

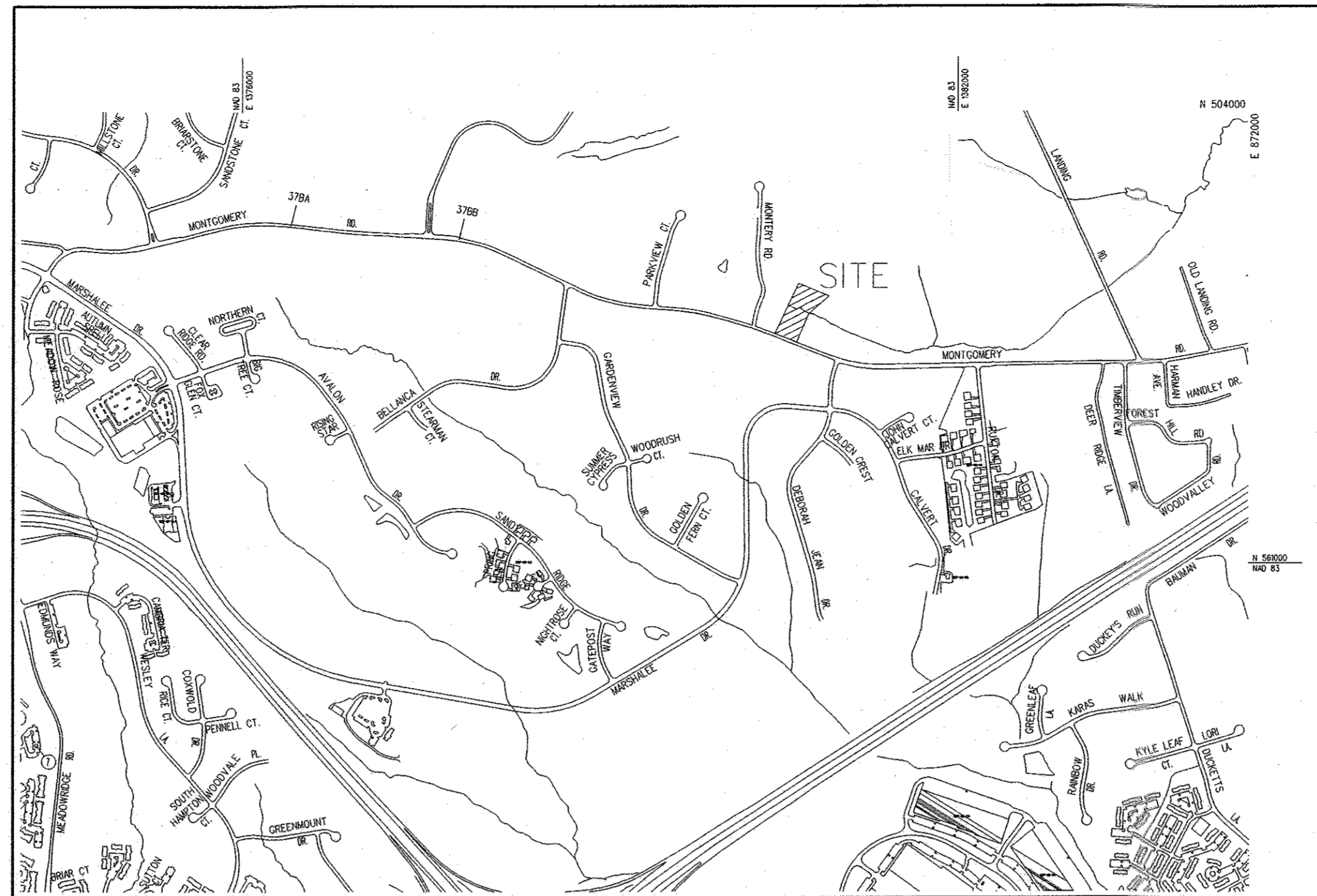
INDEX OF DRAWINGS

- Sheet 1 COVER SHEET
- Sheet 2 GRADING, SEDIMENT AND EROSION CONTROL PLAN
- Sheet 3 ROAD PROFILE, STORM DRAIN PROFILE AND DETAIL
- Sheet 4 SEDIMENT AND EROSION CONTROL DETAILS
- Sheet 5 DRAINAGE AREA MAP
- Sheet 6 FOREST STAND DELINEATION PLAN
- Sheet 7 FOREST CONSERVATION PLAN
- Sheet 8 PERIMETER LANDSCAPE PLAN

MINIMUM LOT SIZE CHART			
LOT	GROSS AREA	PIPESTEM AREA	NET LOT SIZE
3	23,302 Sq. Ft.	4,858 Sq. Ft.	18,444 Sq. Ft.
4	22,618 Sq. Ft.	4,807 Sq. Ft.	17,811 Sq. Ft.
MINIMUM LOT SIZE = 18,000 Sq. Ft.			

LEGEND

DESCRIPTION	EXISTING	PROPOSED
2' CONTOUR	--- 142 ---	--- 142 ---
10' CONTOUR	--- 140 ---	--- 140 ---
SPOT ELEVATION	+ (25.5)	+ 25.5
STORM DRAIN	--- (O) ---	--- (O) ---
STORM DRAIN INLET	--- (I) ---	--- (I) ---
PROPERTY BOUNDARY	--- (Dashed) ---	--- (Dashed) ---
LOT LINE	--- (Dashed) ---	--- (Dashed) ---
RIGHT-OF-WAY	--- (Dashed) ---	--- (Dashed) ---
TREE LINE	--- (Wavy) ---	--- (Wavy) ---



LOCATION MAP
SCALE 1"=1000'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County Design Manual Vol IV and MSHA standards & specification.
2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection at (410)313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work.
4. Project Background:
Location: Tax Map 37, Parcel 58
Deed Reference: Liber 6485, Folio 0556
Zoning: R-20 (Per 02/02/04 Comprehensive Zoning Plan)
Election District: 1st
Total Tract Area: 2.84 Acres Plus/minus
5. Number of Proposed Lots: 6
a) Buildable: 4 lots (1 lot with existing dwelling, 3 new dwellings)
b) Open Space: 2 lots
6. Area of Proposed Lots:
a) Buildable: (3 new lots) 65,407 s.f. or 1.502 Ac.
b) Buildable (1 lots with existing dwelling): 20,110 s.f. or 0.462 Ac.
c) Required Open Space: (Min. lot size 18,000 s.f./40' x Req'd) 12,371 s.f. or 0.284 Ac.
d) Provided Open Space: 30,207 s.f. or 0.693 Ac.
7. Any damage caused by the contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractor's expense.
8. The existing utilities shown hereon are located from field surveys and construction drawings of record. The approximate locations of existing utilities are shown for the contractor's information and convenience. The contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the contractor shall take all necessary precautions to protect all existing utilities and maintain uninterrupted service.
9. The onsite topography shown hereon was field run by G&O, Inc. in December, 2002. Offsite topography is compiled from Howard County Aerial Photogrammetry except in areas where offsite improvements are planned, including the Guilford Road improvements.
10. Horizontal and vertical datum's are related to the Maryland State Plans Coordinate System as projected from Howard County geodetic control station Nos. 35GA and 35C2 (NAS 83).
11. Boundary field verified by G&O, Inc. in December, 2002.
12. The nontidal wetland shown are field located from a delineation prepared by Wildman Environmental Services dated December, 2003.
13. A Joint Federal/State permit application has been submitted to MDE for the purpose of obtaining a permit to conduct activities in nontidal wetlands, wetland buffers and "Waters of the U.S.", as regulated under sections 401 and 404 of the "Clean Water Act". Permit tracking # _____
14. Stormwater management facilities shall be privately owned and maintained by the Home Owners Association. The HOA will perform routine maintenance and will be responsible for yearly inspections, mowing once a year and correcting any structural problems that arise. Stormwater management will be achieved by means of applying the Natural Conservation Area Credit, sheet flow to buffer for the house construction and the non-rooftop disconnect credit for the driveway construction.
15. All hydraulic data is for the 10-year storm unless otherwise noted.
16. See sheet 2 of 8 for construction sequence.
17. 95% compaction in oil fill areas shall be determined by AASHTO T-180.
18. Revised Forest Stand Delineation was Prepared by Wildman Environmental Service, Inc. in October, 2004.
19. The Forest Conservation Obligations are provided by 0.455 acres of Forest Retention within two (2) Forest Conservation Easement labeled as FCE 'A' - 0.312 ac., FCE 'B' - 0.143 ac.) and by providing 0.214 acres of Reforestation within FCE 'C'. The Total Reforestation Requirement Remaining of 0.34 acres is to be provided by a FEE-N-LEU payment in the amount of \$11,077.00 (0.34 x \$32,610.00) to the Ho. Co. Forest Conservation Fund. **Forest Conservation Easement No. 103044 is \$2,200.00 shall be posted as a part of the Developer's Agreement.**
amount of \$8,624.88 shall be posted as a part of the Developer's Agreement.
20. All erosion and sediment control measures shown shall comply with the "1994 Standards and Specifications for Soil Erosion and Sediment Control in Maryland" see **NOTE # 36 FOR AASHTO INFORMATION.**
21. The private use-in-common driveway serving lots 1-4 and open space lots 5-6 shall meet the following specifications: 14 foot width; 6" compacted crusher run base (CR-6); 2 1/2" bituminous concrete base; 1/2" bituminous concrete surface; minimum turning radius of 45 feet; Designed to support vehicles with a gross weight of 25 tons; 12 feet of overhead clearance; Maintained for all weather use; Maximum grade is 15% with the durable and sustained grade of 8%. Where one (1) driveway serves more than one (2) lots, a house number sign must be placed at each lot entrance and a range of street address house numbers sign where the common driveway intersects with the main road.
22. All aspects of this project are in conformance with the latest Howard County Standards unless waivers have been approved. Onsite roadways have been designed in conformance with the Use-in-Common Design Criteria, dated 2002.
23. The subject property is located within the Patapsco watershed and the Rockburn Branch drainage area. Public water and public sewer will be utilized for this development under Contract Nos. S-6244, 10-1043, 34W.
24. Use-in-Common Driveway and Easement shall be private and owned and maintained by the owners of Lots 1-4. A use in common maintenance agreement shall be executed and recorded concurrent with the recording of the record plat.
25. B.R.L. denotes building restriction line.
26. Open space Lots 5 & 6 shall be dedicated to the Howard County Department of Recreation and Parks.
27. The Zoning Regulations Section 133.D(2) requires two (2) spaces per dwelling unit. These spaces shall be provided on individual private driveways. Two (2) spaces per driveway required - 8 spaces.
28. The earthwork quantities shown herein are for information purposes only. Quantities shown are based solely on differences between existing and finished grades and do not account for undercut. The excavating contractor shall be responsible for the determination of actual cut and fill quantities to be used for bid purposes.
29. Failure to specifically mention any work normally associated with the construction of the improvements shown herein does not relieve the contractor of his responsibility to perform such work.
30. The existing dwelling located on Lot 1 is to be removed before any new building/structures can be built.
31. For flag or pipe stem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipe stem and the road right-of-way line only and not onto the flag or pipe stem lot driveway.
32. A financial surety in the amount of \$ 1200.00 shall be posted as part of the Developers Agreement for Landscaping.
33. WP-03-118 was approved on August 8, 2003 to waive sections 16.115(c)(2) to permit clearing, grading, fill and placement of two culverts and a shared driveway within a floodplain, 16.116 (a)(1) & (2) to permit grading, the removal of vegetative cover and construction of a shared residential driveway within a 25 foot Wetland Buffer and 50 foot Stream Buffer, and 16.121(e)(1) to permit the minimum required Public road frontage of 40 feet for an open space lot to be reduced to zero feet for "Open Space Lots 5-6". (It was determined after approval of this waiver petition that no floodplain exists within this subdivision boundary.)
34. Development or construction on these lots must comply with the setback and buffer regulations in effect at the time of the submission of the site development plan, waiver petition or building/grading permit.
35. This subdivision is subject to the requirements of the amended fifth edition of the Howard County Subdivision Regulations.

Final Plans
Hawk's Watch
Lots 1-6
Tax Map No. 37 Parcel 58
1st Election District - Howard County, Maryland

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

John P. Blanton 10/17/06
SIGNATURE DATE

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *[Signature]*
HOWARD SCD DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Michelle R. Smith 10-9-08
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cynthia R. Smith 10/19/08
Chief, Division of Land Development Date

David R. Smith 10/19/08
Chief, Development Engineering Division Date

HOWARD COUNTY GEODETIC SURVEY CONTROL

NO. 37BB	NO. 37C3
N 563663.415	N 562916.003
E 1378040.417	E 1384856.679
ELEV. 373.822	ELEV. 258.497
NO. 37AB	NAD83(91) (HORIZONTAL)
N 563785.618	NGVD29 (VERTICAL)
E 1376343.172	
ELEV. 394.786	

36. A PORTION OF FOREST CONSERVATION EASEMENT "C" (1.761 SQUARE FEET, 0.04 ACRES) HAS BEEN ABANDONED. PAYMENT OF \$125 PER SQUARE FOOT OF ABANDONMENT OF 1.761 SQUARE FEET OF FOREST CONSERVATION EASEMENT IN THE AMOUNT OF \$2,202.00 HAS BEEN PAID. RECEIPT # 158594.

OWNER/DEVELOPER
HAWK'S WATCH, LLC
4747 BONNIE BRANCH ROAD
ELLICOTT CITY, MD 21043
ATTN: RON WILDMAN
410-869-9999

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THAT ANY 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 SOIL CONSERVATION DISTRICT."

Ronald B. Wildman 8/21/08
SIGNATURE OF DEVELOPER DATE
FOR HAWK'S WATCH, LLC

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 SOIL CONSERVATION DISTRICT."

Gregory R. Klar 8/25/08
SIGNATURE OF ENGINEER - GREGORY R. KLAR DATE

No.	REVISION	DATE	BY
1	ADD GENERAL NOTE # 36	10/20/06	MBA



ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
GREENHORNE & O'MARA, INC.
200 HARRY S. TRUMAN PARKWAY, SUITE 200
ANNAPOLIS, MARYLAND 21401
(410) 266-0066
Greenbelt, MD • Annapolis, MD • Atlanta, GA • Denver, CO • Fairfax, VA • Fredericksburg, VA • Mechanicsville, VA
Raleigh, NC • Rockville, MD • Tampa, FL • West Palm Beach, FL

Cover Sheet

Hawk's Watch Minor Subdivision
Lots 1-6

Zoned: R-20
Tax Map 37 Parcel 58
1ST ELECTION DISTRICT, HOWARD COUNTY, MD

JES DESIGN	SCALE	AS NOTED
KML DRAWN	1	OF 8
CHECKED SHEET		
DEC., 2007 DATE	G80 JOB No. 1082	DPZ FILE No. F-03-138

JES DESIGN	SCALE	AS NOTED
KML DRAWN	1	OF 8
CHECKED SHEET		
DEC., 2007 DATE	G80 JOB No. 1082	DPZ FILE No. F-03-138

F-03-138

MGWC 4.5: DEPRESSED CULVERTS



DESCRIPTION
The work should consist of depressing roadway culverts 1 foot (0.3 meters) below the natural stream invert.

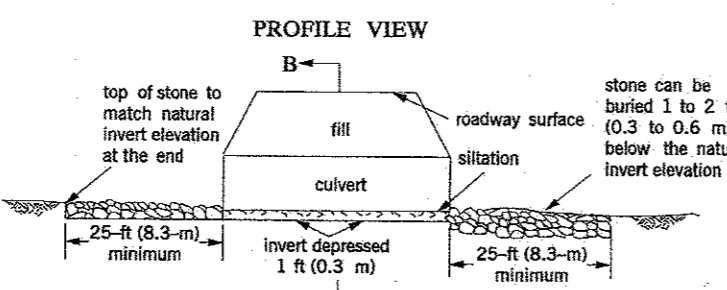
EFFECTIVE USES & LIMITATIONS
Depressed culverts encourage channelization and enhance fish passage by allowing water to pool and sediment to deposit in the culvert barrel. During storm events, deposited sediment wash away, ensuring the effectiveness and integrity of the culvert.

Depressed culverts may not be suited to streams with high slope gradients since high flow velocities may scour the barrel and restrict sedimentation.

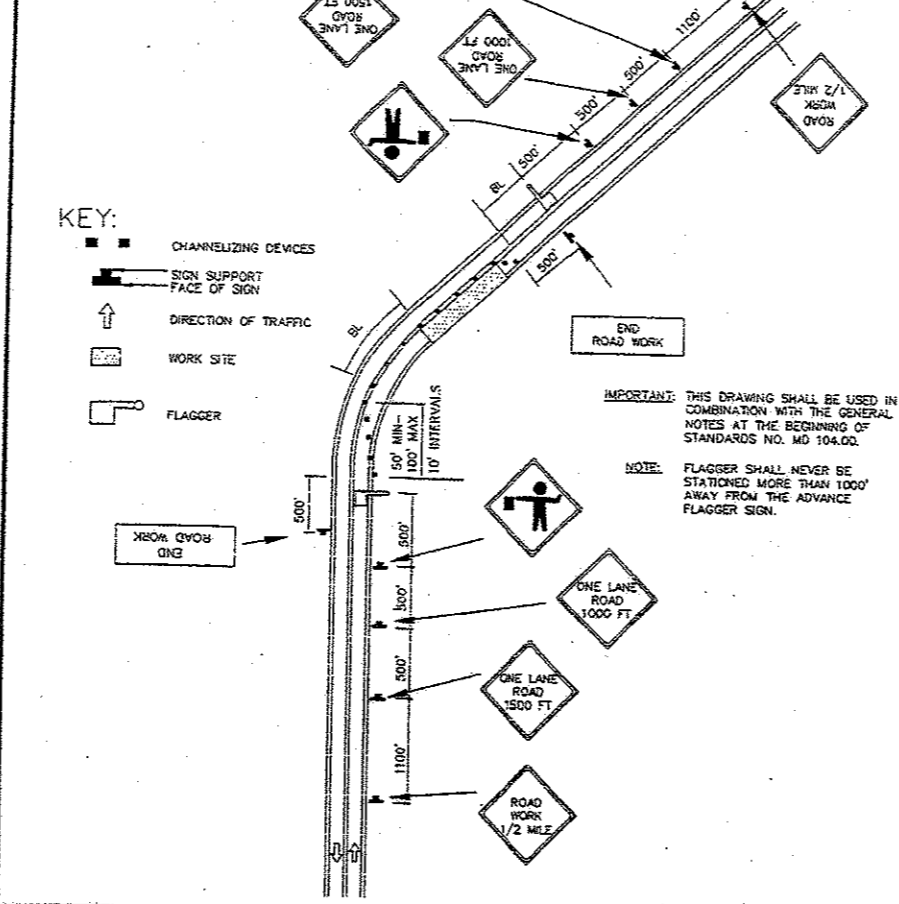
INSTALLATION GUIDELINES
Construction of depressed culverts should proceed the same as for standard culverts as detailed in MGWC 4.3. Culvert installation, in the case of double or triple-culvert culverts, only one or two culverts should be depressed as necessary. Additionally, the streambed adjacent to the entrance and exit of the barrel should be reinforced with riprap and filter fabric.

Refer to Detail 4.5 for typical details of depressed culverts.

**Maryland's Guidelines To Waterway Construction
DETAIL 4.5: DEPRESSED CULVERTS**



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAY AND RESIDENTIAL STRUCTURES
FLAGGING OPERATIONS/LANE 2-WAY
EQUIVALENT TO 40 MPH/OVER 12 HRS. OR NIGHTTIME USE
STANDARD NO. MD 10402-02

CURB TABLE

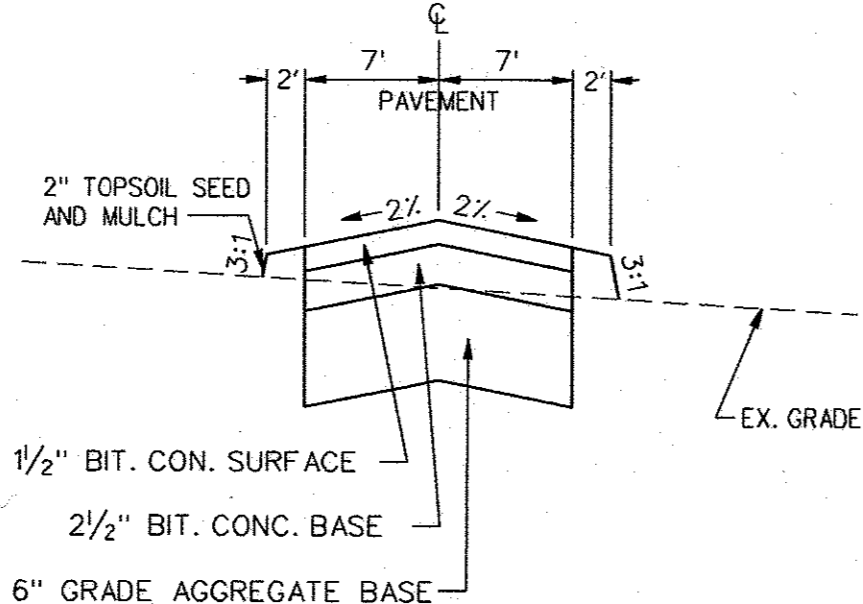
CURB	Ratio	At Length	Midspan	Support	Overlaping	Chord
C1	60:00	15:00	12:30:00"	1:00	N 52°14'17" E	13.88
C2	75:00	15:00	12:30:00"	1:00	N 52°14'17" E	16.89
C3	87:00	15:00	12:30:00"	1:00	N 52°14'17" E	19.17
C4	102:00	15:00	12:30:00"	1:00	N 52°14'17" E	21.66
C5	118:00	15:00	12:30:00"	1:00	N 52°14'17" E	24.38
C6	135:00	15:00	12:30:00"	1:00	N 52°14'17" E	27.33

LINE TABLE

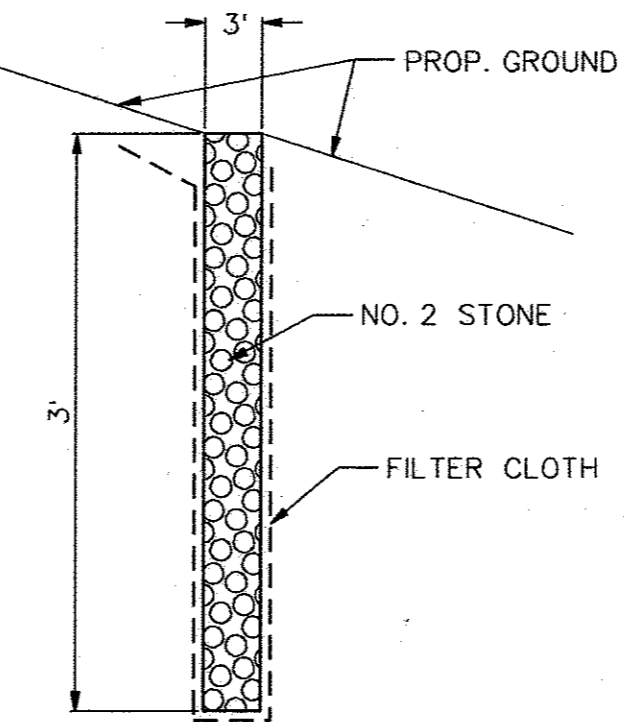
Line	Length	Bearing
L3	34.87	S 65° 41' 54" W
L4	35.58	S 55° 41' 54" W
L6	6.33	S 24° 13' 06" E
L9	17.36	S 08° 54' 40" W
L10	33.94	S 08° 54' 40" W
L11	51.30	S 08° 54' 40" W
L12	51.30	S 08° 54' 40" W
W1	15.15	N 76° 21' 14" E
W2	22.14	S 60° 08' 58" E
W5	18.33	N 82° 41' 32" E
W7	11.16	S 25° 13' 13" E
W8	4.08	S 32° 12' 43" W
W13	49.92	N 74° 39' 29" W
W14	11.37	N 66° 35' 22" W

SEQUENCE OF CONSTRUCTION

1. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1855 48 HOURS PRIOR TO BEGINNING CONSTRUCTION ON THIS PERMIT. 1 DAY
 2. CLEAR JUST ENOUGH AREA TO CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (SCE). CONSTRUCT 50' SCE WHERE SHOWN ON THE PLANS. 1 DAY
 3. STAKE OUT LIMIT OF DISTURBANCE (LOD) IN THE FIELD. 2 DAYS
 4. INSTALL SILT FENCE, SUPER SILT FENCE AND TREE PROTECTION FENCE WITH SIGNAGE. 5 DAYS
 5. WHEN ALL SEDIMENT CONTROLS AND TREE PROTECTION FENCE HAVE BEEN INSTALLED, OBTAIN THE SEDIMENT CONTROL INSPECTOR'S APPROVAL BEFORE BEGINNING ANY WORK ON THIS PERMIT. 1 DAY
 6. CLEAR SITE WITHIN THE LOD (EXCEPT FOR LOTS. LOTS WILL NOT BE CLEARED OR GRADED UNTIL A BUILDING PERMIT IS OBTAINED FOR THAT LOT). ROUGH GRADE PRIVATE USE IN COMMON DRIVEWAY. 1 WEEK
 - * 7. INSTALL 42" RCP DRIVEWAY CULVERT AND RIPRAP INLET AND OUTLET PROTECTION. 3 DAYS
 - * 8. INSTALL 18" RCP DRIVEWAY CULVERT AND RIPRAP OUTLET PROTECTION. 3 DAYS
 - * 9. CONSTRUCT SEWER AND WATERLINE. 1 WEEK
 10. FINE GRADE USE IN COMMON DRIVEWAY AND PAVE. CONSTRUCT STORMWATER MANAGEMENT DEVICES. 1 WEEK
 11. INSTALL LANDSCAPING AND REFORESTATION. 3 DAYS
 12. STABILIZE ALL DISTURBED AREAS. 1 DAY
 13. WITH SEDIMENT CONTROL INSPECTOR'S APPROVAL, REMOVE ALL SEDIMENT CONTROL DEVICES & STABILIZE DISTURBED AREAS. 1 DAY
- * NOTE: ITEMS 7, 8 AND 9 MAY BE PERFORMED CONCURRENTLY OR IN ANY ORDER WITH THE SEDIMENT CONTROL INSPECTOR'S APPROVAL.



TYPICAL DRIVEWAY SECTION SCALE: N.T.S.



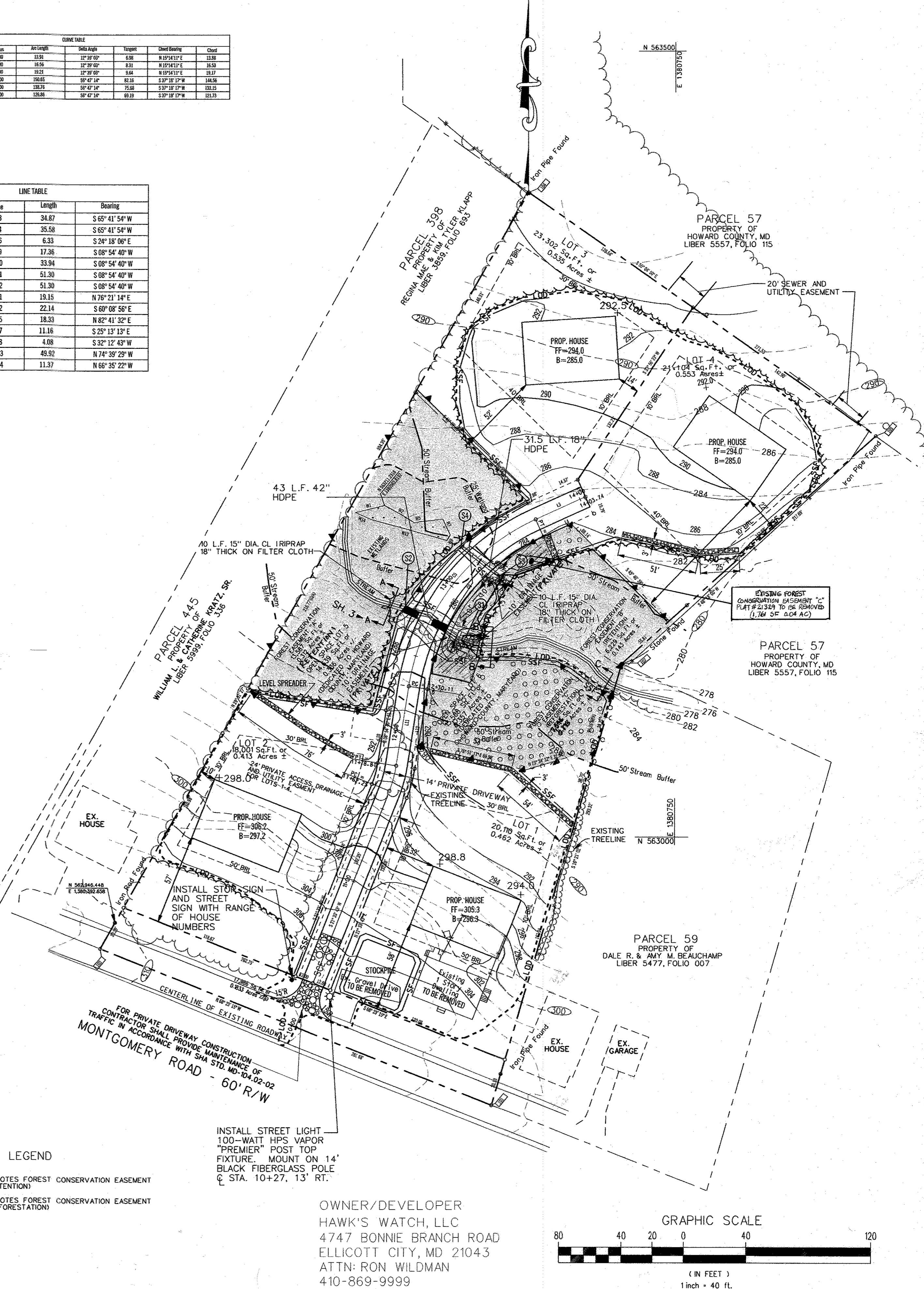
LEVEL SPREADER DETAIL SCALE: N.T.S.

LEGEND

DESCRIPTION	EXISTING	PROPOSED
2' CONTOUR	---	---
10' CONTOUR	---	---
SPOT ELEVATION	(25.5)	(25.5)
WATER MAIN	EX. 8" WATER	PROP. 8" WATER
WATER VALVE	W	W
FIRE HYDRANT	H	H
SEWER MAIN	EX. 8" SEWER	PROP. 8" SEWER
SEWER MANHOLE	M	M
STORM DRAIN	S	S
STORM DRAIN INLET	I	I
CURB/CURB & GUTTER	C	C
PROPERTY BOUNDARY	---	---
LOT LINE	---	---
RIGHT-OF-WAY	---	---
TREE LINE	---	---
TREE PROTECTION FENCE WITH SIGNAGE	---	---

LEGEND

 DENOTES FOREST CONSERVATION EASEMENT (RETENTION)
 DENOTES FOREST CONSERVATION EASEMENT (REFORESTATION)



APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 10-9-08

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Date: 10/16/08

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 Signature: John K. Hunter
 Date: 10/7/08

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: [Signature]
 HOWARD COUNTY SOIL CONSERVATION DISTRICT

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THAT ANY 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 SOIL CONSERVATION DISTRICT.
 Signature: [Signature]
 DATE: 8/25/08

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 SOIL CONSERVATION DISTRICT.
 Signature: [Signature]
 DATE: 8/25/08

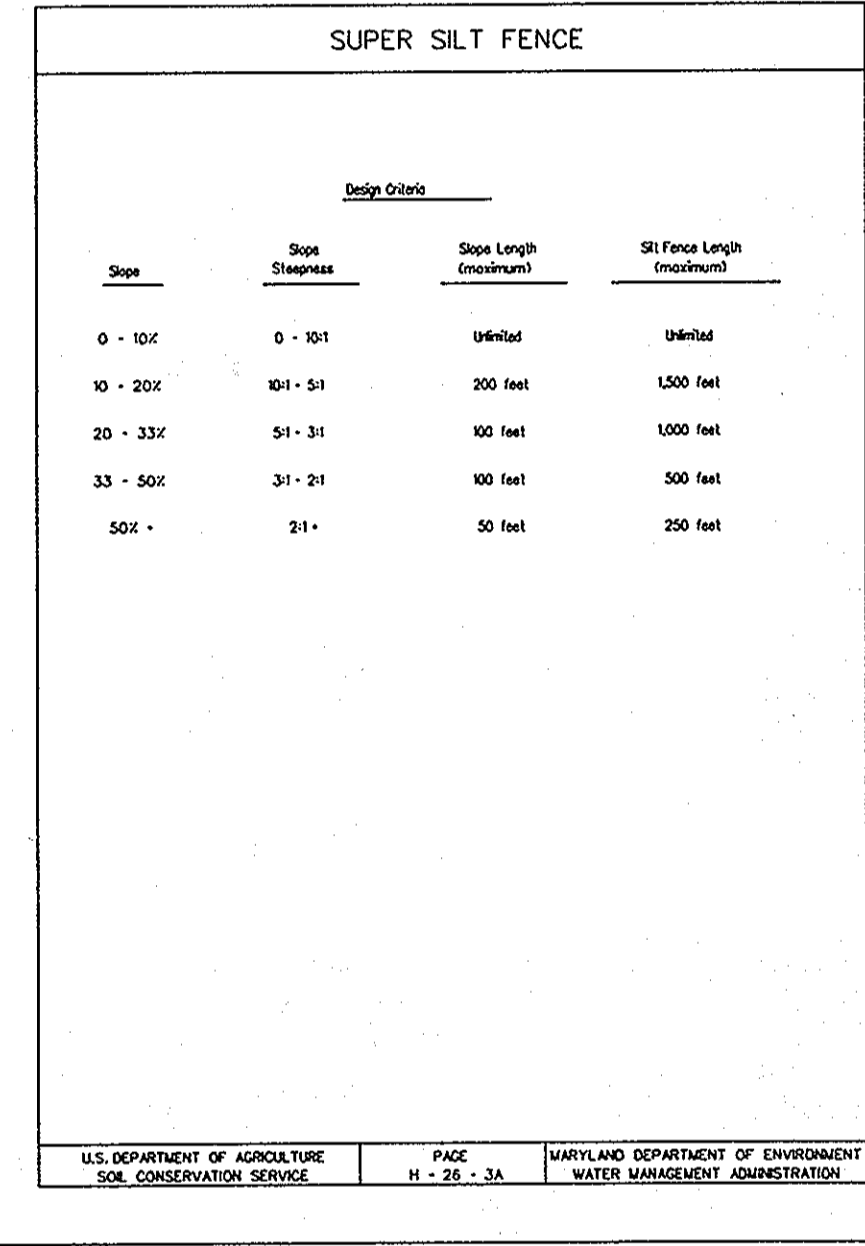
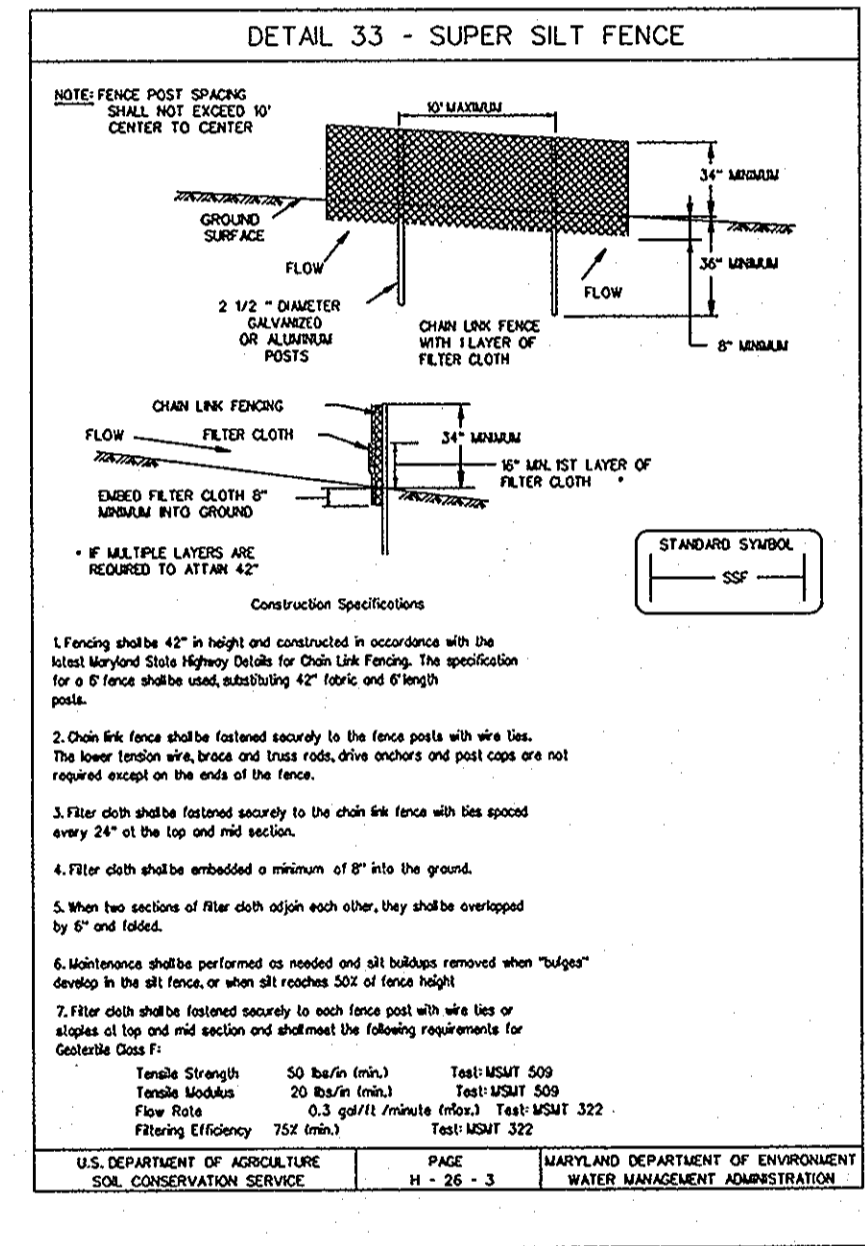
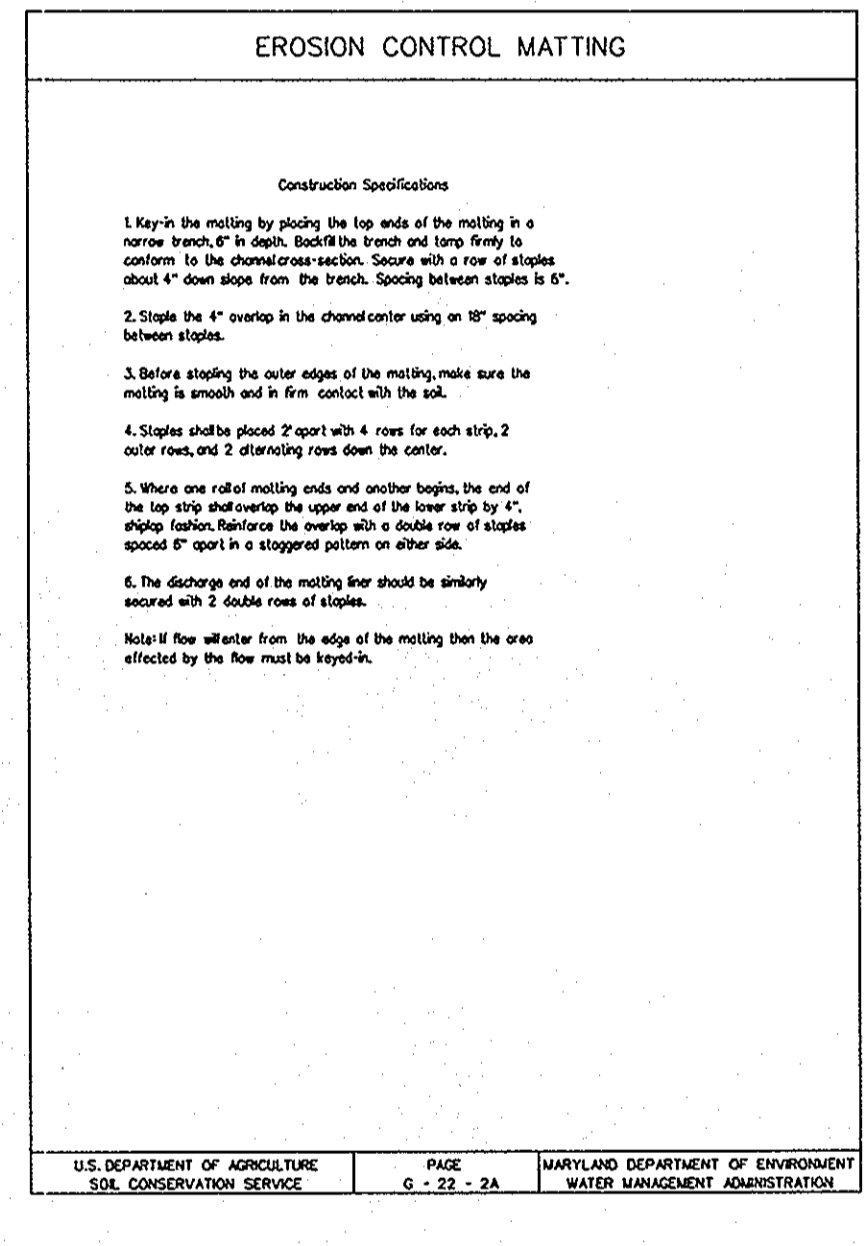
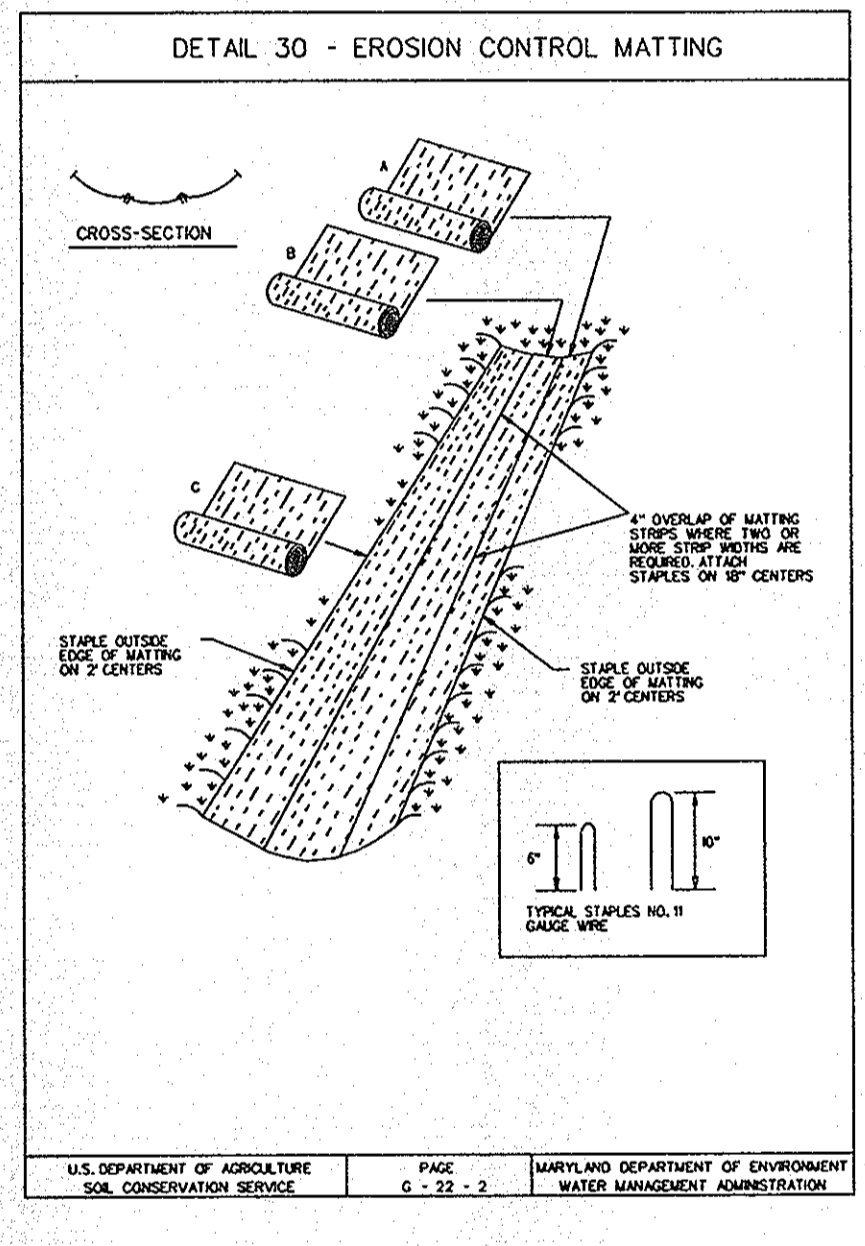
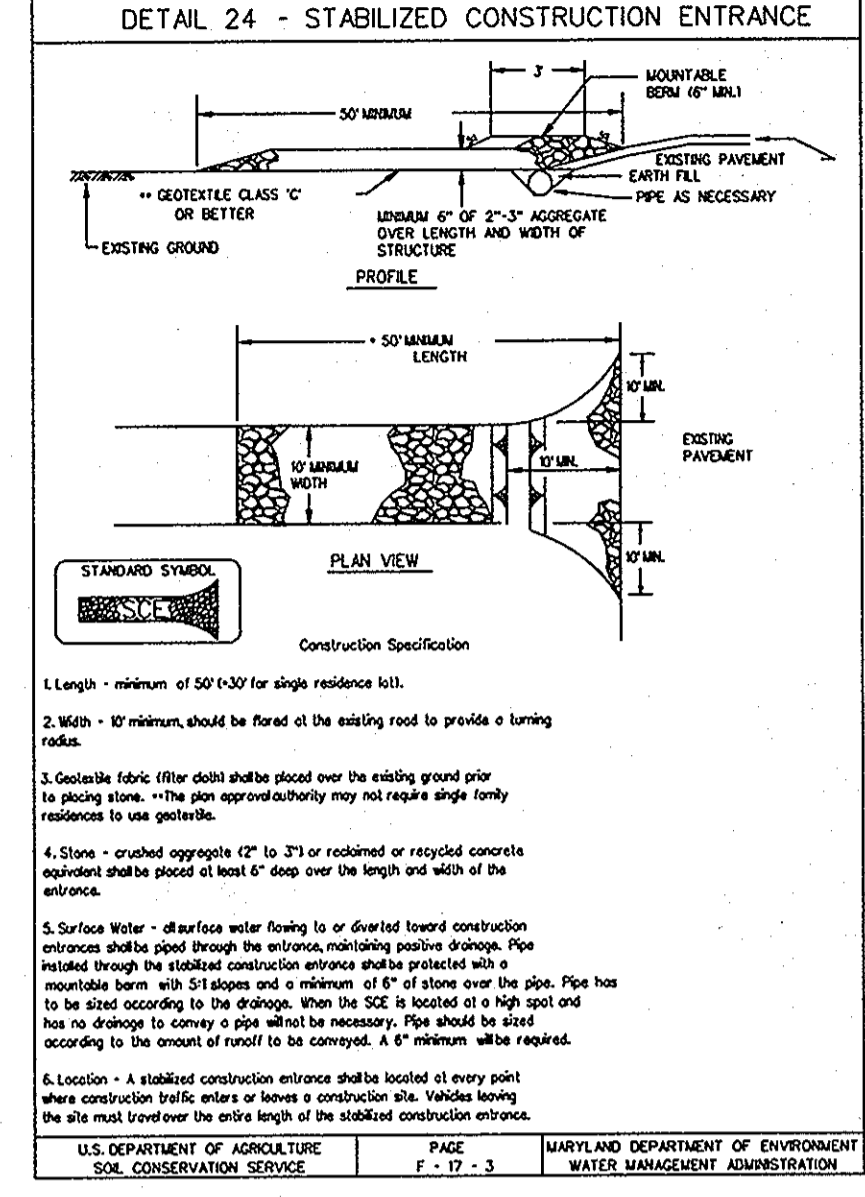
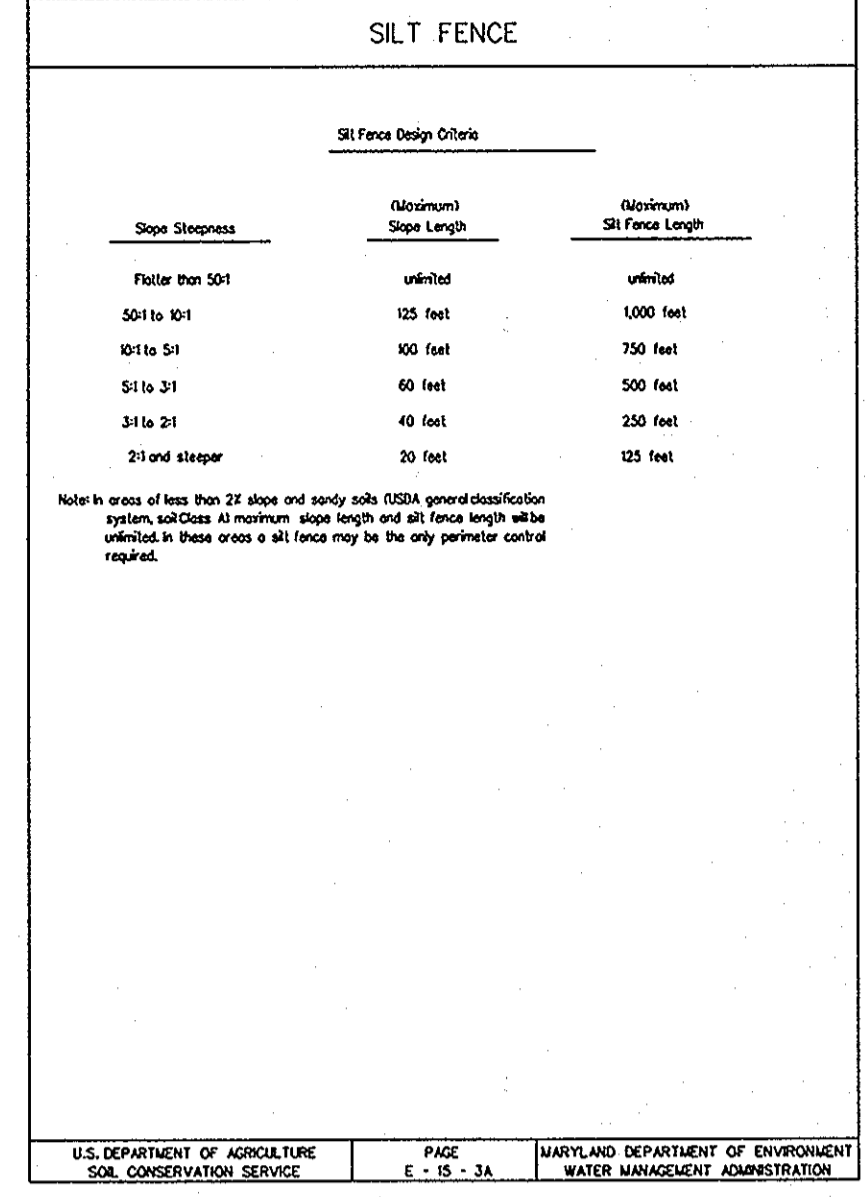
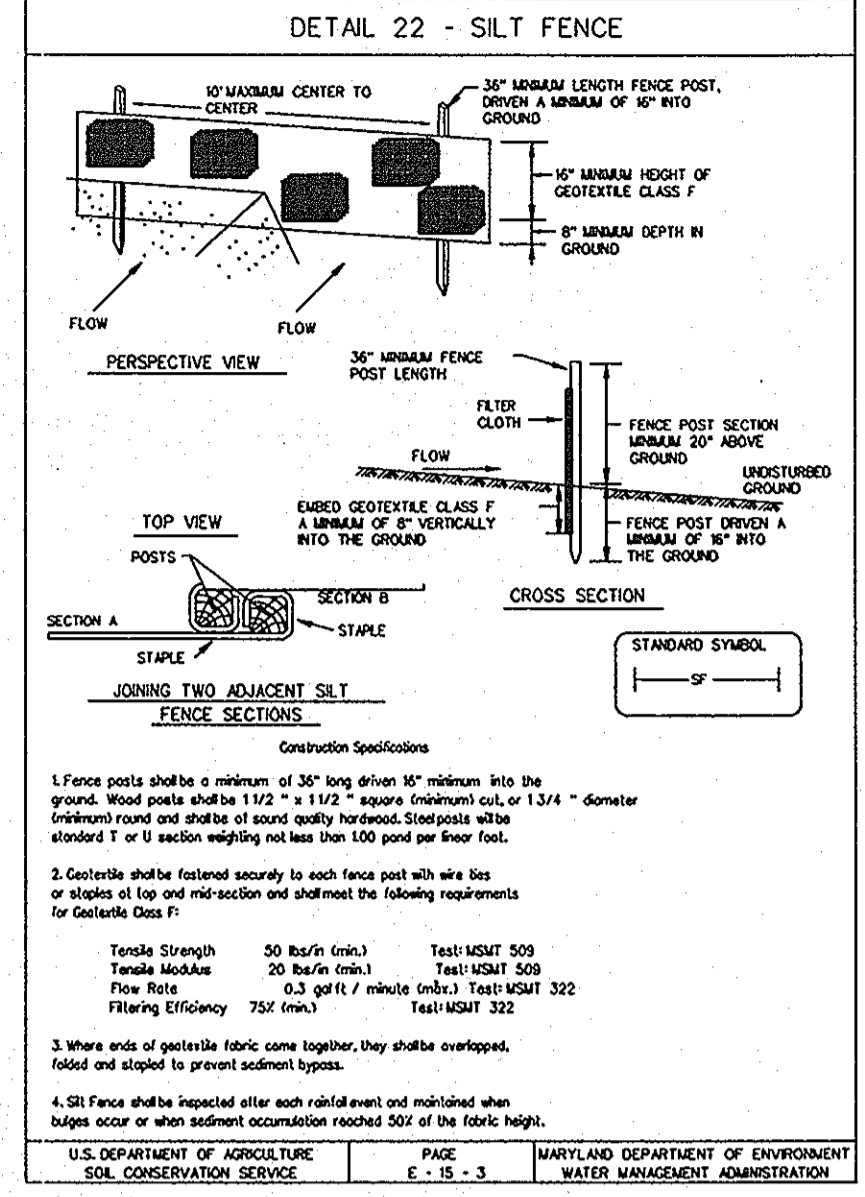
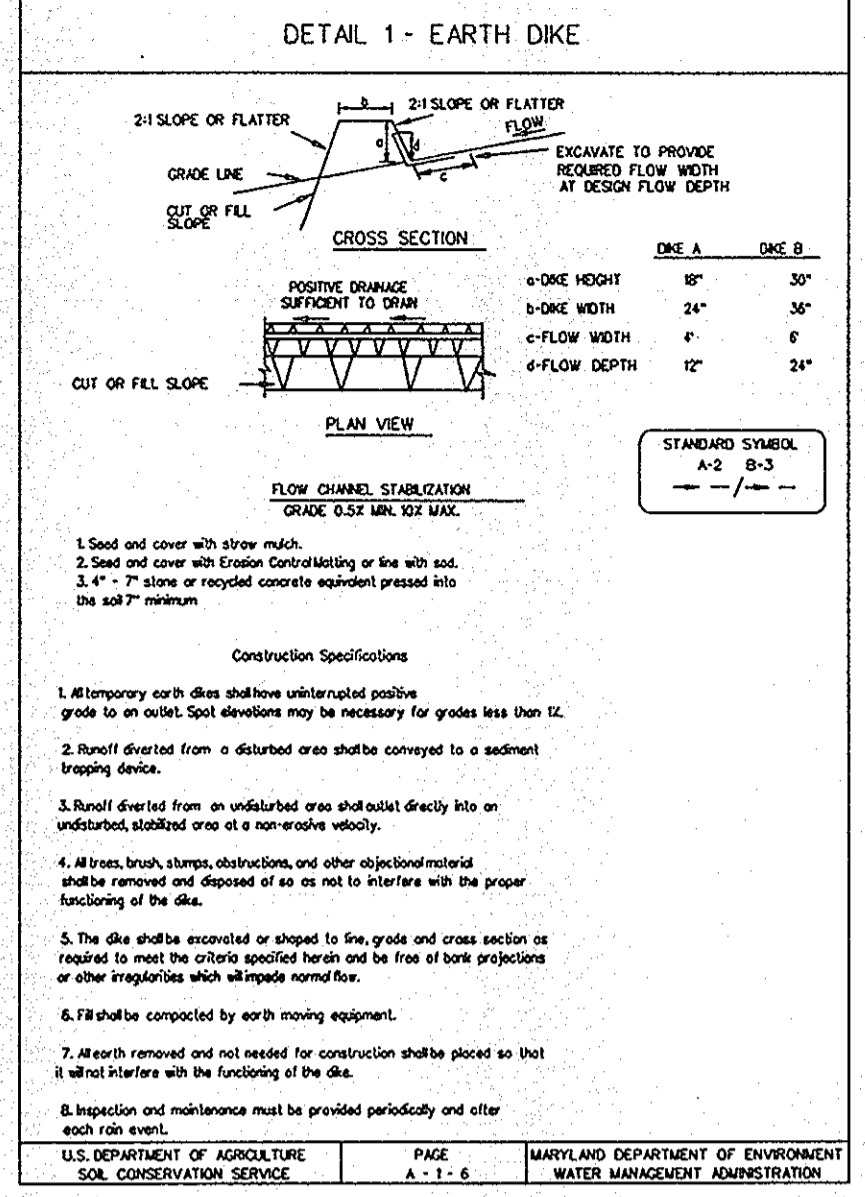
No.	REVISION	DATE	BY
1	REVISED FOREST CONSERVATION EASEMENT 'C'	10/2/08	MBA

ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
GREENHORNE & O'MARA, INC.
 200 HARRY S. TRUMAN PARKWAY, SUITE 200
 ANNAPOLIS, MARYLAND 21401
 (410) 266-0066
 Greenbelt, MD • Annapolis, MD • Atlanta, GA • Denver, CO • Fairfax, VA • Fredericksburg, VA • Mechanicsburg, PA
 Raleigh, NC • Rockville, MD • Tampa, FL • West Palm Beach, FL

OWNER/DEVELOPER
 HAWK'S WATCH, LLC
 4747 BONNIE BRANCH ROAD
 ELLICOTT CITY, MD 21043
 ATTN: RON WILDMAN
 410-869-9999

Grading, Erosion and Sediment Control Plan
Hawks' Watch Minor Subdivision
 Lots 1-6
 Zoned: R-20
 Tax Map 37 Parcel 58
 1ST ELECTION DISTRICT, HOWARD COUNTY, MD

JES DESIGN	SCALE: 1"=40'
KML/ARR DRAWN	2 OF 8
CHECKED	SHEET
12/07 DATE	G&O
	Howards County File # F-03-138



HOWARD COUNTY SOIL CONSERVATION DISTRICT

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and permits, Sediment Control Division prior to the start of any construction. (313-1855)
- 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 SEDIMENT CONTROL and revisions thereto.
- 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 by 14 days as to all other disturbed or graded areas on the project site.
- 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.
- 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.
- 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.
- Site Analysis

Total Area of Site	2.65 Acres
Area Disturbed	1.95 Acres
Area to be Roofed or Paved	0.665 Acres
Area to be Vegetatively Stabilized	1.285 Acres
Total Cut	1250 Cu. Yards
Total Fill	1250 Cu. Yards
Offsite Waste/Borrow Area Location	0
- Any Sediment control practice, which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 100% 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.
- 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 work day, whichever is shorter.

Rev. 9/99

FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil materials so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soils so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

FOR TOPSOIL (continued)

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards 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.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sand loam, clay loam, silt loam, sandy clay loam, loamy sand, approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% of volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other materials larger than 1 1/2\"/>
- Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-5 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.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - 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 phytotoxic 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

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established shall be maintained, albeit 4\"/>

VI Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- 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 requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that area permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - 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.
 - Composted sludge shall be amended with a potassium fertilizer applied to the rate of 4 lb /1,000 square feet, and 1/3 the normal lime application rate.
 - 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.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA Pub #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

OWNER/DEVELOPER
HAWK'S WATCH, LLC
4747 BONNIE BRANCH ROAD
ELLCOTT CITY, MD 21043
ATTN: RON WILDMAN
410-869-9999

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

John K. Redwood 10/7/08
SIGNATURE DATE

U.S.D.A. NATURAL RESOURCES
CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *WMM*
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Walter R. Marshall 10-9-08
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cecilia Hamer 10/16/08
Chief, Division of Land Development Date

John D. Williams 10/16/08
Chief, Development Engineering Division Date

HOWARD COUNTY SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or any 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 dolomitic limestone (92 lbs/sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding.
Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable:** Apply 2 tons/acre dolomitic limestone (92 lbs/sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding.

Seeding: For the periods March 1-April 30, August 1-October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/100 sq. ft.) of Weeping Lovegrass. During the period of October 16-February 28, protect site by:

- Two tons per acre of well-anchored straw mulch and seed as soon as possible in the spring.
- Use Sod
- Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well-anchored straw.

Mulching: 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 mulch anchoring tool or 218 gallons per acre (5 gal/sq. ft.) of emulsified asphalt on flat areas. On slope 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.

HOWARD COUNTY SOIL CONSERVATION DISTRICT

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or any other acceptable means before seeding, if not previously loosened.

Soil Amendments: In Lieu of soil test recommendations, use one of the following schedules:

- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: For the periods March 1-April 30, August 1-October 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs/1000 sq. ft.) For the period May 1 - August 14, seed with 3 lbs/acre Weeping Lovegrass (.07 lbs/1000sq.ft.). For the period November 16-February 28, protect site by applying 2 tons/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 acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THAT ANY 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, ALSO AUTHORITY PERMITS ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Ronald Williams 8/21/08
SIGNATURE OF DEVELOPER - HAWK'S WATCH, LLC DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 SOIL CONSERVATION DISTRICT."

Gregory R. Marshall 9/15/08
SIGNATURE OF ENGINEER DATE

No.	REVISION	DATE	BY

ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS

GREENHORNE & O'MARA, INC.

200 HARRY S. TRUMAN PARKWAY, SUITE 200
ANNAPOLIS, MARYLAND 21401
(410) 266-0066

Greenbelt, MD - Annapolis, MD - Atlanta, GA - Denver, CO - Fairfax, VA - Fredericksburg, VA - Mechanicsville, VA - Raleigh, NC - Rockville, MD - Tampa, FL - West Palm Beach, FL

Gregory R. Marshall
REGISTERED PROFESSIONAL ENGINEER

Latest Date Hereon

Sediment and Erosion Control Details

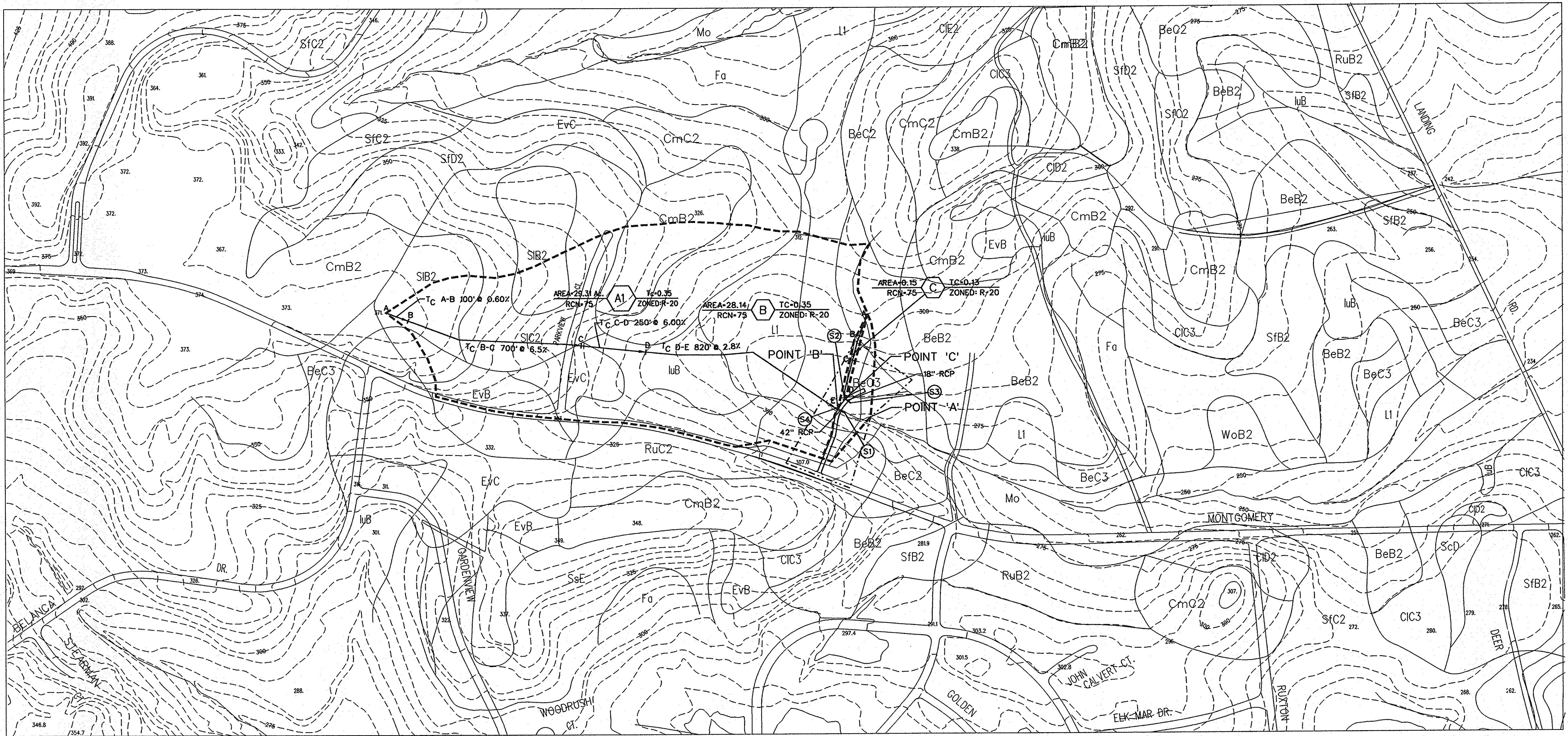
Hawks' Watch Minor Subdivision

Lots 1-6

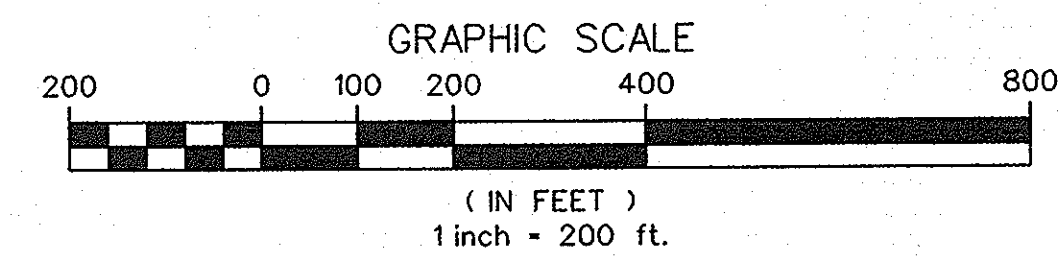
Zoned: R-20
Tax Map 37 Parcel 58
1ST ELECTION DISTRICT, HOWARD COUNTY, MD

JES DESIGN	SCALE	N.T.S.
KML/ARR DRAWN	4	OF 8
CHECKED	SHEET	
12/03 DATE	1082 JOB No.	Howard County File# F-03-138

F-03-138



DRAINAGE AREA TO POINT 'A' = 29.3 ACRES



- BeB2--Beltsville silt loam, 1 to 5% slopes, moderately eroded-CLASS C
- BeC2--Beltsville silt loam, 5 to 10% slopes, moderately eroded-CLASS C
- BeC3--Beltsville silt loam, 5 to 10% slopes, severely eroded-CLASS C
- CIC3--Chillum gravelly loam, 5 to 10% slopes, severely eroded-CLASS C
- CID2--Chillum gravelly loam, 10 to 15% slopes, moderately eroded-CLASS C
- CmB2--Chillum silt loam, 1 to 5% slopes, moderately eroded-CLASS C
- CmC2--Chillum silt loam, 5 to 10% slopes, moderately eroded-CLASS C
- EvB--Evesboro loamy sand, 1 to 5% slopes-CLASS A
- EvC--Evesboro loamy sand, 5 to 15% slopes-CLASS A
- Fa--Fallsington loam-CLASS D
- LuB--luka loam, local alluvium, 1 to 5% slopes-CLASS D
- Li--Leonardtown silt loam-CLASS D
- RuB2--Rumford loamy sand, 1 to 5% slopes, moderately eroded-CLASS B
- RuC2--Rumford loamy sand, 5 to 10% slopes, moderately eroded-CLASS B
- SfB2--Sassafras gravelly sandy loam, 1 to 5% slopes, moderately eroded-CLASS B
- SfC2--Sassafras gravelly sandy loam, 5 to 10% slopes, moderately eroded-CLASS B
- Mo--Mixed alluvial land

OWNER/DEVELOPER
 HAWK'S WATCH, LLC
 4747 BONNIE BRANCH ROAD
 ELLICOTT CITY, MD 21043
 ATTN: RON WILDMAN
 410-869-9999

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. R. [Signature] 10-9-08
 Chief, Bureau of Highways
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
C. [Signature] 10/16/08
 Chief, Division of Land Development
 APPROVED: *[Signature]* 10/16/08
 Chief, Development Engineering Division

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

SIGNATURE DATE
 U.S.D.A NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: _____ DATE _____
 HOWARD SCD

DEVELOPER'S CERTIFICATE
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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 SOIL CONSERVATION DISTRICT."
Ron Wildman 10/16/08
 SIGNATURE OF DEVELOPER HAWK'S WATCH, LLC Agent DATE

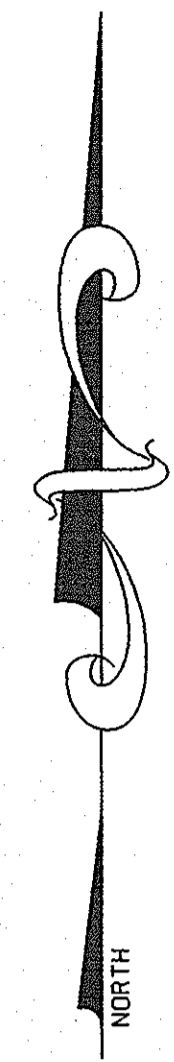
ENGINEER'S CERTIFICATE
 "I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
[Signature] 10/16/08
 SIGNATURE OF ENGINEER DATE

No.	REVISION	DATE	BY

ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS
GREENHORNE & O'MARA, INC.
 200 HARRY S. TRUMAN PARKWAY, SUITE 200
 ANNAPOLIS, MARYLAND 21401
 (410) 266-0066
 Greenbelt, MD • Annapolis, MD • Atlanta, GA • Denver, CO • Fairfax, VA • Fredericksburg, VA • Mechanicsville, VA
 Raleigh, NC • Rockville, MD • Tampa, FL • West Palm Beach, FL
 © Latest Date Hereon

Drainage Area and Soils Area Map
Hawks' Watch Minor Subdivision
 Lots 1-6
 Zoned: R-20
 Tax Map 37 Parcel 58
 1ST ELECTION DISTRICT, HOWARD COUNTY, MD

JES DESIGN	SCALE: 1"=200'
KML/ARR DRAWN	5 OF 8
CHECKED SHEET	
March '04 DATE	1002 JOB No. Howard County File# F-03-138



SMH 4
Top Elev. = 301.00 ±
Inv. (In) = 281.89
Inv. (Out) = 281.79

N 563500
E 180765

FOREST

HOWARD COUNTY, MD
PARCEL 57
5347/48
Part 2

FOREST

RESIDENTIAL

RESIDENTIAL

GENERAL NOTES:

- SITE DATA:
ZONING: R-20.
TAX MAP 37 PARCEL 58
DEED REFERENCE: L.6485 F.0556
GROSS AREA: 2.84 ACRES ±
MINIMUM LOT SIZE: 18,000 SQ. FT.
NUMBER OF PROPOSED BUILDABLE LOTS: 4
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED.
- ALL AREAS ARE MORE OR LESS:
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENT).
 - SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 100% GRADE CHANGE AND MINIMUM OF 45-FOOT RADIUS.
 - STRUCTURES (CULVERT/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.

FOREST CONSERVATION WORKSHEET:

NET TRACT AREA:	AREA
A. Total tract area	2.84 Ac. ±
B. Area within 100 year floodplain	0.00 Ac. ±
D. Net tract area	2.84 Ac. ±

LAND USE CATEGORY:	(From Table 3.2.1, Page 40, Manual)	AREA				
Input the number "1" under the appropriate land use zoning, and limit to only one entry.						
ARA	MDR	IDA	HDR	MPD	CA	AREA
0	0	0	1	0	0	0.43 Ac. ±
E. Afforestation Threshold (15% of Net Tract Area)						0.43 Ac. ±
F. Conservation Threshold (20% of Net Tract Area)						0.57 Ac. ±

EXISTING FOREST COVER:	AREA
G. Existing forest cover	1.84 Ac. ±
H. Area of forest above afforestation threshold	1.42 Ac. ±
I. Area of forest above conservation threshold	1.25 Ac. ±

BREAK EVEN POINT:	AREA
J. Forest retention above threshold with no mitigation	0.27 Ac. ±
K. Clearing permitted without mitigation	1.06 Ac. ±

PROPOSED FOREST CLEARING:	AREA
L. Total area of forest to be cleared	1.44 Ac. ±
M. Total area of forest to be retained	0.46 Ac. ±

LEGEND

DESCRIPTION	EXISTING	PROPOSED
2' CONTOUR 142 142
10' CONTOUR	----- 140 -----	----- 140 -----
SPOT ELEVATION	+ (25.5)	+ 25.5
FOREST STAND LINE	-----	-----
PROPERTY BOUNDARY	-----	-----
LOT LINE	-----	-----
RIGHT-OF-WAY	-----	-----
TREE LINE	~~~~~	~~~~~

SPECIMEN TREE LIST

SPECIES	DIAMETER
① YELLOW POPLAR	39"
② RED OAK	39"
③ WHITE OAK	33"
④ RED MAPLE	44"

OWNERS CERTIFICATION

WE, HAWK'S WATCH, LLC, owner of the property shown and described herein, hereby adopt this plan in consideration of the approval of this Forest Conservation Easement Plan by the Department of Planning and Zoning, to establish the Forest Conservation Easement(s).

Ronald B. Wildman
HAWK'S WATCH, LLC Agent

12/16/08
DATE

Ronald B. Wildman
MARYLAND Qualified Forest Conservation Professional

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

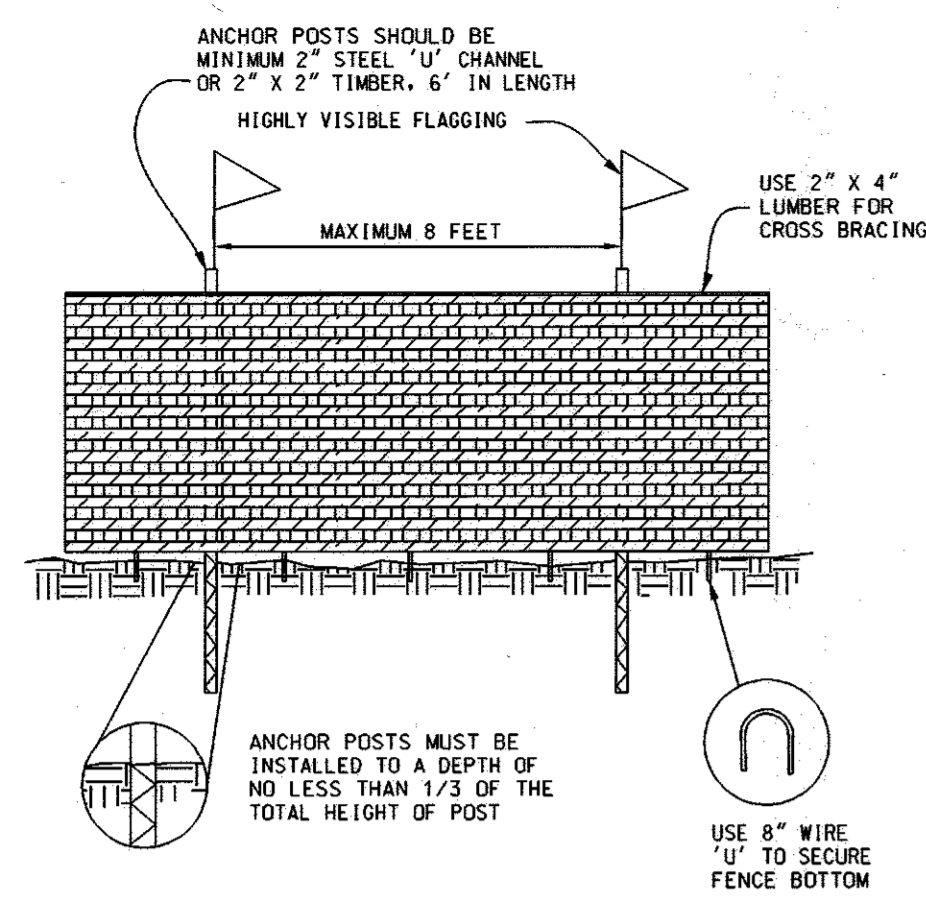
APPROVED:
HOWARD SCD

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. M... 10-9-08
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamer 10/16/08
Chief, Division of Land Development

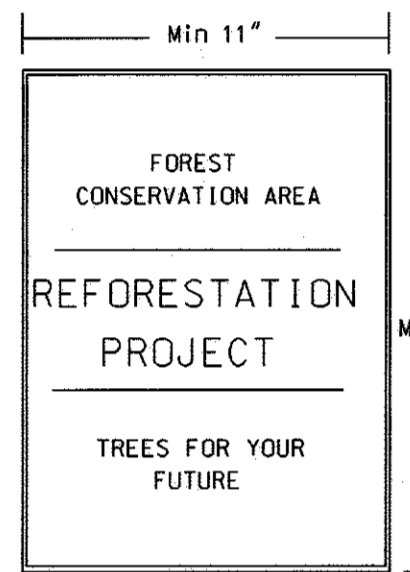
John De... 10/16/08
Chief, Development Engineering Division

DATE	NO.	REVISION
OWNER/DEVELOPER HAWK'S WATCH, LLC 4747 BONNIE BRANCH ROAD ELLCOTT CITY, MARYLAND 21043 ATTN: RONALD WILDMAN		
PROJECT: HAWK'S WATCH SUBDIVISION 6397 MONTGOMERY ROAD HOWARD COUNTY MARYLAND		
AREA: TAX MAP 37, PARCEL 58 GRID FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: FOREST STAND DELINEATION		
		WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLCOTT CITY, MD 21043 PHONE: (410) 869-9909 FAX: (410) 869-9901
DESIGNED BY: W.E.S. DRAWN BY: J.E.P. PROJECT NO. DATE: 12/03 SCALE: 1" = 40' SHEET NO. 6 OF 8 Howard County File# F-03-138		



- NOTES:
1. FOREST PROTECTION FENCE ONLY.
 2. RETENTION AREA SHALL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING FENCE.
 4. BOUNDARIES SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

PROTECTIVE FENCE DETAIL
BLAZE ORANGE PLASTIC MESH
NOT TO SCALE



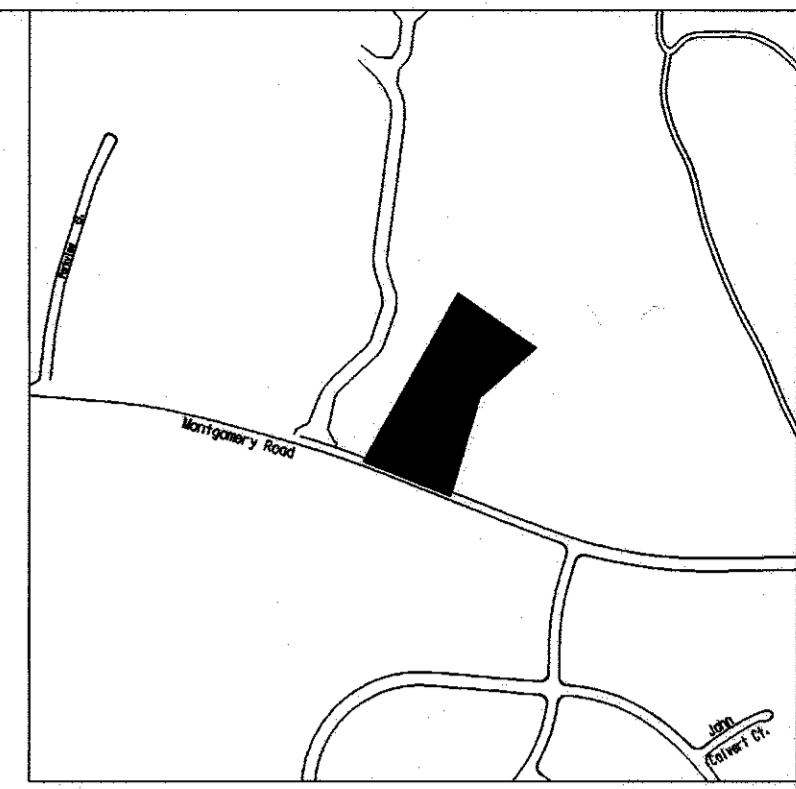
SIGNAGE DETAIL
NOT TO SCALE

REFORESTATION PLANT LIST						
QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	MET. STATUS	MIN.D.C. SPACING	SIZE & REMARKS
11	Prunus serotina Wild Black Cherry	I	M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
11	Rubus pseudoacacia Black Locust	VI	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
11	Acer rubrum Red Maple	VT	D-W	FAC	11'	SEEDLING/WHIP W/TREE SHELTER
11	Quercus rubra Red Oak	MT	D-M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER
11	Quercus palustris Pin Oak	T	M-W	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
11	Liriodendron tulipifera Tulip Poplar	MT	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
11	Nyssa sylvatica Black Gum	T	M-W	FAC	11'	SEEDLING/WHIP W/TREE SHELTER

Quantities of Individual Species and Species Composition May Change Depending on Availability At Time of Planting. Total Quantity of Trees For Entire Easement Area Will Not Change. Any Species Substitution Must Be Listed On The Howard County Forest Association List. If Quantities Are Changed, A Minimum Of Five (5) Species Must Be Planted.

FOREST CONSERVATION WORKSHEET:

NET TRACT AREA:	AREA
A. Total tract area	2.84 Ac. ±
B. Area within 100 year floodplain	0.00 Ac. ±
C. Area to be dedicated for right of way	N/A
D. Net tract area	2.84 Ac. ±
E. Afforestation Threshold (15% of Net Tract Area)	0.43 Ac. ±
F. Conservation Threshold (20% of Net Tract Area)	0.57 Ac. ±
EXISTING FOREST COVER:	
G. Existing forest cover	1.84 Ac. ±
H. Area of forest above afforestation threshold	1.42 Ac. ±
I. Area of forest above conservation threshold	1.25 Ac. ±
BREAK EVEN POINT:	
J. Forest retention above threshold with no mitigation	0.27 Ac. ±
K. Clearing permitted without mitigation	1.06 Ac. ±
PROPOSED FOREST CLEARING:	
L. Total area of forest to be cleared	1.44 Ac. ±
M. Total area of forest to be retained	0.46 Ac. ±
PLANTING REQUIREMENTS	
N. Reforestation for clearing above conservation threshold	0.33 Ac. ±
O. Reforestation for clearing below conservation threshold(2x0.16)	0.22 Ac. ±
P. Credit for retention above conservation threshold	0.00 Ac. ±
Q. Total reforestation required	0.55 Ac. ±
R. Total afforestation required	N/A
S. Total reforestation and afforestation required	0.55 Ac. ±
T. Total reforestation provided	0.21 Ac. ±
U. Total reforestation remaining	0.34 Ac. ±



VICINITY MAP
1" = 500'

PLANT STORAGE AND INSPECTION

1. FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
2. FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
4. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

FERTILIZING

1. DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANDY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
2. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
3. IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
2. ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
3. VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
4. REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
5. REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
6. A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

SUPERVISION

1. ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

Ronald B. Willman
MD. Qualified Forest Conservation Professional

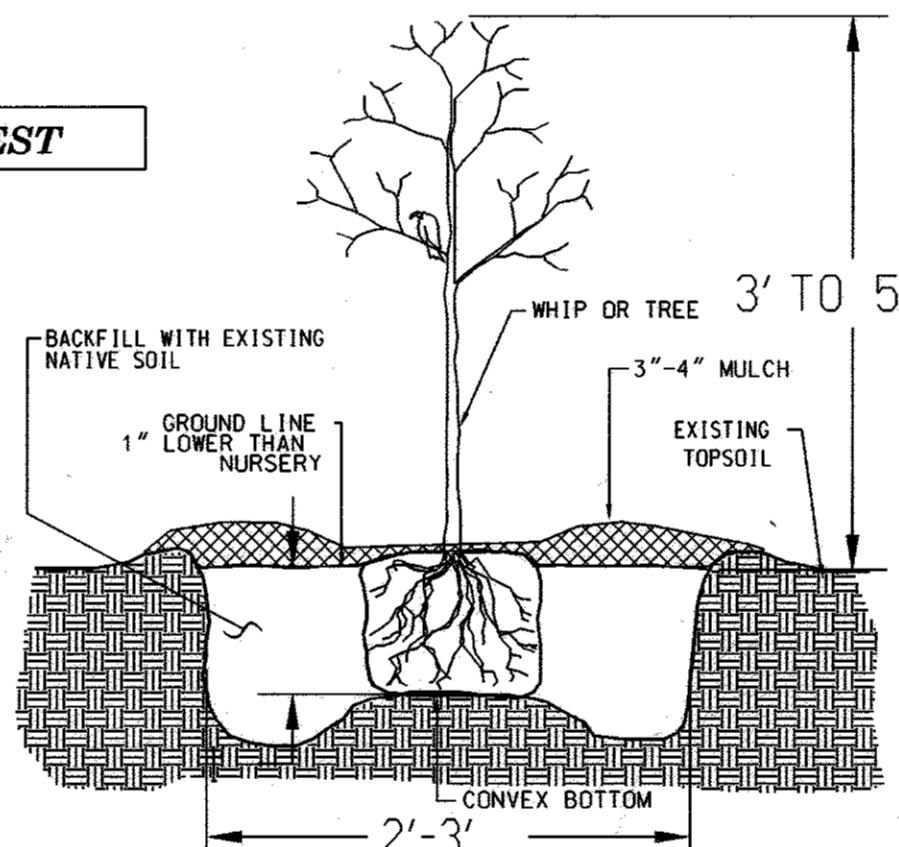
PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

1. PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. AS SHOWN ON THE DETAIL VIEW, A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
4. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT INSTALLATION

1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
2. PLANTING FIELD DIMENSIONS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
3. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
4. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
5. FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
6. FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FOUR (4), PER SPECIES, OVER THE ENTIRE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED ON PLANT LIST.
7. AVOID PLANTING IN A STRAIGHT GRID PATTERN. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED ON PLANT LISTS TO OBTAIN A MORE NATURAL APPEARANCE.
8. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON. DUE TO THE WELL DRAINED NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD, THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.



TREE PLANTING DETAIL
CONTAINER GROWN

GENERAL NOTES:

1. SITE DATA:
ZONING: R-20.
TAX MAP 37 PARCEL 58
DEED REFERENCE: L.6485 F.0556
GROSS AREA: 2.84 ACRES ±
MINIMUM LOT SIZE: 18,000 SQ. FT.
NUMBER OF PROPOSED BUILDABLE LOTS: 4
2. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED.
3. ALL AREAS ARE MORE OR LESS.
4. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENT).
B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.
C) GEOMETRY - MAXIMUM 15% GRADE CHANGE AND MINIMUM OF 45-FOOT RADIUS.
D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
5. THE FOREST CONSERVATION OBLIGATIONS ARE PROVIDED BY 0.455 ACRES OF FOREST RETENTION WITHIN TWO (2) FOREST CONSERVATION EASEMENTS (RETENTION) LABELED AS (FCE 'A' - 0.312 AC., FCE 'B' - 0.143 AC. = 0.455 AC. TOTAL) AND BY PROVIDING 0.214 ACRES OF REFORESTATION WITHIN FCE 'C'. THE TOTAL REFORESTATION REQUIREMENT REMAINING OF 0.34 ACRES SHALL BE PROVIDED BY A FEE-IN-LIEU PAYMENT IN THE AMOUNT OF \$11,107.80 TO THE HOWARD COUNTY FOREST CONSERVATION FUND AND A FOREST CONSERVATION AGREEMENT SURETY IN THE AMOUNT OF \$8,624.88.
A PORTION OF FOREST CONSERVATION EASEMENT 'C' (1.164 SQUARE FEET, 0.01 ACRES) HAS BEEN ABANDONED. PAYMENT OF \$1.25 PER SQUARE FOOT OF ABANDONMENT OF 1.164 SQUARE FEET OF FOREST CONSERVATION EASEMENT IN THE AMOUNT OF \$2,202.00 HAS BEEN PAID, REF# 145824.

SPECIMEN TREE LIST

SPECIES	DIAMETER
① YELLOW POPLAR	39"
② RED OAK	39"
③ WHITE OAK	33"
④ RED MAPLE	44"

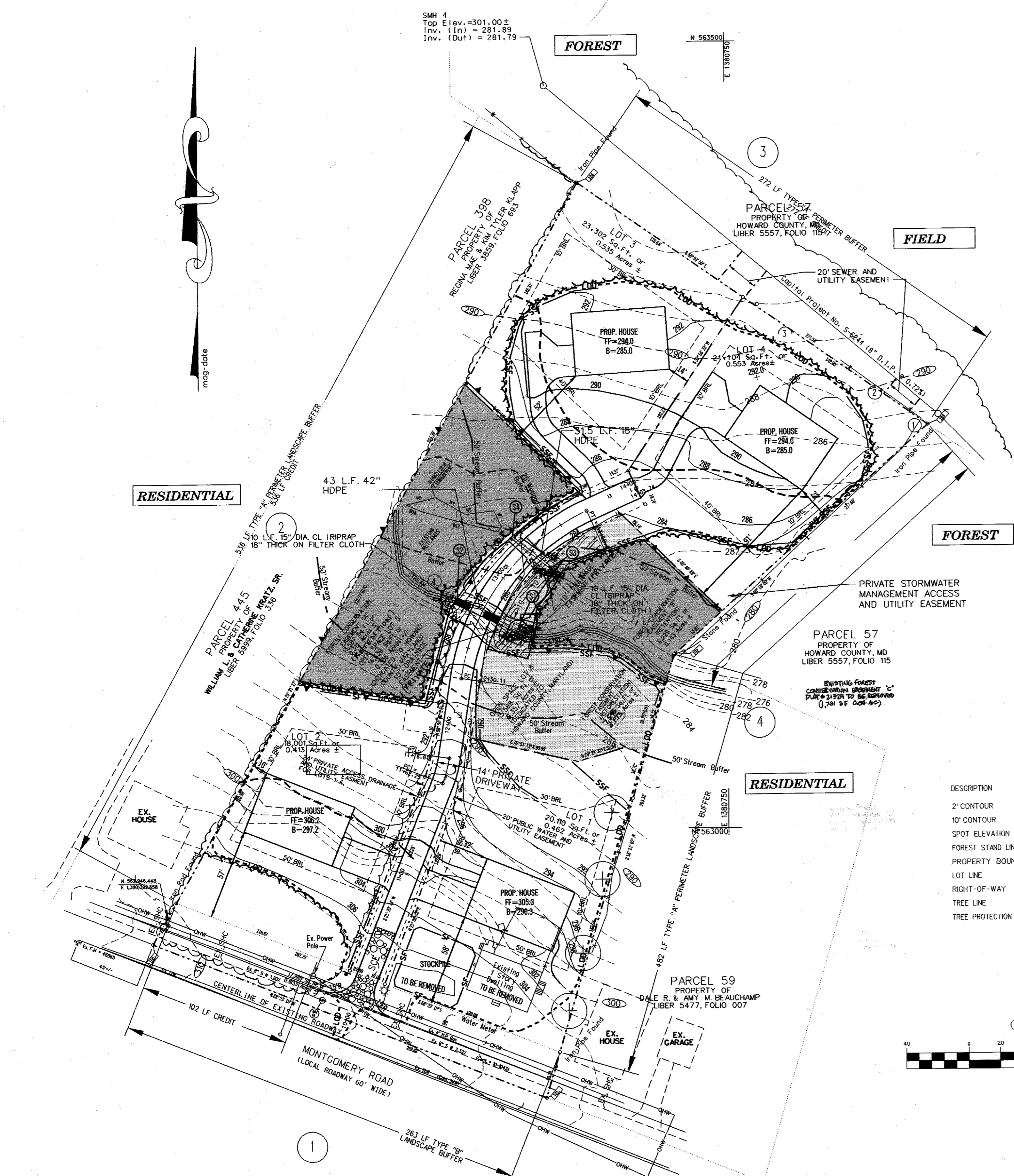
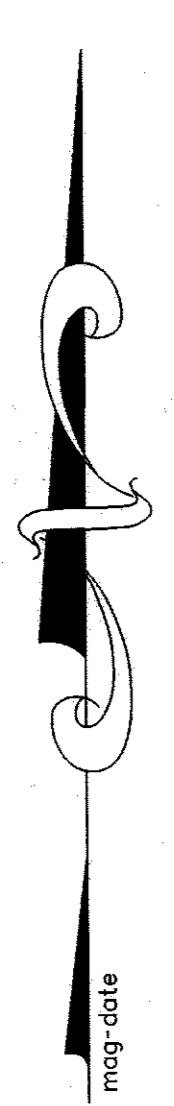
LEGEND

DESCRIPTION	EXISTING	PROPOSED
2' CONTOUR	--- 142 ---	--- 142 ---
10' CONTOUR	--- 140 ---	--- 140 ---
SPOT ELEVATION	• (25.5)	• 25.5
FOREST STAND LINE	-----	-----
PROPERTY BOUNDARY	-----	-----
LOT LINE	-----	-----
RIGHT-OF-WAY	-----	-----
TREE LINE	-----	-----
TREE PROTECTION FENCE WITH SIGNAGE	-----	-----

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

SIGNATURE _____ DATE _____
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: _____ DATE _____
HOWARD SCD

10/16/10	REVISION
DATE	NO.
OWNER/DEVELOPER	
HAWK'S WATCH, LLC 4747 BONNIE BRANCH ROAD ELLICOTT CITY, MARYLAND 21043 ATTN: RONALD WILDMAN	
PROJECT:	
HAWK'S WATCH SUBDIVISION 6397 MONTGOMERY ROAD HOWARD COUNTY MARYLAND	
AREA:	
TAX MAP 37, PARCEL 58 GRID VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.	
TITLE:	
FOREST CONSERVATION PLAN	
WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLICOTT CITY, MD. 21043 PHONE: (410) 869-9099 FAX: (410) 869-9901	
DESIGNED BY: W.E.S.	
DRAWN BY: J.E.P.	
PROJECT NO.	
DATE: 12/03	
SCALE: 1" = 40'	
SHEET NO. 7 OF 8	
Howard County File# F-03-138	



TREE LIST					
No.	Key	Qty.	Plant Names	Size-Cond.	Remarks
1	+	4	ACER RUBRUM (Red Maple-October Glory)	2 1/2"-3" Cal.	B&B
Total: 4					

SCHEDULE A
PERIMETER LANDSCAPE EDGE

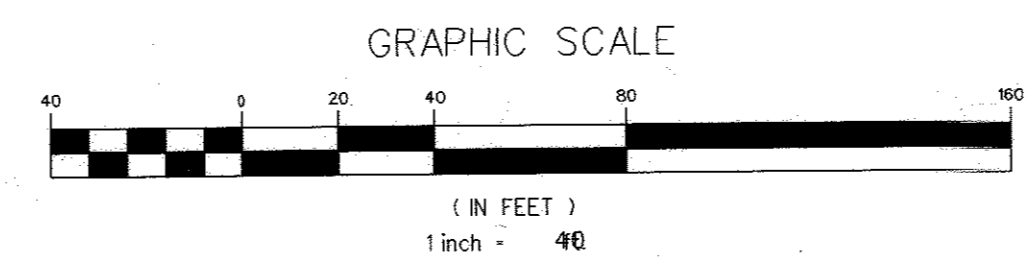
Category	Adjacent to Roadways			
	Adjacent to Roadways	Perimeter Properties		
	B (1)	A (2)	A (3)	A (4)
Landscape Type				
Linear Feet of Roadway Frontage/Perimeter (HOUSES TO FACE ROADWAY)	263	536	272	482
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	N/A	536	272	
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	N/A	No	No	No
Number of Plants Required				
Shade Trees	---	---	---	4
Evergreen Trees	---	---	---	---
Shrubs	---	---	---	---
Number of Plants Provided				
Shade Trees	---	---	---	4
Evergreen Trees	---	---	---	---
Other Trees (2:1 Substitution)	---	---	---	---
Shrubs (10:1 Substitution)	---	---	---	---
(Describe plant substitutions credits below if needed)				

Comments: Existing Trees

NOTE:
THIS PLAN FOR LANDSCAPING ONLY.
Landscape surety in the amount of \$1,200.00 shall be posted as a part of the Developer's Agreement.

The final landscape requirements for Lots 2, 3 and 4 shall be determined and provided if required with the required site development plan for the development of these lots.

DESCRIPTION	EXISTING	PROPOSED
	2' CONTOUR	---
10' CONTOUR	---	---
SPOT ELEVATION	+ (25.5)	+ 25.5
FOREST STAND LINE	---	---
PROPERTY BOUNDARY	---	---
LOT LINE	---	---
RIGHT-OF-WAY	---	---
TREE LINE	---	---
TREE PROTECTION FENCE WITH SIGNAGE	---	---



SPECIMEN TREE LIST		
SPECIES	DIAMETER	CONDITION
① YELLOW POPLAR	39"	GOOD
② RED OAK	39"	GOOD
③ WHITE OAK	33"	GOOD
④ RED MAPLE	44"	POOR

OWNERS CERTIFICATION
WE, HAWK'S WATCH, LLC, owner of the property shown and described herein, hereby adopt this plan in consideration of the approval of this Forest Conservation Easement Plan by the Department of Planning and Zoning, to establish the Forest Conservation Easement(s).
Ronald L. Willman (Member)
HAWK'S WATCH, LLC
DATE: 9/9/08

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
SIGNATURE: _____ DATE: _____
U.S.D.A NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: _____ DATE: _____
HOWARD SCD

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. Mahan 10-9-08
Chief, Bureau of Highways
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hamm 10/16/08
Chief, Division of Land Development
John Decker 10/16/08
Chief, Development Engineering Division

10/16/08	REVISED FOREST CONSERVATION ESMR "C"
DATE NO.	REVISION
OWNER/DEVELOPER	HAWK'S WATCH, LLC 4747 BONNIE BRANCH ROAD ELLCOTT CITY, MARYLAND 21043 ATTN: RONALD WILDMAN
PROJECT:	HAWK'S WATCH SUBDIVISION 6397 MONTGOMERY ROAD HOWARD COUNTY MARYLAND
AREA:	TAX MAP 37, PARCEL 58 GRID FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	PERIMETER LANDSCAPE PLAN
WILDMAN ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLCOTT CITY, MD 21043 PHONE: (410) 869-9999 FAX: (410) 869-9901	
DESIGNED BY: W.E.S. DRAWN BY: J.E.P. PROJECT NO. DATE: 12/03 SCALE: 1" = 40' SHEET NO. 8 OF 8 Howard County File# F-03-138	