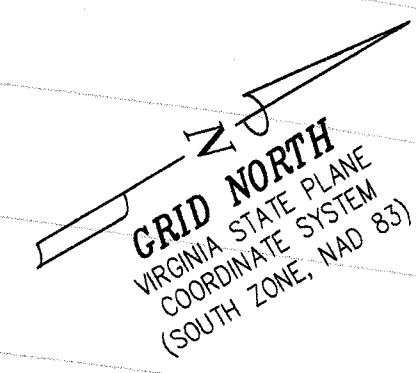


EROSION & SEDIMENT CONTROL MEASURES MAINTENANCE SCHEDULE

E&SC SYMBOL	MAINTENANCE INSTRUCTIONS
CE	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 REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT 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.
SF	SILT FENCES 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 OF A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.  SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.  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.
IP	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 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.  STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
DD	THE MEASURE SHALL BE INSPECTED AFTER EVERY STORM AND REPAIRS MADE TO THE DIKE, FLOW CHANNEL, OUTLET OR SEDIMENT TRAPPING FACILITY, AS NECESSARY. ONCE EVERY TWO WEEKS, WHETHER A STORM EVEN HAS OCCURRED OR NOT, THE MEASURE SHALL BE INSPECTED AND REPAIRS MADE IF NEEDED. DAMAGES CAUSED BY CONSTRUCTION TRAFFIC OR ANY OTHER ACTIVITY MUST BE REPAIRED BEFORE THE END OF EACH WORKING DAY.
ST	SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN VOLUME OF THE TRAP. SEDIMENT REMOVAL FROM THE BASIN SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.  FILTER STONE SHALL BE REGULARLY CHECKED TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. STONE CHOKED WITH SEDIMENT SHALL BE REMOVED AND CLEANED OR REPLACED.  THE STRUCTURE SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION 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.
TO	PERIMETER CONTROLS MUST BE PLACED AROUND THE STOCKPILE IMMEDIATELY; SEEDING OF STOCKPILES SHALL BE COMPLETED WITHIN 7 DAYS OF THE FORMATION OF THE STOCKPILE. IN ACCORDANCE WITH THE STD. AND SPEC. 3.31, TEMPORARY SEEDING, IF IT IS TO REMAIN DORMANT FOR LONGER THAN 30 DAYS (REFER TO MS #1 AND MS #2).
PS	EVEN WITH CAREFUL, WELL-PLANNED SEEDING OPERATIONS, FAILURES CAN OCCUR. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON AN AREA OR HAVE DIED, THESE AREAS MUST BE RESEED IMMEDIATELY TO PREVENT EROSION DAMAGE. HOWEVER, IT IS EXTREMELY IMPORTANT TO DETERMINE FOR WHAT REASON GERMINATION DID NOT TAKE PLACE AND MAKE ANY CORRECTIVE ACTION NECESSARY PRIOR TO RESEEDING THE AREA.
B/M	ALL SOIL STABILIZATION BLANKETS AND MATTING SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, RE-INSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL WHICH TIME THEY BECOME PERMANENTLY STABILIZED; AT THAT TIME AN ANNUAL INSPECTION SHOULD BE ADEQUATE.
DC	VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE, BARRIERS, OR CALCIUM CHLORIDE WILL BE USED AS NECESSARY TO CONTROL DUST ON SITE.
MU	ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUT OR BREAKAGE OCCURS, REINSTALL NETTING OR MATTING AS NECESSARY AFTER REPAIRING DAMAGE TO SLOPE OR DITCH. INSPECTION SHOULD TAKE PLACE UNTIL GRASSES ARE FIRMLY ESTABLISHED. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE THAT MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, REPAIR AS NEEDED.
RWD	TEMPORARY RIGHT-OF-WAY DIVERSIONS SHALL BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE IF NECESSARY. AT LEAST ONCE EVERY TWO WEEKS, WHETHER A STORM HAS OCCURRED OR NOT, THE MEASURE SHALL BE INSPECTED AND REPAIRS MADE IF NEEDED. RIGHT-OF-WAY DIVERSIONS, WHICH ARE SUBJECT TO VEHICULAR TRAFFIC, SHOULD BE RESHAPED AT THE END OF EACH WORKING DAY.

REQUIRED IN ALL DISTURBED AREAS

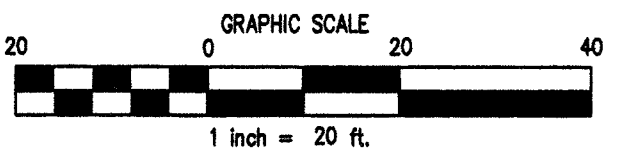
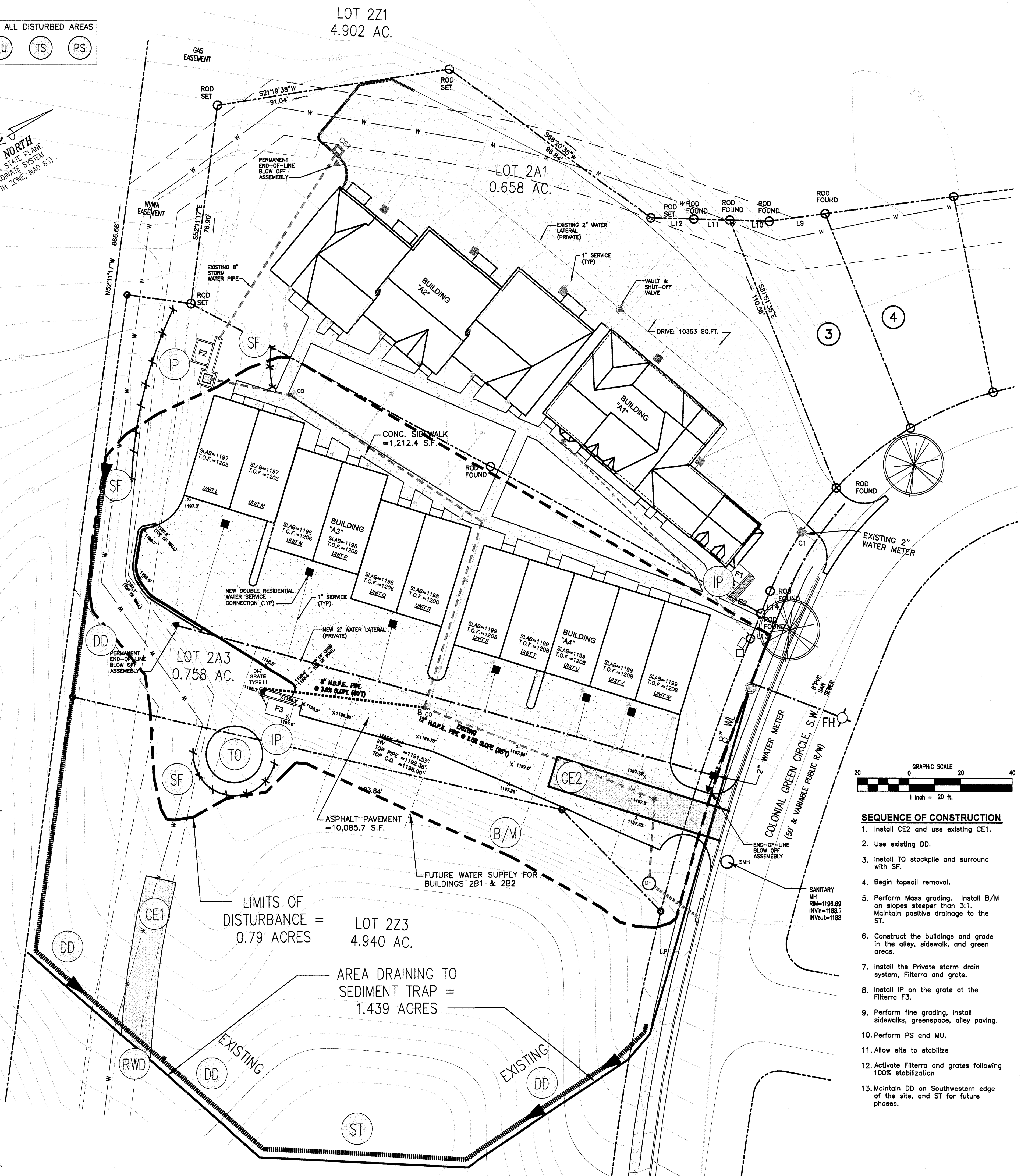
DC MU TS PS



CE	3.02 CONSTRUCTION ENTRANCE
SF	3.05 SILT FENCE
IP	3.07 STORM DRAIN INLET PROTECTION
DD	3.09 TEMPORARY DIVERSION DIKE
RWD	3.11 TEMPORARY RIGHT-OF-WAY DIVERSION
ST	3.13 TEMPORARY SEDIMENT TRAP
TO	3.30 TOPSOILING
TS	3.31 TEMPORARY SEEDING
PS	3.32 PERMANENT SEEDING
MU	3.35 MULCHING
B/M	3.36 SOIL STABILIZATION BLANKET/MATTING
DC	3.39 DUST CONTROL

IMPORTANT NARRATIVE INFORMATION

- A. PROJECT DESCRIPTION:  
LOT 2A3 IS A 0.797 ACRE PARCEL LOCATED IN THE CITY OF ROANOKE, VIRGINIA. THE PROJECT WILL CONSIST OF THE GRADING AND CONSTRUCTION OF THE PROPOSED LOT WITH A NEW ENTRANCE ACCESSING COLONIAL GREEN CIRCLE. THE AREA OF DISTURBANCE FOR THIS PROJECT IS 0.788 ACRES CONTAINED WITHIN A DRAINAGE AREA OF 1.44 ACRES THAT DRAINS TO AN EXISTING SEDIMENT TRAP SIZED FOR A TOTAL DRAINAGE AREA OF 2.03 ACRES. PERMANENT STORMWATER FLOWS WILL BE COLLECTED INTO A FILTERRA UNIT AND TRANSPORTED THROUGH A NEW 8" PIPE TO THE EXISTING PRIVATE SYSTEM INSTALLED IN PHASE 2A2 AND THEN INTO THE EXISTING STORMWATER MANAGEMENT AREA IN THE GREEN THROUGH D2. THE DEVELOPMENT AREA ENVELOPES SOME PRE-GRADED BUILDING PADS, SOME TREE COVER AND UNDERBRUSH, AND GRASS. THE FOLLOWING NARRATIVE WILL PROVIDE FOR THE PROPER DEVELOPMENT OF THE AREA.
- B. EXISTING SITE CONDITIONS:  
THE PROPOSED 0.797 ACRE PARCEL IS PRESENTLY A VACANT PARCEL SURROUNDED BY DEVELOPMENT. AS PART OF THE COLONIAL GREEN MASTER PLAN, THIS PARCEL IS BORDERED ON THE NORTH BY PHASE 2A1 AND 2A2 TOWNHOMES, TO THE SOUTH IS SUNSCAPE APARTMENTS, TO THE WEST IS COLONIAL GREEN OPEN SPACE WHICH IS BORDERED BY ROANOKE COUNTY RESIDENTIAL DEVELOPMENT, AND FINALLY BELOW THE SITE TO THE EAST ARE MORE VACANT LOTS READY FOR FUTURE DEVELOPMENT OF MULTIFAMILY LOTS (LOT 2Z1). STORMWATER ON THE EXISTING SITE DRAINS IN TWO DIRECTIONS. PART OF THE FLOW DRAINS TO THE SOUTHEAST INTO A SWALE AND EXITS THE PROPERTY AT THE SOUTHEASTERN PROPERTY LINE. THE MAJORITY OF THE FLOW IN THE PRE-EXISTING CONDITION ENTERS A STORM DRAIN GRATE ALONG COLONIAL GREEN CIRCLE, THROUGH A SWM FACILITY, AND ULTIMATELY OUT THE SAME LOCATION, IN A SWALE AT THE SOUTHEASTERN PROPERTY LINE ALONG COLONIAL AVENUE. EXISTING SITE CONDITIONS ARE STABILIZED AND CONTAIN TREES, GRASS, AND UNDERBRUSH.
- C. ADJACENT AREAS:  
APPROXIMATELY 0.221 ACRES OF LOT 2Z1 BELOW THIS SITE AND TO THE EAST WILL BE GRADED TO TIE IN PROPOSED GRADES TO EXISTING GRADES. A TOTAL OF 1.44 ACRES OF DRAINAGE AREA EXIST SURROUNDING THE SITE WITHIN THE WATERSHED AREA OF THE SEDIMENT TRAP THOUGH NOT ALL OF THIS AREA WILL BE DISTURBED UNDER THIS PLAN. ABOVE AND BELOW 2A3 ARE STABILIZED DEVELOPED AND UNDEVELOPED AREAS. THERE SHOULD BE NO OTHER ADJACENT AREAS OR PROPERTIES AFFECTED, OTHER THAN THE PROPERTIES CONTAINED HEREIN, AND ESC MEASURES PROPERLY DESIGNED AND INSTALLED WILL ENSURE THEY ARE PROTECTED.
- D. OFF-SITE AREAS:  
THERE WILL BE NO "OFFSITE AREAS" INCLUDED IN THIS PLAN.
- E. SOILS:  
SOILS ARE MADE UP OF SC.D, AND E. THE CHISWELL LITZ COMPLEX RANGING FROM 7-50 PERCENT SLOPES (30% IS THE MAXIMUM ON THIS SITE). GENERALLY, THIS SOIL CONTAINS MODERATE PERMEABILITY WITH RAPID RUNOFF AND HIGH EROSION POTENTIAL. THIS EROSION AND SEDIMENT CONTROL MEASURES ARE VERY IMPORTANT DURING CONSTRUCTION AT THIS LOCATION. THESE SOILS ARE CHARACTERIZED BY LOAM LAYERS SHALLOW AND THEN ROCKY SOFT AND HARD SHALE ANYWHERE FROM 10"-24" DEEP. ADDITIONAL SOIL INFORMATION MAY BE FOUND IN THE E&S NARRATIVE.
- F. CRITICAL AREAS:  
SOME 30% SLOPES ARE CONTAINED ON THE SITE AND ARE WITHIN ADEQUATE FILL DIVERSION AND DIVERSION DIKE AREAS. THESE STEEP SLOPES WILL NOT BE GRADED UNTIL THE E&S MEASURES ARE IN. ALL RESULTING STEEP SLOPES WILL HAVE THE PROPER BLANKETS AND MATTING APPLIED IMMEDIATELY UPON REACHING FINAL GRADING. AN EXISTING URBAN DRAINAGE SWALE WILL BE MOVED DUE TO GRADING ON THE SOUTHERN END OF THE SITE. THE FILL DIVERSION WILL CUT OFF THE MAJORITY OF DRAINAGE TO THAT SWALE DURING CONSTRUCTION AND WHAT LITTLE FLOW REMAINS DURING A RAIN EVENT WILL BE DIVERTED USING THE DIVERSION DIKE. A NEW SCC WILL BE INSTALLED FOR PERMANENT USE TO REPLACE THE EXISTING SWALE.
- G. MINIMUM STANDARDS:  
ALL MINIMUM STANDARDS WILL BE STRICTLY ADHERED TO. PLEASE SEE THE EXPLANATIONS PROVIDED ON SHEET 5, ESC NOTES AND DETAILS PAGE OF THIS PLAN.
- H. PERMANENT STABILIZATION:  
IMMEDIATELY AFTER ALL DISTURBANCE AND GRADING IS COMPLETED, GRASSED AREAS OF THE SITE WILL BE PERMANENTLY STABILIZED THROUGH THE INSTALLATION OF PERMANENT SEEDING. WITHIN ONE YEAR OF STABILIZATION, THE SITE WILL BE INSPECTED AND SAFE AREAS WILL BE RE-ESTABLISHED.



SEQUENCE OF CONSTRUCTION

1. Install CE2 and use existing CE1.
2. Use existing DD.
3. Install TO stockpile and surround with SF.
4. Begin topsoil removal.
5. Perform Mass grading. Install B/M on slopes steeper than 3:1. Maintain positive drainage to the ST.
6. Construct the buildings and grade in the alley, sidewalk, and green areas.
7. Install the Private storm drain system, Filterra and grate.
8. Install IP on the grate at the Filterra F3.
9. Perform fine grading, install sidewalks, greenspace, alley paving.
10. Perform PS and MU.
11. Allow site to stabilize.
12. Activate Filterra and grates following 100% stabilization.
13. Maintain DD on Southwestern edge of the site, and ST for future phases.

Progress Street BUILDERS

Colonial Green  
Phase I - Lot 2A3  
Comprehensive Site Plan  
City of Roanoke, Virginia



DRAWN BY: JMM  
DESIGNED BY: MTJ  
CHECKED BY: MTJ  
DATE: MAY 22, 2013

REVISIONS  
AUG. 01, 2013

APPROVED  
AUG 22 2013

SCALE: SEE PLAN

SHEET No.  
**4**  
EROSION & SEDIMENT CONTROL; STORM WATER MANAGEMENT PLAN