

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT & EROSION CONTROL NOTES & DETAILS

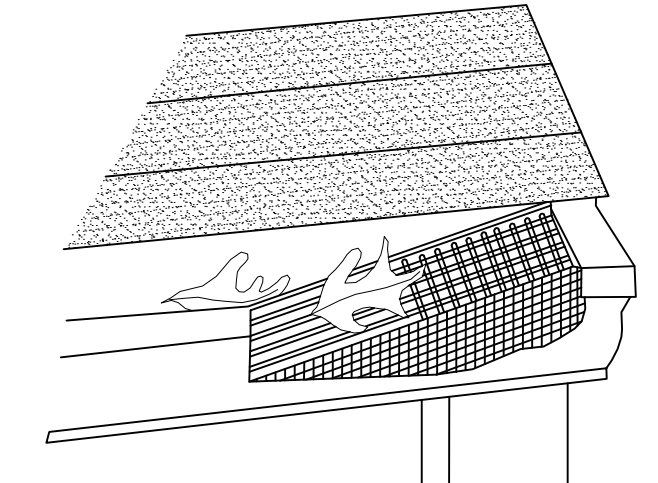
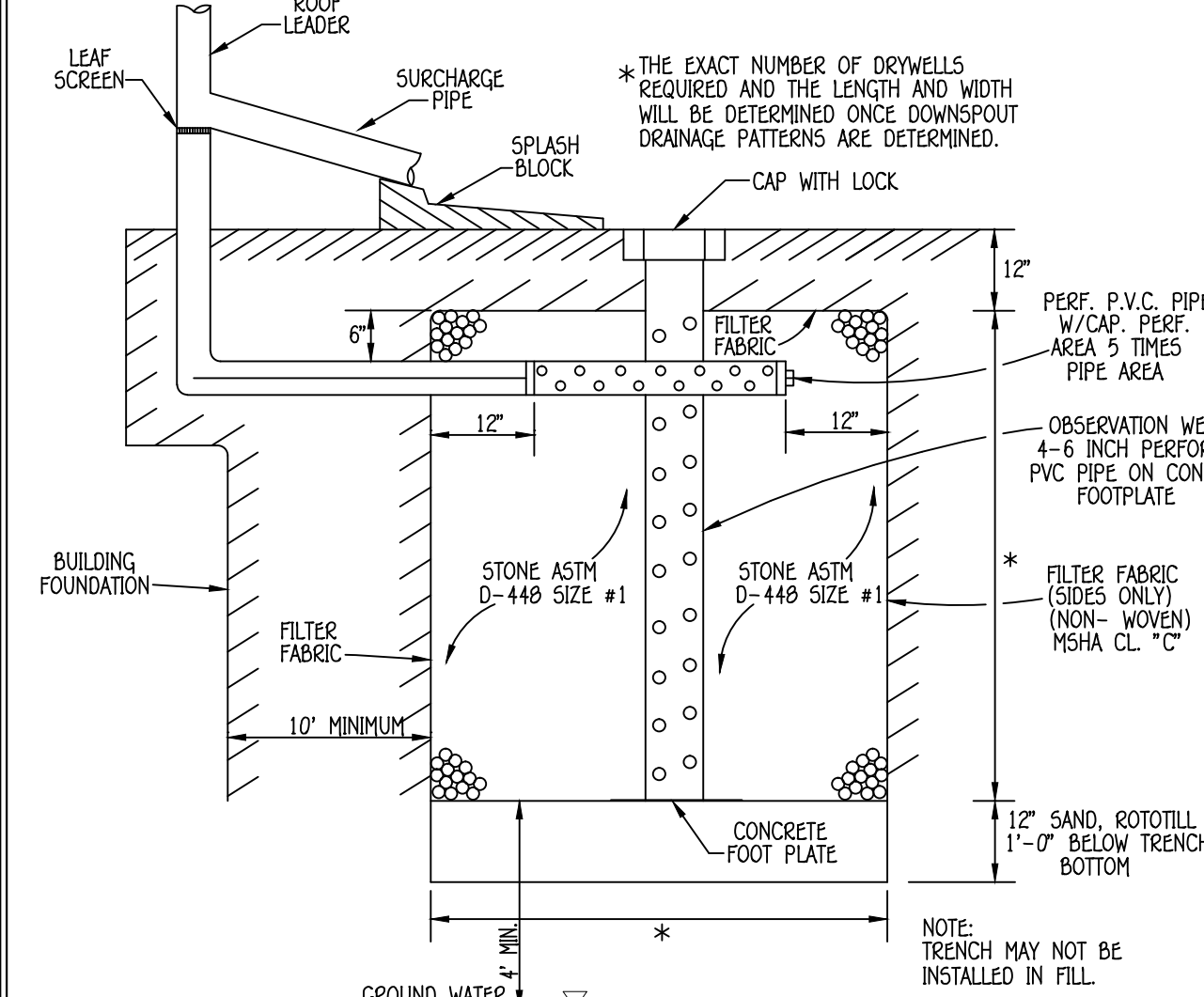
Minimum Lot Size Chart			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
1	21,566 Sq. Ft.	1,565 Sq. Ft.	20,001 Sq. Ft.
2			

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
ChC	Chillum-Russell loams, 5 to 10 percent slopes	B	0.28
CeB	Chillum loam, 2 to 5 percent slopes	B	0.28
Fa	Fallsington sandy loam, 0 to 2 percent slopes	B	0.24
SaC	Sassafras loam, 5 to 10 percent slopes	B	0.24
UsB	Urban land-Sassafras-Bethsville complex, 0 to 5 percent slopes	C	0.24
UsD	Urban land-Sassafras-Bethsville complex, 5 to 1 percent slopes	C	0.24

ADDRESS CHART	
LOT #	STREET ADDRESS
1	5442 KERGER ROAD
2	5444 KERGER ROAD

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	E5DV REQUIRED CU.FT.	E5DV PROVIDED CU.FT.	REMARKS
SITE	1,128	723	DRY WELL (M-5), ROOFTOP DISCONNECTION (N-1) & NON-ROOFTOP DISCONNECTION (N-2)
TOTAL	1,128	723	

GROSS AREA = 0.96 ACRES
 LOD = 1.01 ACRES
 RCN = 55
 TARGET Pe = 1.2"



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

STORMWATER MANAGEMENT NOTES

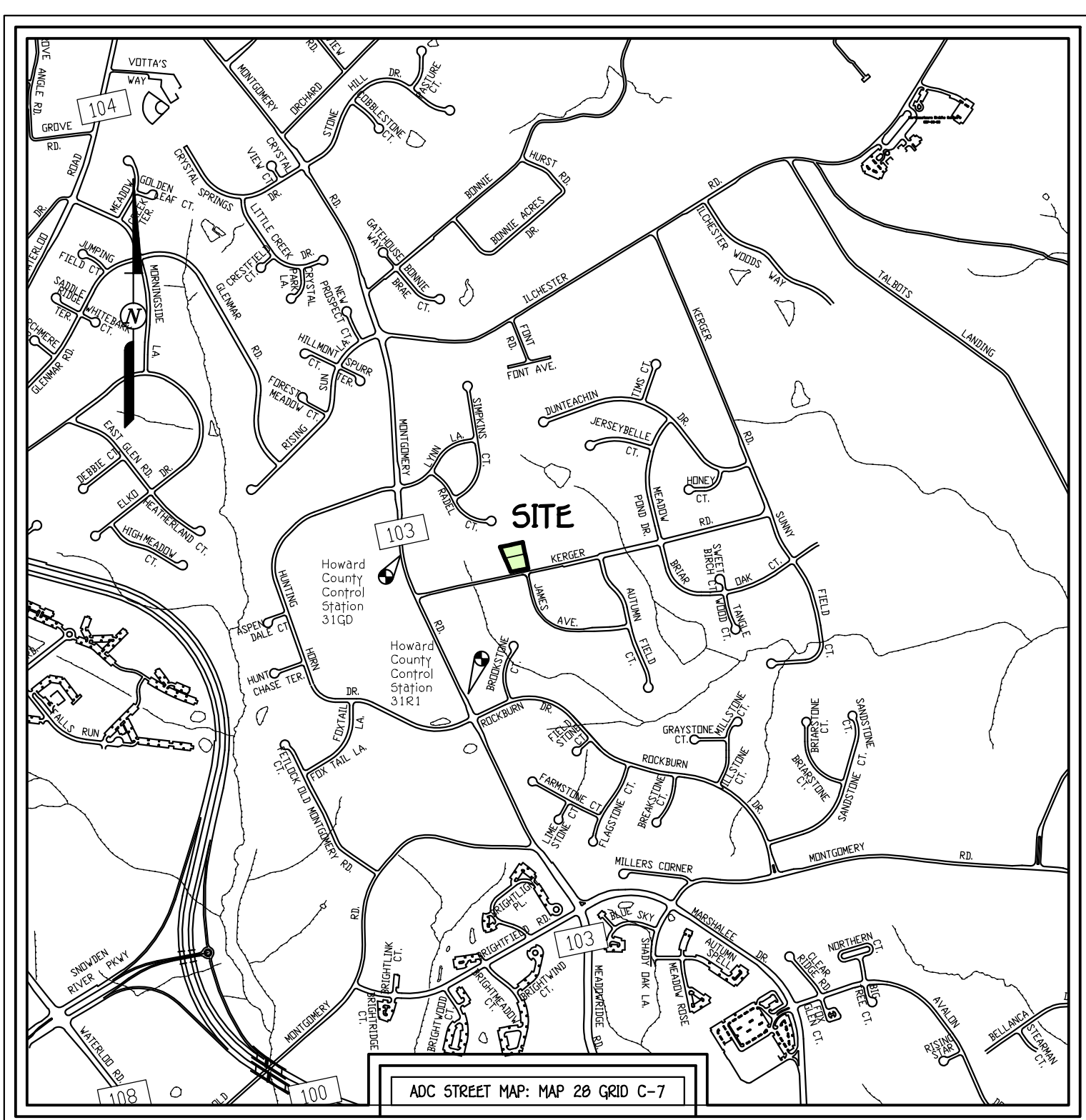
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DRYWELL SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

DRY WELL CHART						
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L	W
SIDE (2)	870 SQ. FT.	83 C.F.	200 C.F.	100%*	10'	10' x 5'

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

SITE DEVELOPMENT PLAN BOOWOODS LOTS 1 AND 2

TAX MAP No. 31 GRID No. 20 PARCEL NO. 867
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1" = 1200'

BENCHMARK INFORMATION	
B.M.#1 - HOWARD COUNTY CONTROL STATION #31GD - HORIZONTAL - (NAD '83)	N 566,299.8736 E 1,372,013.9464 ELEVATION = 419.34 - VERTICAL - (NAVD '88)
B.M.#2 - HOWARD COUNTY CONTROL STATION #31R1 - HORIZONTAL - (NAD '83)	N 565,303.5115 E 1,372,517.7020 ELEVATION = 400.93 - VERTICAL - (NAVD '88)

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED. THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 41,841 SQ.FT. OR 0.96 AC.
- LIMIT OF DISTURBED AREA = 43,876 SQ.FT. OR 1.01 AC.
- PRESENT ZONING DESIGNATION = R-20
(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: P-93-01, S-90-09, F-94-99, F-10-052, ECP-11-024, F-12-043, AND W-12-162
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC.
- TOTAL AREA OF SLOPES IN EXCESS OF 15% TO 24.99% = 0.00 AC.
- TOTAL AREA OF SLOPES IN EXCESS OF 25% OR GREATER = 0.00 AC.
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF EXISTING FOREST = 0.00 AC.
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC.
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.96 AC.
- TOTAL GREEN OPEN AREA = 0.73 AC.
- TOTAL IMPERVIOUS AREA = 0.23 AC.
- TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.

Table B.4. Materials Specifications for Micro-Bioretenction, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)	n/a	
Mulch	shredded hardwood	n/a	aged 6 months, minimum
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	ASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 2B or ASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained, reinforcing to meet ASTM-C315-90	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved state or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350R/99; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	ASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (ASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

OWNER
 CRAIG J. MORRIS
 5420 RADEL COURT
 ELLICOTT CITY MD 21042
 410-461-6771

BUILDER
 VIKING CUSTOM HOMES
 Cary Cumberland
 1719 Archers Glen
 Sykesville, Maryland 21784
 410-977-2180

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

NO.	REVISION	DATE	X

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD _____ Date _____

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2018.

Signature Of Professional Engineer _____ DATE _____

BUILDER/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 ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature Of Developer _____ DATE _____

ENGINEER'S CERTIFICATE

I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature Of Engineer _____ DATE _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning _____ Date _____

Chief, Division of Land Development _____ Date _____

Chief, Development Engineering Division _____ Date _____

PROJECT	SECTION	PARCEL NO.			
BOOWOODS LOTS 1 AND 2		867			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
22693	20	R-20	31	FIRST	601104

TITLE SHEET

BOOWOODS

LOTS 1 AND 2
 ZONED R-20

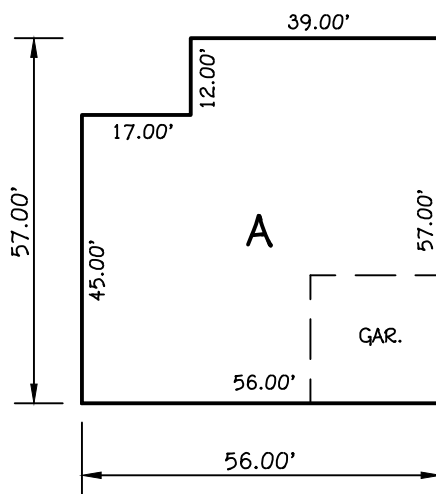
TAX MAP No. 31 GRID No. 21 PARCEL No. 867
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: SEPTEMBER 2016
 SHEET 1 OF 3

SDP-17-016

SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER	P-1	P-2	P-3	TOTAL
CATEGORY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	
LANDSCAPE TYPE	A	N/A	A	
LINEAR FEET OF PERIMETER	233 L.F.	142 L.F.	230 L.F.	
NUMBER OF PLANTS REQUIRED	4	0	4	8
SHADE TREES	(233'/60' = 3.9 OR 4)		(230'/60' = 3.9 OR 4)	
EVERGREEN TREES				0
CREDIT FOR EXISTING VEGETATION	4	0	4	8
SHADE TREES				0
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0	0
NUMBER OF PLANTS PROVIDED	7	0	0	0
SHADE TREES				0
EVERGREEN TREES	12	0	0	0

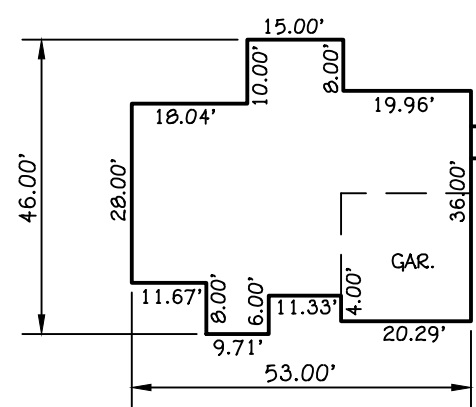
* NOTE: CREDIT TAKEN FOR EIGHT (8) EXISTING SHADE TREES. A 3" BEECH, A 20" TULIP POPLAR, A 3" BLACK GUM, AND 0" BLACK GUM ARE CREDITED ALONG P-1 AND A 6" BLACK GUM, A 10" MAPLE, A 4" MULBERRY, AND A 3" CHERRY ARE CREDITED ALONG PERIMETER P-3.



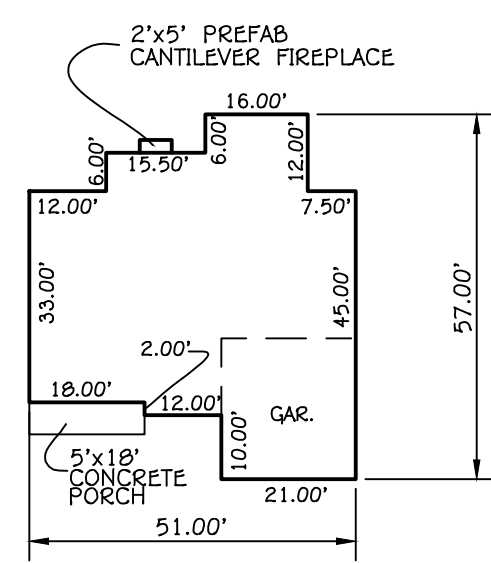
GENERIC BOX
SCALE: 1" = 30'

NOTE: SWM HAS BEEN SIZED BASED ON 2,344 SQ.FT. WHICH IS THE LARGEST MODEL FOOTPRINT (MADELINE MODEL).

VANHORNE FITS
MADELINE FITS
SPEC II FITS

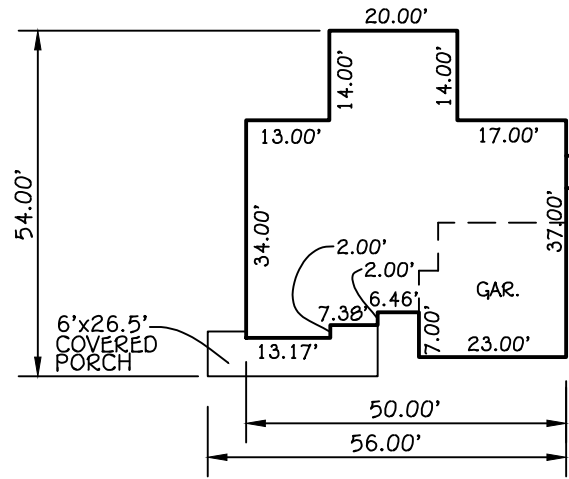


VANHORNE FAMILY
(1,896 SQ.FT.)

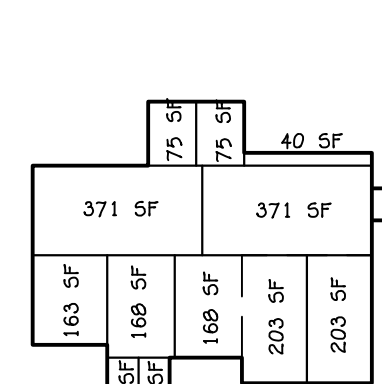


MADELINE MODEL
(2,334 SQ.FT.)

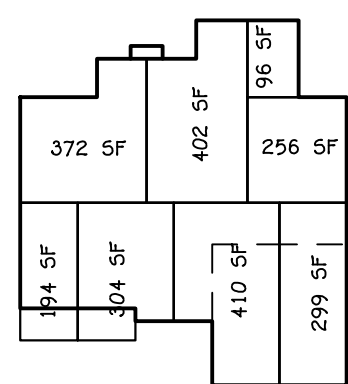
HOUSE MODELS
SCALE: 1" = 30'



SPEC II MODEL
(2,180 SQ.FT.)

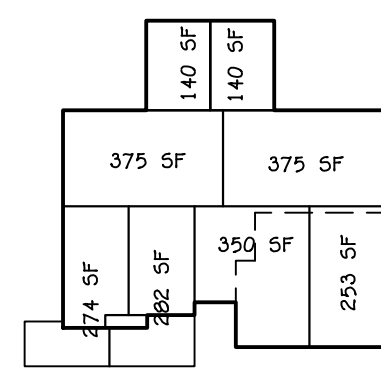


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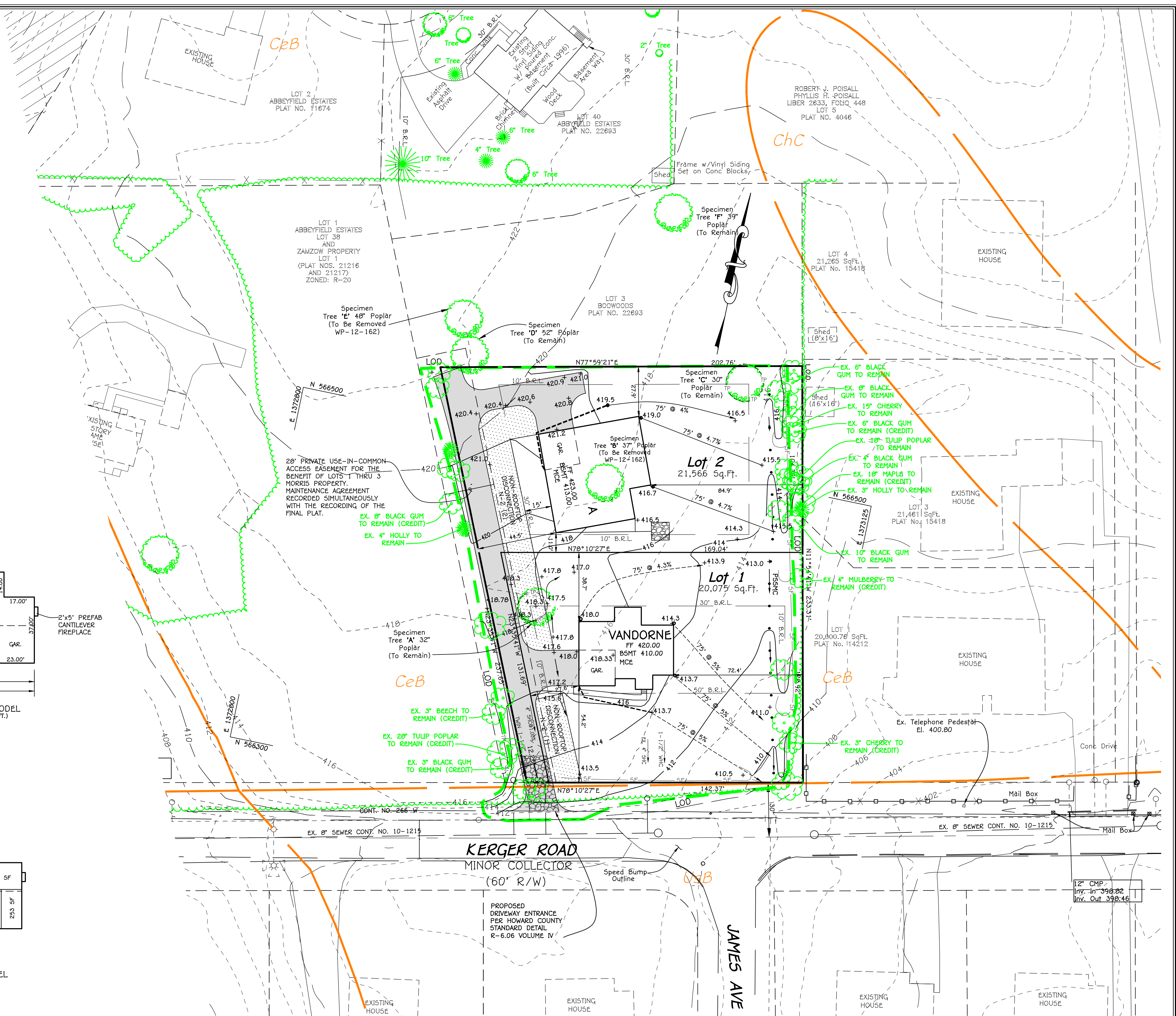


MADELINE MODEL
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ROOF DRAINAGE AREAS
SCALE: 1" = 30'



SPEC II MODEL
(2,180 SQ.FT.)



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SITE DEVELOPMENT PLAN

BOOWOODS

LOTS 1 AND 2
ZONED R-20

TAX MAP No. 31 GRID No. 21 PARCEL No. 067
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SHEET 2 OF 3

SDP-17-016

