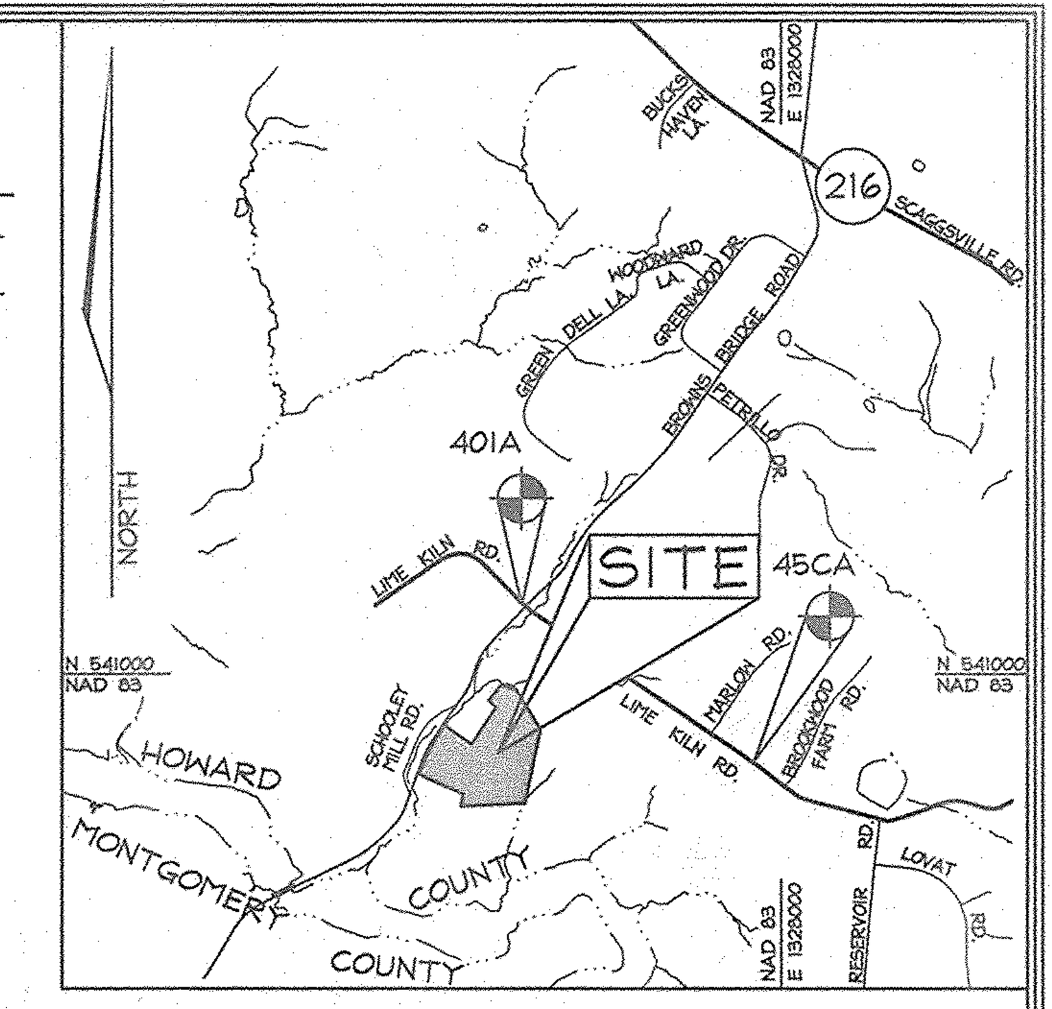
FINAL FOREST CONSERVATION, LANDSCAPING, AND ROAD CONSTRUCTION PLANS
J. THOMPSON PROPERTY
LOTS 1 THRU 6

GENERAL NOTES

1. Subject property zoned RR-DEO per 02/02/04 Comprehensive Zoning Plan and The "Comprehensive Lite" Zoning Amendments effective 7/28/06.
2. Private water and sewer will be used within this site.
3. Total area of property: 21.227 ac.±
4. Number of proposed buildable lots: 6
   Area of proposed buildable lots: 21.227 ac.±
5. The lots shown hereon comply with the minimum ownership, width and lot area as required by the Maryland State Department of the Environment.
6. [hatch symbol] This area designates a private sewage easement of at least 10,000 square feet as required by the Maryland State Department of the Environment for individual sewage disposal (COMAR 26.04.03). Improvements of any nature in this area are restricted until public sewerage is available. These easements shall become null and void upon connection to a public sewerage system. The County Health Officer shall have the authority to grant adjustments to the private sewage easement.
7. All wells and septic fields within 100' of property's boundary have been shown.
8. All percolation test holes and their elevations have been field located by FSH Associates.
9. On-site topography and existing utilities are based on a Field Run Survey prepared by FSH Associates dated 05/04/05. Off-site and non-critical topography based on Howard County 1993 Aerial Topographic Surveys with five foot contours.
10. All wells to be drilled prior to submittal of final plat for signature. It is the developer's responsibility to schedule the well drilling prior to final plat submission. It will not be considered 'government delay' if the well drilling holds up the Health Department signature of the record plat.
11. The project is not within the metropolitan district.
12. The project is in conformance with and all construction shall be in accordance with the latest Howard County standards and specifications, plus MSHA standards and specifications if applicable unless waivers have been approved.
13. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based on the Maryland State Plane Coordinate system. Howard County monument numbers 401A and 45CA were used for this project.
14. Boundary survey prepared by FSH Associates on or about 05/04/05.
15. A.P.F.O Traffic Study prepared by Street Traffic Studies Ltd. on 02/24/05, and approved on July 14, 2005 under SP-05-020.
16. Operating Speed Study along Browns Bridge Road prepared by Street Traffic Studies Ltd. on 04/01/05.
17. Forest Stand Delineation and Forest Conservation Plan prepared by Exploration Research Inc. and approved on October 14, 2005 under SP-05-020
18. Wetlands Evaluation prepared by Exploration Research Inc. There are no wetlands on-site.
19. On July 22, 2005, the Planning Director approved Waiver Petition WP-05-137 from Section 16.120(b)(4)(iii)(b) to allow floodplain, streams, wetlands and their buffers and a forest conservation easement on lots less than 10Ac. in size.
   Subject to the following conditions:
   a) Lots 1,3,4 and 5 will be allowed to create a forest conservation easement for tree retention only;
   b) a 35-foot setback to be provided from the edge of the forest easement;
   c) developer shall post the forest conservation signage during the construction of the driveway;
   d) the 60,000 square-foot policy for forest conservation shall not be allowed to be applied to this site;
   e) the distance between the proposed house location and the environmentally sensitive features shall be maximized to the extent possible.
20. This plan is subject to the Amended Fifth Edition of the subdivision and Land Development Regulations per Council Bill 45-2003 and the Zoning Regulations as amended by CB 75-2003. Development or construction of these lots must comply with setback and buffer regulations in effect at the time of submission of the waiver petition application, or building/grading permit.
21. On September 14, 2005 Chief Development Engineering Division approved a waiver from Section 2.3.1.B in Design Manual Volume III to allow the height of object for a stopping sight distance analysis, to be 2 feet instead of 6 inches , as outlined in "AASHTO a policy on Geometric Design of Highways and streets 2001, Fourth Edition".
22. The contractor shall notify the Department of Public Works/Bereau of Engineering/Construction Inspection Division at (410)313-1880 at least five (5) working days prior to the start of work.
23. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
24. Stormwater Management Recharge (Rev) and water quality (WQ) has been provided through the use of Roof-top and Non-Rooftop Disconnects and Grass Channels (all three are non-structural design credits within the MD SWM Design Manual.) Stormwater Channel Protection is not required due to less than 2.0 c.f.s. of runoff on the post-development one (1) year storm event. Stormwater Overbank Flood Protection (10 year management) and Extreme Flood Volume (100 year management) are not required for this development. All provided Rev and WQv SWM measures shall be privately owned and maintained.
25. The flood plain for this project was prepared by FSH Associates, dated August 25, 2005 and approved with the preliminary equivalent sketch plan (SP-05-020) on October 14, 2005.
26. There are no wetlands on this site.
27. The preliminary equivalent Sketch Plan (SP-05-020) was approved on October 14, 2005.
28. Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
29. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the limits of wetlands, stream(s), or their required buffers, flood plain and forest conservation easement areas.
30. For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not onto the pipestem lot driveway.
31. The Forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement; however, Forest Management Practices as defined in the Deed of Forest Conservation Easement are allowed.
32. [hexagon symbol] The Forest Conservation Plan has been prepared in accordance with the Howard County Forest Conservation Act of 1991 and has been met by 2.55 acres retention and 2.19 acres off site in The Clarks Meadow, F-06-29, Forest Conservation Bank.
   Surety in the amount of $22,215.60 will be posted prior to plat recordation.: 2.55 Ac retention= 111,078 sf @ $0.20/sf= $22,215.60.
33. Reservation of Public Utility and Forest Conservation Easements Developer reserves unto itself, its successors and assigns, all easements shown on this plan for water, sewer, storm drainage, other public utilities and forest conservation (designated as "Forest Conservation Area"), located in, on over and through lots/parcels, any conveyances of the aforesaid lots/parcels shall be subject to the easements herein reserved, whether or not expressly stated in the deed(s) conveying said lot(s)/parcels. Developer shall execute and deliver deeds for the easements herein reserved to Howard County with a metes and bounds description of the forest conservation area. Upon completion of the public utilities and their acceptance by Howard County, and in the case of the forest conservation easement(s), upon completion the developer's obligations under the forest conservation installation and maintenance agreement executed by the developer and the County, and the release of developer's surety posted with said agreement. The County shall accept the easements and record the deed(s) of easement in the Land Records of Howard County.
34. Landscaping for Lot(s) 1-6 is provided in accordance with a certified Landscape Plan and is included with this road construction plan set in accordance with Section 16.124 of the Howard County code and the Landscape Manual. Financial surety in the amount of $16,500 (55 shade trees at $300 per shade tree) will be part of the Grading Permit.

LEGEND

Stream Bank Buffer	—— SB ——
Stream	— · · — · · —
Proposed Septic Easement	[hatch]
Existing Septic Easement	[hatch]
Proposed Dwelling	[symbol]
Forest Conservation Easement Detention Area	[hexagon pattern]



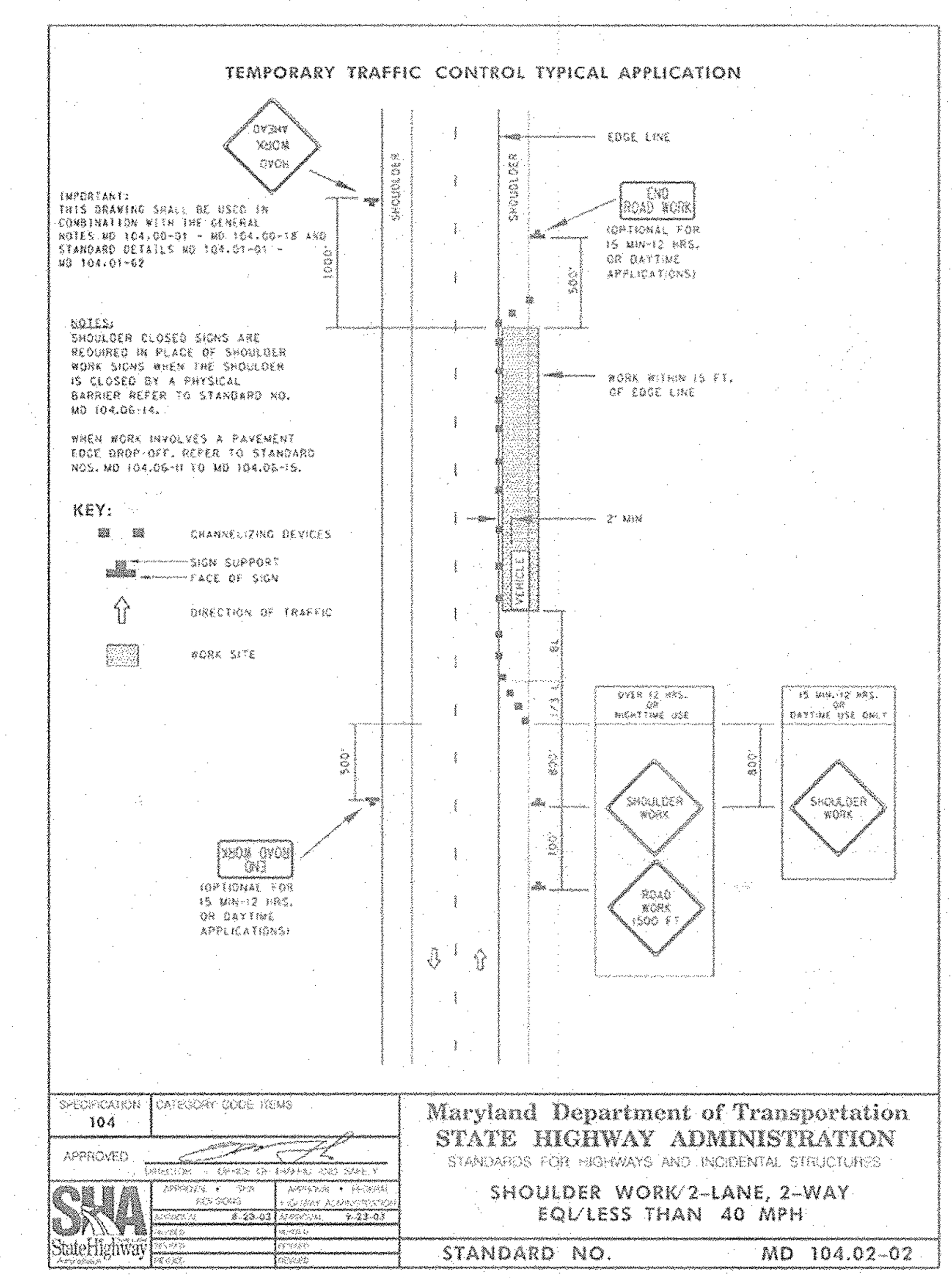
VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS

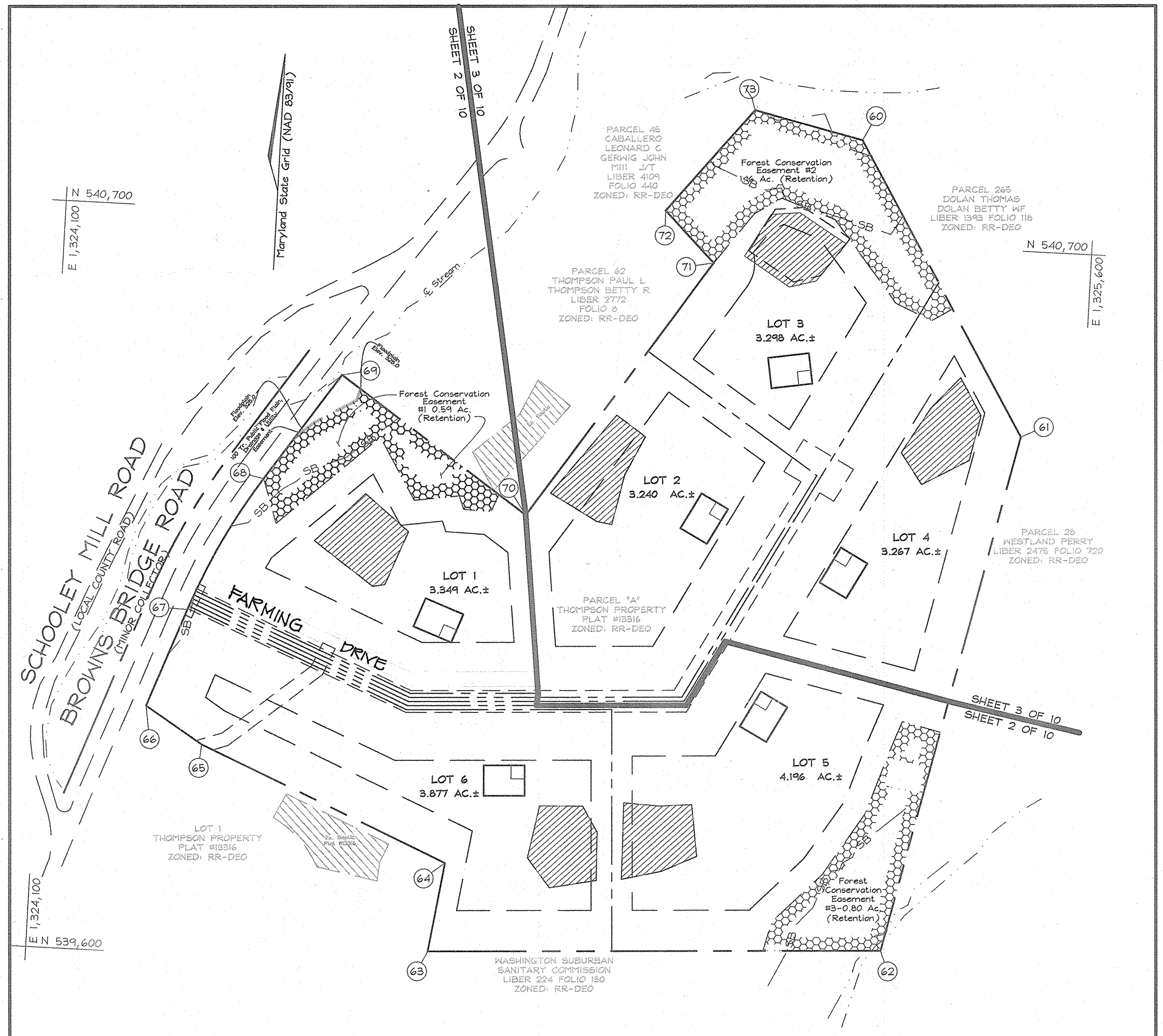
Sta.	401A	N 541,725.800	E 1,325,316.889	El.: 360.066 (feet)
Sta.	45CA	N 540,071.002	E 1,327,702.745	El.: 426.811 (feet)

SHEET INDEX

DESCRIPTION	SHEET No.
Cover Sheet	1 of 10
Grading and Sediment and Erosion Control Plan	2 of 10
Grading and Sediment and Erosion Control Plan	3 of 10
Sediment and Erosion Control Notes and Details	4 of 10
Private Driveway Profile	5 of 10
Storm Drain Plan, Profiles and Drainage Area Map and Browns Bridge Road Improvements Plan	6 of 10
Landscape Plan	7 of 10
Landscape Plan	8 of 10
Final Forest Conservation Plan, Notes And Details	9 of 10
Final Forest Conservation Plan	10 of 10



SPECIFICATION 104	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH
	STANDARD NO. MD 104.02-02



LOCATION MAP
SCALE: 1"=100'

MINIMUM LOT SIZE CHART

LOT NUMBER	GROSS AREA (AC)	PIPESTEM AREA (AC)	MINIMUM LOT SIZE (AC)
2	3.240±	0.075±	3.165±
3	3.298±	0.156±	3.142±
4	3.267±	0.119±	3.148±
5	4.196±	0.090±	4.106±

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/12/07

DEVELOPER/ CONTRACT PURCHASER
HAILEY DEVELOPMENT LC
3905 National Drive, Suite 105
Burtonsville, Maryland 20866
Telephone: (301) 476-7715

OWNER
JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

COVER SHEET
J. THOMPSON PROPERTY
LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND · ZACHARIA YOSEF FISCH · 22418 · PROFESSIONAL ENGINEER

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel.: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsheri.com

DESIGN BY:	MT
DRAWN BY:	HK/MY/CW
CHECKED BY:	ZYF
SCALE:	As Shown
DATE:	Jan. 30, 2007
W.O. No.:	3288
SHEET No.:	1 OF 10

F-07-024

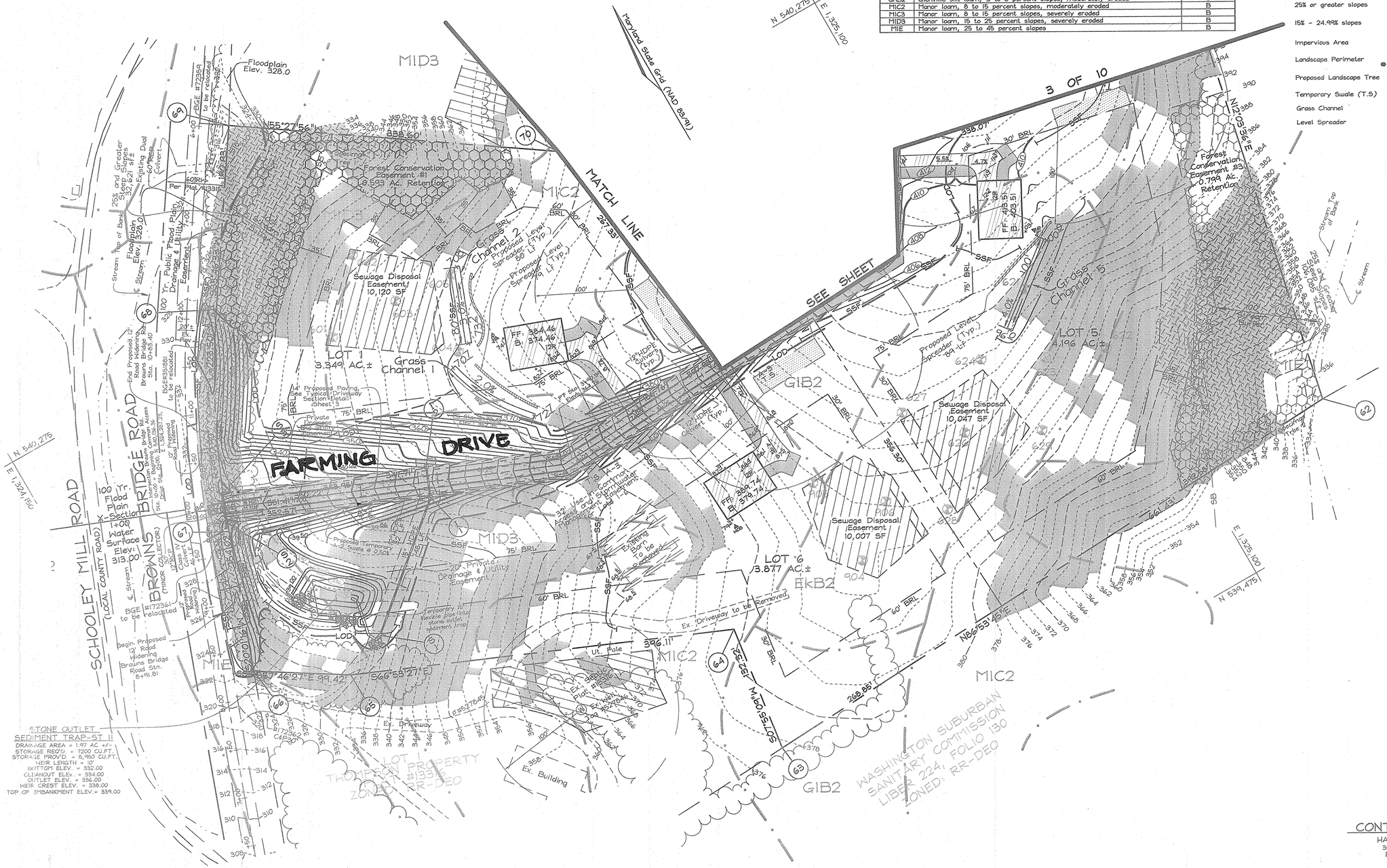
SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
M1C2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
M1C3	Manor loam, 8 to 15 percent slopes, severely eroded	B
M1D3	Manor loam, 15 to 25 percent slopes, severely eroded	B
M1E	Manor loam, 25 to 45 percent slopes	B

LEGEND

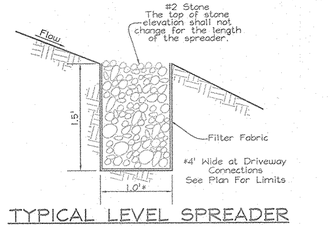
- Erosion Control Matting — ECM
- 25% or greater slopes
- 15% - 24.99% slopes
- Impervious Area
- Landscape Perimeter — PERIMETER ONE
- Proposed Landscape Tree
- Temporary Swale (T.S.)
- Grass Channel
- Level Spreader
- Existing Contour — 382
- Proposed Contour — 382
- Existing Spot Elevation — 382.5
- Proposed Spot Elevation — +82.53
- Direction of Flow
- Existing Trees to Remain
- Light Poles
- Utility Pole
- Check Dam
- Stabilized Construction Entrance — SCE
- Super Silt Fence — SSF — SSF
- Silt Fence — SF — SF
- Limit of Disturbance — LOD — LOD
- Tree Protection Fence — TPF — TPF
- Existing well — W
- Rooftop Disconnect

*Note: All level spreaders and grass channels to be installed by builder for each lot under plot plan.



STONE OUTLET SEDIMENT TRAP-ST II

DRAINAGE AREA = 1.97 AC +/-
STORAGE REQ'D. = 7200 CU.FT.
STORAGE PROV'D. = 8,950 CU.FT.
WEIR LENGTH = 10'
BOTTOM ELEV. = 332.00
CLEANOUT ELEV. = 334.00
OUTLET ELEV. = 336.00
WEIR CREST ELEV. = 338.00
TOP OF EMBANKMENT ELEV. = 339.00



TYPICAL LEVEL SPREADER CROSS SECTION

NOT TO SCALE
See plan for level spreader lengths

DEVELOPER/ CONTRACT PURCHASER

HAILEY DEVELOPMENT LC
3905 National Drive, Suite 105
Burtonsville, Maryland 20866
Telephone: (301) 476-7715

OWNER

JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

GRADING AND SEDIMENT AND EROSION CONTROL PLAN
J. THOMPSON PROPERTY
LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DEVELOPER'S CERTIFICATE

"I/WE 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 SOIL CONSERVATION DISTRICT."

By: RICHARD THOMETZ, Manager — 1/30/07 DATE
Hailey Development, L.C.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
USDA-NATURAL RESOURCES CONSERVATION SERVICE — 2/8/07 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — 2/8/07 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2/12/07 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT — 2/12/07 DATE

ENGINEERS CERTIFICATE

"I 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 SOIL CONSERVATION DISTRICT."

ZACHARIA Y. FISCH — 1/30/07 DATE

STATE OF MARYLAND — ZACHARIA YORK FISCH — No. 22418 — REGISTERED PROFESSIONAL ENGINEER

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel.: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsheri.com

DESIGN BY:	MT
DRAWN BY:	RL
CHECKED BY:	ZYF
SCALE:	1"=50'
DATE:	Jan. 30, 2007
W.O. No.:	3288
SHEET No.:	2 OF 10

F-07-024

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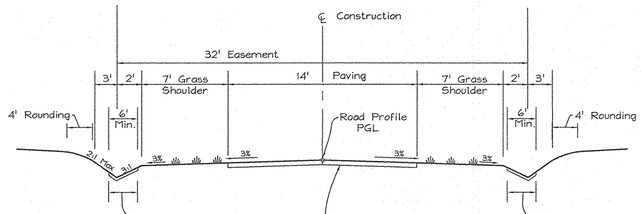
LEGEND

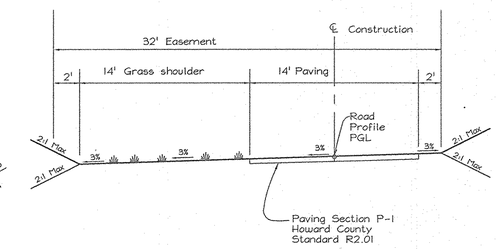
Existing Contour	382	25% or greater slopes	
Proposed Contour	382	15% - 24.99% slopes	
Existing Spot Elevation	382.3	Impervious Area	
Proposed Spot Elevation	+82.53	Level Spreader	
Direction of Flow		Forest Conservation Easement	
Existing Trees to Remain		Landscape Perimeter	PERIMETER ONE
Light Poles		Proposed Landscape Tree	
Utility Pole		Erosion Control Matting	ECM
Super Silt Fence	SSF SSF	Temporary Swale	
Silt Fence	SF SF	Proposed House	
Limit of Disturbance	LOD LOD	Stabilized Construction Entrance	
Soils Line	EkB2	Walk Out Basement	WOB
Existing Well	W		
Existing perc	600		
Rooftop Disconnect			

#Note: All level spreaders and grass channels to be installed by builder for each lot under plot plan.



TYPICAL USE-IN-COMMON ACCESS DRIVEWAY SECTION CLASSIFICATION: USE-IN-COMMON DRIVEWAY

FROM ℄ STA. 0+00 TO 7+60
NOT TO SCALE



TYPICAL USE-IN-COMMON ACCESS DRIVEWAY SECTION CLASSIFICATION: USE-IN-COMMON DRIVEWAY

FROM ℄ STA. 7+60 TO 11+73.68
NOT TO SCALE

USE-IN-COMMON ACCESS DRIVEWAY ℄ DATA

FROM STA.	TO STA.	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
0+00	3+70.43	S67°26'12"E	370.43'	N/A	N/A	N/A	N/A	N/A
3+70.43	3+90.59	N/A	N/A	45.00'	20.16'	25°40'03"	S80°16'13"E	19.99'
3+90.59	7+57.68	N86°53'45"E	367.09'	N/A	N/A	N/A	N/A	N/A
7+57.68	8+03.92	N/A	N/A	45.00'	46.24'	58°52'15"	N57°27'38"E	44.23'
8+03.92	11+73.68	N28°01'30"E	369.76'	N/A	N/A	N/A	N/A	N/A

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/14/07

DEVELOPER'S CERTIFICATE

"I/WE 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 SOIL CONSERVATION DISTRICT."

By: Richard Thometz, Manager — 1/30/07
Hailey Development, L.L.C. — DATE

ENGINEERS CERTIFICATE

"I 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 SOIL CONSERVATION DISTRICT.

Zacharia Y. Fisch — 1/30/07
ZACHARIA Y. FISCH — DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE — 2/8/07 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — 2/8/07 DATE

DEVELOPER/ CONTRACT PURCHASER

HAILEY DEVELOPMENT LC
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OWNER

JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

GRADING AND SEDIMENT AND EROSION CONTROL PLAN J. THOMPSON PROPERTY

LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — ZACHARIA YOSSEF FISCH — 22418 — PROFESSIONAL ENGINEER
Zacharia Y. Fisch

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
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E-mail: info@fsheri.com

DESIGN BY: MT
DRAWN BY: RL
CHECKED BY: ZYF
SCALE: As Shown
DATE: Jan. 30, 2007
W.O. No.: 3288
SHEET No.: 3 OF 10

F-07-024

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition

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

Purpose

To provide a suitable soil medium for vegetable 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

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. 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.

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 a 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 and 1/2" in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, 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.

II. 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.

iii. 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 not be used.
   d No sod or seed shall be placed on soil 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 ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. 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.

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 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.

iv. Topsoil shall not be place 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.

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, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use the following schedule: Apply 2 tons per acre dolomitic limestone(92 lbs/1000 s.f.) And 900 lbs. / acre (20.7 lbs./1000s.f.) of 10-20-20 before seeding. Harrow or disc into upper 3 in. Of soil.
SEEDING: Apply a mixture of Turf Type Tall fescue(80%) and Hard Fescue (20%) in accordance with seeding dates and rates shown in the Permanent Seeding Summary shown on this sheet. For stabilization outside of the seeding dates, apply straw mulch at rates and methods specified below and apply permanent seeding when within proper seeding dates.
MULCHING: Immediately following seeding, apply a uniform 1- 2 in. Deep layer of un-rotted small grain straw at a rate of 2 tons/acre. (Apply 2.5 Tons/acre if a mulch anchoring tool is used.)Straw may be anchored with wood cellulose fiber at a rate of 750 lbs. / acre mixed at a ratio of 50 lbs. Of wood fibre/ 100 gal. of water. Synthetic liquid binders such as Terra Tax II, Acrylic DLR (Agro- Tack), DCA-70, Petroset and other approved equals may be used at rates recommended by the manufacturers.

TEMPORARY SEEDING NOTES

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 the following schedule: Apply 2 tons per acre dolomitic limestone(92 lbs/1000 s.f.) And 600 lbs. / acre (15 lbs./1000s.f.) of 10-10-10 before seeding. Harrow or disc into upper 3 in. Of soil.
SEEDING: Apply the Maryland State Highway approved seed mixture of Barley or Rye plus Foxtail Millet in accordance with seeding dates and rates shown in the Temporary Seeding Summary shown on this sheet. For stabilization outside of the seeding dates, apply straw mulch at rates and methods specified below.
MULCHING: Immediately following seeding, apply a uniform 1- 2 in. Deep layer of un-rotted small grain straw at a rate of 2 tons/acre. (Apply 2.5 Tons/acre if a mulch anchoring tool is used.)Straw may be anchored with wood cellulose fiber at a rate of 750 lbs. / acre mixed at a ratio of 50 lbs. Of wood fibre/ 100 gal. of water. Synthetic liquid binders such as Terra Tax II, Acrylic DLR (Agro- Tack), DCA-70, Petroset and other approved equals may be used at rates recommended by the manufacturers.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROLFOR RATE AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or redisturbance, 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.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, 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, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall 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	21.23 Acres
Area Disturbed	3.52 Acres
Area to be roofed or paved	1.15 Acres
Area to be vegetatively stabilized	2.37 Acres
Total Cut	10,000 CY **
Total Fill	10,000 CY **
Offsite waste/borrow area location	*

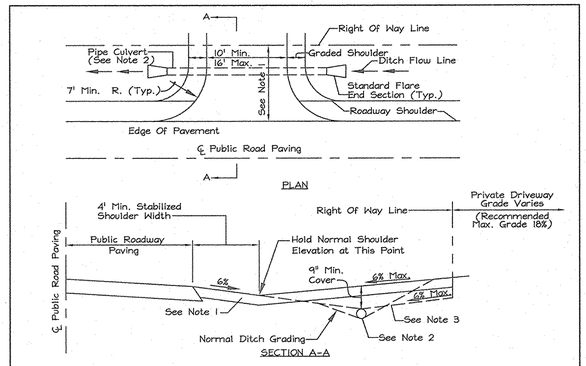
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas 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

* To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit
**Total cut and fill quantities are for permit purposes only. Contractor to verify earthwork quantities.

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit.
2. Notify Howard County Department of Inspections License and Permits at (410) 313-1880 and MDE Inspector(410) 537-3768 at least 24 hours before starting any work. Contact Miss Utility at least 48 hours before any excavation(1-800-257-7777).
3. Install Stabilized Construction Entrance, Silt fence, Super Silt Fence, Tree Protection Fence, Stone Outlet Sediment Trap and Temporary Swale. (5 days) *
4. With permission of the Sediment control Inspector remove all topsoil within areas to be disturbed and stock pile within "Stock Pile Area". Rough grade site, install storm drains, install 15" Temporary Flexible Pipe and culvert. Grade Browns Bridge Road widening and proposed Use-In-Common Access driveway to sub-base only. (1 week)
5. Fine grade site, install topsoil, seed and mulch to disturbed areas (2 days).
6. Pave Browns Bridge Road widening and proposed Use-In-Common Access driveway. (1 week)
7. With permission of Sediment Control Inspector flush storm drains, as needed, remove all sediment contol measures and provide final stabilization to all areas disturbed (1 week).

*SHOW A DOUBLE ROW OF "SUPER" SILT FENCE FOR L.O.D. ALONG BROWNS BRIDGE ROAD JWL 2/8/07



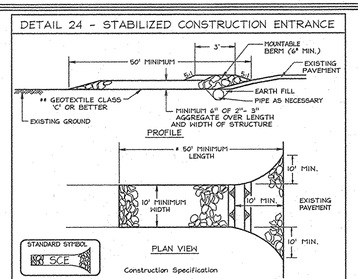
RESIDENTIAL DRIVEWAY ENTRANCE

CONNECTION TO OPEN SECTION ROADWAY
HOWARD COUNTY DETAIL R6.06
NOT TO SCALE

DRIVEWAY CULVERT REQUIREMENTS
Lot 1 Thru 21 - 12" CMP or equivalent

NOTES:
1. Driveway must be paved from edge of public road to right of way line using standard paving section P-1 as shown on St'd. No. 6.06 or alternate section equal to or better than P-1, as approved by D.P.W.
2. Drainage culvert shall be sized for a 10-year frequency storm and the minimum size shall be 12" dia. round or 14" x 9" arch pipe if larger pipe is required, ditch invert shall be lowered to provide min. ditch gradient of 0.5% and clearance shown.
3. Private driveways flow may be provided over driveway located at or near the crest of vertical curves on the public road where quantity of flow is small, as approved by D.P.W.
4. Tie-in grade of private driveway shall not exceed 14%.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

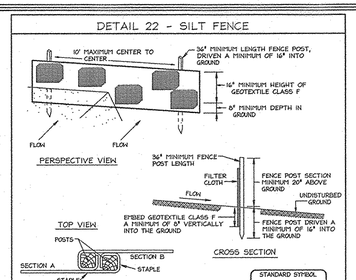


Construction Specification

1. Length - minimum of 50' (* 30' for a single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
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 6" deep over the length and width of the entrance.
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 stabilized construction entrance shall be protected with a mountable berm with 5:1 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, 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 construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

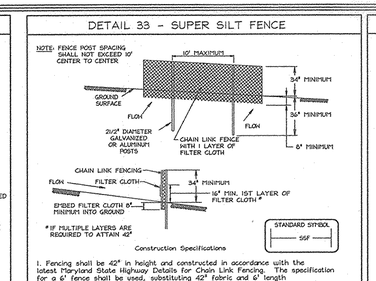
1. Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Fence posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and of sufficient quality to support the load imposed. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
2. Geotextile 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 Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ ft²/minute (max.)	Test: MSMT 322
Filtering Eggeciency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE

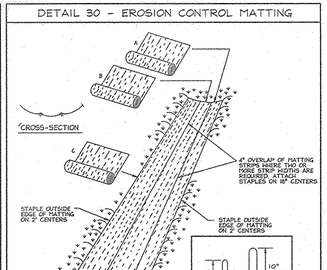


1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
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 by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups 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 at 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	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE II - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



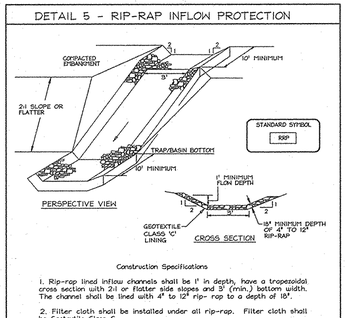
Construction Specifications

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 8".
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 matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
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", shingle fashion. Reinforce the overlap with a double row of staples spaced 4" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 27 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION

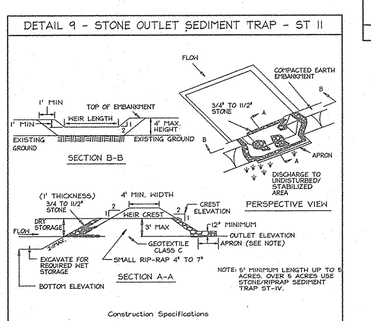


Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip- rap to a depth of 18".
2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
3. Entrance and exit sections shall be installed as shown on the detail section.
4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
6. Rip-rap should blend into existing ground.
7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 6 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

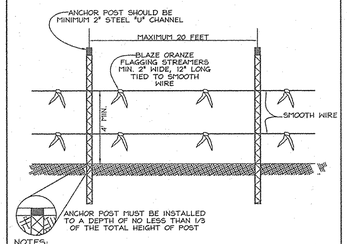
DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
6. the structure shall be inspected periodically after each rain and repairs made as needed.
7. Construction of traps shall carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with the Stabilization Structure specifications. Bare areas around the embankment shall be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
8. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
9. Refer to section D for specifications concerning trap dewatering.
10. Minimum trap depth shall be measured from weir elevation.
11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
12. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 8" into existing ground at the entrance of the outlet channel.
13. Outlet-An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 29 - 10 F - 4 - 84	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TWO STRAND SMOOTH WIRE



NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO TREE CLEARING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE DETAIL

NOT TO SCALE

DEVELOPER/ CONTRACT PURCHASER

HAILEY DEVELOPMENT LC
3905 National Drive, Suite 105
Burtonsville, Maryland 20866
Telephone: (301) 476-7715

OWNER

JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

DEVELOPER'S CERTIFICATE

"I/WE 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 SOIL CONSERVATION DISTRICT.

By: RICHARD THOMETZ, Manager
By: _____, Manager
Hailey Development, L.L.C. DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 2/7/07

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — DATE 2/8/07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/12/07

ENGINEERS CERTIFICATE

"I 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 SOIL CONSERVATION DISTRICT.

Zacharia Y. Fisch — 1/30/07
ZACHARIA Y. FISCH — DATE

SEDIMENT & EROSION CONTROL NOTES AND DETAILS
J. THOMPSON PROPERTY
LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — 22415 — REGISTERED PROFESSIONAL ENGINEER

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel.: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsheri.com

DESIGN BY: PS
DRAWN BY: RL
CHECKED BY: ZYF
SCALE: As Shown
DATE: Jan. 30, 2007
W.O. No.: 3286
SHEET No.: 4 OF 10

F-07-024

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PROFILE
SCALE: Hor. 1"=50'
Vert. 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2/12/07 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 2/12/07 DATE

OWNER
JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

DEVELOPER/CONTRACT PURCHASER
HAILEY DEVELOPMENT LC
3905 National Drive, Suite 105
Burtonsville, Maryland 20866
Telephone: (301) 476-7715

PRIVATE DRIVEWAY PROFILE
J. THOMPSON PROPERTY
LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' PLAT #13316)
TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — 22413 — PROFESSIONAL ENGINEER

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
Tel.: 410-750-2251 Fax: 410-750-7350
E-mail: info@fsha.biz

DESIGN BY: PS
DRAWN BY: MY
CHECKED BY: ZYF
SCALE: 1"=50'
DATE: Jan 30, 2007
W.O. No.: 3288
SHEET No.: 5 OF 10

F-07-024

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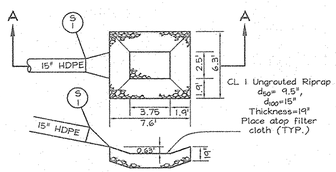
STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-1	Modified Open End Grate (Single Opening)	℄ Use-in-Common Sta.2+40.42 @ 16' RT	346.46±	342.74	342.49	Modified S.D. 4.36 see detail this sheet for both I-1 & I-2
I-2	Modified Open End Grate (Single Opening)	℄ Use-in-Common Sta.2+40.42 @ 16' LT	346.46±	-----	343.00	
S-1	15" HDPE End Section	N 539,932.55 E 1,324,388.51	----	334.00	333.83	----------
S-2	12" HDPE End Section	℄ Use-in-Common Sta.0+29.37 @ 15' RT	----	329.22	329.20	----------
S-3	12" HDPE End Section	℄ Use-in-Common Sta.0+29.37 @ 15' LT	----	329.70	329.68	----------

NOTES: 1. The locations of the HDPE End Sections correspond to the point where the end section meets the incoming pipe.

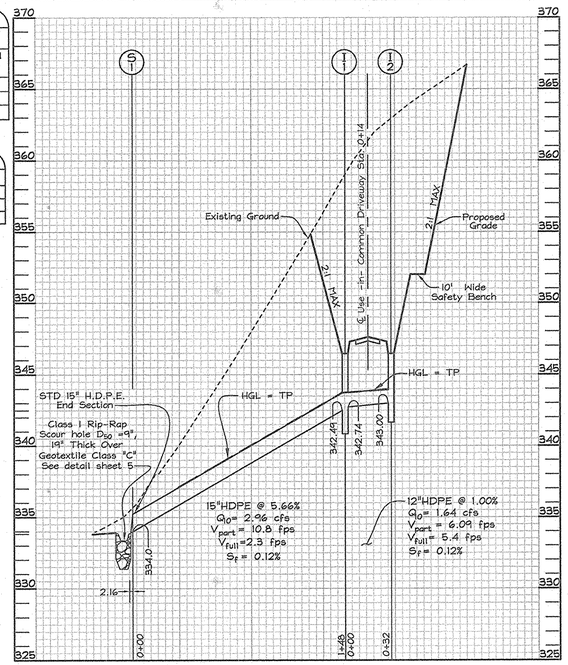
PIPE SCHEDULE

SIZE	TYPE	LENGTH
12"	HDPE	32'
15"	HDPE	148'
12"	RCP CLASS IV	30'

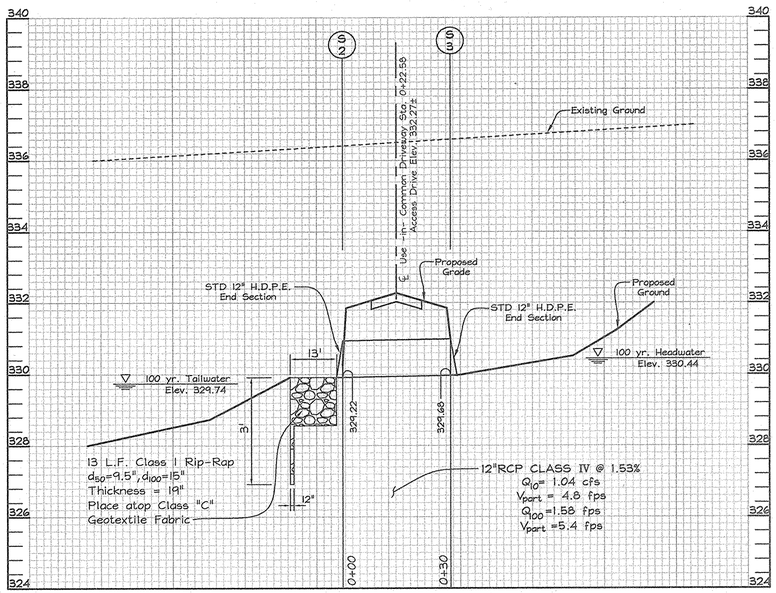


SECTION 'A'-'A'
NOT TO SCALE

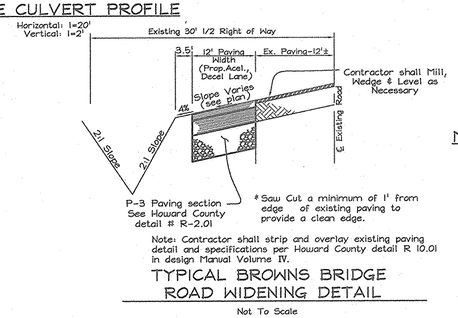
SCOUR HOLE Detail
NOT TO SCALE



PRIVATE STORM DRAIN PROFILE
Horizontal: 1=50'
Vertical: 1=5'



PRIVATE CULVERT PROFILE



P-3 Paving section See Howard County detail # R-2.01

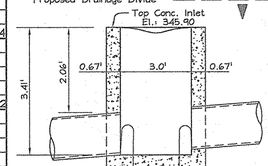
* Saw Cut a mininum of 1' from edge of existing paving to provide a clean edge.

Note: Contractor shall strip and overlay existing paving detail and specifications per Howard County detail R 10.01 in design Manual Volume IV.

TYPICAL BROWNS BRIDGE ROAD WIDENING DETAIL
Not To Scale

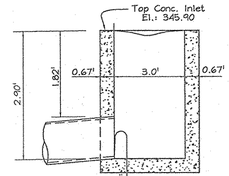
LEGEND

Existing Contour	382
Proposed Contour	382
Existing Spot Elevation	382.3
Proposed Spot Elevation	+82.53
Direction of Flow	
Existing Trees to Remain	
Light Poles	
Utility Pole	
Soils	ChC2
Proposed Drainage Divide	



See Howard County Standard detail SD 4.36 for more information

Modified SD 4.36 Detail Inlet 1-1
Not To Scale



See Howard County Standard detail SD 4.36 for more information

Modified SD 4.36 Detail Inlet 1-2
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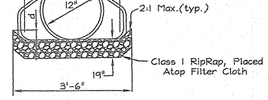
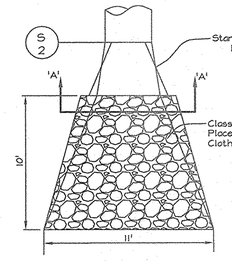
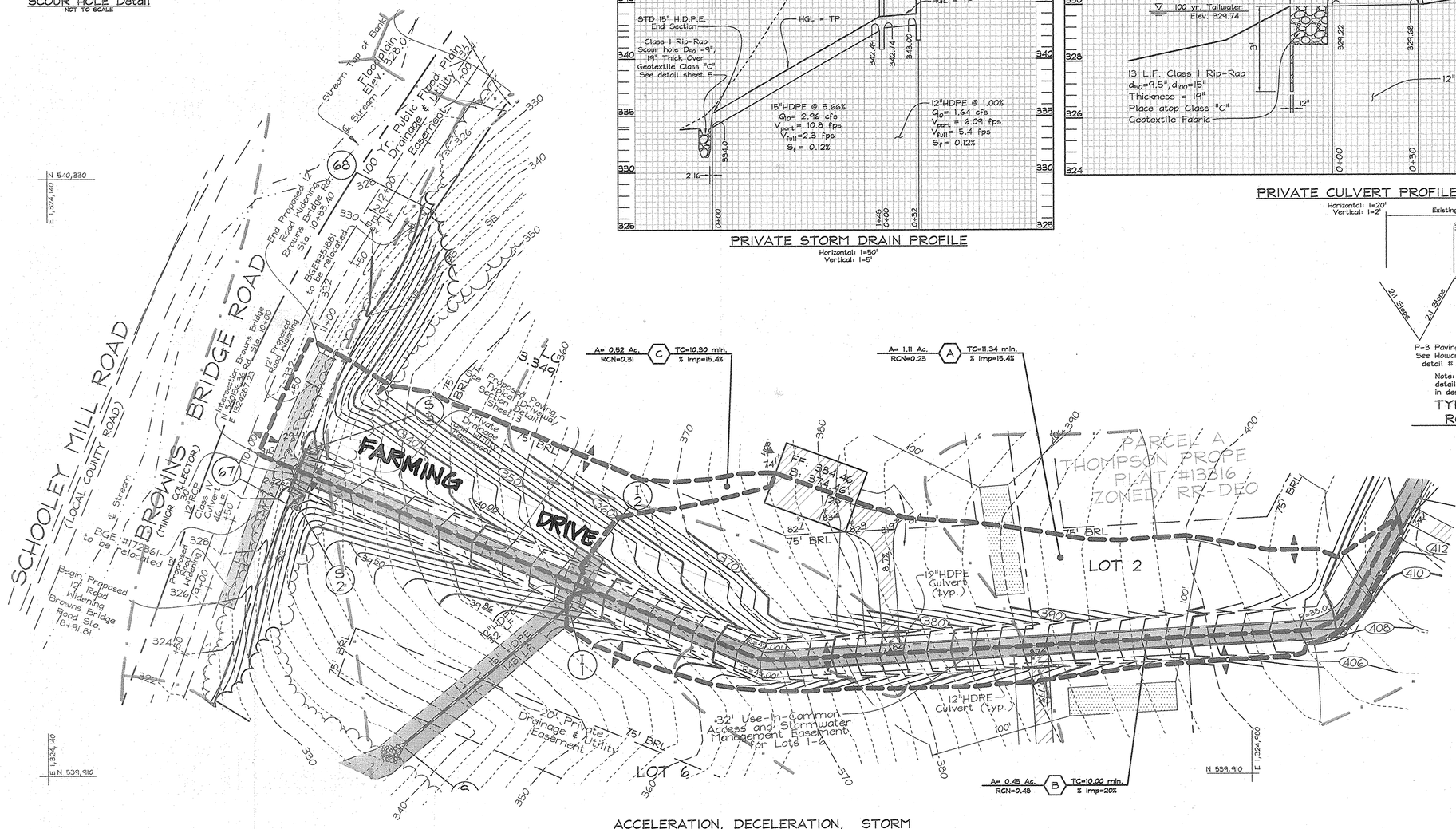


SECTION 'A'- 'A'



S-2 RIPRAP OUTFALL DETAIL
Not To Scale



ACCELERATION, DECELERATION, STORM DRAIN PLAN & DRAINAGE AREA MAP
SCALE:1=40'

DEVELOPER/ CONTRACT PURCHASER

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OWNER

JENNIE M. THOMPSON
8067 Browns Bridge Road
Highland, Maryland 20777

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/12/07

ACCELERATION, DECELERATION, STORM DRAIN PLAN, PROFILES & DRAINAGE AREA MAP

J. THOMPSON PROPERTY

LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — ZACHARIAH J. HYDE — 22218 — PROFESSIONAL ENGINEER

FSH Associates
Engineers Planners Surveyors
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DESIGN BY: ZYF
DRAWN BY: RT
CHECKED BY: ZYF
SCALE: As Shown
DATE: Jan. 30, 2007
W.O. No.: 3288
SHEET No.: 6 OF 10

F-07-024

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SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GIB2	Glenelg loam, 3 to 8 percent slopes, moderately eroded	B
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MIC3	Manor loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B
MIE	Manor loam, 25 to 45 percent slopes	B

LEGEND

Erosion Control Matting — ECM
25% or greater slopes
15% - 24.99% slopes
Impervious Area
Landscape Perimeter — PERIMETER ONE
Proposed Landscape Tree
Temporary Swale
Grass Channel
Level Spreader
Existing Contour — 382
Proposed Contour — 82
Existing Spot Elevation — 382.3
Proposed Spot Elevation — +82.53
Direction of Flow
Existing Trees to Remain
Light Poles
Utility Pole
Check Dam
Stabilized Construction Entrance — SCE
Super Silt Fence — SSF
Silt Fence — SF
Limit of Disturbance — LOD
Tree Protection Fence — TPF
Rooftop Disconnect

SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS			ADJACENT TO PERIMETER PROPERTIES			
Perimeter/Frontage Designation Landscape Type	1 B			2 A	3 A	4 A	
Linear Feet of Roadway Frontage/Perimeter	568			1,101	1,442	1,289	
Credit for Existing Vegetation (Yes, No, Linear Feet) Remaining Perimeter Length	Yes* (191) 377			Yes* (593) 508	Yes* (823) 619	Yes* (327) 962	
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) Remaining Perimeter Length	No			No	No	No	
Number of Plants Required Shade Trees Evergreen Trees Shrubs	 1:50 8 1:40 9 –			 1:60 8 – –	 1:60 10 – –	 1:60 16 – –	
Number of Plants Provided Shade Trees Evergreen Trees Shrubs	 8 0** –			 8 – –	 10 – –	 16 – –	

* Existing trees to remain.
** Alternative compliance for these perimeters, see Landscape Note #4.

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	NOTE
⊙	14	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	2 1/2"-3" Cal.	B & B
⊗	14	Quercus rubra Red Oak	2 1/2"-3" Cal.	B & B
	14	Liquidambar styraciflua Sweetgum	2 1/2"-3" Cal.	B & B

STREET TREE CHART

STREET NAME	LF REQUIRED	TREES REQUIRED	TREES PROVIDED
Brown's Bridge Road	377' *	(1:30)** 13	13

* 568' - 191' existing trees to remain
** Small trees due to overhead utilities

STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	NOTE
○	13	Prunus serrulata 'Kwanzan' Kwanzan Cherry	1 1/2"-2" Cal.	B & B

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6339 HOWARD LANE
ELKRIDGE, MARYLAND 21075
TEL: (410) 567-5210 FAX (410) 796-1562

LANDSCAPE NOTES

1. At the time of installment, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
2. The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
3. Financial surety for the required landscaping will be posted as part of the Grading Permit in the amount of $16,500 (55 shade trees @ $300.00).
4. The developer is claiming Alternative Compliance for Perimeter One. The elevation difference between Browns Bridge Road and the site substitutes for the required evergreen component along Browns Bridge Road. There is over 40' of elevation difference between Browns Bridge Road and the side of the proposed house on lot 1. Additionally, the shade tree component shall be planted no closer than 25' from the property line to minimize future conflicts with the overhead powerlines.

DEVELOPER'S BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

By: RICHARD THOMETZ, Manager
[signature] Manager Hailey Development, L.C. — 1/30/07 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2/12/07 DATE
[signature] CHIEF, DIVISION OF LAND DEVELOPMENT — 2/12/07 DATE

LANDSCAPE PLAN
J. THOMPSON PROPERTY
LOTS 1 THRU 6
(A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A' THOMPSON PROPERTY PLAT #13316)

TAX MAP 45 GRID 5 — PARCEL 13
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — PROFESSIONAL ENGINEER — 22418

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel.: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsheri.com

DESIGN BY: SMM
DRAWN BY: RL & SM
CHECKED BY: ZYF
SCALE: 1"=50'
DATE: Jan. 30, 2007
W.O. No.: 3288
SHEET No.: 7 OF 10

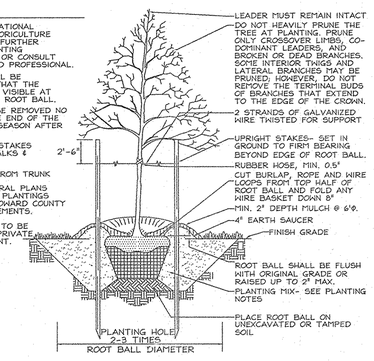
F-07-024

LEGEND

- Existing Contour — 382
- Proposed Contour — 82
- Existing Spot Elevation — 382.0
- Proposed Spot Elevation — +82.53
- Direction of Flow
- Existing Trees to Remain
- Light Poles
- Utility Pole
- Stabilized Construction Entrance — SCE
- Super Silt Fence — SSF — SSF
- Silt Fence — SF — SF
- Limit of Disturbance — LOD — LOD
- 25% or greater slopes
- 15% - 24.99% slopes
- Impervious Area
- Landscape Perimeter — PERIMETER ONE
- Proposed Landscape Tree
- Tree Protection Fence — TPF — TPF
- Erosion Control Matting — ECM
- Temporary Swale
- Rooftop Disconnect

NOTES

1. CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS, OR CONSULT WITH A QUALIFIED PROFESSIONAL.
2. EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
3. STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
4. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
5. KEEP MULCH 1" FROM TRUNK
6. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
7. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEPTIC OR SEWAGE EASEMENT.



TYPICAL TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/12/07

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By: RICHARD THOMETZ, Manager — 1/30/07
Hailey Development, L.C. — DATE

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ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
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LANDSCAPE PLAN

J. THOMPSON PROPERTY

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STATE OF MARYLAND — RICHARD YOSEF FSH — 22418 — PROFESSIONAL ENGINEER

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DRAWN BY:	RL & SM
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F-07-024

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Forest Conservation Narrative

This Forest Conservation Plan was prepared in accordance with the Howard County Forest Conservation Manual.

The subject property has a gross and net tract area of 21.23 Ac with a floodplain total of 0.06 Ac. The net tract is 21.17 Ac and there is 2.72 Ac. of forest on site. There are two specimen trees around the site, which will be preserved. Forest has been retained to the greatest extent possible, including all forest in sensitive environments. The only clearing will occur to allow site access. The forest will be retained in 3 easements on lots as per an approved county waiver. The three easements are retention areas; Easement #1 is 0.59 Ac on Lot 1, Easement #2 is 1.16 Ac spanning Lots 3 and 4, and Easement #3 is 0.80 Ac on Lot 5 for a total of 2.55 Ac. This results in an afforestation/reforestation mitigation requirement of 2.19 Ac in the Clark Meadow, F-06-26 Forest Conservation Bank.

Surety in the amount of $22,215.60 will be posted with the developers agreement.
2.55 Ac retention=111,078.0 sf @ $0.20/sf=$22,215.60

SPECIMEN TREES

Key	Name	Scientific Name	DBH	Condition	Retained
ST-1	Tulip Poplar	Liriodendron tulipifera	44"	Poor	Yes
ST-2	Sycamore	Platanus occidentalis	35"	Good	Yes

LEGEND

- Existing contours — 552
- Existing Spot Elevation — 392.3
- Existing Trees to Remain
- Stream Bank Buffer — SB
- Stream
- Proposed Septic Easement
- Existing Septic Easement
- Temporary Swale — TPF
- Use-in-Common Access Easement
- Proposed Dwelling
- Proposed Well Area
- Ex. Well — W
- 15-24.99% Slopes
- 25-50% Slopes
- Retention Area
- Tree Protection Sign
- Tree Protection Fence — TPF
- Rooftop Disconnect

FOREST CONSERVATION WORKSHEET

Net Tract Area	Acres
A. Total Tract Area	21.23
B. Area Within 100 Year Floodplain	0.06
C. Other deductions	--
D. Net Tract Area	21.17
Zoning Use Category: RESIDENTIAL-RURAL MEDIUM	
Land Use Category	
E. Afforestation Minimum (20 % x D)	4.23
F. Conservation Threshold (25 % x D)	5.29
Existing Forest Cover	
G. Existing Forest on Net Tract Area	2.72
H. Forest Area Above Conservation Threshold	0
Breakeven Point	
I. Forest Retention Above Threshold with no Mitigation	NA
J. Clearing Permitted without Mitigation	0
Proposed Forest Clearing	
K. Forest Areas to be Cleared	0.17
L. Forest Areas to be Retained	2.55
Planting Requirements	
M. Reforestation for Clearing Above Threshold	0
N. Reforestation for Clearing Below the Threshold	0.34
P. Credit for Retention Above Conservation Threshold	0
Q. Total Reforestation Required	0
R. Total Afforestation Required	1.85
S. Total Reforestation and Afforestation Requirement	2.19

FOREST CONSERVATION EASEMENT TABLE

EASEMENT	TYPE	AREA (ACRES)
1	Retention	0.59
2	Retention	1.16
3	Retention	0.80
	TOTAL	2.55

Forest Tree Protection and Management Notes

1. Tree protection devices shall be installed prior to any grading or land clearing.
2. After the boundaries of the retention areas have been staked and flagged and before any disturbance has taken place a pre-construction meeting with the Howard County Inspector is required.
3. Provide maintenance to tree protection devices and signage to maintain their integrity throughout the duration of the project.
4. Attachment of signs to tree protection devices to maintain their integrity thoughout the duration of the project.
5. Any significant changes made to the Forest Conservation Plan shall be made with the prior approval if the Howard County Dept Of Planning and Zoning.
6. No burial of discarded material is permitted within the Forest Conservation and Planting areas.
7. No open burning within 100 feet of wooded areas is permitted.
8. Post construction phase.
   a. Inspect existing trees around the perimeter of the site for signs of root or trunk damage and excessive soil compaction.
   b. Remove dead or dying trees and evaluate for hazard tree removal.*
   c. All temporary forest protection devices will be removed after construction.
   d. Following completion of construction, prior to use, the county inspector shall inspect the entire site for compliance with this Forest Conservation Plan.

* A licensed Arborist or Forester should be retained for this service as needed.

9. Future tree maintenance for Utility Line safety including pruning and removals of hazardous trees shall be permitted within the scope of the Forest Conservation Agreement. This shall be applicable up to 45' from the Utility Pole Line along Browns Bridge Road.

PLAN
SCALE: 1" = 50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 2/12/07

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FINAL FOREST CONSERVATION PLAN
J. THOMPSON PROPERTY
LOTS 1 THRU 6
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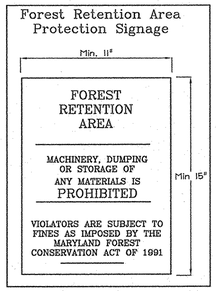
PLAN
SCALE: 1" = 50'

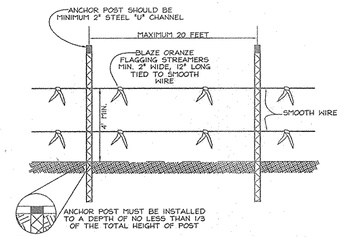
Forest Retention Area Protection Signage



SIGN DETAIL: PERMANENT SIGN

SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON METAL 'T' POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.

TWO STRAND SMOOTH WIRE



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

TREE PROTECTION DETAIL
NOT TO SCALE

LEGEND

- Existing contours — 552
- Existing Spot Elevation 352.3
- Existing Trees to Remain
- Stream Bank Buffer — SB —
- Stream
- Proposed Septic Easement
- Existing Septic Easement
- Use-In-Common Access Easement
- Proposed Dwelling
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- Ex. Well (W)
- 15-24.99% Slopes
- 25-50% Slopes
- Retention Area
- Tree Protection Sign △
- Tree Protection Fence — TPF —
- Temporary Swale
- Rooftop Disconnect

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STATE OF MARYLAND STEPHEN L. RIGGS No. 589 REGISTERED PROFESSIONAL FORESTER

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