

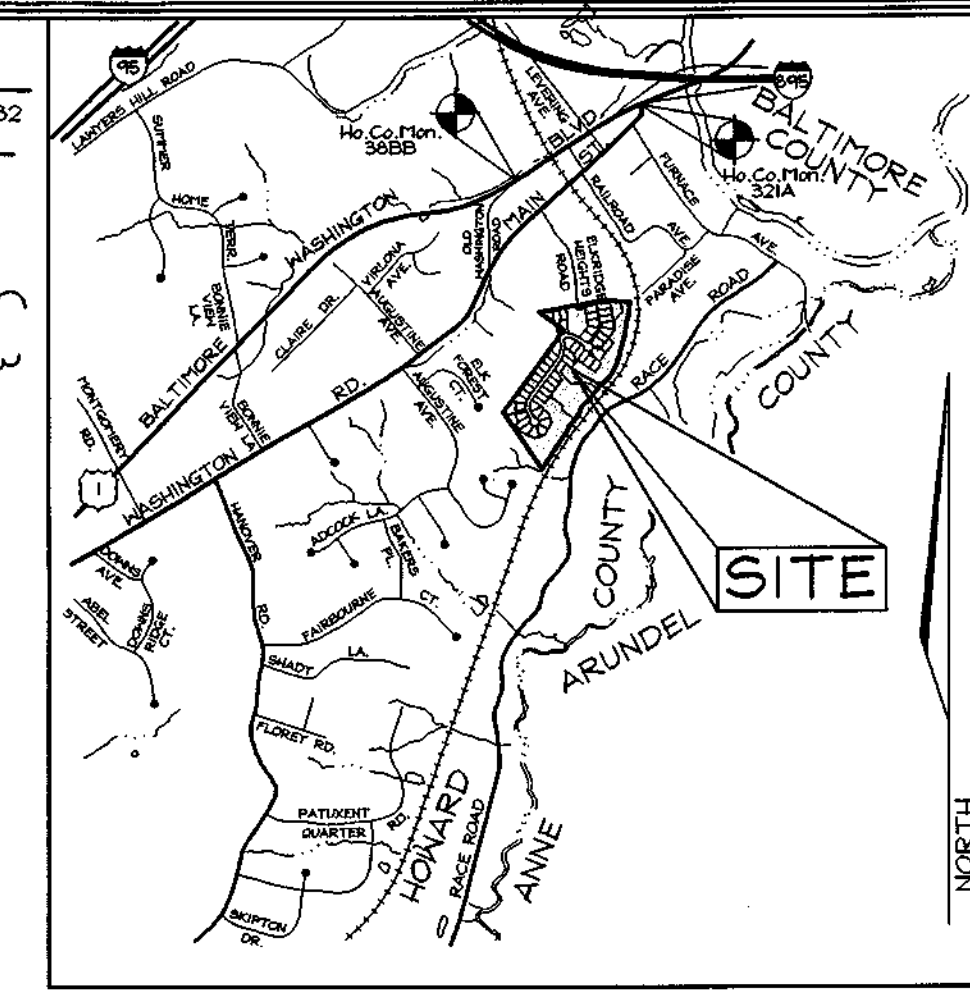
**GENERAL NOTES**

- This plan is subject to compliance with the 4th Edition of the Howard County Subdivision Regulations and the recently amended Howard County Zoning Regulations pursuant to Council Bill 50-2001.
- This site is located within the metropolitan district.
- Public water and sewer will be used within this site.
- Howard County Soil Map 26.
- Topography is based on a field run topography survey prepared by Fisher, Collins & Carter, Inc. in Feb. of 2001 and aerial topography prepared by Harford Aerial Surveys, Inc. in Feb. of 1999.
- Field run boundary survey prepared by Fisher, Collins & Carter, Inc. on April 2, 2001.
- Existing house on Lot 5 to remain.
- The coordinates shown herein are based upon the Howard County Geodetic Control which is based on the Plane Coordinate System. Howard County monument numbers 321A and 316B were used for this project.
- Stormwater management & water quality is provided as necessary in accordance with the 2000 stormwater management manual. Pond to be a micro pool extended detention pond hazardous class 'A'. Facility to be owned and maintained by the Homeowners Association. Stormwater Management recharge requirement will be provided by drywells located on lots 6 - 4, 18, 19, 28 - 32, 43 - 54. Soil borings for each drywell location shall be shown in accordance with H.B.A.M. Bulletin titled "Disconnection of rooftop runoff credits using dry wells".
- A.P.F.O. traffic study prepared by Street Traffic Studies L.T.D. and approved under S-01-24.
- Wetlands delineation and report and forest stand delineation and report prepared by Exploration Research Inc. and approved under S-01-24.
- There are no floodplains, historic structures or cemeteries on-site.
- No clearing, grading or construction is permitted within wetlands, streams or their required buffers.
- The lots shown herein comply with the minimum ownership, width and lot area as required by the Maryland State Department of the Environment.
- Street trees along Joseph Scott Drive, the Private Access Place and Fairlee Road and perimeter landscaping will be shown at Final Plan stage. Internal landscaping for lots 25 and 54 will be shown at Site Development Plan stage.
- 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 to the pipestem lot driveway.
- This project complies with the requirements of section 16-1200 of the Howard County Code for Forest Conservation by retaining 2.05 acres of forest and planting 0.36 acres of reforestation within Forest Conservation Easement 1, retaining 0.96 acres of forest and planting 0.56 acres of reforestation within Forest Conservation Easement 2, retaining 1.03 acres of forest and planting 0.24 acres of reforestation within Forest Conservation Easement 3, and retaining 2.57 acres of forest and planting 0.31 acres of reforestation within Forest Conservation Easement 4. Total retention = 6.61 ac. Total reforestation provided = 1.47 ac. \$89,602.92 surety to be posted with the Developer's Agreement. Requested Fee-in-lieu for 1.42 ac remaining obligation is \$30,927.60.
- All ditches and swales will have erosion control matting.
- This project is subject to review and approval by the Maryland Aviation Administration (TAA) regarding confirmation that construction of proposed structures on this site will not penetrate any navigational airspace and that the proposed 5-ft landscaping will meet their approval requirements.
- CPV management for a portion of Wesley Woods (3 ac.±) is provided in the stormwater management facility on site.
- The retaining wall designed to construct the access to the stormwater management facility is privately owned and maintained by the homeowners association.
- Soil borings for each drywell location have been shown in accordance with H.B.A.M. Bulletin titled, "Disconnection of Rooftop Runoff Credits Using Dry Wells".
- A gravity sewer service approval will be required from the Department of Public Works for the lots at the end of Joseph Scott Drive. The lots which require this waiver will be determined at the final plan stage.

# PRELIMINARY PLAN KUHNS PROPERTY LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58 AND A RESUBDIVISION OF BULK PARCEL 'C' WESLEY WOODS, SECTION 1 HOWARD COUNTY, MARYLAND

**LEGEND**

- Existing Contour
- Proposed Contour
- Existing Spot Elevation
- Proposed Spot Elevation
- Direction of Flow
- Existing Trees to Remain
- 15-24.9% Slopes
- 25% and Greater Slopes
- Wetlands
- Utility Pole
- Access Easement
- Access and Utility Easement
- Proposed Drainage Swale
- Proposed Dry Well
- Forest Conservation Easement



VICINITY MAP  
SCALE: 1"=200'

**BENCHMARKS**

Sta. 321A	N 172,232.2477	E 425,261.5439	El.: 8.4417 (meters)
	N 565,065.4463	E 1,395,212.248	El.: 27.646 (feet)
Sta. 388B	N 171,939.8745	E 424,785.3620	El.: 19.6329 (meters)
	N 564,007.646	E 1,395,649.975	El.: 64.412 (feet)

SHEET INDEX		
DESCRIPTION	SHEET No.	
Cover Sheet	1 of 9	
Preliminary Plan	2 of 9	
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	3 of 9	
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	4 of 9	
Preliminary Grading, Landscaping, Sediment Control and Soils Plan	5 of 9	
Retaining Wall Enlargement Plan	6 of 9	
Forest Conservation Plan	7 of 9	
Forest Conservation Plan	8 of 9	
Forest Conservation Notes and Details	9 of 9	

**MINIMUM LOT SIZE CHART**

LOT NUMBER	GROSS AREA (sf)	PIPESTEM AREA (sf)	MINIMUM LOT SIZE
1	11,136±	1,008±	10,043±
2	11,300±	595±	10,705±
3	9,828±	1,168±	8,660±
4	9,524±	181±	9,343±
5	9,438±	464±	8,974±
6	10,217±	677±	9,540±
7	9,937±	859±	9,078±
8	27,868±	9,222±	18,646±
9	10,471±	885±	9,586±
10	9,961±	791±	9,230±
11	9,652±	578±	9,074±
12	10,225±	462±	9,763±
13	9,378±	369±	9,009±
14	8,468±	206±	8,262±
15	10,642±	1,533±	9,109±
16	10,478±	1,186±	9,292±
17	9,780±	375±	9,406±
18	11,423±	1,467±	9,956±
19	12,911±	1,328±	11,583±

**CENTERLINE ROAD CURVE DATA**

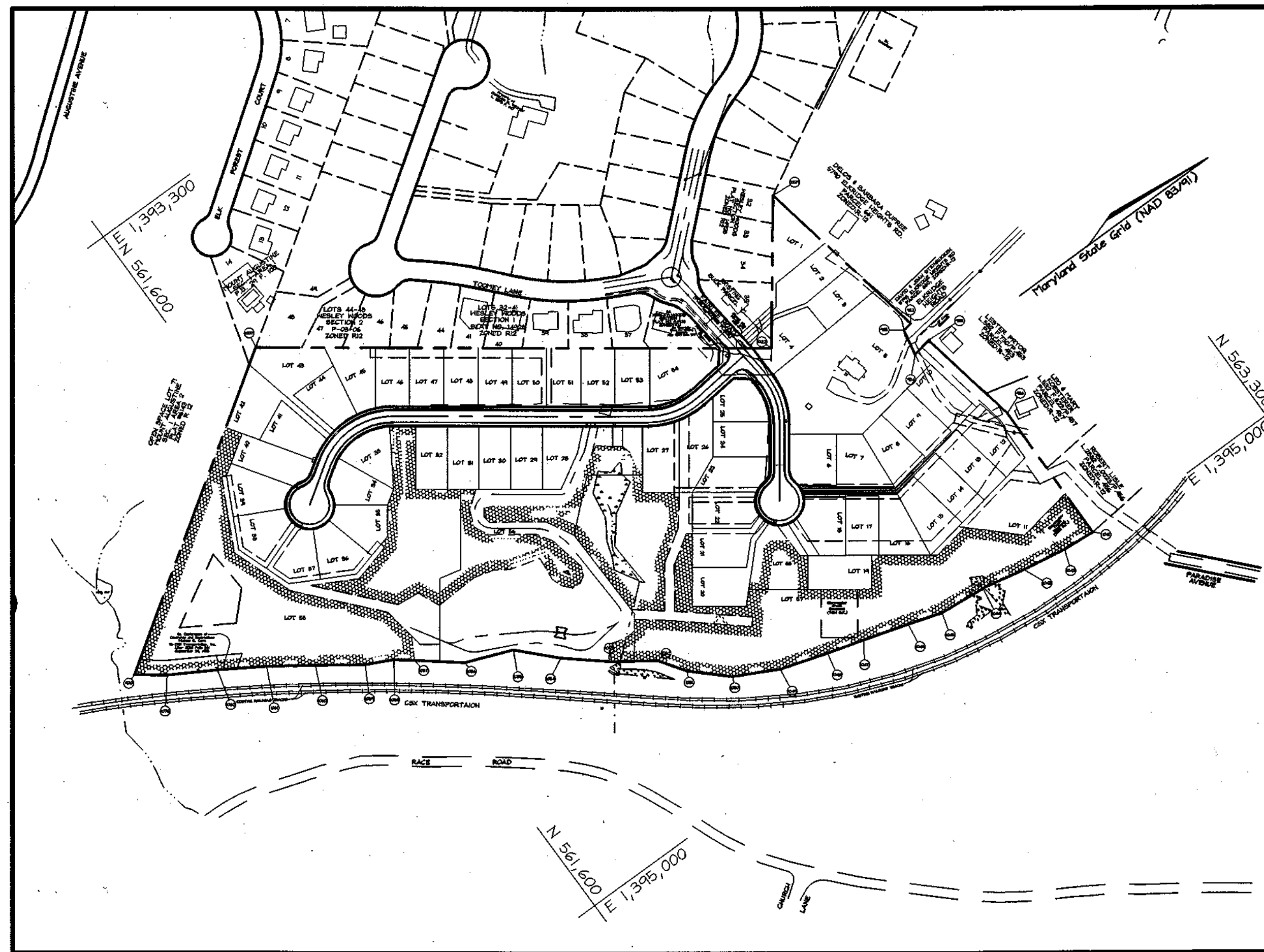
CURVE #	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING	CHORD LENGTH
C1	150.00	110.59	42°14'27"	57.94	N74°55'08"W	108.10
C2	150.00	110.59	42°14'27"	57.94	N15°05'21"E	108.10
C3	150.00	183.26	70°00'00"	105.03	S01°12'06"W	172.07

**ROAD CLASSIFICATION**

ROAD NAME	CLASSIFICATION	R/W
Fairlee Road	Public Access Place	40'
Joseph Scott Drive	Public Access Street	40'

**SITE ANALYSIS DATA CHART**

- Present zoning: "R-12" per 10/18/93 Comprehensive Zoning Plan.
- Gross area of property tract:
  - Parcel 163: 25.58 ac.
  - Bulk Parcel 'C': 3,321± or 0.08 ac.
  - Total area: 25.66 ac.
- Number of proposed buildable lots: 54
- Area of proposed buildable lots: 13.24 ac.
- Number of proposed open space lots: 4
- Area of proposed open space lots: 10.88 ac.
- Open Space requirements:
  - Open Space required (30%-8,400 of minimum lot size): 25.58 ac. x 0.30 = 7.67 ac.±
  - Open Space provided: 10.87 ac.± (0.2 ac.± non-credited)
- Recreational open space requirements:
  - Open Space required (200sf per buildable lot): 54 x 200 = 10,800 sf
  - Open Space provided: 10,800 sf
- Area of proposed road dedication: 1.54 ac.
- County file numbers: S-99-16; S-01-24; HP-99-87.



LOCATION MAP  
SCALE: 1"=200'

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY

*Mark A. Eagle*  
PLANNING DIRECTOR  
10/22/03  
DATE

Per the geotechnical report, prepared by Herbst/Benson & Associates, the following procedures are recommended for basin and embankment construction

- Along the area of the proposed embankment, strip all vegetation, topsoil and any surface organically contaminated soils to expose relatively clean existing fills or competent native soils.
- Profile roll the exposed surface with a loaded tandem dump truck to delineate unsuitable areas and cut out any soft yielding areas to expose firm underlying soils.
- Excavate the core trench to a minimum depth of 4 feet below the proposed basin elevation using a minimum 4-foot bottom trench width and side slopes no steeper than 1:1. Beneath the principal spillway, the core trench depth should extend at least 4 feet beyond the bottom of the pipe cradle and use similar bottom widths and side slopes. Compact the bottom of the trench excavation to firm, unyielding condition.
- Backfill the core trench excavation using the native CL soil from the west slope as represented by boring SHM-4. Judging from the moisture/compacted density test results shown of SHEET 1, COMPACTION TEST, the fill should be readily compatible at the existing moisture content.
- Prior to placing the principal spillway pipe and cradle, examine the founding soils along the pipe alignment outside the core trench area. Undercut any organic or otherwise unsuitable material and compact the exposed grade to a firm, unyielding condition. The existing fill soils and core trench fills are expected to adequately support principal spillway construction providing that the applied bearing pressures do not exceed 1,000 PSF. Backfill the principal spillway excavation and place embankment fill using the native cut soils from the western slope and approved existing CL clay fill soil from the basin excavation to form the embankment.

**U.S. EQUIVALENT COORDINATE TABLE**

POINT	NORTHING	EASTING
970	561,120.8264	1,394,062.3184
982	562,827.3487	1,394,416.2673
983	562,886.5543	1,394,465.4126
984	562,797.2381	1,394,472.7771
985	562,807.6906	1,394,419.9496
986	562,877.2192	1,394,682.5069
1,007	561,717.9338	1,393,666.1498
1,022	562,568.2495	1,394,288.5175
1,029	562,756.3987	1,394,037.4929
1,041	562,873.1174	1,394,983.6089
1,042	562,805.7767	1,394,478.0472
1,043	562,714.0135	1,394,962.3267
1,044	562,623.5403	1,394,943.5554
1,045	562,527.7285	1,394,933.8715
1,046	562,457.8293	1,394,911.8037
1,047	562,365.5297	1,394,883.9872
1,048	562,290.2707	1,394,861.6639
1,049	562,192.5835	1,394,831.2913
1,050	562,105.6063	1,394,785.4889
1,051	562,037.5409	1,394,721.9695
1,052	562,001.5412	1,394,669.0543
1,053	561,924.8067	1,394,615.2816
1,054	561,845.3029	1,394,547.9258
1,055	561,776.2481	1,394,476.9862
1,056	561,680.3584	1,394,439.6555
1,057	561,600.6474	1,394,375.0575
1,058	561,567.6533	1,394,349.7207
1,059	561,513.8973	1,394,323.0695
1,060	561,430.9484	1,394,264.4006
1,061	561,348.8864	1,394,207.9559
1,062	561,263.3383	1,394,154.4552
1,076	561,174.4724	1,394,102.5855

**METRIC EQUIVALENT COORDINATE TABLE**

POINT	NORTHING	EASTING
970	171,029.9699	424,911.0445
982	171,550.1190	425,018.9283
983	171,552.9249	425,033.3078
984	171,540.9413	425,036.1525
985	171,544.1272	425,020.0507
986	171,565.3195	425,100.0783
1,007	171,211.9696	424,790.2920
1,022	171,471.1436	424,979.9901
1,029	171,528.4934	424,903.4776
1,041	171,564.0693	425,191.8544
1,042	171,543.5438	425,190.1592
1,043	171,515.5743	425,185.3675
1,044	171,487.9981	425,179.6460
1,045	171,458.7446	425,176.6944
1,046	171,437.4892	425,169.9681
1,047	171,409.3563	425,161.4896
1,048	171,386.4173	425,154.6855
1,049	171,356.6422	425,145.4279
1,050	171,330.1315	425,131.4673
1,051	171,309.3851	425,112.1065
1,052	171,298.4124	425,095.9779
1,053	171,275.0236	425,079.5880
1,054	171,250.7908	425,059.0579
1,055	171,229.7429	425,037.4355
1,056	171,200.5156	425,026.0570
1,057	171,176.2197	425,006.3675
1,058	171,166.1631	424,998.6449
1,059	171,149.7782	424,990.5216
1,060	171,124.4953	424,972.6392
1,061	171,099.4828	424,955.4349
1,062	171,073.4077	424,939.1278
1,076	171,046.3213	424,923.3179

**STREET LIGHT TABLE**

FIXTURE TYPE	POLE TYPE	LOCATION	STREET
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	± Sta. 1+82 14.00 right	Fairlee Road
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	± Sta. 3+75 13.00 left	Fairlee Road
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	N 562,363.6 E 1,394,580.6	Fairlee Road
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	± Sta. 3+06 15.00 left	Joseph Scott Drive
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	± Sta. 7+25 14.00 right	Joseph Scott Drive
100 watt HPS vapor Premier post top mounted: colonial	14" black fiberglass ornamental	N 561,617.7 E 1,393,950.0	Joseph Scott Drive

Note: Light pole location given at center of base

**COVER SHEET**  
**KUHNS PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1

TAX MAP 38 GRIDS 4 & 10  
1ST ELECTION DISTRICT

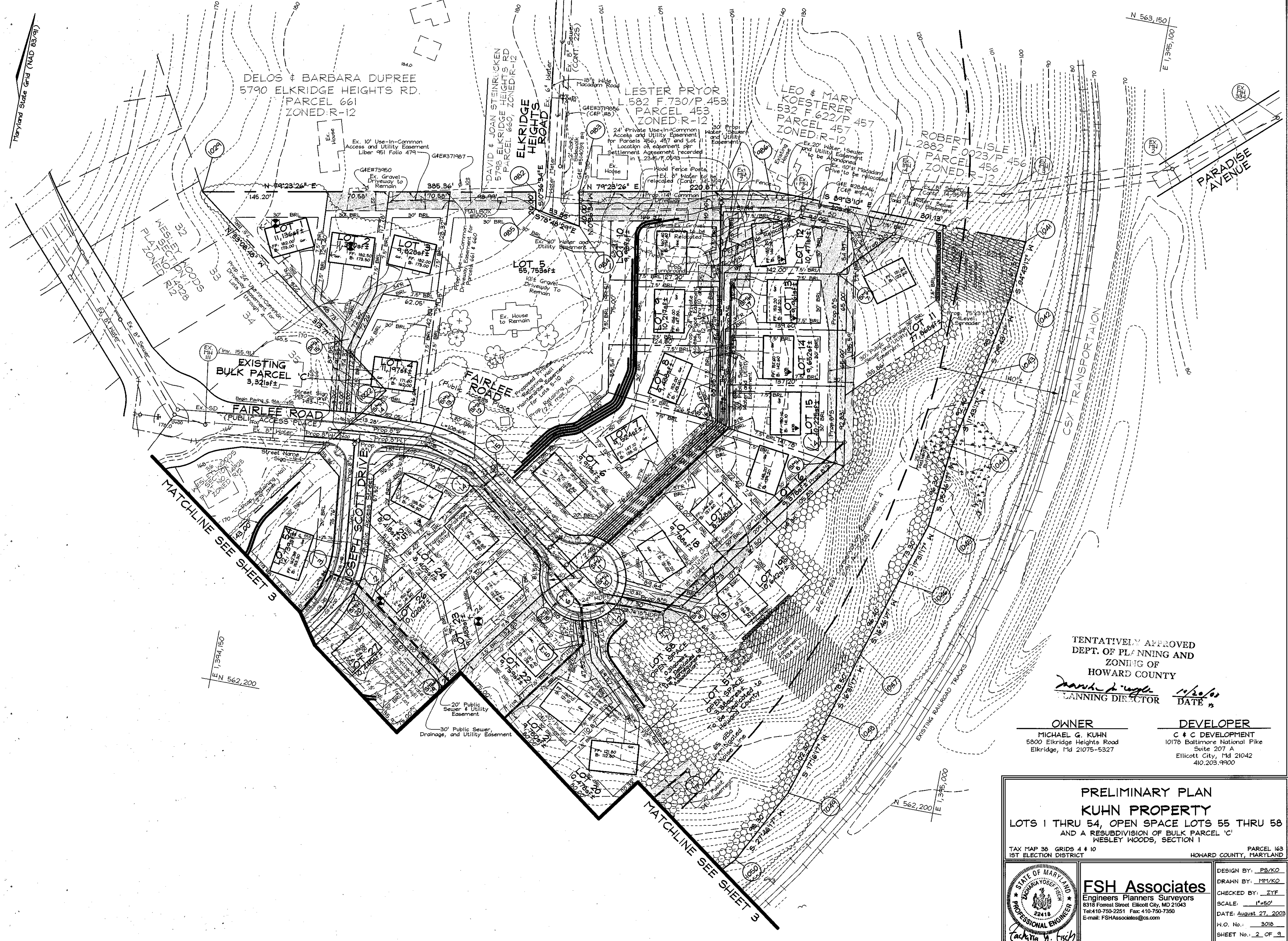
PARCEL 163  
HOWARD COUNTY, MARYLAND

DESIGN BY: PS/KO  
DRAWN BY: MMV/KO  
CHECKED BY: ZYF  
SCALE: As Shown  
DATE: August 27, 2003  
W.O. No.: 3018  
SHEET No.: 1 OF 9

**FSH Associates**  
Engineers Planners Surveyors  
3318 Forest Street, Ellicott City, MD 21043  
Tel: 410-750-2251 Fax: 410-750-7350  
E-mail: FSHAssociates@cs.com



Maryland State Grid (NAD 83/91)



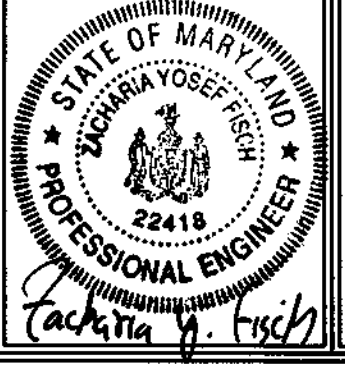
MATCHLINE SEE SHEET 3

MATCHLINE SEE SHEET 3

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY  
*David P. Wagle* 1/26/03  
PLANNING DIRECTOR DATE

OWNER: MICHAEL G. KUHN  
5800 ElkrIDGE HEIGHTS ROAD  
ElkrIDGE, Md 21075-5327  
DEVELOPER: C & C DEVELOPMENT  
10178 Baltimore National Pike  
Suite 207 A  
Ellicott City, Md 21042  
410.203.9900

PRELIMINARY PLAN  
KUHN PROPERTY  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1  
TAX MAP 38 GRIDS 4 & 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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Engineers Planners Surveyors  
8318 Forest Street Ellicott City, MD 21043  
Tel: 410-750-2251 Fax: 410-750-7350  
E-mail: FSHAssociates@cs.com

DESIGN BY: PS/KO  
DRAWN BY: MM/KO  
CHECKED BY: ZYF  
SCALE: 1"=50'  
DATE: August 27, 2003  
H.O. No.: 3018  
SHEET No.: 2 OF 3





MATCHLINE SEE SHEET 2

MATCHLINE SEE SHEET 2

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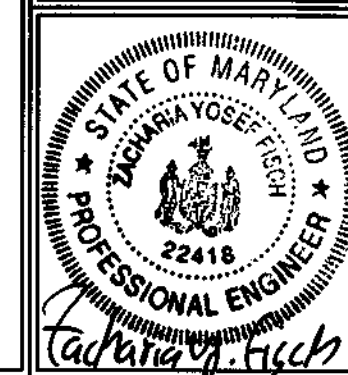
*Mark A. Long*  
PLANNING DIRECTOR      *10/10/10*  
DATE

**OWNER**  
MICHAEL G. KUHN  
5800 Elkridge Heights Road  
Elkridge, Md 21075-5327

**DEVELOPER**  
C & C DEVELOPMENT  
10178 Baltimore National Pike  
Suite 207 A  
Ellicott City, Md 21042  
410.203.9900

**PRELIMINARY PLAN**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1

TAX MAP 38 GRIDS 4 & 10      PARCEL 163  
1ST ELECTION DISTRICT      HOWARD COUNTY, MARYLAND



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E-mail: FSHAssociates@cs.com

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CHECKED BY: IYF  
SCALE: 1"=50'  
DATE: August 27, 2009  
H.O. No.: 3018  
SHEET No. 3 OF 9



SYMBOL	NAME / DESCRIPTION	SOIL GROUP
BeB2	Beltville silt loam, 1 to 5 percent slopes, moderately eroded	C
BeC2	Beltville silt loam, 5 to 10 percent slopes, moderately eroded	C
BeD2	Beltville silt loam, 10 to 15 percent slopes, moderately eroded	C
CIE2	Chillum gravelly loam, 15 to 30 percent slopes, moderately eroded	C
Md	Made land	C
ScD	Sandy and clayey loam, moderately sloping	C
ScE	Sandy and clayey loam, moderately steep	C
SIC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B
SaE	Sassafras soils, 15 to 40 percent slopes	B

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES						
	1	2	3	4	5	6	7	8	9
Perimeter/Frontage Designation	B	B	A	A	A	A	A	A	A
Linear Feet of Roadway	108	35	1054	717	2048	963	314		
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	No	No	440	1,829	90	No		
Remaining Perimeter Length (Yes, No, Linear Feet)	No	No	No	No	No	No	No	No	No
Number of Plants Required	1:50 2	1:50 1	1:60 18	1:60 5	1:60 4	1:60 15	1:60 5		
Number of Plants Provided	2	1	18	5	4	15	5		
Shade Trees	2	1	18	5	4	15	5		
Evergreen Trees	1	1	18	5	4	15	5		
Other Trees (2:1 Substitution)	1	1	18	5	4	15	5		
Shrubs (10:1 Substitution)	1	1	18	5	4	15	5		
(Describe Plant Substitution Credits Below if needed)									

\* Existing woods to remain



TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY

*David L. Cullen* 1/28/20  
PLANNING DIRECTOR DATE

**OWNER**  
MICHAEL G. KUHN  
5800 Elkridge Heights Road  
Elkridge, Md 21075-5327

**DEVELOPER**  
C & C DEVELOPMENT  
10178 Baltimore National Pike  
Suite 207 A  
Ellicott City, Md 21042  
410.203.9900

**PRELIMINARY GRADING, LANDSCAPING,  
SOILS AND SEDIMENT CONTROL PLAN**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
MESLEY WOODS, SECTION 1

TAX MAP 35 GRIDS 4 & 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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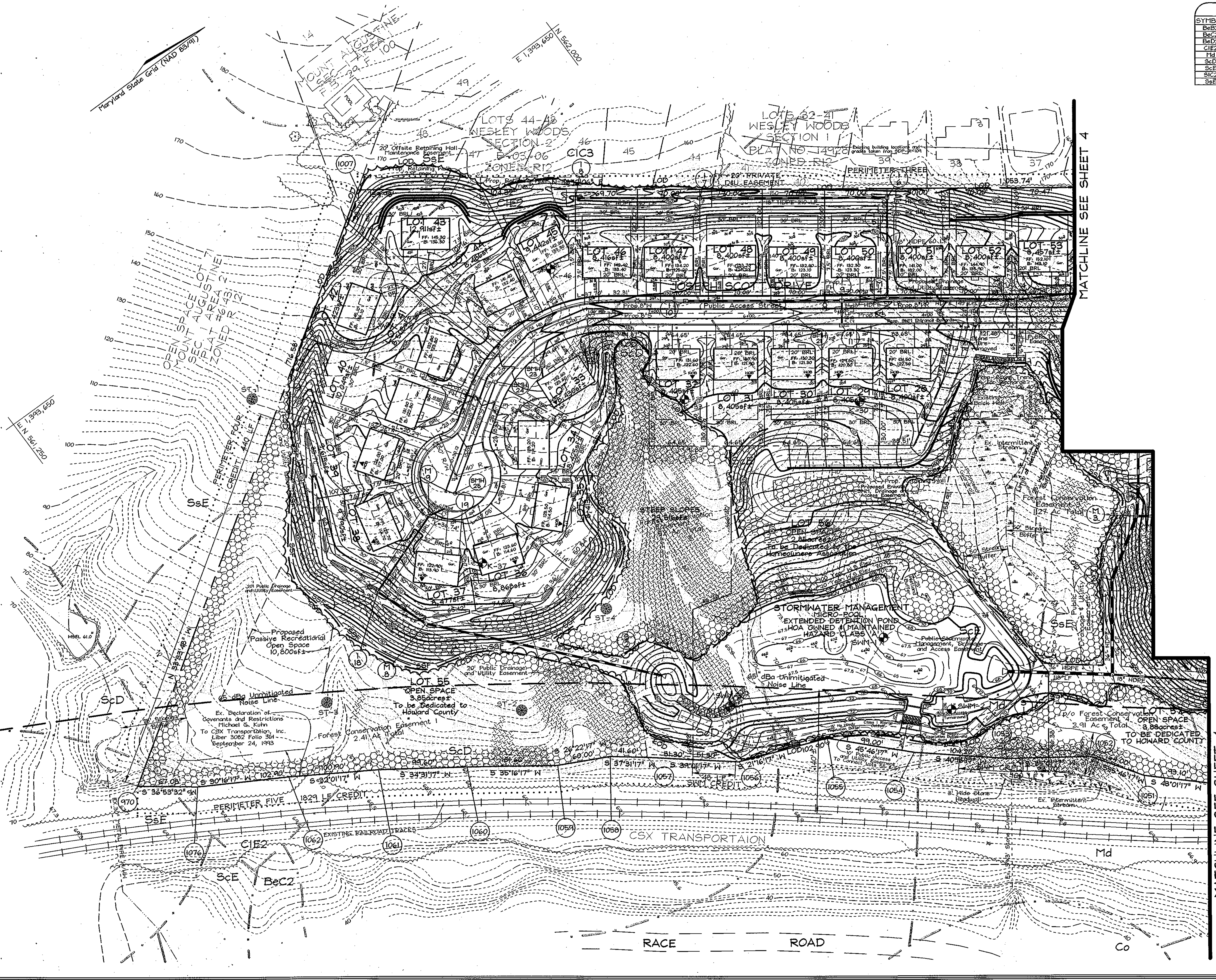
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SHEET No.: 4 OF 9



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
BeS2	Beltville silt loam, 1 to 5 percent slopes, moderately eroded	C
BeC2	Beltville silt loam, 5 to 10 percent slopes, moderately eroded	C
BeD2	Beltville silt loam, 10 to 15 percent slopes, moderately eroded	C
CIE2	Chillum gravelly loam, 15 to 30 percent slopes, moderately eroded	C
Md	Made land	C
ScD	Sandy and clayey loam, moderately sloping	C
ScE	Sandy and clayey loam, moderately steep	C
SiC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B
SeE	Sassafras soils, 15 to 40 percent slopes	B

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING	
Linear Feet of Perimeter	1702 LF
Credit for Existing Vegetation (No, Yes and Linear Feet)	Yes, 1148 LF (Remaining Perimeter: 1,554 LF)
Credit for other Landscaping (No, Yes and %)	N/A
Number of Trees Required	
Shade Trees	1:50 = 31 Shade Trees
Evergreen Trees	1:40 = 34 Evergreen Trees
Number of Trees Provided	
Shade Trees	31 Shade Trees
Evergreen Trees	34 Evergreen Trees
Other Trees(2:1 Substitution)	0 Trees(0 Substitution Trees)

\* Existing trees to remain at rear of boundary near CFX Transportation Rail Road tracks



TENTATIVELY APPROVED  
DEPT. OF PLANNING AND ZONING OF  
HOWARD COUNTY

*Mark A. Lough* 12/16/03  
PLANNING DIRECTOR DATE

<b>OWNER</b>	<b>DEVELOPER</b>
MICHAEL G. KUHN 5800 Elkridge Heights Road Elkridge, Md 21075-5327	C & C DEVELOPMENT 10178 Baltimore National Pike Suite 207 A Ellicott City, Md 21042 410.203.9900

**PRELIMINARY GRADING, LANDSCAPING, SOILS AND SEDIMENT CONTROL PLAN**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
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WESLEY WOODS, SECTION 1

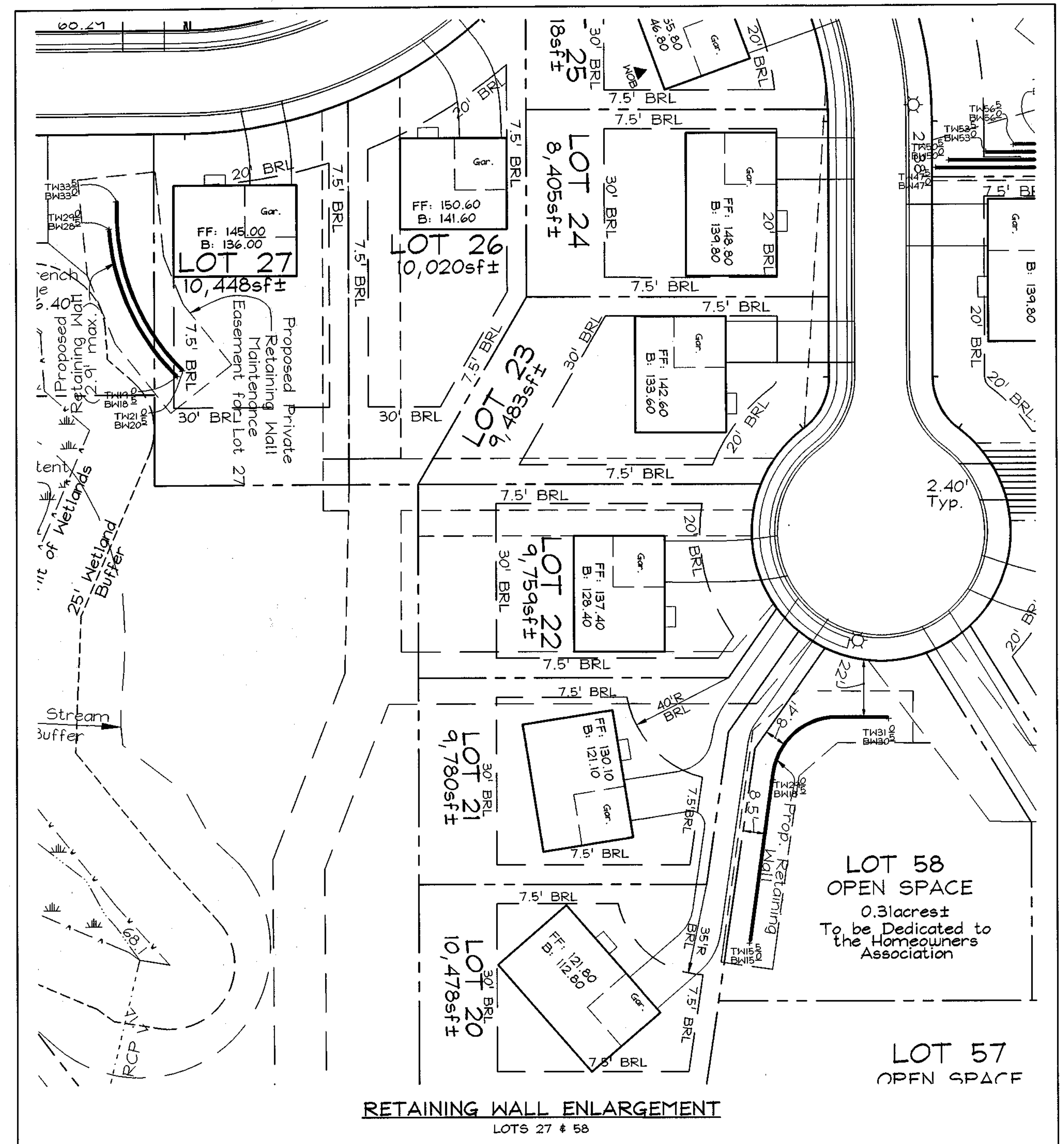
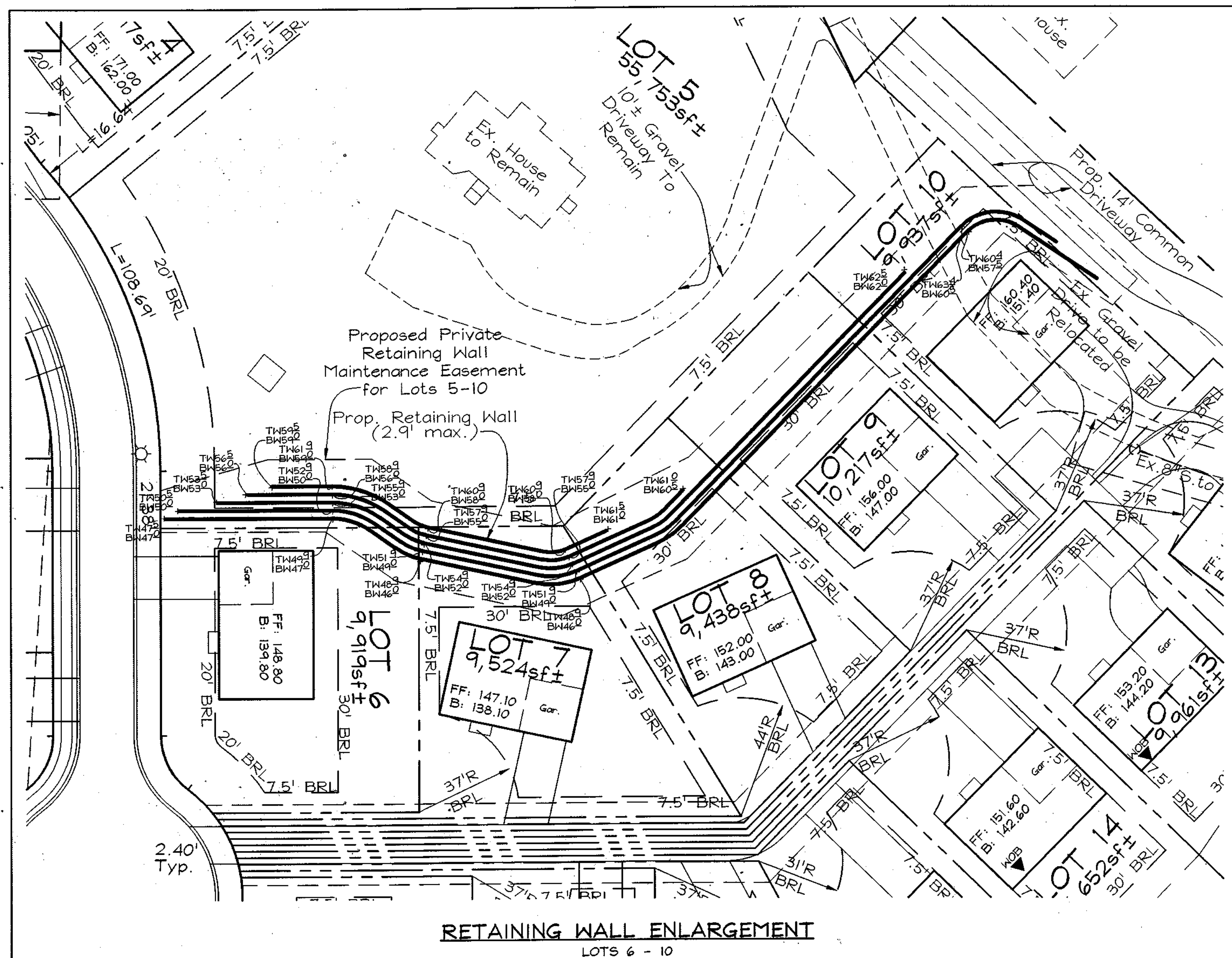
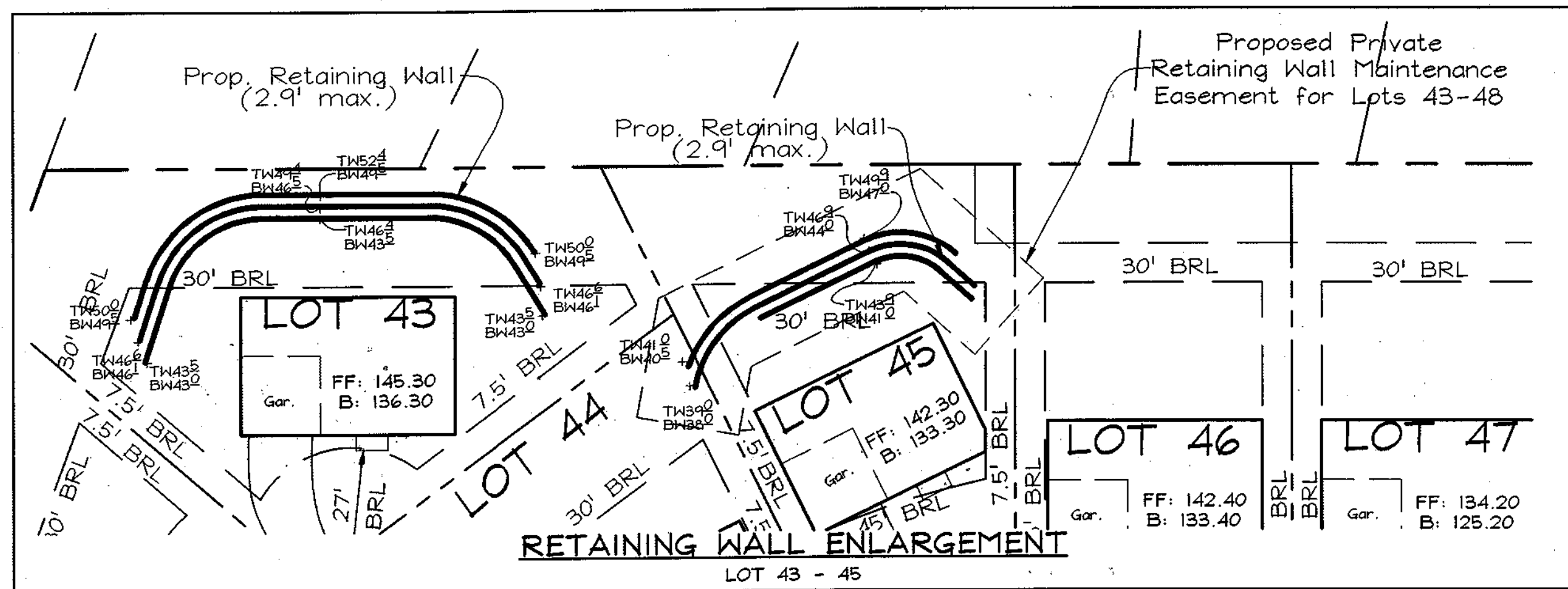
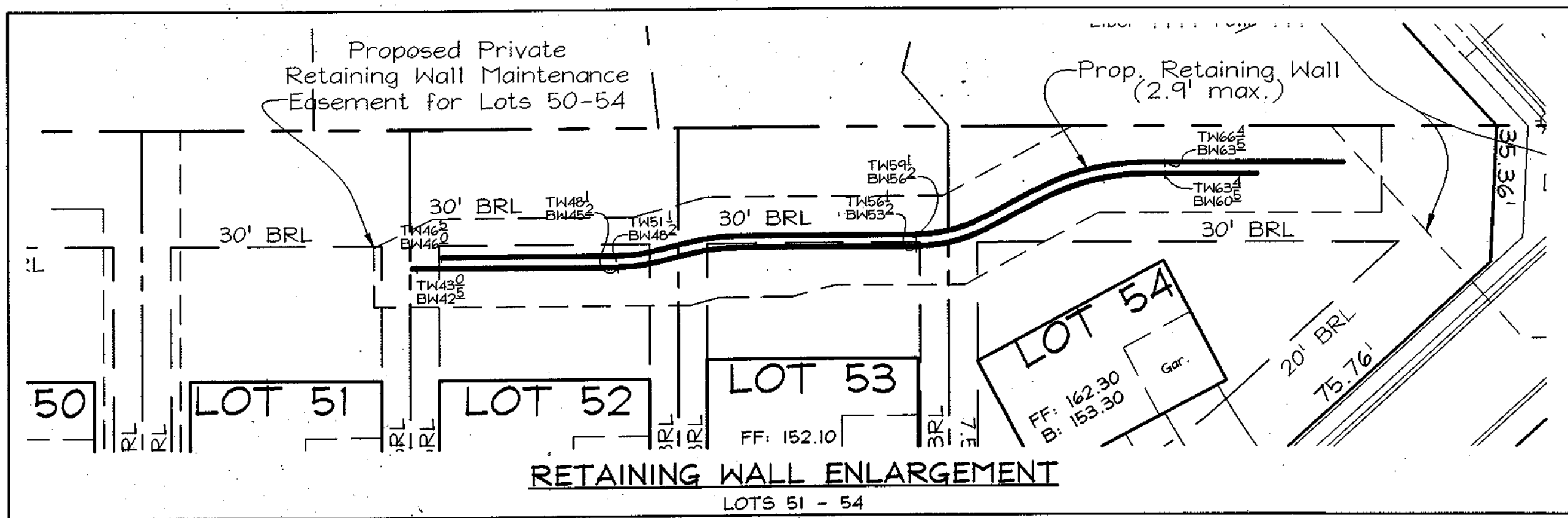
TAX MAP 38 GRIDS 4 + 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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E-mail: FSHAssociates@cs.com

DESIGN BY: FS/KO  
DRAWN BY: MH/KO  
CHECKED BY: ZYF  
SCALE: 1"=50'  
DATE: August 27, 2003  
P.L.O. No.: 3018  
SHEET No.: 5 OF 9





TENTATIVELY APPROVED  
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ZONING OF  
HOWARD COUNTY

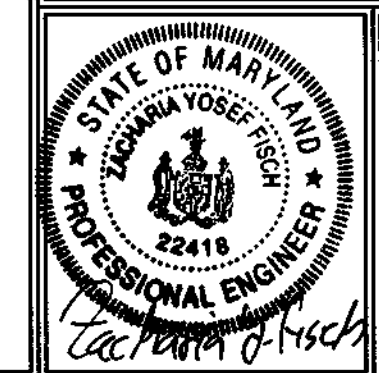
*David A. Wolfe* 10/20/09  
PLANNING DIRECTOR DATE

**OWNER**  
MICHAEL G. KUHN  
5800 Elkridge Heights Road  
Elkridge, Md 21075-5327

**DEVELOPER**  
C & C DEVELOPMENT  
10178 Baltimore National Pike  
Suite 207 A  
Ellicott City, Md 21042  
410.203.9900

**RETAINING WALL ENLARGEMENTS**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1

TAX MAP 38 GRIDS 4 & 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

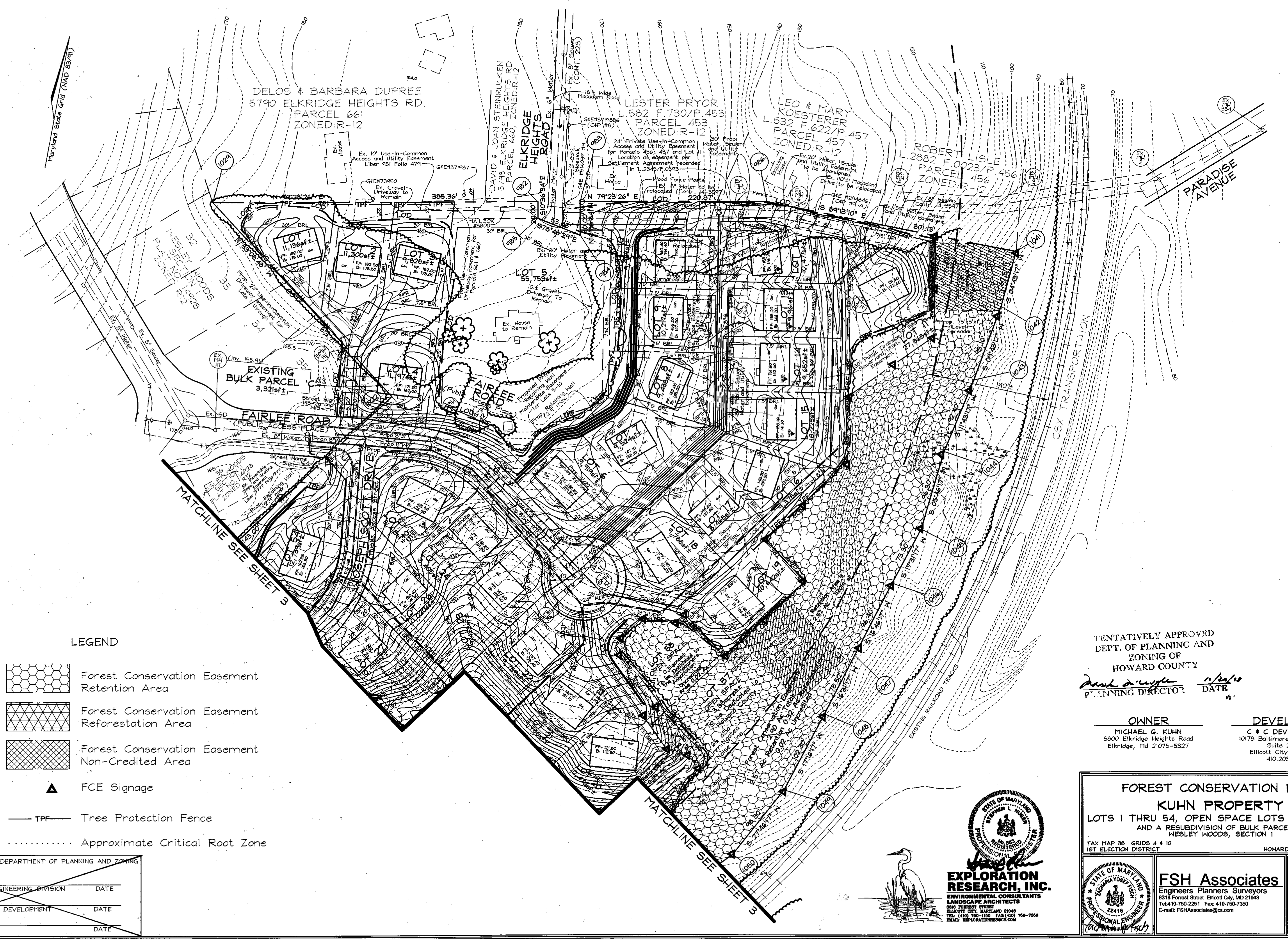


**FSH Associates**  
Engineers Planners Surveyors  
8316 Forest Street Ellicott City, MD 21043  
Tel: 410-750-2251 Fax: 410-750-7350  
E-mail: FSHAssociates@cs.com

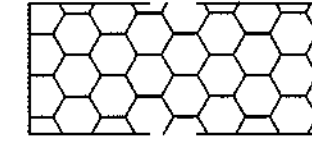
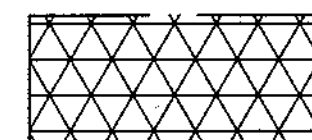
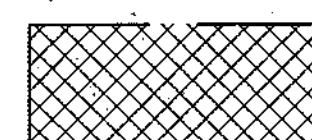



DESIGN BY: PS/KO  
DRAWN BY: MM/KO  
CHECKED BY: ZYF  
SCALE: 1"=30'  
DATE: August 27, 2009  
W.O. No.: 3018  
SHEET No.: 6 OF 9



Maryland State Grid (NAD 83/91)



**LEGEND**

-  Forest Conservation Easement Retention Area
-  Forest Conservation Easement Reforestation Area
-  Forest Conservation Easement Non-Credited Area
-  FCE Signage
-  TPF Tree Protection Fence
-  Approximate Critical Root Zone

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DIRECTOR	DATE

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY

*David A. Wampler* *11/26/10*  
PLANNING DIRECTOR DATE

OWNER	DEVELOPER
MICHAEL G. KUHN 5800 Elkridge Heights Road Elkridge, Md 21075-5327	C & C DEVELOPMENT 10178 Baltimore National Pike Suite 207 A Ellicott City, Md 21042 410.203.9900

**FOREST CONSERVATION PLAN**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1

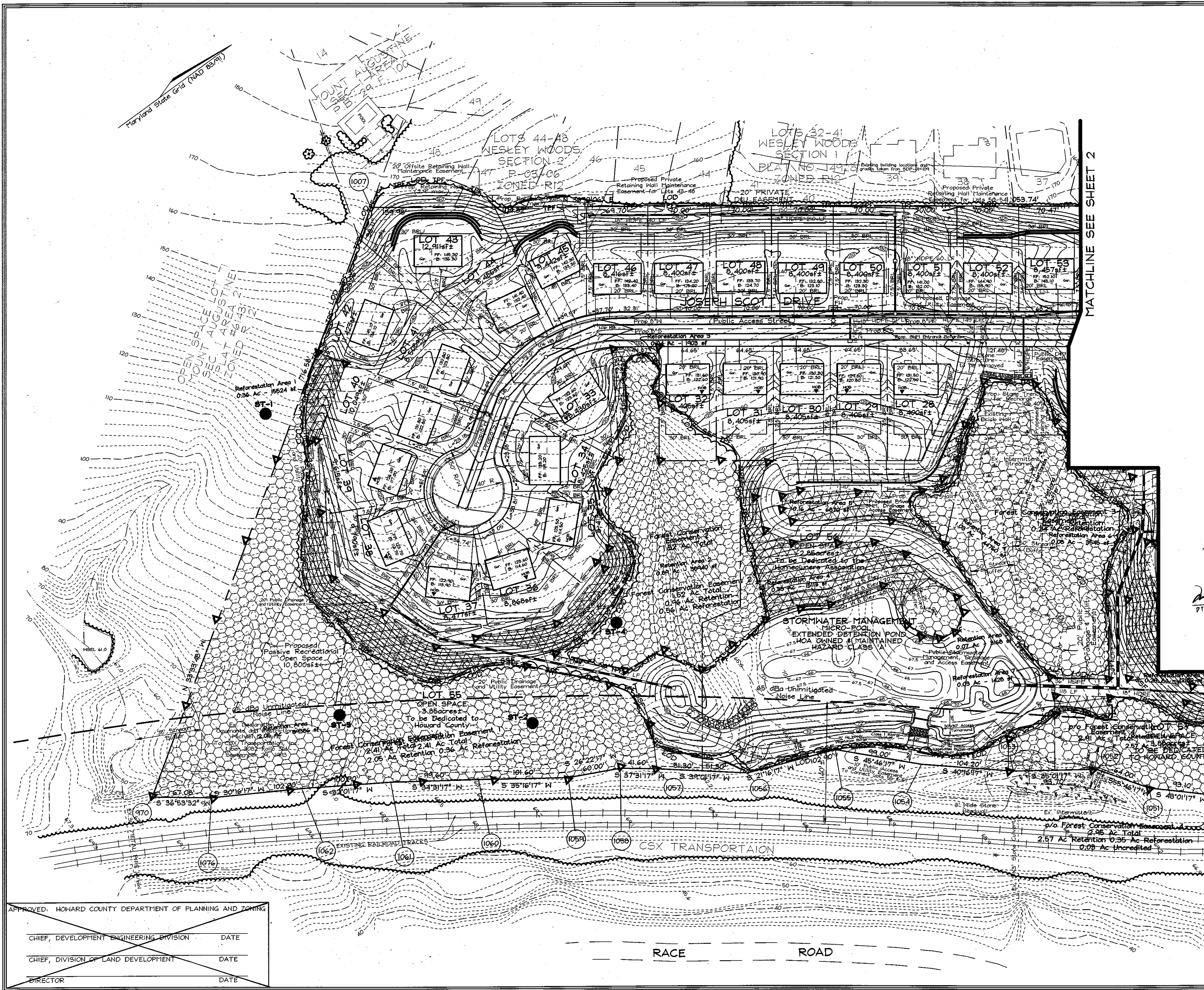
TAX MAP 38 GRIDS 4 & 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**EXPLORATION RESEARCH, INC.**  
ENVIRONMENTAL CONSULTANTS  
LANDSCAPE ARCHITECTS  
8018 FOREST STREET  
ELICOTT CITY, MARYLAND 21043  
TEL: (410) 750-1150 FAX: (410) 750-7550  
EMAIL: EXPLORATION@ERINC.COM

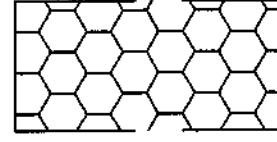
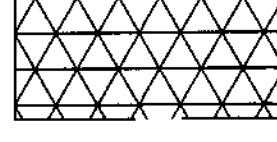
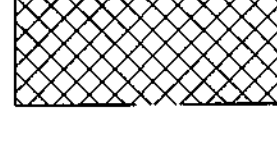

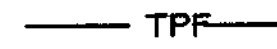

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DESIGN BY: PS/KO  
DRAWN BY: MM/RAB  
CHECKED BY: ZYE/SLH  
SCALE: 1"=50'  
DATE: August 27, 2009  
H.O. No.: 3018  
SHEET No.: 7 OF 9



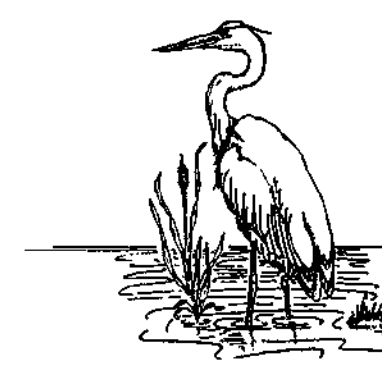
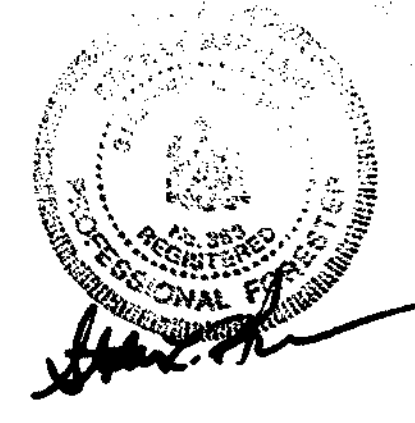


LEGEND

-  Forest Conservation Easement Retention Area
-  Forest Conservation Easement Reforestation Area
-  Forest Conservation Easement Non-Credited Area
-  FCE Signage
-  Tree Protection Fence
-  Approximate Critical Root Zone

MATCHLINE SEE SHEET 2

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY  
*David A. Ryan* 11/20/10  
PLANNING DIRECTOR DATE



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**FOREST CONSERVATION PLAN**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
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TAX MAP 38 GRIDS 4 & 10 PARCEL 163  
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DESIGN BY: PS/KO  
DRAWN BY: PML/RAB  
CHECKED BY: ZYE/SLH  
SCALE: 1"=50'  
DATE: August 27, 2009  
M.O. No.: 3018  
SHEET No. 8 OF 9

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DIRECTOR	DATE

RACE ROAD



**FOREST CONSERVATION WORKSHEET**

<b>Net Tract Area</b>	<b>Acres</b>
A. Total Tract Area	25.66
B. Area Within 100 Year Floodplain	0
C. Other deductions (Area p/o FCP for F-00-115)	0.08
D. Net Tract Area	25.58
Zoning Use Category: Residential	
<b>Land Use Category</b>	
E. Afforestation Minimum (15 % x D)	3.84
F. Conservation Threshold (20 % x D)	5.12
<b>Existing Forest Cover</b>	
G. Existing Forest on Net Tract Area	24.10
H. Forest Area Above Conservation Threshold	18.98
<b>Breakeven Point</b>	
I. Forest Retention Above Threshold with no Mitigation	8.92
J. Clearing Permitted without Mitigation	15.18
<b>Proposed Forest Clearing</b>	
K. Forest Areas to be Cleared	17.49
L. Forest Areas to be Retained	6.61
<b>Planting Requirements</b>	
M. Reforestation for Clearing Above Threshold	4.37
N. Reforestation for Clearing Below the Threshold	0
P. Credit for Retention Above Conservation Threshold	1.49
Q. Total Reforestation Required	2.88
R. Total Reforestation Required	0
S. Total Reforestation and Afforestation Requirement	2.88

**FOREST CONSERVATION NARRATIVE**

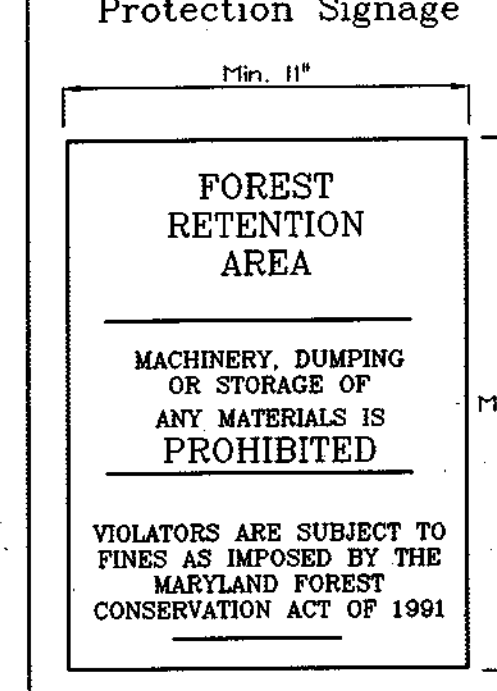
This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991. The total tract area consists of 25.66 acres of land, including a 0.08 acre area on the adjacent Wesley Woods subdivision which has been included in the forest conservation plan for F-00-115. This area was dedicated for a net tract of 25.58 ac. The site contains 24.1 acres of forest cover on the net tract. Forest retained in easements will total 6.61 acres. A total of 1.48 acres of reforestation planting is proposed. Four forest conservation easements will be established. Easement 4 will contain residual non-credited area (0.02 ac.) within the easements due to clearing within the Open Space lot that is too small for planting. These areas will be allowed to regenerate naturally, though no credit for this is taken. All easements contain wetlands, streams and their buffers, and steep slopes. For the remaining 1.40 acres of obligation we are proposing fee-in-lieu payment of \$30,492.00 at this time, until an appropriate offsite mitigation area is found.

New plantings will be 2-3' containerized whip stock planted at 350 stems/acre.

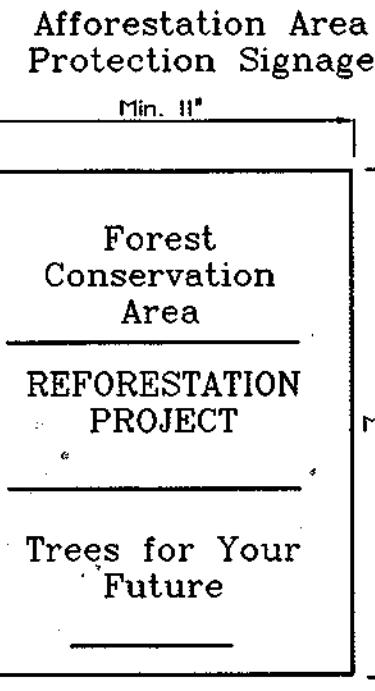
**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	TYPE	AREA (ACRES)	BOND RATE	BOND PRICE
1	Reforestation Retention	0.36 2.05	\$0.50 /S.F. \$0.20 /S.F.	\$7,840.80 \$17,859.60
2	Reforestation Retention	0.56 0.96	\$0.50 /S.F. \$0.20 /S.F.	\$12,196.80 \$8,363.52
3	Reforestation Retention	0.24 1.03	\$0.50 /S.F. \$0.20 /S.F.	\$5,227.20 \$8,973.36
4	Reforestation Retention Non-credited	0.32 2.57 0.02	\$0.50 /S.F. \$0.20 /S.F.	\$6,969.6 \$22,389.84
<b>TOTAL</b>		<b>7.89</b>		<b>\$89,820.72</b>
	Retention Reforestation Non-credited	6.61 1.48 0.02		\$57,586.32 \$32,234.40

**Forest Retention Area Protection Signage**



**Reforestation and Afforestation Area Protection Signage**



**FOREST CONSERVATION EASEMENT #1**  
Reforestation Area 1 : 0.36 Ac. (126 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
21	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
21	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
21	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
21	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
21	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
21	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #2**  
Reforestation Area 2 : 0.17 Ac. (60 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
10	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
10	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
10	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
10	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
10	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
10	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #3**  
Reforestation Area 3 : 0.04 Ac. (14 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
2	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
2	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
2	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
2	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
3	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
3	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #4**  
Reforestation Area 4 : 0.35 Ac. (123 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
20	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
20	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
20	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
21	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
21	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
21	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #5**  
Reforestation Area 5 : 0.16 Ac. (56 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
10	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
10	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
9	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
9	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
9	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
9	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #6**  
Reforestation Area 6 : 0.08 Ac. (28 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
5	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
5	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
4	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
4	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
5	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
5	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #7**  
Reforestation Area 7 : 0.03 Ac. (11 trees @ 350 TPA)

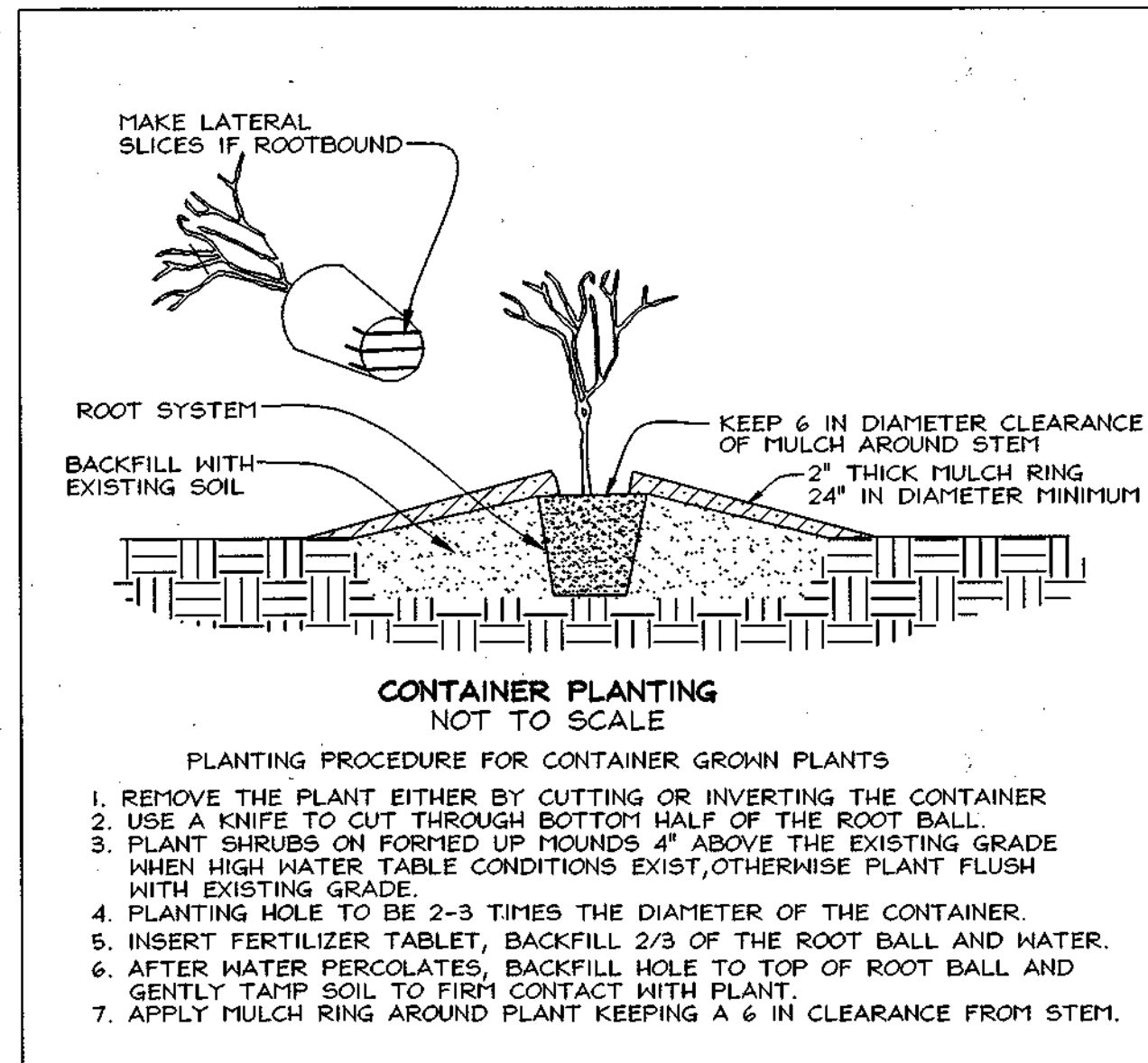
Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
2	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
2	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
2	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
2	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
1	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
2	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

**FOREST CONSERVATION EASEMENT #8**  
Reforestation Area 8 : 0.29 Ac. (102 trees @ 350 TPA)

Qty	Botanical Name	Common Name	Min. Size	Spacing	Notes
17	Acer rubrum	Red Maple	WHIP 2-3'	11' o.c.	1-3 Gallon Container Group
17	Liriodendron tulipifera	Tulip Poplar	WHIP 2-3'	11' o.c.	
17	Quercus coccinea	Scarlet Oak	WHIP 2-3'	11' o.c.	
17	Quercus rubra	Red Oak	WHIP 2-3'	11' o.c.	
17	Cercis canadensis	Red bud	WHIP 2-3'	11' o.c.	
17	Acer negundo	Box-elder	WHIP 2-3'	11' o.c.	

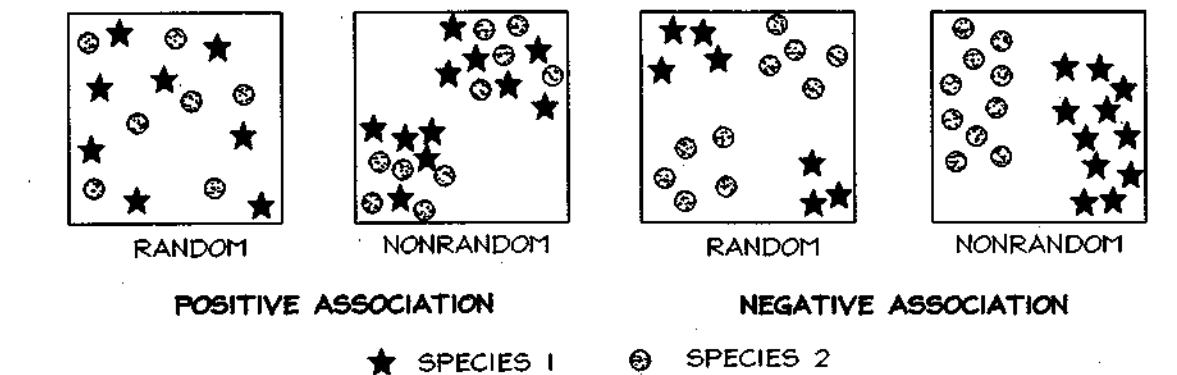
**MANAGEMENT NOTES FOR FOREST RETENTION AREAS**

- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- 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.
- Tree protection for all retained areas:
  - 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).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
  - If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
    - Prune roots with a clean cut using proper pruning equipment (see root pruning detail).
    - Water and fertilize as needed.
- During construction phase, monitor and correct condition of retained trees for soil compaction, root injury, flood conditions, drought conditions and other stress signs.
- Post-Construction Phase
  - 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.
  - Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
  - No burial of discarded materials will occur onsite within the conservation areas.
  - No burning within 100 feet of wooded areas.
  - All temporary forest protection structures will be removed after construction. Temporary signage shall be replaced with permanent signage on posts in locations shown.
  - Following completion of construction, prior to use, the County inspector shall inspect the entire area.



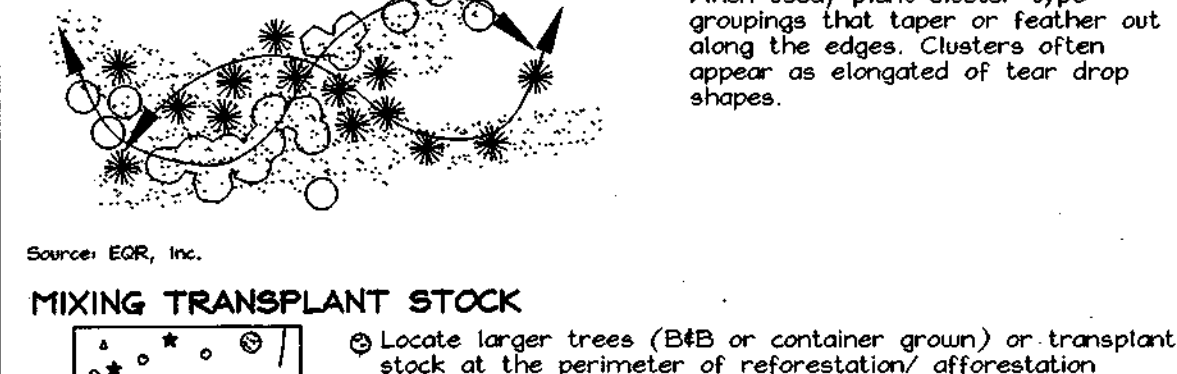
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HOWARD COUNTY  
PLANNING DIRECTOR  
DATE

**TYPICAL FOREST TREE DISTRIBUTION PATTERNS**

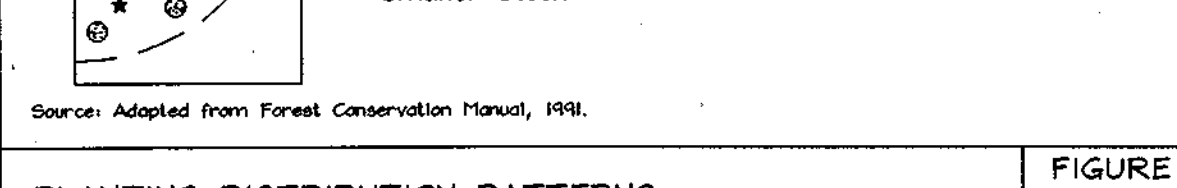


NOTE: Naturally occurring populations of trees tend to be found in informal groupings. A cluster of trees is really a mosaic of different species groups. The objective of an afforestation/reforestation plan is to select the appropriate species and distribution pattern for a chose site that mimic natural patterns.  
Source: Prince Georges County Woodland Conservation Manual.

**AGGREGATE DISTRIBUTION DRIFT**



**MIXING TRANSPLANT STOCK**



PLANTING DISTRIBUTION PATTERNS FIGURE 3.8.2

**Soil Protection Zone Notes**

- The Soil Protection Zone shall include all areas contained inside the Limit of Disturbance.
- 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.
- No construction activity is permitted within the Soil Protection Zone.
- 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.
- Root pruning shall occur prior to the beginning of construction.
- 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.
- Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
- Tree maintenance and removal shall be undertaken by a qualified HD Tree Expert to ensure damage to surrounding trees is minimized.
- 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.

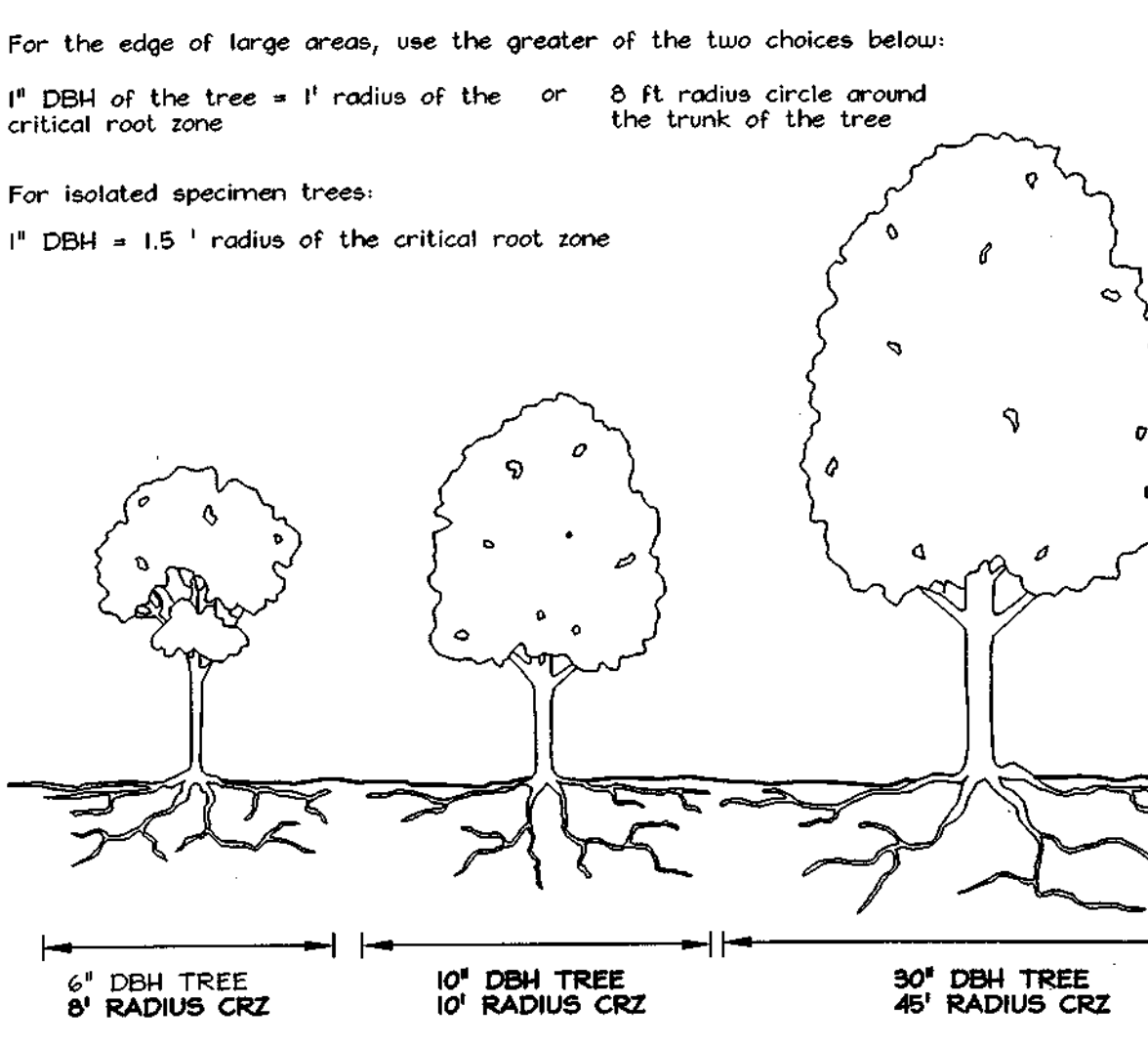
**Reforestation Area Monitoring Notes**

- 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.
- 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.
- 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.
- Effective monitoring will assess plant survival during the first growing season and make recommendations for reinforcement planting if required at that time.

**Reforestation Area Planting Notes**

- Initial planting inspection and certification required. Planting contractor to notify ERI qualified professional 24 hours in advance of planting.
- Reforestation areas may be planted as soon as reasonable to do so. Late winter or 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 warrant.
- 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 Hollis, N.Y. 11423 or approved equal.
- Plant materials shall be planted in accordance with the planting diagram, planting details and planting schedule.
- 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 planting.
- 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.
- 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.
- Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
- Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angling is preferred with scarification of the sides of each hole.

**CRITICAL ROOT ZONE**



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**FOREST CONSERVATION NOTES AND DETAILS**  
**KUHN PROPERTY**  
LOTS 1 THRU 54, OPEN SPACE LOTS 55 THRU 58  
AND A RESUBDIVISION OF BULK PARCEL 'C'  
WESLEY WOODS, SECTION 1

TAX MAP 98 GRIDS 4 & 10 PARCEL 163  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: PS/KO  
DRAWN BY: MIV/RAB  
CHECKED BY: ZYF/SLH  
SCALE: 1"=50'  
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**EXPLORATION RESEARCH, INC.**  
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LANDSCAPE ARCHITECTS  
2510 FOREST STREET  
ELICOTT CITY, MARYLAND 21043  
(410) 750-1050 FAX (410) 750-7500  
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The forest conservation easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual. No clearing, grading or construction is permitted within the forest conservation easements; however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE