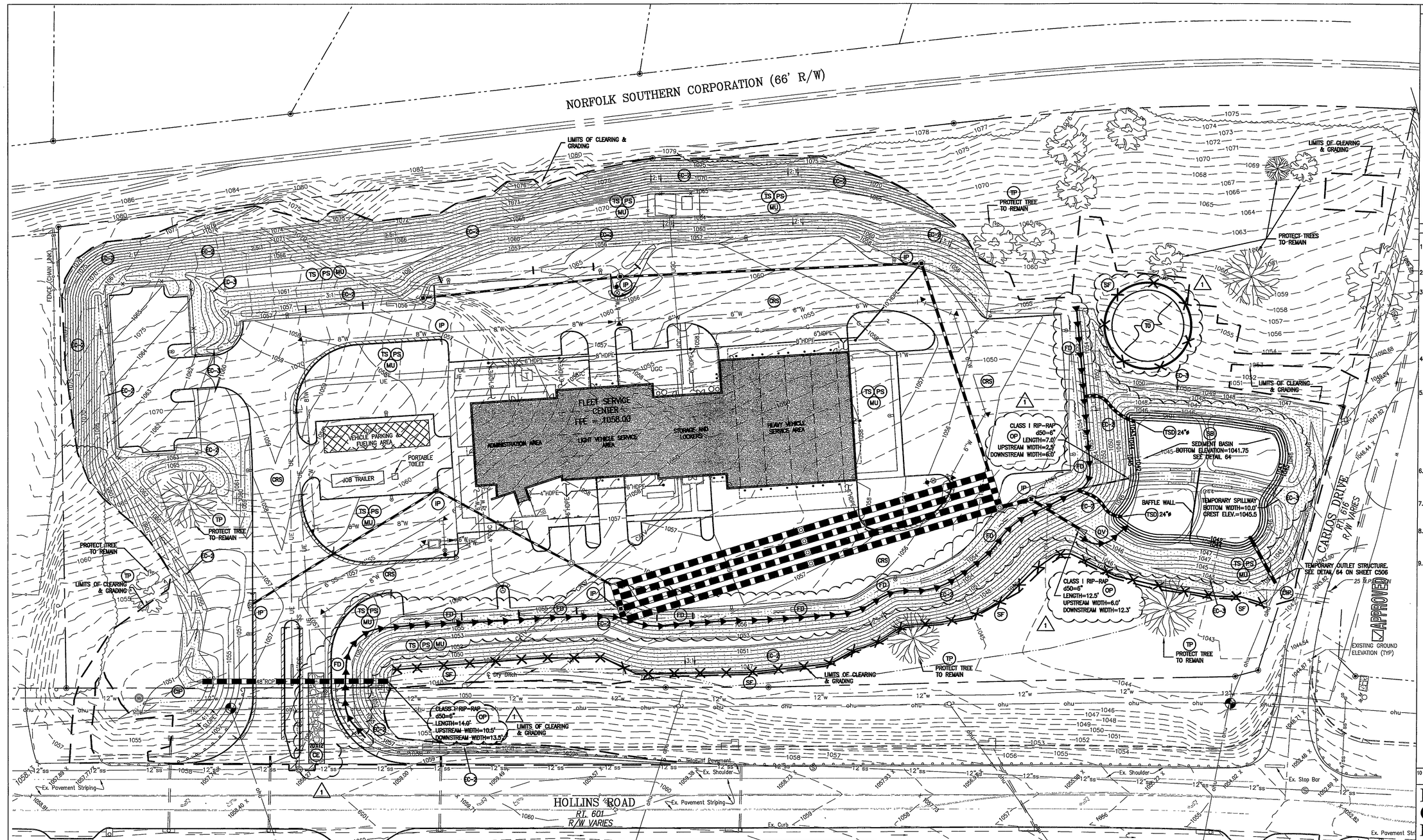

MANAGEMENT STRATEGY AND SEQUENCE OF CONSTRUCTION

1. INSTALL ALL PERIMETER ESC MEASURES (SILT FENCE, TREE PROTECTION, CONSTRUCTION ENTRANCE, ETC) AS INDICATED ON THE PHASE I ESC PLAN.
2. EXCAVATE SEDIMENT BASIN AND INSTALL OUTLET STRUCTURE, BERM, AND EMERGENCY SPILLWAY. INSTALL DEWATERING ORIFICE, BAFFLE, OUTLET AND SPILLWAY AT THE LOCATIONS SHOWN IN DETAIL 64 ON SHEET C506. CONSTRUCTION METHODS SHALL MEET THE REQUIREMENTS IN SECTION 3.14 OF THE VIRGINIA ESC HANDBOOK.
3. DIVERT ALL RUNOFF FROM DENUDED AREAS TO SEDIMENT BASIN. PRIOR TO INSTALLING SITE DRAINAGE PIPES AND STRUCTURES, DIVERT RUNOFF FROM DENUDED AREAS TO SEDIMENT BASIN USING FILL DIVERSIONS (VA ESC HANDBOOK NO. 3.10) AND/OR TEMPORARY SLOPE DRAINS (VA ESC HANDBOOK NO. 3.15). MAINTAIN FILL DIVERSIONS AT THE TOP OF ALL SLOPES THROUGHOUT ALL EARTHWORK OPERATIONS.
4. INSTALL SITE DRAINAGE PIPES AS SOON AS POSSIBLE TO DIRECT FLOWS TO SEDIMENT BASIN. MAINTAIN ADEQUATE INLET PROTECTION AT ALL DRAINAGE INLETS. MAINTAIN ADEQUATE OUTLET PROTECTION AT ALL PIPE OUTLETS.
5. CLEAR AND GRUB SITE. STOCKPILE TOPSOIL IN AN APPROVED LOCATION. SOIL STOCKPILES MUST BE SURROUNDED BY SILT FENCING AND TEMPORARILY SEEDED AS REQUIRED IN SECTION 3.31 OF THE VIRGINIA ESC HANDBOOK.
6. ROUGH GRADE THE SITE.
7. APPLY SOIL STABILIZATION BLANKETS/MATTING AS SLOPES AND DITCHES ARE COMPLETED.
8. AFTER NEW SITE ENTRANCE HAS BEEN GRADED, BUT BEFORE DITCH "I" IS INSTALLED MOVE CONSTRUCTION ENTRANCE FROM THE PHASE I LOCATION TO THE PHASE II LOCATION.
9. WHEN CUT AND FILL OPERATIONS ARE COMPLETED, INSTALL CONSTRUCTION ROAD STABILIZATION IN ALL PARKING AREAS. PERMANENTLY SEED ALL AREAS THAT ARE AT FINAL GRADE. TEMPORARILY SEED ALL AREAS THAT WILL REMAIN UNWORKED FOR 30 DAYS OR MORE.
10. MAINTAIN ALL ESC MEASURES AS NECESSARY THROUGHOUT THE ENTIRE PROJECT. REMOVE EXCESS SEDIMENT FROM SEDIMENT BASIN WHEN CLEANOUT LEVEL IS REACHED, SEE DETAIL 64.
11. COMPLETE CONSTRUCTION OF ALL STRUCTURES (BUILDING, PARKING, SIDEWALKS, UTILITIES, SITE LIGHTING, ETC.)
12. ESTABLISH FINAL GRADES FOR ALL AREAS OF THE SITE. PERMANENTLY SEED AND CULTIVATE A GOOD STAND OF GRASS.
13. DO NOT INSTALL "GRASSED SWALES" UNTIL UPSTREAM AREAS ARE COMPLETELY STABILIZED AND THEIR INSTALLATION HAS BEEN APPROVED BY A/E.
14. INSTALL "GRASSED SWALES" BY EXCAVATING A 3' WIDE TRENCH TO THE PROPER DEPTH. INSTALL GEOTEXTILE FABRIC, UNDERDRAIN AND GRAVEL PER DETAIL 66. CONNECT UNDERDRAIN TO STORMDRAINS. INSTALL SOIL MIX AND CHECKDAMS, SEED AND MULCH SWALES.
15. MAINTAIN SEDIMENT BASIN IN PLACE AND IN GOOD WORKING ORDER UNTIL THE ENTIRE UPSTREAM AREA IS COMPLETELY STABILIZED (EARTHWORK IS COMPLETE, PARKING IS INSTALLED, AND SEEDING IS ESTABLISHED) AND ITS REMOVAL HAS BEEN APPROVED BY A/E AND THE COUNTY OF ROANOKE.
16. UPON A/E AND COUNTY APPROVAL, REMOVE DIVERSION FROM SWALE "K" AND TEMPORARILY PLUG THE 10" BIORETENTION PIPE SO THAT ALL SITE RUNOFF WILL DIVERT AROUND THE SEDIMENT BASIN.
17. REMOVE SEDIMENT BASIN OUTLET STRUCTURE AND ESTABLISH FINAL GRADES ON BERM AND EMERGENCY SPILLWAY.
18. COMPLETELY REMOVE ALL SATURATED SEDIMENT FROM BOTTOM OF SEDIMENT BASIN UNTIL A SOLID ORIGINAL SOIL IS ENCOUNTERED. ESTABLISH FINAL SUB-GRADE FOR THE "BIORETENTION AREA".
19. CONSTRUCT "BIORETENTION AREA". INSTALL ASSOCIATED GEOTEXTILE FABRIC, UNDERDRAIN, SOIL MIX, MULCH, PLANTINGS, ETC. IN ACCORDANCE WITH THIS PLAN AND THE PROJECT MANUAL.
20. REMOVE ALL ACCUMULATED SEDIMENT FROM STORM DRAINAGE PIPES. REMOVE TEMPORARY PLUG FROM 10" BIORETENTION PIPE.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL AREAS OF THE SITE AS DESCRIBED IN THE SPECIFICATIONS AND IN "MAINTENANCE REQUIREMENTS" ON SHEET C505, UNTIL OWNER HAS OCCUPIED THE BUILDING.

ESC LEGEND

PROPOSED	DESCRIPTION
SF	SILT FENCE VA ESC HANDBOOK No. 3.05
CIP	CULVERT INLET PROTECTION VA ESC HANDBOOK No. 3.08
OP	OUTLET PROTECTION VA ESC HANDBOOK No. 3.18
IP	INLET PROTECTION VA ESC HANDBOOK No. 3.07
TS	TEMPORARY SEEDING VA ESC HANDBOOK No. 3.31
PS	PERMANENT SEEDING VA ESC HANDBOOK No. 3.32
CE	CONSTRUCTION ENTRANCE VA ESC HANDBOOK No. 3.02
CRS	CONSTRUCTION ROAD STABILIZATION VA ESC HANDBOOK No. 3.03
EC-2	SOIL STABILIZATION MATTING (TREATMENT 1) VA ESC HANDBOOK No. 3.36
EC-3	SOIL STABILIZATION MATTING (TREATMENT 2) VA ESC HANDBOOK No. 3.36
MU	MULCHING (OVER PERMANENT SEEDING) VA ESC HANDBOOK No. 3.35

ESC LEGEND (CONTD)

PROPOSED	DESCRIPTION
TP	TEMPORARY SEDIMENT BASIN VA ESC HANDBOOK No. 3.38
SB	TEMPORARY SEDIMENT BASIN VA ESC HANDBOOK No. 3.14
CD	ROCK CHECK DAMS VA ESC HANDBOOK No. 3.20
DV	DIVERSION VA ESC HANDBOOK No. 3.12
FD	TEMPORARY FILL DIVERSION VA ESC HANDBOOK No. 3.10
TSD	TEMPORARY SLOPE DRAIN VA ESC HANDBOOK No. 3.15

SEE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

GENERAL EROSION AND SEDIMENT CONTROL NOTES

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 A VAC50-30 Erosion and Sediment Control Regulations.

ES-2: The plan approving authority must be notified one week prior to the preconstruction 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 commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan approving authority.

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 runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately. Virginia Erosion and Sediment Control Regulations are found in section "4VAC50-30" of the Code of Virginia.

TOTAL DISTURBED AREA = 7.4 Ac.

1" = 30'-0" (30' 20' 10' 0 30' 60')

KEY PLAN

GENERAL NOTES

1. THIS EROSION AND SEDIMENT CONTROL (ESC) SHEET SHOWS ESC MEASURES WHICH ARE TO BE INSTALLED BEFORE SITE CLEARING AND GRADING BEGINS.
2. REFER TO SHEETS C504 AND C505 FOR EROSION AND SEDIMENT CONTROL DETAILS AND DESIGN DATA.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN THIRTY (30) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
4. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURE SHOWN HEREON AND SHALL COMPLY WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION.
5. PERMANENT SEEDING APPLIED TO ALL MECHANICALLY STABILIZED SLOPES AND SLOPES STEEPER THAN 3:1 SHALL MEET THE FOLLOWING MIXTURE:

POUNDS PER ACRE	SEED TYPE
10B	KENTUCKY 31
2	RED TOP
20	SEASONAL NURSE CROP ANNUAL RYE, FOXTAIL MILLET, & WINTER RYE MIX)
20	CROWN VETCH

6. SEDIMENT TRAPS AND/OR BASINS SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
7. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
8. PERMANENT SEEDING (3.32) AND MULCHING (3.35) SHALL BE APPLIED ON ALL DISTURBED SURFACES NOT INDICATED TO BE HARDSCAPED, SODDED, OR LANDSCAPED. SEE L-1.1 FOR SOD AND MULCH BED LOCATIONS.
9. THE LOCATION OF ALL OFF-SITE FILL OR BORROW AREAS ASSOCIATED WITH THE CONSTRUCTION PROJECT WILL BE PROVIDED TO ROANOKE COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT. AN EROSION AND SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THIS AREA.

SPECTRUM DESIGN
architects | engineers
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ROANOKE • MARION

FLEET SERVICE CENTER
ROANOKE COUNTY
5253 Old Hollins Rd
Roanoke, VA 24019
IFB-0898

SPECTRUM DESIGN PROJECT NO. 06118

CERTIFICATION STATEMENT:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

COMMONWEALTH OF VIRGINIA
MICHAEL A. RAKES
No. 022939
PROFESSIONAL ENGINEER

OWNER REPRESENTATIVE | TITLE | DATE

DATE	27 DECEMBER 2007
DESIGN ARCHITECT	WWH
PROJECT ARCHITECT	
PROJECT ENGINEER	MAR
CHECKED BY	MF
DRAWN BY	

REVISIONS	NUMBER	DATE
COUNTY COMMENTS 2	1	04/10/2008

SHEET TITLE
ESC AND SWPP PLAN PHASE II

C106