SITE DEVELOPMENT PLAN
LA ISLA, LOT 5
HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. SUBJECT PROPERTY ZONED R-20 PER 10/06/18 COMPREHENSIVE ZONING PLAN.
2. TOTAL AREA OF LOT = 3.009 AC. ±
3. DEED REFERENCE: LIBER 21759, FOLIO 245
4. PROPERTY ADDRESS: 6626 CORINA COURT, COLUMBIA MD 21044
5. PREVIOUS HOWARD COUNTY FILE NUMBERS: S-81-028, P-82-012, F-82-107, ECP-22-018, WP-23-042, F-23-020.
6. PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
7. ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS HAVE BEEN FIELD LOCATED.
8. THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY PERFORMED BY SEG LAND SURVEYING, LLC DATED DECEMBER 2021.
9. THE EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM A FIELD RUN SURVEY WITH TWO-FOOT CONTOUR INTERVALS PREPARED BY SEG LAND SURVEYING, LLC DATED FEBRUARY 2022.
10. A FIELD REVIEW PERFORMED BY SILL ENGINEERING GROUP, LLC, IN JULY OF 2022 HAS CONFIRMED THAT STEEP SLOPES, SOME WETLAND BUFFER, AND STREAM BUFFER ARE PRESENT AT THE REAR OF THE PROPERTY, BUT NOT WITHIN THE AREA OF DEVELOPMENT. NO CEMETERIES OR HISTORIC ELEMENTS ARE KNOWN TO OCCUR ON THE SUBJECT PROPERTY. NO FLOODPLAINS CAN BE FOUND ON SITE. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, UNLESS WAIVERS HAVE BEEN APPROVED OR ACTIVITIES HAVE BEEN DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING.
11. THE SOILS SHOWN HAVE BEEN TAKEN FROM THE NRCS WEB SOIL SURVEY WEBSITE.
12. THE CONTRACTORS SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION	410.531.5533
BGE (CONTRACTOR SERVICES)	410.850.4620
BGE (UNDERGROUND DAMAGE CONTROL)	410.787.9068
MISS UTILITY	800.257.7777
COLONIAL PIPELINE COMPANY	410.795.1390
HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES	410.313.4900
HOWARD COUNTY HEALTH DEPARTMENT	410.313.2640
AT&T	800.252.1133
VERIZON	800.743.0033/410.224.9210

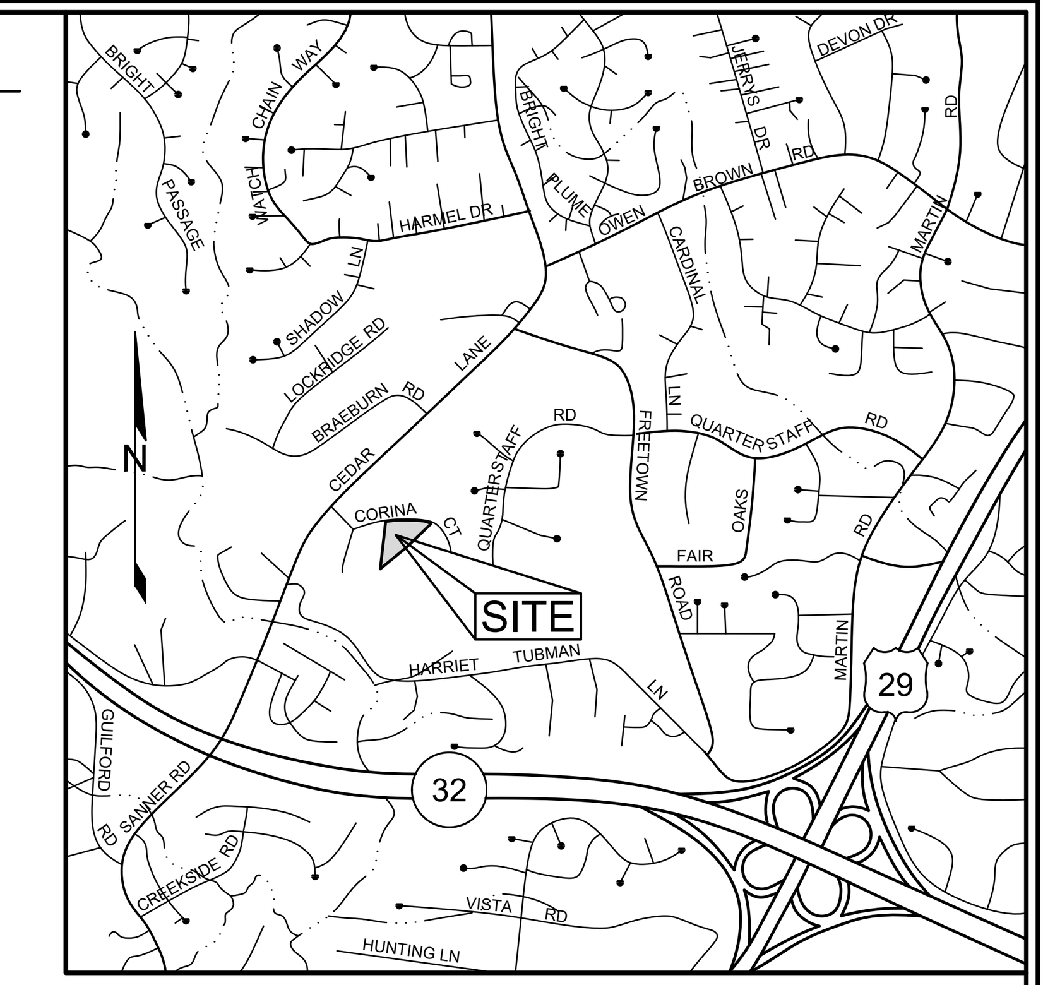
13. ANY DAMAGE TO THE COUNTY'S PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
14. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1.800.257.7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
15. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410.313.1880 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF WORK.
16. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
17. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
18. THE PROJECT IS IN CONFORMANCE WITH THE CURRENT HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
19. ALL HDPE PIPE SPECIFICATIONS, AND INSTALLATIONS SHALL MEET AASHTO M-252 TYPE S, M-294 TYPE S AND ASTM D2321, RESPECTIVELY.
20. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. DRIVEWAY PAVING TO BE HOWARD COUNTY STANDARD P-1 PAVING SECTION. GEOTECHNICAL ENGINEER TO CONFIRM ACCESSIBILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST, PRIOR TO CONSTRUCTION.
21. ALL TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
22. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NO MORE THAN 16 FEET IN WIDTH, MAY PROJECT MORE THAN 4 FEET INTO ANY SETBACK, PORCH OR DECK, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
23. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS AT THE DEVELOPER'S EXPENSE:
    1) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
    2) SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM);
    3) GEOMETRY - MAXIMUM 15% GRADE, MINIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADUIS;
    4) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
    5) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
    6) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
24. FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.
25. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY SEPTIC COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
26. EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
27. STORMWATER MANAGEMENT OBLIGATIONS FOR THIS SITE WILL BE MET BY FIVE DRYWELLS (M-5), ONE MICRO-BIORETENTION FACILITY (M-6), AND ONE NON-ROOFTOP DISCONNECT (N-2).
28. ON 11/28/2022 AN ALTERNATIVE COMPLIANCE REQUEST WAS DENIED FOR SECTION 16.155(a) OF THE HOWARD COUNTY SUBDIVISION AND LAND REGULATIONS TO USE THE PROCESSING AND ACCEPTNACE OF AN ENVIRONMENTAL CONCEPT PLAN AS SUBSTITUTE FOR THE SITE DEVELOPMENT PLAN PROCESS. THE ALTERNATIVE COMPLIANCE REQUEST WP-23-042 WAS DENIED BY THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING.
29. PER THE HOWARD COUNTY SUBDIVISION & LAND DEVELOPMENT REGULATIONS CODE FOR FOREST CONSERVATION SECTION 16.120(b)(2)(i)(a) THIS DEVELOPMENT IS EXEMPT WITH A DECLARATION OF INTENT, FROM THE REQUIREMENTS BECAUSE CLEARING OF FOREST RESOURCES IS LESS THAN 20,000 SQUARE FEET IN SIZE.
30. THIS PROJECT IS EXEMPT FROM LANDSCAPING REQUIREMENTS OF SECTION 16.124 BECAUSE THE DEVELOPMENT IS INTERNAL TO THE LA ISLA SUBDIVISION. NO NEW LOTS ARE BEING CREATED UNDER THE REQUEST.
31. THIS PROJECT IS NOT SUBJECT TO THE MIHU (MODERATE INCOME HOUSE UNIT) REQUIREMENT BECAUSE IT IS FOR DEVELOPMENT OF ONE UNIT ON AN EXISTING RESIDENTIAL LOT.
32. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (CB 45-2003) AND THE 2013 COMPREHENSIVE ZONING PLAN (EFFECTIVE 10/06/2013). DEVELOPMENT OR CONSTRUCTION OF THIS LOT MUST COMPLY WITH THE SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF THE SITE DEVELOPMENT PLAN AND/OR BUILDING PERMIT.
33. IN ACCORDANCE WITH SECTION 16.134(b) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, NO SIDEWALKS ARE REQUIRED BECAUSE THE LA ISLA SUBDIVISION DEVELOPMENT (RECORDED PLAT) HAS BEEN SUBSTANTIALLY COMPLETED WITHOUT SIDEWALKS, PURSUANT TO PRIOR APPROVALS.
34. THIS PROJECT IS EXEMPT FROM THE MULTIMODAL TRAFFIC STUDY, AS WELL AS THE ADEQUATE PUBLIC FACILITIES ORDINANCE PER SECTION 16.1107(B)(3) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

PLAN VIEW
SCALE: 1"=50'

N 554,700 E 1,344,025

LEGEND

EXISTING FENCE	—X—
EXISTING TREELINE	
PROPOSED TREELINE	
EXISTING STREAM	
STREAM BUFFER	—SB—
WETLAND BUFFER	—WB—
ROAD CENTERLINE	—℄—
EXISTING TREE	
EXISTING WELL	Ⓦ
MODERATE SLOPES, 15-24.99%	
STEEP SLOPES, 25% OR GREATER	
EXISTING SEWAGE DISPOSAL AREA	



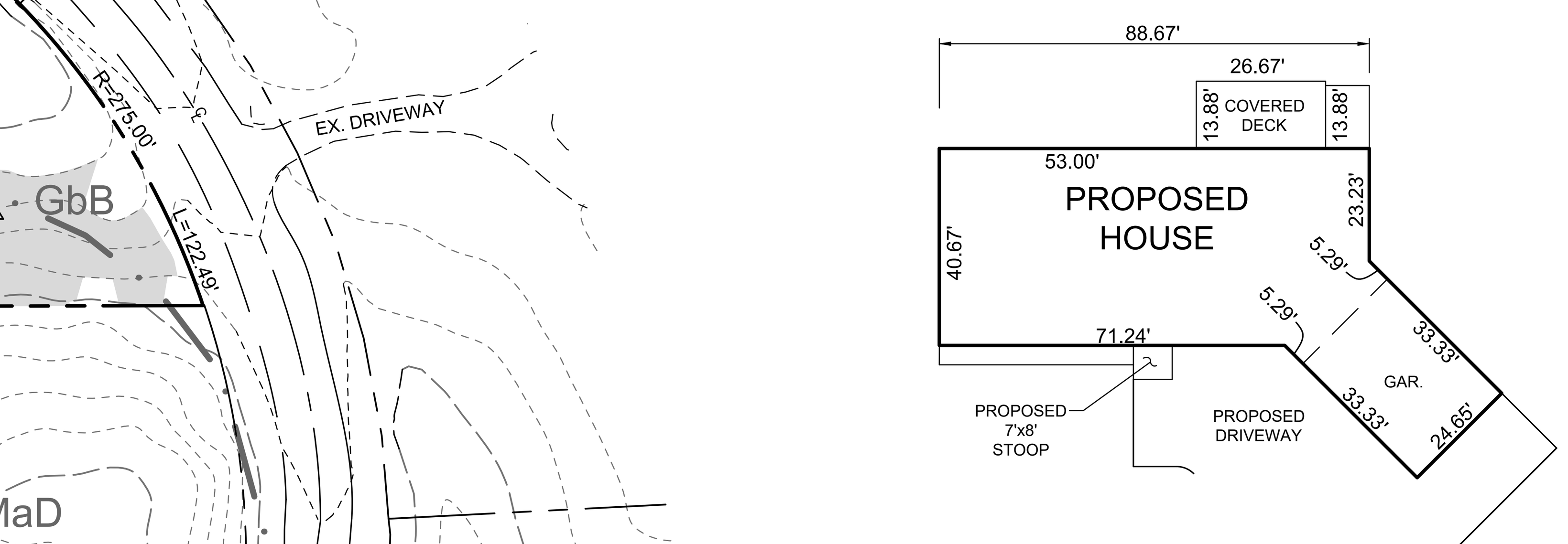
HOWARD COUNTY, MARYLAND ADC MAP 15 GRIDS C10 & C11

VICINITY MAP
SCALE: 1"=2000'

SITE ANALYSIS DATA SHEET

ENVIRONMENTAL AREA	SIZE OR USE
TOTAL PROJECT AREA	3.0096 AC ±
ROW TO BE DEDICATED	N/A
PROPOSED PROJECT AREA	3.0096 AC ±
LIMIT OF DISTURBANCE	0.8168 AC ±
GREEN OPEN AREA (LAWN)	1.2326 AC ±
PROPOSED IMPERVIOUS AREA	0.2072 AC ±
PROPOSED SITE USES	RESIDENTIAL
WETLANDS	0 AC ±
WETLAND BUFFERS	0.0093 AC ±
FLOODPLAINS	0 AC ±
FLOODPLAIN BUFFERS	0 AC ±
EXISTING FOREST	1.5698 AC ±
FOREST TO BE CLEARED	0.1483 AC ±
SLOPES 15%-24.9%*	0.9567 AC ±
SLOPES GREATER THAN 25%	0.3901 AC ±
HIGHLY ERODIBLE SOILS	0 AC ±

* NOTES:
1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY.
2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.



HOUSE TEMPLATE
SCALE:1=30'

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GRADING PLAN
3	SEDIMENT AND EROSION CONTROL PLAN
4	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
5	STORMWATER MANAGEMENT PLAN, DRAINAGE AREA MAP, NOTES, DETAILS & BORING LOGS
6	STORMWATER MANAGEMENT PLAN, PROFILE, AND NOTES
7	ONSITE SEWAGE DISPOSAL PLAN, PROFILE, NOTES AND DETAILS

STORMWATER MANAGEMENT SUMMARY TABLE

PARCEL/LOT	Pe		ESDv		RECHARGE		SWM PRACTICES		
	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	DRYWELL	MICRO-BIORETENTION FACILITY	NON-ROOFTOP DISCONNECT
113, LOT 5	1.5"	1.81"	1,154 CF	1,163 CF	266 CF	266 CF	5	1	1

STORMWATER MANAGEMENT PRACTICES

LOT	FACILITY NAME & NUMBER	PRACTICE TYPE	PUBLIC	PRIVATE	PRIVATELY MAINTAINED
LOT 5	DRYWELL-1	M-5	-	X	YES
LOT 5	DRYWELL-2	M-5	-	X	YES
LOT 5	DRYWELL-3	M-5	-	X	YES
LOT 5	DRYWELL-4	M-5	-	X	YES
LOT 5	DRYWELL-5	M-5	-	X	YES
LOT 5	MICRO-BIORETENTION FACILITY	M-6	-	X	YES

STORMWATER MANAGEMENT NOTES & DESIGN NARRATIVE

BELOW IS A LIST TO DESCRIBE THE STORMWATER MANAGEMENT REQUIREMENTS AND ACHIEVEMENTS FOR THE SITE PER THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, AS AMENDED BY THE STORMWATER MANAGEMENT ACT OF 2007.

1. ENVIRONMENTALLY SENSITIVE AREAS HAVE BEEN AVOIDED. THE AREA OF DEVELOPMENT WAS DESIGNED TO AVOID DISTURBING AREAS OF STEEP SLOPES. A PORTION OF A STREAM, IT'S BUFFER AND A WETLAND BUFFER IS LOCATED AT THE REAR OF THE PROPERTY BUT NON OF WHICH, IS WITHIN THE AREA OF DEVELOPMENT.
2. TO THE GREATEST EXTENT PRACTICABLE THE NATURAL FLOW PATTERNS OF THE SITE HAVE BEEN MAINTAINED.
3. IMPERVIOUS AREAS HAVE BEEN REDUCED BY POSITIONING THE BUILDING AS CLOSE TO CORINA COURT AS THE SETBACKS AND GRADES ALLOW.
4. A STABILIZED CONSTRUCTION ENTRANCE, SILT FENCES AND SUPER SILT FENCES ARE USED AS SEDIMENT AND EROSION CONTROL.
5. THE STORMWATER MANAGEMENT OBLIGATIONS FOR THIS PARCEL WILL BE MET BY THE USE OF FIVE DRYWELLS (M-5), ONE MICRO-BIORETETNION FACILITY (M-6), AND ONE NON-ROOFTOP DISCONNECT (N-2).
6. NO DESIGN MANUAL WAIVERS OR WAIVER PETITIONS ARE BEING PROPOSED.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FEET

OWNER/DEVELOPER

MIKE MOSMAN
7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

DocuSigned by: Michael J. Davis A099773D5AB5423... 5/2/2023

COUNTY HEALTH OFFICER — DATE
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Paul DiMarco EDD5384E25784B6... 5/1/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DocuSigned by: 1EB75478A22B49A... 4/28/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 989DB92F944F4CD... 5/2/2023
DIRECTOR — DATE

NO.	DESCRIPTION	DATE

REVISIONS

COVER SHEET
LA ISLA, LOT 5
6626 CORINA COURT

TAX MAP 35 GRID 23
5TH ELECTION DISTRICT

PARCEL 113, LOT 5
HOWARD COUNTY, MARYLAND

STATE OF MARYLAND PAUL M. SILL 32025 PROFESSIONAL ENGINEER

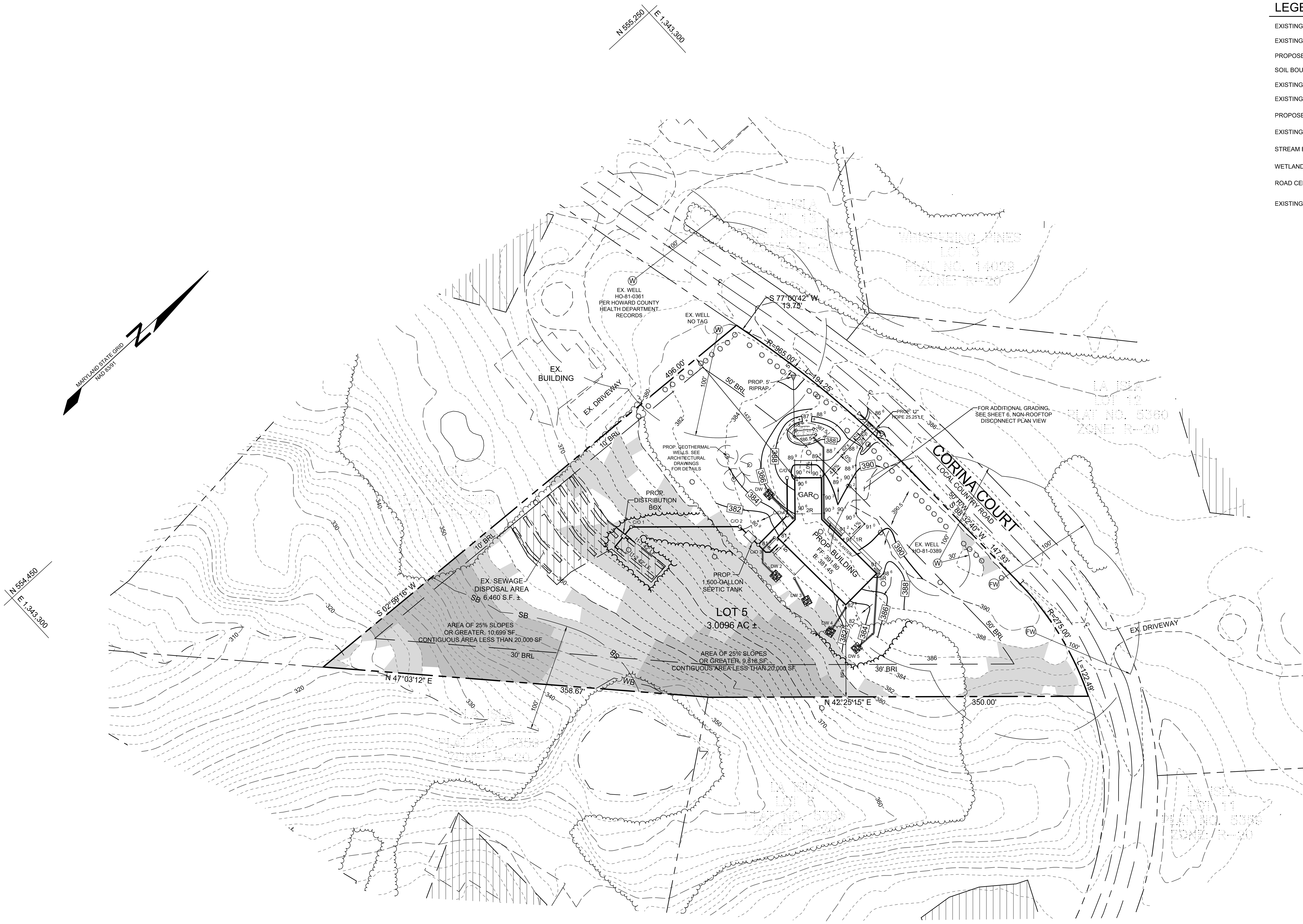
SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
Woodbine, Maryland 21797
Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY: PS
DRAWN BY: TB
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 10, 2023
PROJECT #: 21-098
SHEET #: 1 of 7

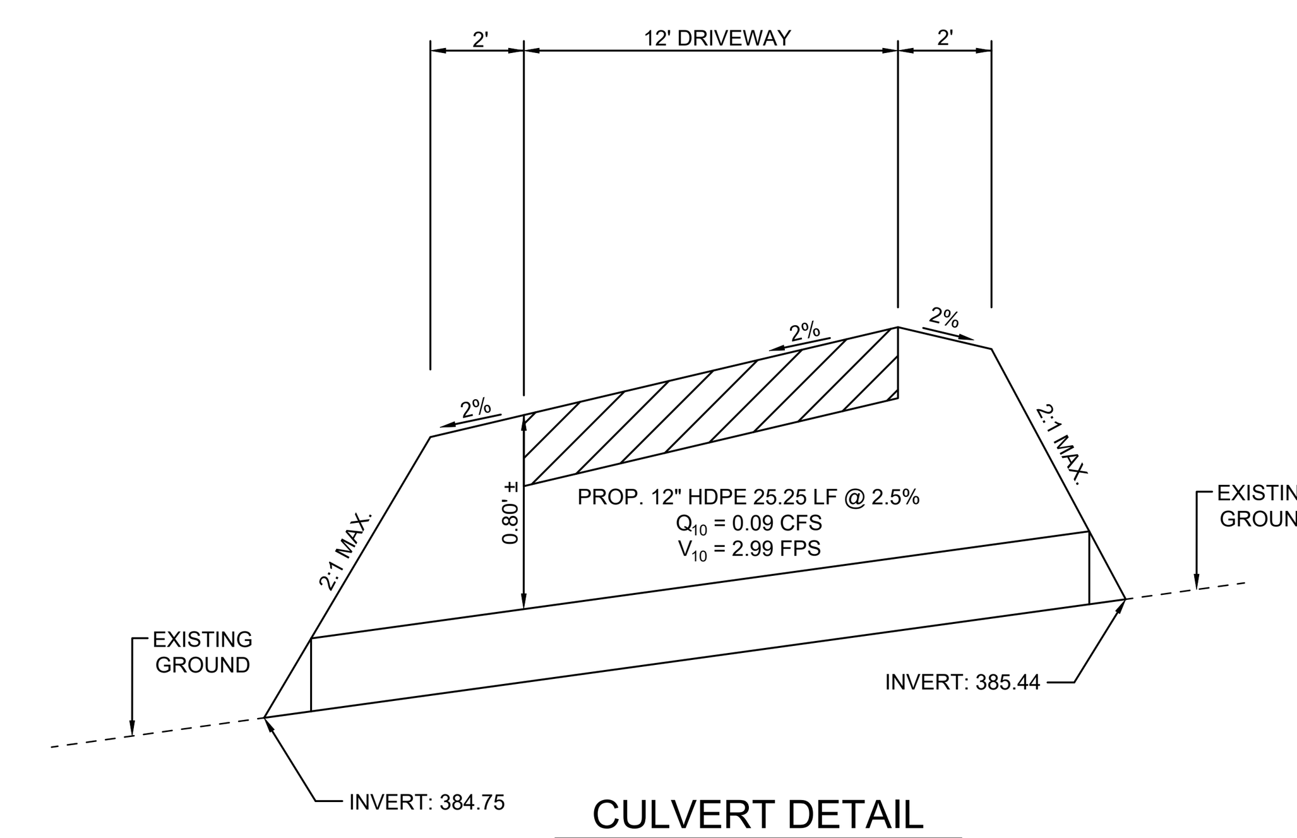
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE JUNE 20, 2023

LEGEND

EXISTING GIS CONTOUR	382
EXISTING FIELD RUN CONTOUR	382
PROPOSED CONTOUR	382
SOIL BOUNDARY	
EXISTING FENCE	X
EXISTING TREELINE	
PROPOSED TREELINE	
EXISTING STREAM	
STREAM BUFFER	SB
WETLAND BUFFER	WB
ROAD CENTERLINE	℄
EXISTING TREE	
MODERATE SLOPES, 15-24.99%	
STEEP SLOPES, 25% OR GREATER	
EXISTING SEWAGE DISPOSAL AREA	
EXISTING WELL	W
PROPOSED FUTURE WELL	FW
PROPOSED DRYWELL AND ROOFLEADER	DW 1



PLAN VIEW
SCALE: 1"=50'



CULVERT DETAIL
NOT TO SCALE

E 1,343,900
N 554,450

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 INCH = 50 FEET

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

Michael J. Davis — 5/2/2023
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Paul DiMarco — 5/1/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE
4/28/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE
5/2/2023
DIRECTOR — DATE

NO.	DESCRIPTION	DATE

REVISIONS

OWNER/DEVELOPER

MIKE MOSMAN
7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

GRADING PLAN
LA ISLA, LOT 5
6626 CORINA COURT

TAX MAP 35 GRID 23
5TH ELECTION DISTRICT

PARCEL 113, LOT 5
HOWARD COUNTY, MARYLAND

SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
Woodbine, Maryland 21797
Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY:	PS
DRAWN BY:	TB
CHECKED BY:	PS
SCALE:	AS SHOWN
DATE:	APRIL 10, 2023
PROJECT #:	21-098
SHEET #:	2 of 7

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. 32025, EXPIRATION DATE JUNE 20, 2023

SDP-23-008

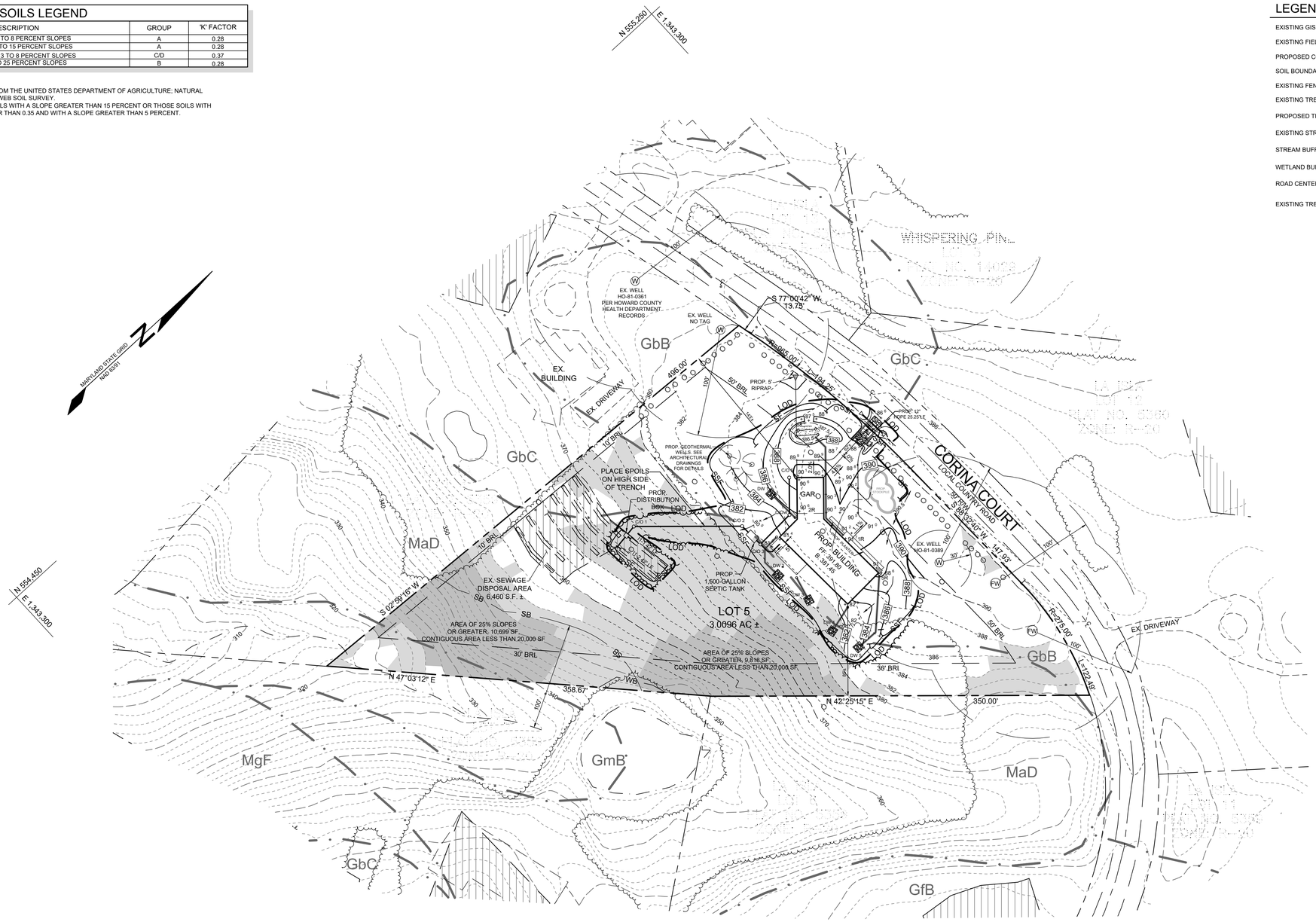
SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	A	0.28
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	A	0.28
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C/D	0.37
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.28

NOTES:
1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY.
2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

LEGEND

- EXISTING GIS CONTOUR
- EXISTING FIELD RUN CONTOUR
- PROPOSED CONTOUR
- SOIL BOUNDARY
- EXISTING FENCE
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING STREAM
- STREAM BUFFER (SB)
- WETLAND BUFFER (WB)
- ROAD CENTERLINE
- EXISTING TREE
- MODERATE SLOPES, 15-24.99%
- STEEP SLOPES, 25% OR GREATER
- EXISTING SEWAGE DISPOSAL AREA
- EXISTING WELL
- PROPOSED FUTURE WELL
- PROPOSED DRYWELL AND ROOFLEADER
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE (SSF)
- LIMIT OF DISTRUBANCE (LOD)



PLAN VIEW
SCALE: 1"=50'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 INCH = 50 FEET

E 1,343,900 N 554,450

NO.	DESCRIPTION	DATE

REVISIONS

SEDIMENT AND EROSION CONTROL PLAN
LA ISLA, LOT 5
6626 CORINA COURT

TAX MAP 35 GRID 23 — PARCEL 113, LOT 5
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Paul DiMarco — 5/1/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

4/28/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

5/2/2023
DIRECTOR — DATE

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

Michael J. Davis — 5/2/2023
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

Alexander Bratchie — 4/28/2023
HOWARD SCD — DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Apr 25, 2023
SIGNATURE OF ENGINEER, PAUL M. SILL, P.E. — DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Mosman (Apr 10, 2023 13:20 EDT) — 10 APR 2023
SIGNATURE OF DEVELOPER — DATE

OWNER/DEVELOPER
MIKE MOSMAN
7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
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Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

STATE OF MARYLAND — PAUL M. SILL — 32025 — PROFESSIONAL ENGINEER

DESIGN BY: PS
DRAWN BY: TB
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 10, 2023
PROJECT #: 21-098
SHEET #: 3 of 7

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. 32025, EXPIRATION DATE JUNE 20, 2023

SDP-23-008

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.
CRITERIA

A. SOIL PREPARATION
1. TEMPORARY STABILIZATION
a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
I. SOIL PH BETWEEN 6.0 AND 7.0.
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS,GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
6. TOPSOIL APPLICATION
a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

DocuSigned by: Michael J. Davis — A099773D5AB5423... 5/2/2023
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

DocuSigned by: Alexander Bratchie — 65648D5BA9B64C1... 4/28/2023
HOWARD SCD — DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Mosman (Michael J. Mosman (Apr 10, 2023 12:23 EDT)) — 10 APR 2023
SIGNATURE OF DEVELOPER — DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Apr 25, 2023
SIGNATURE OF ENGINEER, PAUL M. SILL, P.E. — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Paul DiMarco — EDD5384E25784B6 — 5/1/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DocuSigned by: 1EB75479A22B49A... — 4/28/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 989DB92F944F4CD... — 5/2/2023
DIRECTOR — DATE

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.
CRITERIA

A. SEEDING
1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
2. APPLICATION
a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BYHYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
2. APPLICATION
a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. ANCHORING
a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS,BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND,THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7A AND 6B)					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P	K	
9	TALL FESCUE KENTUCKY BLUE GRASS	60 40	3/1 - 5/15 8/15 - 11/15	0.5 IN.	1.0 LB/ 1000 SF	2.0 LB/ 1000 SF	2.0 LB/ 1000 SF	90 LB/ 1000SF

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT (410) 313-1880 AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, AND SUPER SILT FENCE. (1 WEEK)
4. INSTALL DRIVEWAY CULVERT AND STABILIZE IMMEDIATELY. (2 DAYS)
5. CLEAR, GRUB, AND ROUGH GRADE LOT. (3 DAYS)
6. BEGIN HOUSE CONSTRUCTION AND BASE PAVE DRIVEWAY. (6 MONTHS)
7. INSTALL SEWAGE DISPOSAL SYSTEM. (2 WEEKS)
8. FINAL GRADE AND STABILIZE LOT. (1 WEEK)
9. WITH THE DRAINAGE AREAS STABILIZED AND WITH APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, CONSTRUCT MICRO-BIORETENTION FACILITY 1, AND DRYWELLS 1 THROUGH 5, ENSURING NO SEDIMENT LADEN RUNOFF ENTERS THEM. (2 WEEKS)
10. COMPLETE HOUSE AND FINAL PAVE DRIVEWAY. (2 WEEKS)
11. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND STABILIZE ANY REMAINING DISTURBED AREAS. (1 WEEK)

NO.	DESCRIPTION	DATE

REVISIONS

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.
CRITERIA

A. SEED MIXTURES
1. GENERAL USE
A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY .
2. TURFGRASS MIXTURES
A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES
WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS ORPURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENTSEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE B.22 RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.
NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE
C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:
WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
1. GENERAL SPECIFICATIONS
A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR
SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. SOD INSTALLATION
A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY
WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH.
ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE
SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
3. SOD MAINTENANCE
A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE LB/AC	SEEDING RATE LB/1000 FT²	SEEDING DEPTH (INCHES)	RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE: 5b & 6a	6b	7a & 7b
COOL-SEASON GRASSES						
ANNUAL RYEGRASS (*LOLIUM PERENNE SSP. MULTIFLORUM*)	40	1.0	0.5	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30
BARLEY (*HORDEUM VULGARE*)	96	2.2	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30
OATS (*AVENA SATIVA*)	72	1.7	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30
WHEAT (*TRITICUM AESTIVUM*)	120	2.8	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30
CEREAL RYE (*SECALE CEREALE*)	112	2.8	1.0	MARCH 15 TO MAY 31; AUG 1 TO OCT 31	MARCH 1 TO MAY 15; AUG 1 TO NOV 15	FEB 15 TO APR 30; AUG 15 TO DEC 15
WARM-SEASON GRASSES						
FOXTAIL MILLET (*SETARIA ITALICA*)	30	0.7	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14
PEARL MILLET (*PENNISETUM GLAUCUM*)	20	0.5	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14

FERTILIZER RATE (10-20-20): 436 LB/AC (10LB/1000SF) LIME RATE: 2 TONS/AC (90LB/1000SF)

NOTES:
1. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
3. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

*THIS SITE LIES WITHIN U.S.D.A. PLANT HARDINESS ZONE 6B.

TABLE B.5: RECOMMENDED PLANTING DATES FOR PERMANENT COVER IN MARYLAND

TYPE OF PLANT MATERIAL	PLANT HARDINESS ZONES: 5b & 6a	6b	7a & 7b
SEEDS- COOL-SEASON GRASSES (*INCLUDES MIXES WITH FORBS AND/OR LEGUMES*)	MAR 15 TO MAY 31 AUG 1 TO SEP 30	MAR 1 TO MAY 15 AUG 1 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO OCT 31 NOV 1 TO NOV 30♦
SEEDS- WARM-SEASON/ COOL-SEASON GRASS MIXES (*INCLUDES MIXES WITH FORBS AND/OR LEGUMES*)	MAR 15 TO MAY 31♦♦ JUN 1 TO JUN 15*	MAR 1 TO MAY 15♦♦ MAY 16 TO JUN 15*	FEB 15 TO APR 30♦♦ MAY 1 TO MAY 31*
SOD - COOL-SEASON	MAR 15 TO MAY 31 JUN 1 TO AUG 31* SEP 1 TO NOV 1*	MAR 1 TO MAY 15 MAY 16 TO SEP 14* SEP 15 TO NOV 15*	FEB 15 TO APR 30 MAY 1 TO SEP 30* OCT 1 TO DEC 1*
UNROOTED WOODY MATERIALS; BARE-ROOT PLANTS; BULBS, RHIZOMES, CORMS AND TUBERS [2]	MARCH 15 TO MAY 31 JUN 1 TO JUN 30*	MARCH 1 TO MAY 15 MAY 16 TO JUN 30*	FEB 15 TO APR 30 MAY 1 TO JUN 30*
CONTAINERIZED STOCK; BALLED-AND-BURLAPPED STOCK	MAR 15 TO MAY 31 JUN 1 TO JUN 30* SEP 1 TO NOV 15*	MAR 1 TO MAY 15 MAY 16 TO JUN 30* SEP 15 TO NOV 30*	FEB 15 TO APR 30 MAY 1 TO JUN 30* OCT 1 TO DEC 15*

NOTES:
1. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE. THESE DATES MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONES. WHEN SEEDING TOWARD THE END OF THE LISTED PLANTING DATES, OR WHEN CONDITIONS ARE EXPECTED TO BE LESS THAN OPTIMAL, SELECT AN APPROPRIATE NURSE CROP FROM TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION AND PLANT TOGETHER WITH THE PERMANENT SEEDING MIX.
2. WHEN PLANTED DURING THE GROWING SEASON, MOST OF THESE MATERIALS MUST BE PURCHASED AND KEPT IN A DORMANT CONDITION UNTIL PLANTING. BARE-ROOT GRASSES ARE THE EXCEPTION—THEY MAY BE SUPPLIED AS GROWING (NON-DORMANT) PLANTS.
♦ ADDITIONAL PLANTING DATES FOR THE LOWER COASTAL PLAIN, DEPENDENT ON ANNUAL RAINFALL AND TEMPERATURE TRENDS. RECOMMEND ADDING A NURSE CROP, AS NOTED ABOVE, IF PLANTING DURING THIS PERIOD.
♦♦ WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHTY SITES.
* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.
FREQUENT FREEZING AND THAWING OF WET SOILS MAY RESULT IN FROST-HEAVING OF MATERIALS PLANTED IN LATE FALL, IF PLANTS HAVE NOT SUFFICIENTLY ROOTED IN PLACE. SOD USUALLY NEEDS 4 TO 6 WEEKS TO BECOME SUFFICIENTLY ROOTED. LARGE CONTAINERIZED AND BALLED-AND-BURLAPPED STOCK MAY BE PLANTED INTO THE WINTER MONTHS AS LONG AS THE GROUND IS NOT FROZEN AND SOIL MOISTURE IS ADEQUATE.

SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
A. PRIOR TO THE START OF EARTH DISTURBANCE,
B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
6. SITE ANALYSIS:

TOTAL AREA:	3.01 ACRES
AREA DISTURBED:	0.82 ACRES
AREA TO BE ROOFED OR PAVED:	0.21 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	0.61 ACRES
TOTAL CUT:	581 CY
TOTAL FILL:	0 CY
OFFSITE WASTE/BORROW AREA LOCATION:	**

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
- OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 - JUNE 15
- USE III AND IIIP OCTOBER 1 - APRIL 30
- USE IV MARCH 1 - MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

* EARTHWORK QUANTITIES ARE SOLELY FOR THE PURPOSE OF CALCULATING FEES. CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO THE START OF CONSTRUCTION.
** TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES:
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.
CRITERIA
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
- A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE
- TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

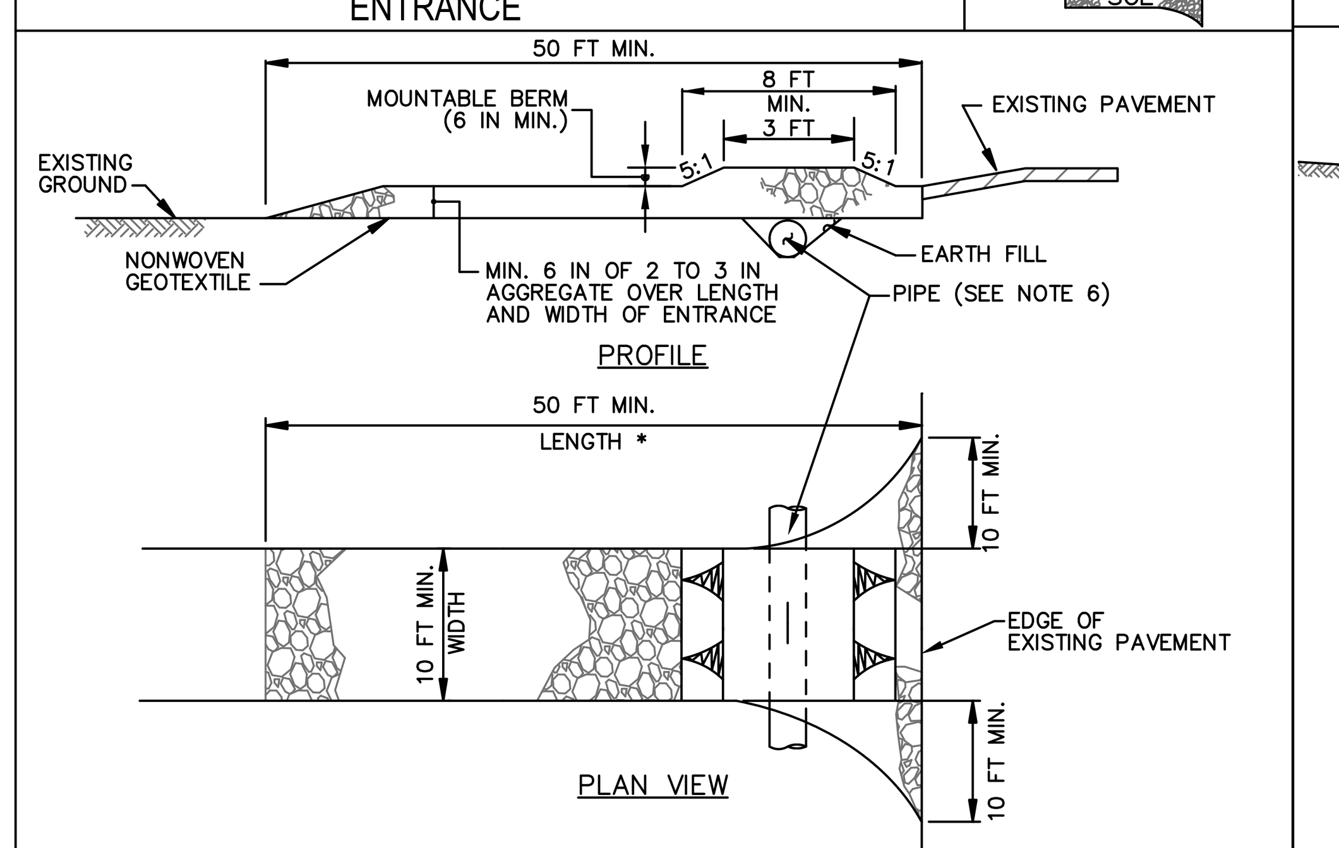
CONDITIONS WHERE PRACTICE APPLIES:
- STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA
1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE
- THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

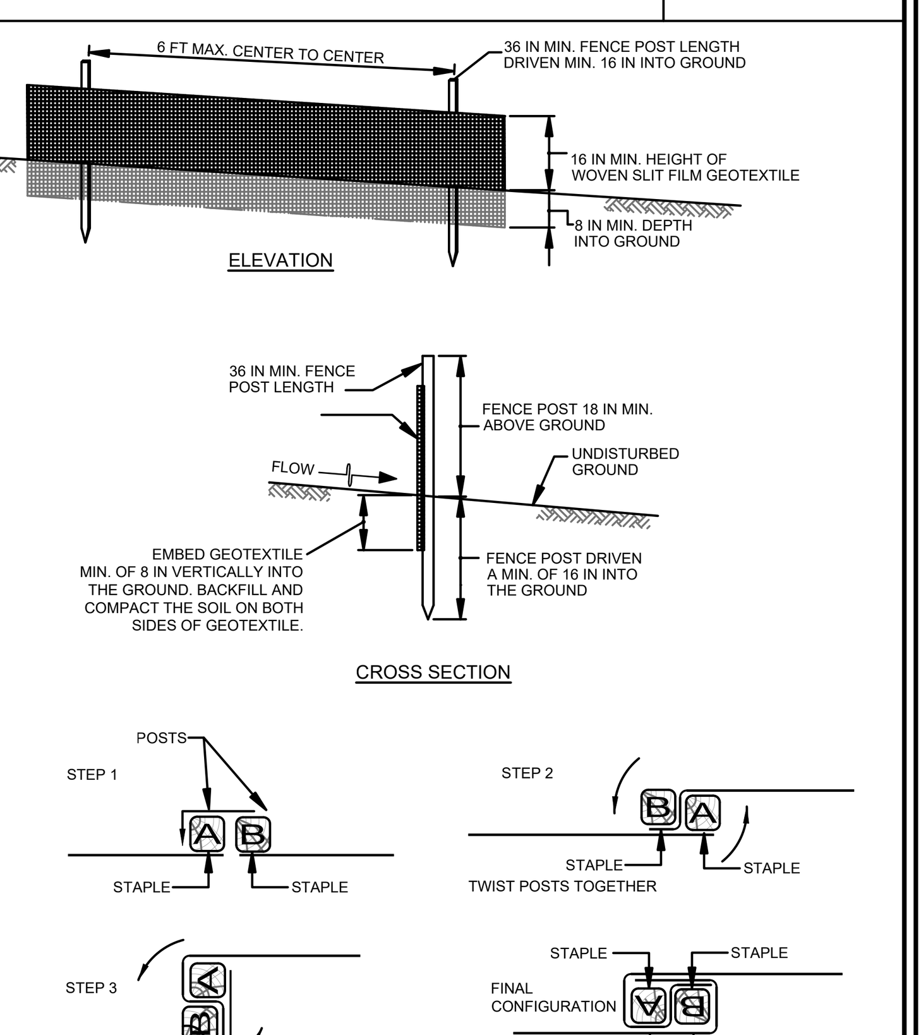
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

CONSTRUCTION SPECIFICATIONS

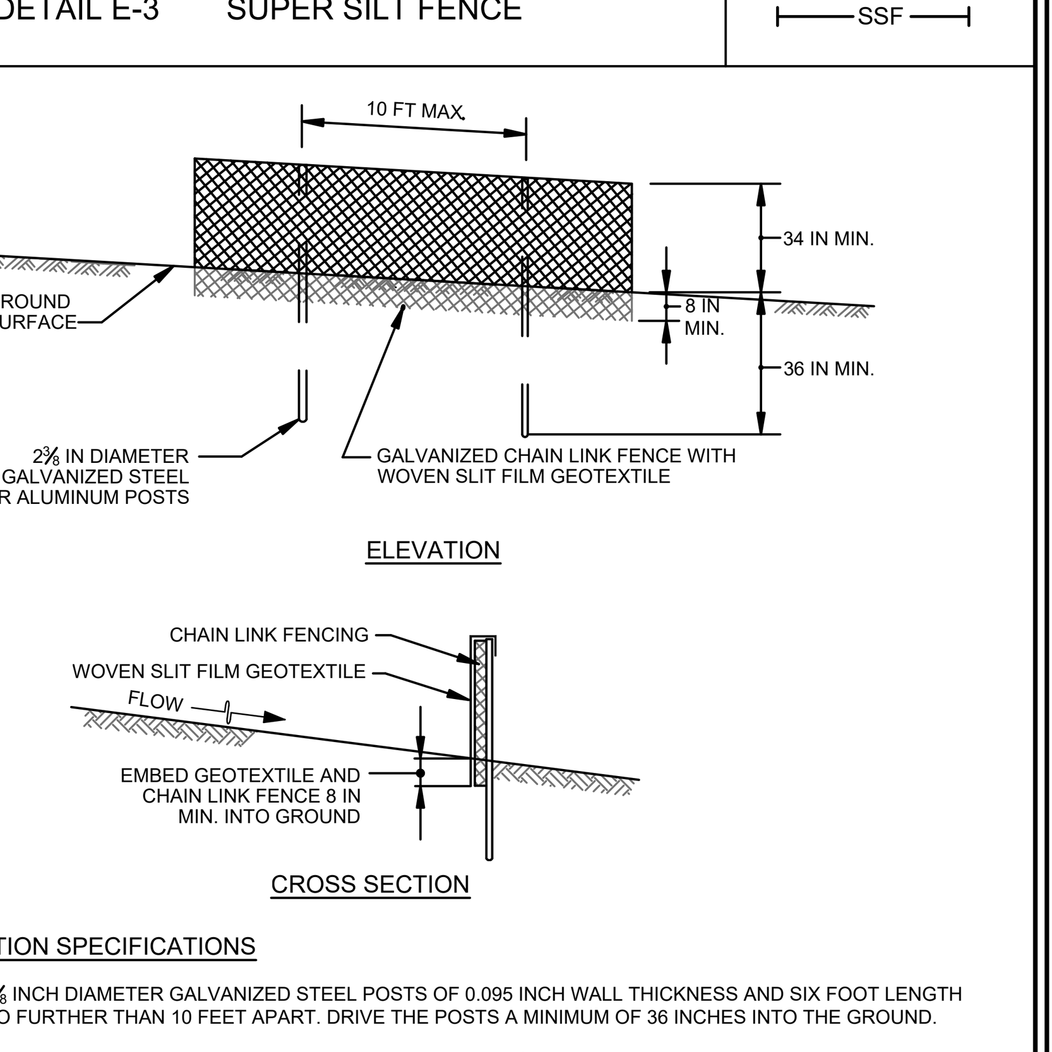
1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

OWNER/DEVELOPER

MIKE MOSMAN
7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

SEDIMENT AND EROSION CONTROL NOTES & DETAILS
LA ISLA, LOT 5
6626 CORINA COURT

TAX MAP 35 GRID 23 — PARCEL 113, LOT 5
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — PAUL M. SILL — 32025 — PROFESSIONAL ENGINEER

SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
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Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY: PS
DRAWN BY: TB
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 10, 2023
PROJECT #: 21-098
SHEET #: 4 of 7

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. 32025, EXPIRATION DATE JUNE 20, 2023

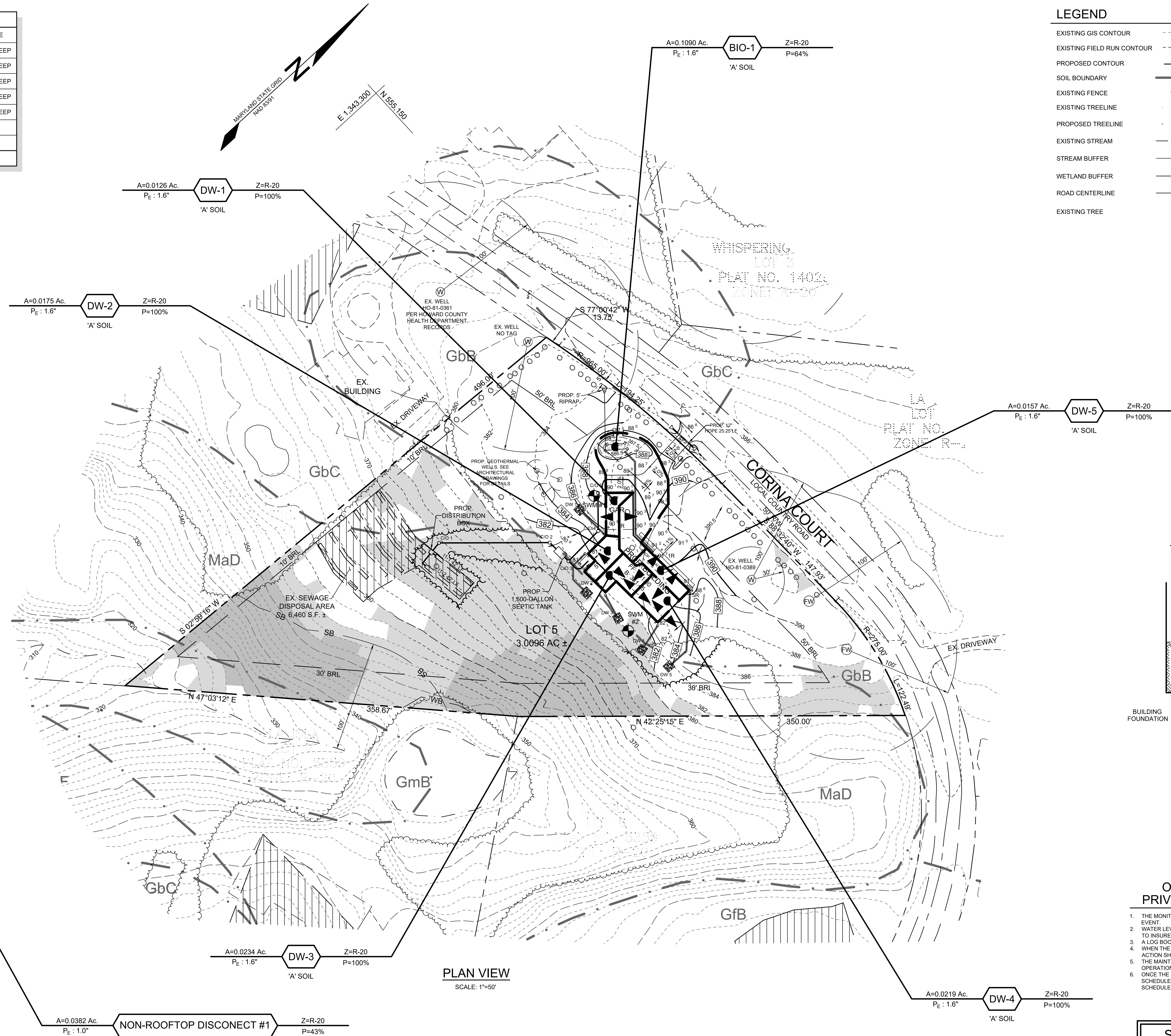
STORMWATER MANAGEMENT DESIGN CHART

PARCEL	SWM PRACTICE	VOLUME REQUIRED	VOLUME PROVIDED	Pe REQUIRED	Pe TREATED	DRY WELL SIZE
113	DW 1	65 CF	112 CF	1.5"	2.60"	8.0' X 7.0' X 5.0' DEEP
113	DW 2	91 CF	112 CF	1.5"	1.85"	8.0' X 7.0' X 5.0' DEEP
113	DW 3	113 CF	120 CF	1.5"	1.61"	8.0' X 7.5' X 5.0' DEEP
113	DW 4	105 CF	120 CF	1.5"	1.73"	8.0' X 7.5' X 5.0' DEEP
113	DW 5	87 CF	153 CF	1.5"	2.02"	8.0' X 7.5' X 5.0' DEEP
113	NRD 1	61 CF	61 CF	1.0"	1.00"	-
113	BIO 1	388 CF	485 CF	1.5"	1.88"	-
TOTAL		910 CF	1,163 CF	1.5"	1.81"	-

NOTE: THE ENVIRONMENTAL SITE DESIGN REQUIREMENT IS 1,154 CF.
DRYWELL 5 WAS OVER SIZED TO TREAT THE REMAINING ESDv AND 0.5" OF RAINFALL THAT COULD NOT BE TREATED BY NON-ROOFTOP DISCONNECT 1.
DRYWELLS 1 THROUGH 5 WERE OVERSIZED TO MEET THE SITE ESDv REQUIREMENT.

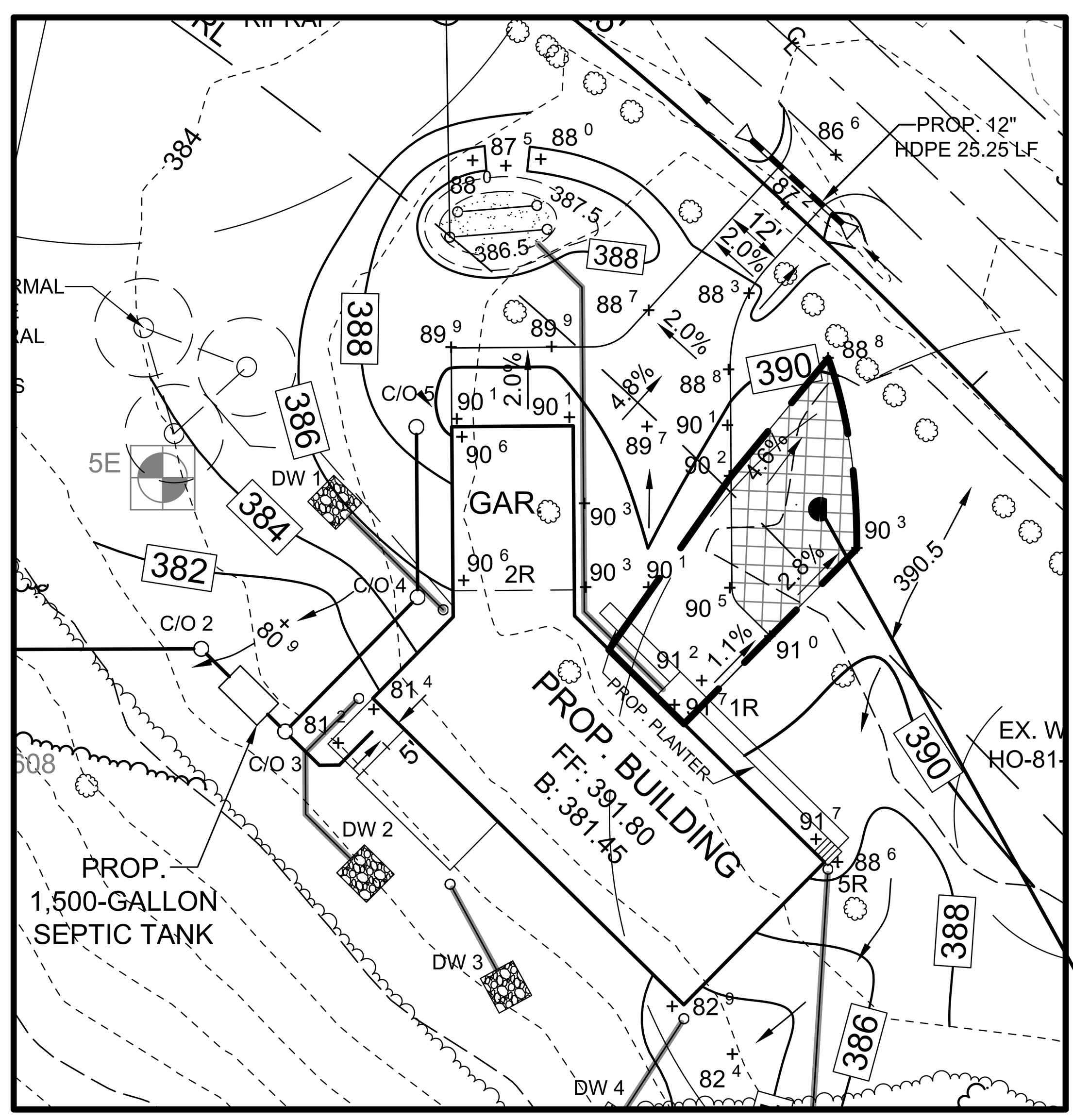
OPERATION AND MAINTENANCE SCHEDULE FOR ROOFTOP (N-1) AND NON-ROOFTOP (N-2) DISCONNECTS

MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR THE OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G. BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER).



PLAN VIEW

SCALE: 1"=50'



NON-ROOFTOP DISCONNECT PLAN VIEW

SCALE: 1"=30'

LEGEND

EXISTING GIS CONTOUR	382	MODERATE SLOPES, 15-24.99%	
EXISTING FIELD RUN CONTOUR	382	STEEP SLOPES, 25% OR GREATER	
PROPOSED CONTOUR	382	EXISTING SEWAGE DISPOSAL AREA	
SOIL BOUNDARY		EXISTING WELL	W
EXISTING FENCE	X	PROPOSED FUTURE WELL	FW
EXISTING TREELINE		PROPOSED STORMWATER MANAGEMENT BORING	SWM #1
PROPOSED TREELINE		PROPOSED DRYWELL AND ROOFLEADER	DW 1
EXISTING STREAM		DRAINAGE DIVIDE	
STREAM BUFFER	SB	NON-ROOFTOP DISCONNECT AREA	
WETLAND BUFFER	WB		
ROAD CENTERLINE	℄		
EXISTING TREE			

STORMWATER MANAGEMENT BORING 1:

- 0.0' - 9.0" TOPSOIL
- 9.0" - 6.0' SILTY CLAY, REDDISH-BROWN IN COLOR WITH SOME SAND PRESENT
- 6.0' - 9.0' LIGHT BROWN IN COLOR, SMALL COBBLE PRESENT
- 9.0' - 10.0' SANDY LOAM WITH SMALL AMOUNTS OF CLAY, GRAY IN COLOR WITH COBBLE PRESENT

* AT 10.0', NO WATER WAS ENCOUNTERED, NO BEDROCK PRESENT.

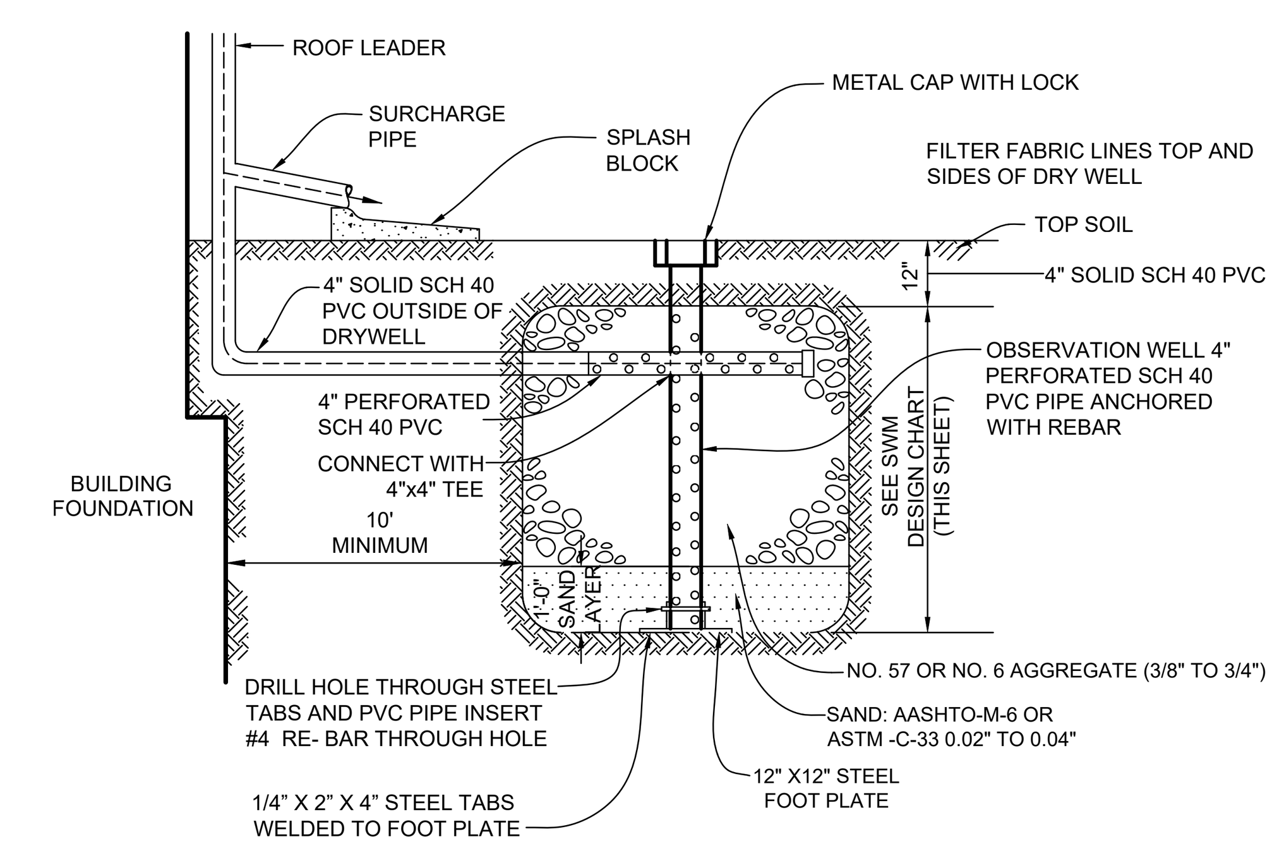
STORMWATER MANAGEMENT BORING 2:

- 0.0' - 1.0' TOPSOIL
- 1.0' - 4.0' SANDY CLAY, REDDISH/BROWN IN COLOR, LARGER COBBLE PRESENT
- 4.0' - 8.0' SANDY, LIGHT BROWN IN COLOR, WITH SOME COBBLE PRESENT
- 8.0' - 10.0' SANDY WITH CLAY, MIX OF GRAY AND REDDISH IN COLOR, COBBLE PRESENT

* AT 10.0', NO WATER WAS ENCOUNTERED, NO BEDROCK PRESENT.

STORMWATER MANAGEMENT BORING LOGS

NOT TO SCALE



TYPICAL DRY WELL CROSS SECTION

NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOURS TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

DocuSigned by: Michael J. Davis — 5/2/2023

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Paul DiMarco — 5/1/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/28/2023

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/2/2023

DIRECTOR — DATE

NO.	DESCRIPTION	DATE

REVISIONS

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GbB	GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	A	0.28
GbC	GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	A	0.28
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C/D	0.37
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	0.28

NOTES:
1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE; NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY.
2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FEET

OWNER/DEVELOPER
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7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

STORMWATER MANAGEMENT PLAN, DRAINAGE AREA MAP, NOTES, DETAILS AND BORING LOGS

LA ISLA, LOT 5

6626 CORINA COURT

TAX MAP 35 GRID 23 — PARCEL 113, LOT 5
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND PAUL M. SILL 32025 PROFESSIONAL ENGINEER

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Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

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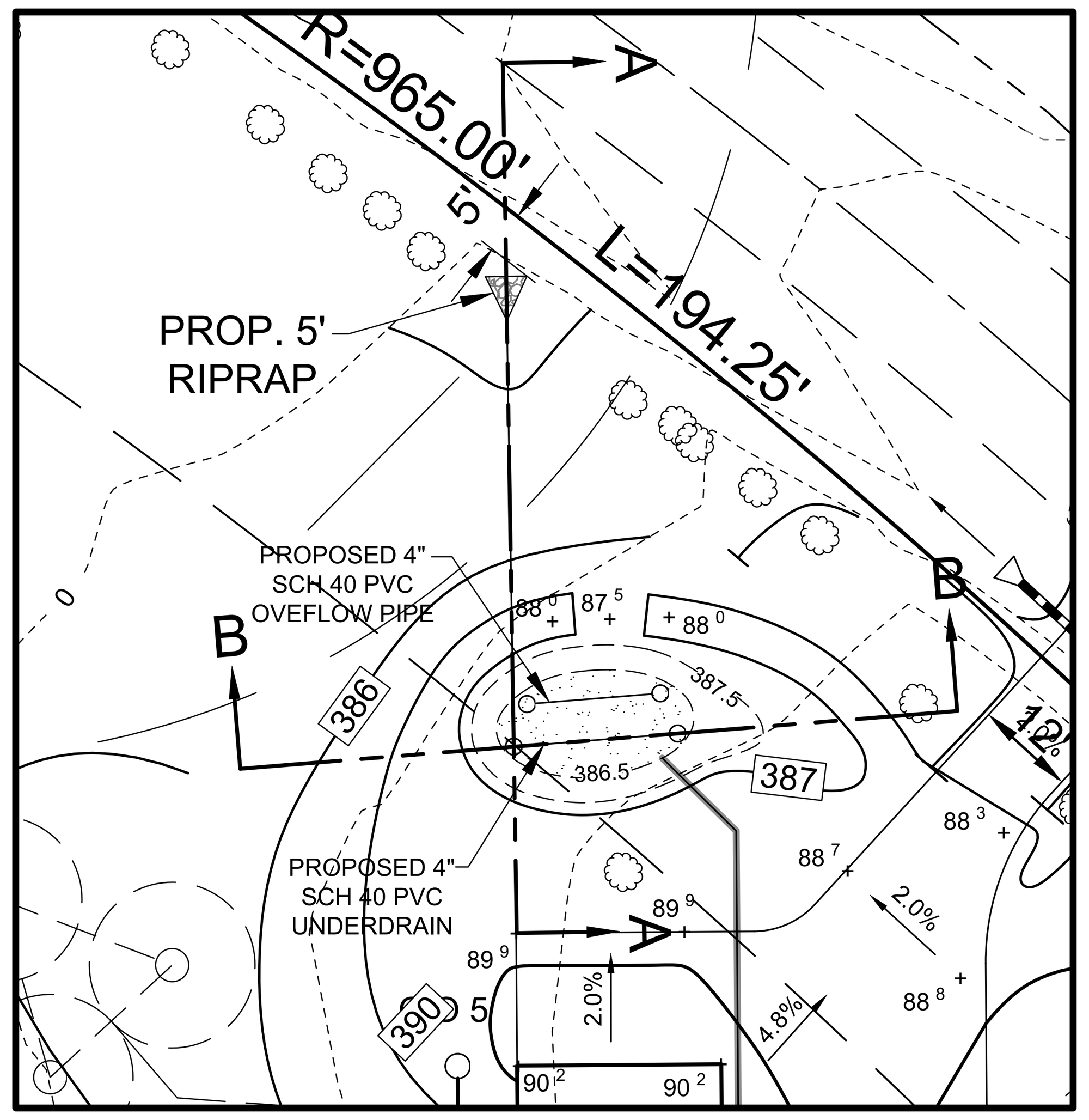
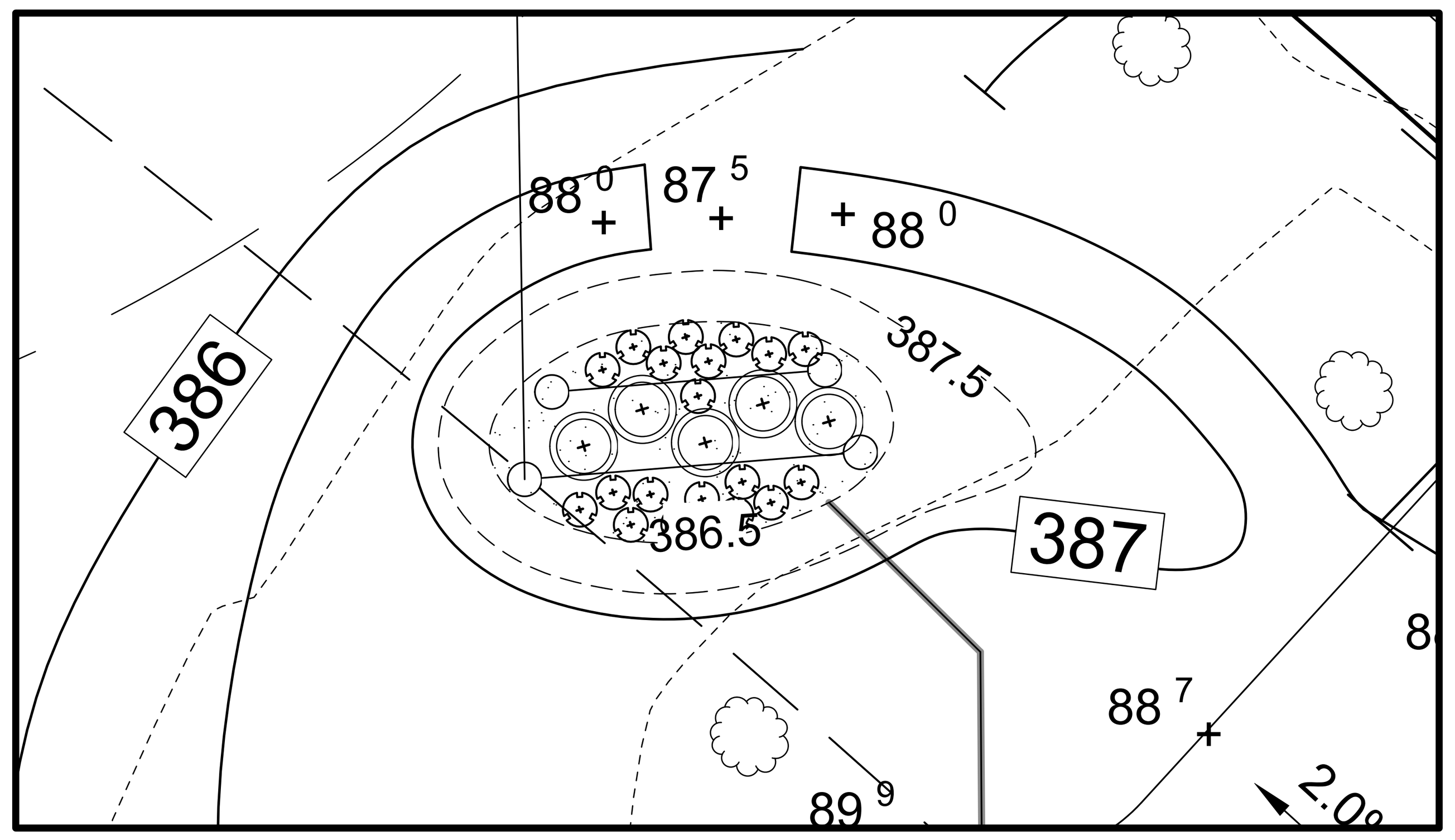


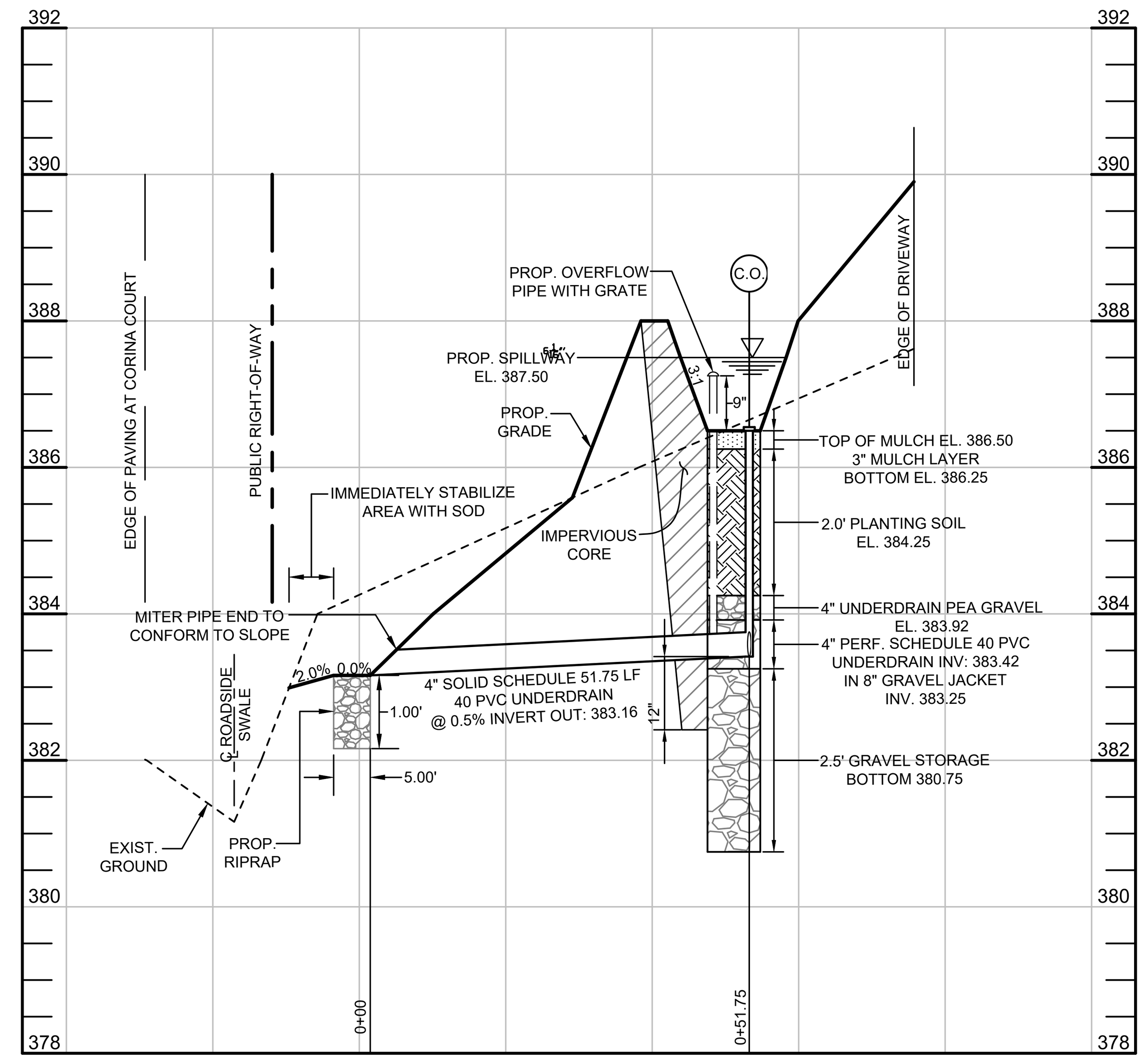
PLAN VIEW: MICRO-BIORETENTION FACILITY #1 (M-6)

SCALE: 1"=20'



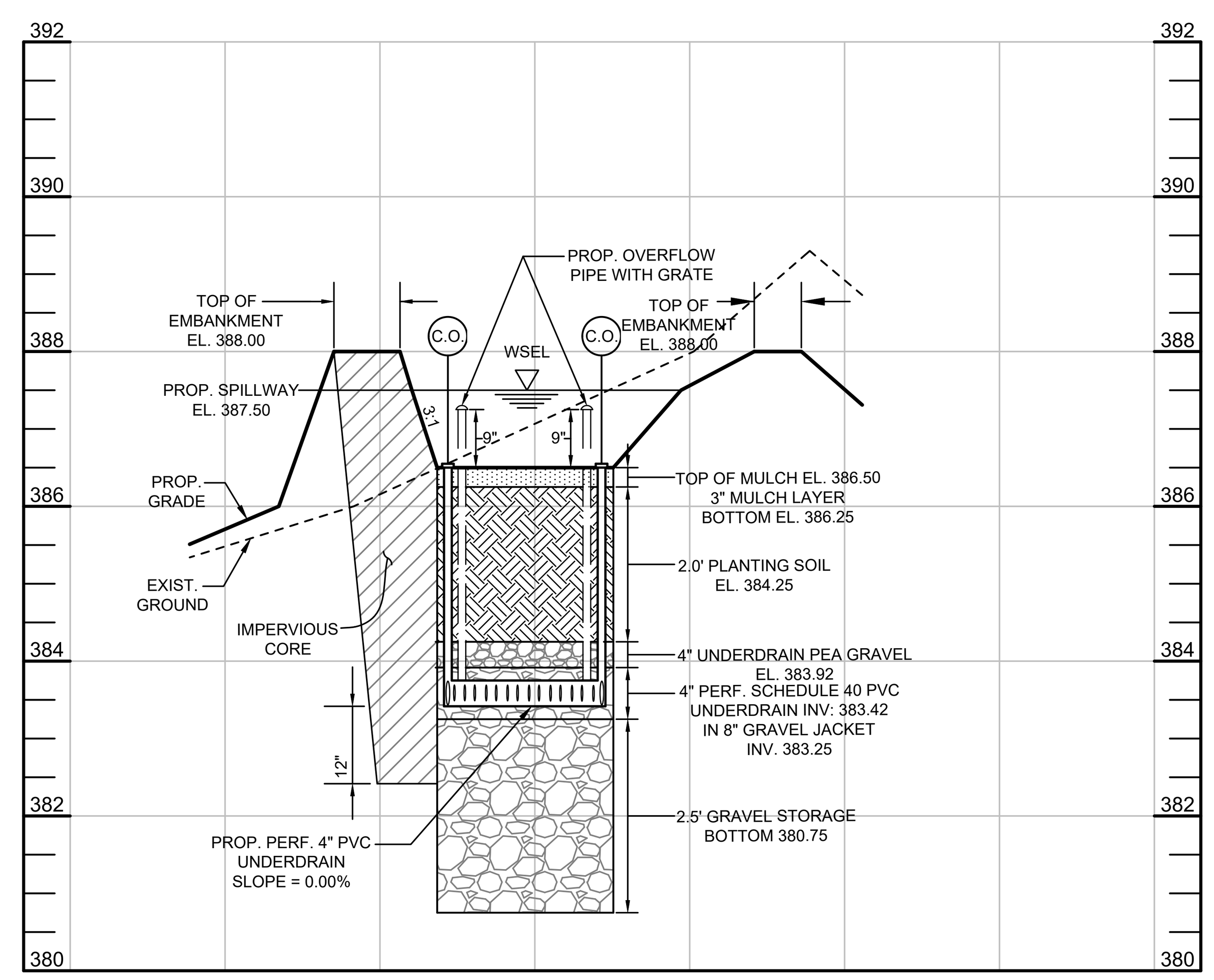
PLAN VIEW: MICRO-BIORETENTION FACILITY #1 (M-6) LANDSCPE PLAN

SCALE: 1"=10'



MICRO-BIORETENTION FACILITY #1 (M-6) - PROFILE (A-A)

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2'



MICRO-BIORETENTION FACILITY #1 (M-6) - PROFILE (B-B)

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=2'

LEGEND

EXISTING GIS CONTOUR	382
EXISTING FIELD RUN CONTOUR	382
PROPOSED CONTOUR	382
EXISTING TREE	

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE – SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPS OIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12” TO 18”. DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2” TO 3”. SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2” BY 2” STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE- SHOULD BE 4” TO 6” DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4” RIGID PIPE (E.G.,PVC OR HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE ⅜” DIAMETER LOCATED 6” ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A ¼” (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
- GRAVEL – THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3” THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4” LAYER OF PEA GRAVEL (⅛” TO ⅜” STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24”.

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED

MATERIALS SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN & LANDSCAPE INFILTRATION

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANT LIST THIS SHEET	N/A	PLANTINGS ARE SITE-SPECIFIC, SEE PLANT LIST THIS SHEET
PLANTING SOIL [2'-4' TO 4' DEEP]	LOAMY SAND (60% - 65%) & COMPOST (35%-40%) OR SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	USDA 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; NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN (IF REQUIRED)	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE, 3/8" PERF. @ 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" GALVANIZED HARDWARE CLOTH.
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MX NO.3; F'c= 3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60	N/A	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 PREVOUSLY 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 [H-10 OR H-20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING.
SAND	AASHTO-M-6 OR ASTM-C-33	0.02" TO 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.

BIORETENTION PLANT LIST

SHRUBS AND PERENNIALS						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY. BIO 1
⊙	ILEX GLABRA	INK BERRY	AS SHOWN* (MIN. 4' O.C.)	24"- 36" HT.	--	5
⊙	RUDBECKIA	BLACK-EYED SUSAN	AS SHOWN* (MIN. 2' O.C.)	1 GALLON	--	19

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.

MICRO-BIORETETNTION FACILITY # 1 -
BIORETENTION AREA = 242 S.F. OR 0.0056 AC.
PROVIDED: 5 SHRUBS AND 19 PERENNIALS

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES (F-6)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by: Paul DiMarco EDD5384E25784B6... 5/1/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DocuSigned by: 1EB75478A22B49A... 4/28/2023
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DocuSigned by: 989DB92F944F4CD... 5/2/2023
DIRECTOR — DATE

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

DocuSigned by: Michael J. Davis A099773D5AB5423... 5/2/2023
COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

NO.	DESCRIPTION	DATE
	REVISIONS	

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 INCH = 10 FEET

OWNER/DEVELOPER
MIKE MOSMAN
7614 SWEET HOURS WAY
COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

STORMWATER MANAGEMENT PLAN, PROFILE, AND NOTES
LA ISLA, LOT 5
6626 CORINA COURT

TAX MAP 35 GRID 23 — PARCEL 113, LOT 5
5TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — PAUL M. SILL — 32025 — PROFESSIONAL ENGINEER

SILL ENGINEERING GROUP, LLC
16005 Frederick Road, 2nd Floor
Woodbine, Maryland 21797
Phone: 443.325.5076
Fax: 410.696.2022
Email: info@sillengineering.com
Civil Engineering for Land Development

DESIGN BY: PS
DRAWN BY: TB
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 10, 2023
PROJECT #: 21-098
SHEET #: 6 of 7

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. 32025, EXPIRATION DATE JUNE 20, 2023

SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS

- INITIAL SYSTEM SYSTEM:
  - APPLICATION RATE: 1.2
  - EFFECTIVE AREA BEGINNING DEPTH: 5.0'
  - BOTTOM MAXIMUM DEPTH: 8.0'

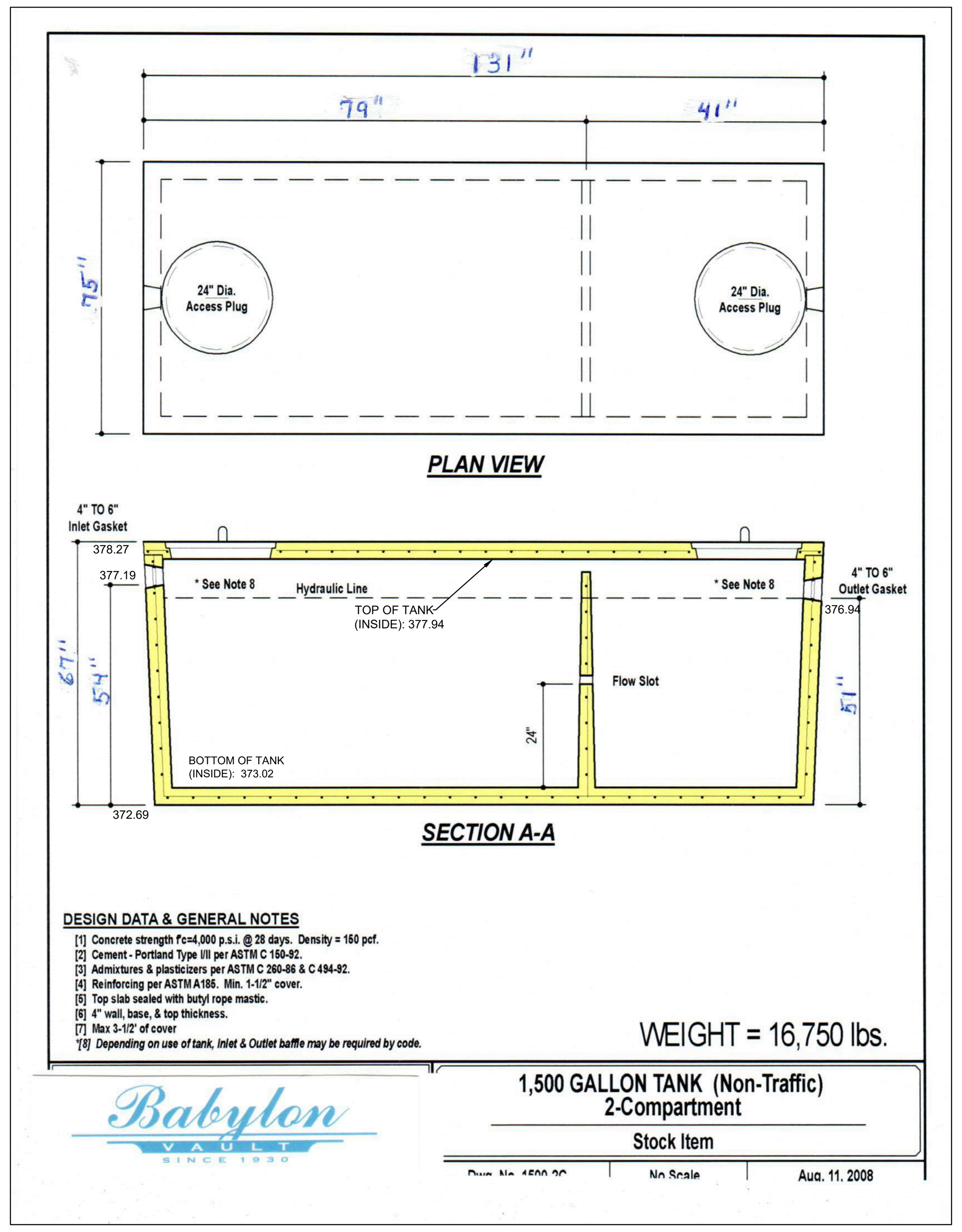
1. DESIGN FLOW:
   - 4 BEDROOMS AT 150 GALLONS PER DAY (GPD)
   -4X150 GPD = 600 GPD
2. SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:
   - DESIGN FLOW (600 GPD) / APPLICATION RATE (1.2) = 500 SF
3. SIDEWALL REDUCTION CREDIT:
   - TRENCH WIDTH (W) = 3.0'
   - TRENCH EFFECTIVE DEPTH (D) = 3.0'
   - (W+2) / (W+1+2D) X 100 = 50%
4. LINEAR LENGTH OF TRENCH REQUIRED:
   - DRAIN FIELD SQUARE FOOTAGE (500) X SIDEWALL REDUCTION CREDIT (50%) / TRENCH WIDTH (3.0') = 83.3'
5. LINEAR LENGTH OF TRENCH PROVIDED = 84'
   - TWO TRENCHES AT 42 LF EACH
6. EXISTING GROUND: TRENCH I1: 369.6
   INVERT: TRENCH I1: 367.6
   EXISTING GROUND: TRENCH I2: 367.6
   INVERT: TRENCH I2: 365.6

- FIRST REPLACEMENT SYSTEM:
  - APPLICATION RATE: 0.6
  - EFFECTIVE AREA BEGINNING DEPTH: 6.0'
  - BOTTOM MAXIMUM DEPTH: 8.0'

1. DESIGN FLOW:
   - 4 BEDROOMS AT 150 GALLONS PER DAY (GPD)
   -4X150 GPD = 600 GPD
2. SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:
   - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.6) = 1,000 SF
3. SIDEWALL REDUCTION CREDIT:
   - TRENCH WIDTH (W) = 3.0'
   - TRENCH EFFECTIVE DEPTH (D) = 2.0'
   - (W+2) / (W+1+2D) X 100 = 63%
4. LINEAR LENGTH OF TRENCH REQUIRED:
   - DRAIN FIELD SQUARE FOOTAGE (1,000) X SIDEWALL REDUCTION CREDIT (63%) / TRENCH WIDTH (3.0') = 210'
5. LINEAR LENGTH OF TRENCH PROVIDED = 210'
   - THREE TRENCHES 70 LF EACH
6. EXISTING GROUND: TRENCH R1-1: 369.1
   INVERT: TRENCH R1-1: 367.1
   EXISTING GROUND: TRENCH R1-2: 367.5
   INVERT: TRENCH R1-2: 365.5
   EXISTING GROUND: TRENCH R1-3: 365.3
   INVERT: TRENCH R1-3: 363.3

- SECOND REPLACEMENT SYSTEM:
  - APPLICATION RATE: 0.8
  - EFFECTIVE AREA BEGINNING DEPTH: 6.0'
  - BOTTOM MAXIMUM DEPTH: 8.0'

1. DESIGN FLOW:
   - 4 BEDROOMS AT 150 GALLONS PER DAY (GPD)
   -4X150 GPD = 600 GPD
2. SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:
   - DESIGN FLOW (600 GPD) / APPLICATION RATE (0.8) = 750 SF
3. SIDEWALL REDUCTION CREDIT:
   - TRENCH WIDTH (W) = 3.0'
   - TRENCH EFFECTIVE DEPTH (D) = 2.0'
   - (W+2) / (W+1+2D) X 100 = 63%
4. LINEAR LENGTH OF TRENCH REQUIRED:
   - DRAIN FIELD SQUARE FOOTAGE (750) X SIDEWALL REDUCTION CREDIT (63%) / TRENCH WIDTH (3.0') = 157.5'
5. LINEAR LENGTH OF TRENCH PROVIDED = 159'
   - THREE TRENCHES 53 LF EACH
6. EXISTING GROUND: TRENCH R2-1: 363.4
   INVERT: TRENCH R2-1: 361.4
   EXISTING GROUND: TRENCH R2-2: 361.7
   INVERT: TRENCH R2-2: 359.7
   EXISTING GROUND: TRENCH R2-3: 360.1
   INVERT: TRENCH R2-3: 358.1

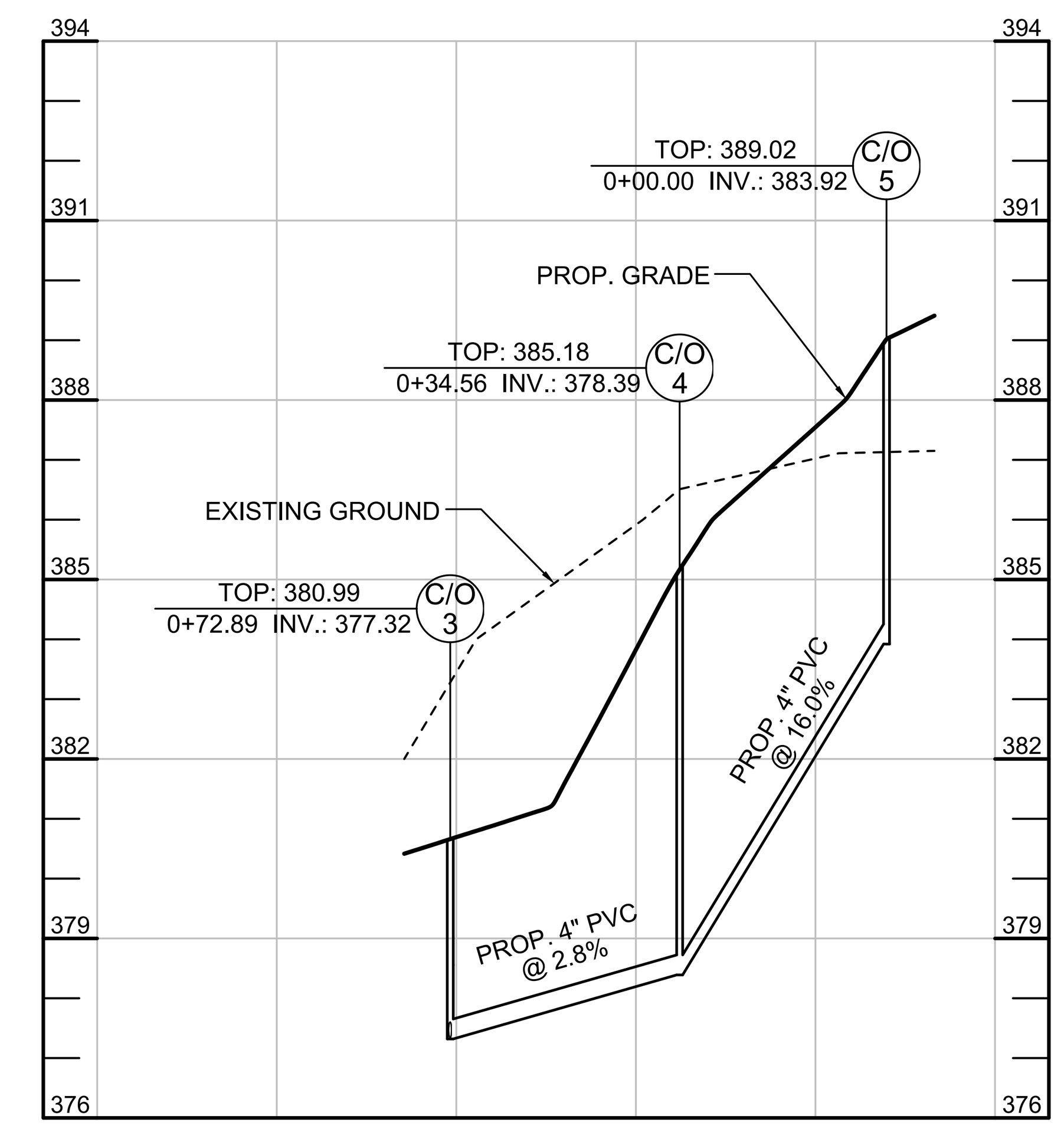


PROPOSED 1,500-GALLON SEPTIC TANK DETAIL

NOT TO SCALE

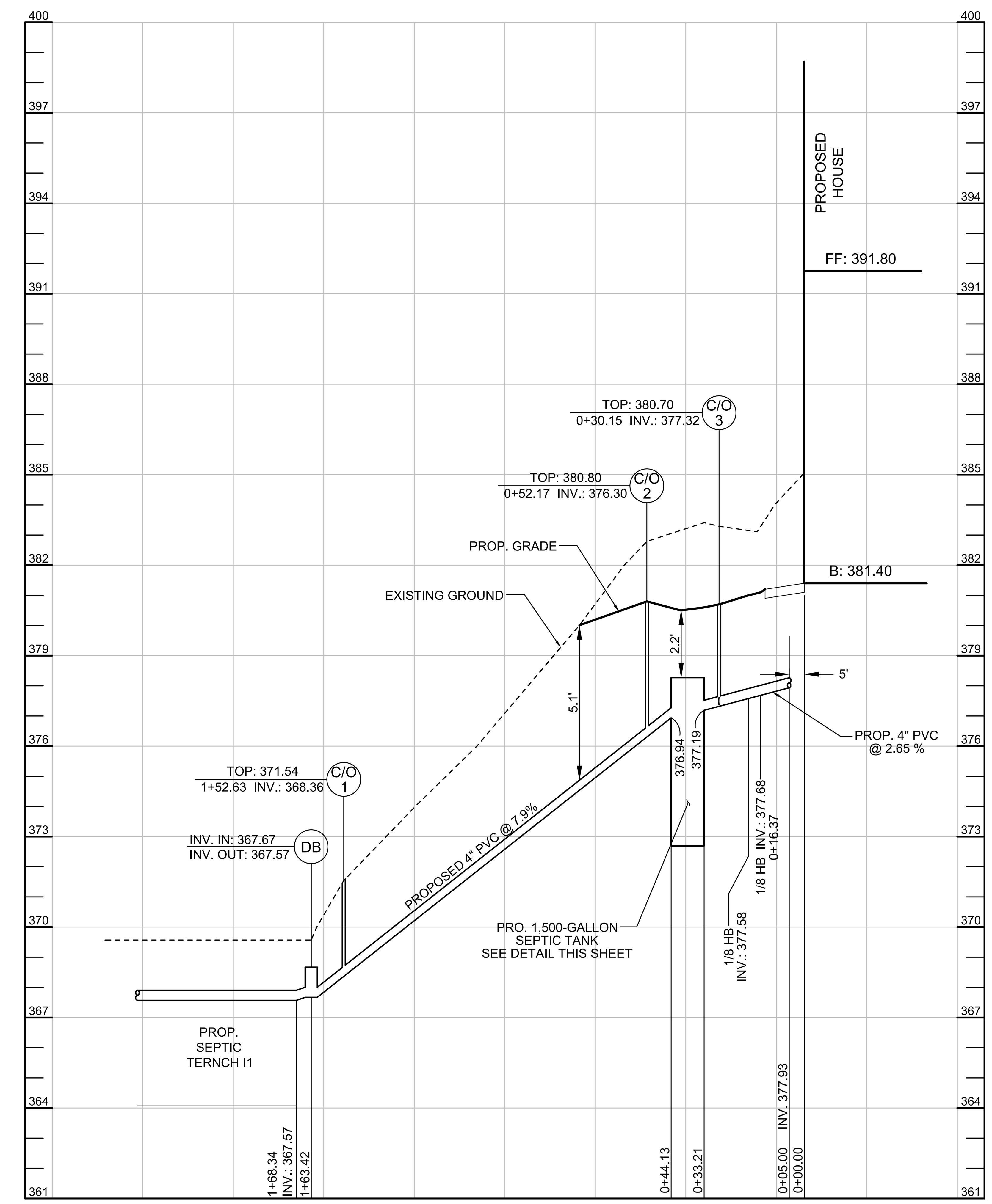
LEGEND

EXISTING GIS CONTOUR
EXISTING FIELD RUN CONTOUR
PROPOSED CONTOUR
SOIL BOUNDARY
EXISTING FENCE
EXISTING TREELINE
PROPOSED TREELINE
EXISTING STREAM
STREAM BUFFER
WETLAND BUFFER
ROAD CENTERLINE
EXISTING TREE
EXISTING WELL
MODERATE SLOPES, 15-24.99%
STEEP SLOPES, 25% OR GREATER
EXISTING SEWAGE DISPOSAL AREA
PROPOSED FUTURE WELL



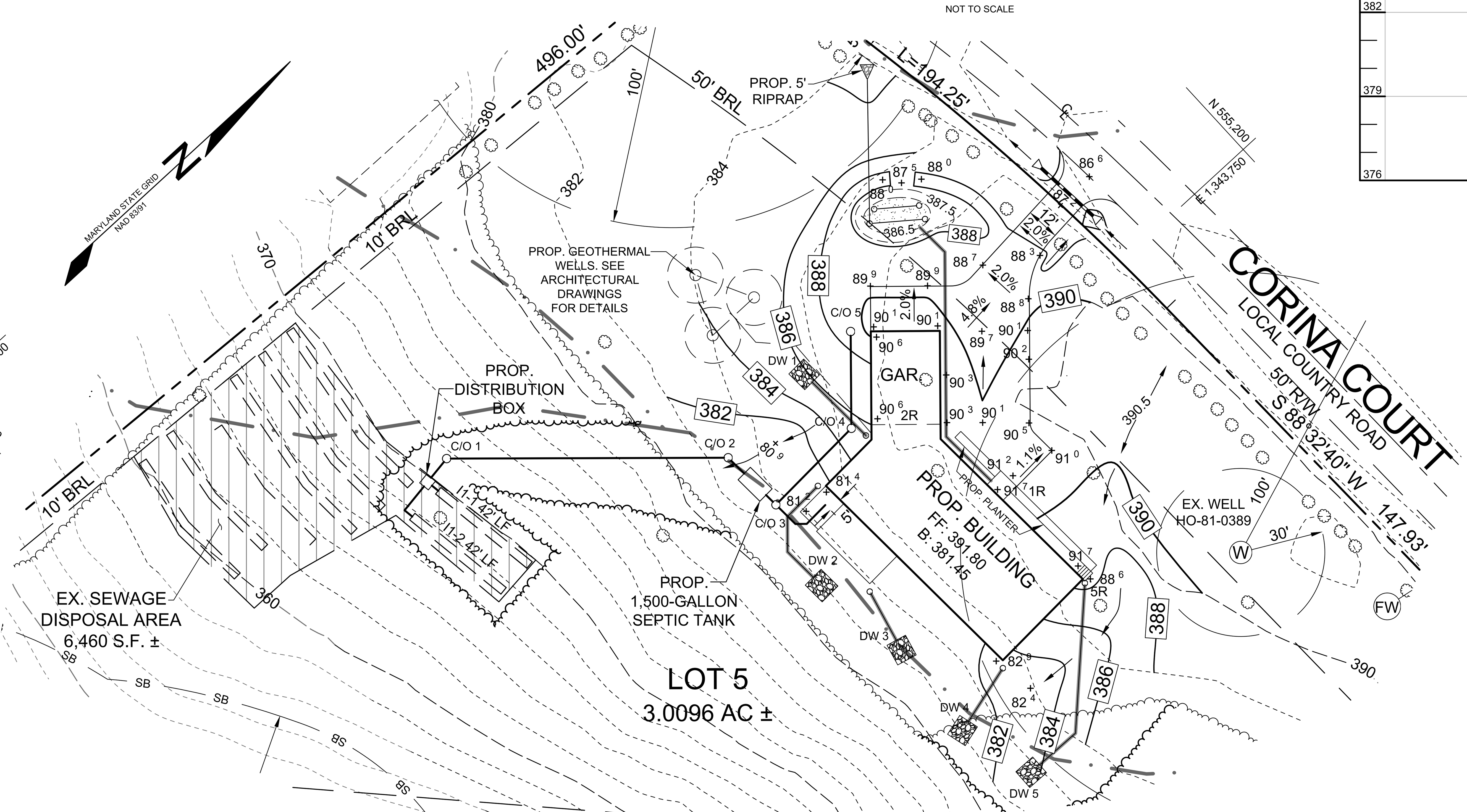
CLEANOUT PROFILE

HORIZONTAL SCALE : 1" = 30'
VERTICAL SCALE : 1" = 3'



SEPTIC SYSTEM PROFILE

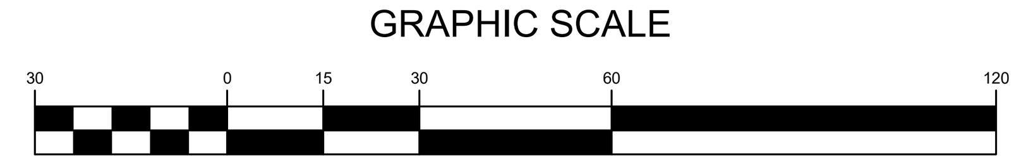
HORIZONTAL SCALE : 1" = 30'
VERTICAL SCALE : 1" = 3'



PLAN VIEW

SCALE: 1"=30'

GRAPHIC SCALE



(IN FEET)
1 INCH = 30 FEET

CLEANOUT INVERT CHART

CLEANOUT	ELEVATION
1	368.36
2	376.30
3	377.32
4	378.39
5	383.92

APPROVED : FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

DocuSigned by: Michael J. Davis A099773D5AB5423... 5/2/2023

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NO.	DESCRIPTION	DATE

REVISIONS

OWNER/DEVELOPER

MIKE MOSMAN
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COLUMBIA, MARYLAND 21046
MIKEMOSMAN@AOL.COM
410-336-0803

ONSITE SEWAGE DISPOSAL PLAN, PROFILE NOTES, & DETAILS
LA ISLA, LOT 5

6626 CORINA COURT

TAX MAP 35 GRID 23
5TH ELECTION DISTRICT

PARCEL 113, LOT 5
HOWARD COUNTY, MARYLAND

STATE OF MARYLAND — PAUL M. SILL — 32025 — PROFESSIONAL ENGINEER

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Email: info@sillengineering.com
Civil Engineering for Land Development

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