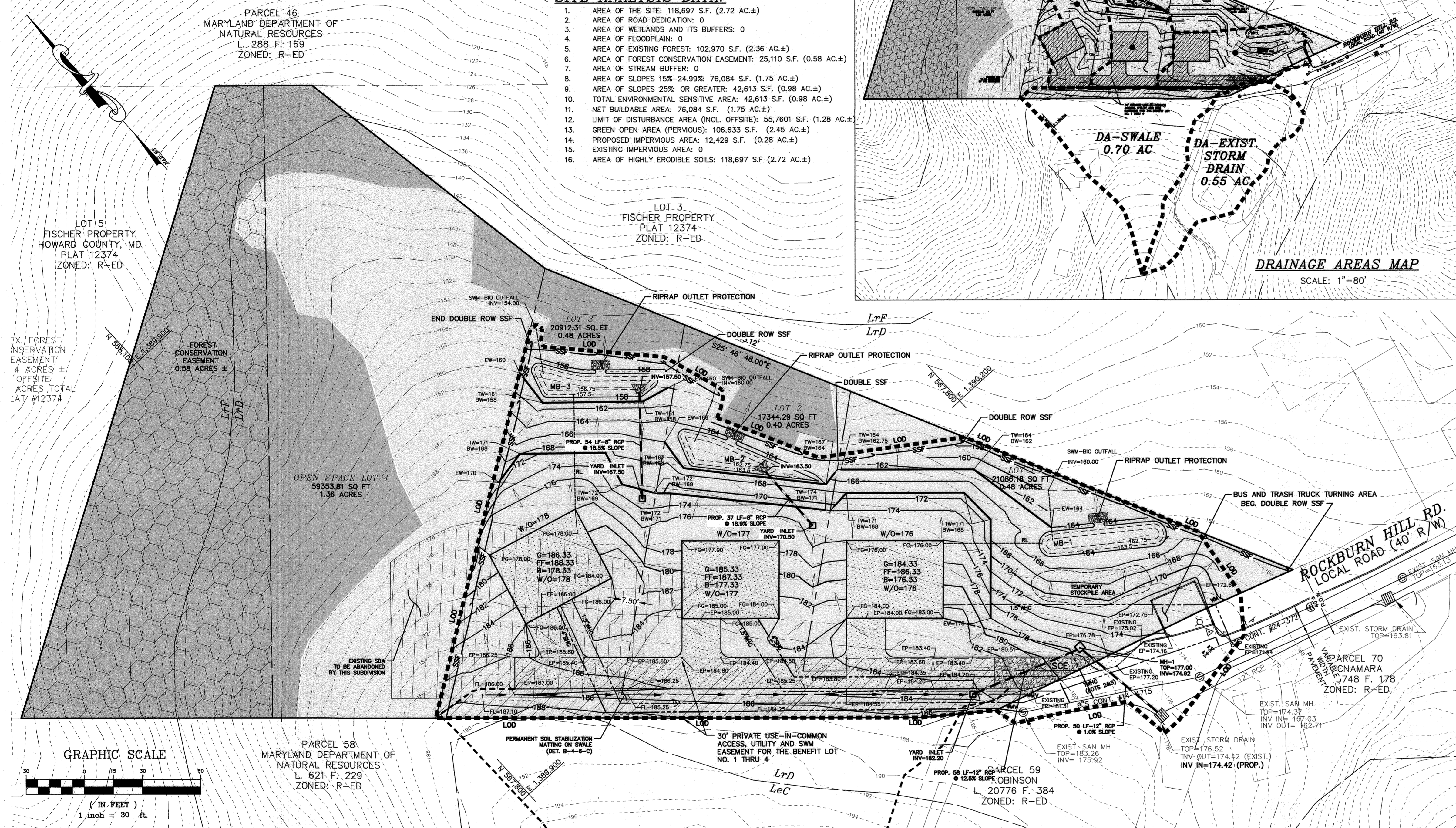


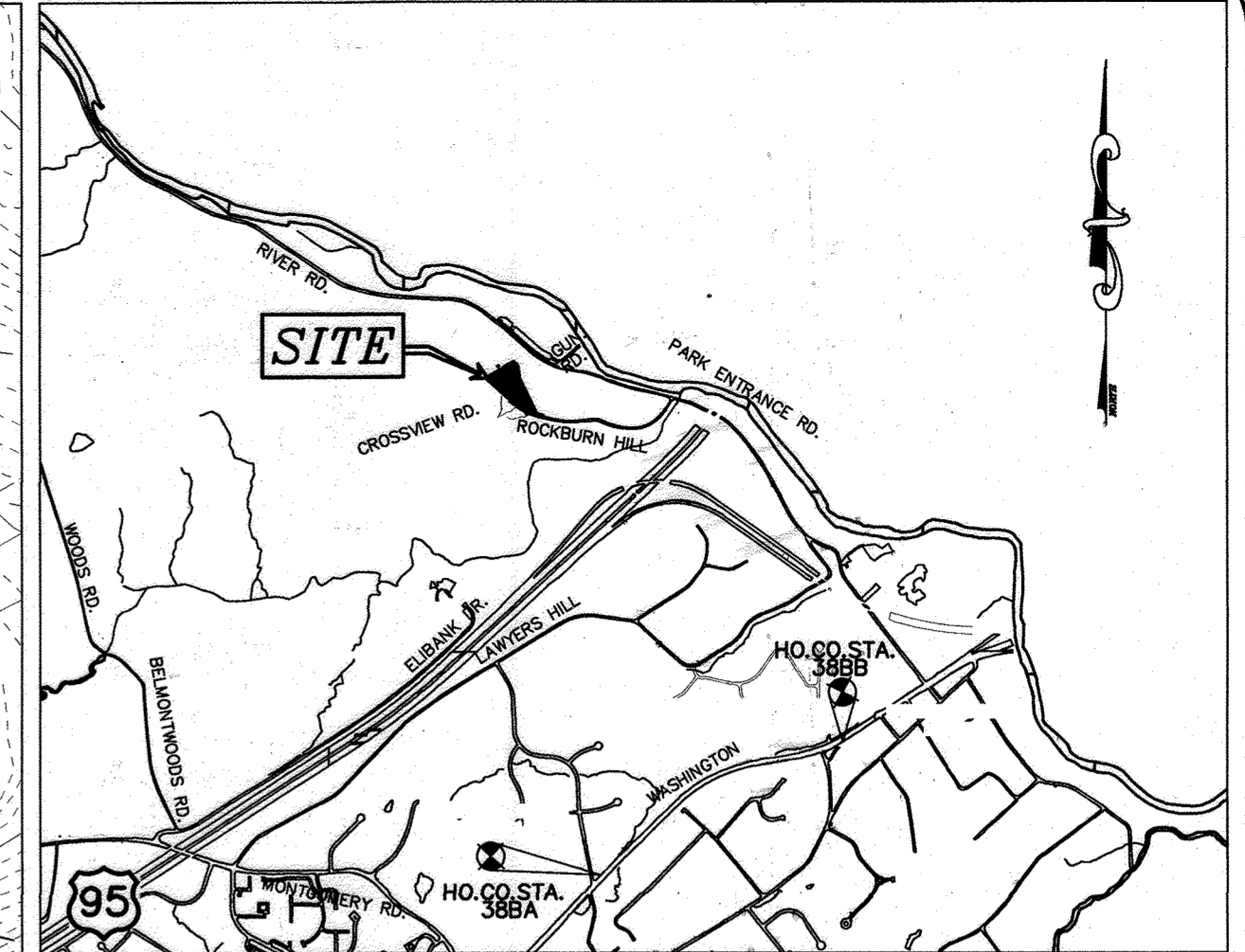
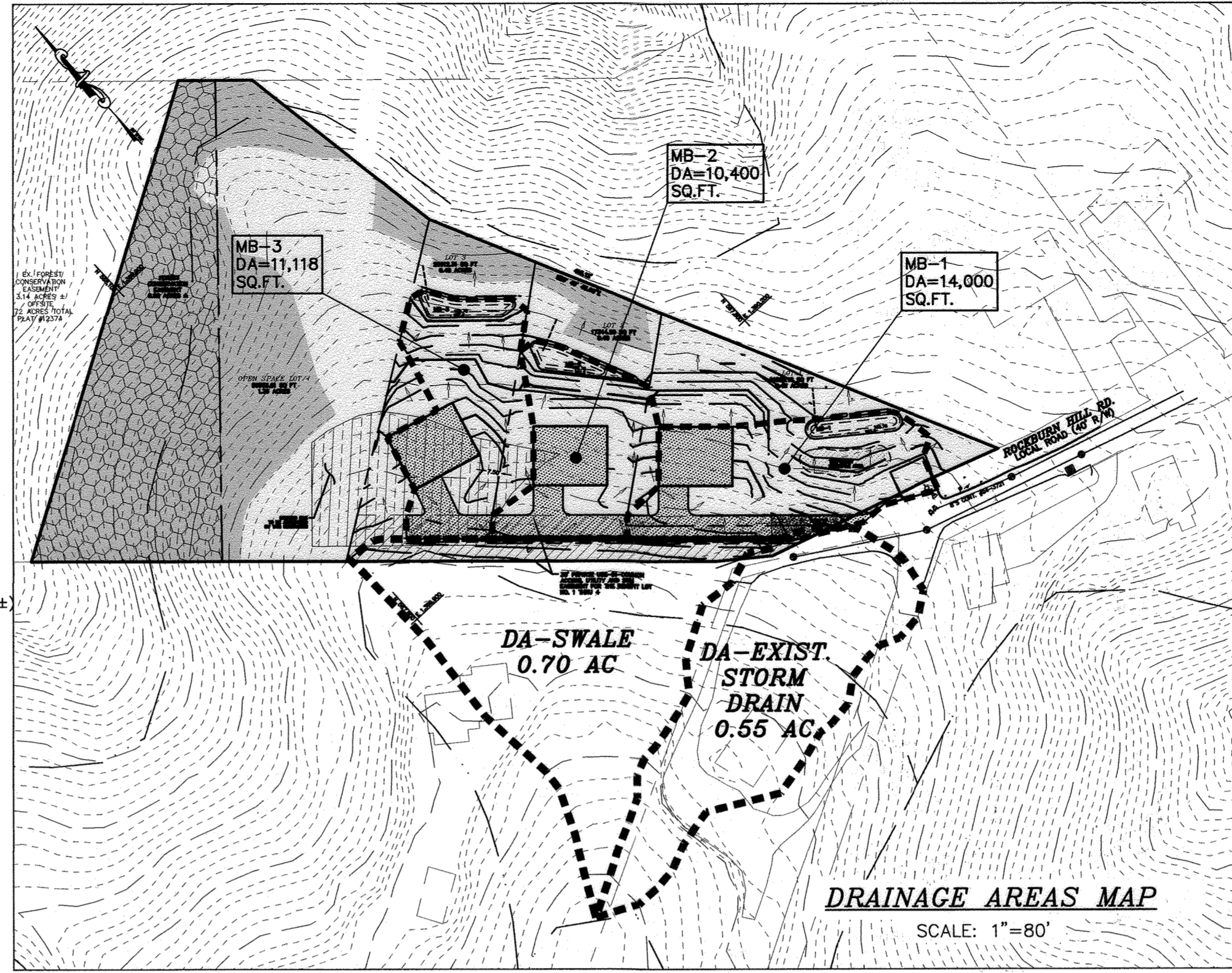
SWM PRACTICES SCHEDULE

AREA	PROPOSED PRACTICES	REQUIRED ESDv	PROVIDED ESDv	REQUIRED Pe	PROVIDED Pe
LOT 1	M-6, MICRO-BIORETENTION (MB-1)	458 CF	459 CF	1.0"	1.00"
LOT 2	M-6, MICRO-BIORETENTION (MB-2)	334 CF	380 CF	1.0"	1.14"
LOT 3	M-6, MICRO-BIORETENTION (MB-3)	315 CF	408 CF	1.0"	1.29"



SITE ANALYSIS DATA:

1. AREA OF THE SITE: 118,697 S.F. (2.72 AC.±)
2. AREA OF ROAD DEDICATION: 0
3. AREA OF WETLANDS AND ITS BUFFERS: 0
4. AREA OF FLOODPLAIN: 0
5. AREA OF EXISTING FOREST: 102,970 S.F. (2.36 AC.±)
6. AREA OF FOREST CONSERVATION EASEMENT: 25,110 S.F. (0.58 AC.±)
7. AREA OF STREAM BUFFER: 0
8. AREA OF SLOPES 15%-24.99%: 76,084 S.F. (1.75 AC.±)
9. AREA OF SLOPES 25% OR GREATER: 42,613 S.F. (0.98 AC.±)
10. TOTAL ENVIRONMENTAL SENSITIVE AREA: 42,613 S.F. (0.98 AC.±)
11. NET BUILDABLE AREA: 76,084 S.F. (1.75 AC.±)
12. LIMIT OF DISTURBANCE AREA (INCL. OFFSITE): 55,7601 S.F. (1.28 AC.±)
13. GREEN OPEN AREA (PERVIOUS): 106,633 S.F. (2.45 AC.±)
14. PROPOSED IMPERVIOUS AREA: 12,429 S.F. (0.28 AC.±)
15. EXISTING IMPERVIOUS AREA: 0
16. AREA OF HIGHLY ERODIBLE SOILS: 118,697 S.F. (2.72 AC.±)



LEGEND

- DRAINAGE AREA
- ▭ IMPERVIOUS AREA TREATED BY MICRO-BIORETENTION (M-6)
- SUPER SILT FENCE
- LIMITS OF DISTURBANCE
- PERMANENT DIVERSION SWALE
- MICRO-BIORETENTION
- EXISTING TREE LINE
- ▨ AREA OF STEEP SLOPES 25%
- ▨ AREA OF SLOPES 15%-24.99%
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- ▨ FOREST CONSERVATION EASEMENT

SOIL DESCRIPTIONS

SYMBOL	RATING	NAME	Kw FACTOR	MAP	ERODIBLE SOILS
LwC	C	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	0.64	17	YES
LrD	C	LEGORE-RELAY GRAVELLY LOAMS, 15 TO 25 PERCENT SLOPES, VERY STONY	0.64	17	YES
LfF	C	LEGORE-RELAY GRAVELLY LOAMS, 25 TO 65 PERCENT SLOPES, VERY STONY	0.64	17	YES

10-YEAR STORM CALCULATIONS:

EXISTING STORM DRAIN (PRE-DEV)
 Q=0.48
 SLOPE = 12.5%
 D=12"
 V=4.47 (4.47/0.55)
 V=1.18 CFS

PERMANENT SWALE (OFFSITE)
 Q=0.48
 SLOPE = 12%
 D=12"
 V=4.47 (4.47/0.70)
 V=1.36 CFS

CHANNEL SLOPE = 1.93%
 SIDE SLOPES = 3:1
 DEPTH = 1'
 MANNING'S N = 0.026
 FLOW DEPTH = 0.42'
 VELOCITY = 2.57 FPS

PROP. 12" RCP (SWALE TO JB)
 Q = 1.36 CFS
 SLOPE = 12.5%
 D = 12"
 MANNING'S N = 0.011
 FLOW DEPTH = 0.21'
 VELOCITY = 11.25 FPS

PROP. 12" RCP (JB TO EXISTING DRAIN)
 Q = 1.36 CFS
 SLOPE = 1.0%
 D = 12"
 MANNING'S N = 0.011
 FLOW DEPTH = 0.40'
 VELOCITY = 4.63 FPS

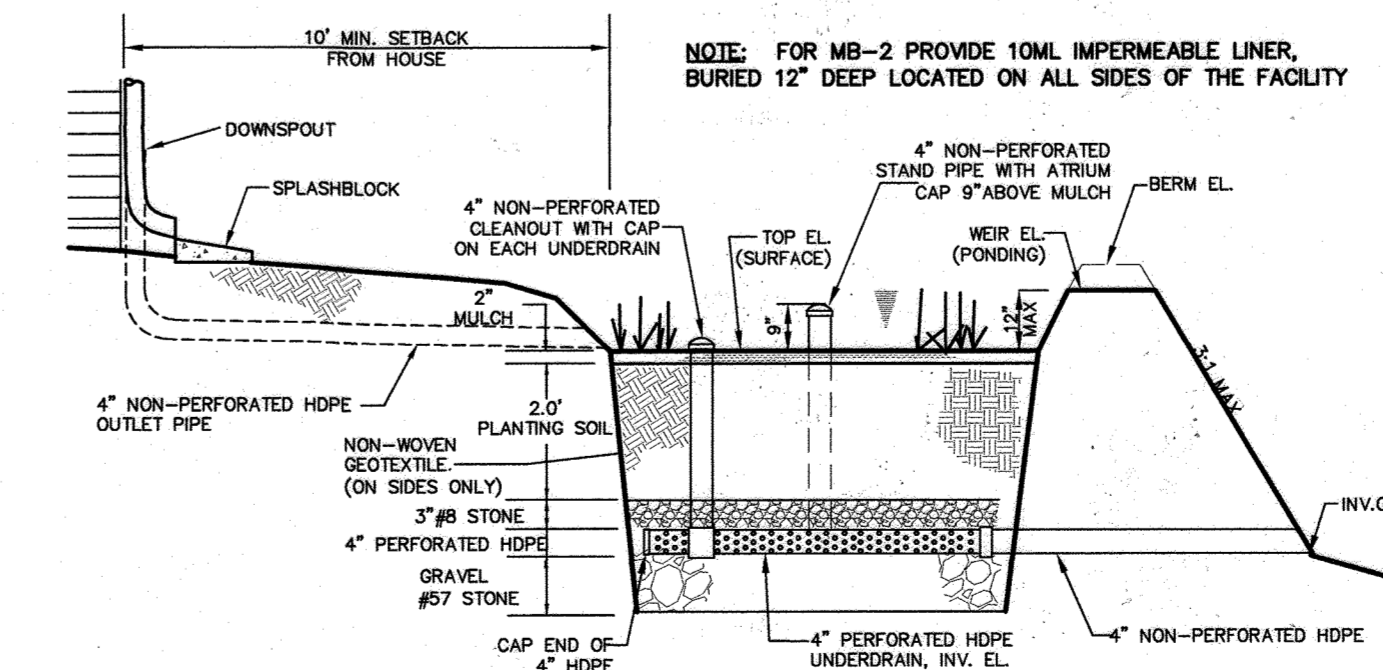
EXISTING 12" RCP (POST-DEV)
 Q = 1.36 + 1.18 = 2.54 CFS
 SLOPE = 1.0%
 D = 12"
 MANNING'S N = 0.011
 FLOW DEPTH = 0.30'
 VELOCITY = 12.8 FPS

ESD NARRATIVE:

1. NATURAL RESOURCES SUCH AS WETLANDS, STREAMS, REGULATED FOREST LAND EXIST ON-SITE. THE PROPOSED MICRO-BIORETENTION FACILITIES WILL PROVIDE STORMWATER MANAGEMENT OVER EXISTING CONDITIONS. NO TREATMENT EXISTS FOR THE EXISTING STRUCTURES AND DRIVEWAY.
2. THE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERS AS CLOSELY AS POSSIBLE. NO IMPACT IS PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS. THERE IS NO ADVERSE IMPACT OF THE ADJACENT PROPERTIES.
3. A 16' WIDE USE-IN-COMMON DRIVEWAY WILL BE USED TO SERVE AS ACCESS FOR PROPOSED LOTS. MICRO-BIORETENTION FACILITY (M-6) WILL PROVIDE STORMWATER MANAGEMENT FOR THE NEW DEVELOPMENT. THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SILT FENCES AND SUPER SILT FENCES. NO CONCENTRATION FLOW IS PROPOSED. NO SEDIMENT TRAPS OR BASINS ARE REQUIRED.
4. TABLE 5.2, SUMMARY OF SITE DEVELOPMENT STRATEGIES WERE UTILIZED TO THE EXTENT ALLOWABLE BY THE CURRENT HOWARD COUNTY ZONING AND LAND DEVELOPMENT REGULATIONS.
5. THIS PROJECT WAS DESIGNED TO MINIMIZE THE IMPERVIOUS AREAS, ESD MEASURES WERE UTILIZED IN THE FOLLOWING ORDER OF PREFERENCE: (M-6).

GENERAL NOTES:

1. THIS SUBJECT PROPERTY IS ZONED R-ED PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
2. PARCEL BACKGROUND: ADDRESS: 6178 ROCKBURN HILL ROAD, ELKDRIDGE TAX MAP 32; GRID: 14 PARCEL 1 PLAT BOOK
3. ELECTION DISTRICT: FIRST DEED REFERENCE: 15087/00129 AREA: 2.72 ACRES ± TOTAL NUMBER OF UNITS: 3 TYPE OF PROPOSED UNIT: SINGLE FAMILY DETACHED PROJECT BOUNDARY IS BASED ON A FIELD RPN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 2021 BY MILDENBERG, BOENDER & ASSOC.
4. TOPOGRAPHY SHOWN HERE IS GIS AND WAS FIELD VERIFIED BY MILDENBERG, BOENDER & ASSOC. INC. IN MAR., 2021 TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
5. HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AS PROJECTED FROM CARROLL COUNTY CONTROL STATIONS NO. 388A & 388B
 STA. 388A: N 562553.314; E 1,390,967.956; EL. 166.174 (NAVD88)
 STA. 388B: N 564007.645; E 1,393,649.926; EL. 63.655 (NAVD88)
6. SOILS LOCATION AND CLASSIFICATION BASED ON WEB SOIL SURVEY FOUND AT WEBSOILSURVEY.SCGOV.USDA.GOV.
7. APPROVAL OF THIS ECP DOES NOT CONSTITUTE ANY APPROVAL OF SUBSEQUENT SUBDIVISION OR SITE DEVELOPMENT PLANS. FURTHER COMMENTS WILL BE GENERATED UPON REVIEW OF THE APPLICABLE DEVELOPMENT PLANS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS. 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.



TYPICAL MICRO-BIORETENTION PROFILE
NOT TO SCALE

TYP. SECTION MICRO-BIORETENTION (M-6)

NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/11/23

WHEREBY I 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. 28859, EXP. DATE 08/28/25
 SAMER A. ALDIMER, P.E.
 DATE: 09/18/23

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 8318 FOREST ST. SUITE 300, ELICOTT CITY, MD 21043
 (410) 997-0298 Tel. (410) 997-0298 Fax.

PATAPSCO HILL
 A RESUBDIVISION OF LOT 4 FISCHER PROPERTY PLAT 12374
 TAX MAP 32 - PARCEL 1 - GRID 14
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 ENVIRONMENTAL CONCEPT PLAN

date: 09.18.2023
 project: 22-021
 illustration: ABC
 scale: 1"=30'
 JCB approval
 SAA approval

1 OF 1