

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION
THE PURPOSE OF THIS PROJECT IS THE DEVELOPMENT OF A WOODSPRING SUITES HOTEL, ASSOCIATED PARKING AREAS, UTILITIES, AND STORMWATER INFRASTRUCTURE AT 3812 PETERS CREEK ROAD, ROANOKE, VIRGINIA. A TOTAL OF 3.38 ACRES WILL BE DISTURBED DURING CONSTRUCTION.

EXISTING SITE CONDITIONS
THE PROPOSED SITE IS A RESIDENTIAL PROPERTY CONSISTING OF A HOUSE WITH GARAGE, DRIVEWAY, WELL, AND SEPTIC FIELD.

ADJACENT PROPERTY
THE SITE IS BORDERED TO THE NORTH BY AN UNDEVELOPED PARCEL, TO THE WEST BY A CHURCH AND CHILD DEVELOPMENT CENTER, TO THE SOUTH BY PETERS CREEK ROAD, AND TO THE EAST BY A STREAM CHANNEL.

OFF-SITE AREAS
NO OFF-SITE STOCKPILE AREAS OR BORROW AREAS ARE PROPOSED.

SOILS
SOIL TYPE BOUNDARIES PER USDA NATURAL RESOURCES CONSERVATION SERVICE CAN BE FOUND ON SHEET C400. A DETAILED DESCRIPTION OF SOIL TYPES IS PROVIDED IN APPENDIX A OF THE EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT NARRATIVE ACCOMPANYING THIS PLAN SUBMITTAL.)

CRITICAL EROSION AREAS
CRITICAL EROSION AREAS MAY BE ENCOUNTERED DURING GRADING OPERATIONS AT PROPOSED SLOPES 3:1 OR GREATER. IN PARTICULAR, THE STEEP BANK ADJACENT TO THE STREAM IS A CRITICAL EROSION AREA AND SHOULD BE MONITORED DURING CONSTRUCTION TO ENSURE EROSION IS NOT TAKING PLACE AS A RESULT OF CONSTRUCTION ACTIVITIES.

STOCKPILING
STOCKPILING OF SOIL ON SITE IS NOT PLANNED.

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.

STRUCTURAL PRACTICES	VESCH STD. & SPEC NUMBER
SAFETY FENCE	3.01
CONSTRUCTION ENTRANCE	3.02
SILT FENCE	3.05
STORM DRAIN INLET PROTECTION	3.07
CULVERT INLET PROTECTION	3.08
TEMPORARY DIVERSION DIKE	3.09
TEMPORARY RIGHT-OF-WAY DIVERSION	3.11
TEMPORARY SEDIMENT TRAP	3.13
TREE PROTECTION	3.38

VEGETATIVE PRACTICES	
TOPSOILING	3.30
TEMPORARY SEEDING	3.31
PERMANENT SEEDING	3.32
MULCHING	3.35
SOIL STABILIZATION BLANKETS AND MATTING	3.36
DUST CONTROL	3.39

- MANAGEMENT STRATEGIES
- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
 - SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING.
 - TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
 - AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED.
 - THE CERTIFIED RESPONSIBLE LAND DISTURBER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
 - AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY EROSION AND SEDIMENT CONTROLS WILL BE CLEANED UP AND REMOVED.

EROSION CONTROL SEQUENCE OF CONSTRUCTION (PHASE 1)

- NOTIFY THE ROANOKE COUNTY EROSION CONTROL INSPECTOR 48 HOURS PRIOR TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. THE CERTIFIED RESPONSIBLE LAND DISTURBER (RLD), AND MR. IAN COFFEY WITH THE CITY OF ROANOKE, MUST ATTEND THE MEETING. DO NOT BEGIN LAND DISTURBANCE WITHOUT INSPECTOR'S APPROVAL. IF CONSTRUCTION DOES NOT COMMENCE FOR 180 DAYS FOLLOWING THE PRE-CONSTRUCTION MEETING OR IF THE PROJECT IS DORMANT FOR 180 DAYS DURING THE CONSTRUCTION PHASE, A NEW PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE CONSTRUCTION CAN START.
- INSTALL PHASE 1 EROSION CONTROL DEVICES AND CLEAR TREES TO LIMITS SHOWN. LAND DISTURBANCE OUTSIDE OF INSTALLATION OF ESC MEASURES SHALL NOT OCCUR UNTIL THE INITIAL ESC MEASURES INSTALLATION HAS BEEN APPROVED BY THE ENVIRONMENTAL INSPECTOR.
- ONCE ALL PHASE 1 ESC MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENVIRONMENTAL INSPECTOR, PERFORM DEMOLITION AS SHOWN, AND BEGIN ROUGH GRADING.
- ADJUST ALL EROSION CONTROL DEVICES AS NECESSARY IN ORDER TO MAINTAIN PROPER FUNCTION.

(PHASE 2)

- BEGIN SITE FEATURE CONSTRUCTION, INSTALLING PHASE 2 EROSION CONTROL DEVICES.
- ADJUST ALL EROSION CONTROL DEVICES AS NECESSARY IN ORDER TO MAINTAIN PROPER FUNCTION.
- THE DIVERSION DIKES SHALL REMAIN IN PLACE UNTIL THE SITE HAS BEEN GRADED, STABILIZED, AND NEW STORMWATER SYSTEM IS OPERATIONAL.
- STABILIZE THE SITE DURING AND AT THE CONCLUSION OF CONSTRUCTION PER VESCH STANDARDS.
- AFTER ALL UPSLOPE AREAS HAVE BEEN STABILIZED, AND WITH APPROVAL OF THE ENVIRONMENTAL INSPECTOR, THE SEDIMENT TRAP CAN BE CONVERTED TO THE UNDERGROUND DETENTION SYSTEM.
- NO EROSION CONTROL MEASURES CAN BE REMOVED WITHOUT THE APPROVAL OF THE ENVIRONMENTAL INSPECTOR FOR THE PROJECT.

MAINTENANCE

- CONSTRUCTION ENTRANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORK OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- SILT FENCE: SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON THE SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED.
- INLET PROTECTION: THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE DESIGN DEPTH OF THE TRAP. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- SEDIMENT TRAP: SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE DESIGN VOLUME OF THE WET STORAGE. FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. THE STRUCTURE SHALL BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR EQUIPMENT. THE HEIGHT OF THE STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS CENTER IS AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.
- SEEDING: THE SEEDED AREAS SHALL BE INSPECTED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NECESSARY.

PERMANENT STABILIZATION
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING OR HARDSCAPE IMMEDIATELY FOLLOWING FINISHED GRADING. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE SEEDING SPECIFICATION ON SHEET C800. MULCH WILL BE USED IN CONJUNCTION WITH PERMANENT SEEDING. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED PRIOR TO MULCHING.

STORMWATER MANAGEMENT NARRATIVE

QUALITY
STORMWATER QUALITY CRITERIA AREA MET THROUGH A COMBINATION OF ON-SITE TREATMENT AND THE PURCHASE OF OFF-SITE NUTRIENT CREDITS. THE PROPOSED UNDERGROUND DETENTION SYSTEM 1 (UCD 1) IS A STORMTECH MC-4500 CHAMBER NETWORK WHICH PROVIDES POLLUTANT FILTRATION BY USING AN ISOLATOR ROW, A DEVICE APPROVED BY VIRGINIA DEQ FOR 40% REMOVAL CREDIT.

CHANNEL PROTECTION
THE SITE DISCHARGES TO A NATURAL CHANNEL, SO COMPLIANCE WITH CHANNEL PROTECTION CRITERIA IS ACCOMPLISHED BY SATISFYING THE ENERGY BALANCE EQUATION. SEE CALCULATIONS IN APPENDIX C OF THE EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT NARRATIVE ACCOMPANYING THIS PLAN SUBMITTAL.

FLOOD PROTECTION
THE SITE DOES NOT EXPERIENCE LOCALIZED FLOODING, SO COMPLIANCE WITH FLOOD PROTECTION CRITERIA IS ACCOMPLISHED BY DEMONSTRATING CHANNEL ADEQUACY DOWN TO THE POINT AT WHICH THE CHANNEL ENTERS A MAPPED FLOODPLAIN. SEE CALCULATIONS AND CHANNEL LOCATIONS & CROSS SECTIONS IN APPENDIX C AND FIGURES 3 & 4 OF THE EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT NARRATIVE ACCOMPANYING THIS PLAN SUBMITTAL.

STORMWATER SITE STATISTICS		
	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	3.38 AC	3.38 AC
TOTAL SITE AREA (AC)	3.21 AC.	3.21 AC.
IMPERVIOUS AREA (AC)	0.26 AC.	1.89 AC.
MANAGED TURF AREA (AC)	2.47 AC.	1.49 AC.
OPEN SPACE / FOREST AREA (AC)	0.67 AC.	0 AC.
RIGHT OF WAY DISTURBANCE (SF)		24,705 SF
KARST PRESENT (Y/N)	N	N

NEW BMP INFORMATION		
	BMP #1	BMP #2
BMP TYPE	UGD	
LEVEL OF TREATMENT (LEVEL 1 OR LEVEL 2)	N/A	
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)	IIB	
TOTAL AREA TREATED (AC)	2.65 AC.	
IMPERVIOUS AREA TREATED BY BMP (AC)	1.83 AC.	
MANAGED TURF AREA TREATED BY BMP (AC)	0.82 AC.	
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)	0 AC.	
SURFACE AREA OF BMP (AC)	0.12 AC.	
STORAGE VOLUME OF BMP (AC-FT)	0.42 AC-FT	
MAXIMUM AVERAGE DEPTH (FT)	10 FT.	
QUALITY, QUANTITY, OR BOTH?	BOTH	
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	PHOS.	
LATITUDE (DECIMAL DEGREES XX.XXXX)	37.325522	
LONGITUDE (DECIMAL DEGREES -XX.XXXX)	-79.992994	
NAME OF RECEIVING WATER	TINKER CREEK	
HYDROLOGIC UNIT CODE (ALPHANUMERIC CODE RU14, ETC)	RU-13	

AS-BUILT BMP INFORMATION		
	BMP #1	BMP #2
BMP TYPE		
LEVEL OF TREATMENT (LEVEL 1 OR LEVEL 2)		
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)		
TOTAL AREA TREATED (AC)		
IMPERVIOUS AREA TREATED BY BMP (AC)		
MANAGED TURF AREA TREATED BY BMP (AC)		
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)		
SURFACE AREA OF BMP (AC)		
STORAGE VOLUME OF BMP (AC-FT)		
MAXIMUM AVERAGE DEPTH (FT)		
QUALITY, QUANTITY, OR BOTH?		
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)		
LATITUDE (DECIMAL DEGREES XX.XXXX)		
LONGITUDE (DECIMAL DEGREES -XX.XXXX)		
NAME OF RECEIVING WATER		
HYDROLOGIC UNIT CODE (ALPHANUMERIC CODE RU14, ETC)		

USE OF NUTRIENT BANK CREDITS FOR BMP		
	BMP #1	BMP #2
BMP TYPE	NUTRIENT BANK CREDIT	
NAME OF AUTHORIZED NUTRIENT BANK	ROLLER	
REQUIRED PHOSPHORUS TO BE REMOVED (LB/YR)	3.22 LB/YR	
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	1.47 LB/YR	
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)	PART IIB	
TOTAL AREA TREATED (AC)	2.65 AC.	
IMPERVIOUS AREA TREATED BY BMP (AC)	1.83 AC.	
MANAGED TURF AREA TREATED BY BMP (AC)	0.82 AC.	
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)	0 AC.	
SURFACE AREA OF BMP (AC)	0.12 AC.	
STORAGE VOLUME OF BMP (AC-FT)	0.42 AC-FT	
QUALITY, QUANTITY, OR BOTH?	QUALITY	
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	PHOSPHORUS	
NAME OF RECEIVING WATER (PROJECT SITE)	TINKER CREEK	
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ETC)	RU-13	

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ESC NARRATIVE & CONSTRUCTION SEQUENCE

REVISIONS

DESIGNED BY: KMJ
DRAWN BY: DEP
CHECKED BY: CAH
SCALE: N/A
DATE: MAY 24, 2021
PROJECT NUMBER: 20010271-010301

C102



3rd Review

New Facility for
WOODSPRING SUITES
3812 Peters Creek Road
Roanoke County, Virginia

SHEET
3
OF
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