ROAD CONSTRUCTION PLANS
WESTMOUNT - PHASE 1
Credited Open Space Lot 1, Lots 3 thru 52, Open Space Lots 53 thru 71, & Non-Buildable Bulk Parcels A and B

GENERAL NOTES

1. Zoning: Site is being developed under the Amended 5th Edition of Subdivision and Land Regulations for R-ED.
2. Previous Department of Planning and Zoning file numbers: F-11-058, ZB-1038M, WP-11-152, WP-15-038, WP-16-081, ECP-14-058, SP-14-008 and the D.R.R.A. is recorded at L. 12122 F. 248.
3. Site Analysis:
   - Total Area of Site: 220.64 Acres±
   - Total Area of Phase 1: 74.04 Acres±
   - (Note: No improvements shown on these plans are within the limits of Non-Buildable Bulk Parcel 'C')
   - Area of 100 Yr. Floodplain: 17.76 Acres±
   - Area of Steep Slopes (outside of floodplain): 0.00 Acres±
   - Area of Proposed Roadway (Public): 7.84 Acres±
   - No. of Non-Buildable Bulk Parcels: 2
   - Area of Non-Buildable Bulk Parcel 'B': 2.12 Acres±
   - Area of Non-Buildable Bulk Parcels 'C': 141.60 Acres±
   - No. of Single Family Detached Lots: 50
   - Area of Single Family Detached Lots: 9.43 Acres±
   - No. of Single Family Attached Lots: 0
   - Area of Single Family Attached Lots: 0.00 Acres±
   - Total Number of Lots: 72
   - No. of Open Space Lots: 22
   - Area of Credited Open Space: 59.86 Acres±
   - Area of Non-Credited Open Space: 0.79 Acres±
4. Total Approximate Limit of Prop. Site Disturbance: 25.65 Acres±
5. Open Space Requirements:
   - (Minimum Open Space Requirement for project in R-ED zoning is 50%)
   - Total Open Space Required: 34.52 Acres±
   - Total Open Space Provided: 54.65 Acres±
   - Recreational Open Space Required (500 s.f. per SFD lot): 0.34 Acres±
   - Recreational Open Space Provided: 0.84 Acres±
6. This project is in conformance with the latest Howard County standards unless waivers have been processed.
7. The Cemetery Inventory Map does not show any cemeteries within the project limits.
8. The Scenic Roads Map does indicate that MD Route 144A (Frederick Road) is a scenic road.
9. The Historic Sites Map does not show any historical sites within the project limits.
10. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Benchmarks 23CA and 16IA were used for this project.
11. Boundary information is from boundary survey by Fisher, Collins & Carter on or about September, 2001.
12. Soils data was taken from the Soil Survey of Howard County, Maryland issued March, 2008.
13. Contours shown were taken from aerial topography prepared by McKenzie-Snyder during December, 2008.
14. Wetland delineation by Ecotone Inc. in a report dated February 18, 2014. The wetland and stream delineation was approved by the Howard County Department of Planning and Zoning on November 4, 2014.
15. The 100-year floodplain limits for the three streams that run through the site were determined in a floodplain study prepared by Getschick, Little and Weber, P.A. as part of the approval of SP-14-008.
16. A Noise Study was prepared by Robert H. Vogel Engineering, Inc. on or about April, 2014 and was approved by Development Engineering Division on November 4, 2014.
17. A Traffic Study was prepared by The Traffic Groups in a report dated April 4, 2014 and was approved by Development Engineering Division on November 4, 2014.
18. A partial Geo-technical Report was prepared by Hills-Carnes in May, 2014 for the stormwater management devices within open space lots as shown on these plans. Additional Geo-technical analysis will be provided for the stormwater management devices that will be located on individual lots.
19. Existing utilities were taken from available Howard County records.
20. The project was brought into the Metropolitan District on December 22, 2014.
21. Water and sewer are public per Contract No. 24-4878-D (Phase 1)
    - 24-4871-D (Phase 2)
    - 24-4878-D (Phase 3)
    - Existing Contract Numbers: Water: 44-3111-D
    - Sewer: 174-S and 44-1511-D
22. The following stream buffers have been provided:
    - Perennial stream "B" buffer
    - Intermittent stream + 50' buffer
    - The stream buffers are measured from the stream banks and not the centerline.
23. Stormwater management for this site is provided in accordance with Chapter 5 of the MDE Stormwater Management Design Manual, Volumes I and 2. Throughout the site, Micro-Bioretention, Dry Wells (MB), and Rooftop disconnect (N) are utilized. Devices on individual lots will be owned and maintained by the homeowner. Devices within county right of way that treat only runoff from a county road will be owned by Howard County and jointly maintained with the HOA. Howard County will only maintain the inlet and associated piping, the HOA will be required to maintain the plants, soil, mulch, etc.. The devices on Open Space Lots 64 and 67 will be owned and maintained by the HOA. The drainage swale within the private easement along the rear property line of Lots 41 through 43, 44, and 45 will be the responsibility of the HOA. All of the other devices within the Open Space Lots will be owned by Howard County and maintained jointly with the HOA.
24. No grading, removal of vegetative cover or trees, or placement of new structures is permitted within limits of wetlands, streams or their required buffers, and 100 year floodplain areas, unless permitted under an approved waiver petition or determined to be essential or necessary by DPZ.
25. Open space lot 66 will contain active recreational areas in accordance with Section 16.121(a)(4) of the Subdivision Regulations (5th Edition).
26. The Forest Conservation requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual will be satisfied with an obligation for this subdivision as described in "Forest Conservation Obligation" shown on this sheet as well as Sheet 50.
27. Minimum building setback restrictions from public roads and property lines will be provided in accordance with the Zoning Regulations adopted July, 2006.
28. All buffering and other landscaping requirements/features will be provided at the Site Development Plan stage and/or the Final Plan Stage and will be provided in accordance with the Subdivision Regulations (Amended 5th Edition).
29. A pre-submission community meeting was held for this project on 10/01/2015 in compliance with Section 16.128 of the Regulations.
30. The project is not subject to the provisions of Moderate Income Housing Units (MIHU) based on the Developer's Rights and Responsibilities Agreement (DRRA) recorded as L. 12722 F. 248 on 9/17/2012.
31. This development shall be in accordance with all requirements established as part of the "Developer's Rights and Responsibilities Agreement" (DRRA) between Howard County and the Carrolls. Per the DRRA, the developer and DPW have agreed that a per lot fee in the amount of $3,000 will be paid at building permit stage for sewage nutrient reduction.
32. To eliminate any reduced sight distance in the micro-bioretention devices within the islands along Westmount Parkway, grass will be used inside the devices instead of shrubs, and with trees that are small in diameter that will be maintained at a trimmed elevation where there will be no conflict with sight distance.
33. Howard County Department of Planning and Zoning has determined, in accordance with Section 16.116(c) of the subdivision and land regulations that the environmental impacts shown hereon are necessary or essential disturbances. See the approval and conditions of WP-15-038, this sheet.
34. See sheet 38 for stormwater management practice chart, narrative, and performance standards. See sheet 49 for the operations and maintenance responsibilities for the various SHM devices.
35. Traffic Control Devices:
    - 35.1. The R1-1 "STOP" sign and the street name sign (SNS) assembly for this development must be installed before the base paving is completed.
    - 35.2. The traffic control device locations shown on the plans are approximate and must be field approved by Howard County Traffic Division (410-313-2450) prior to the installation of any of the traffic control devices.
    - 35.3. All traffic devices and their locations shall be in accordance with the 2011 edition of the "Maryland Manual on Uniform Traffic Control Devices" (MdMUTCD).
    - 35.4. 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 the ground level. A galvanized steel pole cap shall be mounted on top of each post.
36. Street light placement and the type of fixtures and poles shall be in accordance with the Howard County Design Manual, Volume III (2006), Section 5.5.A. A minimum of 20' shall be maintained between any street light and any tree.
37. Three private range of address sign assemblies shall be fabricated and installed by Howard County Bureau of Highways at the developer's/owners expense for the use-in-common driveways located at the end of Burton Drive and along Harburton Court. Contact Howard County Traffic Division at 410-313-5752 for details and cost estimates.
38. The plan has been prepared in accordance with Section 16.124 of the Howard County Code and the Landscape Manual with **116** Shade Trees, 25 Evergreen Trees, and 735' of Vinyl Split rail Fence. A Landscape Surety in the amount of $18,900.00 will be posted with the Developer's Agreement. See sheet **5** for surety calculation.
39. With the agreement to keep disturbance to a minimum, the Howard County Department of Land Development and Development Engineering Division have deemed the construction of the MBR-125 outfall and the sewer outfall into the stream buffer behind OS Lot 68 as a necessary disturbance.

OVERALL DENSITY TABULATION

AREA			
GROSS		NET	
220.64 AC.		182.06 AC.	
UNITS			
REQUIRED		PROVIDED	
NO. LOTS PERMITTED PER ZONING REGULATIONS	364	PHASE 1	50
NO. LOTS PERMITTED PER D.R.R.A.	325	TOTAL	50
OPEN SPACE			
REQUIRED		PROVIDED	
		OS	ACTIVE OS
OPEN SPACE	110.32 AC.	PHASE 1	54.65 / 0.65
ACTIVE OPEN SPACE	2.24 AC.	TOTAL	54.65 / 0.65

THE SUBDIVISION SHOWN WAS INCLUDED ON THE WATER + SEWER MASTER PLAN ON 05/02/2010. (HOWARD COUNTY COUNCIL RESOLUTION 69).

LOT INFORMATION

LOT TYPE	LOTS	MINIMUM LOT SIZE	MINIMUM LOT WIDTH AT FRONT BRL
SINGLE FAMILY DETACHED	3 - 52	6,000 SQUARE FEET	50'

NON-BUILDABLE TRACKING CHART

PARCEL	TOTAL NON-BUILDING PARCEL AREA	FILE UNDER WHICH PARCEL WAS CREATED	FILE UNDER WHICH PARCEL WAS CONVERTED	AREA CONVERTED	CONVERTED TO:	AREA REMAINING
A	184.6420	F-11-058	F-15-087	184.6420	SF LOTS, ROAD R/W, OPEN SPACE LOTS, AND NON-BUILDABLE PARCELS	0.0000
B	2.1236	F-15-087				2.1236
C	141.6060	F-15-087				141.6060
D						0.0000
E						0.0000
F						0.0000
					TOTAL	143.7296

SITE ANALYSIS CHART

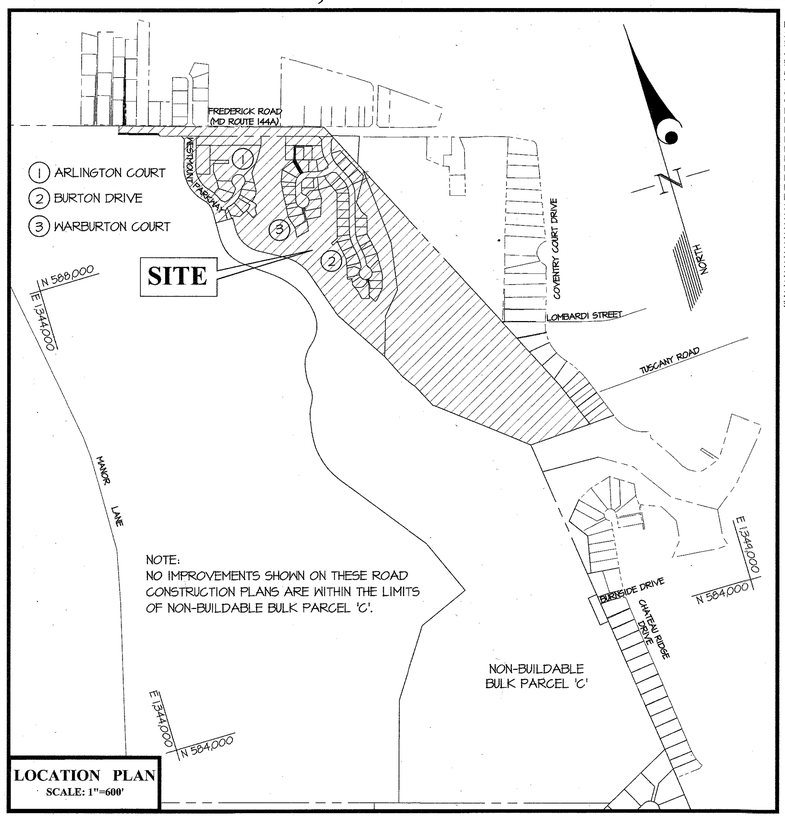
PHASE NO.	FILE REF. NO.	GROSS AREA (SITE)	AREA OUTSIDE OF THIS PHASE (NON-BUILDABLE)		AREA BEING DEVELOPED THIS PHASE		FLOODPLAIN AREA (THIS PHASE)	STEEP SLOPE AREA (THIS PHASE)	NET AREA (THIS PHASE)	NON-BUILDABLE (THIS PHASE)		S.F.D. AC. (%)		ROAD R/W		CREDITED OPEN SPACE		NON-CREDITED OPEN SPACE	
			AC.	(%)	AC.	(%)	AC.	AC.	AC.	AC.	(%)	AC.	(%)	AC.	(%)	AC.	(%)	AC.	(%)
1	F 15-087	220.6430	141.6060	(64.2)	79.0370	(35.8)	17.7600	0.0000	61.2770	2.1236	(2.7)	9.4246	(11.9)	7.8587	(9.9)	58.8545	(74.5)	0.7906	(1.0)

SETBACK REQUIREMENTS

SETBACK TYPE	SETBACK	SETBACK TYPE	SETBACK
PROJECT BOUNDARY	50'	SIDE (PRINCIPAL STRUCTURE)	7.5'
EXTERNAL PUBLIC R/W	75'	REAR (PRINCIPAL STRUCTURE)	25'
FRONT/SIDE ON INTERNAL PUBLIC R/W	20'		
FRONT (PRINCIPAL STRUCTURE)	20'		

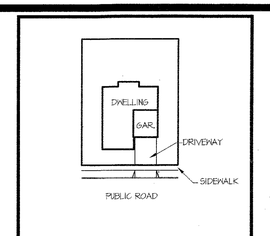
ACTIVE OPEN SPACE

OPEN SPACE LOT(S)	OPEN SPACE LOT AREA	TOTAL
LOT 66	0.6511	0.65 AC.

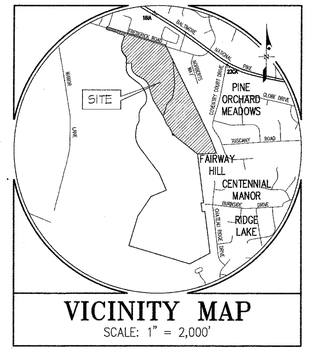


NOTE:
NO IMPROVEMENTS SHOWN ON THESE ROAD CONSTRUCTION PLANS ARE WITHIN THE LIMITS OF NON-BUILDABLE BULK PARCEL 'C'.

LOCATION PLAN
SCALE: 1"=600'



TYPICAL FOOTPRINT
SCALE: 1"=60'



VICINITY MAP
SCALE: 1" = 2,000'

BENCHMARKS

16IA:	NORTHING:	584,509.413	23CA:	NORTHING:	588,055.663
	EASTING:	1346,343.626		EASTING:	1348,388.546
	ELEVATION:	462.92		ELEVATION:	482.20

ADC MAP COORDINATES: MAP 19 GRID E6 & E7 F6 & F7

SHEET INDEX

1 - COVER SHEET
2 - ROAD CONSTRUCTION PLAN & PROFILES - BURTON DRIVE
3 - ROAD CONSTRUCTION PLAN & PROFILES - HARBURTON COURT
4 - ROAD CONSTRUCTION PLAN & PROFILES - ARLINGTON COURT
5 - ROAD CONSTRUCTION PLAN & PROFILES - WESTMOUNT PARKWAY
6 - ROAD DETAILS
7 - ADA COMPLIANT SIDEWALK RAMPS
8 - SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN
9 - SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN
10 - SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN
11 - SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN
12 - GRADING PLAN
13 - GRADING PLAN
14 - GRADING PLAN
15 - STORM DRAIN INFORMATION PLAN
16 - STORM DRAIN INFORMATION PLAN
17 - STORM DRAIN INFORMATION PLAN
18 - STORM DRAIN DRAINAGE AREA MAP
19 - STORM DRAIN DRAINAGE AREA MAP
20 - STORM DRAIN DRAINAGE AREA MAP
21 - STORM DRAIN PROFILES
22 - STORM DRAIN PROFILES
23 - STORM DRAIN PROFILES
24 - STORM DRAIN PROFILES
25 - SEDIMENT CONTROL PLAN - INTERIM
26 - SEDIMENT CONTROL PLAN - INTERIM
27 - SEDIMENT CONTROL PLAN - INTERIM
28 - SEDIMENT TRAP BACKFILL PLAN
29 - TEMPORARY SHM DRAINAGE AREA MAP (PRE-DEVELOPMENT)
30 - TEMPORARY SHM DRAINAGE AREA MAP (POST-DEVELOPMENT)
31 - EARTH DIKE TREATMENT PLAN - EXISTING CONDITIONS
32 - EARTH DIKE TREATMENT PLAN - ULTIMATE CONDITIONS
33 - SEDIMENT CONTROL NOTES and DETAILS
34 - SEDIMENT CONTROL NOTES and DETAILS
35 - STORMWATER MANAGEMENT DRAINAGE AREA MAP
36 - STORMWATER MANAGEMENT DRAINAGE AREA MAP
37 - STORMWATER MANAGEMENT DRAINAGE AREA MAP
38 - SWM NARRATIVE and SUMMARIES
39 - STORMWATER MANAGEMENT DETAILS
40 - STORMWATER MANAGEMENT DETAILS
41 - STORMWATER MANAGEMENT DETAILS
42 - STORMWATER MANAGEMENT DETAILS
43 - SWM NOTES and DETAILS
44 - OVERALL FOREST CONSERVATION PLAN
45 - FOREST CONSERVATION PLAN
46 - FOREST CONSERVATION PLAN
47 - FOREST CONSERVATION PLAN
48 - FOREST CONSERVATION PLAN
49 - FOREST CONSERVATION PLAN
50 - FOREST CONSERVATION NOTES and DETAILS
51 - ROAD CONSTRUCTION PLAN - FREDERICK ROAD
52 - ROAD CONSTRUCTION PLAN - FREDERICK ROAD
53 - STORM DRAIN PROFILES - FREDERICK ROAD
54 - ROAD DETAILS - FREDERICK ROAD
55 - GRADING PLAN - FREDERICK ROAD
56 - MILLING AND PAVING PLAN - FREDERICK ROAD
57 - PAVEMENT MARKING & SIGNING PLAN - FREDERICK ROAD
58 - MAINTENANCE OF TRAFFIC PLAN - TRUCK ENTRANCE TO SITE
59 - MAINTENANCE OF TRAFFIC PLAN - FREDERICK ROAD
60 - HAZARD IDENTIFICATION BEACON PLAN

WP 16-081
ON JANUARY 6, 2016 WP 16-081 WAS GRANTED FOR THE FOLLOWING:
- A WAIVER FROM SECTION 16.1202(A) REQUIRING THE SUBMISSION OF A FOREST CONSERVATION PLAN FOR THE ENTIRE GROSS AREA IS PART OF THE SUBDIVISION PLAN PROCESS.
- A WAIVER FROM SECTION 16.1471(C) REQUIRING A PLAT TO BE SUBMITTED AT A SCALE OF 1 INCH EQUALS 100 FEET, 1 INCH EQUALS 50 FEET OR 1 INCH EQUALS 30 FEET.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
1. THE APPLICANT MUST CONTINUE PROCESSING THE FINAL SUBDIVISION PLANS FOR ALL PHASES AND MEET ALL REQUIRED PROCESSING DEADLINE DATES IN ACCORDANCE WITH THE APPROVED APFO PHASING SCHEDULE FOR WESTMOUNT.
2. THIS APPROVAL OF THE FOREST CONSERVATION OBLIGATION REQUIREMENT IS ONLY AN ALLOWANCE TO TEMPORARILY DEFER THE RECORDATION OF FOREST CONSERVATION EASEMENTS AS A PHASED PROJECT. THE TOTAL FOREST CONSERVATION OBLIGATION REQUIREMENT FOR THE ENTIRE PROJECT SHALL BE ESTABLISHED AND RECORDED WITH THE LAST PHASE. THE FOREST CONSERVATION PLAN SUBMITTED WITH EACH OF THE 4 PHASES OF THIS PROJECT SHALL ESTABLISH AND RECORD THE MINIMUM FOREST CONSERVATION EASEMENT AREA FOR EACH PHASE.
3. COMPLIANCE WITH ALL SUBDIVISION REVIEW COMMITTEE COMMENTS FOR F-15-087, F-16-046 AND F-16-061.
4. THE WAIVER PETITION NUMBER (WP-16-081) AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO ALL FUTURE SUBDIVISION PLATS AND SITE DEVELOPMENT PLANS.

WP 16-143
ON JUNE 20, 2016 WP 16-143 WAS GRANTED FOR THE FOLLOWING:
- A WAIVER FROM SECTION 16.1144(A)(1) REQUIRING THE SUBMISSION OF ADDITIONAL INFORMATION WITHIN 45 DAYS OF REQUEST.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
1. COMPLIANCE WITH ALL SUBDIVISION REVIEW COMMITTEE COMMENTS FOR F-15-087, F-16-046, AND F-16-061..
2. THE REVISED PLAN FOR F-15-087 MUST BE RE-SUBMITTED ON OR BEFORE AUGUST 20, 2016.
3. THE WAIVER PETITION NUMBER (WP-16-143) AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO ALL FUTURE SUBDIVISION PLATS AND SITE DEVELOPMENT PLANS.

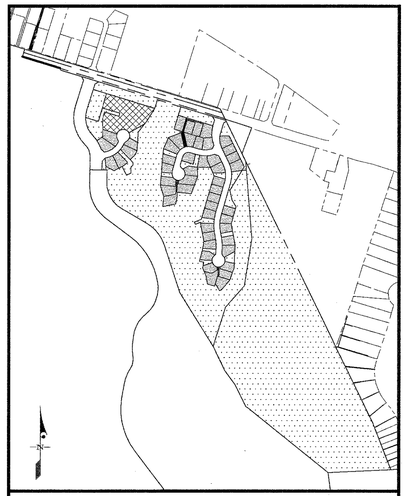
FOREST CONSERVATION OBLIGATION

THE FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT AS CALCULATED IN THE FOREST CONSERVATION WORKSHEET IS 5.151 ACRES OF FOREST RETENTION AND 6.961 ACRES OF REFORESTATION PLANTING FOR TOTAL OF 12.101 ACRES OF FOREST CONSERVATION EASEMENT TO BE RECORDED.

PROPOSED METHOD OF SATISFYING THE ABOVE FOREST CONSERVATION ON-SITE:
RECORD A (EIGHT) FOREST CONSERVATION EASEMENTS TOTALING 28.473 ACRES OF WHICH 10.161 ACRES ARE CREDITED AND THEY CONTAIN 6.721 ACRES OF CREDITED REFORESTATION PLANTINGS ON THE N.T.A. AND 3.44 ACRES OF REFORESTATION WITHIN THE FLOODPLAIN. THERE ARE 5.151 ACRES OF CREDITED RETENTION ON THE N.T.A. AND 11.161 ACRES OF NON-CREDITED RETENTION WITHIN THE FLOODPLAIN.

THE FOREST CONSERVATION SURETY POSTED WITH THE DEVELOPER AGREEMENT IS $0.50/SF OF THE REFORESTATION PLANTING. THE SURETY FOR THE ON-SITE REFORESTATION WOULD BE:
(6.96 AC) (43,560 SF/AC.) ($0.50/SF) = $151,588.80 or $151,589.00 (rounded) [MINIMUM REQUIRED]
(3.20 AC) (43,560 SF/AC.) ($0.50/SF) = $69,696.00 or $69,696.00 (rounded) [PLANTING IN ADVANCE FOR FUTURE PHASE]

TOTAL SURETY:
ON-SITE REFORESTATION, PLANTING= $221,285.00



LAND USE MAP
SCALE: 1" = 600'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE (DOES NOT MEET CRITERIA FOR A FOREST)
- LIMIT OF EXISTING FOREST
- LIMIT OF ULTIMATE FOREST
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATERLINE
- PROPOSED WATERLINE
- PROPOSED FIRE HYDRANT
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EXISTING TREE
- PROPOSED STREET TREE
- EXISTING POST
- EXISTING POLE
- PROPOSED UTILITY POLE
- EXISTING FLAG
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING SIGN TO BE RELOCATED
- CONCRETE SIDEWALK
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER
- 100 YEAR FLOODPLAIN
- LIMIT OF WETLAND
- WETLAND AREA
- STREAM BANK BUFFER
- FLOODPLAIN CROSS SECTION
- WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- STREAM BANK
- CENTERLINE OF STREAM
- PROPOSED BUILDING RESTRICTION LINE
- DRAINAGE DIVIDE
- SOIL TYPE BOUNDARY
- SOIL TYPE / SOIL GROUP
- SLOPES 15% TO 25%
- SLOPES GREATER THAN 25%
- EARTH DIKE / CLEAN WATER DIVERSION
- SILT FENCE / SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- LIMIT OF SUBMISSION
- SOIL BORING LOCATION
- PROPERTY CORNER IDENTIFICATION
- PROPOSED HIB SIGNAL
- RAIN BARREL (M-1)
- DRY WELL (M-5)
- ROOFTOP DISCONNECT (N-1)
- NONROOFTOP DISCONNECT (N-2)
- SHEET FLOW TO BUFFER (N-3)
- MICRO BIO-RETENTION FACILITY (M-6)
- SUBMERGED GRAVEL WETLAND (M-2)
- PROPOSED (LED-150) LIGHT
- PROPOSED (LED-100) LIGHT
- PROPOSED SIGN
- OPEN SPACE SIGN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

WP 15-038
ON OCTOBER 30, 2014 WP 15-038 WAS GRANTED FOR THE FOLLOWING:
- TO ALLOW FOR THE REMOVAL OF VEGETATIVE COVER AND TREES FROM ENVIRONMENTAL AREAS (A WAIVER FROM SECTION 16.116(C) AND TO ALLOW FOR THE REMOVAL OF SPECIMEN TREES (A WAIVER FROM SECTION 16.1205(A)(1).
- A WAIVER FROM SECTION 16.121(A) WHICH REQUIRES 40' OF FRONTAGE ON A PUBLIC ROAD FOR AT LEAST ONE ACCESS TO AN OPEN SPACE LOT, WITH 20' BEING PERMISSIBLE FOR ANY ADDITIONAL ACCESS.
- A WAIVER FROM SECTION 16.114(A)(5) WHICH REQUIRES PUBLIC RIGHT-OF-WAY LINES ON CORNER LOTS AT INTERSECTIONS SHALL BE TRUNCATED BY STRAIGHT LINES JOINING POINTS 25' BACK FROM THE THEORETICAL PROPERTY LINE INTERSECTION IN EACH QUADRANT.

THE APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
1. COMPLIANCE WITH ALL SUBDIVISION REVIEW COMMITTEE COMMENTS FOR SP-14-008.
2. THE WAIVER PETITION NUMBER (WP-15-038) AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO SP-14-008 AND ALL FUTURE SUBDIVISION PLANS.
3. AS MITIGATION FOR THE REQUESTED REMOVAL OF FIFTY-SEVEN (57) SPECIMEN TREES LOCATED WITHIN THE SITE, THE DEVELOPER IS REQUIRED TO USE 2" CALIPER PLANT MATERIALS FOR THE REQUIRED PLANTINGS WITHIN THE PROPOSED REFORESTATION PLANTING AREAS AT A MINIMUM PLANTED ADJACENT TO ALL RESIDENTIAL LOTS THROUGHOUT THE SUBDIVISION. A FINAL DETERMINATION OF THE PLANT MATERIAL SIZE AND TOTAL NUMBER OF PLANTS WILL BE REVIEWED AND FINALIZED AT THE FINAL PLAN. IF DESIGN CHANGES ARE MADE AT FINAL PLAN STAGE AND THE REFORESTATION PLANTING AREAS ARE REDUCED OR ELIMINATED, THEN THE DEVELOPER SHALL PLANT AN EQUIVALENT NUMBER OF SHADE TREES WITHIN THE RESIDENTIAL AND OPEN SPACE LOTS AND ADJACENT TO PRIORITY RETENTION AREAS. THOSE FIFTY-SEVEN (57) SHADE TREES (OR EQUIVALENT) WILL BE IN ADDITION TO AND AN ENHANCEMENT OF ANY REQUIRED PERIMETER LANDSCAPING AND SHALL BE BONDED.
4. A WAIVER TO SECTION 16.116(A)(2) IS NOT REQUIRED FOR THE THREE (3) STREAM CROSSINGS, THE PUBLIC UTILITY LINE EXTENSIONS AND FOR THE PATHWAY THROUGH OPEN SPACE WHICH WERE DETERMINED ESSENTIAL FOR ESSENTIAL ROAD CROSSINGS, UTILITY LINE CONNECTIONS AND PEDESTRIAN CONNECTIONS IN ACCORDANCE WITH SECTION 16.116(C) OF THE REGULATIONS.
5. THE REDUCTION OF THE MINIMUM OPEN SPACE FRONTAGE REQUIREMENTS IS ONLY FOR THOSE OPEN SPACE LOTS DEPICTED ON THE SUBMITTED WAIVER EXHIBIT WHICH PROVIDES ACCESS TO STORMWATER MANAGEMENT FACILITIES.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS- SD (PH1)\13013_01-CS.dwg | DES. DEV | DRN. DEV | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018
7/14/16

COVER SHEET

WESTMOUNT - PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	1 OF 60

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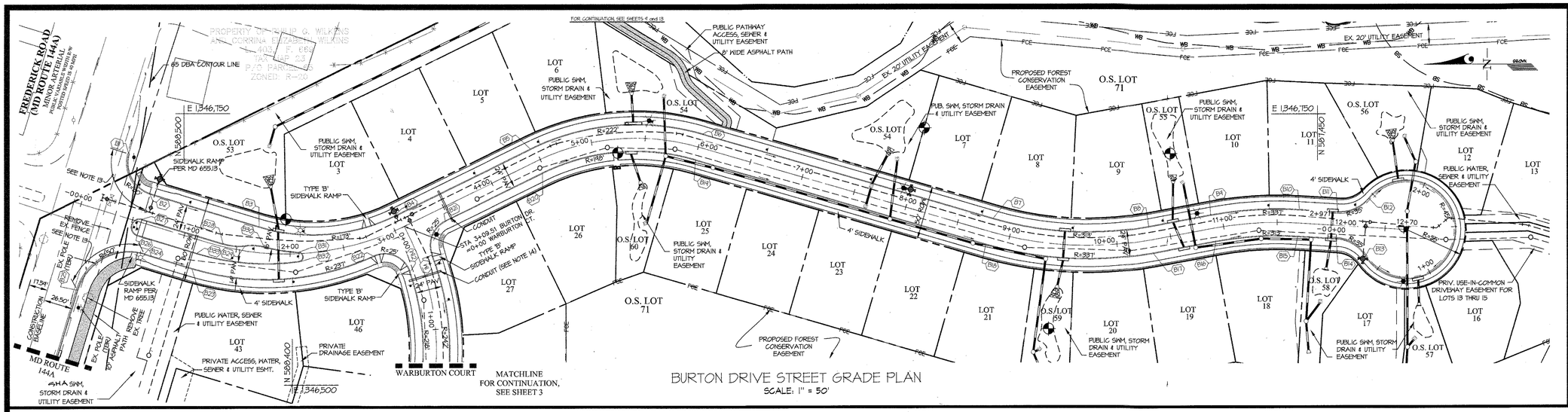
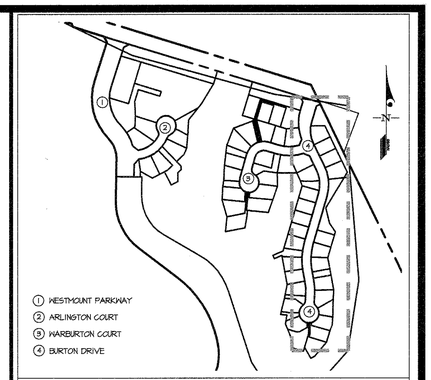
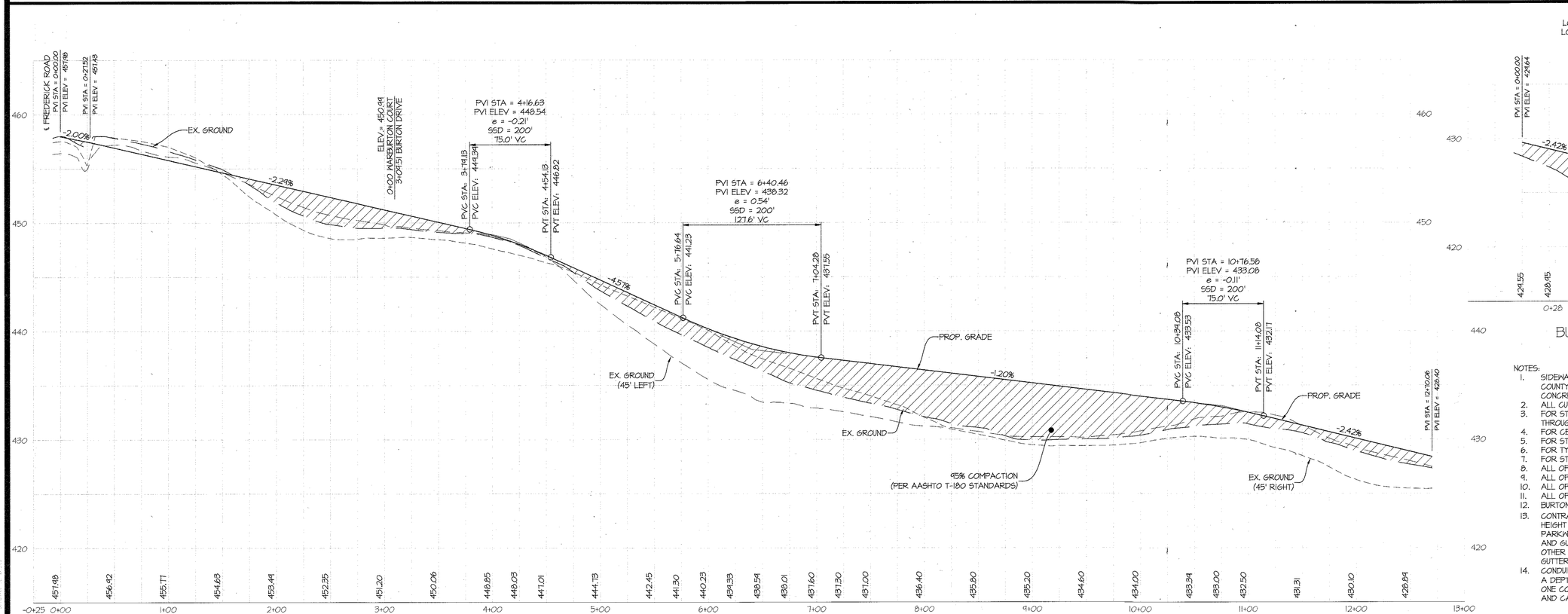
SHA TRACKING NO. 14APHO018XX F 15-087



BURTON DRIVE STREET GRADE PLAN

SCALE: 1" = 50'

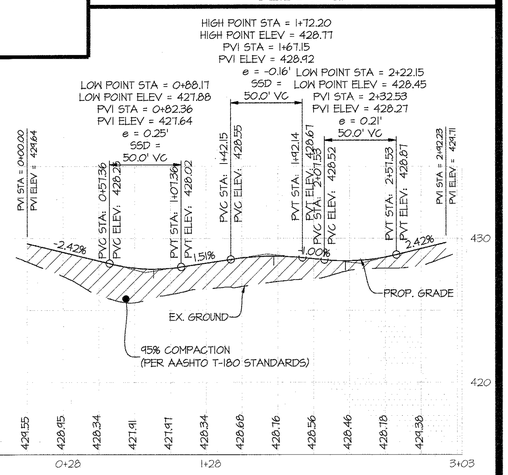




BURTON DRIVE STREET GRADE PROFILE

SCALE: HOR. 1" = 50'
VER. 1" = 5'

(50' R/W, PUBLIC ACCESS STREET)
(24' PAVING)



BURTON DRIVE CUL-DE-SAC PROFILE

SCALE: HOR. 1" = 50'
VER. 1" = 5'

NOTES:

1. SIDEWALK WITHIN SHA R/W IS 5' WIDE. ALL SIDEWALKS ARE 4' WIDE WITHIN HOWARD COUNTY ROAD R/W UNLESS OTHERWISE NOTED. SIDEWALKS SHALL BE REINFORCED CONCRETE WITHIN THE LIMITS OF BIO ACCESS POINTS, SEE SHEETS 12-14.
2. ALL CURB RADII ARE 25' UNLESS OTHERWISE NOTED.
3. FOR STREET TREE, LANDSCAPING, AND BUFFERING REQUIREMENTS, SEE SHEETS 8 THROUGH 11.
4. FOR CENTERLINE CURVE DATA, SEE SHEET 6.
5. FOR STREET LIGHT LOCATIONS, SEE SHEET 8.
6. FOR TYPICAL SECTIONS, SECTION DIMENSIONS AND ROAD DETAILS, SEE SHEET 6.
7. FOR STORM DRAIN SIZING INFORMATION, SEE SHEETS 15-17.
8. ALL OF THE SEWER SHOWN IS 8" UNLESS OTHERWISE NOTED.
9. ALL OF THE SHC'S SERVING NUMBERED LOTS ARE 4".
10. ALL OF THE WATER SHOWN IS 8" UNLESS OTHERWISE NOTED.
11. ALL OF THE WHC'S SERVING NUMBERED LOTS ARE 1-1/2".
12. BURTON DRIVE IS A PUBLIC ACCESS STREET WITH A 50' R/W AND 24' PAVING WIDTH.
13. CONTRACTOR TO TRANSITION FROM 8" CURB HEIGHT WITHIN SHA R/W TO 7⅛" CURB HEIGHT WITHIN COUNTY R/W. UNLESS OTHERWISE NOTED, CURB WITHIN WESTMOUNT PARKWAY AND THE ISLAND IN BURTON AVENUE IS TO BE REVERSE COMBINATION CURB AND GUTTER. ISLANDS WITHIN WESTMOUNT PARKWAY WILL HAVE FLUSH CURB. ALL OTHER CURB WITHIN COUNTY RIGHT-OF-WAY IS STANDARD COMBINATION CURB AND GUTTER. SEE SHEET 6 FOR CURB DETAILS.
14. CONDUIT CROSSINGS SHOWN SHALL BE (4) 4" SCHEDULE 80 PVC, INSTALLED FLAT AT A DEPTH OF 36" WITH MARKERS ON BOTH SIDES AND WITH PULL STRINGS INSTALLED. ONE CONDUIT IS TO BE USED FOR EACH OF THE FOLLOWING: ELECTRIC, VERIZON, GAS, AND CABLE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

PROPOSED CENTERLINE (PGL)
EXISTING GRADE (PGL)
EX. B.R.L. LEFT
EX. B.R.L. RIGHT

NOTE:
ROAD CLASSIFICATION: ACCESS STREET
DESIGN SPEED: 30 MPH
POSTED SPEED: 25 MPH
FOR TYPICAL ROAD SECTIONS, SEE SHEET 6.

* INDICATES THAT STATION IS BASED ON CUL-DE-SAC ALIGNMENT, WHICH IS AT THE GUTTER PAN, 1' FROM THE FACE OF CURB.

TOP OF CURB ELEVATION TABLE FOR BURTON DRIVE

PT. NO	STATION	OFFSET	ELEV.	AS BUILT
(B1)	0+29.80	57.11' LT	456.12	
(B2)	0+58.15	21.05' LT	456.09	
(B3)	1+68.41	23.14 LT	454.10	
(B4)	3+05.82	11.47' LT	451.29	
(B5)	4+45.45	12.00' LT	447.41	
(B6)	6+00.81	12.00' LT	440.42	
(B7)	8+80.63	12.00' LT	435.65	
(B8)	10+31.78	12.00' LT	433.84	
(B9)	10+90.20	12.00' LT	432.93	
(B10)	11+69.62	12.00' LT	431.06	
(B11)	2+84.09*	1.00' RT	430.19	
(B12)	2+55.15*	1.00' RT	429.37	
(B13)	0+33.45*	1.00' RT	429.37	
(B14)	0+00.00*	1.00' RT	430.19	
(B15)	11+69.62	12.00' RT	431.06	
(B16)	10+90.20	12.00' RT	432.93	
(B17)	10+31.78	12.00' RT	433.84	
(B18)	8+80.63	12.00' RT	435.65	

PT. NO	STATION	OFFSET	ELEV.	AS BUILT
(B19)	6+00.81	12.00' RT	440.42	
(B20)	4+45.46	12.00' RT	447.41	
(B21)	3+45.56	12.00' RT	450.36	
(B22)	2+73.81	14.62' RT	451.94	
(B23)	1+15.98	27.00' RT	455.18	
(B24)	0+69.53	27.00' RT	456.51	
(B25)	0+29.53	16.90' RT	456.51	
(B26)	0+58.11	13.00' RT	456.61	
(B27)	0+58.11	3.00 LT	456.82	

PT. NO	STATION	OFFSET	ELEV.	AS BUILT
(B28)	1+36.68	2.54' LT	455.45	
(B29)	1+51.35	4.76' LT	454.41	
(B30)	1+75.63	5.74' LT	454.47	
(B31)	2+01.81	1.23' LT	453.86	
(B32)	2+01.92	7.72' RT	453.68	
(B33)	1+15.98	13.00' RT	455.61	
(PE)	0+33.64	12.00' LT	450.23	
(N2)	0+41.23	12.00' RT	450.02	

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_02-05-ROAD CONST PLAN & PROF.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018

7/14/16

ROAD CONSTRUCTION PLAN & PROFILES - BURTON DRIVE

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	2 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

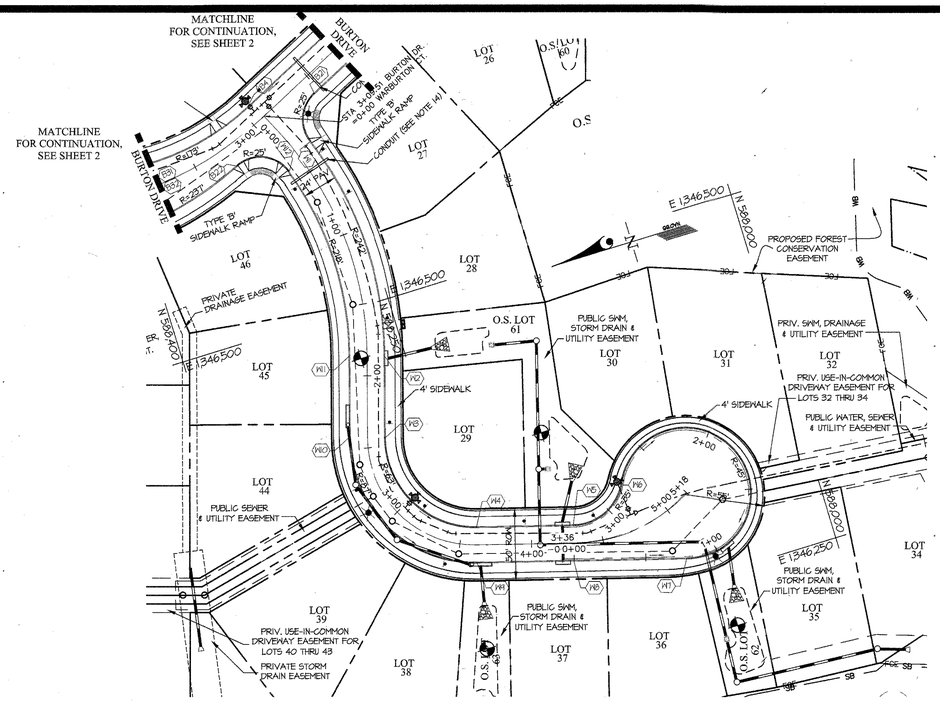
NOTES:

1. ALL SIDEWALKS ARE 4' WIDE WITHIN HOWARD COUNTY ROAD R/M UNLESS OTHERWISE NOTED. SIDEWALKS SHALL BE REINFORCED CONCRETE WITHIN THE LIMITS OF BIO ACCESS POINTS, SEE SHEETS 12-14.
2. ALL CURB RADII ARE 25' UNLESS OTHERWISE NOTED.
3. FOR STREET TREE, LANDSCAPING, AND BUFFERING REQUIREMENTS, SEE SHEETS 8 THROUGH 11.
4. FOR CENTERLINE CURVE DATA, SEE SHEET 6.
5. FOR STREET LIGHT LOCATIONS, SEE SHEET 8.
6. FOR TYPICAL SECTIONS, SECTION DIMENSIONS AND ROAD DETAILS, SEE SHEET 6.
7. FOR STORM DRAIN SIZING INFORMATION, SEE SHEETS 15-17.
8. ALL OF THE SEWER SHOWN IS 8" UNLESS OTHERWISE NOTED.
9. ALL OF THE SHC's SERVING NUMBERED LOTS ARE 4".
10. ALL OF THE WATER SHOWN IS 8" UNLESS OTHERWISE NOTED.
11. ALL OF THE WHC's SERVING NUMBERED LOTS ARE 1-1/2".
12. WARBURTON COURT IS A PUBLIC ACCESS STREET WITH A 50' R/M AND 24' PAVING WIDTH.
13. UNLESS OTHERWISE NOTED, CURB WITHIN WESTMOUNT PARKWAY AND THE ISLAND IN BURTON AVENUE IS TO BE REVERSE COMBINATION CURB AND GUTTER. ISLANDS WITHIN WESTMOUNT PARKWAY WILL HAVE FLUSH CURB. ALL OTHER CURB WITHIN COUNTY RIGHT-OF-WAY IS STANDARD COMBINATION CURB AND GUTTER. SEE SHEET 6 FOR CURB DETAILS.
14. CONDUIT CROSSING FOR STREET LIGHTS SHALL BE (4) 4" SCHEDULE 80 PVC, INSTALLED FLAT AT A DEPTH OF 36" WITH MARKERS ON BOTH SIDES AND WITH PULL STRINGS INSTALLED. ONE CONDUIT IS TO BE USED FOR EACH OF THE FOLLOWING: ELECTRIC, VERIZON, GAS, AND CABLE.

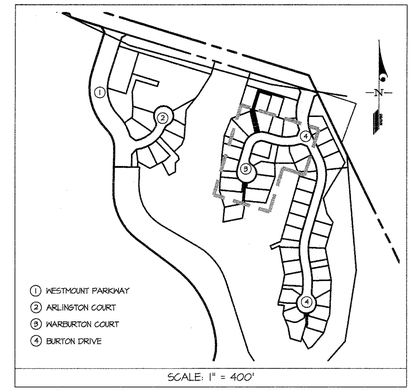
TOP OF CURB ELEVATION TABLE FOR WARBURTON COURT

PT. NO	STATION	OFFSET	ELEV.	AS-BUILT
(B4)	3+05.82	11.93' LT	451.29	
(B2)	3+45.58	12.00' RT	450.38	
(B2.2)	2+73.81	14.62' RT	451.94	
(W1)	0+33.94	12.00' LT	450.23	
(W2)	1+86.71	12.00' LT	445.86	
(W3)	2+42.75	12.00' LT	444.34	
(W4)	3+61.75	12.00' LT	442.47	
(W5)	3+28.40*	1.00' RT.	440.97	
(W6)	2+78.18*	1.00' RT.	439.76	
(W7)	0+78.40*	1.00' RT.	438.44	
(W8)	0+00.00*	1.00' RT.	440.97	
(W9)	3+61.75	12.00' RT	442.47	
(W10)	2+42.75	12.00' RT	444.34	
(W11)	1+86.71	12.00' RT	445.86	
(W12)	0+41.23	12.00' RT	450.01	

* INDICATES THAT STATION IS BASED ON CUL-DE-SAC ALIGNMENT, WHICH IS AT THE GUTTER PAN, 1' FROM THE FACE OF CURB.



WARBURTON COURT STREET GRADE PLAN
SCALE: 1" = 50'

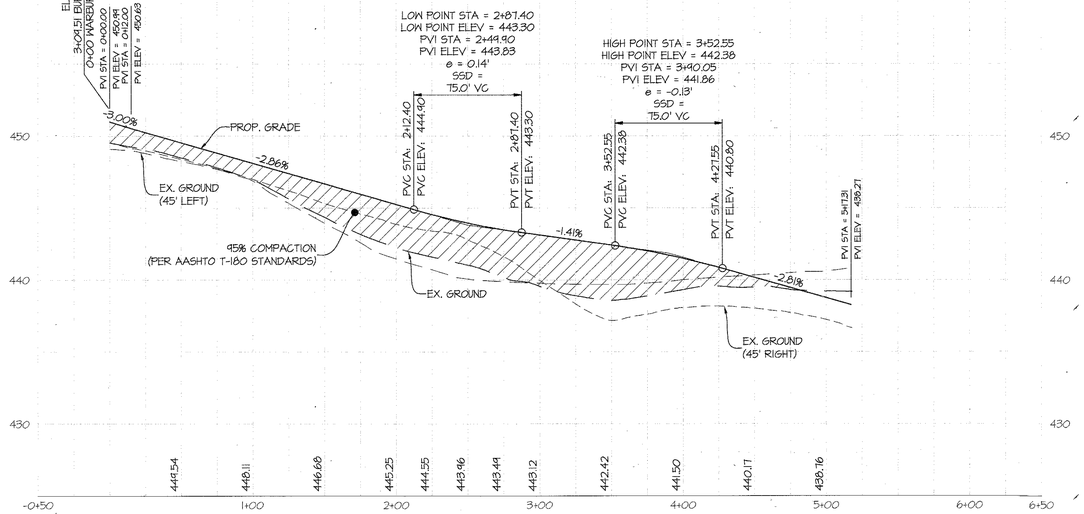


SCALE: 1" = 400'

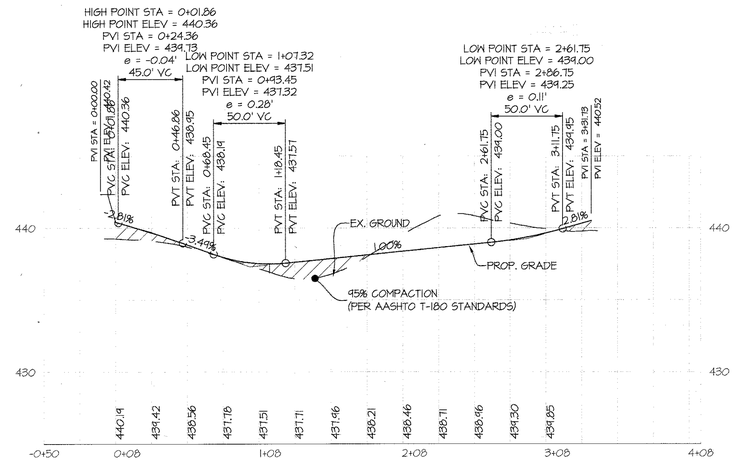
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



WARBURTON COURT STREET GRADE PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'
(50' R/M, PUBLIC ACCESS STREET)
(24' PAVING)



WARBURTON COURT CUL-DE-SAC PROFILE
SCALE: HOR. 1" = 50'
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PROPOSED CENTERLINE (PGL)
EXISTING GRADE (PGL)
EX. B.R.L. LEFT
EX. B.R.L. RIGHT

NOTE:
ROAD CLASSIFICATION: ACCESS STREET
DESIGN SPEED: 30 MPH
POSTED SPEED: 25 MPH

FOR TYPICAL ROAD SECTIONS, SEE SHEET 6.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

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L:\CADD\DRAWINGS\2016\PLANS BY GLW\16005-SP (PHT)\SHEETS\15-16-ROAD CONST PLAN & PROF.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16

ROAD CONSTRUCTION PLAN & PROFILES - WARBURTON COURT

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
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SHA TRACKING NO. 14APHO018XX F 15-087

NOTES:

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10. ALL OF THE WATER SHOWN IS 8" UNLESS OTHERWISE NOTED.
11. ALL OF THE WHC's SERVING NUMBERED LOTS ARE 1-1/2".
12. ARLINGTON COURT IS A PUBLIC ACCESS STREET WITH A 50' R/W AND 24' PAVING WIDTH.
13. UNLESS OTHERWISE NOTED, CURB WITHIN WESTMOUNT PARKWAY AND THE ISLAND IN BURTON AVENUE IS TO BE REVERSE COMBINATION CURB AND GUTTER. ISLANDS WITHIN WESTMOUNT PARKWAY WILL HAVE FLUSH CURB. ALL OTHER CURB WITHIN COUNTY RIGHT-OF-WAY IS STANDARD COMBINATION CURB AND GUTTER. SEE SHEET 6 FOR CURB DETAILS.
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15. FOR MORE SPOT ELEVATIONS AT THE INTERSECTION OF WESTMOUNT PARKWAY AND ARLINGTON COURT, SEE SHEET 7.

TOP OF CURB ELEVATION TABLE FOR ARLINGTON COURT

PT. NO	STATION	OFFSET	ELEV.	ASBUILT
(A1)	0+59.82	11.99' RT	447.42	
(A2)	0+00.00*	1.00' RT	445.46	
(A3)	0+29.25*	1.00' RT	444.98	
(A4)	2+98.62*	1.00' RT -	445.32	
(A5)	2+90.83*	1.00' RT	445.14	
(A6)	0+59.29	12.02' LT	447.43	
(P5)	1+52.15	38.00' RT	447.83	
(P6)	1+63.43	38.00' RT	447.66	
(P7)	1+81.86	38.86' RT	447.45	
(P8)	1+81.86	35.17' LT	447.37	
(P9)	1+65.66	37.45' LT	447.64	
(P10)	1+63.09	32.43' LT	448.37	

* INDICATES THAT STATION IS BASED ON CUL-DE-SAC ALIGNMENT, WHICH IS AT THE GUTTER PAN, 1' FROM THE FACE OF CURB.

PROPOSED CENTERLINE (PGL)
EXISTING GRADE (PGL)
EX. B.R.L. LEFT
EX. B.R.L. RIGHT

NOTE:
ROAD CLASSIFICATION: ACCESS STREET
DESIGN SPEED: 25 MPH

FOR TYPICAL ROAD SECTIONS, SEE SHEET 6.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

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L:\Land Engineering\Jobs\Planning in Progress\13-013\ENGR\13-013 ROAD CONST PLAN & PROF.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
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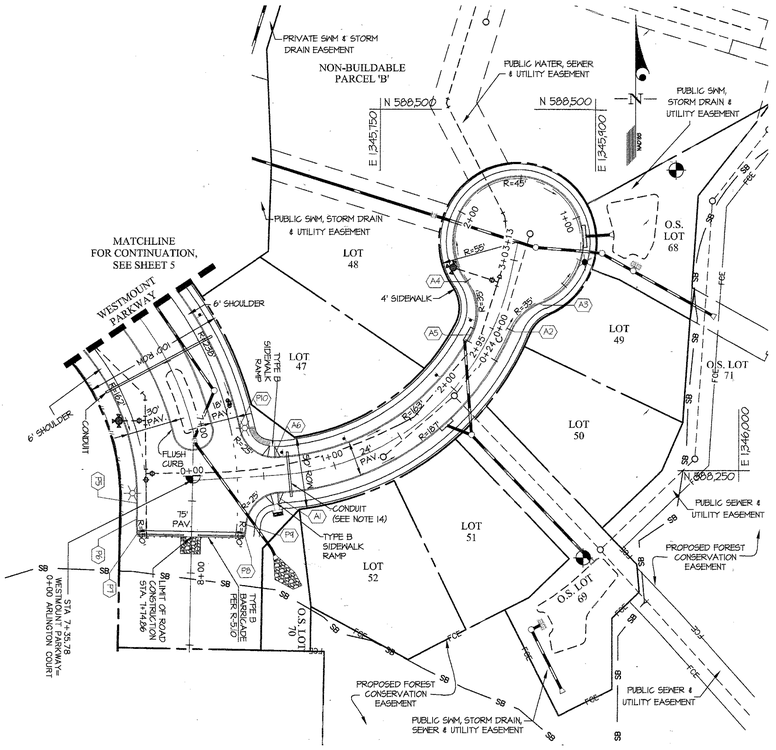
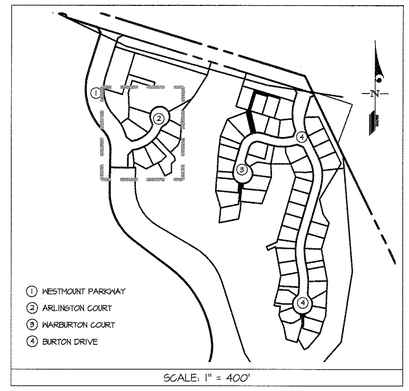


ARLINGTON COURT STREET GRADE PLAN
SCALE: 1" = 50'



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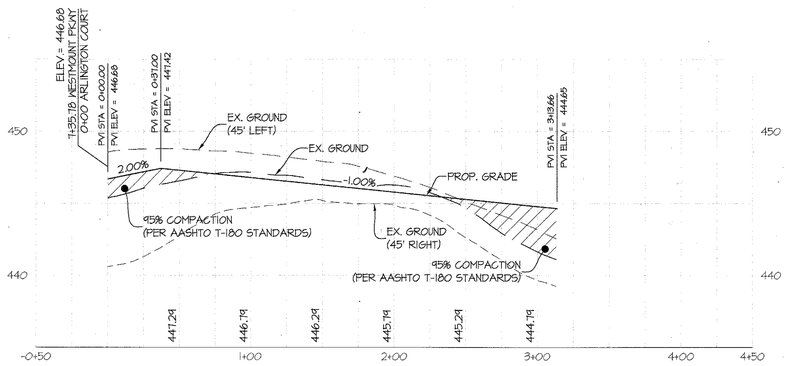
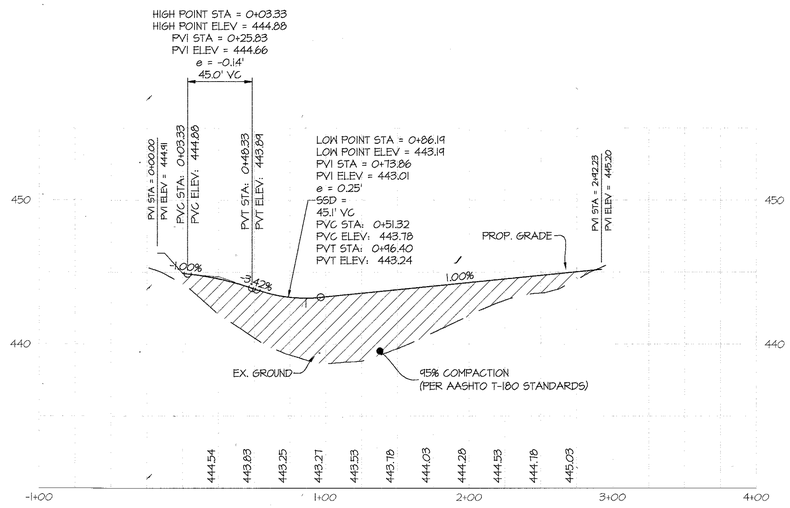


ARLINGTON COURT STREET GRADE PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'

(50' R/W, PUBLIC ACCESS STREET)
(24' PAVING)



ARLINGTON COURT CUL-DE-SAC PROFILE
SCALE: HOR. 1" = 50'
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ROAD CONSTRUCTION PLAN & PROFILES - ARLINGTON COURT

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

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NOTES.

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2. ALL CURB RADII ARE 25' UNLESS OTHERWISE NOTED.
3. FOR STREET TREE, LANDSCAPING, AND BUFFERING REQUIREMENTS, SEE SHEETS 8 THROUGH 11.
4. FOR CENTERLINE CURVE DATA, SEE SHEET 6.
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10. ALL OF THE WATER SHOWN IS 8" UNLESS OTHERWISE NOTED.
11. ALL OF WHC'S SERVING NUMBERED LOTS ARE 1-1/2".
12. CONTRACTOR TO TRANSITION FROM 8" CURB HEIGHT WITHIN SHA R/W TO 7 $\frac{3}{4}$" CURB HEIGHT WITHIN COUNTY R/W. UNLESS OTHERWISE NOTED, CURB WITHIN WESTMOUNT PARKWAY AND THE ISLAND IN BURTON AVENUE IS TO BE REVERSE COMBINATION CURB AND GUTTER. ISLANDS WITHIN WESTMOUNT PARKWAY WILL HAVE FLUSH CURB. ALL OTHER CURB WITHIN COUNTY RIGHT-OF-WAY IS STANDARD COMBINATION CURB AND GUTTER. SEE SHEET 6 FOR CURB DETAILS.
13. CONDUIT CROSSING FOR STREET LIGHTS SHALL BE (4) 4" SCHEDULE 80 PVC, INSTALLED FLAT AT A DEPTH OF 36" WITH MARKERS ON BOTH SIDES AND WITH PULL STRINGS INSTALLED. ONE CONDUIT IS TO BE USED FOR EACH OF THE FOLLOWING: ELECTRIC, VERIZON, GAS, AND CABLE.
14. FOR MORE SPOT ELEVATIONS AT THE INTERSECTION OF WESTMOUNT PARKWAY AND ARLINGTON COURT, SEE SHEET 7.

TOP OF CURB ELEVATION TABLE FOR WESTMOUNT PARKWAY

PT. NO	STATION	OFFSET	ELEV.	ASBUILT
P1	0+40.15	84.54' RT	461.21	
P2	0+83.76	34.00' RT	456.79	
P3	2+45.11	34.66' RT	453.77	
P4	5+85.50	44.00' RT	450.15	
P5	7+52.15	38.00' RT	447.83	
P6	7+63.43	38.00' RT	447.68	
P7	7+73.86	37.64' RT	447.45	
P8	7+73.86	36.52' LT	447.37	
P9	7+65.66	37.45' LT	447.64	
P10	7+03.04	32.43' LT	448.37	
P11	5+85.50	32.00' LT	449.41	
P12	3+00.80	41.14' LT	453.82	
P13	0+82.27	42.00' LT	456.66	
P14	0+25.40	90.01' LT	452.98	
A1	0+59.82	11.98' RT	447.42	
A6	2+54.25	12.02' LT	447.43	

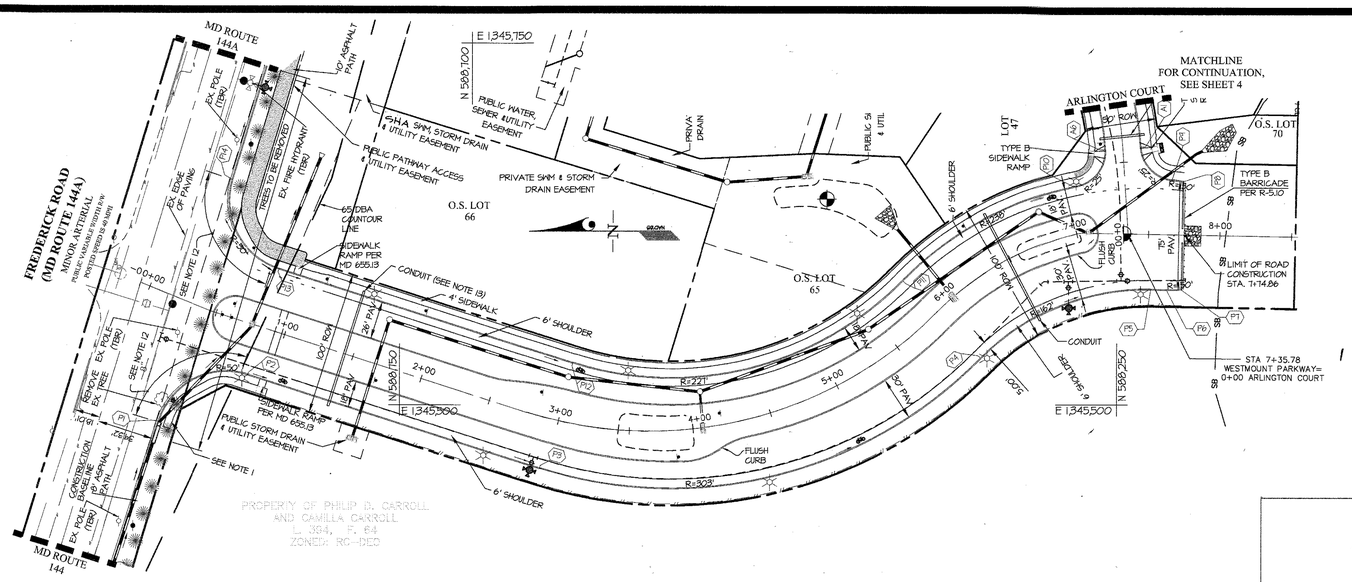
PROPOSED CENTERLINE (PGL)
EXISTING GRADE (PGL)
EX. B.R.L. LEFT
EX. B.R.L. RIGHT

NOTE:
ROAD CLASSIFICATION: MINOR COLLECTOR
DESIGN SPEED: 30 MPH

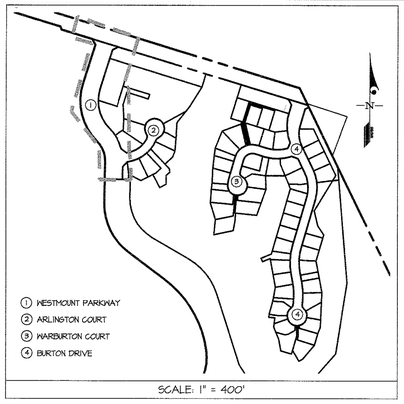
FOR TYPICAL ROAD SECTIONS, SEE SHEET 6.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

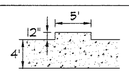


WESTMOUNT PARKWAY STREET GRADE PLAN
SCALE: 1" = 50'

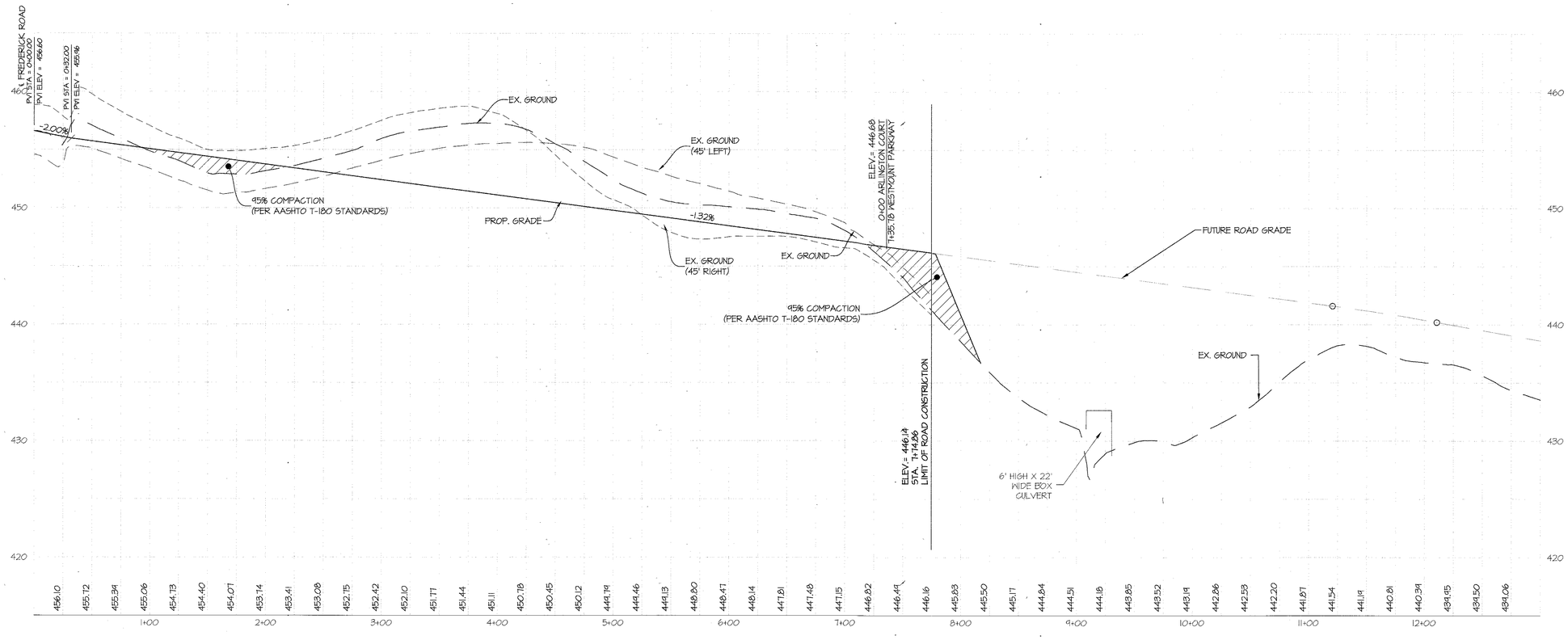


SCALE: 1" = 400'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.



DETAIL FOR 5'X5' SIDEWALK SECTION AT STATIONS 3+33 & 5+33



WESTMOUNT PARKWAY STREET GRADE PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'
(100' R/W, MINOR COLLECTOR)
(PAVING WIDTH VARIES)

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_02-05-ROAD CONST PLAN & PROF.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018
7/14/16

ROAD CONSTRUCTION PLAN & PROFILES - WESTMOUNT PARKWAY

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	23-6&12	SHEET
JULY, 2016	23-6&12	5 OF 60

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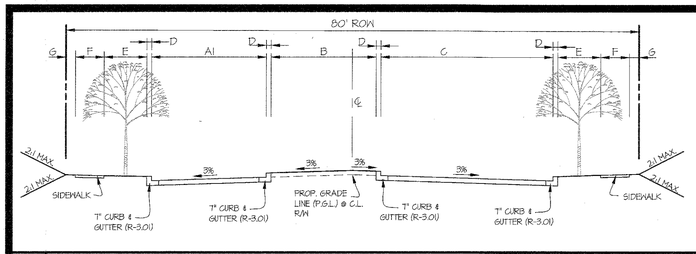
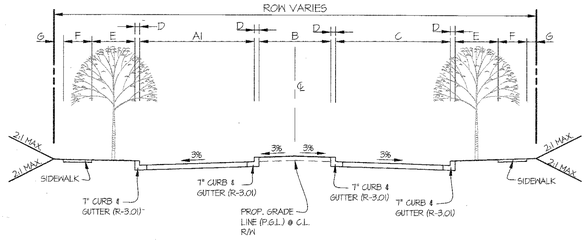
SHA TRACKING NO. 14APHO018XX F 15-087

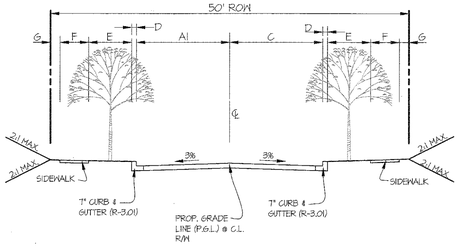
L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_02-05-ROAD CONST PLAN & PROF.dwg, 7/12/2016 8:34:29 AM, jennifend, 1:1



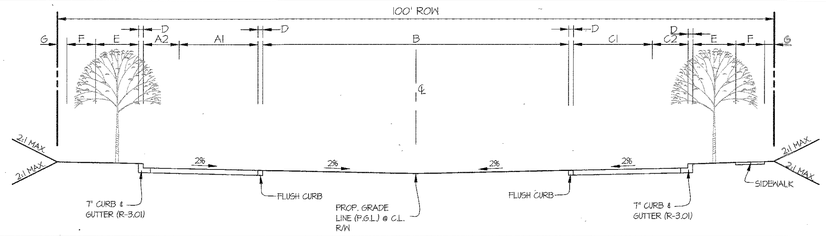
1 **TYPICAL SECTION FOR 80' R/W WITH ISLAND** NO SCALE



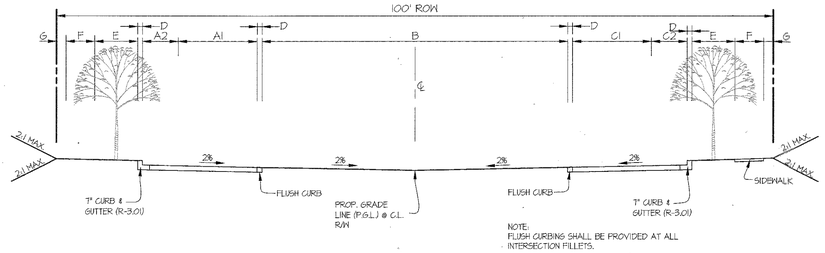
2 **TYPICAL SECTION FOR CROWNED ROAD WITH VARYING R/W AND ISLAND** NO SCALE



3 **TYPICAL SECTION FOR 50' R/W** NO SCALE

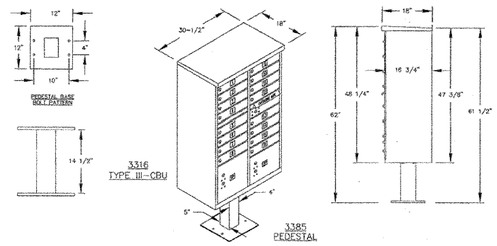


4 **TYPICAL SECTION FOR 100' R/W WITH VARYING PAVING AND ISLAND** NO SCALE

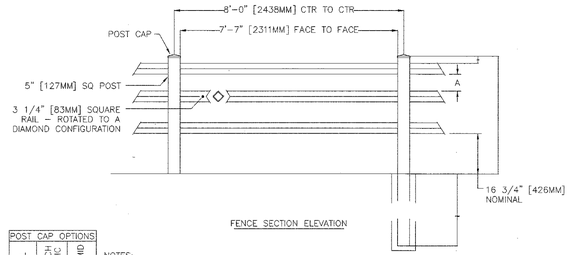


NOTE:
FLUSH CURBING SHALL BE PROVIDED AT ALL INTERSECTION FILLETS.

5 **TYPICAL SECTION FOR 100' R/W WITH VARYING ISLAND & GREEN SPACE** NO SCALE



6 **MAIL BOX DETAILS** NO SCALE



NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER HALCO ONLY.
3. FOOTING WIDTH TO BE (2)X POST WIDTH. MINIMUM DEPTH 30" [762MM].

RAIL DIST (A)	NOM HEIGHT (H)
7 11/16" [195MM]	48" [1219MM]

POST & RAIL VINYL FENCE DETAIL NO SCALE

ROAD INFORMATION

ROAD NAME	STATION	CLASSIFICATION	DESIGN SPEED	A1	A2	B	C1	C2	D	E	F	G	R/W	PAVING SECTION	DETAIL
BURTON DRIVE	0+00 TO 1+23	ACCESS STREET	25 MPH	16'	-	14'-8"	24'	-	8"	7'	4'	1'-4"	80'	P-3	1
BURTON DRIVE	1+23 TO 3+53	ACCESS STREET	25 MPH	16'	-	VARIES	16'	-	8"	7'	4'	1'-4"	VARIES	P-3	2
BURTON DRIVE	3+53 TO 12+13	ACCESS STREET	25 MPH	12'	-	-	12'	-	8"	7'	4'	1'-4"	50'	P-3	3
WARBURTON COURT	0+00 TO 4+30	ACCESS STREET	25 MPH	12'	-	-	12'	-	8"	7'	4'	1'-4"	50'	P-3	3
ARLINGTON COURT	0+00 TO 2+40	ACCESS STREET	25 MPH	12'	-	-	12'	-	8"	7'	4'	1'-4"	50'	P-3	3
WESTMOUNT PARKWAY	0+00 TO 7+69	MINOR COLLECTOR	30 MPH	VARIES	6'	VARIES	VARIES	6'	8"	6'	4'	1'-4"	100'	P-4	4
WESTMOUNT PARKWAY	7+69 TO 17+75	MINOR COLLECTOR	30 MPH	16'	6'	VARIES	11'	6'	8"	6'	4'	VARIES	100'	P-4	5

℄ CURVE DATA CHART

CURVE	STREET NAME	PC STA.	PT STA.	RADIUS	TANGENT	ARC	CHORD	BEARING	DELTA
A1	BURTON DRIVE	1+29.29	3+16.51	250.00'	98.24'	187.22'	182.87'	S4°35'12"E	42°54'24"
A2	BURTON DRIVE	4+52.95	6+07.81	210.00'	81.14'	154.85'	151.37'	S4°54'55"E	42°14'57"
A3	BURTON DRIVE	8+87.63	10+38.78	325.00'	76.97'	151.16'	149.80'	S2°53'07"W	26°38'53"
A4	BURTON DRIVE	10+97.20	11+76.62	325.00'	39.90'	79.41'	79.22'	S3°26'19"E	14°00'00"
B1	WARBURTON COURT	0+14.78	1+86.71	230.00'	90.20'	171.93'	167.95'	S85°22'30"W	42°49'47"
B2	WARBURTON COURT	2+42.75	3+61.75	75.00'	76.20'	119.00'	106.91'	S61°20'00"W	90°54'47"
B3	WARBURTON COURT	4+29.65	5+16.47	112.00'	45.72'	86.82'	84.66'	S6°19'51"E	44°24'55"
C1	ARLINGTON COURT	0+62.54	2+88.66	175.00'	131.95'	226.12'	210.71'	N49°19'30"E	74°01'54"
W1	WESTMOUNT PARKWAY	3+04.19	5+95.87	265.00'	162.59'	291.67'	277.17'	S13°56'30"E	63°03'47"
W2	WESTMOUNT PARKWAY	5+95.87	7+58.16	200.00'	85.91'	162.29'	157.87'	S22°13'37"E	46°29'32"

NOTE: ALL TYPICAL SECTIONS HAVE BEEN SHOWN LOOKING UP STATION

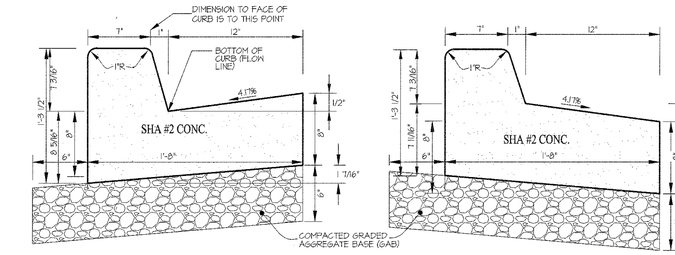
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

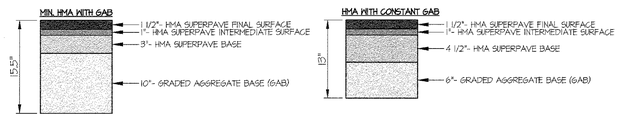
Chief, Development Engineering Division — Date 8.26.16



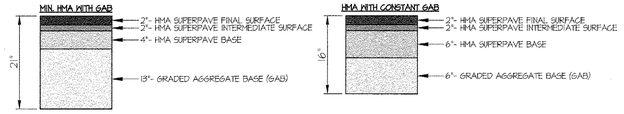
NOTES:
1. STANDARD 'T' COMBINATION CURB AND GUTTER TO BE USED IN ALL PUBLIC RIGHTS OF WAY.
2. GUTTER PAN AT MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 5% FOR MODIFIED CURB AND GUTTER.

STANDARD COMBINATION CURB AND GUTTER — REVERSE COMBINATION CURB AND GUTTER

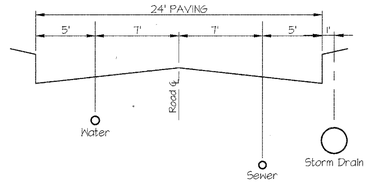
7 **7" CONCRETE CURB AND GUTTER (STANDARD AND REVERSE)** NO SCALE



8 **P-3 PAVING SECTIONS** NO SCALE

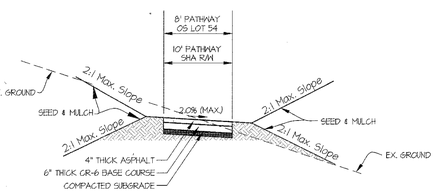


9 **P-4 PAVING SECTIONS** NO SCALE

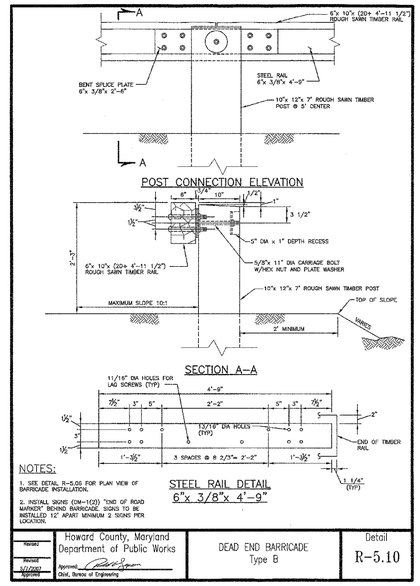


24' PAVING WIDTH

10 **TYPICAL UTILITY LOCATIONS** SCALE: 1"=6'



11 **ASPHALT PATHWAY DETAIL** NO SCALE



NOTES:
1. SEE DETAIL R-5.05 FOR PLAN VIEW OF BARRICADE INSTALLATION.
2. INSTALL SIGNS (OM-1(22) "END OF ROAD MARKER" BEHIND BARRICADE. SIGNS TO BE INSTALLED 12' APART MINIMUM 2 SIGNS PER LOCATION.

STEEL RAIL DETAIL
6"x 3/8"x 4'-9"

Revised	Howard County, Maryland Department of Public Works	DEAD END BARRICADE Type B	Detail R-5.10
Revised 5/1/2003	Approved: Chief, Bureau of Engineering		

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_06-ROAD DETAILS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND — CHRISTOPHER J. CLARK — NO. 12975 — PROFESSIONAL ENGINEER

ROAD DETAILS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	6 OF 60

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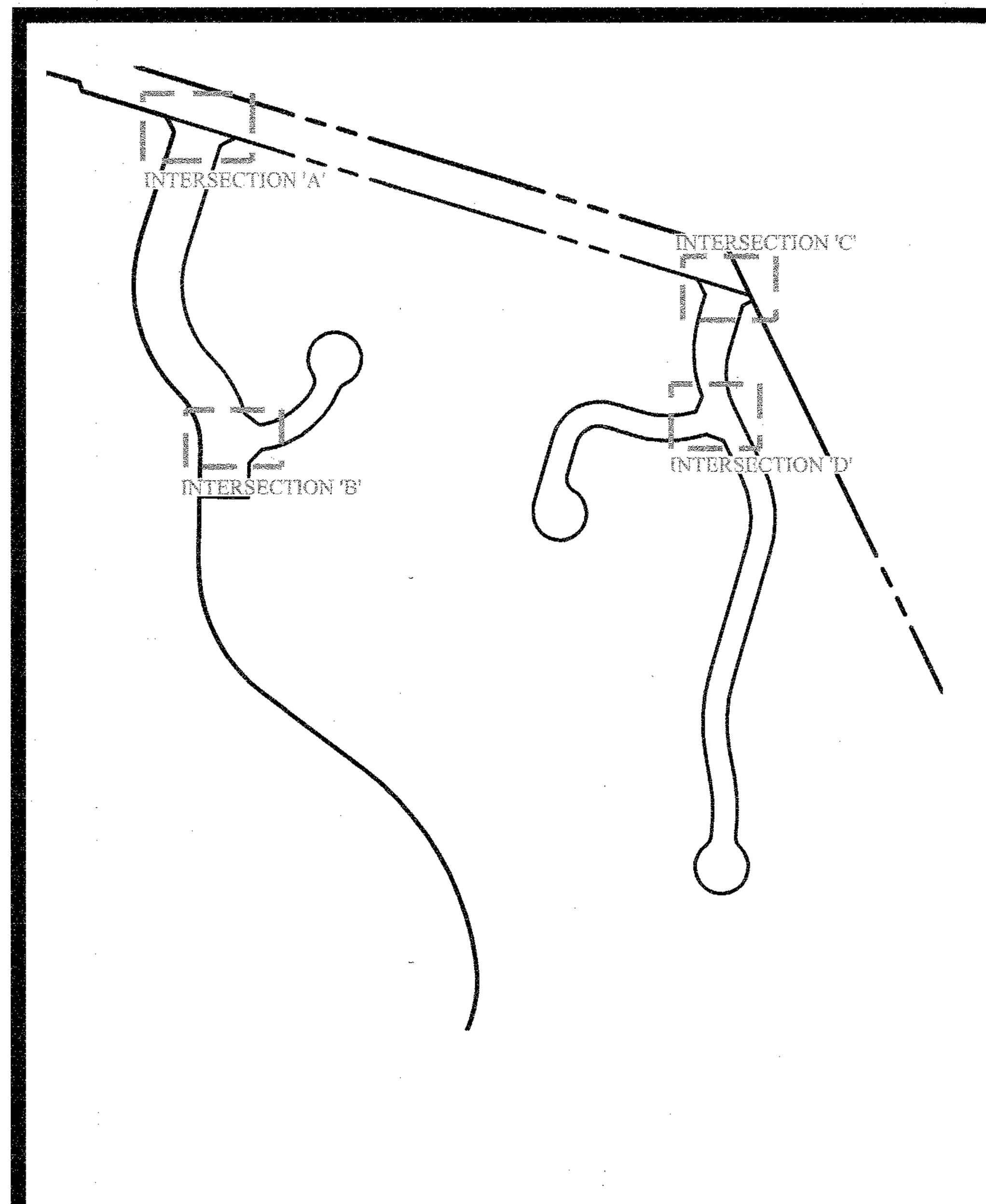
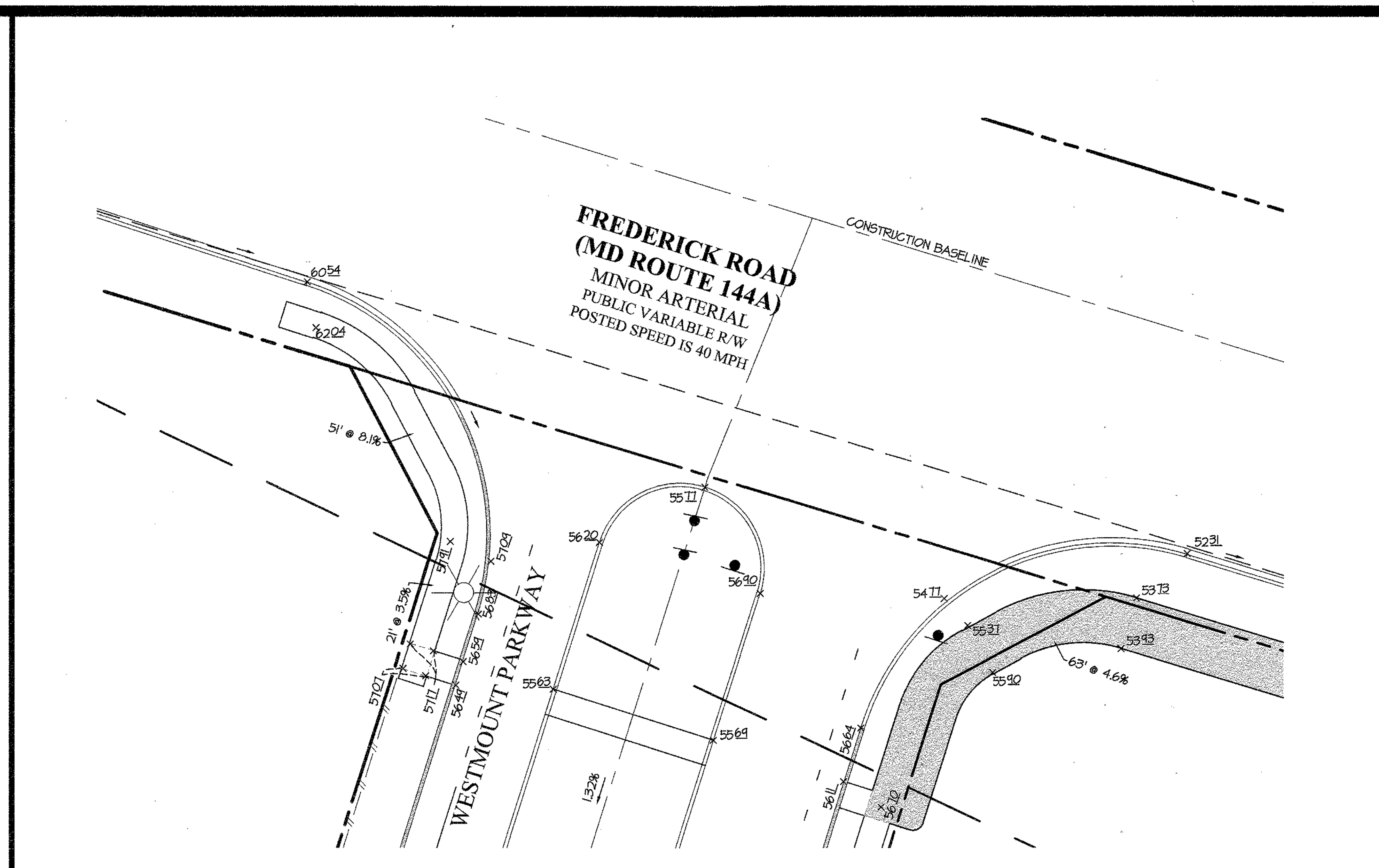
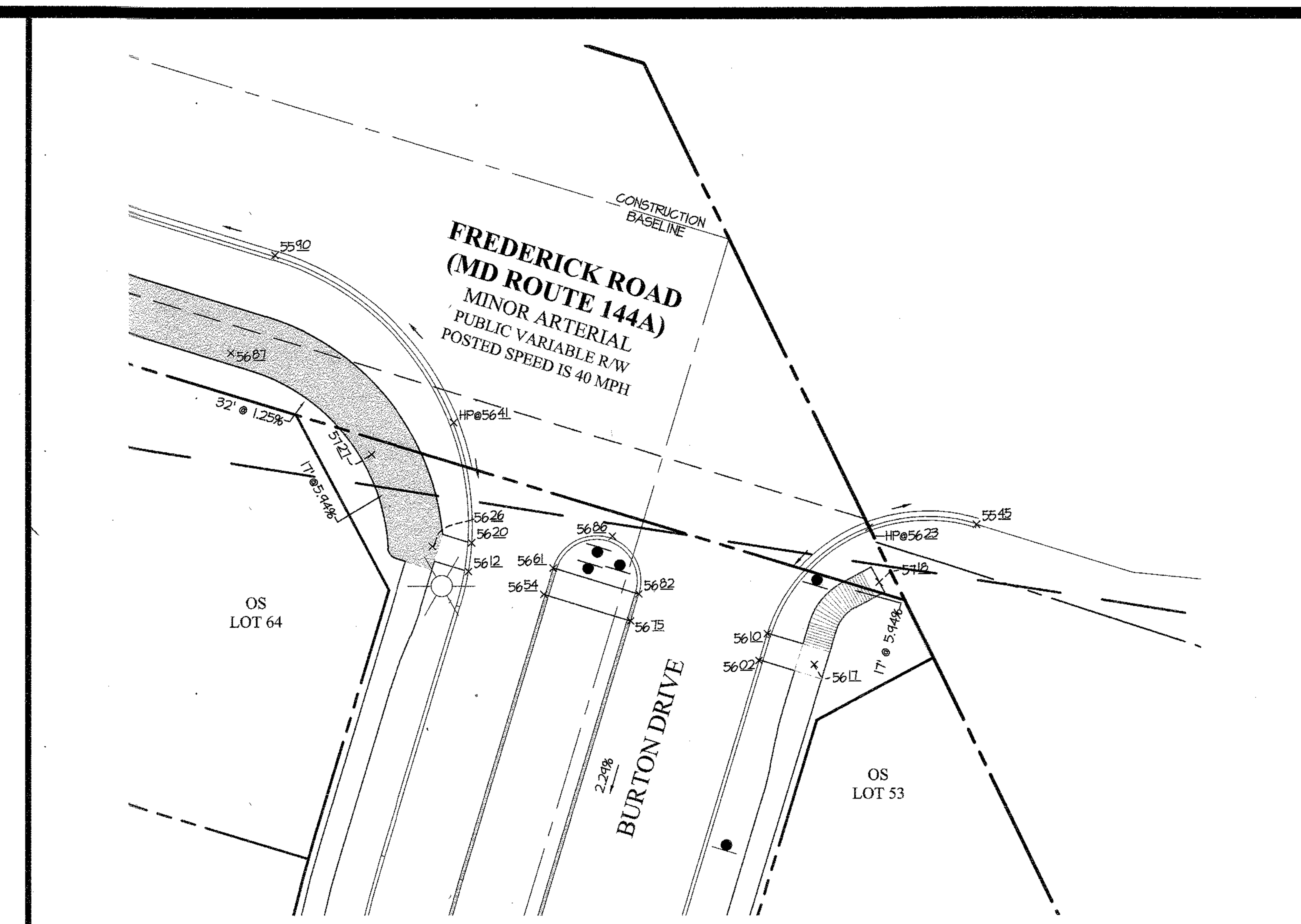
L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_06-ROAD DETAILS.dwg, 7/12/2016 9:40:24 AM, jennifers, 1:1



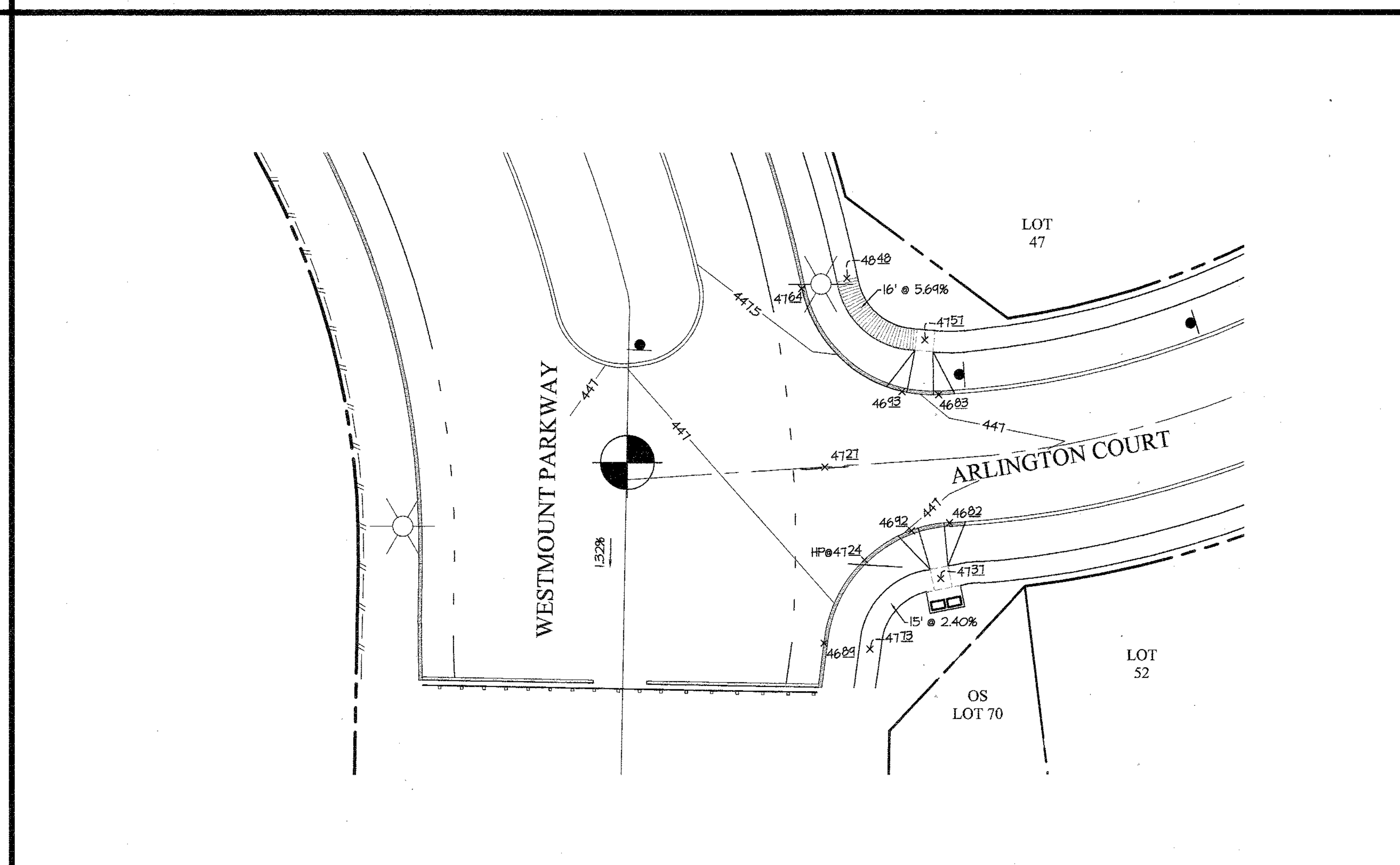
KEY MAP SCALE: 1"=300'



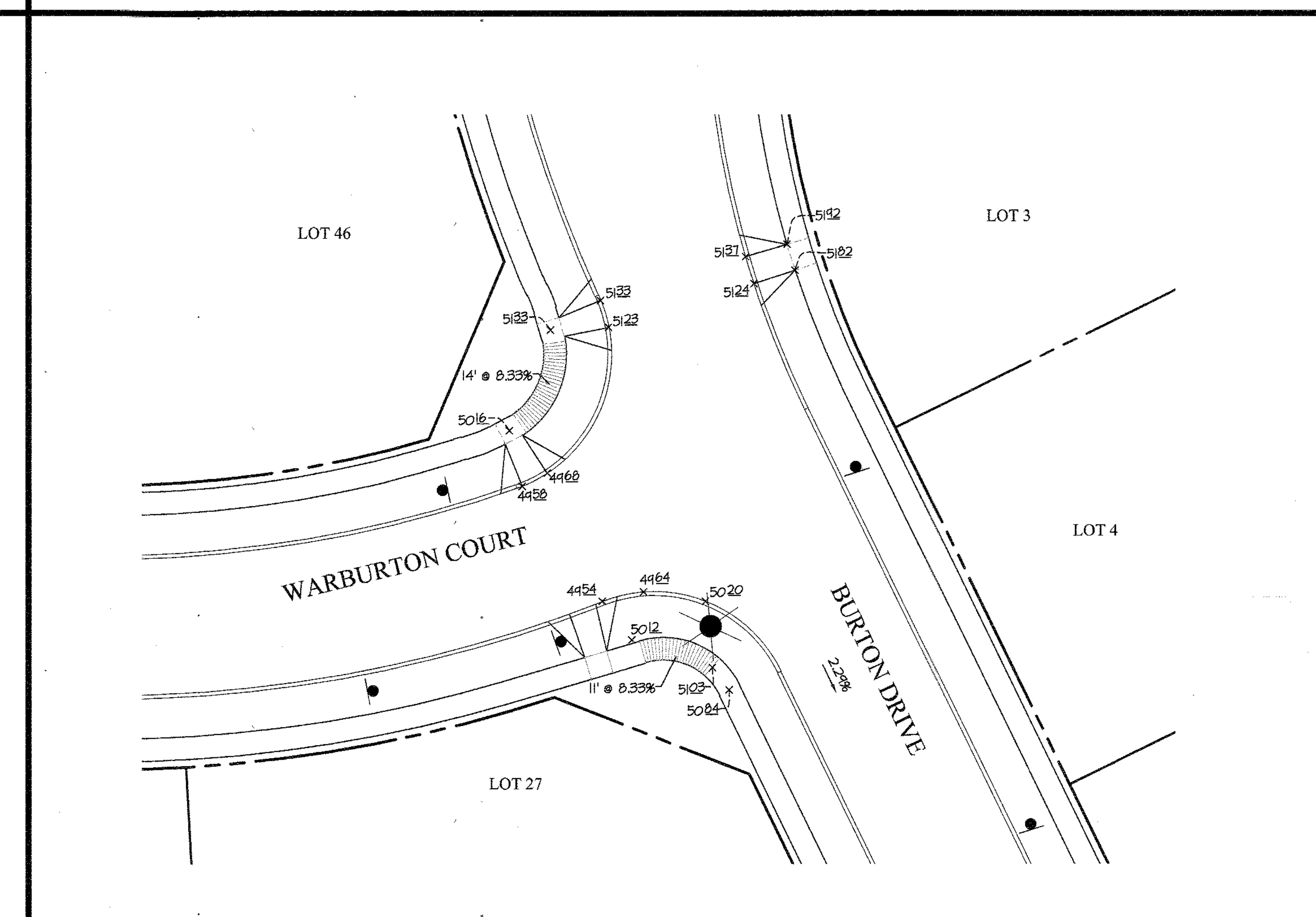
INTERSECTION 'A'



INTERSECTION 'C'



INTERSECTION 'B'



INTERSECTION 'D'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_07-ADA RAMPS.dwg	DES. JRD	DRN. JRD	CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16

ADA COMPLIANT SIDEWALK RAMPS

WESTMOUNT · PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	7 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

LANDSCAPE LEGEND

- 400 — EXISTING CONTOUR
- EXISTING TREELINE
- BOTTOM OF STREAM
- CENTERLINE OF STREAM
- SB — STREAM BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- WB — WETLAND BUFFER
- EXISTING FOREST CONSERVATION EASEMENT
- LIMIT OF PROPOSED SUBDIVISION
- LIMIT OF DISTURBANCE/SUBMISSION
- EASEMENT
- STEEP SLOPES - 15% TO 25%
- STEEP SLOPES - 25% AND GREATER
- PROPOSED FENCE
- PROPOSED STREET TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- 100 WATT LED (COLONIAL POST TOP)
- 150 WATT LED VAPOR (COLONIAL POST TOP)
- EXISTING POLE
- PROPOSED UTILITY POLE
- PROPOSED HIB SIGNAL
- STREET SIGN
- OPEN SPACE LOT SIGN (SEE SHEET 10 FOR DETAIL)

LANDSCAPING NOTES:

1. STREET TREES ARE BEING PROVIDED AS PART OF THIS FINAL PLAN.
2. INTERNAL PLANTING WILL BE PROVIDED WITH THE SITE DEVELOPMENT PLANS AND FINAL PLANS.
3. THE BUFFERS SHOWN IN THE SCHEDULES ARE IN ACCORDANCE WITH THE LANDSCAPE MANUAL. THE FOLLOWING ARE THE MINIMUM PLANTING TO BE PROVIDED ALONG A PERIMETER EDGE:
   SHADE TREES:
   1:80 LINEAR FEET OF MEASURED PERIMETER EDGE, AND
   SMALL ORNAMENTAL DECIDUOUS TREES:
   1:60 LINEAR FEET OF MEASURED PERIMETER EDGE AND
   EVERGREEN TREES:
   1:20 LINEAR FEET OF MEASURED PERIMETER EDGE.
4. AFFORESTATION PLANTING SIZE SHALL BE LARGE ENOUGH TO MEET THE LANDSCAPE BUFFERING REQUIREMENT ALONG EXTERNAL PERIMETERS WHERE APPLICABLE.
5. UNLESS NOTED, ALL STEEP SLOPES AREAS WITHIN THE LIMITS OF SUBMISSION ARE LESS THAN 5,000 S.F.
6. STREET TREES SHALL BE PLACED A MINIMUM OF 15' FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN THE SIDEWALK AND CURB, AND BE LOCATED WITH CONSIDERATION TO UNDERGROUND UTILITIES AND STRUCTURES. STREET TREES MAY NOT BE PLANTED WITHIN 5' OF A DRAIN INLET STRUCTURE, WITHIN 5' OF AN OPEN SPACE ACCESS STRIP, AND WITHIN 10' OF A DRIVEWAY. A 20' MINIMUM DISTANCE SHALL BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHT. FINAL PLACEMENT OF THE STREET TREES WILL BE DETERMINED IN THE FIELD BY THE DEPARTMENT OF PUBLIC WORKS TO BEST ACCOMMODATE THESE SETBACKS WHILE PROVIDING THE MAXIMUM NUMBER OF STREET TREES REQUIRED.
7. ALL PAVEMENT MARKINGS AND SIGN LOCATIONS SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC DIVISION PRIOR TO ANY INSTALLATION (410-313-5752).
8. TREES CANNOT BE PLANTED WITHIN 40' OF STOP SIGN LOCATIONS ON THE APPROACH SIDE FOR VISIBILITY CONCERNS.

NOTES:

1. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
2. THE OWNER 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 MATERIAL TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
3. SEE SHEET 51 FOR THE PAVEMENT MARKING PLAN FOR FREDERICK ROAD AND ITS INTERSECTIONS WITH WESTMOUNT PARKWAY AND BURTON DRIVE.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

STREET TREE REQUIREMENTS

ROAD	LENGTH OF CURB (L.F.)	# OF TREES REQUIRED	# OF TREES PROVIDED
BURTON DRIVE	2,574'	64	70
WARBURTON COURT	1,113'	28	27
ARLINGTON COURT	703'	18	14
WESTMOUNT PARKWAY	1,453	36	36
	TOTAL	146	147

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	REMARKS
(×)	ACER SACHARUM / GREEN MOUNTAIN SUGAR MAPLE	2 1/2" cal.	B & B FULL HEADS

MINIMUM TREE QUANTITIES AND PREFERRED SPACING ARE AS FOLLOWS:
1 TREE PER 40 LINEAR FEET, BOTH SIDES, FOR ALL STREET.

STREET LIGHT SCHEDULE

ROAD NAME	CENTERLINE STATION / COORDINATE	OFFSET	LAMP TYPE	FIXTURE	POLE TYPE
BURTON DRIVE	0+67	31' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE	2+11	21' LT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE	3+33	20' RT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE	5+48	16' LT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE	7+93	16' LT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE	10+78	16' LT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
BURTON DRIVE CUL-DE-SAC	12+70	48' RT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
WARBURTON COURT	2+89	16'RT	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
WARBURTON COURT CUL-DE-SAC	N 1,346,262 E 588,084	---	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
ARILINGTON COURT CUL-DE-SAC	N 1,345,892 E 588,394	---	100 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	0+67	38' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	1+51	46'LT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	2+57	38' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	3+47	42' LT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	4+37	46' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	5+41	36' LT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	5+89	47' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	7+03	36' LT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS
WESTMOUNT PARKWAY	7+45	42' RT	150 LED	COLONIAL POST	14' BLACK FIBERGLASS

REQUIREMENTS FOR TYPE 'B' BUFFER ALONG SCENIC ROAD

SYMBOL	TREE TYPE	NAMES (BOTANICAL/SCIENTIFIC)	SIZE	REMARKS	REQUIRED	PROVIDED
	ORNAMENTAL	COMUS KOUSA / KOUSA DOGWOOD	12'-14' HT.	B&B FULL HEADS	0	12
	SHADE	ACER GINNALA / AMUR MAPLE	2"-2-1/2" CAL.	B&B FULL HEADS	20	24
	EVERGREEN	PINUS STROBUS / WHITE PINE	10' HT.	B&B	25	25

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 26 SHADE TREES (@ $300.00 PER TREE), 25 EVERGREENS (@ $150.00 PER TREE), AND 735' OF VINYL PICKETT FENCE.
SURETY CALCULATIONS FOR PERIMETERS REQUIRING PLANTINGS OR ALTERNATIVES:

PERIMETER 1:
6 SHADE TREES = $1,800.00

PERIMETER 5:
735' OF VINYL PICKET FENCE (@ $10 PER L.F.) = $7,350.00

PERIMETER 6
20 SHADE TREES = $6,000.00
25 EVERGREEN = $3,750.00
TOTAL = $18,900.00

RESIDENTIAL LOT LANDSCAPE PERIMETER REQUIREMENTS SCHEDULE

RESIDENTIAL LOT LINE	LENGTH OF SIDE PERIMETER	REQUIRED LANDSCAPING
R1	69'	THE REQUIRED LOT LANDSCAPING PER THE HOWARD COUNTY LANDSCAPE DESIGN MANUAL SHALL BE PROVIDED AT SDP STAGE
R2	67'	
R3	121'	

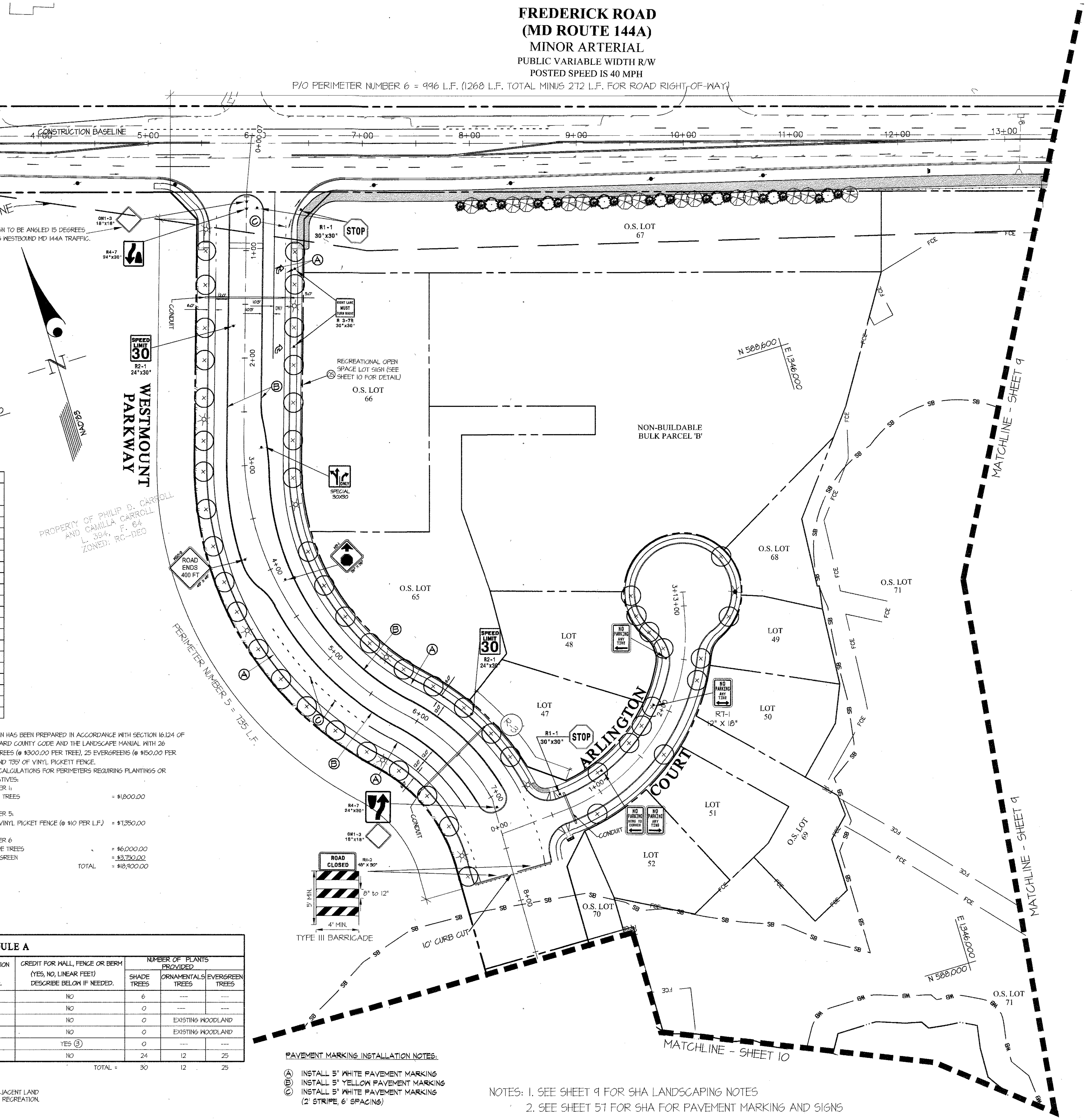
EXTERNAL PERIMETER PLANTING SCHEDULE - SCHEDULE A

PERIMETER	LAND USE	ADJACENT LAND USE	TYPE OF BUFFER	LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	NUMBER OF PLANTS REQUIRED: SHADE TREES	ORNAMENTALS TREES	EVERGREEN TREES	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	NUMBER OF PLANTS PROVIDED: SHADE TREES	ORNAMENTALS TREES	EVERGREEN TREES
PERIMETER 1	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer	369'	6	---	---	NO	NO	6	---	---
PERIMETER 2	SFD RESIDENTIAL	SFD RESIDENTIAL	SEE NOTE (1)	1,662'	28	---	---	NO	NO	0	---	---
PERIMETER 3	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer	1,189	28	---	---	YES (2)	NO	0	EXISTING WOODLAND	
PERIMETER 4	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer	523'	9	---	---	YES (2)	NO	0	EXISTING WOODLAND	
PERIMETER 5	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer	735'	73	---	---	NO	YES (3)	0	---	---
PERIMETER 6	SFD RESIDENTIAL	ROADWAY	'B' Buffer	996'	20	0	25	NO	NO	24	12	25
									TOTAL =	30	12	25

(1) FOR THIS PERIMETER BUFFER, THE ON SITE LAND USE IS AN OPEN SPACE LOT THAT WILL BE CONVEYED TO HOWARD COUNTY PARKS AND RECREATION. THE ADJACENT LAND USE IS THE KIWANIS-WALLACE PARK. ULTIMATELY, THESE TWO PARCELS WILL BE A CONTIGUOUS TRACT OF LAND OWNED BY THE HOWARD COUNTY PARKS AND RECREATION.

(2) CREDIT FOR FOREST RETENTION ALONG THIS PERIMETER.

(3) CREDIT FOR FENCE TO BE CONSTRUCTED ALONG THIS PERIMETER.



PAVEMENT MARKING INSTALLATION NOTES:

(A) INSTALL 5" WHITE PAVEMENT MARKING
(B) INSTALL 5" YELLOW PAVEMENT MARKING
(C) INSTALL 5" WHITE PAVEMENT MARKING (2' STRIPE, 6' SPACING)

NOTES: 1. SEE SHEET 9 FOR SHA LANDSCAPING NOTES
2. SEE SHEET 51 FOR SHA FOR PAVEMENT MARKING AND SIGNS

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_08-11-SSTL.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16

SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	8 OF 60

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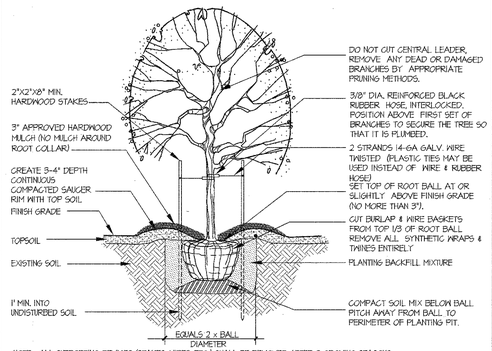
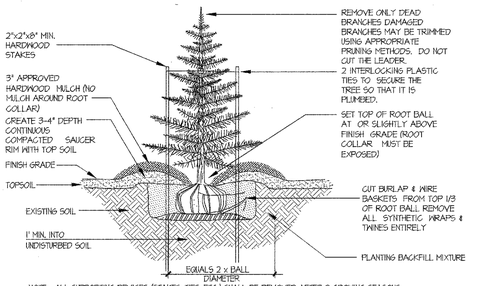
SHA TRACKING NO. 14APHO018XX F 15-087



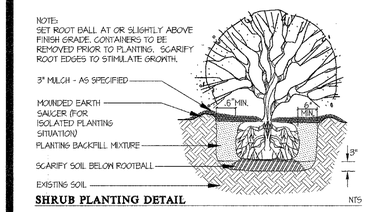
NOTE: ALL SUPPORTING DEVICES (STAKES, WIRES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

DECIDUOUS TREE PLANTING DETAIL NTS
FOR PLANTING MATERIAL UP TO 3 1/2" CALIPER



NOTE: ALL SUPPORTING DEVICES (STAKES, TIES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

EVERGREEN TREE PLANTING DETAIL NTS

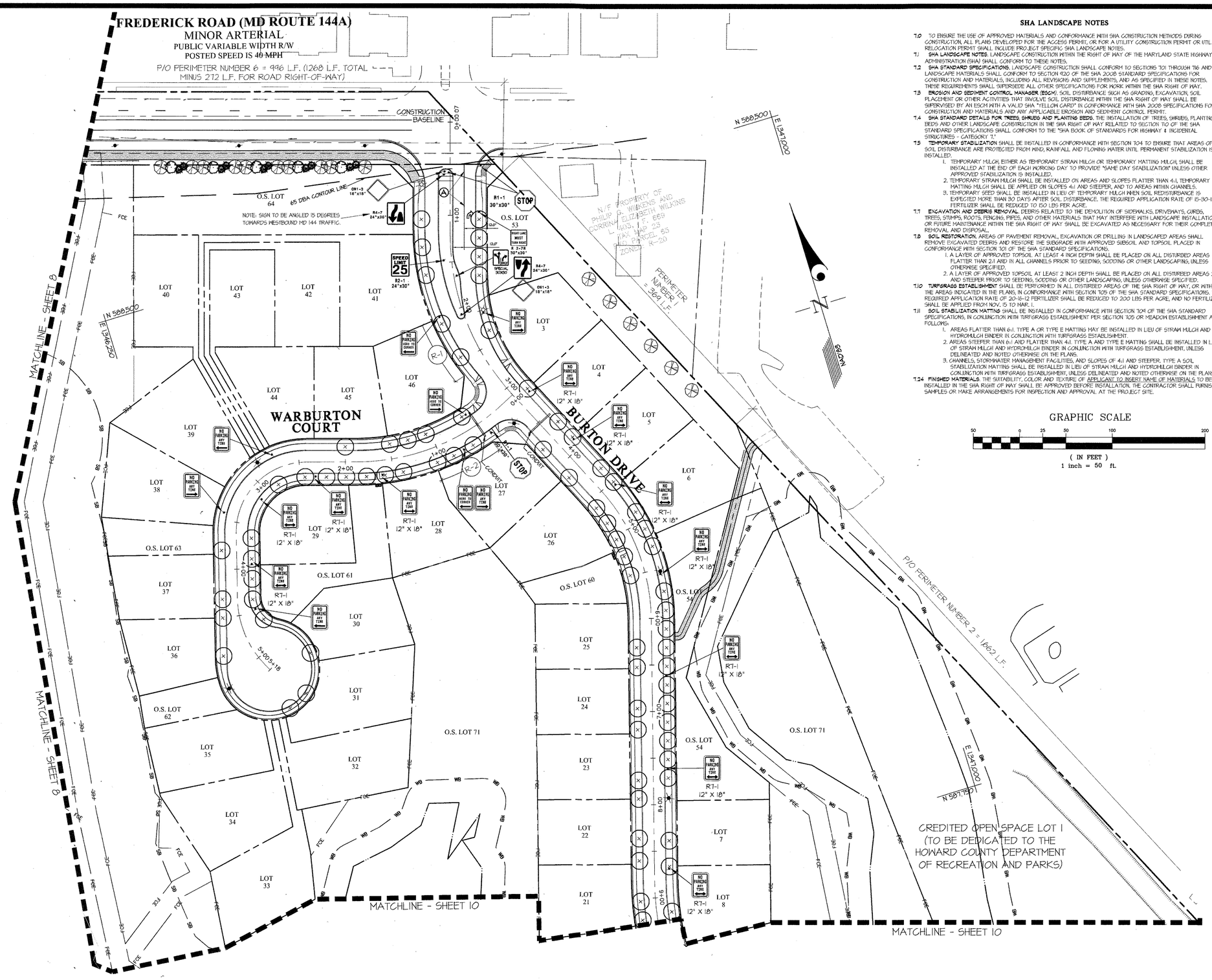


SHRUB PLANTING DETAIL NTS

NOTE: SEE SHEET 57 FOR SHA FOR PAVEMENT MARKING AND SIGNS

PAVEMENT MARKING INSTALLATION NOTES:

Ⓐ INSTALL 5" WHITE PAVEMENT MARKING



SHA LANDSCAPE NOTES

7.0 TO ENSURE THE USE OF APPROVED MATERIALS AND CONFORMANCE WITH SHA CONSTRUCTION METHODS DURING CONSTRUCTION, ALL PLANS DEVELOPED FOR THE ACCESS PERMIT, OR FOR A UTILITY CONSTRUCTION PERMIT OR UTILITY RELOCATION PERMIT SHALL INCLUDE PROJECT SPECIFIC SHA LANDSCAPE NOTES.

7.1 **SHA LANDSCAPE NOTES.** LANDSCAPE CONSTRUCTION WITHIN THE RIGHT OF WAY OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) SHALL CONFORM TO THESE NOTES.

7.2 **SHA STANDARD SPECIFICATIONS.** LANDSCAPE CONSTRUCTION SHALL CONFORM TO SECTIONS 701 THROUGH 716 AND LANDSCAPE MATERIALS SHALL CONFORM TO SECTION 920 OF THE SHA 2008 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, INCLUDING ALL REVISIONS AND SUPPLEMENTS, AND AS SPECIFIED IN THESE NOTES. THESE REQUIREMENTS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK WITHIN THE SHA RIGHT OF WAY.

7.3 **EROSION AND SEDIMENT CONTROL MANAGER (ESCM).** SOIL DISTURBANCE SUCH AS GRADING, EXCAVATION, SOIL PLACEMENT OR OTHER ACTIVITIES THAT INVOLVE SOIL DISTURBANCE WITHIN THE SHA RIGHT OF WAY SHALL BE SUPERVISED BY AN ESCM WITH A VALID SHA "YELLOW CARD" IN CONFORMANCE WITH SHA 2008 SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND ANY APPLICABLE EROSION AND SEDIMENT CONTROL PERMIT.

7.4 **SHA STANDARD DETAILS FOR TREES, SHRUBS AND PLANTING BEDS.** THE INSTALLATION OF TREES, SHRUBS, PLANTING BEDS AND OTHER LANDSCAPE CONSTRUCTION IN THE SHA RIGHT OF WAY RELATED TO SECTION 710 OF THE SHA STANDARD SPECIFICATIONS SHALL CONFORM TO THE "SHA BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES - CATEGORY 7."

7.5 **TEMPORARY STABILIZATION** SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 1304 TO ENSURE THAT AREAS OF SOIL DISTURBANCE ARE PROTECTED FROM WIND, RAINFALL AND FLOWING WATER UNTIL PERMANENT STABILIZATION IS INSTALLED.
1. TEMPORARY MULCH, EITHER AS TEMPORARY STRAW MULCH OR TEMPORARY MATTING MULCH, SHALL BE INSTALLED AT THE END OF EACH WORKING DAY TO PROVIDE "SAME DAY STABILIZATION" UNLESS OTHER APPROVED STABILIZATION IS INSTALLED.
2. TEMPORARY STRAW MULCH SHALL BE INSTALLED ON AREAS AND SLOPES FLATTER THAN 4:1, TEMPORARY MATTING MULCH SHALL BE APPLIED ON SLOPES 4:1 AND STEEPER, AND TO AREAS WITHIN CHANNELS.
3. TEMPORARY SEED SHALL BE INSTALLED IN LIEU OF TEMPORARY MULCH WHEN SOIL RE-DISTURBANCE IS EXPECTED MORE THAN 30 DAYS AFTER SOIL DISTURBANCE. THE REQUIRED APPLICATION RATE OF 15-30-15 FERTILIZER SHALL BE REDUCED TO 150 LBS PER ACRE.

7.7 **EXCAVATION AND DEBRIS REMOVAL** DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS, DRIVEWAYS, CURBS, TREES, STUMPS, ROOTS, FENCING, PIPES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE MAINTENANCE WITHIN THE SHA RIGHT OF WAY SHALL BE EXCAVATED AS NECESSARY FOR THEIR COMPLETE REMOVAL AND DISPOSAL.

7.8 **SOIL RESTORATION.** AREAS OF PAVEMENT REMOVAL, EXCAVATION OR DRILLING IN LANDSCAPED AREAS SHALL REMOVE EXCAVATED DEBRIS AND RESTORE THE SUBGRADE WITH APPROVED SUBSOIL AND TOPSOIL PLACED IN CONFORMANCE WITH SECTION 701 OF THE SHA STANDARD SPECIFICATIONS.
1. A LAYER OF APPROVED TOPSOIL AT LEAST 4 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS FLATTER THAN 2:1 AND IN ALL CHANNELS PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
2. A LAYER OF APPROVED TOPSOIL AT LEAST 2 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS 2:1 AND STEEPER PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.

7.10 **TURFGRASS ESTABLISHMENT** SHALL BE PERFORMED IN ALL DISTURBED AREAS OF THE SHA RIGHT OF WAY, OR WITHIN THE AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 705 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-16-12 FERTILIZER SHALL BE REDUCED TO 200 LBS PER ACRE, AND NO FERTILIZER SHALL BE APPLIED FROM NOV. 15 TO MAR. 1.

7.11 **SOIL STABILIZATION MATTING** SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 804 OF THE SHA STANDARD SPECIFICATIONS, IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT PER SECTION 705 OR MEADOW ESTABLISHMENT AS FOLLOWS:
1. AREAS FLATTER THAN 6:1, TYPE A OR TYPE E MATTING MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT.
2. AREAS STEEPER THAN 6:1 AND FLATTER THAN 4:1, TYPE A AND TYPE E MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE ON THE PLANS.
3. CHANNELS, STORMWATER MANAGEMENT FACILITIES, AND SLOPES OF 4:1 AND STEEPER, TYPE A SOIL STABILIZATION MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE ON THE PLANS.

7.24 **FINISHED MATERIALS.** THE SUITABILITY, COLOR AND TEXTURE OF APPLICANT TO INSERT NAME OF MATERIALS TO BE INSTALLED IN THE SHA RIGHT OF WAY SHALL BE APPROVED BEFORE INSTALLATION. THE CONTRACTOR SHALL FURNISH SAMPLES OR MAKE ARRANGEMENTS FOR INSPECTION AND APPROVAL AT THE PROJECT SITE.

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_08-11-SSTL.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/19/16

SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN

WESTMOUNT - PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	9 OF 60

SHA TRACKING NO. 14APHO018XX F 15-087

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L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_08-11-SSTL.dwg, 7/12/2016 9:47:04 AM, jennifer, 1:1

MATCHLINE - SHEET 8

MATCHLINE - SHEET 9

MATCHLINE - SHEET 11

O.S. LOT 71

O.S. LOT 59

O.S. LOT 55

O.S. LOT 58

O.S. LOT 57

O.S. LOT 56

LOT 20

LOT 19

LOT 18

LOT 17

LOT 16

LOT 15

LOT 14

LOT 13

LOT 12

LOT 11

LOT 10

LOT 9

BURTON DRIVE

N 581500 E 1341000

N 581000 E 1341000

N 581750 E 1346750

NO PARKING ANY TIME R7-1 12" X 18"

10+00

11+00

12+00

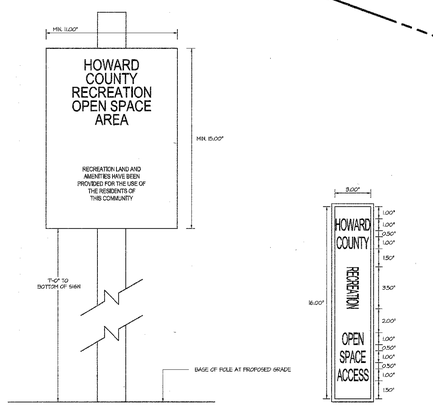
12+70

NON-BUILDABLE BULK PARCEL 'C'

CREDITED OPEN SPACE LOT 1
(TO BE DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS)

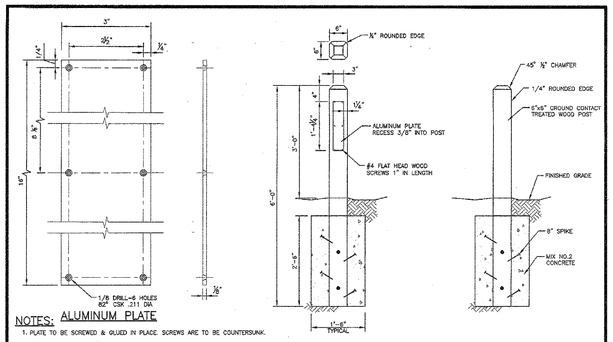
PROPERTY OF PHILIP D. CARROLL AND CAMILLA CARROLL L. 3547, F. 69 ZONED: RC-DEO

BRUSH



REC OPEN SPACE SIGN DETAIL
NOT TO SCALE

RECREATION OPEN SPACE G-7.41 - 3" X 16' BOLLARD SIGN DETAIL
NOT TO SCALE



NOTES: ALUMINUM PLATE

1. PLATE TO BE SCREWED & GLUED IN PLACE SCREWS ARE TO BE COUNTERSUNK.
2. BOLLARDS WILL BE PLACED AT THE FOUR CORNERS OF THE OPEN SPACE ACCESS STRIP.
3. THE ALUMINUM PLATE WILL ONLY BE REQUIRED ON THE FRONT RIGHT BOLLARD DIRECTLY FACING THE ROAD.

Revised	Howard County, Maryland Department of Public Works	Open Space Bollard	Detail G-7.41
Revised 3/7/2003	Approved: Chief, Bureau of Engineering		

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 28, 2018

7/14/16

STATE OF MARYLAND — CHRISTOPHER CARLSON — PROFESSIONAL ENGINEER

SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	10 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

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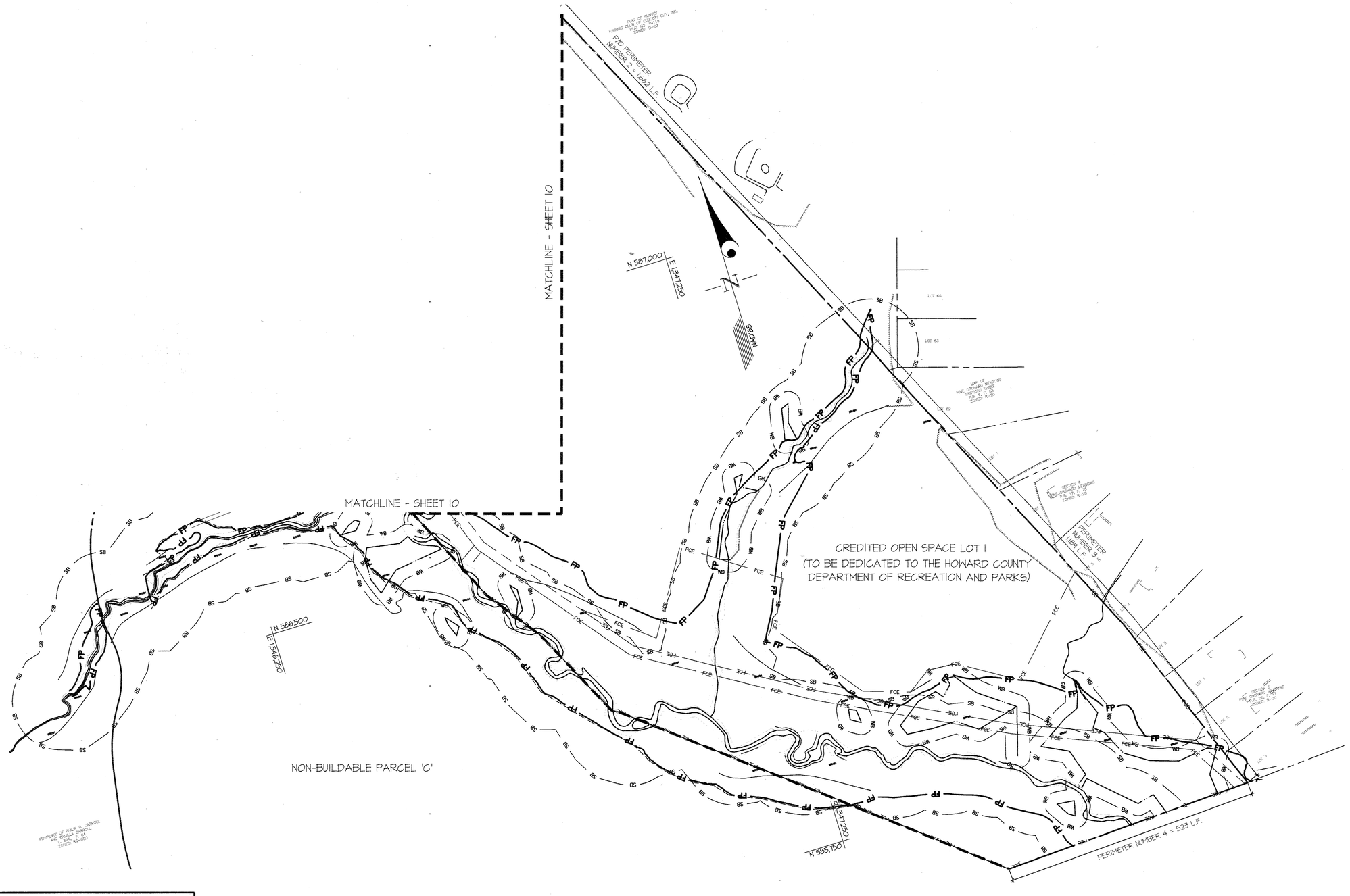

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\WORKS-SD (PHT)\13013_08-11-SSSL.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:

WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018

7/14/16

SIGNING, STREET TREE, LIGHTING & LANDSCAPE PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

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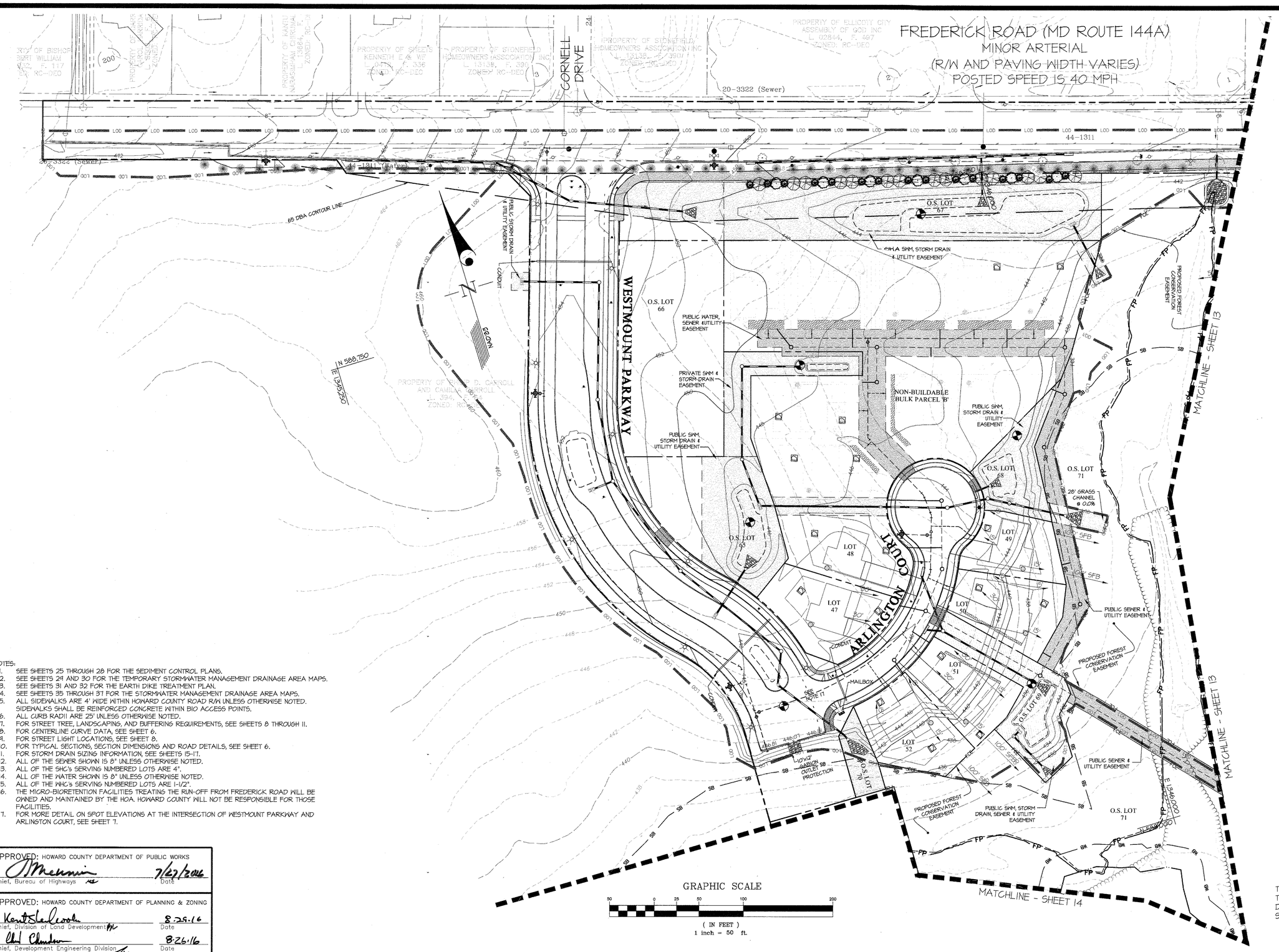
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016.	23-6&12	11 OF 60

© GLW 2015

SHA TRACKING NO. 14APHO018XX F 15-087



LEGEND

- RAIN BARREL (M-1)
- D — DRY WELL (M-5)
- 15' — ROOFTOP DISCONNECT (N-1)
- 100' SFB — SHEET FLOW TO BUFFER (N-3)
- MBR-100 — MICRO BIO-RETENTION FACILITY (M-6)
- ACCESS POINT TO BIORETENTION FACILITY (SIDEWALK WITHIN THIS REGION SHOULD BE REINFORCED CONCRETE)
- 10' WATER/SEWER OFFSET UTILITY EASEMENT WITHIN BRL

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NOTES:

1. SEE SHEETS 25 THROUGH 28 FOR THE SEDIMENT CONTROL PLANS.
2. SEE SHEETS 29 AND 30 FOR THE TEMPORARY STORMWATER MANAGEMENT DRAINAGE AREA MAPS.
3. SEE SHEETS 31 AND 32 FOR THE EARTH DIKE TREATMENT PLAN.
4. SEE SHEETS 35 THROUGH 37 FOR THE STORMWATER MANAGEMENT DRAINAGE AREA MAPS.
5. ALL SIDEWALKS ARE 4' WIDE WITHIN HOWARD COUNTY ROAD R/W UNLESS OTHERWISE NOTED. SIDEWALKS SHALL BE REINFORCED CONCRETE WITHIN BIO ACCESS POINTS.
6. ALL CURB RADII ARE 25' UNLESS OTHERWISE NOTED.
7. FOR STREET TREE, LANDSCAPING, AND BUFFERING REQUIREMENTS, SEE SHEETS 8 THROUGH 11.
8. FOR CENTERLINE CURVE DATA, SEE SHEET 6.
9. FOR STREET LIGHT LOCATIONS, SEE SHEET 8.
10. FOR TYPICAL SECTIONS, SECTION DIMENSIONS AND ROAD DETAILS, SEE SHEET 6.
11. FOR STORM DRAIN SIZING INFORMATION, SEE SHEETS 15-17.
12. ALL OF THE SEWER SHOWN IS 8" UNLESS OTHERWISE NOTED.
13. ALL OF THE SHC's SERVING NUMBERED LOTS ARE 4".
14. ALL OF THE WATER SHOWN IS 8" UNLESS OTHERWISE NOTED.
15. ALL OF THE WHC's SERVING NUMBERED LOTS ARE 1-1/2".
16. THE MICRO-BIORETENTION FACILITIES TREATING THE RUN-OFF FROM FREDERICK ROAD WILL BE OWNED AND MAINTAINED BY THE HOA. HOWARD COUNTY WILL NOT BE RESPONSIBLE FOR THOSE FACILITIES.
17. FOR MORE DETAIL ON SPOT ELEVATIONS AT THE INTERSECTION OF WESTMOUNT PARKWAY AND ARLINGTON COURT, SEE SHEET 7.

THE PURPOSE OF THIS PLAN IS TO CLEARLY SHOW THE GRADING THAT WILL BE USED ON OTHER SHEETS IN THE PLAN SET FOR THE DESIGN OF THE STORM DRAINS, STORMWATER MANAGEMENT AND SEDIMENT CONTROL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.25.16
Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.
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L:\CADD\DRAWINGS\13013\PLANS BY GLW\DCADS-50 (PHT)\13013_12-14-GRADING.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

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EXPIRATION DATE: MAY 26, 2018
7/14/16

GRADING PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	12 OF 60

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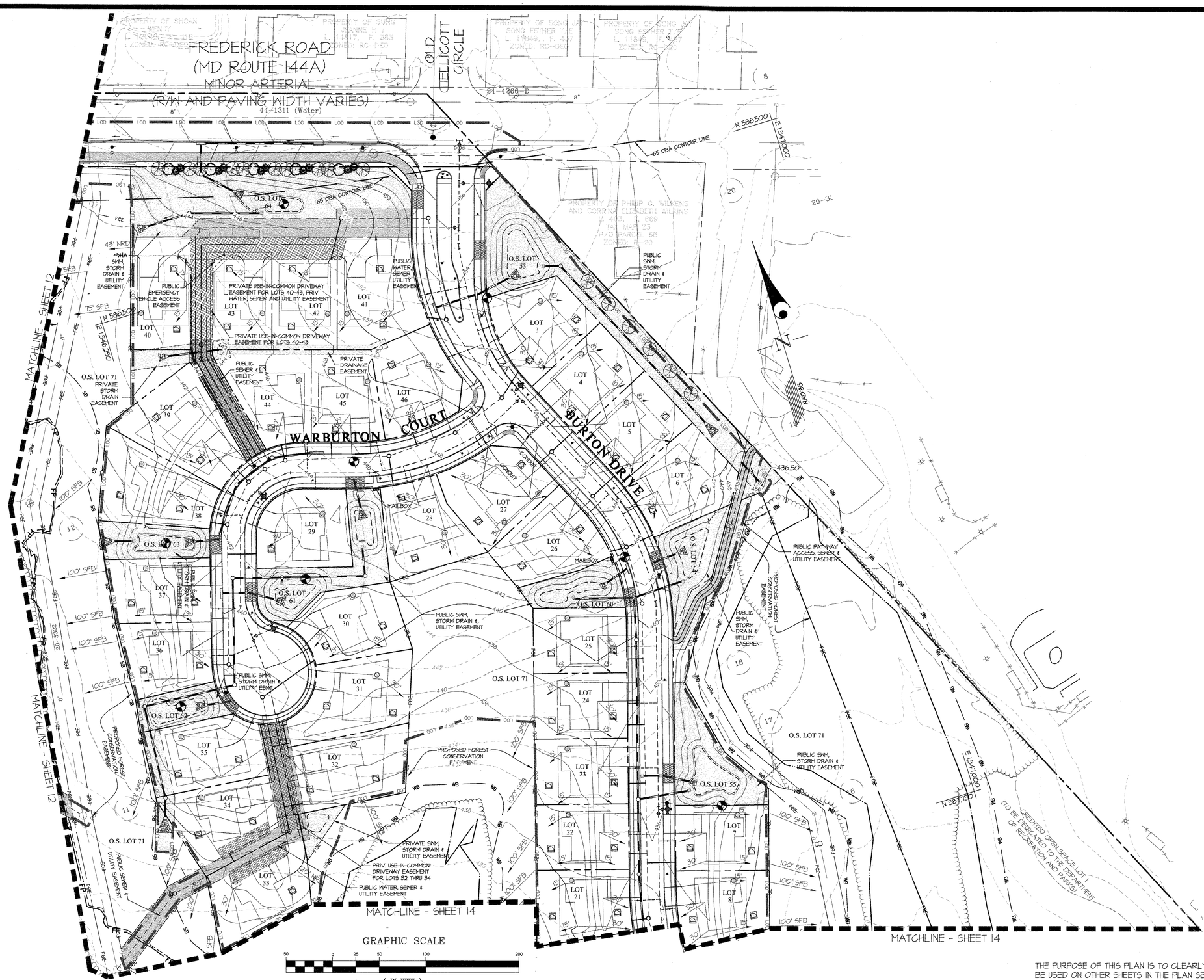
SHA TRACKING NO. 14APHO018XX F 15-087



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3. SEE SHEETS 31 AND 32 FOR THE EARTH DIKE TREATMENT PLAN.
4. SEE SHEETS 35 THROUGH 37 FOR THE STORMWATER MANAGEMENT DRAINAGE AREA MAPS.
5. SEE SHEET 16 FOR LIMITS OF TURF REINFORCEMENT WITHIN PUBLIC EMERGENCY VEHICLE ACCESS EASEMENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

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DATE	REVISION	BY	APP'R.

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7/14/16

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1" = 50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	13 OF 60

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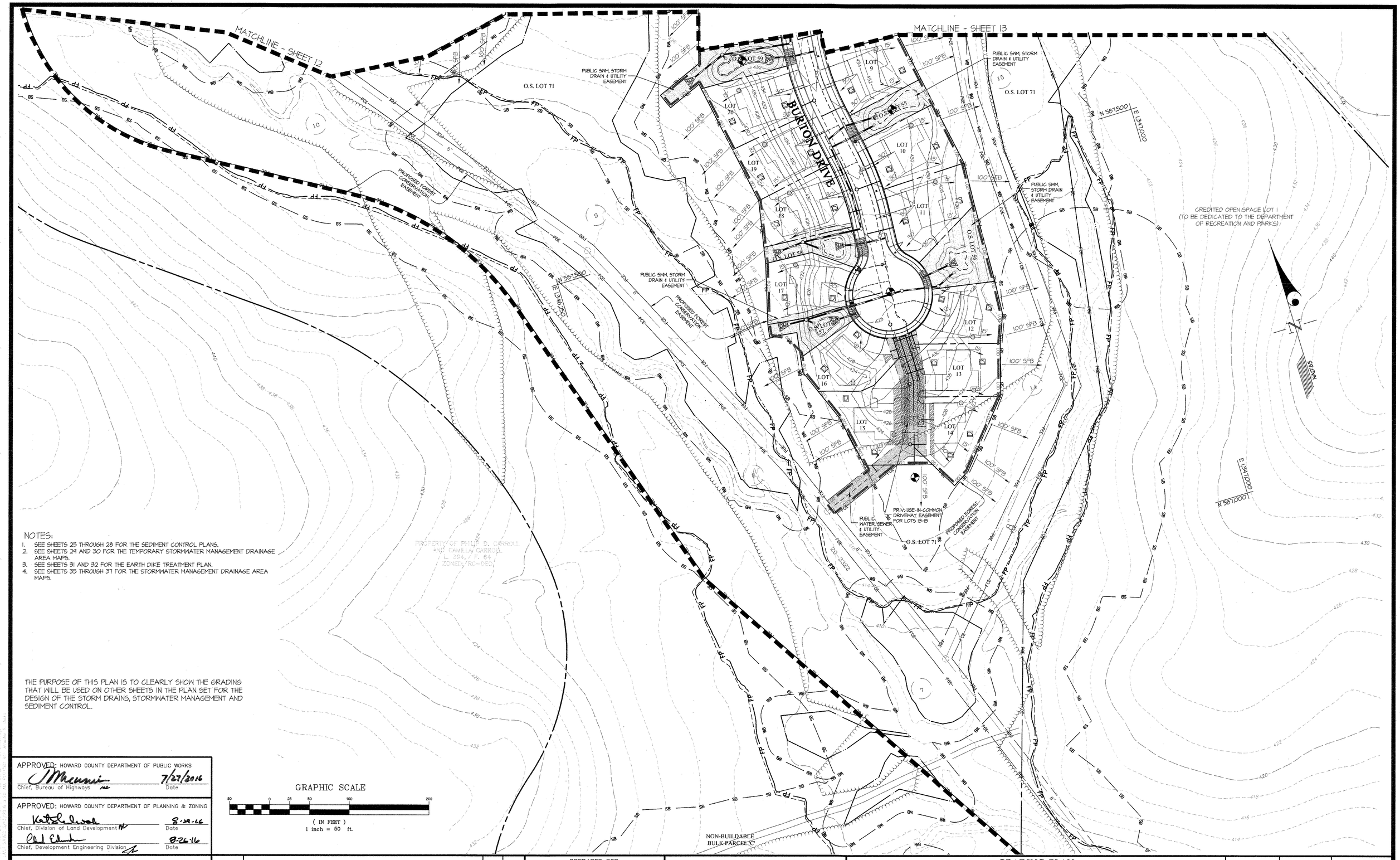
SHA TRACKING NO. 14APHO018XX F 15-087



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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

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EXPIRATION DATE: MAY 26, 2018
7/14/16

GRADING PLAN

WESTMOUNT - PHASE 1

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SCALE	ZONING	G. L. W. FILE No.
1" = 50'	R-ED	13-013
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JULY, 2016	23-6&12	14 OF 60

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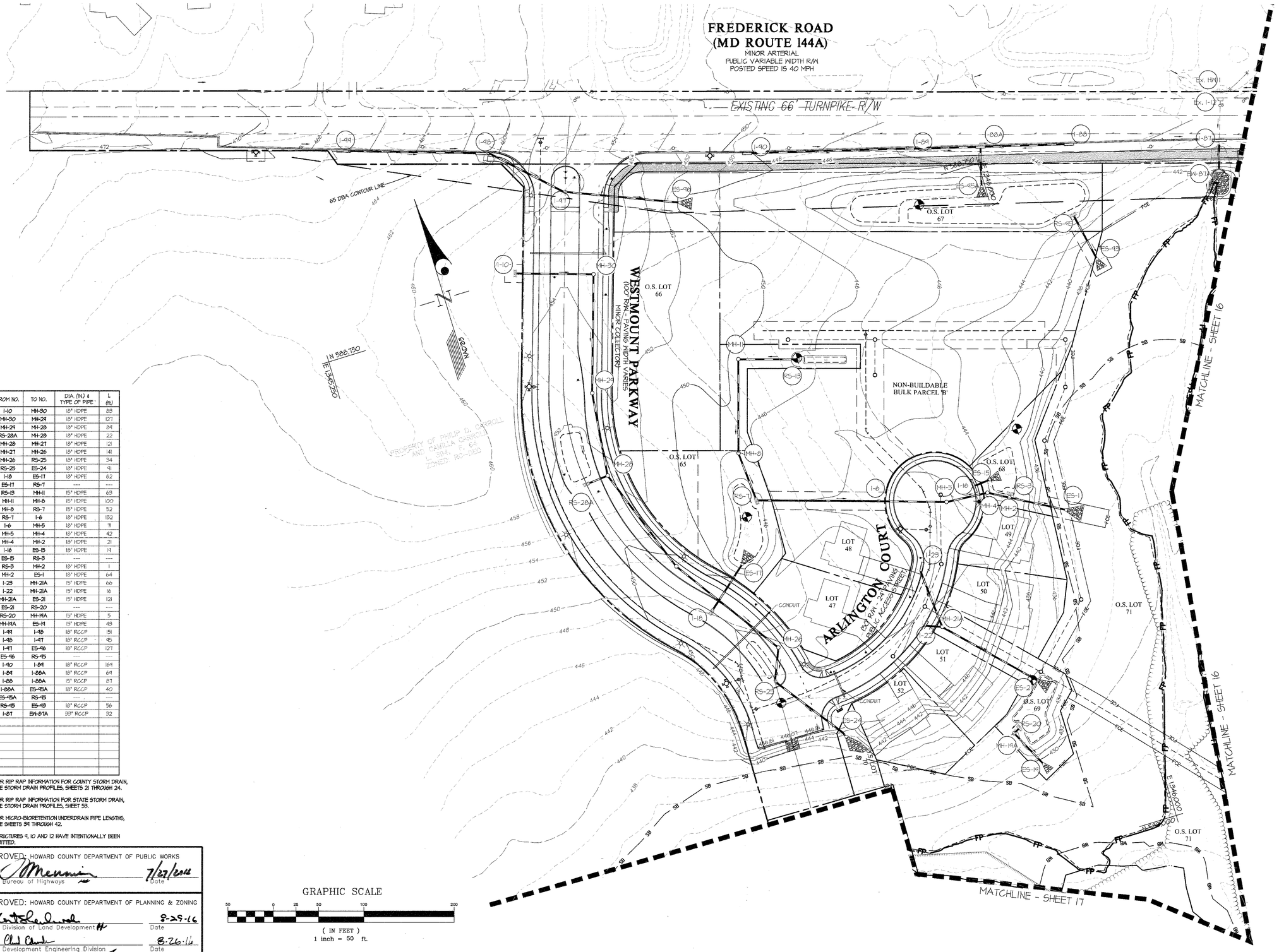

FROM NO.	TO NO.	DIA. (IN) & TYPE OF PIPE	L (ft)
I-10	MH-30	18" HDPE	88
MH-30	MH-24	18" HDPE	121
MH-24	MH-28	18" HDPE	84
R5-28A	MH-28	18" HDPE	22
MH-28	MH-27	18" HDPE	121
MH-27	MH-26	18" HDPE	141
MH-26	R5-25	18" HDPE	34
R5-25	E5-24	18" HDPE	91
I-18	E5-17	18" HDPE	62
E5-17	R5-7	---	---
R5-13	MH-11	15" HDPE	63
MH-11	MH-8	15" HDPE	100
MH-8	R5-7	15" HDPE	52
R5-7	I-6	18" HDPE	132
I-6	MH-5	18" HDPE	71
MH-5	MH-4	18" HDPE	42
MH-4	MH-2	18" HDPE	21
I-16	E5-15	18" HDPE	91
E5-15	R5-3	---	---
R5-3	MH-2	18" HDPE	1
MH-2	E5-1	18" HDPE	64
I-23	MH-21A	15" HDPE	66
I-22	MH-21A	15" HDPE	16
MH-21A	E5-21	15" HDPE	121
E5-21	R5-20	---	---
R5-20	MH-19A	15" HDPE	5
MH-19A	E5-19	15" HDPE	43
I-89	I-88	18" RCCP	151
I-88	I-87	18" RCCP	85
I-87	E5-96	18" RCCP	127
E5-96	R5-95	---	---
I-90	I-89	18" RCCP	168
I-89	I-88A	18" RCCP	64
I-88	I-88A	15" RCCP	87
I-88A	E5-95A	18" RCCP	40
E5-95A	R5-95	---	---
R5-95	E5-93	18" RCCP	56
I-87	EH-87A	33" RCCP	32

FOR RIP RAP INFORMATION FOR COUNTY STORM DRAIN, SEE STORM DRAIN PROFILES, SHEETS 21 THROUGH 24.

FOR RIP RAP INFORMATION FOR STATE STORM DRAIN, SEE STORM DRAIN PROFILES, SHEET 53.

FOR MICRO-BIORETENTION UNDERDRAIN PIPE LENGTHS, SEE SHEETS 39 THROUGH 42.

STRUCTURES 9, 10 AND 12 HAVE INTENTIONALLY BEEN OMITTED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

GLW GUTSCHICK LITTLE & WEBER, P.A.
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E:\CADD\DRAWINGS\13013\PLANS BY GLW\SHEETS-59 (PHT)\13013_15-17-30 INFO.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
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3500 MANOR LANE
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7/14/16

STORM DRAIN INFORMATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	15 OF 60

© GLW 2015

SHA TRACKING NO. 14APHO018XX F 15-087

FROM NO.	TO NO.	DIA. (IN.) & TYPE OF PIPE	L (ft)
I-40	ES-39	15" HDPE	34
ES-39	RS-38	---	---
RS-38	MH-37	15" HDPE	28
MH-37	MH-36	15" HDPE	85
I-45	I-44	15" HDPE	24
I-44	ES-43	15" HDPE	32
ES-43	RS-35	---	---
RS-35	MH-36	15" HDPE	3
MH-36	MH-34	15" HDPE	44
MH-34	MH-33	15" HDPE	110
MH-33	RS-32	15" HDPE	65
I-42	ES-41	15" HDPE	24
ES-41	RS-32	---	---
RS-32	MH-31B	24" HDPE	27
MH-31B	MH-31A	24" HDPE	46
MH-31A	ES-31	24" HDPE	21
I-7A	MH-6A	15" HDPE	35
MH-6A	MH-5A	15" HDPE	46
MH-5A	I-4A	15" HDPE	52
I-4A	ES-3A	15" HDPE	30
ES-3A	RS-2A	---	---
RS-2A	ES-1A	18" HDPE	22
ES-9A	ES-8A	15" HDPE	58
I-50	I-49	15" HDPE	43
I-49	ES-48	15" HDPE	41
ES-48	RS-47	---	---
RS-47	MH-46A	15" HDPE	15
MH-46A	ES-46	15" HDPE	229
I-58	ES-57	15" HDPE	24
ES-57	RS-54	---	---
RS-54	MH-52	15" HDPE	63
I-56	ES-55	15" HDPE	28
ES-55	RS-53	---	---
RS-53	MH-52	15" HDPE	52
MH-52	MH-51	15" HDPE	41
MH-51	MH-59	15" HDPE	167
I-63	I-62	15" HDPE	16
I-62	ES-61	15" HDPE	33
ES-61	RS-60	---	---
RS-60	MH-59	15" HDPE	52
MH-59	MH-64C	18" HDPE	16
MH-64C	MH-64B	18" HDPE	65
I-42	I-41	18" RCCP	118
I-41	MH-101B	18" RCCP	30
MH-101B	ES-101A	18" RCCP	40
ES-101A	RS-101	---	---
RS-101	MH-100A	18" RCCP	74
MH-100A	ES-100	18" RCCP	48

FOR RIP RAP INFORMATION FOR COUNTY STORM DRAIN, SEE STORM DRAIN PROFILES, SHEETS 21 THROUGH 24.

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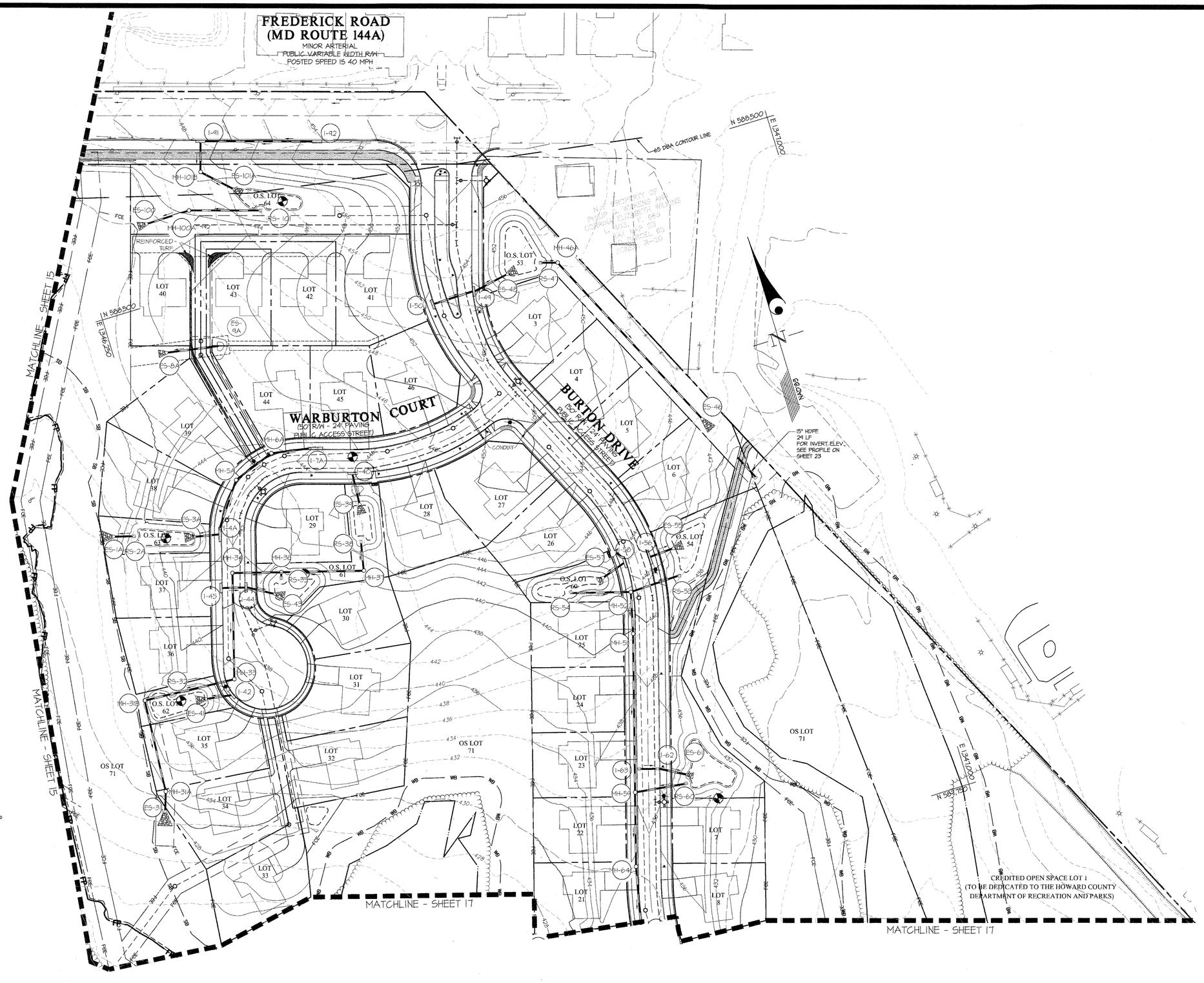
50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

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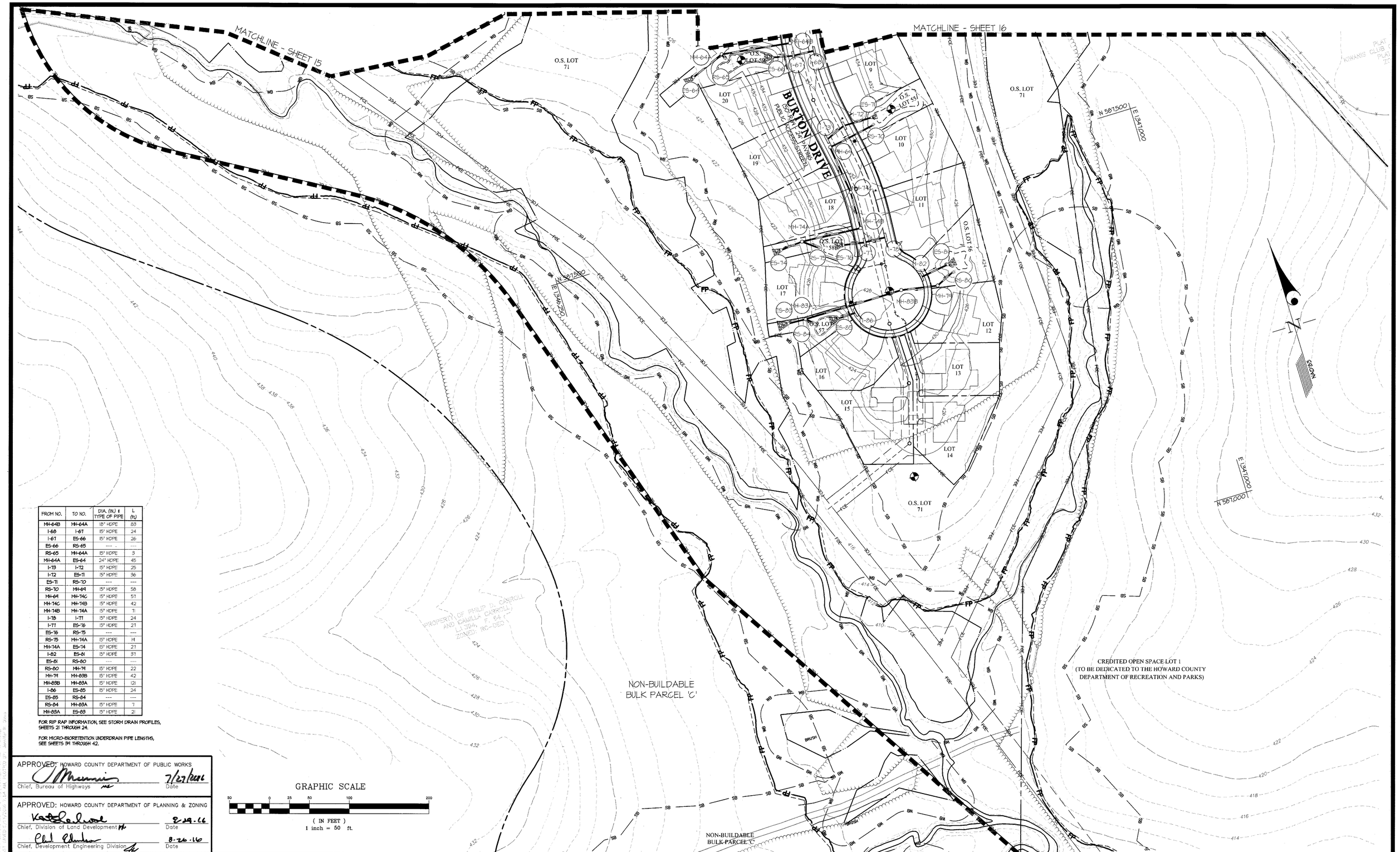

FROM NO.	TO NO.	DIA. (IN.) & TYPE OF PIPE	L (ft.)
MH-64B	MH-64A	18" HDPE	83
I-68	I-67	15" HDPE	24
I-67	ES-66	15" HDPE	26
ES-66	RS-65	---	---
RS-65	MH-64A	15" HDPE	3
MH-64A	ES-64	24" HDPE	45
I-73	I-72	15" HDPE	25
I-72	ES-71	15" HDPE	36
ES-71	RS-70	---	---
RS-70	MH-69	15" HDPE	58
MH-69	MH-74C	15" HDPE	57
MH-74C	MH-74B	15" HDPE	42
MH-74B	MH-74A	15" HDPE	71
I-78	I-77	15" HDPE	24
I-77	ES-76	15" HDPE	27
ES-76	RS-75	---	---
RS-75	MH-74A	15" HDPE	19
MH-74A	ES-74	15" HDPE	27
I-82	ES-81	15" HDPE	37
ES-81	RS-80	---	---
RS-80	MH-79	15" HDPE	22
MH-79	MH-83B	15" HDPE	42
MH-83B	MH-83A	15" HDPE	121
I-86	ES-85	15" HDPE	24
ES-85	RS-84	---	---
RS-84	MH-83A	15" HDPE	7
MH-83A	ES-83	15" HDPE	21

FOR RIP RAP INFORMATION, SEE STORM DRAIN PROFILES, SHEETS 21 THROUGH 24.

FOR MICRO-BIORETENTION UNDERDRAIN PIPE LENGTHS, SEE SHEETS 39 THROUGH 42.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY CLW\RDAGS-SD (PH1)\13013_15-17-SD INFO.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16

STORM DRAIN INFORMATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	17 OF 60

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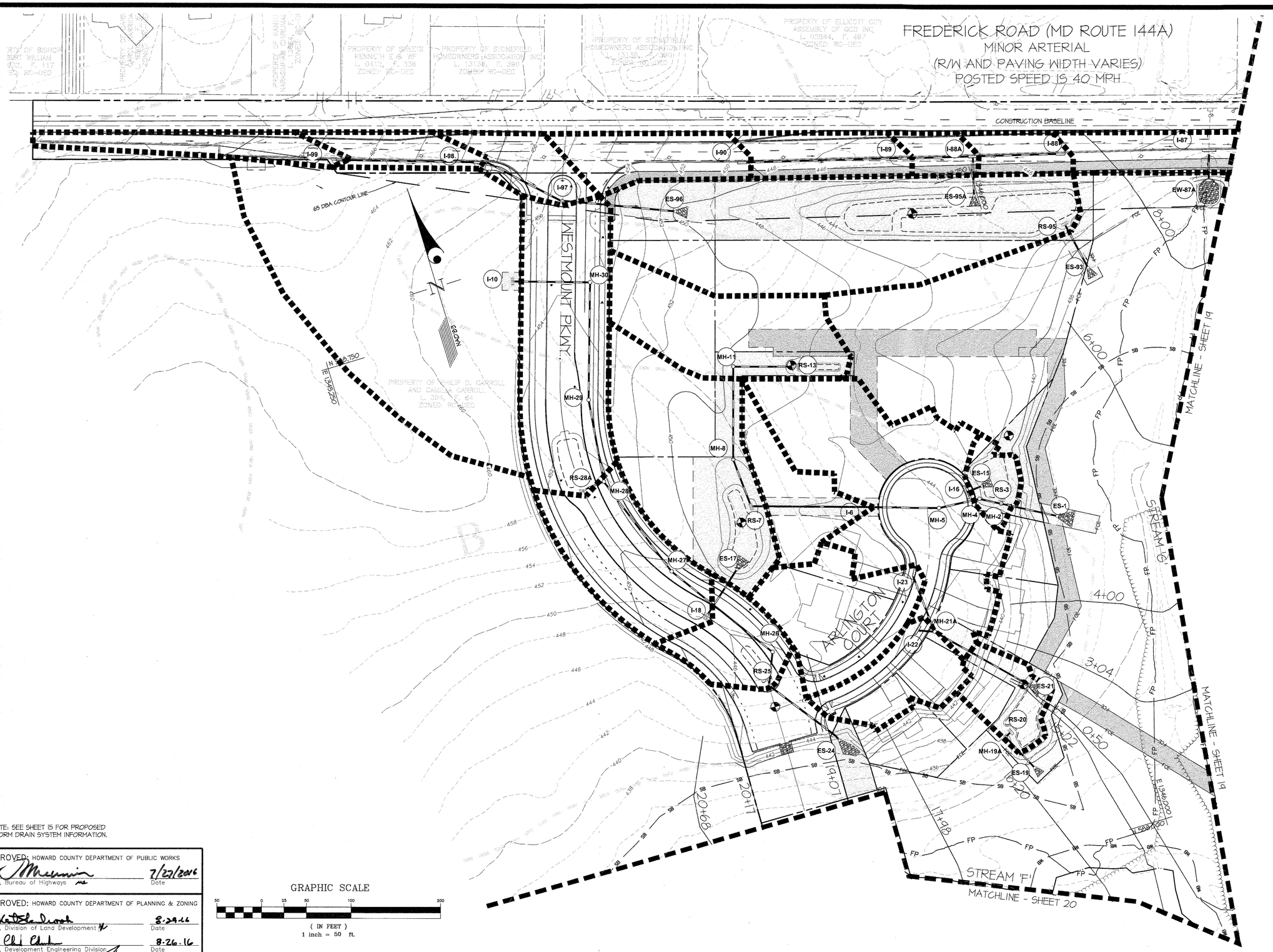
SHA TRACKING NO. 14APHO018XX F 15-087



NOTE: SEE SHEET 15 FOR PROPOSED STORM DRAIN SYSTEM INFORMATION.

"C" FACTOR COMPUTATIONS			
STRUCTURE	AREA (AC.)	"C"	IMPERVIOUS
I-4A	0.43 Ac.	0.61	64%
I-6	0.25 Ac.	0.61	64%
I-7A	0.54 Ac.	0.61	64%
ES-9A	0.20 Ac.	0.61	64%
I-10	1.72 Ac.	0.35	18%
I-16	0.91 Ac.	0.61	64%
I-18	0.45 Ac.	0.71	76%
I-22	0.25 Ac.	0.61	64%
I-23	0.42 Ac.	0.61	64%
I-40	0.25 Ac.	0.61	64%
I-42	0.54 Ac.	0.61	64%
I-44	0.22 Ac.	0.61	64%
I-45	0.01 Ac.	0.61	64%
I-49	0.16 Ac.	0.61	64%
I-50	0.22 Ac.	0.61	64%
I-56	0.46 Ac.	0.61	64%
I-58	0.25 Ac.	0.61	64%
I-62	0.13 Ac.	0.71	76%
I-63	0.30 Ac.	0.61	64%
I-67	0.28 Ac.	0.61	64%
I-68	0.22 Ac.	0.61	64%
I-72	0.15 Ac.	0.61	64%
I-73	0.16 Ac.	0.61	64%
I-77	0.18 Ac.	0.61	64%
I-78	0.18 Ac.	0.61	64%
I-82	0.22 Ac.	0.61	64%
I-86	0.26 Ac.	0.61	64%
I-87	0.32 Ac.	0.61	64%
I-88	0.11 Ac.	0.61	64%
I-88A	0.08 Ac.	0.61	64%
I-89	0.20 Ac.	0.61	64%
I-90	0.25 Ac.	0.61	64%
I-91	0.13 Ac.	0.61	64%
I-92	0.12 Ac.	0.61	64%
I-97	0.17 Ac.	0.61	64%
I-98	0.15 Ac.	0.61	64%
I-99	0.19 Ac.	0.61	64%
RS-2A	0.10 Ac.	0.34	16%
RS-3	0.10 Ac.	0.34	16%
RS-6	0.71 Ac.	0.34	16%
RS-13	0.54 Ac.	0.61	64%
RS-20	0.16 Ac.	0.34	16%
RS-25	0.23 Ac.	0.71	76%
RS-28A	0.14 Ac.	0.71	76%
RS-32	0.10 Ac.	0.34	16%
RS-35	0.15 Ac.	0.61	64%
RS-36	0.08 Ac.	0.34	16%
RS-47	0.15 Ac.	0.34	16%
RS-53	0.09 Ac.	0.34	16%
RS-54	0.09 Ac.	0.34	16%
RS-60	0.01 Ac.	0.34	16%
RS-65	0.01 Ac.	0.34	16%
RS-70	0.08 Ac.	0.34	16%
RS-75	0.06 Ac.	0.34	16%
RS-80	0.05 Ac.	0.34	16%
RS-84	0.06 Ac.	0.34	16%
RS-95	1.32 Ac.	0.34	16%
RS-101	0.31 Ac.	0.34	16%

FLOODPLAIN ELEVATIONS	
STATION	ELEVATION
STREAM 'G'	
0+50	423.25
3+04	427.43
4+00	429.21
6+00	433.81
8+00	437.71
STREAM 'F'	
15+22	424.18
16+20	424.54
17+98	427.32
19+07	429.36
20+17	431.35
20+68	432.10

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\NEW\S-ID (INIT)\13013_18-SD-DMA-SD.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018.

7/14/16

STORM DRAIN DRAINAGE AREA MAP

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	18 OF 60

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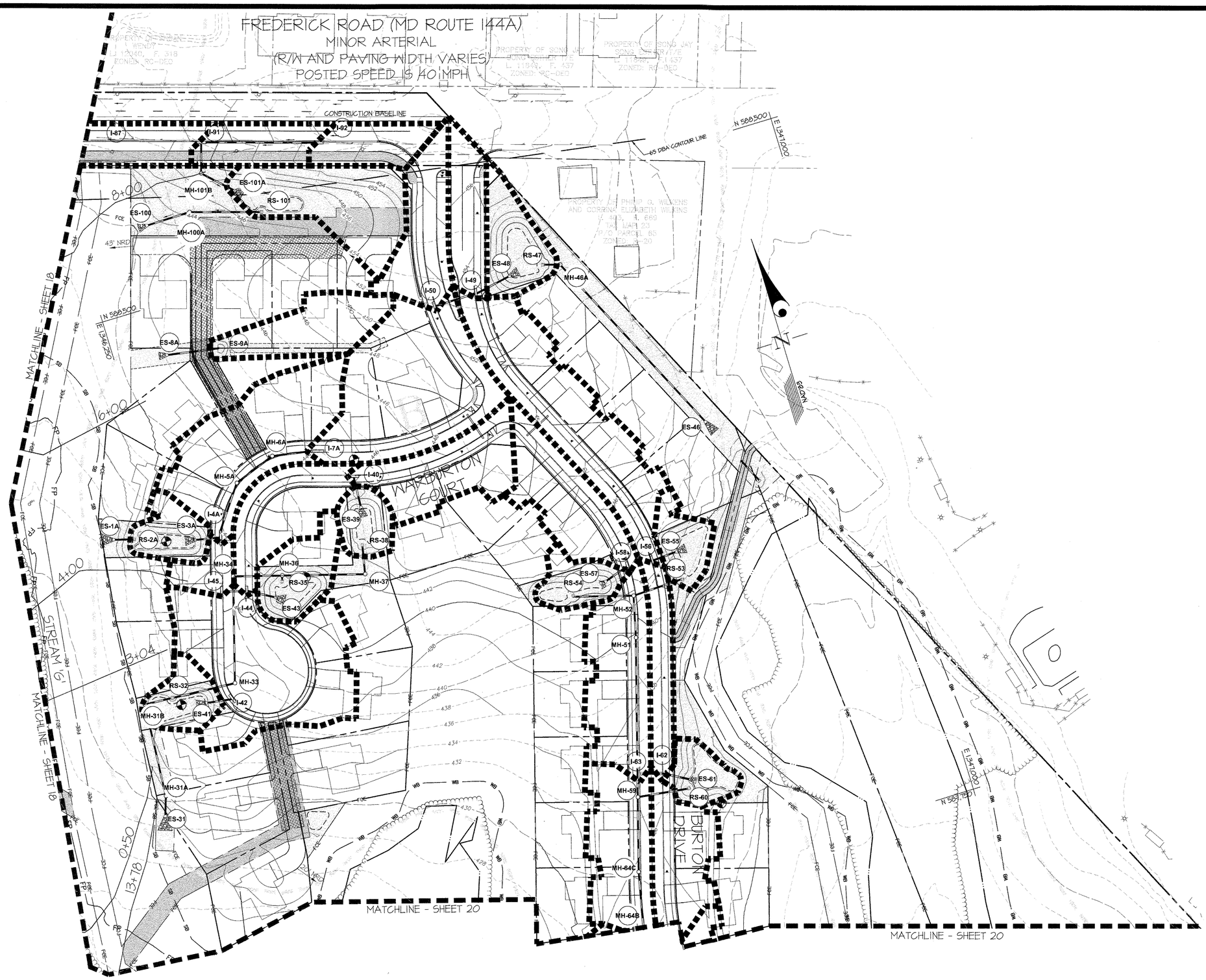
SHA TRACKING NO. 14APHO018XX F 15-087



FLOODPLAIN ELEVATIONS	
STATION	ELEVATION
STREAM 'G'	
0+50	423.25
3+04	427.43
4+00	429.27
6+00	433.87
8+00	437.71

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NOTE: SEE SHEET 16 FOR PROPOSED STORM DRAIN SYSTEM INFORMATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

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DES. JRD	DRN. JRD	CHK. DEV

DATE	REVISION	BY	APP'R.

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EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — CARLTON GERSHEIN GUTSCHICK — PROFESSIONAL ENGINEER

STORM DRAIN DRAINAGE AREA MAP

WESTMOUNT · PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

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ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	19 OF 60

SHA TRACKING NO. 14APHO018XX F 15-087

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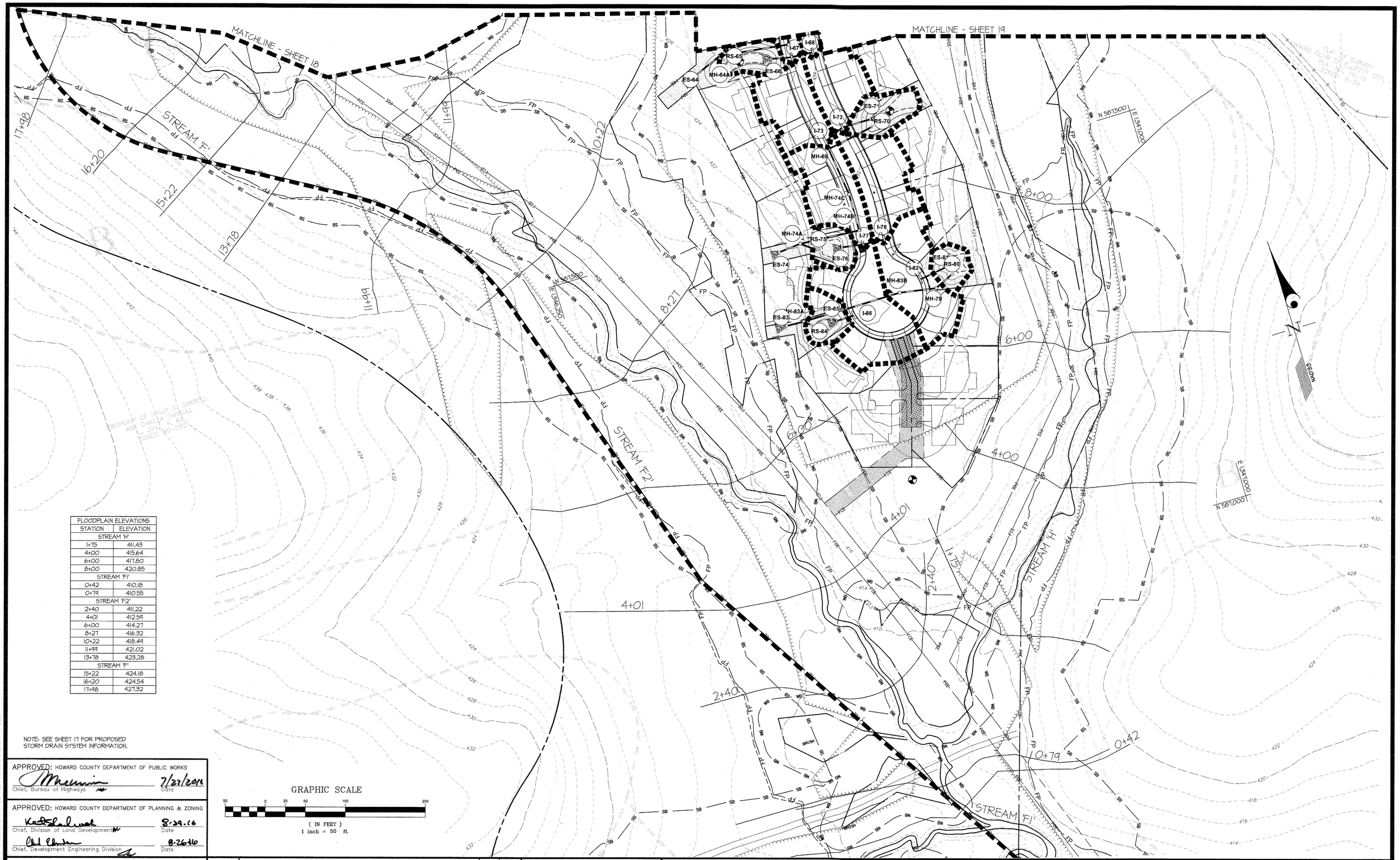

FLOODPLAIN ELEVATIONS	
STATION	ELEVATION
STREAM 'H'	
1+75	411.43
4+00	415.64
6+00	417.80
8+00	420.85
STREAM 'F1'	
0+42	410.18
0+79	410.55
STREAM 'F2'	
2+40	411.22
4+01	412.59
6+00	414.27
8+27	416.32
10+22	418.49
11+99	421.02
13+78	423.28
STREAM 'F'	
15+22	424.18
16+20	424.54
17+98	427.32

NOTE: SEE SHEET 17 FOR PROPOSED STORM DRAIN SYSTEM INFORMATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8-26-16

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EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — CARLTON KENNETH GUTSCHICK — No. 12975 — PROFESSIONAL ENGINEER

STORM DRAIN DRAINAGE AREA MAP

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	20 OF 60

SHA TRACKING NO. 14APHO018XX F 15-087

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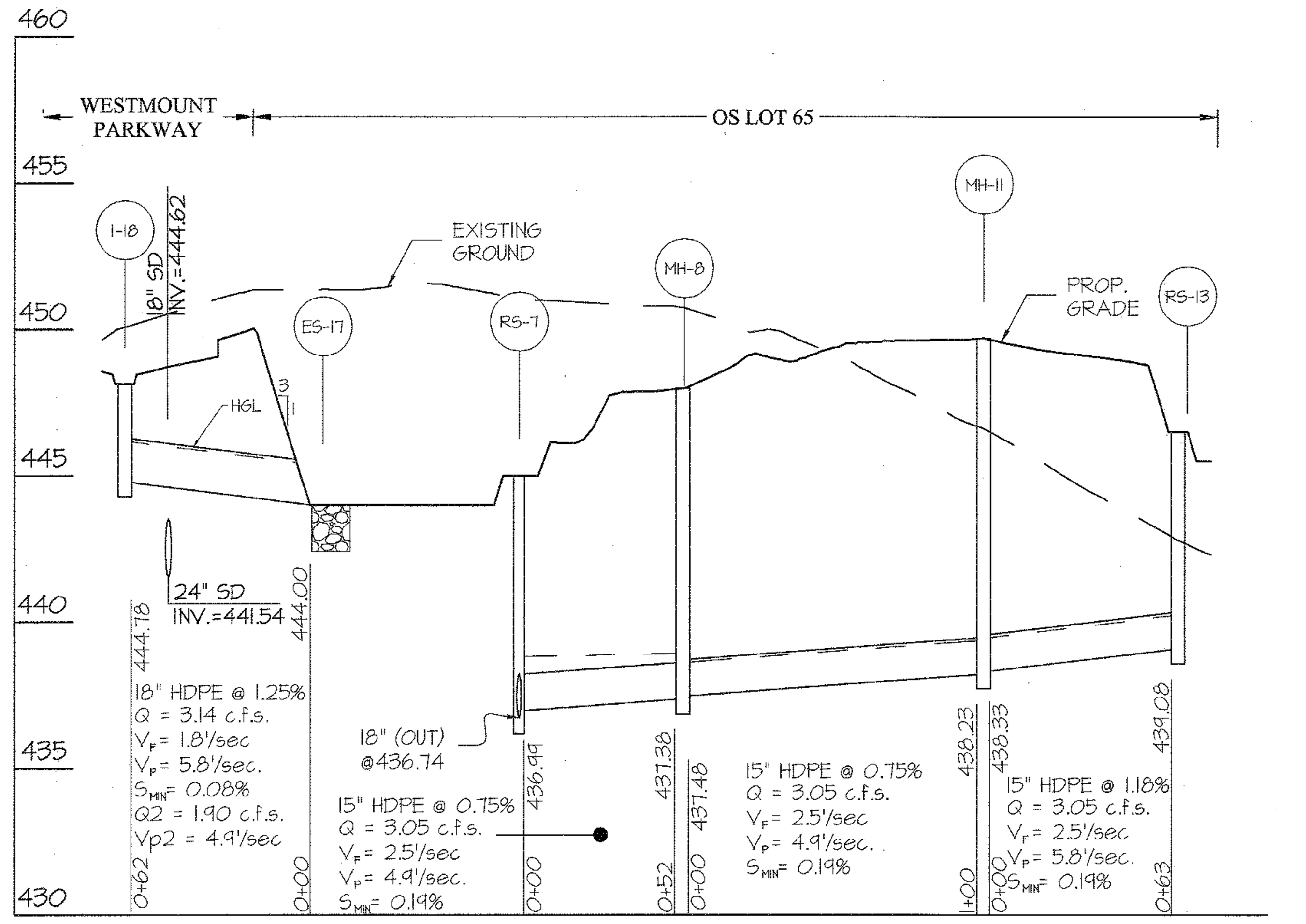

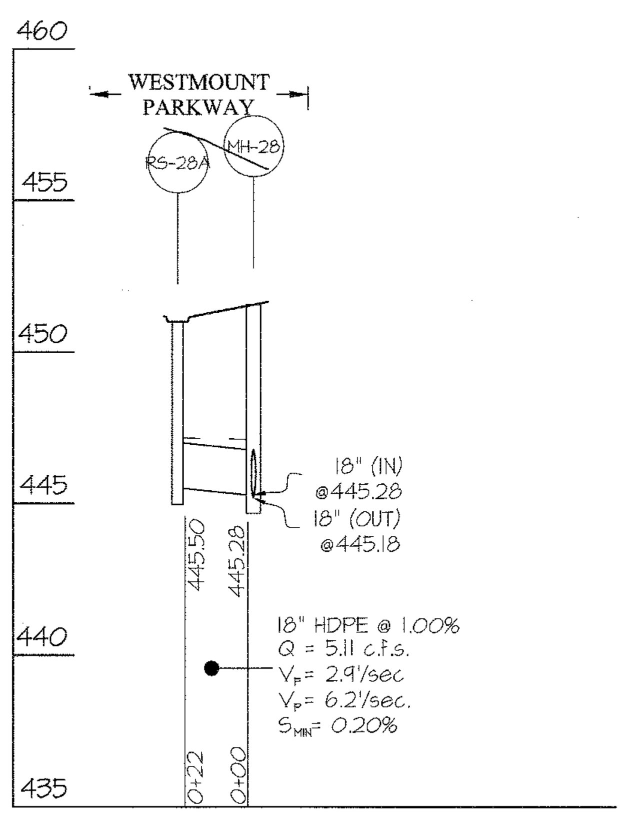

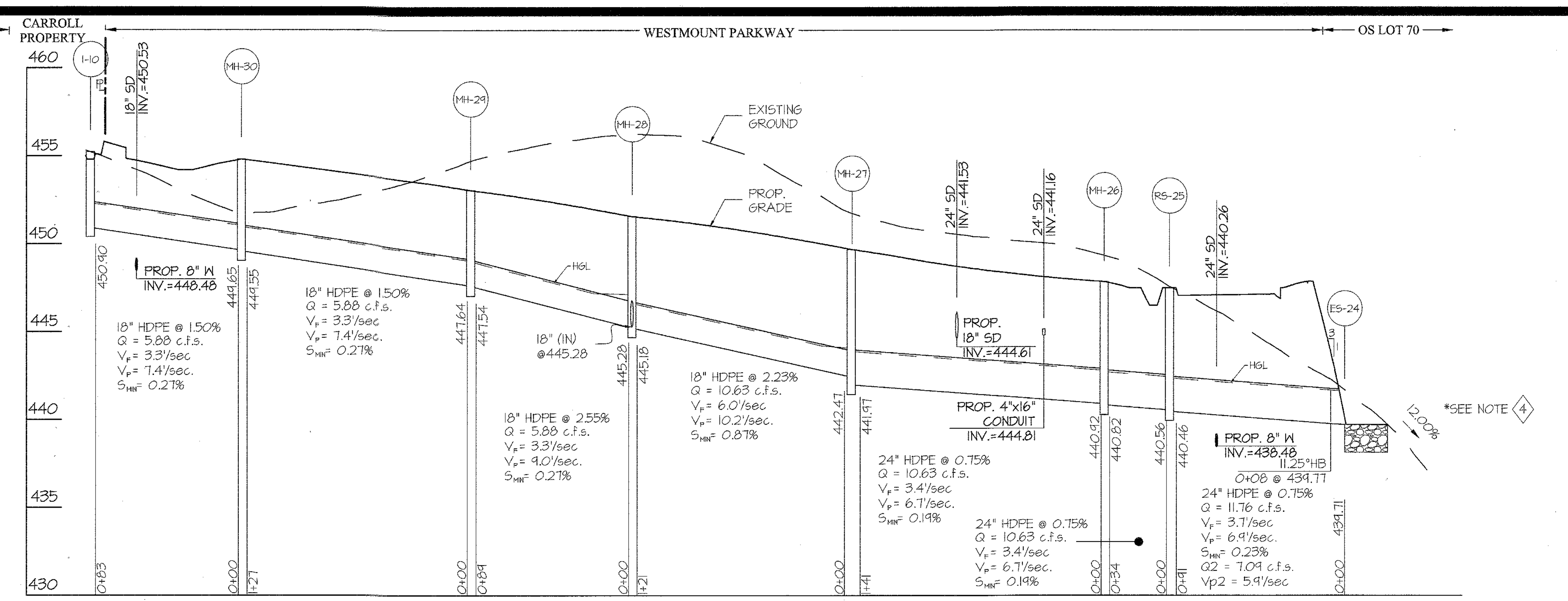

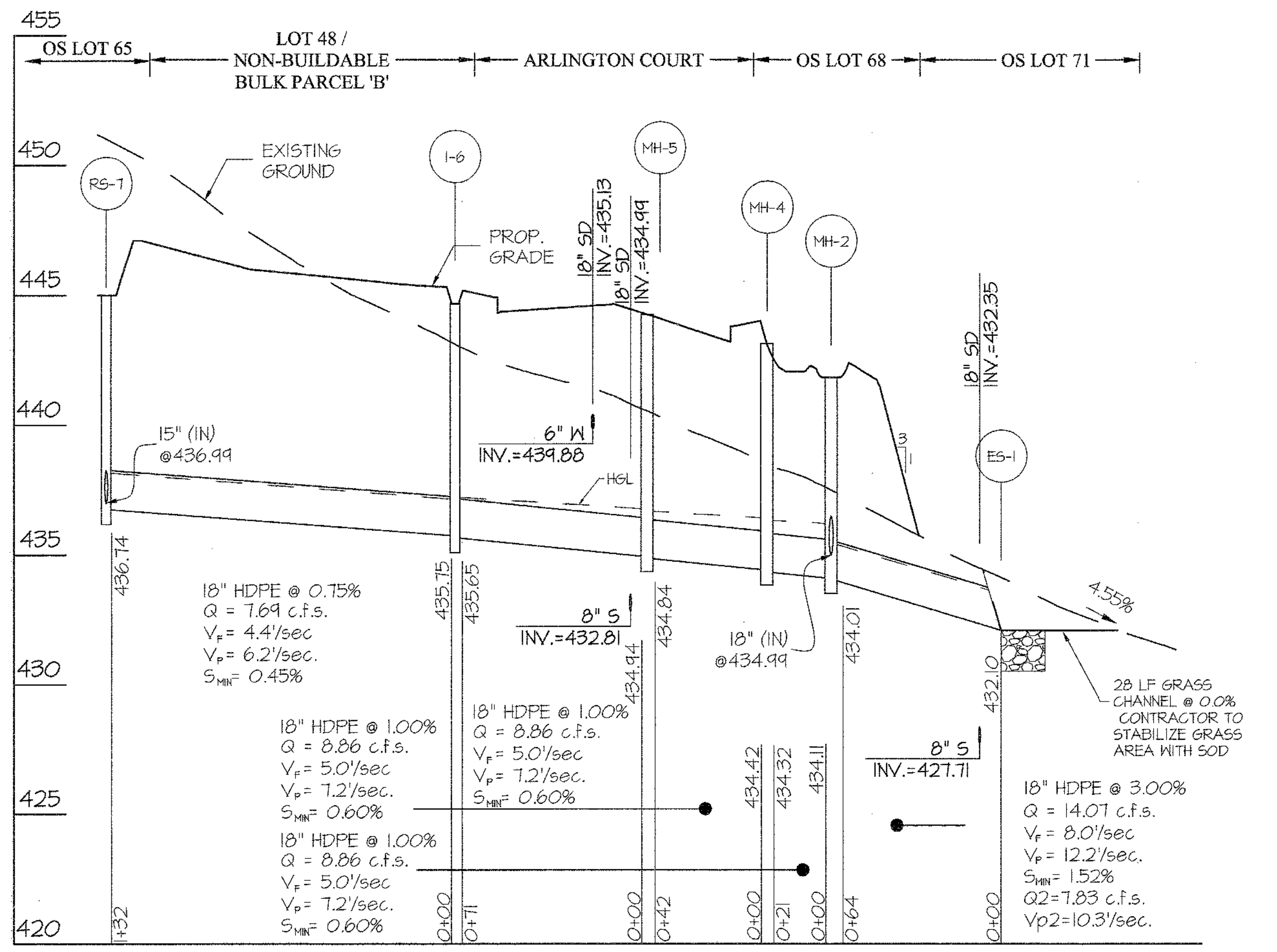

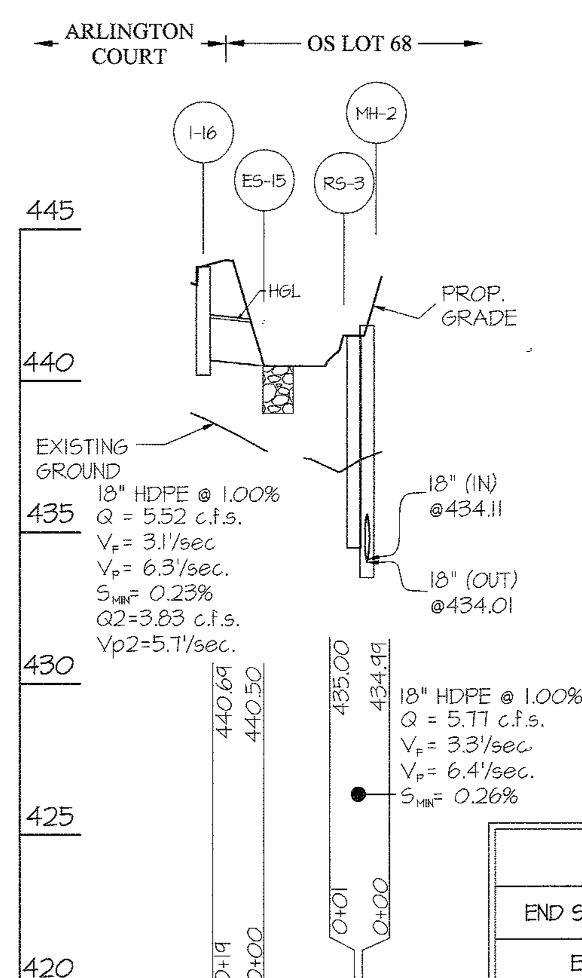

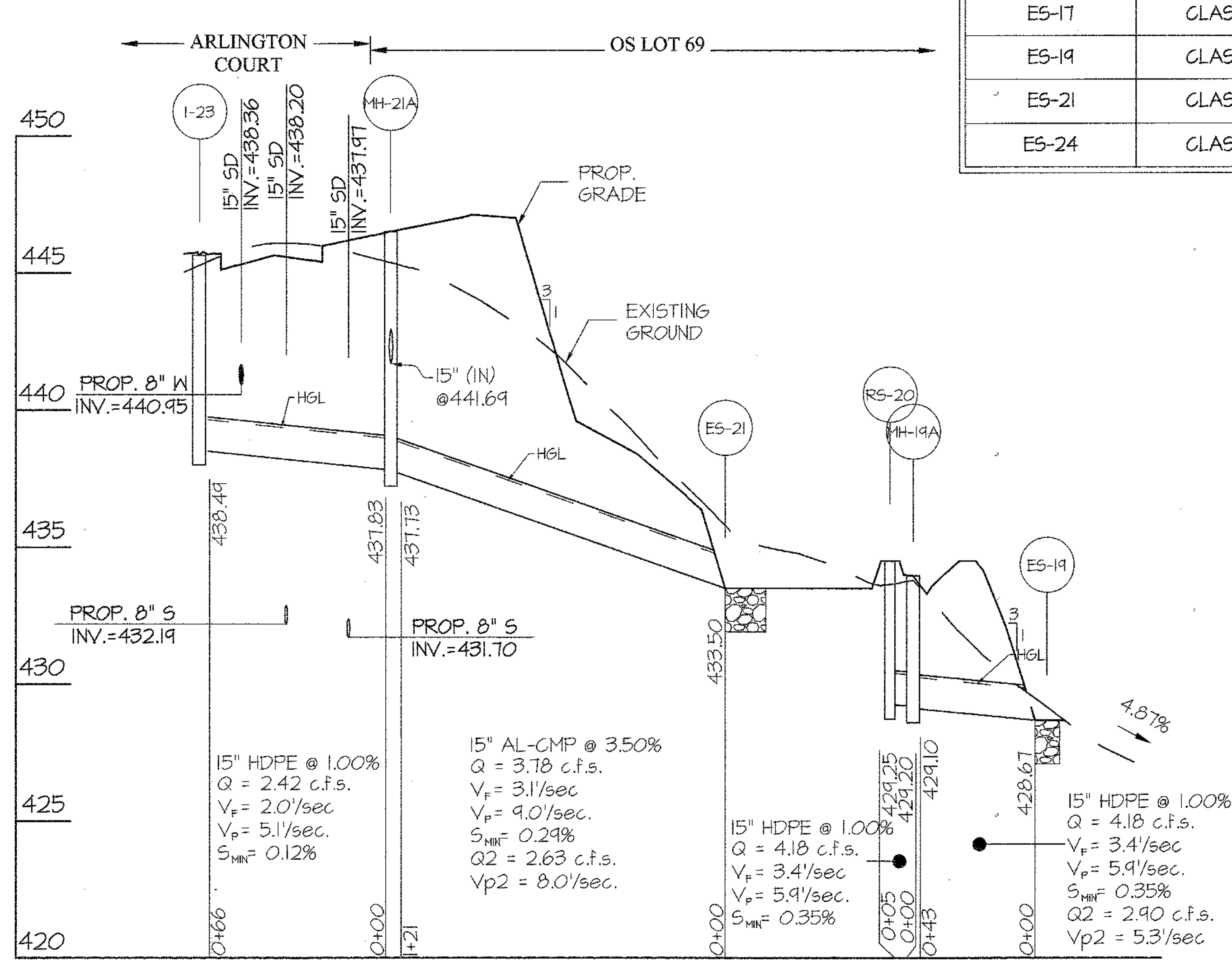

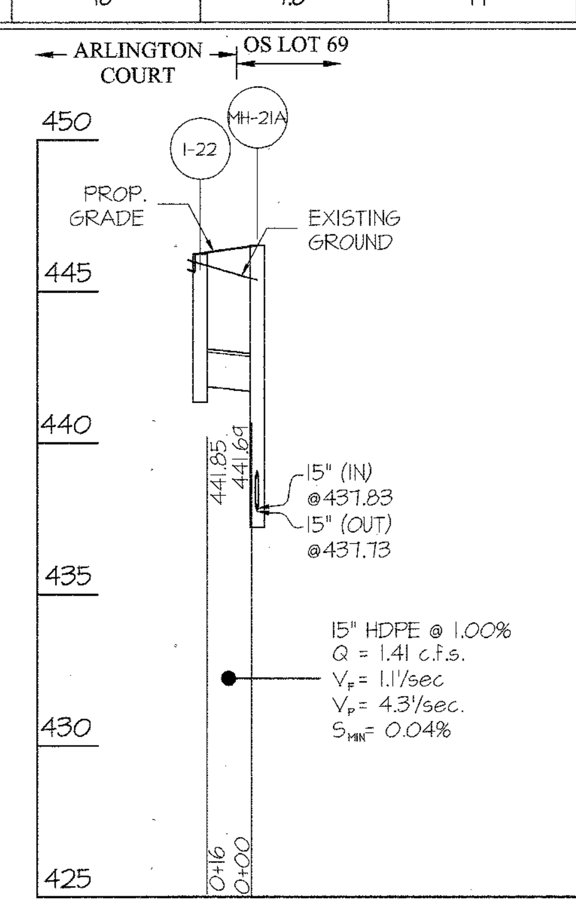

PIPE SCHEDULE

SIZE	TYPE	QUANTITY (l.f.)	REMARKS
15"	HDPE	2,631	
18"	HDPE	1,100	
24"	HDPE	455	

THIS PIPE SCHEDULE IS FOR THE STORM DRAIN ON SHEETS 21-24 ONLY.
FOR THE PIPE SCHEDULE FOR THE UNDERDRAINS WITHIN MICRO-BIORETENTION FACILITIES, SEE SHEET 39.
FOR THE PIPE SCHEDULE OF STORM DRAIN WITHIN THE STATE RIGHT-OF-WAY, SEE SHEET 53.

RIP RAP INFORMATION ⟨3⟩

END SECTION	CLASS	LENGTH	D_{50}	THICKNESS
ES-1	CLASS I	17'	7.8"	19"
ES-15	CLASS I	10'	4.2"	19"
ES-17	CLASS I	13'	4.8"	19"
ES-19	CLASS I	9'	3.6"	19"
ES-21	CLASS I	15'	6"	19"
ES-24	CLASS I	18'	7.8"	19"

STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION PROPOSED UPPER	TOP ELEVATION PROPOSED LOWER	TOP ELEVATION AS-BUILT UPPER	TOP ELEVATION AS-BUILT LOWER	INVERT PROPOSED UPPER	INVERT PROPOSED LOWER	INVERT AS-BUILT UPPER	INVERT AS-BUILT LOWER	STD. DETAIL	LOCATIONS ⟨1⟩	PRIVATE/ PUBLIC
I-6	"S" INLET	2'-7.5"	---	444.68			435.75	435.65			HO. CO. D-4.22	N 588,426 E 1,345,787	PUBLIC
I-10	DOUBLE "S" INLET	2'-7.5"	---	454.80			---	450.90			HO. CO. D-4.23	N 588,783 E 1,345,476	PUBLIC
I-16	COS-15 INLET	2'-6"	443.79	443.79			---	440.69			SHA MD 374.63	N 588,412 E 1,345,892	PUBLIC
I-18	DOUBLE "S" INLET	2'-7.5"	---	448.14			---	444.78			HO. CO. D-4.23	N 588,364 E 1,345,575	PUBLIC
I-22	A-10 INLET	2'-6"	446.27	446.17			---	441.85			HO. CO. D-4.03	N 588,282 E 1,345,795	PUBLIC
I-23	A-10 INLET	2'-6"	445.69	445.57			---	438.49			HO. CO. D-4.03	N 588,344 E 1,345,811	PUBLIC
RS-3	DOUBLE 'S' RISER	2'-7.5"	---	441.50			---	435.00			HO. CO. D-4.23	N 588,392 E 1,345,928	PUBLIC
RS-7	DOUBLE 'S' RISER	2'-7.5"	---	445.00			436.99	436.74			HO. CO. D-4.23	N 588,466 E 1,345,658	PUBLIC
RS-13	'S' RISER	2'-7.5"	---	446.50			---	439.08			HO. CO. D-4.22	N 588,602 E 1,345,748	PRIVATE
RS-20	DOUBLE 'S' RISER	2'-7.5"	---	434.50			---	429.25			HO. CO. D-4.23	N 588,143 E 1,345,863	PUBLIC
RS-25	'S' RISER	2'-7.5"	---	447.50			440.56	440.46			HO. CO. D-4.22	N 588,143 E 1,345,863	PUBLIC
RS-28A	DOUBLE 'S' RISER	2'-7.5"	---	451.00			---	445.50			HO. CO. D-4.23	N 588,539 E 1,345,483	PUBLIC
MH-2	STANDARD MANHOLE	4'-0"	---	441.83			434.99	434.01			HO. CO. G-5.12	N 588,388 E 1,345,926	PUBLIC
MH-4	STANDARD MANHOLE	4'-0"	---	443.13			434.42	434.32			HO. CO. G-5.12	N 588,401 E 1,345,904	PUBLIC
MH-5	STANDARD MANHOLE	4'-0"	---	443.78			434.94	434.84			HO. CO. G-5.12	N 588,404 E 1,345,858	PUBLIC
MH-8	STANDARD MANHOLE	4'-0"	---	447.97			437.48	437.38			HO. CO. G-5.12	N 588,522 E 1,345,654	PUBLIC
MH-11	STANDARD MANHOLE	4'-0"	---	449.70			438.33	438..23			HO. CO. G-5.12	N 588,621 E 1,345,684	PRIVATE
MH-19A	STANDARD MANHOLE	4'-0"	---	433.96			429.20	429.10			HO. CO. G-5.12	N 588,139 E 1,345,855	PUBLIC
MH-21A	STANDARD MANHOLE	4'-0"	---	446.51			441.69	437.73			HO. CO. G-5.12	N 588,274 E 1,345,914	PUBLIC
MH-26	STANDARD MANHOLE	4'-0"	---	447.85			440.92	440.82			HO. CO. G-5.12	N 588,305 E 1,345,634	PUBLIC
MH-27	STANDARD MANHOLE	4'-0"	---	449.69			442.47	441.97			HO. CO. G-5.12	N 588,423 E 1,345,552	PUBLIC
MH-28	STANDARD MANHOLE	4'-0"	---	451.57			445.28	445.18			HO. CO. G-5.12	N 588,541 E 1,345,509	PUBLIC
MH-29	STANDARD MANHOLE	4'-0"	---	453.06			447.64	447.54			HO. CO. G-5.12	N 588,633 E 1,345,519	PUBLIC
MH-30	STANDARD MANHOLE	4'-0"	---	454.84			449.65	449.55			HO. CO. G-5.12	N 588,757 E 1,345,558	PUBLIC
ES-1	END SECTION	1'-6"	433.60	---			---	432.10			⟨2⟩	N 588,356 E 1,345,983	PUBLIC
ES-15	END SECTION	1'-6"	446.00	---			---	444.50			⟨2⟩	N 588,414 E 1,345,913	PUBLIC
ES-17	END SECTION	1'-6"	445.50	---			---	444.00			⟨2⟩	N 588,405 E 1,345,624	PUBLIC
ES-19	END SECTION	1'-3"	429.92	---			---	428.67			⟨2⟩	N 588,095 E 1,345,878	PUBLIC
ES-21	END SECTION	1'-3"	434.75	---			---	433.50			⟨2⟩	N 588,185 E 1,345,898	PUBLIC
ES-24	END SECTION	2'-0"	441.71	---			---	439.71			⟨2⟩	N 588,156 E 1,345,682	PUBLIC

⟨1⟩ COORDINATE POINT GIVEN IS TO THE CENTER OF STRUCTURE FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

⟨2⟩ CONCRETE OR HDPE END SECTION.

⟨3⟩ SEE SHEET 43 FOR RIP RAP DETAILS.

⟨4⟩ THE OUTFALL HERE IS TEMPORARY AND SET TO PREVENT STREAM BUFFER DISTURBANCE IN THIS AREA DURING PHASE I. IT WILL BE RELOCATED IN PHASE 2. TO MITIGATE THE EFFECTS OF THE TEMPORARY SLOPE GREATER THAN 10%, AN ADDITIONAL 10' OF RIP RAP HAS BEEN PROVIDED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_21-24-SD PROFILES.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
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3500 MANOR LANE
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443-367-0422
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7/14/16

STORM DRAIN PROFILES

WESTMOUNT · PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50' (H) 1"=5' (V)	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	21 OF 60

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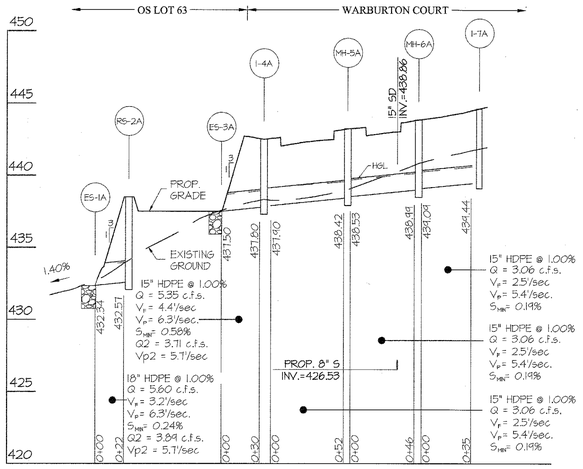
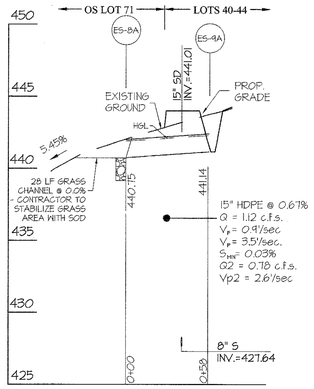
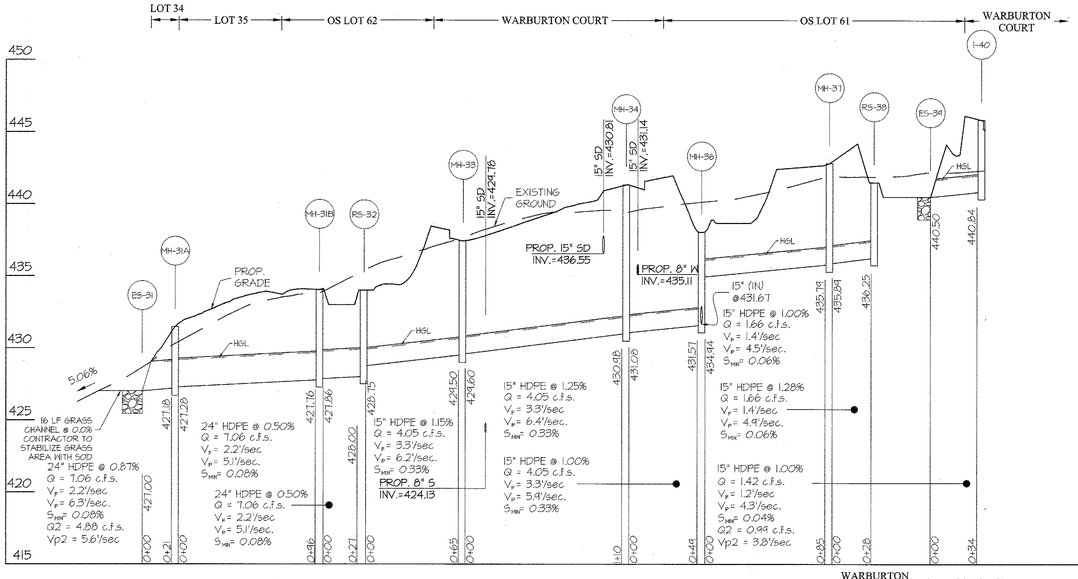
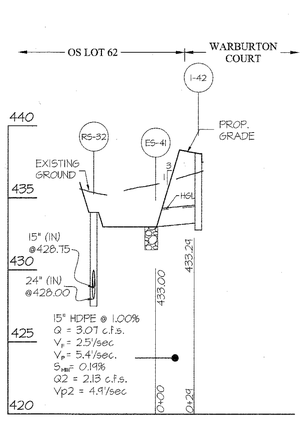
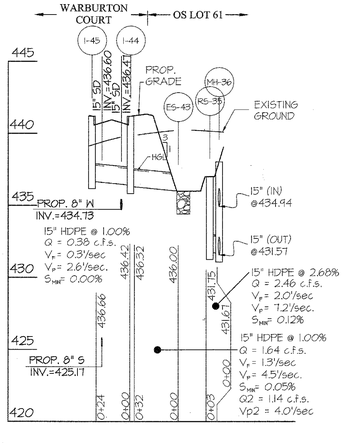
SHA TRACKING NO. 14APHO018XX F 15-087











STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION PROPOSED UPPER	TOP ELEVATION PROPOSED LOWER	TOP ELEVATION AS-BUILT UPPER	TOP ELEVATION AS-BUILT LOWER	INVERT PROPOSED UPPER	INVERT PROPOSED LOWER	INVERT AS-BUILT UPPER	INVERT AS-BUILT LOWER	STD. DETAIL	LOCATIONS ◇1	PRIVATE/ PUBLIC
I-4A	COG-I5 INLET	2'-6"	442.56	442.31			437.90	437.80			SHA MD 374.62	N 588,245 E 1,346,305	PUBLIC
I-7A	COG-I5 INLET	2'-6"	444.93	444.52			---	434.44			SHA MD 374.62	N 588,301 E 1,346,428	PUBLIC
I-40	A-10 INLET	2'-6"	445.45	445.66			---	440.84			HO. CO. D-4.03	N 588,263 E 1,346,461	PUBLIC
I-42	A-10 INLET	2'-6"	438.11	438.11			---	433.29			HO. CO. D-4.03	N 588,074 E 1,346,267	PUBLIC
I-44	A-10 INLET	2'-6"	441.34	441.05			436.42	436.32			HO. CO. D-4.03	N 588,178 E 1,346,315	PUBLIC
I-45	A-10 INLET	2'-6"	441.34	441.05			---	436.66			HO. CO. D-4.03	N 588,187 E 1,346,289	PUBLIC
RS-2A	'5' RISER	2'-7.5"	---	438.50			---	432.57			HO. CO. D-4.22	N 588,268 E 1,346,215	PUBLIC
RS-32	'5' RISER	2'-7.5"	---	434.00			428.75	428.00			HO. CO. D-4.22	N 588,093 E 1,346,205	PUBLIC
RS-35	'5' RISER	2'-7.5"	---	437.00			---	431.75			HO. CO. D-4.22	N 588,178 E 1,346,354	PUBLIC
RS-38	'5' RISER	2'-7.5"	---	441.50			---	436.25			HO. CO. D-4.22	N 588,190 E 1,346,448	PUBLIC
MH-5A	STANDARD MANHOLE	4'-0"	---	443.23			438.53	438.42			HO. CO. 6-5.12	N 588,243 E 1,346,338	PUBLIC
MH-6A	STANDARD MANHOLE	4'-0"	---	443.85			434.09	438.99			HO. CO. 6-5.12	N 588,310 E 1,345,383	PUBLIC
MH-31A	STANDARD MANHOLE	4'-0"	---	431.47			427.28	427.18			HO. CO. 6-5.12	N 587,945 E 1,346,168	PUBLIC
MH-31B	STANDARD MANHOLE	5'-0"	---	434.03			427.86	427.76			HO. CO. 6-5.13	N 588,045 E 1,346,175	PUBLIC
MH-33	STANDARD MANHOLE	4'-0"	---	437.44			429.60	429.50			HO. CO. 6-5.12	N 588,084 E 1,346,214	PUBLIC
MH-34	STANDARD MANHOLE	4'-0"	---	441.34			431.08	430.98			HO. CO. 6-5.12	N 588,199 E 1,346,305	PUBLIC
MH-36	STANDARD MANHOLE	4'-0"	---	438.04			434.94	431.57			HO. CO. 6-5.12	N 588,184 E 1,346,356	PUBLIC
MH-37	STANDARD MANHOLE	4'-0"	---	442.81			435.89	435.79			HO. CO. 6-5.12	N 588,160 E 1,346,442	PUBLIC
ES-1A	END SECTION	1'-6"	433.84	---			---	432.34			◇2	N 588,274 E 1,346,192	PUBLIC
ES-3A	END SECTION	1'-3"	438.75	---			---	437.50			◇2	N 588,248 E 1,346,276	PUBLIC
ES-8A	END SECTION	1'-3"	442.00	---			---	440.75			◇2	N 588,446 E 1,346,305	PRIVATE
ES-9A	END SECTION	2'-0"	442.37	---			---	441.14			◇2	N 588,436 E 1,346,363	PRIVATE
ES-31	END SECTION	2'-0"	424.00	---			---	421.00			◇2	N 587,973 E 1,346,161	PUBLIC
ES-34	END SECTION	1'-3"	441.75	---			---	440.50			◇2	N 588,228 E 1,346,458	PUBLIC
ES-41	END SECTION	1'-3"	434.25	---			---	433.00			◇2	N 588,078 E 1,346,237	PUBLIC
ES-43	END SECTION	1'-3"	437.25	---			---	436.00			◇2	N 588,163 E 1,346,344	PUBLIC

◇1 COORDINATE POINT GIVEN IS TO THE CENTER OF STRUCTURE FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

◇2 CONCRETE OR HDPE END SECTION.

◇3 SEE SHEET 43 FOR RIP RAP DETAILS.

RIP RAP INFORMATION ◇3

END SECTION	CLASS	LENGTH	D_{50}	THICKNESS
ES-1A	CLASS I	10'	4.2"	19"
ES-3A	CLASS I	9'	3.6"	19"
ES-8A	CLASS I	7'	3"	19"
ES-31	CLASS I	14'	5.4"	19"
ES-34	CLASS I	9'	3.6"	19"
ES-41	CLASS I	9'	3.6"	19"
ES-43	CLASS I	9'	3.6"	19"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK

BURTONSVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\LDDOT\PLANS BY GLW\HOWCO-50 (PHT)\LDDOT_25-24-50 PROFILES.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:

WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018

7/14/16

STORM DRAIN PROFILES

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50' (H) 1"=5' (V)	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	22 OF 60

SHA TRACKING NO. 14APH0018XX F 15-087

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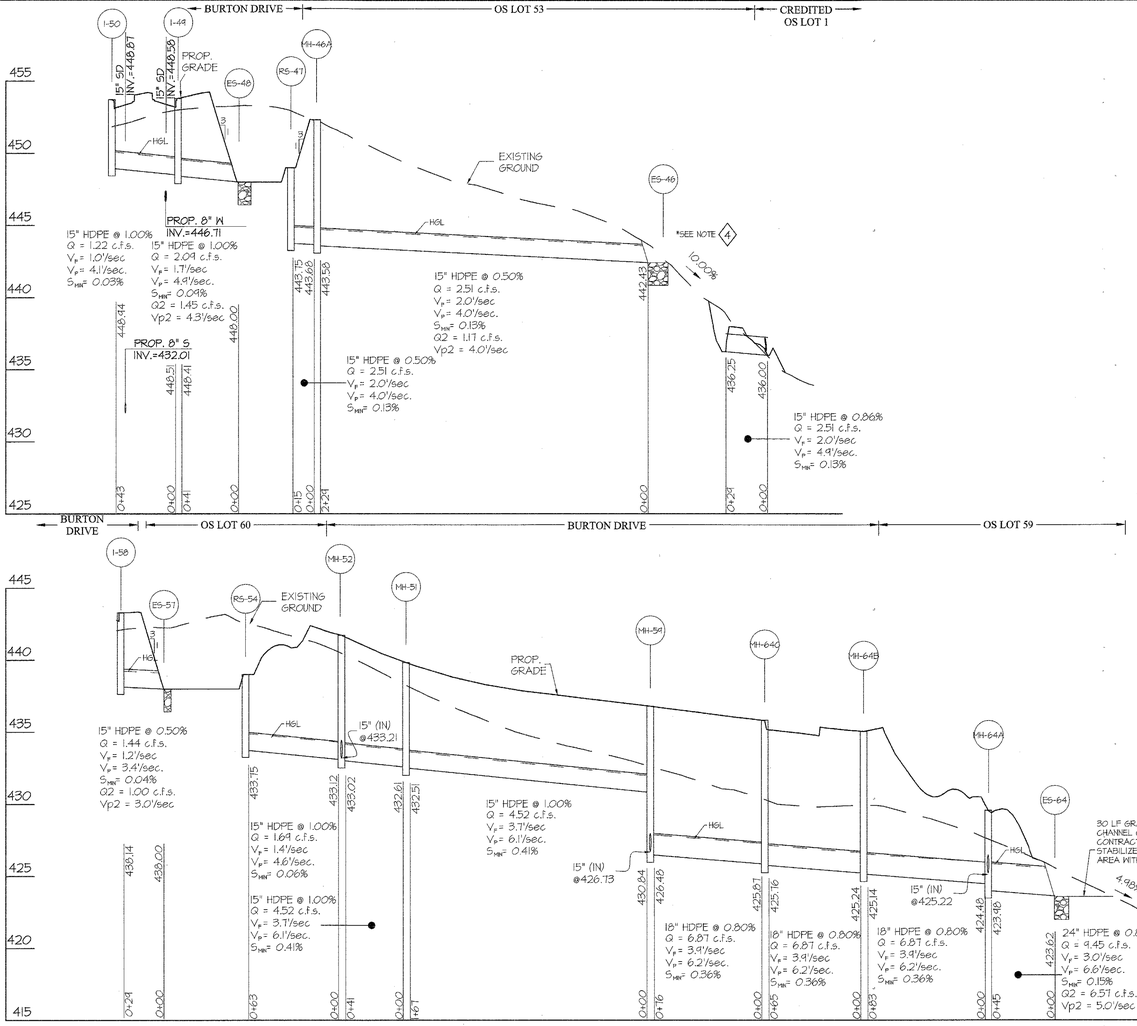

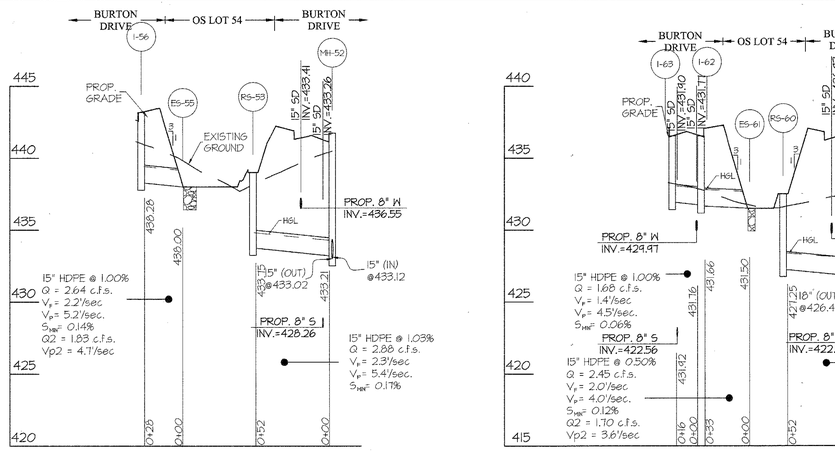

STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION PROPOSED UPPER	TOP ELEVATION PROPOSED LOWER	TOP ELEVATION AS-BUILT UPPER	TOP ELEVATION AS-BUILT LOWER	INVERT PROPOSED UPPER	INVERT PROPOSED LOWER	INVERT AS-BUILT UPPER	INVERT AS-BUILT LOWER	STD. DETAIL	LOCATIONS ◇	PRIVATE/ PUBLIC
I-49	A-10 INLET	2'-6"	453.85	453.65			448.51	448.41			HO. CO. D-4.03	N 588,412 E 1,346,643	PUBLIC
I-50	A-10 INLET	2'-6"	453.71	453.50			---	448.94			HO. CO. D-4.03	N 588,412 E 1,346,546	PUBLIC
I-56	COG-15 INLET	2'-6"	443.51	442.81			---	438.28			SHA MD 374.62	N 588,086 E 1,346,741	PUBLIC
I-58	A-10 INLET	2'-6"	443.54	443.00			---	438.14			HO. CO. D-4.03	N 588,085 E 1,346,714	PUBLIC
I-62	'S' INLET	2'-7.5"	431.07	431.04			431.76	431.66			HO. CO. D-4.22	N 587,863 E 1,346,683	PUBLIC
I-63	'S' INLET	2'-7.5"	431.07	431.04			---	431.92			HO. CO. D-4.22	N 587,869 E 1,346,664	PUBLIC
I-67	A-10 INLET	2'-6"	434.88	434.74			429.86	429.76			HO. CO. D-4.03	N 587,686 E 1,346,616	PUBLIC
I-68	A-10 INLET	2'-6"	434.88	434.74			---	430.10			HO. CO. D-4.03	N 587,684 E 1,346,642	PUBLIC
RS-47	'S' RISER	2'-7.5"	---	449.00			---	443.75			HO. CO. D-4.22	N 588,421 E 1,346,721	PUBLIC
RS-53	'S' RISER	2'-7.5"	---	439.00			---	433.75			HO. CO. D-4.22	N 588,056 E 1,346,768	PUBLIC
RS-54	'S' RISER	2'-7.5"	---	439.00			---	433.75			HO. CO. D-4.22	N 588,073 E 1,346,649	PUBLIC
RS-60	'S' RISER	2'-7.5"	---	432.50			---	427.25			HO. CO. D-4.22	N 587,834 E 1,346,708	PUBLIC
RS-65	'S' RISER	2'-7.5"	---	430.50			---	425.25			HO. CO. D-4.22	N 587,708 E 1,346,533	PUBLIC
MH-46A	STANDARD MANHOLE	4'-0"	---	452.32			443.68	443.58			HO. CO. G-5.12	N 588,415 E 1,346,738	PUBLIC
MH-51	STANDARD MANHOLE	4'-0"	---	439.18			432.61	432.51			HO. CO. G-5.12	N 588,010 E 1,346,700	PUBLIC
MH-52	STANDARD MANHOLE	4'-0"	---	441.15			433.12	433.02			HO. CO. G-5.12	N 588,054 E 1,346,711	PUBLIC
MH-54	STANDARD MANHOLE	4'-0"	---	436.23			430.84	426.48			HO. CO. G-5.12	N 587,846 E 1,346,653	PUBLIC
MH-64A	72" DIA. MANHOLE	6'-0"	---	429.57			425.22	423.98			SHA MD 384.05	N 587,714 E 1,346,526	PUBLIC
MH-64B	STANDARD MANHOLE	4'-0"	---	434.77			425.24	425.14			HO. CO. G-5.12	N 587,764 E 1,346,616	PUBLIC
MH-64C	STANDARD MANHOLE	4'-0"	---	435.43			425.87	425.76			HO. CO. G-5.12	N 587,764 E 1,346,630	PUBLIC
ES-46	END SECTION	1'-3"	443.68	---			---	442.43			◇2	N 588,208 E 1,346,840	PUBLIC
ES-48	END SECTION	1'-3"	444.25	---			---	448.00			◇2	N 588,420 E 1,346,684	PUBLIC
ES-55	END SECTION	1'-3"	434.25	---			---	438.00			◇2	N 588,088 E 1,346,770	PUBLIC
ES-57	END SECTION	1'-3"	434.25	---			---	438.00			◇2	N 588,076 E 1,346,686	PUBLIC
ES-61	END SECTION	1'-3"	432.75	---			---	431.50			◇2	N 587,847 E 1,346,714	PUBLIC
ES-64	END SECTION	2'-0"	425.62	---			---	423.62			◇2	N 587,696 E 1,346,487	PUBLIC
ES-66	END SECTION	1'-3"	430.75	---			---	429.50			◇2	N 587,692 E 1,346,589	PUBLIC

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◇2 CONCRETE OR HDPE END SECTION.

◇3 SEE SHEET 43 FOR RIP RAP DETAILS.

◇4 TO MITIGATE THE EFFECTS OF THE 10% SLOPE, AN ADDITIONAL 8' OF RIP RAP HAS BEEN PROVIDED.

RIP RAP INFORMATION ◇3

END SECTION	CLASS	LENGTH	D_{50}	THICKNESS
ES-46	CLASS 1	14'	4.8"	19"
ES-48	CLASS 1	9'	3.6"	19"
ES-55	CLASS 1	9'	3.6"	19"
ES-57	CLASS 1	5'	2.4"	19"
ES-61	CLASS 1	5'	2.4"	19"
ES-64	CLASS 1	10'	4.2"	19"
ES-66	CLASS 1	9'	3.6"	19"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.25.16
Chief, Development Engineering Division — Date 8.26.16

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DATE	REVISION	BY	APP'R.

PREPARED FOR:
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3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
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ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: MAY 26, 2018
7/14/16

STORM DRAIN PROFILES

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50' (H) 1"=5' (V)	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	23 OF 60

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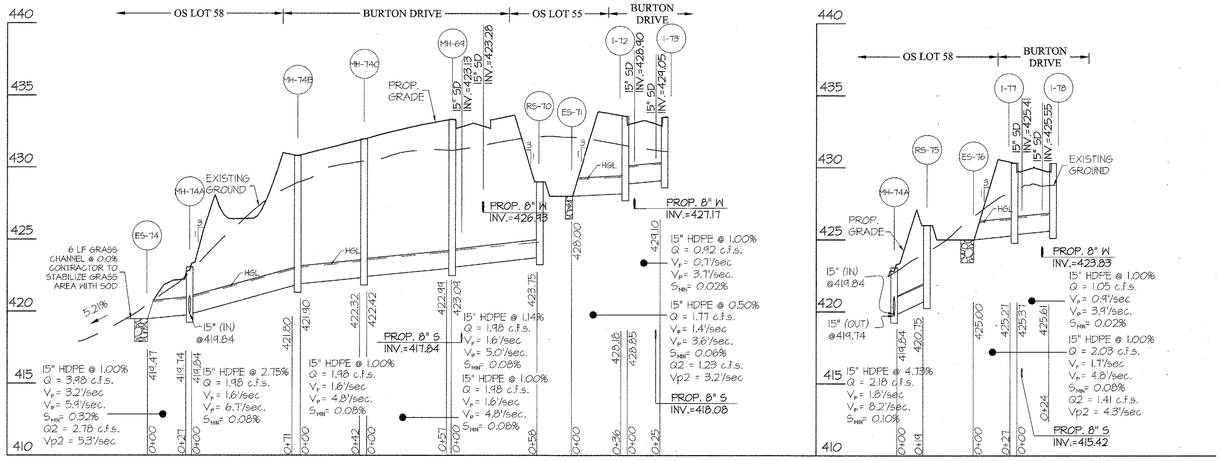
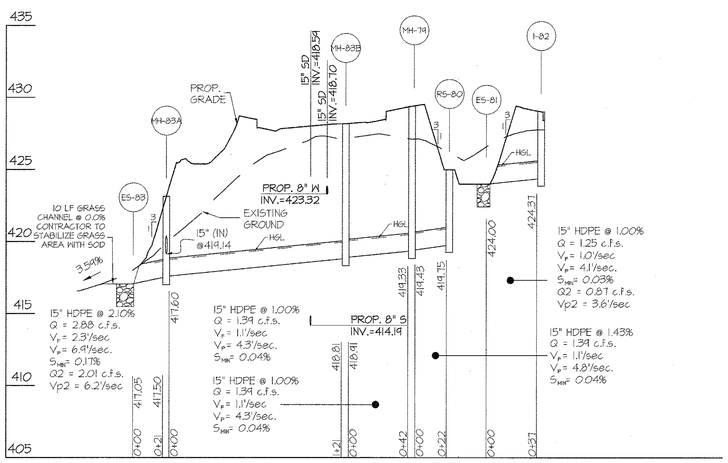
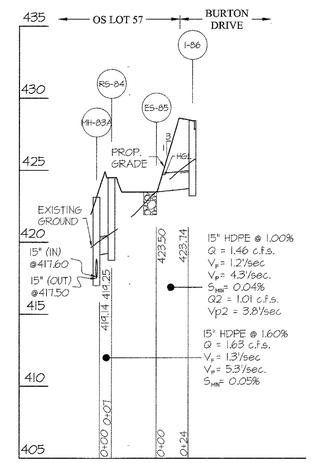
SHA TRACKING NO. 14APHO018XX F 15-087







STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION PROPOSED UPPER	TOP ELEVATION PROPOSED LOWER	TOP ELEVATION AS-BUILT UPPER	TOP ELEVATION AS-BUILT LOWER	INVERT PROPOSED UPPER	INVERT PROPOSED LOWER	INVERT AS-BUILT UPPER	INVERT AS-BUILT LOWER	STD. DETAIL	LOCATIONS (1)	PRIVATE/ PUBLIC
I-72	A-10 INLET	2'-6"	433.64	433.48			428.85	428.18			HO. CO. D-4.03	N 587,574 E 1,346,651	PUBLIC
I-73	A-10 INLET	2'-6"	433.56	433.39			---	429.10			HO. CO. D-4.03	N 587,574 E 1,346,626	PUBLIC
I-77	A-10 INLET	2'-6"	430.44	430.18			425.37	425.27			HO. CO. D-4.03	N 587,438 E 1,346,634	PUBLIC
I-78	A-10 INLET	2'-6"	430.44	430.18			---	425.61			HO. CO. D-4.03	N 587,436 E 1,346,660	PUBLIC
I-82	A-10 INLET	2'-6"	429.05	429.05			---	424.37			HO. CO. D-4.03	N 587,375 E 1,346,684	PUBLIC
I-86	A-10 INLET	2'-6"	428.48	428.48			---	423.74			HO. CO. D-4.03	N 587,362 E 1,346,545	PUBLIC
RS-70	'S' RISER	2'-7.5"	---	429.00			---	423.75			HO. CO. D-4.22	N 587,575 E 1,346,686	PUBLIC
RS-75	'S' RISER	2'-7.5"	---	426.00			---	420.75			HO. CO. D-4.22	N 587,448 E 1,346,577	PUBLIC
RS-80	'S' RISER	2'-7.5"	---	425.00			---	419.75			HO. CO. D-4.22	N 587,369 E 1,346,729	PUBLIC
RS-84	'S' RISER	2'-7.5"	---	424.50			---	419.25			HO. CO. D-4.22	N 587,360 E 1,346,543	PUBLIC
MH-69	STANDARD MANHOLE	4'-0"	---	433.69			423.09	422.99			HO. CO. 6-5.12	N 587,563 E 1,346,626	PUBLIC
MH-74A	STANDARD MANHOLE	4'-0"	---	422.82			419.84	419.74			HO. CO. 6-5.12	N 587,461 E 1,346,558	PUBLIC
MH-74B	STANDARD MANHOLE	4'-0"	---	430.79			421.90	421.80			HO. CO. 6-5.12	N 587,456 E 1,346,634	PUBLIC
MH-74C	STANDARD MANHOLE	4'-0"	---	431.95			422.42	422.32			HO. CO. 6-5.12	N 587,502 E 1,346,635	PUBLIC
MH-79	STANDARD MANHOLE	4'-0"	---	429.43			419.43	419.33			HO. CO. 6-5.12	N 587,354 E 1,346,705	PUBLIC
MH-83A	STANDARD MANHOLE	4'-0"	---	423.54			419.14	417.50			HO. CO. 6-5.12	N 587,367 E 1,346,535	PUBLIC
MH-83B	STANDARD MANHOLE	4'-0"	---	428.16			418.91	418.81			HO. CO. 6-5.12	N 587,367 E 1,346,660	PUBLIC
ES-71	END SECTION	1'-3"	429.25	---			---	428.00			(2)	N 587,584 E 1,346,689	PUBLIC
ES-74	END SECTION	1'-3"	420.72	---			---	419.47			(2)	N 587,458 E 1,346,529	PUBLIC
ES-76	END SECTION	1'-3"	426.25	---			---	425.00			(2)	N 587,442 E 1,346,605	PUBLIC
ES-81	END SECTION	1'-3"	425.25	---			---	424.00			(2)	N 587,381 E 1,346,726	PUBLIC
ES-83	END SECTION	1'-3"	418.30	---			---	417.05			(2)	N 587,368 E 1,346,511	PUBLIC
ES-85	END SECTION	1'-3"	424.75	---			---	423.50			(2)	N 587,356 E 1,346,572	PUBLIC

(1) COORDINATE POINT GIVEN IS TO THE CENTER OF STRUCTURE FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

(2) CONCRETE OR HDPE END SECTION.

(3) SEE SHEET 43 FOR RIP RAP DETAILS.

RIP RAP INFORMATION (3)

END SECTION	CLASS	LENGTH	D_{50}	THICKNESS
ES-71	CLASS I	5'	2.4"	19"
ES-74	CLASS I	9'	3.6"	19"
ES-76	CLASS I	9'	3.6"	19"
ES-81	CLASS I	9'	3.6"	19"
ES-83	CLASS I	12'	4.8"	19"
ES-85	CLASS I	9'	3.6"	19"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8-26-16

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DATE	REVISION	BY	APP'R.

PREPARED FOR:
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3500 MANOR LANE
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ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — JAMES R. DEVER — No. 12975 — PROFESSIONAL ENGINEER

STORM DRAIN PROFILES

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50' (H) 1"=5' (V)	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	24 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SEDIMENT CONTROL LEGEND

- 400 — EXISTING CONTOUR
- 400 — PROPOSED CONTOUR
- EXISTING TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- RRIP — RIP-RAP INFLOW PROTECTION
- EARTH DIKE
- SF — PROPOSED SILT FENCE
- SSF — PROPOSED SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- PROPOSED STORM DRAIN
- FP — 100 YEAR FLOODPLAIN
- SB — STREAM BUFFER
- CENTERLINE OF STREAM
- WB — WETLAND BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- 0+00 — FLOODPLAIN CROSS SECTION
- EROSION CONTROL MATTING
- D.B. — DIVERSION BERM

NOTES:

1. FOR STORM DRAIN SIZES SEE SHEETS 15-17 .
2. WHERE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMIT OF DISTURBANCE.
3. CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION EVERY 25 FEET.
4. FOR DUST CONTROL INFORMATION SEE SHEET 33.
5. CONTRACTOR IS TO STABILIZE DISTURBED AREAS WITH SHA RIGHT-OF-WAY WITH SOD.
6. CONTRACTOR IS TO UTILIZE GRAVEL OR ASPHALT BERMS WITHIN THE ROADWAY TO DIRECT RUNOFF TO THE INLET.

100 YEAR FLOODPLAIN STUDY

CROSS SECTION	WSEL. FT.
STREAM F	
15+22	424.18
16+20	424.54
17+98	427.32
19+07	429.36
20+17	431.35
20+68	432.10

100 YEAR FLOODPLAIN STUDY

CROSS SECTION	WSEL. FT.
STREAM G	
0+50	423.25
3+04	427.43
4+00	429.27
6+00	433.87
8+00	437.71

SEQUENCE OF CONSTRUCTION

NOTES TO CONTRACTOR:

1. SHA STABILIZATION NOTE: ONCE AN AREA WITHIN THE SHA RIGHT-OF-WAY HAS BEEN PLACED ON GRADE, AND NO ADDITIONAL GRADING WILL BE NEEDED, THE AREA IS TO BE STABILIZED THAT SAME DAY WITH SOD.
2. CONSTRUCTION OF HOMES ON LOTS 7 THTOUGH 10, 17, 18, 33, 34, 37, 38, AND 50 THROUGH 52 UNTIL THE TRAPS LYING WITHIN THEM ARE BACKFILLED. IF THE CONTRIBUTING DRAINAGE AREA HAS EITHER BEEN REDUCED OR STABILZED, THE TRAP COULD BE PARTIALLY BACKFILLED. THE ENGINEER WOULD NEED TO REDESIGN THE TRAP TO ENSURE THE REMAINING TRAP WILL ADEQUATELY TREAT THE CONTRIBUTING AREA.

1. OBTAIN GRADING PERMIT AND ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING. (1 DAY)

STAGE 1

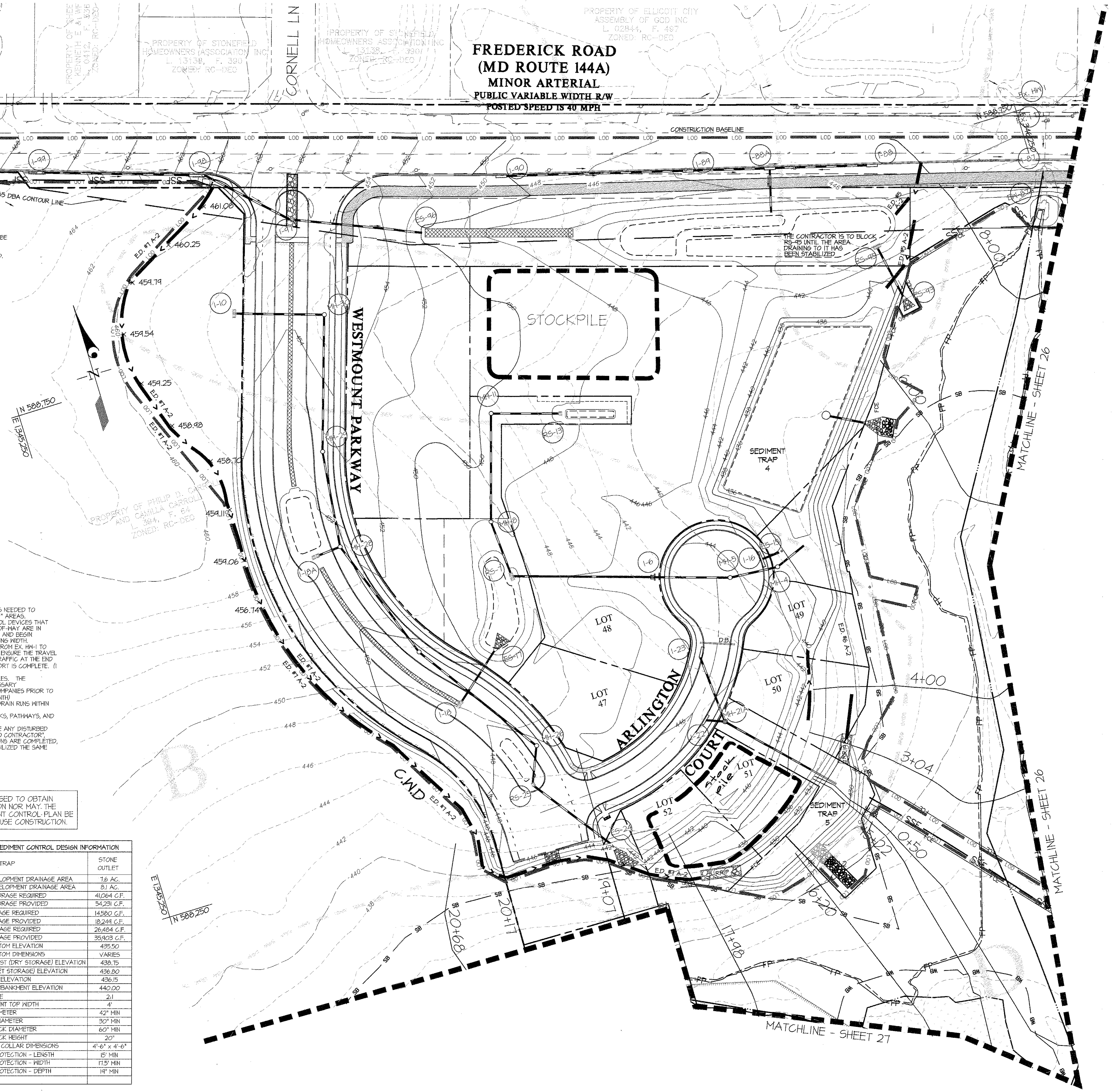
1. INSTALL THE STONE CONSTRUCTION ENTRANCE AT THE INTERSECTION OF BURTON DRIVE AND MD ROUTE 144. (1 DAY)
2. INSTALL SEDIMENT TRAPS 1, 2, 3, AND 6. INSTALL EARTH DIKES 1, 2, 3, 4, AND 8. CONTRACTOR IS TO BEGIN CONSTRUCTION OF EARTH DIKE BEGINNING AT THE TRAPS AND WORKING UPHILL. (2 WEEKS)
3. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN MASS GRADING. (1 MONTH)
4. AS THE MASS GRADING PROGRESSES AND THE GRADES ALLOW, BEGIN CONSTRUCTION OF THE FOLLOWING STORM DRAINS PER THIS PLAN. LAY STORM DRAIN PIPES FROM ES-46 TO RS-47, ES-48 TO 1-50, ES-100 TO RS-101, ES-3A TO 1-7A, ES-31 TO RS-38, ES-39 TO 1-40, ES-41 TO 1-42, ES-43 TO 1-45, ES-61 TO 1-63, ES-55 TO 1-56, ES-57 TO 1-58, ES-85 TO 1-86, TEMPORARY OUTFALL FROM SEDIMENT RAP 2 TO RS-80, ES-81 TO 1-82, ES-71 TO 1-73, ES-76 TO 1-78, AND ES-66 TO 1-68. IF AT ANY TIME PONDING SHOULD OCCUR PRIOR TO AN INLET BEING CONSTRUCTED, THE CONTRACTOR IS TO "CUT IN" A SWALE TO ALLOW THE RUNOFF TO DRAIN TO THE PERIMETER DEVICES. THE CONTRACTOR MAY ALSO HAVE TO USE EARTHEN OR ASPHALT BERMS TO CONTINUE TO HAVE THE ROADWAYS DRAIN TO THE PERIMETER DEVICES THAT WERE INTENDED TO RECIVE THEM. (2 MONTHS)
5. CONSTRUCT ALL WATER AND SEWER LINES AND STRUCTURES TO BURTON COURT AND WARBURTON COURT AND THEIR RESPECTIVE LOTS PER CONT. # 24-4876-D AS THE MASS GRADING IN THE LOT AREA AND ROADWAY PROGRESSES AND THE GRADES ALLOW. (1 MONTH)
6. INSTALL CURB, GUTTER, SIDEWALKS, PATHWAYS, AND BASE PAVING. (1 MONTH)
7. FINE GRADE THE SITE AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (2 WEEKS)
8. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, FLUSH THE STORM DRAIN SYSTEM. (1 DAY)
9. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN TO BACKFILL SEDIMENT TRAPS 1, 2, 3, AND 6. CONSTRUCT MICRO-BIORETENTION FACILITIES IN OPEN SPACE LOTS 54, 55, 58, AND 63 AS TRAPS 1, 2, AND 6 ARE BEING BACK FILLED. CONSTRUCT MICRO-BIORETENTION FACILITIES ON OPEN SPACE LOTS 53, 56, 57, 59, 60, 61, 62, AND 64. (1 MONTH)
10. REMOVE THE STONE CONSTRUCTION ENTRANCE TO BURTON DRIVE. REMOVE EARTH DIKES 1, 2, 3, 4, AND 8. STABILIZE ALL SOIL DISTURBED BY THIS ACTIVITY IMMEDIATELY.

STAGE 2

1. CONSTRUCT THE STONE CONSTRUCTION ENTRANCE AT WESTMOUNT PARKWAY. (1 DAY)
2. INSTALL SEDIMENT TRAPS 4 AND 5. INSTALL EARTH DIKES 5, 6 AND 7. CONTRACTOR IS TO BEGIN CONSTRUCTION OF THE EARTH DIKES BEGINNING AT THE TRAPS AND WORKING UPHILL. (2 WEEKS)
3. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN MASS GRADING. (1 MONTH)
4. AS THE MASS GRADING PROGRESSES AND THE GRADES ALLOW, BEGIN CONSTRUCTION OF THE FOLLOWING STORM DRAIN LINES: ES-24 TO 1-10, ES-17 TO 1-18B, TEMPORARY OUTFALL TO SEDIMENT TRAP 4 TO RS-13, AND ES-93 TO RS-95. IF AT ANY TIME PONDING SHOULD OCCUR PRIOR TO AN INLET BEING CONSTRUCTED, THE CONTRACTOR IS TO "CUT IN" A SWALE TO ALLOW THE RUNOFF TO DRAIN TO A PERIMETER DEVICE. THE CONTRACTOR MAY ALSO HAVE TO USE EARTHEN OR ASPHALT BERMS TO CONTINUE TO HAVE THE ROADWAYS DRAIN TO THE PERIMETER DEVICES THAT WERE INTENDED TO RECEIVE THAT RUNOFF. (1 MONTH)
5. BEGIN CONSTRUCTION OF ALL WATER AND SEWER LINES AND STRUCTURES FOR ARLINGTON COURT AND WESTMOUNT PARKWAY AND THEIR RESPECTIVE LOTS PER CONT. #24-4876-D AS THE MASS GRADING IN THE LOT AREA AND ROADWAY PROGRESSES AND THE GRADES ALLOW. (1 MONTH)
6. INSTALL THE CURB, GUTTER, SIDEWALKS, PATHWAYS, AND BASE PAVING. (1 MONTH)
7. FINE GRADE THE SITE AND STABILIZE ANY DISTURBED SOILS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (2 WEEKS)
8. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, FLUSH THE STORM DRAIN SYSTEM. (1 DAY)
9. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN TO BACKFILL SEDIMENT TRAPS 4 AND 5 WHILE INSTALLING MICRO-BIORETENTION FACILITIES IN OPEN SPACE LOTS 68 AND 69. AT THIS TIME GRADE AND INSTALL MICRO-BIORETENTION FACILITIES IN OPEN SPACE LOTS 65 AND 67.
10. REMOVE EARTH DIKES 1 AND 2 UNBLOCK ALL STORM DRAIN STRUCTURES AT THIS TIME. STABILIZE ALL SOILS DISTURBED BY THIS ACTIVITY IMMEDIATELY.

FOR WORK WITHIN SHA RIGHT-OF-WAY:

1. CONSTRUCT CONCRETE BARRIERS AS NEEDED TO PROTECT TRAFFIC FROM "DROP OFF" AREAS.
2. ONCE THE ON-SITE SEDIMENT CONTROL DEVICES THAT TREAT THE RUNOFF FOR THE RIGHT-OF-WAY ARE IN PLACE, REMOVE THE EXISTING PINES, AND BEGIN GRADING FOR THE ADDITIONAL PAVING WIDTH.
3. CONSTRUCT THE STORM DRAIN RUN FROM EX. HW-1 TO PROP. HW-87A. CONTRACTOR IS TO ENSURE THE TRAVEL LANES ARE SAFE FOR VEHICULAR TRAFFIC AT THE END OF EACH DAY UNTIL THIS WORK EFFORT IS COMPLETE. (1 WEEK)
4. RELOCATE THE EXISTING UTILITY POLES. THE CONTRACTOR MUST MAKE THE NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANIES PRIOR TO THE RELOCATION OPERATION. (1 MONTH)
5. CONSTRUCT THE REMAINING STORM DRAIN RUNS WITHIN THE RIGHT-OF-WAY.
6. INSTALL THE CURB, GUTTER, SIDEWALKS, PATHWAYS, AND BASE PAVING. (1 MONTH)
7. FINE GRADE THE SITE AND STABILIZE ANY DISTURBED SOILS. AS STATED IN THE "NOTES TO CONTRACTOR", AREAS IN WHICH GRADING OPERATIONS ARE COMPLETED, THE DISTURBED AREA MUST BE STABILIZED THE SAME DAY.



NOTE: THIS F PLAN MAY NOT BE USED TO OBTAIN PERMITS FOR HOUSE CONSTRUCTION NOR MAY THE HOWARD SCD STANDARD SEDIMENT CONTROL PLAN BE USED TO OBTAIN PERMITS FOR HOUSE CONSTRUCTION.

SEDIMENT CONTROL DESIGN INFORMATION	TRAP 1	TRAP 2	TRAP 3	TRAP 5	TRAP 6
TYPE OF TRAP	STONE OUTLET	STONE OUTLET	STONE OUTLET	STONE OUTLET	STONE OUTLET
PRE-DEVELOPMENT DRAINAGE AREA	2.7 AC.	2.9 AC.	1.8 AC.	2.4 AC.	4.7 AC.
POST DEVELOPMENT DRAINAGE AREA	3.0 AC.	3.1 AC.	3.1 AC.	1.9 AC.	3.2 AC.
TOTAL STORAGE REQUIRED (WET AND DRY VOLUME)	16,991 C.F.	17,124 C.F.	17,392 C.F.	11,417 C.F.	20,056 C.F.
TOTAL STORAGE PROVIDED	33,840 C.F.	22,249 C.F.	20,656 C.F.	15,744 C.F.	23,680 C.F.
WET STORAGE REQUIRED	5,400 C.F.	5,580 C.F.	5,580 C.F.	4,320 C.F.	8,460 C.F.
WET STORAGE PROVIDED	15,280 C.F.	9,728 C.F.	8,816 C.F.	5,376 C.F.	10,080 C.F.
DRY STORAGE REQUIRED	11,591 C.F.	11,544 C.F.	11,812 C.F.	7,097 C.F.	11,596 C.F.
DRY STORAGE PROVIDED	18,560 C.F.	12,521 C.F.	11,840 C.F.	10,368 C.F.	13,600 C.F.
EXISTING GROUND ELEV. AT OUTLET (WET STORAGE ELEV.)	428.50	417.90	423.00	431.20	433.00
TRAP BOTTOM ELEVATION	426.30	416.00	421.10	430.00	431.00
TRAP BOTTOM DIMENSIONS	285' X 17'	105' X 33'	100' X 97'	150' X 34'	145' X 32'
WEIR LENGTH	12'	16'	12'	10'	20'
WEIR CREST (DRY STORAGE) ELEVATION	430.50	419.80	425.00	433.00	435.00
CLEANOUT ELEVATION	427.40	416.95	422.50	430.60	432.00
TOP OF EMBANKMENT ELEVATION	431.50	420.80	426.00	434.00	436.00
SIDE SLOPE	2:1	2:1	2:1	2:1	2:1
EMBANKMENT TOP WIDTH	4'	4'	4'	4'	4'
OUTLET PROTECTION - LENGTH	10' MIN	10' MIN	10' MIN	10' MIN	10' MIN
OUTLET PROTECTION - DEPTH	19" MIN	19" MIN	19" MIN	19" MIN	19" MIN

NOTE: FOR SEDIMENT TRAP DETAILS, SEE SHEET 34.

TRAP 4 SEDIMENT CONTROL DESIGN INFORMATION	
TYPE OF TRAP	STONE OUTLET
PRE-DEVELOPMENT DRAINAGE AREA	7.6 AC.
POST DEVELOPMENT DRAINAGE AREA	8.1 AC.
TOTAL STORAGE REQUIRED	41,064 C.F.
TOTAL STORAGE PROVIDED	54,231 C.F.
WET STORAGE REQUIRED	14,580 C.F.
WET STORAGE PROVIDED	18,249 C.F.
DRY STORAGE REQUIRED	26,484 C.F.
DRY STORAGE PROVIDED	35,903 C.F.
TRAP BOTTOM ELEVATION	435.50
TRAP BOTTOM DIMENSIONS	VARIES
RISER CREST (DRY STORAGE) ELEVATION	438.75
OUTLET (WET STORAGE) ELEVATION	436.80
CLEANOUT ELEVATION	436.15
TOP OF EMBANKMENT ELEVATION	440.00
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
RISER DIAMETER	42" MIN
BARREL DIAMETER	30" MIN
TRASH RACK DIAMETER	60" MIN
TRASH RACK HEIGHT	20"
ANTI-SEEP COLLAR DIMENSIONS	4'-6" x 4'-6"
OUTLET PROTECTION - LENGTH	15' MIN
OUTLET PROTECTION - WIDTH	17.5' MIN
OUTLET PROTECTION - DEPTH	19" MIN

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

HOWARD S.C.D. — DATE 7/13/16

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER — DATE 12 July 2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/22/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 7/14/16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_25-28-SC.dwg | DES. DEV | DRN. DEV | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018
7/14/16

SEDIMENT CONTROL PLAN - INTERIM

WESTMOUNT - PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	25 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_25-28-SC.dwg, 7/12/2016 8:17:46 AM, jenniferd, 1:1

SEDIMENT CONTROL LEGEND

- 400 — EXISTING CONTOUR
- 400 — PROPOSED CONTOUR
- EXISTING TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- RRIP — RIP-RAP INFLOW PROTECTION
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NOTES:

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100 YEAR FLOODPLAIN STUDY	
GROSS SECTION	WSEL FT.
STREAM F	
13+78	423.28

100 YEAR FLOODPLAIN STUDY	
GROSS SECTION	WSEL FT.
STREAM G	
0+50	423.25
3+04	427.43
4+00	429.27
6+00	433.81
8+00	437.71

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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

HOWARD S.C.D. — 7/13/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER — DATE 12 JULY 2016

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DATE	REVISION	BY	APP'R.

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7/14/16

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WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

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1"=50'	R-ED	13-013
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SHA TRACKING NO. 14APHO018XX F 15-087

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_25-28-SC.dwg, 7/12/2016 8:16:34 AM, jennifercl, 1:1

MATCHLINE - SHEET 25

MATCHLINE - SHEET 26

LIMIT OF WORK - THIS CONTRACT

BURTON DRIVE

STREAM F

STREAM F2

STREAM H

STREAM F1

PROPERTY OF PHILIP D. CARROLL AND CAMILLA CARROLL 54.1 AC± ZONED: RC-DEO

PLAT KINGS CLUB PLAT 20

N 587,150 E 1341,250

N 587500 E 1341,000

N 586,750 E 1341,020

SEDIMENT CONTROL LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
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- RRIP — RIP-RAP INFLOW PROTECTION
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- D.B. — DIVERSION BERM

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6. CONTRACTOR IS TO UTILIZE GRAVEL OR ASPHALT BERMS WITHIN THE ROADWAY TO DIRECT RUNOFF TO THE INLET.

100 YEAR FLOODPLAIN STUDY

CROSS SECTION	WSEL FT.	CROSS SECTION	WSEL FT.
STREAM F1		STREAM F2 (cont.)	
0+42	410.18	11+99	421.02
0+79	410.55	13+18	423.28
STREAM F2		15+22	424.18
2+04	411.22	16+20	424.54
4+01	412.54	17+48	427.32
6+00	414.27		
8+27	416.32		
10+22	418.49		

100 YEAR FLOODPLAIN STUDY

CROSS SECTION	WSEL FT.
STREAM H	
6+00	417.80
8+00	420.85

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 7/15/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER — 12 JULY 2016 DATE

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — 7/14/16 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK

BURTONSVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\13013_25-28-SC.dwg | DES. DEV | DRN. DEV | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:

WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND — CHRISTOPHER CHARLES KNOPP — 12975 — REGISTERED PROFESSIONAL ENGINEER

SEDIMENT CONTROL PLAN - INTERIM

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	27 OF 60

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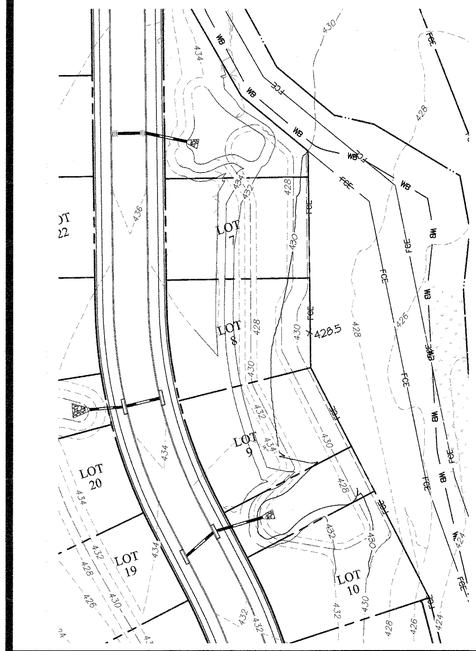
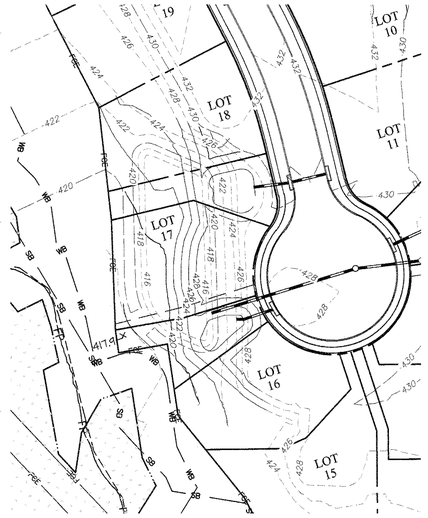
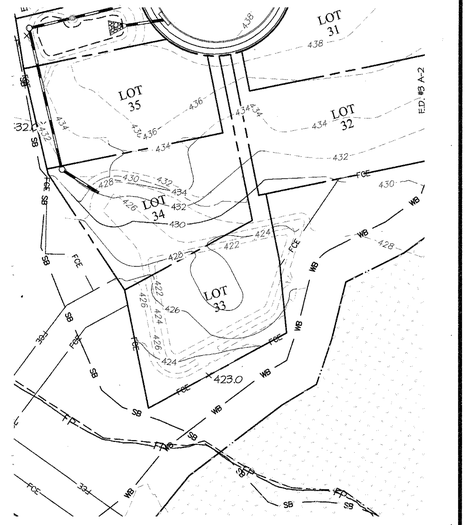
SHA TRACKING NO. 14APHO018XX F 15-087



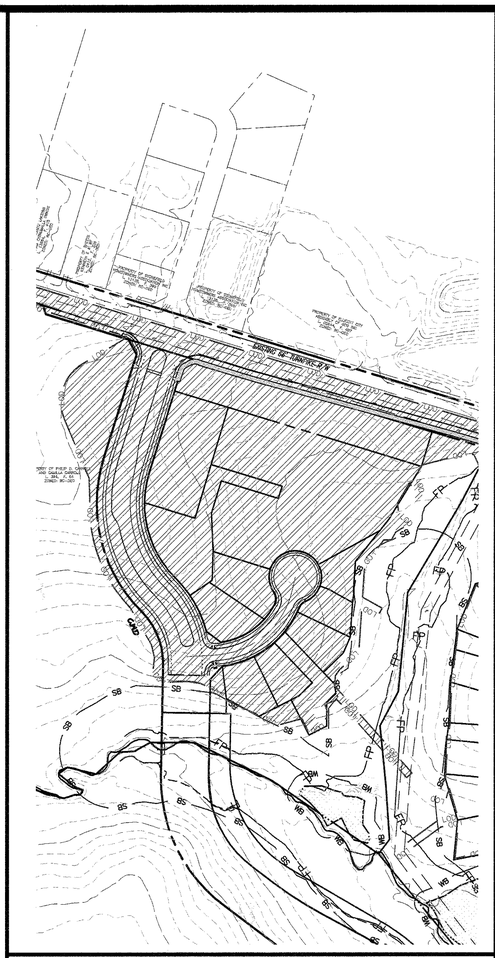
SEDIMENT TRAP #1



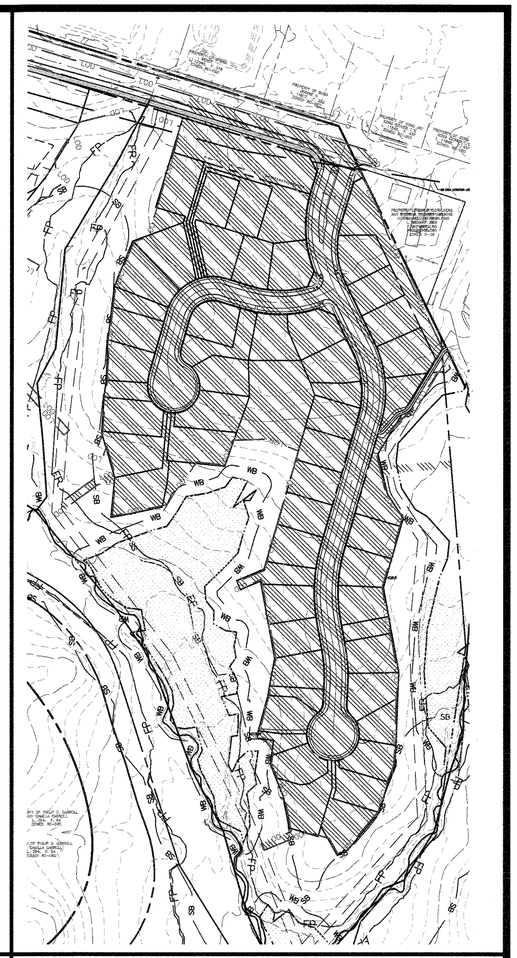
SEDIMENT TRAP #2



SEDIMENT TRAP #3



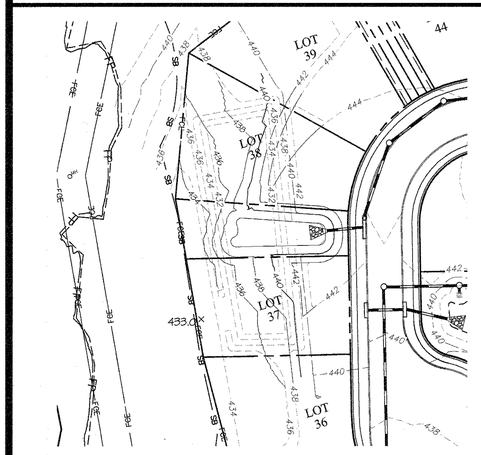
PHASE 2 = 10.6 Ac.



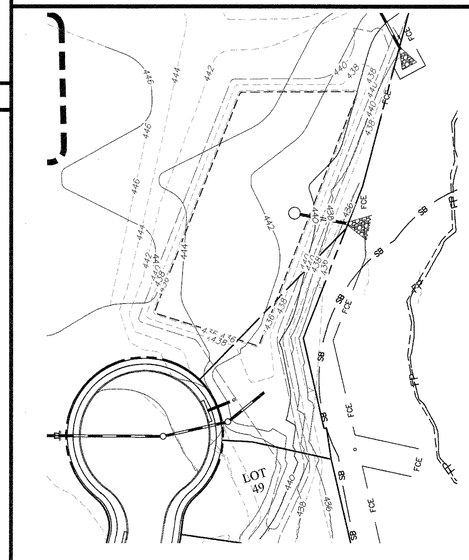
PHASE 1 = 13.9 Ac.

SEDIMENT CONTROL PHASING PLAN

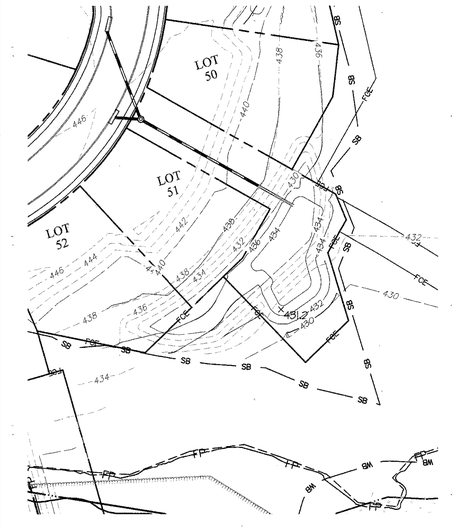
SCALE: 1"=150'



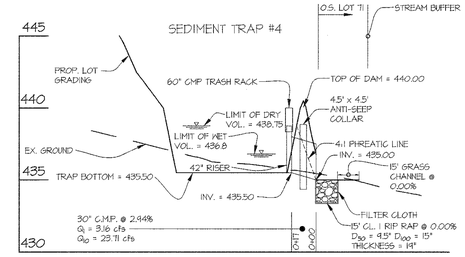
SEDIMENT TRAP #6

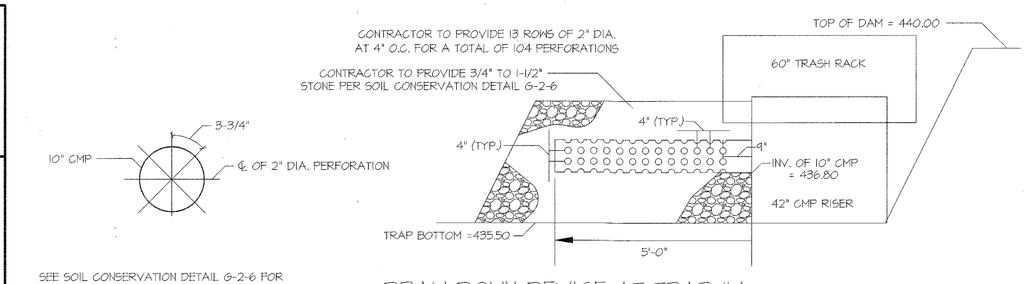


SEDIMENT TRAP #4



SEDIMENT TRAP #5





SEE SOIL CONSERVATION DETAIL G-2-6 FOR ADDITIONAL DETAIL AND SPECIFICATIONS

DRAW DOWN DEVICE AT TRAP #4

NTS

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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

HOWARD S.C.D. — DATE 7/15/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER — 12 July 2016 DATE

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — 7/14/16 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK

BURTONSVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13015\PLANS BY GLW\ROADS-SD (PH1)\13013_25-28-SC.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:

WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND — CHRISTOPHER K. MARTIN — PROFESSIONAL ENGINEER

SEDIMENT TRAP BACKFILL PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	28 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

L:\CADD\DRAWINGS\13015\PLANS BY GLW\ROADS-SD (PH1)\13013_25-28-SC.dwg, 7/12/2016 8:46:35 AM, jennifert, 1:1

LEGEND

B SOILS

C SOILS

D SOILS

DRAINAGE DIVIDE

TC PATH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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DES. JRD	DRN. JRD	CHK. DEV

DATE	REVISION	BY	APP'R.

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EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND — CHRISTOPHER M. DEVINE — PROFESSIONAL ENGINEER

TEMPORARY SWM DRAINAGE AREA MAP (PRE-DEVELOPMENT)

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	29 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

LEGEND

- B SOILS
- C SOILS
- D SOILS
- DRAINAGE DIVIDE
- TC PATH (A) (B)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date: 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date: 8-29-16

Chief, Development Engineering Division — Date: 8-26-16

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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DES. JRD	DRN. JRD	CHK. DEV

DATE	REVISION	BY	APP'R.

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EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — CARLTON KENNETH GUTSCHICK — PROFESSIONAL ENGINEER

TEMPORARY SWM DRAINAGE AREA MAP (POST-DEVELOPMENT)

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

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1"=100'	R-ED	13-013
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JULY, 2016	23-6&12	30 OF 60

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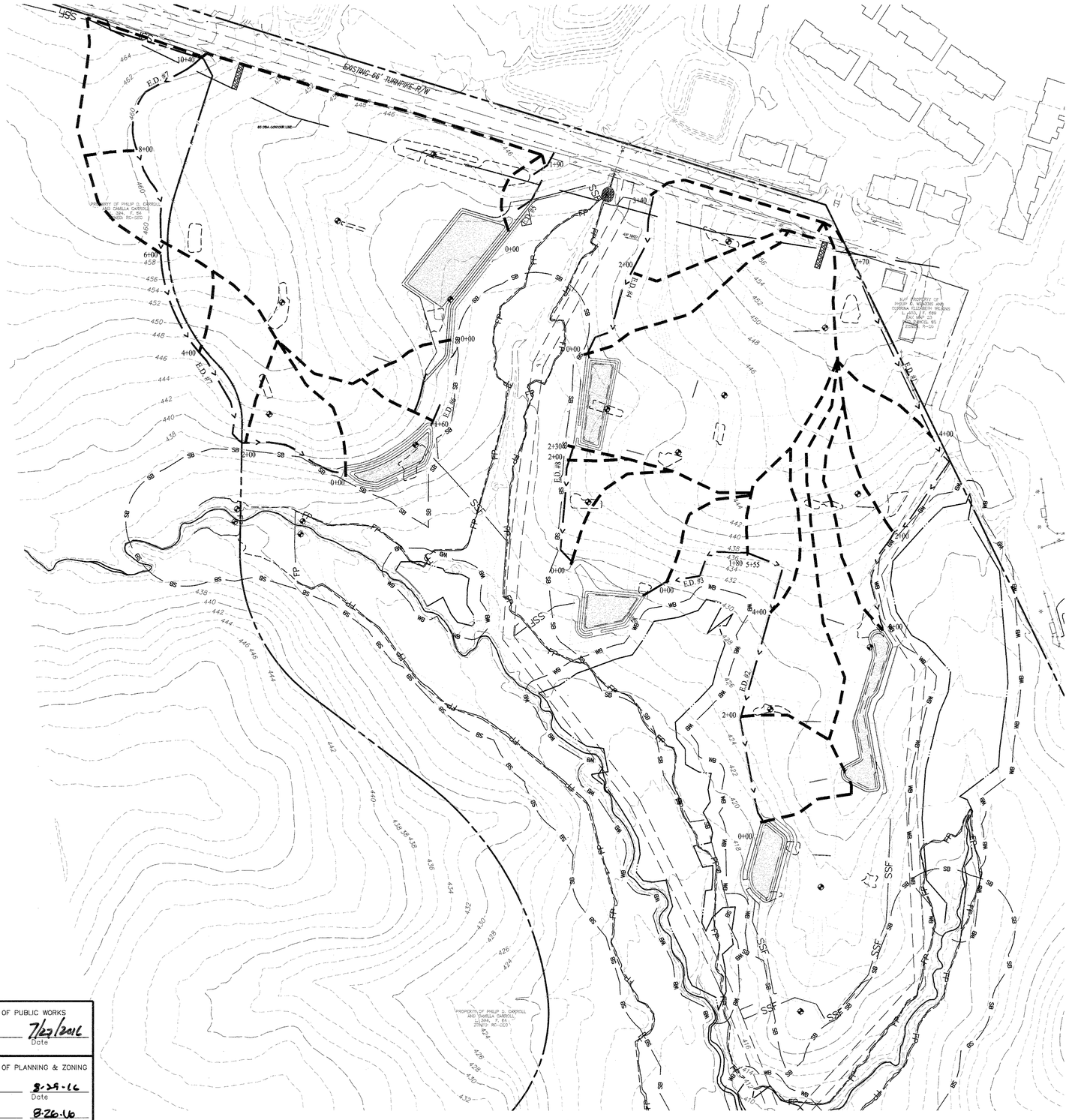
SHA TRACKING NO. 14APHO018XX F 15-087



LEGEND

- 400 — EXISTING CONTOUR
- 400 — PROPOSED CONTOUR
- STABILIZED CONSTRUCTION ENTRANCE
- EARTH DIKE
- SF — PROPOSED SILT FENCE
- SSF — PROPOSED SUPER SILT FENCE
- EXISTING TREELINE
- FP — 100 YEAR FLOODPLAIN
- SB — STREAM BUFFER
- CENTERLINE OF STREAM
- WB — WETLAND BUFFER
- LIMIT OF WETLAND
- DRAINAGE DIVIDE

EARTH DIKE SIZING FOR EXISTING CONDITIONS

EARTH DIKE TREATMENT (ED #1) - LOCATED ALONG EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
7+70	4+00	4.98%	20,774 SF	0.48 AC.	0.48 AC.	A-2	0.71 LB/FT²	TEMPORARY
4+00	2+00	2.90%	30,944 SF	0.71 AC.	1.19 AC.	A-1	0.71 LB/FT²	TEMPORARY
2+00	0+00	2.60%	17,404 SF	0.40 AC.	1.78 AC.	A-2	0.71 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #2) - LOCATED ALONG SOUTH EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
5+80	4+00	3.62%	18,418 SF	0.42 AC.	0.42 AC.	A-1	0.54 LB/FT²	TEMPORARY
4+00	2+00	2.41%	46,481 SF	1.07 AC.	1.49 AC.	A-2	0.54 LB/FT²	TEMPORARY
2+00	0+00	2.85%	27,841 SF	0.64 AC.	2.13 AC.	A-2	0.54 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #3) - LOCATED ALONG SOUTH EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+90	0+00	3.91%	15,012 SF	0.34 AC.	0.34 AC.	A-2	0.71 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #4) - LOCATED ALONG MID-EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
3+40	2+00	0.80%	24,448 SF	0.56 AC.	0.56 AC.	A-2	0.28 LB/FT²	TEMPORARY
2+00	0+00	2.74%	19,586 SF	0.45 AC.	1.01 AC.	A-2	0.28 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #5) - LOCATED ALONG MID-WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+90	0+00	5.31%	8,380 SF	0.19 AC.	0.19 AC.	A-2	0.54 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #6) - LOCATED ALONG MID-WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+60	0+00	0.80%	14,899 SF	0.34 AC.	0.34 AC.	A-2	0.06 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #7) - LOCATED ALONG WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
10+30	8+00	1.21%	24,040 SF	0.67 AC.	0.67 AC.	A-2	0.09 LB/FT²	TEMPORARY
8+00	6+00	0.50%	18,256 SF	0.41 AC.	1.08 AC.	A-2	0.09 LB/FT²	TEMPORARY
6+00	4+00	5.41%	8,835 SF	0.20 AC.	1.28 AC.	A-2	0.54 LB/FT²	TEMPORARY
4+00	2+00	4.07%	26,584 SF	0.61 AC.	1.89 AC.	A-2	0.54 LB/FT²	TEMPORARY
2+00	0+00	1.35%	22,548 SF	0.52 AC.	2.41 AC.	A-2	0.54 LB/FT²	TEMPORARY

EARTH DIKE TREATMENT (ED #8) - LOCATED ALONG MID-EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
2+30	2+00	1.00%	1,841 SF	0.04 AC.	0.04 AC.	A-1	0.25 LB/FT²	TEMPORARY
2+00	0+00	2.46%	12,001 SF	0.28 AC.	0.32 AC.	A-1	0.25 LB/FT²	TEMPORARY

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-25-16
Chief, Development Engineering Division — Date 8-26-16

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L:\CADD\DRAWINGS\13XXX\PLANS BY GLW\ROADS-3D [PVT]\13XXX_3D-ED TREATMENT.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
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ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — CHRISTOPHER KENNETH GIROUARD — PROFESSIONAL ENGINEER

EARTH DIKE TREATMENT PLAN - EXISTING CONDITIONS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

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1"=100'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	31 OF 60

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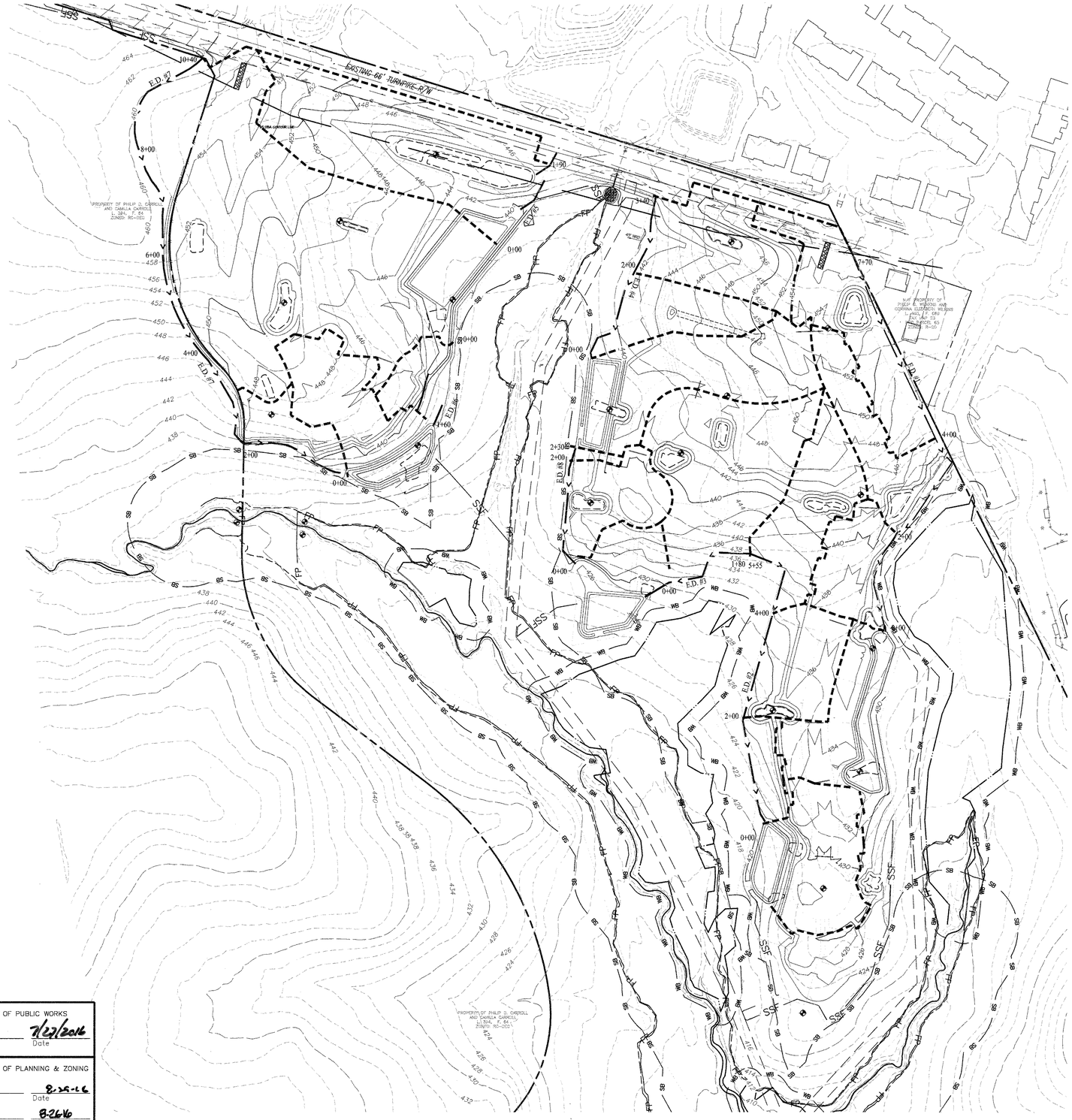

LEGEND

400	EXISTING CONTOUR
400	PROPOSED CONTOUR
	STABILIZED CONSTRUCTION ENTRANCE
	EARTH DIKE
SF	PROPOSED SILT FENCE
SSF	PROPOSED SUPER SILT FENCE
	EXISTING TREELINE
FP	100 YEAR FLOODPLAIN
SB	STREAM BUFFER
	CENTERLINE OF STREAM
WB	WETLAND BUFFER
	LIMIT OF WETLAND
	DRAINAGE DIVIDE

EARTH DIKE SIZING FOR PROPOSED CONDITIONS

EARTH DIKE TREATMENT (ED #1) - LOCATED ALONG EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
7+70	4+00	4.18%	45,100 SF	1.04 AC.	1.04 AC.	A-2	0.71 LB/FT^2	TEMPORARY
4+00	2+00	2.90%	30,000 SF	0.69 AC.	1.74 AC.	A-2	0.71 LB/FT^2	TEMPORARY
2+00	0+00	2.60%	24,000 SF	0.55 AC.	2.29 AC.	A-2	0.71 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #2) - LOCATED ALONG SOUTH EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
3+80	4+00	3.62%	33,600 SF	0.77 AC.	0.77 AC.	A-2	0.54 LB/FT^2	TEMPORARY
4+00	2+00	2.47%	34,400 SF	0.79 AC.	1.56 AC.	A-2	0.54 LB/FT^2	TEMPORARY
2+00	0+00	2.89%	11,300 SF	0.26 AC.	1.82 AC.	A-2	0.54 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #3) - LOCATED ALONG SOUTH EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+90	0+00	3.91%	79,500 SF	1.83 AC.	1.83 AC.	A-2	0.71 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #4) - LOCATED ALONG MID-EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
3+40	2+00	0.80%	45,302 SF	1.04 AC.	1.04 AC.	A-2	0.28 LB/FT^2	TEMPORARY
2+00	0+00	2.14%	26,033 SF	0.60 AC.	1.64 AC.	A-2	0.28 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #5) - LOCATED ALONG MID-WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+90	0+00	5.31%	92,400 SF	2.12 AC.	2.12 AC.	A-2	0.54 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #6) - LOCATED ALONG MID-WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
1+60	0+00	0.80%	13,950 SF	0.32 AC.	0.32 AC.	A-2	0.06 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #7) - LOCATED ALONG WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
10+30	8+00	1.27%	24,040 SF	0.61 AC.	0.61 AC.	A-2	0.09 LB/FT^2	TEMPORARY
8+00	6+00	0.50%	18,056 SF	0.41 AC.	1.08 AC.	A-2	0.09 LB/FT^2	TEMPORARY
6+00	4+00	5.41%	8,835 SF	0.20 AC.	1.28 AC.	A-2	0.54 LB/FT^2	TEMPORARY
4+00	2+00	4.01%	26,584 SF	0.61 AC.	1.84 AC.	A-2	0.54 LB/FT^2	TEMPORARY
2+00	0+00	1.35%	22,548 SF	0.52 AC.	2.41 AC.	A-2	0.54 LB/FT^2	TEMPORARY

EARTH DIKE TREATMENT (ED #8) - LOCATED ALONG MID-EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA		TOTAL AREA	TREATMENT	SHEAR STRESS	SOIL STABILIZATION
2+30	2+00	1.00%	1,836 SF	0.04 AC.	0.04 AC.	A-1	0.25 LB/FT^2	TEMPORARY
2+00	0+00	2.46%	25,900 SF	0.59 AC.	0.63 AC.	A-1	0.25 LB/FT^2	TEMPORARY

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-25-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\2015\15-013\ENGR\15-013 PLANS BY GLW\15-013-12 (PHASE 1) ED #1, 2, 3, 4, 5, 6, 7, 8 TREATMENT.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018

7/14/16

EARTH DIKE TREATMENT PLAN - ULTIMATE CONDITIONS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	32 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

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

DEFINITION

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

I. TEMPORARY STABILIZATION

a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

I. SOIL PH BETWEEN 6.0 AND 7.0.

II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.

b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION

a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

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

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

I. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
 ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (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.

B. MULCHING

I. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
 ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
 i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE: 6b
SEED MIXTURE:

No.	SPECIES	APPLICATION RATE (lb/ac.)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
1	ANNUAL RYEGRASS	40 lb/ac	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 IN.	436 lb.per ac. (10 lb. per 1,000 sf)	2 tons per ac. (90 lb. per 1,000 sf)
2	PEARL MILLET	20 lb/ac	May 16 to July 31	0.5 IN.		

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION

CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

CONDITIONS WHERE PRACTICE APPLIES

AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

1. MULCHES: 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.
2. VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION.
3. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON 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.
4. 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, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
6. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

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

7/13/16
HOWARD S.C.D. DATE

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

1. GENERAL USE
 a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 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.

2. TURFGRASS MIXTURES

a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS 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 SQUARE FEET.

 NOTES:

 SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

 CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

i. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
 WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
 CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
 SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

j. 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 MOWING OF GRASSES WILL POSE NO DIFFICULTY.

k. 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: 6b
SEED MIXTURE: #8 (Tall Fescue)

No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
8	*Certified Tall Fescue blend : Equal amounts of *Falcon IV, Penn 1901 & Rebel Exeda*	6-8 lb per 1000 s.f.	Mar. 1 to May 15, Aug. 15 to Oct. 15	1/4 - 1/2 IN.	1.0 lb per 1000 s.f. (45 lb per acre)	90 lb per 1000 s.f.

* Other cultivars listed as "proven" in the most current UMD TT-77 may also be used

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

3. SOD MAINTENANCE

a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 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.

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), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:

 A. PRIOR TO THE START OF EARTH DISTURBANCE,
 B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
 C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
 D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

 OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGAENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WTIH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

6. SITE ANALYSIS:

TOTAL AREA OF SITE	: 79.03± Acres
AREA DISTURBED	: 24.5± Acres
AREA TO BE ROOFED OR PAVED	: 8.4± Acres
AREA TO BE VEGETATIVELY STABILIZED	: 16.1± Acres
TOTAL CUT	: 38,500 Cu. Yds.
TOTAL FILL	: 38,500 Cu. Yds.
OFF-SITE WASTE/BORROW AREA LOCATION	:

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE

8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND /OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
- OTHER INSPECTION ITEMS AS REQUIRED BY THE "GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES" (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.

11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE LOD. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.

13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 - JUNE 15
- USE III AND IIIP OCTOBER 1 - APRIL 30
- USE IV MARCH 1 - MAY 31

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER — DATE 12 JULY 2016

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 7/14/16

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_33-34-SC NOTES.dwg | DES. DEV | DRN. LAG | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16

SEDIMENT CONTROL NOTES and DETAILS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	33 OF 60

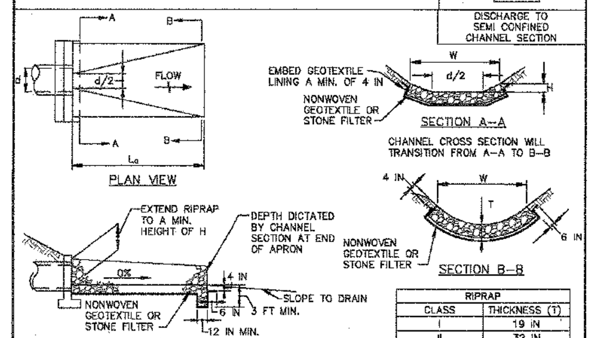
© GLW 2015

SHA TRACKING NO. 14APHO018XX F 15-087

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_33-34-SC NOTES.dwg, 7/12/2016 8:39:33 AM, jenniferd, 1:1

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1 — DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

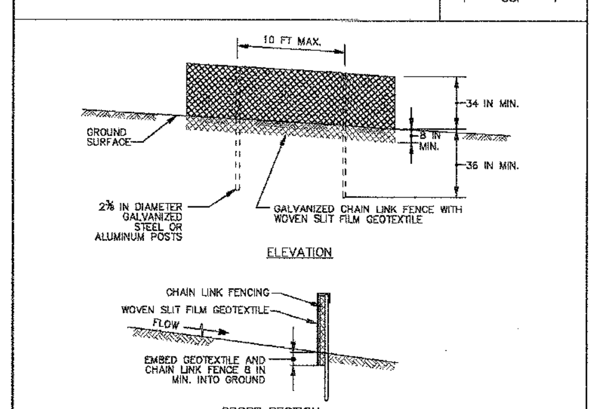
CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: ——SSF——



CONSTRUCTION SPECIFICATIONS

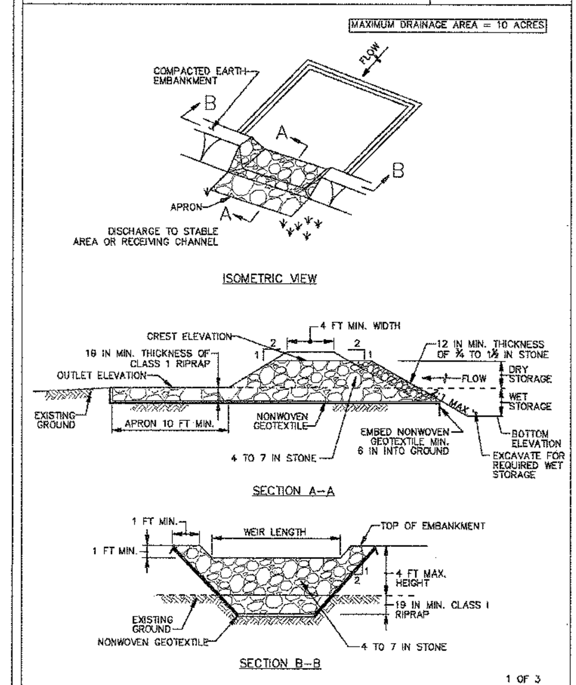
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL: ST–II

MAXIMUM DRAINAGE AREA = 10 ACRES



1 OF 3

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

G.11

DETAIL G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL: ST–II

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
2. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
3. USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
4. CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
5. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
6. 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.
7. USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS I RIPRAP FOR THE APRON. USE OF RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE.
8. PLACE 1 FOOT OF CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE ON THE UPSTREAM FACE OF THE WEIR.
9. CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
10. STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
11. REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% 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 ESTABLISHMENT 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.
12. WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
13. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

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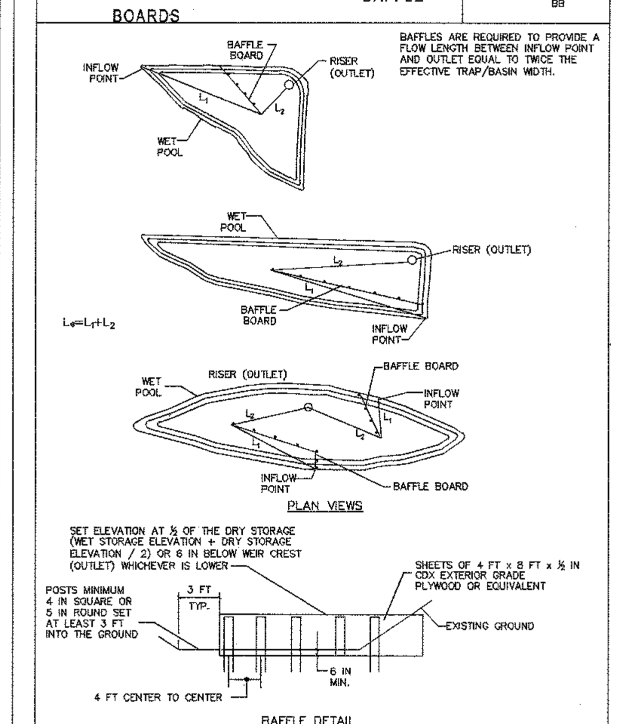
G.12

DETAIL G-2-4 BAFFLE BOARDS

STANDARD SYMBOL: BB

BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.



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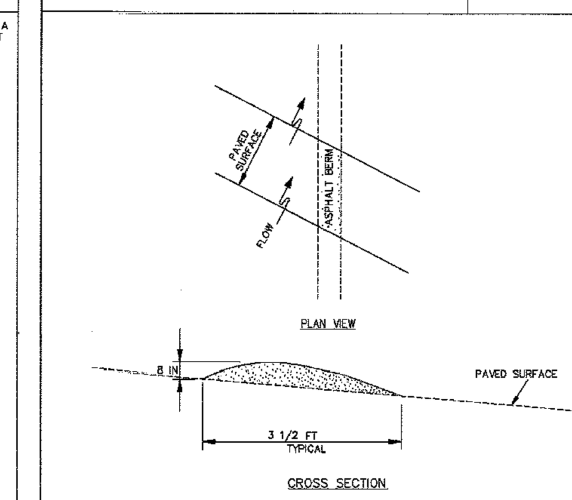
DETAIL C-5 TEMPORARY ASPHALT BERM

STANDARD SYMBOL: TAB



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT BERM ON AN UNINTERRUPTED, CONTINUOUS GRADE.
2. INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 3½ FEET.
3. PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
4. COMPACT ASPHALT BERM.
5. REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
6. UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

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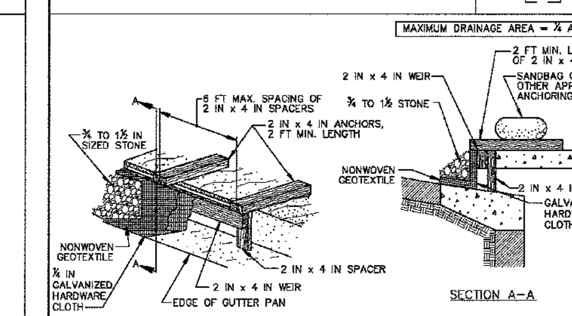
DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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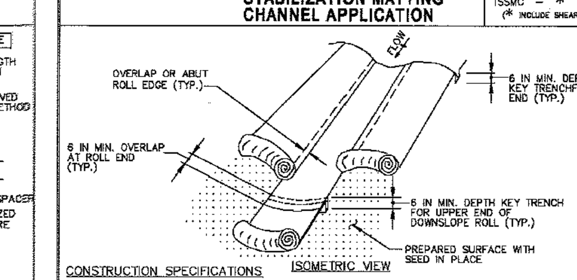
DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN–MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. 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 2x2 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.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. 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 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. 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.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY–IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

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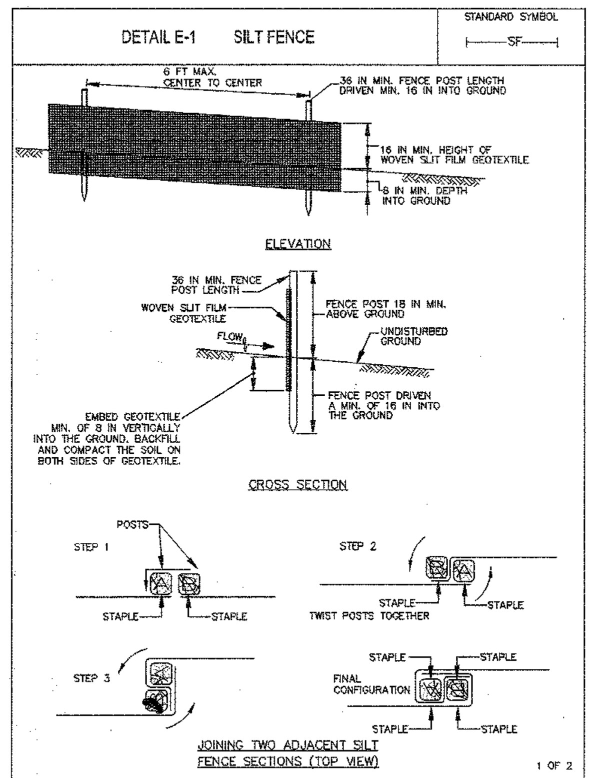
DETAIL E-1 SILT FENCE

STANDARD SYMBOL: ——SF——



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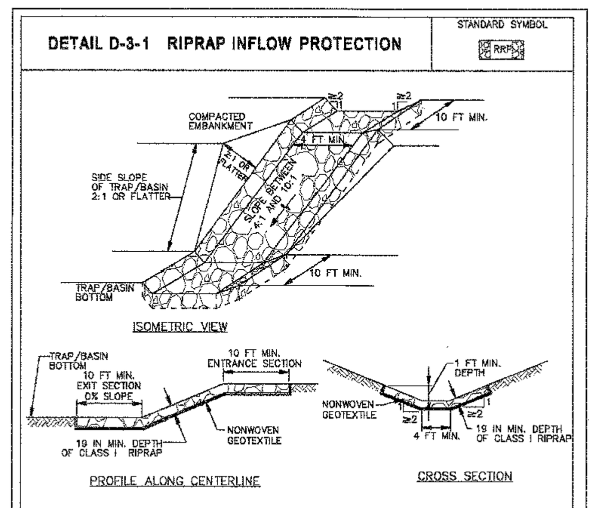
DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL: RRP



CONSTRUCTION SPECIFICATIONS

1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

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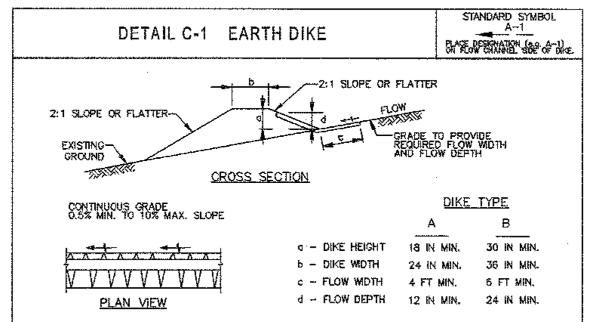
D.10

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A–1 (PLACE DESIGNATION (e.g. A–1) ON FLOW CHANNEL SIDE OF DIKE)



	DIKE TYPE A	DIKE TYPE B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A–1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)

A–2/B–2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

A–3/B–3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

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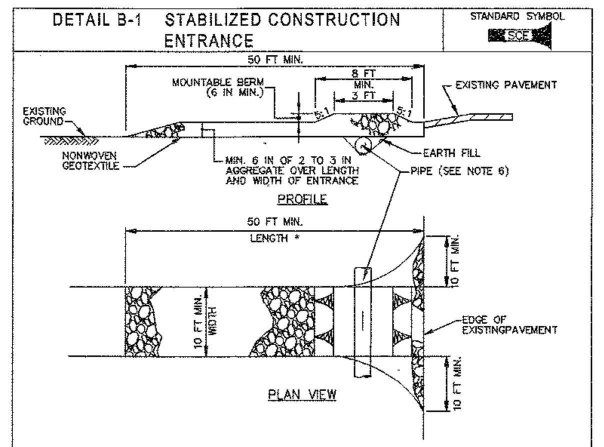
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

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

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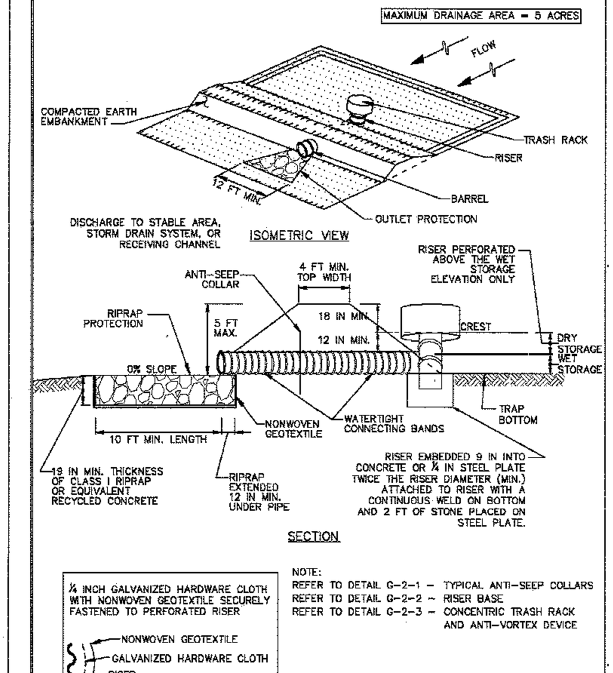
DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-I

STANDARD SYMBOL: ST–I

MAXIMUM DRAINAGE AREA = 5 ACRES



NOTE:
REFER TO DETAIL G–2–1 – TYPICAL ANTI–SEEP COLLARS
REFER TO DETAIL G–2–2 – RISER BASE
REFER TO DETAIL G–2–3 – CONCENTRIC TRASH RACK AND ANTI–VORTEX DEVICE

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DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-I

STANDARD SYMBOL: ST–I

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
2. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
3. PERFORATE THE RISER WITH 1 INCH DIAMETER HOLES SPACED 6 INCHES ON CENTER WITH THE LOWEST PERFORATIONS AT THE WET STORAGE ELEVATION OR PROVIDE A HORIZONTAL OR VERTICAL DRAW–DOWN DEVICE PERFORATED ACCORDING TO APPROVED PLAN. DO NOT PERFORATE THE RISER WITHIN 6 INCHES OF THE TOP OF THE HORIZONTAL BARREL.
4. SET RISER/BARREL ASSEMBLY PRIOR TO EMBANKMENT CONSTRUCTION. MAKE ALL PIPE CONNECTIONS WATERTIGHT. OFFSET RISER FROM EMBANKMENT TO ACCOMODATE PLACEMENT OF THE TRASH RACK. ANCHOR THE RISER WITH EITHER A REINFORCED CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. MAKE CONCRETE BASES AT LEAST TWICE THE RISER DIAMETER AND 18 INCHES THICK WITH THE RISER EMBEDDED 9 INCHES.
5. USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
6. HAND COMPACT IN 4 INCH LAYERS FILL MATERIAL AROUND THE PIPE SPILLWAY. PLACE A MINIMUM OF 2 FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
7. CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE RISER CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
8. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
9. WRAP THE RISER WITH ¼ INCH GALVANIZED HARDWARE CLOTH THEN WRAP WITH NONWOVEN GEOTEXTILE. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE. EXTEND HARDWARE CLOTH AND GEOTEXTILE AT LEAST 6 INCHES ABOVE THE HIGHEST PERFORATIONS AND AT LEAST 6 INCHES BELOW THE LOWEST PERFORATIONS. OVERLAP, FOLD AND FASTEN WHERE ENDS OF GEOTEXTILE COME TOGETHER TO PREVENT BYPASS. REPLACE GEOTEXTILE AS NECESSARY TO PREVENT CLOGGING.
10. USE STRAPS OR CONNECTING BANDS AT THE TOP AND BOTTOM OF THE GEOTEXTILE TO HOLD THE GEOTEXTILE AND HARDWARE CLOTH IN PLACE.
11. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
12. STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
13. CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO THE APPROVED PLAN AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
14. REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% 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 ESTABLISHMENT 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. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.
15. WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
16. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

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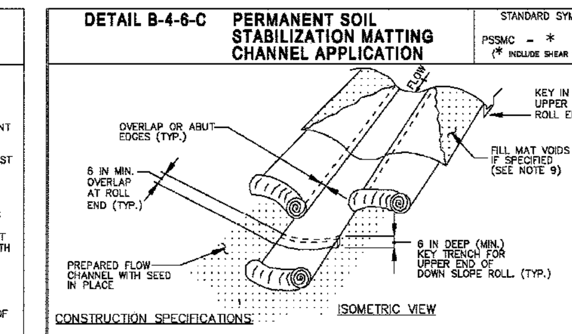
DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



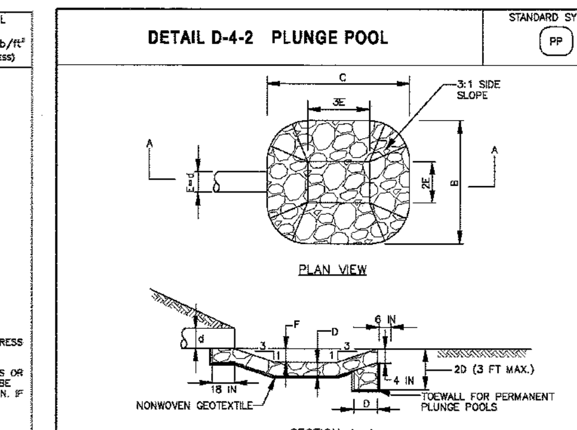
CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. 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 2x2 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.
3. 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 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. 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.
5. 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.
6. 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.
7. 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.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, 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.
10. 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
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-2 PLUNGE POOL

STANDARD SYMBOL: PP



CONSTRUCTION SPECIFICATIONS

1. USE SPECIFIED CLASS OF RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. DELIVER AND PLACE THE STONE FOR THE PLUNGE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: ——SF——

CONSTRUCTION SPECIFICATIONS

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

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

HOWARD S.C.D. 7/15/16 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways 7/27/2016 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development 8-29-16 Date

Chief, Development Engineering Division 8-26-16 Date

BUILDER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER/BUILDER 12 JULY 2016 DATE

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER 7/14/16 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_33-34-SC NOTES.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018
7/14/16

SEDIMENT CONTROL NOTES and DETAILS

WESTMOUNT · PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

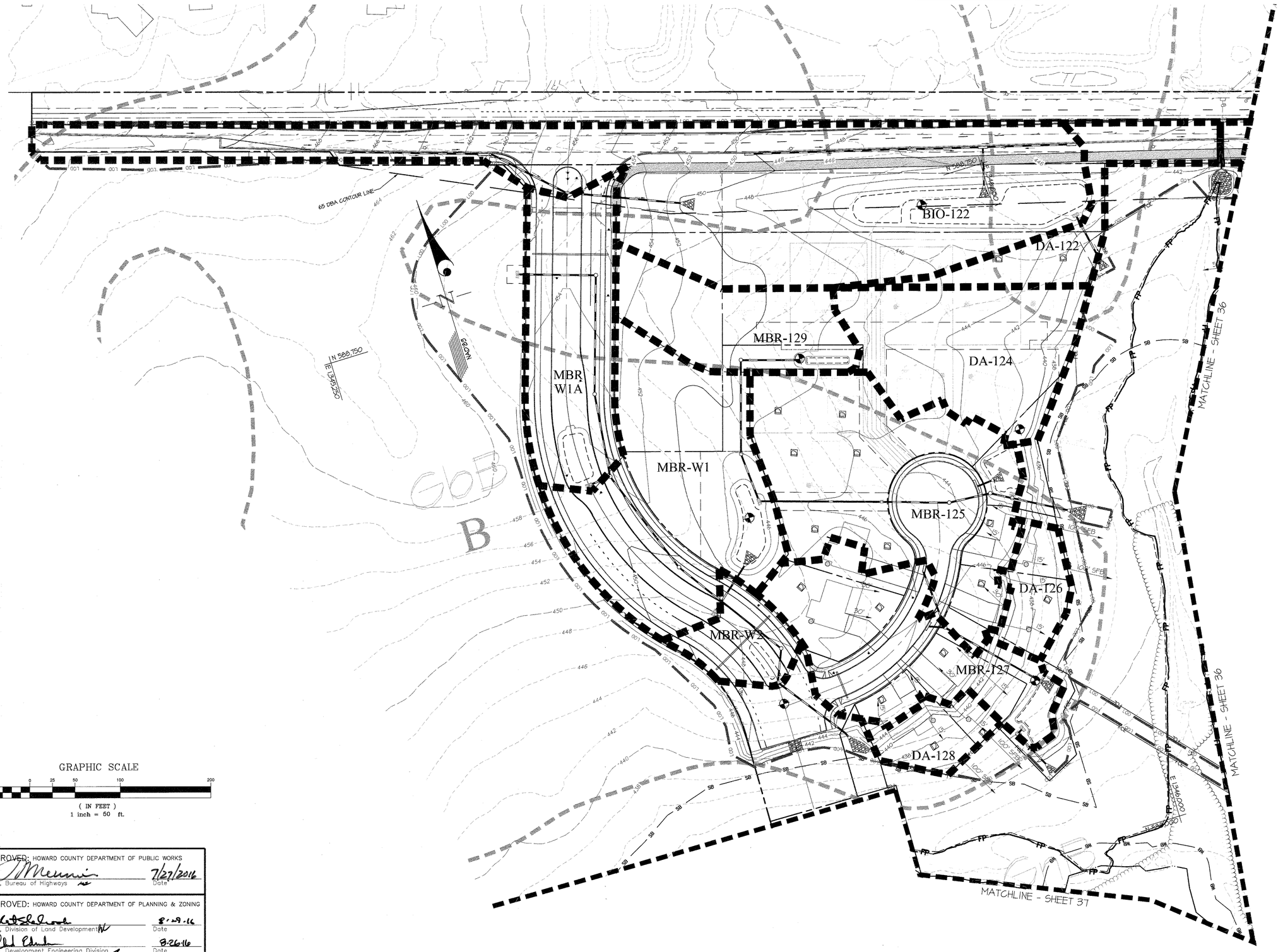
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R–ED	13–013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23–6&12	34 OF 60

SHA TRACKING NO. 14APHO018XX   F 15-087

© GLW 2016

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_33-34-SC NOTES.dwg, 7/12/2016 8:49:18 AM, jenniferd, 1:1



SOIL SYMBOL	SOIL DESCRIPTION	SOIL TYPE
GkB	GLADSTONE LOAM, 3 to 8 PERCENT SLOPES	B
GkC	GLADSTONE LOAM, 8 to 15 PERCENT SLOPES	B
GmB	GLENVILLE-BAILE SILT LOAMS, 0 to 8 PERCENT SLOPES	C

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 9.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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L:\CADD\DRAWINGS\13013\PLANS BY GLW\13013_35-36-SWM.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 25, 2018

7/14/16

STORMWATER MANAGEMENT DRAINAGE AREA MAP

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	35 OF 60

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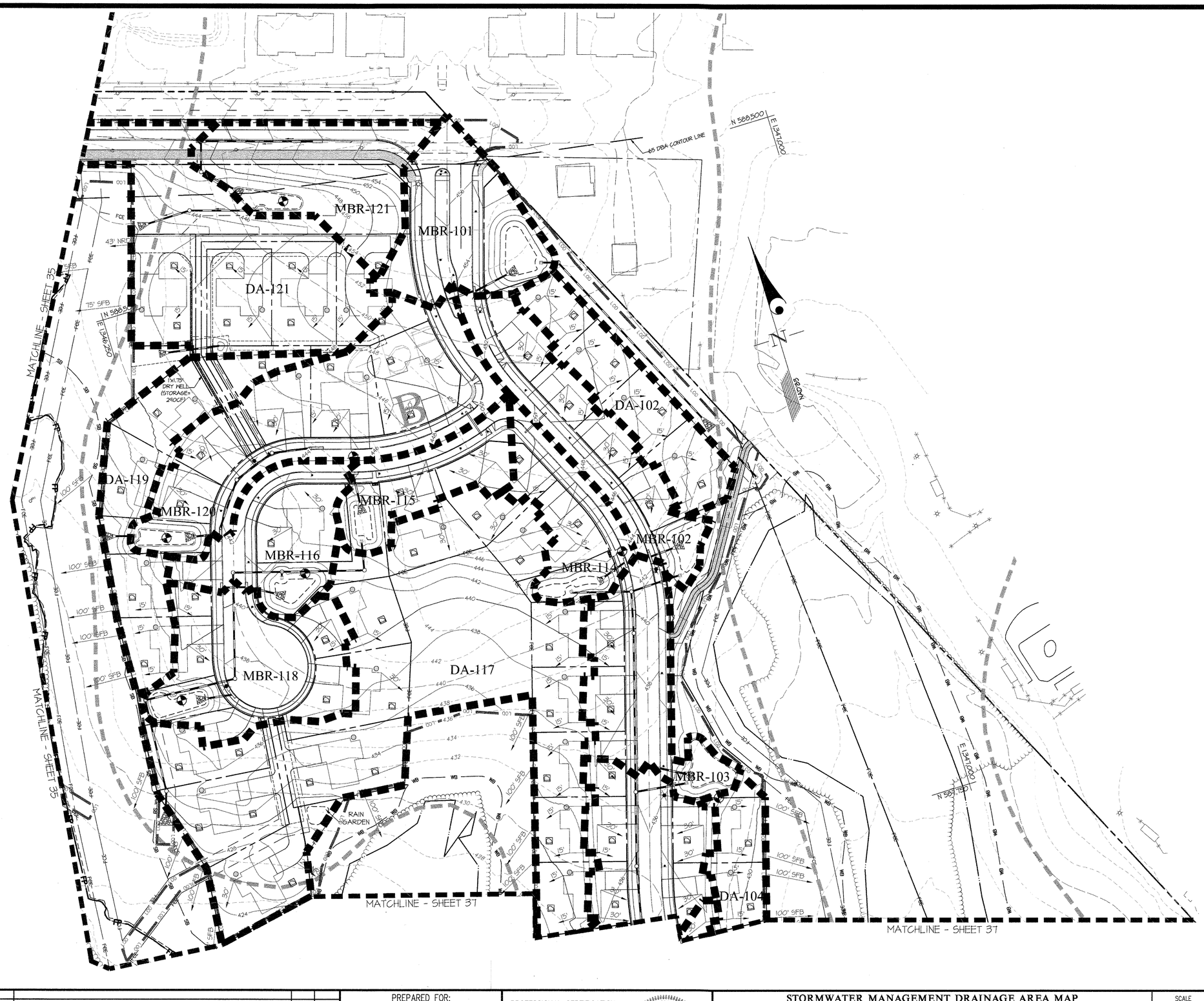
SHA TRACKING NO. 14APHO018XX F 15-087



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
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L:\CADD\DRAWINGS\XXX\PLANS BY GLW\ROADS-SD (PAT)\13013_35-37-SWM-SMA.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

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7/14/16

STORMWATER MANAGEMENT DRAINAGE AREA MAP

WESTMOUNT - PHASE 1

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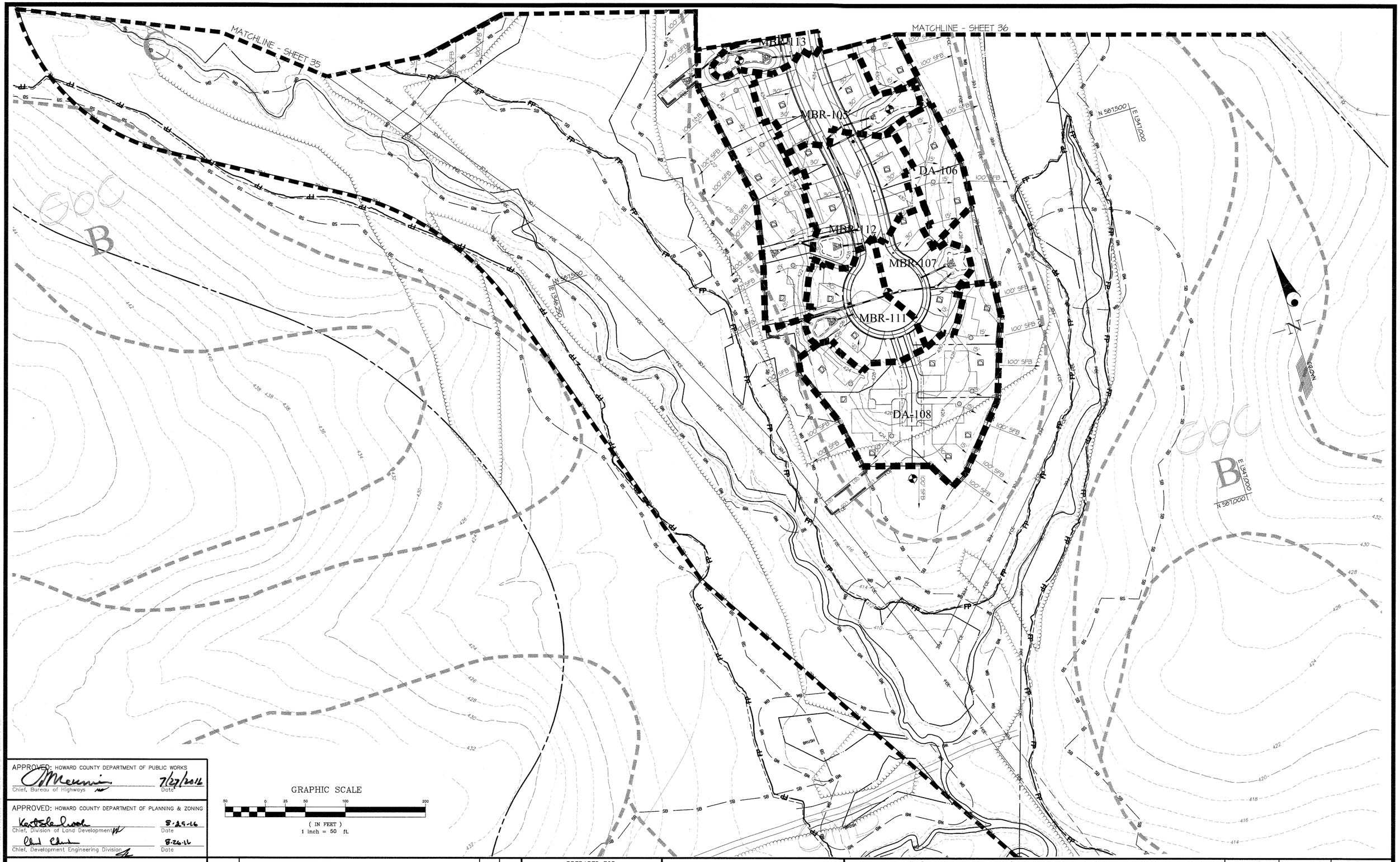
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	36 OF 60

© GLW 2015

SHA TRACKING NO. 14APHO018XX F 15-087



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-25-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.

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DES. JRD	DRN. JRD	CHK. DEV

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EXPIRATION DATE: MAY 26, 2018

7/14/16

STORMWATER MANAGEMENT DRAINAGE AREA MAP

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ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	37 OF 60

© GLW 2015

SHA TRACKING NO. 14APHO018XX F 15-087

ESD COMPUTATION SUMMARY - COUNTY

DRAINAGE AREA NO.	DRAINAGE AREA (AC.)	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	ESDv REQUIRED (C.F.)	ESDv PROVIDED (C.F.)	Pe REQUIRED (IN.)	Pe PROVIDED (IN.)	PUBLIC/PRIVATE/JOINT OWNERSHIP	PUBLIC/PRIVATE/JOINT MAINTENANCE
MBR 101	0.52	0.23	0.29	1545.17	2123.00	1.80"	2.47"	PUBLIC	JOINT
MBR 102	0.55	0.28	0.27	1837.52	2207.00	1.80"	2.16"	PUBLIC	JOINT
MBR 103	0.49	0.27	0.22	1777.09	2502.00	1.80"	2.53"	PUBLIC	JOINT
MBR 105	0.39	0.19	0.20	1274.38	1390.00	1.80"	1.96"	PUBLIC	JOINT
MBR 107	0.27	0.11	0.16	760.98	1013.00	1.80"	2.40"	PUBLIC	JOINT
MBR 111	0.32	0.17	0.15	1130.78	853.00	1.80"	1.36"	PUBLIC	JOINT
MBR 112	0.42	0.22	0.20	1404.89	1196.00	1.80"	1.53"	PUBLIC	JOINT
MBR 113	0.57	0.29	0.28	1888.85	2015.00	1.80"	1.92"	PUBLIC	JOINT
MBR 114	0.34	0.16	0.18	1069.94	1436.00	1.80"	2.42"	PUBLIC	JOINT
MBR 115	0.33	0.13	0.20	900.29	1139.00	1.80"	2.28"	PUBLIC	JOINT
MBR 116	0.44	0.20	0.24	1330.20	1401.74	1.80"	1.90"	PUBLIC	JOINT
MBR 118	0.64	0.34	0.30	2194.13	2221.00	1.80"	1.82"	PUBLIC	JOINT
MBR 120	1.06	0.50	0.56	3281.15	2431.21	1.80"	1.33"	PUBLIC	JOINT
MBR 125	1.32	0.49	0.83	3292.29	2834.48	1.80"	1.55"	PUBLIC	JOINT
MBR 127	0.83	0.35	0.48	2315.67	3110.48	1.80"	2.42"	PUBLIC	JOINT
MBR 129	0.54	0.04	0.50	411.69	591.00	1.80"	2.58"	PRIVATE	PRIVATE
MBR W1A	0.74	0.48	0.26	3057.33	2902.67	1.80"	1.71"	PUBLIC	JOINT
MBR W1	1.23	0.30	0.93	2133.36	3017.09	1.80"	2.55"	PUBLIC	JOINT
MBR W2	0.23	0.15	0.08	943.55	944.00	1.80"	1.80"	PUBLIC	JOINT
DA 102	0.43	0.10	0.33	729.74	552.95	1.80"	1.36"	---	---
DA 104	0.28	0.08	0.20	533.66	645.21	1.80"	2.18"	---	---
DA 106	0.21	0.05	0.16	362.93	370.48	1.80"	1.84"	---	---
DA 108	0.77	0.27	0.50	1826.66	1463.69	1.80"	1.44"	---	---
DA 117	2.83	0.59	2.24	4428.02	3699.93	1.80"	1.50"	---	---
DA 119	0.57	0.13	0.44	926.35	948.7	1.80"	1.84"	---	---
DA 124	0.79	0.18	0.61	1295.85	767.54	1.80"	1.07"	---	---
DA 126	0.20	0.05	0.15	360.94	250.48	1.80"	1.25"	---	---
DA 128	0.19	0.04	0.15	298.10	358.48	1.80"	2.16"	---	---

TOTAL FOR SITE (MBR, DA)	17.50	6.39	11.11	43,311.50	44,385.12	1.80"	1.84"

* THIS SUMMARY CORRESPONDS TO ESD FACILITIES USED TO TREAT STORMWATER RUNOFF WITHIN THE COUNTY LIMITS.

ESD COMPUTATION SUMMARY - STATE

DRAINAGE AREA NO.	DRAINAGE AREA (AC.)	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	ESDv REQUIRED (C.F.)	ESDv PROVIDED (C.F.)	Pe REQUIRED (IN.)	Pe PROVIDED (IN.)	PUBLIC/PRIVATE/JOINT OWNERSHIP	PUBLIC/PRIVATE/JOINT MAINTENANCE
MBR 121	0.58	0.19	0.39	1052.55	1822.00	1.69"	2.52"	PRIVATE	PRIVATE
BIO 122	2.55	1.01	1.54	4797.40	7857.00	1.69"	2.08"	PRIVATE	PRIVATE
DA 121	1.12	0.48	0.64	2975.27	1959.83	1.69"	1.11"	---	---
DA 122	0.51	0.21	0.30	1315.44	247.00	1.69"	0.32"	---	---

TOTAL FOR SITE (MBR, DA)	4.76	1.89	2.87	10,140.65	7,895.83	1.69"	1.69"

* THIS SUMMARY CORRESPONDS TO ESD FACILITIES USED TO TREAT STORMWATER RUNOFF WITHIN THE STATE RIGHT-OF-WAY.

ON-LOT STORMWATER MANAGEMENT PRACTICES

LOT NUMBER	ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF	DISCONNECTION OF NON-ROOFTOP RUNOFF	SHEETFLOW TO CONSERVATION AREAS	RAINWATER HARVESTING	DRY WELLS
		N-1	N-2	N-3	M-1	M-1
		(NUMBER)	(NUMBER)	(Y/N)	(NUMBER)	(NUMBER)
3	BURTON DRIVE	4	0	N	1	2
4	BURTON DRIVE	4	0	N	1	2
5	BURTON DRIVE	4	0	N	1	2
6	BURTON DRIVE	2	0	N	1	2
7	BURTON DRIVE	4	0	Y	1	2
8	BURTON DRIVE	4	0	Y	1	2
9	BURTON DRIVE	4	0	Y	1	2
10	BURTON DRIVE	4	0	Y	1	2
11	BURTON DRIVE	4	0	Y	1	2
12	BURTON DRIVE	3	0	Y	1	2
13	BURTON DRIVE	2	0	Y	1	2
14	BURTON DRIVE	3	0	Y	1	2
15	BURTON DRIVE	1	0	Y	1	2
16	BURTON DRIVE	1	0	Y	1	2
17	BURTON DRIVE	3	0	Y	1	2
18	BURTON DRIVE	3	0	Y	1	2
19	BURTON DRIVE	4	0	Y	1	2
20	BURTON DRIVE	4	0	Y	1	2
21	BURTON DRIVE	4	0	Y	1	2
22	BURTON DRIVE	4	0	Y	1	2
23	BURTON DRIVE	4	0	Y	1	2
24	BURTON DRIVE	4	0	Y	1	2
25	BURTON DRIVE	4	0	N	1	2
26	BURTON DRIVE	2	0	N	1	2
27	BURTON DRIVE	4	0	N	1	2
28	WARBURTON COURT	3	0	N	1	2
29	WARBURTON COURT	2	0	N	1	1
30	WARBURTON COURT	3	0	N	1	2
31	WARBURTON COURT	1	0	N	1	2
32	WARBURTON COURT	0	0	Y	1	2
33	WARBURTON COURT	1	1	Y	1	1
34	WARBURTON COURT	0	0	Y	1	2
35	WARBURTON COURT	0	0	Y	1	2
36	WARBURTON COURT	3	0	Y	1	2
37	WARBURTON COURT	3	0	Y	1	2
38	WARBURTON COURT	1	0	Y	1	2
39	WARBURTON COURT	2	0	N	1	2
40	WARBURTON COURT	2	1	Y	1	2
41	WARBURTON COURT	2	0	N	1	2
42	WARBURTON COURT	2	0	N	1	2
43	WARBURTON COURT	2	0	N	1	2
44	WARBURTON COURT	2	0	N	1	2
45	WARBURTON COURT	2	0	N	1	2
46	WARBURTON COURT	3	0	N	1	2
47	ARLINGTON COURT	2	0	N	1	2
48	ARLINGTON COURT	0	0	N	1	2
49	ARLINGTON COURT	3	0	Y	1	1
50	ARLINGTON COURT	4	0	N	1	2
51	ARLINGTON COURT	4	0	Y	1	2
52	ARLINGTON COURT	3	0	Y	1	2
FUT. 72	ARLINGTON COURT	3	0	N	1	2
FUT. 73	ARLINGTON COURT	2	0	N	1	2
FUT. 74	ARLINGTON COURT	3	0	N	0	0
FUT. 75	ARLINGTON COURT	4	0	N	0	0
FUT. 76	ARLINGTON COURT	0	0	Y	1	1
FUT. 77	ARLINGTON COURT	0	0	N	1	1
FUT. 78	ARLINGTON COURT	4	0	N	1	0
FUT. 79	ARLINGTON COURT	1	0	N	1	0
FUT. 80	ARLINGTON COURT	1	0	Y	1	0

NOTES:
1. ALL ON LOT STORMWATER MANAGEMENT DEVICES WILL BE PRIVATE AND OWNED/MAINTAINED BY THE HOMEOWNER.

2. ON LOT STORMWATER MANAGEMENT FOR FUTURE LOTS WITHIN NON-BUILDABLE BULK PARCEL 'B' ARE SHOWN ON THE STORMWATER MANAGEMENT DRAINAGE AREA MAP AND IN THE ON LOT STORMWATER MANAGEMENT PRACTICE CHART BECAUSE THEY WERE ACCOUNTED FOR IN THE STORMWATER MANAGEMENT COMPUTATIONS.

NARRATIVE:

INTRODUCTION

THIS REPORT SUMMARIZES THE STORMWATER MANAGEMENT DESIGN FOR THE PHASE I SITE OF WESTMOUNT. IT INCLUDES STORMWATER MANAGEMENT PRACTICES, JUSTIFIES WHY THOSE PRACTICES ARE USED, AND THE COMPUTATIONS THAT SUPPORT THEM. THE REPORT REVIEWS EXISTING AND PROPOSED SITE CONDITIONS, WHILE INDICATING ANY IMPACTS OR AFFECTS THAT THE LATTER MAY HAVE ON THE FORMER, OR HOW THOSE POSSIBLE IMPACTS ARE BEING CONTROLLED.

SITE DESCRIPTION

WESTMOUNT IS LOCATED IN THE SECOND ELECTION DISTRICT OF HOWARD COUNTY. IT IS BOUNDED BY MD ROUTE 144 TO THE NORTH, THE KIWANIS-WALLACE PARK AND NEIGHBORHOODS SUCH AS CHATEAU RIDGE AND CENTENNIAL MANOR ARE TO THE EAST, AND THE DOUGHOREGAN MANOR IS TO THE WEST. KINGSBRIDGE AT BURLEIGH MANOR IS ADJACENT TO A PORTION OF THE SOUTH BOUNDARY OF THE SITE. IT SHOULD BE MENTIONED THAT THE REMAINING PROPERTY ADJACENT TO OUR SITE TO THE SOUTH AND ALL OF THE AREA TO THE WEST HAS BEEN PLACED IN AGRICULTURAL PRESERVATION PARCELS AND CAN NEVER BE DEVELOPED. THE OWNER OF THIS PROPERTY BEING DEVELOPED ALSO HAS CONTROL OF THE PRESERVATION PARCELS TO THE WEST. THE LIMIT OF PHASE ONE IS IN THE NORTHERN LIMITS OF WESTMOUNT, ADJACENT TO MD ROUTE 144 AND THE KIWANIS-WALLACE PARK.

THE ZONING FOR THIS PROPERTY IS R-ED AND THE PHASE ONE LIMIT IS APPROXIMATELY 79 ACRES. ACCESS TO THE SITE WILL BE FROM MD ROUTE 144. TWO ENTRANCES ARE BEING PROPOSED. THE FIRST ENTRANCE IS APPROXIMATELY 1400' FROM THE INTERSECTION OF MD ROUTE 144 AND MD ROUTE 40. THE SECOND ENTRANCE IS APPROXIMATELY 600' WEST OF THE FIRST. THE ROAD THAT WILL SERVE THE MAJORITY OF THE SITE HAS BEEN DESIGNED WITH THE INPUT OF FIRE AND RESCUE. OUR CLIENT ACKNOWLEDGED EARLY ON IN THE PROCESS THAT SERVING THIS MANY LOTS WITH ONLY ONE WAY IN AND OUT WOULD GIVE FIRE AND RESCUE CONCERN. THE SOLUTION WAS THE ROAD ALIGNMENT SHOWN, WITH LARGE SWEEPING RADII AND PERIODIC BREAKS IN THE ISLANDS FOR THE FIRE TRUCK TO GET TO THE OTHER SIDE IF THE NEED SHOULD ARISE.

THE SITE IS WOODED IN THE AREAS OF CONCENTRATED FLOWS, AND MEADOW IN THE AREAS OF HIGHER ELEVATION. THE EXISTING TOPOGRAPHY ON THE SITE IS MODERATELY SLOPED DRAINING PREDOMINATELY FROM THE NORTHWEST CORNER OF THE SITE TO THE SOUTHEAST. THE SITE DRAINS TO SEVERAL AREAS OF CONCENTRATED FLOWS, MAKING UP THE THREE MAJOR TRIBUTARIES ANALYZED IN OUR FLOODPLAIN STUDY. THE COMPUTATIONS FOR THE FLOODPLAIN STUDY HAVE BEEN PROVIDED IN A SEPARATE REPORT. THESE AREAS EVENTUALLY DRAIN TO THE LITTLE PATUXENT RIVER. THE SITE LIES WITHIN THE LITTLE PATUXENT WATERSHED. THE LITTLE PATUXENT RIVER IS A TYPE IV-P STREAM.

IN ADDITION TO THE FLOODPLAIN, THE SITE CONTAINS STEEP SLOPES, WETLANDS, AND STREAMS. ANY DISTURBANCES OF THESE AREAS HAVE BEEN DETERMINED AS NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING IN REVIEW OF THE PRELIMINARY EQUIVALENT SKETCH PLAN.

THE SITE IS SUBJECT TO A DEVELOPER'S RIGHTS AND RESPOSIBILITES AGREEMENT WHICH IDENTIFIES THE DEVELOPMENT CRITERIA FOR THE PROJECT.

STORM DRAIN

STORM DRAIN INLETS ARE USED TO COLLECT RUNOFF FROM THE ROAD AND LOT DRAINAGE. THE STORM DRAIN WILL TAKE THE RUNOFF TO A MICRO-BIORETENTION FACILITY. THE RUNOFF THAT DOES NOT INFILTRATE AT THE MIRCO-BIORETENTION FACILITY, WILL BE COLLECTED BY THE UNDER DRAIN OR OVERFLOW RISER AND ENTER A STORM DRAIN SYSTEM THAT WILL OUTFALL THE RUNOFF TO OPEN SPACE. OTHER WATER WILL ENTER THE STORM DRAIN SYSTEM BY OVERLAND FLOW TO A MICRO-BIORETENTION FACILITY, EITHER AS SHEET FLOW OR BY A SWALE.

'C' FACTORS FOR THE STORM DRAIN DRAINAGE AREAS WERE ESTABLISHED BASED ON THREE TYPICAL CONDITIONS FOUND THROUGHOUT THE SITE: 1) DRAINAGE AREA CONSISTS PRIMARILY OF OPEN SPACE (C=0.34) 2) DRAINAGE AREA CONSISTS PRIMARILY OF RESIDENTIAL LOTS (C=0.67) AND 3) DRAINAGE AREA CONSISTS PRIMARILY OF ROAD RIGHT-OF-WAY (C=0.71).

WE BELIEVE THAT THE MANNER IN WHICH WE WILL OUTFALL THE RUNOFF, ALONG WITH THE SEDIMENT CONTROL MEASURES TAKEN DURING CONSTRUCTION, THE NATURAL VEGETATION AND ECO-SYSTEM THAT EXISTS TODAY WILL NOT BE ADVERSELY IMPACTED AND WILL CONTINUE TO THRIVE. ALSO, BECAUSE THE STORM DRAIN SYSTEM OUTFALLS TO OPEN SPACE, IT DOES NOT AFFECT ANY EXISTING STORM DRAIN UTILITIES.

WATER AND SEWER

PROPOSED STORMWATER MANAGEMENT FACILITIES HAVE BEEN LOCATED IN SUCH A WAY SO THAT SEWER OUTFALLS AND WATER MAINS CONNECTING MULTIPLE PHASES DO NOT RUN ALONG COMMON PROPERTY LINES. THIS ALLOWS FOR BOTH THE INITIAL CONSTRUCTION AND FUTURE MAINTENANCE OF THE PUBLIC SYSTEMS.

SEDIMENT CONTROL

SEDIMENT CONTROL FOR THE SITE WILL CONSIST OF PERIMETER EARTH DIKES TO DIRECT THE RUNOFF TO SEDIMENT TRAPS, STONE OUTLET STRUCTURES, AND GABION OUTLET STRUCTURES. SILT FENCE OR SUPER SILT FENCE WILL BE UTILIZED IN AREAS THAT ARE CLOSE IN PROXIMITY AND THE DRAINAGE AREA TO THE DEVICE IS APPROPRIATE. THE LOCATION OF PERMANENT STORMWATER MANANGEMENT WAS TAKEN INTO CONSIDERATION DURING THE DESIGN OF SEDIMENT CONTROL. WE HAVE ALSO PROVIDED STOCKPILE AREAS FOR THE EXCESS MATERIAL THAT WILL BE GENERATED BY THE LOT AREAS AND USED IN AREAS SUCH AS ROAD CROSSINGS. THE SITE DOES BALANCE WITHIN ITSELF; THEREFORE, AN OFFSITE AREA FOR EXCESS OR BORROW MATERIAL WILL NOT BE REQUIRED.

STORMWATER MANAGEMENT

STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED IN ACCORDANCE WITH CHAPTER 5 OF THE RECENTLY REVISED MDE STORMWATER MANAGEMENT DESIGN MANUAL. TWO PE VALUES WERE CALCULATED FOR THE SITE. THE FIRST IS FOR THE AREA OF THE SITE WITHIN THE COUNTY LIMITS AND SECOND FOR THE AREA OF SITE WITHIN THE STATE RIGHT-OF-WAY. BASED ON TABLE 5.3, THIS SITE HAS A TARGET PE OF 1.8" WITHIN THE COUNTY RIGHT-OF-WAY AND A TARGET PE OF 1.69" WITHIN THE STATE RIGHT-OF-WAY. THE METHODOLOGY APPLIED IN OUR DESIGN AND THE FACILITIES BEING USED TO SATISFY OUR ESD VOLUMES FOLLOW THE HIERARCHY OF THE DESIGN MANUAL GUIDELINES AS THE PREFERRED MEANS OF PROVIDING ESD TO THE BMP. IN ORDER TO FULFILL THE STORMWATER MANAGEMENT REQUIREMENTS, A COMBINATION OF ROOFTOP DISCONNECTS, NON-ROOFTOP DISCONNECTS, RAINWATER HARVESTING, SHEET FLOW TO CONSERVATION AREAS, DRY WELLS, MICRO-BIORETENTION FACILITIES, A RAIN GARDEN, AND BIOSWALES WILL BE USED. THE STORMWATER MANAGEMENT COMPUTATIONS HAVE BEEN SUBDIVIDED TO ESTABLISH WHICH ESD FACILITIES ARE USED TO TREAT THE STORMWATER RUNOFF WITHIN THE COUNTY LIMITS OF THE SITE, AND WHICH ARE USED TO TREAT THE STORMWATER RUNOFF GENERATED WITHIN THE LIMITS OF THE STATE RIGHT-OF-WAY.

ALTHOUGH THE PERCENT IMPERVIOUS FOR THE AREA WITHIN OUR LIMIT OF DISTURBANCE IS 37%, THE TARGET PE VALUES WERE DETERMINED BASED ON A CONSERVATIVE SITE IMPERVIOUSNESS OF 50%. THIS SITE HAS MANY GREEN AREAS WITHIN IT, WHICH BRINGS THE COMPOSITE PERCENT IMPERVIOUS AREA DOWN, BUT EACH FACILITY HAS BEEN DESIGNED ON A CASE BY CASE BASIS AND THE PERCENTS OF IMPERVIOUS AREA WILL VARY. THE EXISTING SITE CONDITION CONSISTED OF NO IMPERVIOUS AREA.

DEPENDING ON THE LOT CONFIGURATION, THE ROOFTOP DRAINAGE WILL BE TREATED BY A COMBINATION OF ROOFTOP DISCONNECT, RAINWATER HARVESTING, SWALES, AND DRY WELLS. FOR LOTS THAT BACK TO OPEN SPACE, THE BACK HALF OF THE ROOF WILL BE TREATED BY DRY WELLS AND RAINWATER HARVESTING. THE DRY WELLS WERE DESIGNED TO PROVIDE THE FULL ESD VOLUME FOR THE ROOF. THE NUMBER OF DRY WELLS BEING PROPOSED WILL GENERATE THE Rev REQUIRED FOR THE SITE. ANY DRY WELLS THAT ARE IN FILL HAVE NOT BEEN INCLUDED IN THE CALCULATED Rev PROVIDED BY THE SITE. THE RAINWATER HARVESTING WILL BE FULFILLED BY NO MORE THAN ONE 200 GALLON RAIN BARRELL PER LOT TO ASSIST IN TREATING THE RUNOFF FROM THE BACK HALF OF ROOFS. FOR INTERIOR LOTS THAT BACK TO OTHER LOTS, ANY PORTION OF THE ROOF THAT DOES NOT DRAIN TO A DRY WELL OR RAIN BARRELL WILL RECEIVE PARTIAL TREATMENT FROM ROOFTOP DISCONNECT PROVIDED THAT IT MEETS THE MDE REQUIREMENTS FOR ROOFTOP DISCONNECT. A BENEFIT OF USING MANY OF THE STORMWATER MANAGEMENT DEVICES IS THAT THEY REDUCE THE SURFACE AREA REQUIRED FOR THE MICRO-BIORETENTION FACILITIES, WHILE REQUIRING LITTLE SURFACE AREA THEMSELVES. THE FACT THAT THE LOTS ARE LARGE, THE SITE HAS WIDE ENVIRONMENTAL BUFFERS, AND THE HOUSES ON THE LOTS ARE SINGLE FAMILY DETACHED, WE ARE ABLE TO TAKE ADVANTAGE OF DEVICES SUCH AS ROOFTOP DISCONNECT, SHEET FLOW TO BUFFER, AND RAINWATER HARVESTING.

MICRO-BIORETENTION FACILITIES WILL BE LOCATED THROUGHOUT THE SITE ON OPEN SPACE LOTS. THESE FACILITIES WILL TREAT THE ROAD AREA AND ANY LOT AREA DRAINING TO THE FACILITY BY EITHER OVERLAND FLOW OR PIPING. PART OF WESTMOUNT PARKWAY IS DESIGNED TO SLOPE TOWARD THE GREENSPACE ALONG THE CENTERLINE OF THE ROAD, RATHER THAN WITH A CROWN, TO UTILIZE THE GREEN SPACE FOR STORMWATER MANAGEMENT PRACTICES LIKE MICRO-BIORETENTION FACILITIES. ESD STORAGE IN MICRO-BIORETENTION FACILITIES IS PROVIDED IN THE 12" OF PONDING ABOVE THE FACILITY AND THE STORAGE IN THE STONE UNDER THE PLANTING SOIL. ALL OF THE MICRO-BIORETENTION FACILITIES WILL HAVE AN UNDER DRAIN SYSTEM AND AN OVERFLOW INLET TO PASS LARGE STORMS. IF THE FACILITY CAN PROVIDE THE FULL PE AND IS ADJACENT TO AN OPEN SPACE LOT DRAINING AWAY FROM THE SITE, THE FACILITY WILL OUTFALL TO THE OPEN SPACE LOT.

THE ENVIRONMENTAL SITE DESIGN PRESENTED IN THIS REPORT UTILIZES VARIOUS TYPES OF FACILITIES, SWALES, ETC. TO CAPTURE THE RUNOFF IN A NUMBER OF LOCATIONS WITHIN A WATERSHED IN AN ATTEMPT TO RECHARGE THE GROUNDWATER IN SEVERAL LOCATIONS. WE BELIEVE THIS IS MUCH BETTER THAN RELYING ON ONE OR TWO LOCATIONS, MANY TIMES LOWER IN THE SITE'S WATERSHED, AND NOT BEING EFFECTIVE. THE PROPOSED APPROACH REDUCES THE FOOTPRINT REQUIRED FOR THE ABOVE GROUND FACILITY NEEDED TO PROVIDE THE WATER QUALITY, THEREBY PRESERVING THE EXISTING VEGETATION.

MOST MICRO-BIORETENTION DEVICES WILL BE COUNTY OWNED AND JOINTLY MAINTAINED BY THE COUNTY AND THE HOMEOWNER'S ASSOCIATION (HOA). ANY MICRO-BIORETENTIONS SOLELY WITHIN THE WESTMOUNT PARKWAY RIGHT-OF-WAY WILL BE OWNED BY THE COUNTY AND JOINTLY MAINTAINED. ANY FACILITIES THAT SOLELY TREAT LOT RUNOFF WILL BE BOTH OWNED AND MAINTAINED BY HOA. THE MICRO-BIORETENTIONS ALONG MD ROUTE 144A (FREDERICK ROAD) WILL BE OWNED AND MAINTAINED BY THE HOA. ALL ON LOT DEVICES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE INDIVIDUAL HOME OWNERS.

CONCLUSION

WE BELIEVE THAT BY PROVIDING THE NUMBER OF MICRO BIO-RETENTION FACILITIES AS WE HAVE, ALONG WITH THEIR LOCATION AND THE OTHER DEVICES BEING PROPOSED, WE HAVE CREATED A STRATEGY THAT ALLOWS FOR THE PROPOSED DEVELOPMENT WITHOUT ADVERSELY AFFECTING THE RECEIVING WATERS AND OTHER ENVIRONMENTALLY SENSITIVE AREAS.

THE DESIGN, FOR BOTH STORMWATER MANAGEMENT AND SEDIMENT CONTROL, PRESENTED IN THIS REPORT AND ON THE FINAL PLAN DOES NOT ADVERSELY IMPACT THE ADJACENT PROPERTIES BOTH DURING AND AFTER CONSTRUCTION.

THE DESIGN ALSO DOES NOT ADVERSELY IMPACT THE EXISTING UTILITIES IN THE AREA. THE PROPOSED WATER AND SEWER ARE CONSISTENT WITH THE MASTER PLAN.

THIS FINAL PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS. THE DESIGN PRESENTED WILL SERVE TO UPHOLD THE INTEGRITY OF THE WATERSHED.

THE FOLLOWING RESOURCES WERE USED IN THE DESIGN OF THESE PLANS:
" TR-55 - PREPARED BY: USDA SOIL CONSERVATION SERVICE;
" TR-20 - PREPARED BY: USDA SOIL CONSERVATION SERVICE;
" HOWARD COUNTY SWM DESIGN MANUAL VOLUME I;

GENERAL PERFORMANCE STANDARDS FOR STORMWATER MANAGEMENT

STANDARD #1 THROUGH THE USE OF PERVIOUS CONCRETE IN THE DRIVEWAYS AND SIDEWALKS, DRYWELLS, AND MICRO BIORETENTION FACILITIES, WE HAVE REDUCED THE FOOTPRINT OF ABOVE GROUND FACILITIES.

STANDARD #2 THROUGH THE USE OF THE DEVICES MENTIONED IN NUMBER 1 ABOVE AND THE USE OF SHEET FLOW TO BUFFERS AND ROOFTOP DISCONNECTS, WE HAVE ADEQUATELY TREATED THE RUNOFF BEFORE IT ENTERS A JURISDICTIONAL WETLAND OR WATERS OF THE STATE OF MARYLAND.

STANDARD #3 WE BELIEVE THE LOCATIONS OF THE DEVICES AND THE TYPES OF DEVICES BEING USED PROVIDES THE ABILITY FOR THE GROUNDWATER TO BE RECHARGED AT PRE-DEVELOPMENT RATES.

STANDARD#4 MANAGEMENT HAS BEEN PROVIDED WITH THE USE OF PERVIOUS CONCRETE, DRYWELLS MICRO BIORETENTION FACILITIES, BIOSWALES, ROOFTOP DISCONNECTS AND SHEET FLOW TO BUFFER.

STANDARD #5 SINCE THE DEVICES PROPOSED HAVE BEEN SIZED TO CAPTURE THE REQUIRED VOLUME DRAINING TO IT, AND HAVE BEEN DESIGNED TO THE CRITERIA OUTLINED IN THE DESIGN MANUAL, THE FIRST ASPECT OF THIS STANDARD HAS BEEN SATISFIED. SECONDLY, WE WILL PROVIDE AT FINAL PLAN STAGE THE OPERATIONS AND MAINTENANCE SCHEDULE TO BE IMPLEMENTED TO INSURE THE DEVICES' LONGEVITY. THE FACT THAT THE SITE WILL BE MONITORED BY A HOWARD COUNTY INSPECTOR AS WELL AS THE GEOTECHNICAL ENGINEER WILL ALSO PROVIDE CONFIDENCE THAT THE FACILITIES WILL BE CONSTRUCTED PROPERLY.

STANDARD #6 NO DETERMINATION HAS BEEN MADE THAT ANY MORE THAN THE MANAGEMENT OF THE ONE YEAR STORM WILL BE REQUIRED. HOWEVER, IF HOWARD COUNTY SHOULD DECIDE THAT MANAGEMENT OF THE LARGER STORM EVENTS IS REQUIRED, OUR DESIGN WILL BE MODIFIED TO PROVIDE THE ADDITIONAL MANAGEMENT.

STANDARD #7 THE ENTIRE ONE YEAR VOLUME HAS BEEN ESTABLISHED FOR THE SITE. THEREFORE, NO ADDITIONAL MEASURES ARE REQUIRED TO PROVIDE CPV.

STANDARD #8 RUNOFF FROM THIS SITE DOES NOT DISCHARGE TO CRITICAL AREAS. THEREFORE, THIS STANDARD DOES NOT APPLY.

STANDARD #9 THE OPERATIONS AND MAINTENANCE SCHEDULES ARE PROVIDED WITH THESE PLANS. AGREEMENTS WILL BE PUT IN PLACE BETWEEN THE OWNER AND THE COUNTY TO ENSURE THE LONG TERM CARE OF THE FACILITIES AT THAT TIME.

STANDARD #10 THE FACT THAT EACH FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE MDE DESIGN MANUAL WOULD INDICATE THAT EACH FACILITY HAS AN ACCEPTABLE FORM OF PRE-TREATMENT.

STANDARD#11 THIS SITE DOES NOT QUALIFY FOR RE-DEVELOPMENT. THEREFORE, THIS STANDARD DOES NOT APPLY.

STANDARD #12 THIS PROJECT IS RESIDENTIAL AND DOES NOT REQUIRE AN NOI FOR THE NPDES GENERAL PERMIT. THEREFORE, THIS STANDARD DOES NOT APPLY.

STANDARD #13 THIS SITE DOES NOT MEET THE DEFINITION OF A SITE THAT HAS THE POTENTIAL FOR HIGHER POLLUTANT LOADS. THEREFORE, THIS STANDARD DOES NOT APPLY.

STANDARD #14 THIS SITE IS BEING REVIEWED BY HOWARD COUNTY. UPON RECEIPT OF THEIR APPROVAL, THE PLAN WILL BE IN COMPLIANCE WITH THE DESIGN REQUIREMENTS OF HOWARD COUNTY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[signature] 7/27/2016
Chief, Bureau of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[signature] 8-29-16
Chief, Division of Land Development — Date
[signature] 8-26-16
Chief, Development Engineering Division — Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_35-38-DAM-SWM.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

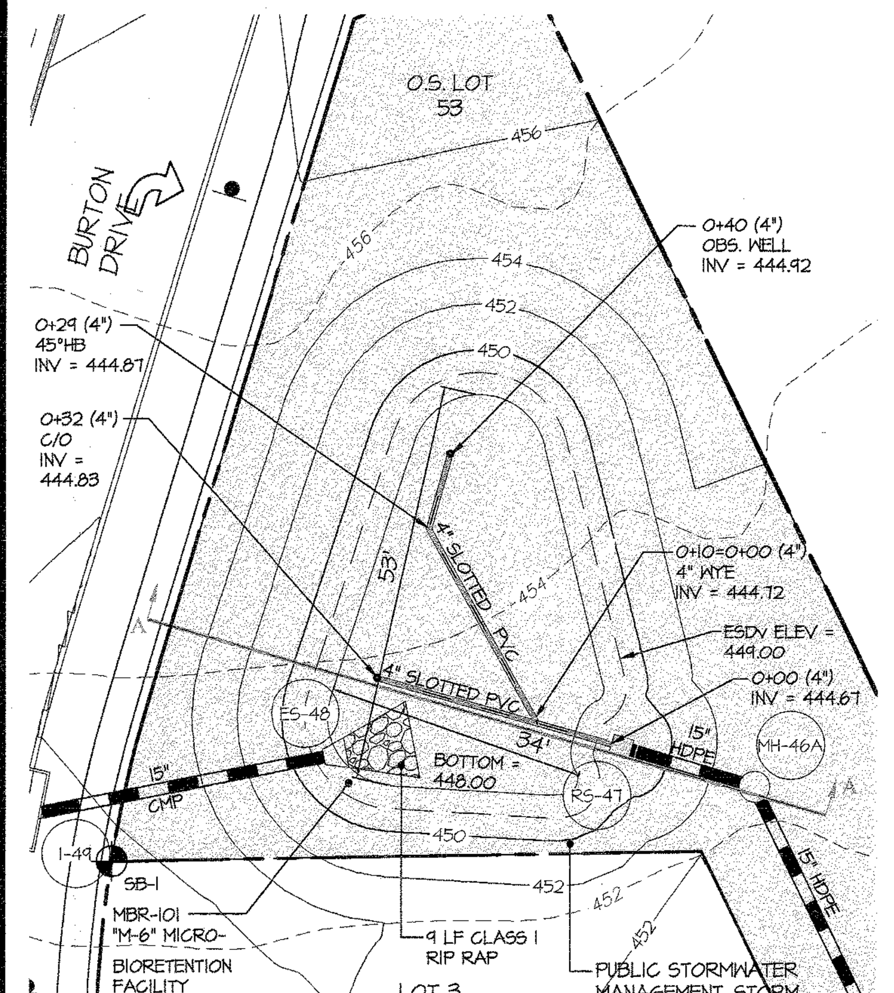
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16 [signature]

SWM NARRATIVE and SUMMARIES

WESTMOUNT · PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	38 OF 60

© GLW 2014

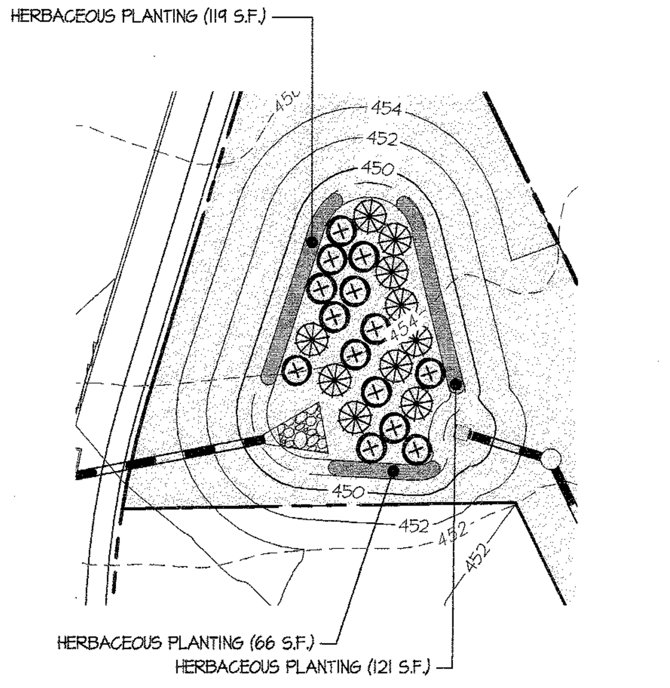


SEE TYPICAL MICRO-BIORETENTION DETAIL THIS SHEET FOR TYPICAL SECTION THROUGH MICRO-BIORETENTION FACILITY AND OUTLET STRUCTURE CONFIGURATION

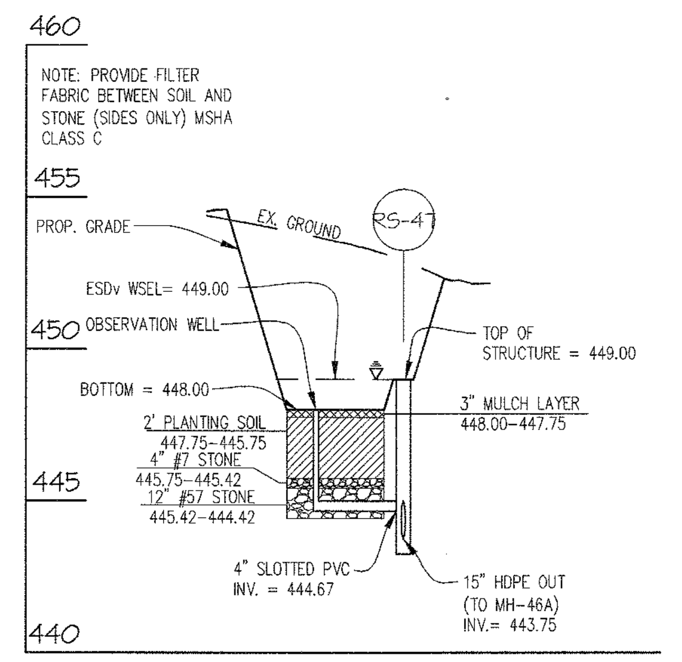
MICRO-BIORETENTION 101 SCALE: 1" = 20'

MBR-101
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 22,859 SF
STORAGE PROVIDED = 1,697 CU-FT (@449.00)
ESDv PROVIDED = 2,123 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 448.00
HIGH-FLOW OUTFALL: RS-47 ('S' INLET, TOP = 449.00)
MINIMUM DAM ELEVATION = 449.33

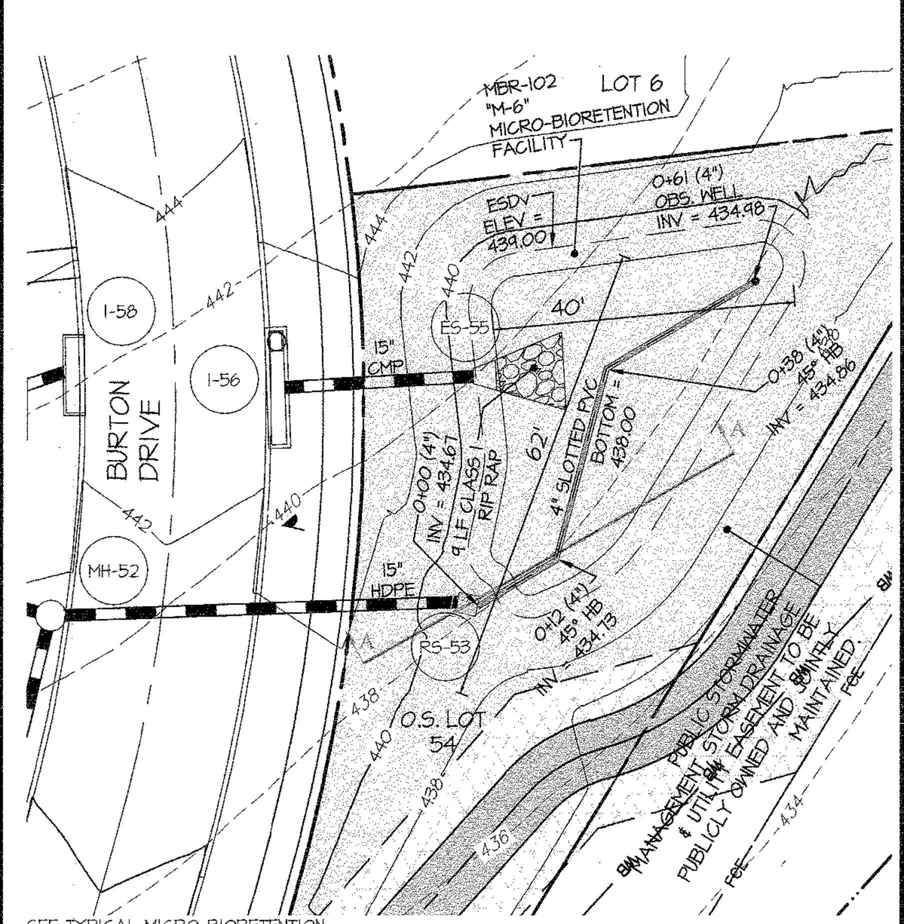


MICRO-BIORETENTION 101 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 101 DETAILS



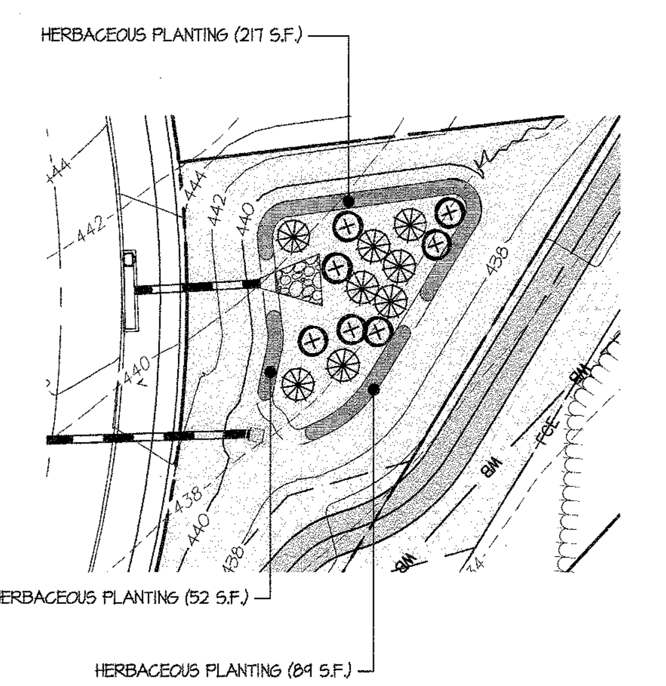
SEE TYPICAL MICRO-BIORETENTION DETAIL THIS SHEET FOR TYPICAL SECTION THROUGH MICRO-BIORETENTION FACILITY AND OUTLET STRUCTURE CONFIGURATION

MICRO-BIORETENTION 102 SCALE: 1" = 20'

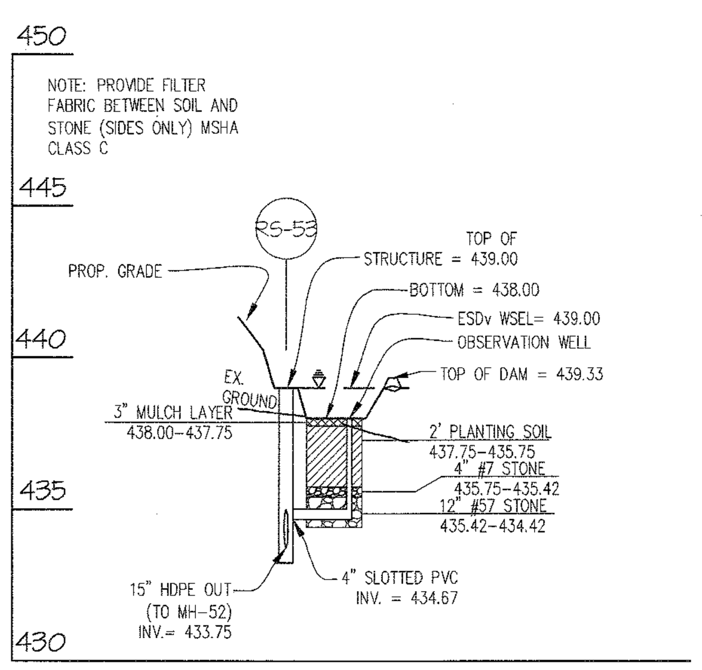
MBR-102
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 24,064 SF
STORAGE PROVIDED = 1,306 CU-FT (@439.00)
ESDv PROVIDED = 1,737 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 438.00
HIGH-FLOW OUTFALL: RS-53 ('S' INLET, TOP = 439.00)
MINIMUM DAM ELEVATION = 439.33

HERBACEOUS PLANTING (217 S.F.)



MICRO-BIORETENTION 102 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 102 DETAILS

0 4 10 20 40
1 inch = 20 ft.

0 6 15 30 60
1 inch = 30 ft.

S.D. PIPE SUMMARY TABLE - PUBLICALLY OWNED AND JOINTLY MAINTAINED			
SIZE (INCHES)	TYPE	QUANTITY (L.F.)	REMARKS
4	SLOTTED PVC	1071	SCHEDULE 40
4	PVC	168	SCHEDULE 40
6	SLOTTED PVC	263	SCHEDULE 40
6	PVC	4	SCHEDULE 40

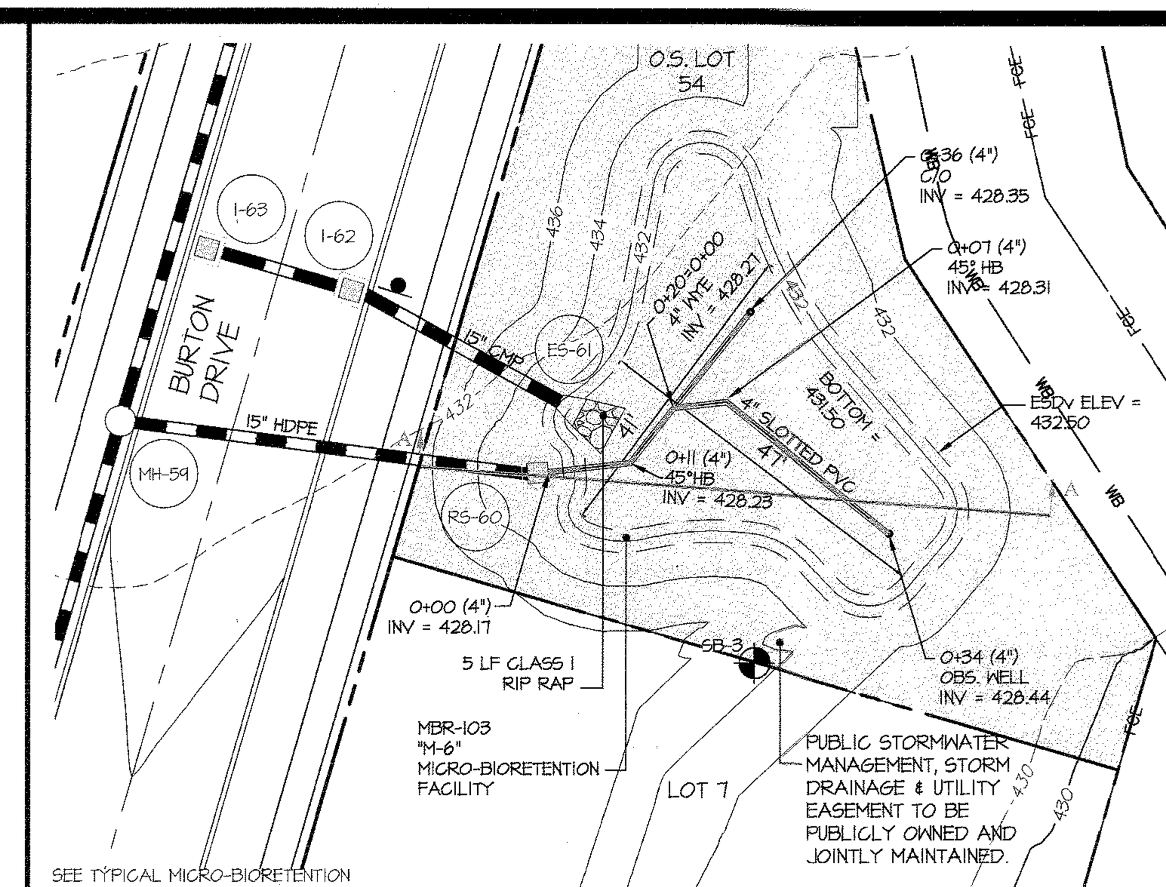
THE SD PIPE SUMMARY TABLE IS FOR THE STORMWATER MANAGEMENT UNDERDRAIN ONLY. FOR THE SITE SD PIPE SUMMARY, SEE SHEET 21.

MICRO-BIORETENTION PLANT LIST				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
SHRUBS *				
⊗	55	CORNUS SERICEA 'RUBY'/ RUBY RED OSIER DOGWOOD	18"-24" SPR.	CONTAINER
✻	39	ITEA VIRGINICA 'HENRY'S GARNET'/ VIRGINIA SWEETSPIRE	18"-24" SPR.	CONTAINER
HERBACEOUS *				
(shaded)	1,686 s.f.	CONTRACTOR TO CHOOSE HERBACEOUS PLANTING FROM: -HERMEROCALLIS 'STRAWBERRY CANDY' DAYLILY -HERMEROCALLIS 'JOAN SENIOR' DAYLILY -KALMIA ANGUSTIFOLIA/SHEEP LAUREL -ELEOCHARIS OVATA OBTUSA/BLUNT SPIKE RUSH	18" O.C.	CONTAINER

* SEE SHEET 9 FOR SHRUB AND HERBACEOUS PLANTING DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[signature] 7/27/2016
Chief, Bureau of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[signature] 8-29-16
Chief, Division of Land Development — Date
[signature] 8-26-16
Chief, Development Engineering Division — Date



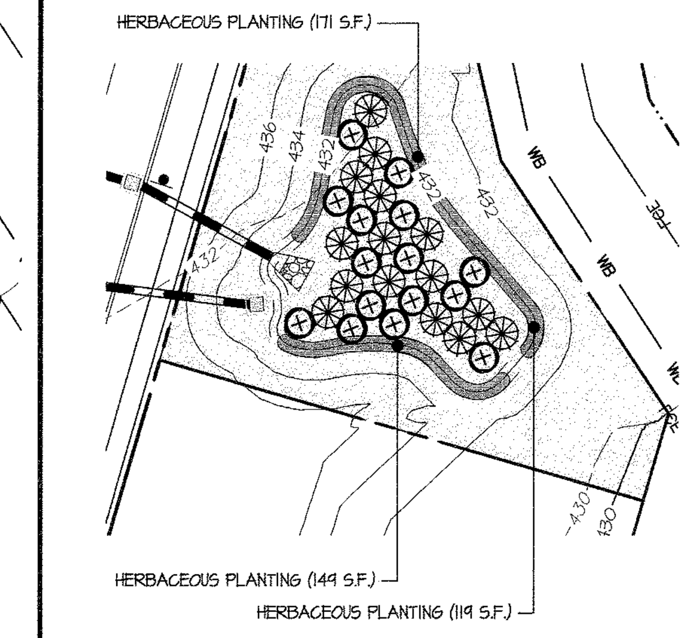
SEE TYPICAL MICRO-BIORETENTION DETAIL THIS SHEET FOR TYPICAL SECTION THROUGH MICRO-BIORETENTION FACILITY AND OUTLET STRUCTURE CONFIGURATION

MICRO-BIORETENTION 103 SCALE: 1" = 20'

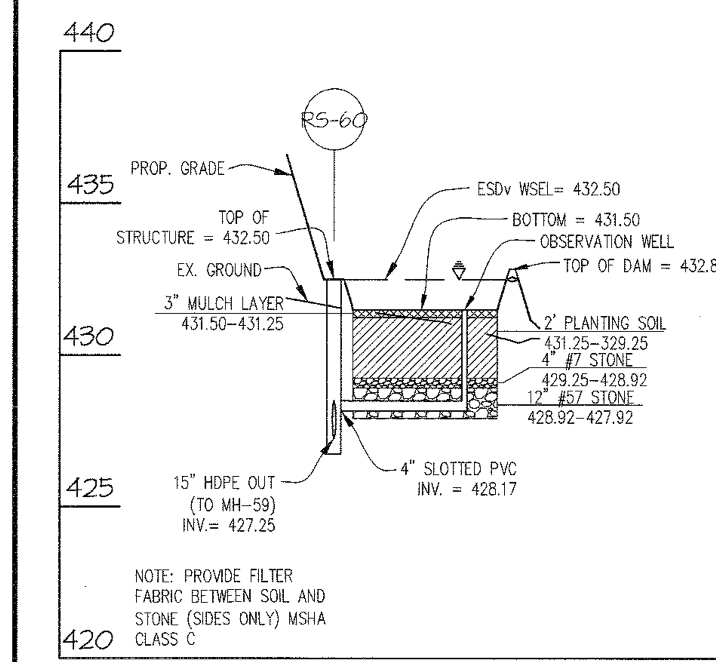
MBR-103
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 21,444 SF
STORAGE PROVIDED = 1,703 CU-FT (@432.50)
ESDv PROVIDED = 2,264 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 431.50
HIGH-FLOW OUTFALL: RS-60 ('S' INLET, TOP = 432.50)
MINIMUM DAM ELEVATION = 432.83

HERBACEOUS PLANTING (171 S.F.)

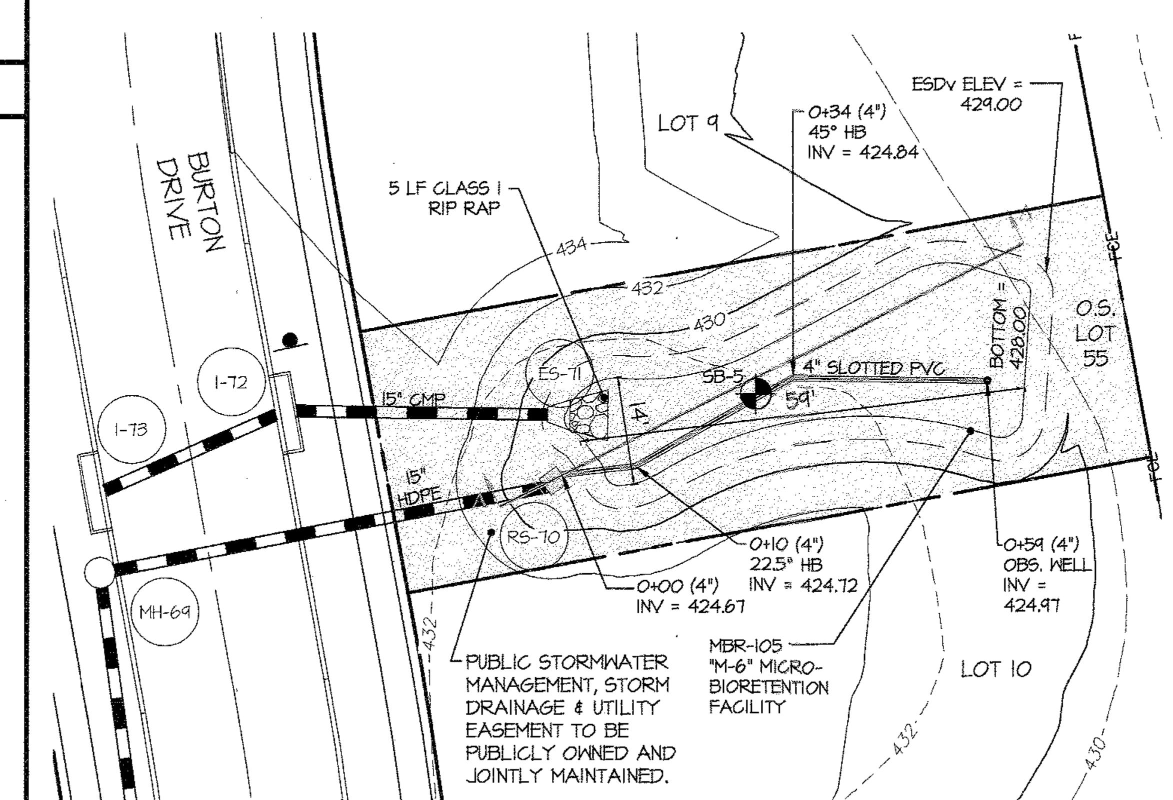


MICRO-BIORETENTION 103 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 103 DETAILS



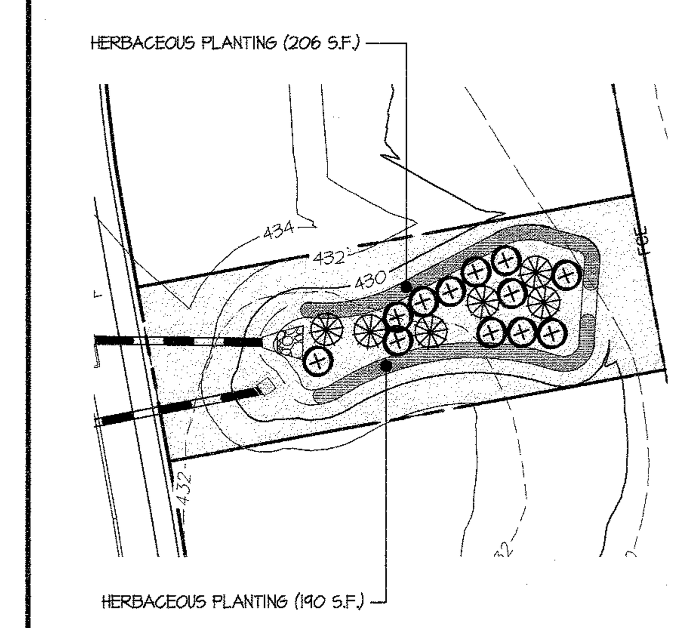
SEE TYPICAL MICRO-BIORETENTION DETAIL THIS SHEET FOR TYPICAL SECTION THROUGH MICRO-BIORETENTION FACILITY AND OUTLET STRUCTURE CONFIGURATION

MICRO-BIORETENTION 105 SCALE: 1" = 20'

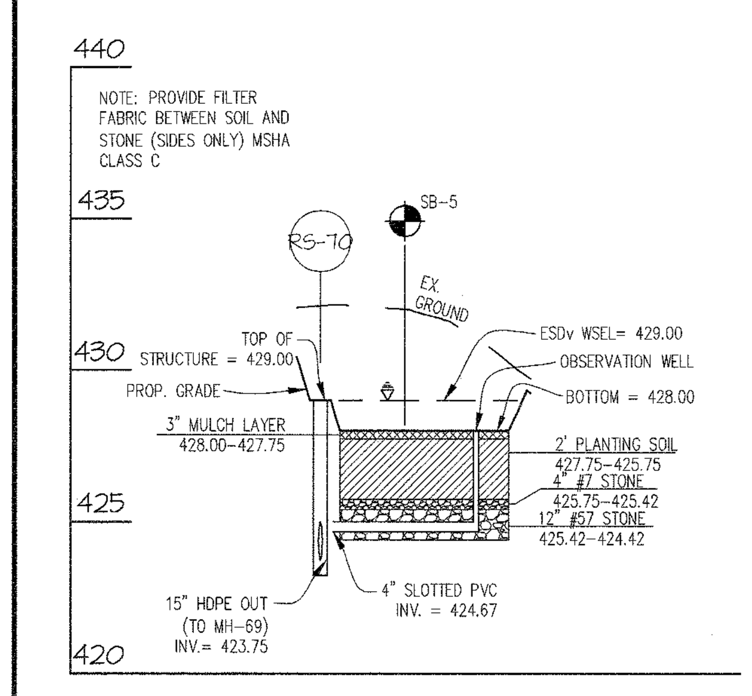
MBR-105
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 17,145 SF
STORAGE PROVIDED =1,128 CU-FT (@429.00)
ESDv PROVIDED = 1,500 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 428.00
HIGH-FLOW OUTFALL: RS-70 ('S' INLET, TOP = 429.00)
MINIMUM DAM ELEVATION = 429.33

HERBACEOUS PLANTING (206 S.F.)

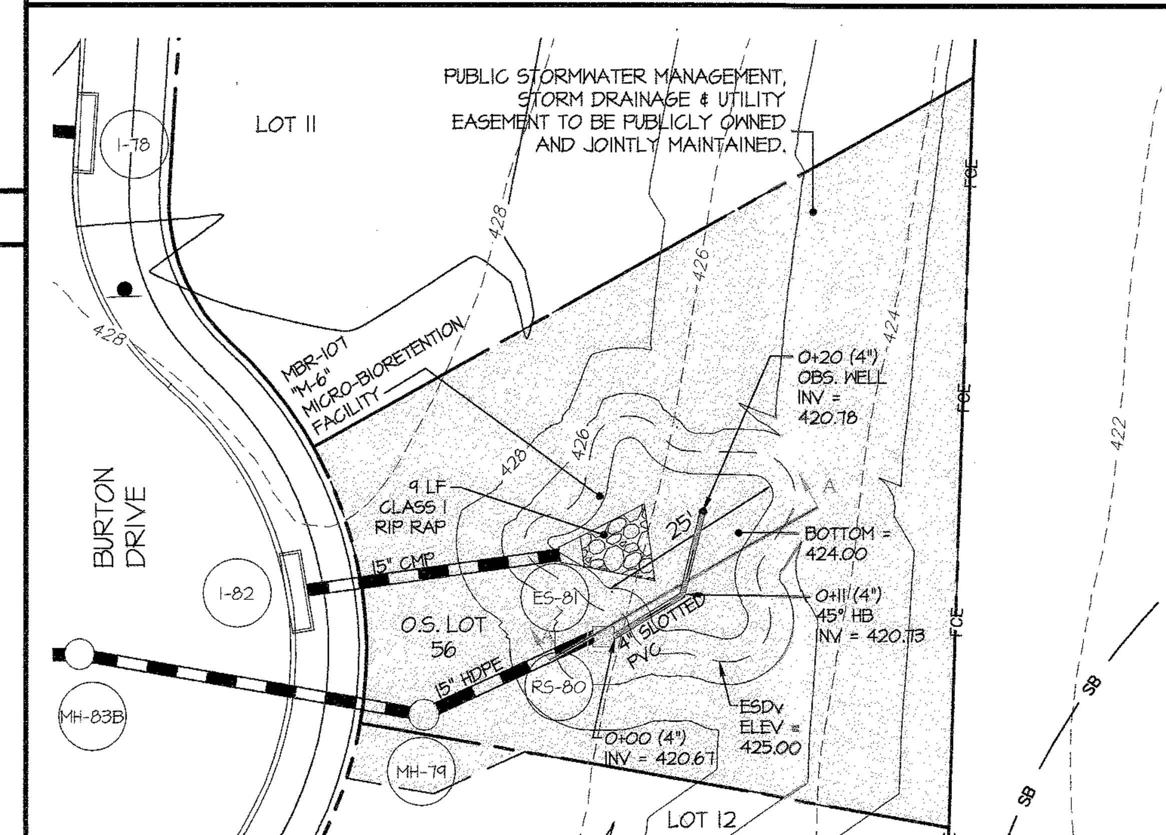


MICRO-BIORETENTION 105 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 105 DETAILS



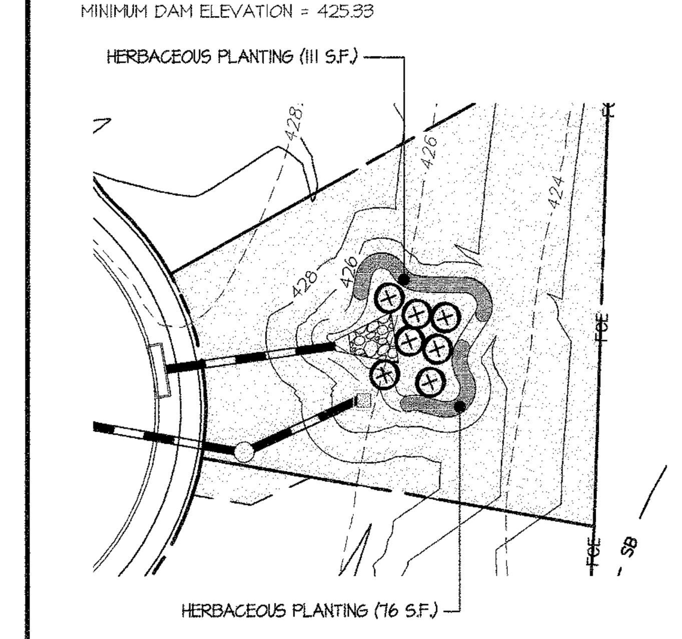
SEE TYPICAL MICRO-BIORETENTION DETAIL THIS SHEET FOR TYPICAL SECTION THROUGH MICRO-BIORETENTION FACILITY AND OUTLET STRUCTURE CONFIGURATION

MICRO-BIORETENTION 107 SCALE: 1" = 20'

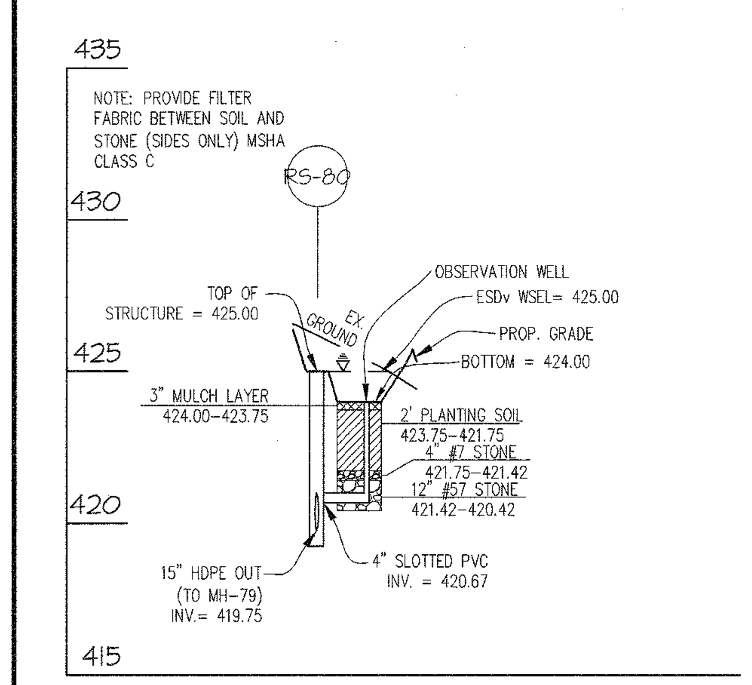
MBR-107
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 11,775 SF
STORAGE PROVIDED = 585 CU-FT (@425.00)
ESDv PROVIDED = 777 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 424.00
HIGH-FLOW OUTFALL: RS-80 ('S' INLET, TOP = 425.00)
MINIMUM DAM ELEVATION = 425.33

HERBACEOUS PLANTING (111 S.F.)



MICRO-BIORETENTION 107 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 107 DETAILS

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_39-ESD DETAILS-1(101-107).dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16 [signature]

STORMWATER MANAGEMENT DETAILS

WESTMOUNT - PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	39 OF 60

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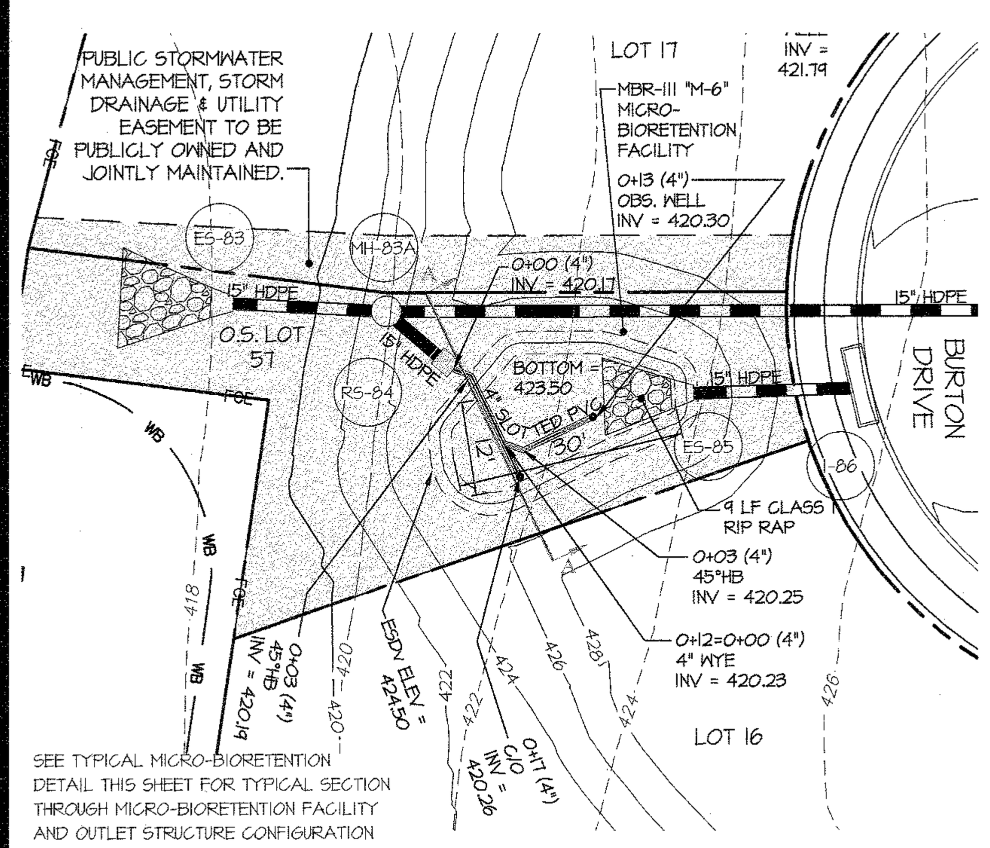
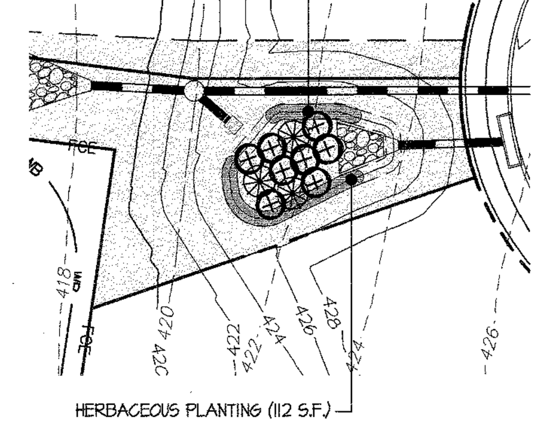
SHA TRACKING NO. 14APHO018XX F 15-087



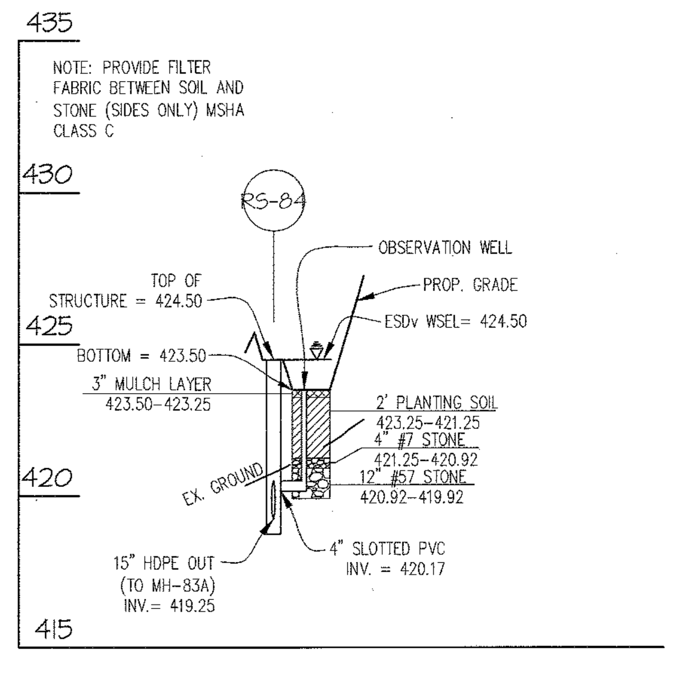
MICRO-BIORETENTION 111 SCALE: 1" = 20'

MBR-111
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 13,953 SF
STORAGE PROVIDED = 477 CU-FT (@ 424.50)
ESDv PROVIDED = 634 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 423.50
HIGH-FLOW OUTFALL: RS-84 ('S' INLET, TOP = 424.50)
MINIMUM DAM ELEVATION = 424.83

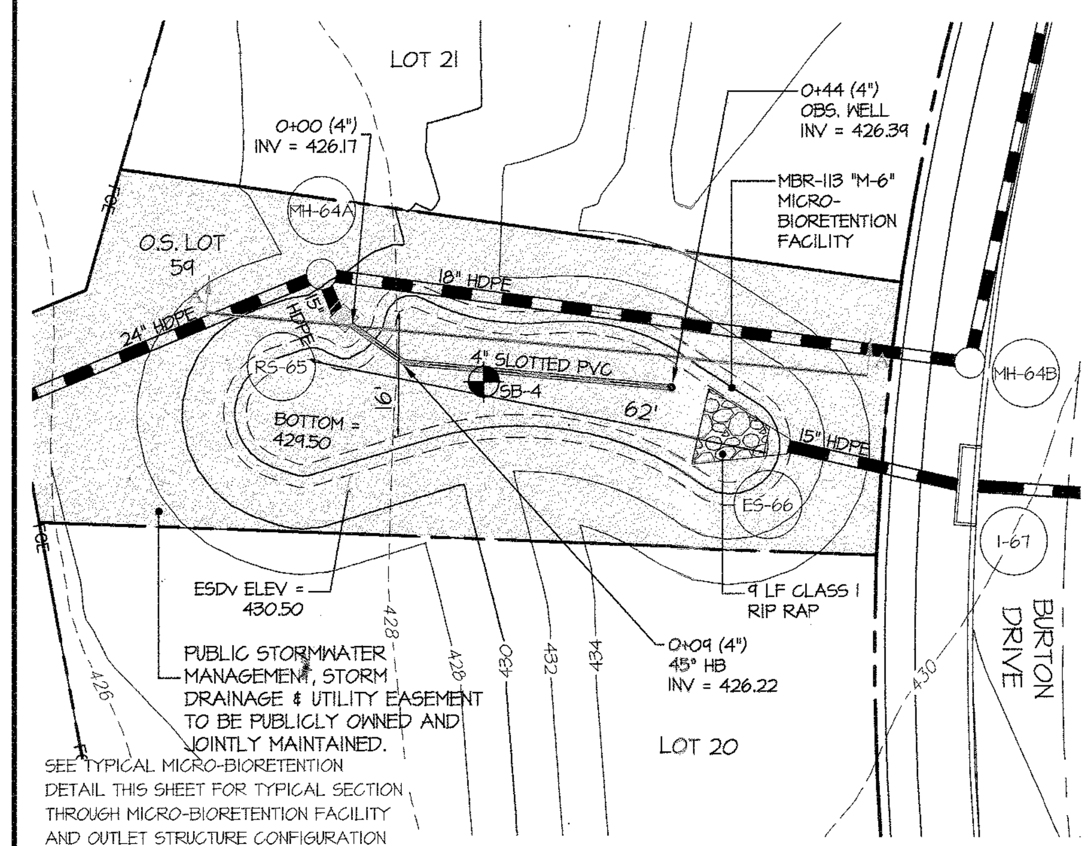


MICRO-BIORETENTION 111 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.) 1" = 5' (VERT.)

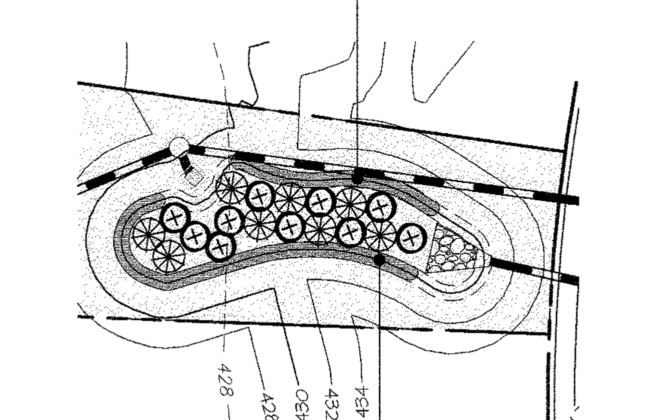
MICRO-BIORETENTION 111 DETAILS



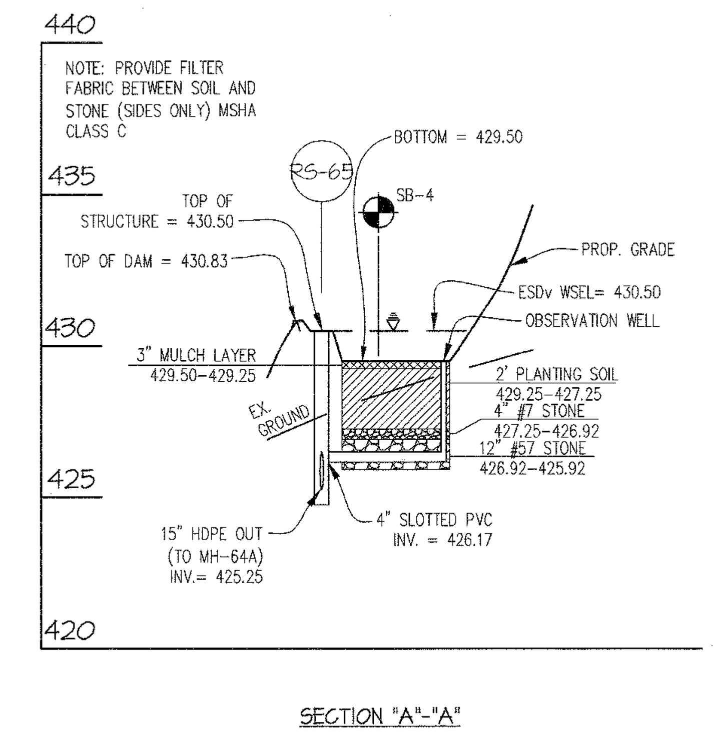
MICRO-BIORETENTION 113 SCALE: 1" = 20'

MBR-113
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 24,696 SF
STORAGE PROVIDED = 1,064 CU-FT (@ 430.50)
ESDv PROVIDED = 1,414 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 429.50
HIGH-FLOW OUTFALL: RS-65 ('S' INLET, TOP = 430.50)
MINIMUM DAM ELEVATION = 430.83

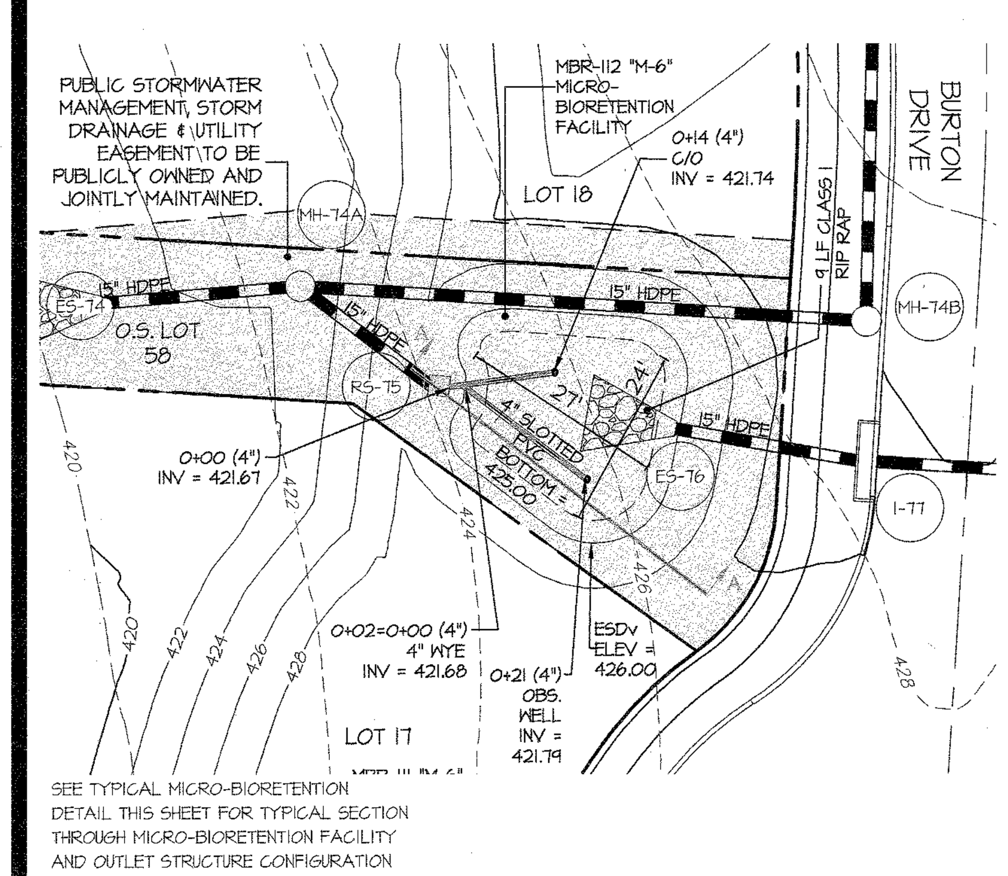


MICRO-BIORETENTION 113 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.) 1" = 5' (VERT.)

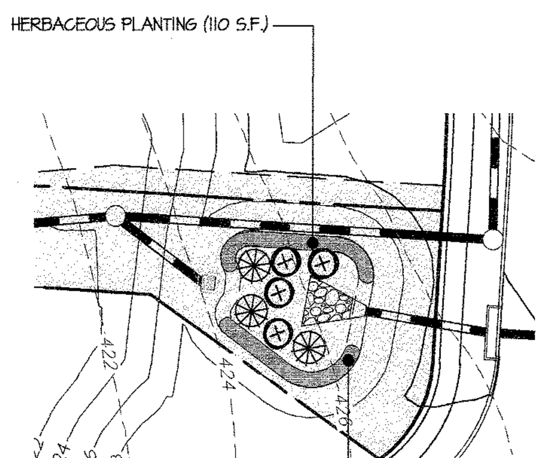
MICRO-BIORETENTION 113 DETAILS



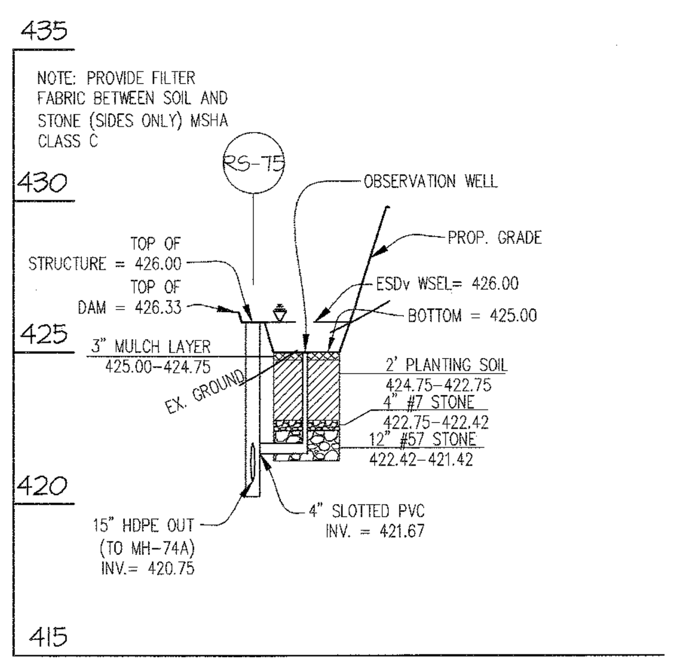
MICRO-BIORETENTION 112 SCALE: 1" = 20'

MBR-112
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 18,142 SF
STORAGE PROVIDED = 626 CU-FT (@ 426.00)
ESDv PROVIDED = 833 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 425.00
HIGH-FLOW OUTFALL: RS-75 ('S' INLET, TOP = 426.00)
MINIMUM DAM ELEVATION = 426.33

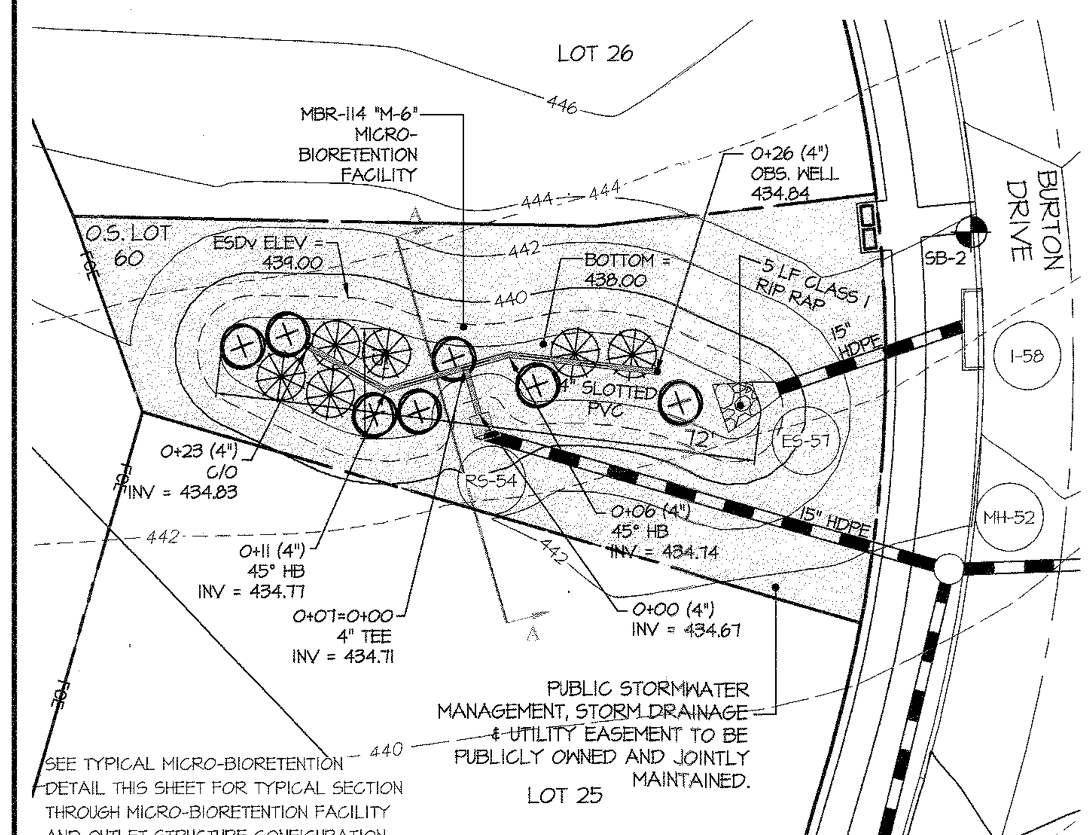


MICRO-BIORETENTION 112 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.) 1" = 5' (VERT.)

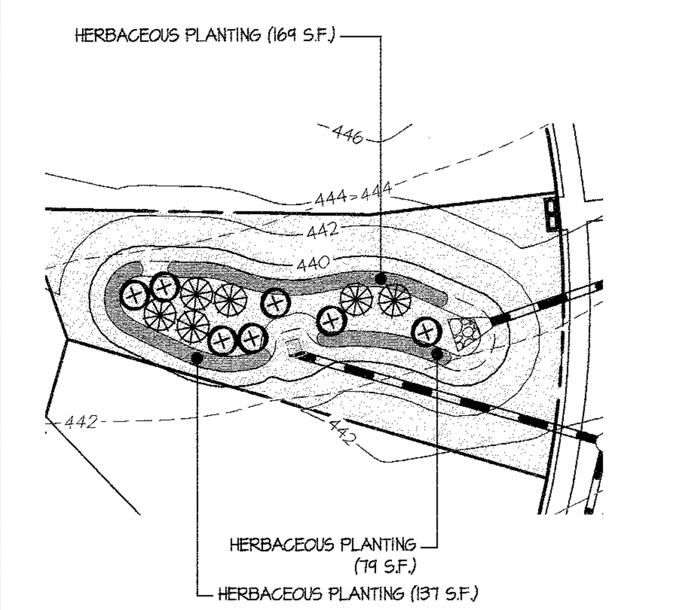
MICRO-BIORETENTION 112 DETAILS



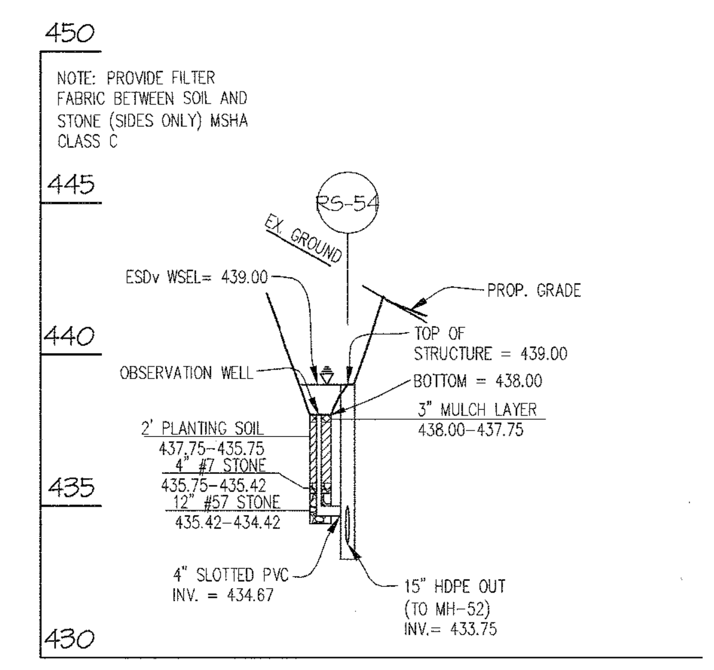
MICRO-BIORETENTION 114 SCALE: 1" = 20'

MBR-114
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 14,957 SF
STORAGE PROVIDED = 911 CU-FT (@ 439.00)
ESDv PROVIDED = 1,212 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 438.00
HIGH-FLOW OUTFALL: RS-54 ('S' INLET, TOP = 439.00)
MINIMUM DAM ELEVATION = 439.33

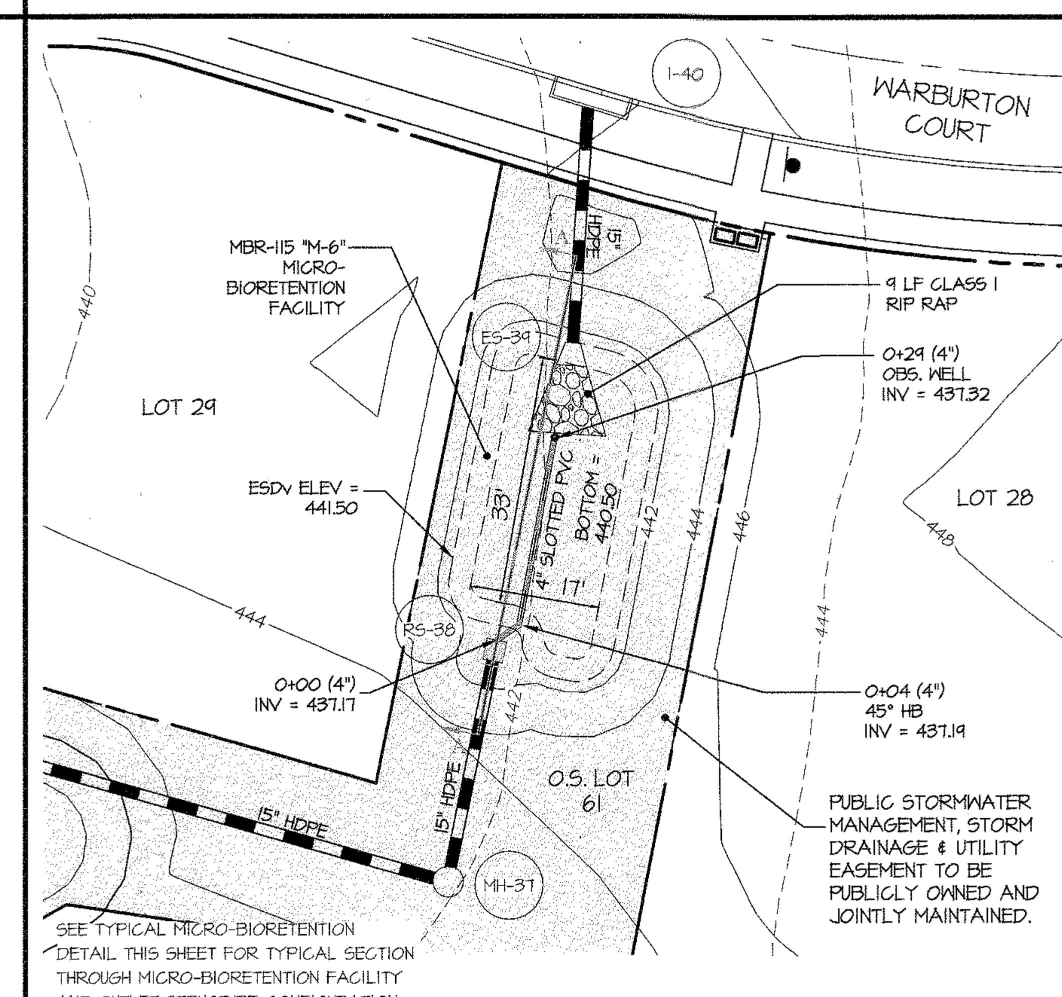


MICRO-BIORETENTION 114 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.) 1" = 5' (VERT.)

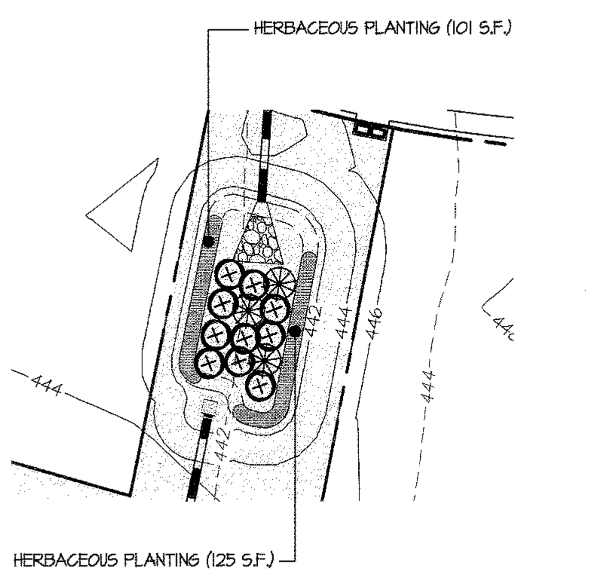
MICRO-BIORETENTION 114 DETAILS



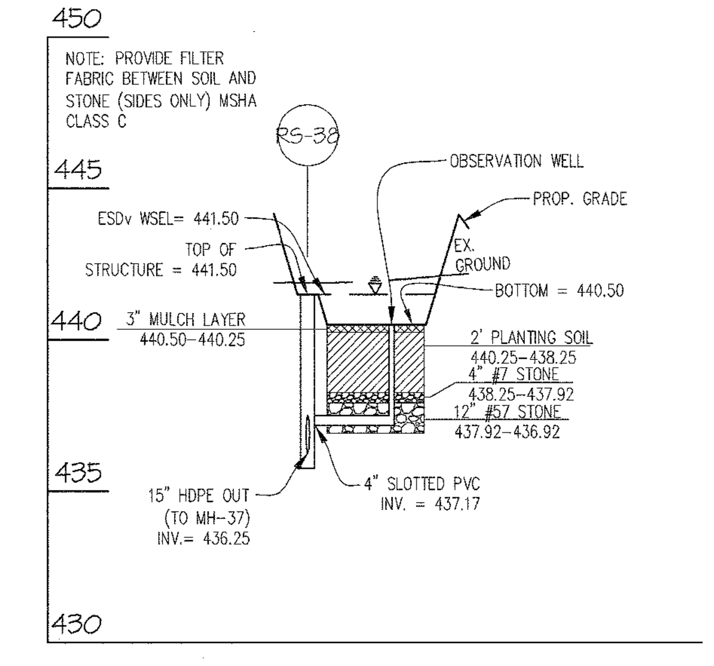
MICRO-BIORETENTION 115 SCALE: 1" = 20'

MBR-115
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 14,585 SF
STORAGE PROVIDED = 754 CU-FT (@ 441.50)
ESDv PROVIDED = 1,002 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 440.50
HIGH-FLOW OUTFALL: RS-38 ('S' INLET, TOP = 441.50)
MINIMUM DAM ELEVATION = 441.83



MICRO-BIORETENTION 115 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.) 1" = 5' (VERT.)

MICRO-BIORETENTION 115 DETAILS

0 4 10 20 40
1 inch = 20 ft.

0 6 15 30 60
1 inch = 30 ft.

MICRO-BIORETENTION PLANT LIST

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
SHRUBS *				
⊗	39	CORNUS SERICEA 'RUBY'/ RUBY RED OSIER DOGWOOD	18"-24" SPR.	CONTAINER
⊛	23	ITEA VIRGINICA 'HENRY'S GARNET/ VIRGINIA SWEETSPIRE	18"-24" SPR.	CONTAINER
HERBACEOUS *				
(shaded)	1,347 s.f.	CONTRACTOR TO CHOOSE HERBACEOUS PLANTING FROM: -HERMEROCALLIS 'STRAWBERRY CANDY' DAYLILY -HERMEROCALLIS 'JOAN SENIOR' DAYLILY -KALMIA ANGUSTIFOLIA/SHEEP LAUREL -ELEOCHARIS OVATA OBTUSA/BLUNT SPIKE RUSH	18" O.C.	CONTAINER

* SEE SHEET 9 FOR SHRUB AND HERBACEOUS PLANTING DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_40-ESD DETAILS-2(111-115).dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018
7/14/16

STORMWATER MANAGEMENT DETAILS

WESTMOUNT - PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	40 OF 60

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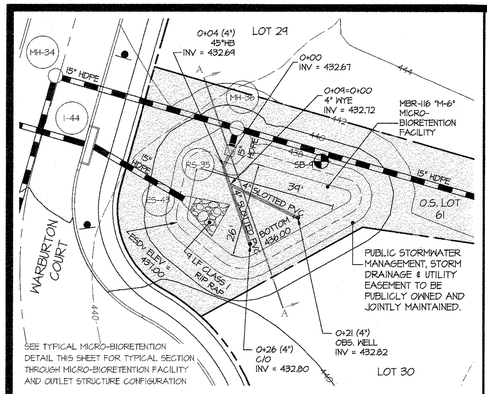
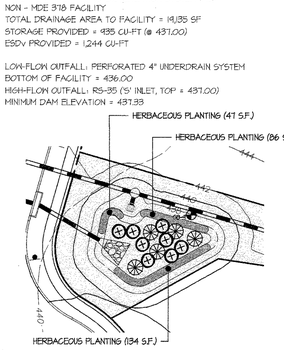
SHA TRACKING NO. 14APHO018XX F 15-087



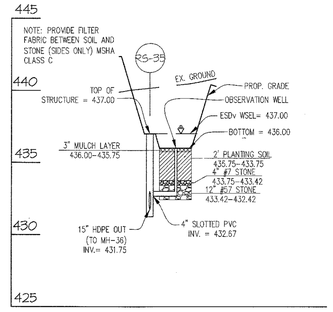
MICRO-BIORETENTION 116 SCALE: 1" = 20'

MBR-116
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 19,135 SF
STORAGE PROVIDED = 935 CU-FT (@ 437.00)
ESDv PROVIDED = 1,244 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 436.00
HIGH-FLOW OUTFALL: RS-35 (5' INLET, TOP = 437.00)
MINIMUM DAM ELEVATION = 437.33

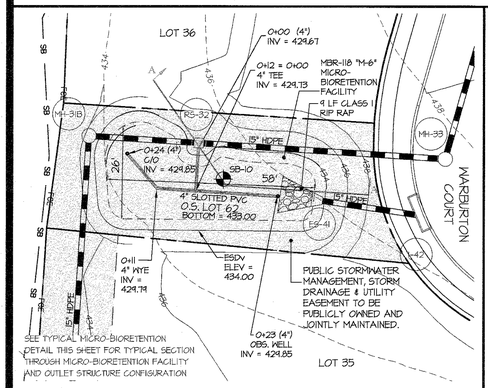


MICRO-BIORETENTION 116 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

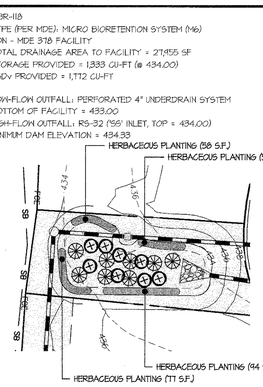
MICRO-BIORETENTION 116 DETAILS



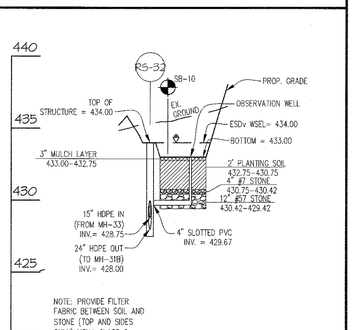
MICRO-BIORETENTION 118 SCALE: 1" = 20'

MBR-118
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 27,955 SF
STORAGE PROVIDED = 1,333 CU-FT (@ 434.00)
ESDv PROVIDED = 1,712 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 433.00
HIGH-FLOW OUTFALL: RS-32 (5'X6' INLET, TOP = 434.00)
MINIMUM DAM ELEVATION = 434.33

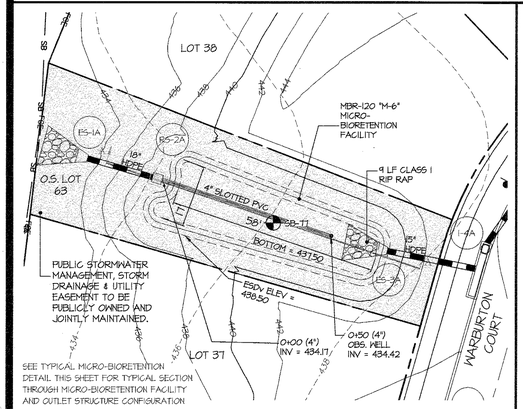


MICRO-BIORETENTION 118 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

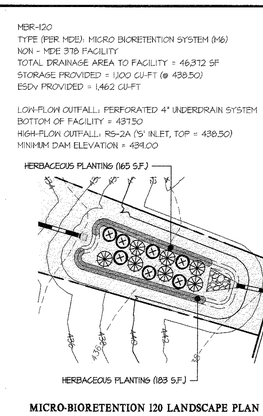
MICRO-BIORETENTION 118 DETAILS



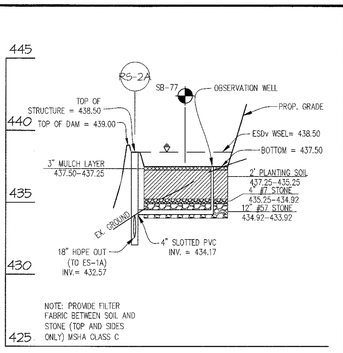
MICRO-BIORETENTION 120 SCALE: 1" = 20'

MBR-120
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 46,312 SF
STORAGE PROVIDED = 1,100 CU-FT (@ 438.50)
ESDv PROVIDED = 1,462 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 431.50
HIGH-FLOW OUTFALL: RS-2A (5' INLET, TOP = 438.50)
MINIMUM DAM ELEVATION = 434.00



MICRO-BIORETENTION 120 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 120 DETAILS

MICRO-BIORETENTION PLANT LIST				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
SHRUBS *				
	66	CORNUS SERICEA 'RUBY' / RUBY RED OSIER DOGWOOD	18"-24" SPR.	CONTAINER
	49	ITEA VIRGINICA 'HENRY'S GARNET' / VIRGINIA SWEETSPIRE	18"-24" SPR.	CONTAINER
HERBACEOUS *				
	2,085 s.f.	CONTRACTOR TO CHOOSE HERBACEOUS PLANTING FROM: -HEMEROCALLIS 'STRAWBERRY CANDY' DAYLILY -HEMEROCALLIS 'JOAN SENIOR' DAYLILY -KALMIA ANGUSTIFOLIA/SHEEP LAUREL -ELEOCHARIS OVATA OBTUSA/BLUNT SPIKE RUSH	18" O.C.	CONTAINER

* SEE SHEET 9 FOR SHRUB AND HERBACEOUS PLANTING DETAILS

0 4 10 20 40
1 inch = 20 ft.
0 6 15 30 60
1 inch = 30 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. JRD	DRN. JRD	CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16

STORMWATER MANAGEMENT DETAILS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	41 OF 60

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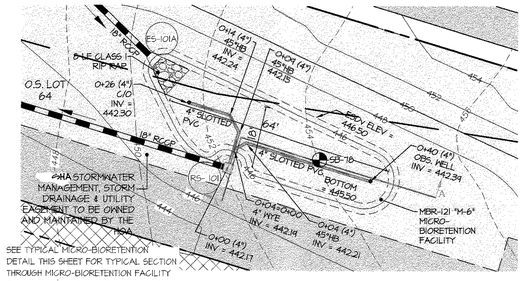
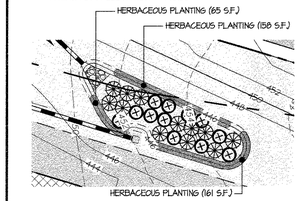
SHA TRACKING NO. 14APHO018XX F 15-087



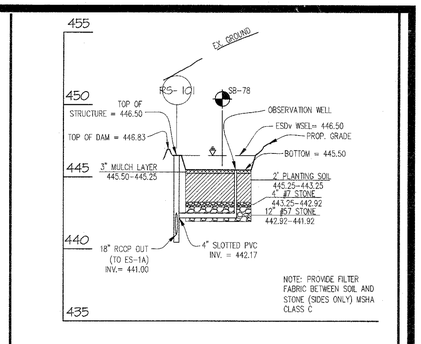
MICRO-BIORETENTION 121 SCALE: 1" = 20'

MBR-121
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 25,056 SF
STORAGE PROVIDED = 1,246 CU-FT (@ 446.50)
ESDv PROVIDED = 1,724 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 445.50
HIGH-FLOW OUTFALL: RS-101 (5' INLET, TOP = 446.50)
MINIMUM DAM ELEVATION = 446.83

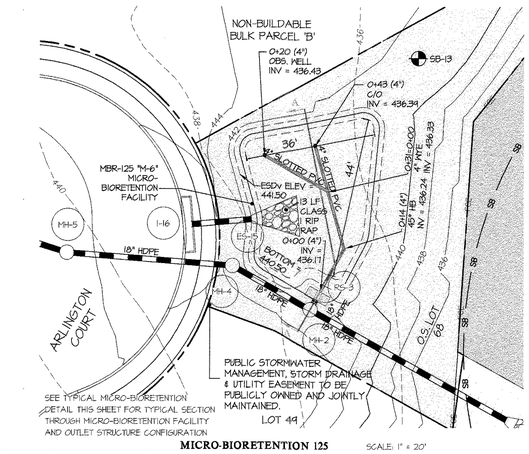


MICRO-BIORETENTION 121 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

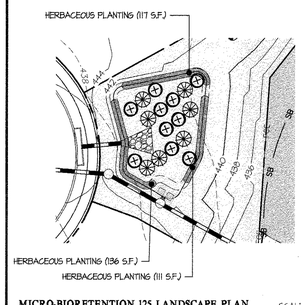
MICRO-BIORETENTION 121 DETAILS



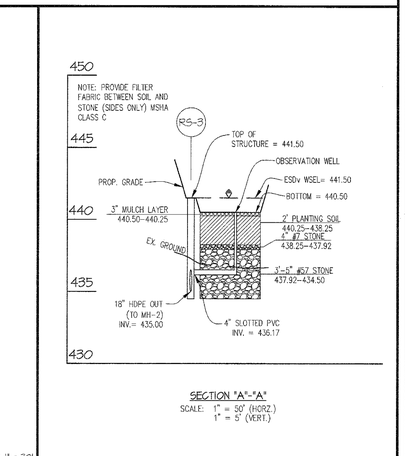
MICRO-BIORETENTION 125 SCALE: 1" = 20'

MBR-125
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 57,466 SF
STORAGE PROVIDED = 1,443 CU-FT (@ 441.50)
ESDv PROVIDED = 1,919 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 440.50
HIGH-FLOW OUTFALL: RS-3 (5'X5' INLET, TOP = 441.50)
MINIMUM DAM ELEVATION = 442.00

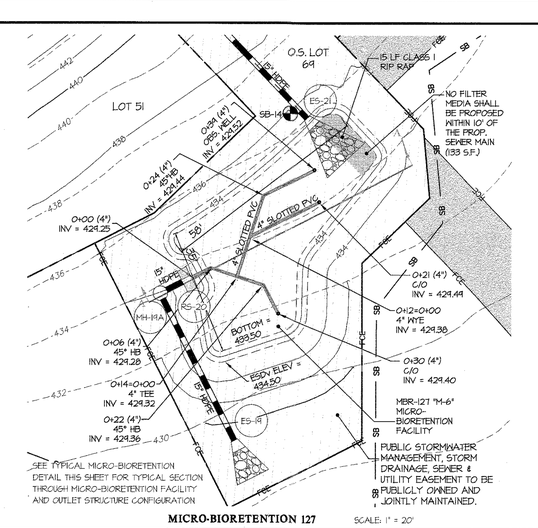


MICRO-BIORETENTION 125 LANDSCAPE PLAN SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

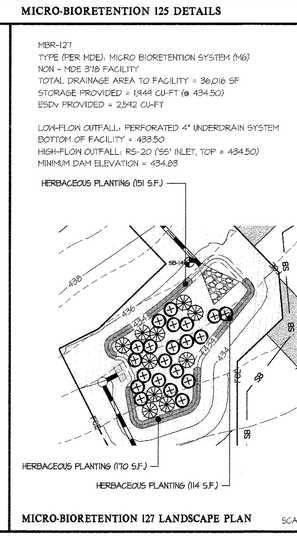
MICRO-BIORETENTION 125 DETAILS



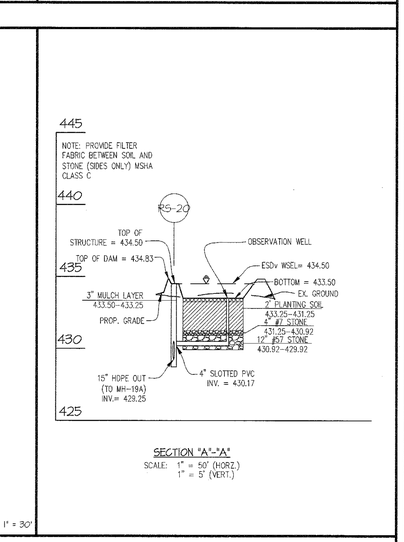
MICRO-BIORETENTION 127 SCALE: 1" = 20'

MBR-127
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 36,016 SF
STORAGE PROVIDED = 1,944 CU-FT (@ 434.50)
ESDv PROVIDED = 2,542 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 433.50
HIGH-FLOW OUTFALL: RS-20 (5'X5' INLET, TOP = 434.50)
MINIMUM DAM ELEVATION = 434.83

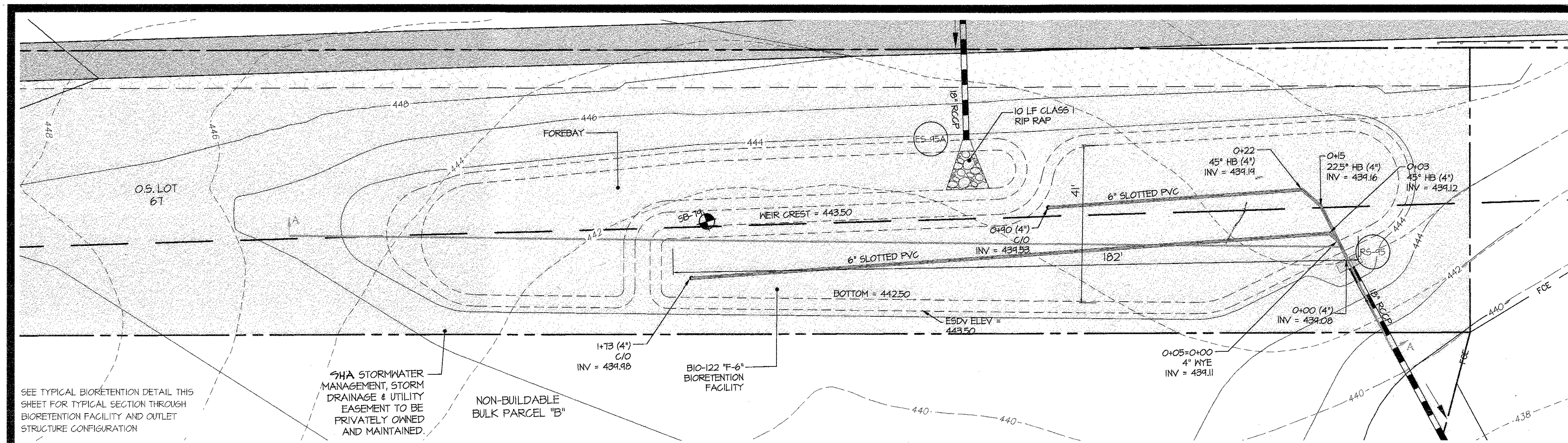


MICRO-BIORETENTION 127 LANDSCAPE PLAN SCALE: 1" = 30'

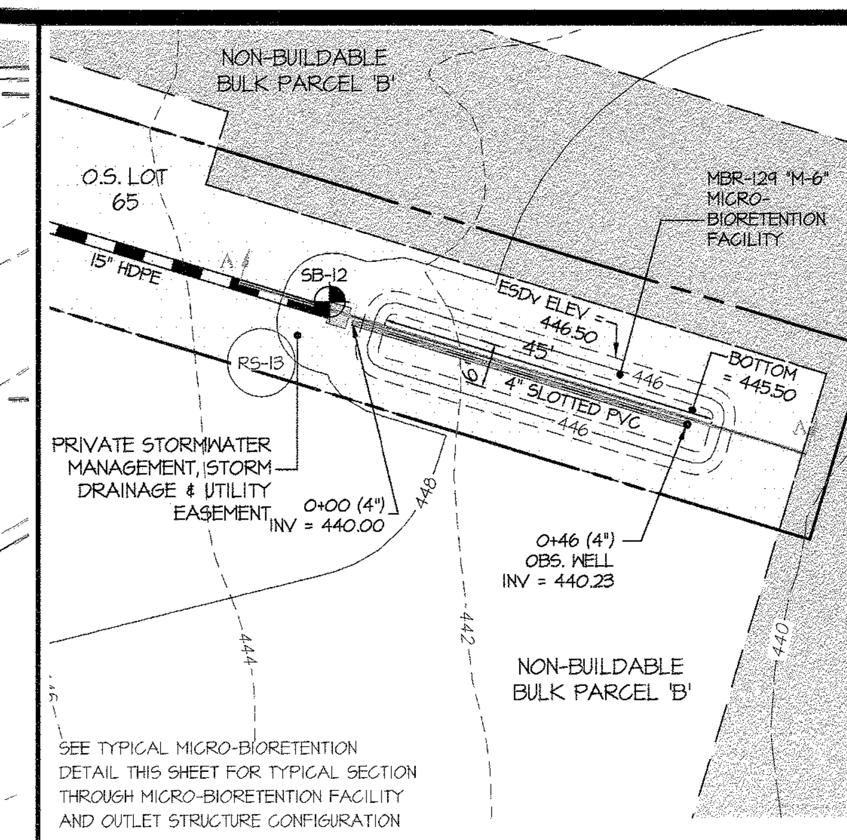


SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION 127 DETAILS



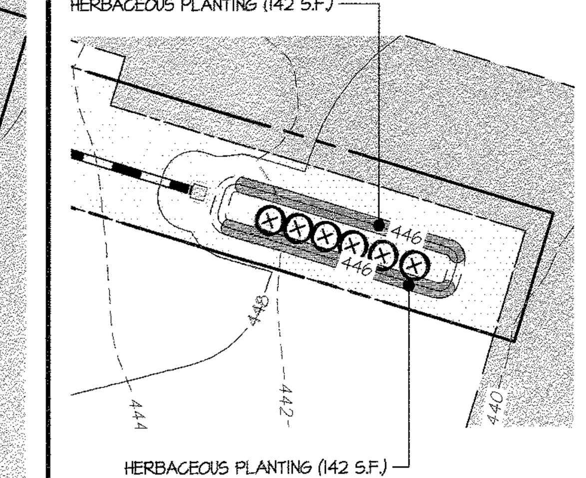
BIORETENTION 122 SCALE: 1" = 20'



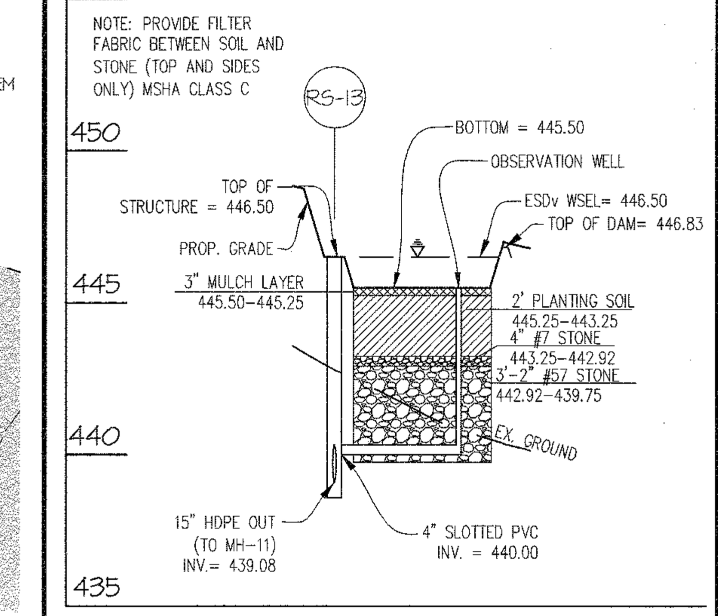
MICRO-BIORETENTION 129 SCALE: 1" = 20'

MBR-129
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 23,324 SF
STORAGE PROVIDED = 427 CU-FT (@ 446.50)
ESDv PROVIDED = 567 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 445.50
HIGH-FLOW OUTFALL: RS-13 ('S' INLET, TOP = 446.50)
MINIMUM DAM ELEVATION = 446.83

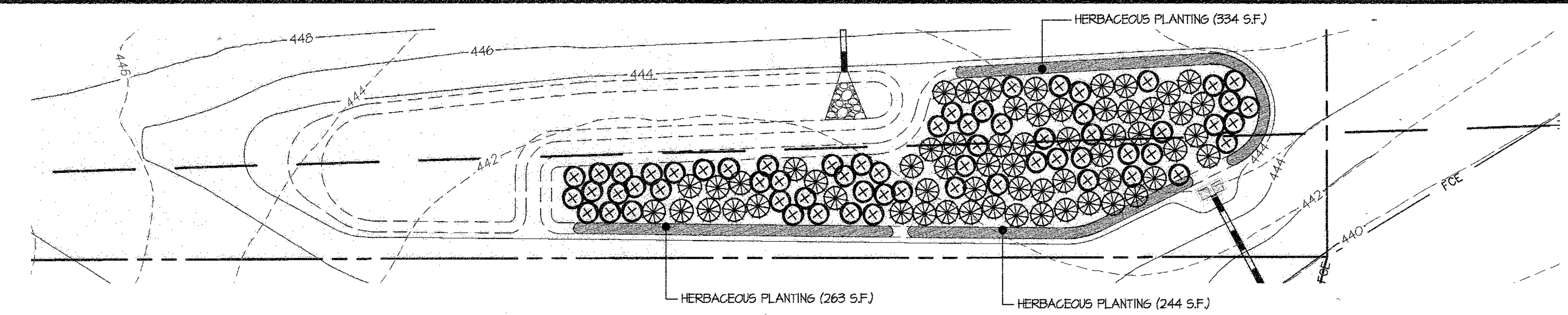


MICRO-BIORETENTION 129 LANDSCAPE PLAN
SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

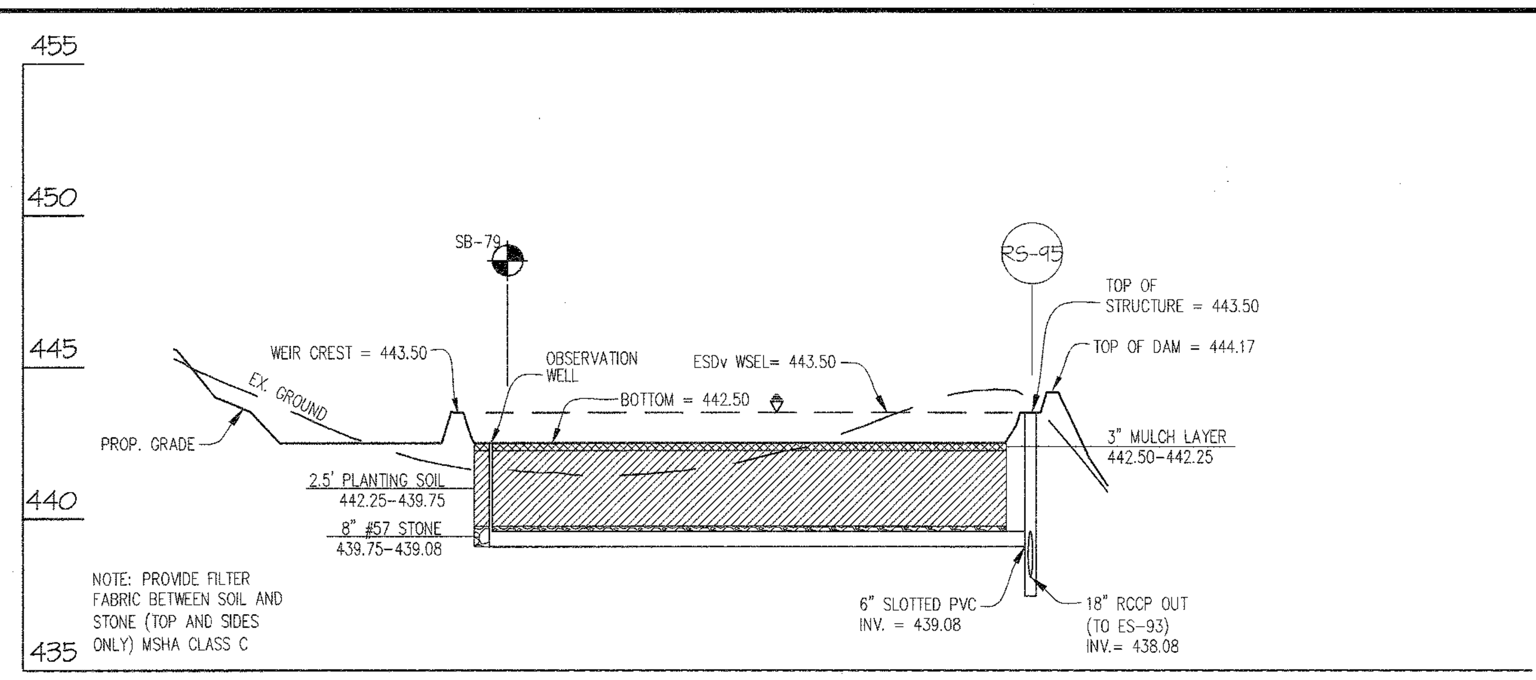
MICRO-BIORETENTION 129 DETAILS



BIORETENTION 122 LANDSCAPE PLAN SCALE: 1" = 30'

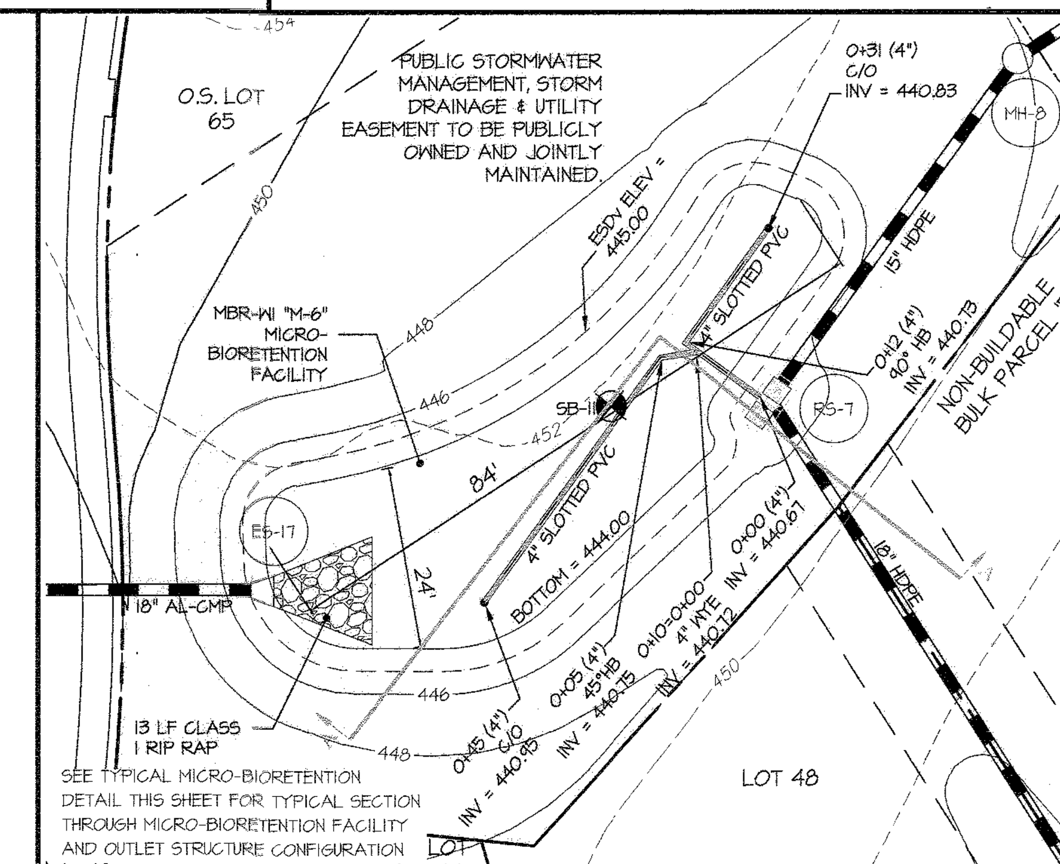
BIO-122
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (F6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 111,005 SF
STORAGE PROVIDED = 5,865 CU-FT (@ 443.50)
ESDv PROVIDED = 7,800 CU-FT

LOW-FLOW OUTFALL: PERFORATED 6" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 442.50
HIGH-FLOW OUTFALL: RS-95 ('SS' INLET, TOP = 443.50)
MINIMUM DAM ELEVATION = 444.17



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

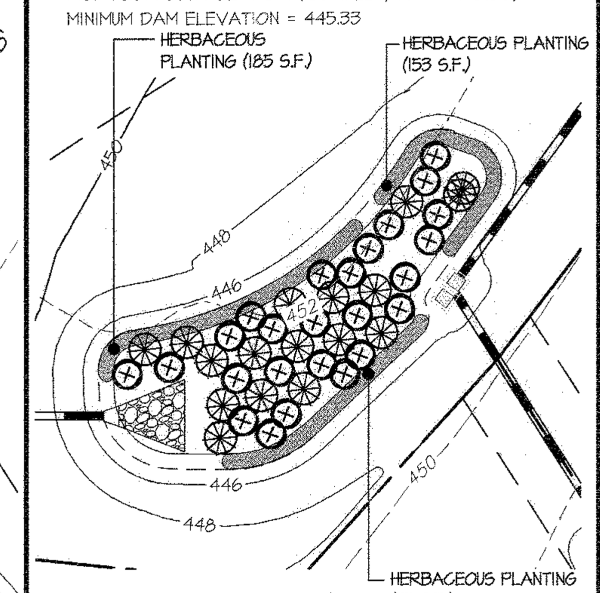
BIORETENTION 122 DETAILS



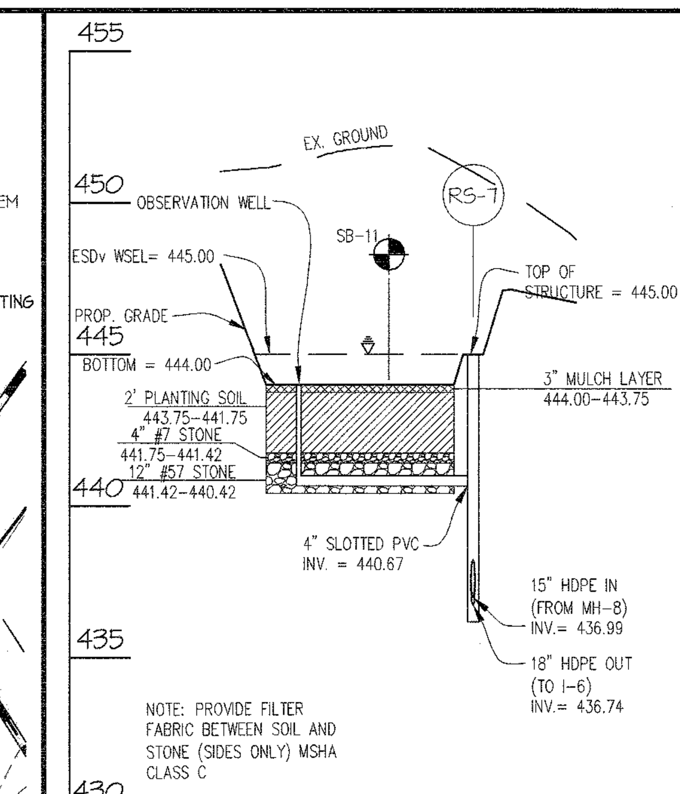
MICRO-BIORETENTION W1 SCALE: 1" = 20'

MBR-W1
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 53,385 SF
STORAGE PROVIDED = 2,079 CU-FT (@ 445.00)
ESDv PROVIDED = 2,764 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 444.00
HIGH-FLOW OUTFALL: RS-7 ('SS' INLET, TOP = 445.00)
MINIMUM DAM ELEVATION = 445.33

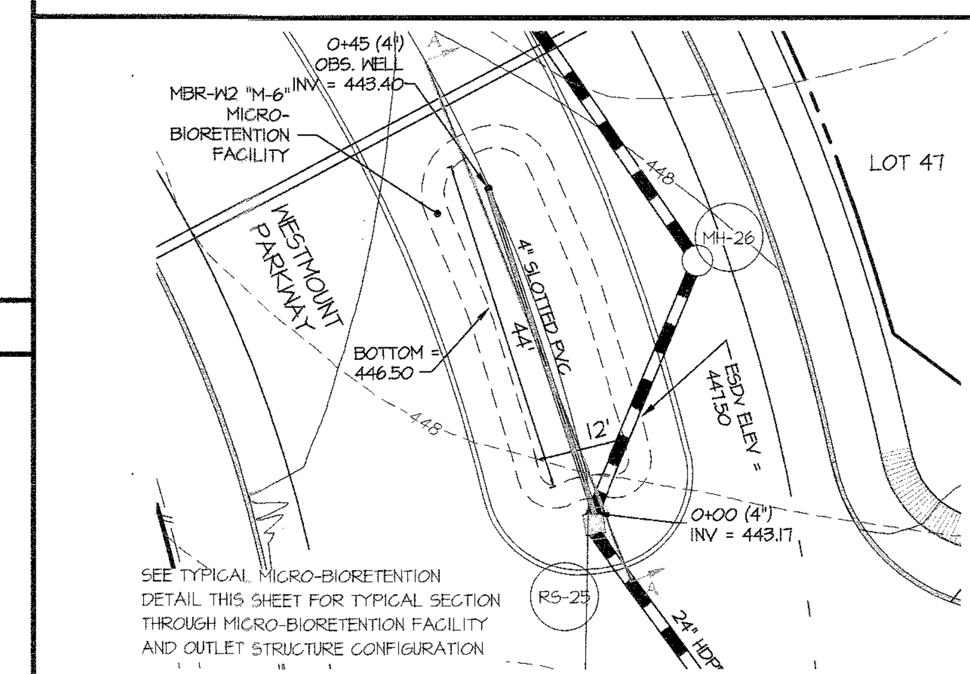


MICRO-BIORETENTION W1 LANDSCAPE PLAN
SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

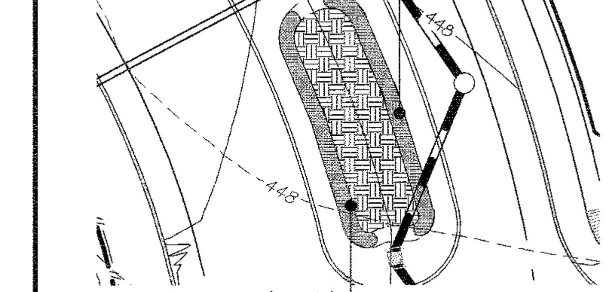
MICRO-BIORETENTION W1 DETAILS



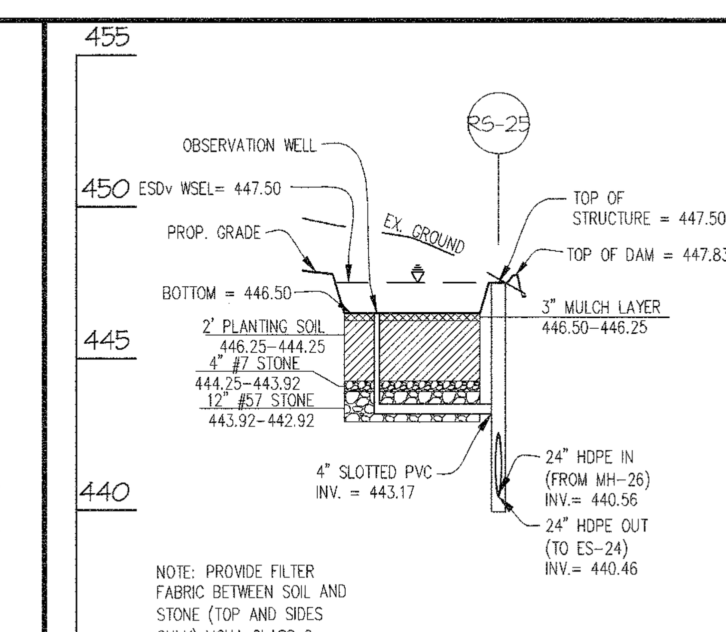
MICRO-BIORETENTION W2 SCALE: 1" = 20'

MBR-W2
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 9,906 SF
STORAGE PROVIDED = 710 CU-FT (@447.50)
ESDv PROVIDED = 944 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 446.50
HIGH-FLOW OUTFALL: RS-25 ('S' INLET, TOP = 447.50)
MINIMUM DAM ELEVATION = 447.83



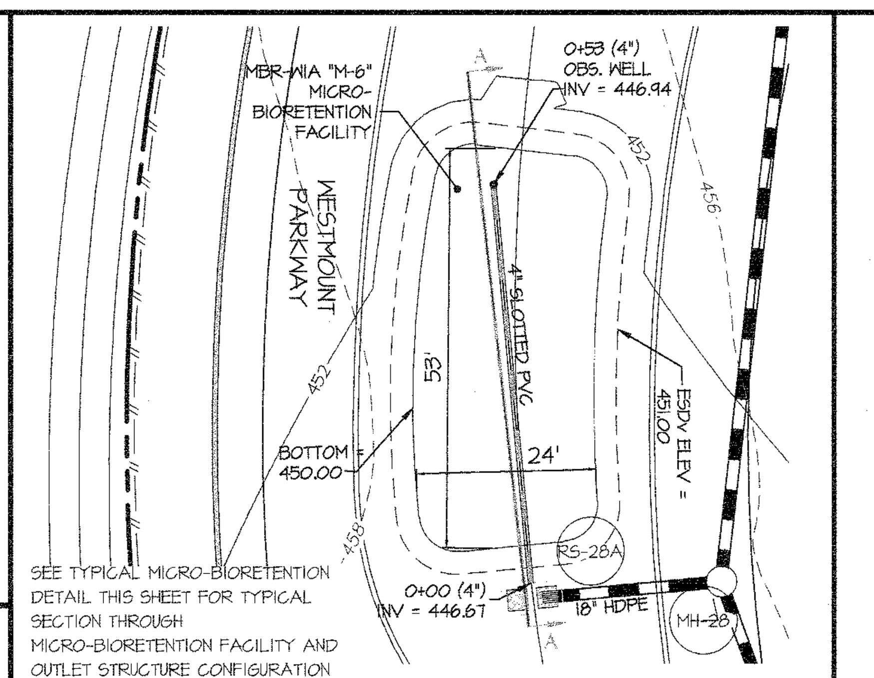
MICRO-BIORETENTION W2 LANDSCAPE PLAN
SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION W2 DETAILS

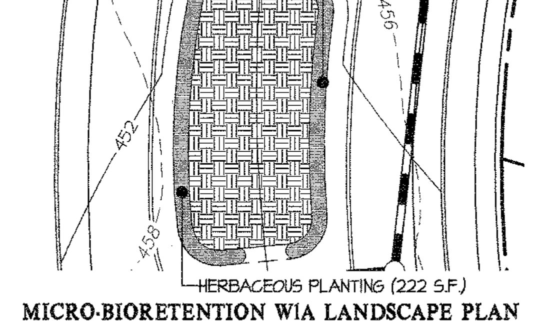
0 4 10 20 40 — 1 inch = 20 ft.
0 6 15 30 60 — 1 inch = 30 ft.



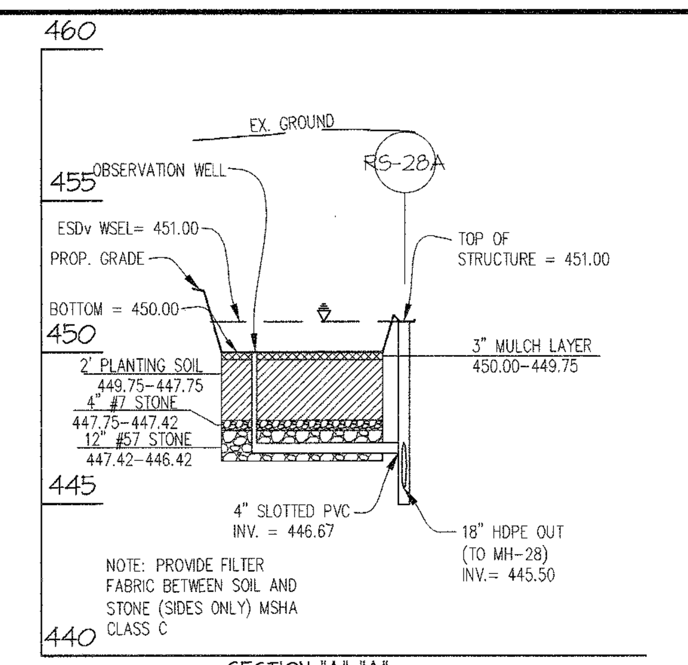
MICRO-BIORETENTION W1A SCALE: 1" = 20'

MBR-W1A
TYPE (PER MDE): MICRO BIORETENTION SYSTEM (M6)
NON - MDE 378 FACILITY
TOTAL DRAINAGE AREA TO FACILITY = 32,098 SF
STORAGE PROVIDED = 1,450 CU-FT (@451.00)
ESDv PROVIDED = 1,929 CU-FT

LOW-FLOW OUTFALL: PERFORATED 4" UNDERDRAIN SYSTEM
BOTTOM OF FACILITY = 450.00
HIGH-FLOW OUTFALL: RS-28A ('SS' INLET, TOP = 451.00)
MINIMUM DAM ELEVATION = 451.50



MICRO-BIORETENTION W1A LANDSCAPE PLAN
SCALE: 1" = 30'



SECTION "A"-"A"
SCALE: 1" = 50' (HORZ.)
1" = 5' (VERT.)

MICRO-BIORETENTION W1A DETAILS

*SEE SHEET 9 FOR SHRUB AND HERBACEOUS PLANTING DETAILS

MICRO-BIORETENTION PLANT LIST

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
SHRUBS *				
(X)	94	CORNUS SERICEA 'RUBY'/ RUBY RED OSIER DOGWOOD	18"-24" SPR.	CONTAINER
(✱)	77	ITEA VIRGINICA 'HENRY'S GARNET'/ VIRGINIA SWEETSPIRE	18"-24" SPR.	CONTAINER
HERBACEOUS *				
(hatch)	2,341 s.f.	CONTRACTOR TO CHOOSE HERBACEOUS PLANTING FROM: -HERMEROCALLIS 'STRAWBERRY CANDY' DAYLILY -HERMEROCALLIS 'JOAN SENIOR' DAYLILY -KALMIA ANGUSTIFOLIA/SHEEP LAUREL -ELEOCHARIS OVATA OBTUSA/BLUNT SPIKE RUSH	18" O.C.	CONTAINER
GRASSES				
(pattern)	1,753 s.f.	TRIPSACUM DACTYLOIDES/ EASTERN GAMAGRASS	2'-3'	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[signature] 7/27/2016
Chief, Bureau of Highways — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[signature] 8-29-16
Chief, Division of Land Development — Date
[signature] 8-26-16
Chief, Development Engineering Division — Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_42-43-ESD DETAILS-4(127-W2)&NOTES.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16 [signature]

STORMWATER MANAGEMENT DETAILS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	42 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

APPENDIX B.1.1. – SUPPLEMENTAL POND SPECIFICATIONS (NON-378)

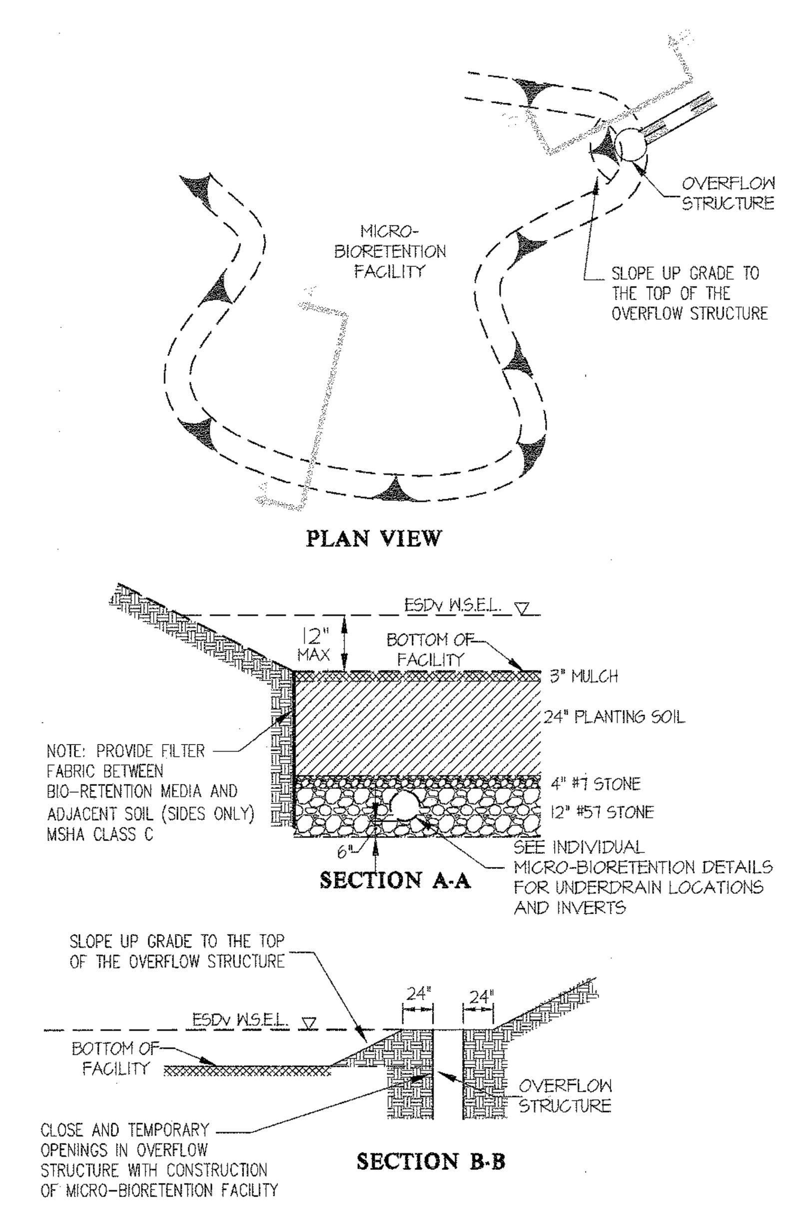
SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)

THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTIONS AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERCEDE.

1. IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE CROSS-SECTION OF THE STORMWATER FACILITY SHOULD SHOW THE LIMITS OF THE DAM CORE (UP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
2. IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-180), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 92% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM.
3. FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIFY COMPACTION IN ACCORDANCE WITH THE SELECTED TEST METHOD. THIS INFORMATION NEEDS TO BE PROVIDED IN A REPORT TO THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS, CAN BE MADE.
4. A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SERVICE MD-342 OR THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PERMANENT SEEDING, SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL.
5. GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MDE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE.

   AMOCO 4552 — CARTHAGE FX-70S
   GEOLON N70 — MIRAFI 180-N
   WEBTEC N07

   THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURES OF THE 1997 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED ACCEPTANCE.
6. A RULE OF THUMB TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS: PROVIDE CALCULATION OF 10H + 20 FEET = L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L, DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%.
7. THE DESIGN ENGINEER AND GEOTECHINCAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION. FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NRCE PUBLICATION TR-18.
8. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.
9. THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1
10. THE SIDE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1.



TYPICAL MICRO-BIORETENTION SECTION SCALE: N.T.S.

GENERAL NOTES

1. MATERIAL SPECIFICATIONS

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

2. PLANTING SOIL

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

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

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

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

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

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

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

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

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

4. PLANT MATERIAL

SEE LANDSCAPE PLAN, THIS SDP SET.

5. PLANT INSTALLATION

MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED 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.

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

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

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

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

6. UNDERDRAINS

UNDERDRAINS ARE TO BE PLACED ON A 3'-0" WIDE SECTION OF FILTER CLOTH. PIPE IS PLACED NEXT, FOLLOWED BY THE GRAVEL BEDDING. THE ENDS OF UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL SHALL BE CAPPED.

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

7. MISCELLANEOUS

THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTENANCE SCHEDULE FOR
RAINWATER HARVESTING (RAIN BARRELS) (M-1)

A. THE HOMEOWNER SHALL EMPTY BARRELS ON A MONTHLY BASIS AND CLEAN BARREL WITH A HOSE.
B. THE HOMEOWNER SHALL VERIFY INTEGRITY OF LEAF SCREENS, GUTTERS, DOWNSPOUTS, SPIGOTS, AND MOSQUITO SCREENS, AND CLEAN AND REMOVE ANY DEBRIS.
C. THE HOMEOWNER SHALL REPLACE DAMAGED COMPONENTS AS NEEDED.
D. THE HOMEOWNER SHALL DISCONNECT THE BARREL PRIOR TO WINTER, OR ALLOW THE BARREL TO DRAIN BY BOTTOM SPIGOT DURING THE WINTER SEASON.

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

A. THE HOMEOWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
B. THE HOMEOWNER 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 HOMEOWNER 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.

OPERATION AND MAINTENANCE SCHEDULE FOR
MICRO-BIORETENTION (M-6) AND BIORETENTION SWALE (M-8)

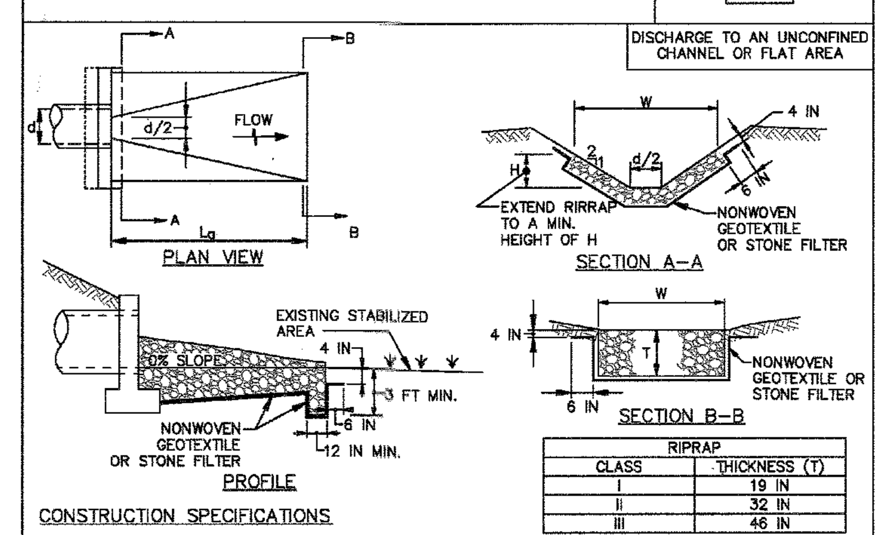
A. THE HOA SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE 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.
B. THE HOA SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF 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.
C. THE HOA 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.
D. THE HOA SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
E. THE HOA SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE UNDERDRAINS WITHIN THE BIO-RETENTION LAYERS.
F. HOWARD COUNTY SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL STORM DRAIN PIPES AND STRUCTURES WITHIN PUBLIC EASEMENTS. THE HOA SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL STORM DRAIN PIPES AND STRUCTURES WITHIN PRIVATE EASEMENTS.

OPERATION AND MAINTENANCE SCHEDULE FOR
DISCONNECTION OF ROOFTOP RUNOFF (N-1)

A. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

DETAIL D-4-1-C ROCK OUTLET PROTECTION III — STANDARD SYMBOL: ROPIII

DISCHARGE TO AN UNCONFINED CHANNEL OR FLAT AREA



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

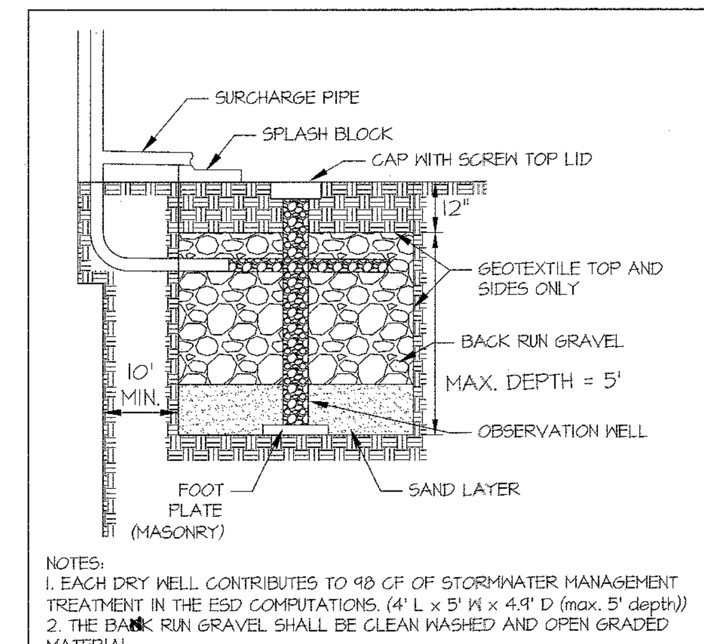
CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND RIPRAP DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

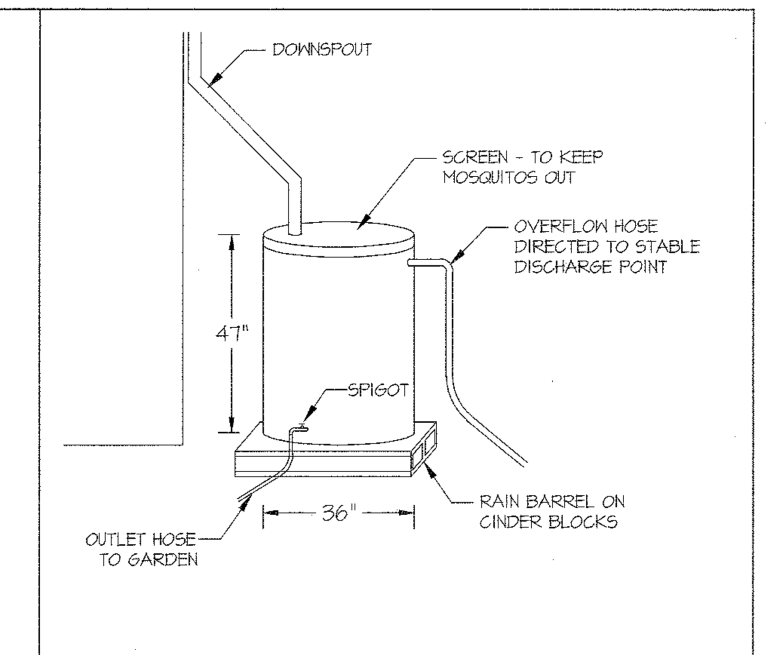
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

D.22



NOTES:
1. EACH DRY WELL CONTRIBUTES TO 98 CF OF STORMWATER MANAGEMENT TREATMENT IN THE ESD COMPUTATIONS. (4' L x 5' W x 4.9' D (max. 5' depth))
2. THE BANK RUN GRAVEL SHALL BE CLEAN WASHED AND OPEN GRADED MATERIAL.

DRY WELL
SCALE: 1" = 3'



SINGLE RAIN BARREL
(200 GAL.)
SCALE: 1" = 3'

STORMWATER MANAGEMENT GENERAL NOTES:

1. THE STORMWATER MANAGEMENT OBLIGATION WAS MET WITH ESD PRACTICES INCLUDING: ROOFTOP DISCONNECTS (N-1), SHEET FLOW TO CONSERVATION AREAS (N-3), RAINWATER HARVESTING (M-1), DRY WELLS (M-5), MICRO-BIORETENTION FACILITIES (M-6), AND SWALES (M-8).
2. WITH THE EXCEPTION OF THE MICRO-BIORETENTION FACILITIES THAT LIE WITHIN THE COUNTY ROAD RIGHT-OF-WAY, ALL ESD PRACTICES WILL BE OWNED AND MAINTAINED BY THE HOME OWNER'S ASSOCIATION.
3. ON LOT ESD PRACTICES SHALL BE SUBJECT TO RECORDED DOCUMENTS OUTLINING OWNERSHIP AND FUTURE MAINTENANCE. THE HOMEOWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ON LOT ESD DEVICES.
4. TO ELIMINATE ANY REDUCED SIGHT DISTANCE IN THE MICRO-BIORETENTION DEVICES WITHIN THE ISLANDS ALONG WESTMOUNT PARKWAY, GRASS WILL BE USED INSIDE THE BIOS INSTEAD OF SHRUBS, AND WITH TREES THAT ARE SMALL IN DIAMETER THAT WILL BE MAINTAINED AT A TRIMMED ELEVATION WHERE THERE WILL BE NO CONFLICT WITH SIGHT DISTANCE.
5. STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED IN ACCORDANCE WITH CHAPTER 5 OF THE MDE STORMWATER MANAGEMENT DESIGN MANUAL, VOLUMES 1 AND 2. THROUGHOUT THE SITE, MICRO-BIORETENTION (M6), DRY WELLS (M5), AND ROOFTOP DISCONNECT (N1) ARE UTILIZED. DEVICES ON INDIVIDUAL LOTS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNER. DEVICES WITHIN COUNTY RIGHT OF WAY THAT TREAT ONLY RUNOFF FROM A COUNTY ROAD WILL BE OWNED BY HOWARD COUNTY AND JOINTLY MAINTAINED WITH THE HOA. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET AND ASSOCIATED PIPING; THE HOA WILL BE REQUIRED TO MAINTAIN THE PLANTS, SOIL, MULCH, ETC. THE DEVICES ON OPEN SPACE LOTS 64 AND 67 WILL BE OWNED AND MAINTAINED BY THE HOA. THE DRAINAGE SWALE WITHIN THE PRIVATE EASEMENT ALONG THE REAR PROPERTY LINE OF LOTS 41 THROUGH 43, 44, AND 45 WILL BE THE RESPONSIBILITY OF THE HOA. ALL OF THE OTHER DEVICES WITHIN THE OPEN SPACE LOTS WILL BE OWNED BY HOWARD COUNTY AND JOINTLY MAINTAINED BY THE COUNTY AND THE HOME OWNER'S ASSOCIATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_42-43-ESD DETAILS-4(127-W2)NOTES.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018
7/14/16

SWM NOTES and DETAILS

WESTMOUNT · PHASE 1
CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C
A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1
ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP – GRID	SHEET
JULY, 2016	23-6&12	43 OF 60

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SHA TRACKING NO. 14APHO018XX — F 15-087

FOREST NARRATIVE

THE SITE IS CURRENTLY ZONED RE-D. IT IS LOCATED IN THE LITTLE PATUXENT RIVER (UPPER) WATERSHED. (DNR LISTING NUMBER: 2I3-II0-5A). THE WESTERN AND CENTRAL PORTION OF THE SITE IS FORESTED AND CONTAINS ENVIRONMENTALLY SENSITIVE AREAS. THE EXISTING FOREST COVERS 21.22 ACRES ON THE 19.04 ACRE SITE, OF WHICH 8.06 ACRES ARE CREDITED ON THE NET TRACT AREA.

THE MAJORITY OF THE EXISTING FOREST IS LOCATED WITHIN ENVIRONMENTAL BUFFERS OR STEEP SLOPES. APPROXIMATELY THREE ACRES OF THE EXISTING FOREST WILL BE CLEARED, AND IT WILL BE REPLACED ON SITE AS REQUIRED. OPEN SPACE LOT 1, WILL BE DEDICATED TO HOWARD COUNTY PARKS AND RECREATION AND A QUARTER OF THE ENVIRONMENTAL AREAS ARE OUTSIDE OF THE PROPOSED FOREST CONSERVATION EASEMENT, PER HOWARD COUNTY PARKS AND RECREATION'S REQUEST. THERE IS A TEMPORARY EXCESS OF 3.20 ACRES IN REFORESTATION TO BE USED FOR THE NEXT PHASE.

FOREST CONSERVATION EASEMENT NO. 6
1.3900 (+/-) ACRES TOTAL
0.7849 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.5760 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0291 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 5
2.0920 (+/-) ACRES TOTAL
1.0308 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.3638 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0706 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
0.6268 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 4
4.4740 (+/-) ACRES TOTAL
1.4671 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
1.9485 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0993 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
0.9591 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

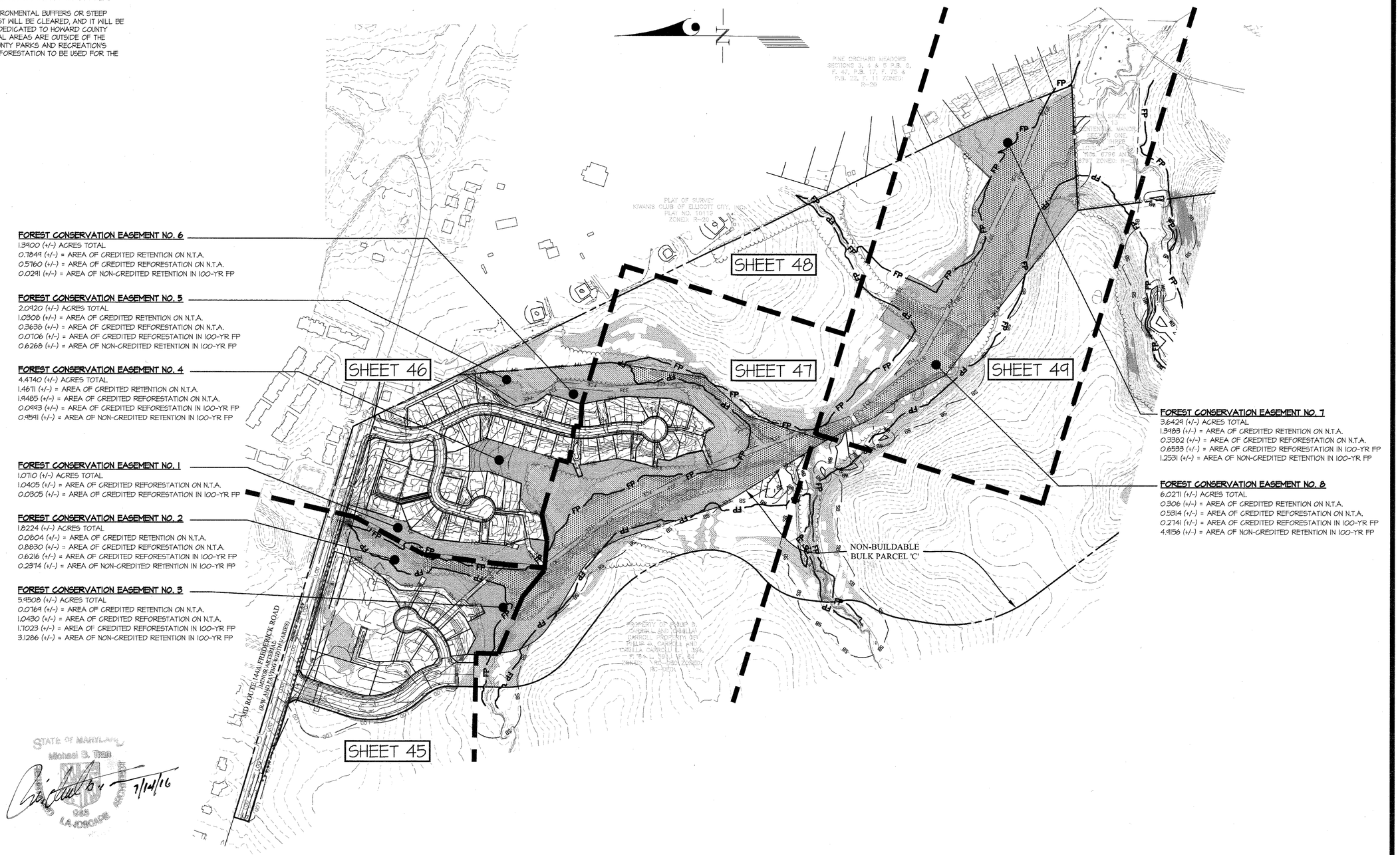
FOREST CONSERVATION EASEMENT NO. 1
1.0710 (+/-) ACRES TOTAL
1.0405 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0305 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 2
1.8224 (+/-) ACRES TOTAL
0.0804 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.8830 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.6216 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
0.2374 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 3
5.9508 (+/-) ACRES TOTAL
0.0769 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
1.0430 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
1.7023 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
3.1286 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 7
3.6424 (+/-) ACRES TOTAL
1.3983 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.3382 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.6533 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
1.2531 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 8
6.0271 (+/-) ACRES TOTAL
0.306 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.5314 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.2741 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
4.9156 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP



LEGEND

- EXISTING STRUCTURE
- PROPOSED BUILDINGS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST CONSERVATION SIGNS
- SLOPES 15- =25%
- SLOPES 25% AND STEEPER
- FCE — FOREST CONSERVATION EASEMENT
- TPF — TREE PROTECTION FENCE
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- TO BE SAVED
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- PROPOSED FOR REMOVAL
- ChC3 — SOIL DELINEATION
- ERODABLE SOILS
- FP — FLOODPLAIN (17.76 Ac.) (FP)
- WETLAND (4.96 Ac.)
- WB — WETLAND BUFFER (9.48 Ac.)
- STREAM CENTERLINE
- SB — STREAM BUFFER (24.28 Ac.)
- LOD — LIMITS OF DISTURBANCE
- FOREST STAND DELINEATION TREELINE
- EXISTING SEWER EASEMENT
- FOREST CLEARING (*)
- (CREDITED) REFORESTATION- PORTION ON N.T.A.
- (CREDITED) REFORESTATION- PORTION IN 100-YR FP
- (CREDITED) FOREST RETENTION- PORTION ON N.T.A.
- (NON-CREDITED) FOREST RETENTION- PORTION IN 100-YR FP
- FOREST CONSERVATION AREA (**)

(N.T.A.) = NET TRACT AREA
(FP) = FLOODPLAIN

FOR CLARITY, THE PATTERNS AS INDICATED BELOW, ARE NOT SHOWN ON THE SPECIFIED SHEETS, WHICH WOULD MAKE THE PLANS ILLEGIBLE.
(*) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 45-48.
(**) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 50.

STATE OF MARYLAND
Michael B. Trass
935
LANDSCAPE ARCHITECT
7/14/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

GRAPHIC SCALE
200 0 100 200 400 800
(IN FEET)
1 inch = 200 ft.

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L:\2400\DRAWINGS\13015\PLANS BY GLW\2400S-SD (PHT)\13013_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

OVERALL FOREST CONSERVATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
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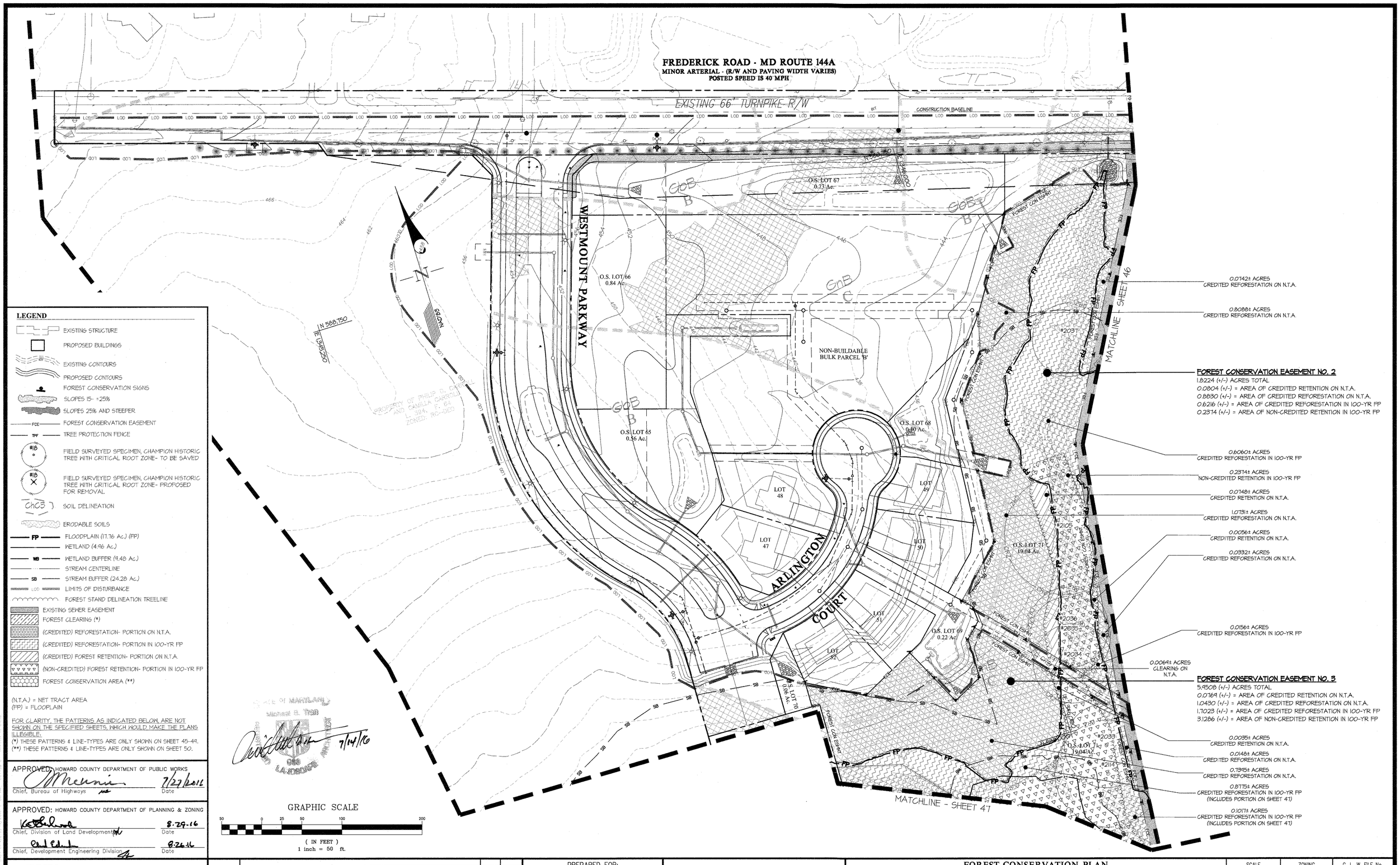

LEGEND

- EXISTING STRUCTURE
- PROPOSED BUILDINGS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST CONSERVATION SIGNS
- SLOPES 15- =25%
- SLOPES 25% AND STEEPER
- FCE — FOREST CONSERVATION EASEMENT
- TPF — TREE PROTECTION FENCE
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- TO BE SAVED
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- PROPOSED FOR REMOVAL
- ChC3 — SOIL DELINEATION
- ERODABLE SOILS
- FP — FLOODPLAIN (17.76 Ac.) (FP)
- WETLAND (4.96 Ac.)
- WB — WETLAND BUFFER (9.48 Ac.)
- STREAM CENTERLINE
- SB — STREAM BUFFER (24.28 Ac.)
- LOD — LIMITS OF DISTURBANCE
- FOREST STAND DELINEATION TREELINE
- EXISTING SEWER EASEMENT
- FOREST CLEARING (*)
- (CREDITED) REFORESTATION- PORTION ON N.T.A.
- (CREDITED) REFORESTATION- PORTION IN 100-YR FP
- (CREDITED) FOREST RETENTION- PORTION ON N.T.A.
- (NON-CREDITED) FOREST RETENTION- PORTION IN 100-YR FP
- FOREST CONSERVATION AREA (**)

(N.T.A.) = NET TRACT AREA
(FP) = FLOODPLAIN

FOR CLARITY, THE PATTERNS AS INDICATED BELOW, ARE NOT SHOWN ON THE SPECIFIED SHEETS, WHICH WOULD MAKE THE PLANS ILLEGIBLE:
(*) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 45-48.
(**) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 50.

STATE OF MARYLAND — MICHAEL B. TRAN — 955 — LANDSCAPE ARCHITECT — 7/14/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\FIGURES-50 (PRT)\13013_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMONT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

FOREST CONSERVATION PLAN

WESTMONT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"= 100'	R-ED	13-013
DATE	TAX MAP - = GRID	SHEET
JULY, 2016	23-6&12	45 OF 60

© GLW 2016

SHA TRACKING NO. 14APHO018XX F 15-087

FREDERICK ROAD - MD ROUTE 144A
MINOR ARTERIAL - (R/W AND PAVING WIDTH VARIES)
POSTED SPEED LIMIT IS 40 MPH

CONSTRUCTION BASELINE

N 588,500
E 347,900

FOREST CONSERVATION EASEMENT NO. 1
1.0710 (+/-) ACRES TOTAL
1.0405 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0305 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP

1.0405± ACRES
CREDITED REFORESTATION ON N.T.A.

0.0279± ACRES
CREDITED REFORESTATION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 4
4.4740 (+/-) ACRES TOTAL
1.4671 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
1.9485 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0993 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
0.9591 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 5
2.0920 (+/-) ACRES TOTAL
1.0308 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.3638 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0706 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
0.6268 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

0.9547± ACRES
CREDITED RETENTION ON N.T.A.
(INCLUDES PORTION ON SHEET 46)

0.2006± ACRES
CREDITED REFORESTATION ON N.T.A.

FOREST CONSERVATION EASEMENT NO. 6
1.3900 (+/-) ACRES TOTAL
0.7849 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.5760 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.0291 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

1.3701± ACRES
CLEARING ON N.T.A.
(INCLUDES PORTION ON SHEET 47)

0.1515± ACRES
CREDITED REFORESTATION ON N.T.A.
(INCLUDES PORTION ON SHEET 47)

0.5646± ACRES
CREDITED REFORESTATION ON N.T.A.
(INCLUDES PORTION ON SHEET 47)

CREDITED OPEN SPACE LOT 1
36.00 Ac.
(TO BE DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS)

0.4671± ACRES
CREDITED RETENTION ON N.T.A.
(INCLUDES PORTION ON SHEET 47)

1.9485± ACRES
CREDITED REFORESTATION ON N.T.A.
(INCLUDES PORTION ON SHEET 47)

0.0033± ACRES
CREDITED REFORESTATION IN 100-YR FP

0.0993± ACRES
CREDITED REFORESTATION IN 100-YR FP
(INCLUDES PORTION ON SHEET 47)

MATCHLINE - SHEET 45

MATCHLINE - SHEET 47

MATCHLINE - SHEET 47

WARBURTON COURT

BURTON DRIVE

O.S. LOT 64 0.51 Ac.
O.S. LOT 63 0.10 Ac.
O.S. LOT 62 0.08 Ac.
O.S. LOT 61 0.19 Ac.
O.S. LOT 60 0.89 Ac.
O.S. LOT 53 0.37 Ac.
O.S. LOT 54 0.33 Ac.
OS LOT 71 19.04 Ac.

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8
LOT 21 LOT 22 LOT 23 LOT 24 LOT 25 LOT 26 LOT 27 LOT 28 LOT 29 LOT 30 LOT 31 LOT 32 LOT 33 LOT 34 LOT 35 LOT 36 LOT 37 LOT 38 LOT 39 LOT 40 LOT 41 LOT 42 LOT 43 LOT 44 LOT 45 LOT 46

#2115

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

DOES NOT QUALIFY AS TYPE 1 FOREST STAND DELINEATION PLANTS

STATE OF MARYLAND
Michael B. Trabbic
No. 983
LANDSCAPE ARCHITECT
7/14/16

LEGEND

- EXISTING STRUCTURE
- PROPOSED BUILDINGS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST CONSERVATION SIGNS
- SLOPES 15- =25%
- SLOPES 25% AND STEEPER
- FCE — FOREST CONSERVATION EASEMENT
- TPF — TREE PROTECTION FENCE
- #ID — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- TO BE SAVED
- #ID — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- PROPOSED FOR REMOVAL
- ChC3 — SOIL DELINEATION
- ERODABLE SOILS
- FP — FLOODPLAIN (17.76 Ac.) (FP)
- WETLAND (4.96 Ac.)
- WB — WETLAND BUFFER (9.48 Ac.)
- STREAM CENTERLINE
- SB — STREAM BUFFER (24.28 Ac.)
- LOD — LIMITS OF DISTURBANCE
- FOREST STAND DELINEATION TREELINE
- EXISTING SEWER EASEMENT
- FOREST CLEARING (*)
- (CREDITED) REFORESTATION- PORTION ON N.T.A.
- (CREDITED) REFORESTATION- PORTION IN 100-YR FP
- (CREDITED) FOREST RETENTION- PORTION ON N.T.A.
- (NON-CREDITED) FOREST RETENTION- PORTION IN 100-YR FP
- FOREST CONSERVATION AREA (**)

(N.T.A.) = NET TRACT AREA
(FP) = FLOODPLAIN

FOR CLARITY, THE PATTERNS AS INDICATED BELOW, ARE NOT SHOWN ON THE SPECIFIED SHEETS, WHICH WOULD MAKE THE PLANS ILLEGIBLE.
(*) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 45-48.
(**) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 50.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CAD\DRAWINGS\13013\PLANS BY GLW\13013_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

FOREST CONSERVATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	R-ED	13-013
DATE	TAX MAP – = GRID	SHEET
JULY, 2016	23-6&12	46 OF 60

SHA TRACKING NO. 14APHO018XX F 15-087

© GLW 2016

MATCHLINE - SHEET 45

MATCHLINE - SHEET 46

MATCHLINE - SHEET 48

MATCHLINE - SHEET 49

PART OF FOREST CONSERVATION EASEMENT NO. 4
(SEE SHEET 46 FOR FOREST CONSERVATION AREA TOTALS)

0.0493± ACRES CREDITED REFORESTATION IN 100-YR FP (INCLUDES PORTION ON SHEET 46)

1.4485± ACRES CREDITED REFORESTATION ON N.T.A. (INCLUDES PORTION ON SHEET 46)

0.4611± ACRES CREDITED RETENTION ON N.T.A. (INCLUDES PORTION ON SHEET 46)

0.1090± ACRES CREDITED REFORESTATION ON N.T.A.

0.8775± ACRES CREDITED REFORESTATION IN 100-YR FP (INCLUDES PORTION ON SHEET 45)

0.1017± ACRES CREDITED REFORESTATION IN 100-YR FP (INCLUDES PORTION ON SHEET 45)

3.1286± ACRES NON-CREDITED RETENTION IN 100-YR FP (INCLUDES PORTION ON SHEET 45 & 44)

0.9591± ACRES NON-CREDITED RETENTION IN 100-YR FP

0.8829± ACRES CREDITED REFORESTATION IN 100-YR FP

0.1507± ACRES CREDITED REFORESTATION ON N.T.A.

PART OF FOREST CONSERVATION EASEMENT NO. 3
(SEE SHEET 45 FOR FOREST CONSERVATION AREA TOTALS)

0.0294± ACRES CREDITED REFORESTATION ON N.T.A.

0.0734± ACRES CREDITED RETENTION ON N.T.A.

1.3710± ACRES CLEARING ON N.T.A. (INCLUDES PORTION ON SHEET 47)

0.1515± ACRES CREDITED REFORESTATION ON N.T.A. (INCLUDES PORTION ON SHEET 46)

0.9541± ACRES CREDITED RETENTION ON N.T.A. (INCLUDES PORTION ON SHEET 46)

0.5646± ACRES CREDITED REFORESTATION ON N.T.A. (INCLUDES PORTION ON SHEET 46)

0.4386± ACRES NON-CREDITED RETENTION IN 100-YR FP

0.0173± ACRES CREDITED REFORESTATION IN 100-YR FP

0.0351± ACRES CREDITED RETENTION ON N.T.A.

0.0375± ACRES CLEARING ON N.T.A.

PART OF FOREST CONSERVATION EASEMENT NO. 5
(SEE SHEET 46 FOR FOREST CONSERVATION AREA TOTALS)

PART OF FOREST CONSERVATION EASEMENT NO. 6
(SEE SHEET 46 FOR FOREST CONSERVATION AREA TOTALS)

0.7816± ACRES CREDITED RETENTION ON N.T.A.

0.0056± ACRES CLEARING ON N.T.A.

0.2095± ACRES CLEARING ON N.T.A.

0.0358± ACRES CREDITED RETENTION ON N.T.A.

0.0147± ACRES CREDITED REFORESTATION ON N.T.A.

0.0116± ACRES CREDITED REFORESTATION ON N.T.A.

0.0407± ACRES CREDITED REFORESTATION IN 100-YR FP

0.0184± ACRES CLEARING ON N.T.A.

0.2291± ACRES NON-CREDITED RETENTION IN 100-YR FP

0.1862± ACRES NON-CREDITED RETENTION IN 100-YR FP

0.0125± ACRES CREDITED REFORESTATION IN 100-YR FP

0.0402± ACRES CREDITED REFORESTATION IN 100-YR FP (INCLUDES PORTION ON SHEET 49)

BURTON DRIVE

O.S. LOT 59 0.14 Ac.

O.S. LOT 71 19.04 Ac.

O.S. LOT 55 0.08 Ac.

O.S. LOT 58 0.07 Ac.

O.S. LOT 57 0.06 Ac.

LOT 9, LOT 10, LOT 11, LOT 12, LOT 13, LOT 15, LOT 16, LOT 17, LOT 18, LOT 19, LOT 20

#2106

#2113

#2107

N 587500 E 1341200

N 587000 E 1341000

SCALE 1" = 100'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

CREDITED OPEN SPACE LOT 1
36.00 Ac.±
(TO BE DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS)

NON-BUILDABLE BULK PARCEL 'C'

DOES NOT QUALIFY AS FOR FOREST STAND DELINEATION PLANS

LEGEND

- EXISTING STRUCTURE
- PROPOSED BUILDINGS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST CONSERVATION SIGNS
- SLOPES 15- =25%
- SLOPES 25% AND STEEPER
- FCE — FOREST CONSERVATION EASEMENT
- TPF — TREE PROTECTION FENCE
- FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- TO BE SAVED
- FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- PROPOSED FOR REMOVAL
- ChC3 — SOIL DELINEATION
- ERODABLE SOILS
- FP — FLOODPLAIN (17.76 Ac.) (FP)
- WB — WETLAND (4.96 Ac.)
- WETLAND BUFFER (9.48 Ac.)
- STREAM CENTERLINE
- SB — STREAM BUFFER (24.28 Ac.)
- LOD — LIMITS OF DISTURBANCE
- FOREST STAND DELINEATION TREELINE
- EXISTING SEWER EASEMENT
- FOREST CLEARING (*)
- (CREDITED) REFORESTATION- PORTION ON N.T.A.
- (CREDITED) REFORESTATION- PORTION IN 100-YR FP
- (CREDITED) FOREST RETENTION- PORTION ON N.T.A.
- (NON-CREDITED) FOREST RETENTION- PORTION IN 100-YR FP
- FOREST CONSERVATION AREA (**)

(N.T.A.) = NET TRACT AREA
(FP) = FLOODPLAIN

FOR CLARITY, THE PATTERNS AS INDICATED BELOW, ARE NOT SHOWN ON THE SPECIFIED SHEETS, WHICH WOULD MAKE THE PLANS ILLEGIBLE:
(*) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 45-44.
(**) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 50.

STATE OF MARYLAND
Marcel B. Thain
No. 9324
PROFESSIONAL ENGINEER
7/14/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-25-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13DRTS\PLANS BY GLW\PRODS-3D [PRT]\13DRTS_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

FOREST CONSERVATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	R-ED	13-013
DATE	TAX MAP – = GRID	SHEET
JULY, 2016	23-6&12	47 OF 60

© GLW 2016

SHA TRACKING NO. 14APHO018XX F 15-087

MATCHLINE - SHEET 44
MATCHLINE - SHEET 43
CREDITED OPEN SPACE LOT 1
36.00 Ac.
(TO BE DEDICATED TO THE HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS)
0.7872± ACRES
CLEARING ON N.T.A.
0.2391± ACRES
CLEARING ON N.T.A.
DOES NOT QUALIFY AS FOR FOREST STAND DELINEATION PLANS
DOES NOT QUALIFY AS FOR FOREST STAND PER FOREST STAND DELINEATION PLANS
N 59°09'09" E 1347.19'
N 59°09'09" E 1347.19'
N 59°09'09" E 1329.38'
BRUSH
BRUSH
LOT 64
LOT 63
LOT 62
LOT 61
LOT 60
LOT 59
LOT 58
LOT 57
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LOT 6
LOT 5
LOT 4
LOT 3
LOT 2
LOT 1
MAP OF RIVE SUBDIVISION, PARCEL B, C, & D ZONED R-20
MAP OF RIVE SUBDIVISION, PARCEL B, C, & D ZONED R-20
GrB
GrB
GrB
GrB
GoC
GoC
GoC

MATCHLINE - SHEET 47

MATCHLINE - SHEET 48

MATCHLINE - SHEET 45

PART OF FOREST CONSERVATION EASEMENT NO. 3
(SEE SHEET 45 FOR FOREST CONSERVATION AREA TOTALS)

0.0402± ACRES
CREDITED REFORESTATION IN 100-YR FP
(INCLUDES PORTION ON SHEET 47)

9.1286± ACRES
NON-CREDITED RETENTION IN 100-YR FP
(INCLUDES PORTION ON SHEET 47)

0.0094± ACRES
CLEARING ON N.T.A.

0.2017± ACRES
CREDITED REFORESTATION ON N.T.A.

0.0432± ACRES
CREDITED RETENTION ON N.T.A.

0.1030± ACRES
CREDITED REFORESTATION IN 100-YR FP

0.1141± AC.
CREDITED REFORESTATION IN 100-YR FP

0.4510± ACRES
NON-CREDITED RETENTION IN 100-YR FP

0.5503± ACRES
CREDITED REFORESTATION IN 100-YR FP

0.0805± ACRES
CREDITED REFORESTATION ON N.T.A.

0.0304± ACRES
NON-CREDITED RETENTION IN 100-YR FP

0.1645± ACRES
CREDITED RETENTION ON N.T.A.

0.4355± ACRES
CLEARING ON N.T.A.

4.9156± ACRES
NON-CREDITED RETENTION IN 100-YR FP

0.1500± ACRES
CREDITED REFORESTATION IN 100-YR FP

0.1536± ACRES
CREDITED RETENTION ON N.T.A.

0.5314± ACRES
CREDITED REFORESTATION ON N.T.A.

0.1524± ACRES
CREDITED RETENTION ON N.T.A.

CREDITED OPEN SPACE LOT 1
36.00 Ac.
(TO BE DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS)

DOES NOT QUALIFY AS FOREST STAND FOR FOREST STAND DELINEATION PLANS.

0.0556± ACRES
CREDITED REFORESTATION ON N.T.A.

FOREST CONSERVATION EASEMENT NO. 7
9.6429 (+/-) ACRES TOTAL
1.3983 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.3382 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.6533 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
1.2551 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

0.7116± ACRES
NON-CREDITED RETENTION IN 100-YR FP

1.1655± ACRES
CREDITED RETENTION ON N.T.A.

0.0212± ACRES
CLEARING ON N.T.A.

0.0100± ACRES
CREDITED REFORESTATION IN 100-YR FP

FOREST CONSERVATION EASEMENT NO. 8
6.0271 (+/-) ACRES TOTAL
0.306 (+/-) = AREA OF CREDITED RETENTION ON N.T.A.
0.5314 (+/-) = AREA OF CREDITED REFORESTATION ON N.T.A.
0.2741 (+/-) = AREA OF CREDITED REFORESTATION IN 100-YR FP
4.9156 (+/-) = AREA OF NON-CREDITED RETENTION IN 100-YR FP

N 586152
E 1347788

#2110 #2111 #2112 #2444 #2445 #2446 #2450 #2452 #2453 #2454

LEGEND

- EXISTING STRUCTURE
- PROPOSED BUILDINGS
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST CONSERVATION SIGNS
- SLOPES 15- =25%
- SLOPES 25% AND STEEPER
- FCE — FOREST CONSERVATION EASEMENT
- TPF — TREE PROTECTION FENCE
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- TO BE SAVED
- #18 — FIELD SURVEYED SPECIMEN, CHAMPION HISTORIC TREE WITH CRITICAL ROOT ZONE- PROPOSED FOR REMOVAL
- ChC3 — SOIL DELINEATION
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- SB — STREAM BUFFER (24.28 Ac.)
- LOD — LIMITS OF DISTURBANCE
- FOREST STAND DELINEATION TREELINE
- EXISTING SEWER EASEMENT
- FOREST CLEARING (*)
- (CREDITED) REFORESTATION- PORTION ON N.T.A.
- (CREDITED) REFORESTATION- PORTION IN 100-YR FP
- (CREDITED) FOREST RETENTION- PORTION ON N.T.A.
- (NON-CREDITED) FOREST RETENTION- PORTION IN 100-YR FP
- FOREST CONSERVATION AREA (**)

(N.T.A.) = NET TRACT AREA
(FP) = FLOODPLAIN

FOR CLARITY, THE PATTERNS AS INDICATED BELOW, ARE NOT SHOWN ON THE SPECIFIED SHEETS, WHICH WOULD MAKE THE PLANS ILLEGIBLE:
(*) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 45-49.
(**) THESE PATTERNS & LINE-TYPES ARE ONLY SHOWN ON SHEET 50.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

STATE OF MARYLAND
KATHLEEN A. BOSLEY
No. 986
LANDSCAPE ARCHITECT
7/14/16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\FOR025-50 (PRT)\13013_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

FOREST CONSERVATION PLAN

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	R-ED	13-013
DATE	TAX MAP – = GRID	SHEET
JULY, 2016	23-6&12	49 OF 60

SHA TRACKING NO. 14APHO018XX F 15-087

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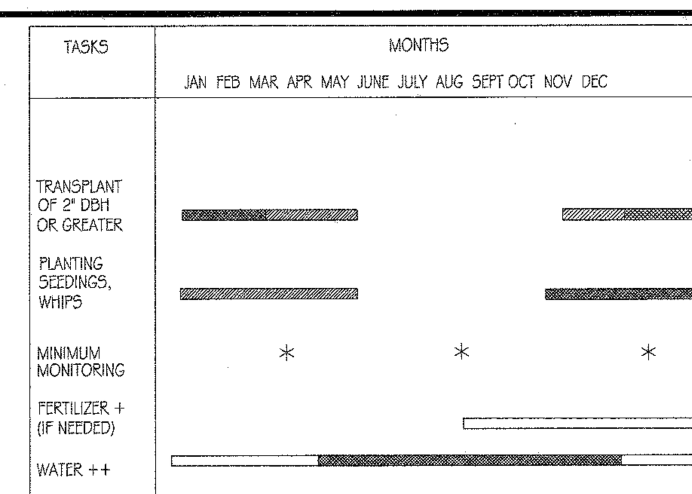
TREE PLANTING AND MAINTENANCE CALENDAR

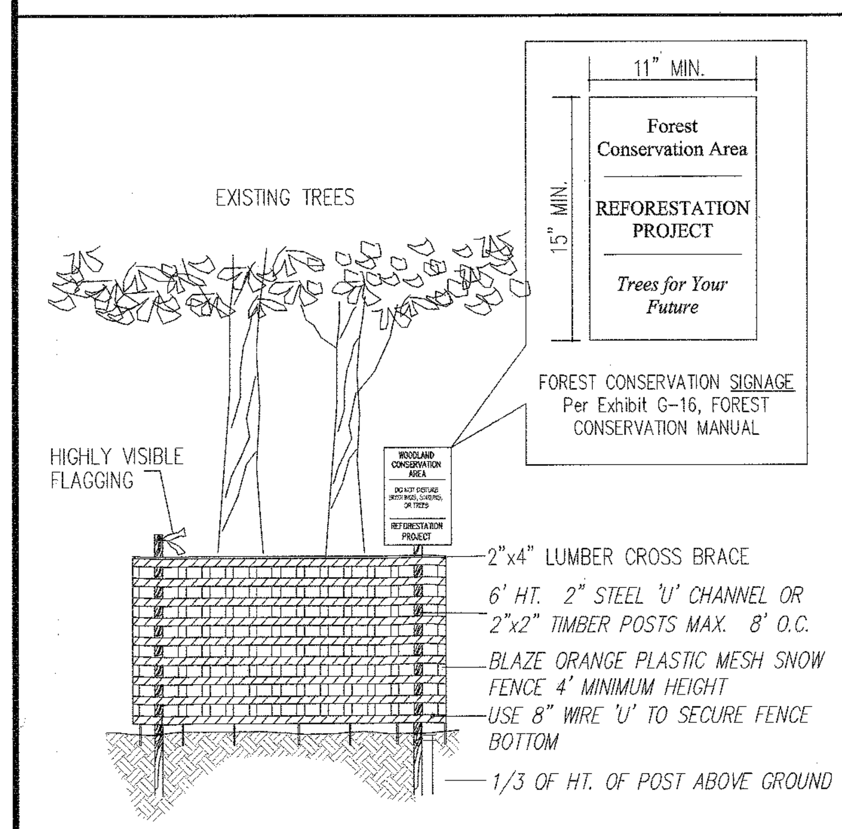


KEY
- * ACTIVITIES DURING THESE MONTHS ARE DEPENDENT UPON GROUND CONDITIONS
- GREATLY RECOMMENDED
- RECOMMENDED WITH ADDITIONAL CARE
- RECOMMENDED
- \+ DEPENDANT UPON SITE CONDITIONS
- ++ DEPENDANT UPON SITE CONDITIONS; WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

NOTE:
The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

SOURCE: adapted from the Maryland State FOREST CONSERVATION MANUAL

TREE PROTECTION FENCE NOT TO SCALE

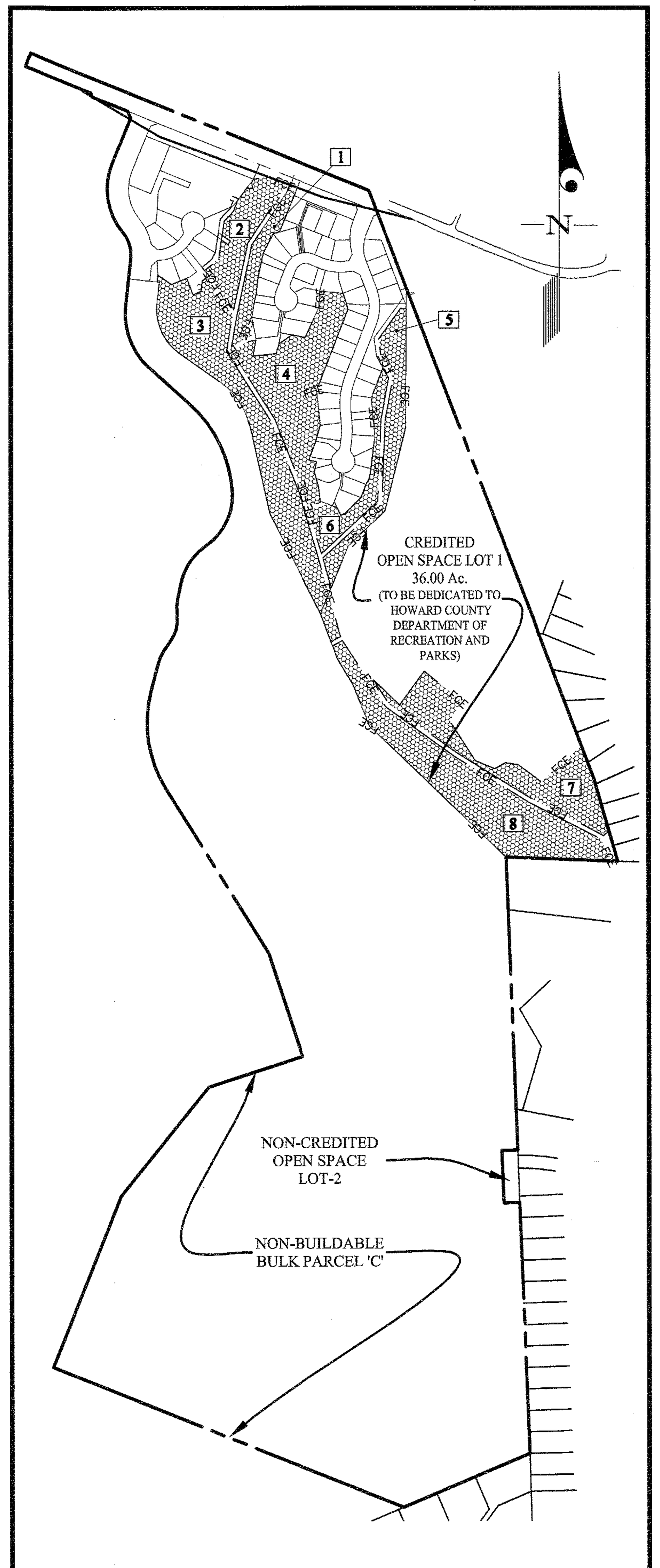


TREE PROTECTION FENCING
1. FOREST PROTECTION DEVICE ONLY.
2. AVOID ROOT DAMAGE.
3. DEVICE MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.

adapted from the Maryland State FOREST CONSERVATION MANUAL

NOTES:

1. THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENTS AFTER THE REMOVAL OF THE TREE PROTECTION FENCING.
2. FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50' TO 100' APART AND AT ALL CORNERS WHERE THE EASEMENT CHANGES DIRECTION.
3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.



FCE LOCATION DIAGRAM
SCALE: 1" = 500'

LEGEND

EASEMENT NUMBER (SEE CHART THIS SHEET)

31 — PROPOSED FOREST CONSERVATION EASEMENT *(boxed numbers)*

GENERAL NOTES:

1. THIS RETENTION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE.
2. IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PRACTICES.
3. THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN.) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY. IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (IF APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS.
4. AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE COUNTY WILL INSPECT THE FOREST CONSERVATION EASEMENT AREAS FOR BOND RELEASE PRECEDING.
5. THE DEVELOPER/BUILDER SHALL (IN WRITING) NOTIFY ALL HOME OWNERS IN THIS DEVELOPMENT OF THE EXISTENCE OF FOREST CONSERVATION AREAS AND THAT DISTURBANCE TO THE FOREST CONSERVATION AREAS OR THE REMOVAL OF FOREST CONSERVATION SIGNS IS PROHIBITED.
6. WHERE APPLICABLE, REFORESTATION/AFFORESTATION TREE PLANTINGS SHOULD BE INSTALLED IN A CURVILINEAR PATTERN TO FACILITATE MAINTENANCE BUT AVOID A GRID APPEARANCE. EACH SPECIES OF TREE SHALL BE DISTRIBUTED EVENLY WITHIN EACH FOREST CONSERVATION EASEMENT AREA.
7. THE REMOVAL OF INVASIVE SPECIES MAY BE REQUIRED IF THE INSPECTOR DETERMINES THAT THE EASEMENT IS DOMINATED BY INVASIVE SPECIES.
8. PER GENERAL NOTE 26, SHOWN ON PLAT NUMBER 21486,

   "FOREST CONSERVATION FOR THIS PROJECT WILL BE TEMPORARILY DEFERRED PER WP-11-132. FOREST CONSERVATION WILL BE ADDRESSED FOR NON-BUILDABLE BULK PARCEL 'A' CREDITED OPEN SPACE LOT 1 AND NON CREDITED OPEN SPACE LOT 2 UPON RESUBDIVISION OF NON-BUILDABLE BULK PARCEL 'A'.";

   HOWEVER THE REMAINDER OF THE FOREST CONSERVATION OBLIGATION IS TO BE ADDRESSED WHEN NON BUILDABLE BULK PARCEL 'C' IS FURTHER SUBDIVIDED.
9. THE FOREST CONSERVATION OBLIGATION FOR NON-CREDITED OPEN SPACE LOT 2 MUST BE SATISFIED WITH THIS PLAN SUBMISSION. THEREFORE FOR THE PURPOSES OF FOREST CONSERVATION, THE GROSS SITE AREA WILL BE 79.03 ACRES.

CONSTRUCTION PERIOD PROTECTION PROGRAM (At Final Plan Stage)

1. THE LIMIT OF FOREST RETENTION SHALL BE STAKED AND FLAGGED.
2. A PRE-CONSTRUCTION MEETING AT THE SITE SHOULD BE HELD TO CONFIRM THE LIMITS OF CLEARING SPECIFIED. THE MEETING SHOULD INCLUDE THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ON-SITE FOREMAN IN CHARGE OF LAND DISTURBANCE, THE ENVIRONMENTAL CONSULTANT AND THE APPROPRIATE HOWARD COUNTY INSPECTORS.
3. FOREST PROTECTION DEVICES AND SIGNS (SEE DETAILS) SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. NONE OF THE DEVICES SHALL BE ANCHORED OR ATTACHED IN ANY WAY TO THE TREES TO BE SAVED.
4. EQUIPMENT, VEHICLES AND BUILDING MATERIALS SHALL NOT BE WITHIN THE PROTECTED AREA. ACTIVITIES STRICTLY TO IMPLEMENT ANY REFORESTATION PLANTING AND MAINTENANCE (I.E. WATERING, FERTILIZING THINNING, PRUNING, REMOVAL OF DEAD AND DISEASED TREES WHERE NECESSARY, ETC.) OF THE CONSERVATION AREA ARE PERMITTED. CLEARING FOR THE PURPOSE OF SODDING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREAS ONCE THEY'RE ESTABLISHED.
5. AT THE END OF THE CONSTRUCTION PERIOD, REQUEST FOR A FOREST CONSERVATION INSPECTION FROM HOWARD COUNTY TO INITIATE THE 2-YEAR (MIN.) POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD.

FOREST CONSERVATION PROGRAM SEQUENCE (At Final Plan Stage)

1. OBTAIN ALL NECESSARY PERMITS.
2. STAKEOUT LIMITS OF DISTURBANCE.
3. FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE SITE GRADING AND CONSTRUCTION.
4. INSTALL FOREST CONSERVATION SIGNS AND FOREST PROTECTION DEVICES (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES).
5. COMMENCE SITE CONSTRUCTION.
6. PREPARE SITE SOIL BY MULCHING AND REMOVAL OF TRASH AND WEEDS INCLUDING AN APPLICATION OF HERBICIDES TO CONTROL NOXIOUS WEEDS AND INVASIVE SPECIES.
7. INSPECTION BY HOWARD COUNTY FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
8. POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
9. FINAL INSPECTION BY HOWARD COUNTY FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATIONS.

FOREST CONSERVATION OBLIGATION & SURETY (At Final Plan Stage)

THE FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT AS CALCULATED IN THE FOREST CONSERVATION WORKSHEET IS 5.15± ACRES OF FOREST RETENTION AND 6.96± ACRES OF REFORESTATION PLANTING FOR TOTAL OF 12.1± ACRES OF FOREST CONSERVATION EASEMENT TO BE RECORDED.

PROPOSED METHOD OF SATISFYING THE ABOVE FOREST CONSERVATION ON-SITE:

RECORD 8 (EIGHT) FOREST CONSERVATION EASEMENTS TOTALING 26.47± ACRES OF WHICH 10.16± ACRES ARE CREDITED AND THEY CONTAIN AND 6.72± ACRES OF CREDITED REFORESTATION PLANTING AND 3.44± ACRES OF REFORESTATION WITHIN THE FLOODPLAIN. THERE ARE 5.15± ACRES OF CREDITED RETENTION ON N.T.A. AND 11.16± ACRES OF NON-CREDITED RETENTION WITHIN THE FLOODPLAIN.

THE FOREST CONSERVATION SURETY POSTED WITH THE DEVELOPER AGREEMENT IS $0.50/S.F OF THE REFORESTATION PLANTING. THE SURETY FOR THE ON-SITE REFORESTATION WOULD BE:

REFORESTATION PLANTING PROVIDED: *(6.96AC) (43,560 SF/Ac.) ($0.50/SF)= $151,589.00*

EXCESS FOREST CONSERVATION PROVIDED: *(3.20AC) (43,560 SF/Ac.) ($0.50/SF)= $69,696.00*
(PROVIDED IN ADVANCE FOR FUTURE PHASES)

TOTAL SURETY:

REFORESTATION PLANTING PROVIDED:	(6.96AC.)	$151,589.00
EXCESS FOREST CONSERVATION PROVIDED:	(3.20AC.)	+ $69,696.00
TOTAL:	(10.16AC)	$221,285.00

Information for Forest Conservation Calculations

1	Project Name:	WESTMOUNT			
2	Land Use Category	Residential - Suburban			
	Forest Conservation Thresholds (Reforestaion / Afforestation) =	20 %		15 %	
3	Gross Site Area	3,442,853	s.f.	79.0370	ac.
4	Area within 100-yr floodplain, if any	773,524	s.f.	17.7577	ac.
5	Area of existing easement for major utility transmission lines (if any, see note below)		s.f.	0.0000	ac.
6	Area of external public road (frontage) dedication (if any see note below)		s.f.	0.0000	ac.
7	Existing Forest on Net Tract Area	350,930	s.f.	8.0562	ac.
8	Forest Clearing on Net Tract Area	126,793	s.f.	2.9108	ac.

FOREST CONSERVATION WORKSHEET

Project Name: WESTMOUNT **DPZ File No.: F-15-087**

		Acreage
1	**Site Data**	
A.	Gross Site Area	79.037
B.	Area within 100-yr floodplain, if any	17.758
C.	Area of existing easement for major utility transmission lines, if any	0.000
D.	Area of external public road (frontage) dedication, if any	0.000
E.	Net Tract Area	61.279
F.	Land Use Category	Residential - Suburban
2	**Input Data**	
A.	Net Tract Area	61.279
B.	Reforestation Threshold (percent of net tract = 20 %)	12.256
C.	Afforestation Threshold (percent of net tract = 15 %)	9.192
D	Existing Forest on Net Tract Area	8.056
E.	Forest Clearing on Net Tract Area	2.911
F.	Forest Retention on Net Tract Area	5.145
3	**Reforestation and/or Afforestaion Calculations**	
A.	Net tract forest clearing **above** reforestation threshold, if applicable	0.000
B.	Net tract forest clearing **below** reforestation threshold, if applicable	2.911
C.	Planting up to afforestation threshold, if applicable	1.136
D.	Reforestation planting required for clearing **above** threshold (3A x 0.25)	0.000
E.	Reforestation planting required for clearing **below** threshold (3B x 2.0)	5.822
F.	Net tract forest retention above reforestation threshold (2F-2B, available credit)	0.000
G.	Total reforestation planting required (3C+3D+3E - 3F)	**6.957**
4	**Break Even Point (BEP) Calculations**	
A.	Maximum clearing allowed with no reforestation planting (2D-2B)/1.25	Not Applicable
B.	Minimum net tract retention at BEP 0.20(2D-2B)+2B or 2D-4A	Not Applicable
5	**Forest Conservation Required**	
A.	Forest Retention Area (2F)	**5.145**
B.	Forest Planting Area (3G)	**6.957**
C.	Total minimum FCE required for retention and reforestation	**12.103**

FOREST CONSERVATION PLANTING QUANTITY SCHEDULE

FOREST PLANTING LOCATION NO.	FCE-1	FCE-2	FCE-3	FCE-4	FCE-5	FCE-6	FCE-7	FCE-8	TOTAL
AREA TO BE PLANTED (IN AC.)	1.07	1.50	2.74	2.05	0.43	0.58	0.99	0.80	10.16
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	107	150	274	205	43	58	99	80	1,016
CREDIT FOR LANDSCAPE TREES TO BE PLANTED	0	0	0	0	0	0	0	0	0
REQUIRED QUANTITY OF 2" CAL. TREES TO BE PLANTED	107	150	274	205	43	58	99	80	1,016

FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	FOREST PLANTING AREA								
	FCE-1	FCE-2	FCE-3	FCE-4	FCE-5	FCE-6	FCE-7	FCE-8	TOTAL
ACER RUBRUM/ RED MAPLE	16	31	28	40	10	10	9	16	160
CERCIS CANADENSIS/ EASTERN REDBUD	16	28	0	30	3	10	10	0	97
LIRIODENDRON TULIPFERA/ TULIP TREE	0	0	30	0	0	0	0	4	34
PLATANUS OCCIDENTIALIS/ AMERICAN SYCAMORE (PLANETREE)	5	0	36	45	0	8	25	20	139
QUERCUS BICOLOR/ SWAMP WHITE OAK	16	30	60	45	10	10	15	10	196
QUERCUS PALUSTRIS/ PIN OAK	27	35	60	45	10	10	25	20	232
QUERCUS RUBRA/ RED OAK	27	26	60	0	10	10	15	10	158
TOTAL	107	150	274	205	43	58	99	80	1,016

NOTE:
1. THE QUANTITY SHOWN ABOVE IS FOR PLANTING WITH 2" CAL. TREES AT 20' X 20' SPACING.

FOREST CONSERVATION - EASEMENT AREA TABULATIONS

Phase	File No.	Easement	Forest Retention on Net Tract	Forest Retention in Floodplain (Non-Credit)	Forest Planting on Net Tract	Forest Planting in Floodplain (Credited)	TOTAL
1	F-15-087	1	0.00	0.00	1.04	0.03	1.07
		2	0.08	0.24	0.88	0.62	1.82
		3	0.08	3.13	1.04	1.70	5.95
		4	1.47	0.96	1.95	0.10	4.48
		5	1.03	0.63	0.36	0.07	2.09
		6	0.78	0.03	0.58	0.00	1.39
		7	1.40	1.25	0.34	0.65	3.64
		8	0.31	4.92	0.53	0.27	6.03
SUB-TOTAL for FCE 1 thru 8			5.15	11.16	6.72	3.44	26.47
RUNNING TOTAL			5.15	11.16	6.72	3.44	26.47
TOTAL FOREST CONSERVATION PLANTING for FCE-1 thru 8					10.16		

SPECIMEN/SIGNIFICANT TREE LIST

TAG #	COMMON NAME	SCIENTIFIC NAME	DBH*	VIGOR**	NOTES	TO BE REMOVED (TBR)
2033	Pin Oak	Quercus palustris	35	good		
2034	Northern Red Oak	Quercus rubra	33	good		
2035	Pin Oak	Quercus palustris	34	fair	poision ivy	
2036	Pin Oak	Quercus palustris	33.5	fair	dead tree leaning on	
2037	Green Ash	Fraxinus pennsylvanica	30.5	fair	poision ivy	
2105	Pin Oak	Quercus palustris	50	good		
2107	Pin Oak	Quercus palustris	36.5	fair	some dead branches	
2109	Pin Oak	Quercus palustris	35	poor	mostly dead	X
2110	Pin Oak	Quercus palustris	37	fair	mostly dead	X
2113	Pin Oak	Quercus palustris	35.5	good		
2114	Pin Oak	Quercus palustris	44.5	fair	some broken branches	
2115	American Elm	Liriodendron tulipifera	31.5	good		
2448	Pin Oak	Quercus palustris	32.5	fair	grape vines, some dead branches	
2449	Pin Oak	Quercus palustris	36.5	fair	grape vines, some dead branches	
2450	Pin Oak	Quercus palustris	38	good		
2451	Pin Oak	Quercus palustris	33	fair	poison ivy vines, canker @ 10'	
2452	Pin Oak	Quercus palustris	42	fair	ison ivy vines, some dead branch	
2453	Pin Oak	Quercus palustris	31	good		
2454	White Oak	Quercus alba	39	fair	some dead branches	

MAPPED SOILS

SYMBOLS	SOIL NAME	SLOPE	K-FACTOR	COMMENT
GbB	Gladstone Loam	3-8%	0.28	------
GbC	Ladstone Loam	8-15%	0.28	------
GfB	Gladstone-Urban Land Complex	0-8%	0.28	------
GmB	Glenville Silt Loam	3-8%	0.28	Baile inclusions/ 5%
GnB	Glenville-Baile Silt Loams	0-8%	0.28	Baile inclusions/ 10%
GuB	Glenville -Urban Land Udorthents Complex	25-45%	0.28	------
Ha	Hatboro-Codorus Silt Loams	0-3%	0.43	Hydric
MaD	Manor Loam	15-25%	0.28	------

FOREST CONSERVATION - TRACKING CHART

RETENTION / AFFORESTATION / REFORESTATION SUMMARY TABLE for WESTMOUNT

PHASE	GROSS SITE AREA (Ac.)	FLOODPLAIN AREA (Ac.)	NET TRACT AREA (Ac.)	EX. FOREST ON NET TRACT (Ac.)	FOREST CLEARED ON NET TRACT (Ac.)	FOREST RETAINED (Ac.)	EXCESS RETENTION (Ac.)	PLANTING REQUIRED (Ac.)	PLANTING PROVIDED (Ac.)	EXCESS FOREST CONSERVATION (Planting & Retention)	COMMENTS
1	79.04	17.76	61.28	8.06	2.91	5.15	0.00	6.96	10.16	**3.20**	F-15-087 (FCE 1 thru 8) F-16-061
2											F-16-046 (FCE 9 thru14)
Running Total	**79.04**	**17.76**	**61.28**	**8.06**	**2.91**	**5.15**	**0.00**	**6.96**	**10.16**	**3.20**	

STATE OF MARYLAND Michael B. Tran LANDSCAPE ARCHITECT 7/14/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\13013\PLANS BY GLW\ROADS-SD (PH1)\13013_44-50-FCP.dwg | DES. KAB | DRN. KAB | CHK. MBT

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

FOREST CONSERVATION NOTES and DETAILS

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	R-ED	13-013
DATE	TAX MAP - = GRID	SHEET
JULY, 2016	23-6&12	50 OF 60

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SHA TRACKING NO. 14APHO018XX F 15-087

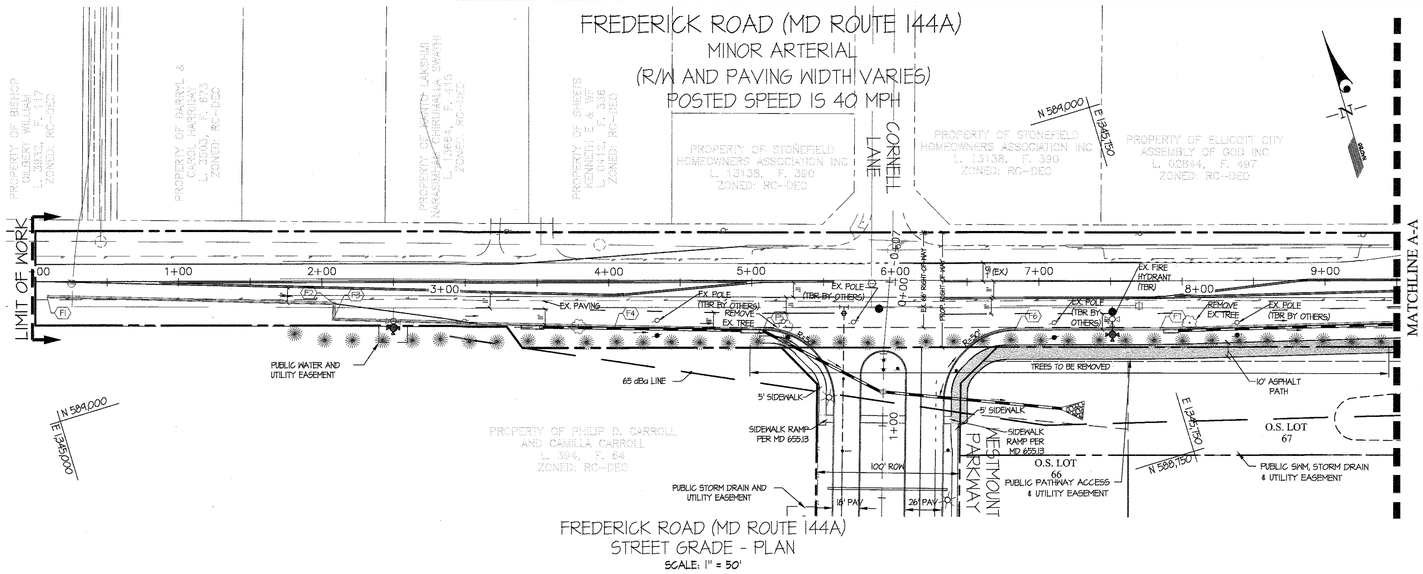
LEGEND

- EXISTING CONTOUR (366)
- PROPOSED CONTOUR (300)
- LIMIT OF ULTIMATE FOREST
- EXISTING SANITARY SEWER (EX. 8"S.)
- PROPOSED SANITARY SEWER (8"S.)
- EXISTING WATERLINE (EX. 8"W.)
- PROPOSED WATERLINE (8"W.)
- PROPOSED FIRE HYDRANT
- EXISTING STORM DRAIN (EX. S.D.)
- PROPOSED STORM DRAIN (S.D.)
- EXISTING TREE
- MICRO BIO-RETENTION FACILITY (M-6)
- EXISTING POLE
- PROPOSED UTILITY POLE
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- (T.B.R.) TO BE RELOCATED
- ASPHALT HIKER/BIKER PATH
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER
- 100 YEAR FLOODPLAIN (FP — FP — FP)
- FOREST CONSERVATION EASEMENT (FCE)
- PROPOSED (LED-100) LIGHT
- SOIL BORING LOCATION
- PROPERTY CORNER IDENTIFICATION (#8)
- PROPOSED HIB SIGNAL
- PROPOSED ROADWAY PAVEMENT
- EXISTING PAVEMENT TO BE MILLED AND OVERLAID
- EXISTING PAVEMENT PATCHINGS FOR PROP. PIPE TRENCH

TOP OF CURB ELEVATION TABLE FOR FREDERICK ROAD

PT. NO	STATION	OFFSET	ELEV.	ASBUILT
F1	0+08.13	10.22' RT	474.70	
F2	2+08.30	15.00' RT	471.24	
F3	2+08.04	26.00' RT	471.01	
F4	4+04.15	30.79' RT	465.85	
F5	5+08.28	32.52' RT	461.21	
F6	6+83.50	33.25' RT	452.98	
F7	7+84.65	33.10' RT	450.15	

NOTES:
1. SEE SHEET 54 FOR SHA PAVING SPECIFICATIONS.
2. SEE SHEET 55 FOR STRUCTURE LABELS, PIPE LENGTHS, AND MATERIAL IDENTIFICATION FOR EXISTING AND PROPOSED STORM DRAIN.
3. SEE SHEETS 8-4 FOR REQUIREMENTS AND NOTES OF LANDSCAPING WITHIN SHA RIGHT-OF-WAY.



FREDERICK ROAD (MD ROUTE 144A)
STREET GRADE - PLAN
SCALE: 1" = 50'

MATCHLINE A-A
FOR CONTINUATION, SEE SHEET 52

THE FOLLOWING STANDARDS ARE REQUIRED FOR THIS PROJECT:

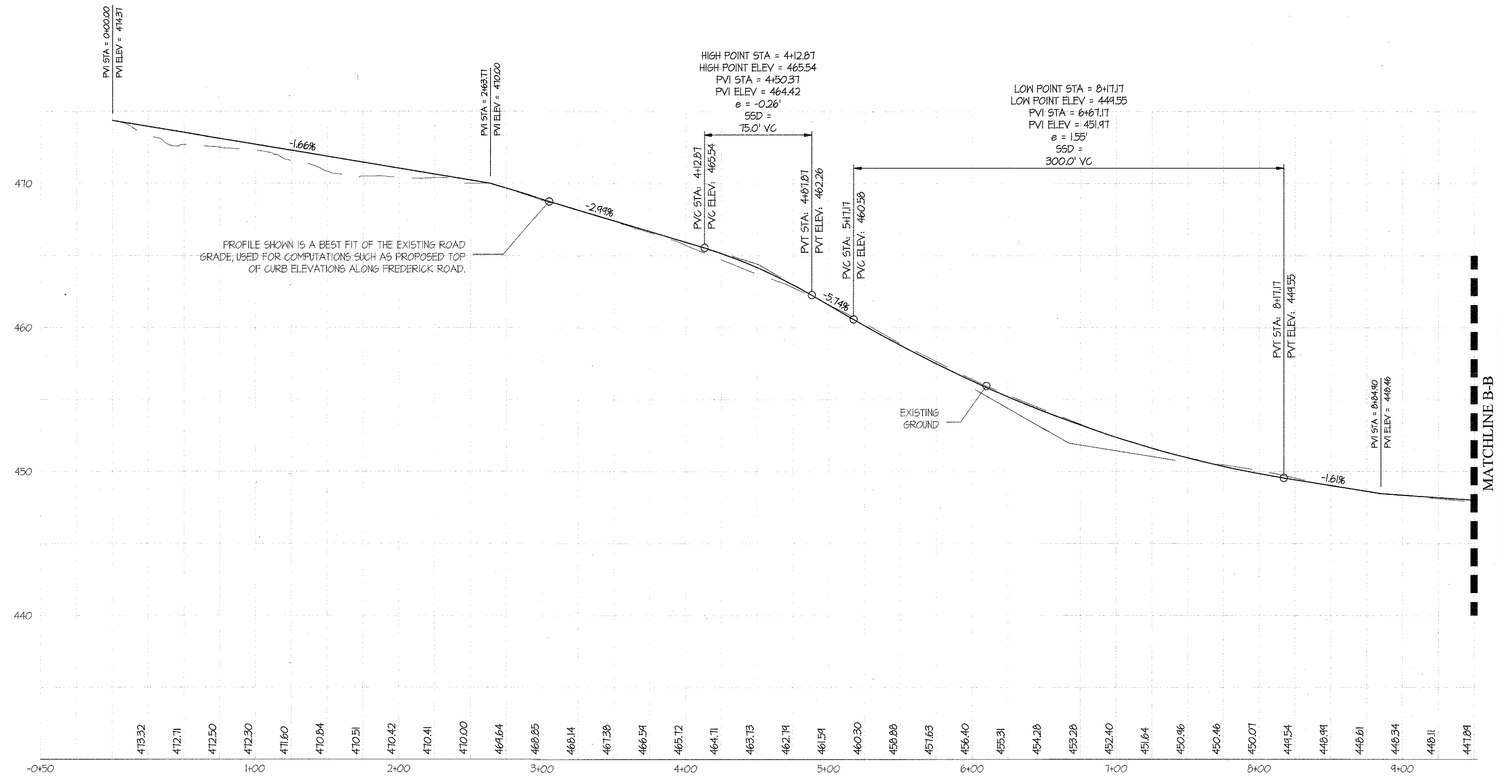
A. MD-655.11 - SIDEWALK RAMPS - PERPENDICULAR
B. MD-655.40 - DETECTABLE WARNING STRIPS
C. MD 620.02 - STANDARD TYPE 'A' COMBINATION CURB & GUTTER
D. MD 518.01 - REPAIRING PAVEMENT OPENING FOR UTILITY TRENCHES
E. MD 655.13 - SIDEWALK RAMPS COMBINATION

F. MD 605.23 - TRAFFIC BARRIER 'W' BEAM POST, OFFSET BRACKET & SPLICE
G. MD 605.26 - TRAFFIC BARRIER 'W' BEAM - POST PLACEMENT DETAILS FOR SPANNING 12'-2" TO 18'-5" OPENINGS
H. MD 605.10 - TYPE K TRAFFIC BARRIER END TREATMENT - OPTION ANCHORAGE
I. MD 384.01 - STANDARD MANHOLE
J. MD 374.63 - CGS-15 INLET
K. MD 374.51 - CGS-10 INLET
L. MD 374.51 - CGS-15 INLET
M. MD 379.01 - 'S' INLET
N. MD 379.03 - DOUBLE 'S' INLET
O. MD 368.01 - CONCRETE END SECTION
P. MD 812.01 - WOOD POST MODIFICATIONS FOR BREAKAWAY FEATURE
Q. MD 812.04 - WOOD SIGN SUPPORTS - POST SIZES AND SPACING

R. MD 104.02-10 - FLAGGING OPERATION LED EQUAL / LESS THAN 40 MPH
S. MD 104.02-04 - LANE SHIFT RIGHT OR LEFT SIDE / 2 LANE, 2 WAY EQUAL / LESS THAN 40 MPH

FOR ALL STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS, WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:
http://apps.roads.maryland.gov/BusinessWithSHA/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/index.asp

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



MATCHLINE B-B
FOR CONTINUATION, SEE SHEET 52

FREDERICK ROAD (MD ROUTE 144A)
STREET GRADE - PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\2013\DRAWINGS\13013PLANS BY GLW\PHASE-3\ [PHT]\13013_51-56-144A ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018
7/14/16

ROAD CONSTRUCTION PLAN - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	51 OF 60

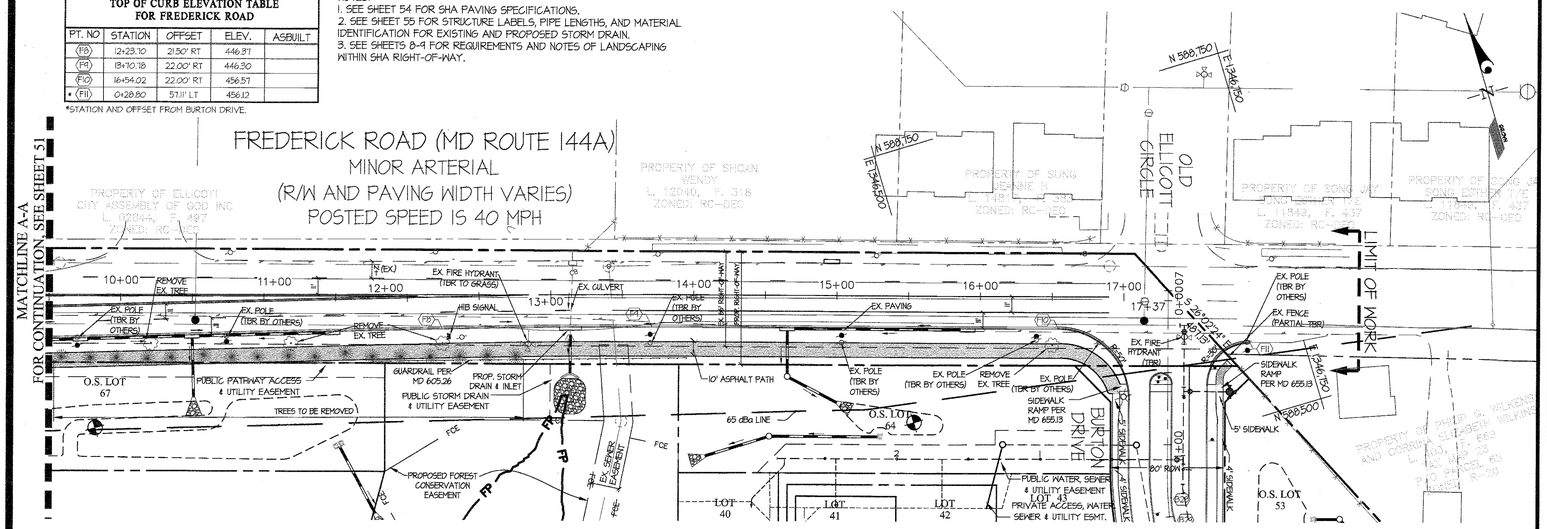
© GLW 2014

SHA TRACKING NO. 14APH0018XX F 15-087

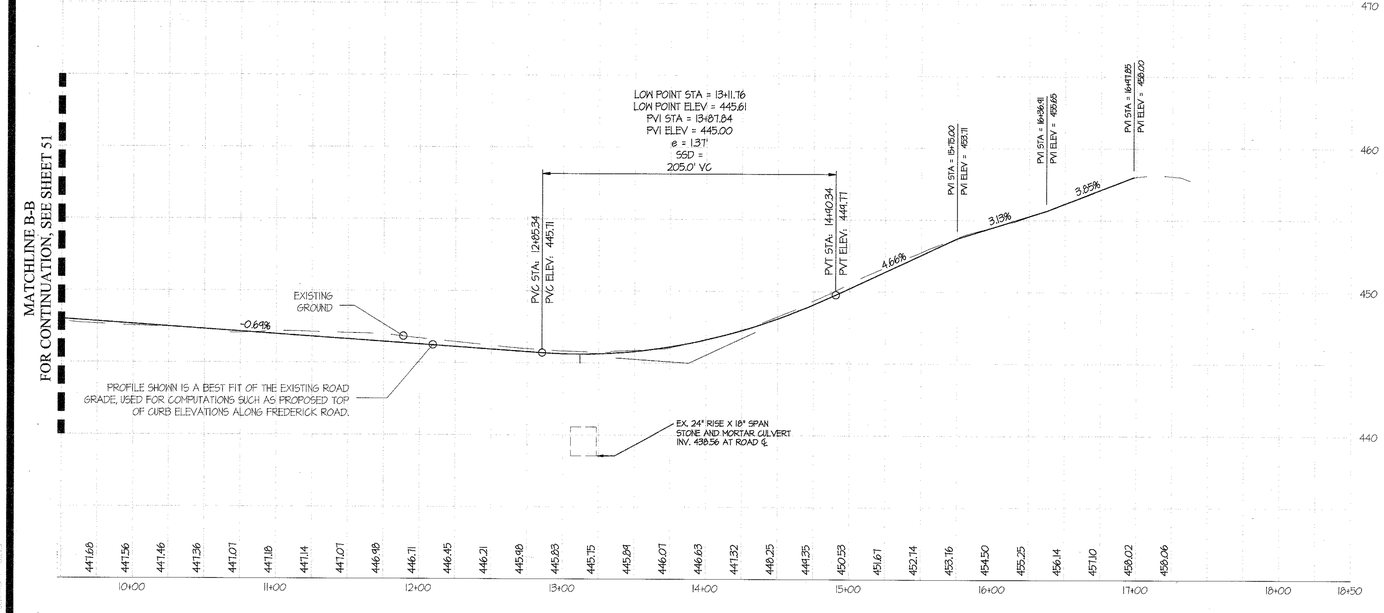
TOP OF CURB ELEVATION TABLE FOR FREDERICK ROAD				
PT. NO	STATION	OFFSET	ELEV.	AS BUILT
(F8)	12+23.10	21.50' RT	446.31	
(F9)	13+10.18	22.00' RT	446.30	
(F10)	16+54.02	22.00' RT	456.51	
* (F11)	0+28.80	51.11' LT	456.12	

*STATION AND OFFSET FROM BURTON DRIVE.

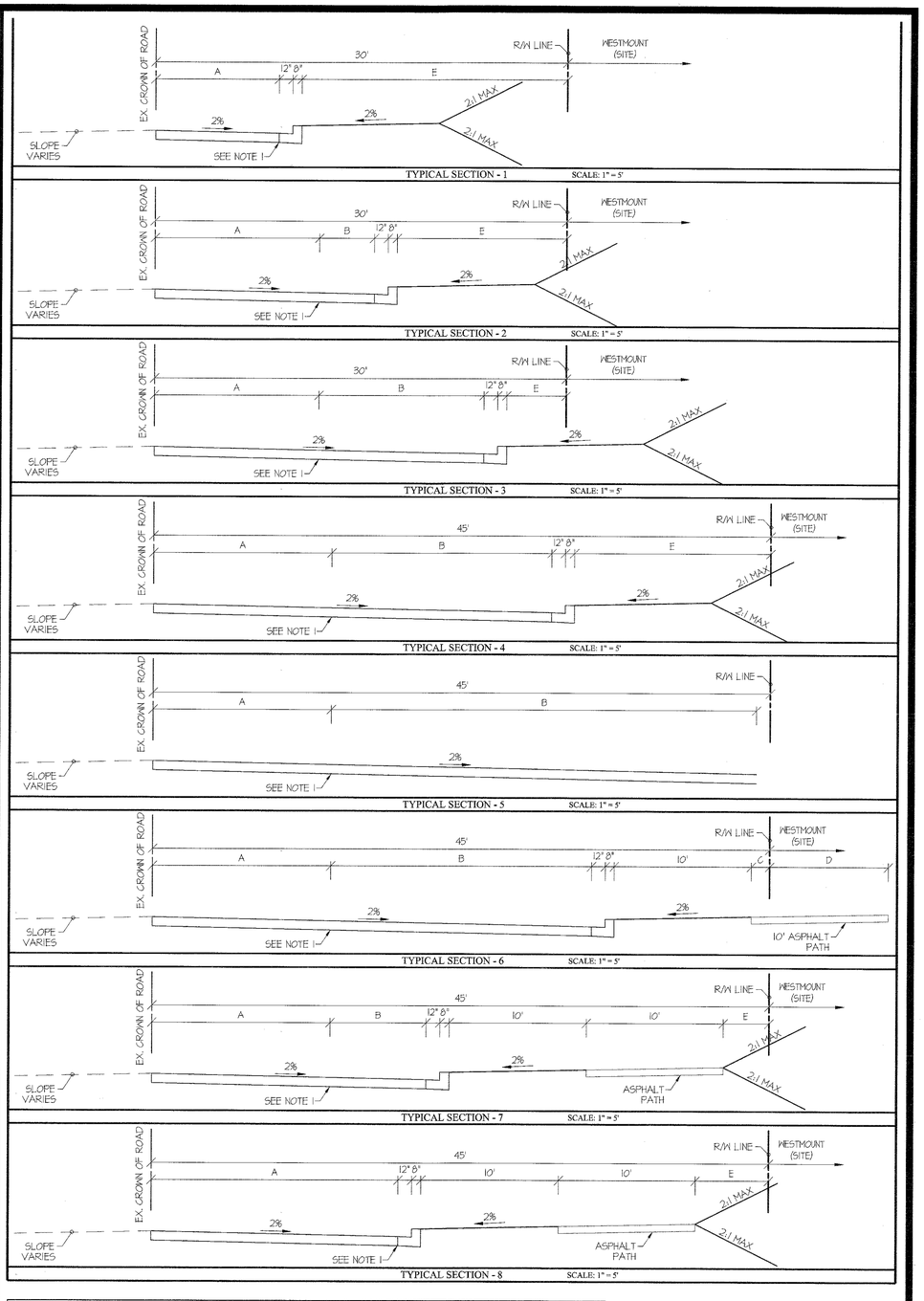
NOTES:
1. SEE SHEET 54 FOR SHA PAVING SPECIFICATIONS.
2. SEE SHEET 55 FOR STRUCTURE LABELS, PIPE LENGTHS, AND MATERIAL IDENTIFICATION FOR EXISTING AND PROPOSED STORM DRAIN.
3. SEE SHEETS 8-9 FOR REQUIREMENTS AND NOTES OF LANDSCAPING WITHIN SHA RIGHT-OF-WAY.



FREDERICK ROAD (MD ROUTE 144A)
STREET GRADE PLAN
SCALE: 1" = 50'



FREDERICK ROAD (MD ROUTE 144A)
STREET GRADE PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'



FREDERICK ROAD - ROAD INFORMATION								
SECTION	STATION	CLASSIFICATION	A	B	C	D	E	R/W WIDTH
1	0+00 TO 1+50	MINOR ARTERIAL	VARIES (9'-12')	-	-	-	VARIES (14'-4" TO 15'-11")	30'
2	1+50 TO 2+10	MINOR ARTERIAL	VARIES (11'-12')	4'	-	-	VARIES (13'-4" TO 12'-4")	30'
3	2+10 TO 3+30	MINOR ARTERIAL	12'	12'-15'	-	-	VARIES (4'-4" TO 1'-4")	30'
4	3+30 TO 5+00	MINOR ARTERIAL	13'	16'-18'	-	-	VARIES (14'-4" TO 12'-4")	45'
5	5+00 TO 6+85	MINOR ARTERIAL	VARIES (13'-14')	VARIES (32'-31')	-	-	-	45'
6	6+85 TO 10+80	MINOR ARTERIAL	13'	19'	VARIES (1'-4" TO 10')	VARIES (8'-8" TO 0")	-	45'
7	10+80 TO 14+20	MINOR ARTERIAL	13'	VARIES (4'-10')	-	-	VARIES (10'-4" TO 0")	45'
8	14+20 TO 16+85	MINOR ARTERIAL	18'	-	-	-	5'-4"	45'

A - LIMITS OF MILLING
B - LIMITS OF NEW PAVING
C - WIDTH OF PATH WITHIN SHA RIGHT-OF-WAY
D - WIDTH OF PATH OUTSIDE OF SHA RIGHT-OF-WAY
E - BALANCE OF THE RIGHT-OF-WAY WIDTH

NOTES:
1. CONTRACTOR TO SAW CUT EXISTING EDGE OF PAVEMENT.
2. SEE SHEET 54 FOR PAVING SECTIONS.
3. ALL SECTIONS ARE DRAWN LOOKING UPSTATION (TO THE EAST).

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
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L:\2013\DRAWINGS\13013\PLANS BY GLW\13013_51-56-144A ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: MAY 26, 2018
7/14/16

STATE OF MARYLAND — CARLOS ERNESTO LITTLE — 12975 — REGISTERED PROFESSIONAL ENGINEER

ROAD CONSTRUCTION PLAN - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

DRAWING 13013_51-56-144A ROAD PLANS.dwg

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	52 OF 60

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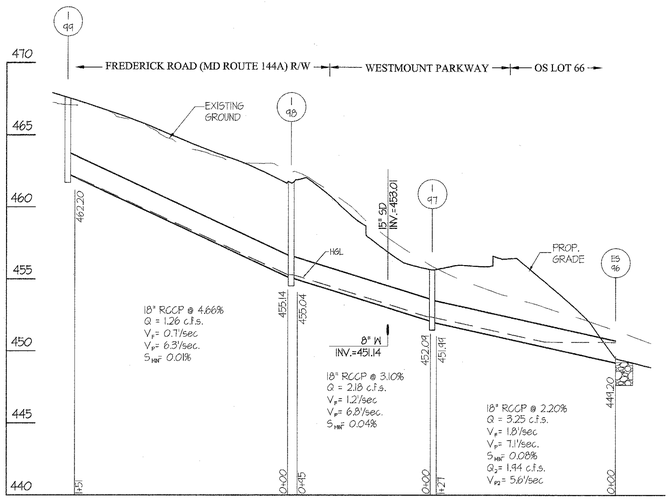
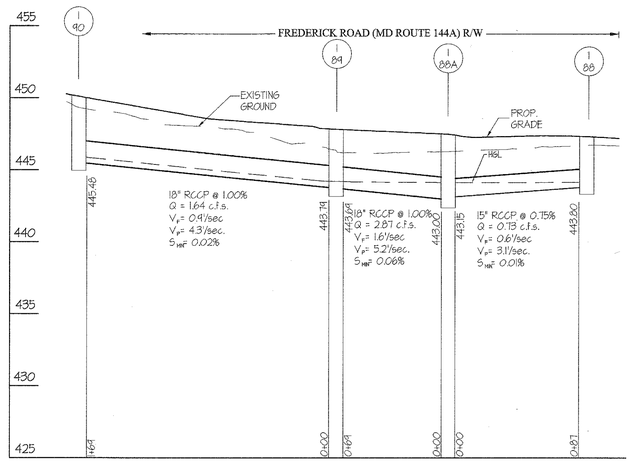
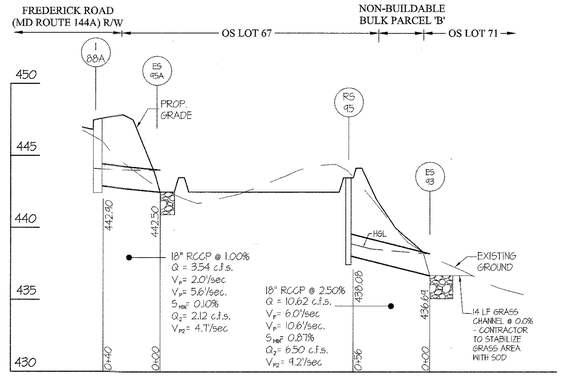
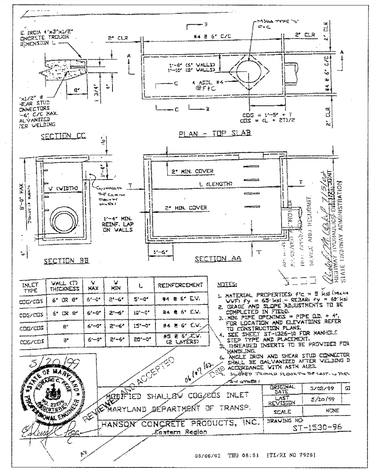
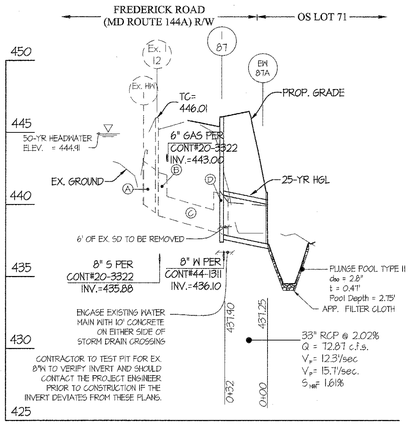
SHA TRACKING NO. 14APHO018XX F 15-087

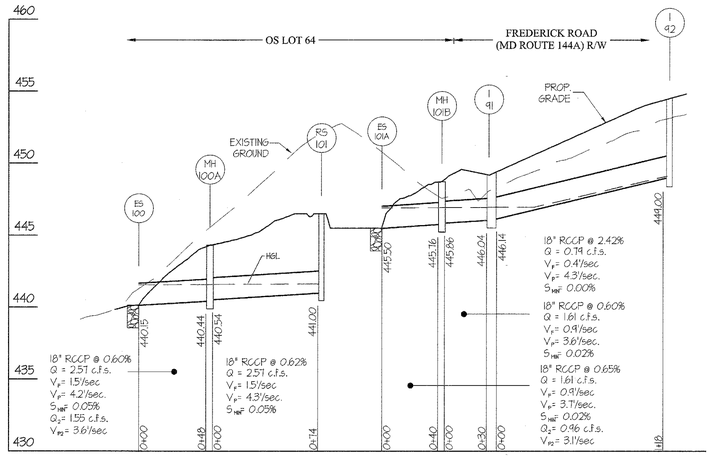












FREDERICK ROAD (MD ROUTE 144A) STA. 13+14 EX. CULVERT PROFILE

EX. SECTION	TYPE	LENGTH
A	36" R.C.P.	8 LF
B	36" R.C.P.	6 LF
C	24"x18" BRICK & MORTAR CULVERT	32 LF
D	33" C.M.P.	10 LF

NOTE: EXISTING SECTIONS ARE TO REMAIN.

PIPE SCHEDULE

SIZE	TYPE	QUANTITY (L.F.)	REMARKS
15"	RCCP CLASS IV	87	
18"	RCCP CLASS IV	1,017	
33"	RCCP CLASS IV	32	

RIP RAP INFORMATION ◇3

END SECTION	CLASS	LENGTH	D_{50}	THICKNESS
ES-93	CLASS I	16'	6"	19"
ES-95A	CLASS I	10'	4.2"	19"
ES-96	CLASS I	12'	4.8"	19"
ES-100	CLASS I	8'	4.5"	19"
ES-101A	CLASS I	8'	3.8"	19"

STRUCTURE SCHEDULE

	TYPE	WIDTH (INSIDE)	TOP ELEVATION PROPOSED UPPER	TOP ELEVATION PROPOSED LOWER	TOP ELEVATION AS-BUILT UPPER	TOP ELEVATION AS-BUILT LOWER	INVERT PROPOSED UPPER	INVERT PROPOSED LOWER	INVERT AS-BUILT UPPER	INVERT AS-BUILT LOWER	STD. DETAIL	LOCATIONS ◇1	REMARKS
I-87	COS-15 INLET	2'-6"	---	445.84			431.99	431.92			MD 374.63	N 588,648 E 1,346,263	
I-88	COG-10 INLET	2'-6"	446.90	446.83			---	443.80			MD 374.51 ◇4	N 588,742 E 1,346,103	
I-88A	COG-10 INLET	2'-6"	447.50	447.46			443.15	442.90			MD 374.51 ◇4	N 588,768 E 1,346,008	
I-89	COG-10 INLET	2'-6"	448.01	447.94			443.79	443.69			MD 374.51 ◇4	N 588,784 E 1,345,933	
I-90	COG-15 INLET	2'-6"	450.11	449.90			---	445.48			MD 374.51 ◇4	N 588,836 E 1,345,760	
I-91	COG-10 INLET	2'-6"	449.14	448.71			446.14	446.04			MD 374.51 ◇4	N 588,654 E 1,346,408	
I-92	COG-10 INLET	2'-6"	454.62	454.28			---	444.00			MD 374.51	N 588,617 E 1,346,528	
I-97	S-INLET	2'-7.5"	---	455.41			452.09	451.99			MD 379.01	N 588,853 E 1,345,555	
I-98	COG-15 INLET	2'-6"	462.03	461.21			455.14	455.04			MD 374.51	N 588,921 E 1,345,480	
I-99	COG-15 INLET	2'-6"	467.83	467.34			---	462.20			MD 374.51	N 588,869 E 1,345,334	
RS-95	DOUBLE 'S' RISER	2'-7.5"	---	443.50			---	438.08			MD 379.03	N 588,665 E 1,346,084	
RS-101	'S' RISER	2'-7.5"	---	446.50			---	441.00			MD 379.01	N 588,563 E 1,346,448	
MH-100A	STANDARD MANHOLE	4'-0"	---	444.32			440.54	440.44			MD 384.01	N 588,585 E 1,346,374	
MH-101B	STANDARD MANHOLE	4'-0"	---	448.92			445.86	445.76			MD 384.01	N 588,621 E 1,346,398	
EW-87A	ENDWALL	2'-9"	440.83	---			---	431.25			MD 358.01	N 588,668 E 1,346,253	
ES-93	END SECTION	1'-6"	438.19	---			---	436.69			◇2	N 588,610 E 1,346,096	
ES-95A	END SECTION	1'-6"	444.00	---			---	442.50			◇2	N 588,723 E 1,345,996	
ES-96	END SECTION	1'-6"	450.70	---			---	449.20			◇2	N 588,804 E 1,345,674	
ES-100	END SECTION	1'-6"	441.65	---			---	440.15			◇2	N 588,585 E 1,346,324	
ES-101A	END SECTION	1'-6"	447.00	---			---	445.50			◇2	N 588,592 E 1,346,428	

◇1 COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT CURB LINE FOR INLETS, THE CENTER OF STRUCTURE FOR MANHOLES AND CENTERLINE OF END SECTIONS AT END.

◇2 RCCP END SECTION OR APPROVED EQUAL.

◇3 SEE THIS SHEET FOR RIP RAP DETAILS.

◇4 MODIFIED SHALLOW COG/COS INLETS PER HANSON CONCRETE PRODUCTS #ST-1530-96 AS APPROVED SUBSTITUTES BY MDSHA ON 07/15/02 FOR MD 374.31 AND MD 374.41, OR AN APPROVED EQUAL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8.29.16

Chief, Development Engineering Division — Date 8.26.16

GLW GUTSCHICK LITTLE & WEBER, P.A.
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L:\2013\13-013\ENGR\SHEETS\STORM PLANS BY GLW\13-013-SD (PHASE1).DGN, 53-56-HWY ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
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7/14/16

STATE OF MARYLAND — CARLTON KENNETH GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

STORM DRAIN PROFILES - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50' (H) 1"=5' (V)	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	53 OF 60

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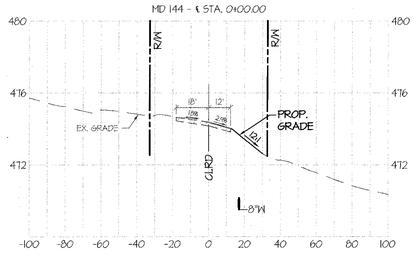
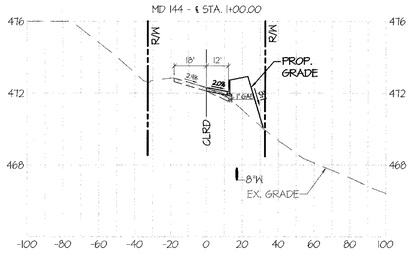
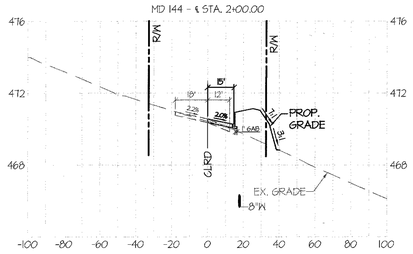
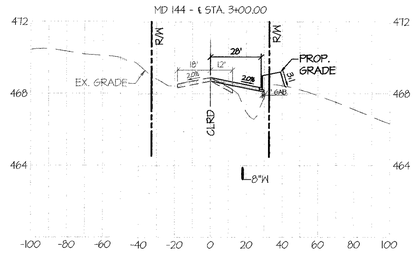
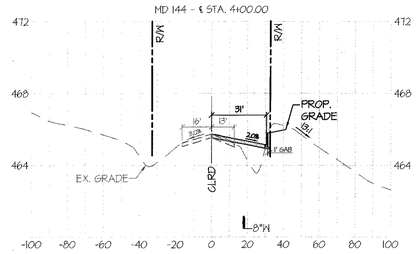
SHA TRACKING NO. 14APHO018XX F 15-087

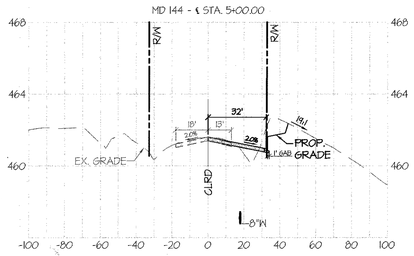


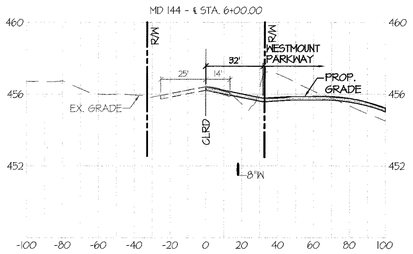


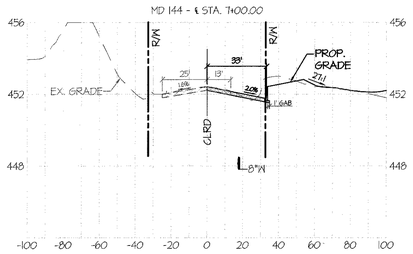


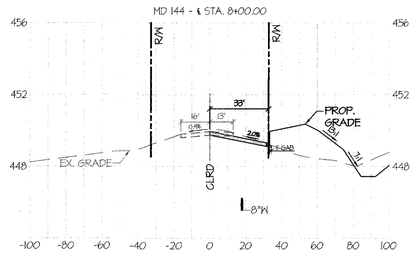


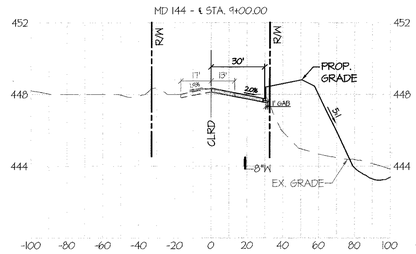


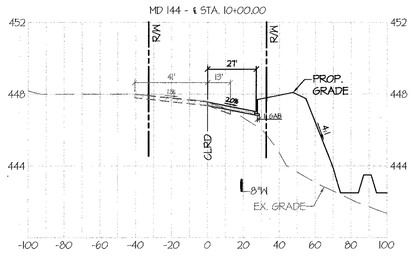


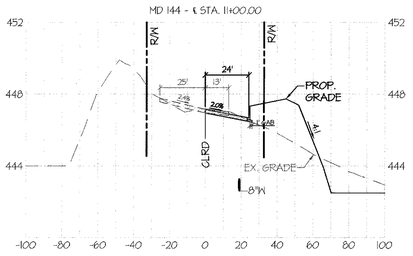


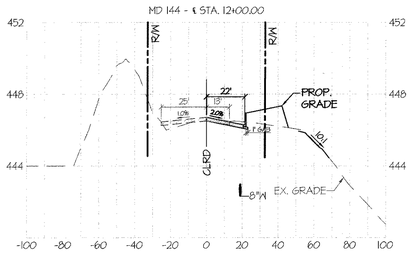


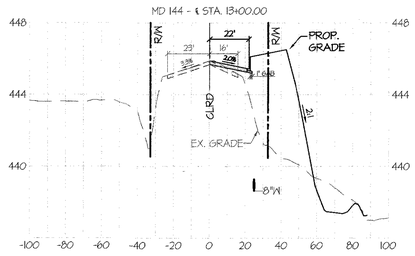


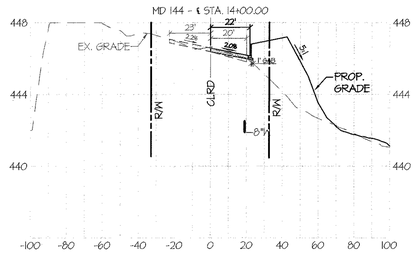




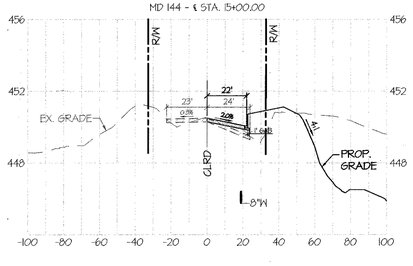


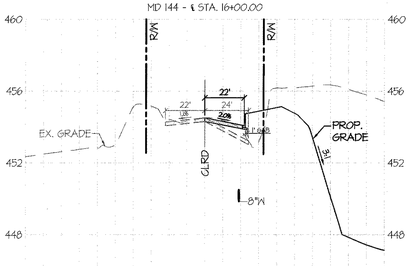


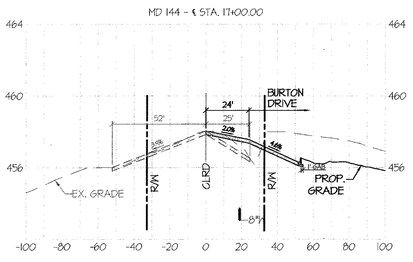


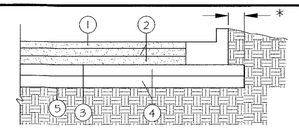


NOTE:
THE SHADED PAVEMENT SHOWN IN EACH CROSS SECTION IS TO BE CONSTRUCTED USING THE FREDERICK ROAD - TYPICAL OVERLAY AND WIDENING SECTION FOUND ON THIS SHEET.

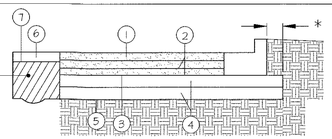








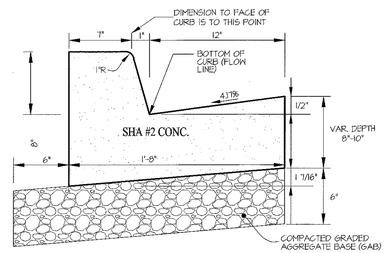
FREDERICK ROAD - NEW CONSTRUCTION SECTION



FREDERICK ROAD - TYPICAL OVERLAY & WIDENING SECTION

1. 2.0" HOT MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFACE COURSE, PG 64-22, LEVEL 2
2. 6.0" HOT MIX ASPHALT SUPERPAVE 19.0 MM FOR BASE COURSE PG 64-22 , LEVEL 2 (2-3" LIFTS)
3. TOP OF SUBGRADE
4. 12.0" BASE COURSE USING GRADED AGGREGATE (2 - 6" LIFTS)
5. LIMIT OF CLASS 1 EXCAVATION
6. HOT MIX ASPHALT SUPERPAVE 9.5 MM, PG 64-22, LEVEL 2, FOR 1-1/2" OVERLAYS
   HOT MIX ASPHALT SUPERPAVE 12.5 MM, PG 64-22, LEVEL 2, FOR 2" OVERLAYS
   MATCH THE SURFACE COURSE SPECIFIED FOR THE ADJACENT FULL DEPTH PAVING IF DIFFERENT FROM THE ABOVE.
7. TOP OF EXISTING PAVEMENT AFTER CARBIDE GRINDING

* 2" GAB W/O TRAFFIC BARRIER, 12" GAB W/ TRAFFIC BARRIER. THE GRADED AGGREGATE OR BORROW OR BORROW MATERIAL SHALL EXTEND UNDERNEATH OF CURB AND GUTTER SECTIONS AND AT LEAST 1 FT BEYOND



STANDARD COMBINATION CURB AND GUTTER

STANDARD 8" TYPE A CONCRETE CURB AND GUTTER NO SCALE

ROAD SECTIONS NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\2013\DRAWINGS\13013\PLANS BY GLW\HEADS-53 (PHP)\13013 SI-56 MAA ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXPIRATION DATE: MAY 26, 2018

STATE OF MARYLAND — CHARLES CHRISTOPHER SCHNEIDER — NO. 12975 — PROFESSIONAL ENGINEER

7/14/16

ROAD DETAILS - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=40' (H) 1"=4' (V)	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	54 OF 60

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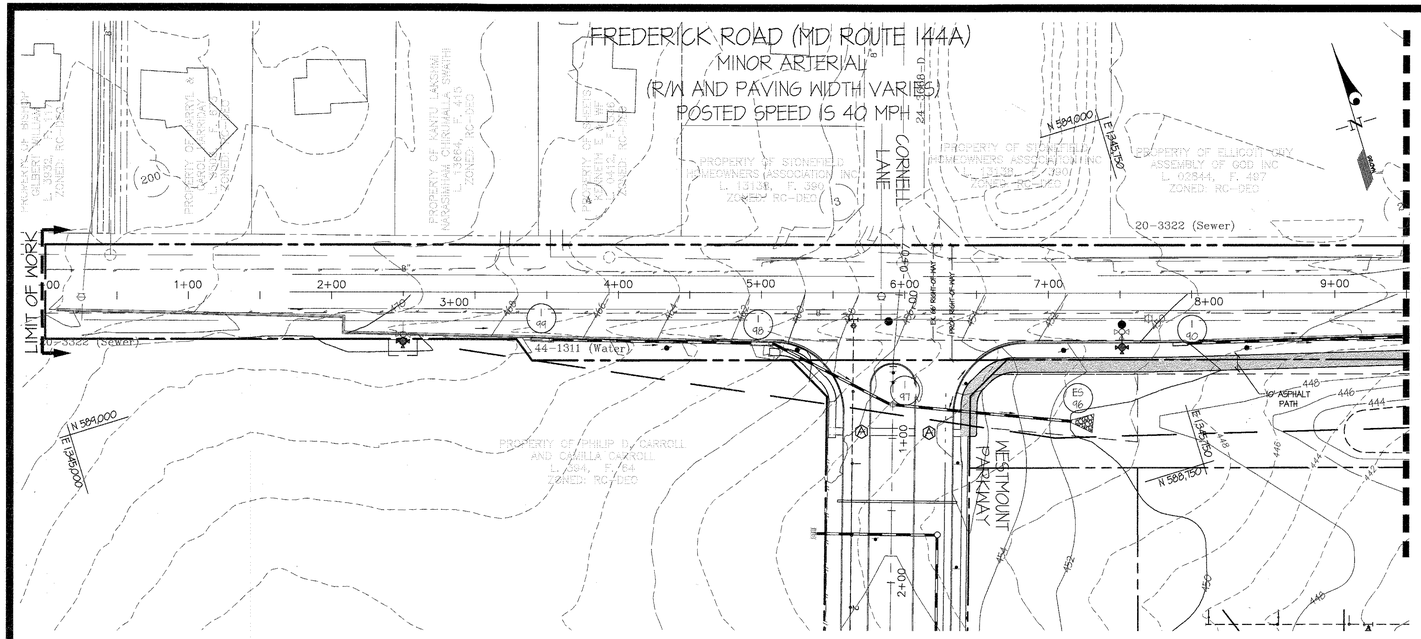
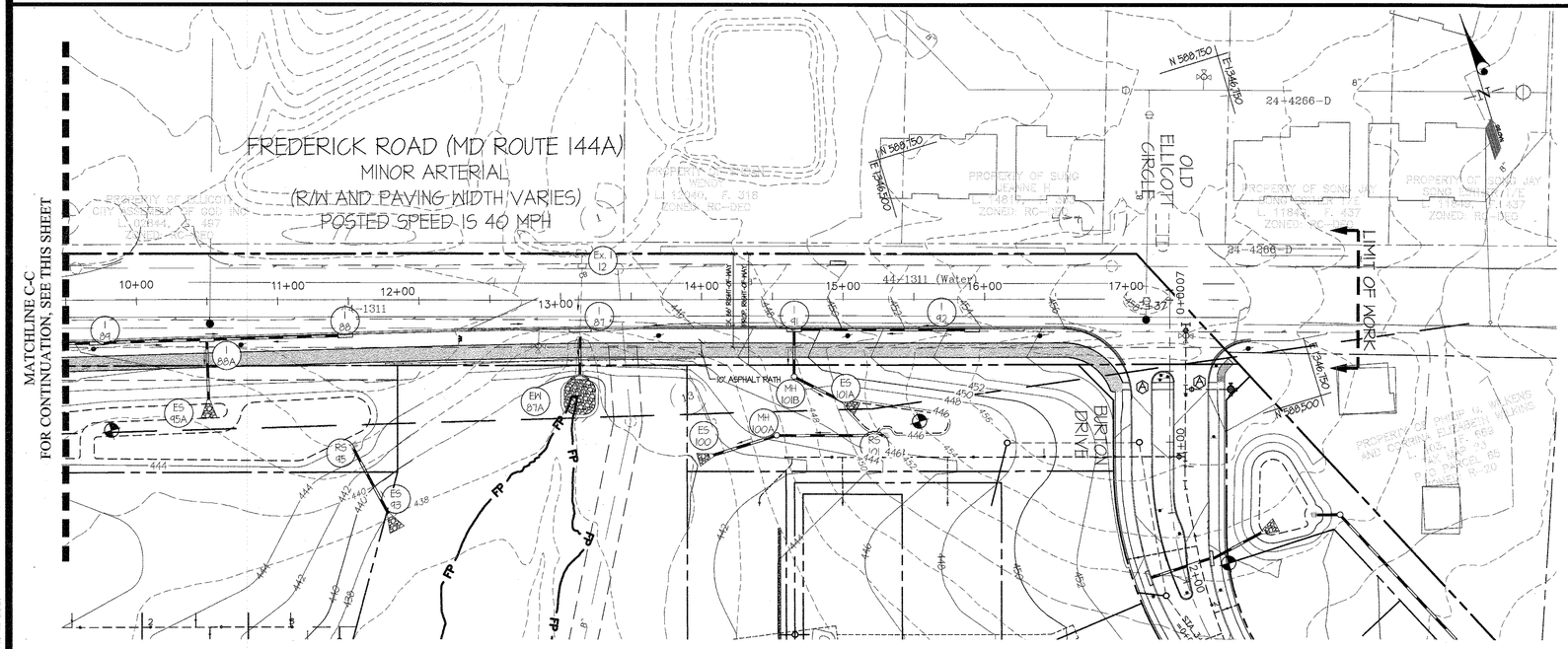
SHA TRACKING NO. 14APHO018XX F 15-087





FROM NO.	TO NO.	DIA. (IN) & TYPE OF PIPE	L (FT)
I-89	I-48	18" RCCP	151
I-88	I-47	18" RCCP	95
I-47	ES-46	18" RCCP	127
ES-46	RS-45	---	---
I-90	I-89	18" RCCP	168
I-89	I-88A	18" RCCP	69
I-88	I-88A	15" RCCP	87
I-88A	ES-45A	18" RCCP	40
ES-45A	RS-45	---	---
RS-45	ES-43	18" RCCP	56
I-42	I-41	18" RCCP	118
I-41	MH-101B	18" RCCP	30
MH-101B	ES-101A	18" RCCP	40
ES-101A	RS-101	---	---
RS-101	MH-100A	18" RCCP	74
MH-100A	ES-100	18" RCCP	48
I-87	EW-87A	33" RCCP	32

NOTES:

1. Ⓐ INDICATES PROPOSED CROSSWALK 60" WIDTH, MAX. 2% CROSS-SLOPE IN ANY DIRECTION

2. SEE SHEETS 25-26 FOR SEDIMENT CONTROL DEVICES REQUIRED TO PERFORM THE CONSTRUCTION FOR FREDERICK ROAD (MD ROUTE 144A).

3. ALL RCCP SHALL BE CLASS IV.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\2016\PROJECTS\16013\PLANS BY GLW\16013-SI (PHT)\16013_SI-SE-144A ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND · CARLOS EDUARDO VILLAMIZAR · 12975 · PROFESSIONAL ENGINEER

GRADING PLAN - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	55 OF 60

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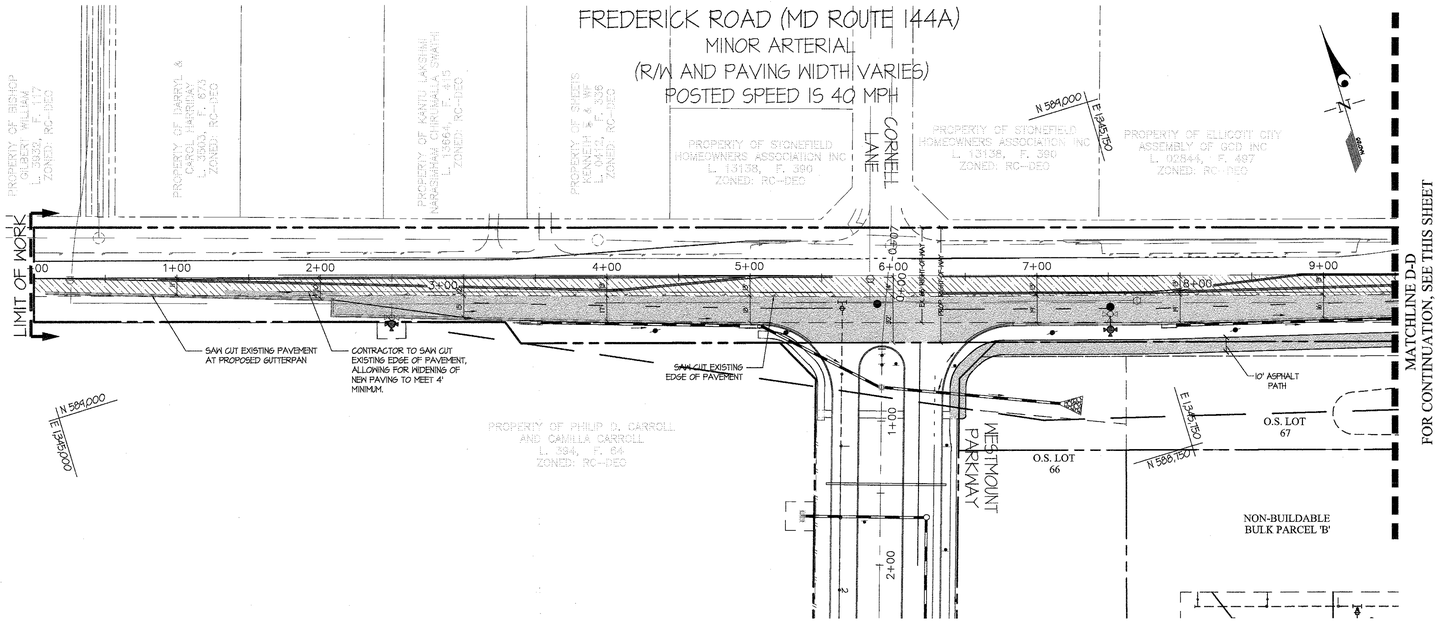
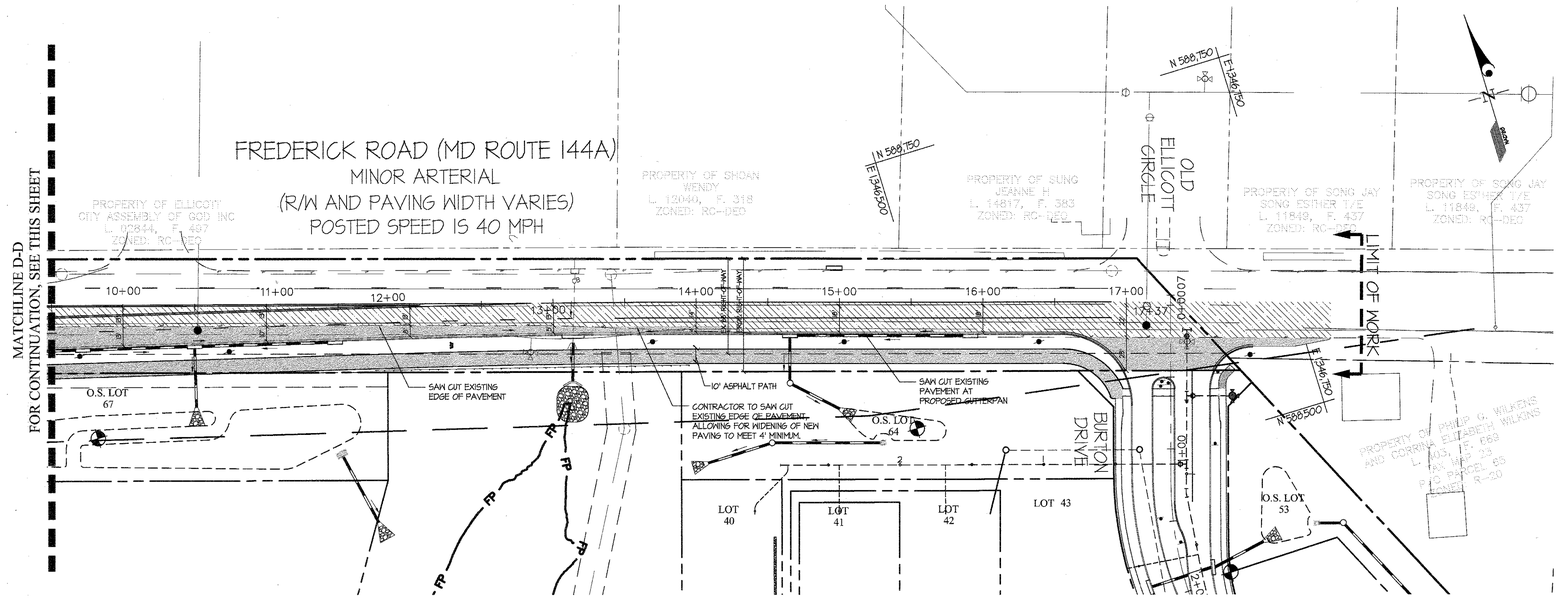
SHA TRACKING NO. 14APHO018XX F 15-087





APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 8-29-16

Chief, Development Engineering Division — Date 8-26-16

GLW GUTSCHICK LITTLE & WEBER, P.A.
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L:\CADD\DRAWINGS\13-013\PLANS BY GLW\13013-SD PHASE1\13013_SH-56-144A ROAD PLANS.dwg | DES. JRD | DRN. JRD | CHK. DEV

DATE	REVISION	BY	APP'R.

PREPARED FOR:
WESTMOUNT DEVELOPMENT CORPORATION
3500 MANOR LANE
ELLICOTT CITY, MARYLAND 21042
443-367-0422
ATTN.: CAMILLA CARROLL

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2018

7/14/16

STATE OF MARYLAND — JAMES RICHARD DEMBROSKI — 12975 — REGISTERED PROFESSIONAL ENGINEER

MILLING AND PAVING PLAN - FREDERICK ROAD

WESTMOUNT - PHASE 1

CREDITED OPEN SPACE LOT 1, LOTS 3-52, OPEN SPACE LOTS 53-71 AND NON-BUILDABLE BULK PARCELS B & C

A RESUBDIVISION OF NON-BUILDABLE BULK PARCEL A and REVISION TO CREDITED OPEN SPACE LOT 1

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-ED	13-013
DATE	TAX MAP - GRID	SHEET
JULY, 2016	23-6&12	56 OF 60

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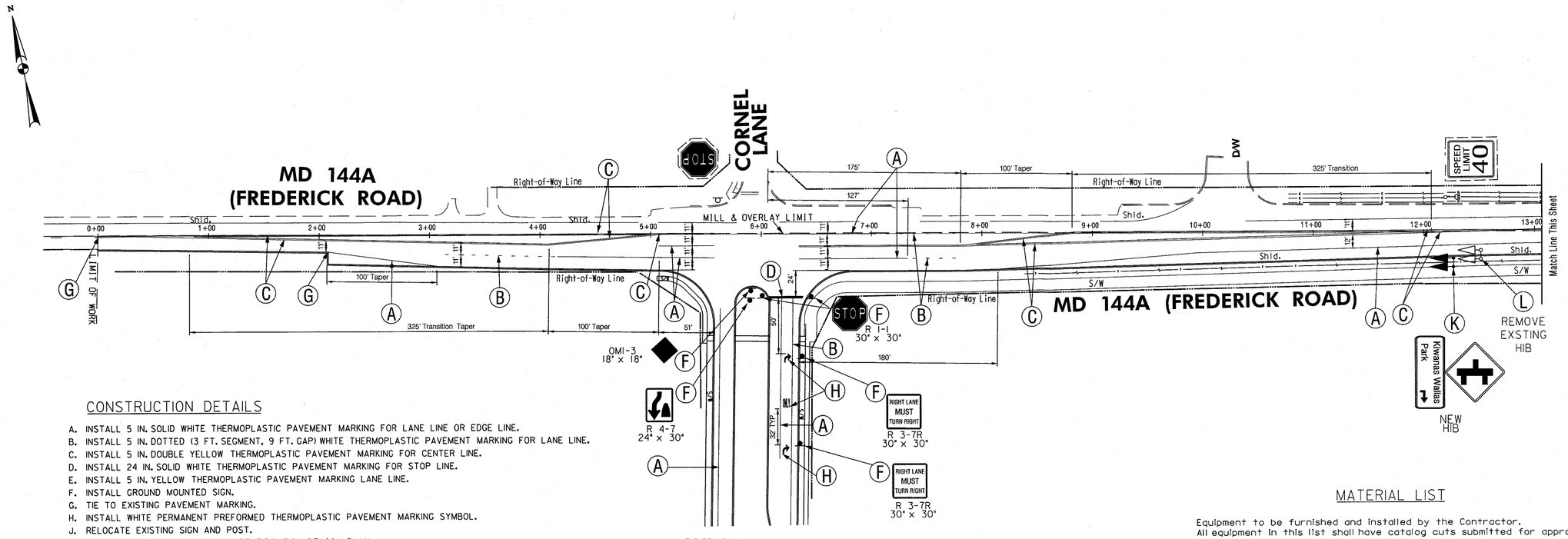
SHA TRACKING NO. 14APHO018XX F 15-087



CONSTRUCTION DETAILS

A. INSTALL 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE LINE OR EDGE LINE.
B. INSTALL 5 IN. DOTTED (3 FT. SEGMENT, 9 FT. GAP) WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE LINE.
C. INSTALL 5 IN. DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING FOR CENTER LINE.
D. INSTALL 24 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
E. INSTALL 5 IN. YELLOW THERMOPLASTIC PAVEMENT MARKING LANE LINE.
F. INSTALL GROUND MOUNTED SIGN.
G. TIE TO EXISTING PAVEMENT MARKING.
H. INSTALL WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOL.
J. RELOCATE EXISTING SIGN AND POST.
K. NEW HIB LOCATION PER HAZARD IDENTIFICATION BEACON PLAN.
L. RMOVE EXISTING SIGN AND POST AND FLASHER PER HAZARD IDENTIFICATION BEACON PLAN.

MATERIAL LIST

Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

QUANTITY	UNITS	DESCRIPTION
1930	LF	5 IN. WIDE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING - WHITE.
5650	LF	5 IN. WIDE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING - YELLOW.
50	LF	24 IN. WIDE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING - WHITE.
3	EA	HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING SYMBOL (RIGHT ARROW) - WHITE.
2	EA	HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING SYMBOL (ONLY) - WHITE.
3	EA	30 IN. X 30 IN. R1-1 SIGN FOR GROUND MOUNTING.
3	EA	30 IN. X 30 IN. R3-7 SIGN FOR GROUND MOUNTING.
3	EA	24 IN. X 30 IN. R4-7 SIGN FOR GROUND MOUNTING
2	EA	18 IN. X 18 IN. OM-1(1) SIGN FOR GROUND MOUNTING.
150	LF	4 IN. x 4 IN. WOOD SIGN SUPPORT.
2	EA	RELOCATE GROUND MOUNTED SIGN AND POST.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.26.16

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 33316
EXPIRATION DATE 9/13/18

STATE OF MARYLAND — MING-YU CHIEH — NO. 33316 — PROFESSIONAL ENGINEER

LEGEND
- EXISTING GEOMETRICS
- PROPOSED GEOMETRICS
- EXISTING SIGN/PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- MILL & OVERLAY LIMIT

50' 0 50' 100'
SCALE: 1" = 50'

MD AMD Tracking No.: 14APHO018XX

PAVEMENT MARKING AND SIGNING PLAN
MD 144A (FREDERICK ROAD)
WESTMOUNT SUBDIVISION

SCALE:	1" = 50'
DATE:	JULY 14, 2016
DESIGNED BY:	FRANK HOECKEL
CHECKED BY:	JOHN DIRNDORFER
JOB NO.:	2014-0133
LOCATION:	HOWARD COUNTY
DRAWING:	57 OF 60

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601
"Merging Innovation and Excellence"®

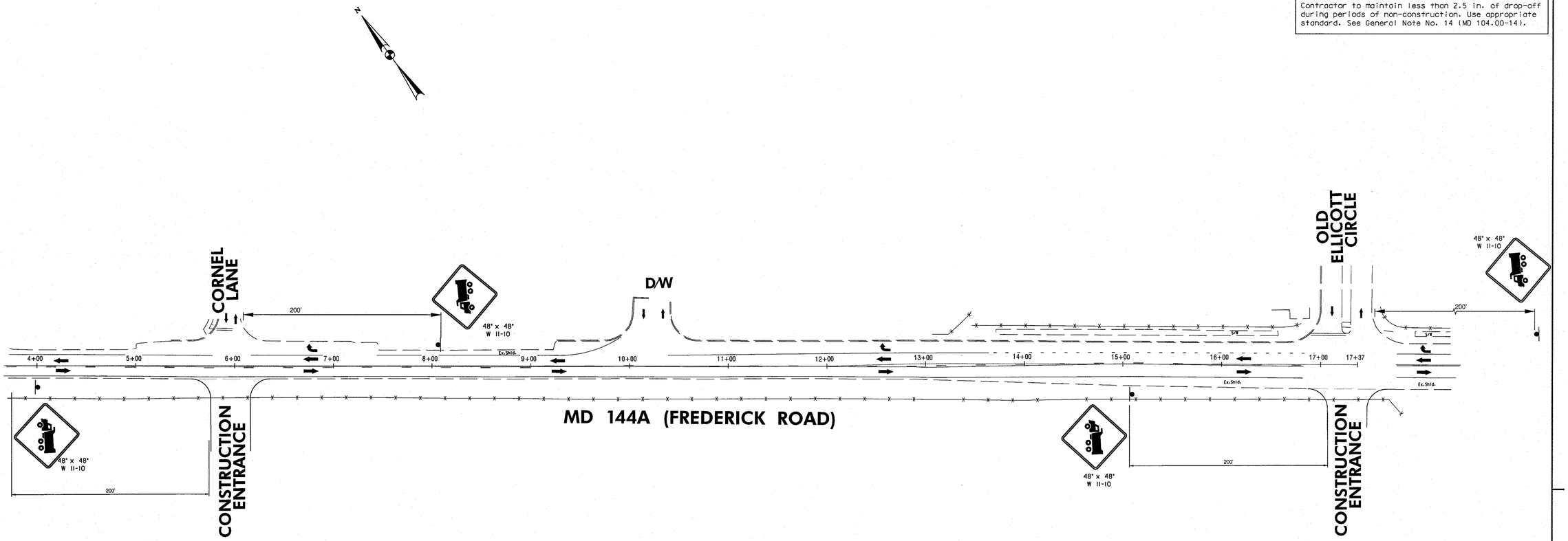
PLOTTED: Thursday, July 14, 2016 AT 06:32 PM
FILE: F:\2014\2014-0133_Westmount\DES\TEDD\PM - MD144- WESTMOUNT.dgn

F 15-087

BY: jstorck

Drop Off Policy

Contractor to maintain less than 2.5 in. of drop-off during periods of non-construction. Use appropriate standard. See General Note No. 14 (MD 104.00-14).



KEY

- Direction of Traffic
- Temp. Traffic Sign
- Existing Geometrics
- Proposed Geometrics Construction entrance

SEQUENCE OF OPERATION

1. CONTRACTOR SHALL CONSULT THE MD-SHA BOOK OF STANDARDS FOR THE CURRENT TYPICALS FOR IMPLEMENTING TEMPORARY TRAFFIC CONTROL.
2. INSTALL ADVANCE WARNING SIGNS FOR TRUCK CONSTRUCTION ENTRANCES. TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT IT IS DETERMINED THEY ARE NO LONGER NEEDED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8.29.16
Chief, Development Engineering Division — Date 8.22.16

BY: jstorck

STATE OF MARYLAND — HUNG-YU CHEN — No. 22316 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO. 22316

EXPIRATION DATE 7/13/18

50' 0 50' 100'

SCALE: 1" = 50'

MD AMD Tracking No.: 14APHO018XX

MAINTENANCE OF TRAFFIC PLAN
TRUCK CONSTRUCTION ENTRANCE INTO SITE
MD 144A (FREDERICK ROAD)
WESTMOUNT SUBDIVISION

SCALE:	1" = 50'
DATE:	JULY 14, 2016
DESIGNED BY:	FRANK HOECKEL
CHECKED BY:	JOHN DIRNDORFER
JOB NO.:	2014-0133
LOCATION:	HOWARD COUNTY
DRAWING:	58 OF 60

The Traffic Group, Inc.
Suite H
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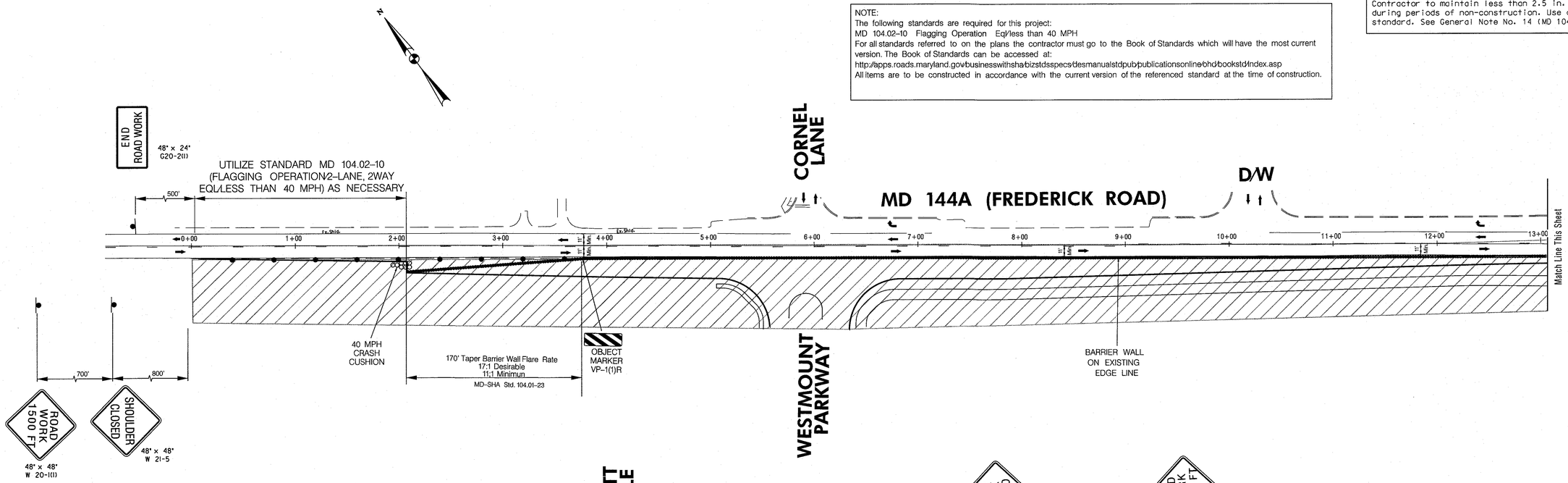
F 15-087

Drop Off Policy

Contractor to maintain less than 2.5 in. of drop-off during periods of non-construction. Use appropriate standard. See General Note No. 14 (MD 104.00-14).

NOTE:
The following standards are required for this project:
MD 104.02-10 Flagging Operation Eql/less than 40 MPH
For all standards referred to on the plans the contractor must go to the Book of Standards which will have the most current version. The Book of Standards can be accessed at:
http://apps.roads.maryland.gov/businesswithsha/bizstdsspecs/desmanualstdpub/publicationsonline/ohd/bookstd/index.asp
All items are to be constructed in accordance with the current version of the referenced standard at the time of construction.



KEY

- Area of Construction
- Direction of Traffic
- Channelizing Device (Drum)
- Temp. Traffic Sign
- Existing Geometrics
- Proposed Geometrics
- Barrier wall

SEQUENCE OF OPERATION

1. CONTRACTOR SHALL CONSULT THE MD-SHA BOOK OF STANDARDS FOR THE CURRENT TYPICALS FOR IMPLEMENTING TEMPORARY TRAFFIC CONTROL.
2. INSTALL ADVANCE WARNING SIGNS (40 MPH). TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT IT IS DETERMINED THEY ARE NO LONGER NEEDED.
3. CONSTRUCT CURB AND GUTTER, AND SIDEWALK ON THE EASTBOUND DIRECTION (SOUTH SIDE) OF MD 144.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8-29-16
Chief, Development Engineering Division — Date 8.25.16

BY: jstorck

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 32316
EXPIRATION DATE 2/13/18

50' 0 50' 100'
SCALE: 1" = 50'

MD AMD Tracking No.: 14APHO018XX

MAINTENANCE OF TRAFFIC PLAN
MD 144A (FREDERICK ROAD)
WESTMOUNT SUBDIVISION

SCALE:	1" = 50'
DATE:	JULY 14, 2016
DESIGNED BY:	FRANK HOECKEL
CHECKED BY:	JOHN DIRNDORFER
JOB NO.:	2014-0133
LOCATION:	HOWARD COUNTY
DRAWING:	59 OF 60

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FILE: F:\2014\2014-0133_Westmount\DES\TEDD\MOT - MD144- WESTMOUNT.dgn

F 15-087

N

MD 144 is considered to run in East/West direction.

CONSTRUCTION DETAILS

A. INSTALL METER SERVICE PEDESTAL FOR AN UNDERGROUND ELECTRICAL SERVICE.
B. INSTALL 14 FT. STEEL PEDESTAL POLE WITH A TRANSFORMER BREAKAWAY BASE FOR HIB WITH FLASHER SIGNALS SIGN, NEMA SIZE "5" POLE MOUNTED CABINET WITH FLASHER CONTROLLER AND CONCRETE PAD. (NOTE: TWO 2 IN. PVC SCH 80 CONDUIT BENDS).
C. INSTALL HANDHOLE.
D. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
E. INSTALL 2 IN. CONDUIT STUBBED OUT TO EXISTING UTILITY POLE FOR PHONE SERVICE BY VERIZON - TRENCHED.
F. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT WITH A PULL STRING STUBBED OUT TO BASE OF EXISTING UTILITY POLE FOR ELECTRICAL SERVICE - TRENCHED.
G. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT WITH A PULL STRING - BORED.
H. USE EXISTING UTILITY POLE FOR ELECTRICAL SERVICE.
J. USE EXISTING UTILITY POLE FOR TELEPHONE SERVICE.
K. REMOVE EXISTING HANDHOLE.
L. REMOVE EXISTING HIB. REMOVE EXISTING BASE 12 IN. BELOW GRADE.
M. CAP AND ABANDON EXISTING CONDUIT.

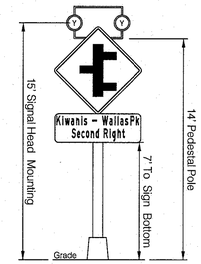
ASSEMBLY OF GOD CHURCH

PROPOSED SIGNALS

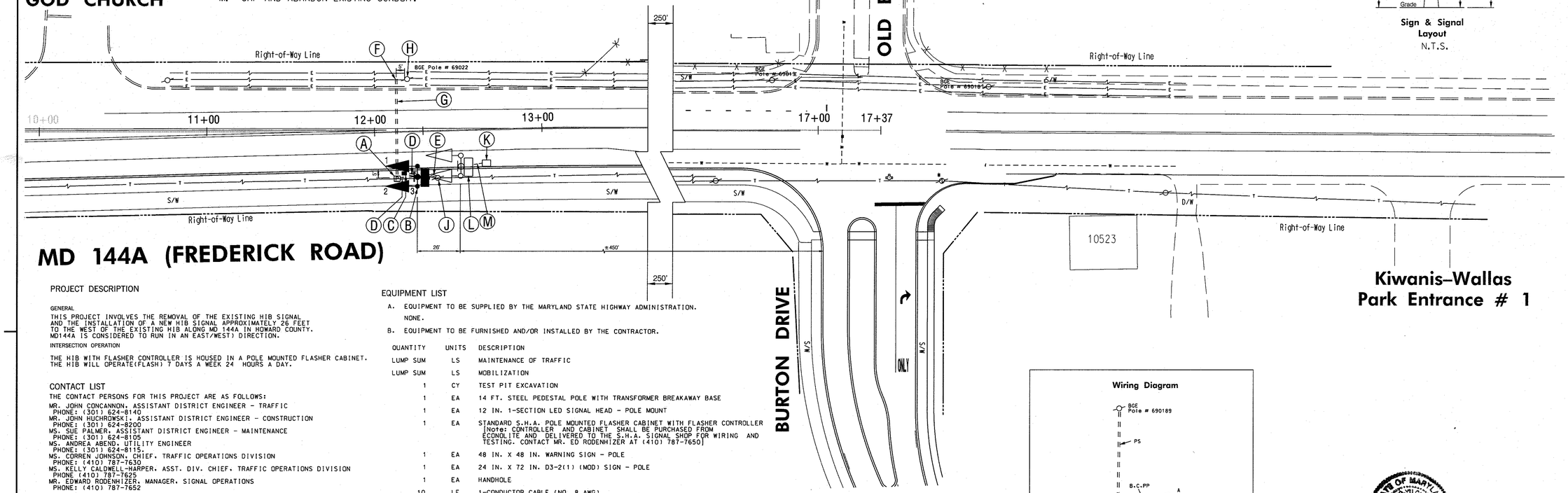
1,2
Y
12"
L.E.D.

PROPOSED SIGN

3
W21(1) 48"×48"
Kiwanis - Wallas Pk Second Right
D3-2(1)(MOD) 24"× 72"



Sign & Signal Layout
N.T.S.



MD 144A (FREDERICK ROAD)

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE REMOVAL OF THE EXISTING HIB SIGNAL AND THE INSTALLATION OF A NEW HIB SIGNAL APPROXIMATELY 26 FEET TO THE WEST OF THE EXISTING HIB ALONG MD 144A IN HOWARD COUNTY. MD144A IS CONSIDERED TO RUN IN AN EAST/WEST) DIRECTION.

INTERSECTION OPERATION

THE HIB WITH FLASHER CONTROLLER IS HOUSED IN A POLE MOUNTED FLASHER CABINET. THE HIB WILL OPERATE(FLASH) 7 DAYS A WEEK 24 HOURS A DAY.

CONTACT LIST

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

MR. JOHN CONCANNON, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8140
MR. JOHN HUCHROWSKI, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 624-8200
MS. SUE PALMER, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8105
MS. ANDREA ABEND, UTILITY ENGINEER
PHONE: (301) 624-8115.
MS. CORREN JOHNSON, CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MS. KELLY CALDWELL-HARPER, ASST. DIV. CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE (410) 787-7625
MR. EDWARD RODENHIZER, MANAGER, SIGNAL OPERATIONS
PHONE: (410) 787-7652

THE POWER COMPANY REPRESENTATIVE IS:
BALTIMORE GAS & ELECTRIC
1068 NORTH FRONT STREET
BALTIMORE, MD 21202
800-233-1854
WMS#

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 7/27/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 8/24/16
Chief, Development Engineering Division — Date 8-26-16

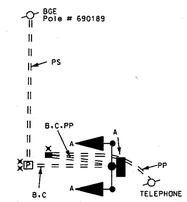
EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION.
NONE.

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	DESCRIPTION
LUMP SUM	LS	MAINTENANCE OF TRAFFIC
LUMP SUM	LS	MOBILIZATION
1	CY	TEST PIT EXCAVATION
1	EA	14 FT. STEEL PEDESTAL POLE WITH TRANSFORMER BREAKAWAY BASE
1	EA	12 IN. 1-SECTION LED SIGNAL HEAD - POLE MOUNT
1	EA	STANDARD S.H.A. POLE MOUNTED FLASHER CABINET WITH FLASHER CONTROLLER [Note: CONTROLLER AND CABINET SHALL BE PURCHASED FROM ECONOLITE AND DELIVERED TO THE S.H.A. SIGNAL SHOP FOR WIRING AND TESTING. CONTACT MR. ED RODENHIZER AT (410) 787-7650]
1	EA	48 IN. X 48 IN. WARNING SIGN - POLE
1	EA	24 IN. X 72 IN. D3-2(1) (MOD) SIGN - POLE
1	EA	HANDHOLE
10	LF	1-CONDUCTOR CABLE (NO. 8 AWG)
40	LF	5-CONDUCTOR CABLE (NO. 14 A.W.G.)
30	LF	BARE COPPER GROUND WIRE (NO. 6 AWG)
40	LF	2 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED
10	LF	4 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED
60	LF	4 IN. PVC CONDUIT [SCHEDULE 80] - BORED
.7	CY	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
3	EA	GROUND ROD - 3/4 IN. X 10 FT. LENGTH
1	EA	EMBEDDED ELECTRICAL SERVICE PEDESTAL (100 AMPS)
1	EA	REMOVE EXISTING HIB AND ALL ATTACHED EQUIPMENT
1	EA	REMOVE AND DISPOSE OF EXISTING CONCRETE FOUNDATION 12 INCHES BELOW GRADE
LUMP SUM	LS	THIRD PARTY CONCRETE TESTING

Wiring Diagram



KEY

A } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
B } BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
C } POWER SERVICE UNDERGROUND 2 PCS-1 CONDUCTOR (NO. 8 AWG)
PS } PROPOSED UNDERGROUND ELECTRICAL SERVICE BY POTOMAC EDISON
PP } PROPOSED PHONE SERVICE BY VERIZON
× } PROPOSED GROUNDING ROD

30' 0 30' 60'
SCALE: 1"=30'

GEOMETRIC LEGEND
EXISTING
PROPOSED

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATION PRIOR TO INSTALLATION.
2. PAVEMENT MARKINGS DETAILED ARE PROPOSED AND ARE TO BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH MD-SHA STANDARDS. ALL OTHER PAVEMENT MARKINGS ARE TO BE CONSIDERED AS EXISTING.
3. GEOMETRICS SHALL BE CONFIRMED PRIOR TO THE INSTALLATION OF SIGNAL EQUIPMENT. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
4. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.
5. ALL UNUSED CABLE SHALL BE REMOVED.

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601
"Merging Innovation and Excellence"®

PLOTTED BY: jstorck

THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 1 YEAR FROM THE DATE OF APPROVAL. SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME THESE PLANS SHALL BE NULL AND VOID WITHOUT A REVIEW FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.

APPROVALS	
TEAM LEADER	ORIGINAL ON FILE
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

REVISIONS					
A Relocate existing HIB					
SHA No. BW996M82 TIMS#					JULY 14, 2016
TTG	FJH				

STATE OF MARYLAND
MICHAEL YU CHEN
No. 22918
PROFESSIONAL ENGINEER

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.: 22916 EXPIRATION DATE: 7/12/18

MD-AMD Tracking No.: 14APH0018XX

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 144A (FREDERICK RD) AT KIWANIS-WALLAS PARK
WESTMOUNT SUBDIVISION

HAZARD IDENTIFICATION BEACON PLAN

SCALE 1" = 30' DATE 102001 CONTRACT NO. HO669A51/HO669B51

DESIGNED BY N/A COUNTY HOWARD
DRAWN BY N/A LOGMILE
CHECKED BY N/A TIMS NO. N/A
F.A.P. NO. N/A TOD NO. N/A

TS NO. TS NO. | DRAWING SG - 01 OF 01 | SHEET NO. 60 OF 60

PLOTTED: Thursday, July 14, 2016 AT 08:31 PM
FILE: F:\2014\2014-0133_Westmount\DES\TEDD\HIB- MD144- Kiwanis Wallis Park.dgn

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