	SHEE	T INDEX			
SHEET N	SHEET NO. DESCRIPTION				
1	TITLE SHEET				
2	ENVIRONMENTAL CONCEPT PU	N			
3	PRELIMINARY SEDIMENT & ER	OSION CONTROL PLAN			

50ILS LEGEND				
50IL	SOIL NAME			
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes		0.28	
GmC	Glenville silt loam, 0 to 15 percent slopes		0.43	
MaC	Manor loam, 8 to 15 percent slopes	В	0.28	
MaD	Manor loam, 15 to 25 percent slopes	В	0.28	
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	В	0.20	

STORMWATER MANAGEMENT SUMMARY				
AREA ID.	E5DV REQUIRED CU.FT.	E5Dv PROVIDED CU.FT.	REMARKS	
SITE	11,205	14,519	DRY WELLS (M-5), MICRO-BIORETENTION (M-6), AND POCKET SAND FILTER (F-5	
TOTAL	11,205	14,519		

LOD = 4.65 ACRES TARGET Pe = 1.7"

NOTE THAT THE PROPERTY IS LOCATED IN THE HISTORIC ELLICOTT CITY AREA OF HOWARD COUNTY IN THE WATERSHED OF THE PATAPSCO RIVER LOWER NORTH BRANCH THE SITE FLOW TOWARD AN UNNAMED TRIBUTARY OF THE HUDSON BRANCH WHICH REQUIRES 10 YEAR AND 100 YEAR MANAGEMENT, WHILE DA 2, THE REMAINING PORTION, FLOWS TOWARD CHURCH ROAD TO THE SUCKER BRANCH OF THE PATAPSCO RIVER. DRYWELLS HAVE BEEN OVERSIZED TO CAPTURE ADDITIONAL FLOW TO REDUCE THE AMOUNT OF 10 YEAR STORAGE REQUIRED WITHIN THE PROPOSED SAND FILTER.

### 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. Per the Howard County Design Manual, 10 and 100 year management will be required.

Lacey Property is a 13 lot single family lot subdivision including one existing house and existing accessory structures to be removed. Property is zoned R-ED and located on Tax Map 25, Grid 1, Parcel No. 13 of the Howard County, Maryland Tax Map Database System. The property is an existing parcel of record located at 3538 Church Road. Subdivision will utilize a proposed public water and sewer extension. The property is located in the Historic Ellicott City area of Howard County in the watershed of the Patapsco River Lower North Branch (02130906). The majority of the site flowing toward an unnamed tributary of the Hudson Branch and the remaining portion toward Church Road to Sucker Branch of the Patapsco River. This property is relatively rectangular in shape and runoff on-site is mainly from northeast to southwest except for the small portion of the northern corner of the property which flows to the north to the Sucker Branch of the Patapsco River Lower North Branch (02130906). The existing house sits at the middle western prortion of the property, with an intermittent stream in the approximate center of the property which flows to the southwest onto Howard County, Maryland property. Forest exists on-site along with wetlands, (within the vicinity of the stream) per a field inspection conducted by Eco-Science Professionals (ESP). The Web Soil Survey shows soils on the site consist of Gladstone loam (GbA). Type "B" soils and Glenville silt loam (GmC). Type "C" soils exist on the property. The runoff from the roofs of the proposed houses is to be directed to drywells and micro-bioretention facilities proposed on-site. Majority of runoff from the proposed driveways will flow overland and be treated by micro-bioretentions and proposed, sand filter. The runoff from the proposed public road will flow via storm drain system to the proposed stepped pool areas then to the proposed sand filter, which will provide a portion of required ESD volume but mainly manage the 10 and 100 year storm events on-site.

- Environmentally sensitive areas including stream, stream buffer, and steep slopes do exist on-site, therefore special effort is required to protect natural resource on-site. The sensitive areas are being placed in a Forest Conservation Easement on a proposed open space lot.
- 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 improvements.
- Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices The design of this project utilizes a public road, two common driveways, and individual driveways for the thirteen new lots. Non-Structural practices as permitted in Chapter 5, Dry Wells (M-5) and Micro-Bioretentions (M-6) will be used to address ESD to the MEP requirements, along with Sand Filter (F-5).
- IV. Integration of Erosion and Sediment Controls into Stormwater Strategy: Total drainage area is around 6 acres to proposed facilities, a sediment trap will be utilized in the area of the proposed Sand Filter. Silt fence, super silt fence, and erosion control matting will be utilized along with the sediment trap. There is no direct discharge of runoff directly to a stream, only indirect. All site runoff will discharge to the the existing ground then eventually to the Patapsco River. No drainage easements will be required. It is anticipated that all cut will be utilized on-site for construction at time of Site Development Plans.
- Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)

The full required ESD volume is being provided along with 10 and 100 year management.

FISHER, COLLINS & CARTER, INC.

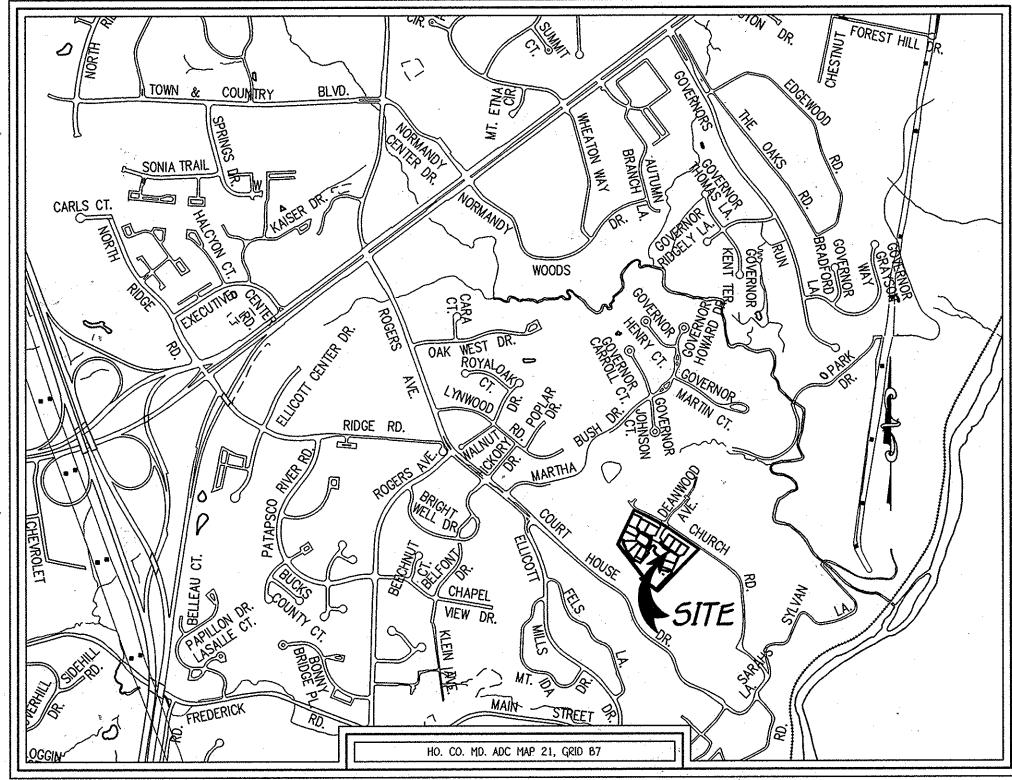
ELLICOTT CITY, MARYLAND 21042

No Waivers related to stormwater management are being requested in this project.

# ENVIRONMENTAL CONCEPT PLAN LACEY PROPERTY,

LOTS 1 THRU 13 OPEN SPACE LOTS 14 THRU 16

TAX MAP No. 25 GRID No. 1 PARCEL NO. 13 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCHMARK INFORMATION M.#1 - HOWARD COUNTY CONTROL STATION #25A1 - HORIZONTAL - NAD '83) N 586,557,549 E 1,366,847.099 ELEVATION = 396.343 - VERTICAL - (NAVD '88)

3.M.#2 - HOWARD COUNTY CONTROL STATION #25A2 - HORIZONTAL - (NAO '83) N 587,502.730 E 1,366,556.378 ELEVATION = 348.145 - VERTICAL - (NAVD '88)

## SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 0.55 AC. ±. LIMIT OF DISTURBED AREA = 4.65 Ac. \* PRESENT ZONING DESIGNATION = R-ED (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% = 3.07 AC. (1.35 AC. 25% OR GREATER)
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0 AC. TOTAL AREA OF EXISTING FOREST = 4.4 AC. TOTAL GREEN OPEN AREA = 6.69 AC. ±
- TOTAL IMPERVIOUS AREA = 1.86 AC. ± AREA OF ERODIBLE SOILS = 4.02 AC. 1. AREA OF ROAD DEDICATION = 0.40 AC.
- N. DENSITY PERMITTED = 0.55 AC - 1.35 AC = 7.20 ACRES X 2 LOTS PER ACRE = 14 LOTS
- O. PROPOSED NUMBER OF LOTS = 13 LOTS.
- P. OPEN SPACE REQUIRED = 8.55 AC X 50% = 4.28 AC Q. OPEN SPACE PROVIDED = 4.56 AC

## GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

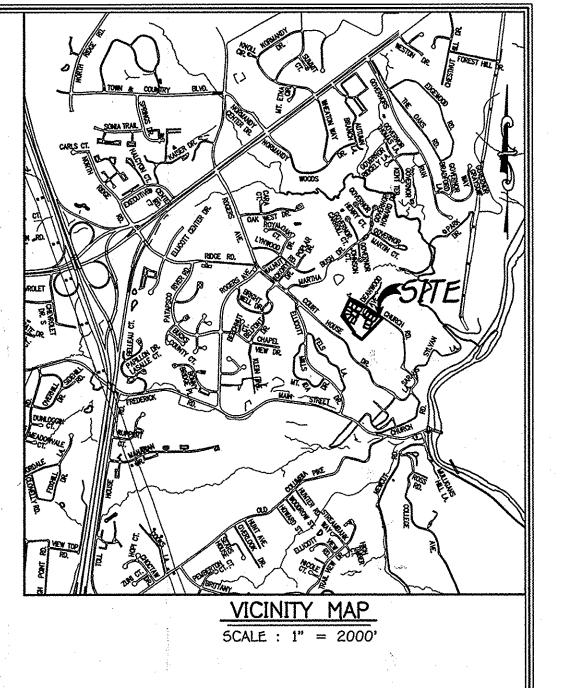
   THE CONTRACTOR SHALL NOTIFY (MISS UTILITY) AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- 3. BOUNDARY BASED FIELD RUN SURVEY BY FISHER, COLLINS & CARTER, INC. DATED AUGUST, 2014. TOPOGRAPHY SHOWN IS BASED FIELD RUN SURVEY BY FISHER, COLLINS & CARTER, INC. DATED MAY, 2013 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATED FOR 2' CONTOUR INTERVAL.

  4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT NOS. 25A1 AND 25A2 WERE USED FOR THIS PROJECT.
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009.
- 7. THIS PROPERTY IS LOCATED INSIDE THE METROPOLITAN DISTRICT.

  8. THIS PROPERTY IS LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- 12. LANDSCAPING WILL BE PROVIDED AT THE PRELIMINARY AND FINAL PLAN STAGE OF THIS PROJECT. 13. FOREST CONSERVATION OBLIGATIONS WILL BE ADDRESSED AT PRELIMINARY AND FINAL PLAN STAGE. IT IS ANTICIPATED THAT ON-SITE RETENTION AND WILL BE UTILIZED ALONG WITH A FEE-IN-LIEU OF REFORESTATION. 14. SOIL BORINGS ARE REQUIRED FOR THIS PROJECT AND EXCAVATIONS WILL BE REQUIRED.
- 15. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION 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.
- 16. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 12. 17. A WETLAND DELINEATION & FOREST STAND DELINEATION LETTER FOR THIS PROJECT DATED SEPTEMBER 2014 WAS PREPARED BY

LEGEND						
5YMBOL	DESCRIPTION	SYMBOL	DESCRIPTION			
492	EXISTING 2' CONTOURS	-482-	PROPOSED CONTOUR			
-490	EXISTING 10' CONTOURS	+362.5	SPOT ELEVATION			
GLB2 MLC2	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE			
~~~~	EXISTING TREELINE		existing septic easement to, be removed			
~~~~	PROPOSED TREELINE		PROPOSED PAVING			
	EXISTING PAVING TO BE MILLED AND OVERLAYED	<b>⊕</b> B−1	BORING HOLE			
	PROPOSED DRYWELL (M-5)	5F	SILT FENCE			
	ROOFTOP DISCONNECTION (N-1)	ECM	erosion control matting			
+	FLOW ARROW	55F	SUPER SILT FENCE			
රි	EXISTING POWER POLE		STABILIZES CONSTRUCTION ENTRANCE			
- (F)TI	SPECIMEN TREE		DRAINAGE AREA DIVIDE			
₹%}® •	existing trees	— rp —	TREE PROTECTION			
	SLOPES 15% TO 25%		PROPOSED TREES			
	SLOPES 25% OR GREATER	***				

- 4.50 AG	•		N				
				APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING			
Account of the second of the s	Van			Chief, Division of Land Development	<u>'</u>	10-19-65- Date	
PROFESSIONAL CERTIFICATION THE PROFESSIONAL CERTIFICATION	ARYTHE		•	Chief, Development Engineering Division	n <b>HSP</b> .	Date	
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: 01/12/2016.		DEVELOPER	OWNER5	PROJECT LACEY PROPERTY	SECTION	PARCEL NO.	
THE STATE OF TRATERIOR BALL. OF TEXTS.		LAND HOLDINGS LLC	CHARLES T LACEY SR CARLOS LACEY CO-TRUSTEES	DOLL PROPERTY	-	13	
Atentrance but 10/12/15	580 AC 3	C\O B. JAMES GREEFIELD 6420 AUTUMN SKY WAY	3530 CHURCH ROAD	DEED BLOCK NO. ZONE	TAX/ZONE ELEC. DIST	. CENSUS TR.	
Signature Of Professional Engineer DATE	ENGRICA	COLUMBIA, MD 21044 443-324-4732	ELLICOTT CITY, MD 21043-4402	. 8317/657 1 R-EO	25 SECONO	602900	



LACEY PROPERTY LOTS 1 THRU 13 AND OPEN SPACE LOTS 14 THRU 16 ZONED R-ED TAX MAP NO.: 25 GRID NO.: 1 PARCEL NO: 13 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: OCTOBER, 2015 SHEET 1 OF 3

TITLE SHEET

