50IL5 LEGEND						
50IL	NAME	CLA55	K FACTOR			
GgB	Glenelg loam, 3 to 0 percent slopes	В	0.20			
GgC	Glenelg loam, 8 to 15 percent slopes	8	0.20			
GmB	Glenville silt loam, 3 to 8 percent slopes	С	0.37			
GnB	Glenville—Baile silt loams, 0 to 8 percent slopes	С	0.37			

- * Hydric soils and/or contains hydric inclusions

DESIGN NARRATIVE

This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of "Woods in Good Condition" will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

Patuxent Woods Overlook is zoned RC-DEO and is located on Tax Map 16, Grid 15, P/O Parcel No. 80, Lot 3 of the Howard County, Maryland Tax Map Database System. The property consists of six proposed lots with access onto a common driveway along with a non-buildable preservation parcel totalling approximately 13.64 acres. The property is located in the Ellicott City area of Howard County mostly within the Little Patuxent River wateshed (02130906), but partially with the Middle Patuxent River Watershed (02131106). This property is somewhat linear nature with a 50 foot wide section of property forming the access to Frederick Road. The high point, located in the 50 foot wide section of property, acts as the split between the watersheds. The front portion slopes south toward Frederick Road, the much larger portion of the property line where a spring and forested area exists. An existing house and garage are located near Frederick Road and the six on-site barns are located within the middle portion of the property. All on-site structures are proposed to be removed and six single family detached houses will be constructed on the six proposed buildable lots which will access Frederick Road via a common driveway. According to a field inspection conducted by Eco-Science Professionals (ESP) forest exists on the rear portion of the property along the eastern property line. spring exists within the forested area that creates an intermittentent stream. No wetlands or wetland buffers exist on-site. The Web Soil Survey shows soils on the site area consist of Glenela loams (Gab GgC) Type "B" soils and Glenville silt loam (GmB) & Glenville-Baile silt

Natural Resource Protection: Environmentally sensitive areas (stream and its buffer) exists on-site. To ensure the protection of natural resources located on this site, stream buffer will be honored by locating improvements away from environmentally sensitive areas which will be placed in forest conservation

II. Maintenance of Natural Flow Patterns: It is the intent of the proposed design to discharge runoff similar to the characteristics and direction of this site prior to any of the proposed

III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices

The design of this project utilizes an use-in-common driveway, allowing a reduction in the necessary paving needed to access to the proposed buildings. Non-Structural practices as permitted in Chapter 5, Rooftop Disconnections (N-1) and Non-Rooftop Disconnections (N-2) will be used to address ESD to the MEP requirements. Sheet Flow to Natural Conservation Area (N-3) is being utilized for Lot 1 in combination with Rooftop Disconnection. Alternative Surfaces were not incorporated into

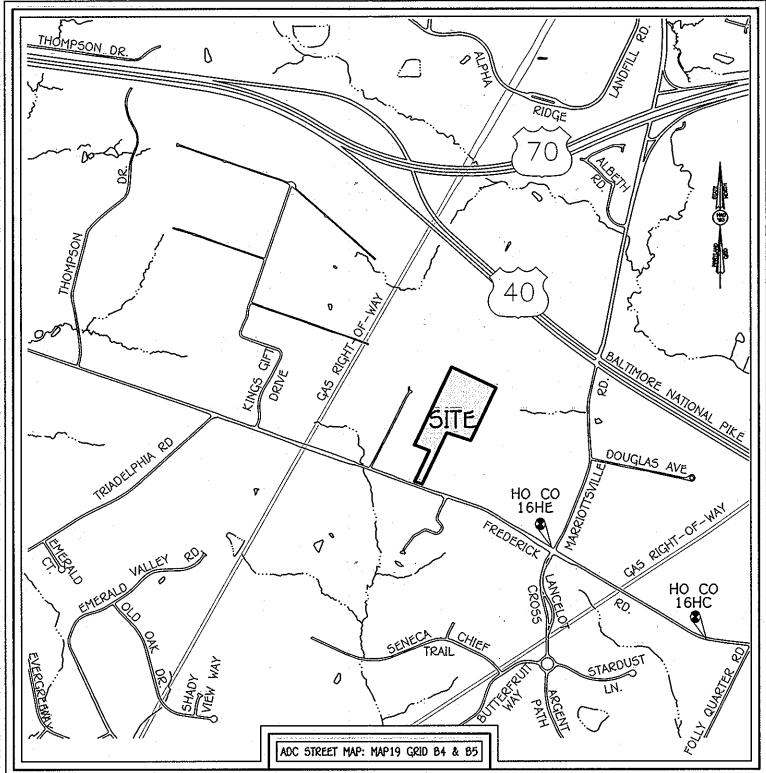
- IV. Integration of Erosion and Sediment Controls into Stormwater Strategy: Since small drainage areas are proposed under this plan, silt fence, super silt fence, and cleanwater earth dike will be utilized for erosion & sediment control. There is no direct discharge of runoff to a stream. All site runoff will discharge to existing ground via existing outfalls and eventually to the Middle Patuxent River and Little Patuxent River. No drainage easements will be required. It is anticipated that all cut will be utilized on-site for construction at time of Building Permit with individual lot Grading Plans.
- V. Implementation of E50 Planning Techniques and practices to the Maximum Extent Practicable (MEP) ESD planning techniques will be utilized to the maximum extent practicable to satisfy the SWM requirements put forth in Chapter 5 of the Maryland Department of the Environment's SWM Design Manual. All non-structural practices are being utilized to treat stormwater runoff. The full required ESD volume is being provided.
- VI. <u>Request for a Design Manual Waiver:</u> No Waivers related to stormwater management are being requested in this project.

ENVIRONMENTAL CONCEPT PLAN PATUXENT WOODS OVERLOOK, LOTS 1 THRU 6 AND

NON-BUILDABLE PRESERVATION PARCEL 'A'

A RESUBDIVISION OF POLANSKY SUBDIVISION, LOT 3 TAX MAP No. 2 GRID No. 24 PARCEL NO. 39

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP

	BENCHMARK INFORMATION
B.M.≠	#1 - HOWARD COUNTY CONTROL STATION #16HE - HORIZONTAL - NAD '93) (LOCATED 34.5' SOUTHWEST OF A WATER VALVE ON MARRIOTTSVILLE ROAD, 88.1' SOUTHEAST OF BG&E #270455/C&P 56, AND 7.3' NORTH OF THE EDGE OF FREDERICK ROAD) N 590,948.7095 E 1,339,596.5575 ELEVATION = 537.96 - VERTICAL - (NAVD '88)
B.M.	#2 - HOWARD COUNTY CONTROL STATION #16HC - HORIZONTAL - (NAD '83) (LOCATED 16.1' NORTHWEST OF G&E 69056, 12.4' NORTH OF PK + FLAGGING IN POST, 10.7' NORTHEAST OF PK + FLAGGING IN POST, 4' SOUTHWEST OF FREDERICK ROAD (MD RT 144) 0.1 MILES FROM INTERSECTION WITH FOLLY QUARTER ROAD) N 589,780.9454 E 1,341,530.0901 ELEVATION = 448.63 - VERTICAL - (NAVD '88)

	SYMBOL	DESCRIPTION
		EXISTING CONTOUR 2' INTERVAL
		PROPOSED CONTOUR 2' INTERVAL
	—5F—5F—	SILT FENCE
	-55F55F-	SUPER SILT FENCE
	-79F 79F	SUPER SILT FENCE
	• BM	SUPER SILT FENCE
	LOD	LEMET OF DISTURBANCE
-	<u>A-2</u>	earth dike
	x	EXISTING FENCE LINE
	uuuu	ex. Limit of trees and forest
	₩ ₩	EXISTING TREES
	Versa katetal	existing road a proposed driveway paving
	+ + + +	PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION)
		PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)
		existing & proposed septic easement

- Soil lines and types

NON-ROOFTOP DISCONNECTION (N-2)

LEGEND

GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIMISION A 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY (MISS UTILITY) AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- . Boundary shown hereon is based on field run monumented boundary survey performed by fisher, collins & carter INC. DATED AUGUST 2013. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SUVERY PERFORMED BY SISHER, COLLINS CARTER, INC. IN AUGUST 2013 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATI
- STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 16HE AND 16HC WERE USED FOR THIS PROJECT.

 DREVIOUS DPZ FILE NUMBERS: F-98-65. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009
- NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED.

 THIS PROPERTY IS LOCATED INSIDE THE METROPOLITAN DISTRICT. LOTS TO BE SERVED PUBLIC WATER AND PRIVATE SEWERAGE.
- THIS PROPERTY IS LOCATED INSIDE THE METROPOLIAN DISTRICT. LOTS TO BE SERVED PUBLIC WATER AND PRIVATE SEWERAGE.

 ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.

 THE SUBJECT PROPERTY IS ZONED RC-DEO (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN.

 THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE
- éasément. Récordation of a modified sewerage éasément shall not be nècessar 11. NO STEEP SLOPES, WETLANDS AND THEIR BUFFERS, STREAM(S), 100 YEAR FLOODPLAIN EXIST ON-SITE
- 12. STREAM BUFFER AND FOREST STAND DELINEATION HAVE BEEN SHOWN. 13. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE
- LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.

 4. LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT, TREES SHOWN ARE EXISTING. 5. FOREST CONSERVATION OBLICATIONS WILL BE MET BY ON-SITE RETENTION OF EXISTING FOREST AND REFORESTATION A
- PLAN STAGE OF THIS PROJECT. 16. NO SOIL BORINGS ARE REQUIRED FOR THIS PROJECT. 17. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN STAGES. THEREFORE, THE APPLICANT AND CONSULTAN
- SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY subdivision and land development regulations and the Howard County Zoning regulations shall occur at the subdivision PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN)
- THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS. 19. ALL EXISTING STRUCTURES THAT CREATE A ZONING VIOLATION AND THOSE WITHIN APPROVED PERC AREAS WILL B SUBMITTAL OF FINAL PLAT MYLAR FOR RECORDATION.
- 20. THE DEVELOPMENT PROPOSAL FOR THIS PROPERTY IS A MAJOR SUBDIVISION WITHIN THE RC-DEO ZONING DISTRICT. HOWEVER, THE SITE HAS BEEN DESIGNATED AS A TIER III GROWTH AREA OF HOWARD COUNTY PER THE PLANHOWARD 2030 TIER MAP DUE TO BEING GRANDFATHERED TO SB-236 SINCE THE PROPERTY OWNER HAD APPLIED FOR A SOIL PERCOLATION TEST APPLICATION AND HAD SUBMITTED A PERCOLATION TEST PLAN TO THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO JULY 1, 2012.

SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 13.64 AC.±. LIMIT OF DISTURBED AREA = 6.98 Ac. ± PRESENT ZONING DESIGNATION = RC-DEO
- (PER 10/06/2013 COMPREHENSIVE ZONING PLAN) PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: F-98-65. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE = 0.00 AC+
- TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC± TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. ±
- TOTAL ARE OF STREAM (INCLUDING BUFFER) = 0.10 AC. *
- TOTAL AREA OF EXISTING FOREST = 1.3 AC* (INCLUDES SPRING AND ASSOCIATED INTERMITTENT STREAM BUFFER) TOTAL AREA OF FOREST TO BE RETAINED/PLANTED = 3.13 AC* (0.90 AC.* RETENTION, 2.23 AC* PLANTING)
- TOTAL GREEN OPEN AREA = 9.15 AC+ TOTAL IMPERVIOUS AREA = 1.36 AC±
- N. TOTAL AREA OF ERODIBLE SOILS = 1.20 AC. ±

2-12-14

PARCEL NO.

CENSUS TR.

6030.00

				<u> </u>							
				#X					APPROVED: HOWARD COUNTY DEPARTMENT	T OF PLANNING AND	ZONING
				4							
			─	-		4.	•		0-1.00	•	
				4.					Kent Shenhande	1	2.
		<u> </u>		1		· ·	• •		Chief, Division of Land Development	Nun	
				1					01101	/11-1 ()	
6						· .			Change Colombia		2.13
FISHER, COLLINS & CARTER,	INC.].		·			Chief, Development Engineering Division		
CIVIL ENGINEERING CONSULTANTS & LAND SU	RVEYORS				Company of the state of the sta	en e	and the second of the second o	and the control of th	PROJECT	SECTION	a
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATI	ONAL PIKE				PROFESSIONAL CER	TIFICATION Manufacture 1			PATUXENT WOODS OVERLOOK, LOTS 1 TH		"
ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055					I HEREBY CERTIFY THAT THESE DOCUMENTS WE	RE PREPARED OR APPROVED SINE OF MARY	OWNERS /	DEVELOPER	AND NON-BUILDABLE PRESERVATION PAR	CEL 'A' -	
(410) 101 2033		40		-	BY ME AND THAT I AM A DULY LICENSED PROF THE LAWS OF THE STATE OF MARYLAND, LICENSE	ESSIONAL ENGINEER UNDER			PLAT BLOCK NO. ZONE 1	TAX/ZONE ELEC. DI	ST C
					DATE: 01/12/2016.	SE NO. 30306, EXPIRATION	ADEL / 6046 SEWELLS	DRCHARO DRIVE	X / BEOOK 110. 20112		
				1			COLUMBIA, MA	RYLAND 21045	X 15 RC-DEO	16 THIRD	
				1	Hambani	7-4/4	(410) 9	51-7169		!	
				1	Juna and so	017			· ·	•	
	110	OSTACION	DATE	V	oldustates of Ltoleszional Engineer	UNIC WALL WALL	·				

STORMWATER MANAGEMENT SUMMARY

 $E50\sqrt{PROVIDED} = 3,028 + 1,668 + 1.183 = 5.879$ CU.FT.

- 8.028 CU.FT. BY NON-ROOFTOP DISCONNECTION

1.668 CU.FT. BY ROOFTOP DISCONNECTION IN COMBINATION

- 1,145 CU.FT. A BERM DOWNGRADE FROM THE LOW POINT IN

REMARKS

ROOFTOP DISCONNECTION (N-1),

& STORAGE BEHIND A BERM

NON-ROOFTOP DISCONNECTION (N-2),

ESDV PROVIDED

CU.FT.

*****5,879

***5.879**

REQUIRED

CU.FT.

5,877

5,877

SITE AREA = 3.85 ACRES

THE COMMON DRIVEWAY.

AREA ID.

TOTAL

RCN = 55.2

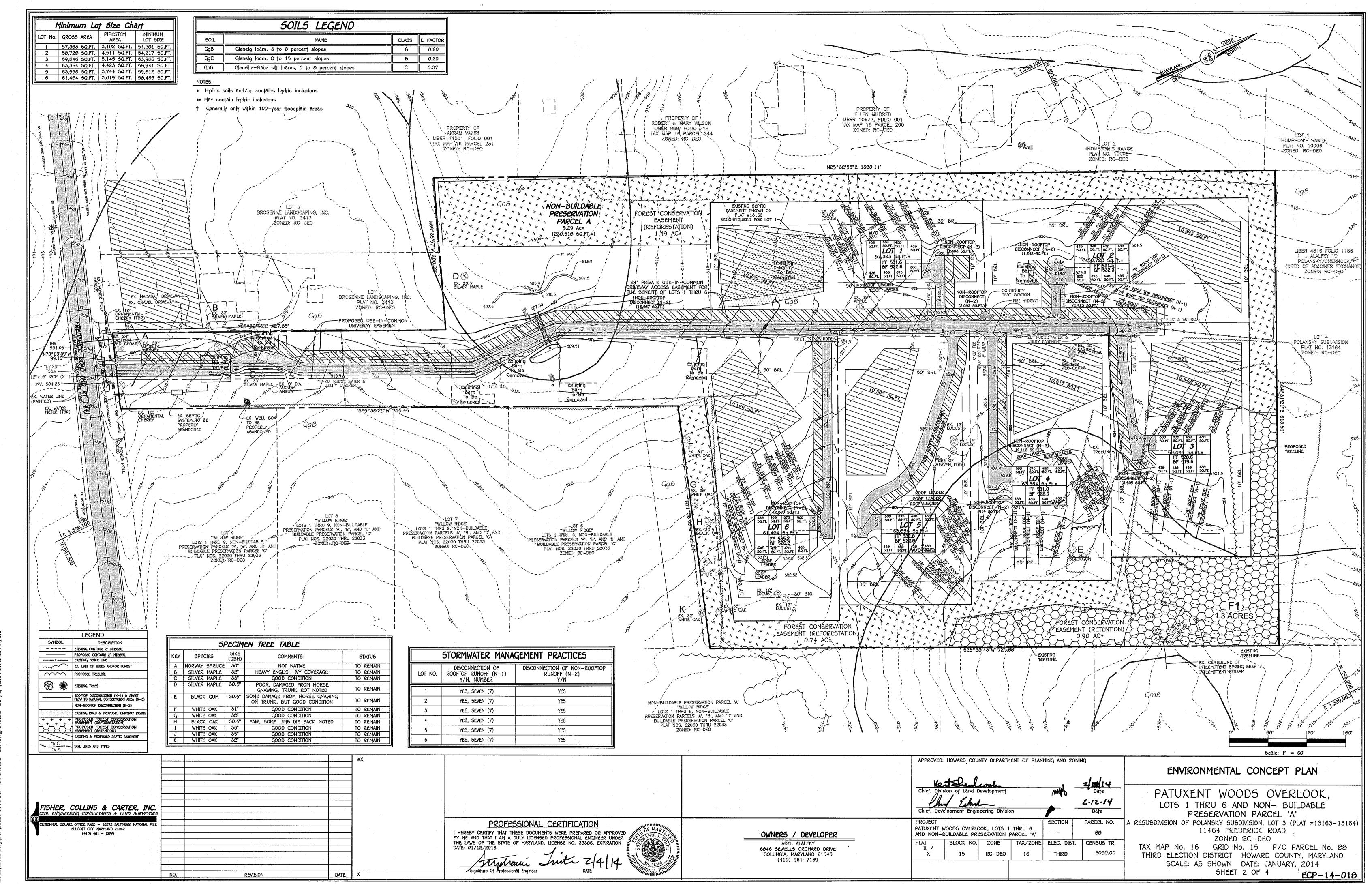
TARGET Pe = 1.0°

TITLE SHEET

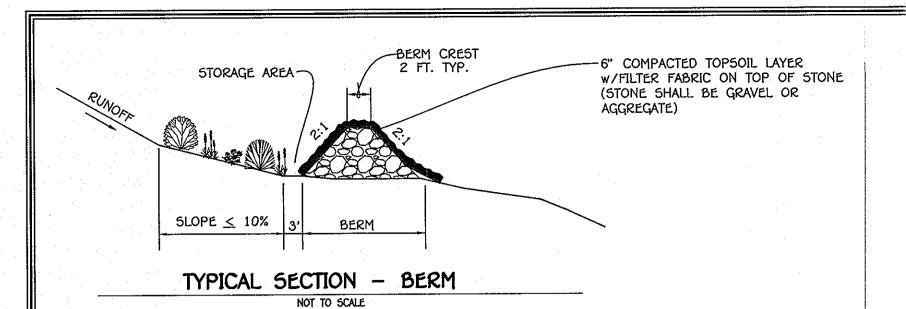
PATUXENT WOODS OVERLOOK, LOTS 1 THRU 6 AND NON-BUILDABLE PRESERVATION PARCEL 'A' A RESUBDIVISION OF POLANSKY SUBDIVISION, LOT 3 (PLAT #13163-13164) 11464 FREDERICK ROAD

ZONED RC-DEO TAX MAP No. 16 GRID No. 15 P/O PARCEL No. 88 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: JANUARY, 2014 SHEET 1 OF 4 ECP-14-018

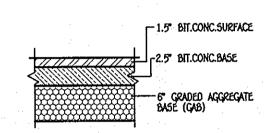


1/2012/12020/dwa/ECP\12020-3001 ECP Plan Sheet 2 - ECP dwg Sheet 2 - ECP 2/4/2014 10:45:15 AM

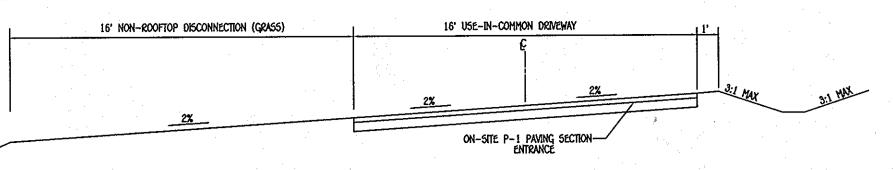


OPERATION AND MAINTENANCE SCHEDULE FOR BERM

- 1. BERM SHOULD BE INSPECTED REGULARLY TO ENSURE THAT PONDING WATER DOES NOT CREATE NUISANCE CONDITIONS.
- 2. SIGNS OF CONCENTRATED FLOW AND OTHER SURFACE EROSION SHOULD BE REPAIRED TO PROMOTE SHEET FLOW.
- 3. A DENSE MAT OF VEGETATION SHOULD BE PRESENT AT ALL TIMES. VEGETATION SHOULD BE REPLACED AS NEEDED.
- 4. WHEN INFILTRATION BERM ARE INCORPORATED IN A SYSTEM USING OTHER PRACTICES, THE MAINTENANCE CRITERIA FOR THAT PRACTICE SHALL ALSO BE CONSIDERED.



P-1 DRIVEWAY PAVING SECTION

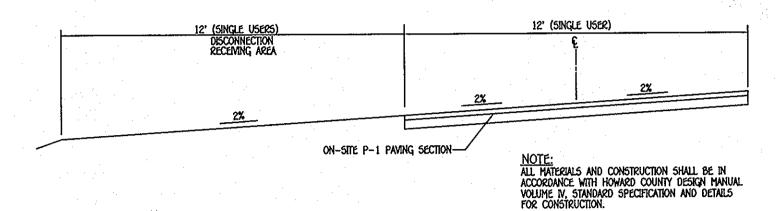


NOTE:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

2. SWALES ARE FOR CONVEYANCE OF RUNOFF AND NOT UTILIZED FOR TREATMENT CREDIT.

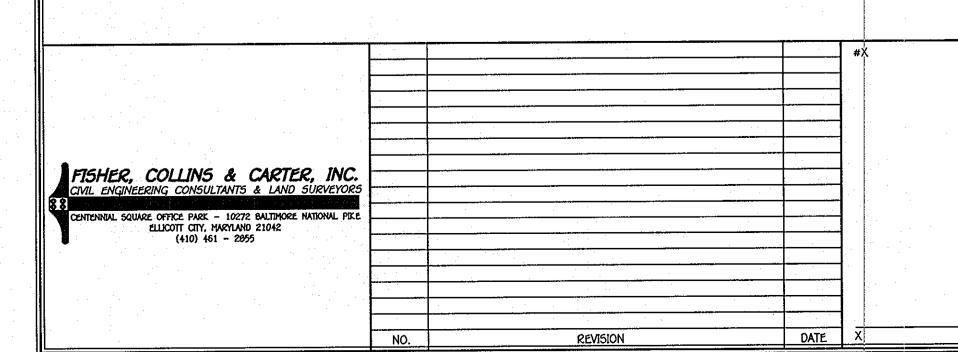
16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION
NOT TO SCALE



TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION
NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED, DISCONNECTION OF ROOFTOP RUNOFF (N-1) & DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.



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. 30306, EXPIRATION DATE: 01/12/2016.

OWNERS / DEVELOPER

ADEL ALALFEY
6046 SEWELLS ORCHARD DRIVE
COLUMBIA, MARYLAND 21045
(410) 961-7169

PROJECT
PATUXENT WOODS OVERLOOK, LOTS 1 THRU 6
AND NON-BUILDABLE PRESERVATION PARCEL 'A'

PLAT
X
15
RC-DEO
16
THIRD

SECTION
PARCEL NO.

- 88

SECTION
PARCEL NO.
- 88

THIRD
6030.00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Z.12.1.4

STORMWATER MANAGEMENT DETAILS & NOTES

PATUXENT WOODS OVERLOOK,

LOTS 1 THRU 6 AND NON- BUILDABLE

PRESERVATION PARCEL 'A'

RESUBDIVISION OF POLANSKY SUBDIVISION, LOT 3 (PLAT #13163-13164)

11464 FREDERICK ROAD

ZONED RC-DEO

TAX MAP No. 16 GRID No. 15 P/O PARCEL No. 88

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: JANUARY, 2014

SHEET 4 OF 4 ECP-14-018

2\12020\dwg\ECP\12020-3001 ECP Plan Sheet 4 - Details.dwg, Sheet 4 - Details, 2/4/2014 10:47:17 AM