PRELIMINARY EQUIVALENT SKETCH PLAN & PERCOLATION CERTIFICATION PLAN

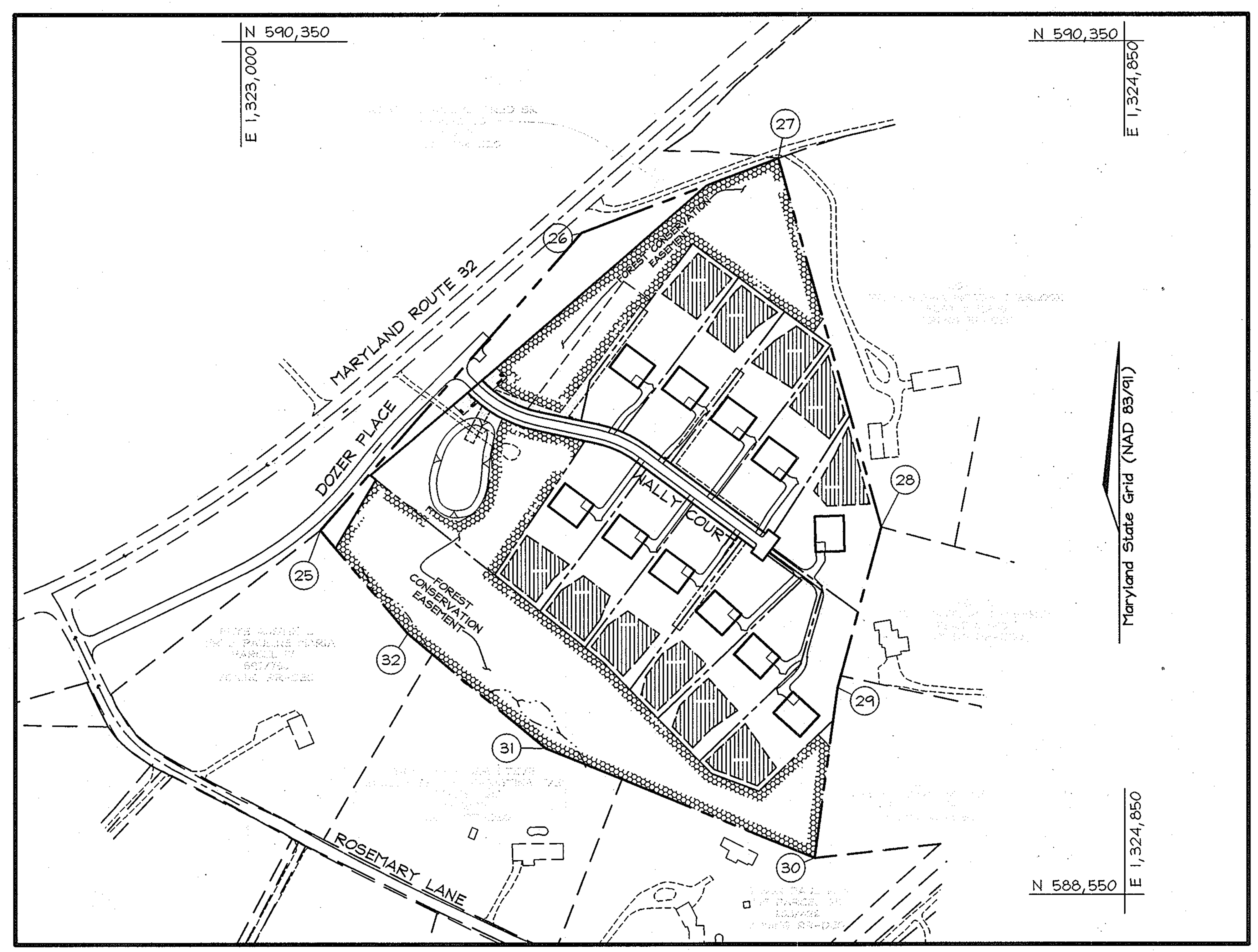
DAVIS PROPERTY

LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A', 'B' AND 'C'

HOWARD COUNTY, MARYLAND

GENERAL NOTES

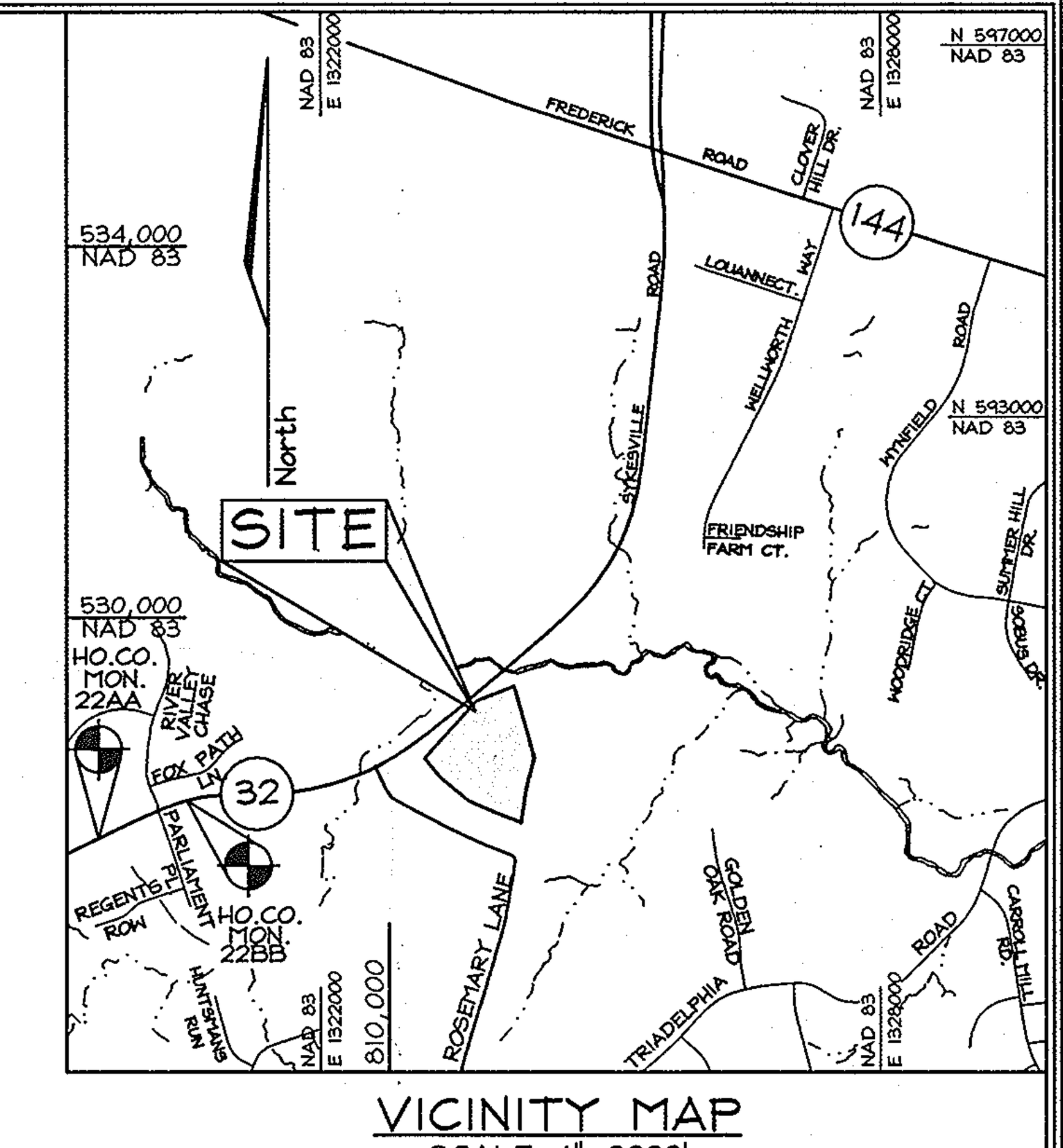
1. This plan is subject to the Amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 50-2001 and the Amended Zoning Regulations per Council Bill No. 75-2003. Development or construction on this property must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application or building/grading permit applications.
2. Subject property zoned RR-DEO per 02/02/04 Comprehensive Zoning Plan.
3. Private water and sewer will be used within this site.
4. Total area of property = 23.66 ac.±
5. Area of proposed public R/W: Howard County Dedication 0.70 ac.±
   SHA Dedication 1.07 ac.±
   Total Right of Way dedication = 1.77 ac.
6. Number of proposed buildable lots: 11
   Area of proposed buildable lots: 12.402ac.±
7. Number of proposed non-buildable preservation parcels: 3
   Area of proposed non-buildable preservation parcels: 9.62 ac.±
8. Density calculations:
   a.) Number of lots based on own density:
   23.66ac / 4.25 = 5.56, therefore 5 units
   b.) Net Tract Area:
   23.66ac − 0.94ac(slopes 25% or greater) = 22.72ac
   c.) Maximum number of lots allowed based on DEO option:
   22.72ac / 2 = 11.36 = 11 units
   d.) Total number of DEO units required:
   11 − 5 = 6 units
9. The lots shown hereon comply with the minimum ownership, width and lot area as required by the Maryland State Department of the Environment.
10. Existing utilities and topography based on Field Run Topographic Survey prepared by FSH Associates on or about June, 2005.
11. ▨ 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 sewage is available. These easements shall become null and void upon connection to a public sewage system. The County Health Officer shall have the authority to grant variances for encroachments into the private sewage easement. Recordation of a modified sewage easement shall not be necessary.
12. All wells and septic fields within 100' of property's boundary have been shown where pertinent.
13. The septic fields are located on soil types GlC2, GnB2, MgB2, MgC2, MgC3, MlD2, MlD3 and MlE as per the soil survey of Howard County, Soils Map #14.
14. All percolation test holes and their elevations have been field located by FSH Associates registered land surveyors. On-site topography and the existing utilities along MD Rt. 32 are based on a Field Run Topographic Survey prepared by FSH Associates in July, 2005 with two foot contours.
15. Off-site topography based on Howard County 1993 Aerial Topographic Surveys with five foot contours.
16. Groundwater appropriations permit # H020066012(1).
17. The existing well and septic system on the property have been properly abandoned as part of the demolition of the existing Mary Selby Burgess house, HO-646.
18. A.P.F.O. traffic study prepared by Street Traffic Studies, on March 3rd 2006.
19. Wetlands delineation and report prepared by McKarthy and Associates. No wetlands were found on-site.
20. The project is not within the metropolitan district.
21. The project is in conformance with the latest Howard County Standards unless waivers have been approved.
22. 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 22AA and 22BB were used for this project.
23. Noise impact analysis prepared by the Wilson T. Ballard Company in March 2006 and revised on September 1, 2006.
24. The landscape and forest conservation sureties will be a part of the Developer's Agreement.
25. Stormwater Management Channel Protection Volume (CP_V) and Water Quality Volume (WQ_V) has been provided within the proposed Micropool Extended Facility for Drainage Area 1 only. CP_V and WQ_V are not required for drainage areas 2-5. The proposed Micropool Extended Detention Facility will be privately owned with joint maintenance by HOA and Howard County. Stormwater Recharge Volume has been provided through the use of the grass channel credit using the Recharge Percent Area Method. Additionally, the Overbank Flood Protection Volume (Q_P) and the Extreme Flood Volume (Q_F) stormwater management criteria are not required for this site.
26. There is no floodplain on this site.
27. The Geotechnical Report was prepared by Herbst/Benson and Associates on March, 2006.
28. All wells to be drilled prior to submittal of record plat for signature. It is the developers 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.
29. The StormWater Management (SWM) system shown on these plans is an approximation of the size and design. It is understood that at the FINAL PLAN stage, the actual design will reflect a riser/barrel principal release structure.



LOCATION MAP
SCALE: 1"=200'

LEGEND

Existing Contour	----------382
Proposed Contour	—444—
Direction of Flow	←
Existing Spot Elevation	382.3
Proposed Spot Elevation	+82.53
Existing Trees	
Proposed Septic Easement	▨
Existing Septic Easement	▨
15-24.99% Slopes	░
25-50% Slopes	▩
Wetlands	
Use-In-Common Access Easement	▨
Existing Perc Test(Passed)	619 ⊕
Existing Perc Test(Failed)	F618
Existing Utility Pole	∅



VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS

Sta.	22AA	N 587,502.7338	E 1,317,897.9412	El.: 569.023 (feet)
Sta.	22BB	N 588,791.5914	E 1,320,292.1959	El.: 538.281 (feet)

COORDINATE TABLE

POINT	NORTHING	EASTING
25	589,319.7549	1,323,165.3804
26	589,946.9007	1,323,712.5208
27	590,104.0119	1,324,125.3364
28	589,325.4356	1,324,340.2789
29	588,986.1357	1,324,248.7058
30	588,627.2897	1,324,200.2704
31	588,858.6146	1,323,637.0376
32	589,101.2083	1,323,348.0302

SHEET INDEX

DESCRIPTION	SHEET No.
Cover Sheet	1 of 8
Preliminary Equivalent Sketch Plan	2 of 8
Preliminary Equivalent Sketch Plan	3 of 8
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	4 of 8
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	5 of 8
Preliminary Forest Conservation Plan	6 of 8
Preliminary Forest Conservation Plan	7 of 8
Preliminary Forest Conservation Plan	8 of 8

CENTERLINE ROAD CURVE DATA WALLY COURT

CURVE No.	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING
C1	250.00	141.46	32°25'09"	72.68	S61°37'09"E 139.58'
C2	250.00	107.02	24°31'38"	54.34	N65°33'54"W 106.21'

CENTERLINE ROAD CURVE DATA DOZER PLACE

CURVE No.	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING
C3	750.00'	332.40'	25°23'36"	168.97	N51°28'01"E 329.68'
C4	970.66'	114.39'	6°45'08"	57.26	S41°34'58"W 114.32'

ROAD CLASSIFICATION

ROAD NAME	CLASSIFICATION	R/W
Wally Court	Public Access Place	40'
Dozer Place	Public Access Place	40'

MINIMUM LOT SIZE CHART

LOT NUMBER	GROSS AREA (sf)	PIPESTEM AREA (sf)	MINIMUM LOT SIZE
5	49,565±	707±	48,858±
6	53,261±	1081±	52,180±

OWNER
Wilford M. & Mary V. Davis
c/o Susan Rhine
12885 Old Frederick Road
Sykesville, MD. 21784-5644

DEVELOPER
Hailey Development L.C.
3905 National Drive
Suite #105
Burtonsville, MD. 20866

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT

[illegible] 11/28/06
COUNTY HEALTH OFFICER DATE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[illegible] 12/11/06
PLANNING DIRECTOR DATE

COVER SHEET

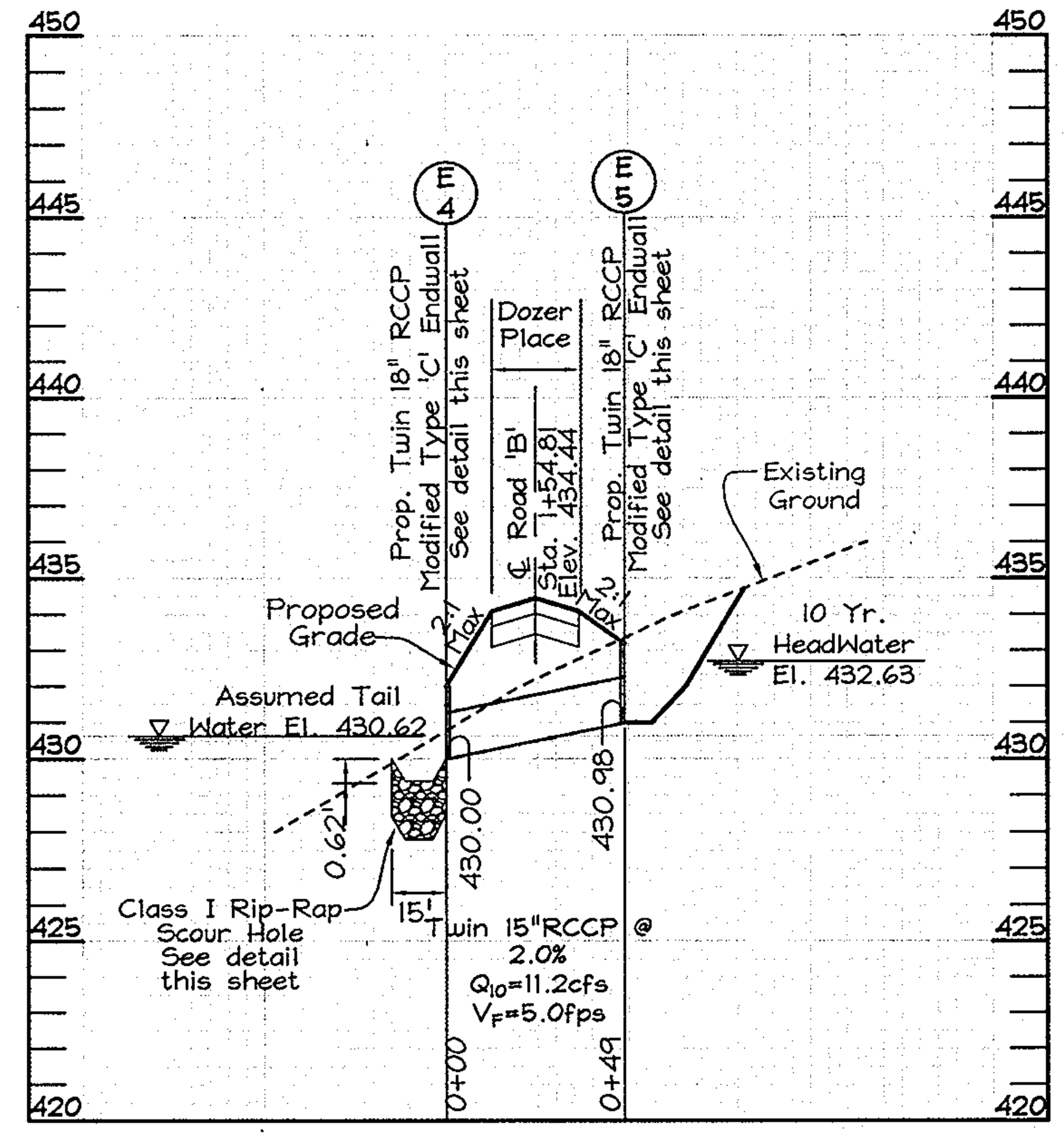
DAVIS PROPERTY
LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A', 'B' AND 'C'
TAX MAP 15 GRID 22 PARCEL 36
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

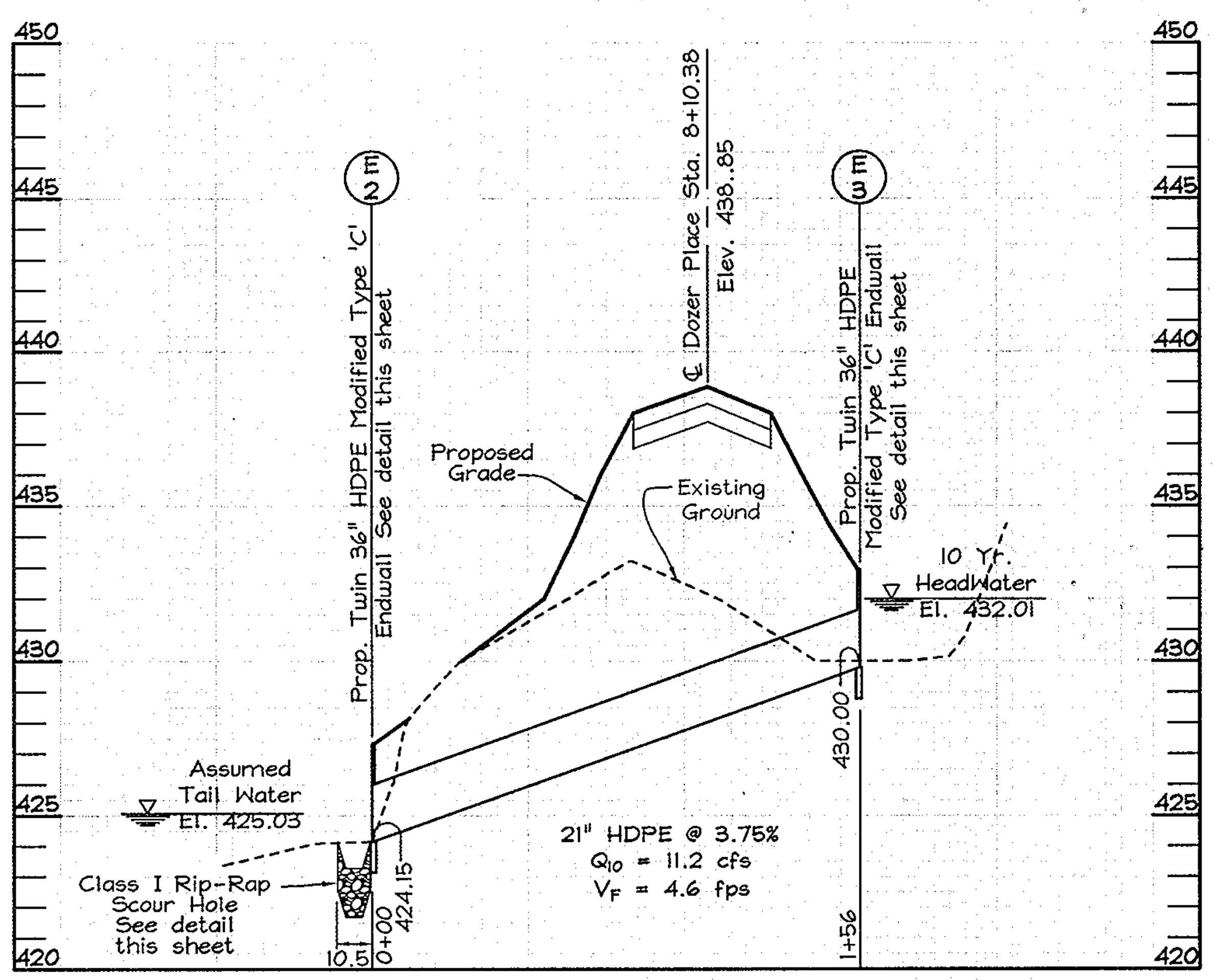
DESIGN BY: PS
DRAWN BY: KSZ
CHECKED BY: ZYF
SCALE: As Shown
DATE: Nov. 1, 2006
W.O. No.: 3303
SHEET No.: 1 OF 8

SP-06-22



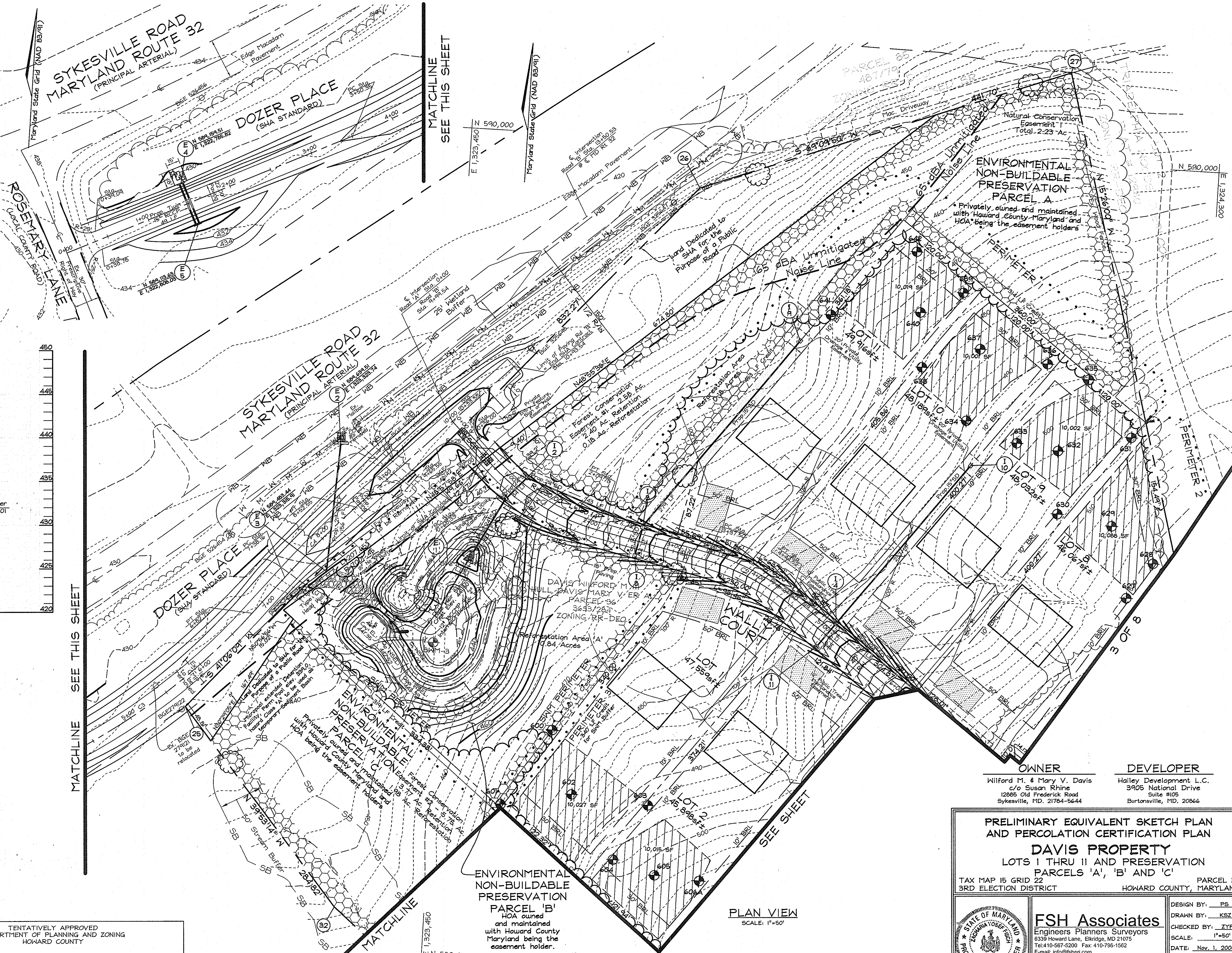
CULVERT E4-E5

SCALE: Horizontal: 1"=50"
Vertical: 1"=5"



CULVERT E2-E3

SCALE: Horizontal: 1"=50"
Vertical: 1"=5"



PLAN VIEW

SCALE: 1"=50'

OWNER	DEVELOPER
Wilford M. & Mary V. Davis	Hailey Development L.C.
c/o Susan Rhine	3905 National Drive
12885 Old Frederick Road	Suite #105
Sykesville, MD. 21784-5644	Burtonsville, MD. 20866

PRELIMINARY EQUIVALENT SKETCH PLAN
AND PERCOLATION CERTIFICATION PLAN

DAVIS PROPERTY

LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A', 'B' AND 'C'

TAX MAP 15 GRID 22 — PARCEL 36
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

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6339 Howard Lane, Elkridge, MD 21075
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DESIGN BY:	PS
DRAWN BY:	KSZ
CHECKED BY:	ZYF
SCALE:	1"=50'
DATE:	Nov. 1, 2006
W.O. No.:	3303
SHEET No.:	2 OF 8

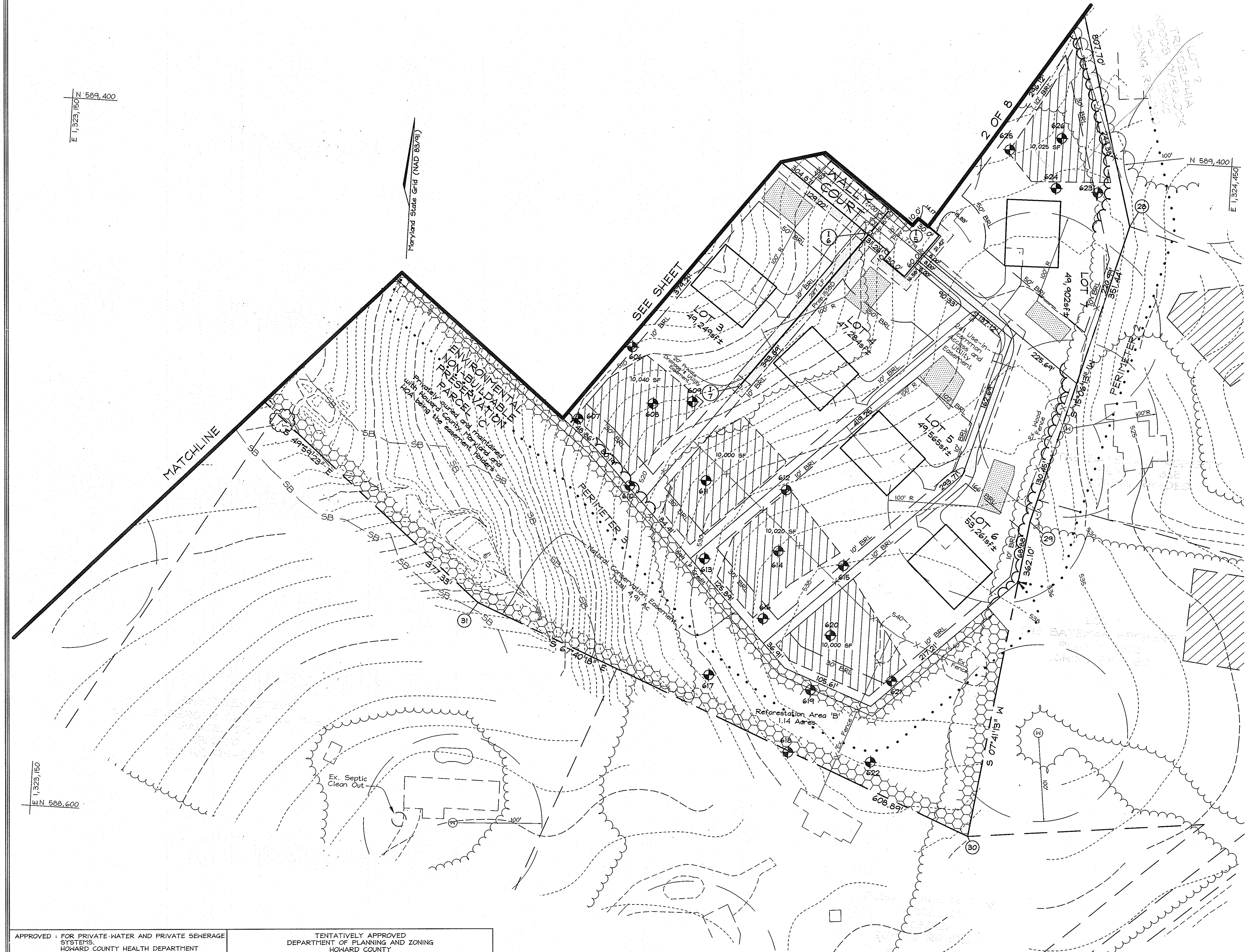
APPROVED : FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT

for Robert J. Weber — 11/28/06
COUNTY HEALTH OFFICER — DATE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[signature] — 12/11/06
PLANNING DIRECTOR — DATE

SP-06-22



PLAN VIEW

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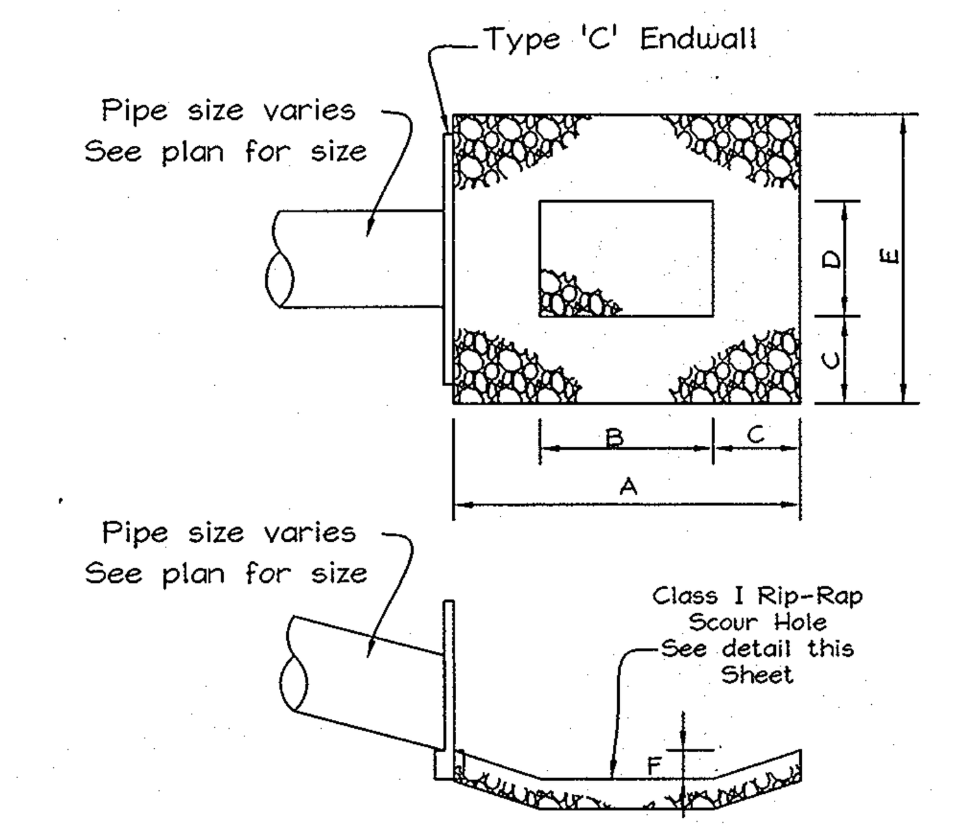

SECTION 'A'-'A'

NOT TO SCALE

TYPICAL SCOUR HOLE OUTFALL DETAIL

NOT TO SCALE

SCOUR HOLE TABLE

OUTFALL	DIMENSIONS					REMARKS
	A	B	C	E	F	
E-2	10.5'	5.25'	2.63'	8.75'	0.88'	Singal 21" RCCP
E-4	15'	7.5'	3.75'	12.5'	0.62'	Twin 15" RCCPs

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PRELIMINARY EQUIVALENT SKETCH PLAN
AND PERCOLATION CERTIFICATION PLAN

DAVIS PROPERTY

LOTS 1 THRU 11 AND PRESERVATION
PARCELS 'A', 'B' AND 'C'

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Robert J. Weber 11/28/06
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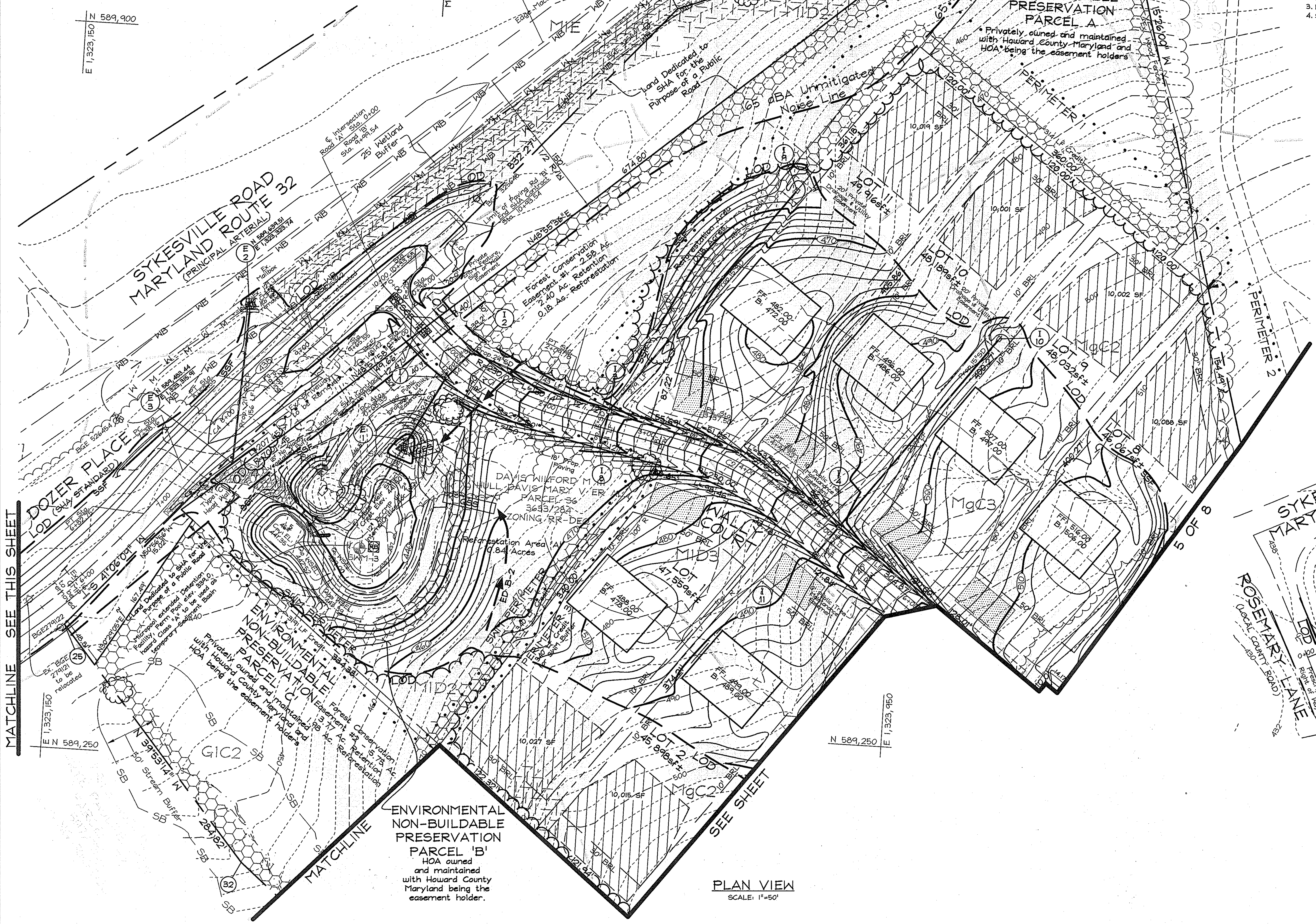
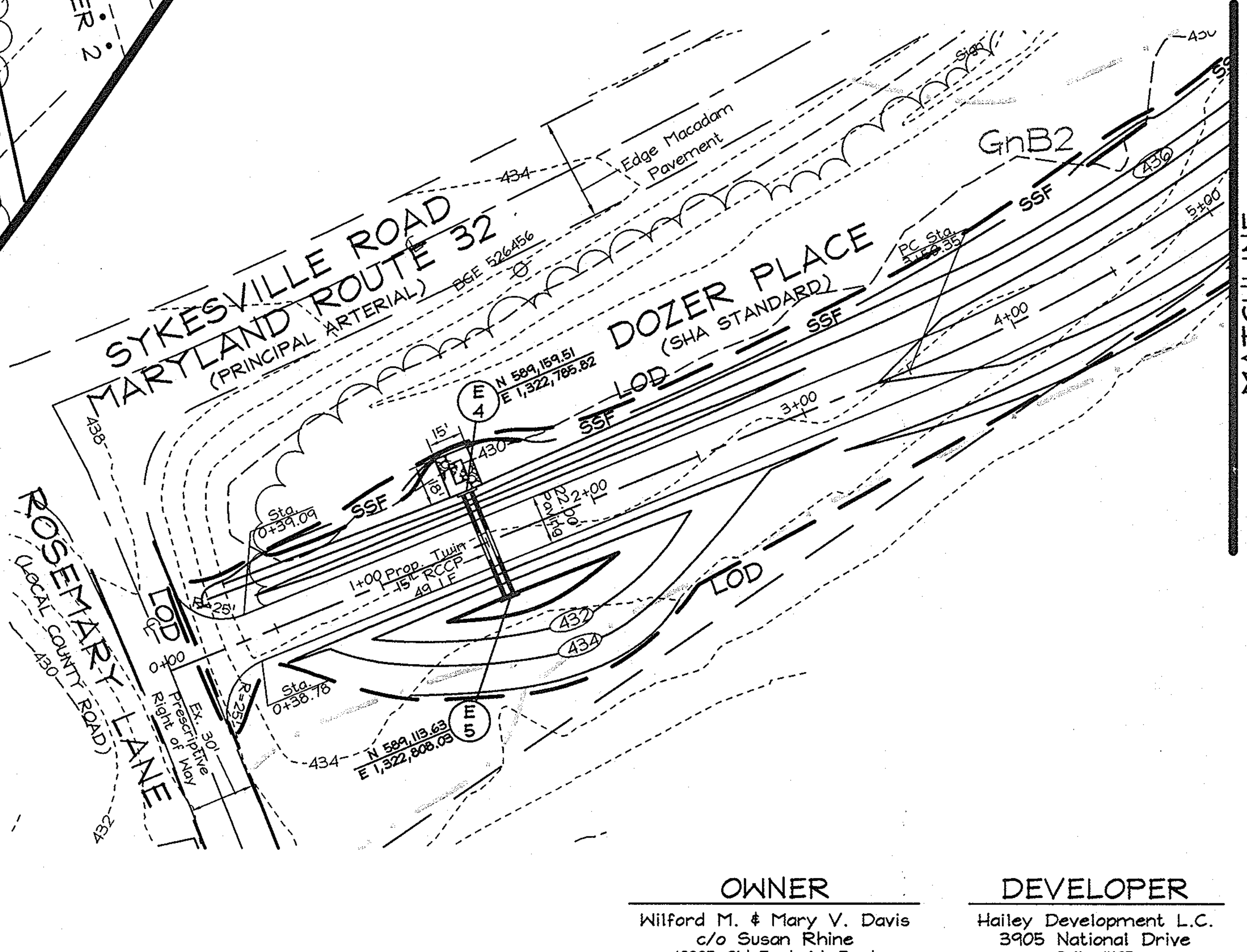
SCHEDULE A PERIMETER LANDSCAPE EDGE			
CATEGORY	ADJACENT TO PERIMETER PROPERTIES		
Perimeter Designation Landscape Type	1 A	2 A	3 A
Linear Feet of Perimeter	809'	820'	1284'
Credit for Existing Vegetation (Yes, No, Linear Feet) Remaining Perimeter Length	Yes, 767'* 42' remain	No No	Yes, 1239'* 45' remain
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) Remaining Perimeter Length	No	No	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs	 1:60 1 - -	 1:60 14 - -	 1:60 1 - -

* Credit for Forest Conservation Planting and Retention and/or SWM Buffer - See Plan for Locations



PLAN VIEW
SCALE: 1"=50'



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 landscape surety will be part of the developer's agreement.
4. Street Trees will be required along Road 'A' and Road 'B'.

LEGEND

Existing Contour	-------------382
Proposed Contour	(82)
Spot Elevation	+82^53
Direction of Flow	
Existing Trees to Remain	
Stabilized Construction Entrance	SCE
Silt Fence	SF — SF
Super Silt Fence	SSF — SSF
Earth Dike	ED A-1
Limit of Disturbance	LOD
Erosion Control Matting	ECM
Landscape Perimeter	PERIMETER ONE
Soil Boundary	
Removable Pumping Station	☒ RPS

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING	
Linear Feet of Perimeter	1210'
Credit for Existing Vegetation (No, Yes and Linear Feet)	Yes, 659'* 551' remain
Credit for other Landscaping (No, Yes and %)	N/A
Number of Trees Required Shade Trees Evergreen Trees	 1:50 11 1:40 14
Number of Trees Provided Shade Trees Evergreen Trees Other Trees(2:1 Substitution)	To Be Determined

* 180' Credit for Forest Conservation Planting and Retention

STREET TREE SCHEDULE			
STREET NAME	LF REQUIRED	TREES REQUIRED	TREES PROVIDED
Wally Court	1560	39	To Be Determined
Dozer Place	2186	55	

OWNER	DEVELOPER
Wilford M. & Mary V. Davis c/o Susan Rhine 12885 Old Frederick Road Sykesville, MD. 21784-5644	Hailey Development L.C. 3905 National Drive Suite #105 Burtonsville, MD. 20866

PRELIMINARY GRADING, LANDSCAPING, SEDIMENT AND EROSION CONTROL, SOILS, AND PERCOLATION CERTIFICATION PLAN
DAVIS PROPERTY
LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A', 'B' AND 'C'

TAX MAP 15 GRID 22 — PARCEL 36
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND · ZACHARIA YOSEF FISCH · 22418 · PROFESSIONAL ENGINEER
Zacharia Y. Fisch

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E-mail: info@fsheri.com

DESIGN BY: PS
DRAWN BY: KSZ
CHECKED BY: ZYF
SCALE: 1"=50'
DATE: Nov. 1, 2006
W.O. No.: 3303
SHEET No.: 4 OF 8

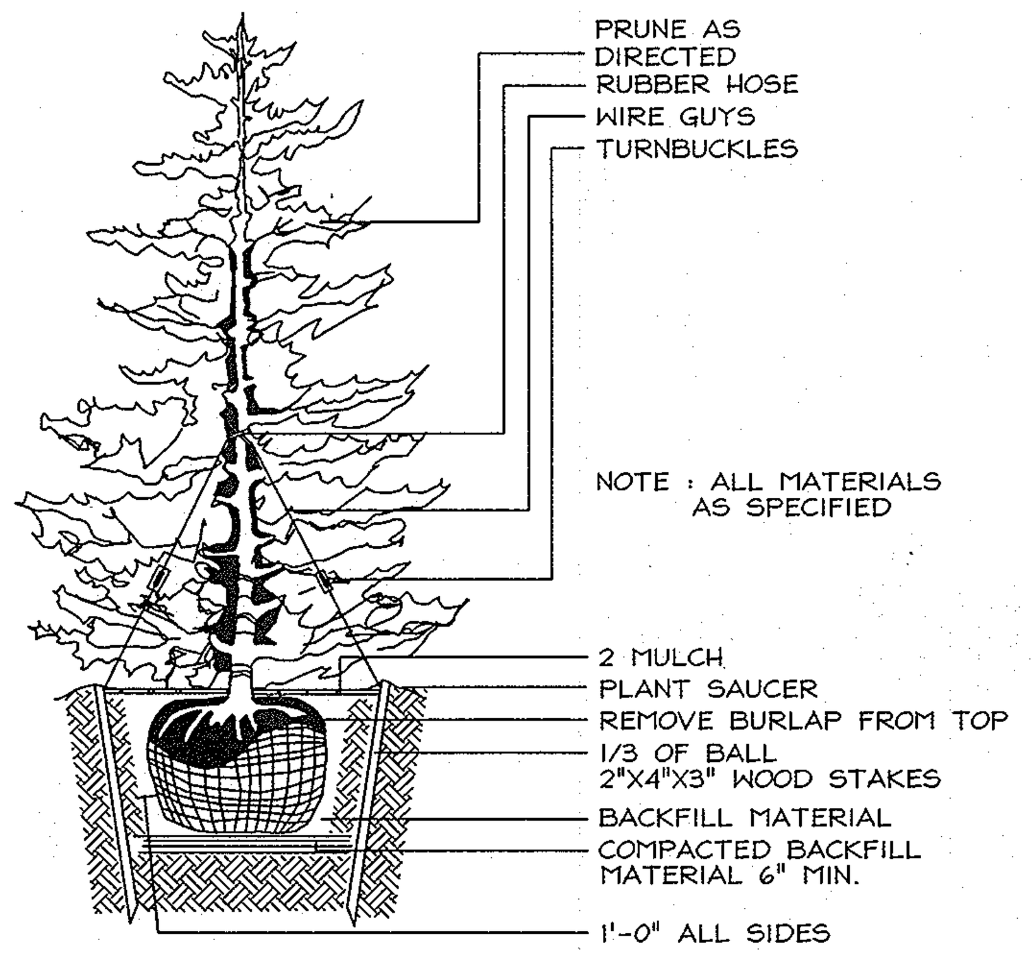
APPROVED : FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT

for Robert J. Weber — 11/28/06 MDD
COUNTY HEALTH OFFICER — DATE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[illegible] — 12/11/06 JA
PLANNING DIRECTOR — DATE

SP-06-22

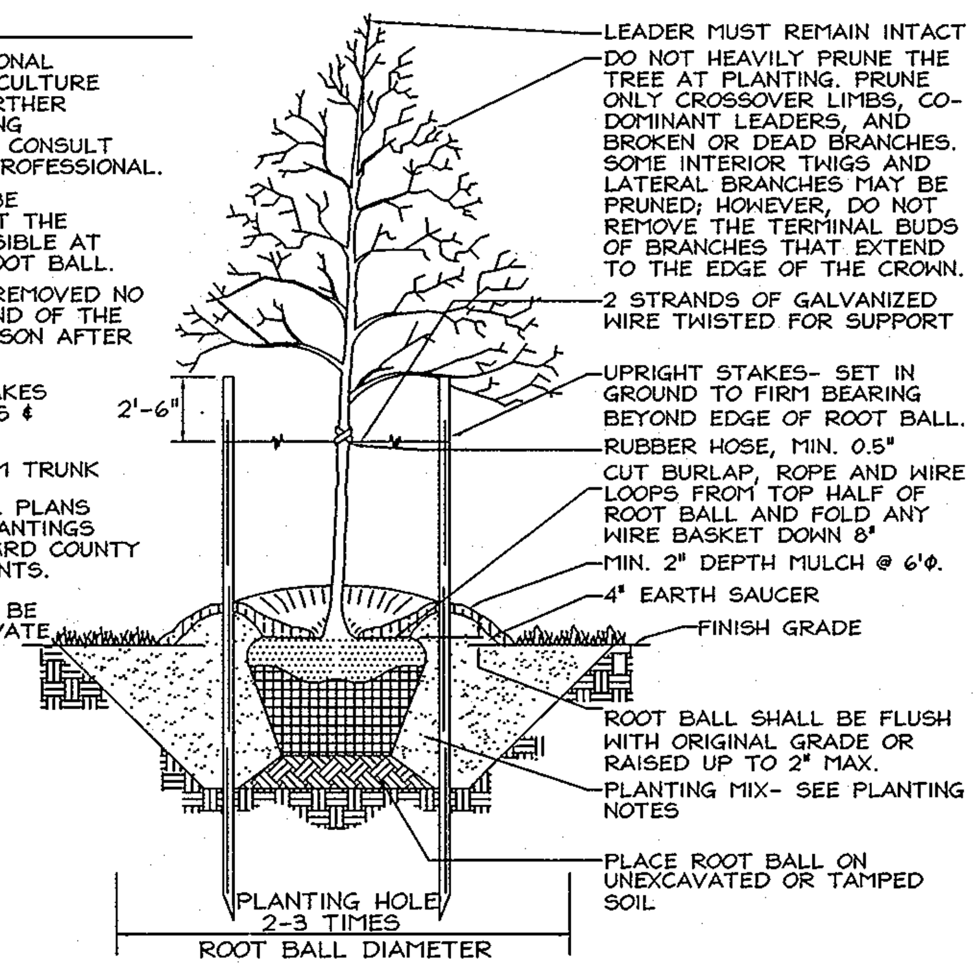


TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

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 SEWAGE EASEMENT.



TYPICAL TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER — NOT TO SCALE

PLAN VIEW

SCALE: 1"=50'

LEGEND

Existing Contour	- - - - - - - -382
Proposed Contour	——(82)——
Spot Elevation	+82[53]
Direction of Flow	←
Existing Trees to Remain	
Stabilized Construction Entrance	SCE
Silt Fence	—SF—SF—
Super Silt Fence	—SSF—SSF—
Earth Dike	→ ED A-1 →
Limit of Disturbance	— LOD —
Erosion Control Matting	▪ ▪ ECM ▪ ▪
Landscape Perimeter	● ● PERIMETER ONE ● ●
Soil Boundary	

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PRELIMINARY GRADING, LANDSCAPING, SEDIMENT AND EROSION CONTROL AND SOILS PLAN

DAVIS PROPERTY

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TAX MAP 15 GRID 22 — PARCEL 36
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND
ZACHARIA YOSEF FISCH
22418
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[illegible]

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DESIGN BY:	PS
DRAWN BY:	HK
CHECKED BY:	ZYF
SCALE:	1"=50'
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W.O. No.:	3303
SHEET No.:	5 OF 8

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT

Robert J. Weber — 11/28/06
COUNTY HEALTH OFFICER — DATE

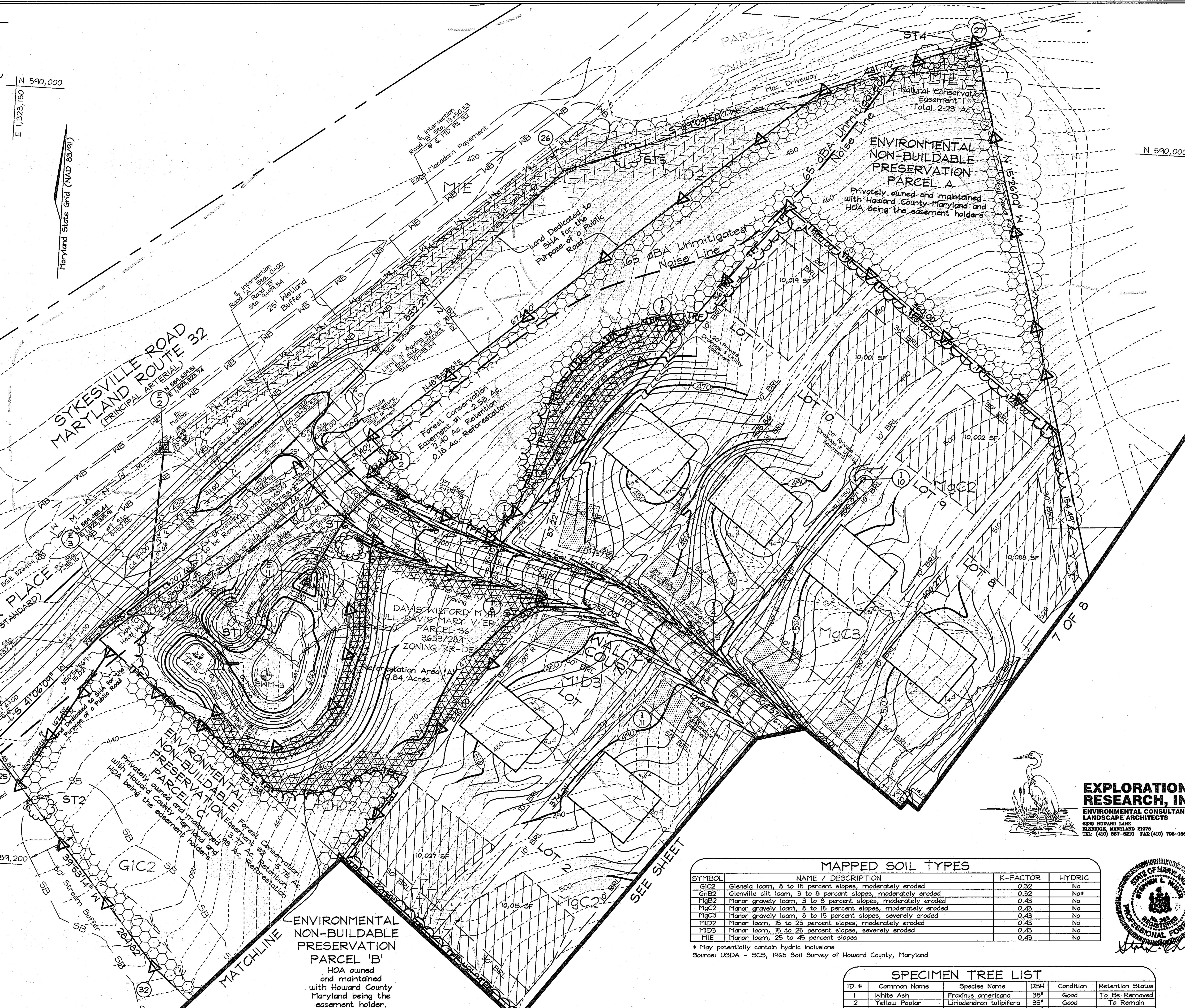
TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[illegible] — 12/11/06
PLANNING DIRECTOR — DATE

SP-06-22

LEGEND

- Existing Contour
- Proposed Contour
- Existing Spot Elevation
- Existing Trees to Remain
- Intermittent Stream
- Perennial Stream
- Stream Buffer
- Wetland
- Wetland Buffer
- Limit of Disturbance
- Proposed Well Area
- Forest Conservation Areas
- Reforestation Areas
- Forest Conservation Signs
- Tree Protection Fence
- Soil Boundary
- 15-24.9% slopes



MAPPED SOIL TYPES

SYMBOL	NAME / DESCRIPTION	K-FACTOR	HYDRIC
GIC2	Glenelg loam, 8 to 15 percent slopes, moderately eroded	0.32	No
GnB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	0.32	No*
MgB2	Manor gravely loam, 3 to 8 percent slopes, moderately eroded	0.43	No
MgC2	Manor gravely loam, 8 to 15 percent slopes, moderately eroded	0.43	No
MgC3	Manor gravely loam, 8 to 15 percent slopes, severely eroded	0.43	No
MID2	Manor loam, 15 to 25 percent slopes, moderately eroded	0.43	No
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	0.43	No
MIE	Manor loam, 25 to 45 percent slopes	0.43	No

* May potentially contain hydric inclusions
Source: USDA - SCS, 1968 Soil Survey of Howard County, Maryland

SPECIMEN TREE LIST

ID #	Common Name	Species Name	DBH	Condition	Retention Status
1	White Ash	Fraxinus americana	38"	Good	To Be Removed
2	Yellow Poplar	Liriodendron tulipifera	35"	Good	To Remain
3	Red Maple	Acer rubrum	33"	Good	To Remain
4	Northern Red Oak	Quercus rubra	41"	Good	To Remain
5	Northern Red Oak	Quercus rubra	35"	Good	To Remain
6	Red Maple	Acer rubrum	38"	Fair*	To Be Removed
7	Red Maple	Acer rubrum	35"	Good	To Be Removed
8	Shingle Oak	Quercus imbricaria	36"	Fair / Poor1,2	To Be Removed
9	Shingle Oak	Quercus imbricaria	30"	Very Poor	To Be Removed

* Hollow Trunk
1 Smaller Trunk dead
2 Crown Dieback

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR 12/11/06 DATE

FOREST CONSERVATION NARRATIVE

This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991. Additionally, the rules for Rural Cluster Subdivisions, Option B have been utilized. The total tract area consists of 23.66 acres of land. The site contains 17.38 acres of forest cover.

Forest retained in easements will total 6.17 acres. A total of 2.16 acres of reforestation planting is proposed on-site, with a fee-in-leiu requested for the remaining 0.39 acres required (see calculations, below). Two forest conservation easements will be established. Total area contained within these easements is 8.33 acres. Easement 1 will have retention and newly forested area for credit, and contains steep slope areas. Easement 2 will also have retention and newly forested area for credit. Easement 2 contains a stream and the associated buffer, as well as areas of steep slopes.

New on-site plantings will be a mix of 2.5"+ cal. trees at 100 trees/acre and 2-3' containerized whip stock planted at 350 stems/acre with tree shelters. The larger plant material will be primarily planted around the edges adjacent to the required landscape perimeters for buffer credit. Plant material will be chosen to match existing forest resources, as appropriate.

Forest Conservation Surety in the amount of $100,798.00 will be posted with the Developers Agreement.
Reforestation: 2.16 Ac. (94,090 s.f.) @ $0.50/s.f. = $47,045.00
Retention: 6.17 Ac. (268,765 s.f. @ $0.20/s.f. = $53,753.00

Remaining Forest Conservation requirement of 0.39 Ac. (2.55 Ac. required - 2.16 Ac. Reforestation on-site) will be fulfilled by a fee-in-lieu payment of $8,494.20 (16,988.4 s.f. @ $0.50/s.f.).

FOREST CONSERVATION EASEMENT TABLE

EASEMENT	TYPE	AREA (ACRES)
1	Retention	2.40
	Reforestation	0.18
2	Retention	3.77
	Reforestation	1.98
TOTAL		8.33
	Retention	6.17
	Reforestation	2.16

FOREST CONSERVATION WORKSHEET

Net Tract Area	Acres
A. Total Tract Area	23.66
B. Area Within 100 Year Floodplain	--
C. Other deductions	--
D. Net Tract Area	23.66
Zoning Use Category: RESIDENTIAL-RURAL MEDIUM DENSITY	
Land Use Category	
E. Afforestation Minimum (20 % x D)	4.73
F. Conservation Threshold (25 % x D)	5.92
Existing Forest Cover	
G. Existing Forest on Net Tract Area	17.38
H. Forest Area Above Conservation Threshold	11.47
Breakeven Point	
I. Forest Retention Above Threshold with no Mitigation	8.21
J. Clearing Permitted without Mitigation	9.17
Proposed Forest Clearing	
K. Forest Areas to be Cleared	11.21
L. Forest Areas to be Retained	6.17
Planting Requirements	
M. Reforestation for Clearing Above Threshold	2.80
N. Reforestation for Clearing Below the Threshold	0
P. Credit for Retention Above Conservation Threshold	0.25
Q. Total Reforestation Required	2.55
R. Total Afforestation Required	0
S. Total Reforestation and Afforestation Requirement	2.55

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STATE OF MARYLAND · STEPHEN L. HUBER · No. 363 · REGISTERED PROFESSIONAL FORESTER

OWNER

Wilford M. & Mary V. Davis
c/o Susan Rhine
12885 Old Frederick Road
Sykesville, MD. 21784-5644

DEVELOPER

Hailey Development L.C.
3905 National Drive
Suite #105
Burtonsville, MD. 20866

FOREST CONSERVATION PLAN

DAVIS PROPERTY

LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A', 'B' AND 'C'

TAX MAP 15 GRID 22 — PARCEL 36
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

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

FSH Associates
Engineers Planners Surveyors
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E-mail: info@fsheri.com

DESIGN BY: PS
DRAWN BY: KSZ/SMM
CHECKED BY: ZYF
SCALE: 1"=50'
DATE: Nov. 1, 2006
W.O. No.: 3303
SHEET No.: 6 OF 8

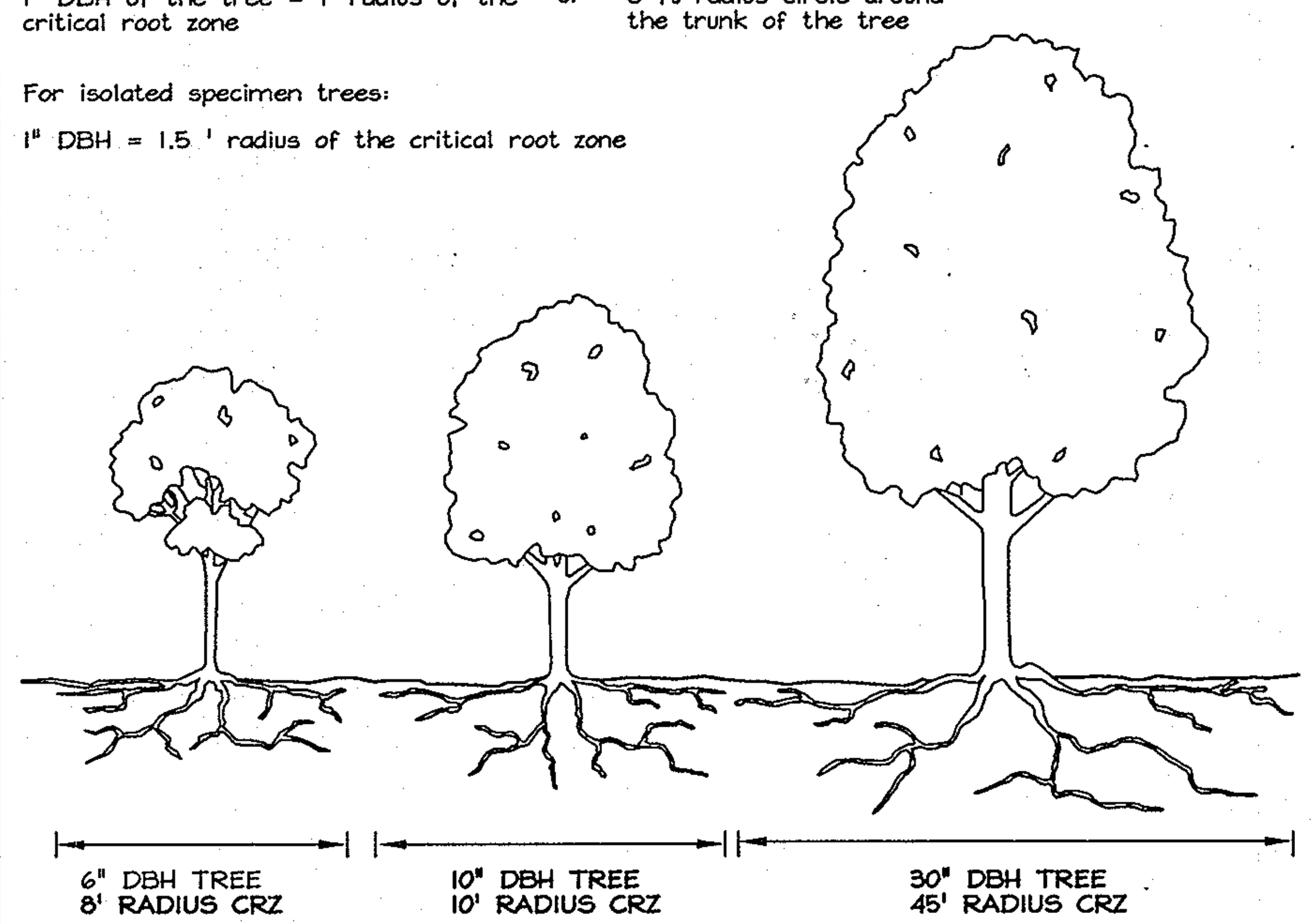
CRITICAL ROOT ZONE

For the edge of large areas, use the greater of the two choices below:

1" DBH of the tree = 1' radius of the critical root zone or 8 ft radius circle around the trunk of the tree

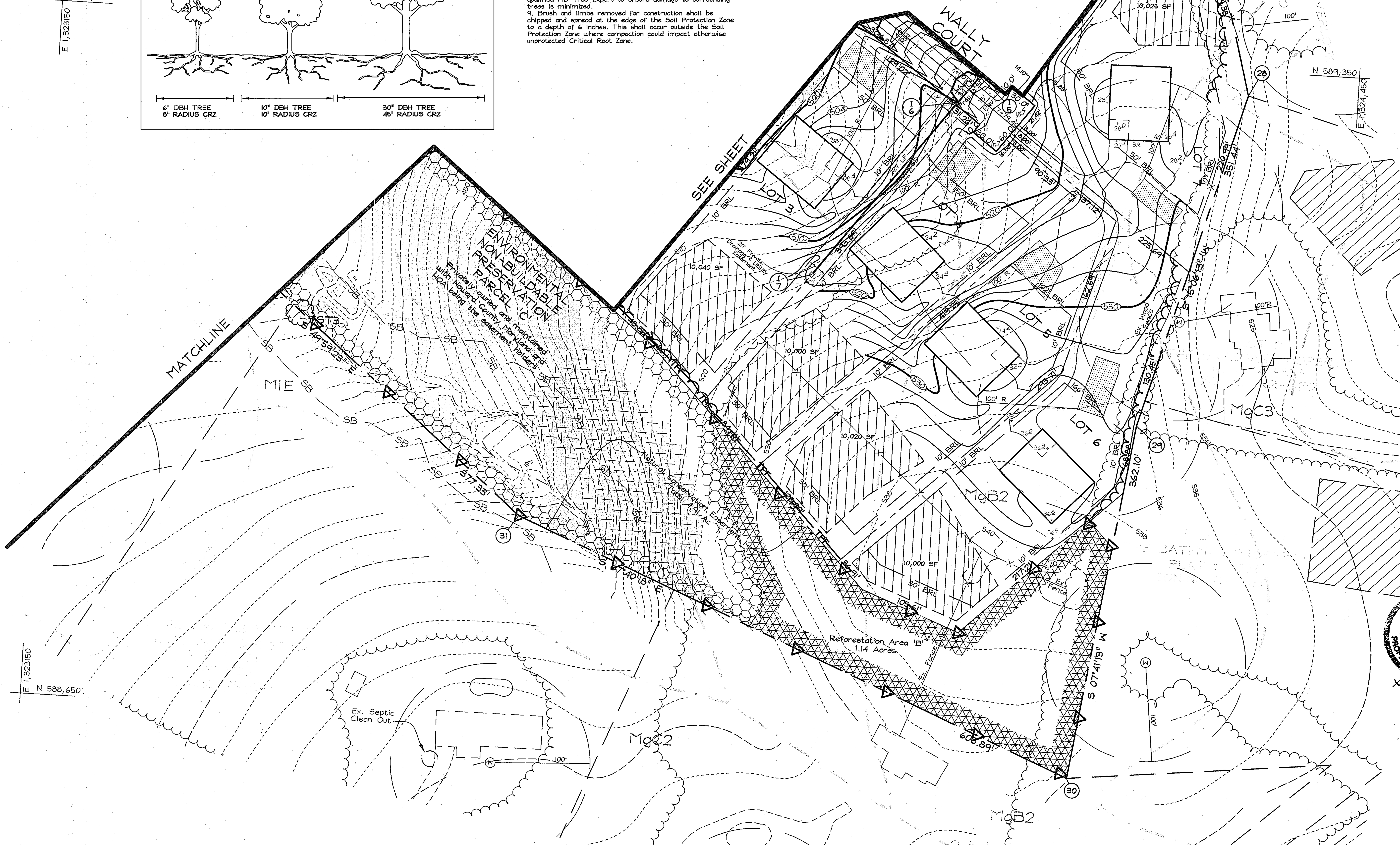
For isolated specimen trees:

1" DBH = 1.5 ' radius of the critical root zone



Soil Protection Zone Notes

1. The Soil Protection Zone shall include all areas contained inside the Limit of Disturbance.
2. Where possible, the Soil Protection Zone shall extend to the drip line of specimen trees. For other groups of trees, the zone shall be the drip line or 40% of the height of the tree, whichever is greater.
3. No construction activity is permitted within the Soil Protection Zone.
4. If soil has been compacted or grading has taken place in the vicinity of the Soil Protection Zone, root pruning shall be implemented per Root Pruning detail, shown on this plan.
5. Root pruning shall occur prior to the beginning of construction.
6. Where the Soil Protection Zone must encroach inside the Critical Root Zone of a tree, soil disturbance shall be mitigated with vertical mulching, radial trenching, or another method approved by the ERI Forest Conservation Professional.
7. Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
8. Tree maintenance and removal shall be undertaken by a qualified MD Tree Expert to ensure damage to surrounding trees is minimized.
9. Brush and limbs removed for construction shall be chipped and spread at the edge of the Soil Protection Zone to a depth of 6 inches. This shall occur outside the Soil Protection Zone where compaction could impact otherwise unprotected Critical Root Zone.

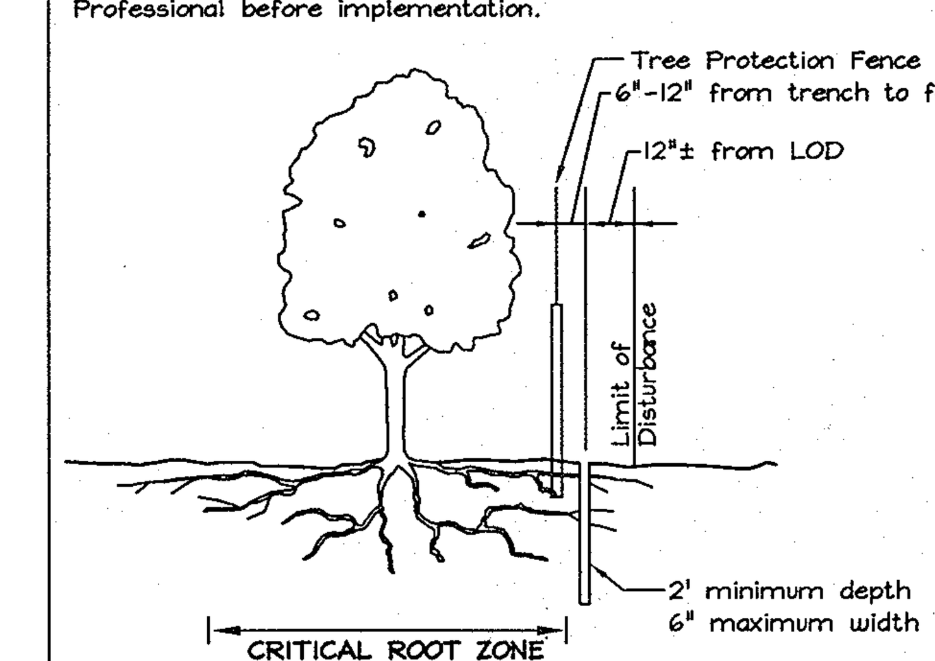


LEGEND

Existing Contour	382
Proposed Contour	82
Existing Spot Elevation	382.3
Existing Trees to Remain	
Intermittent Stream	
Perennial Stream	
Stream Buffer	SB
Wetland	W
Wetland Buffer	WB
Limit of Disturbance	LOD
Proposed Well Area	
Forest Conservation Areas	
Reforestation Areas	
Forest Conservation Signs	△
Tree Protection Fence	TPF
Soil Boundary	
15-24.9% slopes	

ROOT PRUNING

1. Retention areas shall be set prior to construction
2. Boundaries of retention areas shall be flagged, and location of trench shall be specified by ERI Qualified Professional.
3. Roots shall be cut cleanly with root pruning equipment. Where roots >1" are found, trenching shall be done by air spade or hand tools. Roots >1" shall be cut with a hand saw.
4. Trench shall be immediately backfilled with soil removed or high organic content soil.
5. Any other techniques shall be approved by the ERI Qualified Professional before implementation.



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TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR   JA DATE 12/11/06

FOREST CONSERVATION PLAN

DAVIS PROPERTY

LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A', 'B' AND 'C'

TAX MAP 15 GRID 22   PARCEL 36
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SP-06-22

EASEMENT #1 - REFORESTATION AREA : 7841 Sq. ft. (0.18 Ac)

18 plants - 2.5" Cal Trees (0.18 Ac. x 100 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
4	Carya tomentosa	Mockernut Hickory	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
3	Cornus florida	Flowering Dogwood	WHIP 2-3'	11' o.c.	
4	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
3	Quercus alba	White Oak	WHIP 2-3'	11' o.c.	
4	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

EASEMENT #2 - REFORESTATION AREA 'A' : 36,590 Sq. ft. (0.84 Ac)

294 plants- 2'-3' Whips (0.84 Ac. x 350 TPA)*

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
58	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters
58	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
60	Pinus virginiana	Virginia Pine	WHIP 2-3'	11' o.c.	
60	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	
58	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

*At Final Plan stage Landscape sized trees will be specified for some portion to qualify for SWM Perimeter buffer planting requirements.

EASEMENT #2 - REFORESTATION AREA 'B' : 50,530 Sq. ft. (1.16 Ac)

406 plants - 2'-3' Whips (1.16 Ac. x 350 TPA)*

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
80	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Grown with Tree Shelters.
80	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
83	Pinus virginiana	Virginia Pine	WHIP 2-3'	11' o.c.	
83	Prunus serotina	Black Cherry	WHIP 2-3'	11' o.c.	
80	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	

*At Final Plan stage Landscape sized trees will be specified for some portion to qualify for Perimeter 3 buffer planting requirements.

Management Notes for Retention Areas

1. All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
2. After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on-site, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate County inspectors shall attend.
3. Tree protection for all retained areas:
   a. All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
   b. All protection devices shall be in place prior to any grading or land clearing.
   c. All protection devices shall be properly maintained and shall remain in place until construction has ceased.
   d. Attachment of signs, fencing or other objects to trees is prohibited.
   e. No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
4. If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
   a. Prune roots with a clean cut using proper pruning equipment (see root pruning detail)
   b. Water and fertilize as needed.
5. During construction phase, monitor and correct condition of retained trees for: soil compaction, root injury, flood conditions, drought conditions and other stress signs.
6. Post-Construction Phase
   a. Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, crown reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
   b. Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
   c. No burial of discarded materials will occur onsite within the conservation areas.
   d. No burning within 100 feet of wooded area.
   e. All temporary forest protection structures will be removed after construction. Temporary signage shall be replaced with permanent signage on posts in locations shown.
   f. Following completion of construction, prior to use, the County inspector shall inspect the entire area.

Reforestation Area Monitoring Notes

1. Monthly visits during the first growing season are to assess the success of the plantings and to determine if supplemental watering, pest control or other actions are necessary. Early spring visits will document winter kill and autumn visits will document summer kill.
2. The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the two year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted up to 50% toward the total survival number if they are healthy native species at least 12 inches tall.
   Certification at the end of the two-year post construction period must indicate that the survival rates will result in a 100 tree per acre ratio for a forest and the 3 to 4 foot height standard for whips by the end of the two growing season post construction period, with at least 50% of those trees having the potential of attaining a 2" caliper DBH within 7 years.
3. Survival will be determined by a stratified random sample of the plantings. The species composition of the sample population should be proportionate to the amount of each species in the entire planting to be sampled.
4. Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement planting if required at that time.

Reforestation Area Planting Notes

1. Initial planting inspection and certification required. Planting contractor to notify ERI qualified professional 24 hours in advance of planting.
2. Reforestation areas may be planted as soon as reasonable to do so. Late winter- early spring plantings are preferred. Earliest planting dates will vary from year to year but planting may generally begin as soon as the ground is no longer frozen. Alternate planting dates may be considered as conditions warrants.
3. Soil amendments and fertilization recommendations will be made based upon the results of soil analysis for nitrogen, phosphorus, potassium, organic matter content and pH. If required, fertilizer will be provided using a slow release, soluble 16-8-16 analysis designed to last 5-8 years contained in polyethylene perforated bags such as manufactured by ADCO Works, P.O. Box 310 Hollins, N.Y. 11423 or approved equal.
4. Plant materials shall be planted in accordance with the planting diagram, planting details and planting schedule.
5. Plant stock must be protected from desiccation at all times prior to planting. Materials held for planting shall be moistened and placed in cool shaded areas until ready for placement.
6. Planting materials shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standards for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
7. Newly planted trees may require watering at least once per week during the first growing season depending on rainfall in order to get established. The initial planting operation should allow for watering during installation to completely soak backfill materials.
8. Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
9. Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angering is preferred with scarification of the sides of each hole.
10. All nursery stock to be sprayed with deer repellent containing Bitrex such as Repellex All nursery stock to be grown with deer repellent tablets in growing medium, such as Repellex Tablets.

Reforestation and Afforestation Area Protection Signage

Min. 11" / Min 15"

Forest Conservation Area

REFORESTATION PROJECT

Trees for Your Future

Forest Retention Area Protection Signage

Min. 11" / Min 15"

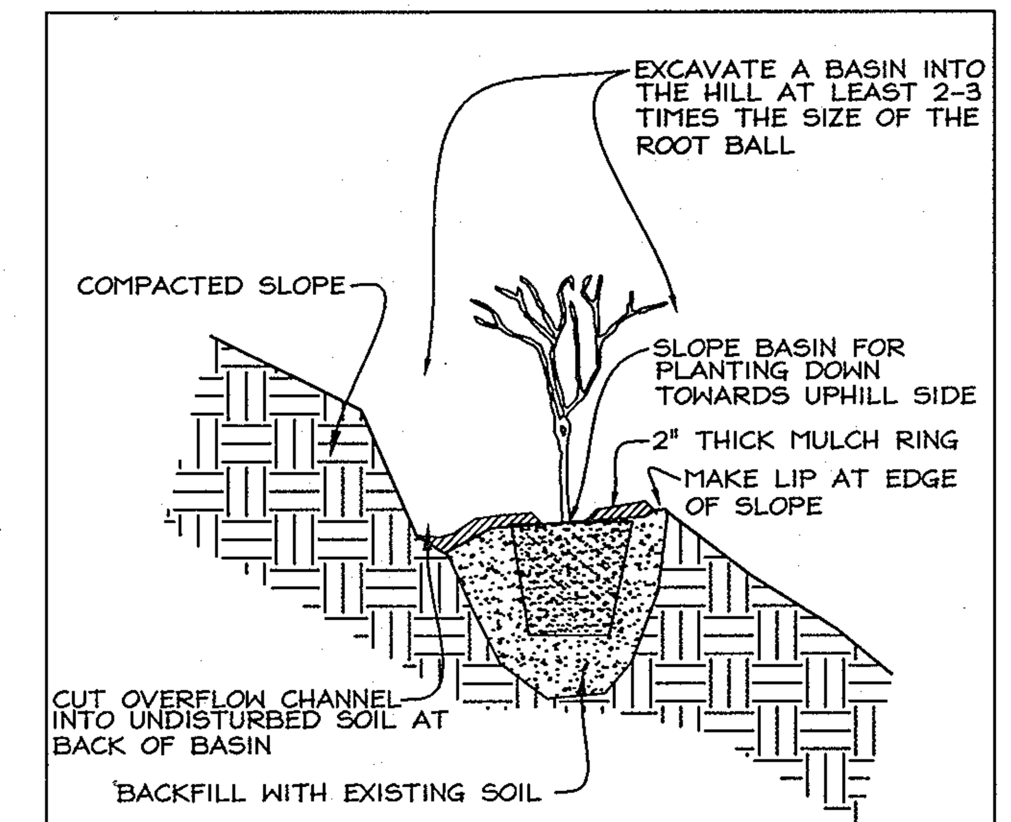
FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991

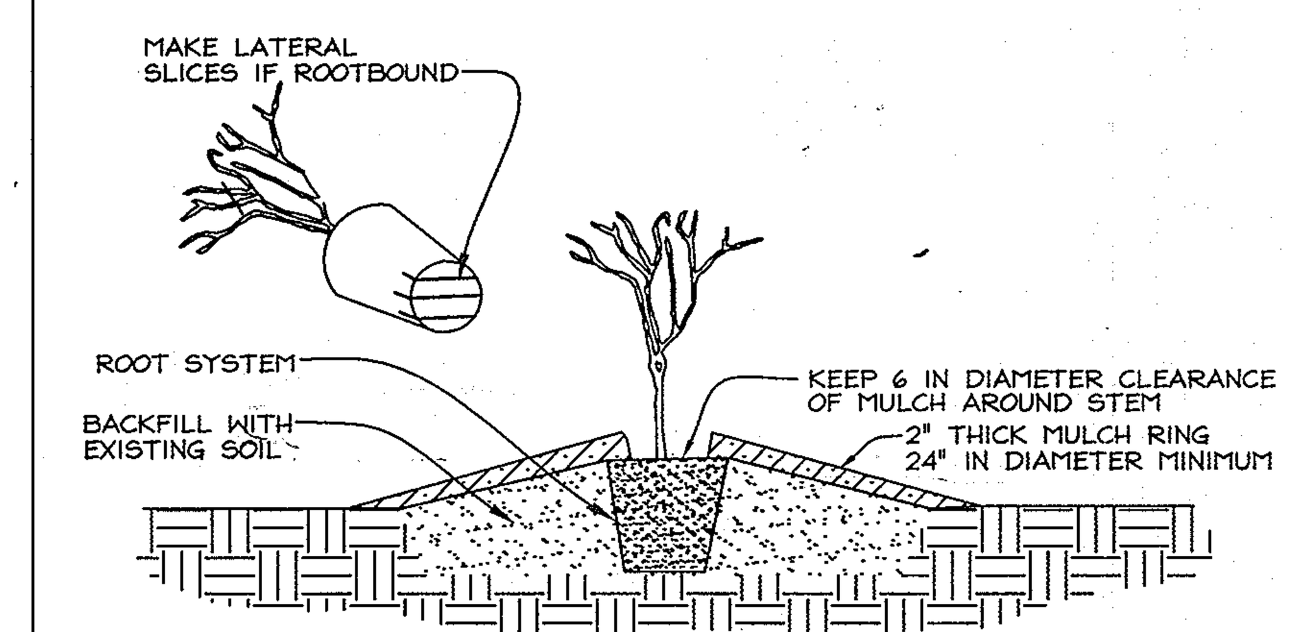
SIGN DETAIL: PERMANENT SIGN

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.



PLANTING ON STEEP SLOPES
NOT TO SCALE

1. PLANT AS PER CONTAINER PLANTING DETAIL EXCEPT PREP OF PLANTING AREA
2. A BASIN FOR PLANTING IS CUT INTO THE SLOPE WITH PLANT BEING PLACED NEAR THE DOWNHILL EDGE OF THE BASIN.
3. BASIN SHOULD SLOPE TOWARD UPHILL SIDE TO ALLOW RAIN TO BE CAPTURED AND INFILTRATE.
4. AN OVERFLOW CHANNEL SHALL BE CUT INTO UNDISTURBED SOIL AT THE REAR OF THE BASIN TO ALLOW EXCESS RUNOFF AND SEDIMENT TO ESCAPE WITHOUT DAMAGING THE BASIN.
5. MULCH AROUND PLANT IN BASIN.

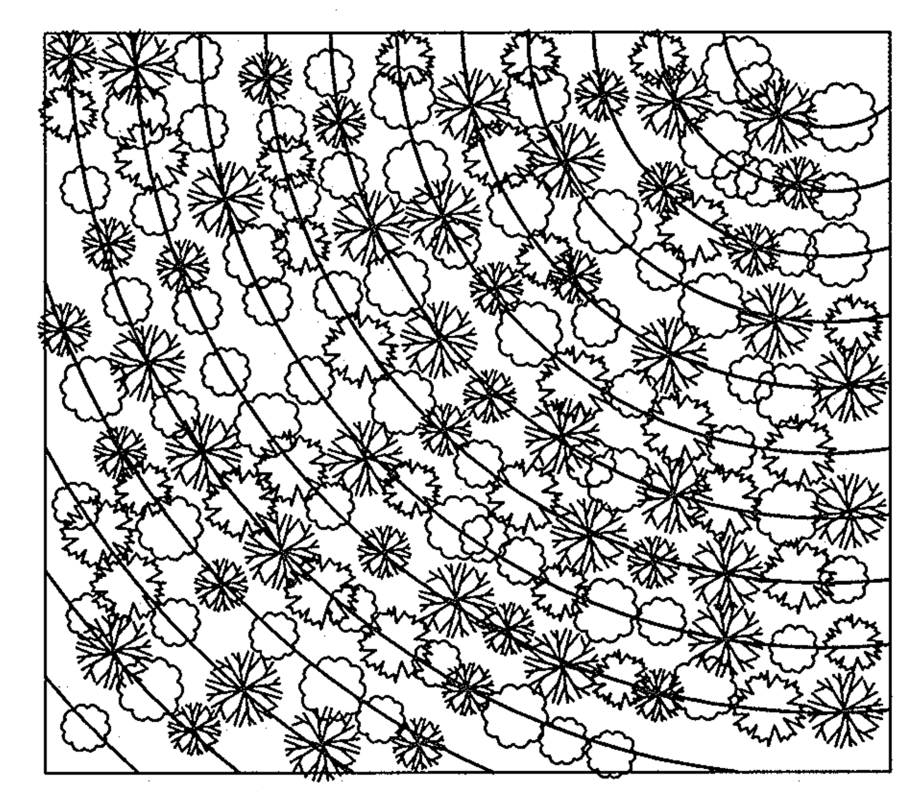


CONTAINER PLANTING
NOT TO SCALE

PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS

1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
2. USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
3. PLANT SHRUBS ON FORMED UP MOUNDS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST,OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
4. PLANTING HOLE TO BE 2-3 TIMES THE DIAMETER OF THE CONTAINER.
5. INSERT FERTILIZER TABLET, BACKFILL 2/3 OF THE ROOT BALL AND WATER.
6. AFTER WATER PERCOLATES, BACKFILL HOLE TO TOP OF ROOT BALL AND GENTLY TAMP SOIL TO FIRM CONTACT WITH PLANT.
7. APPLY MULCH RING AROUND PLANT KEEPING A 6 IN CLEARANCE FROM STEM.

CURVEILINEAR RANDOMIZED PLANTING



PLANT PLACEMENT DETAIL
NOT TO SCALE

1. MIX TREE AND SHRUB SPECIES IN THE STAGING AREA.
2. SET THE GUIDE CURVILINEAR LINE AS CLOSE TO CONTOUR AS POSSIBLE

STATE OF MARYLAND STEPHEN L. HUBER No. 383 REGISTERED PROFESSIONAL FORESTER

[illegible]

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PRELIMINARY FOREST CONSERVATION NOTES AND DETAILS
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LOTS 1 THRU 11 AND PRESERVATION PARCELS 'A', 'B' AND 'C'

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