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 Environmental 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.
- the County Review Engineer, the County Inspector, and the Western Virginia Water Authority and the Town of Vinton personnel if applicable.

6. The Development Review Coordinator will schedule the pre-construction meeting with

- 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
- 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
- 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
- 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:

- Plan approval by Roanoke County does not guarantee issuance of any permits by the Virginia Department of Transportation.
- A permit must be obtained from the Virginia Department of Transportation, Salem Residency Office prior to construction in the highway right-of-way.
- 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.
- 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.
- Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.
- All traffic devices shall be in accordance with current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).
- All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

See Sheet <u>C3</u>	_for Stormwater Site Statistics Table.
See Sheet <u>C3</u>	_for New BMP Information Table.

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

The notes on this sheet shall not be modified.



COUNTY OF ROANOKE, VA

WOOD HAVEN TECHNOLOGY PARK DRAINAGE IMPROVEMENTS	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.
MAGISTERIAL DISTRICT(S) CATAWBA	I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS SHOWI ON THIS COVER SHEET UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.
OWNER (name, address, telephone) WESTERN VIRGINIA REGIONAL INDUSTRIAL FACILITIES AUTHORIT P.O. BOX 2569 ROANOKE, VA 24010	Y ATTN: JOHN HULL
DEVELOPER (name, address, telephone) WESTERN VIRGINIA REGIONAL INDUSTRIAL FACILITIES AUTHOR P.O. BOX 2569 ROANOKE, VA 24010	RITY ATTN: JOHN HULL
BALZER AND ASSOCIATES, INC. ATTN: ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) BALZER AND ASSOCIATES, INC. ATTN: 1208 CORPORATE CIRCLE	CHRIS BURNS 72-9580 FAX 540-772-8050

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,
- 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
- 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

	Western Virginia Water Authority Availability letter number:	N/A	
NORTH	Loch Haven 81	581	∽OVERALL PROPERTY
Wollow Creek Dr. Rt 1587 Read Bload Bridge B	Sando DI At	Sweetenberg 22 22 22 22 22 22 22 22 22 22 22 22 22	~PROJECT AREA

LECENID

	LEG	FND		
Property Line			₽	
Right-of-way			<u>R/W</u>	
Centerline			CL	
Minimum Building Line		— MBL—		— MBL
Existing Storm Sewer		—sb —		-SD
Existing Sanitary Sewer		—ss—	$\overline{}$	-22
Existing Water Main		— w —		- W
Existing Contour			—1045 — -	
Proposed Contour			— 1045 —	
Proposed Drainage Divide		\leftarrow		\leftarrow
Proposed Limits of Clearing				
Proposed Storm Sewer			24" S.D.	
Proposed Sanitary Sewer			8"M.H.	
Proposed Water Main	HYDRANT	VAL	VE	BLOWOFF

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

C1 C2 C3 C4 C5	COVER GRADING AND E.S.C. PLAN E.S.C. NOTES DETAILS NOTES	

Sheet Index

SURVEY INFORMATION

By: BALZER AND ASS	SOCIATES, INC.	
	be referenced to the National Geodetic Vertical Datum of output be referenced to the North American Datum of 1983.	1988.
Horizontal Datum <u>: VA_STAT</u>	E PLANE NAD83 Vertical Datum: NAVD 88	
Source of topographic map		
3oundary was performed b	DRAPER ADEN ASSOCIATES by BALZER & ASSOCIATES, INC. dated: 2018	
Benchmark Information:	AS SHOWN ON PLAN SHFFTS	

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

ITEM	QUANTITY	UNIT	UNIT PRICE	COST
CLEARING AND GRUBBING		AC		
EXCAVATION	1,000	C.Y.	\$10.00	
EMBANKMENT		C.Y.		
VDOT ST'D DI-3C		EA		
CURB INLET DI-		EA		
		EA		
MANHOLE MH-2	2	EA	\$4,000	
30" CL. III RCP	263	LF	\$80.00	
		LF		
-IN. C.M. CULVERT		LF		
-IN. C.M. CULVERT		LF		
BOX CULVERT		LS		
PAVED SWALE		LF		
RIPRAP CHANNEL	430	LF	\$25.00	
PERMANENT GRASS SWALE		LF		
-IN. CONCRETE ENDWALL EW-		EA		
-IN. END SECTION ES-		EA		
CONCRETE PAVEMENT SECTION		S.Y.		
ASPHALT PAVEMENT SECTION		S.Y.		
CURB CG-2		LF		
CLIPB & GLITTEP CG-6		16		

QUANTITY & COST ESTIMATE

	1	EA			
MANHOLE MH-2	2	EA	\$4,000		\$8,000
	 	<u> </u>	-		
2011 01 111 DOD	262	!	*************************************	<u> </u>	604.040
30" CL. III RCP	263	LF LF	\$80.00		\$21,040
		LIT			
				-	
-IN. C.M. CULVERT		LF			
-IN. C.M. CULVERT		LF			
	 		1		
50V 0111 / FDT	<u> </u>				
BOX CULVERT		LS	1		
PAVED SWALE		LF			
17025 500.22					
RIPRAP CHANNEL	430	LF	\$25.00		\$10,750
PERMANENT GRASS SWALE		LF			
	<u> </u>	<u> </u>			
-IN. CONCRETE ENDWALL EW-	 	EA			<u> </u>
		<u> </u>	1		
5 25071211 52			1		
-IN. END SECTION ES-	 	EA			
		-			
CONCRETE PAVEMENT SECTION		S.Y.	-	-	
ASPHALT PAVEMENT SECTION		S.Y.			
CURB CG-2		S.Y.		-	
CURB & GUTTER CG-6		LF	-	+ +	
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	<u> </u>	EA		<u> </u>	
	<u> </u>	<u> </u>			
8" WATER LINE	 	LF			
6" WATER LINE	 	LF			
FIRE HYDRANT ASSEMBLIES		EA			
BLOW OFFS W/ VAULT, FRAME & COVER		EA EA			
-6" GATE VALVES, W/ VAULT, FRAME & COVER		EA EA			
-IN. GATE VALVES, W/ VAULT, FRAME & COVER		EA EA			
-IIV. OATE VALVES, T. T.C.E.,				+	
				+	
	<u> </u>	<u> </u>			
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	-		
STORWING LEATING AND COLUMNIA				-	
AS-BUILT PLANS (STORM SEWER SYSTEMS)	1	LS	\$3,500	-	\$3,500
AS-BUILT PLANS (STORMWATER MANAGEMENT)	-	LS	-	+ +	ΨΨ,
NO BOILT I E 113 (- 1 - 1)		-	-	+ +	
SUB-TOTAL		1	-		\$53,290
10% CONTINGENCY					\$5,329
		,			\$58,619
ESTIMATED TOTAL					
BY SEALING THE PLANS, THE DESIGN PROFESSIONAL HEREBY	CERTIFIES THAT	THE FOREGOING	3 ESTIMATE REFLI	ECTS THE CURRE	<u>NT</u>
IMPROVEMENT COSTS OF THIS PROJECT					





& ASSOCIATES **ENGINEERS / SURVEYORS**

Roanoke / Richmond New River Valley / Staunton Harrisonburg / Lynchburg www.balzer.cc

BONDABLE

\$10,000

1208 Corporate Circle Roanoke, VA 24018 540.772.9580

DRAWN BY: DESIGNED BY: KAM CHECKED BY: 4/22/2025 **REVISIONS:**

Lic. No. 47338

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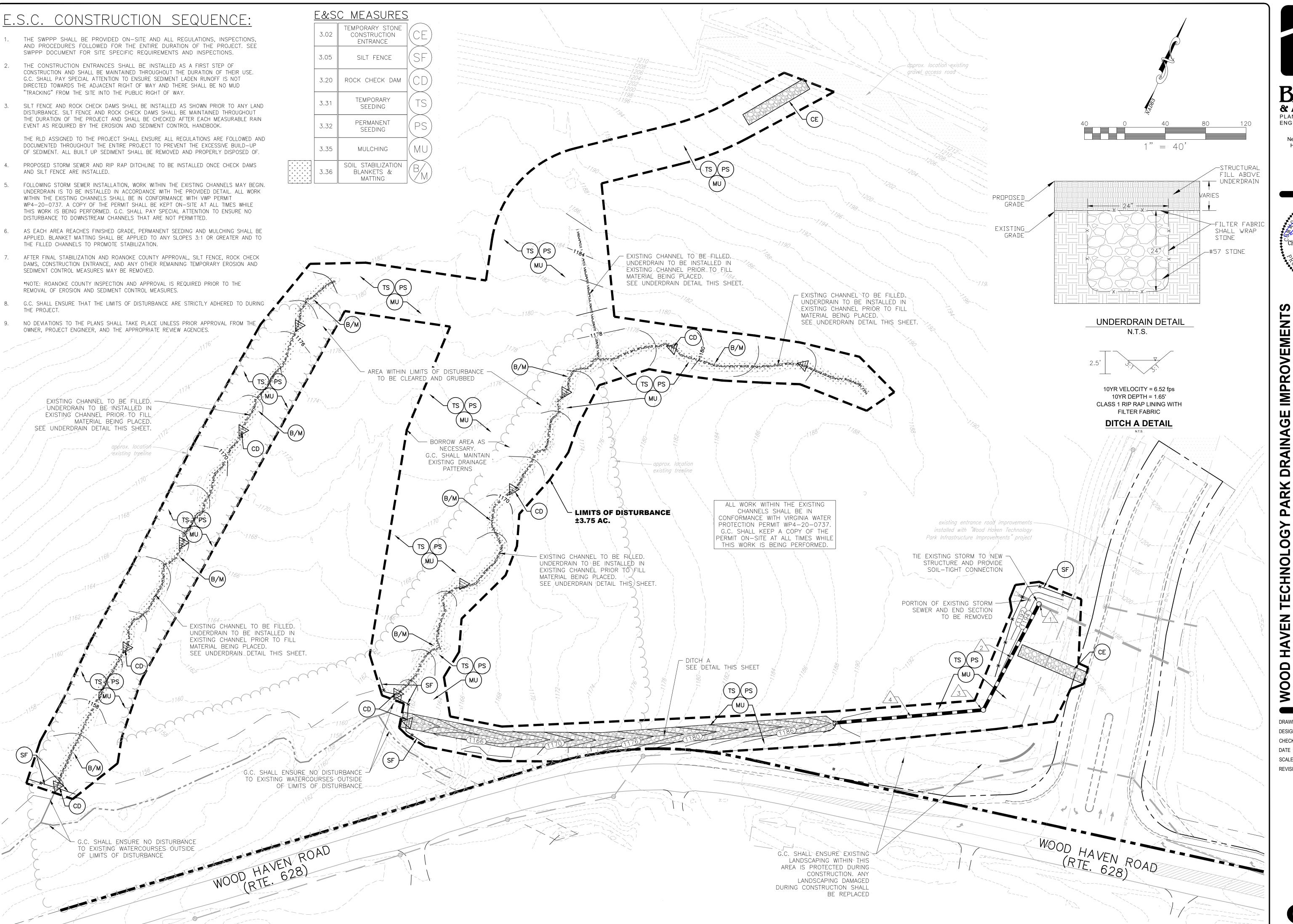
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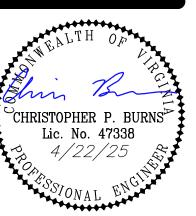
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DRAINAGE IMPROVEMENTS

ADING AND E.S.C. PLAN

DRAWN BY

DESIGNED BY

CHECKED BY

DATE

\$4/22/2025

\$CALE

REVISIONS



ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE- CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT BY ROANOKE COUNTY, THE OWNER SHALL PROVIDE DOCUMENTATION OF AN EXISTING LAND DISTURBING PERMIT(S) THAT WOULD BE ASSOCIATED OR REQUIRED FOR ANY OFF-SITE BORROW OR WASTE AREAS; WHETHER LOCATED WITHIN ROANOKE COUNTY OR

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUN-OFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

BAL-1: ALL ASPHALT AREAS WILL BE STABILIZED WITH BASE STONE WITHIN 30 DAYS OF FINAL GRADING.

BAL-2: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

BAL-3: THE LOCAL APPROVING AUTHORITY AND OTHER INTERESTED AGENCIES SHALL MAKE A CONTINUING REVIEW AND EVALUATION OF THE METHODS USED FOR THE OVERALL EFFECTIVENESS OF THE EROSION CONTROL PROGRAM. AN APPROVED EROSION AND SEDIMENT CONTROL PLAN MAY BE AMMENDED BY THE APPROVING AUTHORITY OF ON SITE INSPECTION INDICATED THAT THE APPROVED CONTROL MEASURES ARE NOT EFFECTIVE IN CONTROLLING EROSION AND SEDIMENTATION OR IF BECAUSE OF CHANGED CIRCUMSTANCES, THE APPROVED PLAN CANNOT BE CARRIED OUT.

BAL-4: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS AND DETAILS OF THE LATEST EDITION OF THE VIRGINIA EROSION CONTROL HANDBOOK (THE HANDBOOK) BY THE VIRGINIA SOIL AND WATER CONSERVATION COMMISSION. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES OR ADJOINING PROPERTIES AND RIGHTS-OF-WAY.

BAL-5: ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.

EROSION AND SEDIMENT CONTROL NARRATIVE

CLAY LOAM 7 TO 15 PERCENT SLOPES. ON-SITE SOILS ARE CLASSIFIED AS HSG-C AND HSG-D.

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS TO FILL IN EXISTING DRAINAGE CHANNELS AND INSTALL STORM SEWER TO PREPARE THE PROPERTY FOR FUTURE DEVELOPMENT. THE DISTURBED AREA FOR THIS SECTION OF THE DEVELOPMENT IS ± 3.75 ACRES.

EXISTING SITE CONDITIONS: THE SITE CURRENTLY CONSISTS OF MANAGED TURF AND WOODS WITH EXISTING DRAINAGE CHANNELS.

ADJACENT PROPERTY: THE LIMITS OF CONSTRUCTION IS BOUNDED TO THE SOUTH BY THE RIGHT OF WAY OF WOOD HAVEN ROAD. TO THE NORTH BY THE RIGHT OF WAY OF INTERSTATE 81, TO THE EAST BY EXISTING CHURCH PROPERTY, AND TO THE WEST BY EXISTING RESIDENTIAL PROPERTY.

OFF-SITE AREAS: G.C. SHALL NOTIFY ROANOKE COUNTY OF THE LOCATION OF ANY OFF-SITE FILL OR BORROW AREAS PRIOR TO ANY

MATERIAL BEING TRANSPORTED TO OR FROM THE SITE. THE SITE IS ANTICIPATED TO BE BALANCED. SOILS: A SUBSURFACE INVESTIGATION HAS NOT BEEN PROVIDED. SOIL INFORMATION IS AVAILABLE ON THE RESIDUAL SOILS THAT IS SUGGESTED IN THE "SOIL SURVEY OF ROANOKE COUNTY AND THE CITIES OF ROANOKE AND SALEM, VIRGINIA" AS PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE. THIS SURVEY IDENTIFIES THE ORIGINAL SOIL MATERIAL AS 42A SINDION LOAM 0 TO 2 PERCENTS AND 3C3 CHILHOWIE SILTY

CRITICAL EROSION AREAS: CRITICAL AREAS ARE ALL AREAS OF STEEP SLOPES AND AREAS THAT ARE ADJACENT TO THE EXISTING CHANNELS THAT ARE TO REMAIN. THESE AREAS SHALL RECEIVE SEEDING AND BE STABILIZED IMMEDIATELY AND TREATED WITH BLANKET MATTING AS REQUIRED. EROSION CONTROL MEASURES SHALL BE INSPECTED REGULARLY AND MAINTAINED AS NECESSARY. SPECIAL ATTENTION SHALL BE MADE AT THESE LOCATIONS TO ENSURE SEDIMENT LADEN RUNOFF IS NOT TRANSPORTED INTO THE RIGHT OF WAY OR ONTO ADJACENT PROPERTIES.

EROSION AND SEDIMENT CONTROL MEASURES:

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

TEMPORARY STONE CONSTRUCTION ENTRANCE-STD. 3.02.....A STONE PAD, LOCATED AT POINT OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE, TO REDUCE THE SOIL TRANSPORTED ONTO PUBLIC ROADS AND OTHER PAVED AREAS.

SILT FENCE-STD. 3.05..... TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND, IN SOME CASES, A WIRE SUPPORT FENCE, PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE.

ROCK CHECK DAMS-STD. 3.20....SMALL, TEMPORARY STONE DAMS CONSTRUCTED ACROSS A DRAINAGE DITCH TO REDUCE THE VELOCITY OF CONCENTRATED FLOWS, REDUCING EROSION OF THE DITCH.

TEMPORARY SEEDING-STD. 3.31.....ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR PERIODS OF 7 DAYS TO 1-YEAR BY SEEDING WITH AN APPROPRIATE RAPIDLY GROWING SEED MIXTURE.

PERMANENT SEEDING-STD. 3.32....ESTABLISHMENT OF A VEGETATIVE COVER BY PLANTING SEED ON ALL FINAL GRADED AREAS THAT WILL NOT RECEIVE AN IMPERVIOUS COVER OR RECEIVE TOPSOIL MATERIAL TO PROVIDE A STABILIZED SITE AFTER THE PROJECT IS COMPLETE.

MULCHING-3.35....MULCH SHALL BE APPLIED TO ALL TEMPORARY AND PEMANENT SEEDING OPERATIONS TO PROMOTE THE GROWTH OF VEGETATION AND TO PROTECT THE SOIL SURFACE FROM RAINDROP IMPACTS.

SOIL STABILIZATION BLANKETS & MATTING-3.36....UPON COMPLETION OF GRADING OPERATIONS, A DEGRADABLE BLANKET SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER TO PROMOTE STABILIZATION DUE TO SEEDING OPERATIONS.

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 MAY ITEMS 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 TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (SITE IS COVERED WITH SNOW, 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 FÓR 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 REQUIRED TO REDUCE SEDIMENTATION OF STORM

DRAINS, 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 MODIFICATIONS 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. IF IMPLEMENTATION BEFORE THE NEXT 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 FROSION 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; LOCATIONS OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

STORMWATER MANAGEMENT:

PREVIOUSLY APPROVED AND CONSTRUCTED PLANS FOR WOOD HAVEN TECHNOLOGY PARK GRADING AND SWM PLAN CONSTRUCTED A STORMWATER MANAGEMENT FACILITY ON THIS PROPERTY. THIS PREVIOUS PROJECT REDUCED THE PEAK RUNOFF RATES WITHIN THE DRAINAGE AREA OF THE PROPOSED PROJECT. AS SHOWN IN THE STORMWATER CALCULATIONS PACKAGE, THE PROPOSED PROJECT WILL CONTINUTE TO MEET THE CHANNEL AND FLOOD PROTECTION REQUIREMENTS.

STORMWATER QUALITY REQUIREMENTS WILL BE MET THROUGH THE PURCHASE OF NUTRIENT CREDITS.

STORMWATER SITE STATI	STICS	
	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	0.00	3.75
TOTAL SITE AREA (AC)	3.75	3.75
IMPERVIOUS AREA (AC)	0.00	0.00
MANAGED TURF AREA (AC)	2.25	3.75
OPEN SPACE/FOREST (AC)	1.50	0.00
RIGHT OF WAY DISTURBANCE (SF)		
KARST PRESENT (Y/N)	UNDETERMINED	UNDETERMINED

BMP INFORMATION TABLE	
	BMP #1
BMP TYPE	OFF-SITE NUTRIENT CREDITS
NAME OF AUTHORIZED NUTRIENT BANK	T.B.D.
REQUIRED PHOSOPHORUS TO BE REMOVED (LB/YR)	0.59 LBS
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	0.59 LBS
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)	IIB
TOTAL AREA TREATED (AC)	3.75 AC.
IMPERVIOUS AREA TREATED BY BMP (AC)	0.00 AC.
MANAGED TURF AREA TREATED BY BMP (AC)	0.00 AC.
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)	3.75 AC. (MIXED OPEN SPACE)
SURFACE AREA OF BMP (AC)	N/A
STORAGE VOLUME OF BMP (AC-FT)	N/A
QUALITY, QUANTITY, OR BOTH?	QUALITY
TMDL ADDRESSED? (PHOSOPHORUS, BACTERIA, SEDIMENT, ETC)	PHOSPHORUS
NAME OF RECEIVING WATER (PROJECT SITE)	PETERS CREEK
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ETC)	RU14
MAXIMUM AVERAGE DEPTH (FT)	N/A
LATITUDE (DECIMAL DEGREES XX.XXXX)	N/A
LONGITUDE (DECIMAL DEGREES XX.XXXX)	N/A

	COST	EST	IMATE			
ITEM	QUAN	QUANTITY		UNIT COST		
CONSTRUCTION ENTRANCE	2	EA	\$1,200.00	per	EA	\$2,400
SILT FENCE	242	LF	\$4.00	per	LF	\$968
CHECK DAM	12	EA	\$100.00	per	EA	\$1,200
TEMPORARY SEEDING	163,300) SF	\$0.04	per	SF	\$6,532
PERMANENT SEEDING	163,300) SF	\$0.05	per	SF	\$8,165
BLANKET MATTING	13,500	SF	\$0.25	per	SY	\$3,375
			Sl	JB-TC	TAL	\$22,640
			10% CON	TINGEN	NCY	\$2,264
	'	EST	MATED	TOTA	<u> ا</u> ا	\$24,904

COSIS MAY VARY, BASED ON ACTUAL FIELD CONDITIONS AND CURRENT ECONOMIC CONDITIONS.

	MINIMUM STANDARDS	
1	CRITERIA, TECHNIQUE OR METHOD PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN FOURTEEN (14) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.	TS PS MU B/M FOR ALL DENUDED AREAS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	SF TS FOR PROVIDED STOCKPILES
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, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	TS PS MU B/M FOR ALL DENUDED AREAS
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 UPSLOPE LAND DISTURBANCE TAKES PLACE.	SF CD FOR ALL DRAINAGE DIVIDES
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE
7	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	NOT APPLICABLE TS PS MU B/M FOR ALL ERODING SLOPES
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. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NO CONCENTRATED RUNOFF SHALL BE CONVEYED DOWN THE STEEP SLOPES ON—S SHOULD SEEPS OCCUR IN ANY EXISTING OR NEW CUT O FILL SLOPE, THE CONTRACTOR SHALL FIRST INSURE THAT THERE ARE NOT AREAS OF PONDED WATER AT THE TOP
9	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT—LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	THE SLOPES, AND THEN SHALL CONTACT BOTH THE DESERVATION OF THE AREAS OF SEEPAGE. NOT APPLICABLE
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS 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.	
2	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. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.	G.C. SHALL FOLLOW THE REQUIREMENTS IN THE VIRGINIA WATER PROTECTION GENERAL PERMIT WP4-20-0737. A COPY OF
3 4	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX (6) MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL. ALL APPLICABLE FEDERAL, STATE AND LOCAL CHAPTERS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. THE BEDS AND BANKS OF ANY WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE	THE PERMIT SHALL BE KEPT ON—SITE AT ALL TIMES WHILE THIS WORK IS BEING PERFORMED.
5	WATERCOURSE IS COMPLETED. THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	
6	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 ANY TRENCH MAY BE OPENED AT ONE TIME. 2)EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3)EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF—SITE PROPERTY. 4)MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5)RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE CHAPTERS. 6)APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.	UTILIZE FOR STORM SEWER INSTALLATION
7	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.	CE
8	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	TS PS MU B/M
9	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 & CRITERIA A: CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE 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	SEE SWM CALCULATIONS
	2. (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF THE TWO—YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNE BED OR BANKS; AND (b) ALL PREVIOUSLY CONSTRUCTED MAN—MADE CHANNELS SHALL BE ANALYZED BY THE USE OF THE 10—YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND B THE USE OF A 2—YEAR STORM TO DEMONSTRATE THAT STORWMATER 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 THE STORMWATER WILL BE CONTAINED WITHIN THE PIPE SYSTEM	
	C: IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: 1. IMPROVE THE CHANNEL TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A 2-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 10-YEAR STORM IS CONTAINED WITHIN THE APPURTANCES; 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 OF WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR 4. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN APPROVING 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 OF THE SUBJECT PROJECT. F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION HE SHALL OBTAIN APPROVAL FROM THE LOCALITY 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 DISSIPATORS 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 RUNOFF CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NO DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PAR 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, CHEMIC STREAMS AND OTHER WATERS OF THE STATE.	RAMETERS THAT REFLECT THE ULTIMATE
	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 IF THE PRACTICES ARE DESIGNED TO; i. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; ii. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND iii. 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 GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF	
		(O.O.) 111/11 10 E00/11 111 111 111/11/11
		N, AND SHALL BE EXEMPT FROM ULGATED PURSUANT TO 10.1—562



ENGINEERS / SURVEYORS

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DRAWN BY KAM **DESIGNED BY** CPB CHECKED BY 4/22/2025 N/A REVISIONS

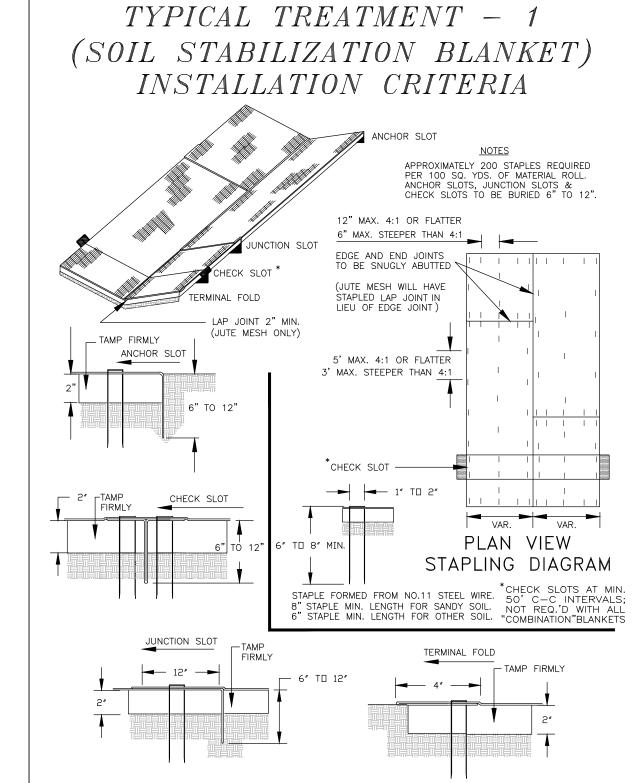
DATE

SCALE

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT) 1. SET THE STAKES. 2. EXCAVATE A 4"X 4" TRENCH UPSLOPE ALONG THE LINE OF 3. STAPLE FILTER MATERIAL 4. BACKFILL AND COMPACT THE EXCAVATED SOIL. TO STAKES AND EXTEND SHEET FLOW INSTALLATION (PERSPECTIVE VIEW) POINTS A SHOULD BE HIGHER THAN POINT B.

DRAINAGEWAY INSTALLATION (FRONT ELEVATION)

ROCK CHECK DAM 2 ACRES OR LESS OF DRAINAGE AREA: FILTER CLOTH (OPTIONAL) (DOWNSTREAM VIEW) COARSE AGGREGATE FLOW 2-10 ACRES OF DRAINAGE AREA: FILTER CLOTH (DOWNSTREAM VIEW) COARSE AGGREGATE



STAKES, STAPLES, & PINS

FOR

INSTALLATION OF

TREATMENT - 2

SOIL STABILIZATION MATTING

_**!**____ 🛚 🖽

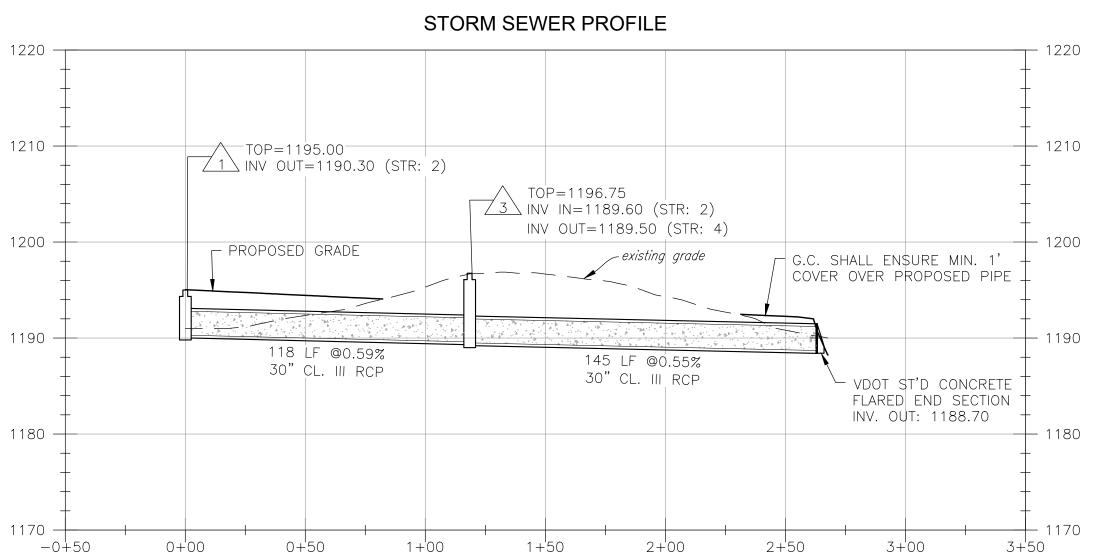
1) 1x4 TRIANGULAR SURVEY STAKE - MINIMUM

IN LENGTH. PLACEMENT OF THE STAKE ACROSS THE FLOW OF THE WATER IS THOUGHT TO PROVIDE A "PINBALL EFFECT" TO HELP SLOW THE VELOCITY.

2) 11 GAUGE STEEL - MINIMUM 1" WIDE BY 6" IN LENGTH STEEL STAPLE - 2"x8" STAPLE MAY BE REQUIRED IN CERTAIN SOIL CONDITIONS.

3) STEEL PINS - 3/16 DIAMETER STEEL PIN

BY 18" IN LENGTH WITH A 2" DIAMETER WASHER ON TOP. (SEE ILLUSTRATION)



STORM STRUCTURE SCHEDULE:

 $/1 \setminus VDOT ST'D MH-2$

 $\sqrt{3}$ VDOT ST'D MH-2

TOP: 1196.75

TOP: 1195.00

INV IN: 1190.40 (EX. 30")

INV IN: 1189.60 (STR. 2)

INV OUT: 1189.50 (STR. 4)

INV OUT: 1190.30 (STR. 2)

/2 \ 118 LF OF 30" CL. III RCP AT 0.59%

/4 \ 145 LF OF 30" CL. III RCP AT 0.55%

1. VDOT STD IS-1 INLET SHAPING SHALL BE

3. G.C. SHALL CONFIRM EXACT LOCATION AND

4. EXCAVATE TRENCHES TO UNIFORM WIDTH

**NOTE: #57 AGGREGATE IS NOT AN ALLOWABLE

STORM SEWER PIPE CONNECTIONS.

OF ANY DISCREPANCIES.

FOR STORM DRAINAGE PIPING.

BACKFILL OR PIPE BEDDING MATERIAL.

PROVIDED IN ALL PROPOSED STRUCTURES

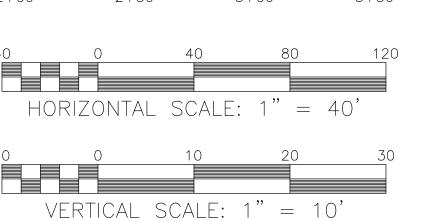
2. NON-SHRINK GROUT SHALL BE USED FOR ALL

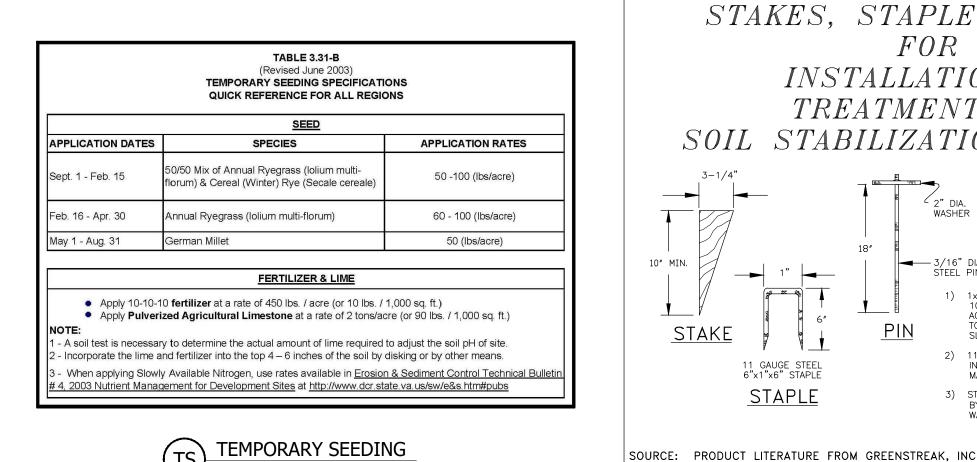
ELEVATION OF EXISTING PIPE PRIOR TO ANY

CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY

CONFORMING TO VDOT STANDARD PB-1 DETAIL

WITH VDOT ST'D CONCRETE END SECTION



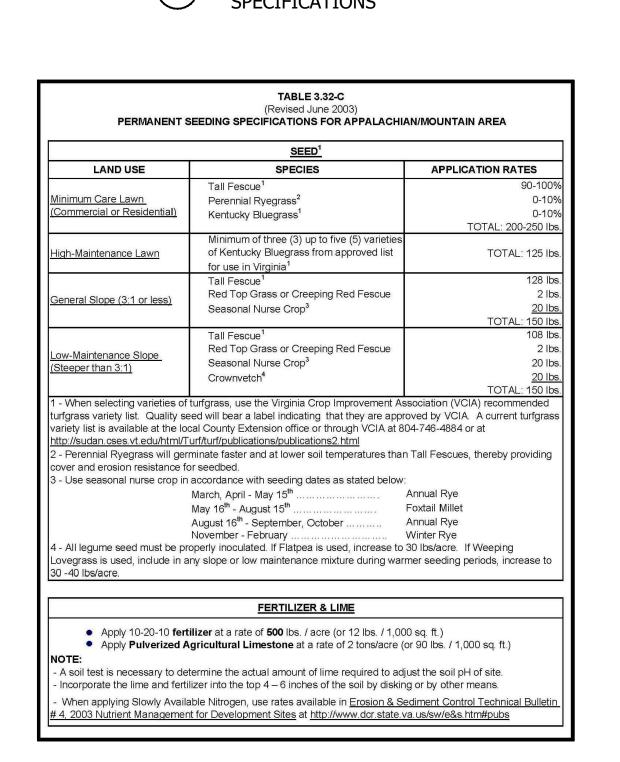


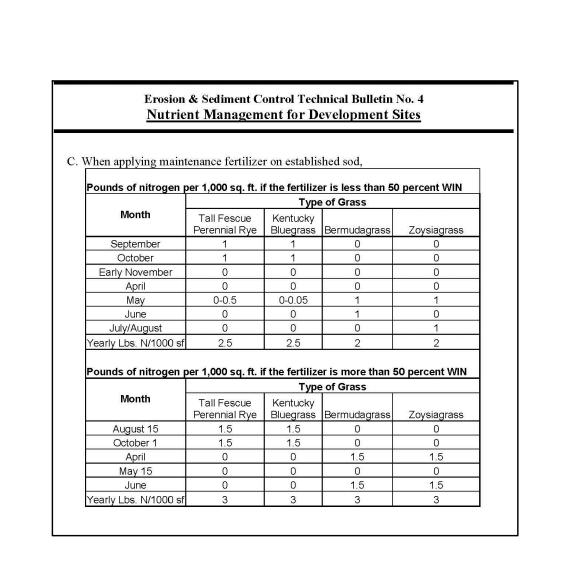
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PLATE. 3.20-1 SOURCE: VDOT ROAD AND BRIDGE STANDARDS

<u>STAKE</u>

STAPLE





FERTILIZER SPECIFICATIONS AND RATES FOR MANAGEMENT

PS PERMANENT SEEDING

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IMPROVEMENTS DRAINAGE AR <u>α</u> 90 CHNOL HAVEN

PLATE: 3.36-2

PLATE: 3.36-3

DRAWN BY KAM DESIGNED BY CHECKED BY CPB DATE 4/22/2025 SCALE AS SHOWN **REVISIONS**

GENERAL NOTES

PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:

a. BOCA — BASIC CODES ROANOKE COUNTY

VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION. ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS

VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK

e. OSHA — OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

WVWA - WESTERN VIRGINIA WATER AUTHORITY

MAINTAIN A SET OF APPROVED PLANS ON SITE AT ALL TIMES DURING CONSTRUCTION.

OBTAIN EACH REQUIRED PERMIT PRIOR TO COMMENCING THAT PART OF THE WORK. PAY REQUIRED

NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF CONDITIONS WHICH DIFFER FROM THOSE SHOWN ON THE PLANS.

COMPLY WITH LOCAL ORDINANCES FOR BURNING OF WASTE. TRANSPORT WASTE MATERIALS AND UNSUITABLE MATERIALS FROM OWNER'S PROPERTY.

COORDINATE BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.

A PRECONSTRUCTION MEETING MUST TAKE PLACE PRIOR TO COMMENCING WORK. AS A MINIMUM, THE CONTRACTOR, OWNER'S AGENT AND COUNTY'S AGENT MUST ATTEND.

VERIFY THE LOCATION AND ELEVATION OF EACH EXISTING UNDERGROUND UTILITY IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. CONTACT ENGINEER IMMEDIATELY IF THERE APPEARS TO BE A CONFLICT, UPON DISCOVERY OF A UTILITY WHICH IS NOT SHOWN, AND UPON DISCOVERY OF A LOCATION OR ELEVATION WHICH DIFFERS FROM THAT SHOWN. TO LOCATE UTILITIES, CALL "MISS UTILITY", 1-800-552-7001. UTILITY LOCATIONS SHOWN ARE THE RESULT OF A COMBINATION OF FIELD LOCATION AND EXISTING INFORMATION. LOCATIONS ARE APPROXIMATE.

REPAIR ALL DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.

NOTIFY OWNERS OF UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION.

SIGNAGE SHALL COMPLY WITH THE APPLICABLE REGULATIONS OF THE COUNTY. A SEPARATE PERMIT

ANY SITE DEVELOPMENT OUTSIDE OF THE SCOPE OF THIS PLAN WILL REQUIRE SITE PLAN REVIEW AND APPROVAL.

ADDITIONAL DRAINAGE STRUCTURES AND EASEMENTS MAY BE REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION DUE TO ANY DEVIATION BETWEEN THE APPROVED PROPOSED CONTOURS AND THE AS-BUILT CONDITIONS OR ANY OTHER TOPOGRAPHIC CHANGES.

DEMOLITION SHALL INCLUDE, UNLESS OTHERWISE NOTED ON DRAWINGS, REMOVAL OF EXISTING OBJECTS OR IMPROVEMENTS, WHETHER INDICATED ON THE DRAWINGS OR NOT, THAT WOULD IN THE OPINION OF THE OWNER, PREVENT OR INTERFERE WITH THE PROGRESS OR COMPLETION OF THE PROPOSED WORK.

PERMITS, FEES AND LICENSES SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR, INCLUDING DISPOSAL CHARGES AS REQUIRED.

WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITIES IN DEMOLITION OF EXISTING PAVEMENT, CURBS AND GUTTERS, DRAINAGE STRUCTURES AND UTILITIES AS MAY BE REQUIRED.

ALL EXISTING UTILITIES TO ANY BUILDINGS SHOWN TO BE RAZED SHALL BE DISCONNECTED AND PLUGGED OR CAPPED AS REQUIRED BY THE LOCALITY.

CONTRACTOR SHALL SAW-CUT ALL JOINTS WHERE EXISTING CURBING, PAVEMENT AND SIDEWALK IS TO BE DEMOLISHED AND NEW CONSTRUCTION JOINS THE EXISTING. ALL SAW CUTTING SHALL BE TO THE FULL DEPTH OF PAVEMENT.

CONTRACTOR SHALL COMPLETELY FILL BELOW GRADE AREAS AND VOIDS FROM DEMOLITION USING APPROVED SELECT FILL MATERIAL.

ALL EXISTING CURBING, CONCRETE, SIDEWALK, ENTRANCES, ASPHALT, BRICK, AND ANY STRUCTURES THAT ARE DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR, ALL DEBRIS, ETC. SHALL NOT BE USED AS FILL MATERIAL ON THE SITE.

CONTRACTOR SHALL PROVIDE THE FOLLOWINGS PROTECTIONS AT THE JOB SITE: MAKE ARRANGEMENTS, BEFORE INITIATING DEMOLITION, FOR RELOCATING, DISCONNECTION, REROUTING, ABANDONING, OR SIMILAR ACTION AS MAY BE REQUIRED RELATIVE TO UTILITIES AND OTHER UNDERGROUND PIPING, TO PERMIT WORK TO PROCEED WITHOUT DELAY. ARRANGEMENTS SHALL BE MADE IN ACCORDANCE WITH REGULATIONS OF AUTHORITIES OF UTILITIES MENTIONED, SUCH AS OVERHEAD AND UNDERGROUND POWER AND TELEPHONE LINES AND EQUIPMENT, GAS PIPING, STORM SEWERS, SANITARY SEWERS, OR WATER PIPING. CONTRACTOR SHALL NOT USE WATER WHEN IT MAY CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS, SUCH AS ICE, FLOODING AND/ OR POLLUTION.

ENSURE SAFE PASSAGE OF PERSONS AROUND ALL AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS,

PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO COST TO THE OWNER.

STRUCTURES, OTHER FACILITIES, OR INJURY TO PERSONS.

MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN. KEEP IN SERVICE. AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. PREVENT INTER-RUPTION OF EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES AS AC-CEPTABLE TO GOVERNING AUTHORITIES.

USE WATER SPRINKLING AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL.

GRADING NOTES

G.C. SHALL REEFER TO GEOTECHNICAL REPORT PROVIDED BY ECS MID-ATLANTIC, LLC DATED MARCH 12, 2020 FOR THE SITE AND FOLLOW ALL RECOMMENDATIONS. IF THERE ARE ANY DISCREPANCIES BETWEEN THESE NOTES, THE REPORT SHALL GOVERN.

REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.

REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.

BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.

FXCAVATION FOR STRUCTURES.

a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1'

PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT

REMOVE ALL LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE

BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET. e. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.

CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.

EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.

PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).

PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°).

a. COMPACT THE BACKFILL AROUND THE OUTSIDE OF EACH BUILDING TO A MINIMUM OF 85% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 STANDARD PROCTOR. DO NOT ALLOW HEAVY COMPACTION EQUIPMENT SUCH AS ROLLERS, ETC., CLOSER TO ANY FOOTING THAN THE HORIZONTAL DISTANCE SUBTENDED BY A 45° ANGLE WITH THE TOP EDGE OF THE FOOTINGS AND THE SURFACE OF THE GROUND. b. BACKFILL BEHIND WALLS AFTER PERMANENT CONSTRUCTION WHICH BRACES THE WALL IS IN PLACE OR TEMPORARY BRACING OF THE WALL IS PROPERLY INSTALLED,

AND AFTER ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING DAMP-PROOFING, REMOVAL OF CONCRETE FORMWORK, AND REMOVAL OF TRASH AND DEBRIS. FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND

CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.

PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO

GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10'

ADDITIONAL COST TO OWNER.

PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL AS FOLLOWS: a. ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOFROLLING, UNDERCUTTING AND COMPACTING AS NECESSARY.

b. PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.

c. PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATING EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.

d. COMPACT SOIL TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR).

SPREAD TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS. SEED IMMEDIATELY.

OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

SITE CONSTRUCTION PLAN GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS.

LAND USE PERMITS (CE-7P) MUST BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO BEGINNING ANY CONSTRUCTION WITHIN THE EXISTING STATE MAINTAINED RIGHT-OF-WAY (INCLUDING ACCESS). VDOT IS TO RECEIVE WRITTEN NOTIFICATION 48 HOURS PRIOR TO COMMENCING WITH INITIAL CONSTRUCTION ACTIVITIES WITHIN SAID RIGHT-OF-WAYS.

THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.

UPON THE DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT A GEOTECHNICAL ENGINEER AND THE OWNER. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY THE GEOTECHNICAL ENGINEER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT VDOT SPECIFICATIONS.

ALL STORM SEWER DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

ALL CONCRETE SHALL BE CLASS A3-AE (AIR ENTRAINED 3,000 PSI OR AS SPECIFIED).

CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY SHOWN ON THIS PLAN, CALL MISS UTILITY OF CENTRAL VIRGINIA AT 1-800-552-7001. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN EXISTING AND/OR PROPOSED RIGHT-OF-WAY REQUIRED BY THE DEVELOPMENT.

CASING SLEEVES SHALL BE PLACED AT ALL ROAD CROSSINGS FOR GAS, POWER, TELEPHONE AND CABLE TV SERVICES TRUNK LINES AS NECESSARY.

A PRIME COAT SEAL BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE WILL BE REQUIRED AT A RATE OF 0.30 GALLONS PER SQUARE YARD (REC-250 PRIME COAT) PER VDOT STANDARDS AND SPECIFICATIONS.

THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECAST WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.

ALL VEGETATION AND ORGANIC MATERIAL IS TO BE REMOVED FROM THE GRADED LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.

ENGINEERS NOTES

BALZER AND ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

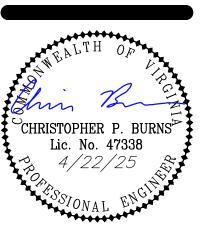
ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER.

BALZER AND ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE PLANS AND WILL NOT BE RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

ENGINEERS / SURVEYORS

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DRAWN BY KAM **DESIGNED BY** CPB CHECKED BY 4/22/2025

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