ROANOKE COUNTY

Purchasing Division
5204 Bernard Drive, Suite 300-F, P.O. Box 29800
Roanoke, Virginia 24018-0798
TEL: (540) 772-2061 FAX: (540) 772-2074

July 26, 2024
ADDENDUM NO. 1 TO ALL BIDDERS:

Reference – IFB 2025-012
Description: Glade Creek Greenway Vinyard Park West
Issue Date: July 23, 2024
Proposal Due: September 3, 2024

The above Project is hereby changed as addressed below:

1. Project Plans: approved plan set provided as an attachment to this Addendum 1 to IFB 2025-012 (18 pages). These plans shall be the basis for the project scope and specifications, and should be referenced by prospective Bidders when preparing their bid submission.

Note: A signed acknowledgment of this addendum must be received at the location indicated on the original solicitation either prior to the proposal due date or attached to your proposal. Signature on this addendum does not substitute for your signature on the original proposal/bid document. The original proposal/bid document must be signed.

Thank you,

Kate Hoyt
Phone: (540) 283-8149
KHoyt@roanokecountyva.gov

Sign Name: _____ Print Name: _____

Name of Firm: _____ Date: _____

COUNTY OF ROANOKE, VA

GENERAL NOTES

PRE-CONSTRUCTION MEETING AND CONSTRUCTION COMMENCEMENT:

1. All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, the Western Virginia Water Authority, and the Virginia Department of Transportation.
2. Stormwater Management Agreements with an attached 8 1/2" x 11" or 8 1/2" x 14" plat must be approved and recorded prior to the pre-construction meeting.
3. Once all required items are submitted to Roanoke County, the developer must contact the Development Review Coordinator to indicate that a pre-construction meeting needs to be scheduled. The pre-construction meeting will be scheduled with the owner/developer two (2) working days later.
4. All land disturbing projects that require approval of an erosion and sediment control plan, grading or clearing permit shall require that the applicant provide the name of an individual who will be responsible for land disturbing activities and that this individual hold a Responsible Land Disturber (RLD) Certificate from the Department of EnviroNDMental Quality. The Responsible Land Disturber can be anyone from the Project team that is certified by the Commonwealth of Virginia to be in charge of carrying out the land disturbing activity for the project.
5. It is the responsibility of the owner/developer to notify the certified Responsible Land Disturber and the Utility Contractor to attend the pre-construction meeting.
6. The Development Review Coordinator will schedule the pre-construction meeting with the County Review Engineer, the County Inspector, and the Western Virginia Water Authority and the Town of Vinton Public Works Department if applicable.
7. An approved set of plans, Storm Water Pollution Prevention Plan (SWPPP), VSMP coverage letter, and all permits must be available at the construction site at all times.
8. The developer and/or contractor shall supply all utility companies with copies of approved plans, advising them that all grading and installation shall conform to approved plans.
9. The project engineer will inform the owner/developer verbally and in writing of the County's obligation to perform inspections on site. Everyone in the meeting will be required to sign a pre-construction checklist indicating their knowledge of Roanoke County's obligation to perform inspections on site.
10. The Erosion Control Permit or Combined Erosion Control & VSMP Permit is given to the developer at this pre-construction meeting.
11. Notify Roanoke County prior to beginning installation of ESC measures. The County will inspect initial installations to ensure compliance with approved plan prior to start of grading. The developer SHALL contact the project inspector 24 hours before beginning any grading or construction on the property.
12. County inspectors must inspect storm drain / stormwater management / BMP installations during the process of installation. Please contact the site inspector 24 hours in advance.
13. All work shall be subject to inspection by Roanoke County, the Western Virginia Water Authority and the Virginia Department of Transportation Inspectors.
14. Contractors shall notify utilities of proposed construction at least two (2), but not more than ten (10) working days in advance. Area public utilities may be notified thru "Miss Utility": 1-800-552-7001 or VA 811.
15. The 100 year Floodway shall be staked prior to any construction.
16. Grade stakes shall be set for all curb and gutter, culvert, sanitary sewer and storm sewer at all times of construction.
17. Roanoke County shall be notified when a spring is encountered during construction.
18. Construction debris shall be containerized in accordance with the Virginia Litter Control Act. No less than one litter receptacle shall be provided on site.
19. The contractor shall provide adequate means of cleaning mud from trucks and/or other equipment prior to entering public streets or rights of ways. It is the contractors responsibility to insure that the streets are in a clean, mud and dust free condition at all times.
20. Plan approval in no way relieves the developer or contractors of the responsibilities contained within the erosion and sediment control or stormwater management policies.
21. Field construction shall honor proposed drainage divides as shown on plans.
22. Field corrections shall be approved by the Roanoke County and/or the Western Virginia Water Authority and the Professional of Record, prior to such construction.
23. The developer or contractor shall supply the County and the Western Virginia Water Authority with correct As-Built plans before final acceptance.

VIRGINIA DEPARTMENT OF TRANSPORTATION:

1. Plan approval by Roanoke County does not guarantee issuance of any permits by the Virginia Department of Transportation.
2. A permit must be obtained from the Virginia Department of Transportation, Salem Residency Office prior to construction in the highway right-of-way.
3. The preliminary pavement designs should be based on a predicted sub-grade CBR value of 7.0 and with a Resiliency Factor (RF) of 2.0 as shown in the current edition of the Virginia Department of Transportation Pavement Design Guide for Subdivision and Secondary Roads. The sub-grade soil is to be tested by an independent laboratory and the results submitted to the Virginia Department of Transportation prior to base construction. Should the sub-grade CBR value and/or the RF value be less than the predicted values, additional base material will be required in accordance with Departmental specifications. Refer to the same manual as the number and locations of the required soil samples to be tested. All pavement designs shall be submitted to the Department for review and approval. The sub-grade shall be approved by the Virginia Department of Transportation prior to placement of the base. Base shall be approved by the Virginia Department of Transportation for depth, template, and compaction before the surface is applied.
4. Standard guardrail with safety end sections may be required on fills or in areas where hazards exist as deemed necessary. After completion of rough grading operations, the County Engineer and Virginia Department of Transportation shall be contacted to schedule a field review. Where guard rail is warranted, the standard shoulder width shall be provided and the guard rail shall be installed in accordance with the current edition of the VDOT Road and Bridge Standards as part of this development.
5. Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.
6. All traffic devices shall be in accordance with current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).
7. All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

See Sheet 18 for Stormwater Site Statistics Table.
See Sheet 18 for New BMP Information Table. N/A

The Project Engineer shall provide electronic copies of the approved plans to the Development Review Coordinator within 5 working days of the pre-construction meeting.

The notes on this sheet shall not be modified.

NAME OF DEVELOPMENT	GLADE CREEK GREENWAY VINYARD PARK - WEST
MAGISTERIAL DISTRICT(S)	VINTON
OWNER (name, address, telephone)	COUNTY OF ROANOKE
DEVELOPER (name, address, telephone)	COUNTY OF ROANOKE
ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone)	DEPARTMENT OF DEVELOPMENT SERVICES
TAX MAP NO(S)	TAX# 061.12-09-01.00 & TAX# 061.12-09-00.00

I, _____ OWNER/DEVELOPER, AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN, ALL REVISIONS THEREOF, AND OTHER APPLICABLE ROANOKE COUNTY CODES AND ORDINANCES.

I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS SHOWN ON THIS COVER SHEET UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.

WATER AND SEWER NOTES

1. All construction methods and materials shall conform to the latest edition of the Design and Construction Standards and Specifications of the Western Virginia Water Authority (WVWA) available at www.westernvawater.org or by contacting the authority at 540-853-5700. The project shall also comply with the governing jurisdiction's standards and other agency standards (e.g. VDOT, DEQ, DCR, VDH, etc.) where applicable.
2. A minimum cover of three (3) feet is required on all WVWA water and sewer lines.
3. All existing utilities may not be shown in their exact locations. The contractor shall notify Miss Utility and shall verify location and elevation of all underground utilities in the areas of construction prior to starting work.
4. Please show all WVWA water and sewer utilities on any development plan.
5. The location of existing utilities across or along the line of proposed work are not necessarily shown on the plans and where shown are only approximately correct. The contractor shall on his own initiative and at no extra cost, locate all underground lines and structures and pothole as necessary. The contractor shall be responsible for any damage to underground structures. All damage incurred to existing utilities during construction shall be repaired at the contractor's expense.
6. Plan approval by the WVWA does not remove the contractor's responsibility to remove or relocate any existing conflicts found during construction.
7. The contractor shall maintain a minimum of 18" clearance vertically and two (2) feet minimum horizontally from the outside of pipe to outside of pipe with all other underground utilities. Where this cannot be achieved, additional measures in accordance with the WVWA standards shall be enforced.
8. All utility grade adjustments shall be in accordance with WVWA standards and are the responsibility of the contractor.
9. Field changes shall be submitted by the engineer of record to the locality and approved by the WVWA.

Western Virginia Water Authority Availability letter number: N/A

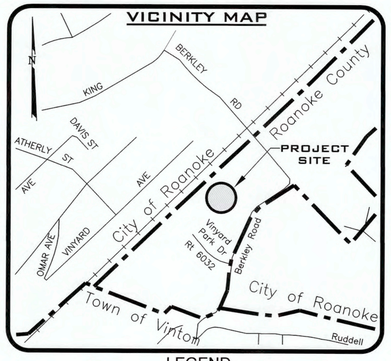
PRIVATE UTILITIES

Underground utilities installed on private property or in private utility easements and building related storm drains shall be designed and installed per the current edition of the Virginia Uniform Statewide Building Code (including amendments). Design and installation requirements issued by the Western Virginia Water Authority that meet or exceed the USBC requirements are acceptable for private utilities. All private utilities are to be permitted through and inspected by the Roanoke County Inspections Office. Vaults, valves and other devices installed by or under the control of the Western Virginia Water Authority may not be substituted for the code required devices.

PR #:	NOTES:

Revision Table

VICINITY MAP



LEGEND

Property Line	℄
Right-of-way	R/W
Centerline	CL
Minimum Building Line	MBL — MBL
Existing Storm Sewer	
Existing Sanitary Sewer	SS — SS
Existing Water Main	4"W — 4"W
Existing Contour	1045
Proposed Contour	1045
Proposed Drainage Divide	
Proposed Limits of Clearing	CL CL CL CL CL
Proposed Storm Sewer	24" S.D.
Proposed Sanitary Sewer	8" M.H.
Proposed Water Main	HYDRANT — VALVE — BLOWOFF

Sheet Index

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in year: 2023
By: NICKIE D. MILLS, P.E., L.S.

All vertical elevations must be referenced to the National Geodetic Vertical Datum of 1929 or 1988. All horizontal data must be referenced to the North American Datum of 1927 or 1983.

Horizontal Datum: NAD83 (2011) Vertical Datum: NAVD88

Source of topographic mapping is dated GIS TOPO SHOWN OUTSIDE OF LIMITS OF FIELD SURVEY.

Boundary was performed by RECORDS dated: MARCH 6, 1993 (P.B. 16 PG. 124)

Benchmark Information: BENCHMARK SET IN FIELD AND SHOWN ON PLANS.

The professional seal and signature certifies the boundary survey and topographic mapping to be accurate and correct.

QUANTITY & COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING		AC			
EXCAVATION		C.Y.			
EMBANKMENT		C.Y.			
CURB INLET DI-		EA			
CURB INLET DI-		EA			
MANHOLE MH-		EA			
MANHOLE MH-		EA			
-IN. CONCRETE PIPE, CLASS III		LF			
-IN. CONCRETE PIPE, CLASS IV		LF			
-IN. C.M. CULVERT		LF			
-IN. C.M. CULVERT		LF			
BOX CULVERT		LS			
PAVED SWALE		LF			
RIPRAP - CLASS		SF			
PERMANENT GRASS SWALE		LF			
-IN. CONCRETE ENDWALL EW-		EA			
-IN. END SECTION ES-		EA			
HEADER CURB & GUTTER CG-		LF			
CURB & GUTTER CG-		LF			
VALLEY GUTTER		EA			
GRAVEL BASE		SY			
GRAVEL SHOULDER		SY			
SURFACE TREATMENT		SY			
-IN. BIT. CONC.: TYPE B-		SY			
-IN. BIT. CONC.: TYPE S-		SY			
-IN. BASE MATERIAL		C.Y.			
-IN. SUBBASE MATERIAL		C.Y.			
TRAFFIC BARRICADE		EA			
8" WATER LINE		LF			
6" WATER LINE		LF			
FIRE HYDRANT ASSEMBLIES		EA			
BLOW OFFS W/ VAULT, FRAME & COVER		EA			
-IN. GATE VALVES, W/ VAULT, FRAME & COVER		EA			
-IN. GATE VALVES, W/ VAULT, FRAME & COVER		EA			
8" SANITARY SEWER		LF			
STANDARD MANHOLE W/FRAME & COVER		EA			
SAMPLING MANHOLE/PORT		EA			
LANDSCAPING		LS			
AMENITIES (INCLUDING BUT NOT LIMITED TO TRAILS, ETC..)		LS			
STORMWATER MANAGEMENT		LS			
AS-BUILT PLANS (STORM SEWER SYSTEMS)		LS			
AS-BUILT PLANS (STORMWATER MANAGEMENT)		LS			
10% CONTINGENCY					
ESTIMATED TOTAL					

BY SEALING THE PLANS, THE DESIGN PROFESSIONAL HEREBY CERTIFIES THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.

NOT APPLICABLE

ROANOKE COUNTY VA

5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155
E-MAIL: NMILLS@roanokecountyva.gov

PREPARED BY
ROANOKE COUNTY
DEPARTMENT OF DEVELOPMENT SERVICES

TIER 1 PROJECT
LOCALLY ADMINISTERED PROJECT
COUNTY OF ROANOKE
NAME OF LOCALITY

(SIGNATURE)

DAVID HENDERSON
NAME OF RESPONSIBLE GOVERNMENT OFFICIAL (TYPED)
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

3/19/24 | COUNTY ENGINEER
DATE | TITLE OF POSITION

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO.
0402031205
3-19-24
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

APPROVED

PLAN APPROVED
REVIEW COORDINATOR, 5/1/2024

Fed. Project #: TAP - 5128 (540)
VDOT UPC No. 122101
EN222 - 080 - 971, C501, P101

Glade Creek Greenway
Vinyard Park - West
150 Berkley Road, Rte. 653
County of Roanoke, Virginia

SHEET 1 OF 18

DATE: 3/18/2024

500 YR FLOOD PLAIN

100 YR FLOOD PLAIN

FLOODWAY

PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)

NORFOLK SOUTHERN RAILWAY

ACCESS ROAD TO RESIDENCE 195 BERKLEY ROAD (PRIVATE SECTION) 0.84 MILES LONG

MERIDIAN BASED ON NAD83 (2011)

30' PRESCRIPTIVE R/W

SHEET 8

SHEET 7

SHEET 6

SHEET 9

SHEET 5

GLADE CREEK

END OF PROJECT 35+96.31

CITY OF ROANOKE
COUNTY OF ROANOKE

MATCH LINE

Tax# 60.12-09-01.01
ROANOKE COUNTY BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1218 PG. 1913 (PLAT)
PB. 16 PG. 124 (PLAT)
6.82 AC.

FLAG FOOTBALL FIELD

FIELD # 1

FIELD # 2

FIELD # 3

FIELD # 4

FIELD # 5

FIELD # 6

FIELD # 7

BALLFIELD

PROPOSED GREENWAY

BLEACHERS

EXISTING PARKING

PEDESTRIAN CROSSING DURING NON-WORK HOURS

SOCCER FIELD

BEGIN PROJECT 10+00.00

EXISTING PARKING LOT

BERKLEY ROAD BRIDGE

RTE. 653

150
PICNIC SHELTER

PLAYGROUND

FLOODWAY

VINYARD PARK DRIVE

RTE. 969

5' DRAINAGE EASEMENT

STOCKPILE AND STORAGE AREA

Tax# 60.12-09-01.00
ROANOKE COUNTY BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1515 PG. 657
D.B. 1440 PG. 842
PB. 16 PG. 144 (PLAT)
PB. 16 PG. 124 (PLAT)
32.180 AC.

VINYARD PARK WEST

VINYARD PARK EAST

Tax# 60.05-02-01.00
ROANOKE COUNTY BOARD OF SUPERVISORS
VINYARD PARK
INSTRU. # 200419172
INSTRU. # 200419171 (PLAT)
DB. 1650 PG. 1633
43.970 AC.

COUNTY OF ROANOKE
CITY OF ROANOKE

TOWN OF VINTON

FORLAND AVE.

ELM ST.

N BLAIR ST.

MONROE AVE.

POLK AVE.

BOWMAN ST.

RUDDELL ROAD

PITT AVE.

MEADOW ST.

KEY PLAN
SCALE: 1" = 100'

LEGEND
PROPOSED GREENWAY

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 inch = 100 ft.

COMMONWEALTH OF VIRGINIA
CHRISTIE D. MILLS
LICENSE NO. 0402031205
PROFESSIONAL ENGINEER
5-17-24

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

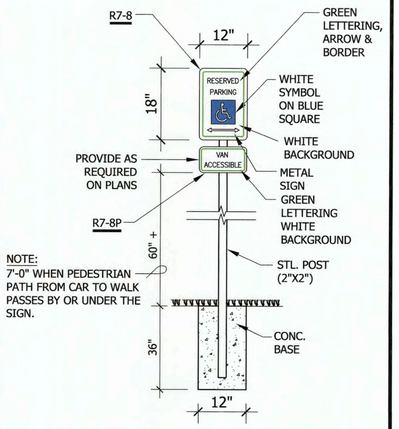
DATE:	3/18/2024
SCALE:	1"=100'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

KEY PLAN

SHEET 2 OF 18

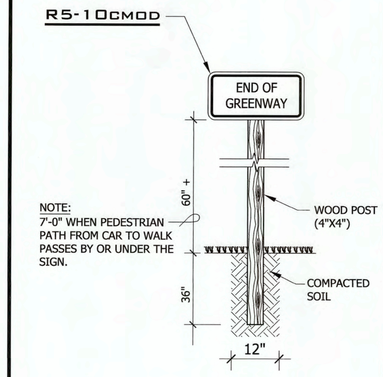
Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Key Plan.dwg

APPROVED 5/1/2024



R7-8 & R7-8P
HANDICAPPED PARKING SIGN

NOT TO SCALE



R5-10cmod (24"x12")

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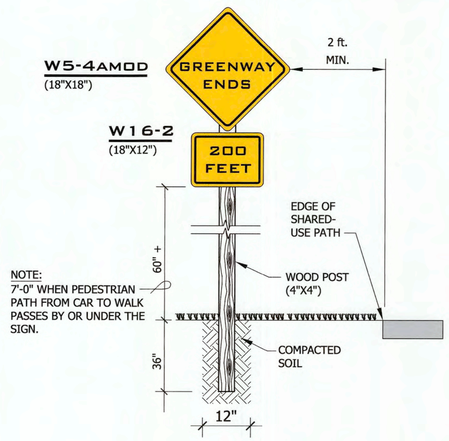

W5-4amod & W16-2

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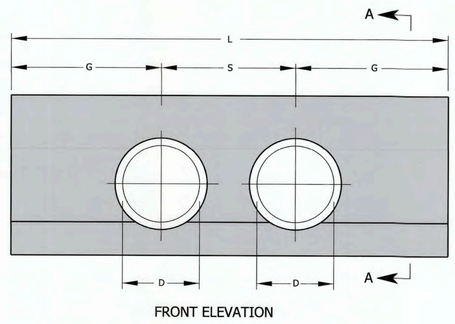
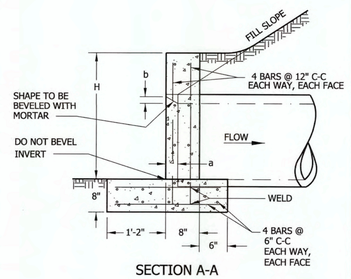
CONSTRUCTION NOTES :

1. THE CONTRACTOR IS REQUIRED TO NOTIFY THE COUNTY OF ROANOKE ENGINEERING DIVISION IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
   a. installation of approved erosion control devices
   b. clearing and grubbing
   c. subgrade excavation
   d. installing storm sewers or culverts
   e. setting curb and gutter forms
   f. placing curb and gutter
   g. placing other concrete
   h. placing gravel base
   i. placing any roadway surface
   j. installing water lines (western virginia water authority)
   k. installing sanitary sewer lines (western virginia water authority)
2. PLAN APPROVAL DOES NOT GUARANTEE ISSUANCE OF ANY PERMITS BY V.D.O.T.
3. AN APPROVED SET OF PLANS AND ALL PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
4. ALL WORK SHALL BE SUBJECT TO INSPECTION BY COUNTY OF ROANOKE AND /OR V.D.O.T. INSPECTORS.
5. ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION LIMITS OF THE PROJECT.
6. ALL SPRINGS SHALL BE CAPPED AND PIPED TO THE NEAREST STORM SEWER OR NATURAL WATERCOURES. THE PIPE SHALL BE 6 INCH MINIMUM DIAMETER AND CONFORM TO V.D.O.T. STANDARD SB-1.
7. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT. NO LESS THAN ONE LITTER RECEPTACLE SHALL BE PROVIDED ON SITE.
8. THE CONTRACTOR SHALL SUPPLY ALL UTILITY COMPANIES WITH COPIES OF APPROVED PLANS, ADVISING THEM THAT ALL GRADING AND INSTALLATION SHALL CONFORM TO APPROVED PLANS.
9. FILL MATERIALS CONTAINING ROCKS LARGER THAN SIX (6) INCHES (15.2 CM) SHALL NOT BE USED. THE UPPERMOST TWO (2) FEET (61 CM) SHALL NOT HAVE ANY ROCK LARGER THAN TWO (2) INCHES (5.1 CM) IN DIAMETER.
10. NO SLOPES SHALL BE STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL) .
11. ON-SITE FILL MATERIAL OR BORROW FILL MATERIAL MAY BE UTILIZED. FILL MATERIAL SOILS, IN GENERAL:
    A. SHALL BE COMPACTED
    B. SHALL BE WITHIN AN ACCEPTABLE RANGE OF MOISTURE CONTENT WHICH IS READILY CONTROLLED
    C. SHALL NOT BE HIGHLY SUSCEPTIBLE TO VOLUME CHANGE (SHRINKAGE OR SWELL) OR SETTLEMENT
    D. SHALL HAVE MINIMUM CBR OF 5.0
12. ALL DISTURBED AREAS SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL AND SEEDED.
13. DEPOSIT DRY FILL AS INDICATED IN LAYERS NOT OVER 6" DEEP, THOROUGHLY COMPACTING EACH LAYER TO WITHIN 95% OF STANDARD PROCTOR AS INDICATED BY ASTM 698. DO NOT USE MECHANICAL COMPACTORS WITHIN 2'-0" OF FOUNDATION WALLS.
14. THE LOCATION OF ALL OFF SITE FILL AREAS OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF DEVELOPMENT SERVICES. AN EROSION SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THESE AREAS.
15. PROPERTY BOUNDARY INFORMATION SHOWN PER PLAT OF **P.B. 16 PG. 124** A COMPLETE BOUNDARY SURVEY OF ALL LOTS WAS NOT PERFORMED.
16. UNDERGROUND UTILITIES SHOWN PER LOCATE TICKET **A234900305-00A**
17. EXISTING TREES IN WORK AREA CURRENTLY MARKED TO BE REMOVED BY SELECT CLEARING. EXISTING VEGETATION OUTSIDE EASEMENT AREA TO BE PROTECTED FROM DAMAGE.
18. EXISTING PIPE DESIGNATED FOR DEMOLITION TO BE REMOVED OR FILLED WITH FLOWABLE FILL AS REQUIRED. CONTRACTOR TO COORDINATE WITH ROANOKE CO. TO ENSURE DOWNSPOUTS, SUMP DRAINS, ETC. ARE NOT PLUGGED AS A RESULT OF THIS DEMOLITION.
19. TEMPORARY BENCHMARK IS **IRON PIN SET (SEE SHEET 5 & 8)**
20. CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN.



FRONT ELEVATION



SECTION A-A

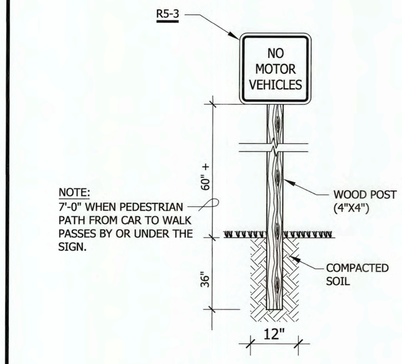
NOTES:

1. CONCRETE TO BE 4000 PSI MINIMUM COMPRESSIVE STRENGTH.
2. IF PIPE IS TO BE SKEWED THE OPENING WILL BE ADJUSTED TO ACCOMMODATE ANGLES UP TO 15".
3. REINFORCING STEEL IN ACCORDANCE WITH ASTM A-615 (REINFORCING BARS).
4. PIPE OPENINGS IN PRECAST DRAINAGE UNITS SHALL NOT EXCEED 4 INCHES AT ANY GIVEN POINT BETWEEN THE PIPE AND THE PRECAST UNIT.
5. DIMENSIONS SHOWN ARE MINIMUM. ACTUAL MEASUREMENTS MAY VARY WITH MANUFACTURER'S TOLERANCE.
6. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
7. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALL OCCUR.
8. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT). HEADWALL AT OUTLET END MAY BE EITHER SQUARE EDGE OR BEVELED.
9. 3/4" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

FOR CIRCULAR CONCRETE OR CORRUGATED METAL PIPE FOR MULTIPLE PIPE ENDWALL						
D	H	L	S	G	a	b
12"	2'-0"	5'-10"	2'-0"	1'-11"	0'-1¼"	0'-1"
15"	2'-3"	7'-3"	2'-3"	2'-6"	0'-1¾"	0'-1¼"
18"	2'-6"	8'-8"	2'-8"	3'-0"	0'-2"	0'-1½"
21" OR 24"	3'-2"	11'-6"	3'-6"	4'-0"	0'-2½"	0'-2"
27" OR 30"	3'-10"	14'-4"	4'-4"	5'-0"	0'-3¼"	0'-2½"
33" OR 36"	4'-4"	17'-2"	5'-2"	6'-0"	0'-3¾"	0'-3"

EW-6PC
(PRECAST ENDWALL FOR MULTIPLE PIPE CULVERTS)
12"-36" PIPE CULVERTS

NOT TO SCALE



R5-3 (24"x24")

NOT TO SCALE

SURVEY NOTES:

1. FIELD SURVEY MAPPING SHOWN ON THESE DRAWINGS WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF NICKIE D. MILLS, LS, FROM AN ACTUAL GROUND SURVEY. THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. ALL SURVEY DATA'S GENERAL ACCURACY IS AS FOLLOWS:
   - HORIZONTAL ACCURACY: WITHIN 0.2' WITH EXCEPTIONS.
   - VERTICAL ACCURACY: WITHIN 0.5' WHERE INFORMATION IS PROVIDED ON PLAN.
3. CONTOUR DATA ON THIS PLAN IS GENERALLY ACCURATE TO WITHIN +/- 0.5' WERE CONTOUR DATA IS PROVIDED. LEAF MULCH IS VERY HEAVY ON PORTIONS OF THIS PROJECT AREA NEAR GLADE CREEK.
4. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THEREFORE, THERE MAY EXIST ENCUMBRANCES NOT SHOWN HEROIN.
5. WITH OCCASIONAL EXCEPTION, EDGE OF PAVEMENT, GRAVEL, CONCRETE, & BRICK ARE SHOWN BASED ON GEOREFERENCED AERIAL IMAGERY AND ARE TYPICALLY ACCURATE WITHIN 1.0'.
6. WITH OCCASIONAL EXCEPTIONS, EXISTING BUILDINGS SHOWN ARE BASED ON MUNICIPAL GIS DATA AND GEOREFERENCED AERIAL IMAGERY AND ARE TYPICALLY ACCURATE TO WITHIN 3.0'.
7. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, LOCATION, SIZE, MATERIAL OR TYPE OF ANY UNDERGROUND UTILITIES. ALL UNDERGROUND UTILITIES & STRUCTURES SHOWN ON THIS PLAN ARE SHOWN BASED ON SURVEYED ABOVE GROUND STRUCTURES, AVAILABLE PUBLIC RECORDS AND BY UTILITY LOCATION MARKINGS.
8. ALL UNDERGROUND UTILITY & STRUCTURE LOCATIONS SHOULD BE FIELD VERIFIED PRIOR TO THE START OF ANY CONSTRUCTION.

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF:

1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
2. INSTALL 4" UNDERDRAIN PARALLEL TO GREENWAY TO PROVIDE ADEQUATE DRAINAGE, TO BE CONECTED TO EXISTING STORM DRAIN.
3. REMOVE 8" OF SOIL AND COMPACT SUBBASE TO 95% BEFORE INSTALLING A 8" 21-B STONE BASE. SHALL BE PERFORMED ON SUBGRADE.
4. CONSTRUCT 2,595 L.F. OF 2" SM-9.5A ASPHALT GREENWAY, TO BE 10' WIDE.
5. CONSTRUCT CIRCULAR TURNAROUND WITH A 10' RADIUS AT THE PROJECT TERMINUS.
6. INSTALL 250 L.F. OF TIMBER GAURDRAIL (FENCE) AT SHOWN LOCATIONS.
7. CONSTRUCT WALKWAY TO CONNECT TO EXISTING PARKING LOT.
8. SEED AND STRAW ALL DISTURBED AREAS WHEN CONSTRUCTION IS COMPLETE.

TRAFFIC CONTROL:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL AND/OR AS REQUIRED BY V.D.O.T. PERMIT. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, UNLESS OTHERWISE APPROVED. THE PERMIT CAN BE REVOKED AT ANY TIME FOR UNSATISFACTORY WORK OR FAILURE TO COMPLY WITH THE REQUIREMENTS OF THE PERMIT.

LEGEND

EXISTING ROAD SURFACE	IPF IRON PIN FOUND
PROPOSED GREENWAY	NATURAL WATER COURSE
EXISTING ASPHALT SURFACE	FENCE
EXISTING STONE SURFACE	LIMITS OF FIELD SURVEY
RIP RAP	CLEARING LIMITS
HAUL ROAD	FIELD LIGHTS
EXISTING REINFORCED CONCRETE PIPE	UNDERDRAIN
PROPOSED REINFORCED CONCRETE PIPE	TIMBER GAURDRAIL
EXISTING STORM DRAIN DEMOLISHED/ABANDONED	CONSTRUCTION SAFETY FENCE
WATER METER	TREES TO BE REMOVED
	LIMITS OF DISTURBANCE

UTILITY CONTACTS FOR IN PLACE PERMITS

Appalachian Power Company
Barry Burnette
80 RIVER ROAD, FIELDALE, VA.
BLBURNETTE@AEP.COM
PH: 276-627-1225

Cox Communications
Greg Smith
5400 Fallowater Ln.
Roanoke, Va. 24018
Gregory.smith2@cox.com
PH: 540-777-4235
Cell: 540-293-2662
Fax: 540-777-1043

NTELOS
Bryan Hunley
P.O Box 174
Daleville, Va. 24083
hunleyb@ntelos.com
PH: 540-591-5438
Fax: 540-992-1000

Roanoke Gas Co.
Hal Bailey
PH: 540-777-3801

SEGRA
Adam Richardson
1900 Roanoke Rd.
Daleville, Va. 24083
Adam.Richardson@segra.com
PH: 540-591-3654
Fax: 540-293-0165

Town of Vinton
William Herndon
804 3rd St.
Vinton, Va. 24179
WHERNDON@vinton.org
PH: 540-983-0646
Fax: 540-985-4582

Verizon Virginia, LLC
R. Allen Asbury
4843 Oakland Blvd.
Roanoke, Va. 24012
Roscoe.a.asbury.jr@verizon.com
PH: 540-265-7574

WVWA
Aaron Shearer
601 S. Jefferson St. Suite 300
Roanoke, Va. 24011
Aaron.Shearer@westernvawater.org
PH: 540-283-2941
Fax: 540-537-3873

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO. 040203120S
3-19-24
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

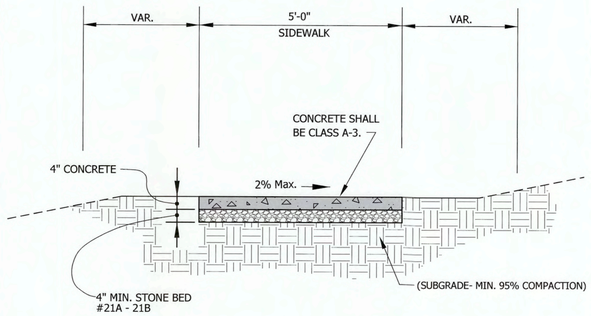
DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

NOTES & DETAILS

SHEET 3 OF 18

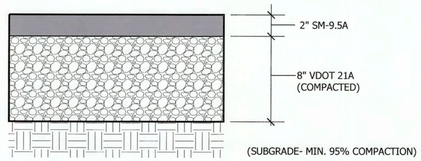
Drawing name: C:\Brian Drawings\Glade Creek Greenway_2023\Plan Sheets\Notes.dwg

APPROVED, 5/1/2024



SIDEWALK SECTION

NOT TO SCALE

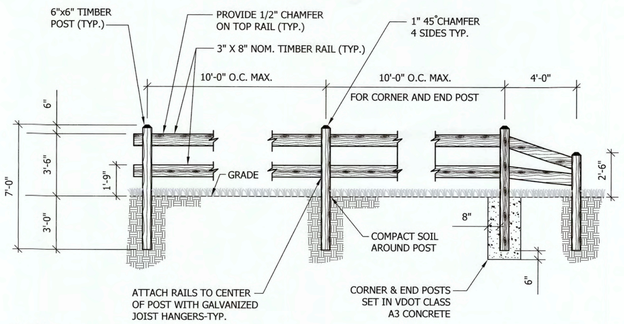


NOTES:

1. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.
2. A TACK COAT SHALL BE APPLIED BETWEEN STONE BASE & ASPHALT PAVEMENT LAYER.
3. G.C. TO INSURE A MINIMUM OF 95% COMPACTION OF THE SUBGRADE PRIOR TO STONE/ASPHALT PLACEMENT.
4. SUBGRADE SHALL BE EXCAVATED AS NECESSARY SUCH THAT THE TOP OF ASPHALT AND THE TOP OF GRAVEL PAVEMENT SECTIONS ARE FLUSH.
5. ALL PAVING AND STONE BASE SHALL BE CONSTRUCTED IN ACCORDANCE W/ VDOT ROAD & BRIDGE STANDARDS.

PAVEMENT SECTION

NOT TO SCALE



NOTES:

1. TIMBER POSTS SHALL BE 6"X 6"X 7' #1 SYP. (SOUTHERN YELLOW PINE), S4S (SURFACE FOUR SIDES), GM (GRADE MARKED), ACQ PRESERVATIVE TO 0.40 LB./CU. FT., PET (PRECISION END TRIM), 1" CH4TE (1" CHAMFER AROUND TOP FOUR EDGES).
2. TIMBER RAILS SHALL BE #1 SYP. (SOUTHER YELLOW PINE) S4S (SURFACE FOUR SIDES), GM (GRADE MARKED), ACQ PRESERVATIVE TO 0.40 LB./CU. FT., DET (DOUBLE END TRIM), 1/2" CHAMFER ON BOTH EDGES OF TOP RAIL, DOH (DEPARTMENT OF HIGHWAYS), RAILS SHALL BE ATTACHED TO POST WITH GALVANIZED CONCEALED FLANGE JOIST HANGERS AND GALVANIZED SCREWS.
3. ALL CUT ENDS SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA STANDARDS.
4. THE CONTRACTOR SHALL TAPER THE TIMBER GUARDRAIL AT THE END TO PROVIDE A MINIMUM 2' HORIZONTAL CLEARANCE FROM THE FACE OF TIMBER GUARDRAIL TO THE EDGE OF THE GREENWAY TRAIL PAVEMENT.
5. THE QUANTITY TO BE PAID FOR UNDER THIS ITEM SHALL BE THE TOTAL LINEAR FEET, MEASURED TO THE NEAREST FOOT OF TIMBER GUARDRAIL FURNISHED AND INSTALLED IN ACCORDANCE WITH THESE PLANS.
6. THE PRICE PER LINEAR FOOT SHALL INCLUDE COST OF ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS REQUIRED TO FURNISH AND INSTALL TIMBER GUARDRAIL IN ACCORDANCE WITH THIS DETAIL SHOWN AND AS DIRECTED ELSEWHERE IN THE PLANS. TO INCLUDE, BUT NOT LIMITED TO POST, RAILS, FOOTINGS, HARDWARE AND OTHER INCIDENTALS REQUIRED FOR THE CONSTRUCTION OF THE TIMBER GUARDRAIL.

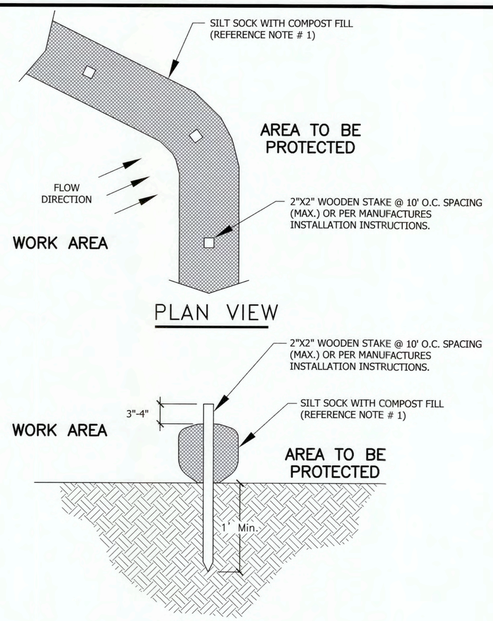
TYPICAL TIMBER GUARDRAIL

NOT TO SCALE

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO.
040203120S
3-19-24
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER
SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

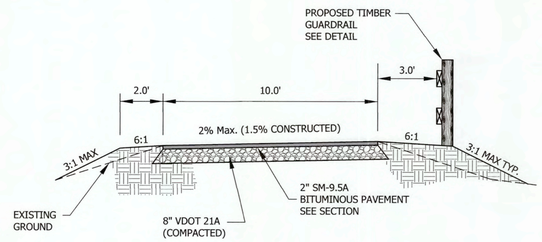


NOTES:

1. REFERENCE PLAN AND/OR TECHNICAL SPECIFICATIONS FOR SILT SOCK SIZE, FILL MATERIAL AND APPROVED MANUFACTURES.
2. THE SILT SOCK SHALL BE PLACED AT LOCATIONS INDICATED ON PLANS AND SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA.
3. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A WORKING EROSION CONTROL SYSTEM AND MAY, WITH APPROVAL OF THE OWNERS REPRESENTATIVE, WORK OUTSIDE THE MINIMUM CONSTRUCTION REQUIREMENTS AS NEEDED.
4. THE CONTRACTOR SHALL MAINTAIN THE SILT SOCK IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE SILT SOCK WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE DEVICE OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
6. THE COMPOST FILL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE OWNER'S REPRESENTATIVE.

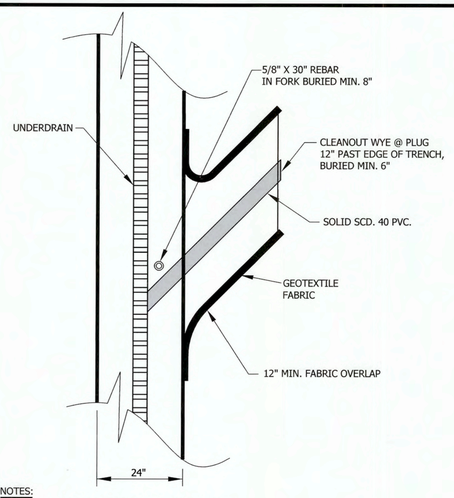
SILT SOCK DETAIL

NOT TO SCALE



TYPICAL GREENWAY SECTION - CROSS SLOPE LEFT

NOT TO SCALE (DESIGN SPEED = 15 MPH)

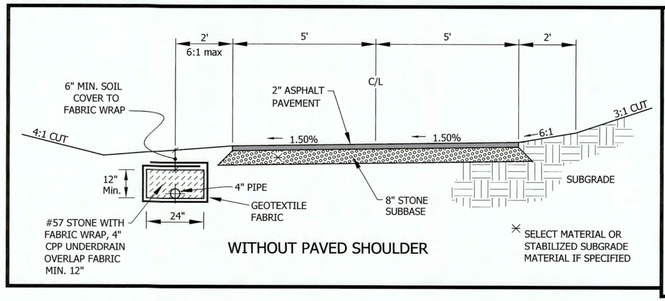


NOTES:

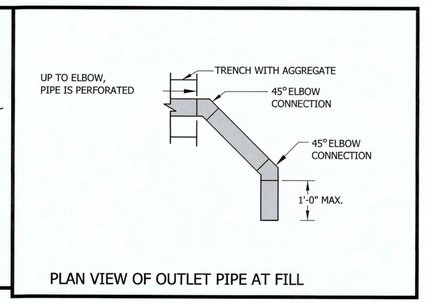
1. CLEANOUT WYE TO BE SOLID SCD. 40 PVC.
2. PLUG SHALL BE THREADED.
3. CLEANOUT WYE SHALL BE INSTALLED @ MAX. 150 O.C.

UNDERDRAIN CLEANOUT DETAIL

NOT TO SCALE



WITHOUT PAVED SHOULDER



PLAN VIEW OF OUTLET PIPE AT FILL

LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH
	4" NOMINAL DIAMETER
CORRUGATED PE	AASHTO M-252

NOTES:

1. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
2. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 1'-0" ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
3. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
4. OUTLET PIPES ARE TO BE INSTALLED PER PROFILE DRAWINGS AND SHALL BE SCHEDULE 40 PVC.

STANDARD GROUNDWATER UNDERDRAIN

NOT TO SCALE

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

TYPICAL SECTIONS

SHEET 4 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway_2023\Plan Sheets\Typical Sections.dwg

APPROVED, 5/1/2024

NORFOLK SOUTHERN RAILWAY
CITY OF ROANOKE
COUNTY OF ROANOKE
GLADE
CREEK
N46°44'20"E
2005.33'
MATCH LINE SHEET 6
SEE MATCH LINE SHEET 6
R=105.00'
L=61.46'
Tan=31.64'
D=33°32'18"
CH=S81°56'22"W
CHORD DIST=60.59'
INSTALL SIGNS
W5-4amod w/ W16-2
("GREENWAY ENDS - 200 FEET")
SEE SHT. 3 FOR DETAIL
LIMITS OF SURVEY
LIMITS OF DISTURBANCE & CLEARING LIMITS
TREELINE
R=110.00'
L=77.81'
Tan=40.61'
D=40°31'42"
CH=N61°01'38"W
CHORD DIST=76.20'
INSTALL SIGN
R5-11
("NO MOTORIZED VEHICLES")
SEE SHT. 3 FOR DETAIL
N81°17'29"W
75.29'
S47°38'57"W
219.89'
PRC-12+76.96
PT-12+14.56
PC-11+53.10
PT-10+77.81
PT-13+75.97
PC-10+00
4" UNDERDRAIN
PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)
LIMITS OF DISTURBANCE
R=110.00'
L=99.01'
Tan=53.14'
D=51°34'17"
CH=S73°26'05"W
CHORD DIST=95.70'
R=105.00'
L=62.40'
Tan=32.15'
D=34°03'00"
CH=N82°11'43"E
CHORD DIST=61.49'
INSTALL SIGN
R5-10cmod
("END OF GREENWAY")
SEE SHT. 3 FOR DETAIL
ADJUST FENCE OPENING TO 5' MIN. AS REQUIRED
5" CONC. SIDEWALK 4' CABC, 4" 4,000 PSI CONCRETE (SEE SHT. 4 FOR TYP. SECTION)
WHEEL STOP
EXISTING GATE TO REMAIN
INSTALL DETECTABLE WARNING SURFACE
HANDICAP ACCESSIBLE SIGNAGE TO BE INSTALLED BY PARKS & REC. DEPT.
BEGIN PROJECT
STA. 10+00.00
ALL WHEELCHAIR ACCESSIBLE SPACES SHALL HAVE MAX. SLOPE OF 2%. ALL AREAS IMMEDIATELY ADJACENT TO ACCESSIBLE PARKING TO HAVE MAX. CROSS SLOPE OF 5%.
TAX# 60.12-09-01.00
ROANOKE COUNTY
BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1515 PG. 657
D.B. 1440 PG. 842
PB. 16 PG. 144 (PLAT)
PB. 16 PG. 124 (PLAT)
32.180 AC.
TAX# 60.05-02-01.00
ROANOKE COUNTY
BOARD OF SUPERVISORS
VINYARD PARK
INSTRU. # 200419172
INSTRU. # 200419171 (PLAT)
DB. 1650 PG. 1633
43.970 AC.
MERIDIAN BASED ON NAD83 (2011)
N
BRIDGE
BERKLEY ROAD
RTE. 653
MAINTAINED BY CITY OF ROANOKE
30' PRESCRIPTIVE R/W
FLOODWAY
"VINYARD PARK" EAST
"VINYARD PARK" WEST
FIELD # 7
FIELD # 6
EXISTING GRAVEL PARKING LOT
PLAN
SCALE: 1"=20'
BENCHMARK
ELEVATION = 920.25'
TEMPORARY BENCHMARK
IRON PIN SET
N 3631361.4770
E 11079091.3300

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

NICKIE D. MILLS LICENSE NO. 0402031205 3-19-24

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
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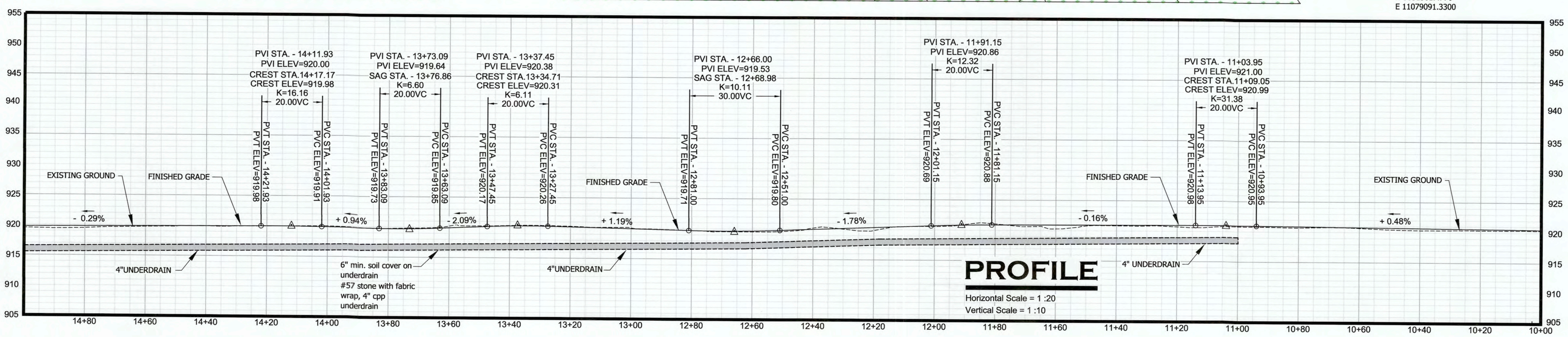

PVI STA. - 14+11.93
PVI ELEV=920.00
CREST STA.14+17.17
CREST ELEV=919.98
K=16.16
20.00VC
PVT STA. - 14+21.93
PVT ELEV=919.98
PVC STA. - 14+01.93
PVC ELEV=919.91
PVI STA. - 13+73.09
PVI ELEV=919.64
SAG STA. - 13+76.86
K=6.60
20.00VC
PVT STA. - 13+83.09
PVT ELEV=919.73
PVC STA. - 13+63.09
PVC ELEV=919.85
PVI STA. - 13+37.45
PVI ELEV=920.38
CREST STA.13+34.71
CREST ELEV=920.31
K=6.11
20.00VC
PVT STA. - 13+47.45
PVT ELEV=920.17
PVC STA. - 13+27.45
PVC ELEV=920.26
PVI STA. - 12+66.00
PVI ELEV=919.53
SAG STA. - 12+68.98
K=10.11
30.00VC
PVT STA. - 12+81.00
PVT ELEV=919.71
PVC STA. - 12+51.00
PVC ELEV=919.80
PVI STA. - 11+91.15
PVI ELEV=920.86
K=12.32
20.00VC
PVT STA. - 12+01.15
PVT ELEV=920.69
PVC STA. - 11+81.15
PVC ELEV=920.88
PVI STA. - 11+03.95
PVI ELEV=921.00
CREST STA.11+09.05
CREST ELEV=920.99
K=31.38
20.00VC
PVT STA. - 11+13.95
PVT ELEV=920.98
PVC STA. - 10+93.95
PVC ELEV=920.95
EXISTING GROUND
FINISHED GRADE
- 0.29%
+ 0.94%
- 2.09%
+ 1.19%
- 1.78%
- 0.16%
+ 0.48%
4"UNDERDRAIN
6" min. soil cover on underdrain #57 stone with fabric wrap, 4" cpp underdrain
4" UNDERDRAIN
PROFILE
Horizontal Scale = 1 :20
Vertical Scale = 1 :10
955 950 945 940 935 930 925 920 915 910 905
14+80 14+60 14+40 14+20 14+00 13+80 13+60 13+40 13+20 13+00 12+80 12+60 12+40 12+20 12+00 11+80 11+60 11+40 11+20 11+00 10+80 10+60 10+40 10+20 10+00

GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

8A

SOIL SPECIFICATION:
COMBS LOAN
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

PLAN & PROFILE (STA. 10+00 - 15+00)

SHEET 5 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024

NORFOLK SOUTHERN RAILWAY

MERIDIAN BASED ON NAD83 (2011)

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

GLADE CREEK

CITY OF ROANOKE
COUNTY OF ROANOKE

N46°44'20"E
2005.33'

R=115.00'
L=39.31'
Tan=19.85'
D=19°35'02"
CH=S57°26'28"W
CHORD DIST=39.12'

ROUTE UNDERDRAIN TO DAYLIGHT, AVOIDING DAMAGE TO EXISTING TREES. PROVIDE STAINLESS STEEL RODENT SCREEN, TYPICAL @ ALL OUTLETS

R=115.00'
L=86.09'
Tan=45.18'
D=42°53'33"
CH=N45°47'12"E
CHORD DIST=84.09'

PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)

LINE SHEET 7

MATCH SEE

LINE SHEET 5

MATCH SEE

LIMITS OF DISTURBANCE
LIMITS OF SURVEY
TREELINE
4" UNDERDRAIN
SCHEDULE 40 SOLID PVC
PT-17+66.84
PC-17+28.53
PT-17+20.13
PC-16+40.62
PC-15+95.81
PT-16+40.62
R=110.00'
L=44.75'
Tan=22.69'
D=23°18'31"
CH=S35°59'41"W
CHORD DIST=44.44'
S47°38'57"W
256.77'
S47°38'57"W
219.89'
PT-13+75.97
R=110.00'
L=99.01'
Tan=53.14'
D=51°34'17"
CH=S73°26'05"W
CHORD DIST=95.70'

TAX# 60.12-09-01.00
ROANOKE COUNTY BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1515 PG. 657
D.B. 1440 PG. 842
PB. 16 PG. 144 (PLAT)
PB. 16 PG. 124 (PLAT)
32.180 AC.

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

VINYARD PARK WEST

8A
SOIL SPECIFICATION:
COMBS LOAM
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.

GOAL NET
225'
330'
SOCCER FIELD
FIELD # 5
SOCCER FIELD
FIELD # 6
FIELD # 7

PLAN

SCALE: 1"=20'

PROFILE

Horizontal Scale = 1 :20
Vertical Scale = 1 :10

PVI STA. - 19+49.40
PVI ELEV=918.78
SAG STA. - 19+48.70
K=12.12
20.00VC
PVC STA. - 19+67.69
PVC ELEV=918.94
PVT STA. - 19+50.40
PVT ELEV=918.87
PVC STA. - 19+39.40
PVC ELEV=918.86
- 0.88%
- 0.77%

PVI STA. - 19+03.07
PVI ELEV=919.14
K=32.69
20.00VC
PVT STA. - 19+13.07
PVT ELEV=919.06
PVC STA. - 18+93.07
PVC ELEV=919.15
- 0.16%

PVI STA. - 18+66.24
PVI ELEV=919.20
K=160.23
20.00VC
PVT STA. - 18+76.24
PVT ELEV=919.18
PVC STA. - 18+56.24
PVC ELEV=919.22

EXISTING GROUND
FINISHED GRADE
- 0.28%

PVI STA. - 17+80.00
PVI ELEV=919.44
CREST STA.17+88.40
CREST ELEV=919.41
K=5.70
20.00VC
PVT STA. - 17+90.00
PVT ELEV=919.41
PVC STA. - 17+70.00
PVC ELEV=919.12
+ 3.23%

PVI STA. - 17+30.55
PVI ELEV=917.84
SAG STA. - 17+19.01
K=8.22
30.00VC
PVT STA. - 17+45.55
PVT ELEV=918.33
PVC STA. - 17+15.55
PVC ELEV=917.90
- 0.42%

PVI STA. - 16+98.16
PVI ELEV=917.98
K=11.89
20.00VC
PVT STA. - 17+08.16
PVT ELEV=917.94
PVC STA. - 16+88.16
PVC ELEV=918.19
- 2.10%

PVI STA. - 16+44.74
PVI ELEV=919.10
CREST STA.16+42.58
CREST ELEV=919.02
K=5.78
20.00VC
PVT STA. - 16+54.74
PVT ELEV=918.89
PVC STA. - 16+34.74
PVC ELEV=918.97
+ 1.36%

PVI STA. - 16+14.96
PVI ELEV=918.70
SAG STA. - 16+18.93
K=4.45
20.00VC
PVT STA. - 16+24.96
PVT ELEV=918.83
PVC STA. - 16+04.96
PVC ELEV=919.01
- 3.14%

PVI STA. - 15+90.00
PVI ELEV=919.48
K=7.03
20.00VC
PVT STA. - 16+00.00
PVT ELEV=919.17
PVC STA. - 15+80.00
PVC ELEV=919.51

- 0.29%
+ 0.94%
- 2.09%

PVI STA. - 14+11.93
PVI ELEV=920.00
CREST STA.14+17.17
CREST ELEV=919.98
K=16.16
20.00VC
PVT STA. - 14+21.93
PVT ELEV=919.98
PVC STA. - 14+01.93
PVC ELEV=919.91

PVI STA. - 13+73.09
PVI ELEV=919.64
SAG STA. - 13+76.86
K=6.60
20.00VC
PVT STA. - 13+83.09
PVT ELEV=919.73
PVC STA. - 13+63.09
PVC ELEV=919.85

6" min. soil cover on underdrain #57 stone with fabric wrap, 4" cpp underdrain
4"UNDERDRAIN CAP ENDS
CAP ENDS
UNDERDRAIN OUTLET TO DAYLIGHT
4"UNDERDRAIN
EXISTING GROUND
FINISHED GRADE
4"UNDERDRAIN

955 950 945 940 935 930 925 920 915 910 905

19+60 19+40 19+20 19+00 18+80 18+60 18+40 18+20 18+00 17+80 17+60 17+40 17+20 17+00 16+80 16+60 16+40 16+20 16+00 15+80 15+60 15+40 15+20 15+00 14+80 14+60 14+40 14+20 14+00 13+80 13+60

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

PLAN & PROFILE (STA. 15+00 - 19+80)

SHEET 6 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED. 5/1/2024

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO.
0402031205
PROFESSIONAL ENGINEER
3.19.24

PROFESSIONAL ENGINEER
SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF
DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

NORFOLK SOUTHERN RAILWAY

MERIDIAN BASED ON NAD83 (2011)

R=110.00'
L=27.69'
Tan=13.92'
D=14°25'23"
CH=S40°32'32"W
CHORD DIST=27.62'

R=110.00'
L=27.30'
Tan=13.72'
D=14°13'18"
CH=S54°51'53"W
CHORD DIST=27.23'

R=110.00'
L=47.88'
Tan=24.33'
D=24°56'23"
CH=S35°10'45"W
CHORD DIST=47.50'

N46°44'20"E
2005.33'

CITY OF ROANOKE
COUNTY OF ROANOKE

GLADE CREEK

MATCH LINE SHEET 8 SEE

MATCH LINE SHEET 6 SEE

TREELINE

EXISTING NET & POLES WITH GUY WIRES TO BE REMOVED BY PARKS, RECREATION AND TOURISM

LIMITS OF SURVEY

INSTALL TIMBER GUARDRAIL STA. 24+75 TO 26+25

PT-24+60

PC-24+29.50

LIMITS OF DISTURBANCE

PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)

EXISTING RIP RAP

INV. EL.= 910.43'

24" RCP

INSTALL TIMBER GUARDRAIL STA. 20+50 TO 21+00

ROUTE UNDERDRAIN TO DAYLIGHT, AVOIDING DAMAGE TO EXISTING TREES.

PT-21+17.41

SUPPLEMENT EX. RIP RAP W/ CL. II RIP RAP AS REQ'D

UNDERDRAIN OUTLET W/ STAINLESS STEEL RODENT SCREEN

REMOVE EXISTING PIPE
INSTALL EW-6PC RETAINING WALL SEE SHEET 3

LIMITS OF DISTURBANCE

LIMITS OF SURVEY

S47°45'13"W
42.30'

S46°05'15"W
312.08'

PT-26+01.74

PC-26+74.05

PT-25+31.75

PC-26+49.45

NET

4" UNDERDRAIN

R=110.00'
L=30.50'
Tan=15.35'
D=15°53'16"
CH=N54°01'54"E
CHORD DIST=30.40'

NEW LOCATION OF NET AND POLES W/ GUY WIRES TO BE INSTALLED BY PARKS, RECREATION AND TOURISM

LIMITS OF DISTURBANCE

LIMITS OF SURVEY

FENCING

FOOTBALL FIELD

BALLFIELD

FIELD # 4

EXIST. BOLLARD FENCING

BLEACHERS W/ CONC. PAD

PARKING STOPS (TYP.)

Tax# 60.12-09-01.00
ROANOKE COUNTY
BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1515 PG. 657
D.B. 1440 PG. 842
PB. 16 PG. 144 (PLAT)
PB. 16 PG. 124 (PLAT)
32.180 AC.

INSTALL DETECTABLE WARNING SURFACE

6" SCH. 40 STEEL BOLLARD, 24' BURY 48' EXPOSED, 18' DIAMETER FULL DEPTH CONC. FOUNDATION BRIGHT YELLOW PLASTIC COVER

SCHEDULE 40 SOLID PVC

MH-1
RIM EL. = 918.43'

15' DRAINAGE EASEMENT

24" RCP

DI-1

HANDICAP ACCESSIBLE SIGNAGE TO BE INSTALLED BY PARKS & REC. DEPT.

WHEEL STOP

PROVIDE SMOOTH TRANSITION TO ASPHALT. RAISE GRADE FLUSH AROUND MANHOLE WITH STONE BASE.

ALL WHEELCHAIR ACCESSIBLE SPACES SHALL HAVE MAX. SLOPE OF 2%. ALL AREAS IMMEDIATELY ADJACENT TO ACCESSIBLE PARKING TO HAVE MAX. CROSS SLOPE OF 5%.

242 EXISTING PARKING SPACES

PARKING STOPS (TYP.)

SCHEDULE 40 SOLID PVC

R=115.00'
L=46.92'
Tan=23.79'
D=23°22'42"
CH=N34°23'55"E
CHORD DIST=46.60'

INSTALL EW-6PC RETAINING WALL SEE SHEET 3

INSTALL (2) 18" RCP 18' L.F. EA.
INV. IN= 915.20'
INV. OUT= 915.00'

PC-20+22.81

4" UNDERDRAIN

LIMITS OF DISTURBANCE

SCHEDULE 40 SOLID PVC

LIMITS OF SURVEY

14' HAUL ROAD (TYP.)

TO TEMPORARY STOCKPILE AND STORAGE AREA (SEE SHEET 18)

8A
SOIL SPECIFICATION:
COMBS LOAN
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

PLAN
SCALE: 1"=20'

NOTE:
ADDITIONAL ACCESSIBLE PARKING SPACES WILL BE CONSTRUCTED BY THE COUNTY, NOT IN CONTRACT, TO MEET CURRENT ADA REQUIREMENTS.

"VINYARD PARK" WEST

10' TEMPORARY PEDESTRIAN CONSTRUCTION CROSSING (SEE SHEET 18)

PROFILE
Horizontal Scale = 1 :20
Vertical Scale = 1 :10

PVI STA. - 25+77.61
PVI ELEV=918.09
K=84.77
20.00VC
PVT STA. - 25+87.61
PVT ELEV=918.08
PVC STA. - 25+67.61
PVC ELEV=918.12
+ 0.09%
- 0.33%

PVI STA. - 25+29.69
PVI ELEV=918.24
CREST STA.25+28.08
CREST ELEV=918.23
K=35.42
20.00VC
PVT STA. - 25+39.69
PVT ELEV=918.21
PVC STA. - 25+19.69
PVC ELEV=918.22

FINISHED GRADE

PVI STA. - 24+62.78
PVI ELEV=918.09
SAG STA. - 24+65.68
K=29.94
20.00VC
PVT STA. - 24+72.78
PVT ELEV=918.11
PVC STA. - 24+52.78
PVC ELEV=918.13
+ 0.24%
- 0.43%

PVI STA. - 24+08.51
PVI ELEV=918.32
CREST STA.24+12.62
CREST ELEV=918.29
K=13.67
20.00VC
PVT STA. - 24+18.51
PVT ELEV=918.28
PVC STA. - 23+98.51
PVC ELEV=918.22
+ 1.03%

PVI STA. - 23+76.22
PVI ELEV=917.99
SAG STA. - 23+72.68
K=13.13
20.00VC
PVT STA. - 23+86.22
PVT ELEV=918.09
PVC STA. - 23+66.22
PVC ELEV=918.04

4"UNDERDRAIN

CAP ENDS

- 0.49%

6" min. soil cover on underdrain #57 stone with fabric wrap, 4" cpp underdrain

OUTLET TO MANHOLE

FINISHED GRADE

EXISTING GROUND

24" RCP INV. EL.= 910.59'

PVI STA. - 22+20.49
PVI ELEV=918.75
CREST STA.22+27.99
CREST ELEV=918.70
K=15.24
30.00VC
PVT STA. - 22+35.49
PVT ELEV=918.68
PVC STA. - 22+05.49
PVC ELEV=918.53

CAP ENDS

+ 1.48%

PVI STA. - 21+15.37
PVI ELEV=917.20
SAG STA. - 21+18.60
K=4.59
20.00VC
PVT STA. - 21+25.37
PVT ELEV=917.35
PVC STA. - 21+05.37
PVC ELEV=917.49

- 2.88%

OUTLET TO DAYLIGHT

18" RCP INV. EL.= 915.10'

18" RCP INV. EL.= 915.10'

PVI STA. - 20+58.33
PVI ELEV=918.84
CREST STA.20+51.62
CREST ELEV=918.80
K=5.80
20.00VC
PVT STA. - 20+68.33
PVT ELEV=918.56
PVC STA. - 20+48.33
PVC ELEV=918.79

+ 0.57%

PVI STA. - 20+24.91
PVI ELEV=918.65
SAG STA. - 20+26.63
K=14.63
20.00VC
PVT STA. - 20+34.91
PVT ELEV=918.71
PVC STA. - 20+14.91
PVC ELEV=918.73

- 0.80%

PVI STA. - 19+77.69
PVI ELEV=919.03
CREST STA.19+78.17
CREST ELEV=918.99
K=11.89
20.00VC
PVT STA. - 19+87.69
PVT ELEV=918.85
PVC STA. - 19+67.69
PVC ELEV=918.94
PVT STA. - 19+59.40
PVT ELEV=918.87

+ 0.88%

4"UNDERDRAIN

955 950 945 940 935 930 925 920 915 910 905

26+00 25+80 25+60 25+40 25+20 25+00 24+80 24+60 24+40 24+20 24+00 23+80 23+60 23+40 23+20 23+00 22+80 22+60 22+40 22+20 22+00 21+80 21+60 21+40 21+20 21+00 20+80 20+60 20+40 20+20 20+00 19+80 19+60

NO.	REVISIONS	DATE
1		
2		
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4		
5		
6		

DEPARTMENT OF DEVELOPMENT SERVICES

GLADE CREEK GREENWAY
VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

PLAN & PROFILE
(STA. 19+80 - 26+00)

SHEET 7 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO.
0402031205
3-19-24
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER
SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

PLAN

SCALE: 1"=20'

NORFOLK SOUTHERN RAILWAY

CITY OF ROANOKE
COUNTY OF ROANOKE

N46°44'20"E
2005.33'

GLADE CREEK

MERIDIAN BASED ON NAD83 (2011)

100 YR FLOOD PLAIN

40' AEP EASEMENT

FLOODWAY

ROUTE UNDERDRAIN TO DAYLIGHT, AVOIDING DAMAGE TO EXISTING TREES.

UNDERDRAIN OUTLET W/ STAINLESS STEEL RODENT SCREEN

SCHEDULE 40 SOLID PVC

LIMITS OF SURVEY

LIMITS OF DISTURBANCE

4" UNDERDRAIN

EXIST. 4" CCP

MH-2

SCORE BOARD

S50°21'06"W
149.66'

PC-32+21.12

PT-32+11.05

PC-31+77.75

R=497.99'
L=10.06'
Tan=5.03'
D=1°09'28"
CH=N33°35'00"E
CHORD DIST=10.06'

R=110.00'
L=33.30'
Tan=16.78'
D=17°20'50"
CH=S41°40'41"W
CHORD DIST=33.18'

MATCH SEE SHEET 9 LINE

COUNTY OF ROANOKE
TOWN OF VINTON

8A

SOIL SPECIFICATION:
COMBS LOAN
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.

PT-30+28.08

PC-29+86.23

S28°01'52"W
2.73'

R=110.00'
L=42.85'
Tan=21.70'
D=22°19'14"
CH=N39°11'29"E
CHORD DIST=42.58'

PC-29+38.35

PT-29+81.20

R=110.00'
L=44.15'
Tan=22.38'
D=22°59'56"
CH=S39°31'50"W
CHORD DIST=43.86'

INSTALL TIMBER GUARDRAIL STA. 28+00 TO 29+25

TREELINE

29+25

S51°01'47"W
189.72'

SCHEDULE 40 SOLID PVC

PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)

Tax# 60.12-09-01.00
ROANOKE COUNTY BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1515 PG. 657
D.B. 1440 PG. 842
PB. 16 PG. 144 (PLAT)
PB. 16 PG. 124 (PLAT)
32.180 AC.

BALLFIELD
FIELD # 4

BALLFIELD
FIELD # 3

ATHLETIC FIELDS

"VINYARD PARK"
WEST

UNDERDRAIN OUTLET W/ STAINLESS STEEL RODENT SCREEN

ROUTE UNDERDRAIN TO DAYLIGHT, AVOIDING DAMAGE TO EXISTING TREES.

PT-27+48.63

PC-27+14.65

REMOVE EXISTING TREES, TYPICAL

EXIST. 24" RCP

R=110.00'
L=33.98'
Tan=17.13'
D=17°41'57"
CH=N42°10'49"E
CHORD DIST=33.85'

4" UNDERDRAIN

LIMITS OF SURVEY

LIMITS OF DISTURBANCE

INSTALL TIMBER GUARDRAIL STA. 24+75 TO 26+25

CLEARING LIMITS

S33°19'50"W
112.92'

BENCHMARK
ELEVATION = 917.11'
TEMPORARY BENCHMARK
IRON PIN SET
N 3630573.7437
E 11077777.0144

PT-26+01.14

MATCH SEE SHEET 7 LINE

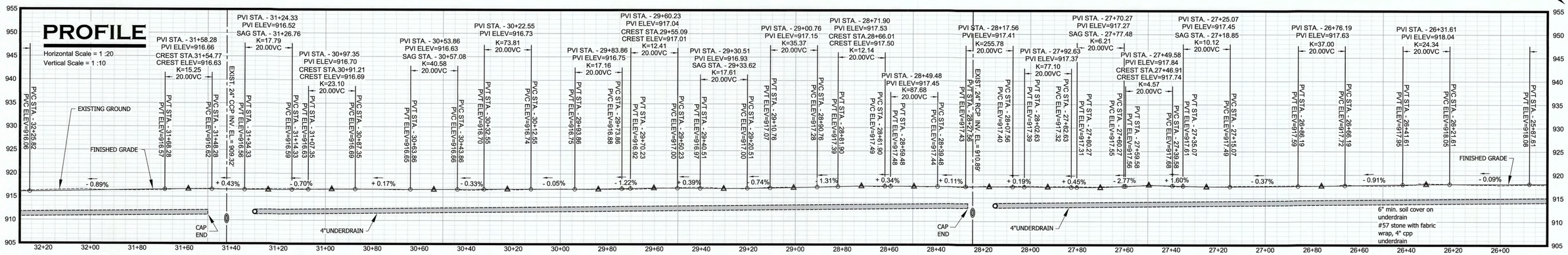
FENCING

FOOTBALL FIELD

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

PROFILE

Horizontal Scale = 1 :20
Vertical Scale = 1 :10



DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

PLAN & PROFILE
(STA. 26+00 - 32+20)

SHEET 8 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024

CITY OF ROANOKE

TOWN OF VINTON

MERIDIAN BASED ON NAD83 (2011)

N & S BRIDGE

NORFOLK SOUTHERN RAILWAY

GLADE CREEK

100 YR FLOOD PLAIN

FLOODWAY

S65°40'07"W 88.26'

R=170.53'
L=11.33'
Tan=5.66'
D=3°48'18"
CH=N56°53'11"E
CHORD DIST=11.32'

REMOVE EXISTING TREES, TYPICAL

COMMONWEALTH OF VIRGINIA
JACKIE D. MILLER
LICENSE NO.
0402031205
PROFESSIONAL ENGINEER
3/19/24

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

END PROJECT
STA. 35+96.21

LIMITS OF SURVEY

LIMITS OF DISTURBANCE

R=110.00'
L=38.58'
Tan=19.49'
D=20°05'50"
CH=N50°30'02"E
CHORD DIST=38.39'

INSTALL SIGNS
W5-4amod w/ W16-2
("GREENWAY ENDS - 200 FEET")
SEE SHT. 3 FOR DETAIL

R=120.00'
L=38.41'
Tan=19.37'
D=18°20'13"
CH=S49°57'13"W
CHORD DIST=38.24'

TREELINE

INSTALL SIGN
R5-10cmod
("END OF GREENWAY")
SEE SHT. 3 FOR DETAIL

POSSIBLE ABANDONED WELL

PT35+14.10

PC35+02.82

35+86.21

34+00

33+00

PC33+17.38

PT32+40.80

PC32+21.12

PC32+11.05

S49°57'13"W 76.60'

4" UNDERDRAIN

PROPOSED 10' GREENWAY (2,596 L.F.) W/ ASPHALT SURFACE (SEE SECTION, SHEET 4)

PT33+88.86

TIE UNDERDRAIN TO DROP INLET DI-7

PC33+48.86

PC33+60.18

4" ADS HDPE

FENCING

R=170.53'
L=31.46'
Tan=15.78'
D=10°34'13"
CH=N49°41'56"E
CHORD DIST=31.42'

R=110.00'
L=19.68'
Tan=9.87'
D=10°15'05"
CH=N39°17'17"E
CHORD DIST=19.66'

R=497.99'
L=10.06'
Tan=5.03'
D=1°09'28"
CH=N33°35'00"E
CHORD DIST=10.06'

N68°58'23"W 72.51'

PT32+11.05

PT32+21.12

COUNTY OF ROANOKE
TOWN OF VINTON

SEE MATCH LINE SHEET 8

FIELD # 1

FLAG FOOTBALL FIELD

"VINYARD PARK" WEST

BALLFIELD

LIMITS OF SURVEY

TREELINE

Tax# 60.12-09-01.01
ROANOKE COUNTY
BOARD OF SUPERVISORS
VINYARD PARK
D.B. 1218 PG. 1913 (PLAT)
PB. 16 PG. 124 (PLAT)
6.82 AC.

SHED

#337

FOXLAND
SECTION 3
PB. 1 PG. 254 (PLAT)

NORTH MAPLE ST.

PLAN

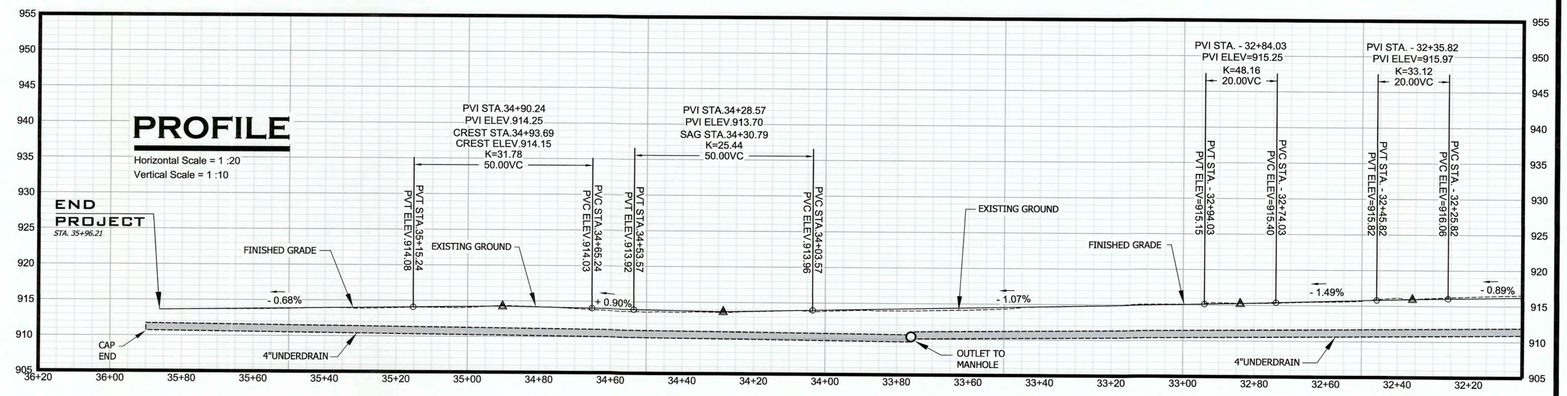
SCALE: 1"=20'

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

8A
SOIL SPECIFICATION:
COMBS LOAM
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.

PROFILE

Horizontal Scale = 1 :20
Vertical Scale = 1 :10



DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
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6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

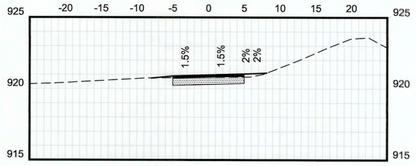
DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

PLAN & PROFILE
(STA. 32+20 - 35+96)

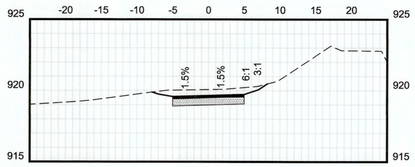
SHEET 9 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

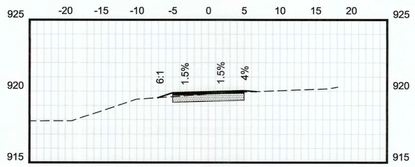
APPROVED, 5/1/2024



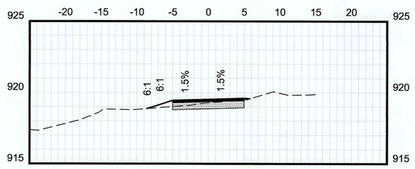
11+25



12+75



14+25



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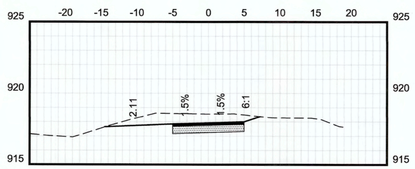

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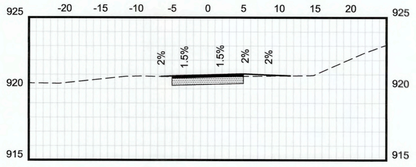

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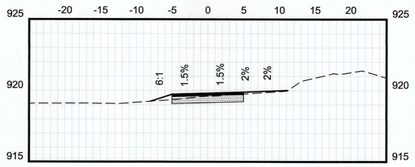

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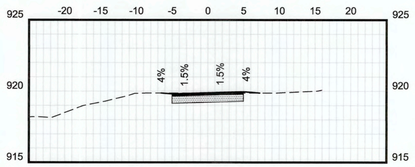

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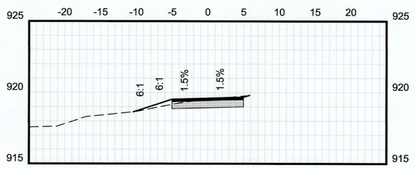

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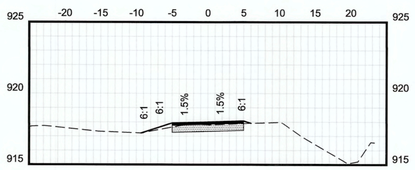

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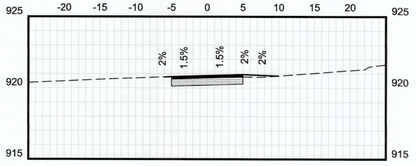

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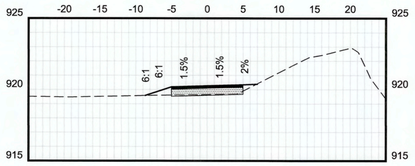

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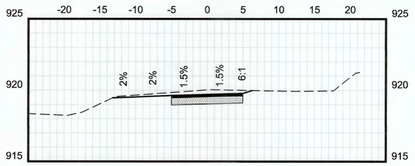

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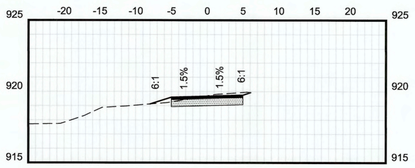

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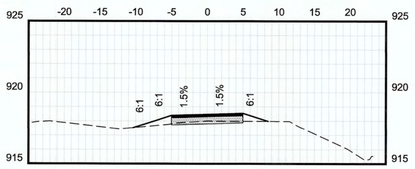

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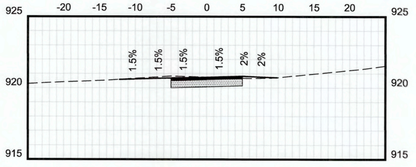

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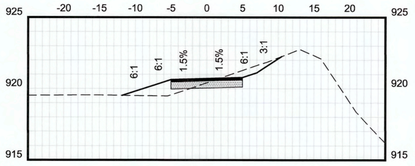

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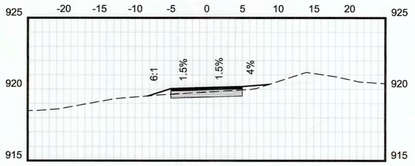

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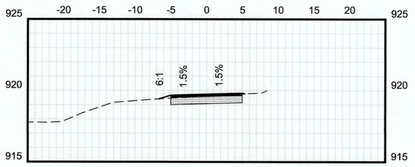

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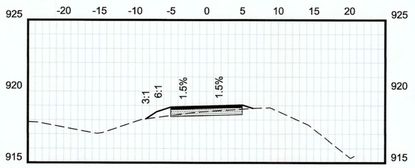

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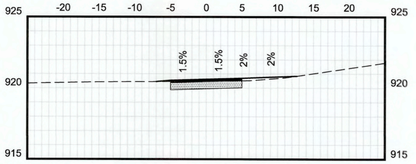

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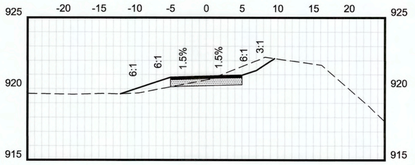

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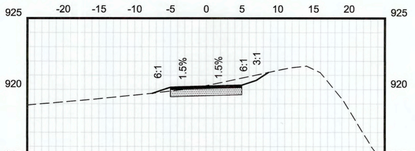

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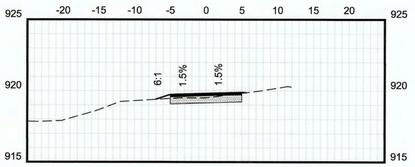

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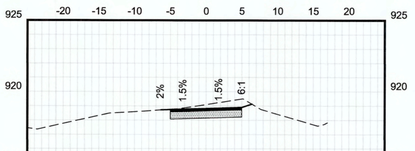

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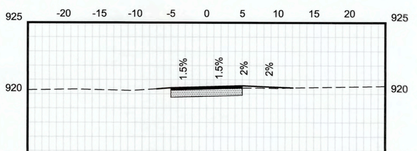

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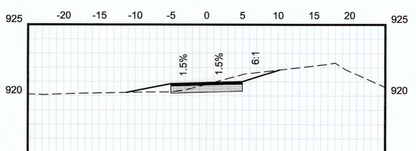

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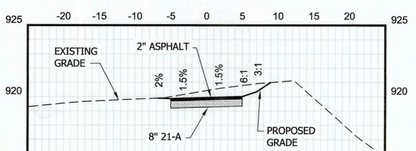

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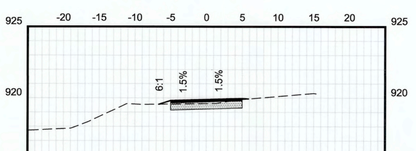

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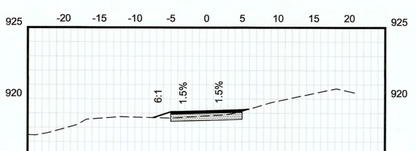

16+00

CROSS SECTIONS

SCALE: HORIZ. 1"= 10' VERT.- 1"= 5'

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
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COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO.
0402031205
3-19-24
PROFESSIONAL ENGINEER

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

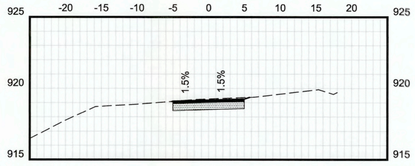
DATE:	3/18/2024
SCALE:	H- 1"=10' V- 1"=5'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

CROSS SECTIONS (STA. 10+00 - 17+25)

SHEET 10 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Cross Sections.dwg

APPROVED, 5/1/2024



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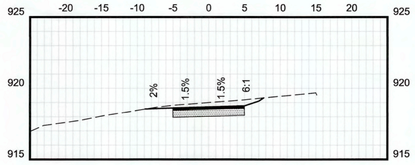

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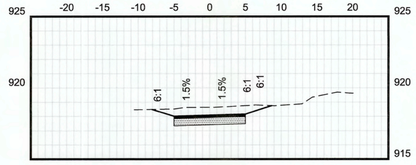

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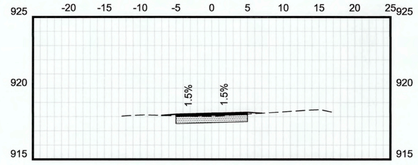

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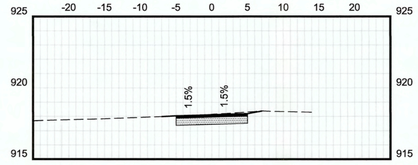

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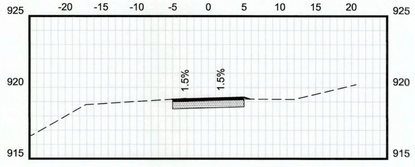

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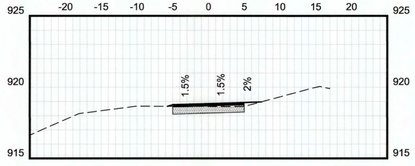

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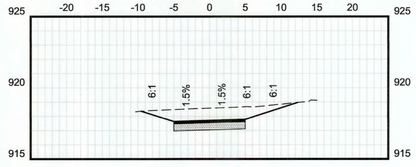

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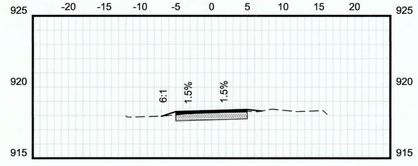

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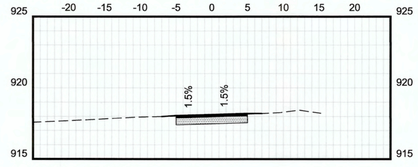

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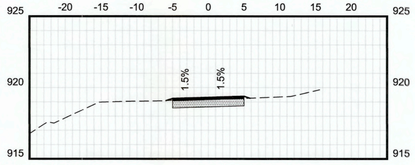

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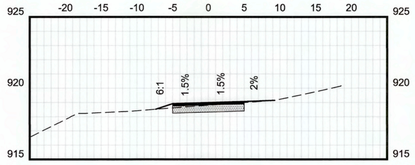

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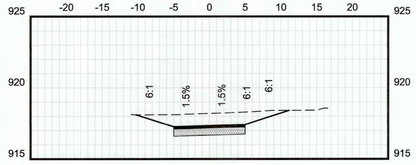

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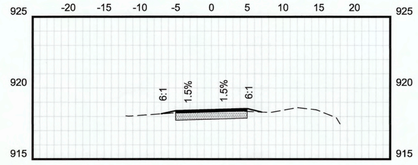

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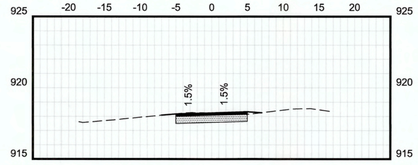

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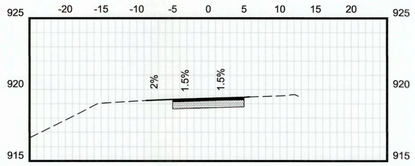

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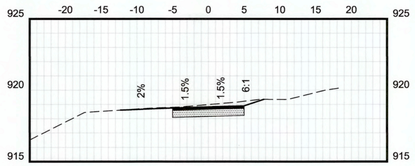

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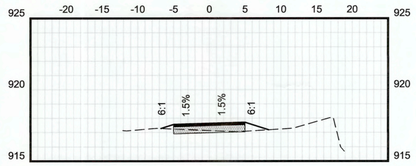

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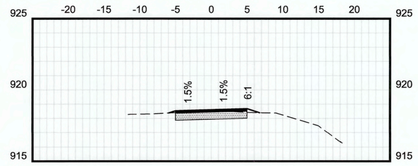

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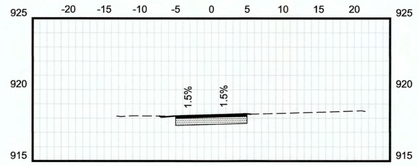

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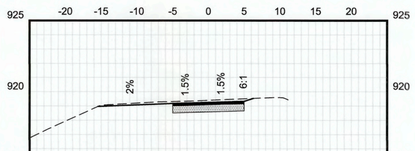

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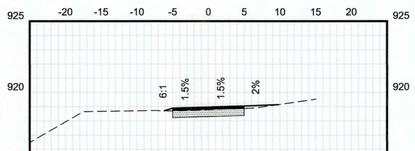

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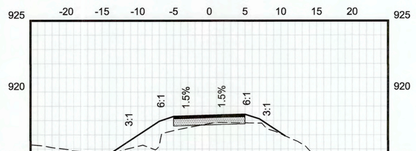

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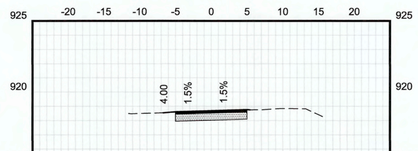

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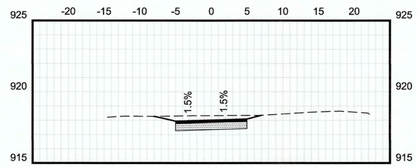

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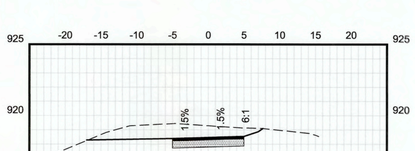

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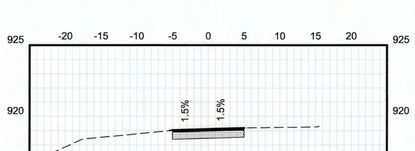

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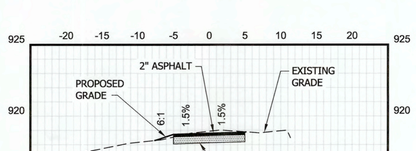

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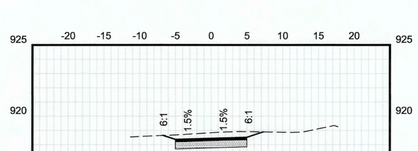

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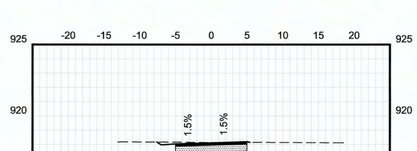

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Fax: (540) 776-7155

COMMONWEALTH OF VIRGINIA
NICKIE C. MILLS
LICENSE NO.
0402031205
PROFESSIONAL ENGINEER
3-19-24

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

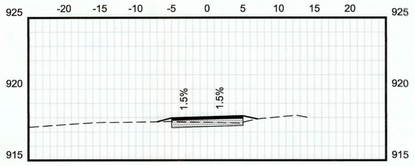
DATE:	3/18/2024
SCALE:	H- 1"=10' V- 1"=5'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

CROSS SECTIONS (STA. 17+50 - 24+75)

SHEET 11 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Cross Sections.dwg

APPROVED, 5/1/2024



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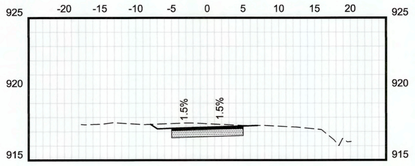

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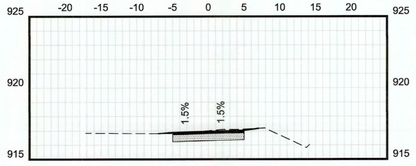

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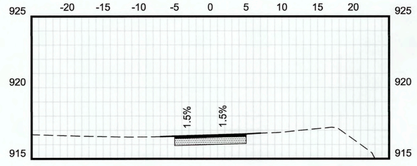

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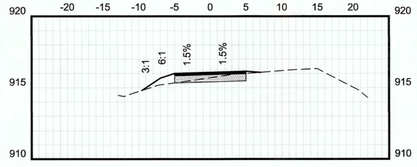

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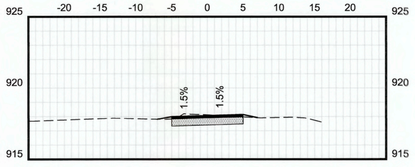

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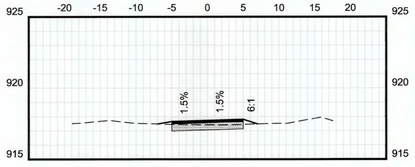

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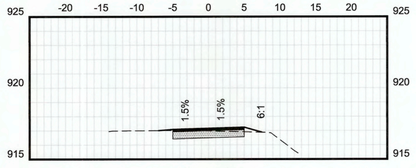

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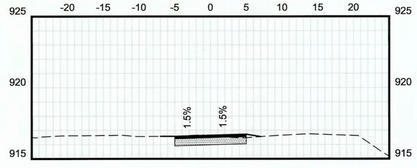

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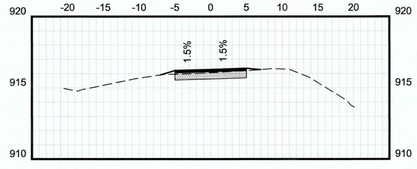

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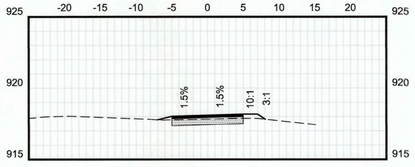

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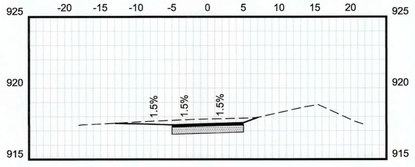

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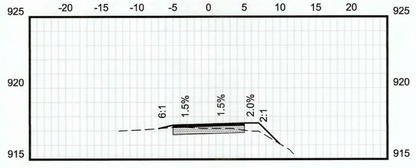

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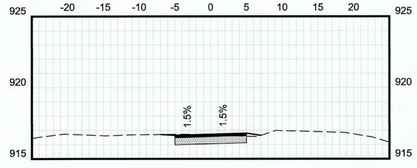

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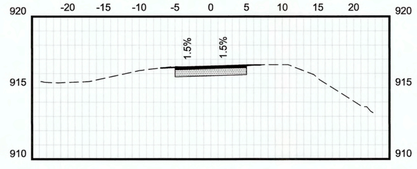

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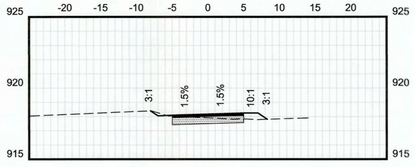

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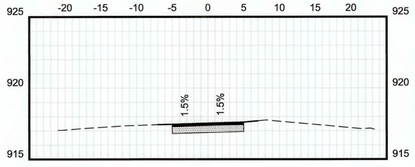

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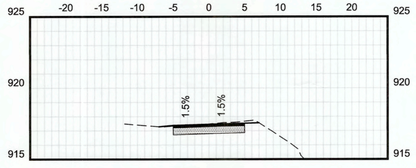

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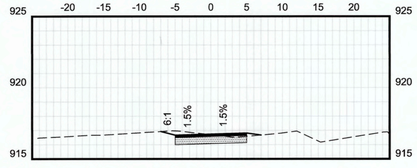

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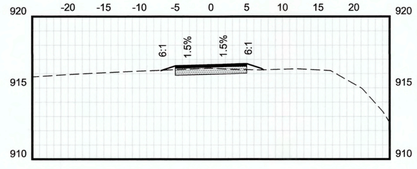

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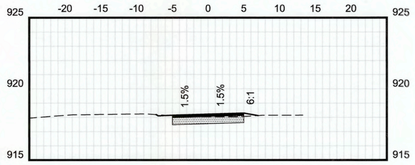

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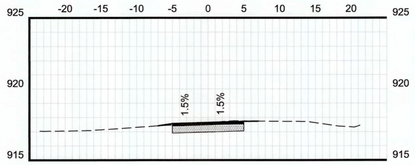

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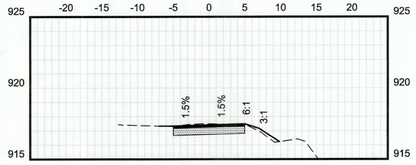

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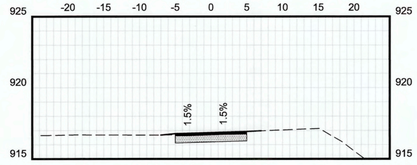

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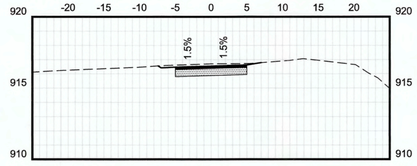

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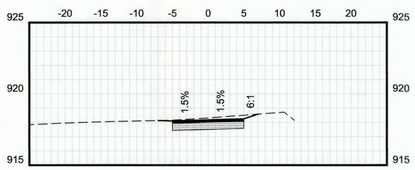

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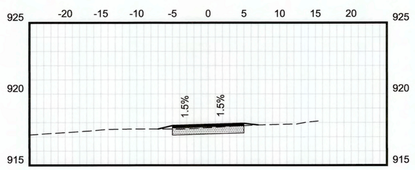

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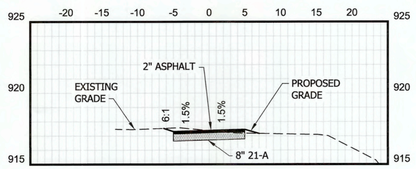

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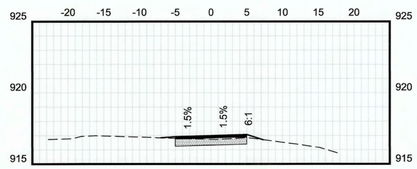

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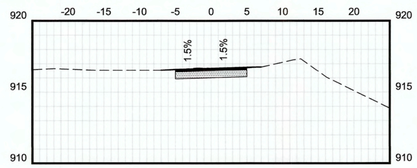

31+00

CROSS SECTIONS

SCALE: HORIZ. 1"= 10' VERT.- 1"= 5'

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO. 0402031205
1-17-24
PROFESSIONAL ENGINEER

DEPARTMENT OF DEVELOPMENT SERVICES

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GLADE CREEK GREENWAY
VINYARD PARK - WEST

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CROSS SECTIONS
(STA. 25+00 - 32+25)

SHEET 12 OF 18

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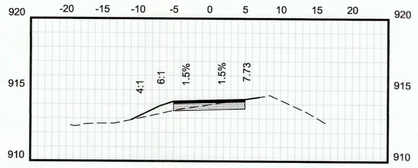

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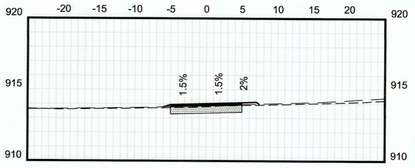

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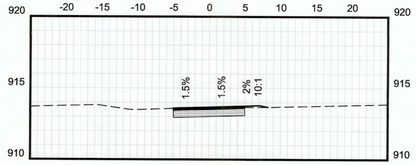

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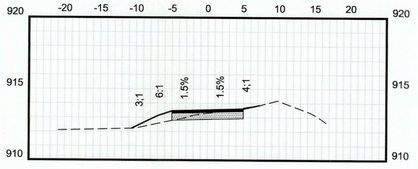

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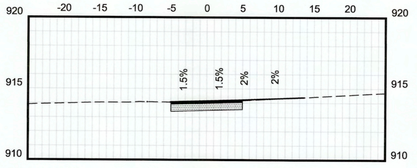

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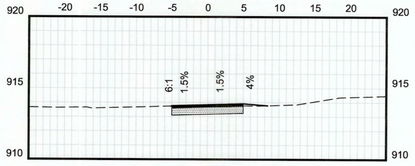

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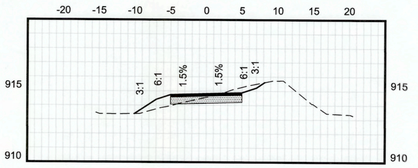

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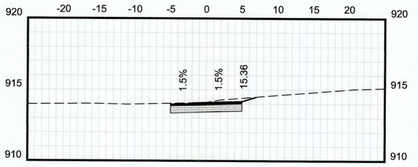

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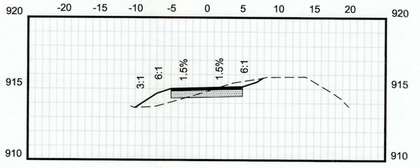

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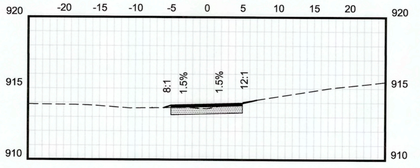

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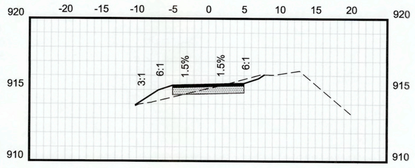

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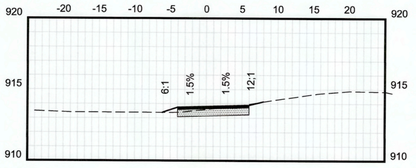

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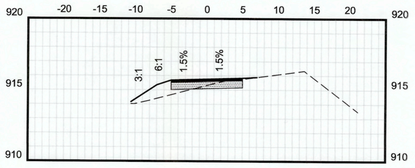

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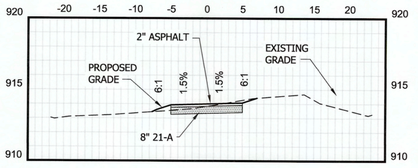

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CROSS SECTIONS

SCALE: HORIZ. 1"= 10' VERT.- 1"= 5'

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DEPARTMENT OF DEVELOPMENT SERVICES

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GLADE CREEK GREENWAY
VINYARD PARK - WEST

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SHEET 13 OF 18

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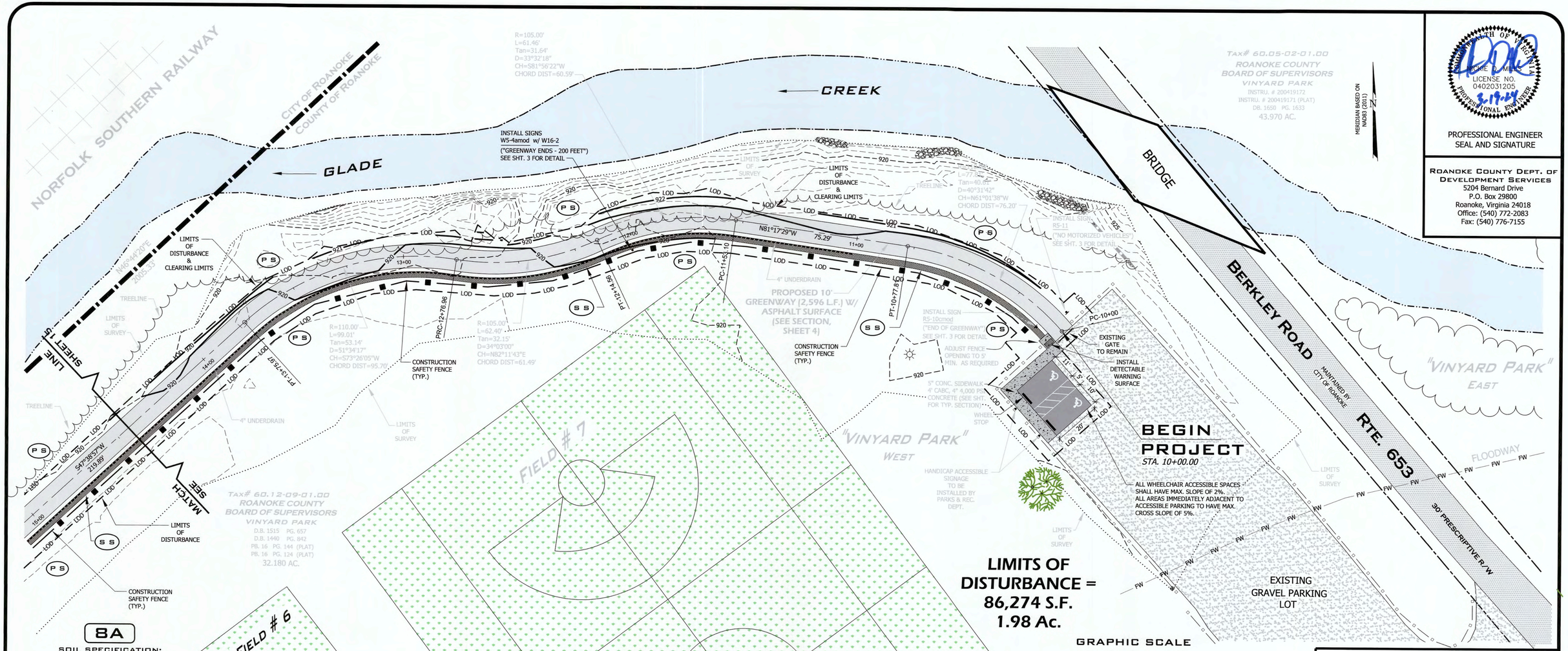
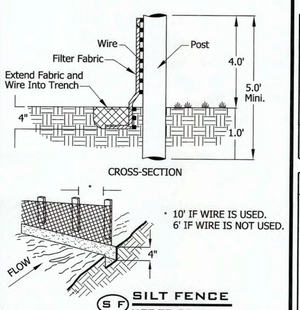


EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

8A

SOIL SPECIFICATION:
COMBS LOAM
0 TO 2 PERCENT SLOPES
OCASSIONALLY FLOODED
H.G.A.



SF SILT FENCE
NOT TO SCALE

TABLE 3.31-B

(REVISED June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUN MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50 - 100 (LBS./ACRE)
FEB. 16 - APR. 30	ANNUAL RYEGRASS (LOLIUN MULTI-FLORUM)	60 - 100 (LBS./ACRE)
MAY 1 - AUG. 31	GERMAN MILLET	50 (LBS./ACRE)

FERTILIZER & LIME

* APPLY 10-10-10 FERTILIZER AT A RATE OF 450 LBS. / ACRE (OR 10 LBS. / 1000 SQ. FT.)
* APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90 LBS. / 1,000 SQ. FT.)

NOTE:
1 - A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL pH OF SITE.
2 - INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4 - 6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
3 - WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN Erosion & Sediment Control Technical Bulletin # 4. 2003 Nutrient Management for Development Sites at http://www.dcr.va.us/sw/e&s.htm#pubs

SITEWORK

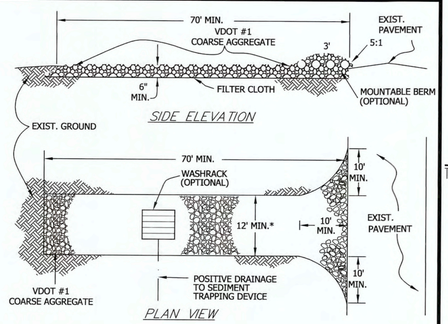
- Subgrade shall be formed ensuring positive drainage and be free of large boulders and other large construction debris.
- Topsoil will be installed and uniformly graded to a consistent four-inch depth over the entire planting area.
- Soil to be friable loam with adequate organic content.
- Soil to be free of rock, roots, clods, and foreign material, including construction debris and gravel.

SEEDING SPECIFICATIONS

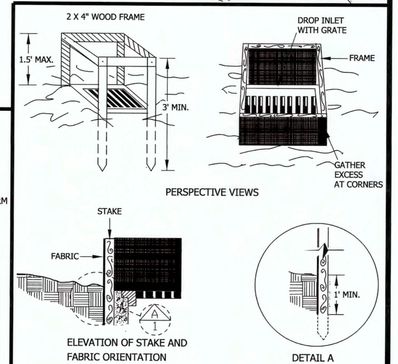
- Seed blend shall consist of a three-way turf-type fescue.
- Seed shall be blue tag certified category one.
- Seed shall be clearly labeled.
- New seeding to be applied at a rate of eight pounds per 1000 square feet.
- Newly seeded areas to be fertilized using a formula with a 1-3-1 npk at a rate of 1/4 pound nitrogen per 1000 square feet.
- Soils to be tested to determine if additional amendments are needed.
- Prepared seedbed will have quality topsoil a minimum of six inches depth, free of rocks, roots, or debris.
- Seed shall be applied in two different directions.
- Seed shall be mechanically incorporated into the top 1/2 inch of the proposed surface.
- Seeded surface shall be mulched with blown straw at a rate of two bales per 1000 square feet then tacked using a hydro-mulcher and paper mulch product. adjacent hard surface will be cleaned from the seeding and mulching operations.

EROSION SEDIMENT CONTROL SYMBOLS

IP	INLET PROTECTION
B/M	SOIL STABILIZATION MAT (EC-3 TYPE B)
TS	TEMPORARY SEEDING
PS	PERMANENT SEEDING
SF	SILT FENCE
CE	CONSTRUCTION ENTRANCE
CP	CULVERT INLET PROTECTION
OP	OUTLET PROTECTION
CD	ROCK CHECK DAM
SS	SILT SOCK
	CONSTR. SAFETY FENCE
	LIMITS OF DISTURBANCE — LOD — — LOD — — LOD —



CE STONE CONSTRUCTION ENTRANCE
NOT TO SCALE



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

IP SILT FENCE DROP INLET PROTECTION

COMMONWEALTH OF VIRGINIA
JACKIE D. MILLS
LICENSE NO. 0402031205
PROFESSIONAL ENGINEER
3.19.24

PROFESSIONAL ENGINEER SEAL AND SIGNATURE

ROANOKE COUNTY DEPT. OF DEVELOPMENT SERVICES
5204 Bernard Drive
P.O. Box 29800
Roanoke, Virginia 24018
Office: (540) 772-2083
Fax: (540) 776-7155

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY
VINYARD PARK - WEST

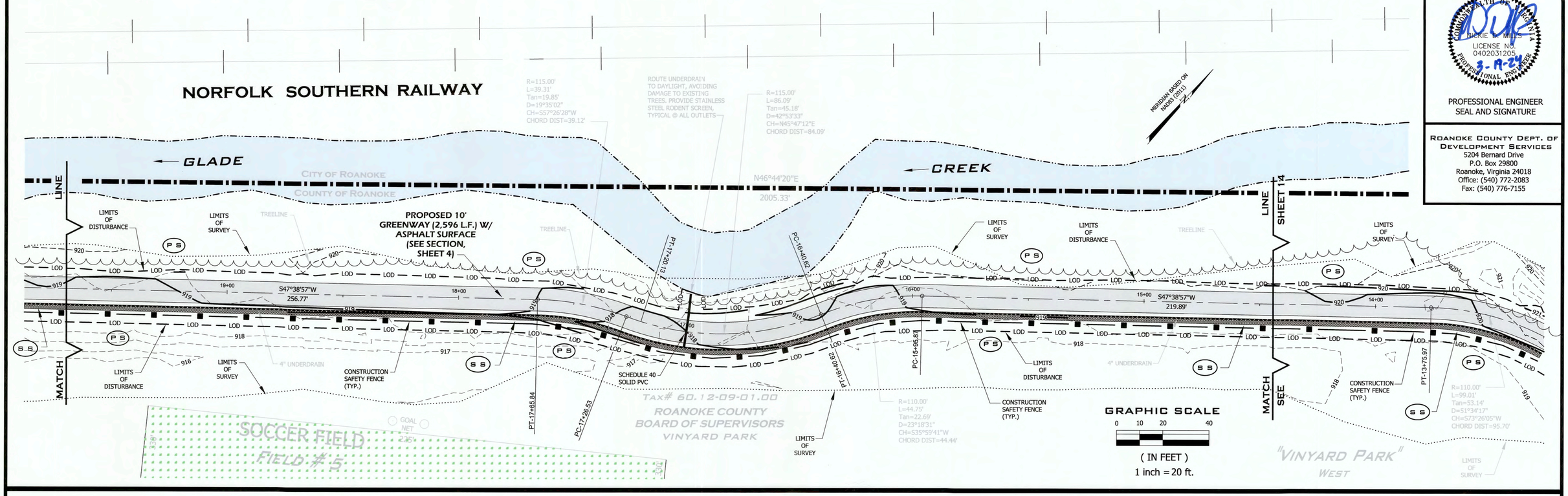
DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

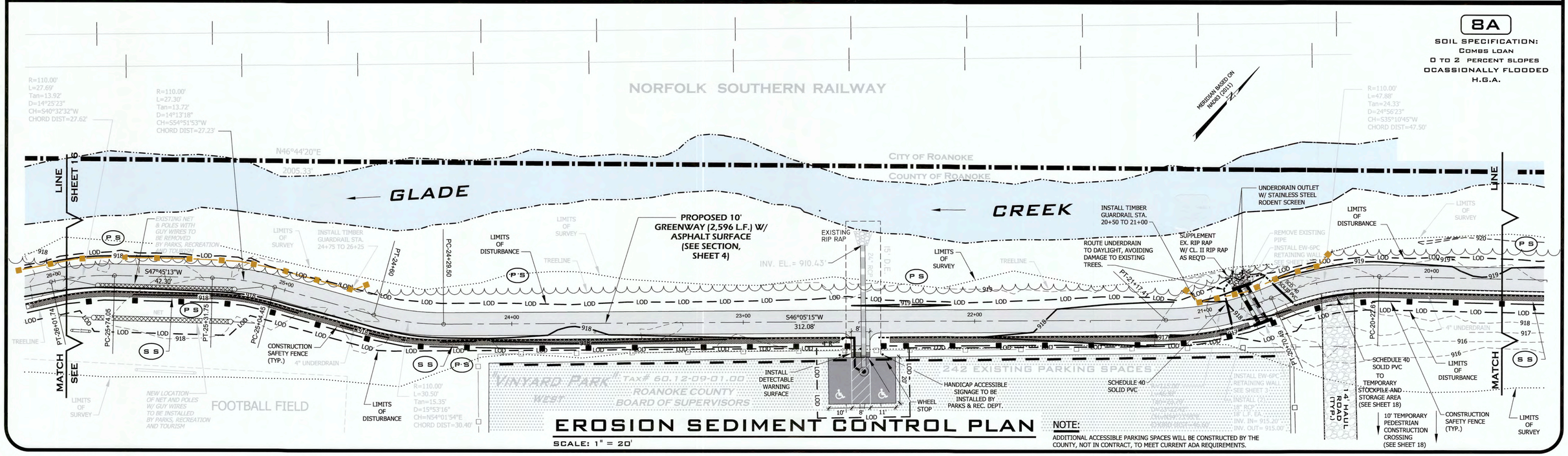
EROSION & SEDIMENT CONTROL PLAN
(STA. 10+00 - 15+00)

SHEET 14 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024





EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

NOTE:
ADDITIONAL ACCESSIBLE PARKING SPACES WILL BE CONSTRUCTED BY THE COUNTY, NOT IN CONTRACT, TO MEET CURRENT ADA REQUIREMENTS.

COMMONWEALTH OF VIRGINIA
DICKIE D. MILLS
LICENSE NO.
0402031205
3-A-24
PROFESSIONAL ENGINEER
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VINYARD PARK - WEST

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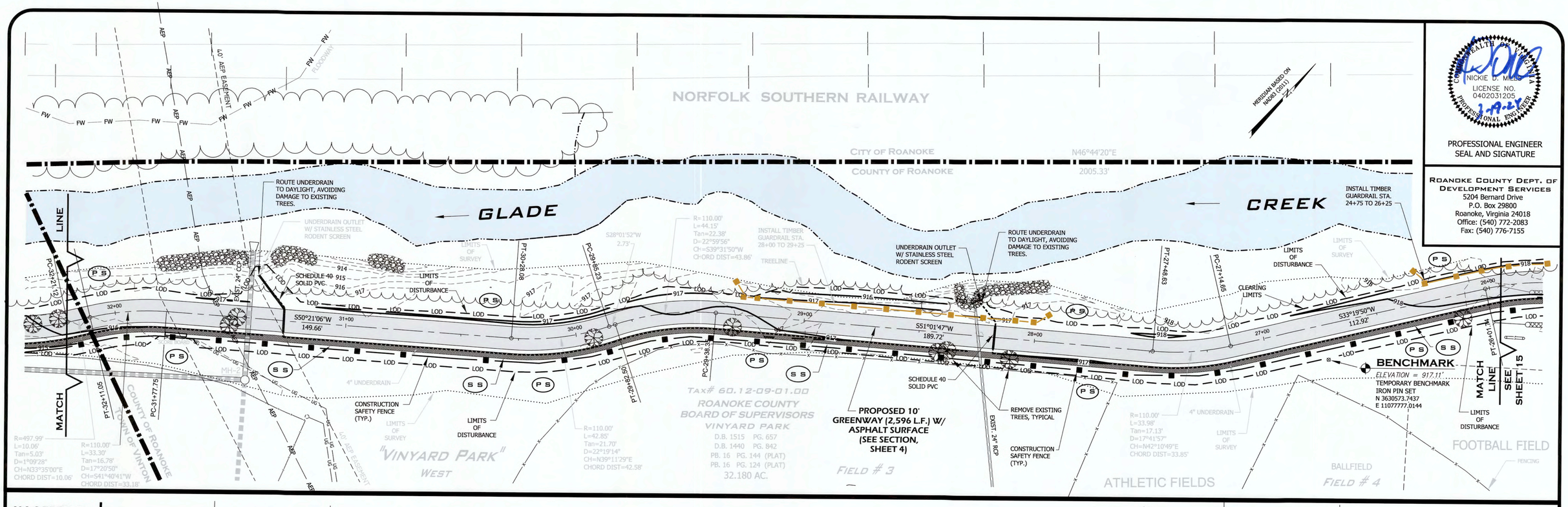
APPROVED BY:	DMH

EROSION & SEDIMENT CONTROL PLAN
(STA. 15+00 - 26+00)

SHEET 15 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024



EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
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1-Apr

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DEPARTMENT OF DEVELOPMENT SERVICES

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GLADE CREEK GREENWAY
VINYARD PARK - WEST

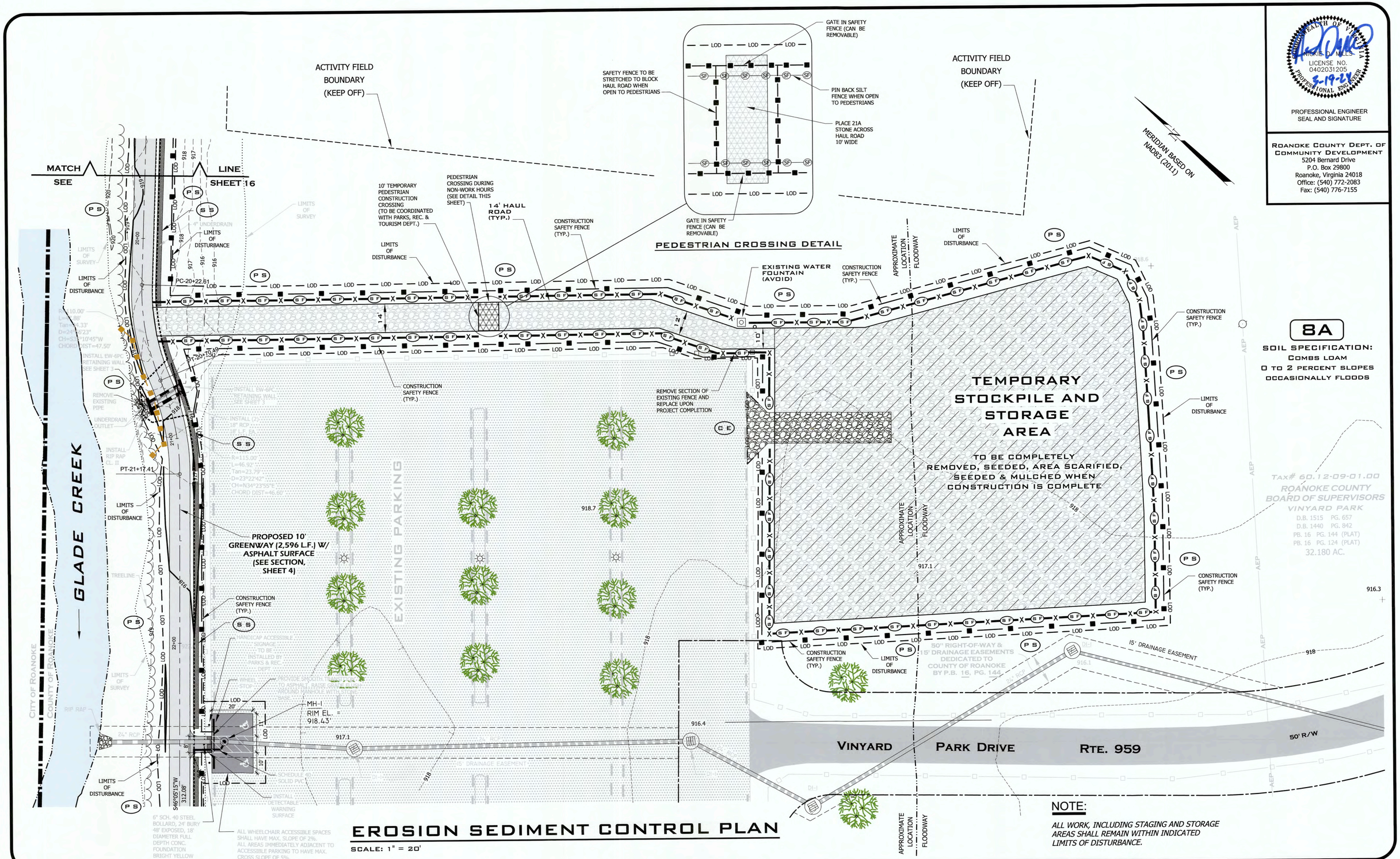
DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

EROSION & SEDIMENT CONTROL PLAN
(STA. 26+00 - 39+96.21)

SHEET 16 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway 2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024



EROSION SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

NOTE:

ALL WORK, INCLUDING STAGING AND STORAGE AREAS SHALL REMAIN WITHIN INDICATED LIMITS OF DISTURBANCE.

8A

SOIL SPECIFICATION:
COMBS LOAM
0 TO 2 PERCENT SLOPES
OCCASIONALLY FLOODS

COMMONWEALTH OF VIRGINIA
NIKKILE D. MILLS
LICENSE NO. 0402031205
3-19-24
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER SEAL AND SIGNATURE

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DEPARTMENT OF DEVELOPMENT SERVICES

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GLADE CREEK GREENWAY
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EROSION & SEDIMENT CONTROL PLAN STAGING AREA

SHEET 17 OF 18

Drawing name: C:\Brian Drawings\Glade Creek Greenway_2023\Plan Sheets\Plan Sheets.dwg

APPROVED, 5/1/2024

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION & SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
2. THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
4. IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
6. FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THESE SYMBOLS AND KEYS ARE TO BE UTILIZED ON ALL EROSION CONTROL PLANS SUBMITTED TO ROANOKE COUNTY.
7. THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF DEVELOPMENT SERVICES. AN EROSION CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.
8. THIS SHEET MAY NOT BE MODIFIED EXCEPT FOR TABLES.

TOTAL DISTURBED AREA = **1.9806** AC. = **86,274** SQ. FT.

BMP INFORMATION TABLE

	BMP #1
BMP TYPE	INFILTRATION TRENCH
NAME OF AUTHORIZED NUTRIENT BANK	N/A
REQUIRED PHOSPHORUS TO BE REMOVED (LB/YR)	0.96 LBS
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	N/A
TECHNICAL REQUIREMENT MET (PART 11B OR 11C)	–
TOTAL AREA TREATED (AC)	1.98
IMPERVIOUS AREA TREATED BY BMP (AC)	0.60
MANAGED TURF AREA TREATED BY BMP (AC)	1.38
OPEN SPACE/FORESTED AREA TREATED BY BMP (AC)	N/A
SURFACE AREA OF BMP (AC)	0.11
STORAGE VOLUME OF BMP (AC)	N/A
QUALITY, QUANTITY, OR BOTH?	QUANTITY
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	N/A
NAME OF RECEIVING WATER (PROJECT SITE)	GLADE CREEK
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ECT)	RU13
MAXIMUM AVERAGE DEPTH (FT)	1.0
LATITUDE (DECIMAL DEGREES XX.XXXX)	37° 17' 13"
LONGITUDE (DECIMAL DEGREES XX.XXXX)	79° 53' 29"

STORMWATER SITE STATISTICS

	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	--	1.98
TOTAL SITE (AC)	–	40.6
IMPERVIOUS AREA (AC)	--	0.60
MANAGED TURF AREA (AC)	--	–
OPEN SPACE/FOREST (AC)	--	--
PUBLIC RIGHT OF WAY DISTURBANCE (SF)	--	N/A
KARST PRESENT (Y/N)	--	UNKNOWN

MODIFIED VIRGINIA CODING SYSTEM FOR EROSION & SEDIMENT CONTROL PRACTICES

REFER TO SHEET 8 FOR DETAILS OF IMPLEMENTED MEASURES

NO.	TITLE	KEY	SYMBOL	NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF		3.21	LEVEL SPREADER	LS	
3.02	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	CE		3.22	VEGETATIVE STREAMBANK STABILIZATION	VSS	
3.03	CONSTRUCTION ROAD STABILIZATION	CRS		3.23	STRUCTURAL STREAMBANK STABILIZATION	SSS	
3.04	STRAW BALE BARRIER	STB		3.24	TEMPORARY VEHICULAR STREAM CROSSING	VSC	
3.05	SILT FENCE	SF		3.25	UTILITY STREAM CROSSING	USC	
3.06	BRUSH BARRIER	BB		3.26	DEWATERING STRUCTURE	DS	
3.07	STORM DRAIN INLET PROTECTION	IP		3.27	TURBIDITY CURTAIN	TC	
3.08	CULVERT INLET PROTECTION	CIP		3.28	SUBSURFACE DRAIN	SD	
3.09	TEMPORARY DIVERSION DIKE	DD		3.29	SURFACE ROUGHENING	SR	
3.10	TEMPORARY FILL DIVERSION	FD		3.30	TOPSOILING	TO	
3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	RWD		3.31	TEMPORARY SEEDING	TS	
3.12	DIVERSION	DV		3.32	PERMANENT SEEDING	PS	
3.13	TEMPORARY SEDIMENT TRAP	ST		3.33	SODDING	SO	
3.14	TEMPORARY SEDIMENT BASIN	SB		3.34	BERMUDA GRASS AND ZOYSIAU GRASS ESTABLISHMENT	B/M	
3.15	TEMPORARY SLOPE DRAIN	TSD		3.35	MULCHING	MU	
3.16	PAVED FLUME	PF		3.36	SOIL STABILIZATION BLANKETS AND MATTING	BE/ZE	TREAT. 1 TREAT. 2
3.17	STORMWATER CONVEYANCE CHANNEL	SCC		3.37	TREES, SHRUBS, VINES AND GROUND COVERS	VEG	
3.18	OUTLET PROTECTION	OP		3.38	TREE PRESERVATION AND PROTECTION	TP	
3.19	RIPRAP	RR		3.39	DUST CONTROL	DC	
3.20	ROCK CHECK DAMS	CD		3.06	SILT SOCK	SS	

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS THE CONSTRUCTION OF A GREENWAY ADJACENT TO GLADE CREEK IN VINEYARD PARK. THE PROJECT IS LOCATED ON BERKLEY ROAD IN ROANOKE COUNTY, VIRGINIA. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 1.9806 AC.

EXISTING SITE CONDITIONS: THE LIMITS OF DISTURBANCE IS LOCATED WITHIN THE SUBJECT PROPERTY, IDENTIFIED AS ROANOKE COUNTY TAX PARCEL #060.12-09-01.00. THE SITE IS CURRENTLY A PUBLIC PARK WITH A MIX OF BALL FIELDS, PAVED PARKING LOTS AND GRASSED AREA. THE ENTIRE SITE DRAINS TO EXISTING DITCHES WHICH DISCHARGES INTO GLADE CREEK ADJACENT TO THE PARK. THERE ARE CURRENTLY NO KNOWN CHANNEL EROSION PROBLEMS RELATED TO THE PROJECT AREA.

ADJACENT PROPERTY: THE PROJECT AREA IS BOUNDED BY GLADE CREEK TO THE NORTH, BERKLEY ROAD TO THE EAST, BERKLEY ROAD TO THE SOUTH, TOWN OF VINTON CORPORATION LINE TO THE WEST.

OFFSITE AREAS: THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, TO THE COUNTY OF ROANOKE:
A. THE LOCATION OF ANY OFFSITE BORROW AREAS.
B. THE LOCATION OF ANY OFFSITE AREAS WHERE EXCESS EXCAVATED MATERIAL WILL BE DISPOSED.

SOILS: THE "WEB SOIL SURVEY" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE IDENTIFIES THE SOILS ON SITE AS 8A COMBS LOAM, 0 TO 2 PERCENT SLOPE, FLOODS OCCASIONALLY, WHICH IS HYDRAULIC SOIL GROUP A.

CRITICAL AREAS: CRITICAL AREAS FOR THIS PROJECT INCLUDE ALL AREAS WITH SLOPES GREATER THAN 3H TO 1V AND EXISTING CHANNELS IN PROJECT WORK AREA SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT THESE AREAS HAVE ADEQUATE EROSION CONTROL AND THAT SEDIMENT TRANSPORT FROM THE PROPERTY IS MINIMIZED.

EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION (VESCH). THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS DIRECTED BY THE LOCAL PROGRAM ADMINISTRATOR.

STRUCTURAL-

SILT SOCK–Std. 3.06–1 ...... temporary sediment barrier constructed at the perimeter of a disturbed area from the residue materials availible from clearing and grubbing the site. To intercept and retain sediment from disturbed areas of limited extent, preventing sediment from leaving the site.

TEMPORARY STONE CONSTR. ENTR. –Std. 3.02 ...... a stabilized stone pad with a filter fabric underliner located at points of vehicular ingress and egress on a construction site.

SILT FENCE. 3.05 ...... a temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entranced to intercept and detain small amounts of sediment from disturbed areas.

RIP RAP. 3.19 ...... a permanent, erosion resistant ground cover of large, loose, angular stone with filter fabric or granular underlining, used to protect the soil from erosive forces of concentrated runoff, slow the velocity of concentrated runoff while enhancing the potential for infiltration; also utilized to stabilize slopes with seepage problems and/or non–cohesive soils.

VEGETATIVE-

TEMPORARY SEEDING. 3.31 ...... establishment of temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants to reduce erosion by stabilizing disturbed areas that will not be brought to final grade for a period of more than 14 days.

PERMANENT SEEDING. 3.32 ...... establishment of perennial vegetative cover on disturbed areas by planting seed to reduce erosion and decrease sediment yield from disturbed areas.

MULCHING. 3.35 ...... application of plant residues or other suitable materials to the soil surface. Mulching will prevent erosion by protecting the soils surface from raindrop impact and reducing the velocity of overland flow. After seeding, mulching will foster the growth of vegetation by increasing available moisture and providing insulation against extreme heat and cold.

SOIL STABILIZATION BLANKETS & MATTING. 3.36 ..... the installation of a protective covering or a soil stabilization mat on a prepared planting area of a steep slope or channel. In particular, the use of soil mats in channeled areas will raise the maximum permissible velocity of turf grass, by reinforcing, to resist the forces of erosion during storm events.

DUST CONTROL. 3.39 ...... the application of measures to prevent surface and air movement of dust from exposed soil surfaces and reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

SEDIMENT RETENTION ROLL ...... the installation of an intermittent barrier on step slopes to interrupt and back up water flowing down a steep slope,

MANAGEMENT STRATEGIES:

A.) CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

B.) SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.

C.) THE LOCAL PROGRAM ADMINISTRATOR RESERVES THE RIGHT TO ADD TO, DELETE OR OTHERWISE CHANGE THE EROSION CONTROL MEASURES AS DEEMED NECESSARY DUE TO ACTUAL FIELD CONDITIONS BY WRITTEN NOTIFICATION TO THE CONTRACTOR.

D.) ALL FILL AND CUT SLOPES SHALL BE SEEDED WITHIN SEVEN (7) DAYS OF ACHIEVING FINAL GRADE.

E.) ONLY AFTER INSPECTION AND APPROVAL FROM THE LOCAL PROGRAM ADMINISTRATOR, EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED FOLLOWING THE STABILIZATION OF THE CONTRIBUTING AREAS.

THE GENERAL CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND THE AREA OF CONSTRUCTION VEHICLE ACCESS AT LEAST EVERY FOURTEEN (14) CALENDAR DAYS, AND WITHIN 48 HOURS OF THE END OF A STORM EVENT PRODUCING 1/2" OR GREATER OF PRECIPITATION. WHERE AREAS HAVE BEEN FINALLY OR TEMPORARY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH, ICE, OR FROZEN GROUND EXISTS) SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

A.) INSPECT DISTURBED AREAS AND AREAS OF MATERIALS STORAGE THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF, OR THE POTENTIAL FOR SEDIMENT ENTERING THE STORM DRAIN SYSTEM. INSPECT E&S CONTROLS IN ACCORDANCE WITH REQUIREMENTS STATED HEREIN, AND INSPECT POINTS OF STORM DRAIN DISCHARGE FOR EXCESSIVE SEDIMENTATION. CORRECT SITE CONTROLS AS AS REQUIRED TO REDUCE SEDIMENTATION OF STORM DRAINED, CULVERTS, AND RECEIVING CHANNELS.

B.) IF CONTROLS OR SEDIMENT PREVENTION AREAS ARE FOUND TO BE IN NEED OF REPAIR OR MODIFICATION, THE GENERAL CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES OR MODIFICATION TO EXISTING MEASURES AS REQUIRED. ANY ADDITIONAL MEASURES OR MODIFICATIONS TO EXISTING MEASURES SHALL BE RECORDED AS FIELD REVISIONS TO THESE PLANS. IN THE EVENT THAT ADDITIONAL CONTROLS ARE FOUND TO BE REQUIRED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE CONTROLS BEFORE THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICAL, THEY SHALL BE IMPLEMENTED AS SOON AS PRACTICAL.

C.) A REPORT SUMMARIZING THE SCOPE OF INSPECTIONS, NAME OF INSPECTOR, INSPECTOR'S QUALIFICATIONS, DATES OF INSPECTIONS, MAJOR OBSERVATIONS PERTAINING TO THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS, AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS A PART OF THESE PLANS, MAJOR OBSERVATIONS OF THESE REPORTS SHALL INCLUDE: THE LOCATIONS OF EXCESSIVE SEDIMENTATION FROM THE SITE; LOCATIONS OF CONTROLS IN NEED OF REPAIR; LOCATION OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

STORMWATER MANAGEMENT:

STORMWATER QUANTITY REQUIREMENTS WILL BE MET BY **INFILTRATION**

STORMWATER QUALITY REQUIREMENTS WILL BE MET THROUGH **FORESTED OPEN SPACE RESERVE AREA**

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COMMONWEALTH OF VIRGINIA
NICKIE D. MILLS
LICENSE NO. 0402031205
PROFESSIONAL ENGINEER
3-19-24

MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 10,000 S.F. IN AREA OF DISTURBANCE. THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL PROGRAM AUTHORITY OR THE CONSULTING ENGINEER.

No.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.	PS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	SF TS
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PS
4	SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSWEEP LAND DISTURBANCE TAKES PLACE.	SF
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE
6	SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NOT APPLICABLE
7	CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	NOT APPLICABLE
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NOT APPLICABLE
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NOT APPLICABLE
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	NOT APPLICABLE
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	OP
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.	NOT APPLICABLE
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY (6) SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED.	NOT APPLICABLE
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.	NOT APPLICABLE
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1.) NO MORE THAN 500 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 DE-WATERING 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 OFFSET PROPERTY. 4.) MATERIAL USED FOR BACKFIRING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5.) RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER. 6.) APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.	
17	WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.	CE
18	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, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS. A.) CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B.) ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. C.) IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION. D.) THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E.) ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. F.) IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. G.) OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATERS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL. H.) ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. I.) INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. J.) IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. K.) ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. L.) ANY PLAN APPROVED PRIOR TO JULY 1, 2014 THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (1) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (2) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (3) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2 AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO 10.1-562 OR 10.1-570 OF THE ACT. M.) FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUALITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS. N.) COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50-60-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.	NOT APPLICABLE

COUNTY OF ROANOKE VIRGINIA 1838

DEPARTMENT OF DEVELOPMENT SERVICES

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		

GLADE CREEK GREENWAY VINYARD PARK - WEST

DATE:	3/18/2024
SCALE:	1" = 20'
DRAWING BY:	BWE
DESIGNED BY:	NDM
APPROVED BY:	DMH

COUNTY OF ROANOKE VIRGINIA 1838

EROSION & SEDIMENT CONTROL NARRATIVE

APPROVED, 5/1/2024