

SHEET INDEX	
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1	TITLE SHEET
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3	PRELIMINARY SCHEMATIC GRADING AND SEDIMENT CONTROL PLAN
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PRELIMINARY EQUIVALENT SKETCH PLAN

NORMANDY OAKS

LOTS 1 THRU 7

ZONING: R-20

TAX MAP NO. 18 GRID No. 13 PARCEL No. 51

U.S. Equivalent Coordinate Table			Metric Coordinate Table		
POINT	NORTH (feet)	EAST (feet)	POINT	NORTH (meters)	EAST (meters)
101	592093.0300	1367899.5335	101	180470.36503	416924.49700
103	591891.3903	1367825.9718	103	180408.895052	416914.90090
104	591877.7190	1368022.7070	104	180404.689579	416914.955084
111	592036.5254	1368533.9851	111	180453.093856	417129.99270
112	592068.8775	1368312.6049	112	180462.954794	417082.51631
113	592080.1220	1367984.6204	113	180466.382141	416962.54623
301	592092.9229	1367860.5711	301	180470.283868	416924.735952
302	592076.2910	1367851.7274	302	180465.214444	416922.040389
303	591913.0568	1367827.8005	303	180415.460565	416914.747454
304	591891.3356	1367826.8739	304	180408.839934	416914.465037
402	592093.4661	1367895.3071	402	180470.449436	416923.131484
405	591664.6222	1368428.7180	405	180339.737535	417097.907481

GENERAL NOTES

- Subject Property Zoned R-20 Per 2/02/04 Comprehensive Zoning Plan.
- Coordinated Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 24C2 And No. 18G1. Station No. 24C2 North 588648.312 East 1366028.195 Elev. = 354.09 East 1367750.295 East 1367750.295 Elev. = 407.81
- This Plan Is Based On Field Run Monumented Boundary Survey Performed On Or About February, 2006 By Fisher, Collins & Carter, Inc.
- B.R.L. Denotes Building Restriction Line.
- Denotes Iron Pin Set With Cap "F.C.C. 106".
- ⦿ Denotes Iron Pipe Or Iron Bar Found.
- Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
- Denotes Concrete Monument Set With Cap "F.C.C. 106".
- Denotes Concrete Monument Or Stone Found.
- Driveways Shall Be Provided Prior To Issuance Of A Use And Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:
 - Width - 12 Feet (6 Feet Serving More Than One Residence)
 - Surface - Six (6) Inches Of Compacted Crusher Run Base With Tar And Chip Coating. (1 1/2" Minimum)
 - Geometry - Maximum 1% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius.
 - Structures (Culverts/Bridges) - Capable Of Supporting 25 Gross Tons (1-125-Loading)
 - Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface.
 - Maintenance - Sufficient To Ensure All Weather Use.
- All Lot Areas Are More Or Less (±).
- Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement.
- There Is An Existing Dwelling/Structure(s) Located On Lot 7 To Remain. No New Buildings, Extensions Or Additions To The Existing Dwelling(s) Are To Be Constructed At A Distance Less Than The Zoning regulations Allow.
- No Cemeteries Exist On This Site Based On Both A Site Visit And An Examination Of The Howard County Cemetery Inventory Map.
- This Plan Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill 45-2003 And The Zoning Regulations As Amended By Council Bill 75-2003. Development Or Construction On These Lots 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 And Per The Comp-Lite Zoning Regulations Dated July, 28, 2006.
- Previous Department Of Planning And Zoning File Nos. Not Available (P.B. 26, F. 14).
- Property Is Located In Metropolitan District And Is Served By Public Water And Public Sewer.
- Landscape For Lot 7 Is Exempt From The Perimeter Landscape Requirement Of Section 16.124 Of The Howard County Code And The Landscape Manual Because Lot 7 Contains An Existing Dwelling To Remain.
- No Grading, Removal Of Vegetative Cover Or Trees, Paving And New Structure Shall Be Permitted Within The Limits Of Wetlands, Streams, Or Their Required Buffers, Floodplain And Forest Conservation Easement Areas.
- 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 Into The Pipestem Lot Driveway.
- Water And Sewer Service To Lot 7 Will Be Granted Under The Provisions Of Section 16.122.B Of The Howard County Code.
- Public Water And Sewage Allocation Will Be Granted At The Time Of Issuance Of The Building Permit If Capacity Is Available At That Time.
 - Gross Area Of Tract = 4.107 Ac.
 - Area Of Floodplain = 0.00 Ac.
 - Area Of 25% Or Greater Slopes = 0.00 Ac.
 - Net Area Of Tract = 4.107 Ac.
- Area Of Proposed Road R/W = 43 S.F.
- Site Analysis
 - Area Of Proposed Buildable Lots = 4.106 Ac.
 - Area Of Open Space Required = 0.00 Ac.
- Number Of Lots Proposed:
 - Buildable = 7
 - Open Space Lots = None
 - Non-Buildable Bulk Parcel = None
- No Noise Study Is Required For This Project.
- Soils Information Taken From Soil Survey, Howard County, Maryland.
- Topographic Contours Based On Field Run Survey Performed By Fisher, Collins And Carter, Inc. Dated October, 2006.
- There Are No Areas Of Steep Slopes Located On This Property As Defined By The Howard County Subdivision And Land Development Regulations, Section 16.16.B.
- Stormwater Management Will Be Provided In Accordance With Howard County And Maryland 378 Specifications. Recharge Volume Will Be Provided Through The Use Of Bio-retention And Disconnection Credits.
- There Is No Floodplain Within The Site.
- The AFPO Traffic Study For This Project Was Prepared By Mrs Group, Inc. Dated Nov. 2006.
- The Forest Conservation Requirements Of Section 16.1200 Of The Howard County Code And Forest Conservation Act For This Subdivision Will Be Fulfilled By Providing 2.29 Acres Of Off-Site Forest Restoration To Be Located On Tally Property. A Total Surety Of \$49,876.20 Based On 2.29 Ac. Reforestation Will Be Provided With The Developer's Agreement At The Final Stage. A detailed off-site planting plan will be provided at final plan stage.
- No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined In The Deed Of Forest Conservation Easement Are Allowed.
- The Geotechnical Report For This Project Was Prepared By Hills-Carnes Engineering Associates, Inc. Dated October, 2006.
- Written authorization must be provided by BGE before this project can receive signature approval of final road construction drawings.
- A fee-in-lieu payment for open space for 6 lots at \$1,500.00 per lot for a total of \$9,000.00 will be paid to Department of Recreation & Parks at the final plan stage.

MINIMUM LOTS SIZE CHART			
LOT No.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	25,333 Sq.Ft.±	2,357 Sq.Ft.±	22,976 Sq.Ft.±
2	25,694 Sq.Ft.±	3,511 Sq.Ft.±	22,183 Sq.Ft.±
3	29,012 Sq.Ft.±	4,752 Sq.Ft.±	24,260 Sq.Ft.±
4	26,032 Sq.Ft.±	1,823 Sq.Ft.±	24,209 Sq.Ft.±
5	22,100 Sq.Ft.±	1,417 Sq.Ft.±	20,683 Sq.Ft.±
6	22,476 Sq.Ft.±	848 Sq.Ft.±	21,628 Sq.Ft.±

Curve Data Chart					
Pnt-Pnt	Radius	Arc Length	Delta	Tangent	Chord Bearing And Distance
103-101	1523.27'	204.34'	7°41'09"	102.32'	S08°15'37"W 204.19'
301-302	1650.00'	18.85'	6°32'41"	9.43'	S28°00'03"W 18.84'
303-304	1075.00'	21.74'	1°09'32"	10.87'	N02°26'33"E 21.74'



NOTE: REFER TO HOWARD COUNTY, MARYLAND ADC MAP PAGE 12 (F-5).

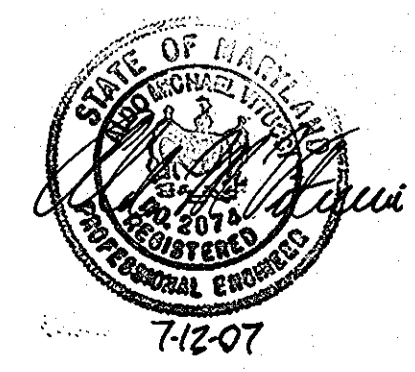
VICINITY MAP

SCALE: 1" = 2000'

SECOND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

LEGEND	
SYMBOL	DESCRIPTION
---432---	EXISTING CONTOUR 2' INTERVAL
---430---	EXISTING CONTOUR 10' INTERVAL
---432---	PROPOSED CONTOUR 2' INTERVAL
---430---	PROPOSED CONTOUR 10' INTERVAL
+425.50	SPOT ELEVATION
-SF--SF-	SILT FENCE
FF	FIRST FLOOR ELEVATION
BE	BASEMENT ELEVATION
L.O.D.	LIMIT OF DISTURBANCE
(Tree symbol)	PROPOSED STREET TREE
(Fence symbol)	TREE PROTECTION FENCE



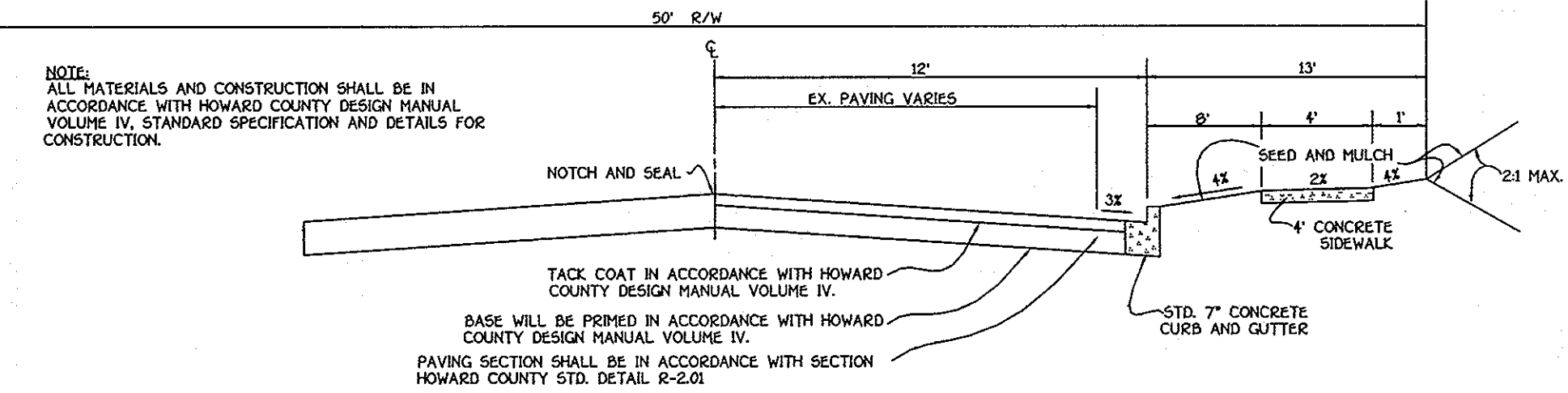
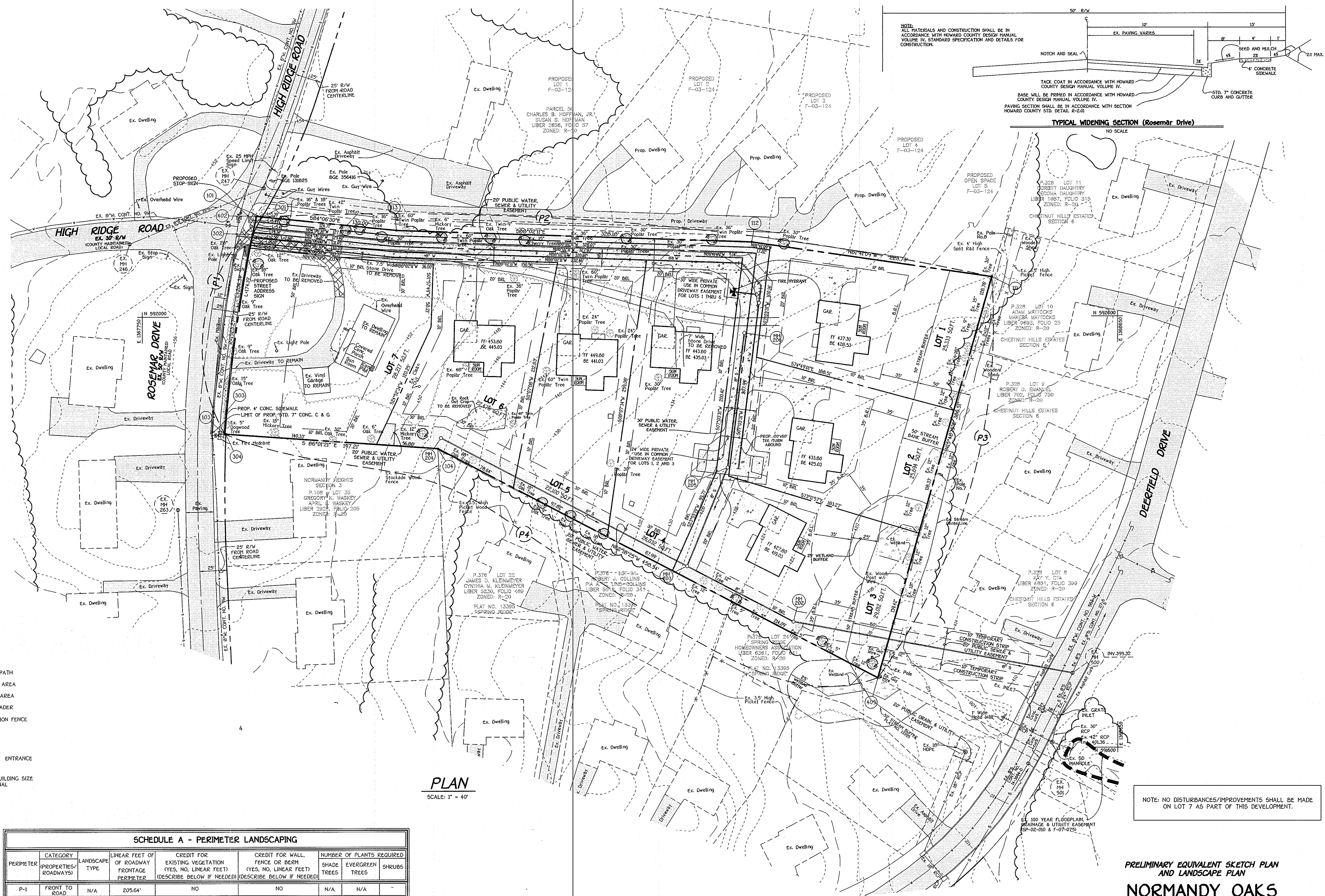
FISHER, COLLINS & CARTER, INC.
 CIVIL, ENGINEERING, CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY
Paul D. Temple
 PLANNING DIRECTOR
 DATE: 7/2/07

OWNERS
 PAUL AND GEORGIA MILLER TRUSTEES
 2885 ROSEMAR DRIVE
 ELLICOTT CITY, MARYLAND 21043
 (410) 455-4761

DEVELOPER
 HIGH RIDGE LLC
 10776 BALTIMORE NATIONAL PIKE
 SUITE 217
 ELLICOTT CITY, MARYLAND 21042
 (410) 230-9900

TITLE SHEET
NORMANDY OAKS
 LOTS 1 THRU 7
 ZONED: R-20
 TAX MAP No. 18 GRID No. 13 PARCEL No. 51
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: JULY 2007
 SHEET 1 OF 4



- LEGEND**
- 432- - EXISTING 2' CONTOURS
 - 430- - EXISTING 10' CONTOURS
 - 432- - PROPOSED 2' CONTOURS
 - 430- - PROPOSED 10' CONTOURS
 - ROOF LEADER
 - ROOFTOP DISCONN. FLOW PATH
 - DISCONNECTED IMPERVIOUS AREA
 - DISCONNECTION RECEIVING AREA
 - PROP GRAVEL LEVEL SPREADER
 - EX. TREE / TREE PROTECTION FENCE
 - SF- - SILT FENCE
 - L.O.D. - LIMIT OF DISTURBANCE
 - S.C.E. - STABILIZED CONSTRUCTION ENTRANCE

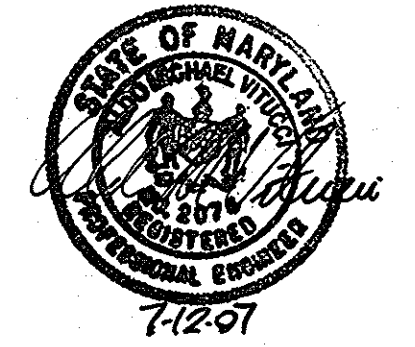
NOTE: UNIT SIZE SHOWN REFLECT MAXIMUM BUILDING SIZE AND IS SUBJECT TO FINAL ARCHITECTURE. FINAL DOWNSPOUT LOCATIONS SUBJECT TO FINAL ARCHITECTURE.

PLAN
SCALE: 1" = 40'

NOTE: NO DISTURBANCES/IMPROVEMENTS SHALL BE MADE ON LOT 7 AS PART OF THIS DEVELOPMENT.

SCHEDULE A - PERIMETER LANDSCAPING

PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	FRONT TO ROAD	N/A	205.64'	NO	NO	N/A	N/A	-	-
P-2	ADJ. TO PERIMETER	A	676.62'	7 TREES	NO	4	-	-	-
P-3	ADJ. TO PERIMETER	A	386.51'	100%	NO	0	-	-	-
P-4	ADJ. TO PERIMETER	A	655.75'	100%	NO	0	-	-	-



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
10222 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
410.461.2999

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
Paul D. Vogel
PLANNING DIRECTOR
DATE: 7/2/07

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PAUL AND GEORGIA MILLER TRUSTEES
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DEVELOPER
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**PRELIMINARY EQUIVALENT SKETCH PLAN
AND LANDSCAPE PLAN**

NORMANDY OAKS
LOTS 1 THRU 7

ZONED: R-20
TAX MAP No. 18 GRID No. 13 PARCEL No. 51
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: JULY 2007
SHEET 2 OF 4



NOTE: NO DISTURBANCES/IMPROVEMENTS SHALL BE MADE ON LOT 7 AS PART OF THIS DEVELOPMENT.

SWM REQUIREMENTS SUMMARY				
Rev	VOLUME	Rev AREA	WQV	Cpv q1
SUBAREA 001	0.017 ac/ft	0.196 ac	0.079 ac/ft	2.30B cfs

SWM REQUIREMENTS MET WITH NON-ROOFTOP DISCONNECTION, SHEET FLOW TO BUFFER, AND ROOFTOP DISCONNECTION (WITH RAIN GARDENS) CREDITS.

PLAN
SCALE: 1" = 40'

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
David J. Joyce
PLANNING DIRECTOR
DATE: 7/24/07

OWNERS
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PRELIMINARY SCHEMATIC GRADING
AND SEDIMENT CONTROL PLAN
NORMANDY OAKS
LOTS 1 THRU 7
ZONED: R-20
TAX MAP No. 1B GRID No. 13 PARCEL No. 51
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: JULY 2007
SHEET 3 OF 4



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
233 CENTRAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2955

APPLIED STORMWATER
TIA T. E. SCOTT & ASSOCIATES, INC.
118 COCKEYVILLE ROAD, SUITE 300
HENT VALLEY, MARYLAND 21086
Phone: 410-428-2951
Fax: 410-282-0216
www.appliedsw.com

SPECIFICATIONS

SOIL TEXTURE AND STRUCTURE
Soil shall have a sandy loam, loamy sand, or loam texture per USDA textural triangle. Maximum clay content shall be 6%. Soil mixture shall be 50-60% sand, 20-30% leaf compost, and 20-30% topsoil. The soil shall be a uniform mix, free of stones, stumps, roots, or other similar objects larger than two inches. No other materials or substances should be mixed or dumped within the bioretention soil that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil must be free of plant or seed material of non-native, invasive species, or noxious weeds.

SOIL TESTING
Planting soil for bioretention areas must be tested prior to installation for PH and organic matter. The soil should meet the following criteria (Landscape Contractors Association, 1986).
PH Range: 5.5 - 6.5
Organic Matter: 1.5 - 4.0%

Sieve analysis, PH and organic matter tests shall be performed for each bioretention area.

SOIL PREPARATION
Soil preparation can be performed onsite or offsite and transported to the facility location when ready for installation. Prior to transport, the soil mix should be certified as meeting the criteria established for the soil medium and approved by the site inspector.

Soil preparation can be accomplished by thoroughly mixing soil components, amendments and additives, as needed utilizing a backhoe or front-end loader.

SOIL PLACEMENT
Placement of the planting soil in the bioretention area should be after scarifying the invert area of the proposed facility and installing the underdrain and/or recharge area (if applicable), in lifts of 12 to 18 inches and lightly compacted. Minimal compaction effort can be applied to the soil by tamping with a bucket from a dozer or backhoe. Lifts are not to be compacted but are performed in order to reduce the possibility of excessive settlement. Installation of soils must be done in a manner that will ensure adequate filtration.

SOIL COMPACTION
Avoid over compaction by allowing time for natural compaction and settlement. No additional manual compaction of soil is necessary. Rake soil material as needed to level out. Overfill above the proposed surface invert to accommodate natural settlement to proper grade. Depending upon the soil material, up to 20% natural compaction may occur. For facilities designed with a liner, no scarification of the invert area is required.

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoses to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf-type tires.

SOIL COMPACTION (cont)
Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reducing infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure. Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a Chisel Plow, Ripper, or Subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before back filling the facility and placement of underdrain. Pump any ponded water before preparing (rototilling) base.

When back filling the bioretention facility, do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

SOIL PRESOAK
In order to speed up the natural compaction process, presoaking the placed soil may be performed. Significant settlement can occur after the first presoak, and additional settlement may occur subsequent to the initial wetting. If time and construction scheduling permits, it is preferable to allow natural settlement to occur with the help of rain events to presoak the soil medium.

MULCH
Areas should be mulched once trees and shrubs have been planted. Any ground cover specified as plugs may be installed once mulch has been applied.

The mulch layer shall consist of either a standard landscape fine shredded hardwood mulch (preferred) or hardwood chips. The mulch may be either aged or fresh to maximize nitrogen and metal uptake by the facility. Mulch shall be free of weed seeds, soil, roots, or any other substance not consisting of either bole or branch wood and bark. The mulch should be uniformly applied approximately 2 to 3 inches in depth. Mulch applied any deeper than three inches reduces proper oxygen and carbon dioxide cycling between the soil and the atmosphere, and keeps plant roots from making good contact with the soil.

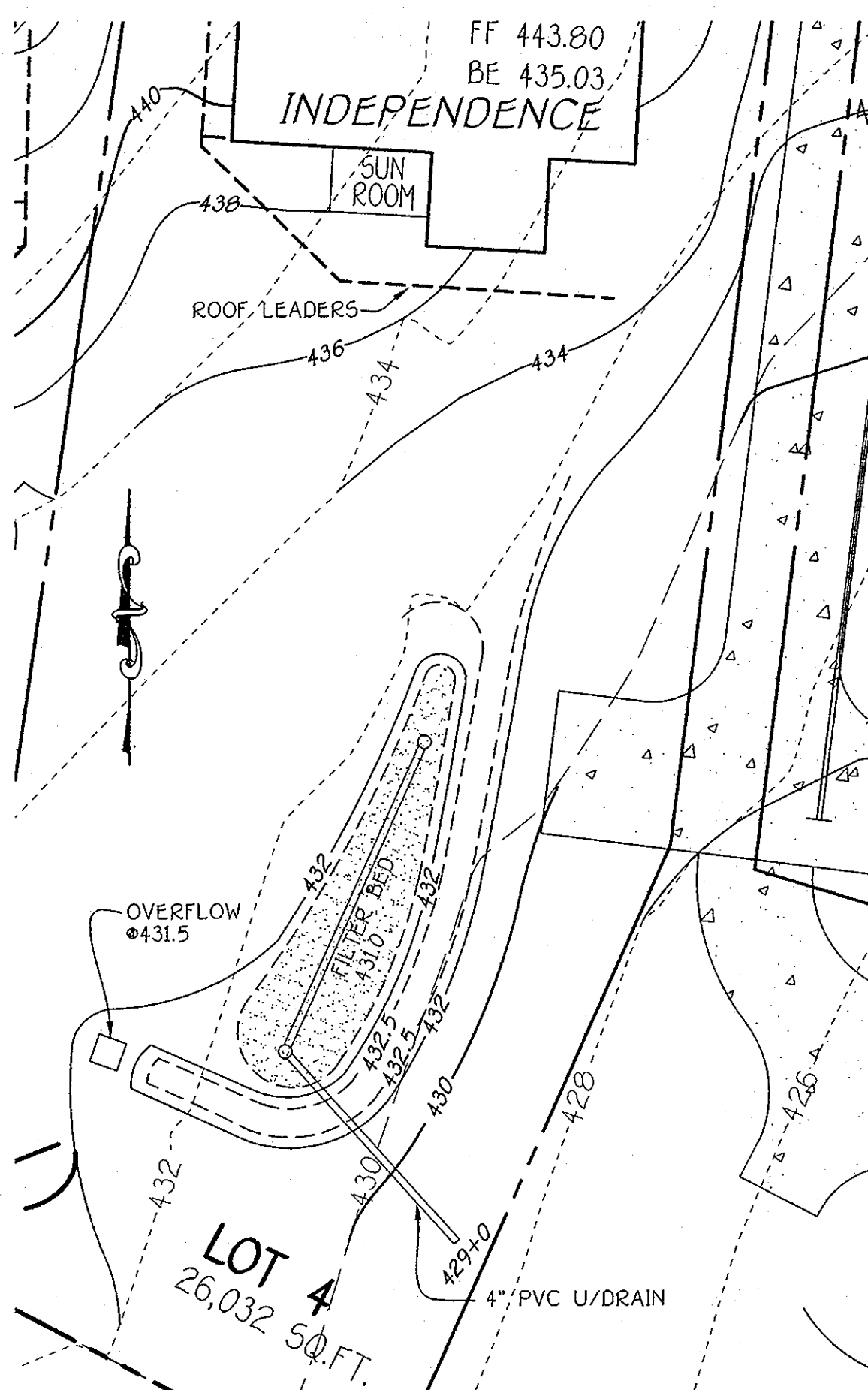
SAND
Sand shall be clean and free of deleterious materials, meeting AASHTO M-6 or ASTM C-33 with grain size of 0.02" - 0.04". HDGSA C-33 sand is acceptable.

GEOTEXTILE
Geotextile fabric should meet ASTM D-751 (puncture strength - 125 LB), ASTM D-1117 (Mullen burst strength - 400 PSF), and ASTM D-1682 (Tensile strength - 300 LB). Fabric should have 0.08" thick E.O.S. of #80 sieve, and maintain 125 GPM per SQ. FT. flow rate.

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

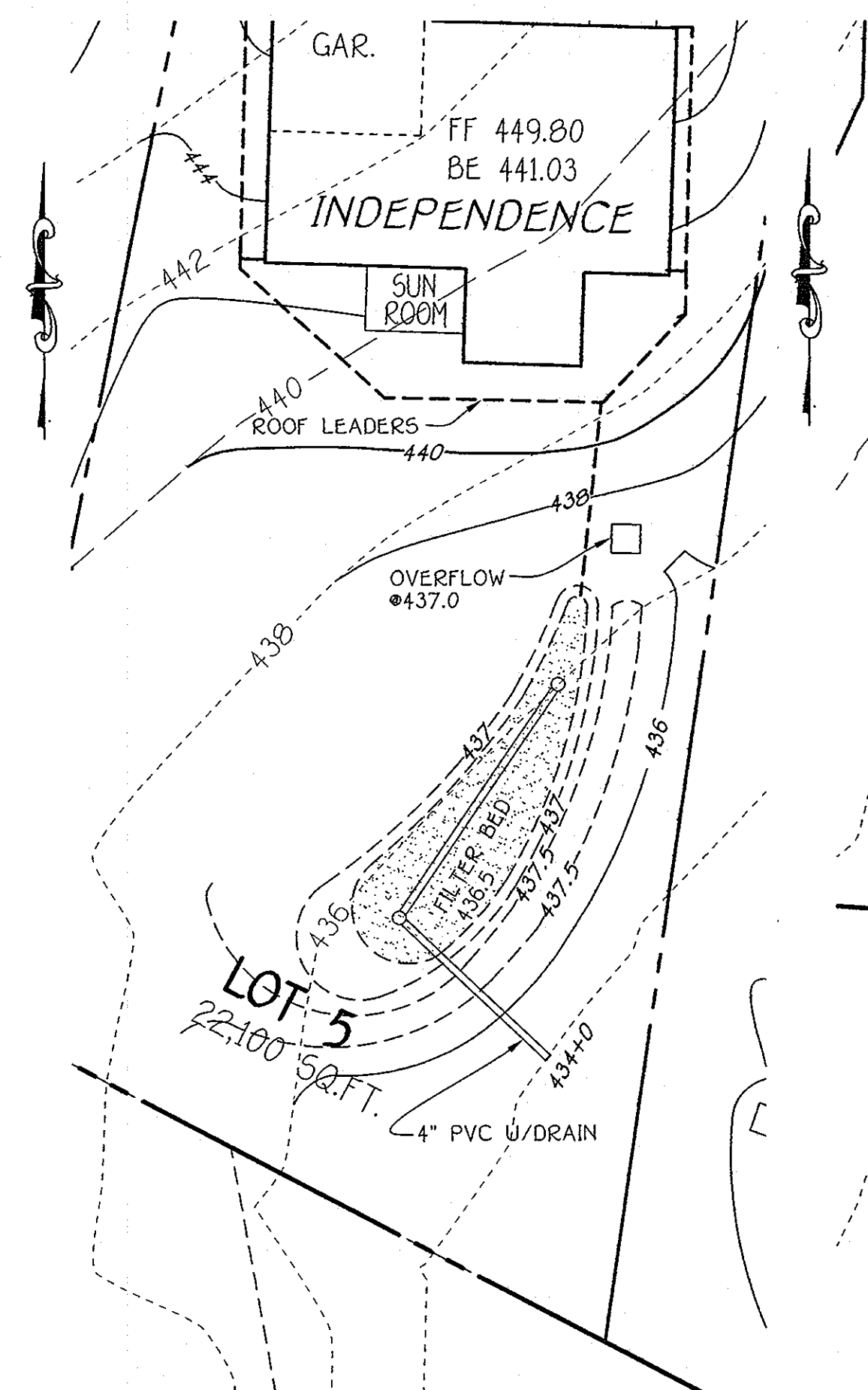
Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent filling the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to the specified for the core of the embankment or other embankment materials.

Plastic Pipe
The following criteria shall apply for plastic pipe:
1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirement of AASHTO M252 Type 5, and 12" through 24" inch shall meet the requirement of AASHTO M259 Type 5.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firm and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill".



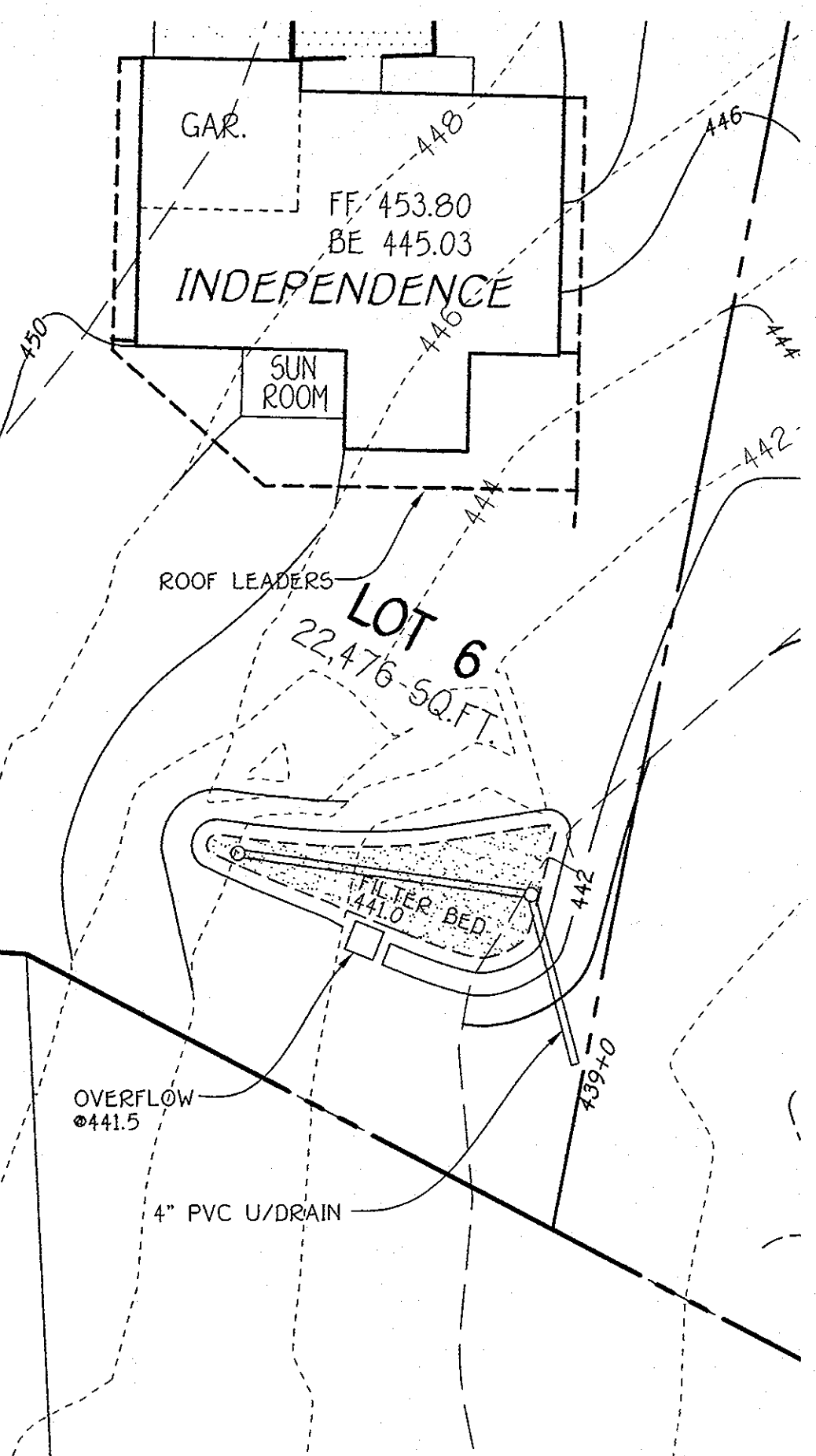
LOT #4 BIO-RETENTION

SCALE: 1" = 20'



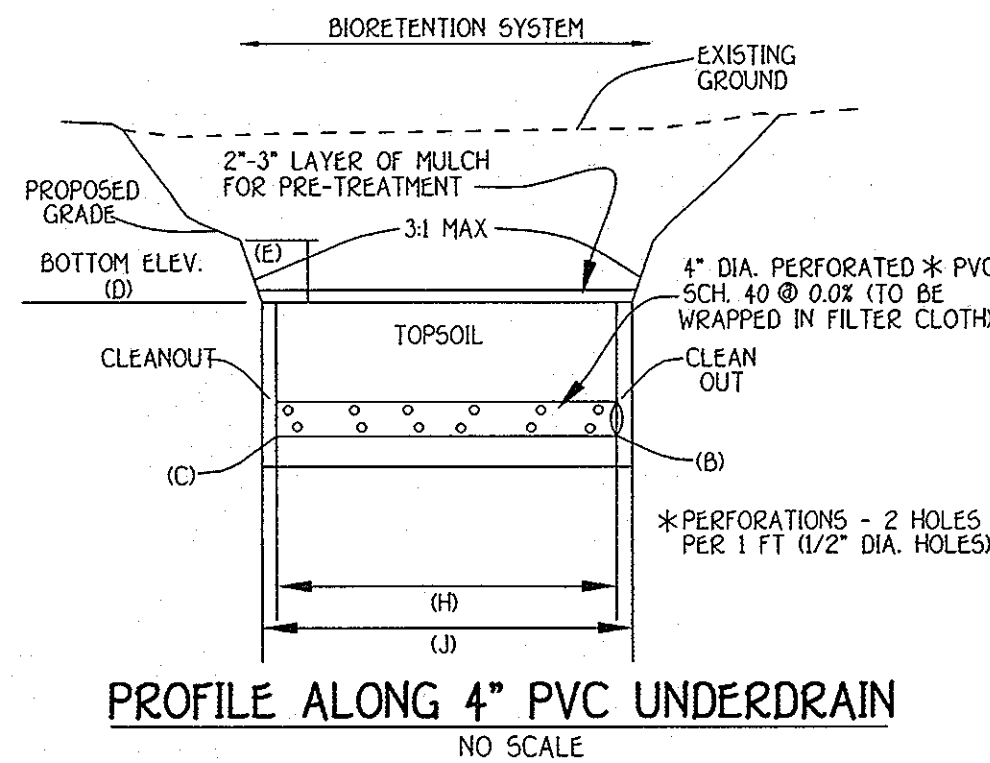
LOT #5 BIO-RETENTION

SCALE: 1" = 20'



LOT #6 BIO-RETENTION

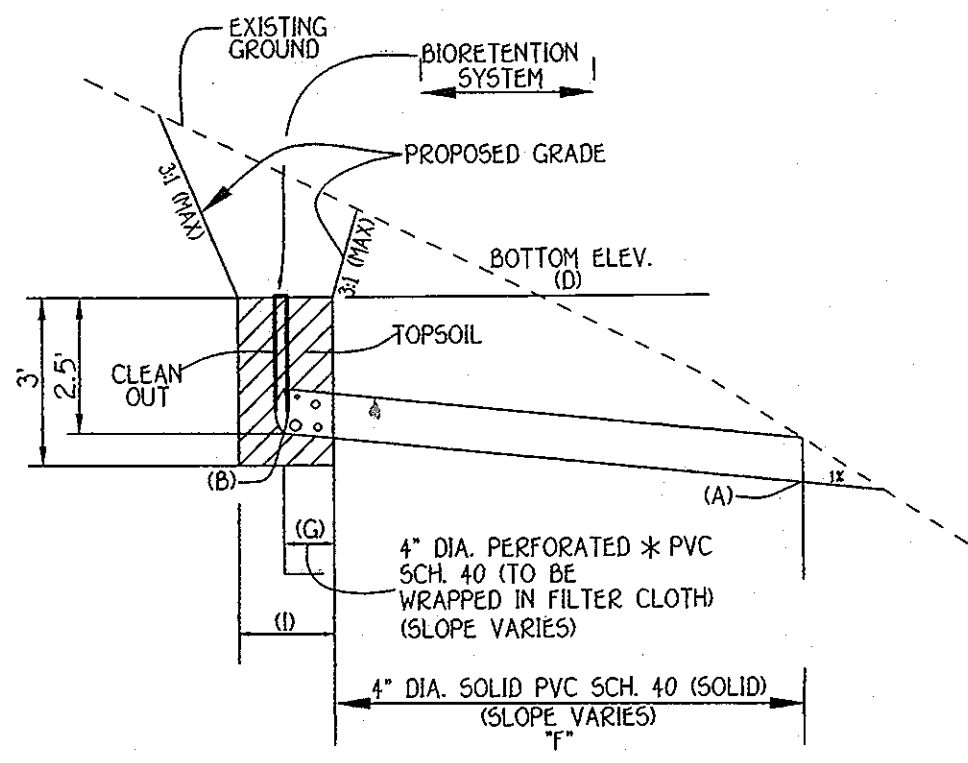
SCALE: 1" = 20'



PROFILE ALONG 4" PVC UNDERDRAIN

BIO-RETENTION DATA

	LOT #4	LOT #5	LOT #6
INVERT ELEV.	428.00	433.50	438.00
FILTER BED ELEV.	431.00	436.50	441.00
OVERFLOW ELEV.	431.50	437.00	441.50
WQV / Cpv ELEV.	432.00	437.00	442.00
TOP ELEV.	432.50	437.50	442.50
FILTER BED WIDTH (ø Max)	15'	15'	12.5'
FILTER BED LENGTH (ø Max)	63'	57'	44'

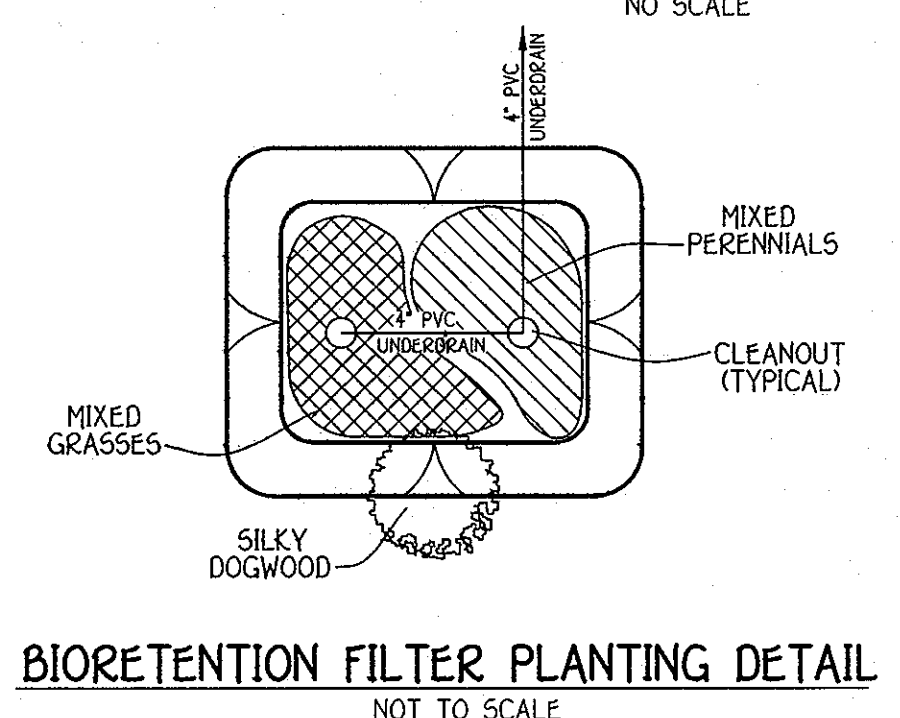


PROFILE ALONG 4" PVC OUTLET

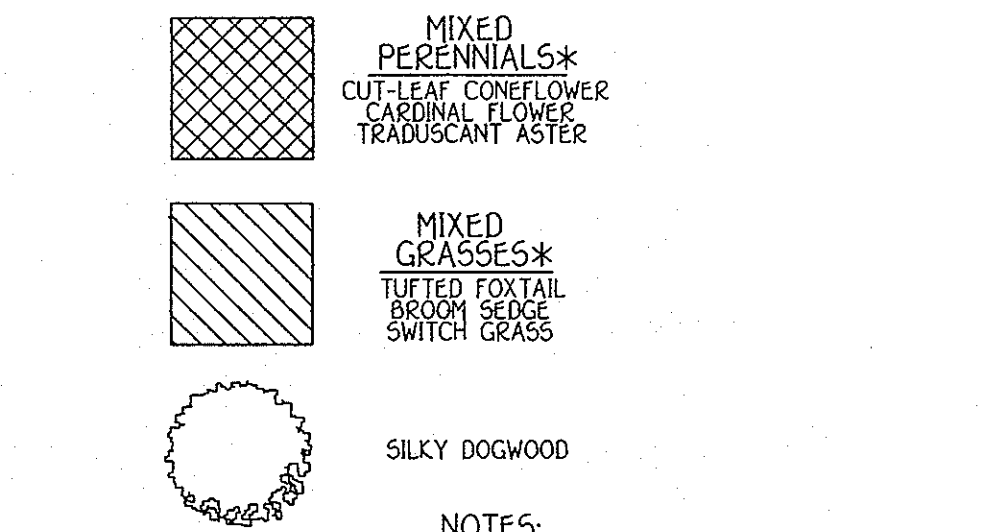
BIORETENTION FILTER PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

PRIVATE BIORETENTION FILTER OPERATION & MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



BIORETENTION FILTER PLANTING DETAIL



NOTES:
* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING.
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE RAINGARDEN.



TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
PLANNING DIRECTOR
DATE: 7/24/07

OWNERS
PAUL AND GEORGIA MILLER, TRUSTEES
2885 ROSENAR DRIVE
ELLCOTT CITY, MARYLAND 21043
(410) 465-4761

DEVELOPER
HIGH RIDGE LLC
10176 BALTIMORE NATIONAL PIKE
SUITE 217
ELLCOTT CITY, MARYLAND 21042
(410) 230-9900

**STORMWATER MANAGEMENT
BIO-RETENTION PLAN AND DETAILS**
NORMANDY OAKS
LOTS 1 THRU 7
ZONED: R-20
TAX MAP No. 18 GRID No. 13 PARCEL No. 51
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: JULY 2007
SHEET 4 OF 4

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2955

APPLIED STORMWATER
TIA T. E. SCOTT & ASSOCIATES, INC.
128 COCKEYVILLE ROAD, SUITE 300
HORTONVILLE, MARYLAND 21086
(410) 296-8218
www.appliedstorm.com