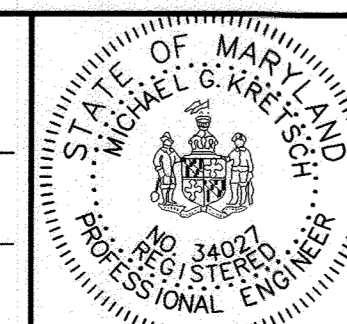


DRAINAGE AREA MAP
1" = 50 FT

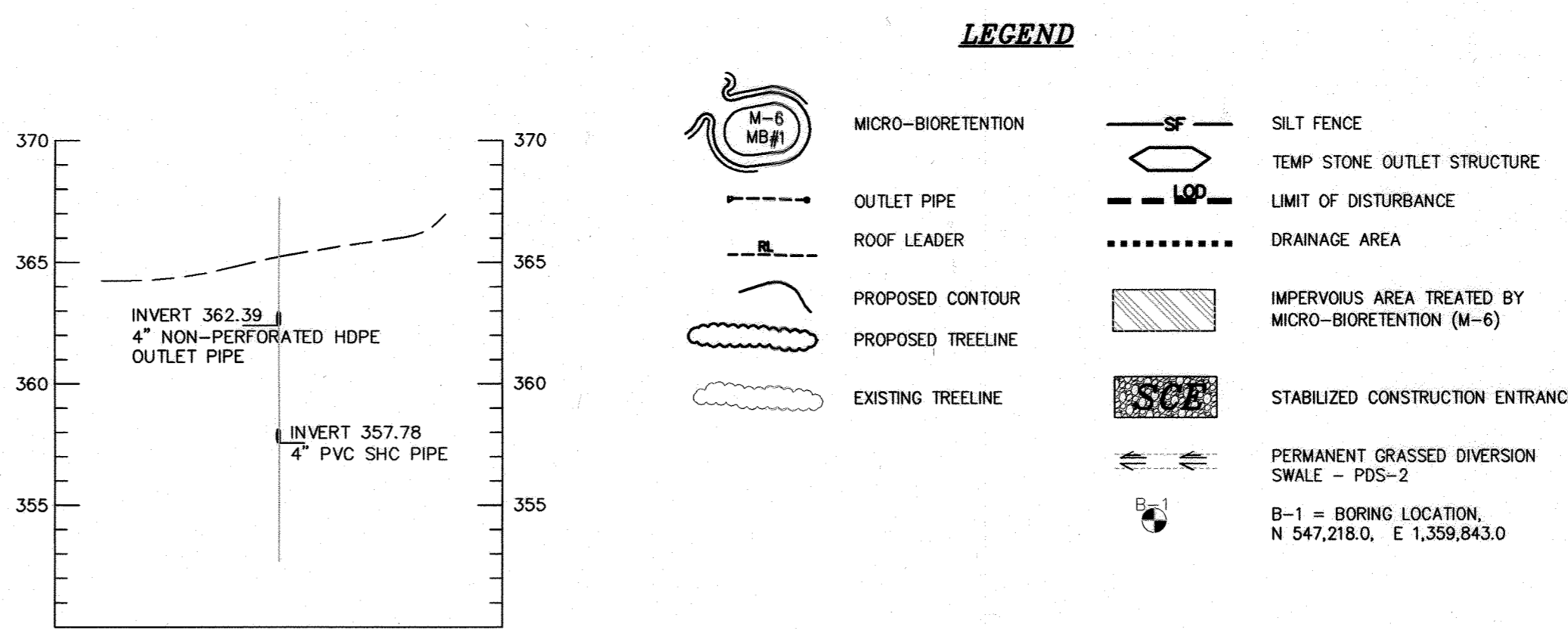
APPROVED: DEPARTMENT OF PLANNING AND ZONING

 MICHAEL KRETSCH, PROFESSIONAL ENGINEER
 DATE: 11/23/20

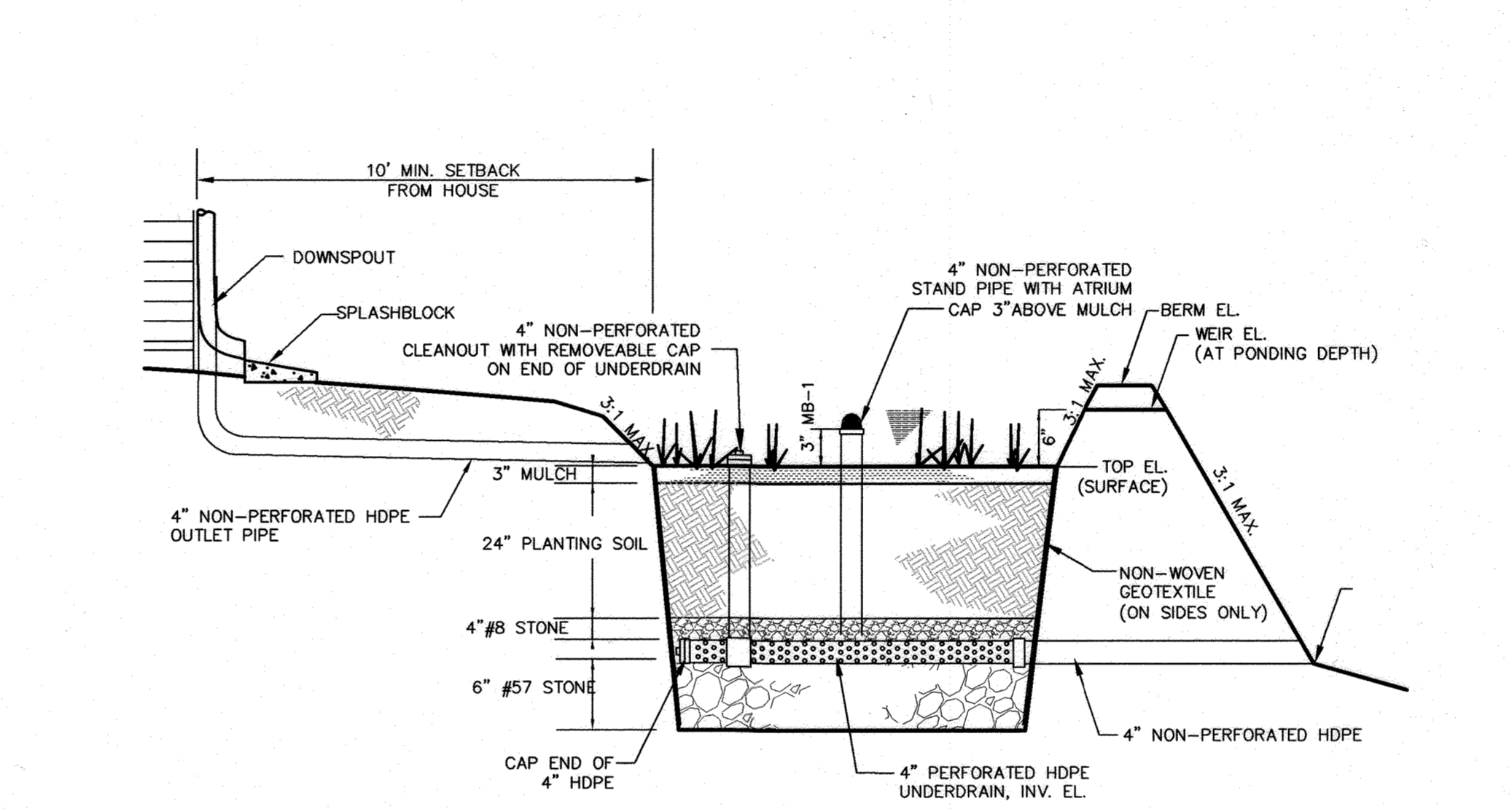


I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 34027, EXP DATE 01/16/2021
 MICHAEL KRETSCH: _____ DATE: _____

OWNER/DEVELOPER
 DEVRICK MOORE
 ALICIA MOORE
 1707 BLARNEY COURT
 SEVERN MD 21144
 240-319-9825

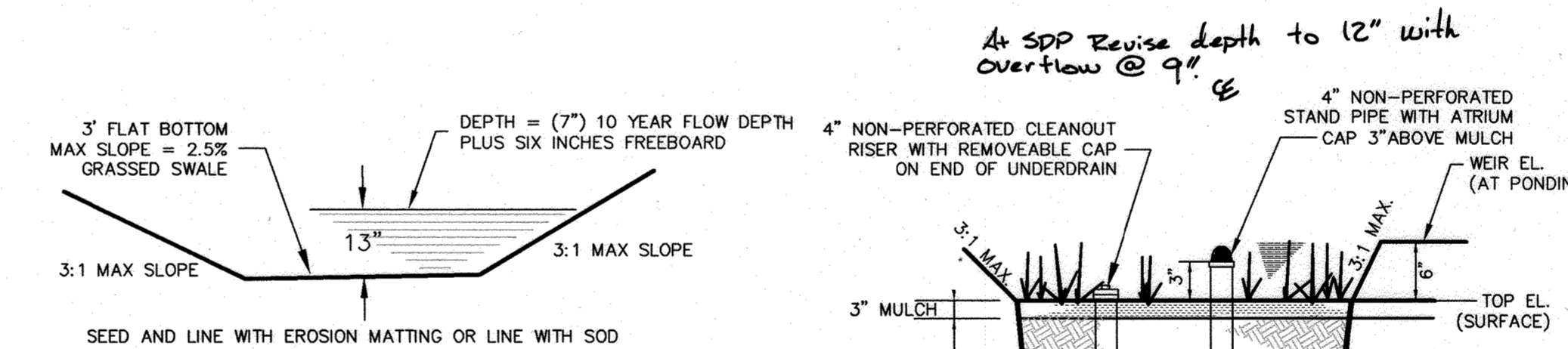


SECTION A-A PIPES CROSSING
1" = 5' VERTICAL, 30' HORIZONTAL

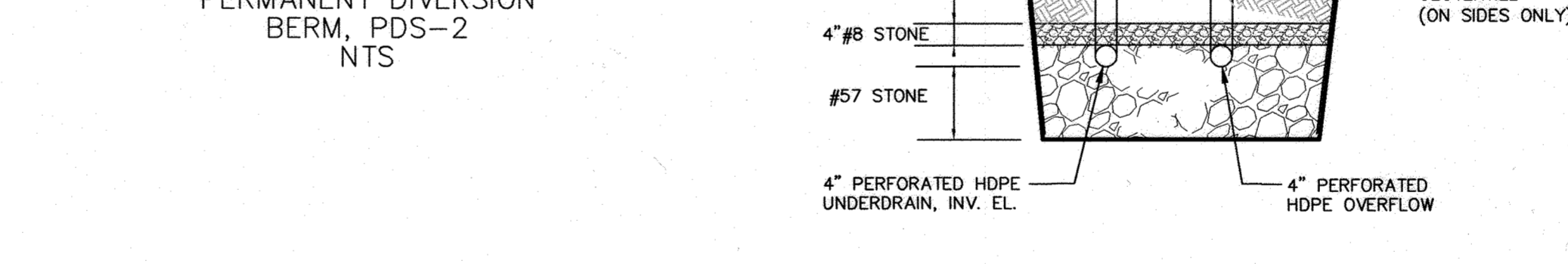


TYPICAL MICRO-BIORETENTION PROFILE
NTS

NOTE- THE ENTIRE DRAINAGE AREA MUST BE FULLY STABILIZED BEFORE RUNOFF CAN BE DIRECTED TO THE FACILITY.



TYPICAL GRASS SWALE SECTION
PERMANENT DIVERSION BERM, PDS-2
NTS



TYPICAL MICRO-BIORETENTION SECTION
NTS

OUTLET STABILITY

HDPE N = 0.012, GRASS N = 0.15 $V = 1.49 \sqrt{N(AW/PW)^{0.67} S^{0.5}}$

| DESCRIPTION | DIM OR DIAM | AW | PW | AW/PW ^{0.67} | SLOPE | VELOCITY FPS | SHEAR |
|-------------|-------------|----|----|-----------------------|-------|--------------|-------|
| #4\"/> | | | | | | | |

SHEAR STRESS = 62.4 LB/CU.FT. x (AW/PW) x SLOPE, UNITS LBS/SQ.FT.
 VELOCITY 0.24 FPS IS STABLE ON ANY SURFACE, SHEAR LESS THAN 2.0 MAY BE MULCHED
 GRASS SWALE CALCULATED FOR 10 YEAR STORM, STEEPEST DESIGN SLOPE

SWM PRACTICES SCHEDULE

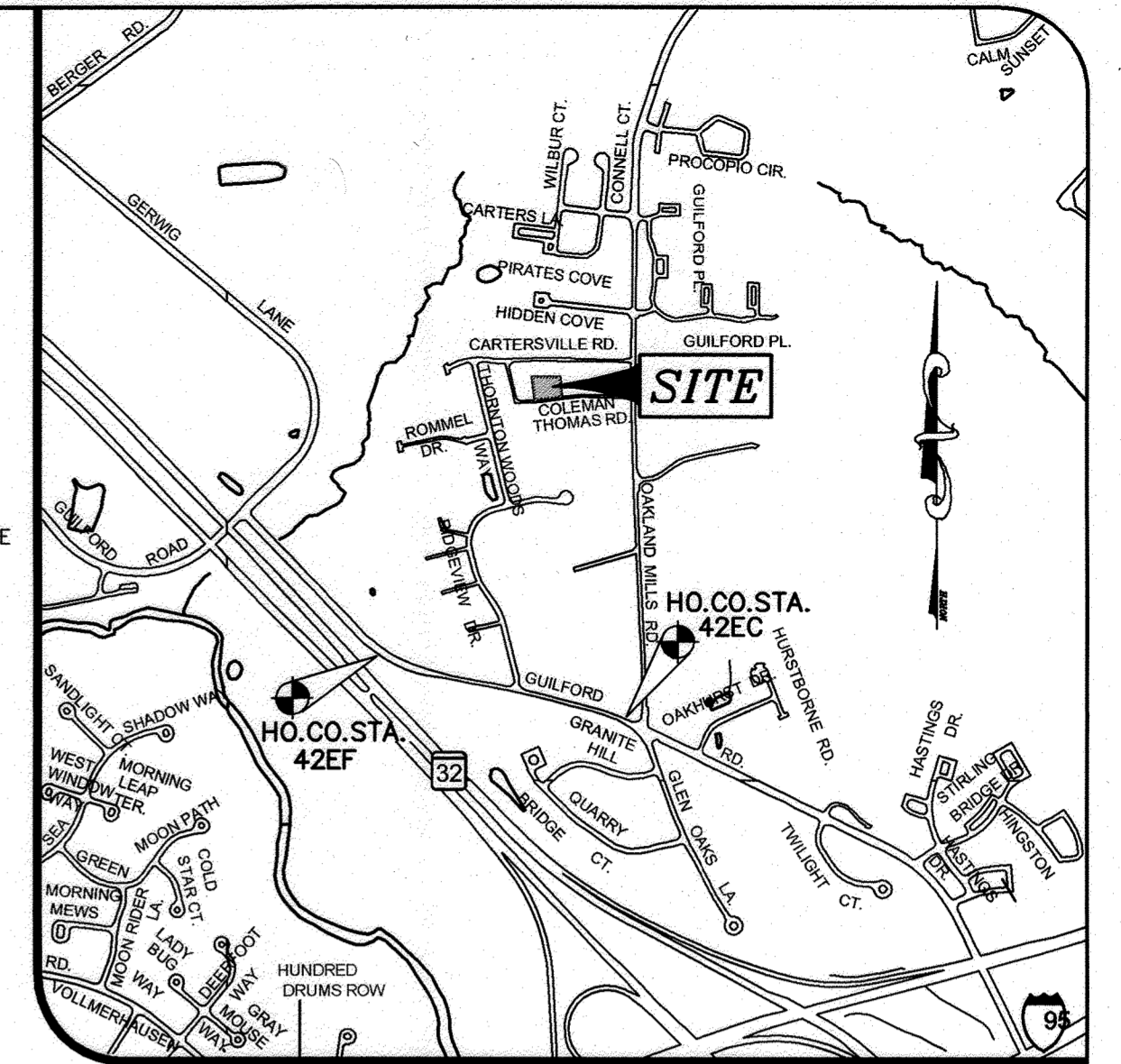
| FACILITY# | AREA | REQUIRED ESDv | PROVIDED ESDv |
|-----------|------------|---------------|---------------|
| MB #1 | HOUSE & DW | 235 C.F. | 261 C.F. |

MICRO-BIORETENTION SCHEDULE

| FACILITY | TOP EL. (SURFACE) | WEIR EL. (PONDING) | BERM EL. | UND.DRAIN INV. IN | UND.DRAIN INV. OUT | SURFACE AREA | PONDING AREA | PONDING DEPTH | GRAVEL DEPTH BELOW UNDERDRAIN |
|----------|-------------------|--------------------|----------|-------------------|--------------------|--------------|--------------|---------------|-------------------------------|
| MB#1 | 365.50 | 366.00 | 366.50 | 362.58 | 361.40 | 278 S.F. | 436 S.F. | 6" | 9" |

SOIL DESCRIPTION:

| SYMBOL | RATING | NAME | K FACTOR | MAP NO. | COMMENTS |
|--------|--------|--|----------|---------|-----------------|
| UsB | D | URBAN LAND-SASSAFRAS-BELTSVILLE COMPLEX 0-5 PERCENT SLOPES | 0.37 | | HIGHLY ERODIBLE |



VICINITY MAP ADC MAP: 33, GRID D-7
SCALE: 1"=1000'

- GENERAL NOTES:**
- SITE ANALYSIS DATA:
 ADDRESS: 9240 COLEMAN THOMAS ROAD, COLUMBIA, 21046
 LOCATION: TAX MAP: 0042 - PARCEL : 0266 - GRID 010
 ELECTION DISTRICT: SIXTH
 ZONING: R-12
 PROPOSED USE: SFD
 TOTAL NUMBER OF LOTS: 01
 DEED REFERENCE: LIBER 11255, FOLIO 00150
 DPZ FILE REFERENCE:
 - COORDINATES BASED ON NAD83 / NAVD88 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 42EC AND 42EF.
 STA. No. 42EC N 545,416.890, E 1,360,140.442, EL. 365.383
 STA. No. 42EF N 545,623.351, E 1,359,044.500, EL. 347.010
 - PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS IN ACCORDANCE WITH SECTION SEC. 16-1202(B)(1)(i).
 THE FOLLOWING DEVELOPMENT IS EXEMPT FROM THE REQUIREMENT OF THIS SUBTITLE: (i) A SUBDIVISION, SITE DEVELOPMENT OR GRADING PERMIT FOR DEVELOPMENT ON LAND WHICH IS LESS THAN 40,000 SQUARE FEET.
 - PROJECT BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN SURVEY JULY 2020.
 - TOPOGRAPHY BASED ON HOWARD COUNTY GIS OFFSITE, AND FIELD RUN TOPOGRAPHIC SURVEY OF THE PROPERTY JULY 2020.
 - THIS SITE IS NOT LOCATED IN AN HISTORIC DISTRICT AND THERE ARE NO BURIAL, CEMETERY OR HISTORICAL SITES LOCATED ON THIS PROPERTY.
 - WATER QUALITY TO BE PROVIDED BY MICRO-BIORETENTION(M-6)
 - ALL ESD PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE PROPERTY OWNER.
 - SITE DEVELOPMENT PLAN APPROVAL IS REQUIRED BY THE DEPARTMENT OF PLANNING AND ZONING PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLINGS ON THESE LOTS.
 - LANDSCAPING AND PERIMETER LANDSCAPING REQUIREMENTS WILL BE ADDRESSED AT A FUTURE STAGE OF THE PROJECT.
 - APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR REDLINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR REDLINE REVISION PROCESS. COMMENTS MAY ALTER THE OVERALL SITE DESIGN AS THE PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
 - NO ALTERNATE COMPLIANCE IS ANTICIPATED AT THIS STAGE.

- ESD NARRATIVE**
- THE PROPERTY CONTAINS NO FOREST OR WETLANDS OR FLOODPLAIN. MICRO-BIORETENTION (M-6) WILL PROVIDE STORMWATER QUALITY TREATMENT FOR THE HOUSE. A GRASS SWALE (M-8) WILL PROVIDE TREATMENT FOR THE DRIVEWAY.
 - THE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSELY AS POSSIBLE. NO IMPACT IS PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS.
 - NON STRUCTURAL PRACTICES SUCH AS ROOFTOP AND NON-ROOFTOP DISCONNECTIONS ARE NOT PERMITTED IN IN-FILL DEVELOPMENTS. MICRO-SCALE PRACTICES WILL BE UTILIZED TO PROVIDE STORMWATER QUALITY MANAGEMENT FOR THE NEW DEVELOPMENT.
 - THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SUPER SILT FENCES. NO SEDIMENT TRAPS OR BASINS ARE REQUIRED.
 - TABLE 5.2, SUMMARY OF SITE DEVELOPMENT STRATEGIES WAS UTILIZED TO THE EXTENT ALLOWABLE BY THE CURRENT HOWARD COUNTY ZONING AND LAND DEVELOPMENT REGULATIONS BY MINIMIZING EARTH DISTURBANCE.
 - IN DESIGNING THIS PROJECT, IT WAS PLANNED TO MINIMIZE IMPERVIOUS AREAS, AND UTILIZE ESD MEASURES LISTED IN THE SWM PRACTICES SCHEDULE.

- ECP SITE ANALYSIS DATA PARCEL 266:**
- AREA OF THE SITE = 0.459 ACRES (19,994 S.F.)
 - LIMIT OF DISTURBANCE AREA = 0.340 ± ACRES (14,796 S.F.)
 - AREA OF WETLANDS = 0 ACRES
 - AREA OF WETLANDS BUFFER = 0 ACRES
 - AREA OF FLOODPLAIN = 0 ACRES
 - AREA OF STREAM BUFFER = 0 ACRES
 - AREA OF STEEP SLOPES 15% OR GREATER = 0 ACRES
 - AREA OF STEEP SLOPES 25% OR GREATER = 0 ACRES
 - AREA OF EXISTING FOREST = 0 ACRES
 - AREA OF EX. FOREST CONSERVATION ESMT = 0 ACRES
 - AREA OF ERODIBLE SOILS = 0.459± ACRES (19,994 S.F.)
 - AREA OF PROPOSED GREEN OPEN SPACE = 0.394± ACRES (17,176 S.F.)
 - IMPERVIOUS AREA PROPOSED = 0.065± ACRES (2,818 S.F.)

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 7360-B Grace Drive, Columbia, Maryland 21044
 (410) 997-0296 Tel. (410) 997-0299 Fax

COLEMAN THOMAS RD PARCEL 266
 TAX MAP: 42- PARCEL : 266 - GRID 010
 HOWARD COUNTY, MARYLAND
 SIXTH ELECTION DISTRICT
ENVIRONMENTAL CONCEPT PLAN

Project date: NOV 2020
 Illustration: 20-019
 scale: 1" = 30'
 description: engineering
 scale: MKG
 approval: MKG
 date: 11/23/20

1 OF 1
 ECP-21-004