

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

SEDIMENT CONTROL and revisions thereto.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector

7. Site Analysis: Total Area of Site- 2.634 Acres Area Disturbed- 0.6159 Acres/ 26.830 S.F. Area to be roofed or paved- 0.1562 Acres/ 6.805 S.F. Area to be vegetatively stabilized- 0.4597 Acres/ 20.025 S.F. Total Cut- 350 Cu Yds. Total Fill- 350 Cu Yds. Offsite waste/borrow area location- NONE

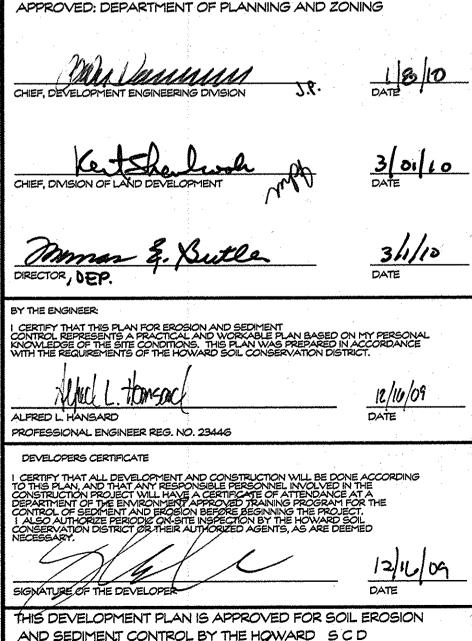
8. Any sediment control practice, which is disturbed by grading activity for placement of utilities, must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each workday, whichever is

Professional Cartilication, I hombly contify that those documents were prepared or approved by ms, and first t am a duly ilconsed professional angineer under the laws Ucaras No. 22,732 Exometer Police 05 Jun 2016 FOR AS POULLT



STANDARDS AND SPECIFICATIONS FOR TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following: i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless. topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel,

sticks, roots, trash, or other materials larger that 1 «" in diameter. ii. Topsoil must be free of plants or plant parts such as bermuda grass, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified. iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres: i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following: a) pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b) Organic content of topsoil shall be not less than 1.5 percent by weight. c) Topsoil having soluble salt content greater than 500 parts per million shall

d) No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials. Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed crosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil. iv. preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the

formation of depressions or water pockets. v. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime

specified below: i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following

and commercial fertilizer, composted sludge and amendments may be applied as

a) Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06. b) Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent

phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c) Composted sludge shall be applied at a rate of 1 ton/1,000 square feet. ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6' IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES

ABOUT 4' DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6'.

2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING

3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE

4. STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2

5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF

THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4".

SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA

MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.

OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER

SPACED 6' APART IN A STAGGERED PATTERN ON EITHER SIDE.

SECURED WITH 2 DOUBLE ROWS OF STAPLES.

EFFECTED BY THE FLOW MUST BE KEYED-IN.

6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY

BETWEEN STAPLES.

EROSION CONTROL MATTING

CROSS-SECTION

STAPLE OUTSIDE EDGE OF MATTING ON 2' CENTERS

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONGLIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING. CISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

PREFERRED- APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS,/1000 SQ, FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ. FT.)

2) ACCEPTABLE- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS 1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING- FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST THROUGH OCTOBER 15. SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ. FT.) OF KENTUCKY 31" TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS. KENTUCKY 31" TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.5 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS, DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28. PROTECT SITE BY: OPTION (1) © 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2)- USE SOD. OPTION (3)- SEED WITH 60 LBS./ACRE KENTUCKY 31" TALL FESCUE AND MULCH WITH 2 TON/ACRE WELL-ANCHORED STRAW.

MUI.CHING- APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING A MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1070 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES OF 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE- INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING IF NOT PREVIOUSLY LOOSENED.

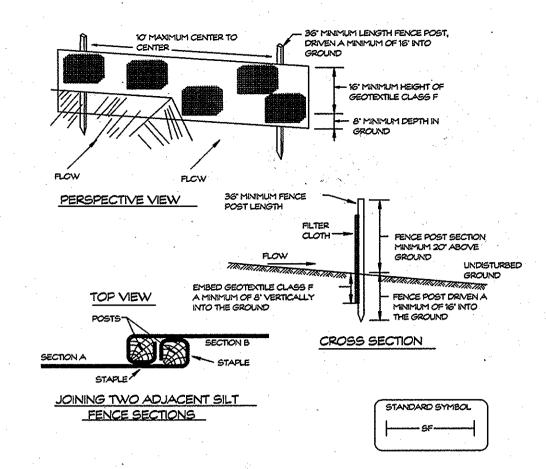
SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./ 1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 15. SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ. FT.) FOR THE PERIOD OF MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.7 LBS./1000 SQ.FT.) FOR THE PERIOD OF NOVEMBER 16 THROUGH NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRÉ (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL. PER ACRE (8 GAL 1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL . EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

DETAIL 22 - SILT FENCE



Construction Specifications

1. FENCE POSTS SHALL BE A MINIMUM OF 36' LONG DRIVEN 16' MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 18" X 18" SQUARE (MINIMUM) CUT, OR 18" DIAMETER (MINIMUM] ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE 2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES

TENSILE STRENGTH 50 LBS/IN (MIN.) TEST: MSMT 509 TENSILE MODULUS 20 LBS/IN (MIN.) PLOW RATE 03 GAL FT / MINUTE (MAX.) TEST: MSMT 322

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED,

4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN

Silt Fence Design Criteria

Slope Steepness	Slope Length	Silt Fence Length	
Patter than 50:1	unlimited	unimited	
50:1 to 10:1	125 feet	1,000 feet	
10:1 to 5:1	100 feet	750 feet	
5:1 to 3:1	60 feet	500 feat	
3:1 to 2:1	40 feet	250 feet	
2:1 and steeper	20 feet	125 feet	

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATIO) SYSTEM, SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS A SILT FENCE MAY BE THE ONLY PERMETER CONTROL

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT. (1 DAY)

2. INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN. (1 DAY)

3. CONSTRUCT DWELLING. (90 DAYS)

4. FINE GRADE LOT AND INSTALL DRIVEWAY. (1 DAY)

5. INSTALL PERMANENT SEEDING AND MULCHING. (1 DAY)

6. INSTALL LANDSCAPING. (1 DAY)

7. ONCE LOT IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED BY E & S INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL DEVICES. (2 DAYS)

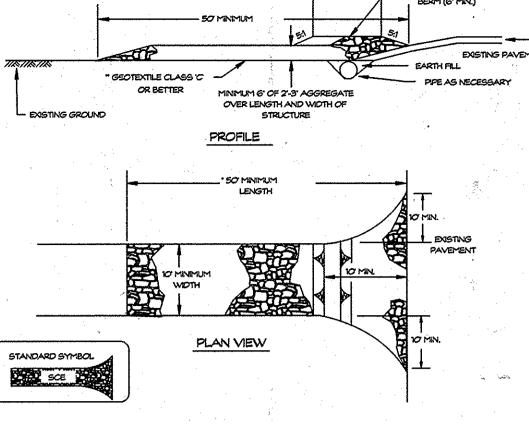
STOCKPILE / TOPSOIL NOTES

1. STOCKPILING WILL NOT BE ALLOWED ON ANY IMPERVIOUS AREA.

2. ALL STOCKPILES LEFT AT THE END OF THE DAY WILL NEED TO BE TEMPORARILY STABILIZED UNTIL THEY ARE AGAIN DISTURBED UNLESS THEY ARE WITHIN EXISTING PERIMETER SEDIMENT CONTROLS.

3. ALL STOCKPILE AREAS SHALL BE CONTINED WITHIN PERIMETER CONTROLS. IN THE EVENT THAT STOCKPILE AREAS MUST BE LOCATED OUTSIDE DISTURBED AREAS. THE LOCATION SHALL BE AS DIRECTED BY THE INSPECTOR IN THE FIELD.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



1. LENGTH - MINIMUM OF 50 (30 FOR SINGLE RESIDENCE LOT).

2, WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING

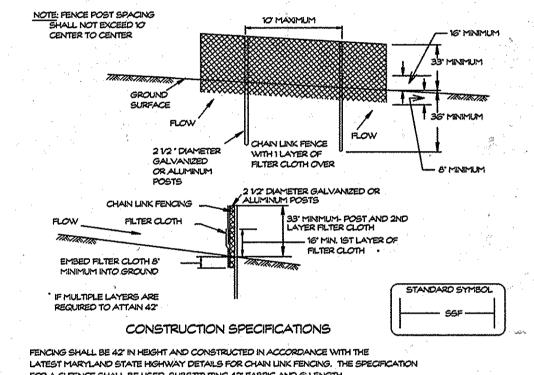
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. "THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.

4. STONE - CRUSHED AGGREGATE (2' TO 3') OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST & DEEP OVER THE LENGTH AND WIDTH OF THE

5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STARLIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 51 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6' MINIMUM WILL BE REQUIRED.

6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCION ENTRANCE.

DETAIL 33 - SUPER SILT FENCE



OR A 6' FENCE SHALL BE USED, SUBSTITUTING 42' FABRIC AND 6' LENGTH

2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE PENCE

3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION

4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8' INTO THE GROUND.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED

6 MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN BULGES

7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR

> FLOW RATE 03 GALATT MINUTE (MAX.) TEST: MSMT 322 FILTERING EFFICIENCY 75% (MIN.) DESIGN CRITERIA

SLOPE LENGTH SILT FENCE LENGTH

SLOPE	STEEPNESS	(MAXIMUM)	(MAXIMUM)	
0-10%	0-101	UNLIMITED	UNLIMITED	
10 - 20%	10:1 - 5:1	200 FEET	1,500 FEET	
20 - 33%	51 - 31	1000 FEET	1,000 FEET	
33 - 50%	31 - 21	100 FEET	500 FEET	
50%+	21+	50 FEET	250 FEET	2
DATE		PEVISION		

BY

SINGLE FAMILY RESIDENTIAL COLVIN PROPERTY PARCELS 840 & 315

SITE DEVELOPMENT PLAN

STORMWATER MANAGEMENT PLAN AND DETAILS

DEED REFERENCE: 10333/651

TAX MAP: 38 BLOCK: 9 PARCELS: 840 & 315 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

County File No. SDP-08-098 (WP-10-008)

FOVERLAP OF MATTING STRIPS WHERE TWO OR MORE STRIP WIDTHS ARE REQUIRED. ATTACH STAPLES ON 18" CENTERS STAPLE OUTSIDE EDGE OF MATTING ON 2' CENTERS TYPICAL STAPLES NO. 11 GAUGE WIRE

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 23446, EXPIRATION DATE: AUGUST 28, 2010 WESTMINSTER OFFICE: 439 East Main Street Vestminster, MD 21157-5539 (410) 848-1790 FAX (410) 848-1791 FREDERICK OFFICE: 445 Progress Drive, Suite E Frederick, MD 21701-4879 (301) 662-1799 FAX (301) 662-8004 Alfred L. Hansard APRIL 10, 2008 BEP CLSI Drawn By: Burveyed By: 2006102

650-S

Computed By: AGM Checked By:

WATER CONTRACT NO.

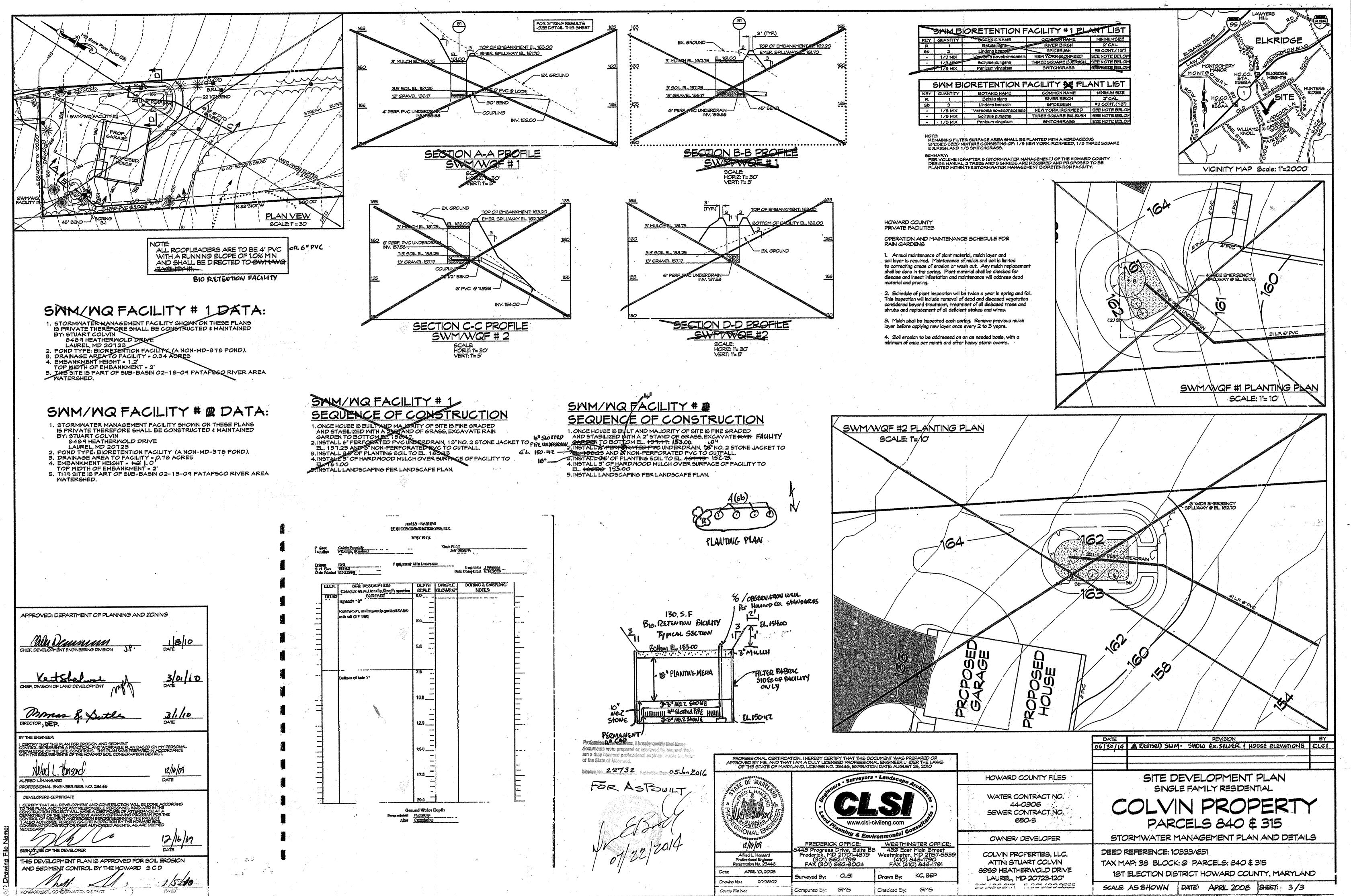
HOWARD COUNTY FILES

COLVIN PROPERTIES, LLC. ATTN: STUART COLVIN 8989 HEATHERWOLD DRIVE LAUREL, MD 20723-1201 301.490.9171 F: 301.490.3555

44-0906 SEWER CONTRACT NO.

OWNER/ DEVELOPER

DATE: APRIL 2008 SHEET: 2 / 3



County File No: SDP-08-098 (WP-10-008)