

- NOTES:**
- EXISTING ZONING: R-SC
 - DEED REFERENCE: 10057/327
 - SITE ANALYSIS DATA
 - GROSS AREA OF SITE: 0.40 AC. (17,424 SF)
 - EXISTING IMPERVIOUS AREA: 0.27 AC. (ON-SITE)
 - EXISTING SITE USE: VACANT LAND
 - EXISTING WETLANDS AND THEIR BUFFERS: 0.0 AC.
 - EXISTING FLOODPLAINS: 0.0 AC.
 - EXISTING STEEP SLOPES 15% AND GREATER: 0.0 AC.
 - EXISTING ERODIBLE SOILS: 0.00 AC.
 - AREA OF PLAN SUBMISSION:
 - LIMIT OF DISTURBANCE: 0.52 AC.
 - IMPERVIOUS AREA: 0.26 AC.
 - REVEGETATED AREA: 0.37 AC.
 - PROPOSED USE: PUBLIC ROADWAY
 - PREVIOUS SUBMITTAL: PLAT BOOK 61, FOLIO 47
 - THIS DISTURBANCE WILL UTILIZE SEDIMENT AND EROSION CONTROL FEATURES PREPARED UNDER AN APPROVED FINAL ROAD CONSTRUCTION PLANS.
 - TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD SURVEYED TOPOGRAPHY PREPARED BY BENCHMARK ENGINEERING, INC. DATED MARCH, 2021 AND SUPPLEMENTED WITH 2018 HOWARD COUNTY GIS CONTOURS.
 - THERE ARE NO IDENTIFIABLE ENVIRONMENTAL FEATURES ON SITE.
 - TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO CEMETERIES ON-SITE.
 - THE PROPOSED ROAD EXTENSION PROJECT WILL RESULT IN LESS THAN 20,000 SF OF FOREST CLEARING. AS SUCH, THIS ACTIVITY IS EXEMPTED FROM THE FOREST CONSERVATION ACT PER COUNTY CODE SECTION 16.1202(b)(2)(v) - LINEAR PROJECT NOT OTHERWISE EXEMPT THAT RESULT IN LESS THAN 20,000 SF OF FOREST CLEARING. A DECLARATION OF INTENT IS REQUIRED FOR THIS PROJECT AND SHALL BE PROVIDED AT FINAL PLAN FILING APPLICATION.
 - APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT PLAN REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE FINAL PLAN STAGE. 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.
 - A SOIL BORING WILL BE REQUIRED AND PROVIDED AT THE FINAL PLAN STAGE TO SUPPORT THE PROPOSED MBR-1.

SWM DESIGN NARRATIVE:

IN ORDER TO PROTECT NATURAL RESOURCE AREAS, 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 AREAS. THIS DESIGN INCORPORATES ADEQUATE TREATMENT AND STORAGE IN ORDER TO CREATE THE LEAST POSSIBLE STORMWATER RUNOFF. THE RUNOFF WILL BE TREATED ON-SITE USING APPROVED MDE METHODS. OUTFALLS GENERALLY CORRESPOND WITH THE NATURAL DRAINAGE PATTERNS FOR THE SITE.

THE SITE IS WITHIN A DEVELOPED SUBURBAN NEIGHBORHOOD CONSISTING PRIMARILY OF SINGLE-FAMILY LOTS. THE LOTS WERE CREATED IN THE LATE 1800'S BY A RECORDED PLAT IN THE LAND RECORDS OF HOWARD COUNTY, MD. THE SWM PRACTICES CHOSEN ARE SELECTED TO MINIMIZE THE DISTURBANCE WHILE PROVIDING ESD FOR THE AREA DRAINING TO IT, BASED ON THE PRESENCE OF ONLY 'C' SOILS, THERE ARE LIMITED METHODS WHICH MAY BE UTILIZED ON THIS SITE.

THE TARGET PE FOR THIS SITE WAS CALCULATED TO BE 1.5 HOURS. BY USING ENVIRONMENTAL SITE DESIGN (ESD) 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 WILL BE PROVIDED BY ONE (1) MICRO BIORETENTION FACILITY M-6; (MBR) AND A LINEAR GRASS SWALE (M-8) ALONG THE PROPOSED PUBLIC ROADWAY. THESE FEATURES PROVIDE TREATMENT FOR THE PROPOSED PUBLIC ROADWAY, SIDEWALK AND DRIVEWAYS WITHIN THE PUBLIC RIGHT-OF-WAY. THE MBR FACILITY WILL BE IN THE PUBLIC RIGHT OF WAY AND MAINTAINED BY HOWARD COUNTY SINCE IT IS ACCEPTING FLOW FROM THE PUBLIC ROAD. A PORTION OF THE EAST HALF OF THE PROPOSED ROADWAY WILL DRAIN TO FLOW-THRU STORM DRAIN INLETS THAT WILL DISCHARGE INTO THE PROPOSED GRASS SWALES. THE (M-8) GRASS SWALES HAVE BEEN DESIGNED TO ENSURE THAT THE VELOCITIES, DEPTH OF FLOW AND SLOPES DO NOT EXCEED THE DESIGN PARAMETERS, PER THE 2000 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 5.

THE (M-6) MBR FACILITY WILL TREAT THE WESTERN HALF OF THE PROPOSED ROADWAY, SIDEWALK AND DRIVEWAYS WITHIN THE RIGHT-OF-WAY. GROUNDWATER RECHARGE (REV) IS FULLY ADDRESSED BY THE USE OF A STONE CHAMBER BENEATH THE M-6 MICRO-BIORETENTION. THERE ARE NO REQUIRED DRAINAGE EASEMENTS PROPOSED AT THIS TIME. THE DESIGN INCORPORATES ADEQUATE TREATMENT AND STORAGE IN ORDER TO CREATE THE LEAST POSSIBLE STORMWATER RUNOFF AND PREVENT ANY ADVERSE EFFECTS TO THE DEVELOPMENT AND ITS ADJACENT PROPERTIES.

NO WAIVERS OR ALTERNATIVE COMPLIANCE'S ARE CURRENTLY ANTICIPATED.

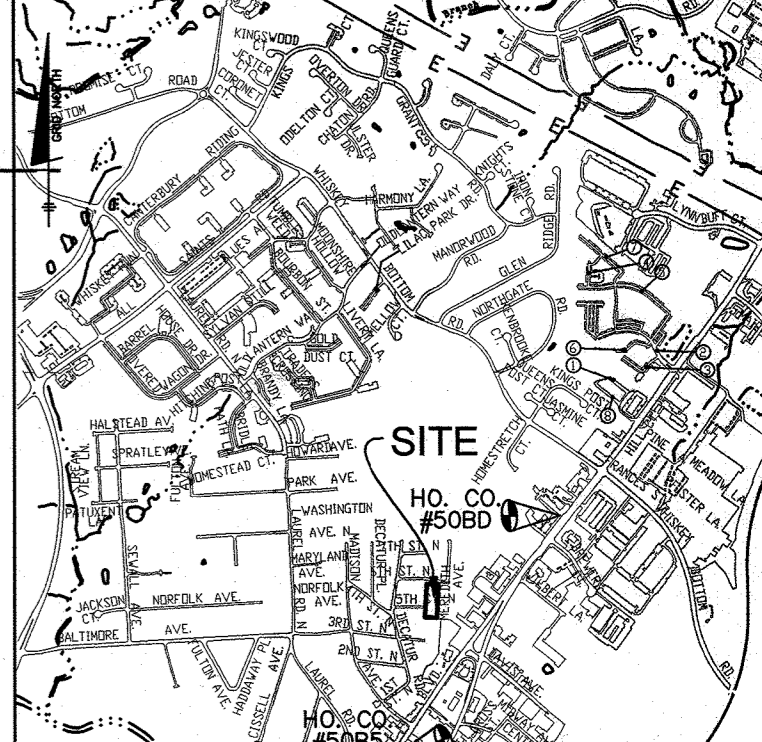
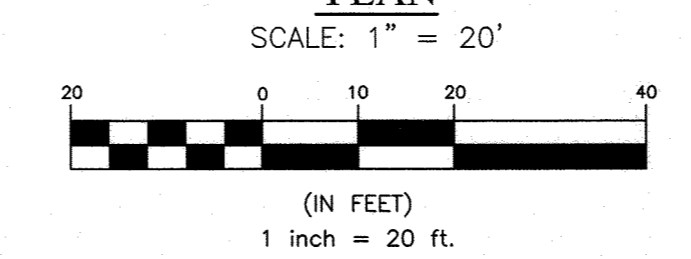
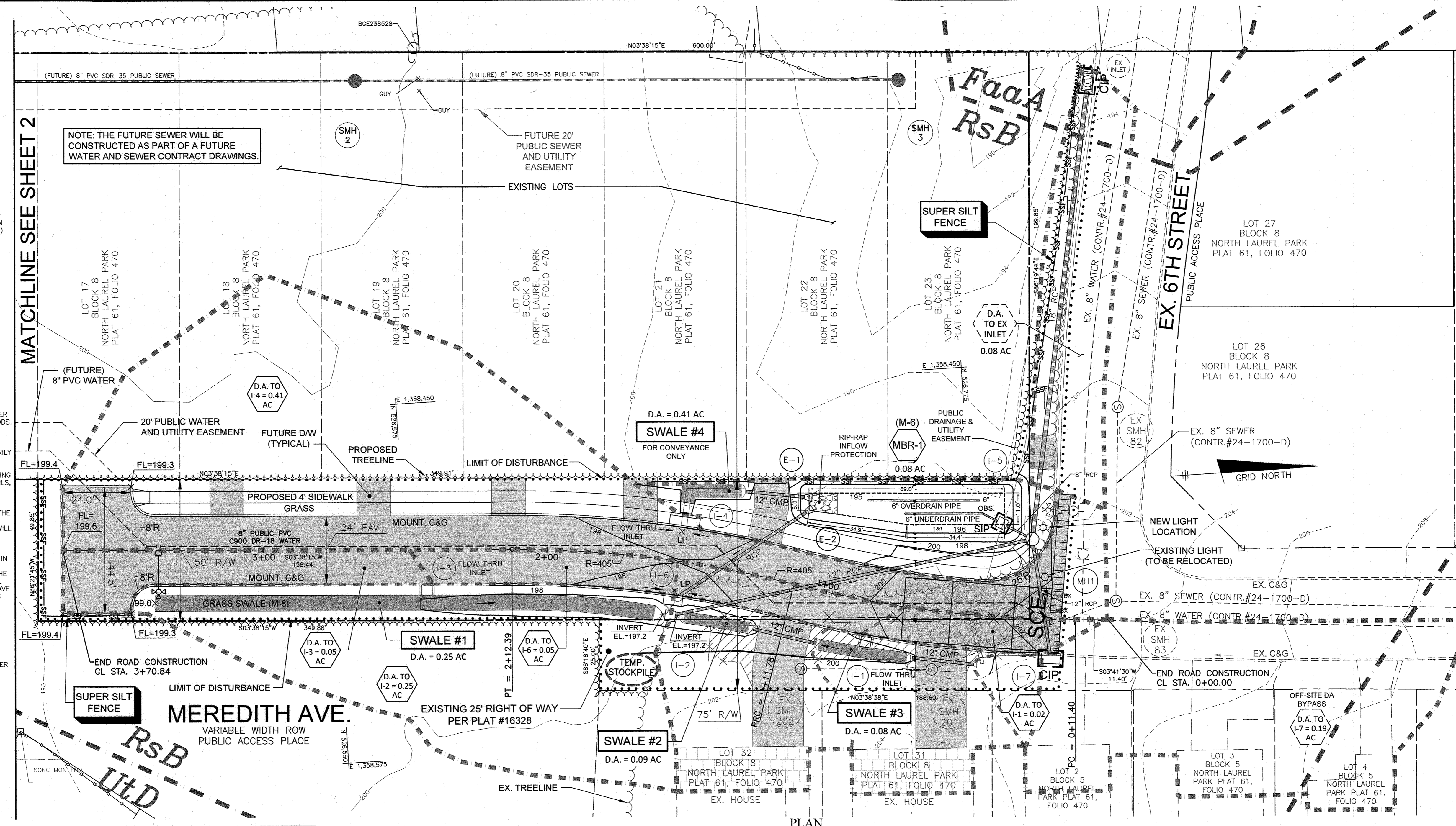
Facility	Drainage Area	Impervious	I (%)	Rv	Req'd ESDv (cf)	Ponded Storage (75%) (cf)	Req'd Stone Storage (cf)	Stone Storage Provided (cf)	Total ESDv	Pe Prov.	Rev (cf)	Notes
MBR-1 (M-6)	21,240	10,792	48%	0.484	1200	900	300	337	1263	1.5	340	
SW-1 (M-8)	10,808	1,986	18%	0.215	310	627	300	337	627	3.2		
SW-2 (M-8)	4,696	1,690	46%	0.464	135	261	300	337	261	1.4		
SW-3 (M-8)	3,988	1,382	37%	0.387	90	209	300	337	209	1.6		
TOTALS	15,850	15,850			1735	2023	337	337	2360		340	

SEC REPORT-MEREDITH AVENUE													
SWALE #1 STUDY POINT													
Event	DA SQFT	Q CFS	Slope %	Mannings 'n'	Width FT	Bank Slope	Channel Depth FT	Flow Depth FT	Velocity FPS	Shear Stress LB/SQFT	V less than 8.5?	V less than 4.0?	Shear Stress less than 2.0?
2 Year	10,863	0.55	1.1%	0.03	5.5	3:1:3:1	1.0	0.10	0.95	0.07	okay	okay	okay
10 Year	10,863	1.06	1.1%	0.03	5.5	3:1:3:1	1.0	0.14	1.28	0.10	okay	okay	okay
SWALE #2 STUDY POINT													
Event	DA SQFT	Q CFS	Slope %	Mannings 'n'	Width FT	Bank Slope	Channel Depth FT	Flow Depth FT	Velocity FPS	Shear Stress LB/SQFT	V less than 8.5?	V less than 4.0?	Shear Stress less than 2.0?
2 Year	3,727	0.23	1.5%	0.03	4	3:1:3:1	1.0	0.07	0.78	0.07	okay	okay	okay
10 Year	3,727	0.42	1.5%	0.03	4	3:1:3:1	1.0	0.42	2.91	0.39	okay	okay	okay
CONVEYANCE SWALE #4 STUDY POINT													
Event	DA SQFT	Q CFS	Slope %	Mannings 'n'	Width FT	Bank Slope	Channel Depth FT	Flow Depth FT	Velocity FPS	Shear Stress LB/SQFT	V less than 8.5?	V less than 4.0?	Shear Stress less than 2.0?
2 Year	17,736	0.99	2.4%	0.03	2	3:1:3:1	1.0	0.17	1.91	0.25	okay	okay	okay
10 Year	17,736	1.83	2.4%	0.03	2	3:1:3:1	1.0	0.23	2.33	0.34	okay	okay	okay

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 1/7/22

DATE: 1/9/22



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 40, GRID B8

BENCH MARKS (NAD83)

HO. CO. No. 5085 ELEV. 177.427'
NEAR RT-1 BY DAMS AVE
12.2 FEET FROM CORNER OF PARKING LOT
N 524999.311 E 1357925.729

HO. CO. No. 508D ELEV. 245.803'
BY RT-1 S OF WHISKEY BOTTOM RD
6.9 FEET FROM FIRE HYDRANT
17.2 FEET FROM SSMH
N 527593.830 E 1359803.018

LEGEND

- PROPERTY BOUNDARY
- ADJACENT PROPERTY LINES
- PROPOSED CONTOUR LINES
- CONTOUR LINES
- SOIL DELINEATION
- EXISTING STRUCTURES
- PROPOSED STRUCTURE
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- DRAINAGE AREA
- STABILIZATION MATTING
- CURB INLET PROTECTION
- STANDARD INLET PROTECTION
- EXISTING IMPERVIOUS (TO BE REMOVED)

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
Rsb	C	C	C	RUSSETT FINE SANDY LOAM 2 TO 5 PERCENT SLOPES	0.24
Ud	D	D	D	URBAN LAND-UDORTHERNS COMPLEX 0 TO 15 PERCENT SLOP	0.24

BENCHMARK ENGINEERS & PLANNERS, INC.

8480 BALTIMORE NATIONAL PIKE A SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

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. 22390, Expiration Date: 6-30-2023.

OWNER/DEVELOPER:

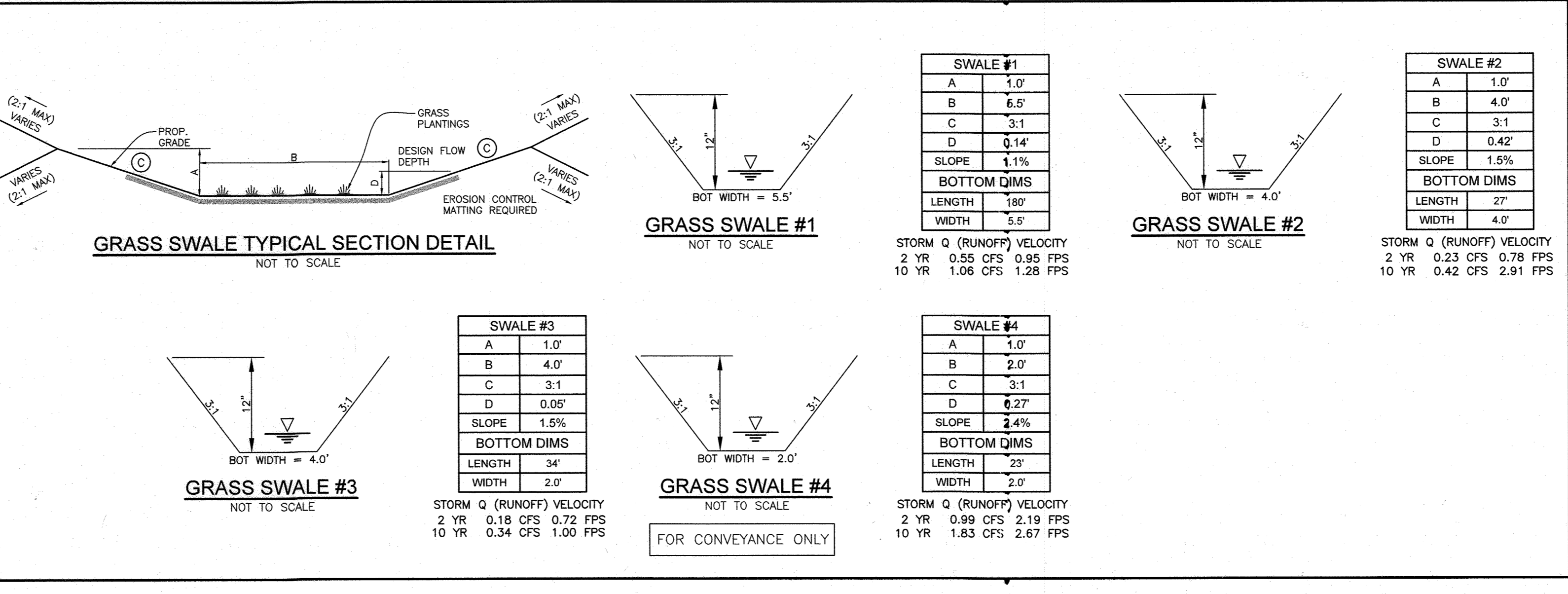
MEREDITH AVE. LLC
517 HORN POINT DRIVE
ANNAPOLIS, MD 21403
410-336-0708

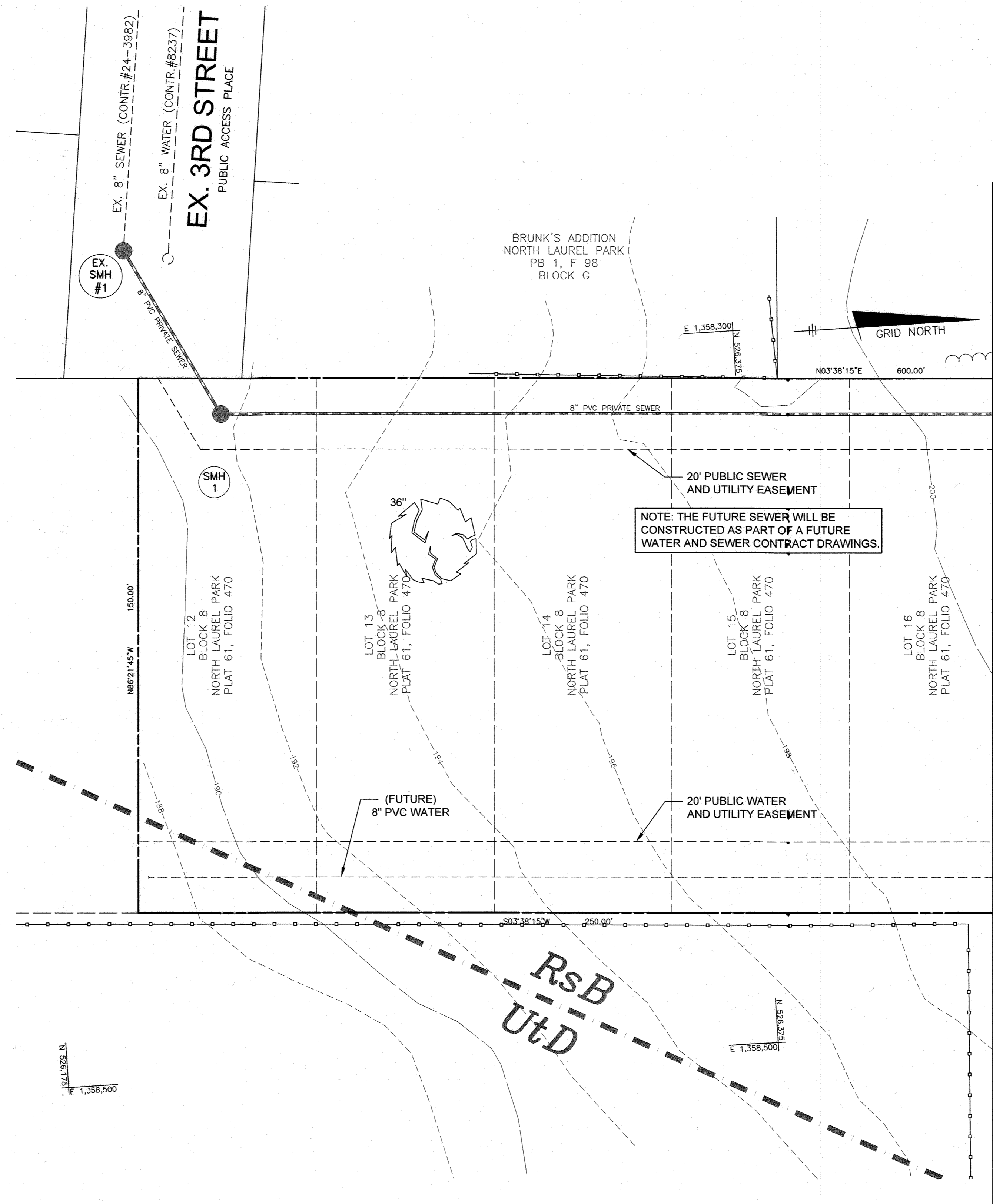
MEREDITH AVENUE
NORTH LAUREL PARK

TAX MAP: 50 GRID: 4 PARCEL: 426
ZONED: R-SC
ELECTION DISTRICT NO. 6TH HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN
STORMWATER MANAGEMENT AND
SEDIMENT & EROSION CONTROL PLAN

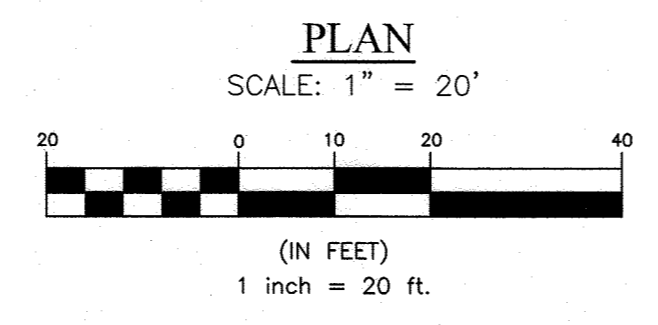
DATE: JANUARY, 2022 BEI PROJECT NO. 3058
DESIGN: LDD DRAFT: LDD SCALE: AS SHOWN SHEET 1 OF 2





MATCHLINE SEE SHEET 1

LEGEND	
	PROPERTY BOUNDARY
	ADJACENT PROPERTY LINES
	PROPOSED CONTOUR LINES
	CONTOUR LINES
	SOIL DELINEATION
	EXISTING STRUCTURES



SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND					
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
RSB		C	C	RUSSETT FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	0.24
LDD		D	C	URBAN LAND-UDORTHERTS COMPLEX 6 TO 15 PERCENT SLOP	0.24

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
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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. 22390, Expiration Date: 6-30-2023.

OWNER/DEVELOPER: MEREDITH AVE. LLC 517 HORN POINT DRIVE ANNAPOLIS, MD 21403 410-336-0708	MEREDITH AVENUE NORTH LAUREL PARK, BLOCK 8, LOTS 12-23
	TAX MAP: 50 GRID: 4 PARCEL: 426 ZONED: R-SC ELECTION DISTRICT NO. 6th HOWARD COUNTY, MARYLAND
	ENVIRONMENTAL CONCEPT PLAN STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
DATE: JANUARY, 2022 SCALE: AS SHOWN	BEI PROJECT NO. 3058 SHEET 2 OF 2

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
	2/7/22 DATE
	2/9/22 DATE