RAILINGS SHALL BE GROUNDED AND EFFECTIVELY BONDED. INSTALLATION OF GROUNDING MATERIALS TO BE IN ACCORDANCE WITH ST'D. FE-6.
- 9. COMMERCIALLY AVAILABLE RAILING SYSTEMS MAY BE USED IN LIEU OF DESIGNING AND FABRICATING THE RAILING. DOCUMENTATION FROM THE MANUFACTURER VERIFYING THAT PROJECT REQUIREMENTS ARE MET WITH THE RAILING SYSTEM SHALL BE SUBMITTED WITH THE INSTALLATION DRAWINGS AND APPROVED BY THE ENGINEER IN ACCORDANCE WITH NOTE 1.
- 10. HANDRAIL TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDLING CODE.
- 11. PEDESTRIAN RAILING IS REQUIRED ALONG THE ENTIRE LENGTH OF THE PROPOSED RETAINING WALL.



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

DESIGN TEAM ENGINEER SUPERVISOR

Construction Management Supervisor

O9.27.2021

Water, Sewer, STREETS BUREAU CHIEF

DATE

DATE

Dennis M. Leach 09/28/21
TRANSPORTATION DIRECTOR

Susan Finotti 9/23/21

PROJECT MANAGER

REVISIONS

PEDESTRIAN RAILING

MBIA PIKE KETAINING WALD07S

MA PIKE ON NORTH WEST CORNER (
S FREDERICK STREET

v. D1

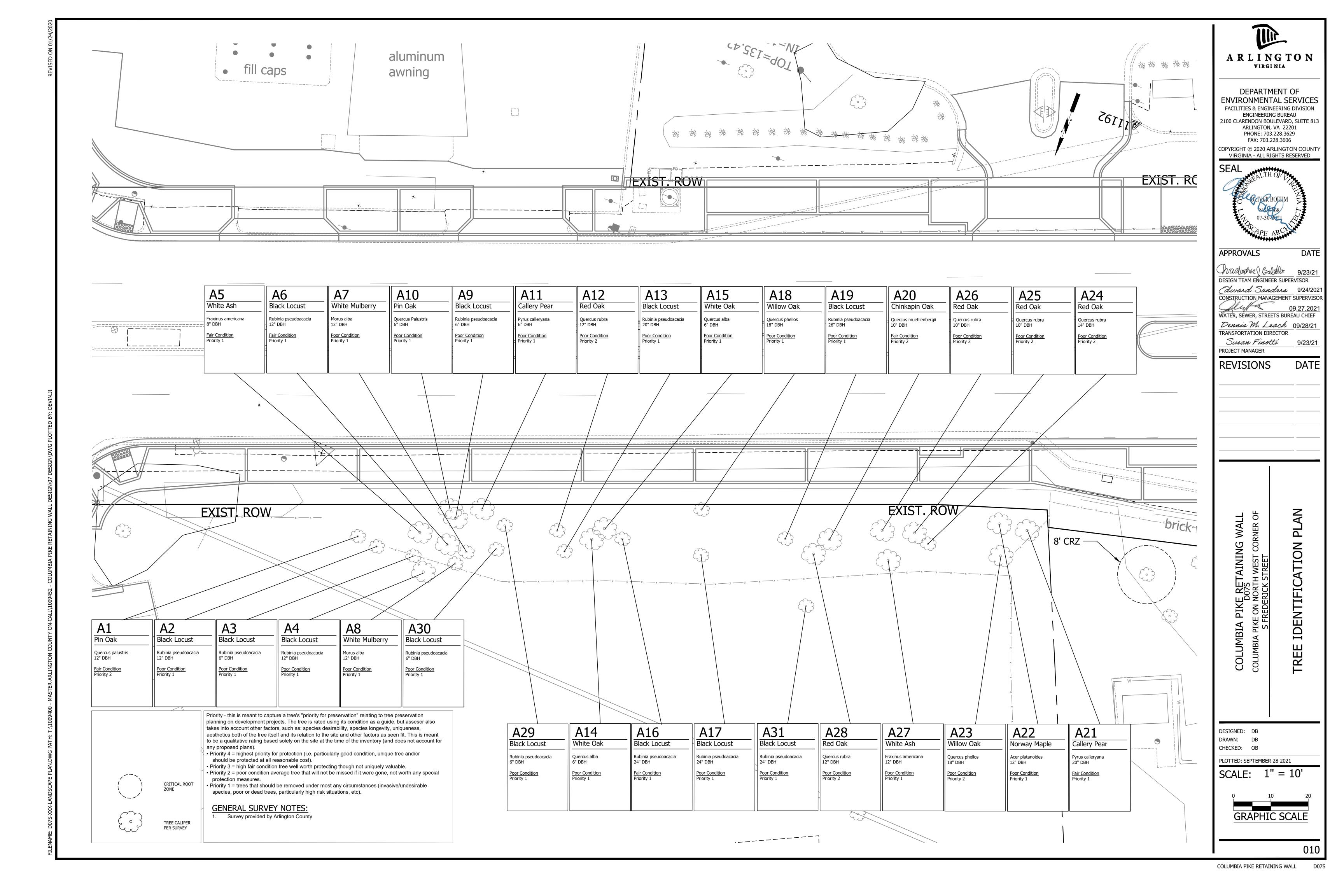
DESIGNED: DJ
DRAWN: DJ
CHECKED: BCG

PLOTTED: SEPTEMBER 28 2021

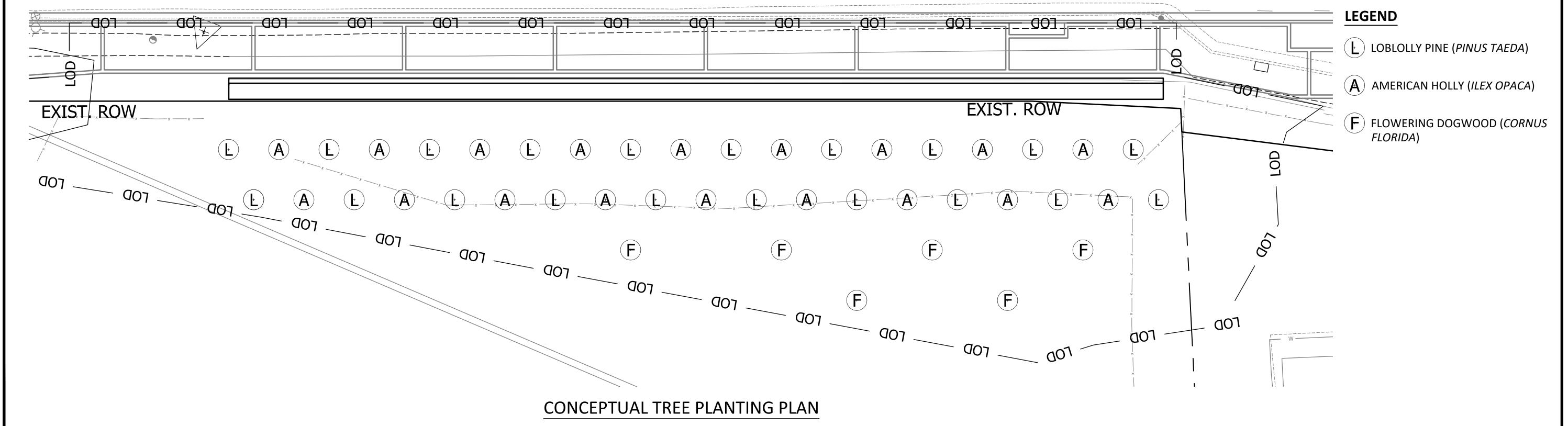
SCALE:

**AS SHOWN** 

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		DBH			<u>₽</u> 0	<u></u>	<del>2</del>	SL	SCRZ	CRZ						
Tree #	Preserve or Remove	(Diameter at 4.5 feet above grade)	Common Name	Botanical Name	Condition Ratin %	Condition Ratin	Dead Tree (Y/N	Number of Sten	Structural Critical Root Zone (radius) in Feet	in Ft	l '.	Species Rating	Replacement Value	Replacements	Additional Notes	Condition Notes
A1	Remove	12	oak, pin	Quercus palustris	70%	Fair	No	1	7	12	2	70	5.9	2		
A2	Remove	12	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	7	12	1	50	3.6	1		
A3	Remove	6	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	5	8	1	55	2.0	1		
A4	Remove	12	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	7	12	1	50	3.6	1		
A5	Remove	8	ash, white	Fraxinus americana	70%	Fair	No	1	5	12	1	40	2.2	1		
A6	Remove	12	locust, black	Rubinia pseudoacacia	70%	Fair	No	1	7	12	1	60	5.0	2		
A7	Remove	12	mulberry, white	Morus alba	60%	Poor	No	1	7	12	1	40	2.9	1		
A8	Remove	12	mulberry, white	Morus alba	60%	Poor	No	1	7	12	1	55	4.0	1		
A9	Remove	6	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	5	8	1	50	1.8	1		
A10	Remove	6	oak, pin	Quercus palustris	60%	Poor	No	1	5	8	1	70	2.5	1		
A11	Remove	6	pear, callery	Pyrus calleryana	60%	Poor	No	1	5	8	1	70	2.5	1		
A12	Remove	12	oak, red	Quercus rubra	60%	Poor	No	1	7	12	2	80	5.8	2		
A13	Remove	20	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	9	20	1	50	6.0	2		
A14	Remove	6	oak, white	Quercus alba	60%	Poor	No	1	5	8	1	85	3.1	1		
A15	Remove	6	oak, white	Quercus alba	60%	Poor	No	1	5	8	1	85	3.1	1		
A16	Remove	24	locust, black	Rubinia pseudoacacia	70%	Fair	No	1	10	24	1	55	9.2	2		
A17	Remove	24	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	10	24	1	55	7.9	2		
A18	Remove	18	oak, willow	Quercus phellos	60%	Poor	No	1	8	18	1	65	7.0	2		
A19	Remove	26	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	10	26	1	50	7.8	2		
A20	Remove	10	oak, chinquapin	Quercus muehlenbergii	70%	Fair	No	1	6	10	2	70	4.9	1		
A21	Remove	20	pear, callery	Pyrus calleryana	70%	Fair	No	1	9	20	1	50	7.0	2		
A22	Remove	12	maple, norway	Acer platanoides	60%	Poor	No	1	7	12	1	70	5.0	2		
A23	Remove	18	oak, willow	Quercus phellos	60%	Poor	No	1	8	18	2	65	7.0	2		
A24	Remove	14	oak, red	Quercus rubra	60%	Poor	No	1	7	14	2	75	6.3	2		
A25	Remove	10	oak, red	Quercus rubra	60%	Poor	No	1	6	10	2	80	4.8	1		
A26	Remove	10	oak, red	Quercus rubra	60%	Poor	No	1	6	10	2	80	4.8	1		
A27	Remove	12	ash, white	Fraxinus americana	60%	Poor	No	1	7	12	1	55	4.0	1		
A28	Remove	12	oak, red	Quercus rubra	60%	Poor	No	1	7	12	2	75	5.4	2		
A29	Remove	6	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	5	8	1	55	2.0	1		
A30	Remove	6	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	5	8	1	55	2.0	1		
A31	Remove	6	locust, black	Rubinia pseudoacacia	60%	Poor	No	1	5	8	1	60	2.2	1		





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

Orwdogher | Baldlo 9/23/21
DESIGN TEAM ENGINEER SUPERVISOR
Edward Sanders 9/24/202

DATE

CONSTRUCTION MANAGEMENT SUPERVISOR

09.27.2021

WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 09/28/21

TRANSPORTATION DIRECTOR

Susan Finotti

PROJECT MANAGER

09/28/21

9/23/21

REVISIONS

IG WALL
CORNER OF

OLUMBIA PIKE RETAINING WALL DO75 OLUMBIA PIKE ON NORTH WEST CORNER OF S FREDERICK STREET

IDENTIFICATION TABLE

DESIGNED: DB
DRAWN: DB
CHECKED: OB

PLOTTED: SEPTEMBER 28 2021

SCALE: 1" = 10'

GRAPHIC SCALE

U1