9 | SEDIMENT & EROSION CONTROL NOTES & DETAILS

	MINIMUM L	OTS SIZE C	HART
LOT No.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
2	8838 sq.ft.	372 sq.ft.	8466 sq.ft.
3	8684 sq.ft.	605 sq.ft.	8079 sq.ft.
4	9159 sq.ff.	832 sq.ff.	8327 sq.ff.
5	7254 sq.ft.	1014 sq.ff.	6240 sq.ff.
6	7611 sq.ft.	1368 sq.ff.	6243 sq.ft.
7	8145 sq.ff.	1806 sq.ft.	6339 sq.ft.
8	10,857 sq.ft.	1,812 sq.ft.	9045 sq.ft.

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

MORK

THIS DRAWING SHALL BE USED IN

MD 104.01-81

TANDARD DETAILS MD 104.01-01 -

SHOULDER CLOSED SIGNS ARE

NO. MD 104.06-18.

REQUIRED IN PLACE OF SHOULDER

WORK SIGNS WHEN THE SHOULDER

IS CLOSED BY POSITIVE PROTECTIO

(TEMPORARY CONCRETE BARRIER OR

WHEN WORK INVOLVES A PAVEMENT EDGE DROP-OFF, REFER TO STANDARD

SEVEN CHANNELIZING DEVICES

THE ENGINEER SHOULD CONSIDER

IN THE SHOULDER TAPER.

ADDITIONAL, ADJACENT LANI CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY

ENCROACHMENTS EXISTS.

NOS. MD 104.06-15 TO MD 104.06-19.

CHANNELIZING DEVICES

DIRECTION OF TRAFFIC

15 MIN-12 HRS.

FACE OF SIGN

SIMILAR DEVICE). REFER TO STANDARD

- EDGE LINE

OR DAYTIME

WORK WITHIN 15 FT

OF EDGE LINE

APPLICATIONS)

FINAL	ROAD C	ONSTRU	JCTION,
GRAD	ING, &	STORM	WATER
	ANAGEM	ENT PU	AN5
MEAC	10WF	CIOGE	i VIE

LOTS 1 THRU 8 AND OPEN SPACE LOT 9 THRU 11

ZONED: R-5C

TAX MAP No. 37 GRID No. 09 PARCEL NO. 78



VICINITY MAP

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

	STOR	YWATER MANA	GEMENT PRACTICES	
LOT NO.	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER	NON-ROOFTOP DISCONNECTION (N-2) Y/N	ROOFTOP DISCONNECTIO (N-1) Y/N
question and the second	YES, TWO (2)	NO	NO	NO
2	YES, THREE (3)	NO	NO	NO
3	YES, TWO (2)	NO	NO	NO
All a	YE5, TWO (2)	NO	NO	NO
5	YES, THREE (3)	NO	NO	NO
6	YES, THREE (3)	NO	NO	NO
7	YES, THREE (3)	NO	NO	NO
8	YES, FOUR (4)	NO	МО	NO
COMMON DRIVE	NO	YE5, TWO (2)	NO	NO

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. 38386, EXPIRATION DATE: 01/12/2020.

TITLE SHEET MEADOWRIDGE VIEW LOTS 1 THRU 8 AND OPEN SPACE LOTS 9 THRU 11

ZONED R-5C TAX MAP No. 37 GRID No. 09 PARCEL No. 78 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: DECEMBER, 2018 SHEET 1 OF 9

BRIGHTFIFTD LOTS 50 - 94 AND WILLOWOOD SECTION 3, AREA 1 LOTS 358 THRU 433 PLAT NOS. 11149 PLAT NOS. 9321 WILLIAM & LINDER TAX MAP 37 JAMES C. JOHNSON & VALENCIA SCOTT LIBER 924 FOLIO Ex. PARCEL 78 LIBER 7252 FOLIO PROPERTY O Circa 1930 To Be Removed DARA JOHNSON TAX MAP 37 PARCEL WILLOWOOD LIBER 9482 FOLIO 576 SECTION 3, AREA LOTS 358 THRU PLAT NOS. 11149 TAX MAP 37 PARCEL LIBER 4797 FOLIO 677 WILLOWOOD SECTION 3, AREA LOTS 358 THRU PLAT NOS. 11149

EXISTING CONDITIONS PLAN VIEW

STORMWATER MANAGEMENT SUMMARY E5Dv REQUIRED PROVIDED REMARKS CU.FT. CU.FT. DRYWELLS (M-5) & 4,013 SITE MICRO-BIORETENTION (M-6)

4,013 5,094 TOTAL GROSS AREA = 4.13 ACRES

= 1.95 ACRES (SITE) = 59.8 TARGET Pe = 1.76" RECHARGE VOLUME (REV) Rev = (5) (Rv) (A) / 12= (0.218) (0.329) (1.91) / 12 = 0.0114 AC-FT OR 497 CU-FT

AS PERMITTED IN CHAPTER 2 OF THE 2000 MARYLAND STORMWATER DESIGN MANUAL, RECHARGE VOLUME HAS BEEN INCLUDED WITHIN THE ESDV.

SITE ANALYSIS DATA CHART

A. TOTAL AREA OF THIS SUBMISSION = 4.13 AC.±. B. LIMIT OF DISTURBED AREA = 1.95 Ac. # PRESENT ZONING DESIGNATION: R-5C (PER 10/06/2013 COMPREHENSIVE ZONING PLAN) PROPOSED USE: RESIDENTIAL

PREVIOUS HOWARD COUNTY FILES: ECP-17-046, SP-17-009, WP-17-119 TOTAL AREA OF FLOODPLAIN LOCATED ON SITE = 0.84 AC. G. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 1.05 AC.

(0.24 AC. 25% OR GREATER) TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 2.03 AC. (INCLUDES FLOODPLAIN AREA) TOTAL AREA OF EXISTING FOREST = 3.57 AC. ± (2.73 AC. OUTSIDE OF FLOODPLAIN)

TOTAL GREEN OPEN AREA = 3.54 AC. ± TOTAL IMPERVIOUS AREA = 0.59 AC. * AREA OF ERODIBLE SOILS = 2.26 AC. 1. AREA OF ROAD DEDICATION = 0.19 AC

N. DENSITY PERMITTED = 4.13 AC - 1.08 AC = 3.05 ACRES X 4 LOTS/ACRE = 12 LOTS O. PROPOSED NUMBER OF LOTS = 8 LOTS P. OPEN SPACE REQUIRED = 4.13 AC X 25% = 1.03 AC

Q. OPEN 5PACE PROVIDED = 2.32 AC. (2.23 AC. (credited) & 0.09 AC. (non-credited))

NOTE: THE FOLLOWING STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT: MD 104.02-01 - SHOULDER WORK

FOR ALL STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST REFER TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED BY: HTTP://APPS.ROADS.MARYLAND.GOV/BUSINESSWITH5HA/BIZSTD55PEC5/ DE5MANUALSTDPUB/PUBLICATION5ONLINE/OHD/BOOK5TD/INDEX.ASP

ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

FISHER. COLLINS & CARTER. INC. NIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PUBLIC WORKS 3/22/2019 CHIEF, BUREAU OF HIGHWAYS APPROVED: DEPARTMENT OF PLANNING AND ZONING Vent Electrock REVISION DATE

UTILIZE MOST CURRENT VERSION OF MD 104.02-02 AND

ALSO ADHERE TO MOST RECENT PAVEMENT EDGE DROP-OFF

FLAGGING TO BE UTILIZED PER MD 104.02-10.

STANDARDS (MD 104.06-15 TO MD 104.06-19)

OWNERS JAMES C. JOHNSON & VALENCIA SCOTT 6077 MEADOWRIDGE RD ELKRIDGE, MD 21075

DEVELOPER PATAPSCO BUILDERS, LLC 5050 WATERLOO ROAD, SUITE 140 COLUMBIA, MD 21045 443-367-0422

GENERAL NOTES 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1000 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.

DESIGN SPEED EASEMENT WIDTH

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS M5HA STANDARDS AND SPECIFICATIONS IF

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-000-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). 5. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2013 ZONING REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A

BUILDING OR GRADING PERMIT APPLICATION 6. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 37 HC AND NO. 37 EC. HOWARD COUNTY MONUMENT NO. 37HC N 556,364.071 E 1,375,513.263 ELEV. (NAVD00) = 270.062

HOWARD COUNTY MONUMENT NO. 37EC N 561,099.806 E 1,375,580.480 ELEV. (NAVD86) = 346.154

7. SUBJECT PROPERTY ZONED R-SC PER 10/06/13 COMPREHENSIVE ZONING PLAN. 8. BACKGROUND INFORMATION:

a. SUBDIVISION NAME: MEADOWRIDGE VIEW

b. TAX MAP NO. 37 c. PARCELS NO. 78

ROADWAY INFORMATION CHART

CLASSIFICATION

HUNTERS HOLLOW RD | PRIVATE USE-IN-COMMON DRIVEWAY | 15 M.P.H.

ROAD NAME

d. ZONING R-5C e. ELECTION DISTRICT: FIRST

f. GROSS AREA OF TRACT = 4.13 ACRES NET TRACT AREA = 3.29 ACRES

a. NUMBER OF BUILDABLE LOTS: 8 h. NUMBER OF OPEN SPACE LOTS: 3

i. AREA OF BUILDABLE LOTS: 1.62 ACRES j. AREA OF OPEN SPACE LOTS: 2.32 ACRES

k. AREA OF ROADWAY TO BE DEDICATED: 0.19 ACRES

|. PREVIOUS FILE NUMBERS: ECP-17-046, 5P-17-009; WP-17-119.

m. AREA OF FLOODPLAIN = 0.84 ACRES n. AREA OF 25% OR GREATER SLOPES = 0.24 ACRES

9. OPEN SPACE REQUIREMENTS:

a. AREA OF OPEN SPACE REQUIRED = 4.13 x 25% = 1.03 ACRES

b. AREA OF OPEN SPACE PROVIDED = 2.32 ACRES (2.23 ACRES CREDITED) 10. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.

11. NOISE STUDY WAS PREPARED BY MARS GROUP DATED FEBRUARY, 2017. THE 650BA NOISE CONTOUR LINE DRAWN ON THIS PLAT IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65DBA NOISE EXPOSURE. THE 65DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

12. WATER IS PUBLIC (CONTRACT NO. 14-5015-D) SEWER IS PUBLIC (CONTRACT NO. 14-5015-D)

13. SOILS INFORMATION TAKEN FROM SOIL SURVEY MAP NO. 26, HOWARD COUNTY, MARYLAND.

14. THERE IS AN EXISTING HOUSE ON-SITE DATING TO THE 1930S WHICH WILL BE DEMOLISHED.

15. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS, & CARTER, INC. DATED MARCH, 2017.

16. THE EXISTING IS TAKEN FROM ON FIELD RUN SURVEY WITH (MAXIMUM TWO FOOT) CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MARCH, 2017 AND SUPPLEMENTED WITH HOWARD COUNTY TOPOGRAPHY. 17. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE NEW MDE, CHAPTER 5 REGULATIONS AND THE NEW HOWARD COUNTY SWM MANUAL ADOPTED ON

OR AROUND MAY 4, 2010, RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIR, WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY A MICRO BIO-RETENTION FACILITY AND 22 DRY WELLS. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED & MAINTAINED BY THE H.O.A. (Bio-Retention) OR THE PRIVATE HOMEOWNER (Dry Wells).

18. STREAM, WETLANDS, THEIR BUFFERS, STEEP SLOPES, AND FLOODPLAIN EXIST ON-SITE. FLOODPLAIN SHOWN HEREON IS BASED ON HOWARD COUNTY FEMA MAPS. 19. THE DISTURBANCE TO THE 25% OR GREATER ON-SITE STEEP SLOPES IS PERMITTED BECAUSE THE SLOPES ARE LESS THAN 20,000 SF IN AREA, IN ACCORDANCE WITH SECTION 16.116(B)(1)(I) OF THE SUBDIVISION REGULATIONS.

20. DISTURBANCE INTO THE WETLANDS, STREAM, AND THEIR BUFFERS FOR THE EXTENSION OF THE SEWER MAIN AND EASEMENT IS CONSIDERED ESSENTIAL DISTURBANCE BY DPZ PER SECTION 16.116(c)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 21. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN, IN THE AMOUNT \$6,000.00 BASED

ON (11) SHADE TREES @ \$300.00 EACH, (16) EVERGREENS @ \$150.00 EACH. 22. A COMMUNITY MEETING WAS CONDUCTED FEBRUARY 23, 2017 FOR THE PURPOSE OF THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED RESIDENTIAL DEVELOPMENT AND TO ALLOW THE COMMUNITY TO ASK QUESTIONS AND TO MAKE COMMENTS, PER SECTION 16.128(D) OF THE SUBDIVISION

23. THE TRAFFIC STUDY FOR THIS PROJECT DATED FEBRUARY, 2017 WAS PREPARED BY MARS GROUP.

24. SUBDIVISION IS SUBJECT TO SECTION 104.0.F. OF THE ZONING REGULATIONS. AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE MILH.U. REQUIREMENT WILL BE MET. THE MILH.U. AGREEMENT AND COVENANTS WILL BE RECORDED SIMULTANEOUSLY WITH THIS PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF A FEE-IN-LIEU TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT.

25. MODERATE INCOME HOUSING UNIT (M.I.H.U.) TABULATION:

a. M.I.H.U. REQUIRED = (8 LOTS X 10%) = 0.8 M.I.H.U. b. M.I.H.U. PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS

REQUIRED BY THE DEVELOPMENT c. AN EXECUTED M.I.H.U. AGREEMENT WITH THE HOWARD COUNTY HOUSING DEPARTMENT WILL BE COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE PLAT. 27. THE 24' PRIVATE USE-IN-COMMON, ACCESS, DRIVEWAY EASEMENT AND MAINTENANCE AGREEMENT FOR THE USE AND BENEFIT OF LOTS 1 THRU Ø IS RECORDED

SIMULTANEOUSLY WITH THE PLAT. 28. APPROVAL OF A SITE DEVELOPMENT PLAN IS REQUIRED FOR THE DEVELOPMENT OF ALL RESIDENTIAL LOTS WITHIN THIS SUBDIVISION PRIOR TO ISSUANCE OF ANY GRADING OR BUILDING PERMITS FOR NEW HOUSE CONSTRUCTION IN ACCORDANCE WITH SECTION 16.155 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

29. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT WILL BE MET THROUGH THE RETENTION OF 1.14 AC. * OF FOREST (1.10 AC. CREDITED). NO SURETY WILL BE REQUIRED FOR RETENTION. "NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. 30. SOIL BORING REPORT FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS, & CARTER, INC. DATED MARCH, 2017 AND APPROVED ON MAY 30, 2017.

31. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH, 2017 AND APPROVED ON MAY 30, 2017. THERE ARE NO WETLANDS ON THIS SITE.

32. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. 33. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD R/W LINE AND NOT THE PIPESTEM LOT DRIVEWAY.

34. TRASH AND RECYCLABLES COLLECTION WILL BE AT MEADOWRIDGE ROAD A WITHIN 5' OF THE COUNTY OR STATE ROADWAY. 35. A PRIVATE DRIVEWAY NAME SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATE.

36. NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION. 37. TRAFFIC CONTROL DEVICES: (a) THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.

(b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.

(c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD) (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED

("QUICK PUNCH"). SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH

30. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:

a. WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)

b. SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.

c. GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS. d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).

e. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.

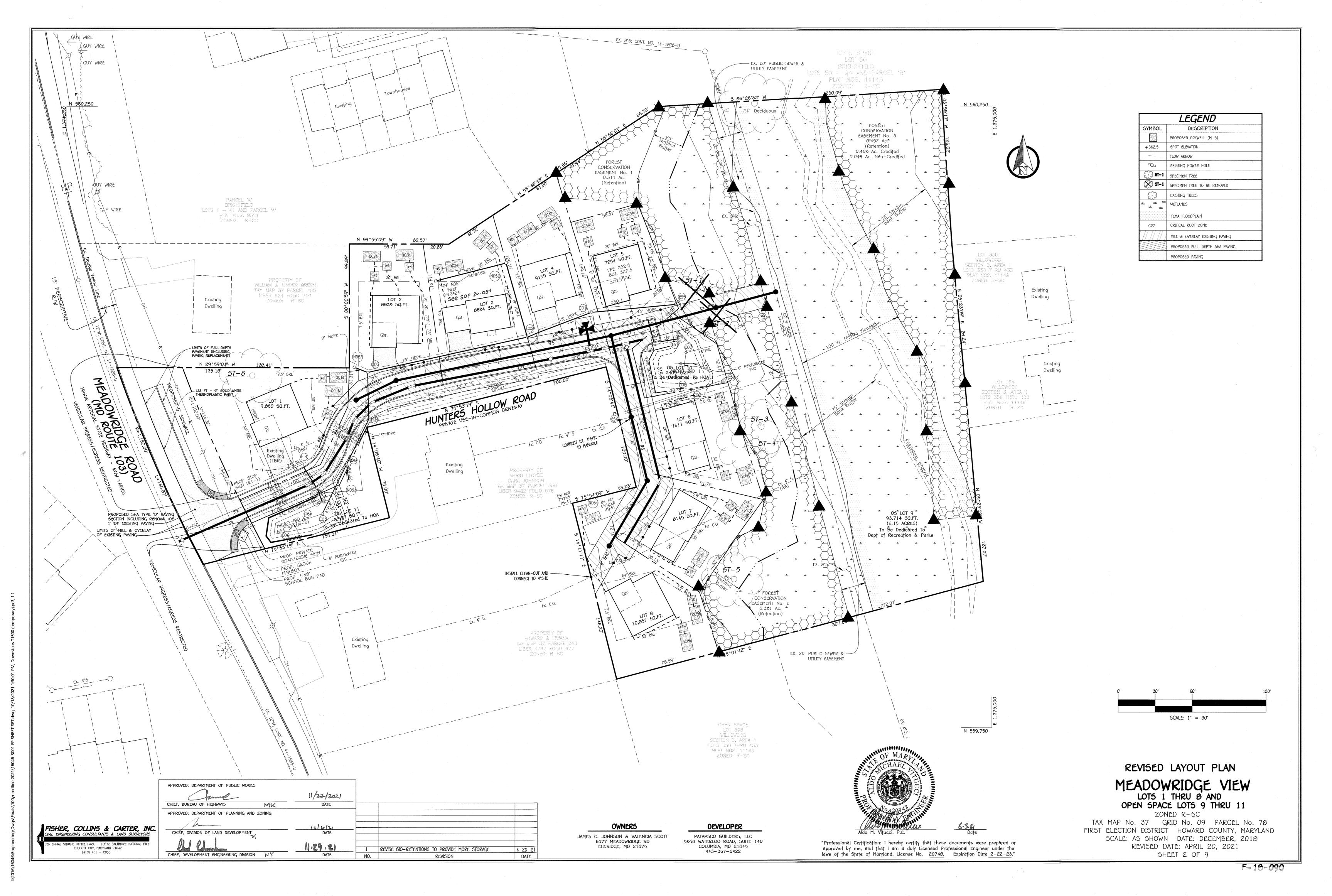
f. STRUCTURE CLEARANCES - MINIMUM 12 FEET. g. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

39. DESIGN MANUAL WAIVER TO ALLOW & LOTS ON A USE-IN-COMMON DRIVEWAY WAS GRANTED ON OCTOBER 30, 2017 SUBJECT TO PROVIDING CURB & GUTTER, STORM DRAIN SYSTEM, AND SWM TO FULLY TREAT ESDV, SAFELY CONVEY THE STORMWATER AND PREVENT FLOODING TO EXISTING AND PROPOSED HOUSES.

40. ROAD IMPROVEMENTS ALONG MEADOWRIDGE ROAD INCLUDE AN ACCELERATION LANE, CURB & GUTTER, SIDEWALK, AND A BUS STOP PAD. 41. ALTERNATIVE COMPLIANCE APPLICATION, WP-17-119, WAS APPROVED ON JUNE 1, 2017 REQUESTING ALTERNATIVE COMPLIANCE TO SECTION 16.1205(A)(7) TO ALLOW THE REMOVAL OF TWO (2) SPECIMEN TREES. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

1. THE REMOVAL OF THE TWO (2) SPECIMEN TREES (RED MAPLES) WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (4 TOTAL) WITH A MINIMUM 3" CALIPER NATIVE PLANT SPECIES AS PART OF THIS SUBDIVISION'S LANDSCAPING PLAN. SURETY FOR THE FOUR SHADE TREES WILL BE INCORPORATED INTO THE LANDSCAPE SURETY WITH THE FINAL PLAN.

2. PROVIDE A NOTE ON ALL SUBSEQUENT SUBDIVISION AND SITE DEVELOPMENT PLANS REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THE REGULATION SECTIONS PETITIONED, THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL, AND THE CONDITIONS OF APPROVAL.



OWNERS

JAMES C. JOHNSON & VALENCIA SCOTT

6077 MEADOWRIDGE RD

ELKRIDGE, MD 21075

DEVELOPER

PATAPSCO BUILDERS, LLC

5850 WATERLOO ROAD, SUITE 140

COLUMBIA, MD 21045

443-367-0422

4-3-19

3.28.19

NO.

REVISION

CHIEF, DEVELOPMENT ENGINEERING DIVISION

FISHER, COLLINS & CARTER, INC.

TENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

F-18-090

ZONED R-5C

TAX MAP No. 37 GRID No. 09 PARCEL No. 78

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: DECEMBER, 2018

SHEET 3 OF 9

AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF

THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION, DATE: 01/12/2020.

Signature Of Professional Engineer

2.0

4.0

© CURVE DATA

HUNTERS HOLLOW ROAD

STA. 1+43.74 TO STA. 2+09.87

RADIUS = 69.00'R

ARC LENGTH = 66.13'

TAN. = 35.05'

DELTA = 54° 54' 34.5"

CHORD = 5 44° 04' 00.94" W, 63.62'

© CURVE DATA

HUNTERS HOLLOW ROAD

STA. 2+09.07 TO STA. 2+01.63

RADIUS = 491'R

ARC LENGTH = 71.76'

TAN. = 35.95'

DELTA = 0° 22' 26.6"

CHORD = 5.75° 42' 31.49" W, 71.70'

DELTA = 3° 49' 10.4" CHORD = N 77° 59' 09.59" E, 67.25'

C CURVE DATA

HUNTERS HOLLOW ROAD

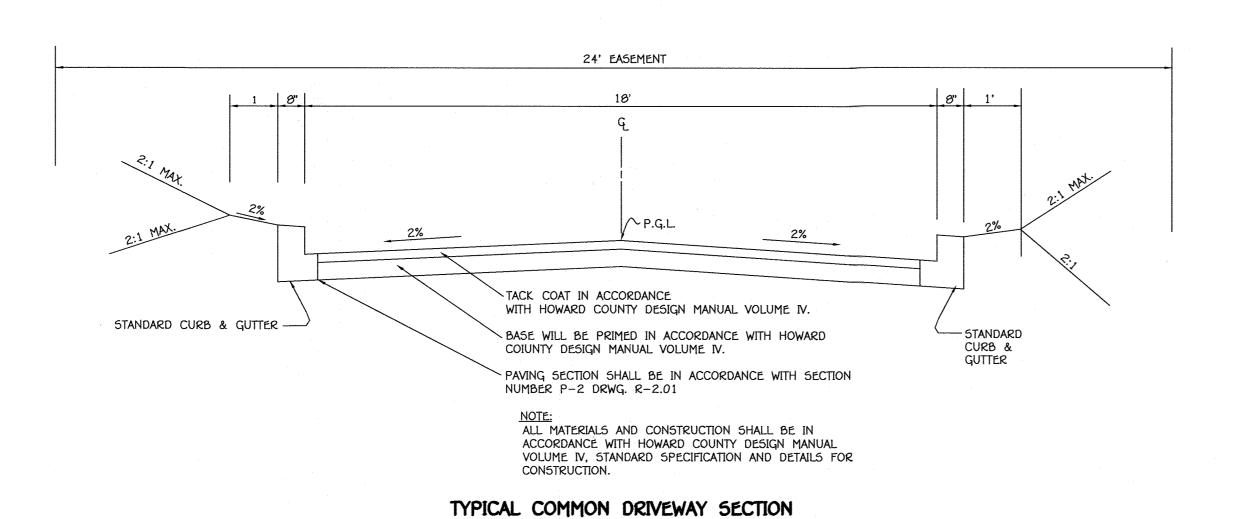
STA. 2+01.63 TO STA. 3+52.2

RADIUS = 1,009'R

ARC LENGTH = 67.26'

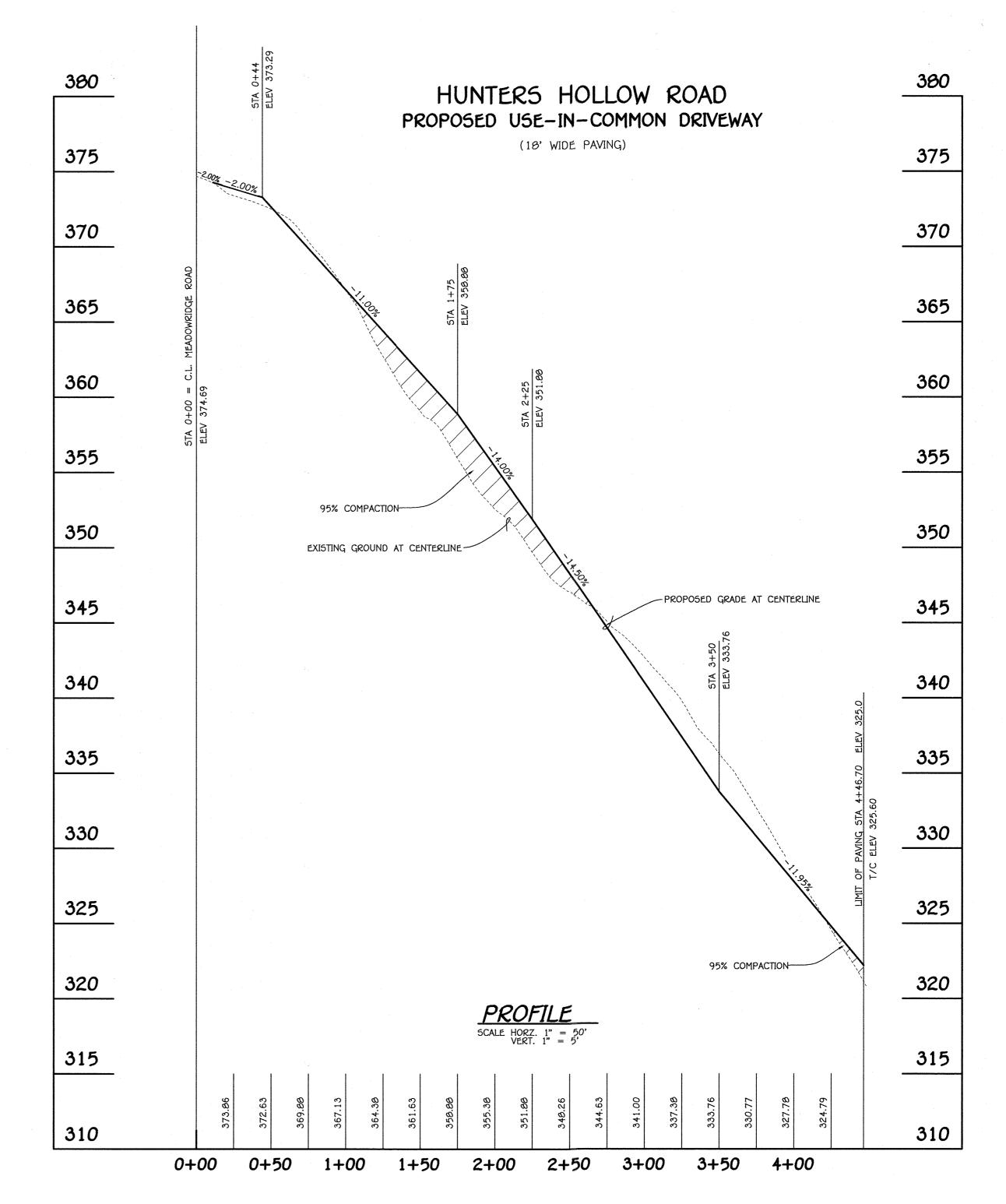
TAN. = 33.64'

Scale: 1" = 50"



ROADWAY INFORMATION CHART						
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	& STATION LIMITS	EASEMENT	PAVING SECTION
HUNTERS HOLLOW ROAD	PRIVATE DRIVEWAY	15 M.P.H.	R-5C	0+00 TO 4+46.70	24'	P-2

NO SCALE





		_		
APPROVED: DEPARTMENT OF PUBLIC WORKS				
Genne	11/22/2021			
CHIEF, BUREAU OF HIGHWAYS	DATE			
APPROVED: DEPARTMENT OF PLANNING AND ZONING				
/ h-	12/4/21			
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE			
11 1 2 1 3				
Und Educat	11:29:21	1	REVISED BIO-RETENTIONS & DRYWELLS TO PROVIDE MORE STORAGE	4-20-21
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE	NO.	REVISION	DATE

JAMES C. JOHNSON & VALENCIA SCOTT 6077 MEADOWRIDGE RD ELKRIDGE, MD 21075 PATAPSCO BUILDERS, LLC 5050 WATERLOO ROAD, SUITE 140 COLUMBIA, MD 21045 443-367-0422



approved by me, and that I am a duly Licensed Professional Engineer under the

laws of the State of Maryland, License No. 20748, Expiration Date 2-22-23."

Aldo M. Vitucci, P.E.

"Professional Certification: I hereby certify that these documents were prepared or

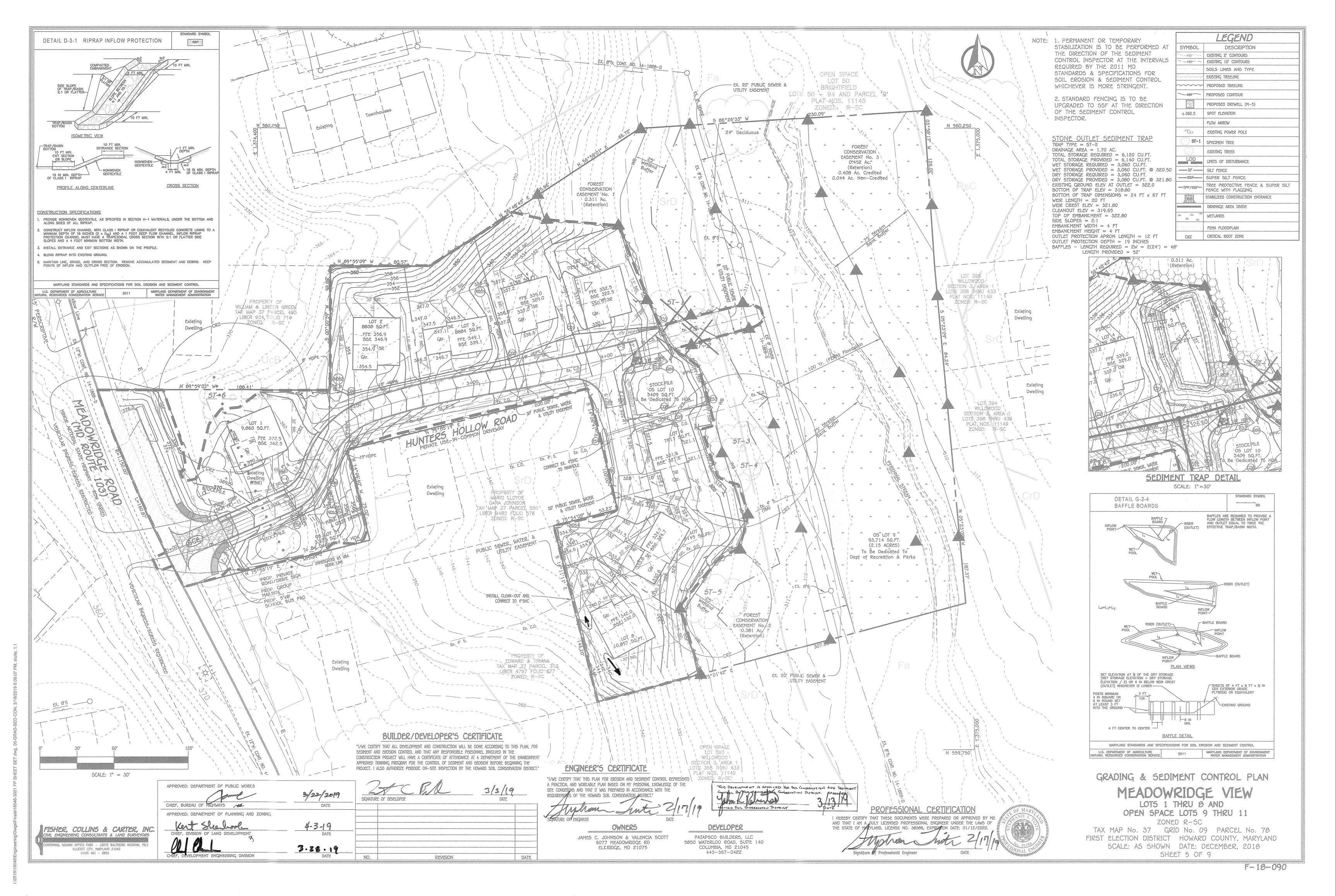
REVISED DRIVEWAY PROFILE

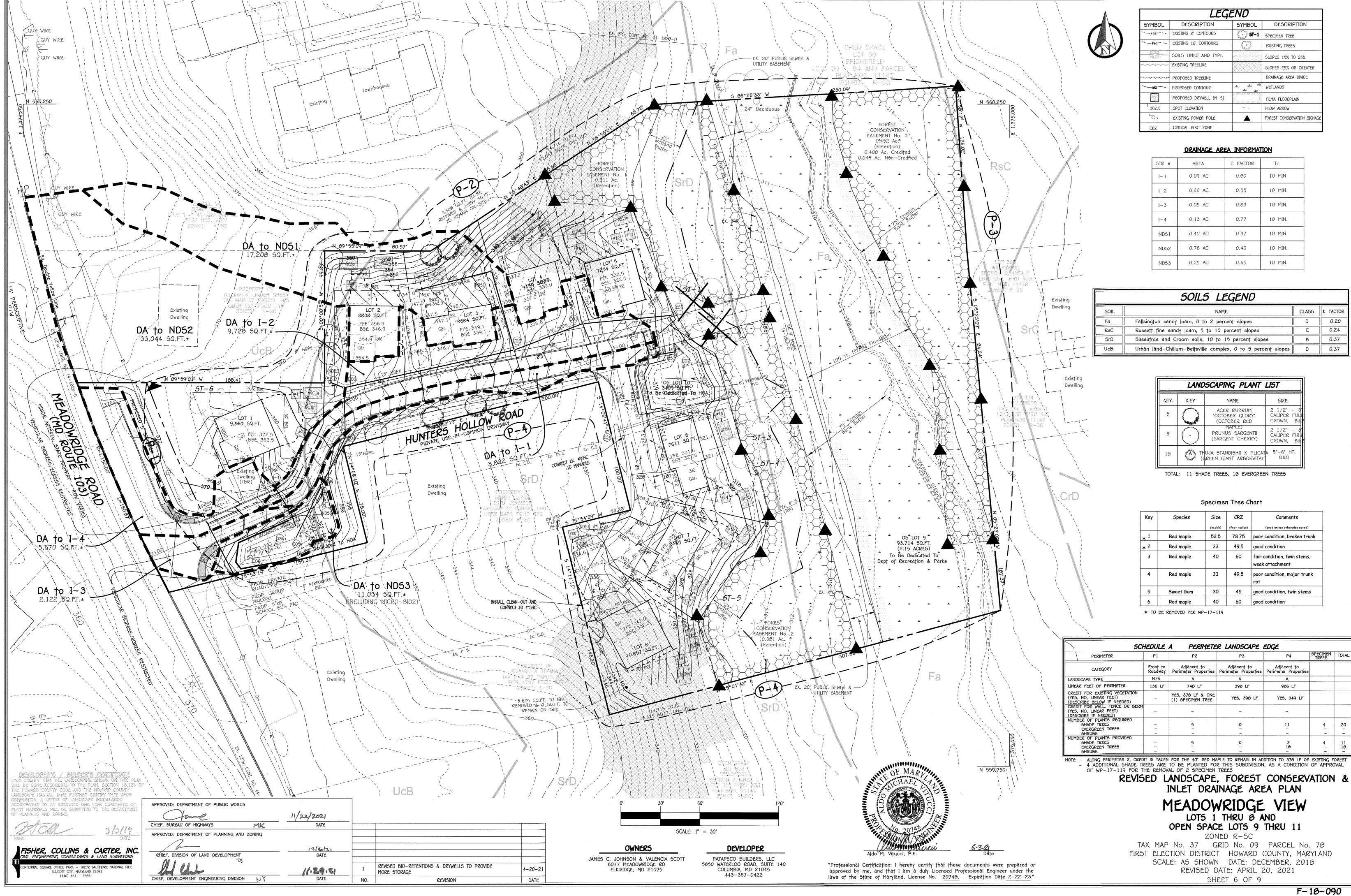
MEADOWRIDGE VIEW

LOTS 1 THRU 8 AND

OPEN SPACE LOTS 9 THRU 11

ZONED R-5C
TAX MAP No. 37 GRID No. 09 PARCEL No. 78
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2018
REVISED DATE: APRIL 20, 2021
SHEET 4 OF 9





Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide desthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching
- the facility, thereby reducing the possibility of clogging. > Determine areas that will be saturated with water and water table depth so that
- appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary. > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or sod. > Temporarily divert flows from seeded areas until vegetation is established > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

he characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.00.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash -1(K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 †o 55%
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

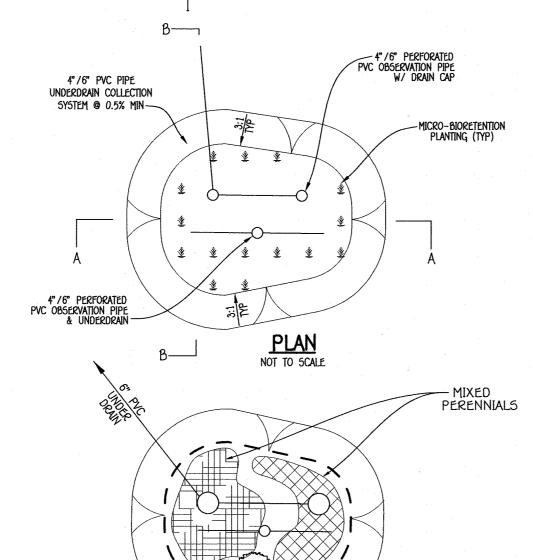
Planting Guidance

FISHER, COLLINS & CARTER, INC

ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2855

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure. The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.



MICRO BIO-RETENTION PLANTING NOT TO SCALE

						
		DRY W	ELL C	HART		
LOT No.	DRYWELL No.	AREA OF ROOF PER DRYWELL	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
LOT 1	1	707 SQ. FT.	99 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 1	2	820 SQ. FT.	114 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 2	3	457 SQ. FT.	64 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 2	4	344 5Q. FT.	48 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 2	5	726 SQ. FT.	101 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 3	6	410 5Q. FT.	57 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 3	7	892 5Q. FT.	99 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 4	8	735 SQ. FT.	103 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 4	9	659 SQ. FT.	92 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 5	10	457 5Q. FT.	64 C.F.	72 C.F.	100%*	5' x 7.2' x 5'
LOT 5	11	344 5Q. FT.	48 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 5	12	726 SQ. FT.	101 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 6	13	410 SQ. FT.	57 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 6	14	891 SQ. FT.	124 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 7	15	446 SQ. FT.	63 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 7	16	446 5Q. FT.	63 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 7	17	410 SQ. FT.	57 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 8	18	344 5Q. FT.	48 C.F.	72 C.F.	100%*	6' x 6' x 5'
LOT 8	19	825 SQ. FT.	115 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 8	20	458 5Q. FT.	64 C.F.	102 C.F.	100%*	6' x 8.5' x 5'
1						l · ·

LOT 8 21** 948 5Q. FT. 132 C.F. 140 C.F. 100%* 5' x 14' x 5'

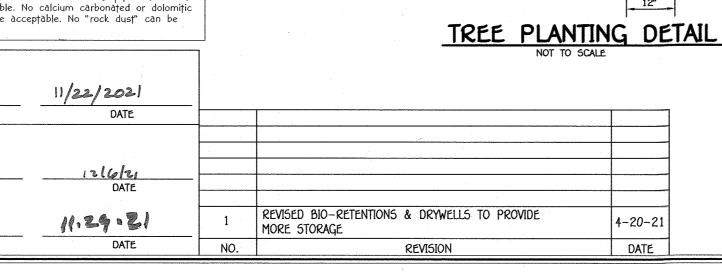
* AREA OF TREATMENT EXCEEDS THAT REQUIRED

** TREATING DRIVEWAY.

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A; Table A.4	n/a	plantings are site-specific
Planting soil [2' to 4' deep]	loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		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
Peā grāvel diāphrāgm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" †o 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Grāvel (underdrāins ānd infil†rāțion berms)	AASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 750, Type PS 20 or AASHTO M-270	4" to 6" rigid schedule 40 PVC or 5DR35	Slotted or perforated pipe; 3/8" pert. @ 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 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 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 previously 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	AA5HTO-M-6 or ASTM-C-33	0.02" †0 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.

APPROVED: DEPARTMENT OF PUBLIC WORKS 11/22/2021 MK CHIEF, BUREAU OF HIGHWAYS APPROVED: DEPARTMENT OF PLANNING AND ZONING 126/21 CHIEF, DIVISION OF LAND DEVELOPMENT 11.29.21 CHIEF, DEVELOPMENT ENGINEERING DIVISION



NOTE: CONTRACTOR TO REGRADE, 500 OR

HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF THEIR WORK.

SPRAY WITH WILT-PROOF ACCORDING

PRUNE 1/3 LEAF AREA BUT RETAIN NATURAL

2 PIECES OF REINFORCED RUBBER HOSE

DOUBLE #12 GALVANIZED WIRE GUYS TWISTED

(EXCEPT EVERGREENS)

3-2"X 2" OAK STAKES, NOTCH STAKES TO HOLD WIRE

WRAP TRUNK TO SECOND TIER

REMOVE ANY COVERING FROM

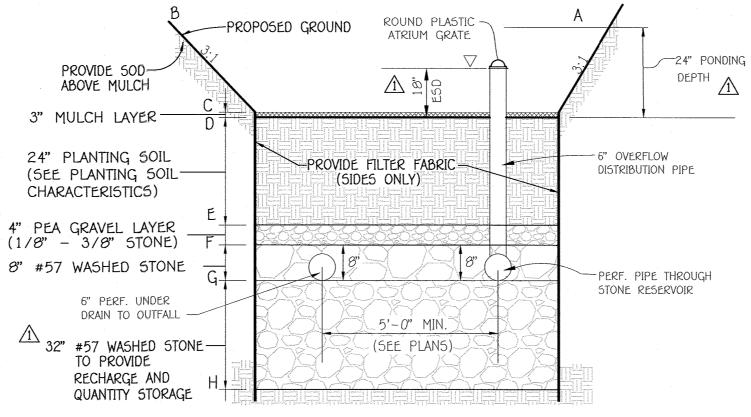
WITH TOP OF ROOT CROWN

OF BRANCHES WITH WATERPROOF TREE WRAP, TIE AT 24" INTERVALS

CONSTRUCT 3" SAUCER RIM-FLOOD -

WITH WATER TWICE WITHIN 24 HOURS

CONVEX BOTTOM 6" MIN. HT



MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE

NO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR BIORETENTION AREAS (M-6)

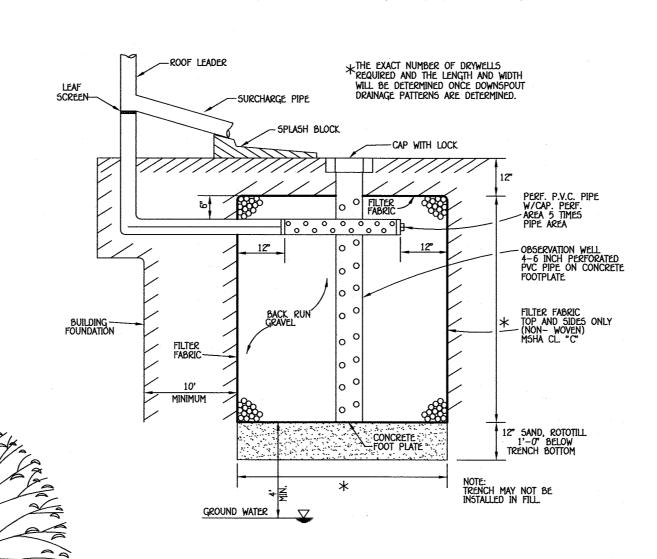
1. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance 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.

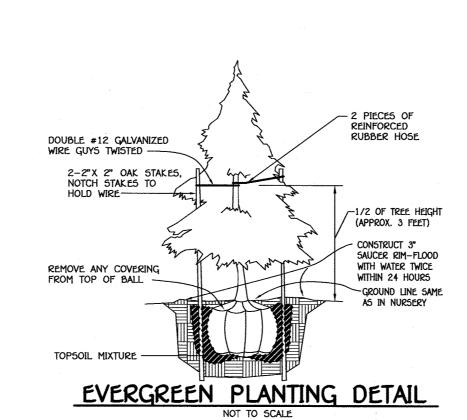
2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material Treat diseased trees and shrubs and replace all deficient 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

OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT. B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS
- TO INSURE TRENCH DRAINAGE C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- F. 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.



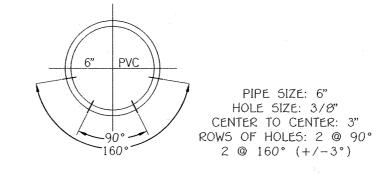


OWNERS JAMES C. JOHNSON & VALENCIA SCOTT 6077 MEADOWRIDGE RD ELKRIDGE, MD 21075

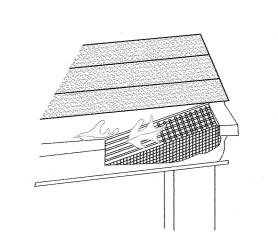
DEVELOPER PATAPSCO BUILDERS, LLC 5050 WATERLOO ROAD, SUITE 140 COLUMBIA, MD 21045 443-367-0422

MICRO-BIORETENTIONS MICRO-BIORETENTION | C | D | E | F | G | H | FILTER 321.0 | 321.0 | 319.25 | 319.0 | 317.00 | 316.67 | 316.00 | 313.33 | 316.00 364.0 364.0 362.25 362.0 360.00 359.67 359.00 356.03 355.1

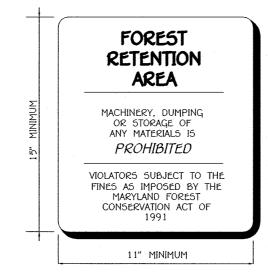
	MICRO-BIOR	ETENTION P	PLANT MATERIAL
MICRO-BIO 1 QUANTITY	MICRO-BIO 2 QUANTITY	NAME	MAXIMUM SPACING (FT.)
130	65	MIXED PERENNIALS	1.5 TO 3.0 FT.
2	2	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION



5CH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE NO SCALE



GUTTER DRAIN FILTER DETAIL



NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

FOREST CONSERVATION SIGN DETAIL

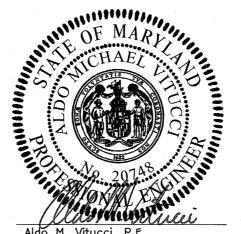
NOT TO SCALE

STORMWATER MANAGEMENT NOTES

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL
- 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN
- 4. FINAL GRADING IS SHOWN ON THE SITE DEVELOPMENT PLAN.

FOREST CONSERVATION WORKSHEET VERSION 1.0

NET TRACT AREA	ACRE5
A. TOTAL TRACT AREA	4.13
B. DEDUCTIONS (AREA WITHIN 100 YEAR FLOODPLAIN)	0.84
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00
D. NET TRACT AREA	3.29
LAND USE CATEGORY: HIGH DENSITY RESIDENTIAL	
E. AFFORESTATION THRESHOLD (NET TRACT AREA [C] x 15%)	0.49
F. CONSERVATION THRESHOLD (NET TRACT AREA [C] x 20%)	0.66
EXISTING FOREST COVER	
G. EXISTING FOREST COVER WITHIN THE NET TRACT AREA	2.73
H. AREA OF FOREST ABOVE AFFORESTATION TRESHOLD	2.24
I. AREA OF FOREST ABOVE CONSERVATION TRESHOLD	2.07
BREAKEVEN POINT	
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	1.07
BREAKEVEN POINT	1.07
K. CLEARING PERMITTED WITHOUT MITIGATION	1.66
PROPOSED FOREST CLEARING	
L TOTAL AREA OF FOREST TO BE RETAINED	1.10
M. TOTAL AREA OF FOREST TO BE CLEARED OR RETAINED OUTSIDE FCE	1.63
PLANTING REQUIREMENTS	
N. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION TRESHOLD	0.41
P. REFORESTATION FOR CLEARING BELOW THE CONSERVATION TRESHOLD	0.00
Q. CREDIT FOR RETENTION ABOVE THE CONSERVATION TRESHOLD	0.44
R. TOTAL REFORESTATION REQUIRED	0.00
5. TOTAL AFFORESTATION REQUIRED	0.00
T. TOTAL PLANTING REQUIREMENT	0.00



"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. 20748, Expiration Date 2-22-23."

NOTES

- 1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 1.14 ACRES OF FOREST. NO SURETY WILL BE REQUIRED. A FOREST CONSERVATION AGREEMENT WILL BE REQUIRED FOR THE FOREST CONSERVATION RETENTION AREA AT FINAL PLAN STAGE.
- 2. FOREST CONSERVATION REQUIREMENTS AS SET FORTH IN SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL, NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- 3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY FOR REQUIRED SHADE TREES WILL BE REQUIRED AT FINAL PLAN STAGE.

FOREST PROTECTION GENERAL NOTES

- 1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING
- 2. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO
- EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- 7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE
- 8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- 9. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

- 1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND.
- THE PURPOSE OF THIS MEETING WILL BE: A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION. EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
- B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES; C. MAKE ALL NECESSARY ADJUSTMENTS:
- D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES

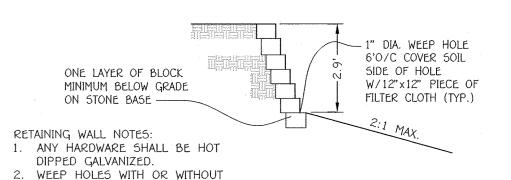
CONSTRUCTION MONITORING

- 1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT
- 2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE. CONSULTATION WITH A
- PROFESSIONAL ARBORIST 3. THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM

MULTIFLORA ROSE CONTROL NOTE:

GRAVEL DRAIN ARE REQUIRED AT

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing and Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Seaseon And Once In The Spring And Once In the Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturers Specifications. Care Should be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth OF Roses Is Able To Be More Successfully Managed.



RETAINING WALL DETAIL NOT TO SCALE

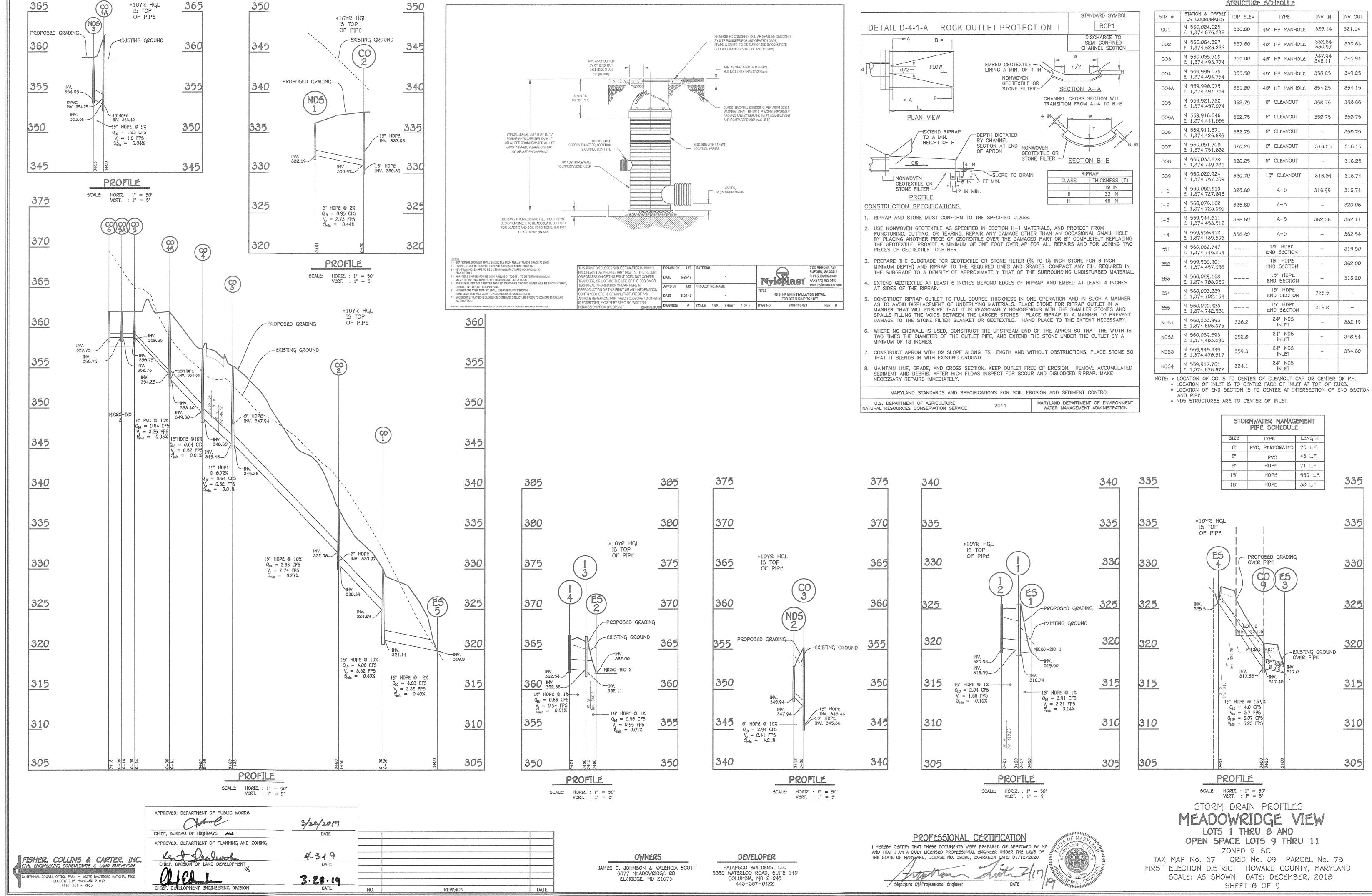
REVISED FOREST CONSERVATION AND STORMWATER MANAGEMENT DETAILS & NOTES

MEADOWRIDGE VIEW LOTS 1 THRU 8 AND OPEN SPACE LOTS 9 THRU 11

ZONED R-5C TAX MAP No. 37 GRID No. 09 PARCEL No. 78 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: DECEMBER, 2018

REVISED DATE: APRIL 20, 2021 SHEET 7 OF 9

F-18-090



F-18-090

b. Apply fertilizer and lime as prescribed on the plans.

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.

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

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

. 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 the approved plan, then

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 triable. Seedbed loosening may be unnecessary on newly disturbed areas.

8. Topsoiling

i. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for regetative 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

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

scarified or otherwise loosened to a depth of 3 to 5 inches.

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

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.

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 à loàm, sândy loàm, clây loàm, silt loàm, sândy clây loàm, or loàmy sând. Other soils mày be used it recommended by ân 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 1 1/2

o. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison iv, thistle, or others

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

Erosion and sediment control practices must be maintained when applying topsoil.

Uniformly distribute topsoil in a 5 to 0 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 opsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

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 myst be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure ma 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.

). Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percen 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 0 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

The application of seed and mulch to establish vegetative cover

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

à. All seed must meet the requirement 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 8.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of 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 cook as possible until used. Temperatures above 75 to 60 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

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

time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with 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

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; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre. 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 hydroseeding. iii. Mix seed and fertilizer on site and seed immediately and without interruption. iv. When hydroseeding do not incorporate seed into the soil.

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 tree 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 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. 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 agrication 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 by phyto-toxic. v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeters, pH range of 4.0 to 2.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

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 to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to

affain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. 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 4-15 feet wide and 300 to 3,000 feet long.

PEVELOPMENT 15 APPROVED FOR SOIL AND SEDMENT CONTROL BY THE APPROVED: DEPARTMENT OF PUBLIC WORKS 3/22/2019 APPROVED: DEPARTMENT OF PLANNING AND ZONING 4-3-19

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

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.

1. Select one or more of the species or seed mixtures listed in Table 8.1 for the appropriate Plant Hardiness Zone (from Figure 8.3), 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 8.1 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. Temporary Seeding Summary

lardiness Zone (from Figure B.3): <u>6b</u> Seed Mixture (from Table B.1):			***************************************	Fertilizer Rate (10-20-20)	Lime Rate
5pecies	Application Rate (lb/ac)	Seeding Dates	5eeding Dep†hs	st cycle and an analysis of the cycle and ano	
BARLEY	96	3/1 - 5/15.	₹1.5 4.15	436 lb/ac	2 tons/dc
O/ATS	7/2,	8/15 - 10/15	€ ii	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
LRYts	11%		5 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 ×	- expressionis	

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures General Use

a. Select one or more of the species or mixtures listed in Table 8.3 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 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.

Turfgrāss 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 or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding 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 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 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: 1 1/2 to 3 pounds per 1000 saudre feet.

Select turfarass 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 quarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides reliable means of consumer projection 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

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 1 1/2 inches in diameter The resulting seedbed must be in such condition that future moving of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 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. Permanent Seeding Summary

Hardiness Zone (from Figure B.3): <u>6b</u> Seed Mixture (from Table B.3): <u>8</u>				Ferțiliz	er Rațe (10-	20-20)	Lime Rațe	
No.	5pecies	Application Rate (lb/ac)	Seeding Dațes	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
					•		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

immediately prior to laying the sod.

1. General Specifications a. Class of turforass 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 to % inch, plus or minus % 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 of 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

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

b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against

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

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.

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified. CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE

OWNERS JAMES C. JOHNSON & VALENCIA SCOTT 6077 MEADOWRIDGE RD

ELKRIDGE, MD 21075

U.S. DEPARTMENT OF AGRICULTURE JRAL RESOURCES CONSERVATION SERVICE

CONSERVATION DISTRICT."

DEVELOPER PATAPSCO BUILDERS, LLC COLUMBIA, MD 21045

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

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 8-3 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 8-4 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

> HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

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.

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the uture LOD and protected areas are marked clearly in the field. A minimum of 40 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.

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-4-9) 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. 8-4-6). 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:

Area Disturbed: Acres (ROAD IMPROVEMENTS ONLY) Area to be roofed or paved: 0.59 Acres 1.36 Area to be vegetatively stabilized: Acres Total Fill: 1200 Offsite waste/borrow area location: N/A

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

STABILIZATION MATTING

CHANNEL APPLICATION

CONSTRUCTION SPECIFICATIONS:

DETAIL B-4-6-C

* Maintenance and/or corrective action performed * Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE)

PERMANENT SOIL

· ISOMETRIC VIEW

USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2×2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH HAND HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.

KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.

STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLI ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.

ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

BUILDER/DEVELOPER'S CERTIFICATE

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

SHEAR STRESS FOR PSSMC = 62.4 LBS/FT° x 0.05 FT x 0.04 = 2.0 LBS/FT°

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, 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 HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure

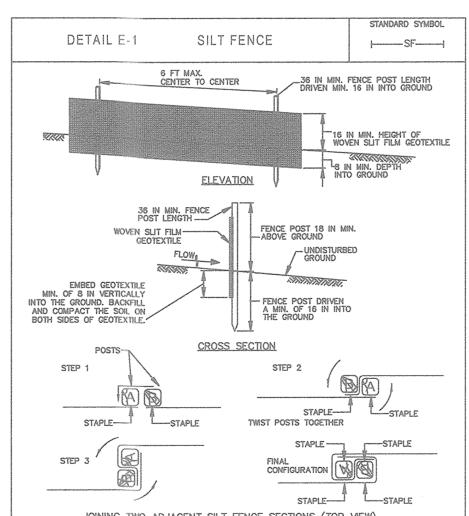
13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All Silt Fence and Super Silt Fence shall be placed on—the—contour, and be imbricated at 25 minimum intervals, with lower ends curled uphill by 2 in elevation. 15. Stream channels must not be disturbed during 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.

STANDARD SYMBOL

PSSMC - * 2.0 lb/ft

KEY IN UPPER ----- ROLL END



ONSTRUCTION SPECIFICATIONS THAN 1 POUND PER LINEAR FOO' USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART. 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.

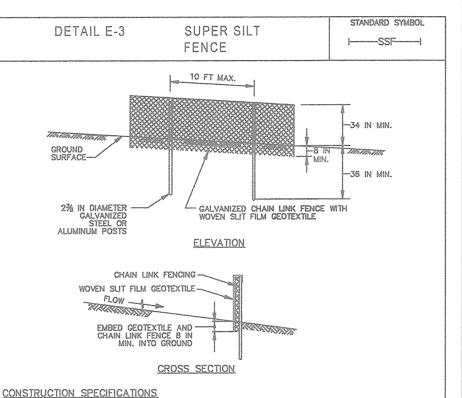
WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.

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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

Signature of Professional Engineer

DETAIL B-1 STABILIZED CONSTRUCTION SCE ENTRANCI MOUNTABLE BERM (6 IN MIN.) EXISTING PAVEMENT -EARTH FILL -PIPE (SEE NOTE 6) **PROFILE** 50 FT MIN. PLAN VIEW CONSTRUCTION SPECIFICATIONS 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 FEE FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS. 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. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS 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. 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 2011



INSTALL 2% 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

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE IPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MIC

SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

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. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

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

BE REMOVED AND PROVIDING SERVICE TO THE EXISTING HOUSE. (1 MONTH) 2011 ROUGH GRADE SITE AND INSTALL SEWER AND WATER LINES PER COUNTY CONTRACT DRAWINGS. INSTALL STORM DRAIN EXCEPT FOR FINAL PIPE FROM STANDARD SYMBOL CLEANOUT 1. INSTALL TEMPORARY PIPES SHOWN ON SEDIMENT TRAP DETAIL DETAIL C-9 DIVERSION FENCE --- DF ----ONE IS FROM I-2 TO CLEANOUT 1 AND THE OTHER IS FROM CLEANOUT 1 TO MAXIMUM DRAINAGE AREA = 2 ACRES BLOCK INLETS I-1, I-3, & I-4 UNTIL SEDIMENT TRAP IS REMOVED. (3 WEEKS) INSTALL EROSION CONTROL MATTING IN SWALES AS SHOWN ON THE PLANS, AND 10 FT MAX. TEMPORARY SEED DISTURBED AREAS AS NECESSARY. (3 DAYS) CONSTRUCT CURB & GUTTER AND DRIVEWAY BASE PAVING. (1 WEEK) AT ANY POINT IN THE SEQUENCE FROM HERE FORWARD, ACCELERATION / DECELERATION LANES AND ASSOCIATED CURB & GUTTER AND SIDEWALK ALONG MEADOWRIDGE ROAD MAY BE CONSTRUCTED. SEE ACCESS PERMIT PLANS FOR ADDITIONAL DETAIL. (3 DAYS) INSTALL PERMANENT SEEDING. (3 DAYS) ONCE INDIVIDUAL LOTS ARE CONSTRUCTED AND ALL FINE GRADING & -CHAIN LINK FENCE COVERED WITH IMPERMEABLE SHEETING REMOVE SEDIMENT TRAP. REMOVE MOUNTABLE BERM. UNBLOCK INLETS. REMOVE TEMPORARY PIPES TO AND FROM CLEANOUT 1 TO THE TRAP, AND UV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES OF FENCE ELEVATION INSTALL PERMANENT PIPE LEAVING CLEANOUT 1. (18 MONTHS) 12. ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS) NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS. SECTION

CONSTRUCTION SPECIFICATIONS USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING). USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT TH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN

FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. . EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM . KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2011

NOTES & DETAILS MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

LOTS 1 THRU 8 AND OPEN SPACE LOTS 9 THRU 11 ZONED R-5C

TAX MAP No. 37 GRID No. 09 PARCEL No. 78 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: DECEMBER, 2018

STANDARD SYMBO

ST-III

EMBED NONWOVEN GEOTEXTILE

MAXIMUM DRAINAGE AREA = 10 ACRES

DETAIL G-1-3 RIPRAP OUTLET

APRON LENGTH 10 FT MIN

EMBANKMEN I MIN. 1 ABOVE TOP OF RIPR

5. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.

RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE

COUNTY INSPECTOR. (2 WEEKS)

INSTALL SEDIMENT TRAP. (2 DAYS)

BEFORE STARTING WORK.

CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.

12. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

a - DEPTH OF OUTLET

b - BOTTOM WIDTH OF OUTLET

CONSTRUCTION SPECIFICATIONS

SEDIMENT TRAP ST-III

ISOMETRIC VIEW

SECTION A-A

SECTION B-B

. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.

. CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.

. USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.

CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE TOP OF RIPRAP OUTLET. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

5. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.

USE CLEAN CLASS 1 RIPRAP PLACED 19 INCHES IN DEPTH FOR THE OUTLET AND APRON. USE OF

CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.

9. STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF

10. REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (25% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE

STABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION.

. WHEN DEWATERING TRAP, PASS THE REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

SEQUENCE OF CONSTRUCTION

NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT

1-800-257-7777. NOTIFY THE HOWARD COUNTY DEPT OF PUBLIC WORKS.

CONSTRUCTION INSPECTION DIVISION AT 410-313-1855 AT LEAST 48 HOURS

INSTALL SILT FENCE, SUPER-SILT FENCE, AND DIVERSION FENCE. INSTALL

ASSOCIATED DIVERSION FENCE TO DIVERT OFF-SITE DRAINAGE THROUGH PIPE

DURING CONSTRUCTION. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR

TREES MAY BE CUT PRIOR TO INSTALLATION OF FENCING AS LONG AS ROOTBALL

DEMOLISH EXISTING STRUCTURE. REMOVE ALL DESIGNATED UTILITIES SHOWN TO

SEDIMENT TRAP. INSTALL MOUNTABLE BERM AT END OF COMMON DRIVEWAY AND

STABILIZATION IS COMPLETE (HOUSES TO BE CONSTRUCTED UNDER FUTURE 5DP)

AND WITH APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MUCK OUT AND

ENGINEER'S CERTIFICATE

"I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND

WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS

CULVERT PIPE, GRADE SWALE TO CULVERT, INSTALL SOD IN SWALE, AND

IS NOT REMOVED PRIOR TO INSTALLATION OF FENCING. (5 DAYS)

OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH

FISHER. COLLINS & CARTER. INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS NIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

CHIEF, BUREAU OF HIGHWAYS ASS

REVISION

DATE

5850 WATERLOO ROAD, SUITE 140 443-367-0422

JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

USE WOOD POSTS 1% X 1% \pm % 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

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS INSPECTION/ENFORCEMENT AU
IN SECTION H-1 MATERIALS. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERWINING OCCURS, REINSTALL FENCE.

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. 38386, EXPIRATION DATE: 01/12/2020.

PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SEDIMENT & EROSION CONTROL

MEADOWRIDGE

SHEET 9 OF 9

F-18-090