SHEET INDEX						
SHEET NO. DESCRIPTION						
1	TITLE SHEET					
2	ENVIRONMENTAL CONCEPT PLAN					

	50IL5 LEGEND		
50IL	NAME	CLA55	K FACTO
UcB	Urban Land-Chillum-Beltsville Complex, 0 to 5 percent slope	D] <u>.37</u>
Soil Mão	Number: 23 (Clarksville, 5E)		

ENVIRONMENTAL CONCEPT PLAN GOPEZ PROPERTY LOTS 1 AND 2

TAX MAP No. 46 GRID No. 18 PARCEL NO. 175 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



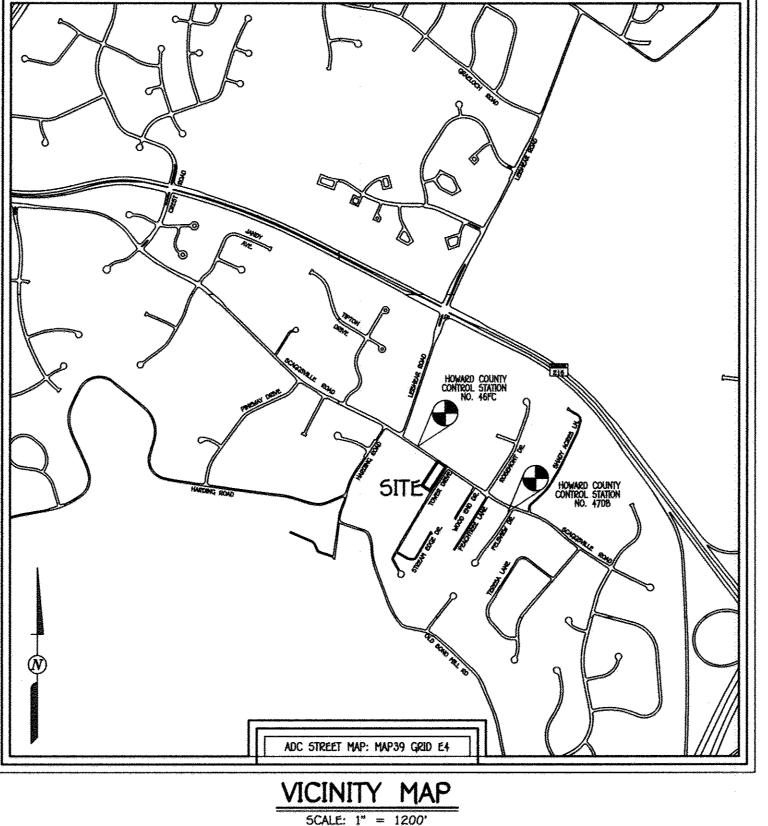
PROFESSIONAL CERTIFICATION

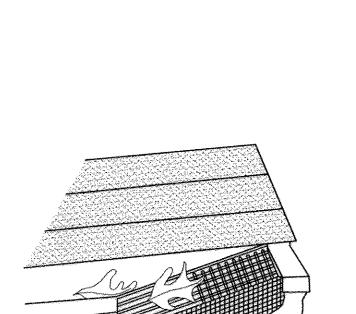
BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR : UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21351,

EXPIRATION DATE: 07/15/2017.

DATE

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED





GUTTER DRAIN FILTER DETAIL

STORMWATER MANAGEMENT NOTES

- . 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
- THE DETAIL SHOWN ON THIS SHEET. 4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH

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

Material	Specification	Size	Notes
Plantings	see Appendix A; Table A.4	n/ā	plantings are site-specific
Planting soil [2" to 4" deep]	ioamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		USOA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		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	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. Aggregate (3/8° to 3/4°)	
Underdrain piping	F 750, Type P5 20 or AASHTO M-270	4" to 6" rigid schedule 40 PVC or 5DR35	Slotted or perforated pipe; 3/8" pert. © 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-615-60	n.à	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 350.R/89; vertical loading EH-10 or H-201; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
5and	AASHTO-M-6 or ASTM-C-33	0.02* †o 0.04*	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 5CALE: 1" = 1200" 8.14.17 Chief, Development Engineering Division SECTION PARCEL NO. GOPEZ PROPERTY, LOTS 1 AND 2 175 OWNER/DEVELOPER JONATHAN AND JOSIELYN GOPEZ 10509 SCAGGSVILLE ROAD LAUREL, MARYLAND 20723 TAX/ZONE | ELEC. DIST. CENSUS TR. 757-525-1660 L 15659 18 R-20 606005 46

LEGEND					
5YMBOL	DESCRIPTION	SYMBOL	DESCRIPTION		
492	EXISTING 2' CONTOURS	-+02-	PROPOSED CONTOUR		
<u> </u>	EXISTING 10' CONTOURS	+362.5	SPOT ELEVATION		
GgB GgC	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE		
~~~~	existing treeline		DRAINAGE AREA DIVIDE		
0// e	Individual trees & shrubs	5F	SILT FENCE		
***************************************	EXISTING FENCE LINE	ECM	erosion control matting		
	EXISTING & PROPOSED PAVING	風	STABILIZES CONSTRUCTION ENTRANCE		

### GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1860 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 SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED DEC., 2016. TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SUVERY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN DEC., 2016 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. 470B AND 46FC 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.

- #34-4350 & 34-3957.

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

  9. THE SUBJECT PROPERTY IS ZONED R-20 (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN.

  10. NO 100 YEAR FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SITE.

  11. NO FOREST STANDS EXIST ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED
- 12. LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT.
- 12. CANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT.

  13. THIS PROJECT IS A MINOR SUBDIVISION CREATING ONE NEW LOT WITH NO FURTHER SUBDIVISION POTENTIAL, THIS SUBDIVISION IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(b)(1)(viii) OF THE COUNTY CODE.

  14. A SOIL BORING WILL BE REQUIRED FOR THIS PROJECT SINCE A MICRO-BIORETENTION POND IS BEING UTILIZED.

  15. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT SUBDIVISION, FOREST CONSERVATION, OR SITE DEVELOPMENT PLANS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE LOCATION, DRIVEWAY LOCATION, GRADING, TREE CLEARING, AND/OR OTHER REQUIREMENTS AS THE

DEVELOPMENT PLAN PROGRESSES THROUGH THE PLAN REVIEW PROCESS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING

- REGULATIONS AND THE FOREST CONSERVATION REQUIREMENTS.

  16. APPROVAL OF THIS ECP BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT PROVIDE APPROVAL OF THE SHOWN SEDIMENT
- 17. A STRUCTURE EXISTS ON THE PROPERTY, KNOWN AS 10509 SCAGGSVILLE ROAD, WHICH IS TO REMAIN.
  18. SOILS SHOWN HEREON ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP #23.
  19. NO HISTORICAL FEATURES OR CEMETERIES ARE ON SITE.

### 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.

10509 Scaggsville Road is zoned R-20 and is located on Tax Map 46, Parcel No.175 of the Howard County, Maryland Tax Map Database System. The property has never been subdivided and remain a parcel of land described in Liber 15659, Folio 360, dated June 20, 2014. The site has an existing house and detached garage on an open lot (not forested) with some individual trees. Since this subdivision was created prior to Forest Conservation regulations, it is anticipated that forest conservation will not be required. The proposed house will be served by public water and sewer as will the existing house which is currently be served public water and public sewer. The runoff from the lot is mostly from northweast to southeast. Micro-Bioretention will be utilized to treat the rooftop, the existing garage and driveway will be utilized thus reducing new impervious area. Per the 2004 Web Soil Survey, soils on-site consist of "UcB" Urban Land-Chillum-Beltsville Complex, type D soil.

I. Natural Resource Protection:

Environmentally sensitive features such as wetlands, streams, their buffers, steep slopes, floodplain and forested areas do not exist on-site. Three (3) specimen trees existing along the western property line and are to remain.

II. <u>Maintenance of Natural Flow Patterns:</u>
Nature flow patterns will be maintained. Existing and proposed runoff flows mostly toward the southeast portion of the site.

III. <u>Reduction of impervious areas through better site design. alternative surfaces and Nonstructural Practices</u>

The existing driveways are proposed to provide access to both the existing and proposed house. The design will reduce the amount of new impervious area needed to serve the new development.

- IV. Integration of Erosion and Sediment Controls into Stormwater Strategy: Silt Fence will be utilized to provide erosion and sediment control.
- V. Implementation of E5D Planning Techniques and practices to the Maximum Extent Practicable (MEP)
- The full required ESD volume is being provided.
- VI. <u>Request for a Design Manual Waiver:</u>
  No waivers related to stormwater management are required.

#### SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 0.474 AC.+. (Lot 2) LIMIT OF DISTURBED AREA = 18,832 5Q.FT. OR 0.432 Ac.+ PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN) PROPOSED USE: RESIDENTIAL PREVIOUS HOWARD COUNTY FILES: ECP-16-060
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC± TOTAL AREA OF STEEP SLOPES: MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC+ STEEP SLOPES: 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 = 0.474 AC+ TOTAL GREEN OPEN AREA = 0.402 AC+
- TOTAL IMPERVIOUS AREA = 0.13 AC+ TOTAL AREA OF ERODIBLE SOILS = 0.474 AC. ± TOTAL AREA OF ROAD DEDICATION = 0.001 AC.+

TITLE SHEET

GOPEZ PROPERTY,

LOTS 1 AND 2

10509 SCAGGSVILLE ROAD ZONED R-20 TAX MAP No. 46 GRID No. 18 PARCEL No. 175 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY, 2017

> SHEET 1 OF 2 ECP-17-044

FISHER. COLLINS & CARTER. INC.

VIL ENGINEERING CONSULTANTS & LAND SURVEYORS

