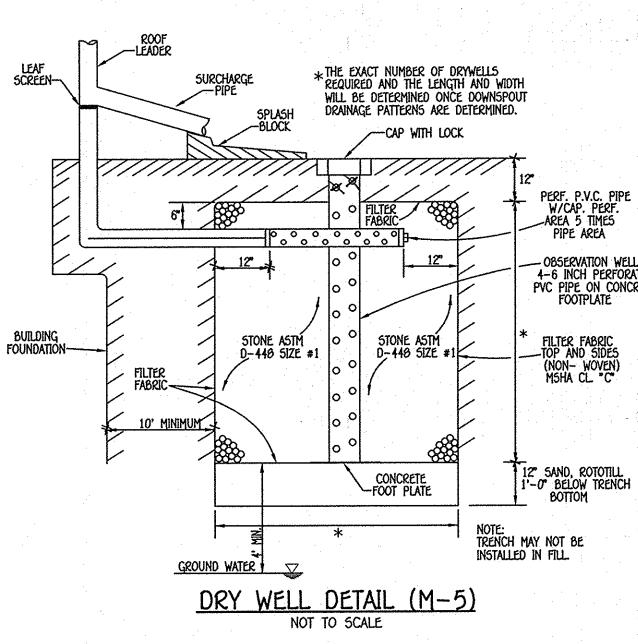
			SHEET INDEX
5ł	HEET	NO.	DESCRIPTION
Π	1		TITLE SHEET
Г	2		ENVIRONMENTAL CONCEPT PLAN

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

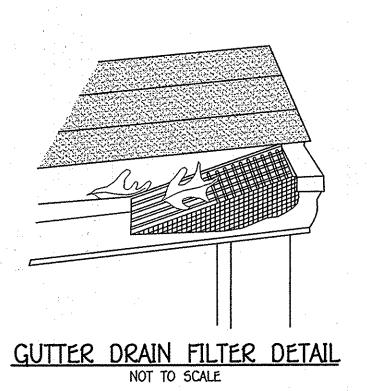
STORMWATER MANAGEMENT SUMMARY						
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS			
SITE	1,158	1,107	ROOFTOP DISCONNECTIONS (N-1), NON-ROOFTOP DISCONNECTIONS (N-2), DRY WELLS (M-5) & MICRO-BIORETENTION (M-6)			
TOTAL	1,158	1,187				

GROSS AREA = 6.06 ACRES LOD = 1.57 ACRES RCN = 55.6 TARGET Pe = 1.0°



ENVIRONMENTAL CONCEPT PLAN LEWIS PROPERTY LOTS 1 AND 2

TAX MAP No. 14 GRID No. 7 PARCEL NOS. 238 AND 332 HOWARD COUNTY, MARYLAND FOURTH ELECTION DISTRICT

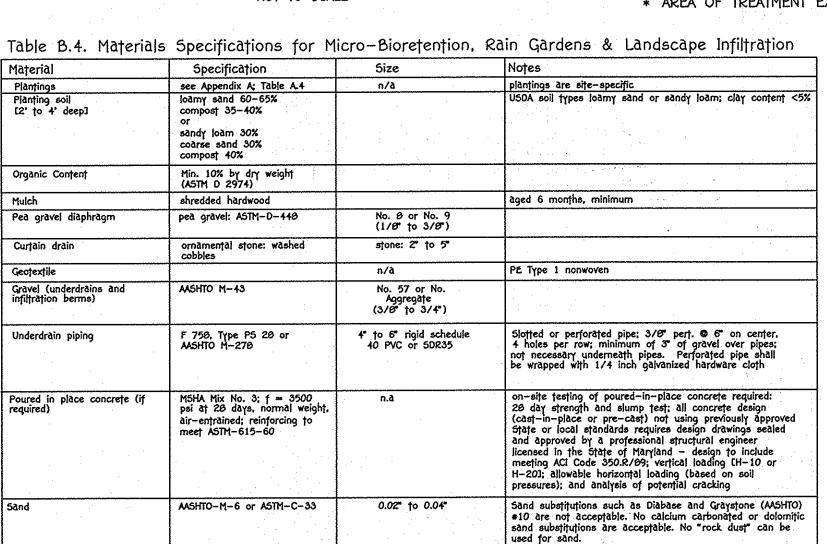


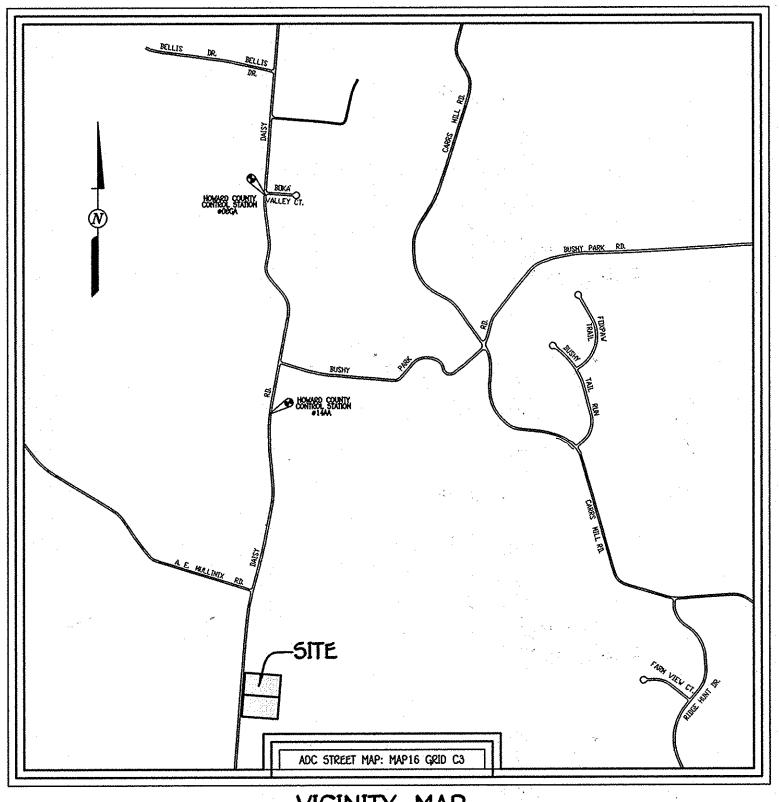
STORMWATER MANAGEMENT NOTES

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS. 3. 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. 4. 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	D W	
2 (1)	750 SQ. FT.	60 C.F.	72 C.F.	100%*	6, x	6' x 5'	
2 (2)	750 SQ. FT.	60 C.F.	72 C.F.	100%*	6' x	6' x 5'	
2 (3)	500 SQ. FT.	40 C.F.	50 C.F.	100%*	5' x	5' x 5'	

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.





VICINITY MAP

BENCHMARK INFORMATION	41
B.M.#1 - HOWARD COUNTY CONTROL STATION #14AA - HORIZONTAI (LOCATED MARRIOTTSVILLE ROAD, JUST NORTH OF RT-99) N 601,206.6390 E 1,340,912.3072 ELEVATION = 403.00 - VERTICAL - (NAVD '00)	L - NAD '03)
B.M.#2 - HOWARD COUNTY CONTROL STATION #08GA - HORIZONTA (LOCATED RT-99 1/4 MILE WEST OF MARRIOTTSVILLE ROAD N 601,201.8639 E 1,339,637.6516 ELEVATION = 522.62 - VERTICAL - (NAVD '88)	L - (NAD '03)

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

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. 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. C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- D. 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.
- E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA. F. ONCE 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.

LEGEND					
5YMBOL	DESCRIPTION	SYMBOL	DESCRIPTION		
`492	EXISTING 2' CONTOURS	-482	PROPOSED CONTOUR		
<u>-490</u>	EXISTING 10' CONTOURS	+ 362.5	SPOT ELEVATION		
GgB GgC	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE		
~~~~	existing treeline	~~~~	PROPOSED TREELINE		
83	Individual large trees	5F	SILT FENCE		
x x	EXISTING FENCE LINE	ECM .	EROSION CONTROL MATTING		
	EXISTING & PROPOSED PAVING	——55F——	SUPER SILT FENCE		
	DRAINAGE AREA DIVIDE		STABILIZES CONSTRUCTION ENTRANCE		

#### GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION 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 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- INC. DATED NOVEMBER 2013. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SUVERY PERFORMED BY FISHER, COLLINS
- state plane coordinate system. Howard county monument nos. 16He and 16Hc were used for this project. 5. PREVIOUS DPZ FILE NUMBERS: N/A.
  6. 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.

  7. THIS PROPERTY IS LOCATED OUTSIDE THE METROPOLITAN DISTRICT. LOTS TO BE SERVED PRIVATE WATER AND PRIVATE SEWERAGE.

  8. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THE SUBJECT PROPERTY IS ZONED RC-DED (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 EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

  11. NO 100 YEAR FLOODPLAIN, WEILANDS, STREAM(S) AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SITE.
- 13. LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT, TREES SHOWN ARE CONCEPTUAL.

  14. THIS SUBDIVISION IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENT PER SECTION 16.1202(B)(1)(viii) OF THE HOWARD
- COUNTY CODE AND FOREST CONSERVATION MANUAL, SINCE THIS IS A MINOR SUBDIMISION CREATING ONE ADDITIONAL LOT AND HAS N
- FURTHER SUBDIMSION POTENTIAL.

  15. SOIL BORINGS ARE NOT REQUIRED FOR THIS PROJECT SINCE DISCONNECTIONS ARE BEING UTILIZED.

  16. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIMSION PLAN/PLAT AND/OR 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) AS

#### THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS. 17. NO STRUCTURES EXIST ON THIS PROPERTY.

the requirement of providing Channel Protection Volume.

## 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

Lewis Property is zoned RC-DEO and is located on Tax Map 14, Parcel Nos. 238 & 332 of the Howard County, Maryland Tax Map Database System. The property consists of 6.06 acres, none of which is considered forest. This is a subdivision creating Parcels 230 & 332 as recorded lots, Lot 1 and 2. since they were deemed as being improperly subdivided previously. These lots will have access to Daisy Road via a common driveway. The proposed lots will be served by private well and septic systems already approved by the Health Department. This subdivision is exempt from forest conservation requirements per Section 16.1202(b)(1)(viii) Of The Howard County Code And Forest Conservation Manual since it is a minor subdivision that creates no new lot or parcels and has no further subdivision potential. Per the Howard County Soil Survey, soils on-site consist of "GgB" & "GgC" Glenelg loam, Type "B" soils and "GmB" Glenville silt loam, Type C soils. Mostly Type B soils will be within the limits of disturbance (a small amount of C soils is being disturbed). The Type C Soils are located in the middle of site in a depressed area running eastward. Runoff flows from northwest to southeast across the site starting at the centerline of Daisy Road (the high point) and leaving the site in a wide depression near the southeast corner of the property. This runoff eventually flows to the off-site Cattail Creek, a tributary of Brighton Dam on the Patuxent River (02131108) Rooftop Disconnection (N-1), Dry Wells (M-5), and Micro-Bioretention (M-6) will be utilized for the proposed houses and Non-Rooftop Disconnection (N-2) will be utilized for the proposed individual and common driveways.

#### The site is located within the Patuxent River Watershed. No environmentally sensitive features exist on-site. No floodplain, steep slopes,

- wetlands, streams, or their buffers exist on-site. No protection of natural resources will be required on this site. 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
- III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices A proposed common driveway will serve the proposed two (2) lots. Non-Structural practices as permitted in Chapter 5, Rooftop Disconnection (N-1) & Non-Rooftop Disconnection (N-2), Dry Wells (M-5), and Micro-Bioretention (M-6) will be used to address ESD to
- IV. Integration of Erosion and Sediment Controls into Stormwater Strategy: It is anticipated that diversion fence, super silt fence, and erosion control matting will be provided and that the use of sediment traps will not be necessary. There is no direct discharge of runoff to a stream. No drainage easements will be required. It is anticipated that all cut will be utilized on-site for construction at time of Grading Plan.
- V. <u>Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)</u>
  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. Although the full required ESD volume is not being provided, all impervious surfaces are being treated. All non-structural practices are being utilized to treat impervious runoff.
- No environmental waivers are expected to be required on this project.

#### SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 6.06 AC.±.
  B. LIMIT OF DISTURBED AREA = 1.57 Ac.±
- PRESENT ZONING DESIGNATION = RC-DEO
- (PER 10/06/2013 COMPREHENSIVE ZONING PLAN) PROPOSED USE: RESIDENTIAL PREVIOUS HOWARD COUNTY FILES: N/A
- 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 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 = 5.68 AC±
  - TOTAL GREEN OPEN AREA = 5.41 AC+ (TOTAL AREA LESS IMPERVIOUS AREA, BUT INCLUDES TREED AREAS THAT ARE CONSIDERED MAINTAINED LAWN)
- TOTAL AREA OF ERODIBLE SOILS = 0.85 AC.+

TOTAL IMPERVIOUS AREA = 0.27 AC+ P. TOTAL AREA OF ROAD DEDICATION = 0.38 AC. ±

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FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS				
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS				
28 CENTENNIAL SQUARE OFFICE PARK — 10272 BALTIMORE NATIONAL PIKE				
ELLICOTT CITY, MARYLAND 21042				
(410) 461 - 2855				
				·
	NO.	REVISION	DATE	X

PROFESSIONAL CERTIFICATION 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

OWNERS / DEVELOPER ROBERT & LISA LEWIS 2425 DAISY ROAD WOODBINE, MARYLAND 21797-8129 443-255-9314

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 7/07/14 7.8.14 PARCEL NO. LEWIS PROPERTY, LOTS 1 AND 2 238 & 332 ELEC. DIST. CENSUS TR. BLOCK NO. TAX/ZONE 604002 700 RC-DEO

TITLE SHEET

LEWIS PROPERTY.

LOTS 1 AND 2, ZONED RC-DEO

TAX MAP No. 14 GRID No. 7 PARCEL Nos. 238 & 332 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE, 2014 SHEET 1 OF 2

ECP-14-063

