

DESIGN NARRATIVE:

The site was analyzed as woods in good condition and a target RCN was determined. A target rainfall depth treatment (Pe) was determined based on the measured impervious areas and HSG soil types. The target Pe for this site is 1.1 inches. The target Pe was treated using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual, as amended by Maryland's Stormwater Management Act of 2007. The selected methods include Rooftop and Non-Rooftop disconnects, a Grass Swale and Micro-bioretentation facilities.

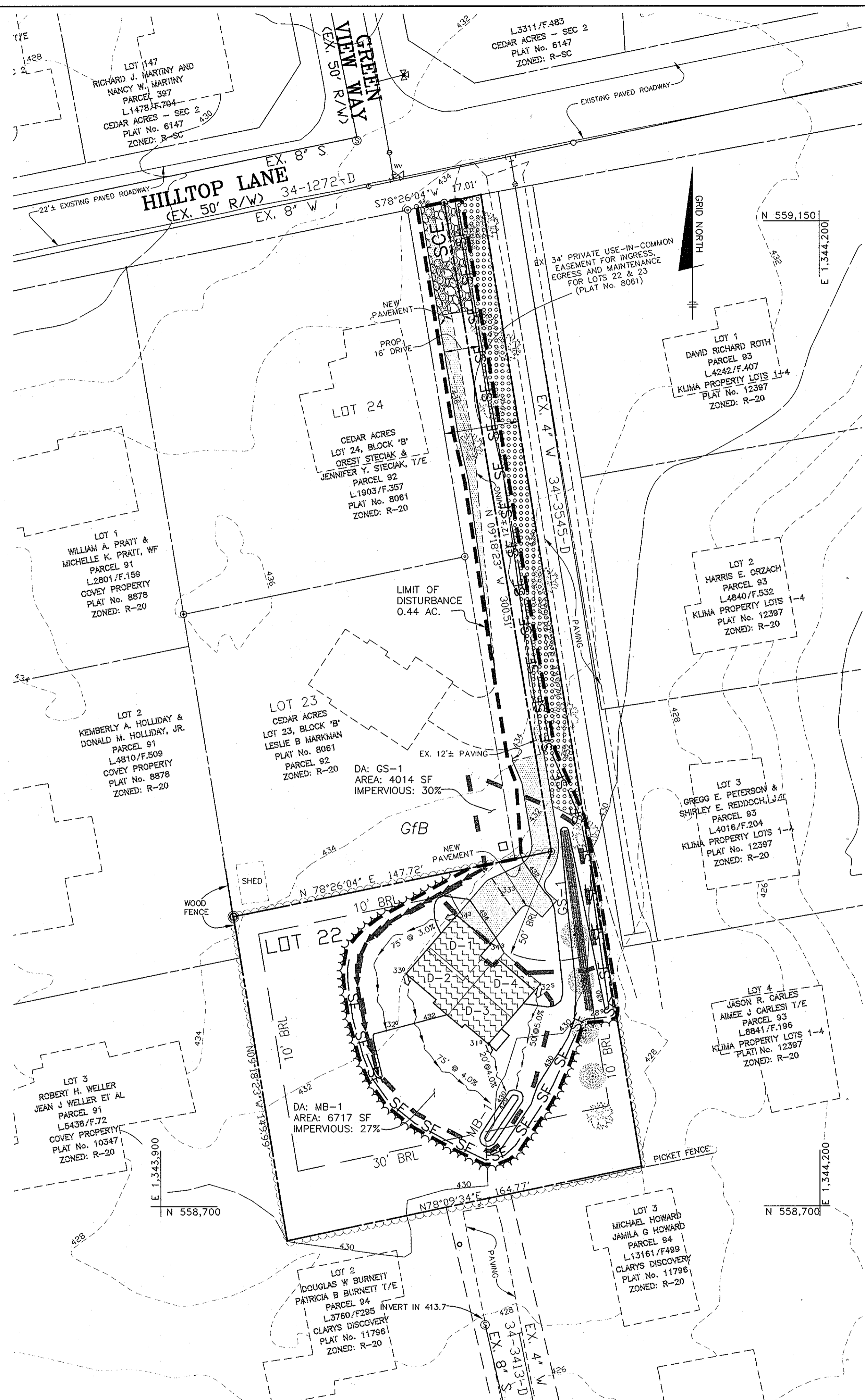
This site is located near the top of a ridge, and is comprised of very moderate slopes. The lot is generally tree covered, but has no streams, wetlands, or steep slopes. A minimum of trees will be removed, a moderately sized house will be constructed, and the minimum size driveway will be provided, to protect as much natural area as possible.

Non-Rooftop disconnect methods will be used to treat the new widening for the common driveway. The receiving area will adequately treat the new impervious and much of the existing driveway. The rooftop of the house will be treated by disconnects of various lengths. The remaining treatment will be provided by a small micro-bioretentation facility. Due to the limited elevation changes, the facility will be dewatered by an overdrain or a stone window. The front driveway will be captured and conveyed through a grass swale for treatment. Outfalls generally correspond with the natural drainage patterns for the site.

Sediment and erosion controls have been designed based on the 1994 Maryland Specifications for Soil Erosion and Sediment Control. Erosion control matting and silt fence will be used to prevent runoff containing unacceptable levels of TSS from leaving the site and entering the adjacent wetlands during the construction. It will be the obligation of the contractor to install, inspect and maintain these practices.

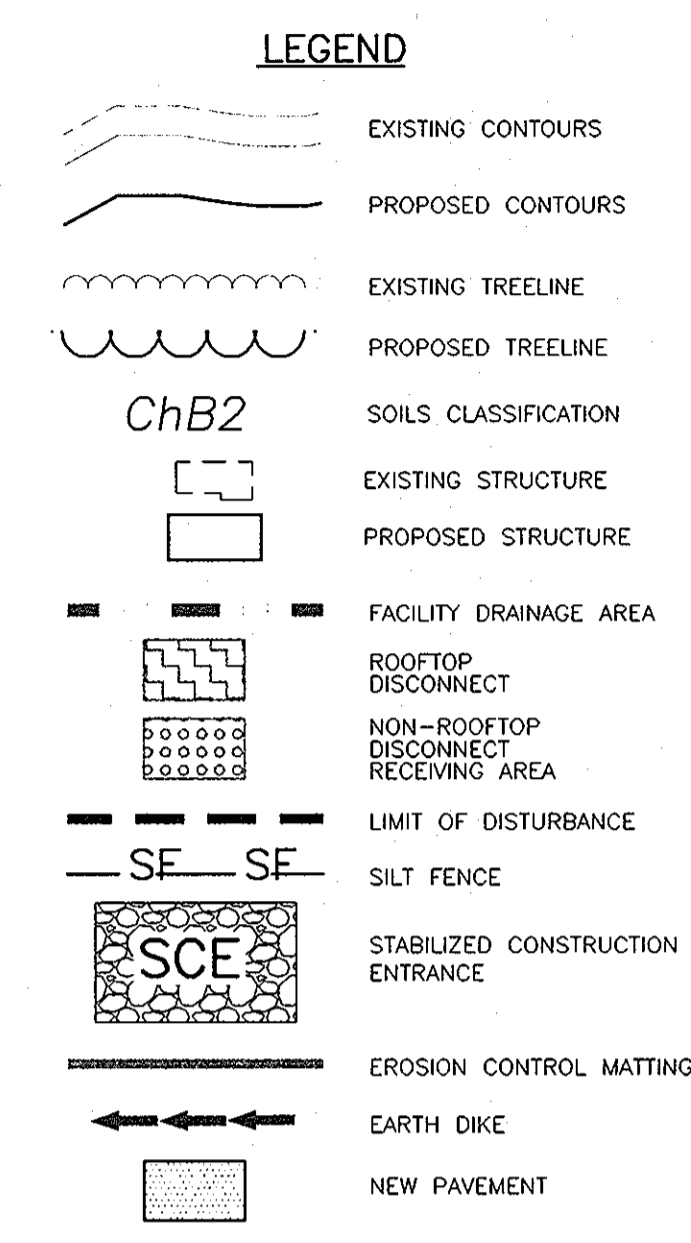
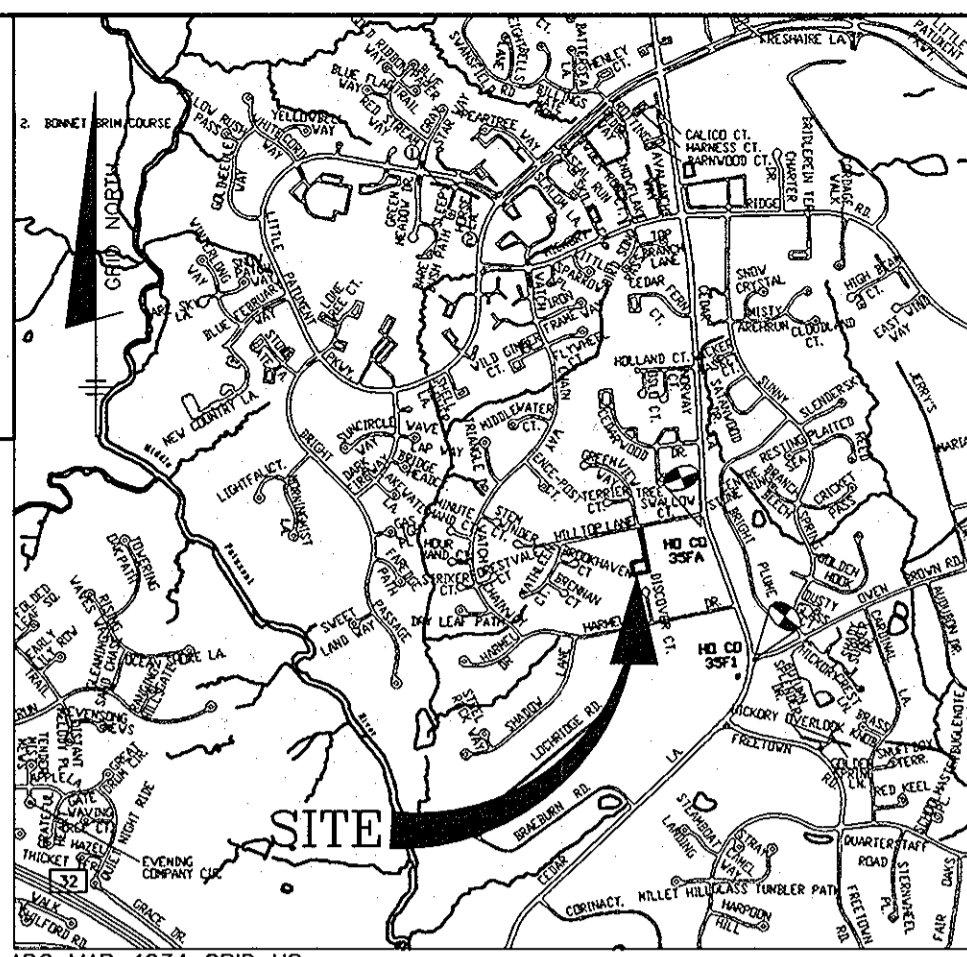
The target Pe for this site is 1.1 inches. By using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual as amended by Maryland's Stormwater Management Act of 2007, full treatment of the target Pe of 1.1 was achieved, fully addressing the stormwater management requirements.

A Design Manual waiver will be requested to modify the type of underdrain provided for the micro-bioretentation facility.



BENCHMARKS NAD'83 HORIZONTAL

HO. CO. #35FA STAMPED BRASS DISK SET ON TOP OF CONCRETE BASE. N 559266.1334' E 1344682.6389' ELEVATION: 410.329'
HO. CO. #35F1 STAMPED BRASS DISK SET ON TOP OF CONCRETE BASE. N 557787.3788' E 1345217.2645' ELEVATION: 400.439'



STORMWATER MANAGEMENT PRACTICES

LOT NUMBER	ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF N ² (NUMBER)	DISCONNECTION OF NON-ROOFTOP RUNOFF N ² (NUMBER)	MICRO-BIORETENTION M ² (NUMBER)	SWALES M ² (NUMBER)
LOT 1	10843 HILLTOP LANE	4	1*	1	1

*NON-ROOFTOP DISCONNECT IS FOR THE SHARED ACCESS/MAINTENANCE DRIVEWAY.

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-20 PER THE 2-2-04 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING AMENDMENTS EFFECTIVE 7-28-06.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
- PROJECT BOUNDARY AND TOPOGRAPHY WITHIN THE SUBDIVISION AREA ARE BASED ON FIELD RUN BOUNDARY SURVEY AND TOPO PERFORMED BY BENCHMARK ENGINEERING INC. DATED MAY, 2011.
- EXISTING TOPOGRAPHY OUTSIDE OF THE SUBDIVISION AREA AND OFFSITE SHOWN HEREON IS BASED ON HOWARD COUNTY GIS.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. #35FA AND #35F1 WERE USED FOR THIS PROJECT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM, OR THEIR REQUIRED BUFFERS UNLESS DEEMED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING.
- NO 100-YEAR FLOOD PLAINS, WETLANDS OR THEIR BUFFERS ARE LOCATED WITHIN THE LIMIT OF DISTURBANCE.
- THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT.
- THIS SITE IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER WILL BE PRIVATE ON-SITE FACILITIES.
- THERE IS NO FOREST CONSERVATION ACT OBLIGATION FOR THIS PROJECT BECAUSE LESS THAN 20,000 SF (13,172 SF) OF FOREST WILL BE DISTURBED. A DECLARATION OF INTENT WILL BE SUBMITTED WITH THE SITE DEVELOPMENT PLAN.
- PREVIOUS DRP FILES FOR THIS SITE: F-88-060.

SITE ANALYSIS DATA/TABULATION

A) TOTAL PROJECT AREA.....	0.68± AC.
B) AREA OF WETLANDS AND BUFFER.....	0.00 AC.
C) AREA OF 100-YR. FLOODPLAIN.....	0.00 AC.
D) AREA OF FOREST.....	0.57 AC. ±
E) AREA OF STEEP SLOPES 25% OF GREATER.....	0.00± AC.
F) AREA OF DEDICATION.....	0.00 AC.
G) HIGHLY ERODIBLE SOILS (K _c > 0.35).....	0.00± AC.
H) NUMBER OF UNITS ALLOWED.....	1
I) NUMBER OF RESIDENTIAL UNITS PROPOSED.....	1
J) AREA OF PLAN SUBMISSION.....	0.68± AC.
K) LIMIT OF DISTURBED AREA.....	0.44± AC.
L) OPEN SPACE REQUIRED.....	N/A
M) OPEN SPACE PROVIDED.....	N/A
N) PRESENT ZONING DESIGNATION.....	R-20
O) PROPOSED USE: SINGLE FAMILY DETACHED DWELLING	
P) IMPERVIOUS COVER.....	0.10± AC.

Porter Property Project Number 2323

Determine ESD Implementation Goals

Soil Conditions for "Woods in Good Condition"			
HSG	RCN	Area (#2)	Percent
A	38	0	0%
B	55	25,736	100%
C	70	0	0%
D	77	0	0%
Target RCN		55	25736

Determine Target Pe Using Table 5.3

Soil Conditions Developed Condition			
HSG	Area (#2)	Impervious	Percent
A	0	0	0
B	25736	4,280	0
C	0	0	0
D	0	0	0
Weighted Pe	25736	0.00%	16.6%

* See graphical determination in SWM report.

Practices and Sizing

Drainage Area	Pe	1.1 inches		
Drainage Area GS-1: Treated by Grass Swale				
Total Drainage Area:	4014			
Impervious Area:	1209			
Impervious:	30%			
Rv =	0.321			
ESDV =	114.4 c.f			
Drainage Area MB-1: Treated by Micro-Bioretentation				
Total Drainage Area:	6717			
Impervious Area:	1791			
Impervious:	27%			
Rv =	0.290			
ESDV (before reduct.) =	172.9 c.f			
Pe reductions:				
ID and Type	Impervious Area	Distance or ratio	Pe Treated	Weighted Treatment
D-1 (rooftop)	464	75	1.0	0.259
D-2 (rooftop)	447	75	1.0	0.250
D-2 (rooftop)	386	20	0.3	0.057
D-2 (rooftop)	452	50	0.7	0.168
Remainder	42	-	0.0	0.000
Total:	1791	-	0.734	
Storage Computation:				
Remainder to be treated in MB-2:				
1 inches =	0.73 inches =	0.27 inches		
ESDV (after reductions) =	43.1 c.f			
Provided in MB-1				107

SHEET INDEX

NO.	DESCRIPTION
1	ENVIRONMENTAL CONCEPT PLAN
2	SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 418A ELLORETT CITY, MARYLAND 21043
(P) 410-465-8105 (F) 410-465-6844

60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BE-ENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28376, Expiration Date: 1-1-2013.

11 July 2011

OWNER:
HITESH AND CHRISTINA PATEL
626 CHAPELGATE DRIVE
ODENTON, MARYLAND 21113

BUILDER:
CASTLE ROCK BUILDERS
2159 WHITE STREET, SUITE 3
YORK, PENNSYLVANIA 17404
888-864-4272

CEDAR ACRES LOT 22

LOCATION: TAX MAP: 35, GRID: 11
PARCEL: 92
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE:
ENVIRONMENTAL CONCEPT PLAN

DATE: JULY, 2010
BEI PROJ. NO. 2407

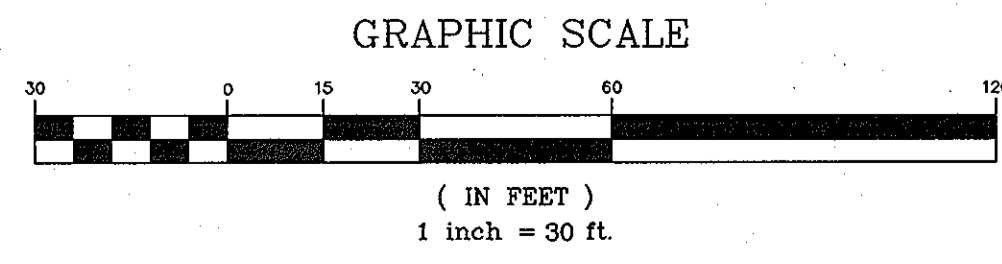
DESIGN: AAM **DRAFT:** AAM **CHECK:** CAM

SCALE: AS SHOWN **SHEET 1 OF 2**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 7/19/11
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 7/18/11
CHIEF, DIVISION OF LAND DEVELOPMENT



SOILS LEGEND

MAP SYMBOL	SOIL GROUP	SOIL TYPE
GfB	B	GLADSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT

HOWARD COUNTY, MD (MD027) NRCS WEB SOIL SURVEY 2.0
NOTE THAT ONLY ONE SOIL TYPE OCCURS WITHIN THE AREA SHOWN ON THIS THE MAP. THE WEB SOIL SURVEY WEBSITE WAS VISITED IN JUNE, 2011.

SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION...
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 SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL...
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMITS...
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE...
5. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER...
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR...
7. SITE ANALYSIS: TOTAL AREA OF SITE (THIS SUBMISSION) 0.68 ACRES, AREA DISTURBED 0.44 ACRES, AREA TO BE ROOFED OR PAVED 0.17 ACRES, AREA TO BE VEGETATIVELY STABILIZED 0.27 ACRES, TOTAL CUT 272 CY, TOTAL FILL 361 CY, OFFSITE WASTE/BORROW AREA LOCATION N/A...
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF OCCURRENCE...
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 REQUIRED UPON COMPLETION OF INSTALLATION OF PERMITTER EROSION AND SEDIMENT CONTROLS...
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDBED PREPARATIONS

- SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE OF THE FOLLOWING SCHEDULES:
1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING...
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...
SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 5-1/2 BU/ACRES PER ACRE OF ANNUAL RYE (32 LBS/1000 SQ FT)...
MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING...
MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

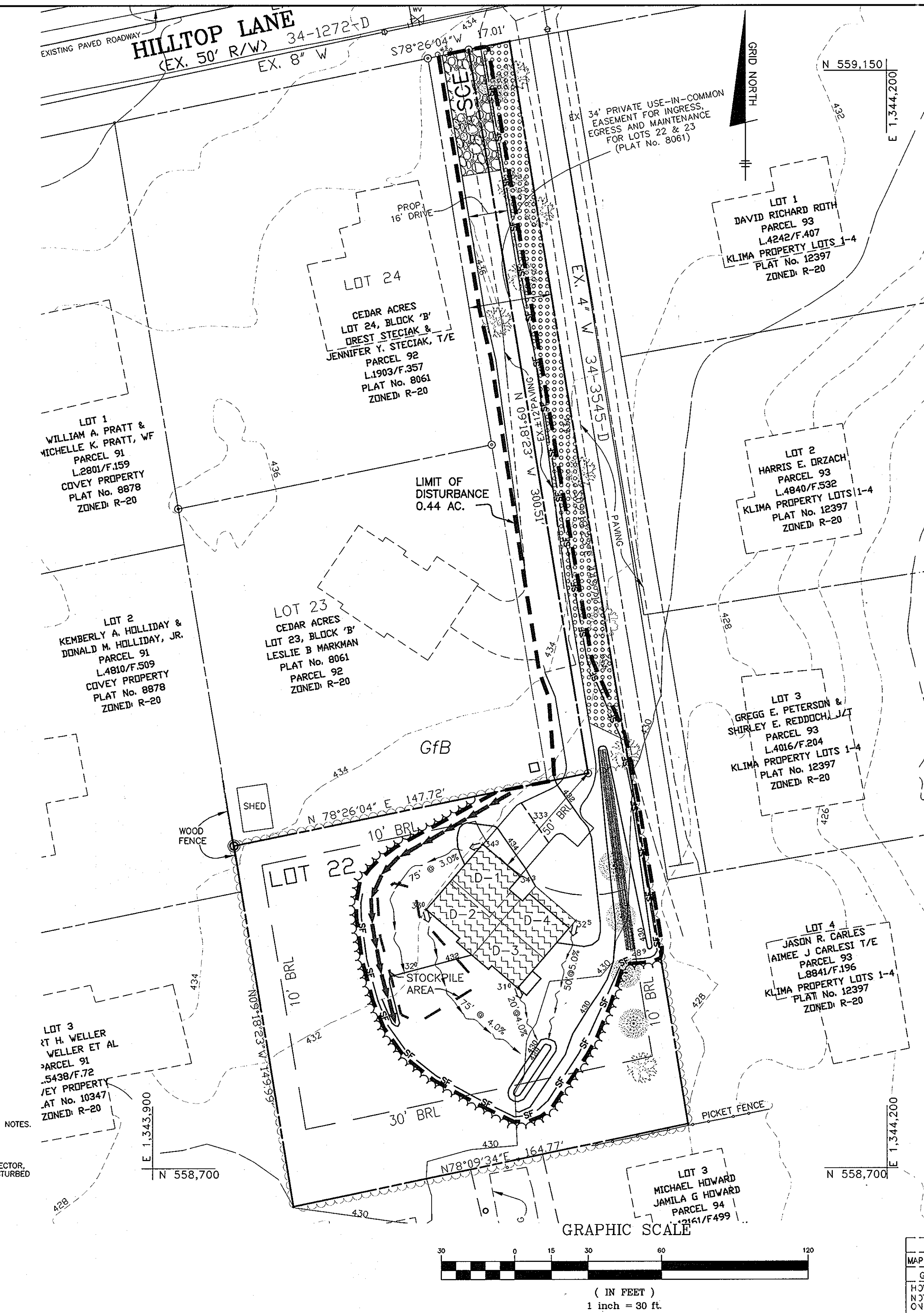
TEMPORARY SEEDBED PREPARATIONS

- 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, DISCING 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 PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 5-1/2 BU/ACRES PER ACRE OF ANNUAL RYE (32 LBS/1000 SQ FT)...
MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING...
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

NOTE: CONTRACTORS SHALL TAKE EXTREME CARE WHEN WORKING WITHIN THE AREA OF THE OVERHEAD POWER LINES AND WILL BRACE EXISTING UTILITY POLES AS NEEDED

SEQUENCE OF CONSTRUCTION
NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
DAY 1 1) OBTAIN GRADING PERMIT.
DAY 2-6 2) INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS GRADING PLAN.
DAY 7-10 3) EXCAVATE FOR FOUNDATION, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
DAY 11-80 4) CONSTRUCT HOUSE, BACKFILL AND CONSTRUCT DRIVEWAY.
DAY 81-85 5) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES.
DAY 86-89 6) WHEN CONTRIBUTING AREAS ARE STABILIZED, CONSTRUCT GRASS SWALE, BIO RETENTION FACILITY AND INSTALL PLANT MATERIALS.
DAY 90-93 7) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.
NOTE: EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOD SHOULD BE USED.
NOTE: THE UTILITY INVERT ELEVATIONS PROVIDED ON THIS PLAN SHALL BE FIELD VERIFIED PRIOR TO BEGINNING CONSTRUCTION.

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT.
ALICE A. MILLER, P.E. # 28376
DATE: 11 July 2011
DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT.
DATE: 7/14/11
DATE: 7/31/11



LEGEND
EXISTING CONTOURS
PROPOSED CONTOURS
EXISTING TREELINE
PROPOSED TREELINE
SOILS CLASSIFICATION
EXISTING STRUCTURE
PROPOSED STRUCTURE
FACILITY DRAINAGE AREA
ROOFTOP DISCONNECT
NON-ROOFTOP DISCONNECT RECEIVING AREA
LIMIT OF DISTURBANCE
SILT FENCE
STABILIZED CONSTRUCTION ENTRANCE
EROSION CONTROL MATTING
EARTH DIKE
SOILS LEGEND
MAP SYMBOL SOIL GROUP SOIL TYPE
G1E D CLAYSTONE-URBAN LAND COMPLEX, 0 TO 8 PERCENT
HOWARD COUNTY, MD (MD027) NRCS WEB SOIL SURVEY 2.0
NOTE THAT ONLY ONE SOIL TYPE OCCURS WITHIN THE AREA SHOWN ON THIS THE MAP.
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS GRASS SWALES AND WET SWALES, (M-8)
1. THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS...
2. THE OPEN CHANNEL SHALL BE MAINTAINED TO A MINIMUM OF 6 INCHES DEPTH...
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOVING OPERATIONS...
4. VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
5. REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT EXCEEDS 25% OF THE ORIGINAL WQV.
6. INSPECT CHECK DAMS TWICE A YEAR FOR STRUCTURAL INTEGRITY. RESTORE CHECK DAMS TO ORIGINAL CONDITION AS APPLICABLE.
OPERATION & MAINTENANCE SCHEDULE FOR RAINGARDENS, (M-6)
1. ANNUAL MAINTENANCE OF PLANT MATERIAL AND MULCH LAYER IS REQUIRED...
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN THE SPRING AND FALL...
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE THE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 3 TO 5 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS-NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE
DETAIL 33 - SUPER SILT FENCE
SUPER SILT FENCE CONSTRUCTION SPECIFICATIONS
1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing...
2. Chain link fence shall be fastened securely to the fence posts with wire ties...
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 12" at the top and mid section...
4. Filter cloth shall be embedded a minimum of 6" into the ground...
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded...
6. Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height...
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples of top and mid section and shall meet the following requirements for Geotextile Class F:
Tensile Strength 50 lbs/in (min.) Test: MSMT 509
Tensile Modulus 30 lbs/in (min.) Test: MSMT 322
Flow Rate 0.3 gpm/ft (min.) Test: MSMT 322
Filtering Efficiency 75% (min.) Test: MSMT 322
SUPER SILT FENCE DESIGN CRITERIA
Slope 1:1 to 2:1
Slope Length (maximum) 200 feet
Silt Fence Length (maximum) Unlimited
1:1 to 2:1 100 feet
2:1 to 3:1 150 feet
3:1 to 4:1 100 feet
4:1 to 5:1 50 feet
DETAIL 30 - EROSION CONTROL MATTING
CONSTRUCTION SPECIFICATIONS
1. KEY-IN THE MATTING BY PLACING THE TOP EDGE OF THE MATTING IN A HARBOR TROUGH OF A OPEN, BROAD, THE TROUGH AND HARP SHALL BE CONTIGUOUS TO THE CHANNEL CROSS-SECTION...
2. STAPLE THE MATTING TO THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES...
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING MAKE SURE THE MATTING IS BROAD AND IN FIRM CONTACT WITH THE SOIL...
4. STAPLES SHALL BE PLACED AT LEAST WITH A 6" SPACING FOR EACH STRIP, 2 OUTERS EDGES AND 2 INTERMEDIATE SPACING FROM THE OUTER EDGES...
5. MAKE ONE ROW OF MATTING OVER AND ANOTHER BELOW THE TOP OF THE TROUGH...
6. THE SPACING OF THE MATTING LINES SHOULD BE SMOOTHLY SECURED WITH WIRE & COVERED FROM THE EDGE OF THE MATTING THE AREA EFFECTED BY THE FLOW MUST BE KEY-IN.

BENCHMARK ENGINEERING, INC.
6840 BALTIMORE NATIONAL PIKE SUITE 418 A ELICOTT CITY, MARYLAND 21043
(410) 465-6105 (F) 410-465-6844
60 THOMAS JOHNSON DRIVE FREDERICK, MARYLAND 21702
(301) 371-3565 (F) 301-371-3506
www.benchmarkeng.com
OWNER: HITESH AND CHRISTINA PATEL
626 CHAPELGATE DRIVE
ODONTON, MARYLAND 21113
BUILDER: CASTLE ROCK BUILDERS
2159 WHITE STREET, SUITE 3
YORK, PENNSYLVANIA 17404
888-864-4272
LOCATION: TAX MAP: 35, GRID: 11
PARCEL: 92
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND
TITLE: ENVIRONMENTAL CONCEPT PLAN
DATE: JULY 2010 BEI PROJ. NO. 2407
DESIGN: AAM **DRAFT:** AAM **CHECK:** CAM **SCALE:** AS SHOWN **SHEET 2 OF 2**