GENERAL NOTES:

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE. 2. SUBJECT PROPERTY ZONED R-20 PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.

THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED 4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE NAD '83 MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 31GD AND 31R1 WERE USED FOR THIS ROJECT.

. PREVIOUS HOWARD COUNTY FILE NUMBERS: S-90-009, P-93-001, F-94-099, SDP-95-075, ECP-24-005, WP-24-076 6. TRACT BOUNDARY IS BASED ON FIELD RUN BOUNDARY SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT MAY, 2023.

7. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY BENCHMARK ENGINEERING, INC., DATED MAY, 2023. EXISTING UTILITIES SHOWN ARE BASED ON FIELD LOCATIONS BY BENCHMARK ENGINEERING, NC., HOWARD COUNTY GIS, F-94-099 AND F-04-152.

8. WETLAND AND FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED AUGUST 16, 2023 AND APPROVED ON DECEMBER 18, 2023. THE 100-YEAR FLOODPLAIN STUDY WAS PREPARED BY

BENCHMARK ENGINEERING, INC. IN DECEMBER, 2023. A FLOODPLAIN STUDY WAS APPROVED AS PART OF THE REVIEW OF P-93-001, THESE FLOOD LIMITS WERE RECORDED ON THE ABBEYFIELD ESTATES OBLIGATION OF 6% PER SUBDIVISION AND LAND DEVELOPMENT PLAT AND ARE SHOWN AND LABELED PER PLAT NUMBER 11674.

10. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES LOCATED ON THIS SITE.

11. THERE ARE NO HISTORIC SITES/STRUCTURES LOCATED ON THIS SITE. THERE IS AN EXISTING STRUCTURE TO REMAIN ON LOT 42. IT IS DATED CIRCA 1954. THE PLANNING SUPERVISOR FROM THE DEPARTMENT OF PLANNING AND ZONING, RESOURCE CONSERVATIO DIVISION, DOES NOT REQUIRE A HISTORIC COMMISSION REVIEW OF THIS PROPERTY IN CORRESPONDENCE DATED 2/5/24. NO NEW BUILDINGS, EXTENSIONS, OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING EGULATIONS REQUIREMENTS.

2. THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA, EXISTING PUBLIC WATER AND PUBLIC SEWER CONNECTIONS ARE TO CONTRACT 14-3371-D.

13. A NOISE STUDY IS PROVIDED BY MARS GROUP, INC., DATED JANUARY, 2024 FOR THIS PROJECT. THE 65dBA NOISE CONTOUR IS SHOWN ON THE EXISTING CONDITIONS PLAN. THE 65dBA NOISE CONTOUR DOES NOT IMPACT THE SITE.

4. A TRAFFIC STUDY IS NOT REQUIRED FOR THIS SUBDIVISION. THE PROJECT DOES NOT GENERATE MORE THAN 5 PEAK HOUR TRIPS PER THE MULTIMODAL CHECKLIST COMPLETED BY MARS GROUP, DATED JANUARY 28, 2024.

15. THIS SUBDIVISION COMPLIES WITH THE REQUIREMENTS OF SECTION 16.200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION AS IT WAS PREVIOUSLY PROVIDED BY F-94-099, AS SHOWN ON PLAT NUMBER 11674, AND IS NOT TO BE REVISED BY THIS PLAN. THE DEED OF FOREST CONSERVATION WAS RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY MARYLAND, AT LIBER 4941, FOLIO 0467, DATED NOVEMBER 1999. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST

16. THIS SUBDIVISION IS NOT LOCATED ON A SCENIC ROAD. 17. COMMUNITY MEETING WAS HELD ON JUNE 26, 2023 AT THE HOWARD COUNTY PUBLIC LIBRARY, ELKRIDGE BRANCH.

CONSERVATION EASEMENT ARE ALLOWED.

DEVELOPMENT PLAN.

8. STORMWATER MANAGEMENT ENVIRONMENTAL SITE DESIGN (ESD) HAS BEEN PROVIDED TO THE MAXIMUM EXTENT PRACTICAL (MEP). THE DECLARATION OF COVENANTS SHALL BE RECORDED FOR MINITENANCE. THE PRACTICES USED ARE FOUR INDIVIDUALLY MAINTENANCE. THE PRACTICES USED ARE FOUR INDIVIDUALLY MAINTAINED MICRO-BIORETENTION FACILITIES (M-6) AND ONE INDIVIDUALLY MAINTAINED GRASS SWALE (M-8). SEE STORMWATER MANAGEMENT DETAIL SHEET FOR OPERATION AND MAINTENANCE SCHEDULES. STORMWATER MANAGEMENT PLANS AND PRACTICES SHOWN ON THIS PLAN MAY BE REVISED ON THE SITE

9. LANDSCAPING IS PROVIDED WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL POSTING OF SURETY FOR REQUIRED LANDSCAPING IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL WILL BE REQUIRED. FINANCIAL SURETY IN THE AMOUNT OF \$ 3,000.00 (7 SHADE TREES, 4 EVERGREEN TREES AND 10 SHRUBS) FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE GRADING PERMIT.

20. FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY ONLY AND NOT ONTO THE FLAG OR PIPESTEM LOT DRIVEWAY.

21. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:

AND CHIP COATING. C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.

D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)

E) DRAINAGE ELEMENTS – CÀPABLE OF SAFELY PASSING 100 YEAR FLOOD PLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER

SITE DATA TABULATION 1) GENERAL SITE DATA

а.	PRESENT ZONING:	R-20	
h	LOCATION: TAX M	P 31 _ CPID 2	206

- b. LOCATION: TAX MAP 31 GRID 21 PARCEL 206 c. APPLICABLE DPZ FILE REFERENCES: S-90-009, P-93-001,
- F-94-099, SDP-95-075, ECP-24-005, WP-24d. DEED REFERENCE: BOOK 21943, PAGE 0298
- e. PROPOSED USE OF SITE: 3 SFD LOTS;
- 1 OPEN SPACE LOT f. PROPOSED WATER AND SEWER:
- PUBLIC WATER AND PUBLIC SEWER, CONTRACT 14-3371-D
- 2) AREA TABULATION

Z) AREA TABULATION		
a. TOTAL AREA OF OVERALL SITE	1.67	Ac.±
b. AREA OF 100-YR FLOODPLAIN EASEMENT (APPROX.)	0.02	Ac.±
c. AREA OF STEEP SLOPES (25% OR GREATER)	0.02	Ac.±
AREA OF STEEP SLOPES LESS THAN 10 VERT. FEET		
PLUS AREAS OF STEEP SLOPES WITHIN FLOODPLAIN	0.02	Ac.±
d. NET AREA OF SITE	1.67	Ac.±
e. AREA OF THIS PLAN SUBMISSION	1.67	Ac.±
f. LIMIT OF DISTURBANCE (APPROX.)	0.98	Ac.±
g. AREA OF PROPOSED BUILDABLE LOTS	1.42	Ac.±
h. AREA OF OPEN SPACE LOT	0.25	Ac.±
i. AREA OF NON-CREDIT OPEN SPACE	0.15	Ac.±
k. AREA OF CREDIT OPEN SPACE	0.10	Ac.±
I. AREA OF PROPOSED PUBLIC ROAD	0.00	Ac.
m. AREA OF PROPOSED PUBLIC R/W DEDICATION	0.00	Ac.
3) DENSITY TABULATION		
a. NET AREA OF OVERALL SITE	. 1.67	Ac.±
b. MINIMUM LOT SIZE	. 20.0	
a. TOTAL NUMBER OF BUILDABLE LOTS		
b. TOTAL NUMBER OF OPEN SPACE LOTS	. 1	
4) UNIT/LOT TABULATION		
a. OPÉN SPACE REQUIRED BY F-94-099	. 2.50) AC.±
b. OPEN SPACE PROVIDED BY PLAT 11674	. 3.48	3 AC.±
c. RECREATIONAL O.S. REQUIRED BY F-94-099	7,00)0 SF
d. RECREATIONAL O.S. PROVIDED BY PLAT 11674	7.59	91 SF
e. RECREATIONAL OPEN SPACE REQUIRED THIS PLAN		
*RECREATIONAL OPEN SPACE PREVIOUSLY PROVIDED BY PL	AT 11	674

APPROVED: DEPARTMENT OF PLANNING AND ZONING

APPROVED: DEPARTMENT OF PLANNING AND ZONING					
Control DocuSigned by:					
M	7/18/2024				
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE				
DocuSigned by:					
(HAD Edmondson	7/18/2024				
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE				

F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

22. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.

23. SECTION 13.402(c)(e) OF THE HOWARD COUNTY CODE OF ORDINANCES FOR MODERATE INCOME HOUSING UNITS APPLIES T ORDINANCES FOR MODERATE INCOME HOUSING UNITS APPLIES TO THIS PROPERTY. THIS SHALL BE ACCOMPLISHED BY A FEE-IN-LIEU OF CONSTRUCTION PAYMENT THAT IS TO BE CALCULATED AND PAID AT THE TIME OF BUILDING PERMIT ISSUANCE. LOT 42 IS EXEMPT AS IT CONTAINS THE EXISTING HOUSE, IF THE LOT 42 DWELLING IS REMOVED THE NEW DWELLING WILL BE SUBJECT TO THE MIHU REQUIREMENTS IN PLACE AT THAT TIME.

24. PER SECTION 16.121.a.2 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND PER F-94-099 THIS PROJECT IS SUBJECT TO 10% OPEN SPACE REQUIREMENT (2.50 AC.) OF THE ORIGINAL DEVELOPMENT'S AREA. PLAT 11674 FULFILLED THE OBLIGATION BY RECORDING 3.48 ACRES± OF OPEN SPACE. OPEN SPACE OBLIGATION WAS FULFILLED BY DEDICATION OF OPEN SPACE LOT 37 TO HOWARD COUNTY, MARYLAND. THIS RESUBDIVISION OF LOT 1 CREATES NEW OPEN SPACE LOT 44. LOT 44 IS 0.25 ACRES OF OPEN SPACE ADJACENT TO THE EXISTING OPEN SPACE LOT 37. THE NEW OPEN SPACE LOT 44 HAS A TOTAL AREA OF 0.25 ACRES. THE NEW OPEN SPACE LOT 44 HAS 0.15 ACRES THAT IS LESS THAN 35' WIDE AND IS NON-CREDITED. THE NEW OPEN SPACE LOT 44 HAS 0.10 ACRES OF CREDITED OPEN SPACE. OPEN SPACE LOT 44 IS TO BE DEDICATED TO HOWARD COUNTY, MARYLAND, AS IT IS A DEDICATED TO HOWARD COUNTY, MARYLAND, AS IT IS A CONTINUATION OF THE OPEN SPACE PREVIOUSLY DEDICATED TO HOWARD COUNTY, MARYLAND, AS SHOWN ON PLAT 11674. THIS OPEN SPACE LOT FULFILLS THE FRONTAGE OBLIGATION AS DESCRIBED IN SECTION 16.121(e)(3), SHARING FRONTAGE WITH EXISTING OPEN SPACE LOT 37. THE CREDITED OPEN SPACE OF OPEN SPACE LOT 44 FULFILLS THE CURRENT OPEN SPACE OPEN SPACE LOT 667 DEED SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SECTION 16.121(a)(2).

25. RECREATIONAL OPEN SPACE WAS PROVIDED ON PLAT 11674. THE OBLIGATION UNDER F-94-099 WAS 7,000 SF PER PLAT 11674. THE AREA DESIGNATED ON THAT PLAT IS 7,591 SF. THE TWO NEW LOTS OF THIS SUBDIVISION WOULD REQUIRE 200 SF EACH (A TOTAL OF 400 SF) BUT THIS AREA WAS ALREADY PROVIDED ADJACENT TO THIS DEVELOPMENT PER PLAT 11674.

26. LYNN LANE AND RADEL COURT ARE NEIGHBORHOOD YIELD STREETS. THE LAND USE CONTEXT IS DENSE RESIDENTIAL WITH AN ANTICPATED ADT IN THE DESIGN YEAR OF LESS THAN 2,000. TRANSPORTATION CLASSIFICATION IS LOCAL ROAD FOR BOTH STREETS. THE EXISTING STREETS CURRENTLY PROVIDE FOR ON-STREET PARKING. THE EXISTING RIGHTS-OF-WAY ARE 50', THE PAVED WIDTH IS APPROXIMATELY 26' AND THERE ARE EXISTING SIDEWALKS. THE POSTED SPEED IS 25 MPH AND THERE ARE NUMEROUS SINGLE-USER DRIVEWAYS. THE STREETS IN THE VICINITY OF THE PROJECT ALSO HAVE SIDEWALKS. BIKEHOWARD MASTER PLAN AND HOWARD COUNTY INTERACTIVE MAP HAS NO DESIGNATIONS FOR LYNN LANE OR RADEL COURT.

27. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN THE BOUNDARIES OF THE OCTOBER 2019 HOWARD COUNTY. BALTIMORE/WASHINGTON INTERNATIONAL AIRPORT (BWI), AIRPORT NOISE ZONE AS WELL AS THE FOUR MILE RADIUS OF BWI AIRPORT. THEREFORE, NO APPROVAL FROM THE MARYLAND AVIATION ADMINISTRATION IS REQUIRED.

28. BRL INDICATES ZONING BUILDING RESTRICTION LINE, OTHER RESTRICTIONS MAY APPLY.

29. UNLESS OTHERWISE NOTED AS "PUBLIC", ALL EASEMENTS ARE "PRIVATE".

30. ALL AREAS ON THESE PLANS ARE "MORE OR LESS".

31. THIS SUBDIVISION (F-24-041) IS EXEMPT FROM PROVIDING ROADWAY IMPROVEMENTS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III, COMPLETE STREETS AND BRIDGES, IN ACCORDANCE WITH EXEMPTION 2. THE EXISTING JUSTIFIABLE ABSENCE OF NEED DUE TO THE EXISTING IMPROVEMENTS

32. DEVELOPER RESERVATION IS NOT NECESSARY FOR THIS SUBDIVISION AS NO NEW PUBLIC EASEMENTS ARE PROPOSED.

3. BGE APPROVAL IS NOT NECESSARY AS THERE ARE NO OVERHEAD POWER LINES IN THE VICINITY OF THIS DEVELOPMENT.

34. ON MAY 24, 2024 THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING APPROVED AN ALTERNATIVE COMPLIANCE REQUEST (WP-24-076) WITH RESPECT TO SECTION 16.127(C)(4)(i) THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO UTILIZE AN INDIVIDUAL DRIVEWAY FOR LOT 43 OF THE PROPOSED RESUBDIVISION OF ABBEYFIELD ESTATES, LOT 1.

35. THE GEOTECHNICAL BORINGS LOGS WERE PREPARED BY HILLLIS-CARNES ENGINEERING ASSOCIATES, INC. IN AUGUST, 2023. ONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC

WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

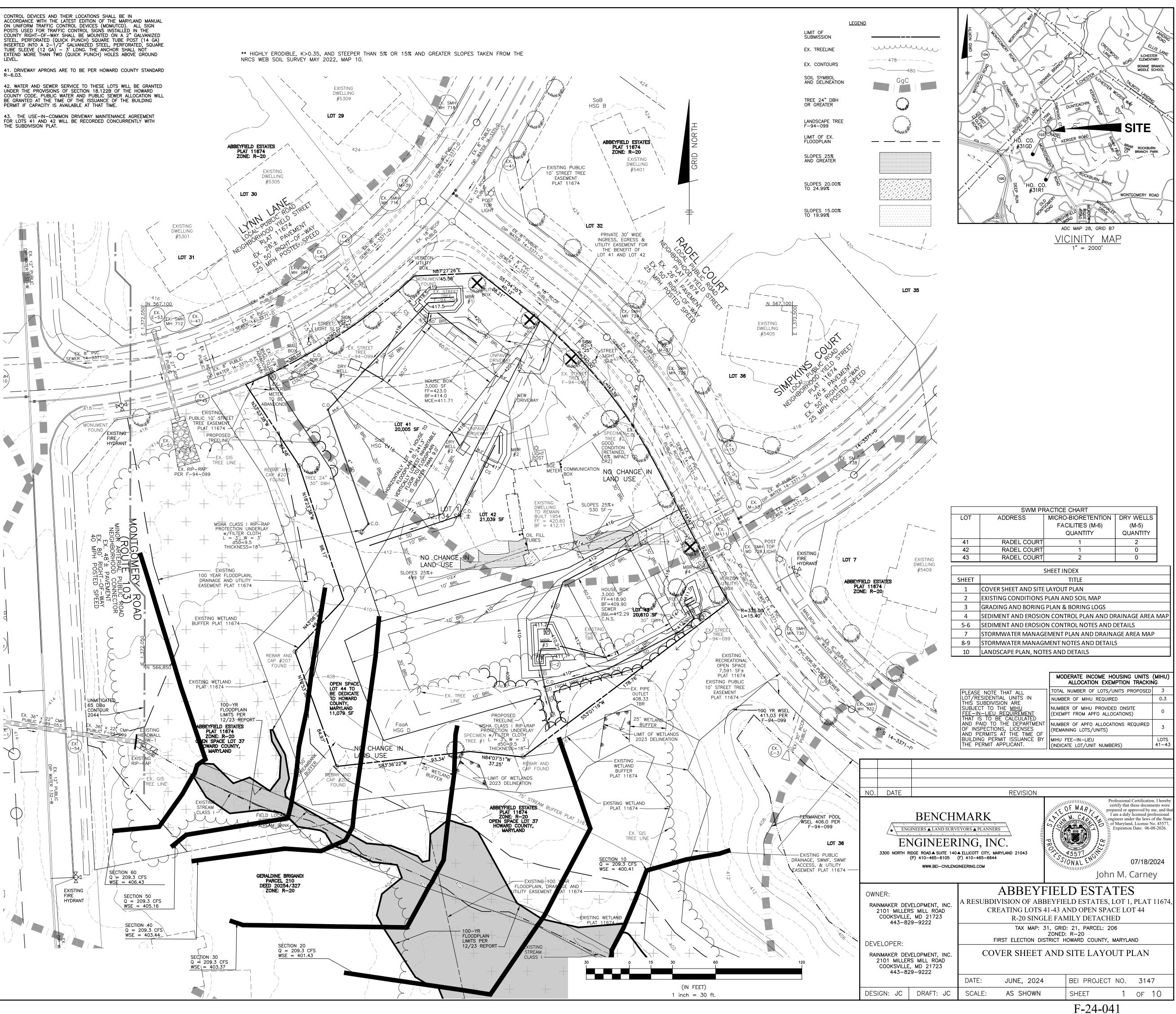
37. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1–800–257–7777_AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE

38. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.

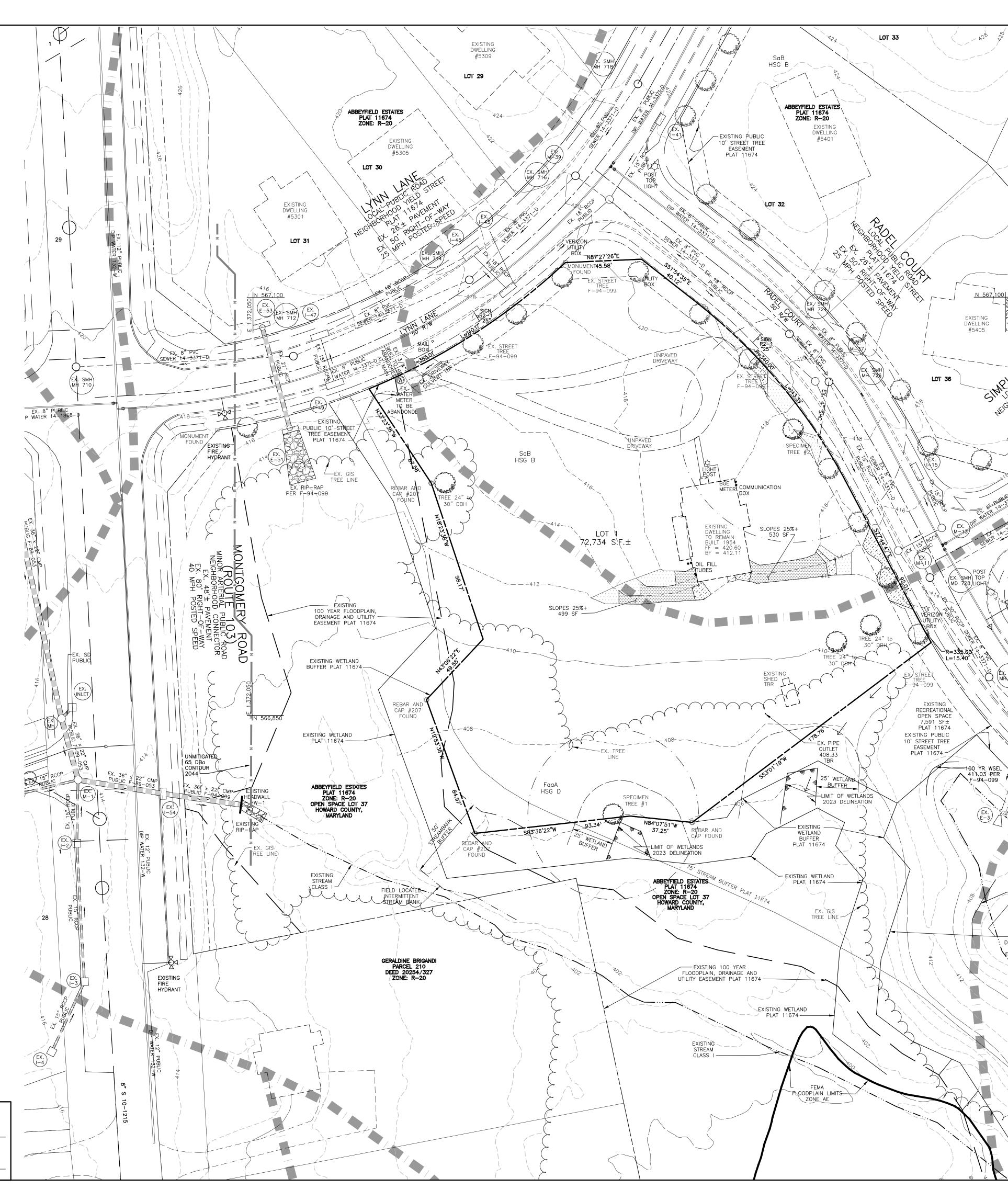
A) WIDTH – 12' AND (16' SERVING MORE THAN ONE RESIDENCE). B) SURFACE – 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING AND CHIP COATING BE GRANTED AT TIME OF ISSUANCE OF BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.

> 10. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430). ALL TRAFFIC

DRIVEWAY APRONS ARE TO BE PER HOWARD COUNTY STANDARD



Docusign Envelo	pe ID: 35FA0270-	DD88-45C6-BB43	A1574D16CDC7



APPROVED: DEPARTMENT OF PLANNING AN	ID ZONING
M	7/18/2024
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
(HD) Edmondson	7/18/2024
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE

** HIGHLY ERODIBLE, K>0.35, AND STEEPER THAN 5% OR 15% AND GREATER SLOPES TAKEN FROM THE NRCS WEB SOIL SURVEY MAY 2022, MAP 10.

_ __ __ __ _

GgC

---478----

<u>LEGEND</u>

LIMIT OF SUBMISSION EX. TREELINE EX. CONTOURS SOIL SYMBOL AND DELINEATION TREE 24" DBH OR GREATER LANDSCAPE TREE F—94—099

L

EXISTING

-PERMANENT POOL WSEL 406.0 PER F-94-099

EXISTING PUBLIC DRAINAGE, SWMF, SWMF ACCESS, & UTILITY EASEMENT PLAT 11674 -

LOT 36

LOT 7

ABBEYFIELD ESTATES

ZONE: R-20/

LIMIT OF EX. FLOODPLAIN

SLOPES 25% AND GREATER

SLOPES 20.00% TO 24.99%

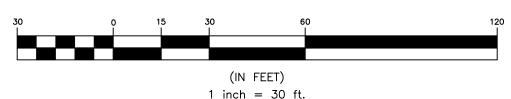
SLOPES 15.00% TO 19.99%

UNMITIGATED 65 DBa CONTOUR 2044

Specimen Tree Chart

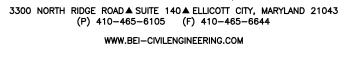
N N N

Key	Species	Size	CRZ	Condition	State
(x#)		(in. dbh)	1:1.5	(good unless otherwise	Champion
			(feet	noted)	(in. dbh)
			radius)		
1	Red Maple	34	51		86.9
2	Red Maple	45	67.5	Odd branching pattern a bh,	86.9
				measure below branch collar	



1 inch = 30 ft.

REVISION BENCHMARK ● ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC.



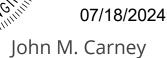
NO. DATE

OWNER:

DEVELOPER:

~

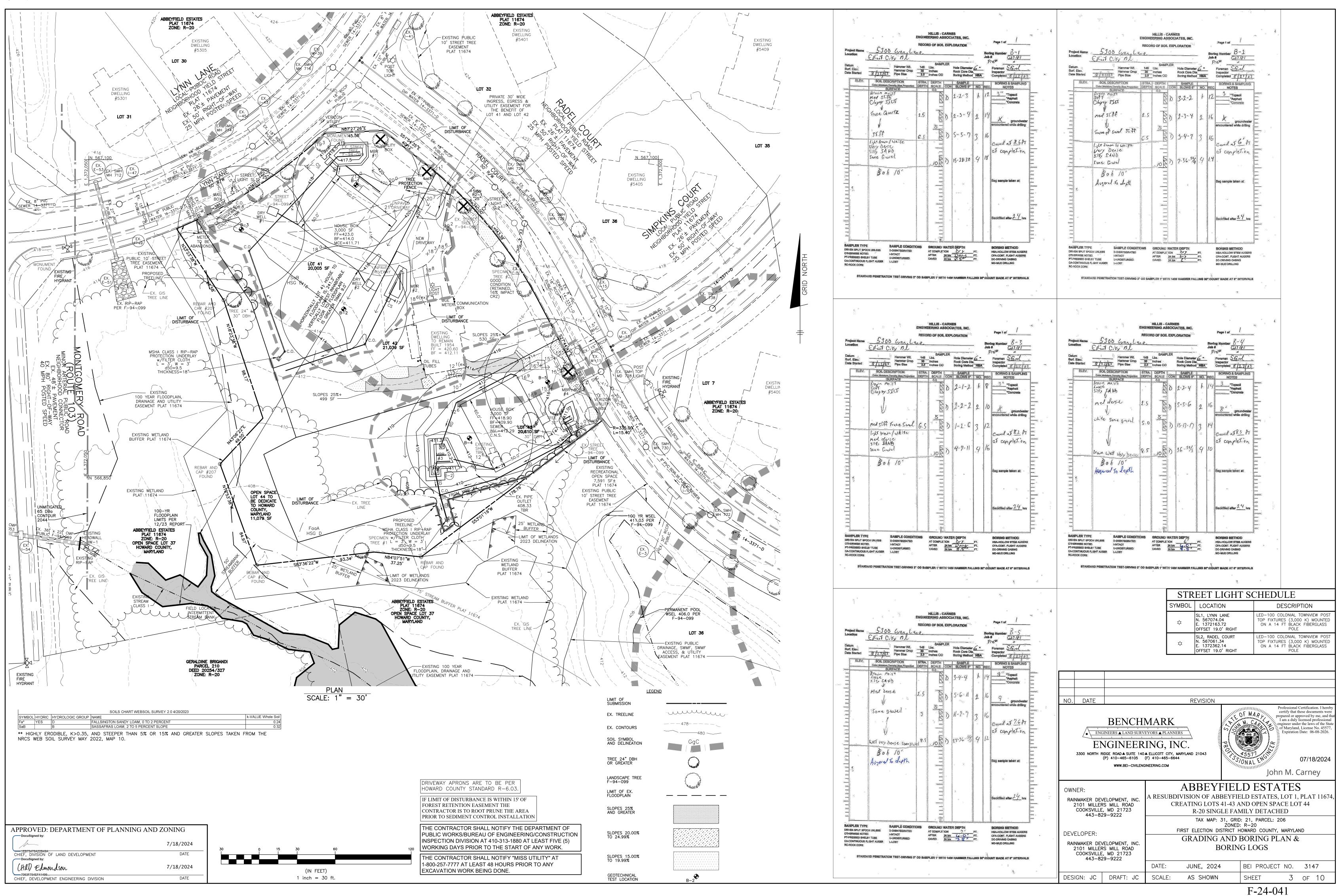




ABBEYFIELD ESTATES RESUBDIVISION OF ABBEYFIELD ESTATES, LOT 1, PLAT 11674, RAINMAKER DEVELOPMENT, INC. 2101 MILLERS MILL ROAD COOKSVILLE, MD 21723 443–829–9222 CREATING LOTS 41-43 AND OPEN SPACE LOT 44 R-20 SINGLE FAMILY DETACHED TAX MAP: 31, GRID: 21, PARCEL: 206 ZONED: R-20 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

2101 MILLEF COOKSVILLE	VELOPMENT, INC. RS MILL ROAD 5, MD 21723 29–9222		EXISTING CONDI SOIL	TIONS PLAN 5 MAP	AN	D	
		DATE:	JUNE, 2024	BEI PROJECT N	10.	314	7
DESIGN: JC	DRAFT: JC	SCALE:	AS SHOWN	SHEET	2	OF	10

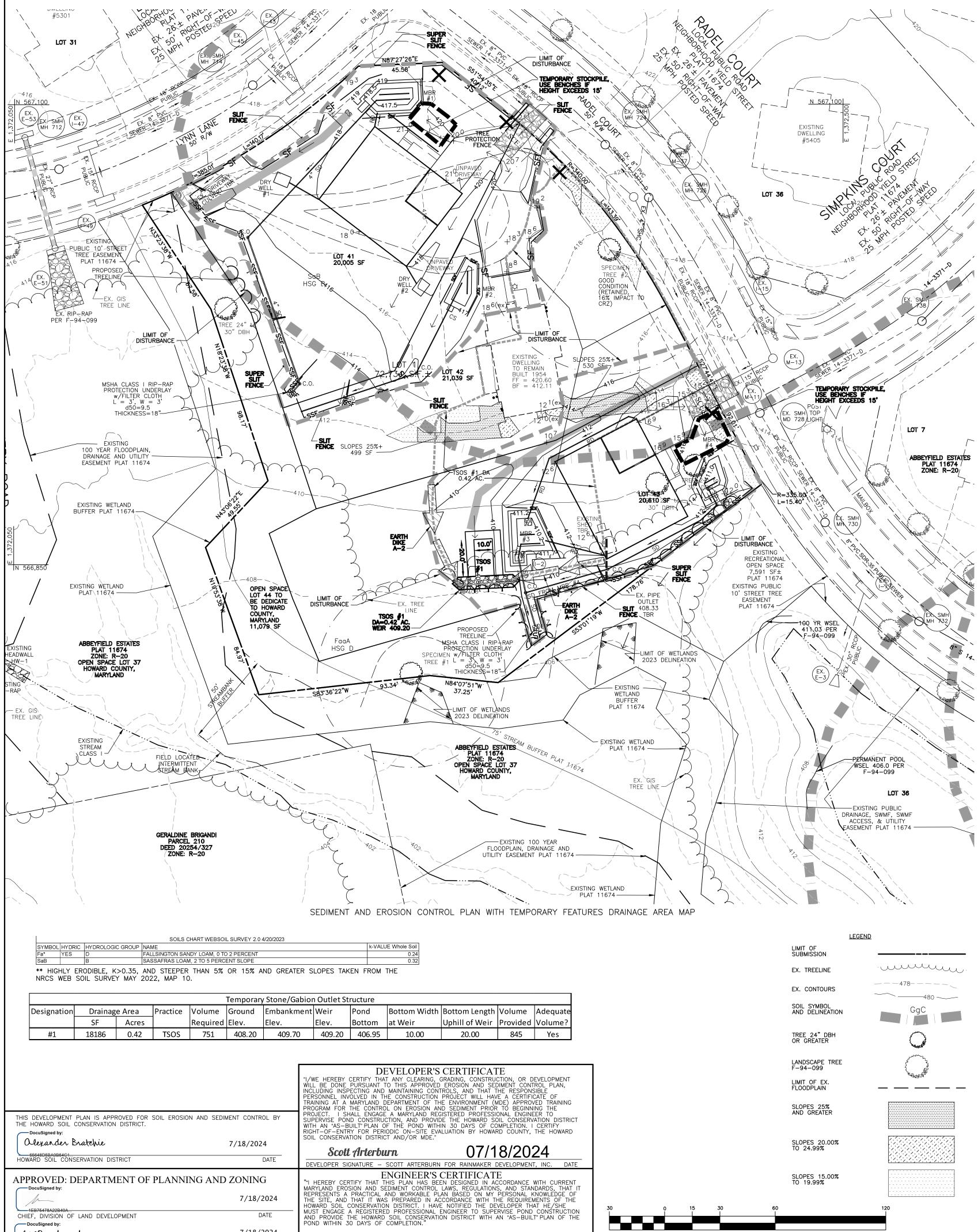
F**-**24**-**041



-DocuSigned by:

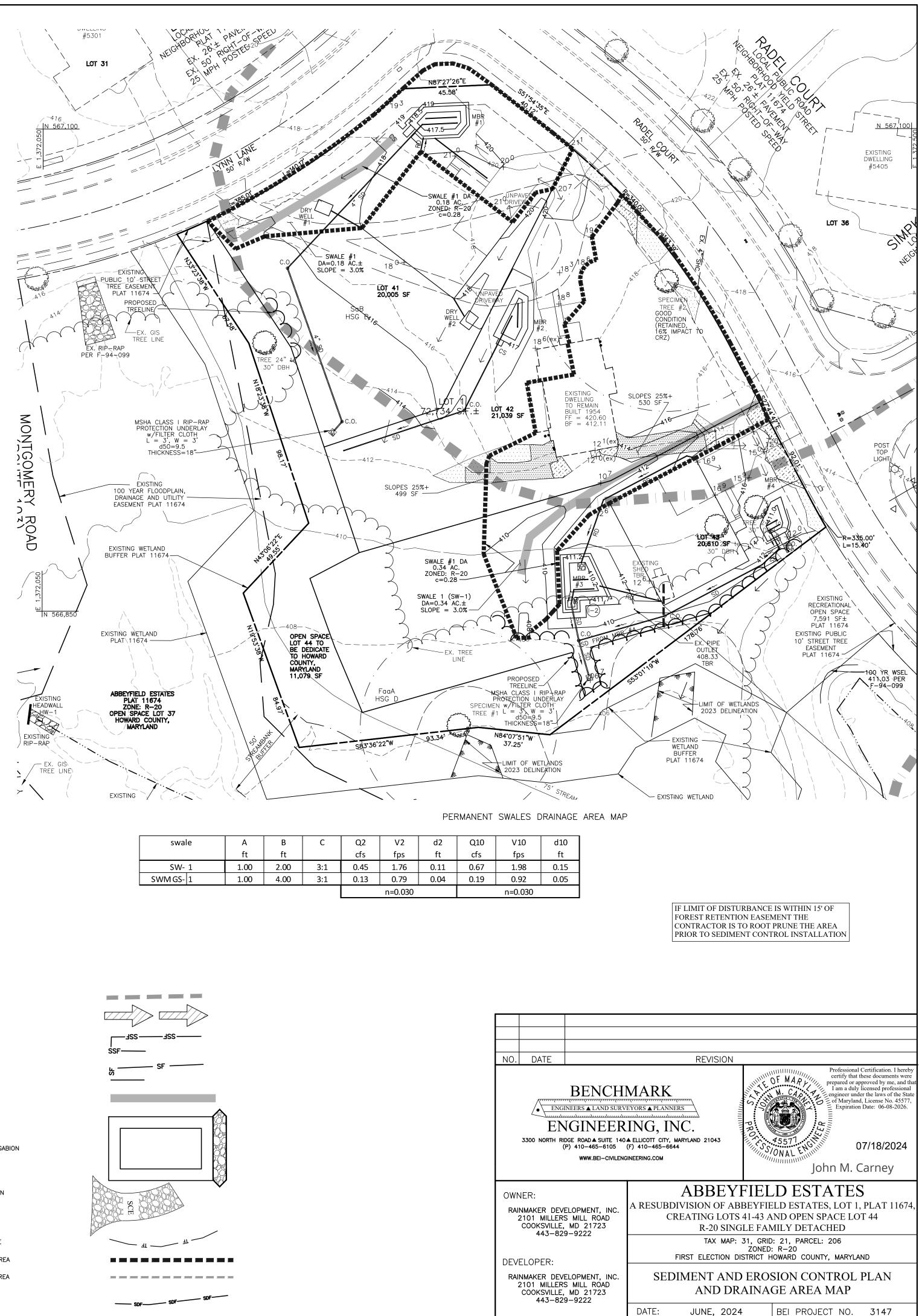
(HAD Edmondson

CHIEF, DEVELOPMENT ENGINEERING DIVISION



7/18/2024

DATE



DESIGN: JC | DRAFT: JC

SCALE:

AS SHOWN

swale	А	В	
	ft	ft	
SW- 1	1.00	2.00	
SWM GS- 1	1.00	4.00	

07/18/2024

DATE

LIMIT OF DISTURBANCE EARTH DIKE

SUPER SILT FENCE

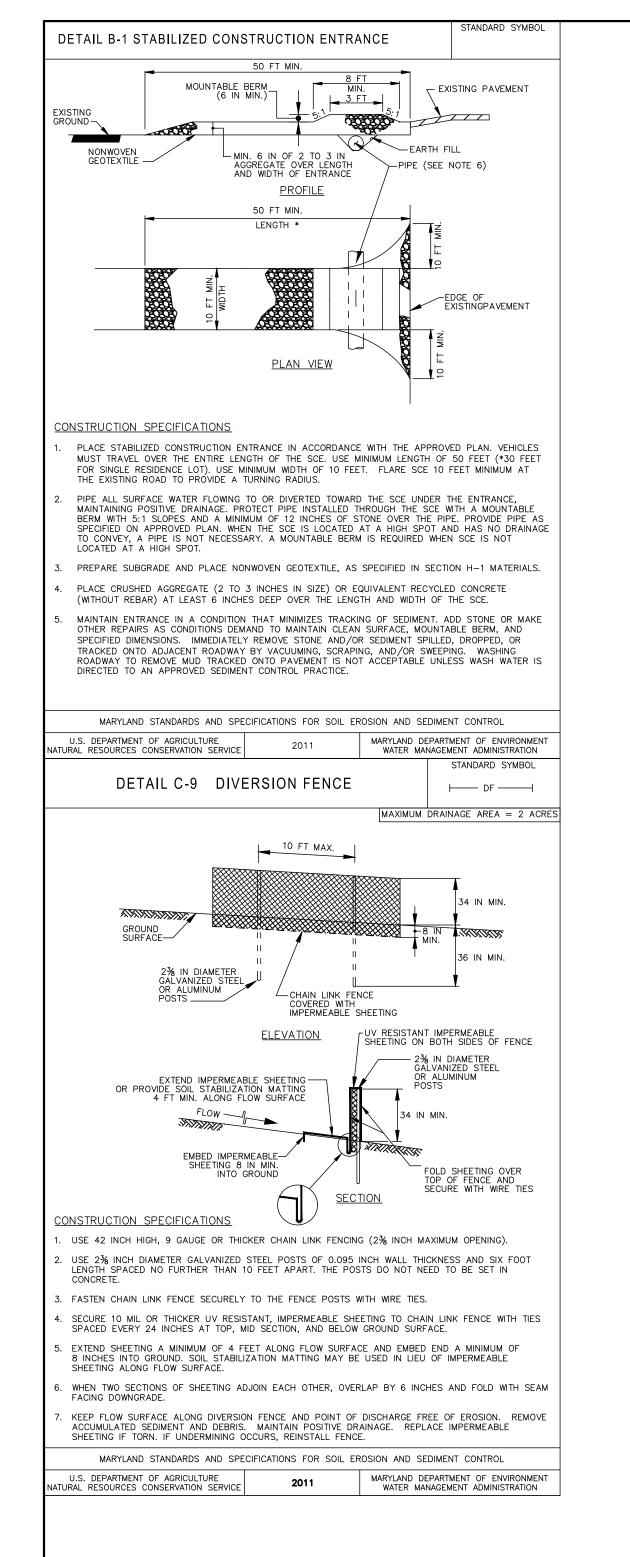
SILT FENCE STABILIZATION MATTING

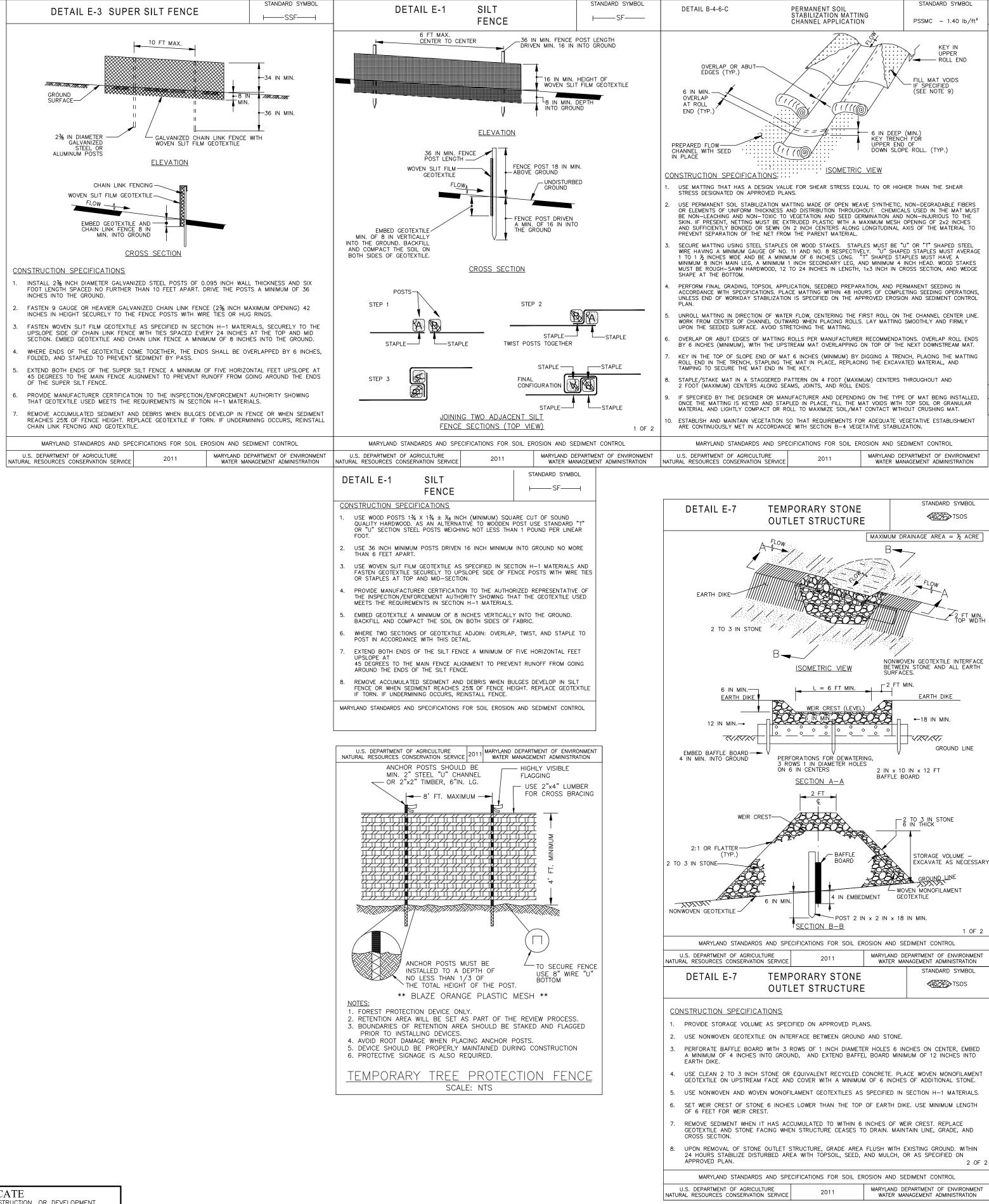
TEMPORARY STONE OR GABION OUTLET SEDIMENT TRAP

STABILIZED CONSTRUCTION ENTRANCE WITH BERM

TREE PROTECTION FENCE PERMANENT DRAINAGE AREA TEMPORARY DRAINAGE AREA DIVERSION FENCE

SHEET	4	OF	10
F-24-04	1		





THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. DocuSigned by: Olerander Bratchie 7/18/2024 66648D6BA0B64C1. HOWARD SOIL CONSERVATION DISTRICT DATE	DEVELOPER'S CERTIFICATE "I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION, AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE." DEVELOPER SIGNATURE – SCOTT ARTERBURN FOR RAINMAKER DEVELOPMENT, INC.	SIL SUI DIR CO
APPROVED: DEPARTMENT OF PLANNING AND ZONING DocuSigned by: 7/18/2024 CHIEF, DIVISION OF LAND DEVELOPMENT DocuSigned by: CHAD ELMONDSON 7/18/2024	ENGINEER'S CERTIFICATE ""I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION." John M. Carney 07/18/2024	IF LII FORI CON PRIO
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	ENGINEER - JOHN M. CARNEY, P.E., MD REGISTRATION No. 45577 DATE	

ILT FENCE MAY BE REPLACED BY UPER SILT FENCE AT THE IRECTION OF THE SEDIMENT ONTROL INSPECTOR.

LIMIT OF DISTURBANCE IS WITHIN 15' OF REST RETENTION EASEMENT THE NTRACTOR IS TO ROOT PRUNE THE AREA IOR TO SEDIMENT CONTROL INSTALLATION

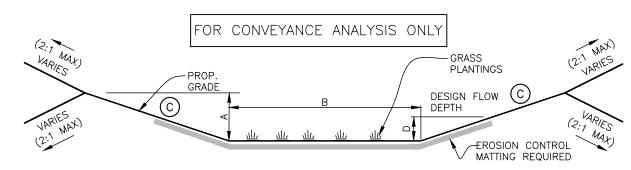
YMBOL	DETAIL C-1		STANDARD SYMBOL
0 lb/ft²		EARTH DIKE	PLACE DESIGNATION (e.g. A-1) ON FLOW CHANNEL SIDE OF DIKE.
N R END S	2:1 SLOPE OR FLATTER- EXISTING GROUND	2:1 SLOPE OR FLAT	
	CONTINUOUS GRADE 0.5% MIN. TO 10% MAX. SLOPE		DIKE TYPE A B
	<u>A</u> AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	b – DIKE WIDTH 24 c – FLOW WIDTH 4	IN MIN. 30 IN MIN. IN MIN. 36 IN MIN. FT MIN. 6 FT MIN. IN MIN. 24 IN MIN.
	FLOW CHANNEL STABILIZATION		
٩R	A-1 SEED WITH WATER DIVERSION.)	STRAW MULCH AND TACK. (NOT A	LLOWED FOR CLEAR
	A-2/B-2 SEED WITH SOIL STABILIZAT	TION MATTING OR LINE WITH SOD.	
FIBERS T MUST THE CHES	A MINIMUM OF 7 INCH	OR EQUIVALENT RECYCLED CONCRE IES AND FLUSH WITH GROUND.	TE PRESSED INTO SOIL
AL TO	CONSTRUCTION SPECIFICATIONS		
STEEL VERAGE	1. REMOVE AND DISPOSE OF ALL TREES, MATERIAL SO AS NOT TO INTERFERE W		
STAKES WEDGE	 EXCAVATE OR SHAPE EARTH DIKE TO I PROJECTIONS OR OTHER IRREGULARITIE 		AS SPECIFIED. BANK
MEDOL	3. COMPACT FILL.		
ATIONS, NTROL	4. CONSTRUCT FLOW CHANNEL ON AN UN DUE TO FIELD CONDITIONS AS NECESS/		
	5. PROVIDE OUTLET PROTECTION AS REQU	JIRED ON APPROVED PLAN.	
R LINE. ILY	6. STABILIZE EARTH DIKE WITHIN THREE D WATER DIVERSION WITHIN 24 HOURS OF		FLOW CHANNEL FOR CLEAR
- ENDS MAT. ATTING	 MAINTAIN LINE, GRADE, AND CROSS SE MAINTAIN POSITIVE DRAINAGE. KEEP EA CONTINUOUSLY MEET REQUIREMENTS FO WITH SECTION B-4 VEGETATIVE STABIL 	ARTH DIKE AND POINT OF DISCHAR DR ADEQUATE VEGETATIVE ESTABLI	GE FREE OF EROSION, AND
	 UPON REMOVAL OF EARTH DIKE, GRADI REMOVAL STABILIZE DISTURBED AREA V APPROVED PLAN. 		
	MARYLAND STANDARDS AND SPECIF	FICATIONS FOR SOIL EROSION AND	SEDIMENT CONTROL
TALLED, JLAR	U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE		DEPARTMENT OF ENVIRONMENT MANAGEMENT ADMINISTRATION
HMENT			

swale	A	В	С	Q2	V2	d2	Q10	V10	d10
	ft	ft		cfs	fps	ft	cfs	fps	ft
SW- 1	1.00	2.00	3:1	0.45	1.76	0.11	0.67	1.98	0.15
SWM GS-1	1.00	4.00	3:1	0.13	0.79	0.04	0.19	0.92	0.05
					n=0.030			n=0.030	

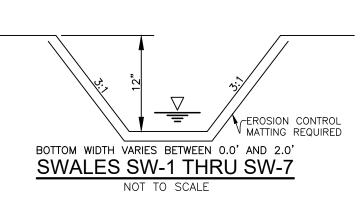
SWALE	B 1/	2 ac.	D 1/	2 ac.	Weighted	Area	Q10
	AREA	С	AREA	С	с	Ac.	cfs
Sw- 1	12252	0.28	2611	0.37	0.30	0.34	0.67
SWM GS-1	4430	0.28	0	0.37	0.28	0.10	0.19

Tc = 10 I10 = 6.6 I2 = 4.5

minutes



GRASS SWALE TYPICAL SECTION DETAIL



NO. DATE			REVISION	Ì		Drofossional	Cartifiaa	tion. I hereby
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OWNER:			ABBEY	FIEL	D EST	ATES	5	
	ELOPMENT, INC.	A RESUBD	IVISION OF AB	BEYFIE	LD ESTATI	ES, LOT 1	, PLA	T 11674
2101 MILLER	S MILL ROAD	CF	REATING LOTS				DT 44	
	, MD 21723 29-9222		R-20 SING	LE FAN	AILY DETA	CHED		
			TAX MAP:	31, GRID ZONED:	: 21, PARCEL	.: 206		
DEVELOPER:			FIRST ELECTION DI			TY, MARYLA	AND	
	ELOPMENT, INC.	S	EDIMENT A	ND EF	ROSION (CONTR	OL	
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F-24-041

<u>B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION</u> <u>ition:</u> Using vegetation as cover to protect exposed soil from erosion. To promote the establishment of vegetation on exposed soil. <u>Conditions</u> Where Practice Applies: On all disturbed areas not stabilized by other methods This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent Effects on Water Quality and Quantity: Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment bads and runoff to downstream areas. Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation. ranspiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and othe chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and egetative establishment.

- Adequate Vegetative Establishment Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.
- . Adequate vegetative stabilization requires 95 percent groundcover 2. If an area has less than 40 percent groundcover, restabilize following the original B.
- mendations for lime, fertilizer, seedbed preparation, and seeding. 3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize
- using half of the rates originally specified. 4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION inition: Establishment of vegetative cover on cut and fill slopes. <u>Purpose:</u> To provide timely vegetative cover on cut and fill slopes as work progresses. <u>Conditions Where Practice Applies:</u> Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

A. Incremental Stabilization - Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1):

- a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize. c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed
- Phase 1 areas as necessary. d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary. Note: Once excavation has begun the operation should be continuous from grubbing through he completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding

season will necessitate the application of temporary stabilization Incremental stabilization - fill slopes . Construct and stabilize fill slopes in increments not to exceed 15 feet in height.

- prepare seedbed and apply seed and mulch on all slopes as the work progres 2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive
- 4. Construction sequence example (refer to figure b.2): a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. construct silt fence on low side of fill unless
 - other methods shown on the plans address this area. b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
- . Place phase 1 fill, prepare seedbed, and stabilize. d. Place phase 2 fill, prepare seedbed, and stabilize e. Place final phase fill, prepare seedbed, and stabilize. overseed previously

seeded areas as necessary Note: once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding

season will necessitate the application of temporary stabilization. figure b. B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS <u>Definition:</u> The process of preparing the soils to sustain adequate vegetative stabilization. o provide a suitable soil medium for vegetative growth. <u>Jurpose:</u> To provide a suitable soil medium for vegerative growar. <u>Conditions Where Practice Applies</u>: Where vegetative stabilization is to be established.

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 equipmen 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. . Apply fertilizer and lime as prescribed on the plans
- 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
- i. Soil pH between 6.0 and 7.0

- ii. Soluble salts less than 500 parts per million (ppm). ii. 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 oderate amount of moisture. An exception: if love-grass 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.
- 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. Graded areas must be maintained in a true and even grade as specified on
- e approved plan, then scarified or otherwise loosened to a depth of 3 to 5 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.
- 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. 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 . 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. . 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. 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 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 1¹/₂ inches in diameter. b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass guack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified Topsoil substitutes or amendments, as recommended by a qualified agronomi or soil scientist and approved by the appropriate approval authority, may be used n lieu of natural topsoil.
- 6. Topsoil Application a. Erosion and sediment control practices must be maintained when applying 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. 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 east 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 imestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.
- B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING ion: 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 c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or disturbed area not under active grading. Criteria:

 - 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 guality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding 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 nust not be used later than the date indicated on the container. Add fresh inoculants Criteria:

- 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. Application
- d. Dry Seeding: This includes use of conventional drop or broadcast spreaders. 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. 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 Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. . Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and 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 ii.Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when
- iii. Mix seed and fertilizer on site and seed immediately and without interruption. iv. When hydroseeding do not incorporate seed into the soil. 1. Mulch Materials (in order of preference) a. Straw consisting of thoroughly threshed wheat, rve, 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
- b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood celluloseprocessed into a uniform fibrous physical state. i. WCFM is to be dyed green or contain a green dye in the package that will rovide an appropriate color to facilitate visual inspection of the uniformly spread 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 atconcentration levels that will be phyto-toxic. v. WCFM must conform to the following physical requirements: fiber length of ximately 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 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. /. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet

(IN FEET) 1 inch = 50 f

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. DocuSigned by: Olerander Bratchie 7/18/2024	DEVELOPER'S CERTIFICATE "I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A MARYLAND REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION, AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE." Scott Arterburn 07/18/2024
HOWARD SOIL CONSERVATION DISTRICT DATE	DEVELOPER SIGNATURE – SCOTT ARTERBURN FOR RAINMAKER DEVELOPMENT, INC. DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING DocuSigned by: 1EB75478A22B49A CHIEF, DIVISION OF LAND DEVELOPMENT DATE DocuSigned by:	ENGINEER'S CERTIFICATE "I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
CHAD Edmondson7/18/202470035F754EF411499DATECHIEF, DEVELOPMENT ENGINEERING DIVISIONDATE	John M. Carney 07/18/2024 ENGINEER – JOHN M. CARNEY, P.E., MD REGISTRATION NO. 45577 DATE

B-4-5 STANDARDS AND SPECIFICATION FOR PERMANENT STABILIZATION ition: To stabilize disturbed soils with permanent vegetation. Purpose: To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a <u>Conditions Where Practice Applies</u>: Exposed soils where ground cover is needed for 6 pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants

wide and 300 to 3.000 feet long.

Seed Mixtures 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 ates, 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 Guild, Section 342 - Critical Area Planting.c. For sites having disturbed areas over 5 acres, use and show the rates

ecommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 $\frac{1}{2}$ 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. irfgrass Mixtures a. Areas where turforass may be desired include lawns, parks, playorounds, 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 <u>Criteria</u>: site conditions or purpose. Enter selected mixture(s), application rates, and

seeding dates in the PermanentSeeding Summary. The summary is to be placed on the plan 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 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. ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium o 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 rom 10 to 30 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 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 0 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 squarefeet. 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

nsumer protection and assures a pure genetic line. 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 ardiness Zone: 6b)

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 1 ½ 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 ant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedings are made late in e planting season, in abnormally dry or hot seasons, or on adverse sites.

Sod: to provide quick cover on disturbed areas (2:1 grade or flatter). General Specifications a. Class of turfgrass 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

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. 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.

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. 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.

b. Lay the first row of sod in a straight line with subsequent rows placed

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 we Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

- 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 1/3 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.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABLIZATION nition: To stabilize disturbed soils with vegetation for up to 6 months. To use fast growing vegetation that provides cover on disturbed soils. ns Where Practice Applies: Exposed soils where ground cover is needed for a period longer duration of time, permanent stabilization practices are req'd.

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 remporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, ther 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

<u>B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA</u> inition: A mound or pile of soil protected by appropriately designed erosion and sediment Purpose: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

next seeding season.

Criteria:

1. The stockpile location and all related sediment control practices must be clearly dicated 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 stabilizatior requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 porary 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. Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b). 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

> Section B-3 Land Grading. H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL on: Controlling the suspension of dust particles from construction activities. To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with

Specifications: 1. <u>Mulches</u>: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, 1. <u>Mulches</u>: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.

> windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect. . Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs. 5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales.

> similar material can be used to control air currents and soil blowing. 6. <u>Chemical Treatment</u>: Use of chemical treatment requires approval by the appropriate plan review authority.

Seeding Rate 1 lant Specie lb/ac | lb/1000 ft Season Grasses Annual Ryegrass (Lolium perenn 1.0 ssp. multiflorum) Barley (Hordeum vulgare) 2.2 1.7)ats (Avena sativa` Wheat (Triticum aestivum) 120 2.8 ereal Rye (Secale cereale) 2.8 rm-Season Grasses Foxtail Millet (Setaria italica) 30 07 Pearl Millet (Pennisetum glaucum) 20 0.5 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. Oats are the recommended nurse crop for warm-season grasses.

2/ For sandy soils, plant seeds at twice the depth listed above.

The second best of the second second		Plant Hardiness Zones		
Type of Plant Material	5b and 6a	<u>6</u> b	7a and 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/}	Mar 15 to May 31 Jun 1 to Jun 30*	Mar 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*+	
Table B.3 Notes: . The planting dates listed are averages for each zone. The When seeding toward the end of the listed planting dates plant with the permanent seeding mix. (See Table B.2, Note that the permanent seeding mix.)	, or when conditions are expected to			
. When planted during the growing season, most of these r exception—they may be supplied as growing (non-dorma		pt in a dormant condition until planti	ng. Bare-root grasses are the	
Additional planting dates for the lower Coastal Plain, de planting during this period.	pendent on annual rainfall and temp	perature trends. Recommend adding	a nurse crop, as noted above, if	
Warm-season grasses need a soil temperature of at least adequate, the seeds will remain dormant until conditions emergence and weed control prior to planting. When se later plantings, especially on droughty sites.	s are favorable. In general, planting	during the latter portion of this perio	od allows more time for weed	

Table B.1: Temporary Seeding for Site Stabilization

er plantings, especially on droughty si Additional planting dates during which supplemental watering may be needed to ensure plant establishmen 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

INFORMATION) 1.) DAY 1 SUCH AS OVERHEAD POWERLINES, OLD WELLS, GAS LINES, ETC. STEP DURATION 1 DAY. FENCES. STEP DURATION 7 DAYS. DURATION 12 DAYS. STEP DURATION 1 DAY MANAGEMENT PRACTICES. INSTALL UTILITIES. STEP DURATION 78 DAYS. TEMPORARY STONE OUTLET STRUCTURE. STEP DURATION 3 DAYS. SEDIMENT CONTROL DEVICES INCLUDING THE DIVERSION FENCES. PERMANENTLY STABILIZE AS REQUESTED. STEP DURATION 2 DAYS.

Table B.1: Temporary Seeding for Site Stabilization

Diant Granina	Seedin	g Rate 1/	Seeding	Recomr	mended Seeding Dates by Plant Ha
Plant Species	lb/ac	lb/1000 ft2	Depth 2/ (inches)	5b and 6a	6b
Cool-Season Grasses					
Annual Ryegrass (Lolium perenne ssp. Multiflorum	40	1.0	0.5		Mar 1 to May 15; Aug 1 to Oct 3
Barley (Hordeum vulgare)	96	2.2	1.0		Mar 1 to May 15; Aug 1 to Oct 3
Oats (Avena sativa)	72	1.7	1.0		Mar 1 to May 15; Aug 1 to Oct 3
Wheat (Triticum aestivum)	120	2.8	1.0		Mar 1 to May 15; Aug 1 to Oct 3
Cereal Rye (Secale cereale)	112	2.8	1.0		Mar 1 to May 15; Aug 1 to Nov
Warm-Season Grasses					
Foxtail Millet (Serataria italica)	30	0.7	0.5		May 16 to Jul 31
Pearl Millet (Pennisetum glaucum	20	0.5	0.5		May 16 to Jul 31
Notes:					•

/ Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent se 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, for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late fall beyond the seeding dates for of 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

Oats are the recommended nurse crop for warm-season grasses.

2/ For sandy soils, plant seeds at twice the depth listed above. The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries o Permanent Seeding Summary

	Hardiness Zone (from Fi Seed Misture (from Tab		6b Tall Fescue/Kentucky B	luegrass
No.	Species	Application	Seeding	Seeding
NO.	Rate	Rate (Ib/ac.)	Dates	Depths
	Fescue, Tall	Fescue, Tall 60 Mar 1		1/4 - 1/2 in
	rescue, raii	00	Aug 1 to Oct 15	1/4-1/211
9	Bluegrass, Kentucky	40	Mar 1 to May 15	1/4 - 1/2 in
9	Didegrass, Kentucky	40	Aug 1 to Oct 15	1/4-1/2111
				1/4 - 1/2 in

<u>Conditions Where Practice Applies:</u> Areas subject to dust blowing and movement where on and off-site damage is likely without treatment. Vegetative Cover: See Section B-4-4 Temporary Stabilization. <u>Tillage:</u> Till to roughen surface and bring clods to the surface. Begin plowing on

	Seeding Depth ^{2/}	Recommended Seeding Dates by Plant Hardiness Zone 3/									
2	(inches)	5b and 6a	6b	7a and 7b							
	0.5	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 Nov 30							
	1.0	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 Nov 30							
	1.0	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 Nov 30							
	1.0	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 Nov 30							
	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15							
	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14							
	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14							

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

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

T-11- D 7.	Recommended Planting Dates for Permanent Cover in Maryland ¹⁷
I able B.S.	Recommended Flanting Dates for Permanent Cover in Maryland
	8

SEQUENCE OF CONSTRUCTION - (SEE SITE DEVELOPMENT PLAN FOR ADDITIONAL

OBTAIN GRADING PERMIT AND HOLD A PRE-CONSTRUCTION MEETING. STEP DURATION 1 DAY. 2.) DAY 2 THE CONTRACTOR(S) IS TO IDENTIFY AND MARK ANY HAZARDOUS CONDITIONS THAT MAY EXIST ONSITE,

3.) DAY 3-9 INSTALL STABILIZED CONSTRUCTION ENTRANCES FOR THE LOTS. INSTALL TREE PROTECTION FENCE AND THEN CLEAR AND GRUB FOR PERIMETER CONTROLS ONLY. INSTALL EARTH DIKES, TSOS, SUPER SILT FENCE, AND SILT

4) DAY 10-21 CLEAR AND GRUB REMAINDER OF THE LIMIT OF DISTURBANCE WITHIN INSTALLED PERIMETER CONTROLS IF NECESSARY. STABILIZE THE DISTURBED LOT AREAS IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES. STEP

5.) DAY 22 INSTALL SWALES. INSTALL EROSION CONTROL MATTING WITHIN THE DITCHES AND SWALES.

6.) DAY 23-100 BUILD THE HOUSES GRADE THE LOT AREAS. INSTALL THE DIVERSION FENCES AT THE STORMWATER

7.) DAY 101-103 REMOVE THE INDIVIDUAL STABILIZED CONSTRUCTION ENTRANCES AND PAVE THE DRIVEWAYS, FINE GRADE AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDBED NOTES. REMOVE

8.) DAY 104-106 INSTALL MICRO-BIORETENTION FACILITIES, PLANT THE FACILITIES. PERMANENTLY STABILIZE ANY DISTURBED AREAS. INSTALL SOD OR PERMANENT MATTING IN PERMANENT SWALES. STEP DURATION 3 DAYS. 9.) DAY 107-108 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING

TIER II HIGH QUALITY WATERSHED HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-3133-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hours 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.

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 <u>2011 MARYLAND STANDARDS AND SPECIFICATIONS</u> FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Accelerated stabilization (same day stabilization) is necessary due to this site being in a Tier II watershed. At a minimum, the 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 aradina.

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. 3-4-4) 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 feet 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:

Site Analysis:	:	*CUT/FILL NUMBERS
Total Area of Site:	<u>1.67</u> Acres	ARE FOR SEDIMENT CONTROL PURPOSES
Area Disturbed:	<u>0.98</u> Acres	ONLY. CONTRACTOR TO VERIFY.
Area to be roofed or paved:	_0.24 Acres	IU VERIFI.
Area to be vegetatively stabilized:	_0.74 Acres	
Total cut:	<u>1,000 *</u> Cu Yds	
Total fill:	<u>1000</u> * _{Cu Yds} SITE WITH AN A	
Off-site waste/borrow area location:	GRADING PERMI	CTIVE F

Off-site waste/borrow area location: <u>GRADING_PERMIT</u> 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 every four days; 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 deficiencie

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 work day, 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 be 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 aradina 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 grea in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, 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 arade.

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

• Use I and IP March 1 - June 15 • Use III and IIIP October 1 - April 30 • Use IV March 1 - May 31

(inclusive):

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

BEI PROJECT NO. 3147

6 OF 10

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F-24-041

SILT FENCE MAY BE REPLACED BY SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

IF LIMIT OF DISTURBANCE IS WITHIN 15' OF

FOREST RETENTION EASEMENT THE CONTRACTOR IS TO ROOT PRUNE THE AREA PRIOR TO SEDIMENT CONTROL INSTALLATION

te	s by Plant Hardin	s by Plant Hardiness Zone 3/										
b		7a and 7b										
/	Aug 1 to Oct 31											
/	Aug 1 to Oct 31											
	Aug 1 to Oct 31											
	Aug 1 to Oct 31				NO. [NO. DATE REVISION						
Aug 1 to Nov 15 Image: Aug 1 to Nov 15						BENC	H	MARK	M. CAO T	Professional Certification. I hereby certify that these documents were epared or approved by me, and th I am a duly licensed professional ngineer under the laws of the Stat		
						● ENGINEERS ▲ LAND S	SURVI	EYORS A PLANNERS	S S S S S S S S S S S S S S S S S S S	of Maryland, License No. 45577, Expiration Date: 06-08-2026.		
			3300	(P) 410-465-610	1404 05 (▲ ELLICOTT CITY, MARYLAND 21043 (F) 410-465-6644 INEERING.COM						
e li	poundaries of the zo	me.			OWNER RAINMA 2101	: KER DEVELOPMENT, IN 1 MILLERS MILL ROAD	c.	A RESUBDIVISION OF AB	FIELD ESTA beyfield estates, 41-43 and open spa	LOT 1, PLAT 11674		
		Fertilizer Rate (10-20-20)			COC	OKSVILLE, MD 21723 443-829-9222			LE FAMILY DETACH			
	N	P2O5	K2O	Lime Rate	DEVELO				31, GRID: 21, PARCEL: 2 ZONED: R–20 STRICT HOWARD COUNTY,			
_	45 pounds per acre (1.0 lb/ 100 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac 2 lb/ 1000 sf)	2 tons/ac (90lb/ 1000 sf)	RAINMA 2101	KER DEVELOPMENT, IN 1 MILLERS MILL ROAD OKSVILLE, MD 21723 443-829-9222	IC.					

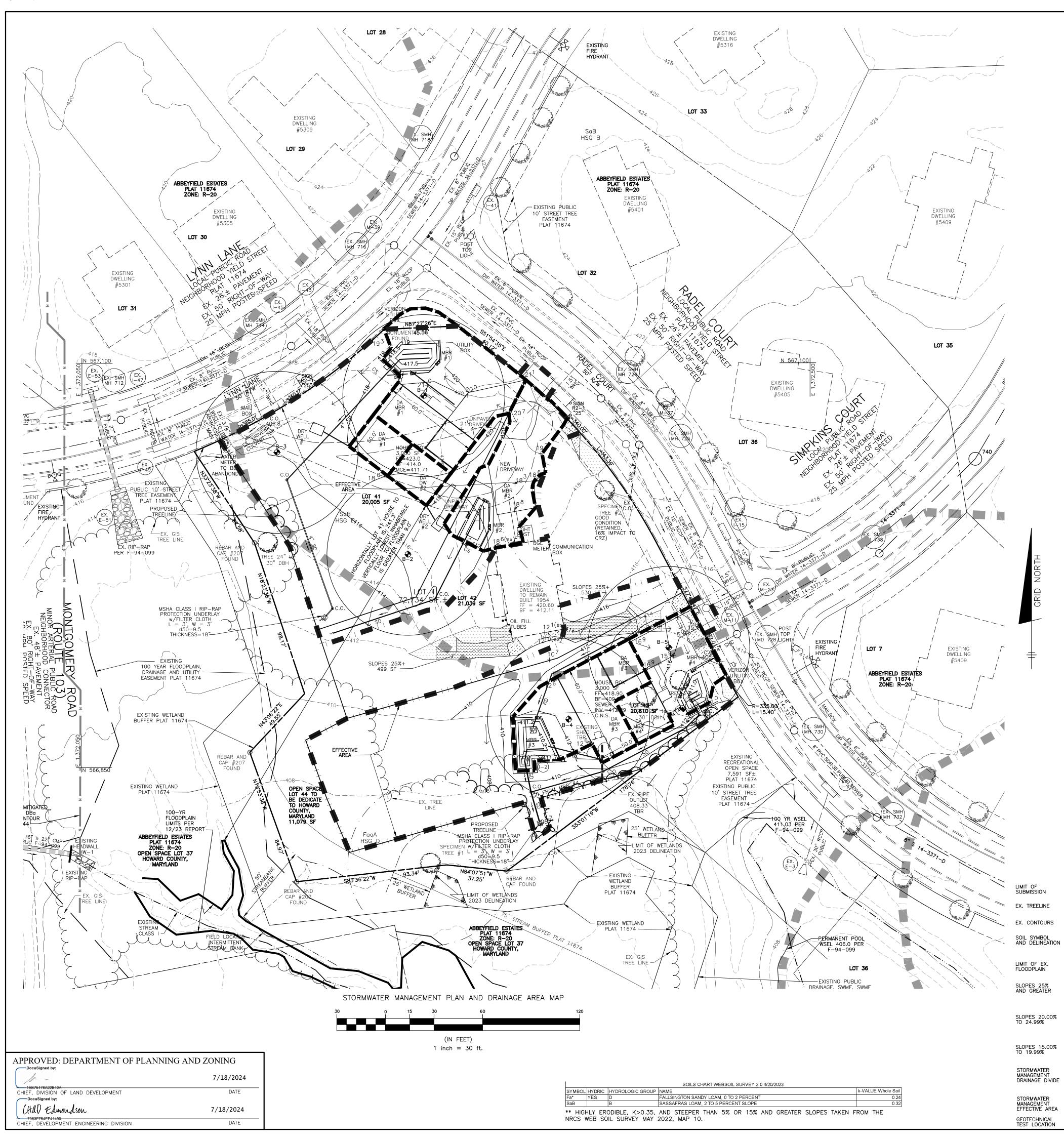
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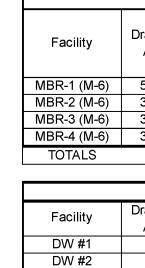
DATE:

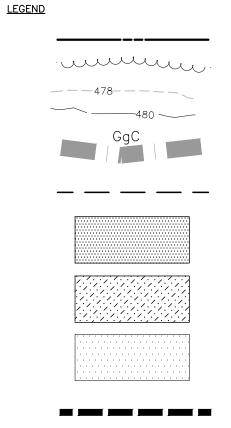
SCALE:

JUNE, 2024

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		eld Estates	د ٦	1	DATE:	05/01/24							
	Facility S	Summary		!	1								
Pe (LOTS):	1.43	inches											
		<u> </u>			MICR		ITION FACILITIE	.S (M-6)			<u> </u>		
Facility	Drainage Area	Impervious	I (%)	Rv	ESDv Req'd (cf)	Req'd Ponded Storage (75%)	Ponded Volume Provided (cf)	Req'd Stone Storage (cf)	Stone Storage Provided (cf)	Total ESDv	Pe Prov.	Rev (cf)	Notes
MBR-1 (M-6)	5,521	2,446	44%	0.45	296	222	278.5	74	77	448	2.17	76.9	
1BR-2 (M-6)	3,562	1,618	45%	0.46	195	146	223	49	47	344	2.53	46.7	1
/IBR-3 (M-6)	3,986	2,250	56%	0.56	266	199	269.5	66	68	427	2.31	68.0	
/IBR-4 (M-6)	3,067	1,559	51%	0.51	186	139	140.8	46	47	235	1.81	47.0	1
TOTALS	· · · · · · · · · · · · · · · · · · ·	7,873			943		912		239	1454		239	
							•						
				DR`	Y WELL FACIL	LIITY (M-5)							
Facility	Drainage	Impervious	Volumetric	ESDv	Length	Width	Depth	Volume	Rev	Full ESDv	1		
	Area	Area	Runoff	Req. (CF)	(ft)	(ft)	(ft)	(cf)	Provided (cf)	Provided			
DW #1	750	750	0.95	85.15	6.00	8.00	5.00	96.00	96.00	yes	1		
DW #2	750	750	0.95	85.15	6.00	8.00	5.00	96.00	96.00	yes	1		
TOTALS		750		170	1				192	ı <u> </u>	1		
icaptured new	impervious	1,351											
ne total ESDv p	rovided by t!	nis design is	:	1625	CF		267	CF	EXCESS				
ne total Rev pro	-	-		431	CF		286	~-	EXCESS				

*The ESDv summary table portrays storage in excess of that required for Environmental Site Design requirements.

NO. DATE	-		REVISION					
ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS SIGNAL AND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS ENGINE & LAND SURVEYORS & LAND			PROTESSION	CAPTER STATE	Professional certify that t prepared or arg I am a duly engineer und of Marylanc Expiration	these docur pproved by licensed pr er the laws 1, License 1 1 Date: 06- 7/18/20	nents were me, and tha ofessional of the State No. 45577, 08-2026.	
2101 MIL COOKSV 443 DEVELOPER RAINMAKER 2101 MIL COOKSV	DEVELOPMENT, INC. LERS MILL ROAD LLE, MD 21723 -829-9222 : DEVELOPMENT, INC. LERS MILL ROAD LLE, MD 21723 -829-9222	C.	TAX MAP: FIRST ELECTION DI	BEYFIELI 41-43 ANI ELE FAMII 31, GRID: 2 ZONED: R STRICT HOW MANAC NAGE A	D ESTATES D OPEN SP LY DETAC 1, PARCEL: -20 ARD COUNTY	S, LOT 1, ACE LO HED 206 7, maryla 7 PLAN	, PLAT T 44 ND)
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CONSTRUCTION SPECIFICATIONS

B.4.C Specifications for Micro-Bioretention. Rain Gardens, Landscape Infiltration & Infiltration Berms

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 naterials 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 and(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.

here 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 topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

6. 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.

. 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.

rees 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.

he 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:

- nderdrains should meet the following criteria:
- Pipe- Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, 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 ³/₈" 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 1,000 square feet) to provide a clean-out port and monitor performance of the filter.
- A 4" layer of pea gravel (1/8" to 3/8" 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).

Miscellaneous

hese practices may not be constructed until all contributing drainage area has been stabilized

EXCAVATED PONDS

GENERAL - EXCAVATED PONDS THAT CREATE A FAILURE POTENTIAL THROUGH A CONSTRUCTED OR CREATED EMBANKMENT WILL BE DESIGNED AS EMBANKMENT PONDS EXCAVATED PONDS

THAT INCLUDE A PIPE OR WEIR OUTLET CONTROL SYSTEM FOR URBAN STORMWATER MANAGEMENT SHALL BE DESIGNED USING THE PRINCIPAL AND EMERGENCY SPILLWAY

HYDROLOGIC CRITERIA FOR EMBANKMENT PONDS, TABLE ' SIDE SLOPES - SIDE SLOPES OF EXCAVATED PONDS SHALL BE SUCH THAT THEY WILL BE

STABLE AND SHALL NOT BE STEEPER THAN 1 HORIZONTAL TO 1 VERTICAL. FLATTER SLOPES ARE TO BE UTILIZED WHERE SAFETY FOR CHILDREN, LIVESTOCK WATERING, ETC. IS A DESIGN FACTOR.

PERIMETER FORM - WHERE THE STRUCTURES ARE USED FOR RECREATION OR ARE LOCATED IN HIGH PUBLIC VIEW, THE PERIMETER OR EDGE SHOULD BE SHAPED TO A CURVILINEAR FORM. INLET PROTECTION - WHEN THE EXCAVATED POND IS A BYPASS TYPE AND WATER IS BEING DIVERTED FROM A STREAM, THE MINIMUM SIZE INLET LINE SHALL BE A 4-INCH DIAMETER PIPE. ALL STATE LAWS CONCERNING WATER USE AND DOWNSTREAM RIGHTS SHALL BE STRICTLY ADHERED TO. WHERE SURFACE WATER ENTERS THE POND IN A NATURAL OR EXCAVATED

CHANNEL, THE SIDE SLOPE OF THE POND SHALL BE PROTECTED AGAINST EROSION.

OUTLET PROTECTION - AN EXCAVATED POND WITH A LOW EMBANKMENT (COMBINATION EXCAVATION / EMBANKMENT POND SHALL BE DESIGNED TO ENSURE A STABLE OUTFALL FOR THE 10-YEAR, 24-HOUR FREQUENCY STORM. PLACEMENT OF EXCAVATED MATERIAL - THE MATERIAL EXCAVATED FROM THE POND SHALL BE PLACED IN ONE OF THE FOLLOWING WAYS SO THAT ITS WEIGHT WILL NOT ENDANGER THE STABILITY OF THE POND SIDE SLOPES AND WHERE IT WILL NOT BE WASHED BACK INTO THE POND BY RAINFALL:

1. UNIFORMLY SPREAD TO A HEIGHT NOT EXCEEDING 3 FEET WITH THE TOP GRADED TO A CONTINUOUS SLOPE AWAY FROM THE POND; 2. UNIFORMLY PLACED OR SHAPED REASONABLY WELL WITH SIDE SLOPES NO STEEPER THAN 2

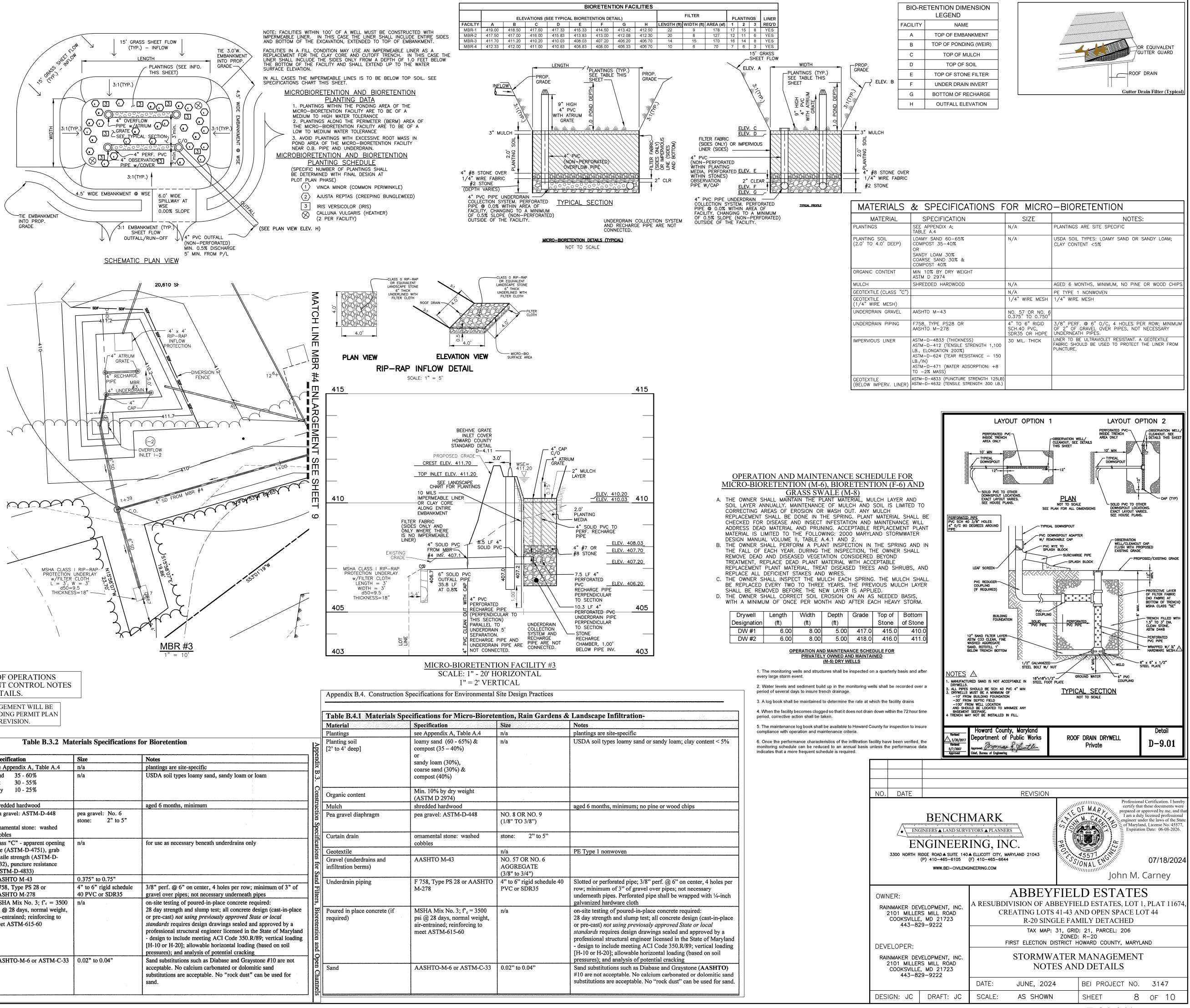
TO 1. THE EXCAVATED MATERIAL WILL BE PLACED AT A DISTANCE EQUAL TO THE DEPTH OF THE POND, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF THE POND; 5. SHAPED TO A DESIGNED FORM THAT BLENDS VISUALLY WITH THE LANDSCAPE; 4. USED FOR LOW EMBANKMENT AND LEVELING; OR

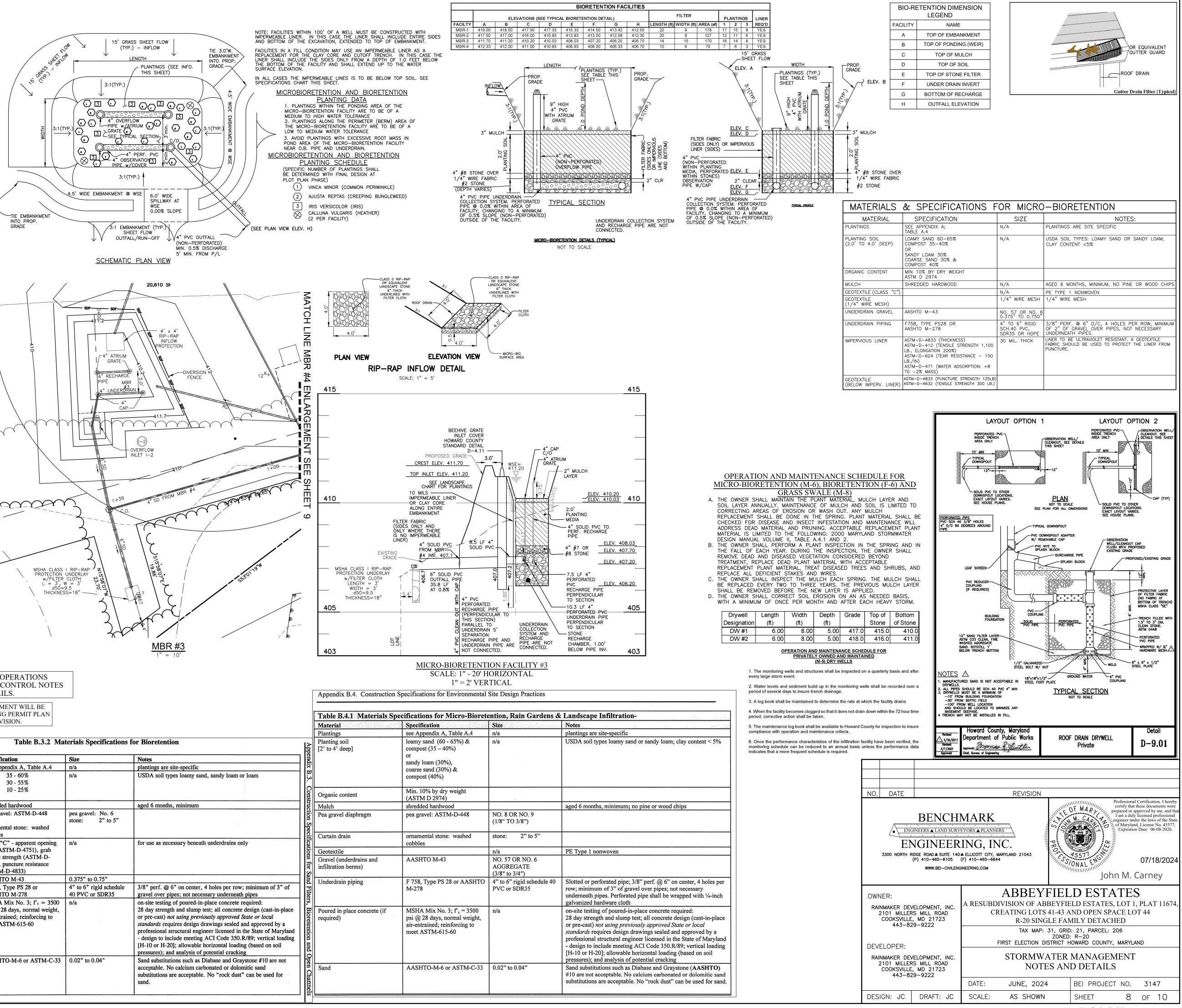
5. HAULED AWAY. (IN FEET) 1 inch = 20 ft. APPROVED: DEPARTMENT OF PLANNING AND ZONING DocuSigned b 7/18/2024 CHIEF, DIVISION OF LAND DEVELOPMENT DATE -DocuSigned by (HAD Edmondson 7/18/2024 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FOR SEQUENCE OF OPERATIONS PLEASE SEE SEDIMENT CONTROL NOTES AND DETAILS.

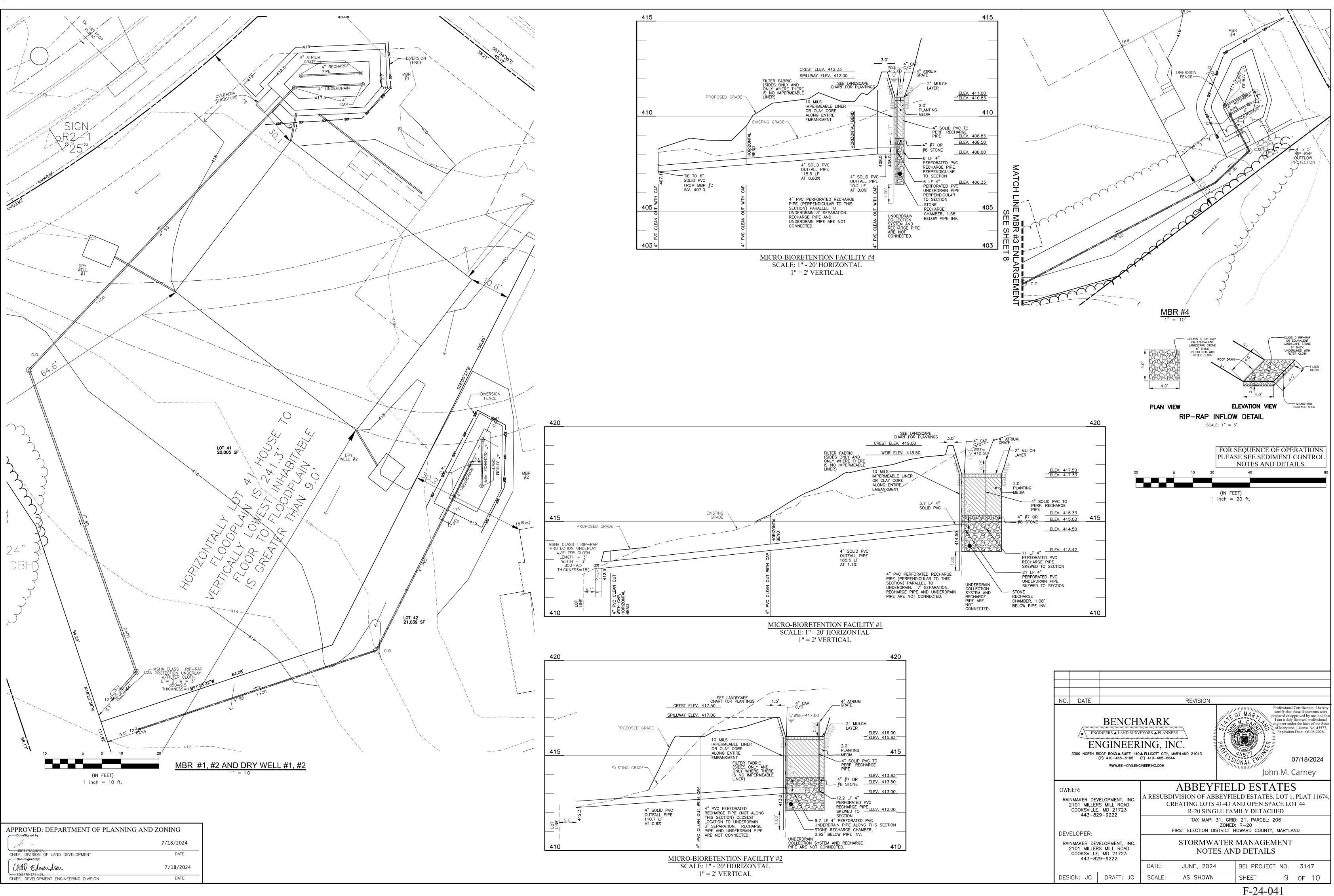
FINAL STORMWATER MANAGEMENT WILL BE DESIGNED UNDER THE BUILDING PERMIT PLAN AND UPDATED BY REDLINE REVISION.

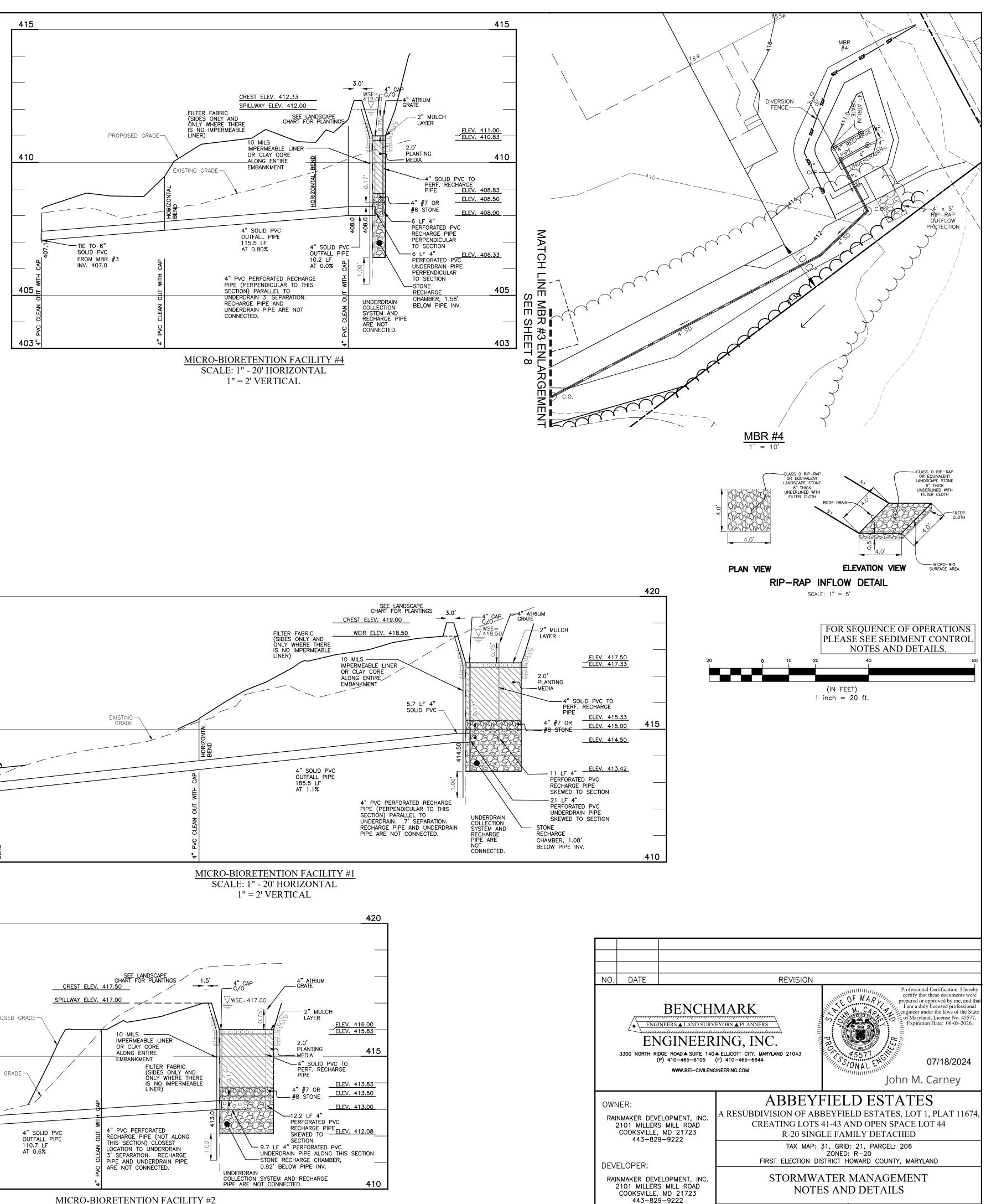
Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-
planting soil [2.5' to 4' deep]	sand 35 - 60% silt 30 - 55% clay 10 - 25%	n/a	USDA soil types I
mulch	shredded hardwood		aged 6 months, mi
pea gravel diaphragm and curtain drain	pea gravel: ASTM-D-448 ornamental stone: washed cobbles	pea gravel: No. 6 stone: 2" to 5"	
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D- 4632), puncture resistance (ASTM-D-4833)	n/a	for use as necessa
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" o gravel over pipes;
poured in place concrete (if required)	MSHA Mix No. 3; f ² c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of p 28 day strength an or pre-cast) <i>not us</i> <i>standards</i> requires professional struct - design to include [H-10 or H-20]; a pressures); and an
sand [1' deep]	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions acceptable. No ca substitutions are a sand.

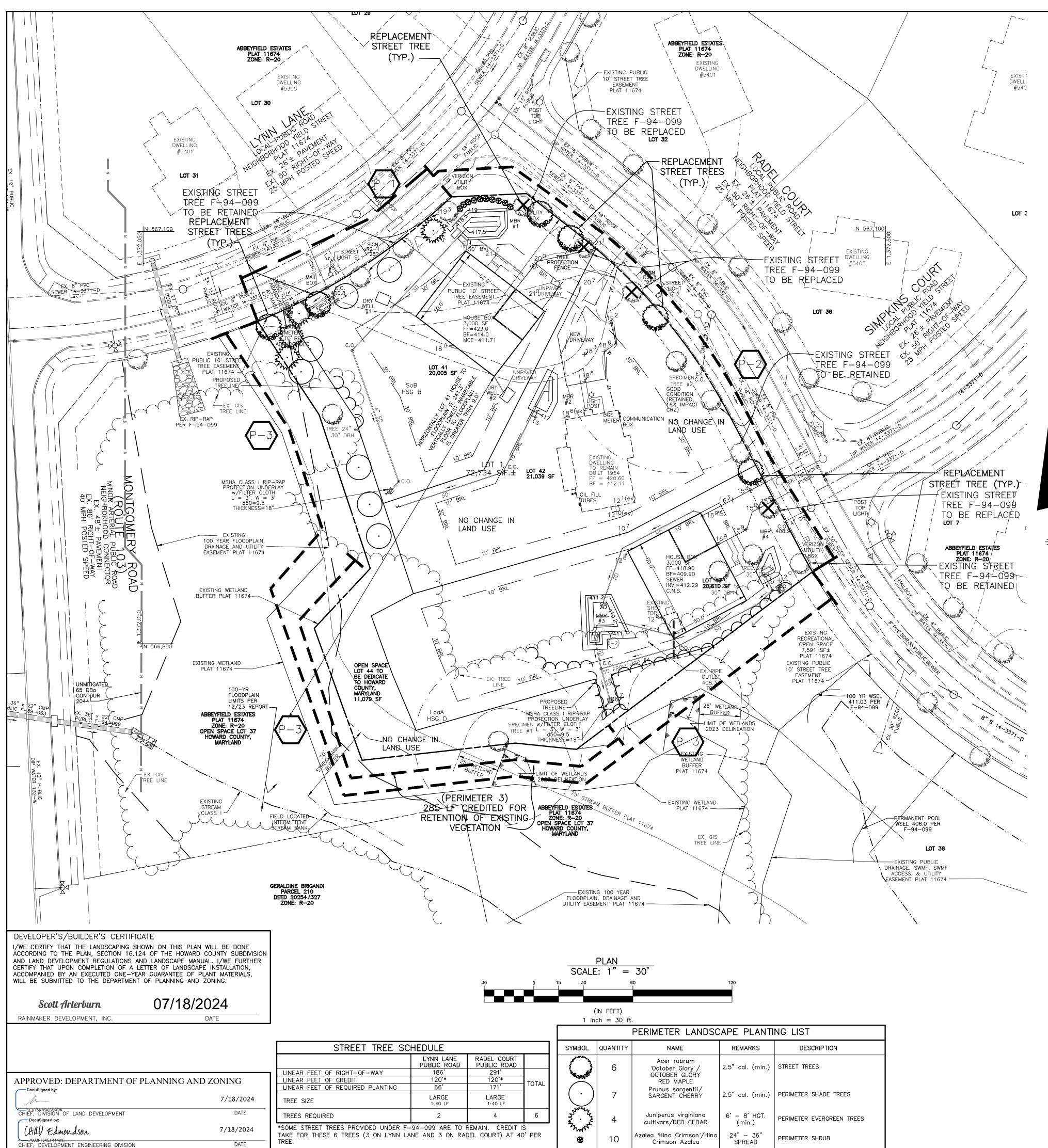




F-24-041







Schedule A								
Perimeter Landscape Edge								
Category 1 2 3								
Landscape Type	В	NO EDGE	А					
Linear Feet of Road Frontage	140	336	610					
or Perimeter								
Credit for Existing Vegetation	0	0	285	—				
(Yes, No, Linear Feet)	No	No	Yes	Totals				
(Describe below if needed)								
Exemption for Existing Dwelling	0	0	0					
(Yes, No, Linear Feet)	No	No	No	1				
(Describe below if needed)								
Linear Feet of Planting	140	336	325					
Number of Plants Required								
Shade Trees	3	0	5	8				
Evergreen Trees	4	0	0	4				
Other Trees (2:1 substitute)								
Shrubs	0	0	0	0				
Number of Plant Provided								
Shade Trees	2	0	5	7				
Evergreen Trees	4	0	0	4				
Other Trees (2:1 substitute)	0	0	0	0				
Shrubs	0	10*	0	10				
* ONE SHADE TREE IS MOVED FROM	I PERIMETE	R 1 TO PERIM	ENTER 2, A	ND				
IS SUBSTITUED FOR WITH 10 SHRU	BS. THE 10	SHRUBS ARE						

IS SUBSTITUED FOR WITH 10 SHRUBS. THE 10 SHRUBS ARE PLACED IN AN ARC AT THE RIGHT-OF-WAY TRUNCATION TO MIMIC THE EXISTING SHRUBS AT THE OPPOSITE SIDE OF THE INTERSECTION AND SCREEN THE STORMWATER FACILITY.

FE	ET)	
=	30	ft.
		DEE

	PERIMETER LANDSCAPE PLANTING LIST								
QUANTITY NAME		REMARKS	DESCRIPTION						
	6	Acer rubrum 'October Glory' / OCTOBER GLORY RED MAPLE	2.5" cal. (min.)	STREET TREES					
	7	Prunus sargentii/ SARGENT CHERRY	2.5" cal. (min.)	PERIMETER SHADE TREES					
	4	Juniperus virginiana cultivars/RED CEDAR	6' – 8' HGT. (min.)	PERIMETER EVERGREEN TREES					
	10	Azalea Hino Crimson'/Hino Crimson Azalea	24" – 36" SPREAD	PERIMETER SHRUB					

LANDSCAPE NOTES:

PART OF THE GRADING PERMIT.

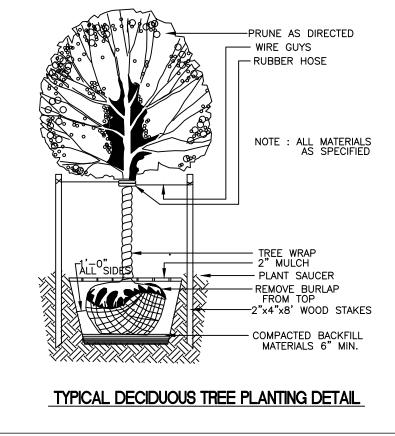
1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. 2. STREET TREE LOCATIONS:

- A. WHEN THE DISTANCE BETWEEN THE CURB AND SIDEWALK IS 6 FEET OR GREATER, THE TREES SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY AND SHALL BE CENTERED BETWEEN THE CURB AND SIDEWALK. B. WHEN THE DISTANCE BETWEEN THE CURB AND SIDEWALK IS LESS THAN 6 FEET, TREES MAY BE PLANTED 3 FEET FROM THE SIDEWALK IN THE DIRECTION AWAY FROM THE ROAD.
- A 10-FOOT WIDE TREE MAINTENANCE EASEMENT SHALL BE REQUIRED IF THE RIGHT-OF-WAY IS LIMITED. C. TREES SHALL BE PLANTED 6 FEET BEHIND CURB WHEN THERE ARE NO SIDEWALKS.
- D. TREES TO BE PLANTED MINIMUM 30 FEET FROM SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB. TREES MAY NOT BE PLANTED WITHIN 5 FEET OF A STORM DRAIN INLET, OPEN SPACE ACCESS STRIP, OR 10 FEET OF A DRIVEWAY.

3. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.

4. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED. 5. FINANCIAL SURETY IN THE AMOUNT OF \$3,000 FOR THE REQUIRED PERIMETER LANDSCAPING (7 PERIMETER SHADE TREES, 4 EVERGREEN TREES AND 10 SHRUBS) SHALL BE POSTED AS

6. ANY LANDSCAPE TREES PLANTED WITHIN THE 10' STREET TREE EASEMENT ARE THE RESPONSIBILITY OF THE PROPERTY OWNERS TO MAINTAIN.



NO.	DATE			REVISION	i				
ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS SUBJECT OF A LAND SURVEYORS & PLANNERS ENGINEERS & LAND SURVEYORS & PLANNERS ENGINE & LAND SURVEYORS & PLANNERS ENGINEERS & LAND SUR				HILL AND PROFILING	DF MAR N. CAPLER M. CAPLER	certify that prepared or a 1 am a duly engineer und of Marylan Expiratio	these doc pproved b licensed ler the law d, Licensed n Date: 0	e No. 45577, 16-08-2026. 8/2024	
OWNER:			ABBEYFIELD ESTATES						
			A RESUBDIVISION OF ABBEYFIELD ESTATES, LOT 1, PLAT 11674,						
	2101 MILLEF	/ELOPMENT, INC. RS MILL ROAD	CREATING LOTS 41-43 AND OPEN SPACE LOT 44						
COOKSVILLE, MD 21723 443-829-9222 DEVELOPER: RAINMAKER DEVELOPMENT, INC. 2101 MILLERS MILL ROAD COOKSVILLE, MD 21723 443-829-9222			R-20 SINGLE FAMILY DETACHED						
			TAX MAP: 31, GRID: 21, PARCEL: 206						
			ZONED: R-20 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND						
			LANDSCAPE PLAN, NOTES						
			AND DETAILS						
			DATE:	JUNE, 2024	-	BEI PROJE	CT NO.	31	47
DES	IGN: JC	DRAFT: JC	SCALE:	AS SHOWN		SHEET	10	OF	10
						F-24-	041		