

SUPPLEMENTAL SOIL EROSION NARRATIVE

PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS THE COMPLETION OF THE MASS-GRADING PROJECT TO A SINGLE-FAMILY RESIDENTIAL SUBDIVISION. THIS WILL BE ACCOMPLISHED BY FINE GRADING THE ROADWAYS, INSTALLATION OF CURBING AND ASPHALT SURFACE, INSTALLATION OF UNDERGROUND PIPE SYSTEMS. REFER TO THE COMPLETE SET OF CONSTRUCTION FOR EXACT LOCATION AND CONSTRUCTION DETAILS. APPROXIMATELY 5.1 ACRES WILL BE DISTURBED FOR THIS PROJECT.

EXISTING SITE CONDITIONS: THE SITE IS CURRENTLY UNDER DEVELOPMENT OF A MASS-GRADING PLAN, PERMITTED BY THE DEVELOPER GRAHAM THOMAS, LLC. THERE ARE NO JURISDICTIONAL WATERS LOCATED WITHIN THE LIMITS OF THE SUBJECT DEVELOPMENT AND WILL NOT REQUIRE ANY ADDITIONAL PERMITTING BY THE VIRGINIA DEPARTMENT OF CONSERVATION & RECREATION, THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY OR THE US ARMY CORPS OF ENGINEERS.

ADJACENT PROPERTY: TO THE SOUTH OF SECTION 3 IS SECTION 4 AND HANGING ROCK GOLF COURSE. THE REST OF THE DEVELOPMENT IS SURROUNDED BY OTHER FAIRWAYS AT HANGING ROCK SECTIONS.

OFF-SITE AREAS: THE DEVELOPMENT WILL BE A "BALANCED" SITE AND NO EXCESS MATERIAL WILL BE EXPORTED NOR WILL ANY MATERIAL BE IMPORTED FROM OTHER PROPERTIES.

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 A CHISWELL-LITZ COMPLEX. CHISWELL-LITZ SOIL HAS THE FOLLOWING CHARACTERISTICS: 1)WELL DRAINED 2) 0"-5" OF TOPSOIL 3) +/- 10" OF A SILT LOAM SUBBASE 4)MODERATE PERMEABILITY 5)MEDIUM TO RAPID SURFACE RUN-OFF AND 6)HIGH EROSION POTENTIAL.

CRITICAL EROSION AREAS: NO CRITICAL AREAS ARE ANTICIPATED AS THE MAJORITY OF THE SITE WILL DRAIN TO AN EXISTING SEDIMENT BASIN LOCATED AT THE LOW POINT OF THE PROJECT ALL SLOPES PROPOSED WITHIN THE PROJECT AREA WILL BE PROTECTED BY DIVERSIONS WHICH WILL DISCHARGE INTO A PROPOSED UNDERGROUND STORM DRAIN PIPE SYSTEM.

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. GC IS TO NOTE THAT THERE NUMEROUS MEASURES THAT ARE LOCATED ON THE SITE AS THERE IS AN EXISTING ESC PLAN IN EFFECT, AND THAT MANY OF THESE ITEMS MAY BE REMOVED DUE TO THE PROPOSED SEDIMENT BASIN LOCATED BELOW THE PROJECT. SEVERAL MEASURES MAY NEED MODIFIED BASED ON THE REVISED GRADING AND SCHEDULING OF WORK TO BE DONE.

STRUCTURAL - CONSTRUCTION ENTRANCE-STD. 3.02.....A STONE PAD, LOCATED AT THE EXISTING DRIVEWAY OFF OF LONGVIEW HAS BEEN PREVIOUSLY INSTALLED TO FACILITATE THE ONGOING CLEARING AND GRUBBING CURRENTLY PERMITTED ON THE SITE.

CONSTRUCTION ROAD STABILIZATION-STD. 3.03.....TEMPORARY STABILIZATION (GRAVEL) SHALL BE PROVIDED ALONG THE EXISTING ACCESSWAY AS REQUIRED TO PREVENT EXCESSIVE TRANSPORTING OF SOILS TO THE CONSTRUCTION ENTRANCE.

SILT FENCE-STD. 3.05.....TEMPORARY BARRIERS TO BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES AND AROUND THE TOPSOIL STOCKPILE TO INTERCEPT AND DETAIN SEDIMENT.

STORM DRAIN INLET PROTECTION-STD. 3.07.....A SEDIMENT FILTER OR EXCAVATED IMPOUNDING AREA INSTALLED AROUND A STORM DRAIN DROP INLET OR CURB INLET TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS.

TEMPORARY RIGHT-OF-WAY DIVERSION-STD. 3.11.....A RIDGE OF COMPACTED SOIL OR LOOSE GRAVEL/ROCK CONSTRUCTED ACROSS A DISTURBED ACCESS ROAD TO DIVERT OFF-SITE RUNOFF AWAY TO MINIMIZE EROSION POTENTIAL ALONG THE EXCAVATED ROADWAYS.

STORMWATER CONVEYANCE CHANNEL-STD. 3.17.....PERMANENT, DESIGNED WATERWAY, SHAPED, SIZED, AND LINED WITH APPROPRIATE VEGETATION OR STRUCTURAL MATERIAL USED TO SAFELY CONVEY RUNOFF WITHIN OR AWAY FROM A DEVELOPING AREA.

OUTLET PROTECTION-STD. 3.18.....THE INSTALLATION OF RIPRAP CHANNEL SECTIONS AND/OR STILLING BASIN BELOW STORM DRAIN OUTLETS TO REDUCE EROSION AND UNDER CUTTING FROM SCOURING AT OUTLETS.

VEGETATIVE -

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 30 DAYS TO 1-YEAR BY SEEDING WITH AN APPROPRIATE RAPIDLY GROWING SEED MIXTURE. SEE SHEET C-10 FOR SEEDING SPECS.

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. SEE SHEET C-10 FOR SEEDING SPECS.

MULCHING-3.35.....MULCH SHALL BE APPLIED TO ALL TEMPORARY AND PERMANENT 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 FOR THE AREA ALONG THE CUL-DE-SAC EMBANKMENT, A DEGRADABLE BLANKET SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER TO PROMOTE STABILIZATION DUE TO SEEDING OPERATIONS.

DUST CONTROL-STD. 3.39.....DUE TO THE PROXIMITY OF THE PROJECT TO OTHER RESIDENTIAL SUBDIVISIONS, CONTRACTOR SHALL TAKE CARE TO REDUCE/PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES.

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 SEEDD 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.

INSPECTIONS:

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 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 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 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; LOCATIONS OF FAILED OR INADEQUATE CONTROLS; AND LOCATIONS WHERE ADDITIONAL CONTROLS ARE NEEDED.

STORMWATER MANAGEMENT:

UPON COMPLETION OF THE PROJECT, THE EXISTING SEDIMENT BASIN WILL HAVE BEEN CONVERTED TO A PERMANENT STORMWATER MANAGEMENT FACILITY TO PROTECT DOWNSTREAM CHANNELS/FACILITIES FROM INCREASED FLOWS ANTICIPATED FROM THE DEVELOPMENT.

W.V.W.A. SERVICE LATERAL INFORMATION

LOT	DOWNSTREAM MANHOLE	DIST.	TOP OF S.S. MAIN	MIN. F.F. ELEVATION	LOWEST SERVICEABLE F.F. ELEV.	APPROX. WATER PRESSURE
13	'N'	183'	1270.6	1273.6	1283.5	108
14	'P'	127'	1284.7	1287.7	1288.5	106
15	'Q'	77'	1286.3	1289.3	1289.5	106
16	'Q'	174'	1287.3	1290.3	1290.5	106
17	'R'	-MH-	1287.6	1290.6	1291.0	105
18	'R'	39'	1290.7	1293.7	1294.0	104
19	'R'	119'	1294.9	1297.9	1298.5	102
20 / 21	'S'	-MH-	1299.1	1302.1	1304.5	99
22	'P'	13'	1274.9	1277.9	1281.5	109
23	'N'	211'	1272.4	1275.4	1283.5	112
24	'N'	149'	1268.3	1271.3	1279.5	114
25	'N'	91'	1264.2	1267.2	1274.5	116
26	'N'	50'	1261.6	1264.6	1271.5	118

ALL OF THE WATER LATERALS PROPOSED FOR THIS SECTION SHALL UTILIZE A W.V.W.A. Std. TYPE 'B' SERVICE CONNECTION. THIS CONNECTION REQUIRES AN INDIVIDUAL 3/4-INCH PRESSURE REDUCING VALVE TO BE INSTALLED IN A SEPARATE METER SETTER AND BOX ON THE CUSTOMER SIDE OF THE METER.

SANITARY SEWER MANHOLE DATA

LINE	BEARING	DISTANCE
Stubout From 'I' to 'N'	N. 60°08'26" W.	±194.9
'N' to 'P'	N. 18°17'01" E.	228.3'
'P' to 'Q'	N. 39°19'15" W.	135.0'
'Q' to 'R'	N. 66°34'57" W.	209.1'
'R' to 'S'	N. 06°45'43" E.	189.0'

STATIONS AND OFFSETS ARE MEASURED ALONG A BASELINE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE WITH 0+00.0 BEING THE BEGINNING AT THE LOWER MANHOLE.

THE MIN. FLOOR ELEVATION IS BASED ON SEC. 200.02-2-G-1-h OF THE WESTERN VIRGINIA WATER AUTHORITY WATER & SEWER REGULATIONS. LOT OWNERS REQUESTING A LOWER SERVICE ELEVATION WILL REQUIRE THE USE OF A PRIVATE SEWAGE PUMP FACILITY, INSTALLED AND MAINTAINED BY THE HOMEOWNER.

SITE SUMMARY

TAX MAP NUMBER: 035.04-02-33.00-0000

SIZE: 41.163 ACRES

ZONING: R1, ZERO LOT LINE OPTION

PROPOSED USE: RESIDENTIAL SUBDIVISION

MINIMUM LOT SIZE REQUIRED: 0.132 AC./5,760 SQ.FT.

MINIMUM LOT FRONTAGE REQUIRED: 60' ON EXISTING R/W
48' ON INTERIOR ROAD
30' ALONG THE CUL-DE-SAC-ARC SEGMENTS

LOT FRONTAGE PROVIDED: SEE SHEET C-5

SETBACKS: FRONT: 30' OFF OF EXISTING R/W
24' OFF OF INTERIOR ROAD

SIDE: 10' WHEN ADJACENT TO PROPERTY NOT WITHIN COMMON DEVELOPMENT - OTHERWISE ONE 10' YARD AND ONE ZERO YARD

REAR: 25' WHEN ADJACENT TO PROPERTY NOT WITHIN COMMON DEVELOPMENT OTHERWISE 20'

MAXIMUM BUILDING HEIGHT: 45'

MAXIMUM LOT COVERAGE: 50%

MAXIMUM BUILDING COVERAGE: 40 PERCENT OF LOT AREA

OWNER/ DEVELOPER: GRAHAM THOMAS, LLC
494 GLENMORE DRIVE
SALEM, VIRGINIA 24153

STREET CATAGORY: VARIES -- SEE CROSS SECTIONS

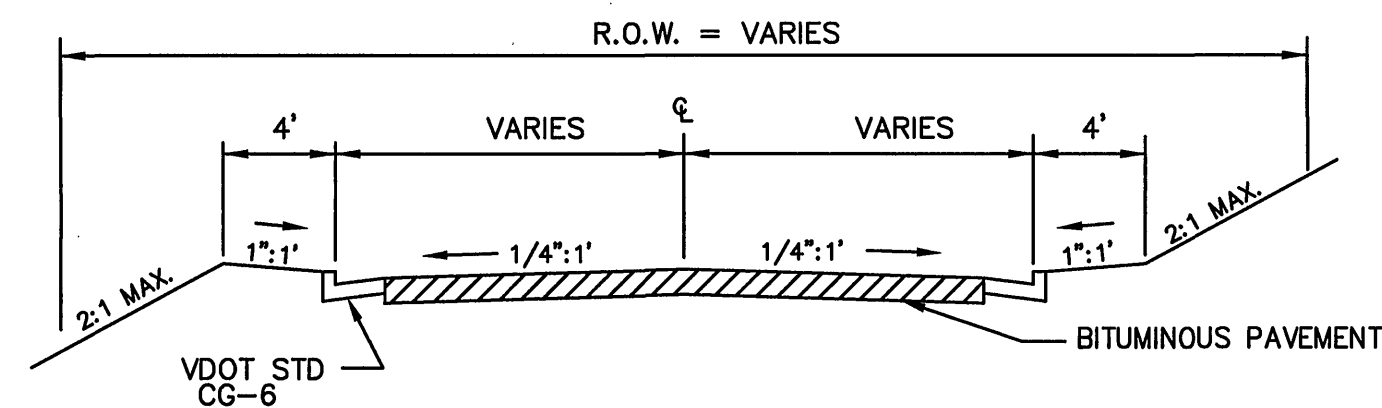
PARKING: DEVELOPER SHALL PROVIDE A MINIMUM OF 2 OFF-STREET PARKING SPACES FOR EACH LOT.

WALL MAINTENANCE NOTE: A PERPETUAL 5 FOOT WALL MAINTENANCE EASEMENT SHALL BE PROVIDED ON THE LOT ADJACENT TO THE ZERO LOT LINE PROPERTY LINE. THIS EASEMENT SHALL BE KEPT CLEAR OF STRUCTURES OR ANY OTHER IMPROVEMENT WHICH WOULD INFRINGE ON THE USE OF THE EASEMENT, WITH THE EXCEPTION OF FREESTANDING WALLS AND FENCES. THIS EASEMENT SHALL BE SHOWN ON THE PLAT AND INCORPORATED INTO EACH DEED TRANSFERRING TITLE TO THE PROPERTY.

FEMA MAP #: 51161C0133G (EFFECTIVE DATE 9/28/2007)

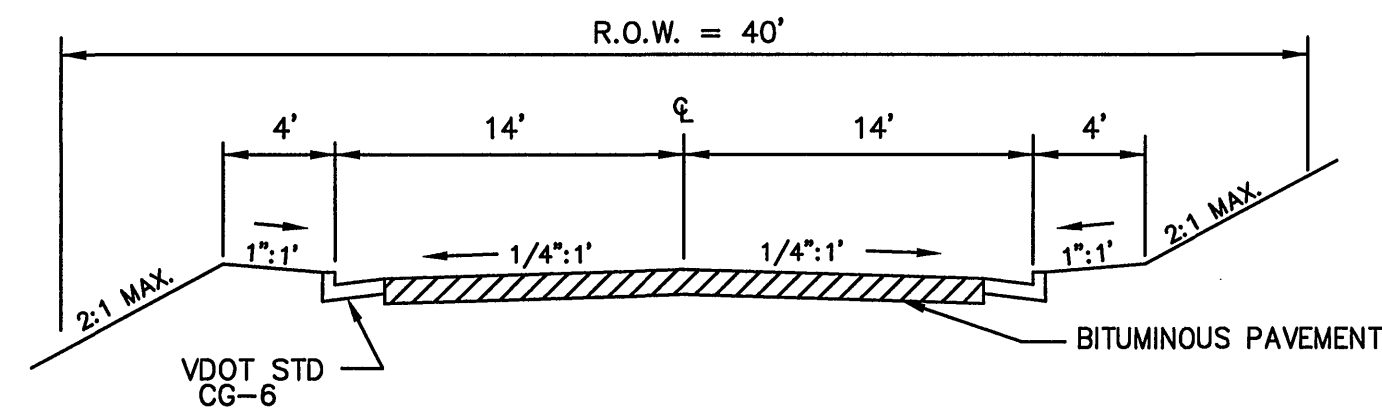
THE LOTS CREATED BY THE RECORDATION OF THIS SUBDIVISION PLAT SHALL BECOME MEMBERS OF THE FAIRWAYS AT HANGING ROCK HOMEOWNERS ASSOCIATION, INC. WHICH IS RESPONSIBLE FOR THE PRIVATE SWM FACILITIES, PRIVATE DRAINAGE SYSTEMS, ETC. THE LOTS WILL ALSO BECOME MEMBERS OF AN ADDITIONAL HOMEOWNERS ASSOCIATION THAT WILL BE RESPONSIBLE FOR THE MAINTENANCE, CARE, ETC OF THE INDIVIDUAL LAWNS, WALL, PRIVATE DRAINAGE SYSTEMS, ETC THAT ARE REQUIRED DUE TO BEING A ZERO LOT-LINE SUBDIVISION, HEREIN REFERRED TO AS FAIRWAYS AT HANGING ROCK, SECTION 3.

TYPICAL ROAD SECTIONS



KINLOCH LANE STA. STA. 13+03.8 to 14+98.60
NOTE THIS ROAD SEGMENT IS TRANSITIONING FROM A 36' WIDTH TO A 28' WIDTH

PAVEMENT DESIGN TO BE BASED ON AN ADT OF 220
CBR TESTS AND FINAL PAVEMENT SPECIFICATIONS TO BE PROVIDED TO VDOT RESIDENCY FOR APPROVAL PRIOR TO INSTALLATION



MEDINAH CIRCLE STA. 10+14.0 TO CUL-DE-SAC
PAVEMENT DESIGN TO BE BASED ON AN ADT OF 140.

CBR TESTS AND FINAL PAVEMENT SPECIFICATIONS TO BE PROVIDED TO VDOT RESIDENCY FOR APPROVAL PRIOR TO INSTALLATION

NOTE:
THE PRELIMINARY PAVEMENT DESIGNS SHOWN ARE BASED ON A PREDICTED SUB-GRADE CBR VALUE OF 7.0 AND A RESILIENCY FACTOR (RF) OF 2.0 AS SHOWN IN APPENDIX I OF THE "2000 VIRGINIA DEPARTMENT OF TRANSPORTATION PAVMENT DESIGN GUIDE FOR SUBDIVISION AND SECONDARY ROADS". THE SUB-GRADE SOIL IS TO BE TESTED BY AN INDEPENDANT LABORATORY AND THE RESULTS SUBMITTED TO VDOT FOR REVIEW AND APPROVAL PRIOR TO BASE CONSTRUCTION. SHOULD THE SUB-GRADE CBR VALUE AND/OR THE RF VALUE BE LESS THAN THE PREDICATED VALUES, ADDITIONAL BASE MATERIAL WILL BE REQUIRED IN ACCORDANCE WITH THE DEPARTMENTAL SPECIFICATIONS. REFER TO THE SAME MANUAL FOR THE NUMBER AND LOCATIONS OF THE REQUIRED SOIL SAMPLES TO BE TESTED.

THE SUB-GRADE SHALL BE APPROVED BY VDOT PRIOR TO PLACEMENT OF THE BASE. BASE SHALL BE APPROVED BY VDOT FOR DEPTH, TEMPLATE AND COMPACTION BEFORE SURFACE IS APPLIED. THE SUBBASE WILL NOT BE INSPECTED BY VDOT PRIOR TO RECEIVING THE CBR TESTS AND SOIL CLASSIFICATIONS. CONTACT VDOT SEVEN (7) DAYS PRIOR TO SCHEDULING PLACEMENT OF AGGREGATE BASE COURSE(S) FOR AN INSPECTION.

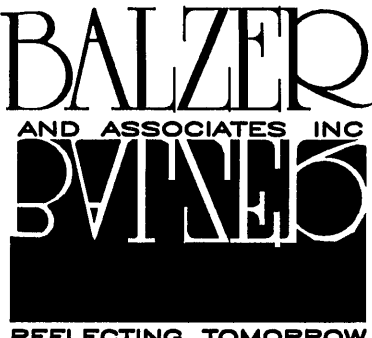
VDOT BACKFILLING AND COMPACTION:

1.) BACKFILL MATERIAL SHALL BE VDOT NO. 21A AGGREGATE, PLACED IN LOOSE LIFTS NOT EXCEEDING 6", AND COMPACTED TO AT LEAST 95% MAXIMUM DRY DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM MOISTURE (V_M-1) WITH THE USE OF MECHANICAL TAMPERS OR VIBRATORY ROLLERS. WATER COMPACTION IS NOT PERMITTED. LOCAL MATERIAL CLASSIFIED AS TYPE I SELECT MATERIAL MAY BE USED AS BACKFILL UPON PRIOR APPROVAL BY THE COUNTY ENGINEER. MATERIAL CLASSIFICATION SHALL BE PERFORMED ON THE ACTUAL SOIL TO VERIFY THAT SOIL MEETS VDOT SPECIFICATIONS FOR TYPE I SELECT MATERIAL BY A QUALIFIED TESTING LABORATORY AND TEST RESULTS SHALL BE CERTIFIED BY A VIRGINIA REGISTERED PROFESSIONAL ENGINEER. DENSITY REQUIREMENTS ARE THE SAME AS ABOVE, HOWEVER, MOISTURE CONTENT FOR SOILS MAY BE WITHIN 20% OF OPTIMUM.

2.) DENSITY AND MOISTURE TESTING IS REQUIRED ON BOTH THE AGGREGATE AND SOIL BACKFILL USED IN ANY TRENCHWORK. ALL TESTING SHALL BE PERFORMED AND CERTIFIED BY A GEOTECHNICAL ENGINEER OR A VDOT CERTIFIED TECHNICIAN. RESULTS SHALL BE PROVIDED TO THE INSPECTOR WITHIN 24-HOURS OF TESTING COMPLETION. THE COST OF ALL TESTING IS THE SOLE RESPONSIBILITY OF THE PERMITEE. THE PERMITEE SHALL SUBMIT WRITTEN TEST RESULTS TO THE INSPECTOR'S OFFICE.

3.) FIELD DENSITY TESTING METHODS SHALL BE APPROVED BY THE COUNTY ENGINEER PRIOR TO PERFORMING ANY TESTING. A PERMITEE THAT PERFORMS MORE THAN TEN (10) EXCAVATIONS A MONTH UNDER THESE STANDARDS MAY SUBMIT A WRITTEN QUALITY CONTROL PLAN TO REDUCE THE NUMBER OF REQUIRED FIELD DENSITY TESTS. THE QUALITY CONTROL PLAN MUST INCLUDE THE EXCLUSIVE USE OF A VDOT-CERTIFIED AGGREGATE. THE QUALITY CONTROL PLAN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR REVIEW AND APPROVAL.

4.) FLOWABLE FILL MAY BE USED AS AN ALTERNATE TO AGGREGATE OR SELECT MATERIAL. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF VDOT SPECIAL PROVISIONS FOR FLOWABLE BACKFILL. THE MATERIAL MUST BE PLANT-CERTIFIED TO PROVIDE A 28-DAY COMPRESSIVE STRENGTH BETWEEN 30 AND 200 PSI. A CERTIFICATE OF MIX DESIGN MUST BE SUBMITTED TO THE INSPECTOR PRIOR TO PLACING THE MATERIAL IN THE TRENCH. A MINIMUM OF FOUR 6 X 12 TEST CYLINDERS SHALL BE TAKEN EVERY 50 CY OF PLACEMENT. CYLINDERS SHALL BE TESTED BY A QUALIFIED TESTING LABORATORY FOR 28-DAY STRENGTH. RESULTS SHALL BE PROVIDED TO THE INSPECTOR'S OFFICE WITHIN 24 HOURS OF TESTING COMPLETION. THE COST OF ALL TESTING IS THE RESPONSIBILITY OF THE PERMITEE. IF THE REPORT INDICATED THE COMPRESSIVE STRENGTHS ARE NOT BETWEEN 30 AND 200 PSI, THE PERMITEE WILL BE RESPONSIBLE FOR REMOVING AND REPLACING THE BACKFILL WITH ACCEPTABLE BACKFILL AND COMPLETING THE RESTORATION OF THE STREET AT NO COST TO THE COUNTY.



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ENVIRONMENTAL & SOIL SCIENCE
WETLAND DELINEATIONS & STREAM EVALUATIONS

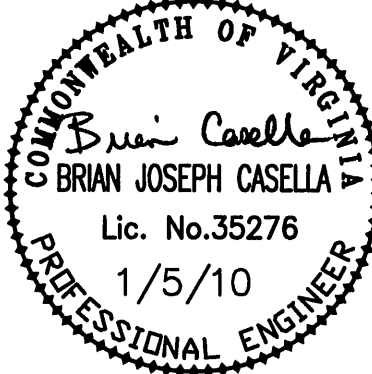
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FAIRWAYS at HANGING ROCK

SECTION 3

CONSTRUCTION DETAILS

CATAWBA DISTRICT
ROANOKE COUNTY, VIRGINIA

DRAWN BY CPB

DESIGNED BY CPB

CHECKED BY BJC

DATE 10/30/2006

SCALE AS NOTED

REVISIONS:

09/09/2008

05/21/2009

11/05/2009

12/09/2009

01/05/2010

SHEET NO.

C-4

JOB NO. R0500377.03