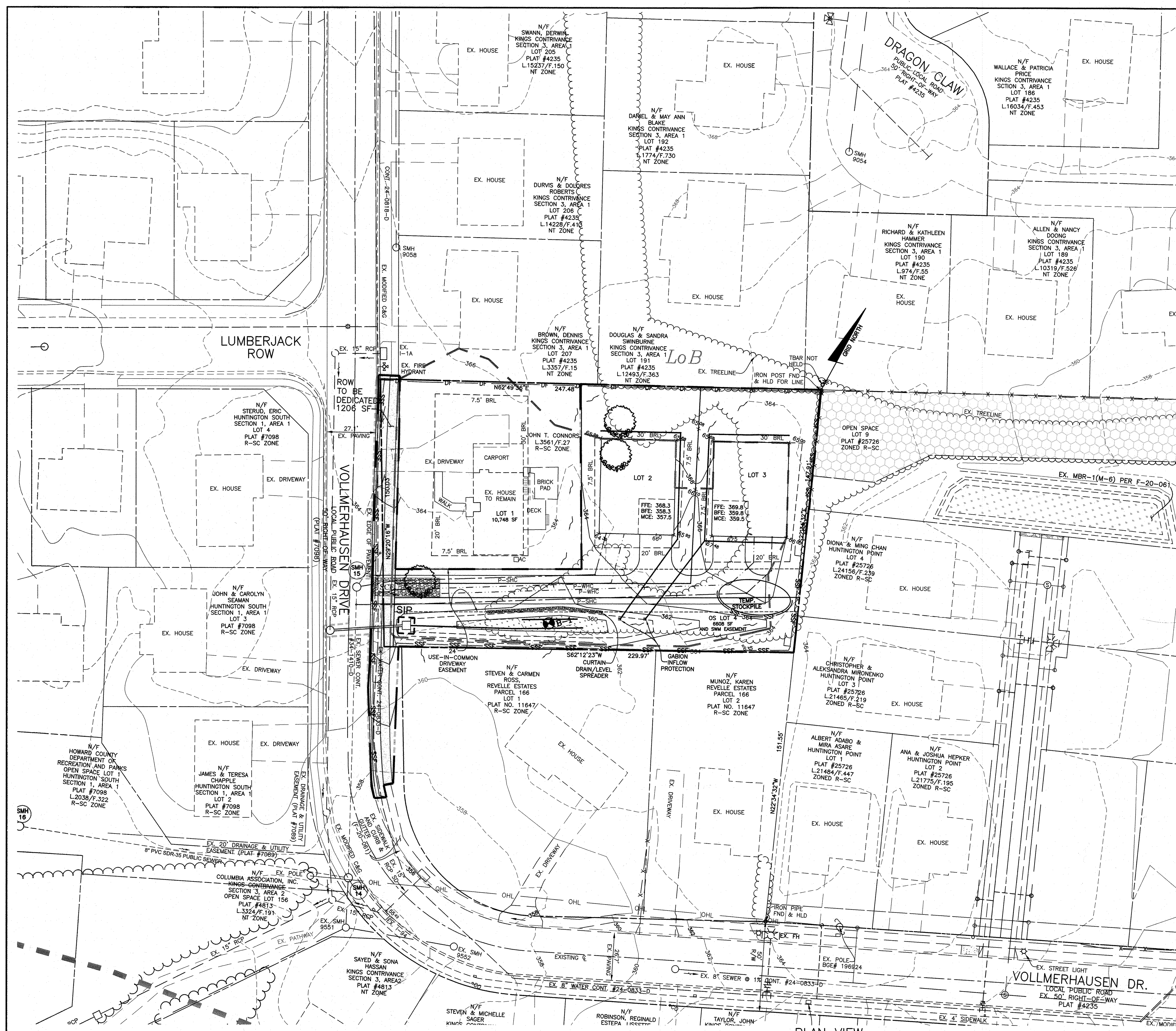


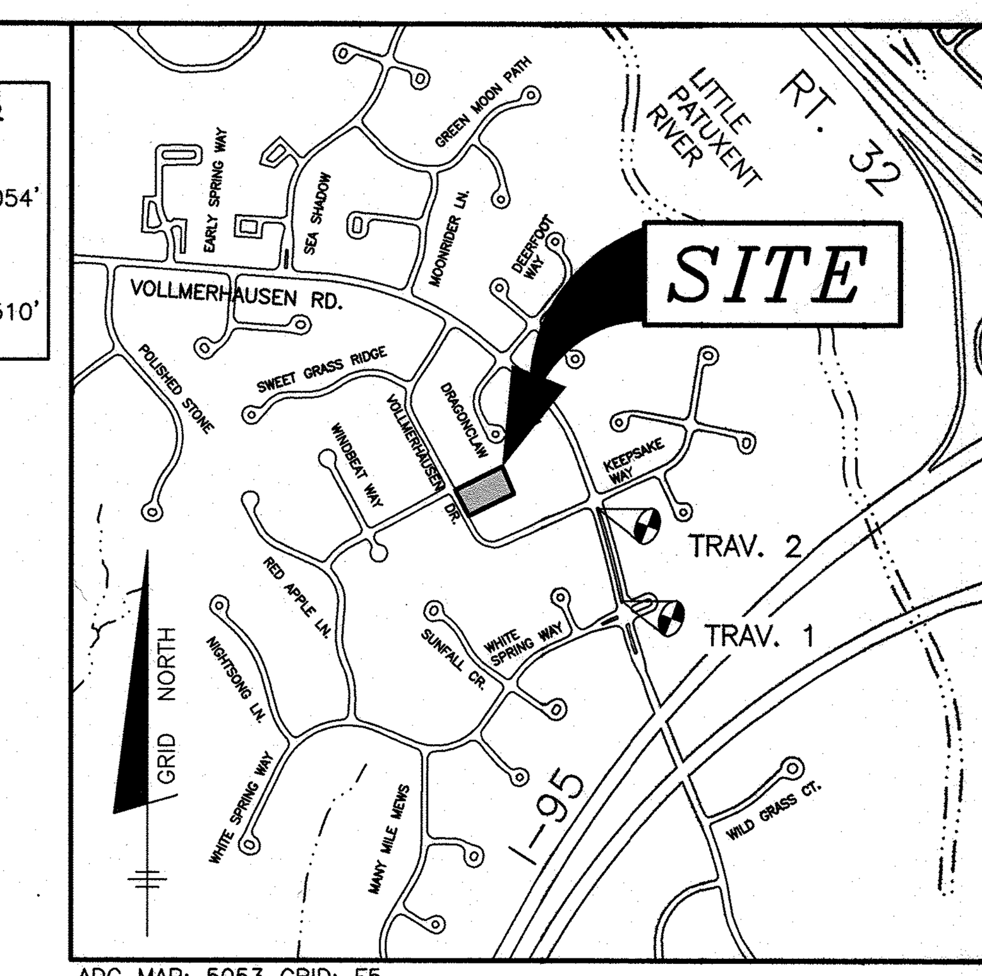
LEGEND

- 358 / 360 — EXISTING CONTOURS
- 360 — PROPOSED CONTOURS
- SOILS DELINEATION LINE
- LoB — SOILS TYPE – ENTIRE SITE
- PROPOSED MICRO-BIORETENTION FACILITY (M-6)
- PROJECT BOUNDARY
- ADJACENT PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- SWM DRAINAGE AREA TO MBR-1
- LIMIT OF DISTURBANCE
- SSF — SUPER SILT FENCE
- EXISTING STRUCTURES
- DF — DIVERSION FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE

BENCHMARKS NAD'83 HORIZONTAL

TRAV. 1 REBAR AND CAP
N542370.1616', E1358287.1054'
ELEVATION: 361.128'

TRAV. 2 REBAR AND CAP
N542808.3770', E1358170.8510'
ELEVATION: 356.641'



ADC MAP: 5053 GRID: F5

VICINITY MAP

DESIGN NARRATIVE:

The site was analyzed as woods in good condition and a target RCN was determined. A target rainfall depth treatment (Pe) was determined based on the measured impervious areas and HSG soil types. The target Pe for this site is 1.8 inches. The target Pe was treated using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual, as amended by Maryland's Stormwater Management Act of 2007. The selected method is Micro-bioretention (M-6). Improvements within the public right of way (sidewalks) will be treated with Non-rooftop disconnection (N-2)

This site is a parcel that has been developed with a single family home which will be retained as Lot 1. To protect the natural resources and existing development in the area, it is important to delay release of stormwater runoff from new impervious areas to avoid increasing peak runoffs, and to adequately treat the stormwater to avoid damage to sensitive species. The design incorporates a micro-bioretention facility to treat stormwater runoff, delay stormwater release and provide recharge. The outfall for the facility will discharge to a public storm drain within the street to help ensure neighbors are not impacted. Proposed frontage improvements include adding curb and gutter along the existing edge of pavement, and adding sidewalk. Sidewalks will be treated for water quality by disconnection (N-2)

This project is exempt from Forest Conservation requirements, as it is less than 40,000 square feet in area. There are no steep slopes, streams or wetlands or their buffers on the property.

Sediment and erosion controls have been preliminarily designed based on the 2011 Maryland Specifications for Soil Erosion and Sediment Control. Erosion control matting and super silt fence will be used to prevent runoff containing unacceptable levels of TSS from leaving the site and entering the adjacent stream and wetlands during the construction. It will be the obligation of the contractor to install, inspect and maintain these practices.

The target Pe for this site is 1.8 inches. By using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual as amended by Maryland Stormwater Management Act of 2007, full treatment of the target Pe of 1.8 was achieved, fully addressing the stormwater management requirements.

No alternative compliance or waivers are currently anticipated.

PROJECT: **Huntington Point II** DATE: 1/17/2023

STORMWATER MANAGEMENT SUMMARY TABLE

Pe: 1.8 inches

BIORETENTION FACILITIES (M-6)

FACILITY	Drainage Area	Impervious	I (%)	Rv	ESDv (cf)	75% ESDv Ponding (cf)	Volume Stored	Volume treated (V/0.75)	Pe Treated
MB-1	27244	8886	33%	0.344	1403.9	1053.0	1094 cf	1459 cf	1.87
						TOTAL:	1094 cf	1459 cf	

Rev Storage: 351 c.f. satisfied by 17.6 inches of stone below underdrain **Use 18"**

NON-ROOFTOP DISCONNECTION (N-2)

Sidewalks in Right of way will be disconnected, at 1:1 ratio, for a 1.0" treatment of 1118 sf. ESDv provided: **95 cf**

Drainage Area MB-1:
Micro-Bioretention (M-6)

Total Drainage Area:	27244 s.f.
Impervious Area:	8886 s.f.
Impervious:	33%
Rv =	0.344
ESDV =	1403.9 c.f.
75% Req'd Pond Storage:	1053.0
25% Req'd Rev Storage:	351.0

Storage Computation:

Elevation (ft)	Area (sf)	Average Area (sf)	Contour Interval (ft)	Incremental Volume (ft^3)	Total Volume (ft^3)
360.00	599				0
		1094.0	1.00	1094.0	
361.00	1589				1094

Stormwater Management Information						
Lot/Parcel Number	Facility Name & Number	Practice Type	Public	Private	HOA Maintains	Misc.
OS4	MB1	QUALITY AND QUANTITY		X	YES	

GENERAL NOTES

1. SUBJECT PROPERTY IS ZONED R-SC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
2. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
3. THE PROJECT BOUNDARY AND ON-SITE TOPOGRAPHY ARE BASED ON FIELD RUN SURVEY BY BENCHMARK ENGINEERING, INC, DECEMBER, 2022. THE OFF-SITE TOPOGRAPHY IS BASED ON HOWARD COUNTY GIS CONTOURS. EXISTING UTILITIES ARE BASED ON DESIGN PLANS AND AS-BUILTS.
4. THERE ARE NO WETLANDS, STREAMS, THEIR BUFFERS, 100-YEAR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES WITH MORE THAN 20,000SF OF CONTIGUOUS AREA LOCATED ON THIS PROJECT SITE.
5. THIS SITE IS WITHIN THE METROPOLITAN DISTRICT.
6. TO THE BEST OF OUR KNOWLEDGE AND INFORMATION THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES LOCATED ON THIS SITE.
7. THE ENVIRONMENTAL FINDINGS LETTER WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. NOVEMBER 2022.
8. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS BECAUSE IT HAS AN AREA LESS THAN 40,000 SF.
9. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT PLAN.
10. 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 AND/OR SITE DEVELOPMENT PLAN STAGES. THEREFORE, THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES.
11. STORMWATER MANAGEMENT PRACTICES SHOWN ON THIS PLAN ASSUME ADEQUATE SOIL BORING TEST RESULTS. THE DESIGN MAY NEED TO BE ADJUSTED AT THE SITE DEVELOPMENT PLAN STAGE AFTER SOIL BORING TESTING HAS BEEN COMPLETED AND AN ALTERNATE PRACTICE MAY NEED TO BE UTILIZED.
12. THE SEDIMENT AND EROSION CONTROL SHOWN IN THIS PLAN SET IS A SCHEMATIC PRELIMINARY DESIGN. A MORE DETAILED DESIGN COMPLETE WITH SEQUENCE OF CONSTRUCTION, NOTES, DETAILS AND COMPUTATIONS SHALL BE PROVIDED AT THE SITE DEVELOPMENT PLAN STAGE.
13. THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THIS PLAN IS AN APPROXIMATION OF THE SIZE, SHAPE, AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN FULLY DESIGNED AND THE ACTUAL DESIGN MAY CHANGE, ALTERING THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT.

SITE ANALYSIS DATA/TABULATION

A) TOTAL PROJECT AREA.......... 0.82 ±AC.
B) AREA OF WETLANDS AND BUFFER.......... 0.00 ±AC.
C) AREA OF 100-YR. FLOODPLAIN AND BUFFER.......... 0.00 ±AC.
D) AREA OF FOREST.......... 0.00 ±AC.
E) AREA OF STEEP SLOPES 15% OR GREATER.......... 0.00 ±AC.
F) ERODIBLE SOILS.......... 0.82 ±AC.
G) AREA OF PLAN SUBMISSION.......... 0.60 ±AC.
H) LIMIT OF DISTURBED AREA.......... 0.60± AC.
I) GREEN OPEN AREA.......... 0.43± AC.
J) IMPERVIOUS COVER.......... 0.23± AC.
K) PRESENT ZONING DESIGNATION.......... R-SC
L) PROPOSED USES FOR THE SITE: SINGLE FAMILY DETACHED

(N-2) Disconnection of Non-Rooftop Runoff

Target PE:	1.0		
Total DA:	2288 SF		
Impervious:	1144 SF		
Area of Filter Strip:	1144 SF	ok	
Rv:	0.50		
Pe Reduction for Non-Rooftop Disconnection			
Length of contributing area:	5 feet		
Length of impervious area:	5 feet		
Length of filter strip:	5 feet		
	MAX. all imp. treated	1 /1 Impervious ratio	
	MAX. all imp. treated	1 /1 Pervious ratio	
	Reduction to Target Pe	**1.0** inches	
ESDv Required:	95		
ESDv Provided:	95		

SOILS LEGEND			
MAP SYMBOL	SOIL GROUP	SOIL TYPE	"K" FACTOR
LoB*	C	LEGORE-MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	0.64

THERE ARE NO HYDRIC SOILS ON-SITE. TAKEN FROM NRCS WEBSITE, NOVEMBER 2022.
*HIGHLY ERODIBLE SOILS: K>0.35 AND >5%, OR SOILS >15% SLOPES.
THE ENTIRE SITE IS THE SAME SOIL (LoB). BASED ON BORING RESULTS ON THE ADJACENT SITE THERE ARE PERMEABLE SOILS IN THE AREA, AND A SOIL INVESTIGATION WILL BE COMPLETED BEFORE THE FINAL DESIGN, TO CONFIRM DRYWELL FEASIBILITY.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 2.15.23
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 2/13/23
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
3300 NORTH RIDGE ROAD ▲ SUITE 140 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND — ALICE A. MILLER — 28376 — PROFESSIONAL ENGINEER

BEI-AAM
2023.02.08 09:48:04 -05'

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. 28376, Expiration Date: 1-1-2025

OWNER:
JOHN CONNORS
9693 GERWIG LANE
SUITE L
COLUMBIA, MARYLAND 21046
410-792-2565

DEVELOPER:
CORNERSTONE HOMES, LLC
9693 GERWIG LANE
SUITE L
COLUMBIA, MARYLAND 21046
410-792-2565

HUNTINGTON POINT II
LOTS 1 - 3 AND OPEN SPACE LOT 4

9470 VOLLMERHAUSEN DR. COLUMBIA, MARYLAND 21046
TAX MAP: 42 – GRID: 22 – PARCEL: 351
ZONED: R-SC
ELECTION DISTRICT NO. 6 – HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

DATE: FEBRUARY 2023		BEI PROJECT NO. 3140	
DESIGN: AAM	CHECK: CAM	SCALE: AS SHOWN	SHEET 1 OF 1

ECP-23-024