EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A RETAIL FURNITURE STORE AND RELATED SITE IMPROVEMENTS INCLUDING PARKING LOTS, LOADING AREA AND UTILITIES.

EXISTING SITE CONDITIONS
THE SITE IS MODERATELY SLOPED, GRASS COVERED WITH EXISTING LANDSCAPING ALONG FERNCLIFF AVENUE. THE SITE DRAINS BOTH OVERLAND AND THROUGH EXISTING STORM DRAINS TO THE HOME DEPOT STORMWATER MANAGEMENT FACILITY.

THE SITE IS BORDERED TO THE NORTHEAST BY FERNCLIFF AVENUE, TO THE SOUTHEAST BY DOLLAR TREE, TO THE SOUTHWEST BY HOME DEPOT, AND TO THE NORTHWEST BY AN APARTMENT COMPLEX.

OFFSITE AREAS NO OFFSITE FILL OR BORROW SITES ARE COVERED BY THIS EROSION AND SEDIMENT CONTROL PLAN. THE CONTRACTOR SHALL PROVIDE TO THE CITY THE LOCATION OF OFF-SITE FILL AREAS AND HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR THOSE AREAS.

CRITICAL AREAS
THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO AREAS ADJACENT TO THE HOME DEPOT PARKING LOT AND EXISTING ACCESS DRIVES TO PREVENT SEDIMENT FROM ENTERING THOSE AREAS.

SOIL INFORMATION
SOIL CONSERVATION SERVICE MAPPING INDICATES SITE SOIL CLASSIFICATIONS 5C, CHISWELL-LITZ COMPLEX, 18B, FREDERICK SILT LOAM, AND 48B, TUMBLING LOAM. ALL SOILS SHARE THE CHARACTERISTICS OF BEING DEEP AND WELL DRAINED WITH MODERATE PERMEABILITY, MEDIUM EROSION POTENTIAL, AND MODERATE SHRINK-SWELL POTENTIAL.

EROSION AND SEDIMENT CONTROL MEASURES AND MAINTENANCE

CONSTRUCTION ENTRANCE (3.02) - A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED ONTO EXISTING ROADS.

SILT FENCE (3.05) — SILT FENCE WILL BE INSTALLED TO FILTER SEDIMENT—LADEN WATER BEFORE IT LEAVES THE CONSTRUCTION AREA.

INLET PROTECTION (3.07) — INLET PROTECTION WILL BE INSTALLED AROUND NEW AND EXISTING STORM DRAIN INLETS AS INDICATED ON PLAN TO FILTER SEDIMENT BEFORE RUNOFF ENTERS DRAIN.

<u>DIVERSION DIKE (3.09)</u> — DIVERSION DIKES WILL BE INSTALLED TO DIVERT CLEAN WATER AROUND THE CONSTRUCTION SITE AND SEDIMENT LADEN RUNOFF INTO THE SEDIMENT BASIN.

TEMPORARY SEDIMENT TRAP (3.13) — TEMPORARY SEDIMENT TRAPS WILL BE INSTALLED TO ALLOW SEDIMENT TO SETTLE OUT OF THE RUNOFF PRIOR TO EXITING THE SITE.

OUTLET PROTECTION (3.18) — OUTLET PROTECTION WILL BE INSTALLED AROUND NEW AND EXISTING STORM DRAIN OUTLETS AS INDICATED ON PLAN TO PREVENT SCOUR.

<u>TEMPORARY SEEDING (3.31)</u> — TEMPORARY SEEDING WILL BE USED TO STABILIZE SOIL WHEN GRADING OPERATIONS ARE SUSPENDED FOR MORE THAN 7 DAYS.

<u>PERMANENT SEEDING (3.32)</u> — PERMANENT SEEDING WILL BE APPLIED AS SOON AS THE SITE OR PORTIONS OF THE SITE ARE BROUGH TO FINAL GRADE.

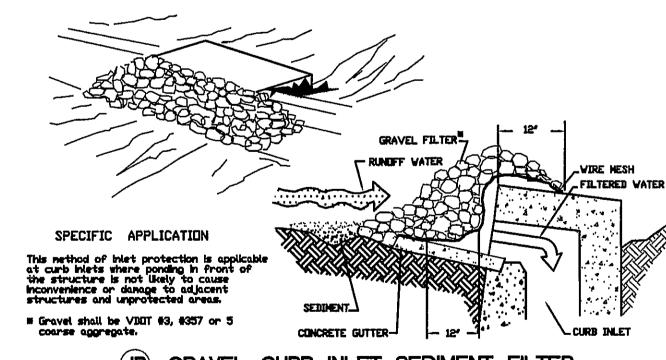
MULCHING (3.35) - FOR THIS PROJECT MULCHING IS REQUIRED FOR BOTH TEMPORARY AND PERMINENT SEEDEDING AREAS. MULCHING HELPS PREVENT EROSION OF EXPOSED SOIL AND FOSTERS GROWTH OF VEGITATION BY INCREASING AVAILABLE MOISTURE AND INSULATING FROM EXTREMES OF HEAT AND COLD.

ALL AREAS ONSITE WHICH WILL NOT RECEIVE BUILDINGS OR PAVEMENT MUST RECEIVE PERMANENT SEEDING AS SOON AS THOSE AREAS REACH FINAL GRADE. FOR PERMANENT SEEDING SPECIFICATIONS PLEASE SEE SPECIFICATIONS ON THIS SHEET.

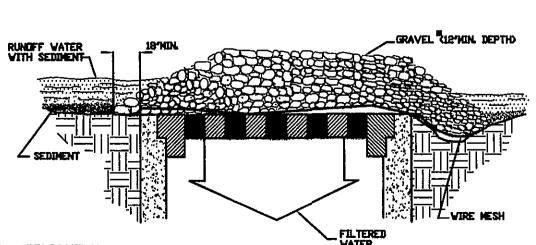
STORMWATER MANAGEMENT

STORMWATER MANAGEMENT HAS BEEN ACCOMPLISHED BY THE USE OF THE EXISTING HOME DEPOT STORMWATER MANAGEMENT FACILITY. FULL BUILD-OUT OF THIS SITE WAS INCLUDED IN THE ORIGINAL POND DESIGN.

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BI-WEEKLY AND AFTER EVERY RUNOFF PRODUCING RAINFALL. A LOG OF DATES AND INSPECTIONS SHALL BE KEPT. ANY DEFICIENCIES THAT ARE FOUND SHALL BE CORRECTED IMMEDIATELY. ACCUMULATED SEDIMENT AT TRAPPING MEASURES SHALL BE ROUTINELY REMOVED.
- 2. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS REQUIRED TO ACHIEVE A GOOD STAND OF GRASS. IN PARTICULAR, THE DIVERSION DIKES SHALL BE INSPECTED REGULARLY.
- 3. THE CONSTRUCTION ENTRANCES SHAL BE CHECKED REGULARLY TO ENSURE THAT MUD IS NOT TRANSPORTED ONTO THE ADJACENT ROADS. THE STONE SHALL BE REMOVED, CLEANED OR REPLACED AS REQUIRED FOR THE CONSTRUCTION ENTRANCE TO FUNCTION PROPERLY.



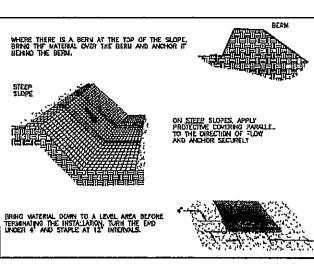
GRAVEL CURB INLET SEDIMENT FILTER

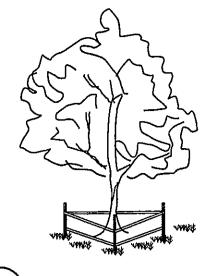


This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.

Gravel shall be VDOT #3, #357 or #5 coarse aggregate.

(IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER







TREE PROTECTION

CONSTRUCTION SEQUENCE Contractor's Certified Responsible Land Disturber shall be named at and attend the pre-construction

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meeting and provide a copy of his RLD Certificate thereat. Contractor shall apply for DEQ Land Disturbance Permit at least two (2) days prior to land disturbance and provide the Roanoke City Department of Planning Building and Economic Development a copy of said

permit within five (5) days of issuance. install Construction Entrance at loading dock area as the first step in the construction process. Install Sediment Traps along with perimeter controls including Silt Fence and Diversion Dykes.

Grading operations to be completed in small managable areas according to drainage patterns. Areas to be cut and filled are to be cleared and graded in phases. This phasing will be done to minimize the length of time areas are subject to erosion. All perimeter erosion and sediment control measures shall be installed

install storm drains from G to A and P TO H along with their inlet and outlet protections, and construct

prior to beginning grading operations in the affected areas.

Temporary erosion and sediment control measures shall be removed after those affected areas have been * SEE PLATE 3.13-1 brought to final grade and permanently stabilized with improvements or established vegetation.

GENERAL ESC 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 VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS, LATEST EDITION. THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS ARE FROM THE VIRGINIA UNIFORM CODING SYSTEM FOR ESC PRACTICES.

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

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED IN ADVANCE OF THE WORK THEY ARE INTENDED TO PROTECT. THIS INCLUDES CLEARING. IN NO CASE DURING CONSTRUCTION SHALL RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND NARRATIVE, AS WELL AS A COPY OF THE LAND DISTURBING PERMIT, SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR WILL DELIVER THESE MATERIALS AT THE ONSITE PRECONSTRUCTION

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 FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6: THE APPROVING AUTHORITY MAY ADD TO, DELETE, CHANGE, OR OTHERWISE MODIFY CERTAIN ESC MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR NSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING

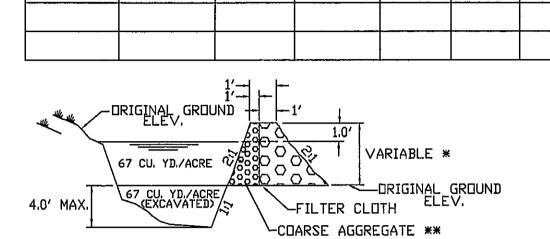
ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING THE LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEWATERING OPERATION, 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.

EROSION AND SEDIMENT CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE						
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST		
CONSTRUCTION ENTRANCE	EA					
SILT FENCE	ᄕ			:		
INLET PROTECTION	EA			·		
TEMPORARY DIVERSION DIKE	LF					
SEDIMENT TRAP	EA					
TEMPURARY SEEDING	AC					
PERMANENT SEEDING	AC					
TREE PROTECTION	EA					
SUB-TOTAL	; · · · · · · · · · · · · · · · · · · ·			\$		
10% CONTINGENCY				\$		
TOTAL PROJECT COST				\$		



TEMPORARY SEDIMENT TRAP DATA

STURAGE (C.Y.)

BOTTOM OF WET: 56' x 1:

TOP OF WET: 68.2' x 26.2

TOP OF DRY: 75.4' x 33.4

BOTTOM OF WET: 53' x 23

TOP OF WET: 65' x 35'

TOP OF DRY: 72.6' x 42.6

284

378

12.6

16.8

1.8

1.9

2.8

2.9

3105

3,03

3,05

3.07

3,08

3.09

REQ'D

281

375

DRAINAGE AREA (ACRES)

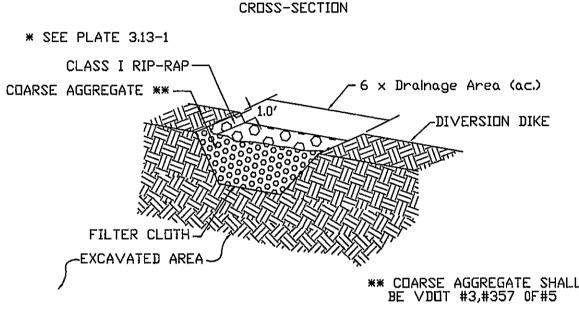
2.1

2.8

STRUCTURE

STI

ST2



SEDIMENT TRAP

THIS APPLIES TO AREAS LESS THAN 3.0 ACRES. FOR AREAS LARGER THAN 3.0 ACRES A SEDIMENT BASIN IS REQUIRED.

TEMPORARY STABILIZATION

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

TEMPORARY SEEDING MIXTURE

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT. 1 — FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI—FLORUM)	50 - 100
	CEREAL (WINTER) RYE (SECALE CEREALE)	
FEB. 16 — APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60 - 100
MAY. 1 — AUG. 31	GERMAN MILLET (SETARIA ITALICA)	50

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING WITHIN 7 DAYS OR IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING WILL BE DONE ACCORDING TO STANDARD AND SPECIFICATION 3.32 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH STRAW MULCH.

PS PERMANENT SEEDING MIXTURE

TYPE A 15 OCTOBER TO 1 FEBRUARY K-31 FESCUE ● 5 LB / 1000 SF BORZY WINTER RYE ● 1/2 LB / 1000 SF 1 FEBRUARY TO 1 JUNE K-31 FESCUE • 5 LB / 1000 SF ANNUAL RYE • 1/2 LB / 1000 SF 1 JUNE TO 1 SEPTEMBER K-31 FESCUE • 5 LB / 1000 SF GERMAN MILLET • 1/2 LB / 1000 SF

TYPE B (SLOPES 3:1 OR STEEPER) 15 MARCH TO 1 MAY CROWN VETCH • 1/2 LB / 1000 SF PERENNIAL RYEGRÁSS • 1/2 LB / 1000 SF RED TOP **0** 1/8 LB / 1000 SF 15 AUGUST TO 1 OCTOBER CROWN VETCH • 1/2 LB / 1000 SF PERENNIAL RYEGRASS • 1/2 LB / 1000 SF RED TOP • 1/8 LB / 1000 SF

1 SEPTEMBER TO 15 OCTOBER K-31 FESCUE • 5 LB / 1000 SF ANNUAL RYE • 1/2 LB / 1000 SF

140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE FERTILIZER: 5-20-10 • 25 LB / 1000 SF

38-0-0 ● 7 LB / 1000 SF IF REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING:

INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED. MULCHING. MAINTENANCE OF NEW SEEDLINGS. AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED By the inspector.

SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. Maximum Seeding Depth Shall be 1/4 inch.

			$1 \bigcirc 1$	
	3.10	TEMPORARY FILL DIVERSION	FD	
	3.11	TEMPORARY RIGHT-OF-WAY DIVERSION	RWD	Ø∧D
	3.12	DIVERSION	DV)	①V
	3.13	TEMPORARY SEDIMENT TRAP	ST	
	3.14	TEMPORARY SEDIMENT BASIN	(ZB)	
	3.15	TEMPORARY SLOPE DRAIN	TSD	(<u>D</u>)
	3.16	PAVED FLUME	PF	
	3,17	STORMWATER CONVEYANCE CHANNEL	SCC	
	3,18	OUTLET PROTECTION	P	
	3.19	RIPRAP	RR	
	3.20	RDCK CHECK DAMS	CB)	-)-)-
Í	3.21	LEVEL SPREADER	LS	
	3,22	VEGETATIVE STREAMBANK STABILIZATION	[VSS]	(B)
	3.23	STRUCTURAL STREAMBANK STABILIZATION	(222)	
	3.24	TEMPORARY VEHICULAR STREAM CROSSING	Vsc	
	3,25	UTILITY STREAM CROSSING	Usc	
	3,26	DEWATERING STRUCTURE	DS	
	3 27	TURBIDITY CURTAIN	(3)	DX
	3.28	SUBSURFACE DRAIN	SD)	
	3,29	SURFACE ROUGHENING	SR	SR -
	3,30	TOPSOILING	<u>_</u>	 10
	3,31	TEMPORARY SEEDING	TS	(15)
	3.32	PERMANENT SEEDING	PS	PS
	3,33	SODDING	SD	\$10
	3.34	BERMUDA GRASS AND ZUYSIAGRASS ESTABLISHMENT	E	3 nR
	3.35	MULCHING	MU	(41)
	3.36	SDIL STABILIZATION BLANKETS AND MATTING	BM	TREAT, 1 TREAT, 2
	3.38	TREE PRESERVATION AND PROTECTION](TP)	

TILE

TEMPORARY GRAVEL

CONSTRUCTION ENTRANCE

STABILIZATION

SILT FENCE

STORM DRAIN

INLET PROTECTION

CULVERT INLET PROTECTION

TEMPORARY DIVERSION DIKE

CONSTRUCTION ROAD

SAFETY FENCE

NOTE:

EROSION AND SEDIMENT CONTROL MEASURES FOR SITE GRADING HAVE BEEN APPROVED WITH PLANS ENTITLED "GRADING AND EROSION CONTROL PLAND FOR SCHEWELS FURNITURE STORE," DATED FEBRUARY 7, 2007 AND ASSOCIATED WITH LAND DISTURBING PERMIT #LD070020. ADDITIONAL INLET PROTECTION IS SHOWN ON THIS PLAN TO ACCOMODATE FULL SITE DEVELOPMENT.

PREPARED FOR URNITURE H

P.C.

SYMBOL

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LUMSDEN ASSO ENGINEERS-SURVEY ROANOKE, VIRGINIA

THOMAS C. DALE

8/0/07

SEDIMEN ETAILS

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August 6, 200 NO SCALE

OMMISSION NO: SHEET 8 OF 9