

GENERAL NOTES
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE UNLESS WAIVER HAS BEEN APPROVED.
2. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
MISSES UTILITY 1-800-257-7777
VERIZON TELEPHONE COMPANY: 1-410-954-6261
HOWARD COUNTY BUREAU OF UTILITIES: 410-313-2366
ALERT CABLE LOCATION DIVISION: 1-800-393-3553
B.G.E. CO. CONTRACTOR SERVICES: 410-850-4520
B.G.E. CO. UNDERGROUND DAMAGE CONTROL: 410-787-4650
STATE HIGHWAY ADMINISTRATION: 410-531-5533
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
5. THE SUBJECT PROPERTY IS ZONED R-ED-MXD-3 IN ACCORDANCE WITH THE 10/6/13 ZONING REGULATIONS, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/20/03 PER COUNCIL BILL 75-2003.
6. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
7. THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED APRIL 30, 2014.
8. THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED FEBRUARY 26, 2014. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS.
9. SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY HOWARD COUNTY, MARYLAND - CLARKSVILLE SO MAP #23.
10. THE COORDINATES SHOWN ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 4106 AND 4654 WERE USED FOR THIS PROJECT.
11. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETRIES LOCATED ON THIS PROPERTY OR THE COUNTY'S CEMETERY SITE MAP.
12. THERE IS A HISTORIC HOUSE (AS DEFINED BY HDC) LOCATED ON PARCEL 113 TO BE DEMOLISHED, THAT IS LOCATED AT THE SITE OF PROPOSED LOT 58. THIS PLAN WAS PRESENTED TO THE HISTORIC PRESERVATION COMMISSION IN DECEMBER 2014. THE COMMISSION WANTED THE HOUSE TO REMAIN ON-SITE. THE HOUSE IS NOT LISTED ON THE HISTORIC SITES INVENTORY.
13. AN INSPECTION OF THIS HOUSE WAS CONDUCTED BY A CONSULTANT IN 2014 AND IT WAS DETERMINED THAT THIS HOUSE IS IN VERY POOR CONDITION, IS BEYOND LIFE EXPECTANCY AND SHOULD BE REMOVED FOR SAFETY REASONS.
14. ACCORDING TO THE HOWARD COUNTY CEMETERY INVENTORY, THIS PARCEL DOES NOT CONTAIN A CEMETERY. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETRIES LOCATED ON THE PROJECT SITE. AS MENTIONED PREVIOUSLY IN THE HISTORIC PRESERVATION COMMISSION MEETING, THERE ARE RECORDS THAT SHOW A CEMETERY ONCE EXISTED ON THE PROPERTY, AS THE LAND HAS BEEN SUBDIVIDED BY DESIGNATION OF THE EMANCIPATION OF HOWARD COUNTY (SUBDIVISION REGULATIONS), THE CEMETERY MAY NO LONGER BE PART OF THIS ACTUAL SITE AS THE LOCATION IS NOT KNOWN.
15. THE OFFICIAL PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JUNE 5, 2014 AT NORTH LAUREL COMMUNITY CENTER. NO ROUTE 215/SKAGSVILLE ROAD IS CLASSIFIED AS A MINOR ARTERIAL.
16. THE PROPOSED ACCESS POINT IS SHOWN HEREON.
17. THE PROPOSED STREETS ARE CLASSIFIED AS PUBLIC MINOR COLLECTOR, ACCESS STREET OR ACCESS PLACE.
18. MURPHY ROAD IS CLASSIFIED AS A MINOR COLLECTOR.
19. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).
B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CLIP COATING.
C) GEOMETRY - MAXIMUM 10% GRADE, MAXIMUM 10% CHANGE AND MINIMUM OF 45-FOOT DEPTH TURNING RADIUS.
D) STRUCTURES (CULVERTS/BRIDGES).
E) DRAINAGE ELEMENTS-CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
F) STRUCTURE CLEARANCES-MINIMUM 12 FEET.
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
20. THIS PROPERTY WAS INCORPORATED INTO THE METROPOLITAN DISTRICT BY CB-19-2016 BY THE COUNTY COUNCIL ON MAY 2, 2016 AND SHALL BECOME EFFECTIVE AS LAW ON JULY 5, 2016.
21. WATER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 44-3505-W. REFER TO CONTRACT 24-4914-D SEWER FOR THIS PROJECT IS TO BE PUBLIC EXTENSIONS OF CONTRACT NO. 20-3506-S. REFER TO CONTRACT 24-4914-D.
22. THE AMENDMENT TO THE WATER AND SEWER MASTER PLAN WAS PASSED BY THE COUNTY COUNCIL RESOLUTION (CR-36-2016) ON MAY 2, 2016 AND BECAME EFFECTIVE ON MAY 5, 2016.
23. THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
24. EXISTING UTILITIES LOCATED WITHIN CONSTRUCTION PLANS, TO BE REMOVED, SURVEY, PUBLIC WATER AND SEWER EXTENSION PLANS, AND AS-BUILT DRAWINGS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
25. ANY DAMAGE INCURRED TO THE EXISTING UTILITIES, DUE TO CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
26. ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
27. THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
28. A NON-CRITICAL FLOODPLAIN IS LOCATED ONSITE.
29. STEEP SLOPES ARE IDENTIFIED AND SHOWN WITHIN OPEN SPACE LOT 189.
30. WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON THE DELINEATION BY ENVIRONMENTAL SYSTEMS ANALYSIS, INC. (ESA) AUGUST 2013.
31. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENTS AND 100-YEAR FLOODPLAIN.
32. FOREST STAND DELINEATION PLAN PREPARED BY KLEBASCO ENVIRONMENTAL, LLC C/O MR. MICHAEL J. KLEBASCO, P.W.S., DATED MAY 2014.
33. FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION REGULATIONS OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
34. TOTAL FOREST CONSERVATION EASEMENT = 7.88 AC, CREDITED FOREST RETENTION = 6.96 ACRES.
35. REFORESTATION / AFFORESTATION OF 6.99 AC.
36. FINANCIAL SURETY SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS FINAL PLAN.
37. A TRAFFIC STUDY FOR THIS PROJECT PREPARED BY THE TRAFFIC GROUP, INC., DATED DECEMBER 19, 2014, WAS APPROVED APRIL 2015.
38. A NOISE STUDY WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JANUARY 2015. THE STUDY UTILIZES PROPOSED BERMS AND PROPOSED SOUND BARRIERS TO REDUCE THE NOISE EXPOSURE TO ACCEPTABLE LEVELS.
39. THE 65 DBA NOISE CONTOUR LINE DRAWN ON THIS SUBDIVISION PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED. THE 65 DBA NOISE CONTOUR LINE IS LOCATED EXACTLY WHERE THE 65 DBA NOISE CONTOUR LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALETT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
40. TEST REPORT FOR NOISE STUDY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED FEBRUARY 2015.
41. AN ENVIRONMENTAL ACCEPTED PLAN (ECP-14-093) WAS APPROVED ON NOVEMBER 21, 2014.
42. A PRELIMINARY EQUIPMENT SKETCH PLAN (SP-15-014) WAS APPROVED ON SEPTEMBER 18, 2015.
43. STORMWATER MANAGEMENT IS PROVIDED BY THE USE OF NON-STRUCTURAL PRACTICES & MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION, BIO SWALES AND DRYWELLS. ONLOT FACILITIES WILL BE PRIVATELY OWNED. OFF-LOT AND MICRO-SCALE FACILITIES MANAGING ROAD RUNOFF SHALL BE DESIGNATED AS PRIVATELY OWNED AND MAINTAINED BY THE HOWARD COUNTY AND HOWARD COUNTY WILL MAINTAIN CULVERTS AND PIPES WHILE THE H.O.A. SHALL MAINTAIN MULCH, WEEDING, PLANTINGS, PERFORATED UNDERDRAINS, FEEDER PIPES, AND ROUTINE SOIL REPLACEMENT.
44. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.1202(A)(1) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND FINANCIAL SURETY IN THE AMOUNT OF \$34,050 FOR THE PERMIETER LANDSCAPING (REQUIRED 90 SHADE TREES \$27,000 AND 27 EVERGREENS \$4,050), AND 10 SHADE TREES (SPECIMEN TREE REPLACEMENT \$3,000) SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
45. PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. FINANCIAL SURETY (\$ 65,700) SHALL BE POSTED AS PART OF THIS FINAL PLAN DEVELOPER'S AGREEMENT FOR THE REQUIRED 219 STREET TREES.
46. IN ACCORDANCE WITH SECTION 16.121(A)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THE OPEN SPACE REQUIREMENTS FOR THIS R-ED-MXD-3 PROJECT IS 50% OF GROSS AREA (91,313 AC. GROSS AREA X 50% = 45,658 AC.).
47. OPEN SPACE LOT 65 TO BE OWNED BY HOWARD COUNTY AND MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS. (20,2504 ACRES)
48. OPEN SPACE LOTS 66-69 TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. (13,0816 ACRES)
49. ADDITIONAL OPEN SPACE SHALL BE PROVIDED UNDER FUTURE PHASE 1, SECTION 2.
50. IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, RECREATION OPEN SPACE FOR THIS R-ED-MXD-3 PROJECT IS 300 SF / UNIT (176 X 300 = 52,800 SF). THE OVERALL REQUIREMENT SHALL BE MET PER REGULATION OR IN COMBINATION WITH THE JUNE 2012 POLICY REGARDING THE ALLOWANCE OF A MAXIMUM 50% CREDIT FOR RECREATIONAL OPEN SPACE IN LIEU OF LAND AREA.
51. PHASE 1 - SECTION 1 WILL PROVIDE 8" WIDE MULTI-USE ASPHALT PATHWAY.
52. PHASE 1 - SECTION 2 (F16-072) WILL PROVIDE A H.O.A. OPEN SPACE LOT WITH CLUBHOUSE, COMMUNITY POOL AND TOT LOT AMENITIES AND ADDITIONAL 8" WIDE MULTI-USE ASPHALT PATHWAY.
53. PER SECTION 107.D.E OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLINGS IN A R-ED DEVELOPMENT SHALL BE MODERATE INCOME HOUSING UNITS (MIHU). 176 X 10% = 17.6. 18 UNITS OR THE EQUIVALENT SHALL BE PROVIDED FOR THIS PROJECT.
54. IN ACCORDANCE WITH DESIGN MANUAL - VOLUME 3, CHAPTER 2 - SECTION 2.9.B, PARKING IS REQUIRED AT TWO (2) SPACES PER UNIT OFF STREET PARKING TO INCLUDE GARAGE SPACE, DRIVEWAY AND PARKING PAIDS. GARAGES CANNOT BE A FULL SPACE. USE TABULATION HEREON.
55. ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6-06.
56. TRAFFIC CONTROL DEVICES WILL BE PROVIDED FOR THE PROPOSED ROAD WIDENING IN ACCORDANCE WITH THE LATEST MANUFD.
57. TRAFFIC CONTROL DEVICES:
A. THE R1-(STOP) SIGNS AND STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
B. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
C. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
D. ALL SIGN POST 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 (1 1/2" DIA.) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE "SLEEVE" (12 GAUGE - 3" LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO (2) "QUICK PUNCH" HOLES ABOVE GROUND LEVEL.
E. GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
58. STREET LIGHTING IS REQUIRED FOR THIS SITE IN ACCORDANCE WITH SECTION 16.135 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. STREET LIGHT PLACEMENT AND PIPES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME SECTION 6.5.A. A MINIMUM OF 20 FEET SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
59. THIS PLAN IS SUBJECT TO PLANNING BOARD CASE # P 415, ON JUNE 30, 2015. THE PLANNING BOARD OF HOWARD COUNTY, MARYLAND APPROVED SP-15-014 FOR THE SUBDIVISION OF 176 SINGLE-FAMILY DETACHED RESIDENTIAL LOTS AND THIRTEEN OPEN SPACE LOTS ON 91.31 ACRES OF LAND ZONED R-ED-MXD-3.
60. THIS SUBDIVISION, LOCATED IN THE WEST SCHOOL REGION, THE FULTON ELEMENTARY SCHOOL DISTRICT AND THE LIME KILN MIDDLE SCHOOL DISTRICT, HAS PASSED THE APO SCHOOL TEST FOR THE ALLOCATION YEAR 2011. BUT HAS FAILED THE APO SCHOOLS TEST FOR THE ALLOCATION YEAR OF 2018 FOR THE 4 TENTATIVE HOUSING UNITS BECAUSE OF A CLOSED ELEMENTARY SCHOOL. THEREFORE, THIS SUBDIVISION WILL HAVE TO BE PHASED INTO TWO PARTS.
61. THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER. ON MAY 22, 2015, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION: APPROVED THE REQUEST TO WAIVE VOL. III - SECTION 2.5.B.9 AND 2.20 TABLE 2.01, WHICH REQUIRES THAT A NEWLY PROPOSED INTERSECTION SHALL MEET THE MINIMUM REQUIREMENTS FOR INTERSECTION AND/OR STOPPING SIGHT DISTANCE. APPROVAL IS SUBJECT TO THE FOLLOWING DWP RECOMMENDATIONS:
A. PROVIDING SIGHT DISTANCE EASEMENTS AS SHOWN ON THE SIGHT DISTANCE ANALYSIS.
B. APPROVED THE REQUEST TO WAIVE VOL. III - SECTION 2.5.B.1.A AND APPROX A) TO REDUCE THE MINIMUM ROAD RADIUS FOR NUMEROUS ROADWAYS WITHIN THE SUBDIVISION, THE WAIVER FOR ROADWAYS B AND E ARE APPROVED SUBJECT TO THE FOLLOWING DWP REQUIREMENTS:
A. ROAD B - DWP REQUESTS 26' PAVEMENT WIDTH ALONG THE REDUCED CURVE AND FLATTENING THE NW INTERSECTION FILET.
B. ROAD E - DWP REQUESTS 26' PAVEMENT WIDTH ALONG THE REDUCED CURVES, ESPECIALLY FROM STATION 0+40 TO 16+00.
THE REQUESTED WAIVER FOR ROAD G IS DENIED. ROAD G IS TO CONNECT TO MURPHY ROAD. THIS ROAD WILL SERVE AS THE SECONDARY ACCESS TO THIS MAJOR DEVELOPMENT.
C. APPROVED THE REQUEST TO WAIVE VOL. III - SECTION 2.2.C AND 2.4.A TO REVISE THE TYPICAL SECTIONS FOR AN ACCESS PLACE, ACCESS STREET, AND MINOR COLLECTOR TO INCLUDE A 5-FOOT SIDEWALK ADJACENT TO THE CURB. APPROVAL IS SUBJECT TO THE FOLLOWING DWP REQUIREMENTS:
A. PLEASE ENSURE THAT NO STREET TREES ARE PLANTED WITHIN 50 FEET OF ANY STOP SIGN.
46. ALL SIDEWALKS ADJACENT TO PUBLIC STORMWATER MANAGEMENT EASEMENTS SHALL BE TRAFFIC BEARING FOR THE LIMITS OF THE PUBLIC CASSEMENT. REINFORCEMENT SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DETAIL R-6-03.
47. THE ONE (1) GARAGE SPACE MAY NOT BE CONVERTED TO LIVING SPACE AND SHALL ONLY BE UTILIZED FOR VEHICULAR PARKING SPACE. REFER TO PARKING TABULATION.

MAPLE LAWN SOUTH APFO PHASING

PHASE NUMBER	ALLOCATION YEAR	TOTAL NO. OF ALLOCATIONS
I	2017	172
II	2018	4

MAPLE LAWN SOUTH - DENSITY TABULATION

PHASE	GROSS AREA	FLOODPLAIN STEEP SLOPES	NET AREA	UNITS PERMITTED BY NET	UNITS PROVIDED	OPEN SPACE REQUIRED	TOTAL OPEN SPACE PROVIDED	NON-CREDITED OPEN SPACE PROVIDED	CREDITED OPEN SPACE PROVIDED
PHASE I / SECTION 1	51,8736 AC.	1,5400 AC.	50,3336 AC.	101	64 SFD	25,9329 AC.	33,2889 AC.	0.42 AC.	32,8689 AC.
FUTURE PHASE I / SECTION 2	38,6836 AC.	0.0000 AC.	38,6836 AC.	77	108 SFD	19,5037 AC.	TBD	TBD	TBD
FUTURE PHASE 2	0.7464 AC.	0.0000 AC.	0.7464 AC.	1	4 SFD	0.3732 AC.	TBD	TBD	TBD
TOTAL	91,3136 AC.	1,5400 AC.	89,7736 AC.	179	176 SFD	45,6568 AC.	TBD	TBD	TBD

* 4 HOUSING ALLOCATIONS AVAILABLE 2018

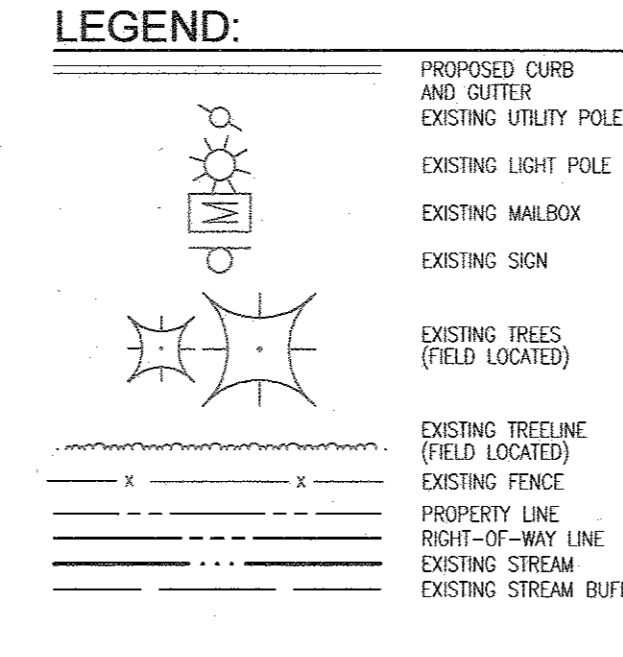
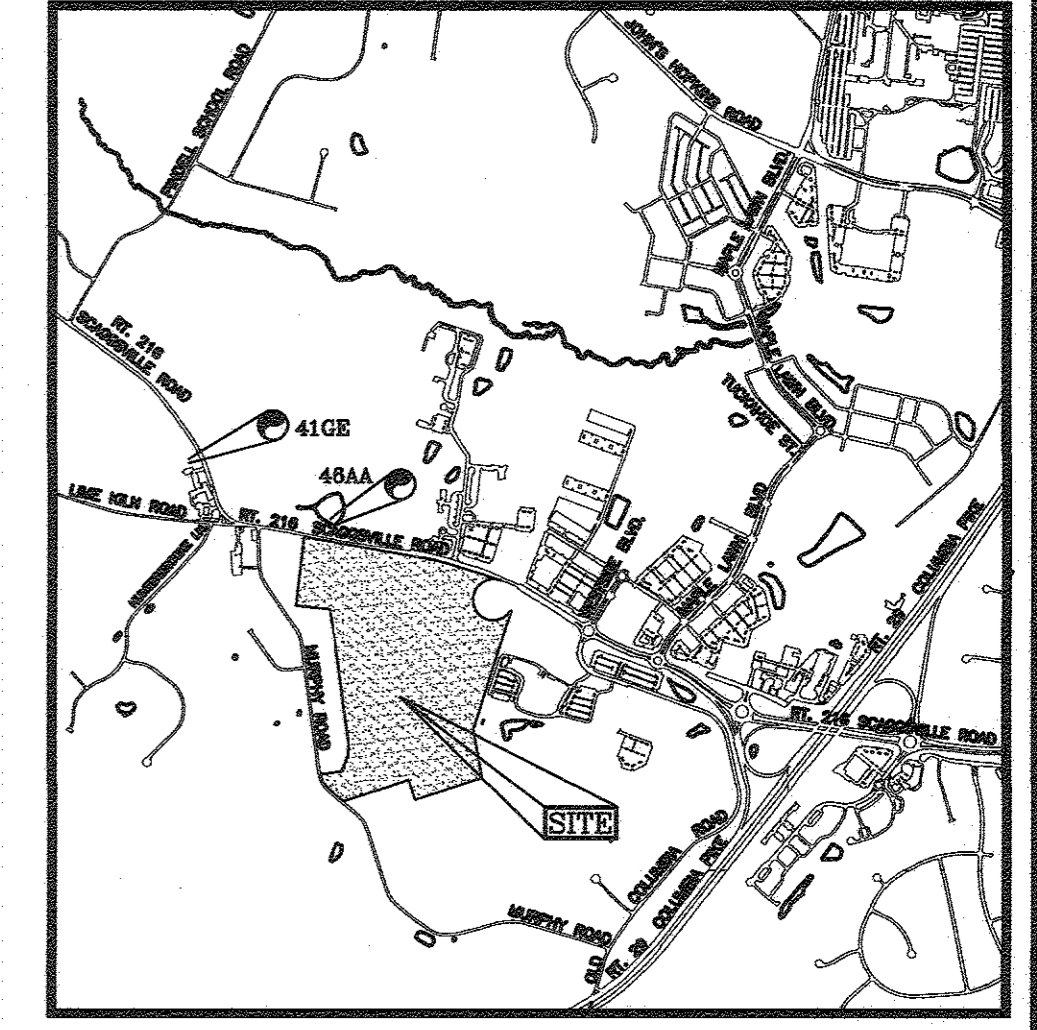
FINAL ROAD CONSTRUCTION PLAN
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
LOTS 1 - 64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B' AND OPEN SPACE LOTS 65 - 69 HOWARD COUNTY, MARYLAND

BENCHMARKS

HOWARD COUNTY BENCHMARK 46AA
ELECTION DISTRICT: 5TH
N 540,396.42 E 1,335,505.31 ELEV.: 447.01 FT.
R 216, 33.2' WEST OF BG# E POLE#315163
HOWARD COUNTY BENCHMARK 41GE
N 541,559.78 E 1,333,698.38 ELEV.: 465.05 FT.
R 216, 82.4' WEST OF BG # E#557787

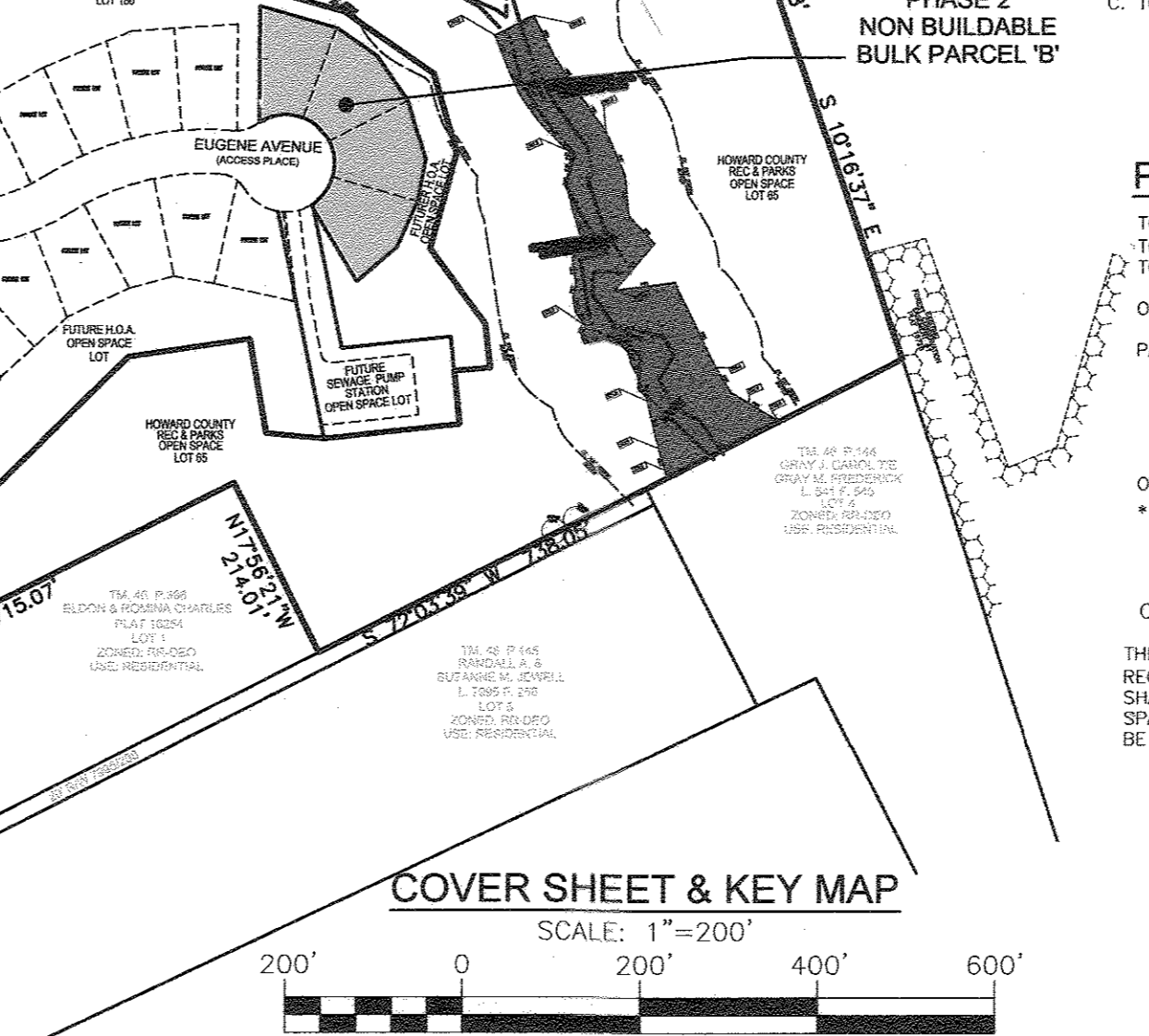
SITE DATA

DEED REFERENCE: PARCEL 113: L 083 / F 747
ELECTION DISTRICT: 5TH
LOCATION: SCAGSVILLE ROAD (MD 216)
WEST OF US 29
EXISTING ZONING:
R-ED-MXD-3
GROSS AREA:
PHASE 1, SECTION 1: 91.31 AC ±
PHASE 1, SECTION 1: 51.87 AC ± (44.78 R/W DEED.)
NON-BUILDABLE BULK PARCEL A: 38.69 AC ±
NON-BUILDABLE BULK PARCEL B: 0.75 AC ±
AREA OF 100 YEAR FLOODPLAIN: 0.92 AC ± / NON-CRITICAL (SEE NOTE 21)
AREA OF ROAD RIGHT OF WAY (ON-SITE): 5.51 AC
AREA OF WETLANDS & BUFFERS: WETLAND: 5,866 S.F. OR 0.13 AC.
BUFFER: 26,142 S.F. OR 0.60 AC. INCLUDES WETLAND
NET AREA (GROSS-STEEP SLOPES & FLOODPLAIN): 89.78 AC ± (91.31 - 0.92 - 0.62 = 89.77)
BASE DENSITY: 179 LOTS (89.77 X 2)
NUMBER OF PROPOSED RESIDENTIAL LOTS: 176 LOTS
PHASE 1, SECTION 1 = 64 SFD
PHASE 1, SECTION 2 = 108 SFD
PHASE 2 = 4 SFD
AREA OF PROPOSED RESIDENTIAL LOTS (SFD):
PHASE 1, SECTION 1: 51.87 AC ± (ON-SITE)
PHASE 2: 0.75 AC ±
AREA OF ROAD DEDICATION (MD 216): 1.58 AC
OPEN SPACE REQUIRED: 50% OF GROSS AREA = 45.66 AC ± PROJECT TOTAL
REC OPEN SPACE: 300 SF/WEAVING UNIT X 176: 52,800 SF
REC OPEN SPACE PROVIDED: SEE TABULATION
LIMIT OF USE OF SITE: 36.00 AC ±
EXISTING USE OF SITE: AGRICULTURE / FARM
PROPOSED USE OF SITE: RESIDENTIAL, SFD
PROPOSED WATER SYSTEM: PUBLIC
PROPOSED SEWER SYSTEM: PUBLIC
MINIMUM LOT AREA: 6,000 SF



COORDINATE TABLE

NO.	NORTH	EAST
106	529292.2566	1352130.3938
108	529432.1159	1351536.0210
113	528714.0664	1350509.3827
115	527951.2569	1349282.3197
126	528472.4761	1351168.1324
127	528507.4228	1351093.9185
131	528133.4467	1351232.3303
150	528400.0730	1351387.5859
151	527871.9247	1351052.7125
152	528204.8447	1350824.4789
153	528263.8256	1350867.5238
154	528278.1636	1351020.0205
155	528233.9263	1350905.9635
156	528283.7518	1351693.4094
164	528319.1942	1351708.7651
165	528318.6501	1351183.8263
166	528345.3873	1351116.4299
167	528762.3875	1350920.6884



OPEN SPACE TABULATION:

IN ACCORDANCE WITH SECTION 16.121(A)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THE OPEN SPACE REQUIREMENTS FOR THIS R-ED-MXD-3 PROJECT IS 50% OF GROSS AREA (91.31 AC. GROSS AREA X 50% = 45.66 AC.).
OPEN SPACE PROVIDED (F16-021, PH.1 & F16-072, PH.1 & F16-072):
CREDITED 32.87 ACRES ±
NON-CREDITED 0.42 ACRES ±
REMAINING PROJECT REQUIREMENT = 12.8 AC ±
SHALL BE PROVIDED UNDER FUTURE PLAN F16-072, PH.1 - SECTION 2.

RECREATION OPEN SPACE TABULATION:

TOTAL RECREATION OPEN SPACE REQUIRED FOR MAPLE LAWN SOUTH - SINGLE FAMILY HOMES SFD = 300 SF/UNIT X 176 UNITS = 52,800 SF
PHASE 1 - SEC 1 F16-021 = 64 SFD = 19,200 SF
PH 1 - SEC 2 F16-072 = 108 SFD = 32,400 SF
PHASE 2 FUTURE PHASE 2 = 4 SFD = 1,200 SF
PROVIDED UNDER PHASE 1 - SEC 1
TOTAL RECREATION OPEN SPACE TO BE PROVIDED FOR MAPLE LAWN SOUTH PHASE 1:
A. F16-021 - PH 1 SEC 1 MULTI-USE PATHWAY AMENITY:
4,098 LF OF 8" ASPHALT PATHWAY (4,098' X 8" = 32,952 SF)
359'15" PATH = 97,656 SF OF CREDIT
B. F16-072 - PH 1 - SEC 2 CLUBHOUSE/POOL/OPEN SPACE LOT
- OPEN SPACE LOT @ APPROXIMATELY 40,250 SF ±
AMENITIES:
CLUBHOUSE = 2,285 SF BUILDING (2,285 SF / 10 SF PER D.U. X 176 D.U. = 39,864 SF)
POOL = 2,875 SF POOL
TOT LOT = 2,000 SF
C. TOTAL PROVIDED (F16-021 & F16-072):
"CLUBHOUSE" OPEN SPACE LOT 40,250 SF ±
AMENITY CREDITS = 190,120 SF ±

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MARYLAND 216 (SCAGSVILLE ROAD) - SIGNING & PAVEMENT MARKING PLAN	44 OF 48
MARYLAND 216 (SCAGSVILLE ROAD) - SIGNING & PAVEMENT MARKING PLAN	45 OF 48
MAIN ENTRANCE LAYOUT PLAN - (THE LAND PLANNING & DESIGN GROUP INC.)	46 OF 48
MAIN ENTRANCE DETAILS - (THE LAND PLANNING & DESIGN GROUP INC.)	47 OF 48
48 OF 48	

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

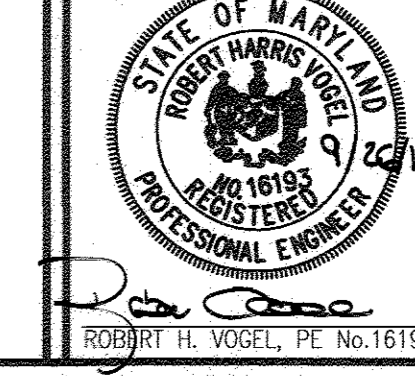
NO. REVISION DATE

NO.	REVISION	DATE
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FINAL ROAD CONSTRUCTION PLAN
COVER SHEET & KEY MAP
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
275.895' EDP - 141-900-15-136, P#415, SP-15-014
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET, ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8962

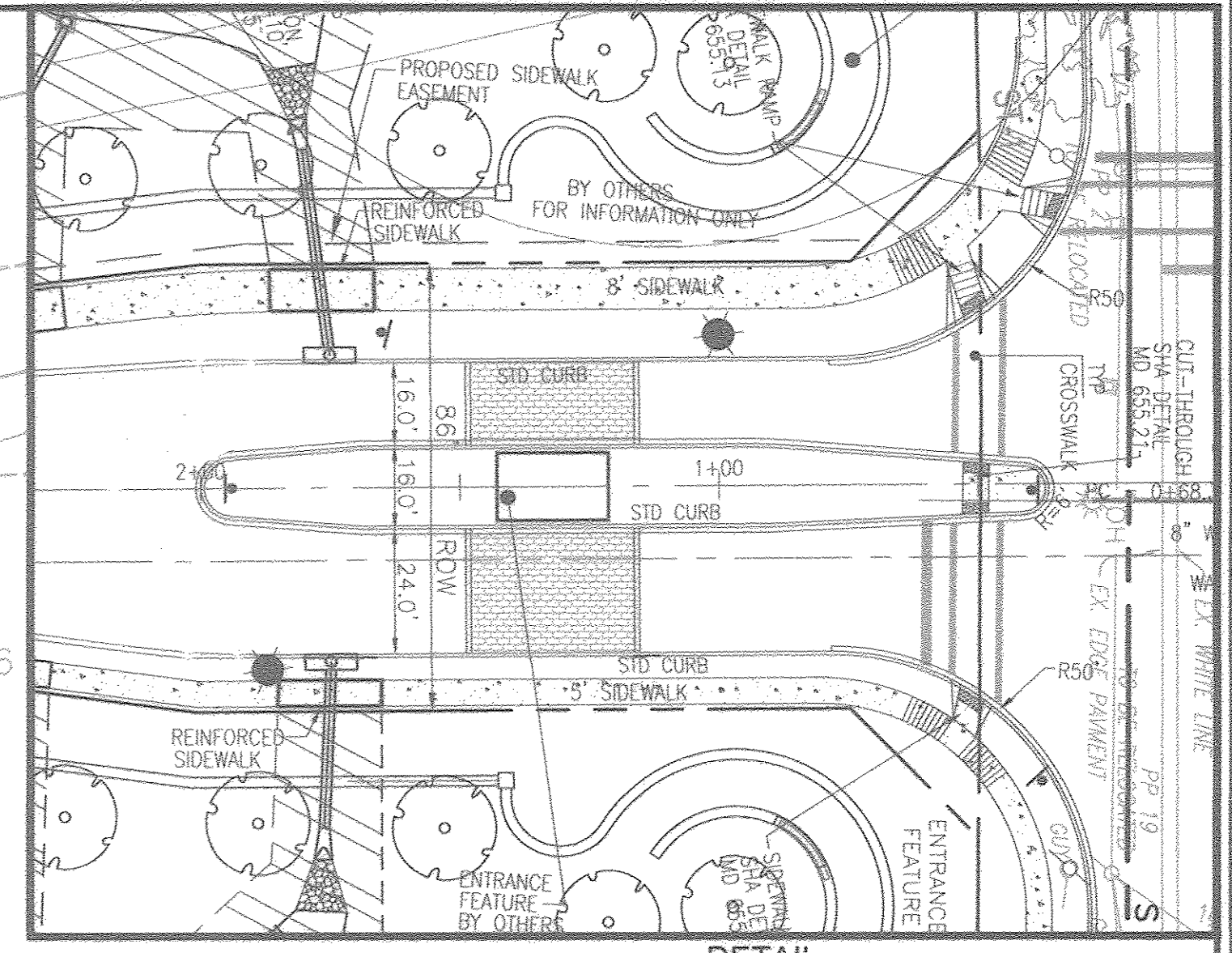
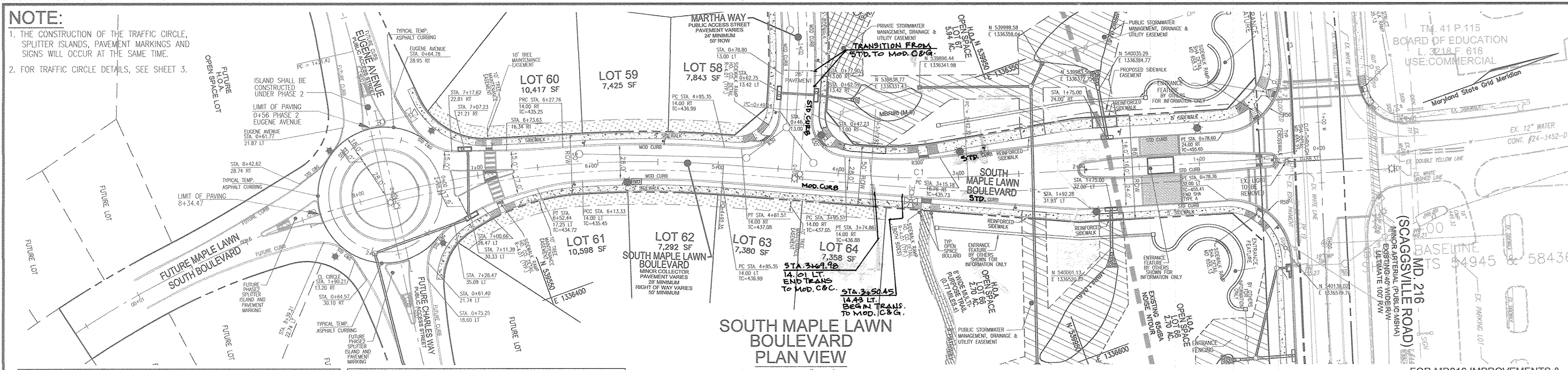


DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

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.
EXPIRATION DATE 09-27-2018

1 SHEET OF **48**

NOTE:
 1. THE CONSTRUCTION OF THE TRAFFIC CIRCLE, SPLITTER ISLANDS, PAVEMENT MARKINGS AND SIGNS WILL OCCUR AT THE SAME TIME.
 2. FOR TRAFFIC CIRCLE DETAILS, SEE SHEET 3.

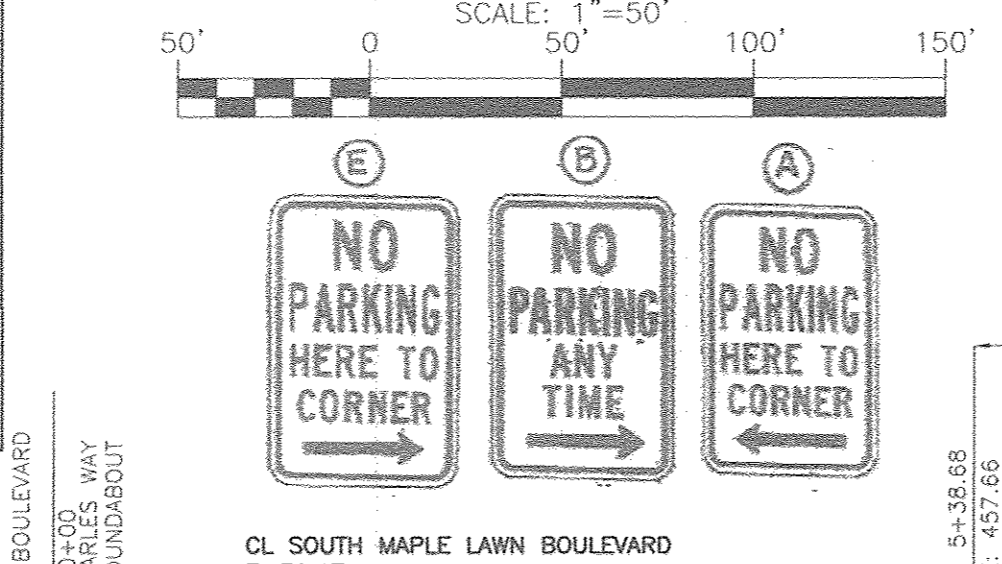


TRAFFIC CONTROL SIGN LOCATION CHART

ROAD NAME	STATION	OFFSET	TYPE
SOUTH MAPLE LAWN BOULEVARD	0+36.00	55.10' L	R1-1 STOP SIGN
SOUTH MAPLE LAWN BOULEVARD	0+40.00	0 FT	R4-7 KEEP RIGHT SIGN
SOUTH MAPLE LAWN BOULEVARD	1+65.00	30.00' R	R2-1 SPEED LIMIT SIGN
SOUTH MAPLE LAWN BOULEVARD	1+96.00	00.00	R4-7 KEEP RIGHT SIGN
SOUTH MAPLE LAWN BOULEVARD	2+54.00	28.00' L	R3-8 LANE USE SIGN - "C"
SOUTH MAPLE LAWN BOULEVARD	2+78.00	25.00' R	R7-1 NO PARKING SIGN - "A"
SOUTH MAPLE LAWN BOULEVARD	5+46.00	17.00' R	W3-2 & W13-1 (15 MPH) SIGN
SOUTH MAPLE LAWN BOULEVARD	6+11.00	17.00' R	R7-1 NO PARKING SIGN - "A"
SOUTH MAPLE LAWN BOULEVARD	7+17.00	17.00' L	R2-1 "SPEED LIMIT 25" SIGN
SOUTH MAPLE LAWN BOULEVARD	8+75.00	00.00' R	R4-7 KEEP RIGHT SIGN
SOUTH MAPLE LAWN BOULEVARD	6+20.00	17.00' L	R7-1 NO PARKING SIGN - "E"
MARTHA WAY	0+46.00	17.00' L	R1-1 STOP SIGN

STREET LIGHT LOCATIONS

ROAD NAME	STATION	OFFSET	FIXTURE/POLE TYPE
SOUTH MAPLE LAWN BOULEVARD	1+00.00	35.00' R	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	1+87.26	35.00' L	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	2+98.00	22.00' R	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	4+13.00	25.00' R	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	5+75.00	17.00' L	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	7+29.21	43.20' R	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	7+39.52	49.50' L	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	8+16.89	51.00' R	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	8+33.64	37.00' L	LED-150 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE



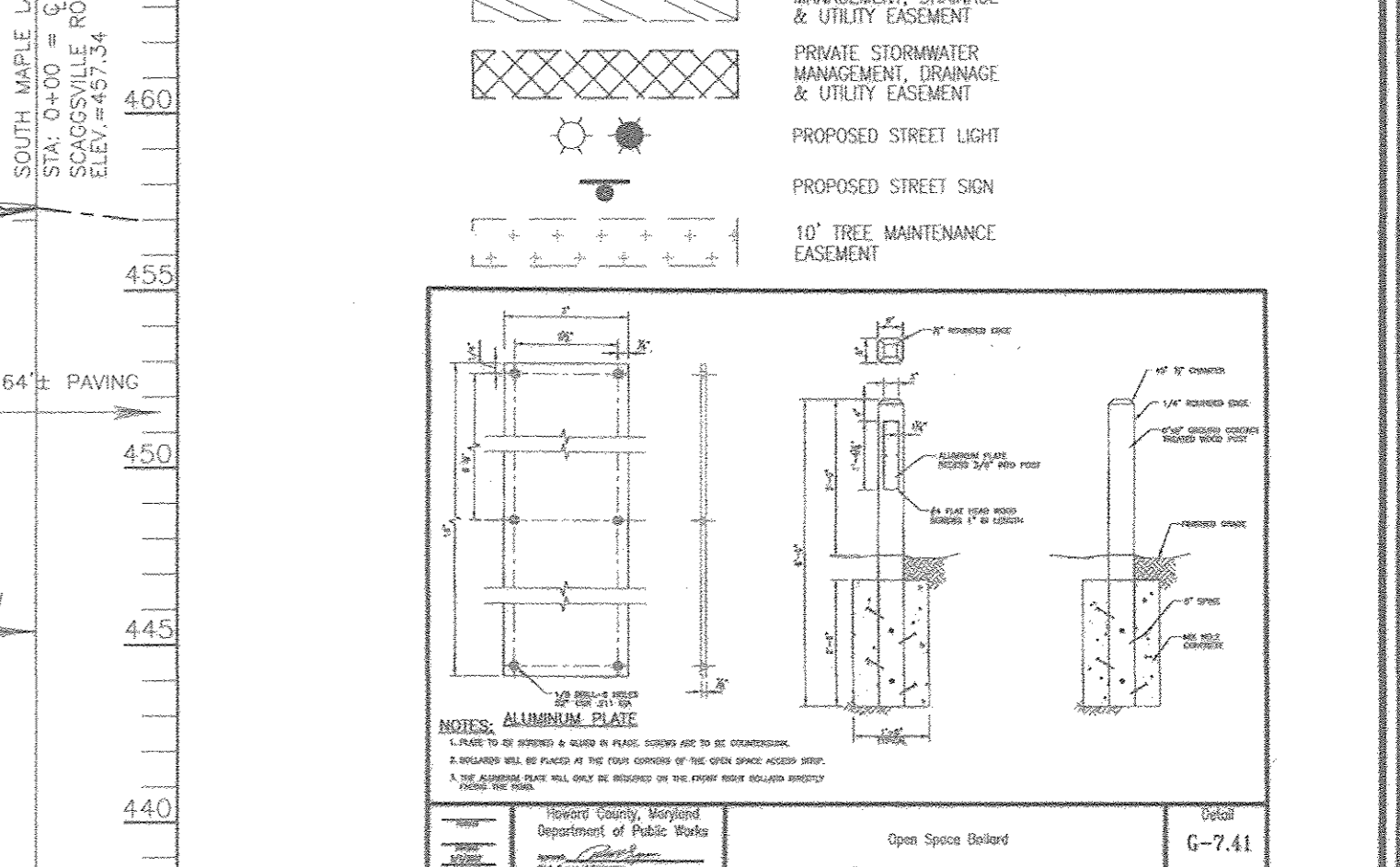
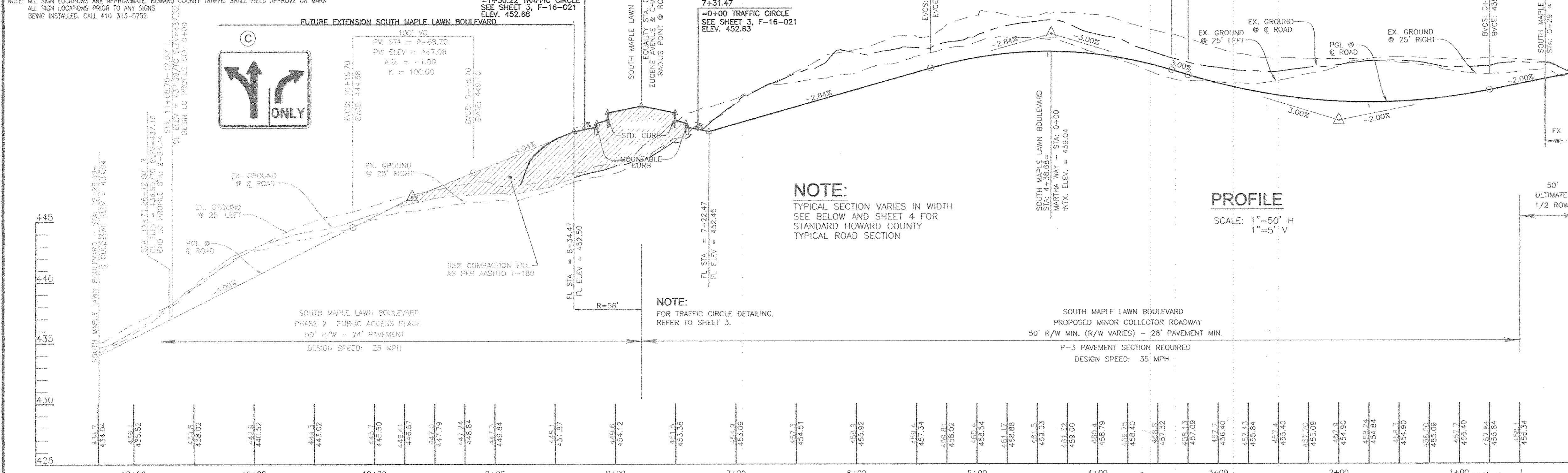
CURVE TABLE

ROAD	CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
SOUTH MAPLE LAWN BOULEVARD	C1	80.60	600.00	7°41'49"	40.36	S20°32'14"W	80.54
SOUTH MAPLE LAWN BOULEVARD	C2	734.11	860.00	48°54'31"	391.10	S00°04'06"W	712.02

FOR MD216 IMPROVEMENTS & DETAILS REFER TO SHEETS 43-46

LEGEND:

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED REINFORCED SIDEWALK
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PROPOSED STREET LIGHT
- PROPOSED STREET SIGN
- 10' TREE MAINTENANCE EASEMENT



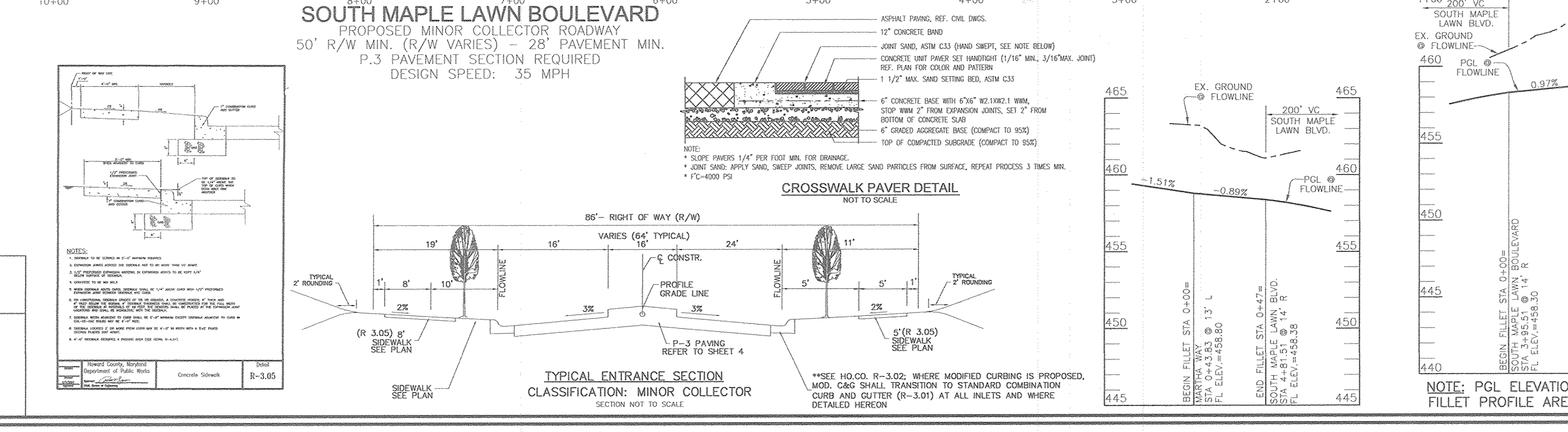
NOTES:

- REFER TO SHEETS 23 TO 25 FOR STORMDRAIN PROFILES.
- REFER TO SHEET 25 FOR STORMDRAIN STRUCTURE SCHEDULE.
- FOR STREET TREE LOCATIONS, REFER TO SHEETS 26-27.
- FOR MD 216 IMPROVEMENTS, REFER TO SHEETS 43-46.
- ALL STREET TREES AND/OR SIGN SHALL BE LOCATED 5' MIN. FROM PROPOSED DRAINAGE, UTILITY STRUCTURE.
- THERE SHOULD BE A MINIMUM OF 20' BETWEEN STREET LIGHTS AND STREET TREES.
- SEE SHEET 3 FOR CIRCLE DETAILING.
- IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.
- SEE SHEET 4 FOR PAVING SECTION DETAILS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/3/16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-4-16



OWNER: MAPLE LAWN FARMS, INC. 11788 SCAGSVILLE ROAD FULTON, MD 20759-0562 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC 2661 RIVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401 443-472-2846

REVISIONS:

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BOULEVARD. REVISE CIRCLE TRUCK APRON, AND STORMDRAIN PROFILES & SCHEDULES AND BIO-SWALE CHART.	09/17

FINAL ROAD CONSTRUCTION PLAN
 ROAD PLAN AND PROFILE
 SOUTH MAPLE LAWN BOULEVARD
 MAPLE LAWN SOUTH PHASE 1 - SECTION 1

TAX MAP 46 - GRID 2 - PARCEL 113
 STA. ELECTION DISTRICT: 14-093, WP-15-136, PB#415, SP-15-014
 ZONED: R-ED-MXD-3
 HOWARD COUNTY, MARYLAND

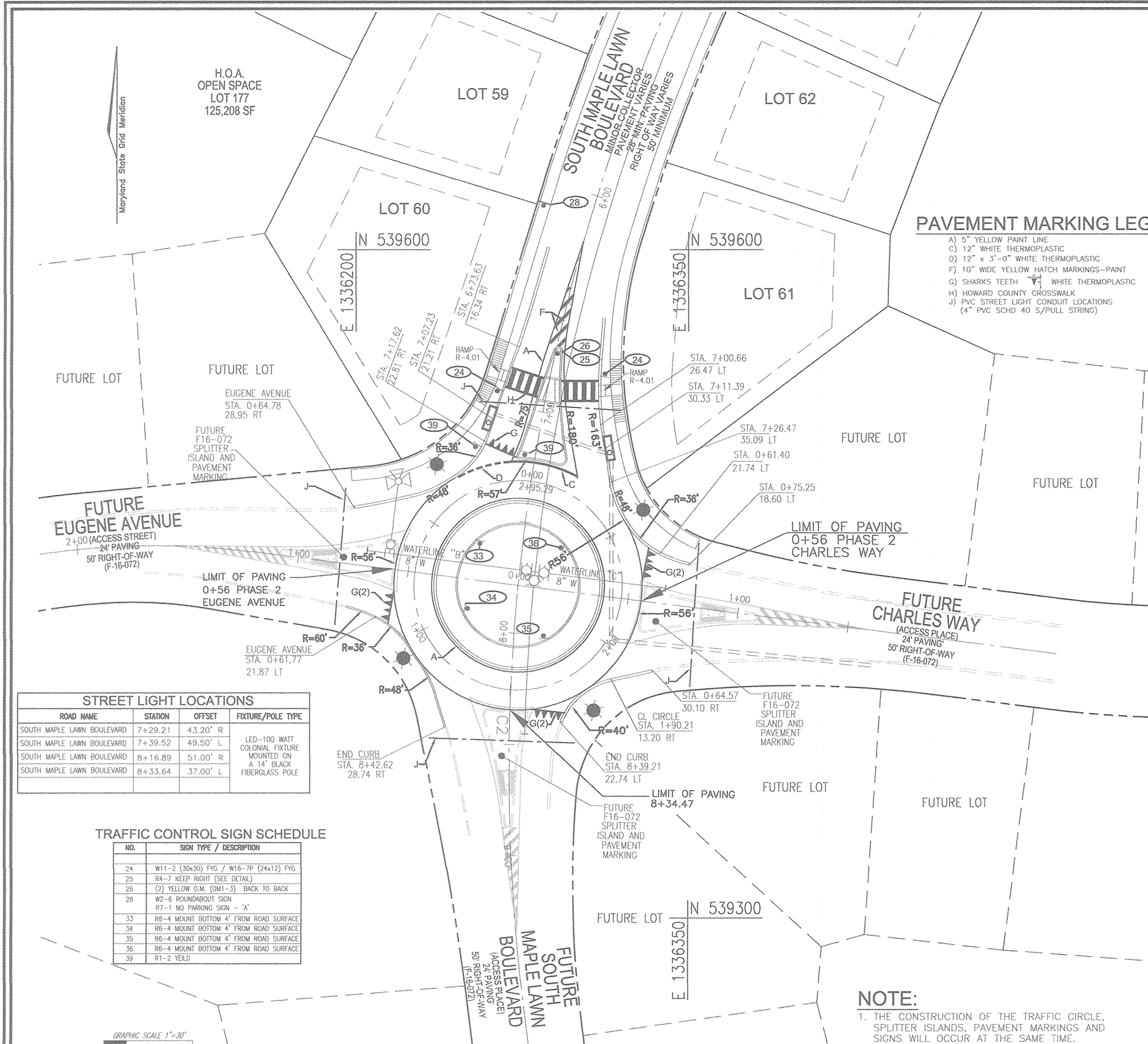
ROBERT H. VOGEL ENGINEERING & SURVEYORS, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7566 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

STATE OF MARYLAND
 ROBERT H. VOGEL
 PE 16193
 PROFESSIONAL ENGINEER

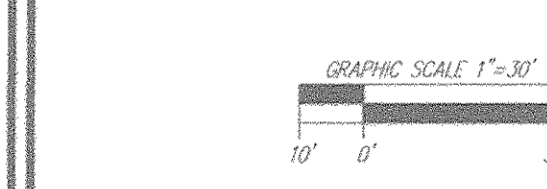
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.

2 SHEET OF 48



ROAD NAME	STATION	OFFSET	FIXTURE/POLE TYPE
SOUTH MAPLE LAWN BOULEVARD	7+29.21	43.20" R	LED-100 WATT COLONIAL FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
SOUTH MAPLE LAWN BOULEVARD	7+39.52	49.50" L	
SOUTH MAPLE LAWN BOULEVARD	8+16.89	51.00" R	
SOUTH MAPLE LAWN BOULEVARD	8+33.64	37.00" L	

NO.	SIGN TYPE / DESCRIPTION
24	W11-2 (30x30) FVG / W16-7P (24x12) FVG
25	R4-7 KEEP RIGHT (SEE DETAIL)
26	(3) YELLOW OAK (OBT-3) (24x12) BACK TO BACK
28	W2-6 ROUNDABOUT SIGN
33	R7-1 NO PARKING SIGN - 'A'
34	R8-4 MOUNT BOTTOM 4" FROM ROAD SURFACE
35	R8-4 MOUNT BOTTOM 4" FROM ROAD SURFACE
36	R8-4 MOUNT BOTTOM 4" FROM ROAD SURFACE
39	R1-2 YIELD



NOTES:

- ALL SIGN LOCATIONS ARE APPROXIMATE. HOWARD COUNTY TRAFFIC SHALL FIELD APPROVE OR MARK ALL SIGN LOCATIONS PRIOR TO ANY SIGNS BEING INSTALLED. CALL 410-313-5752.
- ALL ROUNDABOUT MARKINGS SHALL BE LAID OUT BY HOWARD COUNTY TRAFFIC.
- TOTAL NUMBER OF "SHARKS TEETH" NEEDED WILL BE DETERMINED IN THE FIELD.
- STREET NAME SIGNS WILL BE MOUNTED ON THE R1-2 SIGNS IN THE ROUNDABOUT AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.
- "NO PARKING" SIGNS TO BE INSTALLED AS NEEDED NEAR ROUNDABOUT. TRAFFIC DIVISION WILL FIELD DETERMINE LOCATIONS.
- IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

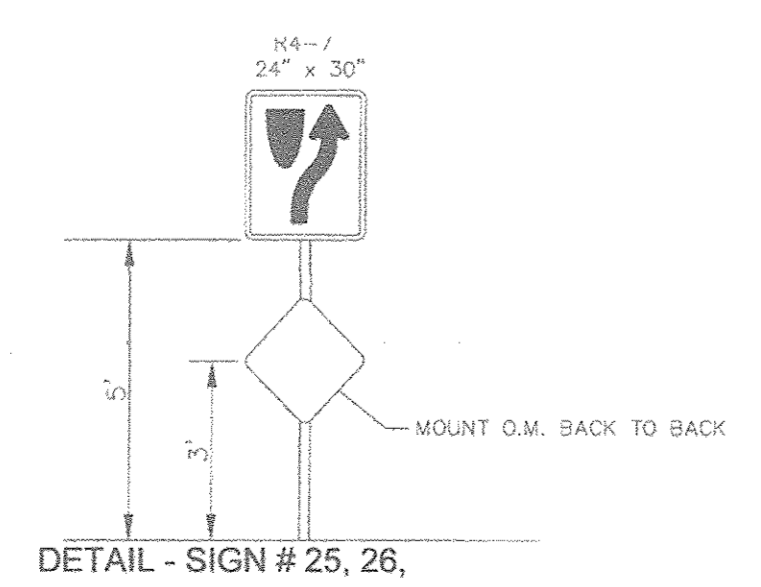
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/26/16
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/6/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

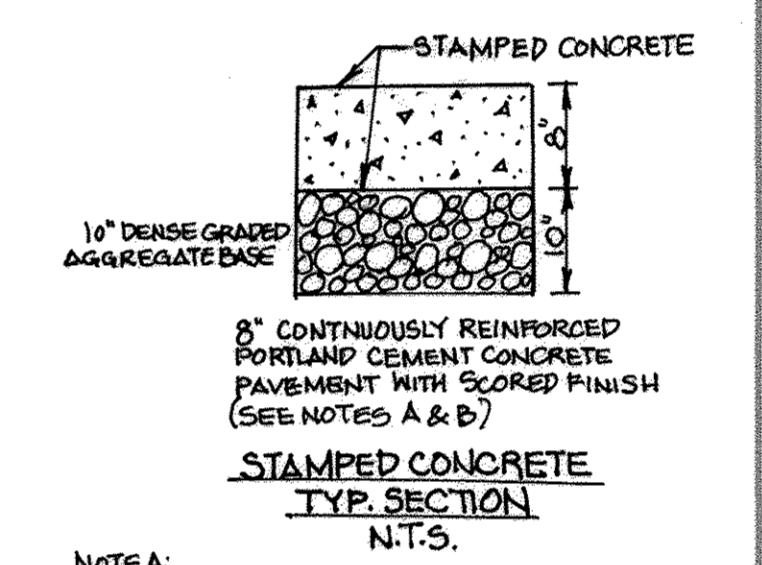
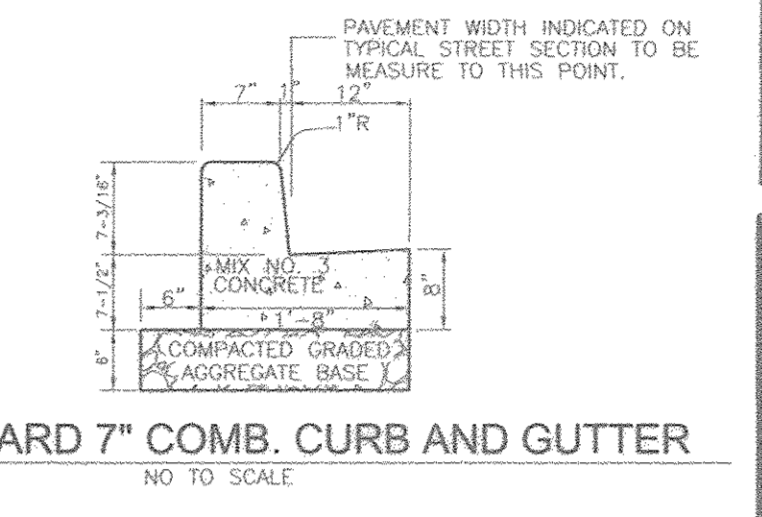
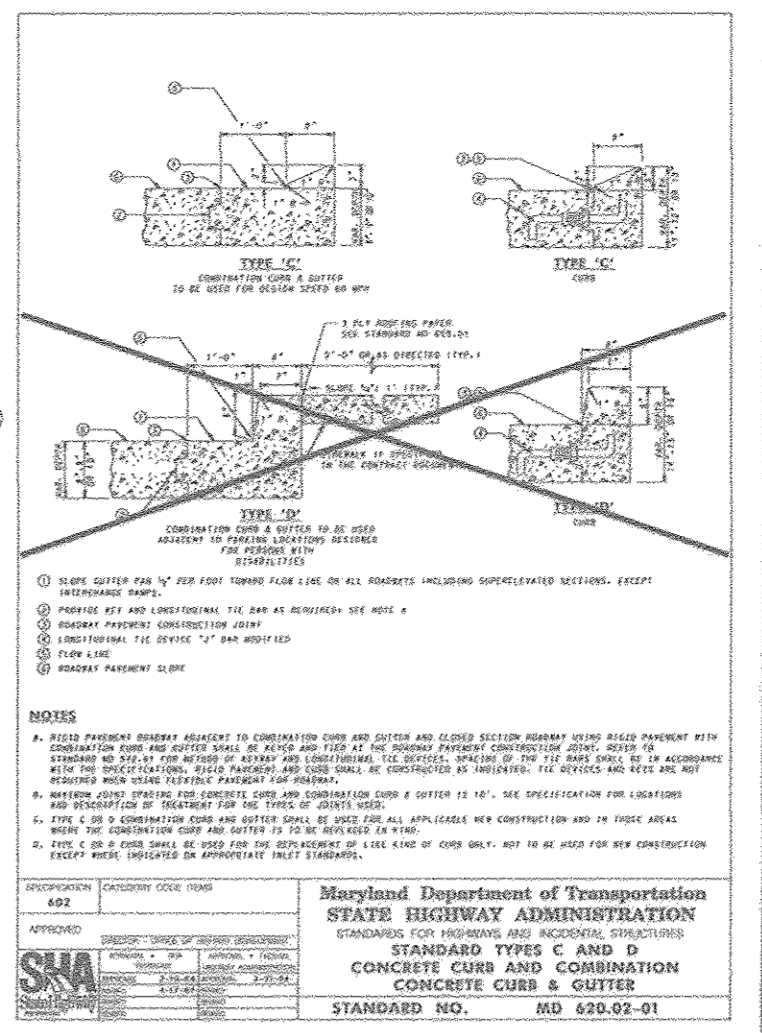
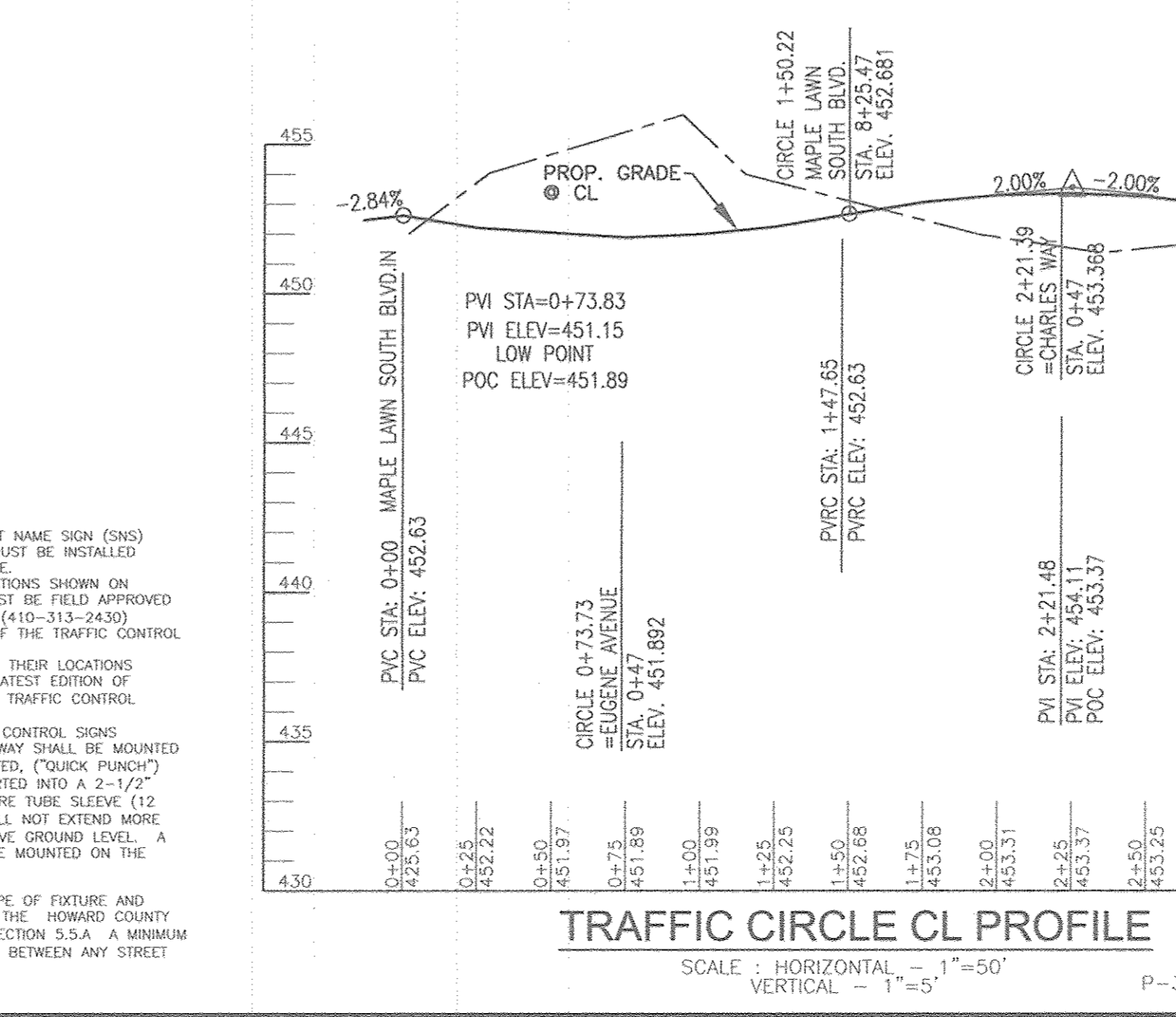
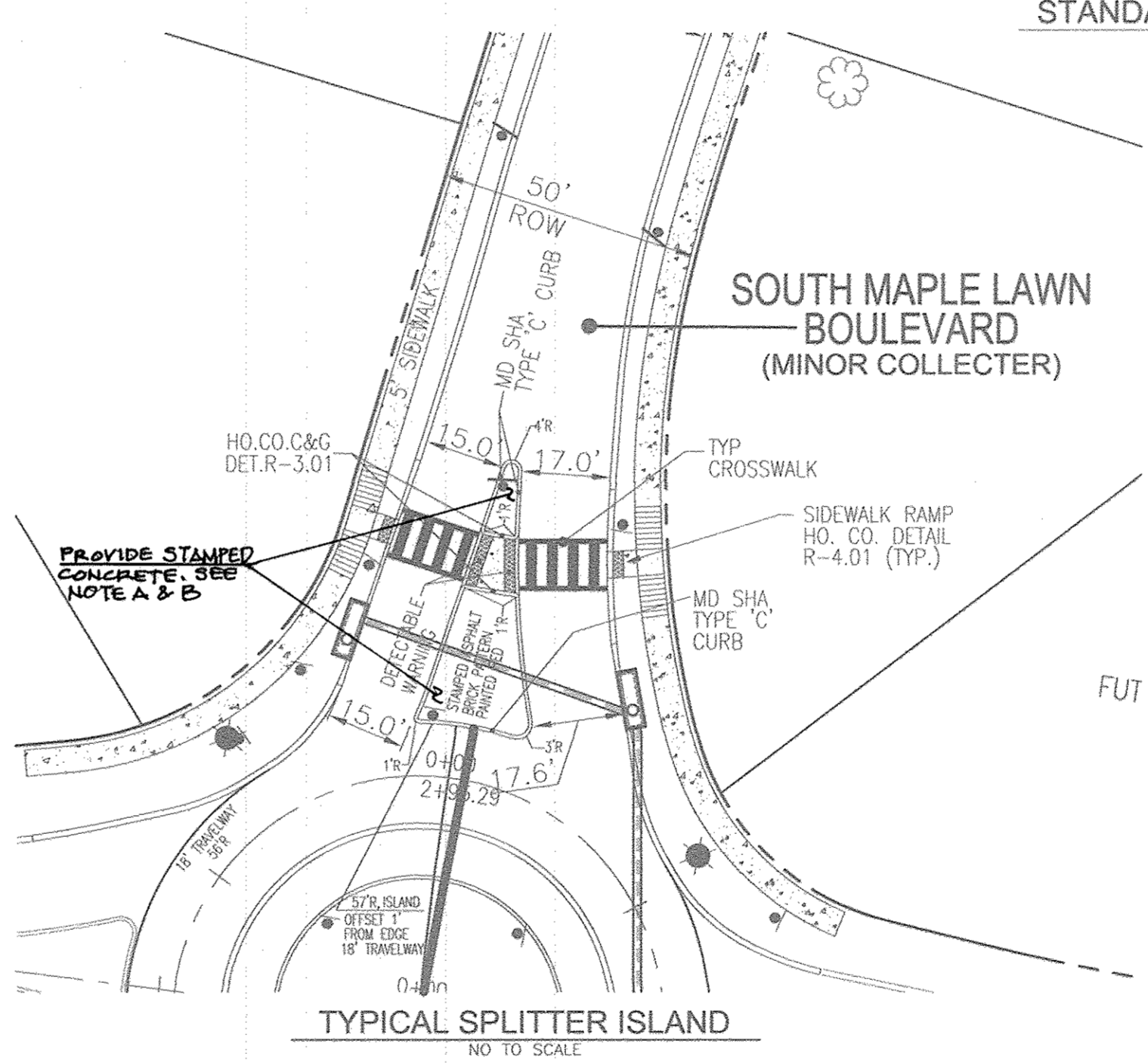
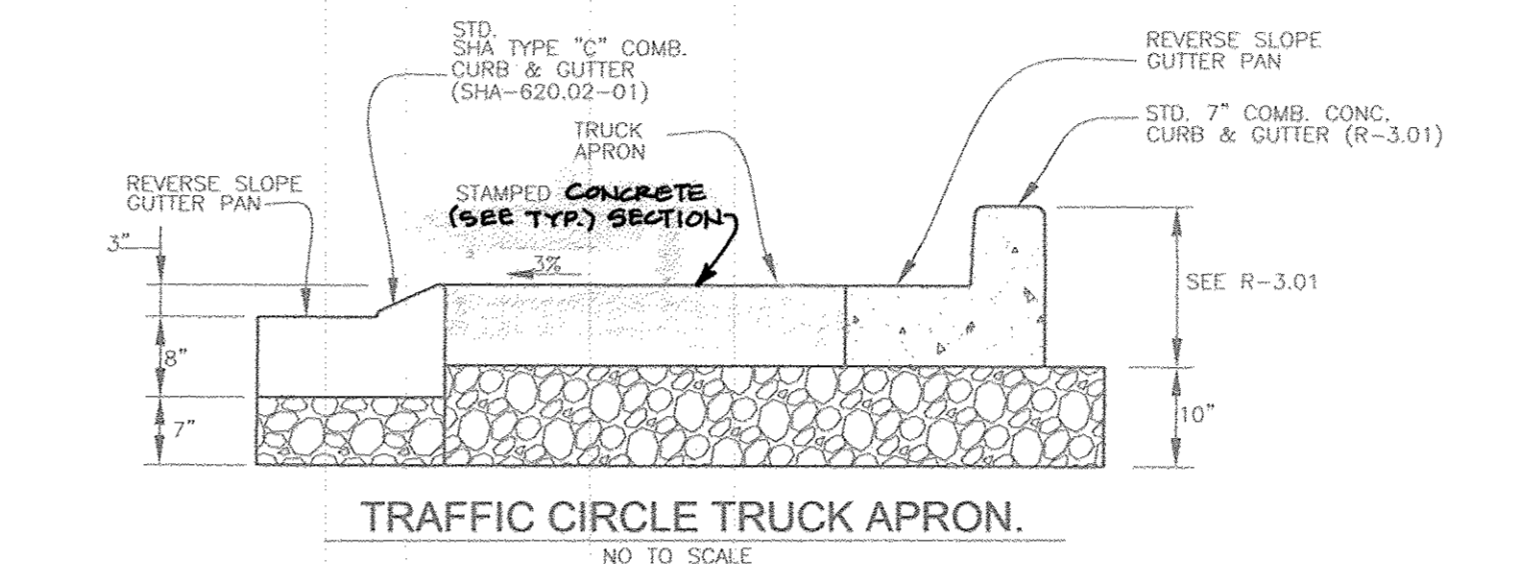
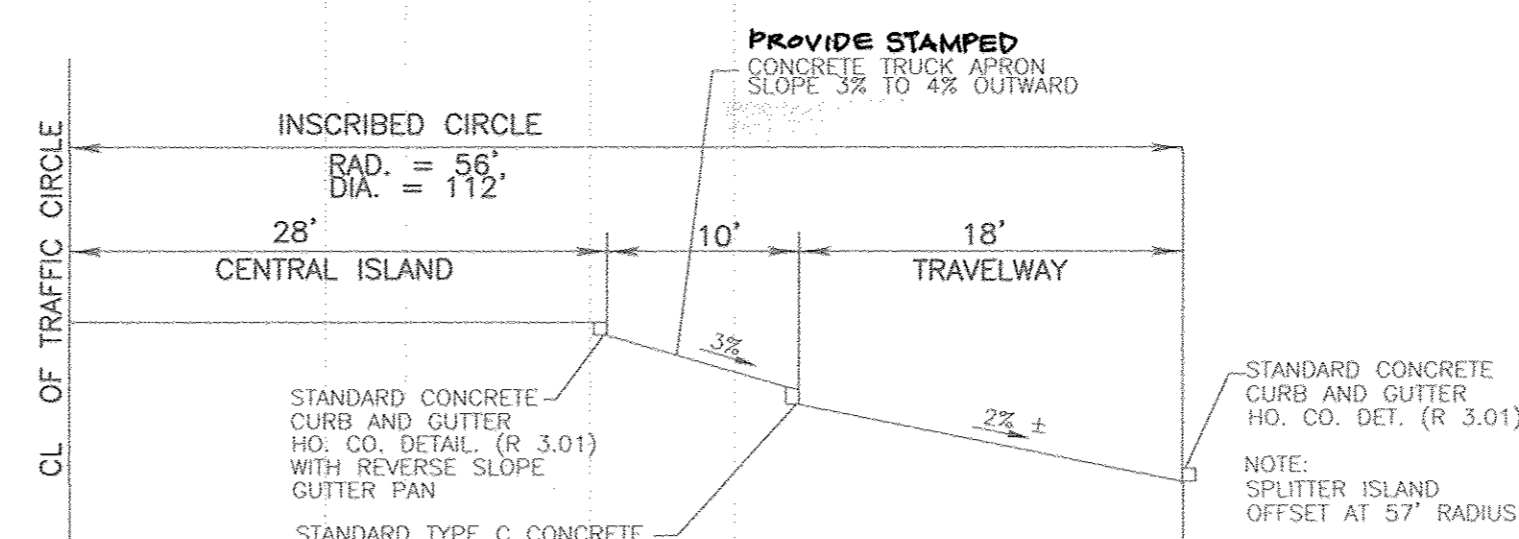
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NOTES:

- REFER TO SHEETS 23 TO 25 FOR STORMDRAIN PROFILES.
- REFER TO SHEET 25 FOR STORMDRAIN STRUCTURE SCHEDULE.
- FOR STREET TREE LOCATIONS, REFER TO SHEETS 26-32.



- PAVEMENT MARKING LEGEND**
- 5" YELLOW PAINT LINE
 - 12" WHITE THERMOPLASTIC
 - 12" x 3"-0" WHITE THERMOPLASTIC
 - 10" WIDE YELLOW HATCH MARKINGS-PAINT
 - SHARKS TEETH WHITE THERMOPLASTIC
 - HOWARD COUNTY CROSSWALK
 - PVC STREET LIGHT CONDUIT LOCATIONS (4" PVC SCHD 40 S/PULL STRING)



NOTE A: THE LONGITUDINAL REINFORCEMENT STEEL SHALL BE #3 BARS @ 12" O.C. THE TRANSVERSE REINFORCEMENT STEEL SHALL BE #3 BARS AT 12" O.C. THE LOAD TRANSFER REINFORCEMENT STEEL SHALL BE 20" LONG; 1" DIA. DOWEL BARS AT 12" O.C.

NOTE B: SCORING PATTERN TO BE DETERMINED BY DEVELOPER.

NOTE: CONCRETE APRON SECTION & REINFORCING SHOWN ON THIS DETAIL SHALL ALSO BE USED FOR ISLANDS LEADING INTO ROUNDABOUT AND TRUCK APRONS.

1. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL DEVICES AND SHALL WORK WITH THE COUNTY TRAFFIC ENGINEER TO DETERMINE THE EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES.

2. ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED AT THE CORNER OF THE ROUNDABOUT.

3. THE TOTAL NUMBER OF "SHARKS TEETH" NEEDED WILL BE DETERMINED IN THE FIELD.

4. STREET NAME SIGNS WILL BE MOUNTED ON THE R1-2 SIGNS IN THE ROUNDABOUT AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

5. "NO PARKING" SIGNS TO BE INSTALLED AS NEEDED NEAR ROUNDABOUT. TRAFFIC DIVISION WILL FIELD DETERMINE LOCATIONS.

6. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:

- THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
- THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

14. A ROAD OF THESE DIMENSIONS SHALL BE PLACED AT A THREE FOOT OFFSET ON CHINA AND 180 FEET FROM THE CURB AND 18 FEET FROM THE TRUCK APRON.

15. A SECTION OF THIS ROADWAY SHALL BE PLACED AT A THREE FOOT OFFSET ON CHINA AND 180 FEET FROM THE CURB AND 18 FEET FROM THE TRUCK APRON.

16. A SECTION OF THIS ROADWAY SHALL BE PLACED AT A THREE FOOT OFFSET ON CHINA AND 180 FEET FROM THE CURB AND 18 FEET FROM THE TRUCK APRON.

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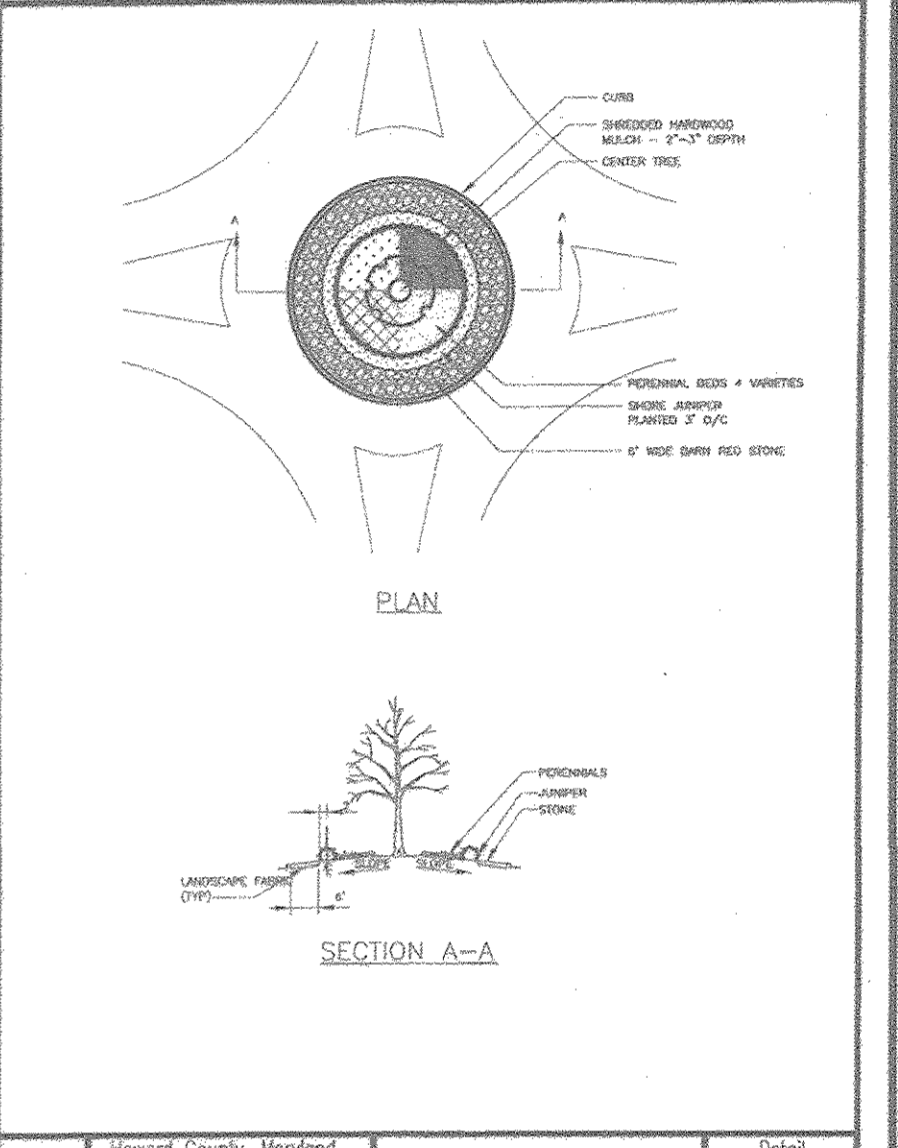
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OWNER: MAPLE LAWN FARMS, INC. 11788 SCAGGSVILLE ROAD FULTON, MD 20759-0562 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC 2661 RVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401 443-472-2846

Department of Public Works
 Traffic Circle
 General Landscape Design
 Information
 L-1.02

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BVD. REVISE CIRCLE TRUCK APRON. AMEND STORMDRAIN PROFILES & SCHEDULES AND BIOSWALE CHART.	8/9/17

FINAL ROAD CONSTRUCTION PLAN
 TRAFFIC CIRCLE DETAILS
 PAVEMENT MARKINGS AND SIGNAGE PLAN
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRD 2 - PARCEL 113
 6TH ELECTION DISTRICT
 DPZ REF: EOP-14-093, WP-15-136, PB#415, SP-15-014
 ZONED: R-ED-MXD-3
 HOWARD COUNTY, MARYLAND

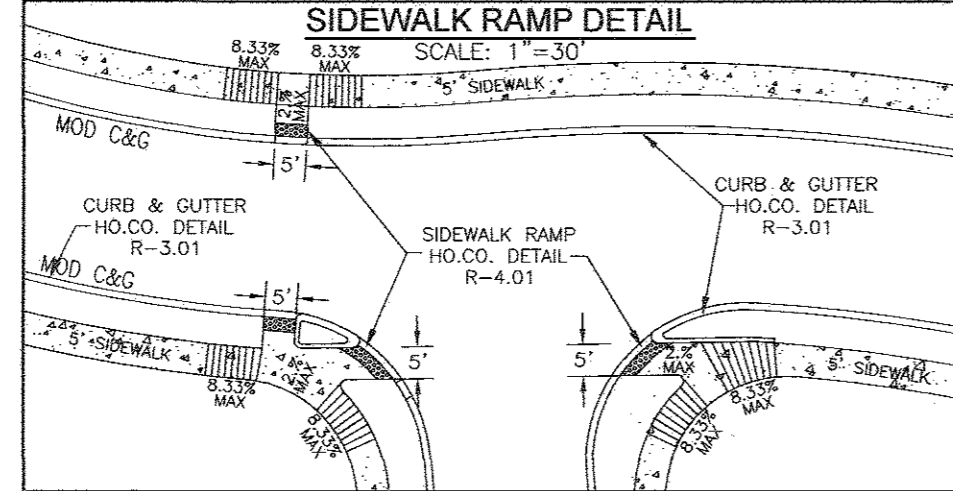
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET, ELLICOTT CITY, MD 21104
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RVE
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

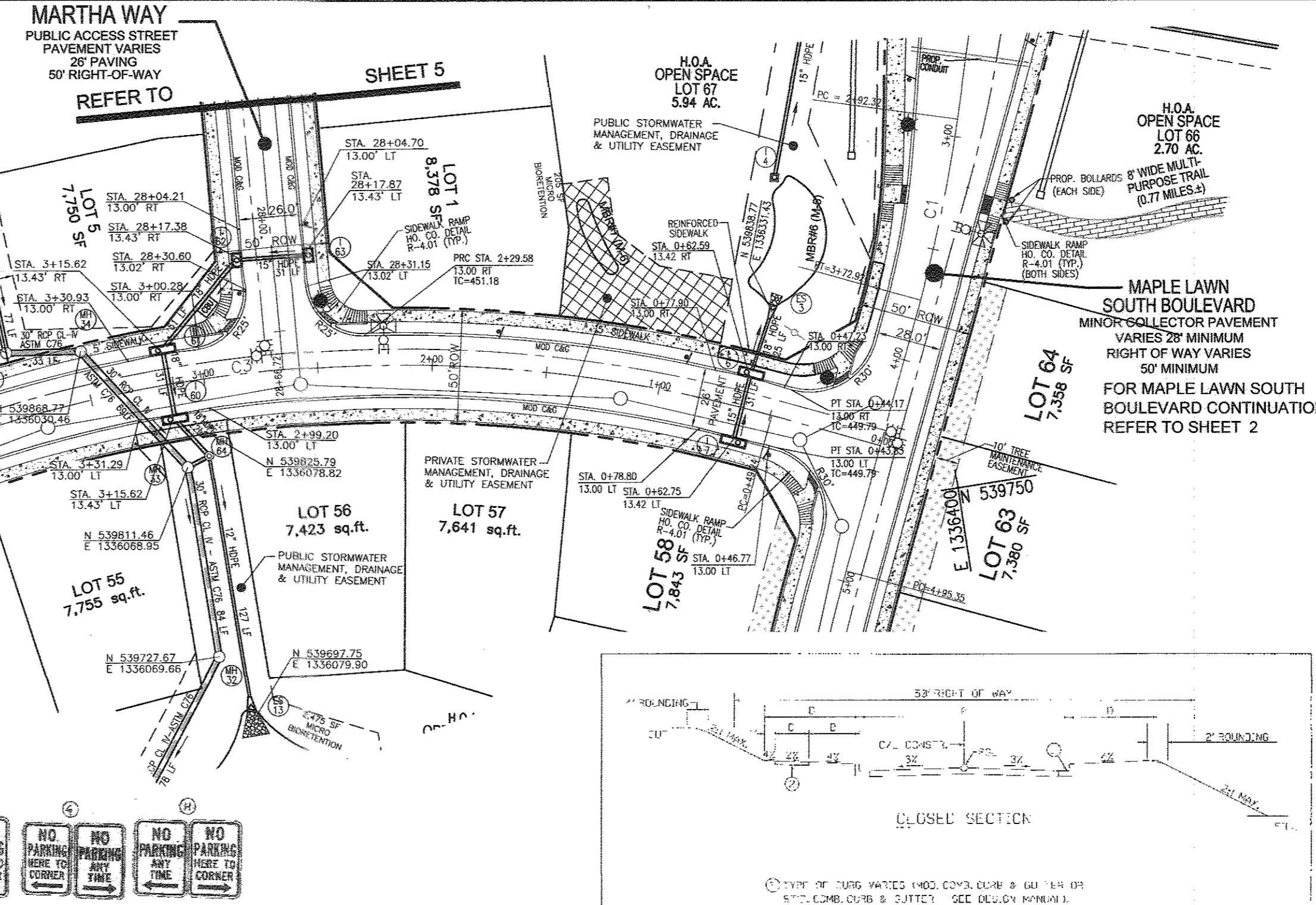
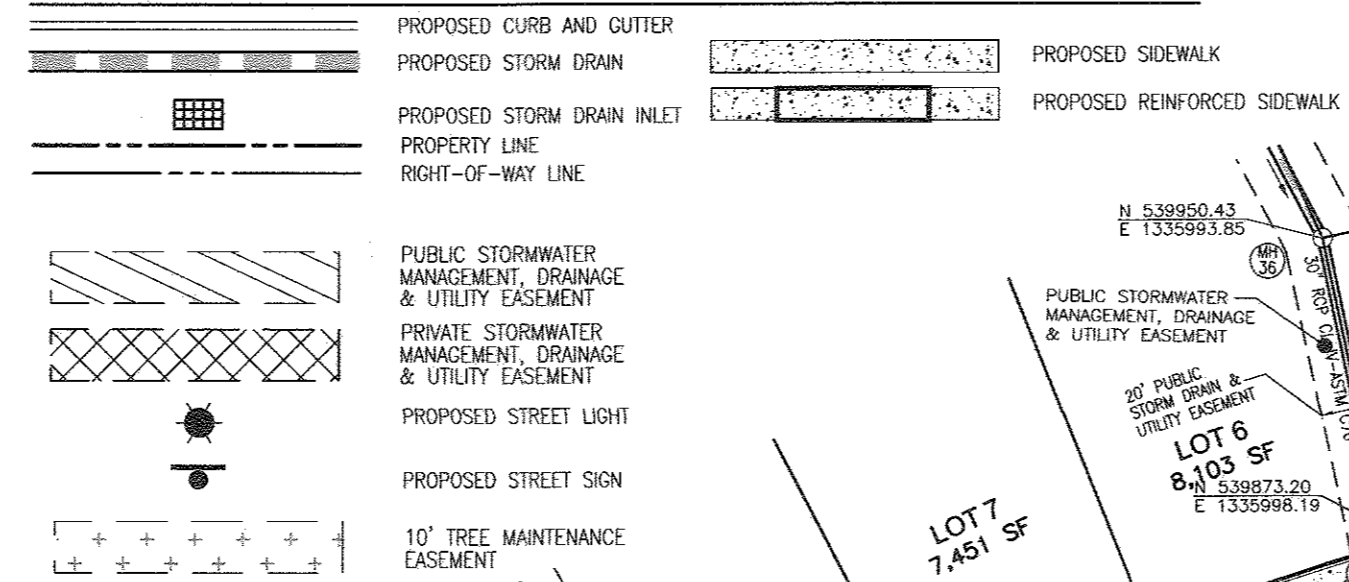
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.

3 SHEET OF 48

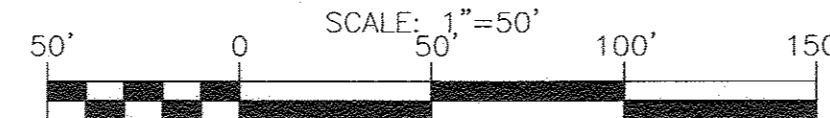
STREET LIGHT LOCATIONS			
ROAD NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MARTHA WAY	4+46.00	16.00' R	LED-100 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
MARTHA WAY	6+68.00	16.00' L	
MARTHA WAY	8+52.50	16.00' R	
MARTHA WAY	25+38.00	20.00' R	
SOUTH MAPLE LAWN BOULEVARD	4+13.00	25.00' R	
GUNNAR DRIVE	0+30.00	17.00' R	



LEGEND:



MARTHA WAY 0+00 - 12+50 PLAN VIEW



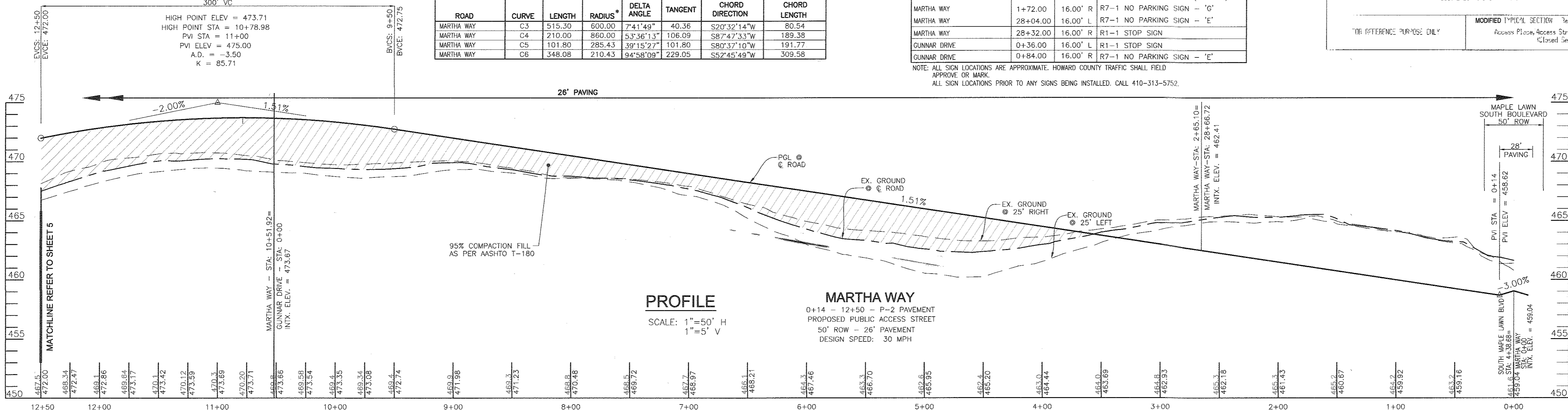
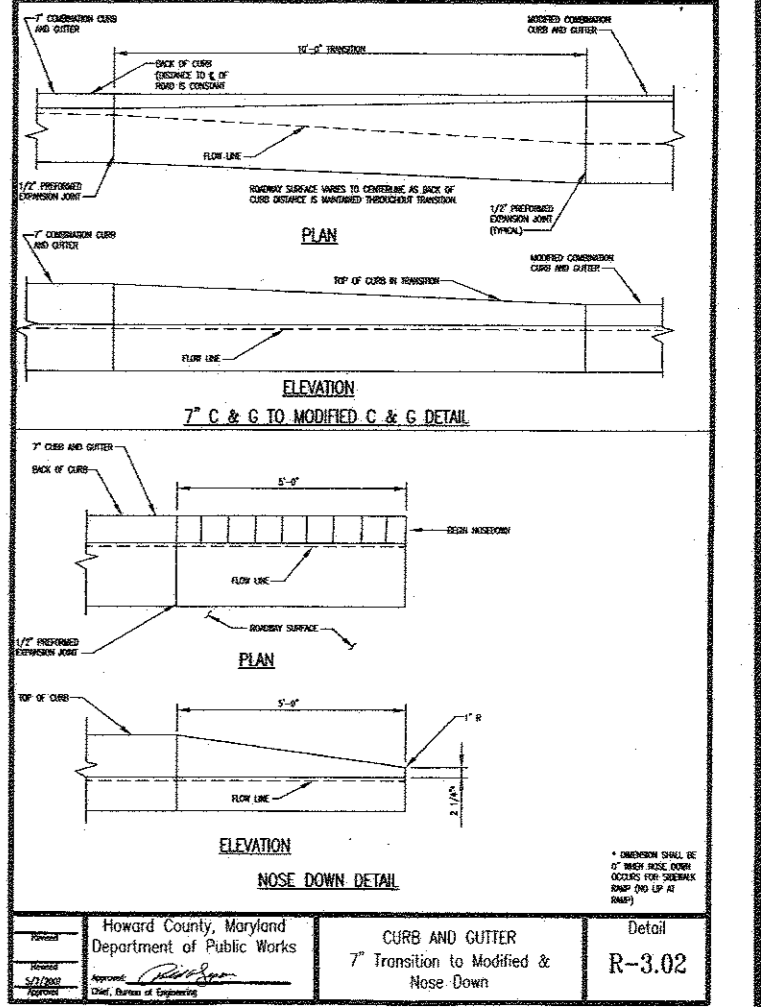
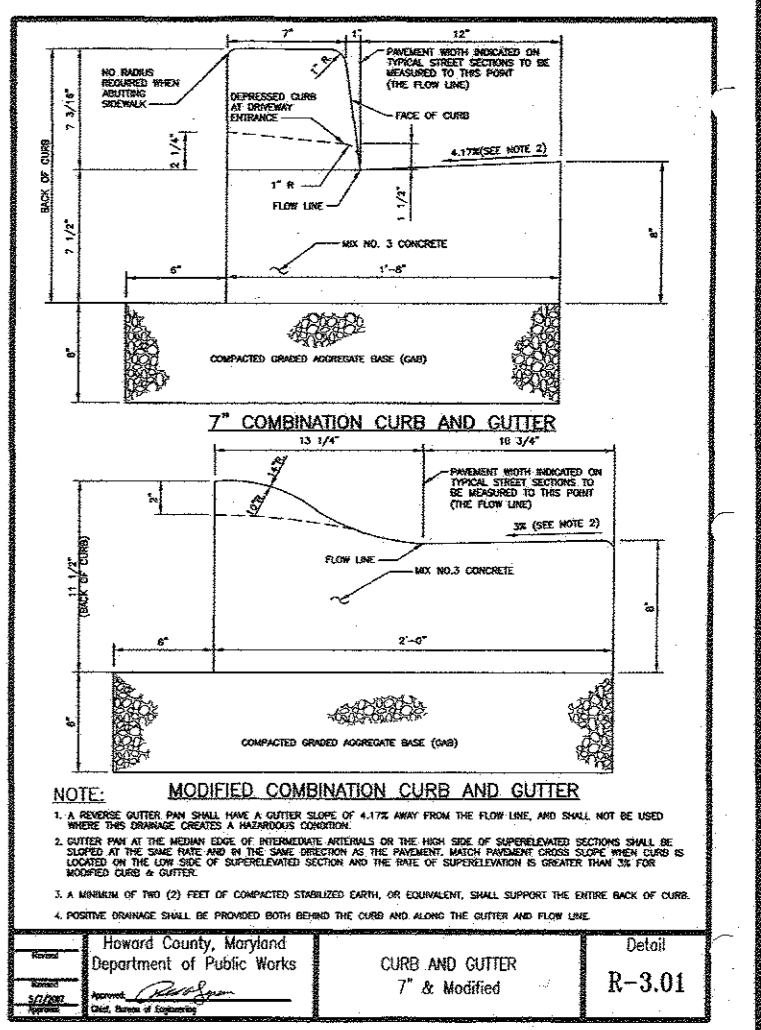
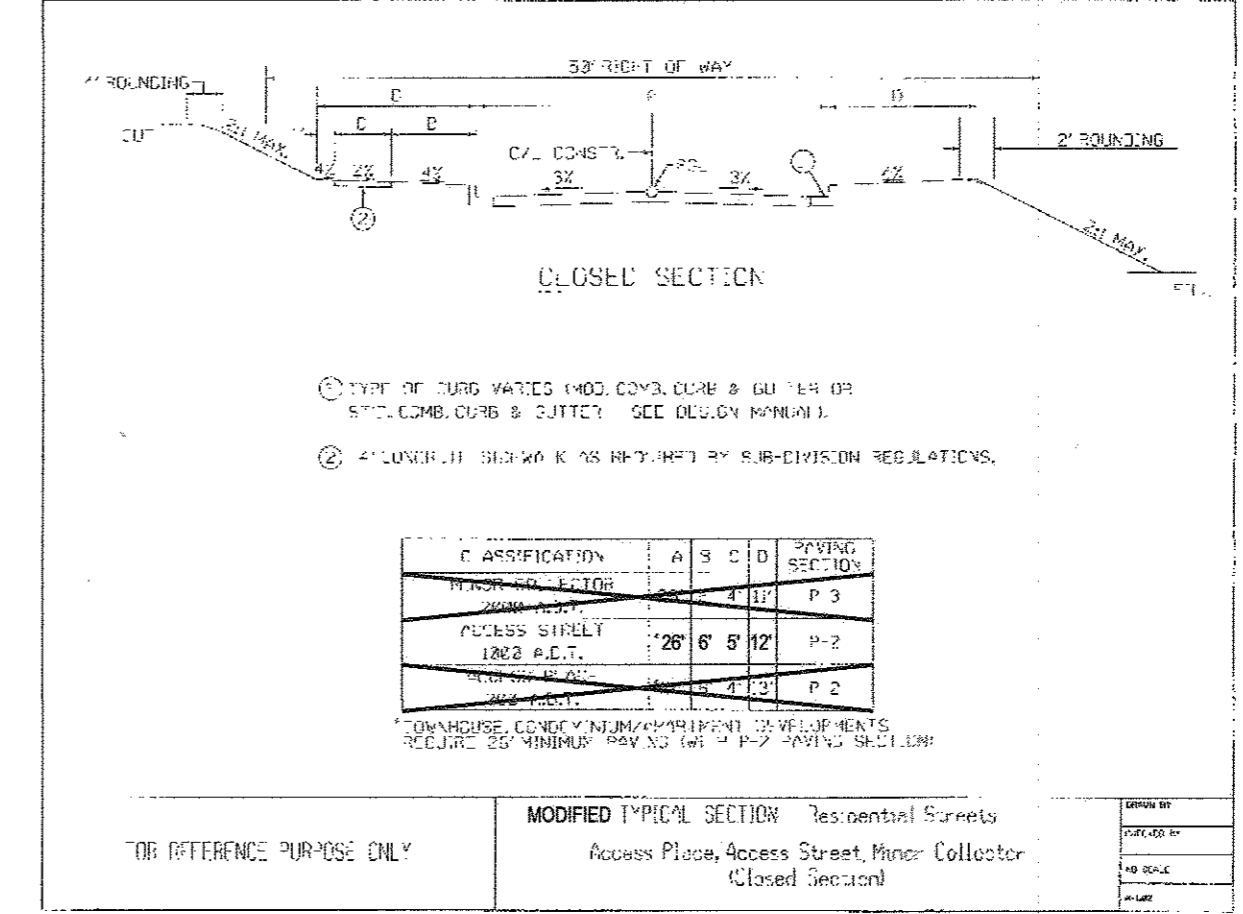
CURVE TABLE

ROAD	CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
MARTHA WAY	C3	515.30	600.00	7°41'49"	40.36	S2°32'14"W	80.54
MARTHA WAY	C4	210.00	860.00	5°33'13"	106.09	S8°47'33"W	189.38
MARTHA WAY	C5	101.80	285.43	39°15'27"	101.80	S80°37'10"W	131.77
MARTHA WAY	C6	348.08	210.43	94°58'08"	229.05	S52°45'49"W	309.58

TRAFFIC CONTROL SIGN LOCATION CHART

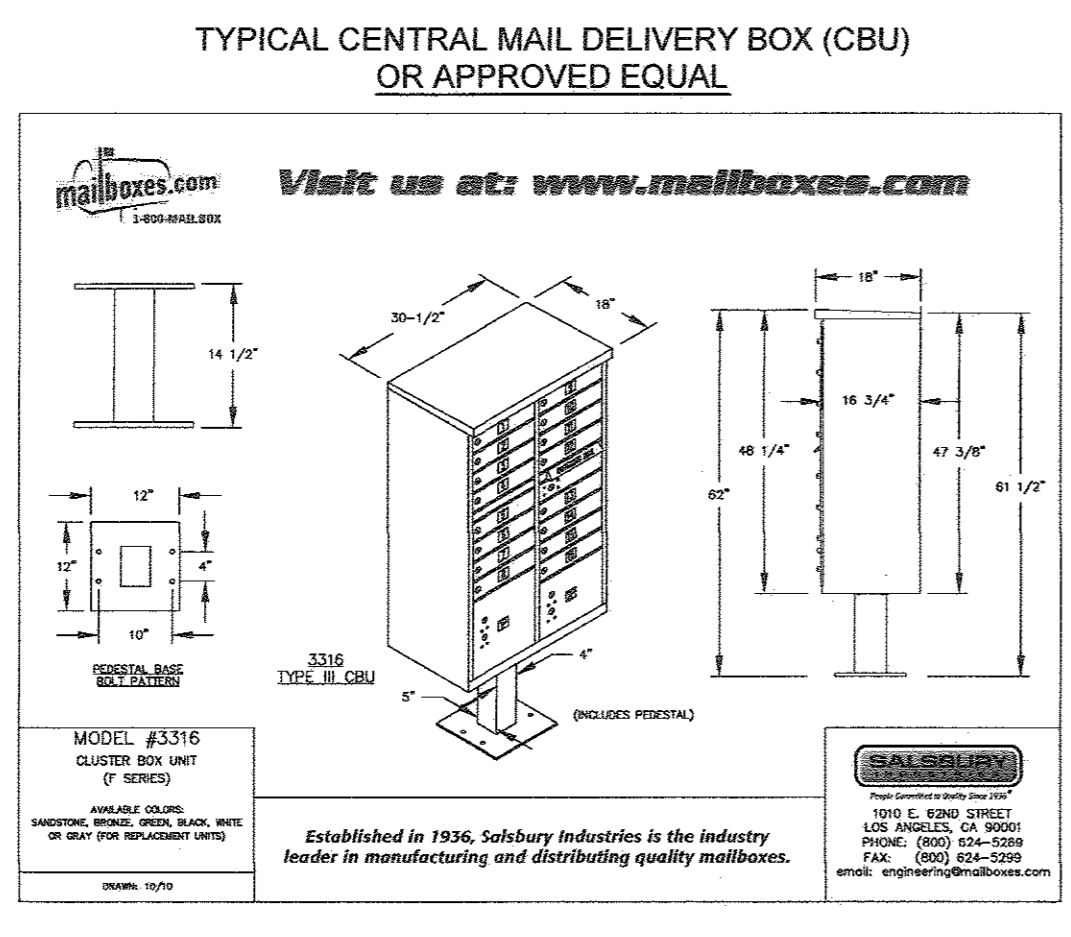
ROAD NAME	STATION	OFFSET	TYPE
MAPLE LAWN SOUTH BOULEVARD	2+54.00	30.00' L	R3-8 LANE USE SIGN
MAPLE LAWN SOUTH BOULEVARD	2+78.00	25.00' R	R7-1 NO PARKING SIGN - 'A'
MARTHA WAY	0+46.00	17.00' L	R1-1 STOP SIGN
MARTHA WAY	0+91.00	16.00' R	R7-1 NO PARKING SIGN - 'H'
MARTHA WAY	1+72.00	16.00' R	R2-1 SPEED LIMIT SIGN (25 MPH)
MARTHA WAY	28+04.00	16.00' L	R7-1 NO PARKING SIGN - 'G'
MARTHA WAY	28+32.00	16.00' R	R1-1 STOP SIGN
GUNNAR DRIVE	0+36.00	16.00' L	R1-1 STOP SIGN
GUNNAR DRIVE	0+84.00	16.00' R	R7-1 NO PARKING SIGN - 'E'

NOTE: ALL SIGN LOCATIONS ARE APPROXIMATE. HOWARD COUNTY TRAFFIC SHALL FIELD APPROVE OR MARK. ALL SIGN LOCATIONS PRIOR TO ANY SIGNS BEING INSTALLED. CALL 410-313-5752.

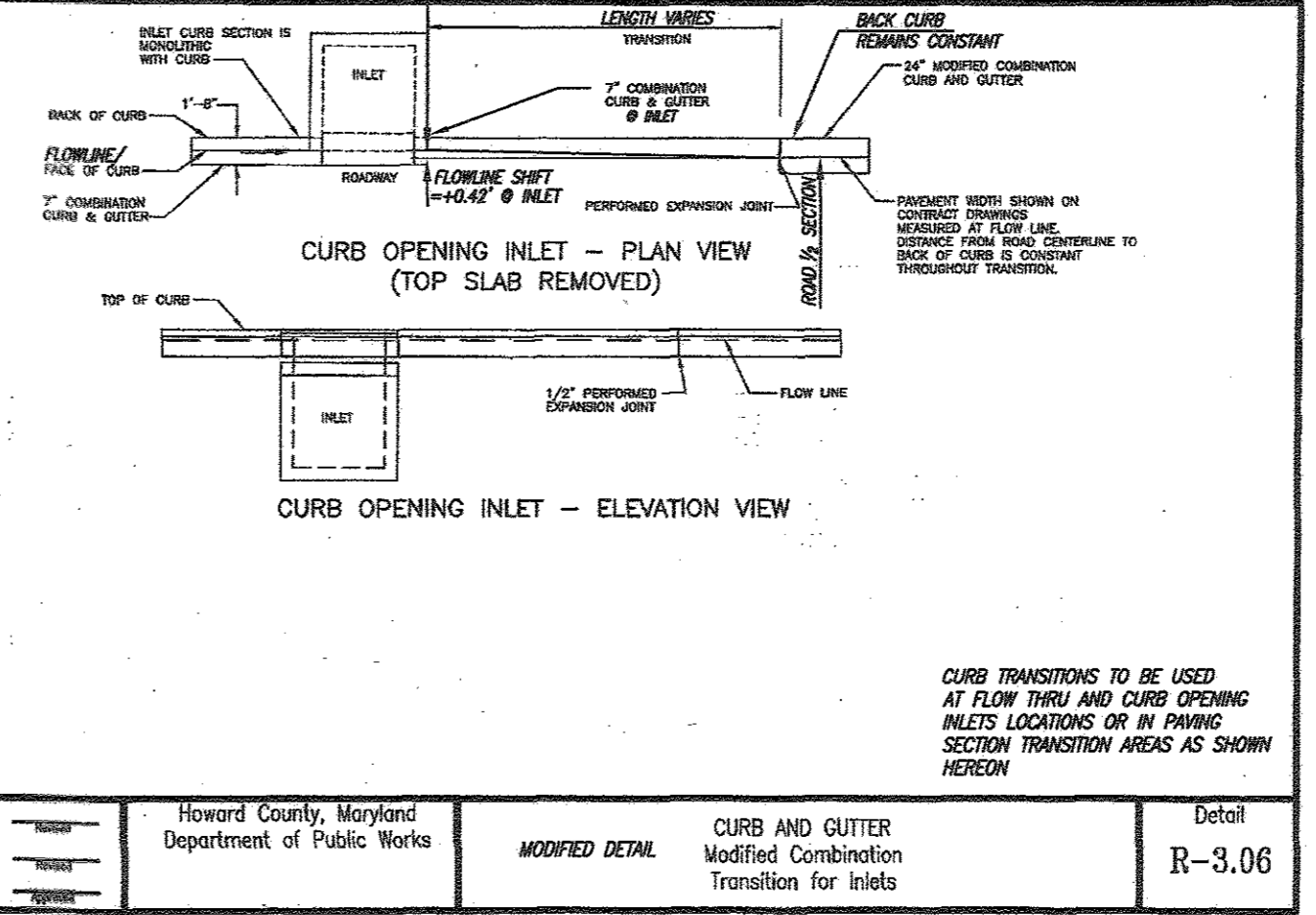


PROFILE MARTHA WAY
0+14 - 12+50 - P-2 PAVEMENT
PROPOSED PUBLIC ACCESS STREET
50' ROW - 26' PAVEMENT
DESIGN SPEED: 30 MPH

- CBU BOX LOCATIONS:** SUBJECT TO CHANGE
- ONE 16 UNIT "CLUSTER BOX UNIT" HAS BEEN PLACED NEAR LOT 5 TO SERVE LOTS 1 - 8, 31 - 32 & 52 - 57.
 - ONE 12 UNIT "CLUSTER BOX UNIT" HAS BEEN PLACED NEAR LOT 25 TO SERVE LOTS 22 - 30.
 - ONE 16 UNIT "CLUSTER BOX UNIT" HAS BEEN PLACED NEAR LOT 18 TO SERVE LOTS 15 - 21 & 34 - 41.
 - ONE 16 UNIT "CLUSTER BOX UNIT" HAS BEEN PLACED NEAR LOT 47 TO SERVE LOTS 9 - 14 & 42 - 51.
 - ONE 12 UNIT "CLUSTER BOX UNIT" HAS BEEN PLACED NEAR LOT 62 TO SERVE LOTS 58 - 64 & 5 FUTURE LOTS.



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CHUTE/FRONT BEARING (INCHES)	3 TO 45 TO 47 2.7	7 TO 10 TO 15 TO 21 3.7
P-1	LOCAL ROAD, SIDEWALK, PAVEMENT DRIVE ASBESTOS, RESIDENTIAL, NOT NON-RESIDENTIAL, NOT OVER 2 HEAVY TRUCKS PER DAY	12.0 MM, PD 84-22, LEVEL 1 (25%)	1.0	1.0
P-2	PAVEMENT DRIVE ASBESTOS, RESIDENTIAL, NOT NON-RESIDENTIAL, WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	12.0 MM, PD 84-22, LEVEL 1 (25%)	1.0	1.0
P-3	PAVEMENT DRIVE ASBESTOS, RESIDENTIAL, NOT NON-RESIDENTIAL, WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	12.0 MM, PD 84-22, LEVEL 1 (25%)	1.0	1.0
P-4	PAVEMENT DRIVE ASBESTOS, RESIDENTIAL, NOT NON-RESIDENTIAL, WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	12.0 MM, PD 84-22, LEVEL 1 (25%)	1.0	1.0



- NOTES:**
- REFER TO SHEETS 23 TO 25 FOR STORMDRAIN PROFILES.
 - REFER TO SHEET 25 FOR STORMDRAIN STRUCTURE SCHEDULE.
 - FOR STREET TREE LOCATIONS, REFER TO SHEETS 26-27.
 - FOR MD 216 IMPROVEMENTS REFER TO SHEETS 43-46.
 - ALL STREET TREES AND/OR SIGN SHALL BE LOCATED 5' MIN. FROM PROPOSED DRAINAGE UTILITY STRUCTURE.
 - THERE SHOULD BE A MINIMUM OF 20' BETWEEN STREET LIGHTS AND STREET TREES.
 - FOR MARTHA WAY INTERSECTION FILLETS, REFER TO SHEET 5
 - IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

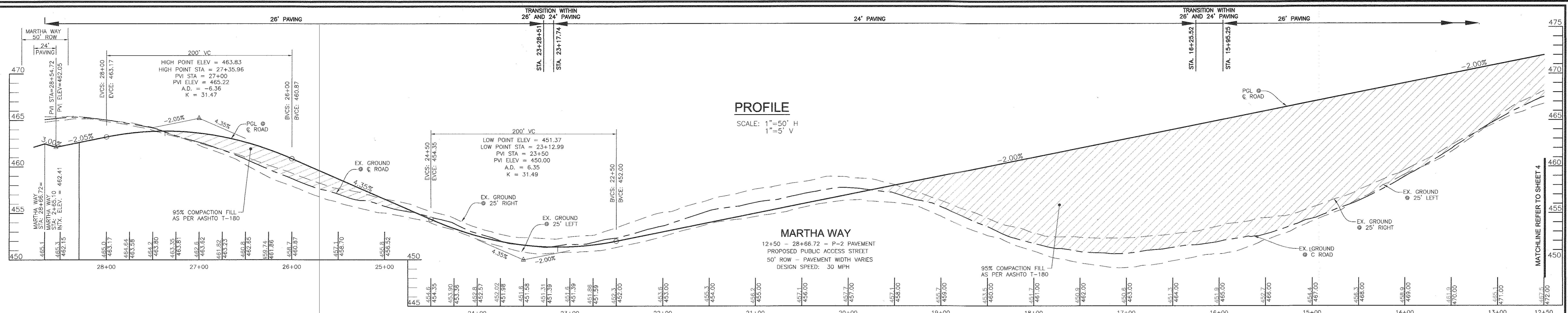
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DEVELOPER: MAPLE LAWN PARTNERS, LLC 2661 RIVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401 443-472-2846

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 11/16/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 11-16-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

FINAL ROAD CONSTRUCTION PLAN
 ROAD PLAN AND PROFILE
 MARTHA WAY
 MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A'
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
 5TH ELECTION DISTRICT
 1977, 1987, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 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3323, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3332, 3333, 3334, 3335, 3336, 3337, 3338, 3339, 3340, 3341, 3342, 3343, 3344, 3345, 3346, 3347, 3348, 3349, 3350, 3351, 3352, 3353, 3354, 3355, 3356, 3357, 3358, 3359, 3360, 3361



PROFILE

SCALE: 1"=50' H
1"=50' V

MARTHA WAY

12+50 - 28+66.72 - P-2 PAVEMENT
PROPOSED PUBLIC ACCESS STREET
50' ROW - PAVEMENT WIDTH VARIES
DESIGN SPEED: 30 MPH

LEGEND:

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- PROPOSED REINFORCED SIDEWALK
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PROPOSED STREET LIGHT
- PROPOSED STREET SIGN
- 10' TREE MAINTENANCE EASEMENT

NOTES:

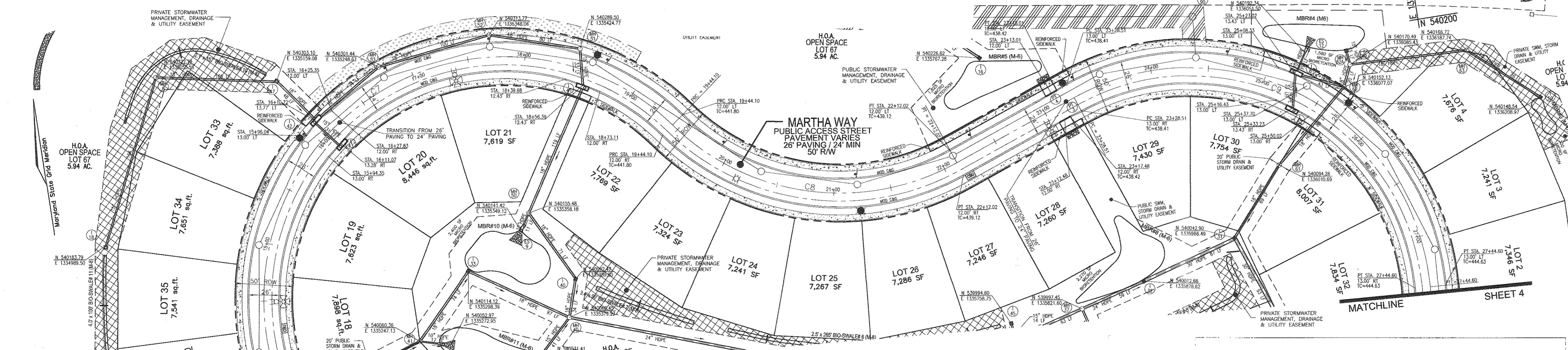
1. REFER TO SHEETS 24 TO 26 FOR STORMDRAIN PROFILES.
2. REFER TO SHEET 26 FOR STORMDRAIN STRUCTURE SCHEDULE.
3. FOR STREET TREE LOCATIONS, REFER TO SHEET 25.
4. FOR MD RT 216 IMPROVEMENTS REFER TO SHEETS 42-45.
5. ALL STREET TREES AND/OR SIGN SHALL BE LOCATED 5' MIN. FROM PROPOSED DRAINAGE, UTILITY, STRUCTURE.
6. THERE SHOULD BE A MINIMUM OF 20' BETWEEN STREET LIGHTS AND STREET TREES.
7. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - 1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - 2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.
8. SEE SHEET 4 FOR PAVING SECTION DETAILS.

OWNER

MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER

MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846



MARTHA WAY 12+50 - 28+66.72 PLAN VIEW

SCALE: 1"=50'

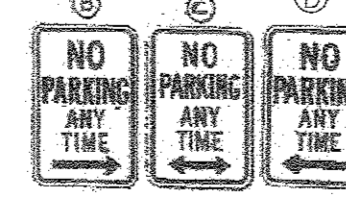
NOTES:

1. ALL INCOMING FLOW FROM PRIVATE PROPERTY CONNECTING TO A PUBLIC SD SYSTEM SHALL BE OWNED AND MAINTAINED BY HOA (TYP.)
2. ALL SIDEWALKS CONNECTING TO FLOW-THRU INLET SHALL BE TRAFFIC BEARING. THE LIMIT OF TRAFFIC BEARING SIDEWALK SHALL BE A MINIMUM OF 50 FOOT FROM EACH SIDE OF FLOW-THRU INLET.

TRAFFIC CONTROL SIGN LOCATION CHART

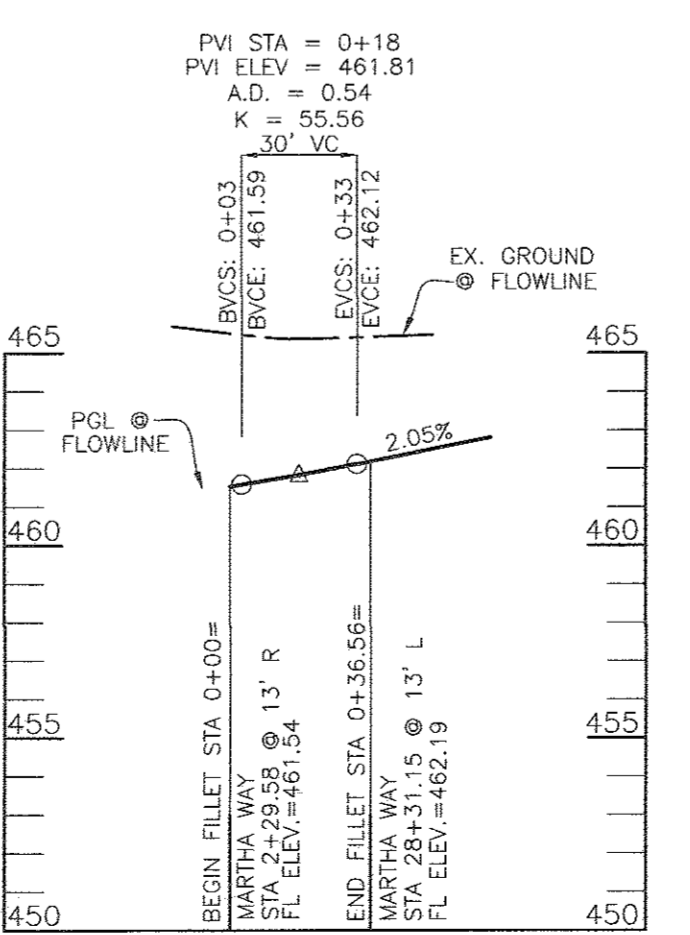
ROAD NAME	STATION	OFFSET	TYPE
MARTHA WAY	15+96.00	16.00' L	R7-1 NO PARKING SIGN - "B"
MARTHA WAY	16+81.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	17+69.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	18+68.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	19+90.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	21+20.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	22+33.00	16.00' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	23+35.00	16.50' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	24+64.00	16.50' L	R7-1 NO PARKING SIGN - "C"
MARTHA WAY	25+78.00	16.50' L	R7-1 NO PARKING SIGN - "D"

NOTE: ALL SIGN LOCATIONS ARE APPROXIMATE. HOWARD COUNTY TRAFFIC SIGNAL FIELD APPROVE OR MARK ALL SIGN LOCATIONS PRIOR TO ANY SIGNS BEING INSTALLED. CALL 410-313-5752.



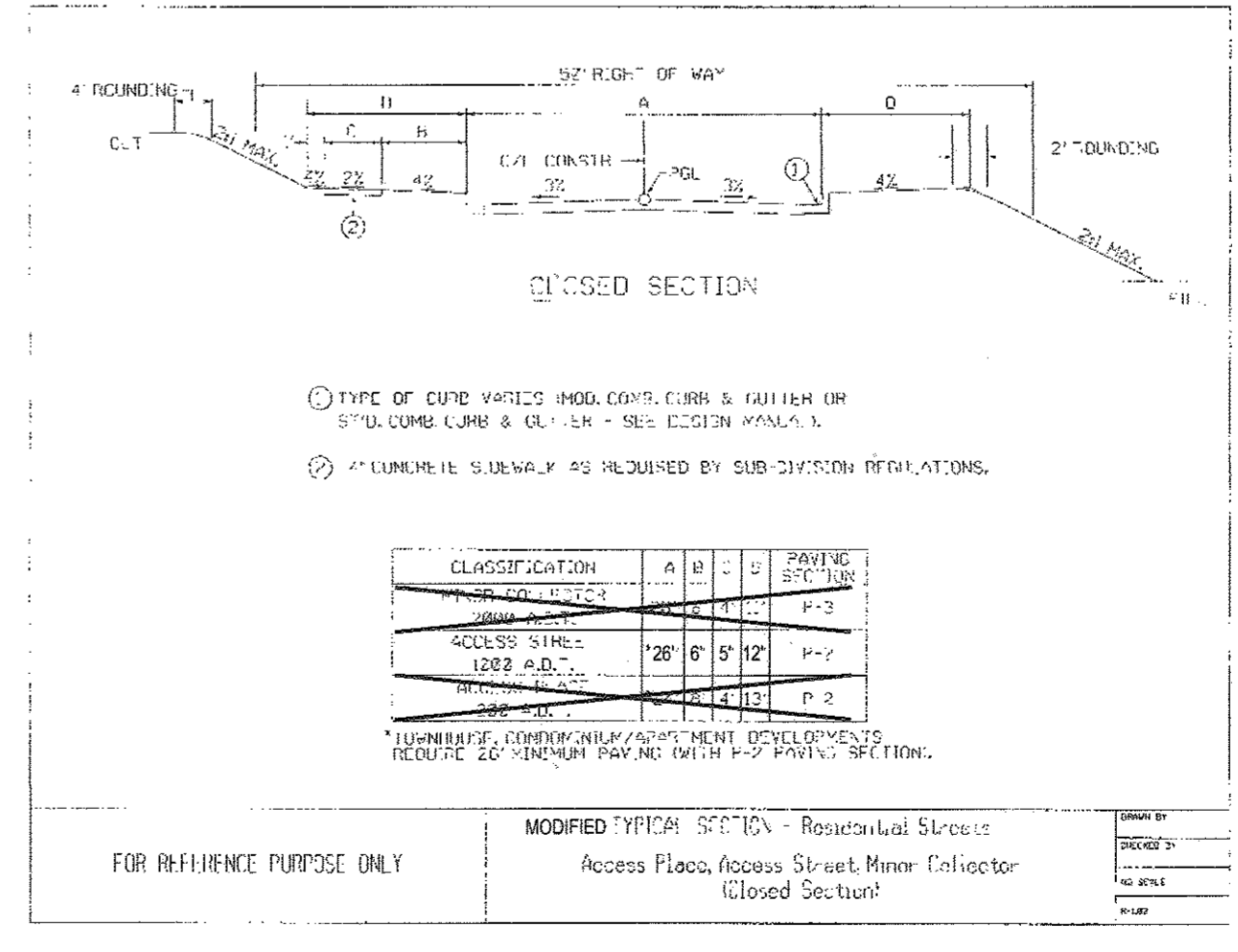
CURVE TABLE

ROAD	CURVE	LENGTH	RADIUS*	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
MARTHA WAY	C7	544.10	210.00	148°27'06"	743.40	S88°56'48"W	404.18
MARTHA WAY	C8	267.92	210.00	73°05'53"	155.67	S73°22'35"W	250.11
MARTHA WAY	C9	416.09	210.00	113°31'26"	320.45	S53°09'49"W	351.29



NOTE: PGL ELEVATIONS FOR CURB FILLET PROFILE ARE TO FLOWLINE

SEE SHEET 4



PROVIDE 7" REINFORCED CONCRETE SIDEWALKS NEAR MICRO BIO-RETENTION FACILITIES. REINFORCEMENT SHALL BE 6" x 6" W2.9x2.9 WIRE MESH OR #3 REINF BARS 12" O/C

DETAIL - REINFORCED CONCRETE SIDEWALK
NOT TO SCALE

STREET LIGHT LOCATIONS

ROAD NAME	STATION	OFFSET	FIXTURE/POLE TYPE
MARTHA WAY	13+73.83	17.00' L	LED-100 WATT COLONIAL FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
MARTHA WAY	15+91.5	16.00' O	
MARTHA WAY	18+59.00	16.50' O	
MARTHA WAY	21+20.39	16.00' R	
MARTHA WAY	23+26.00	16.00' L	
MARTHA WAY	25+72.00	16.00' L	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT

FINAL ROAD CONSTRUCTION PLAN
ROAD PLAN AND PROFILE
MARTHA WAY

MAPLE LAWN SOUTH
PHASE 1 - SECTION 1

LOT 1-64, NON-BUILDABLE BULK PARCEL A,
NON-BUILDABLE BULK PARCEL B, AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
OFF. REP. R2P-14-003, WP-15-136, PB#415, SP-15-014

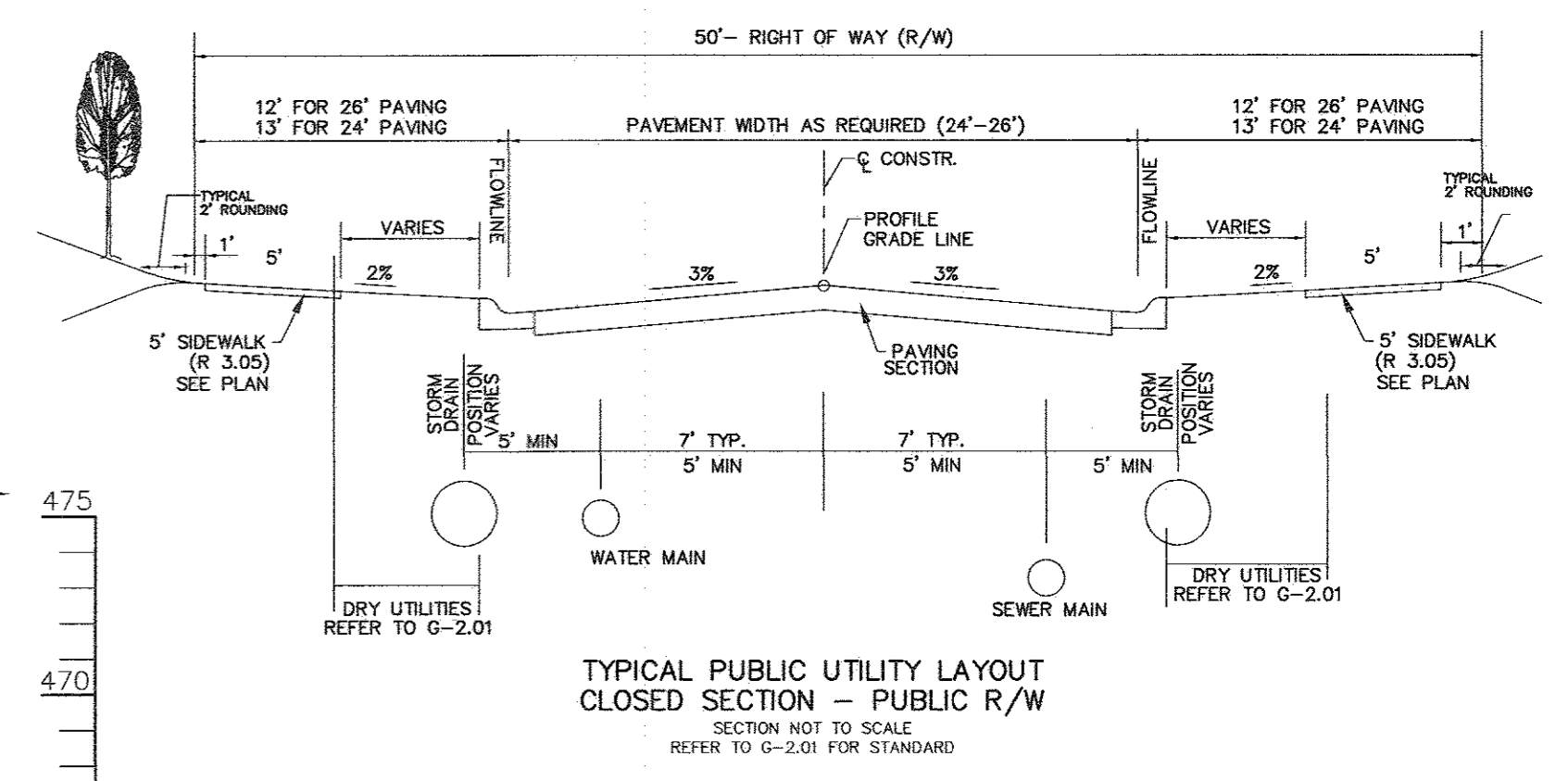
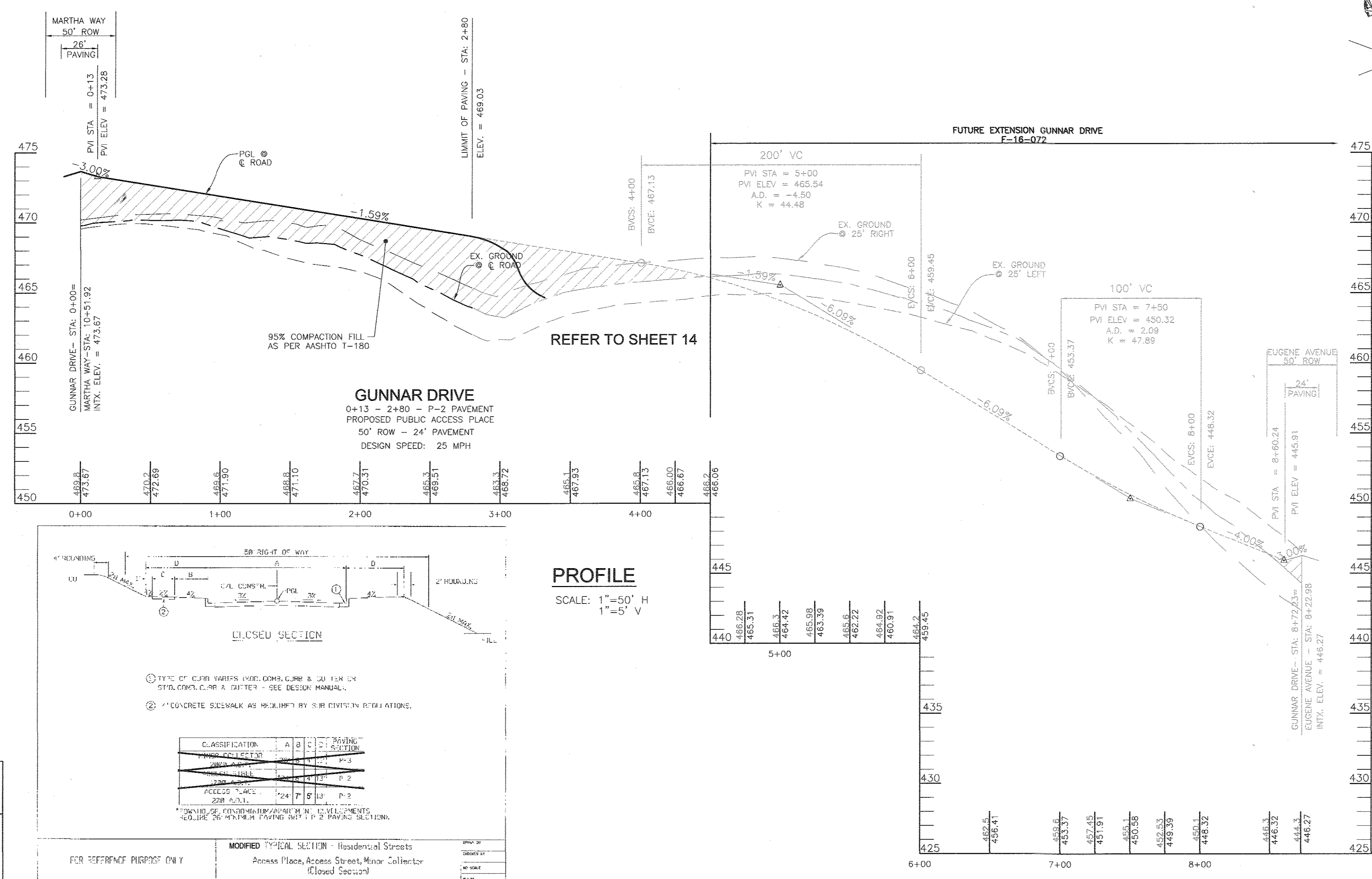
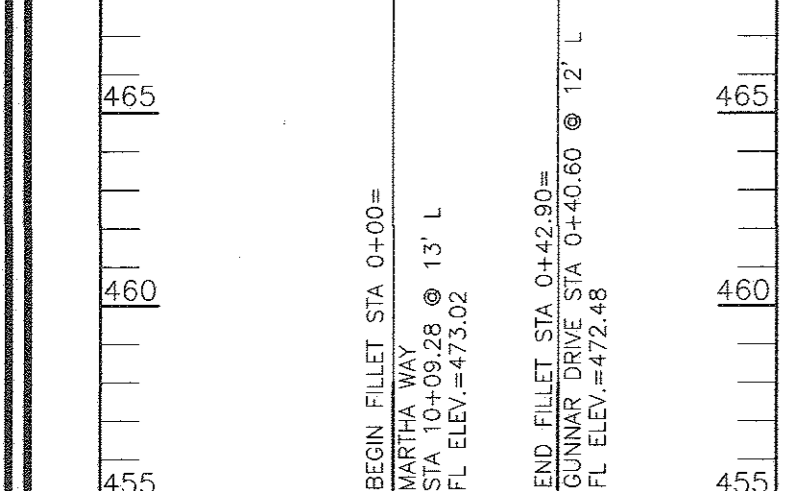
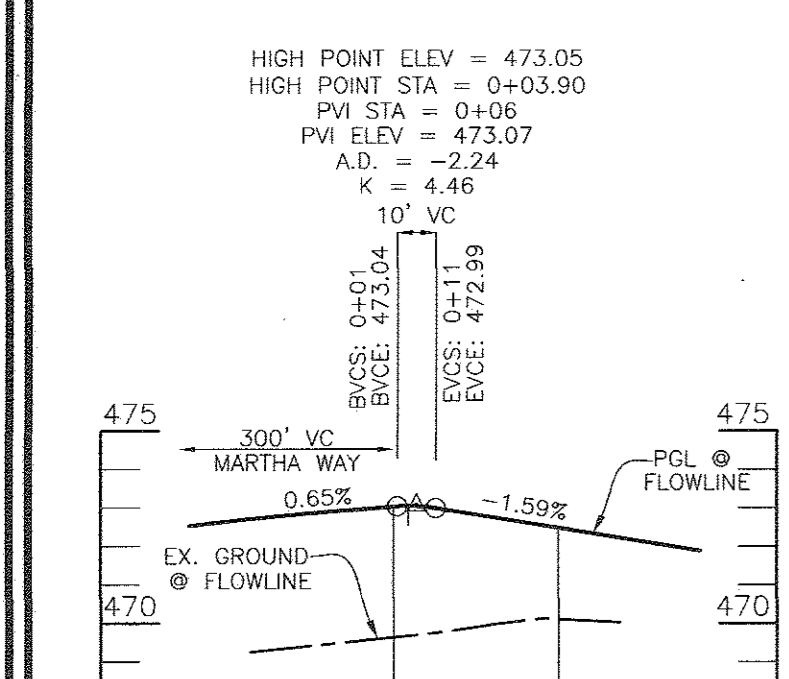
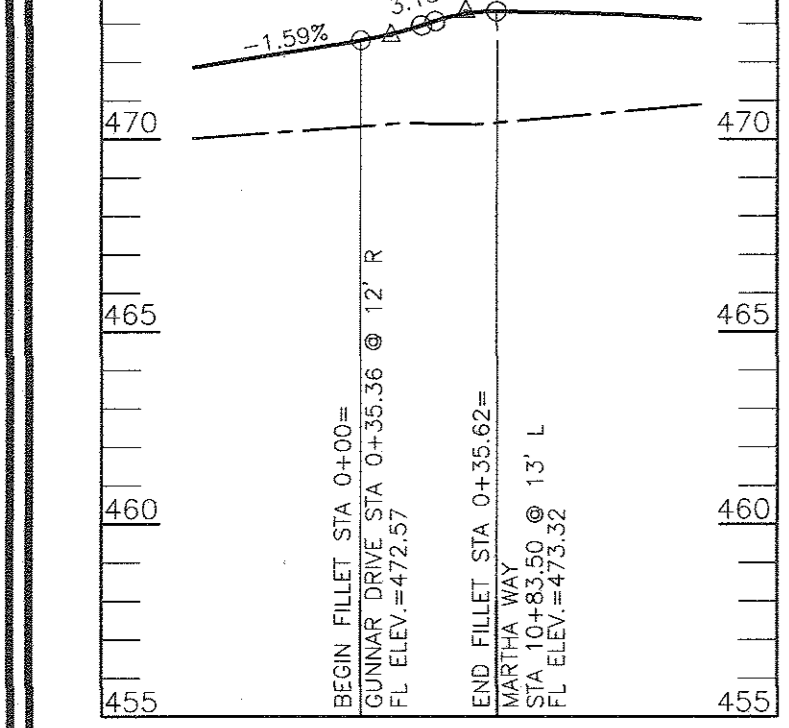
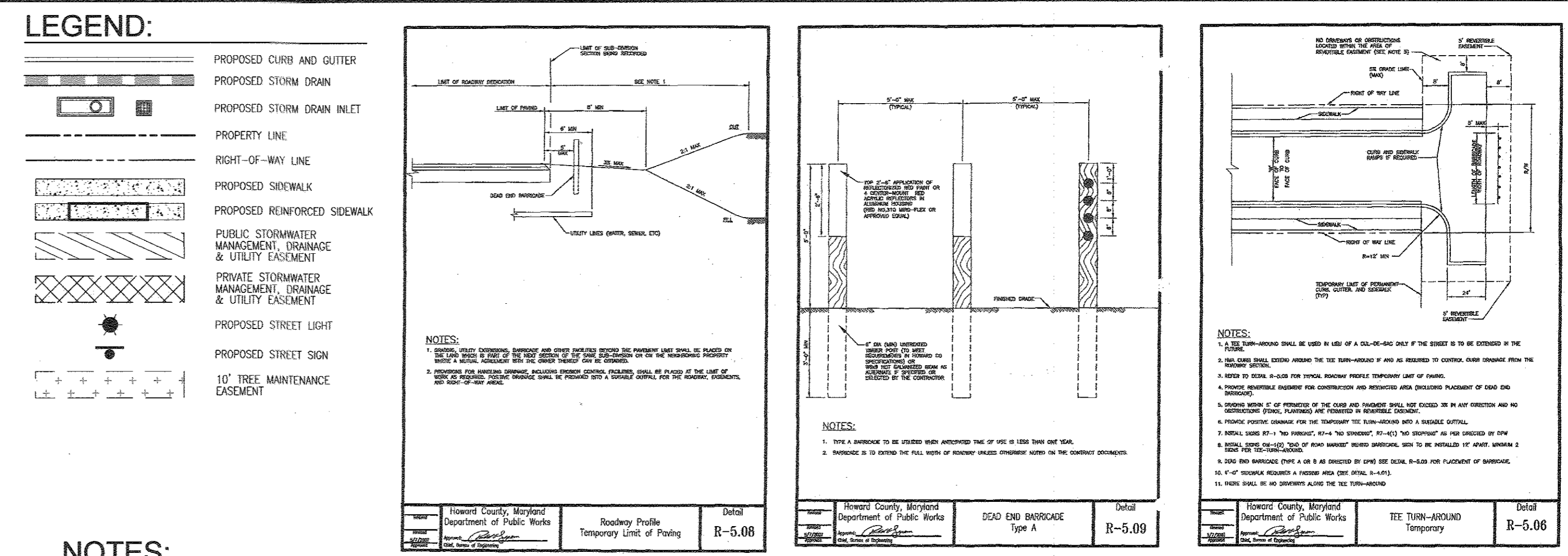
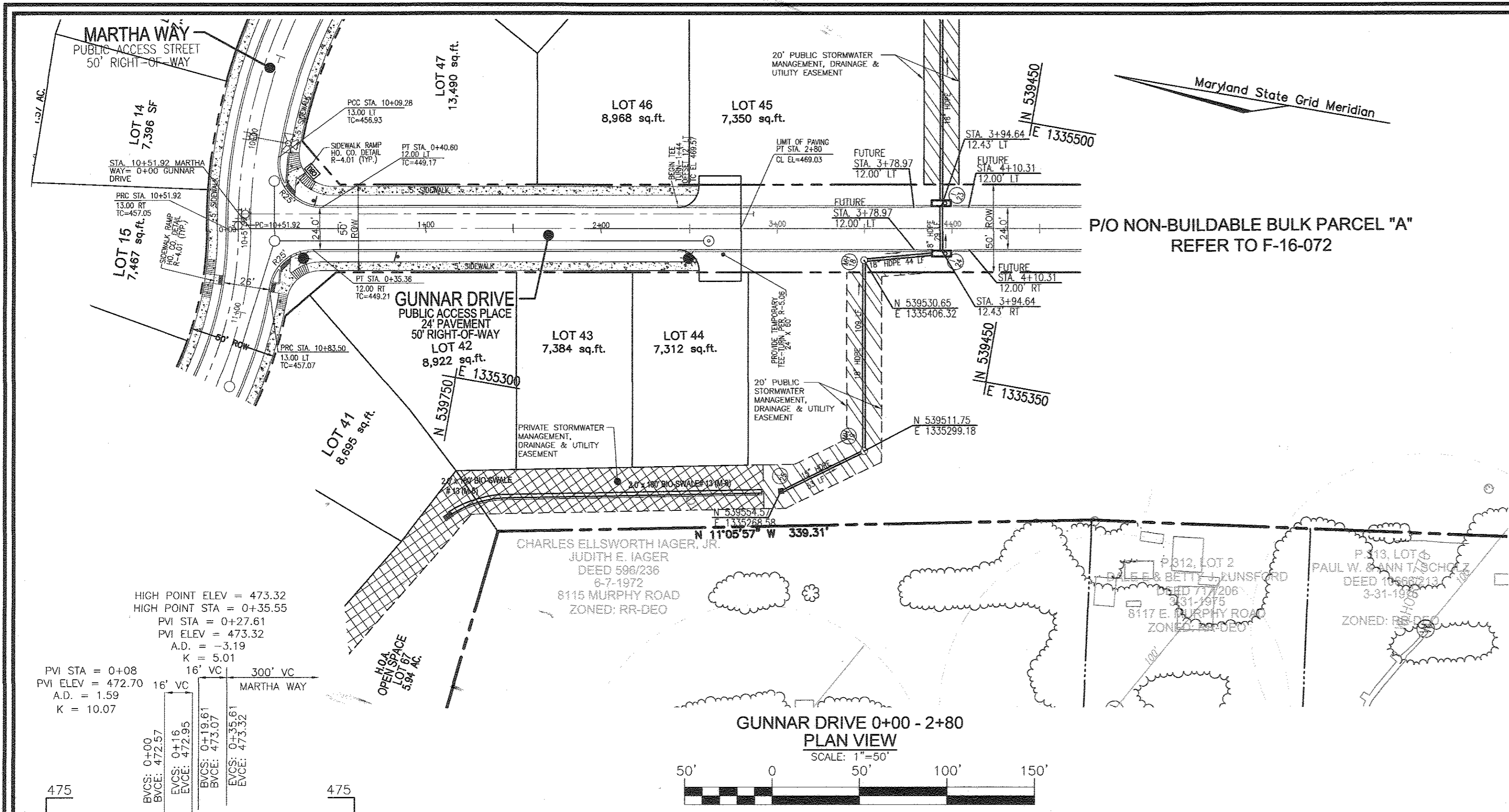
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE: 09-27-2019

5 SHEET OF 48



OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20755-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
ROAD PLAN AND PROFILE
GUNNAR DRIVE
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 48 - GRID 2 - PARCEL 113
 5TH ELECTION DISTRICT
 SPZ REF: ECP-14-093, WP-15-136, PB#415, SP-15-014
 ZONED: R-ED-MD-3
 HOWARD COUNTY, MARYLAND

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DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHW
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

6 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/11/16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-4-16

NOTE:
FOR DISTURBANCES WITHIN THE SHA RIGHT-OF-WAY, THE STATE HIGHWAY ADMINISTRATION REQUIRES SAME DAY STABILIZATION FOR ANY AREA WHICH DOES NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- BAFFLE
- LIMIT OF DISTURBANCE
- EARTH DIKE / CLEAN WATER DIVERSION
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- GABION PROTECTION
- REMOVABLE PUMP STATION
- SOIL BORING

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

OWNER
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FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A'
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
HOWARD COUNTY, MARYLAND

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DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

7 SHEET OF 48

PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"=50'
50' 0 50' 100' 150'

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	PERCENT CLAY	K FACTOR	PERCENT SAND	PERCENT SILT	PERCENT CLAY
Ba	SWAY SET LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES	NO
Ba	CLENELO LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO
GbB	CLENELO LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO
GbB	CLENELO SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES	NO
GbB	CLENELO-SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL	NO
MbC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*SILT COMPONENT OF GbB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRO



BASIN # 3
NOTE: PROVIDE 0.20 NOTCH IN RISER FROM ELEV. 440.70 TO RISER CREST @ ELEV. 443.00

FACILITY TYPE: TEMPORARY BASIN
EX. DRAINAGE AREA: 4.3 AC
INTERIM DRAINAGE AREA: 7.3 AC
PROP. DRAINAGE AREA: 7.0 AC
TOTAL WET STORAGE REQD: 13,140 CF
TOTAL DRY STORAGE REQD: 96,280 CF
TOTAL STORAGE REQUIRED: 109,420 CF
TOTAL WET STORAGE PRVD: 13,091 CF
TOTAL DRY STORAGE PRVD: 14,179 CF
TOTAL STORAGE PROVIDED: 27,270 CF
BOTTOM ELEV.: 437.50
RISER CREST ELEVATION: 443.00
(PROVIDE 0.2' NOTCH @ EL 440.70)
WET STORAGE ELEVATION: 437.50-439.15
DRY STORAGE ELEVATION: 439.15-440.70
TOTAL STORAGE DEPTH: 3.20' (437.50-440.70)
TOP OF EMBANKMENT: 448.00 (SETTLED)
CLEANOUT ELEVATION: 438.35
SIDE SLOPES: 2:1 INSIDE
3:1 OUTSIDE
EMERGENCY SPILLWAY: 14' @ ELEV 444.00
Q1 (EX.): 1.4 CFS
Q1 (BASIN): 1.1 CFS
*THROUGH DEWATER DEVICE ORIFICE & RISER NOTCH
1 YR TSM WSEL = 441.88
10 YR TSM WSEL = 444.20
BAFFLE DESIGN: SEE SHT 17

- NOTES**
- REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 18 FOR BASIN DETAILS
 - REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEET 41 FOR SOIL BORINGS
- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UP HILL BY 2' IN ELEVATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
10/25/2016
DATE
11/4/16
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
11/3/16
DATE
11-4-16
DATE

OWNER/DEVELOPER CERTIFICATION:
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

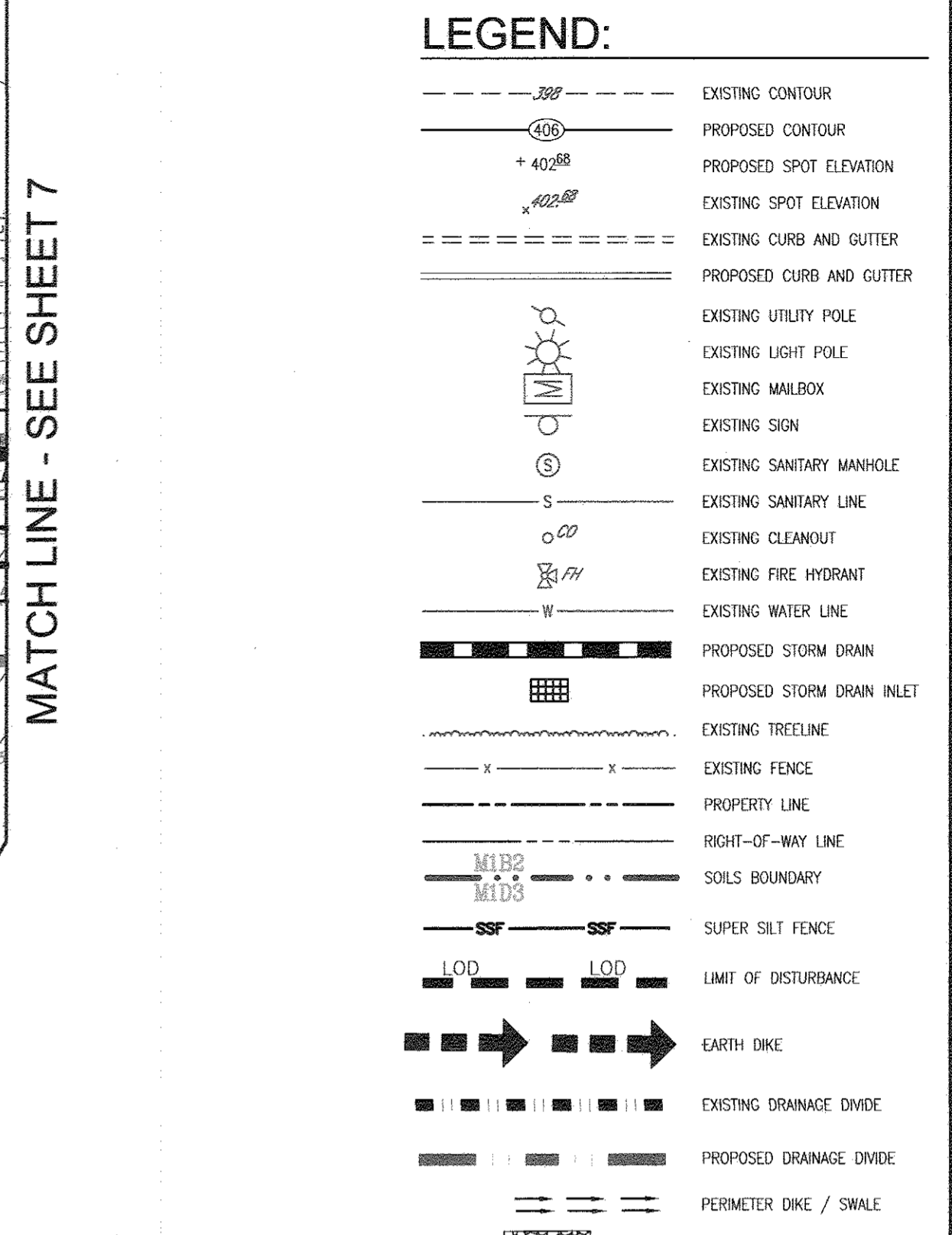
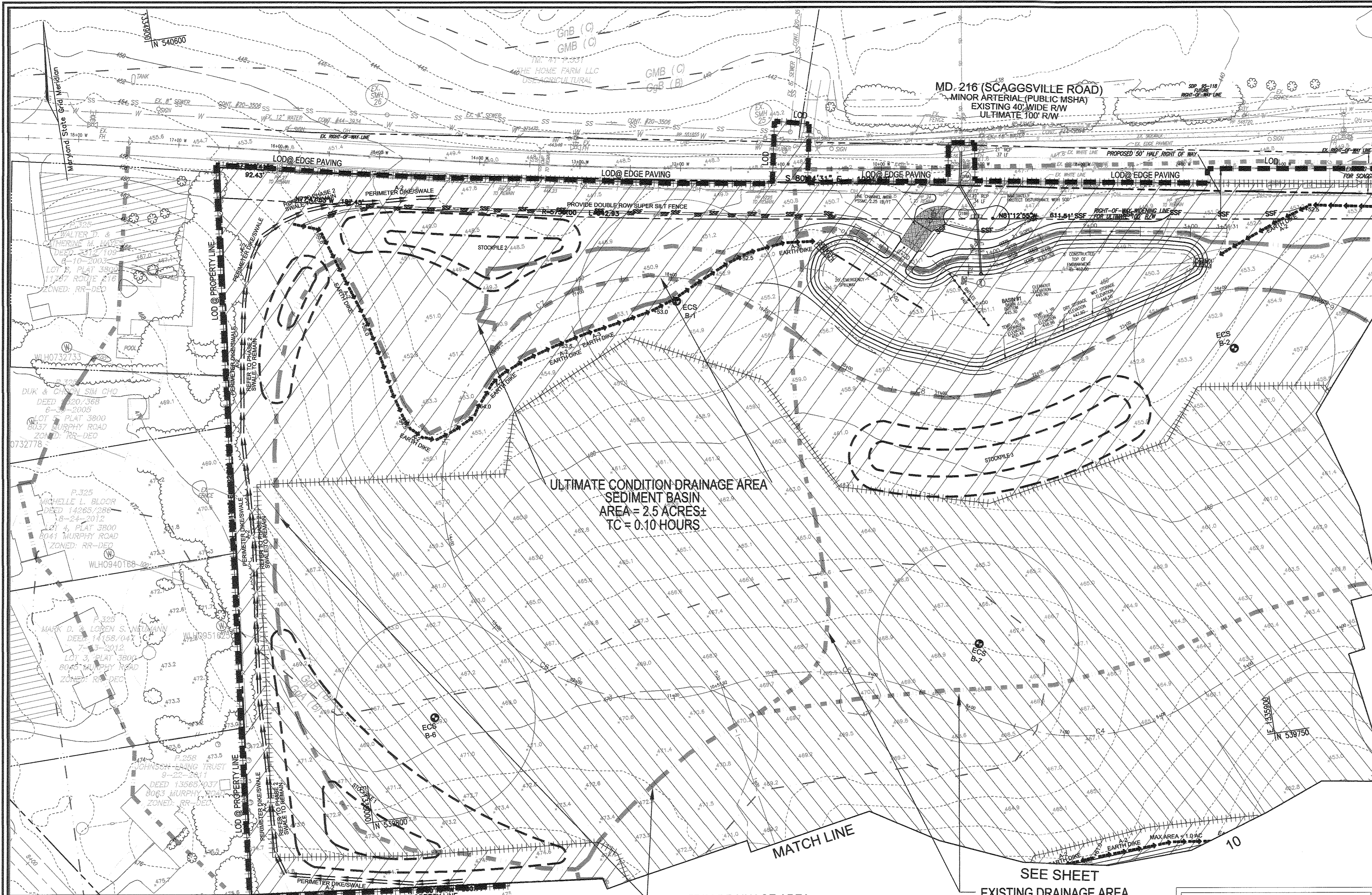
DATE: 9/24/16
SIGNATURE: [Signature]
PRINTED NAME & TITLE: Chris Murn

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 9/24/16
SIGNATURE: [Signature]
PRINTED NAME: ROBERT H. VOGEL
MD REGISTRATION NO. 16193
P.E. R.L.S., OR R.L.A. (circle one)

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

DATE: 10/24/16
SIGNATURE: [Signature]
HOWARD S.C.D.



BASIN # 1

FACILITY TYPE: TEMPORARY BASIN
 EX. DRAINAGE AREA: 11.0 AC.
 INTERIM DRAINAGE AREA: 14.5 AC.
 ULTIMATE DRAINAGE AREA: 2.5 AC.
 TOTAL WET STORAGE REQD: 26,100 CF
 TOTAL DRY STORAGE REQD: 52,200 CF
 TOTAL STORAGE REQUIRED: 78,300 CF
 TOTAL WET STORAGE PRVD: 26,649 CF
 TOTAL DRY STORAGE PRVD: 27,468 CF
 TOTAL STORAGE PROVIDED: 54,117 CF
 BOTTOM ELEV: 445.30
 RISER CREST ELEVATION: 449.00
 WET STORAGE ELEVATION: 445.30-446.50
 DRY STORAGE ELEVATION: 446.50-447.60
 TOTAL STORAGE DEPTH: 2.3' (447.60-445.30)
 TOP OF EMBANKMENT: 452.00 (SETTLED)
 CLEANOUT ELEVATION: 445.90
 SIDE SLOPES: 2:1 INSIDE, 3:1 OUTSIDE
 20'

NOTES

- REFER TO SHEET 16 FOR SEQUENCE OF CONSTRUCTION
- REFER TO SHEET 17 FOR BASIN / TRAP DETAILS
- REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES
- REFER TO SHEET 40 FOR SOIL BORINGS

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

MATCH LINE SEE SHEET 10

NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

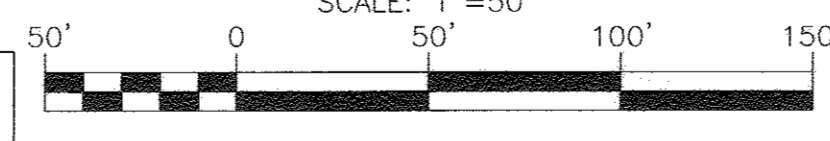
NOTE:
 FOR DISTURBANCES WITHIN THE SHA RIGHT-OF-WAY, THE STATE HIGHWAY ADMINISTRATION REQUIRES SAME DAY STABILIZATION FOR ANY AREA WHICH DOES NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.

INTERIM DRAINAGE AREA SEDIMENT BASIN
 AREA = 14.50 ACRES±
 TC = 0.10 HOURS

EXISTING DRAINAGE AREA SEDIMENT BASIN
 AREA = 11.0 ACRES±
 TC = 0.22 HOURS

NOTE:
 STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT HYDRIC	K FACTOR	PERCENT PARALLEL	PERCENT PERPENDICULAR
Bsa	BLE	NO	0 TO 3 PERCENT SLOPES	0.32	NO	YES
Csa	CLNED	NO	0 TO 3 PERCENT SLOPES	0.20	YES	NO
Csb	CLNED	NO	3 TO 8 PERCENT SLOPES	0.20	YES	NO
Gmb	CLMABLE	NO	3 TO 8 PERCENT SLOPES	0.37	YES	YES
Gmb	CLMABLE	NO	8 TO 15 PERCENT SLOPES	0.37	NO	PARTIAL
Msc	MARL	NO	8 TO 15 PERCENT SLOPES	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF Gmb, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/16
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/25/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JR
 [Signature] 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.
 [Signature] 9/26/16
 OWNER/DEVELOPER SIGNATURE
 ROBERT H. VOGEL
 PRINTED NAME & TITLE

DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 9/26/16
 DESIGNER'S SIGNATURE
 ROBERT H. VOGEL
 PRINTED NAME
 MD REGISTRATION NO. 16193
 (P.E. R.L.S., OR R.L.A. (circle one))

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 10/26/16
 HOWARD S.C.D.
 DATE

FINAL ROAD CONSTRUCTION PLAN
PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRD 2 - PARCEL 113
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 ZONED: R-ED-MKD-3
 HOWARD COUNTY, MARYLAND
 RPZ REF: ECP-14-093, WP-15-136, PBA#115, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21104
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHW
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

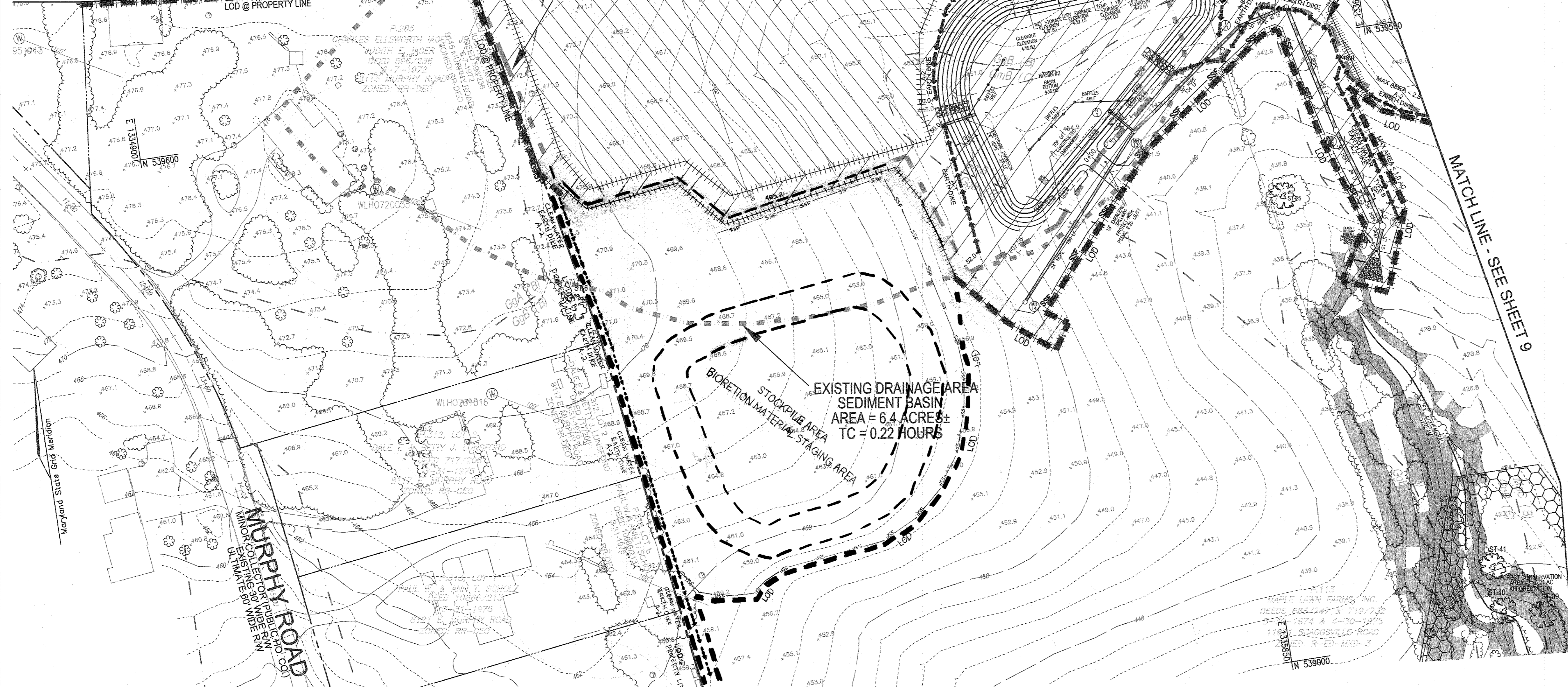
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND (LICENSE NO. 16193)
 EXPIRATION DATE: 09-27-2018

8 SHEET OF 48

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23						
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	PERCENT ERODIBLE	K FACTOR	CRITICAL SLOPE
Ba	BALE SFT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO
Ga	CLENGE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES
Gb	CLENGE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	NO
Gc	CLENGE SFT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES
Gd	CLENGE SFT LOAM, 8 TO 15 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO
Ma	MAJOR LOAM, 0 TO 8 PERCENT SLOPES	B	NO	NO	0.24	YES
Mb	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF Gb, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRO

MATCH LINE - SEE SHEET 8
 LOD @ PROPERTY LINE



- NOTES**
- REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 18 FOR BASIN DETAILS
 - REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEET 41 FOR SOIL BORINGS

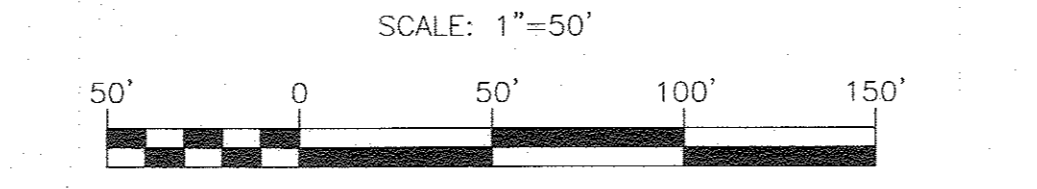
LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	EXISTING SPECIMEN TREE
	EXISTING TREELINE
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	EARTH DIKE / CLEAN WATER DIVERSION
	EXISTING DRAINAGE DIVIDE
	PROPOSED DRAINAGE DIVIDE
	BAFFLE
	GABION PROTECTION
	REMOVABLE PUMP STATION
	GRADING UNIT #1A
	GRADING UNIT #1B
	GRADING UNIT #2

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



BASIN # 2

FACILITY TYPE:	TEMPORARY BASIN
EX. DRAINAGE AREA:	6.4 AC.
INTERIM DRAINAGE AREA:	14.2 AC.
PROP. DRAINAGE AREA:	19.2 AC.
TOTAL WET STORAGE REQD:	34,560 CF
TOTAL DRY STORAGE REQD:	34,560 CF
TOTAL STORAGE REQUIRED:	69,120 CF
TOTAL WET STORAGE PRVD:	35,308 CF
TOTAL DRY STORAGE PRVD:	35,049 CF
TOTAL STORAGE PROVIDED:	70,357 CF
BOTTOM ELEV. ELEVATION:	438.00
RISER CREST ELEVATION:	441.00
WET STORAGE ELEVATION:	436.00-437.60
DRY STORAGE ELEVATION:	437.60-439.05
TOTAL STORAGE DEPTH:	3.15' (436.15-436.00)
TOP OF EMBANKMENT:	444.00 (SETTLED)
CLEANOUT ELEVATION:	436.82
SIDE SLOPES:	2:1 INSIDE 3:1 OUTSIDE
EMERGENCY SPILLWAY:	18'
01 (EX.): 1.0 CFS	
01 (BASIN): 1.0 CFS *	
*THROUGH DEWATER DEVICE ORIFICE AND RISER NOTCH	
1 YR TSMW WSEL= 441.03	
10 YR TSMW WSEL= 442.79	
BAFFLE DESIGN:	SEE SHT 17

- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2' IN ELEVATION.

NOTE:
 STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/6/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11/4/16

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODS ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER/DEVELOPER SIGNATURE
 CHRIS MUNN
 PRINTED NAME & TITLE
 DATE: 9/26/16

DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DESIGNER'S SIGNATURE
 ROBERT H. VOGEL
 PRINTED NAME
 MD REGISTRATION NO. 16183
 (P) R.L.S. OR R.L.A. (Circle one)
 DATE: 9/25/16

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

JOHN R. ROBERTS
 DATE: 10/30/16

NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

1 REVISION: REVISE LIMITS OF DISTURBANCE TO ADD A STOCKPILE 10/19/17

NO. REVISION DATE

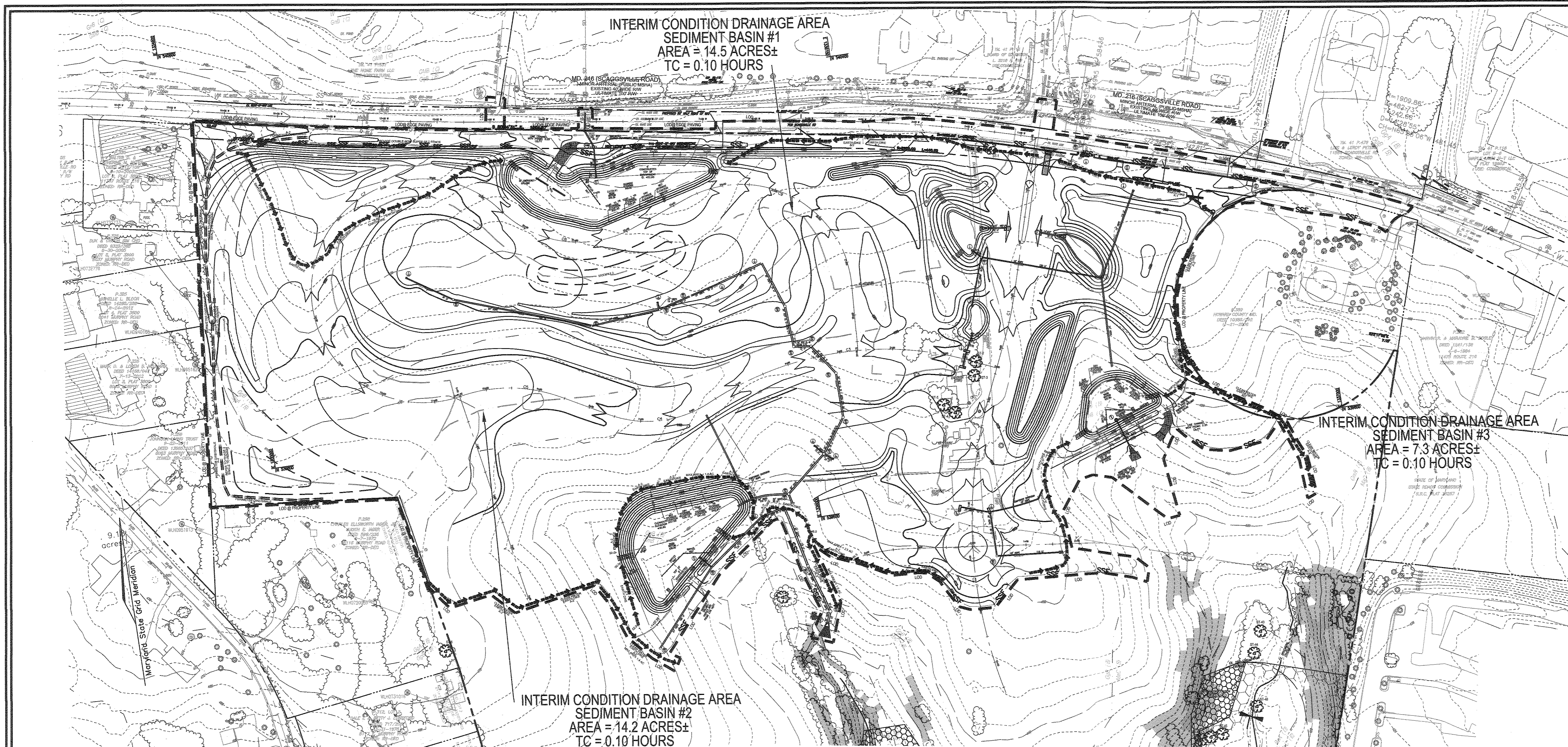
FINAL ROAD CONSTRUCTION PLAN
PHASE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
 5TH ELECTION DISTRICT
 08/27/07 ECP-14-093, WP-15-136, PB#115, SP-15-014 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

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. 16183, EXPIRATION DATE: 12-31-2018

10 SHEET OF 48



LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- EARTH DIKE / CLEAN WATER DIVERSION
- INTERIM DRAINAGE DIVIDE

NOTES
 1. ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 2. IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UP HILL BY 2' IN ELEVATION.

THERE ARE 3 AREAS OF STUDY; 36 ACRES +/- DISTURBED.

THE INTERIM CONDITION IS AS DESCRIBED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AS THE "IN-BETWEEN". IT ACCOUNTS FOR THE PERIMETER EARTH DIKES/CONTROLS WHICH EXPAND THE EXISTING CONDITIONS TO CAPTURE THE DISTURBED AREA. THIS PORTION OF THE PROJECT IS A DYNAMIC DRAINAGE AREA WHICH MAY EXPAND OR CONTRACT AND EVENTUALLY TRANSITIONS TO THE ULTIMATE AREA VIA THE STORM DRAIN AND PROPOSED ROAD GRADES.

-BASIN 1 - THIS BASIN IS LOCATED IN A NATURAL "DRAW" TOWARD MD 216. THE EXISTING CONDITION MODELS THE AREA WHICH DRAINS TO THE OUTFALL POINT. THE ULTIMATE CONDITION MODELS THAT AFTER STORM DRAIN AND PROPOSED GRADING CREATES THE GRADE BREAKS AND DRAINAGE AREAS TOWARD THE OUTFALL POINT.

THE NATURAL DIVIDE MAKES THE EXISTING CONDITIONS THE DRIVING DESIGN PARAMETER. FOR THE INTERIM CONDITION, THE PHASE 1 WORK ASSOCIATED WITH BASIN #3 IMMEDIATELY REDUCES THE NATURAL AREA TO THE OUTFALL. THE INSTALLATION OF THE EARTH DIKE ALONG NATURAL GROUND, FEEDING THE BASIN FROM THE WEST, ALSO DECREASES THE AREA TO THE OUTFALL. IN THE INTERIM CONDITION, THE MARTHA WAY RIGHT OF WAY IS PLACED TO SUBGRADE, AND THE STORM DRAIN IN THE CENTER OF THE MARTHA WAY "CIRCLE" IS BEING INSTALLED. THIS STORM DRAIN CONVEYS RUNOFF TOWARD BASIN #2 FURTHER DECREASING THE INTERIM DRAINAGE AREA TO BASIN #1. AS WORK PROGRESSES, THE AREA DRAINING TOWARD BASIN #1 CONTINUALLY DECREASES THE INTERIM CONDITION TO THE ULTIMATE AREA OF 2.5 ACRES. THIS ULTIMATE AREA IS MOSTLY STABILIZED BERM SLOPES AND THE NORTHERN 1/2 RIGHT-OF-WAY OF MARTHA WAY. 10+50 - 28+00.

-BASIN 2 - THIS BASIN IS LOCATED IN A NATURAL "DRAW", JUST SOUTH OF THE PROPERTIES NATURAL DRAINAGE DIVIDE. THE EXISTING CONDITION MODELS THE AREA WHICH DRAINS TO THE OUTFALL POINT. THE ULTIMATE CONDITION MODELS THAT AFTER STORM DRAIN AND PROPOSED GRADE CREATE THE GRADE BREAKS AND DRAINAGE AREAS WHICH DRAIN TOWARD THE OUTFALL POINT.

AREAS TOWARD THE OUTFALL POINT. THIS INCLUDE THE LOW AREA AT THE CENTER OF MARTHA WAY "CIRCLE" WHICH INITIALLY DRAINS TOWARD BASIN #1.

FROM THE NATURAL DRAINAGE DIVIDE SOUTH TO THE BASIN, THE INITIAL INTERIM CONDITION EXPANDS THE EXISTING DRAINAGE AREA TO THE LIMITS OF THE CONTRIBUTING TEMPORARY EARTH DIKES. PER THE SEQUENCE OF CONSTRUCTION, THE STORM DRAIN WHICH HEADS INTO THE MARTHA WAY "CIRCLE" IS TO BE INSTALLED WHICH DIVERTS BASIN #1 AREA TOWARD BASIN #2.

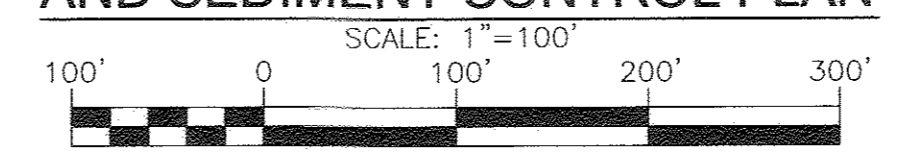
AS THE BASIN #1 AREA DECREASES AND STORM DRAINS AND GRADING IN THE MARTHA WAY "CIRCLE" ARE SET, THE INTERIM CONDITION QUICKLY CONVERTS TO THE ULTIMATE CONDITION; DRAINING THE "CIRCLE" TOWARD BASIN #2.

-BASIN 3 - THIS BASIN IS LOCATED IN A NATURAL "DRAW". THE EXISTING CONDITION MODELS THE AREA WHICH DRAINS TO THE OUTFALL POINT AS THE SITE LAYS TODAY. THE ULTIMATE CONDITION MODELS THAT AFTER STORM DRAINS AND PROPOSED ROAD GRADES CREATE THE GRADE BREAKS AND INDIVIDUAL DRAINAGE AREAS WHICH DRAIN TOWARD THE OUTFALL POINT.

IN THE CASE OF BASIN #3, THE SEQUENCE OF CONSTRUCTION REQUIRES THAT BASIN #3 BE CONSTRUCTED FIRST AS "PHASE 1". THIS WILL CAPTURE RUNOFF FROM THE EXISTING DRAINAGE AREA AND AS EXPANDED OR REDUCED BY THE INSTALLATION OF THE PERIMETER CONTROLS (EARTH DIKE OR CLEAN WATER DIVERSION DIKE) AS THE ENTRANCE ROAD IS PROPOSED TO FALL INTO THE PROJECT SITE, THE REQUIRED DIFFERENCE IN PRE & POST GRADING EXPANDS ONLY SLIGHTLY OVER THE EXISTING DRAINAGE AREA. THE ADDITION OF A DIVERSION PIPE FROM INLET 10 AT THE TRAFFIC CIRCLE TO BASIN #3 HAS BEEN ADDED. THIS INITIAL AREA OF THE PROJECT SHALL BE PLACED TO GRADE, STABILIZED AND PLACED TO BASE PAVEMENT IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION.

PER THE "GRADING UNIT" POLICY, WHERE NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME (SECTION A.3 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL), THE STABILIZATION OF THIS "BASIN #3" AREA REDUCES THE TOTAL DISTURBED AREA TO LESS THAN 30 ACRES. ANY EXCESS CUT MATERIAL CAN BE PLACED IN THE FILL AREAS OF THE BASIN #1 DRAINAGE AREA. THE CHANGE IN SEDIMENT CONTROLS, AS DISCUSSED IN SECTION A.4 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IS THE INSTALLATION OF THE DIVERSION PIPE.

INTERIM - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

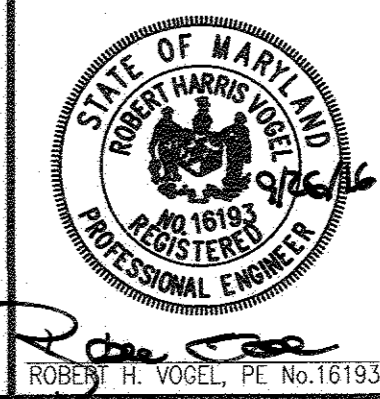
FINAL ROAD CONSTRUCTION PLAN

INTERIM - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN

MAPLE LAWN SOUTH PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRID 2 - PARCEL 113
 20TH ELECTION DISTRICT
 DPZ REF: ECP-14-093, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

11 SHEET OF 48

NOTES

REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 REFER TO SHEET 18 FOR BASIN / TRAP DETAILS
 REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES
 REFER TO SHEET 41 FOR SOIL BORINGS

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

ROBERT H. VOGEL
 PRINTED NAME
 DATE: 10/20/16
 JOHN R. ROBERTSON
 HOWARD S.C.D.
 DATE: 10/20/16

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT HYDRIC	K FACTOR	PERCENT PERMEABLE	PERCENT STONELINESS
BsA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
CgA	GLENNVILLE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
CgB	GLENNVILLE LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
GnB	GLENNVILLE-BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	C	PROBABLY PARTIALLY*	NO	0.37	NO	PARTIAL
MmC	MARSH LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF GNB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/16/16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-14-16

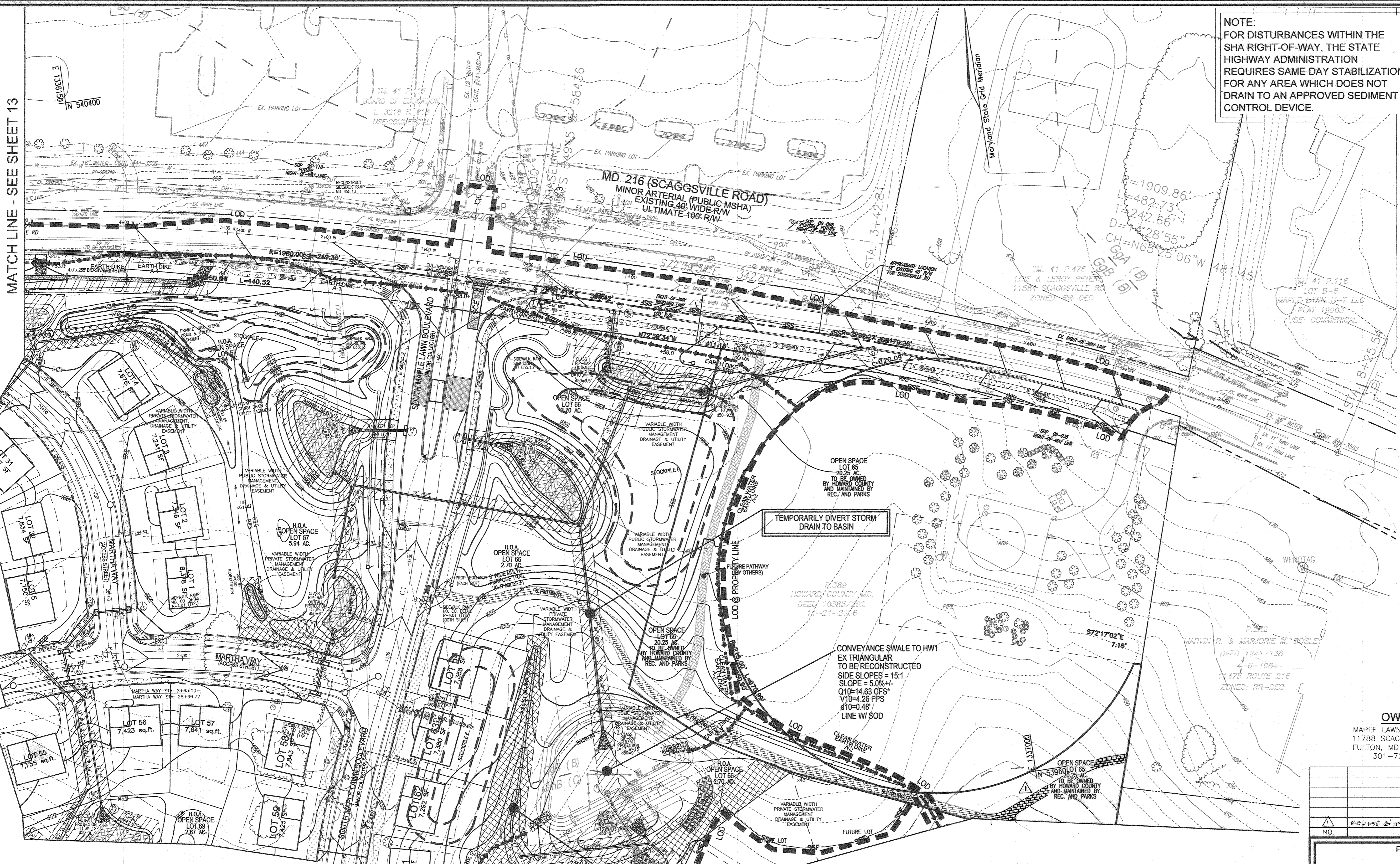
OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERMITS ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER/DEVELOPER SIGNATURE
 CHRIS MURM
 PRINTED NAME & TITLE
 DATE: 9/20/16

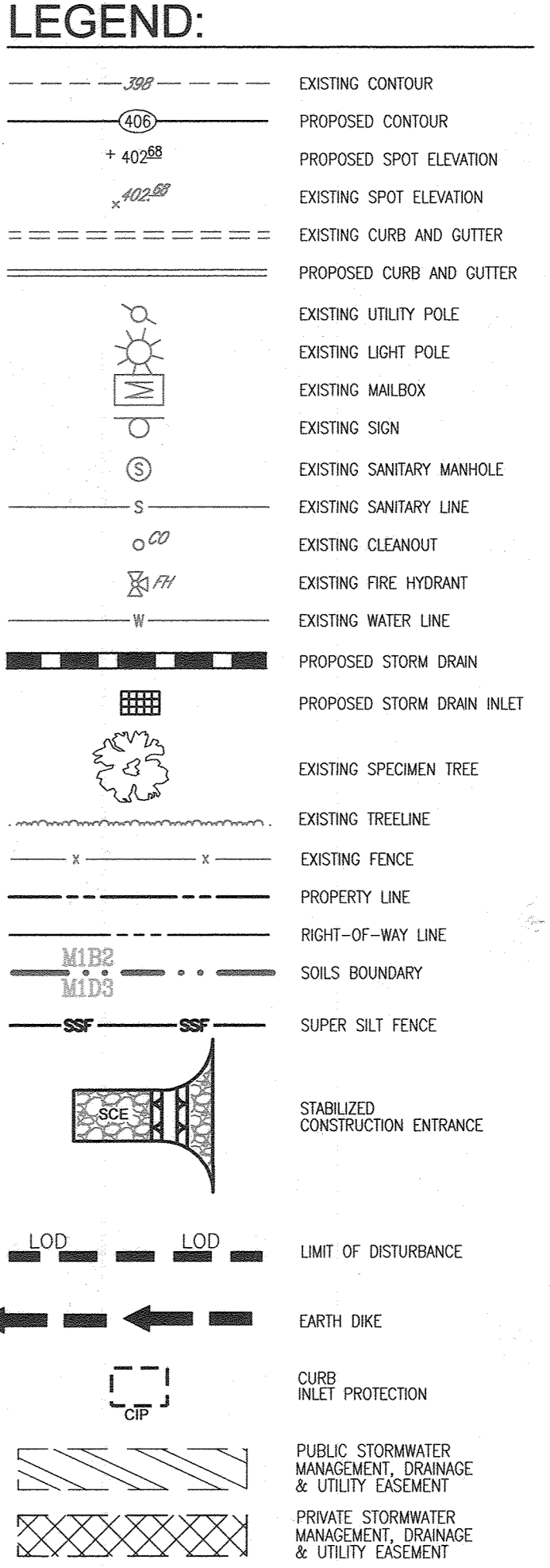
DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS. THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DESIGNER'S SIGNATURE
 ROBERT H. VOGEL
 PRINTED NAME
 DATE: 10/20/16
 JOHN R. ROBERTSON
 DATE: 10/20/16

MATCH LINE - SEE SHEET 13



NOTE:
FOR DISTURBANCES WITHIN THE
SHA RIGHT-OF-WAY, THE STATE
HIGHWAY ADMINISTRATION
REQUIRES SAME DAY STABILIZATION
FOR ANY AREA WHICH DOES NOT
DRAIN TO AN APPROVED SEDIMENT
CONTROL DEVICE.



NOTE:
- SILT FENCE IS TO BE REPLACED WITH
SUPER SILT FENCE IN THE DIRECTION OF
THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO
MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE
SHALL BE INSTALLED IN THE DIRECTION OF
THE SEDIMENT CONTROL INSPECTOR.

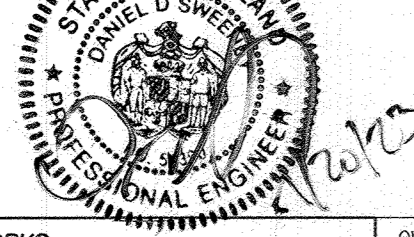
OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIWA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

- NOTES**
- REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 18 FOR BASIN DETAILS
 - REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES

FOR REVIEW BY GHW
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.
EXPIRES 12/31/2026
ROBERT H. VOGEL
10/25/2016

- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2" IN ELEVATION.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/1/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION JR
DATE

[Signature] 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

OWNER/DEVELOPER CERTIFICATION:
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT
WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL
PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL
RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE
A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT
(MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND
SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR
PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL
CONSERVATION DISTRICT AND/OR MDE.

[Signature] 9/26/16
ROBERT H. VOGEL
PRINTED NAME & TITLE

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT
MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT
IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE
OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF
THE HOWARD SOIL CONSERVATION DISTRICT.

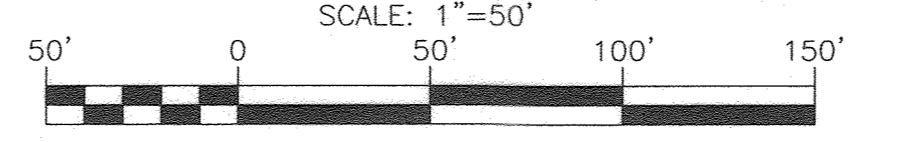
[Signature] 9/25/16
ROBERT H. VOGEL
PRINTED NAME

MD REGISTRATION NO. 16193
(P.E. R.L.S., OR R.L.A. (circle one))

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

[Signature] 10/20/16
HOWARD S.C.D.
DATE

**PHASE 2 - GRADING, SOIL EROSION
AND SEDIMENT CONTROL PLAN**



PHASE 1 - SEDIMENT CONTROLS ARE SHOWN HEREON AND
ARE TO BE UTILIZED REMOVAL OF ANY DEVICE SHALL BE
AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.

NOTE:
STABILIZATION IS TO BE DONE AT
THE DIRECTION OF THE SEDIMENT
CONTROL INSPECTOR OR AT THE
INTERVALS REQUIRED BY THE 2011
STDS. & SPECS. WHICHEVER IS
MORE RESTRICTIVE.

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	MOISTURE REGIMENS	K FACTOR	PERCENT FROM PLAN	CRUISE SLOPE
Ga	BULK SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
Ga	GLENNLE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gb	GLENNLE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gb	GLENNLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
Gb	GLENNLE-SILT SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
Mc	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER
THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR
K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*SILT COMPONENT OF Gb, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NO.	REVISION	DATE
1	REVISE & PATHWAY (BY GHW)	7.20.23

FINAL ROAD CONSTRUCTION PLAN
**PHASE 2 - GRADING, SOIL EROSION
AND SEDIMENT CONTROL PLAN**
**MAPLE LAWN SOUTH
PHASE 1 - SECTION 1**
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113
57th ELECTION DISTRICT
DPZ REF: ECP-14-093, WP-15-136, PB#415, SP-15-014
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

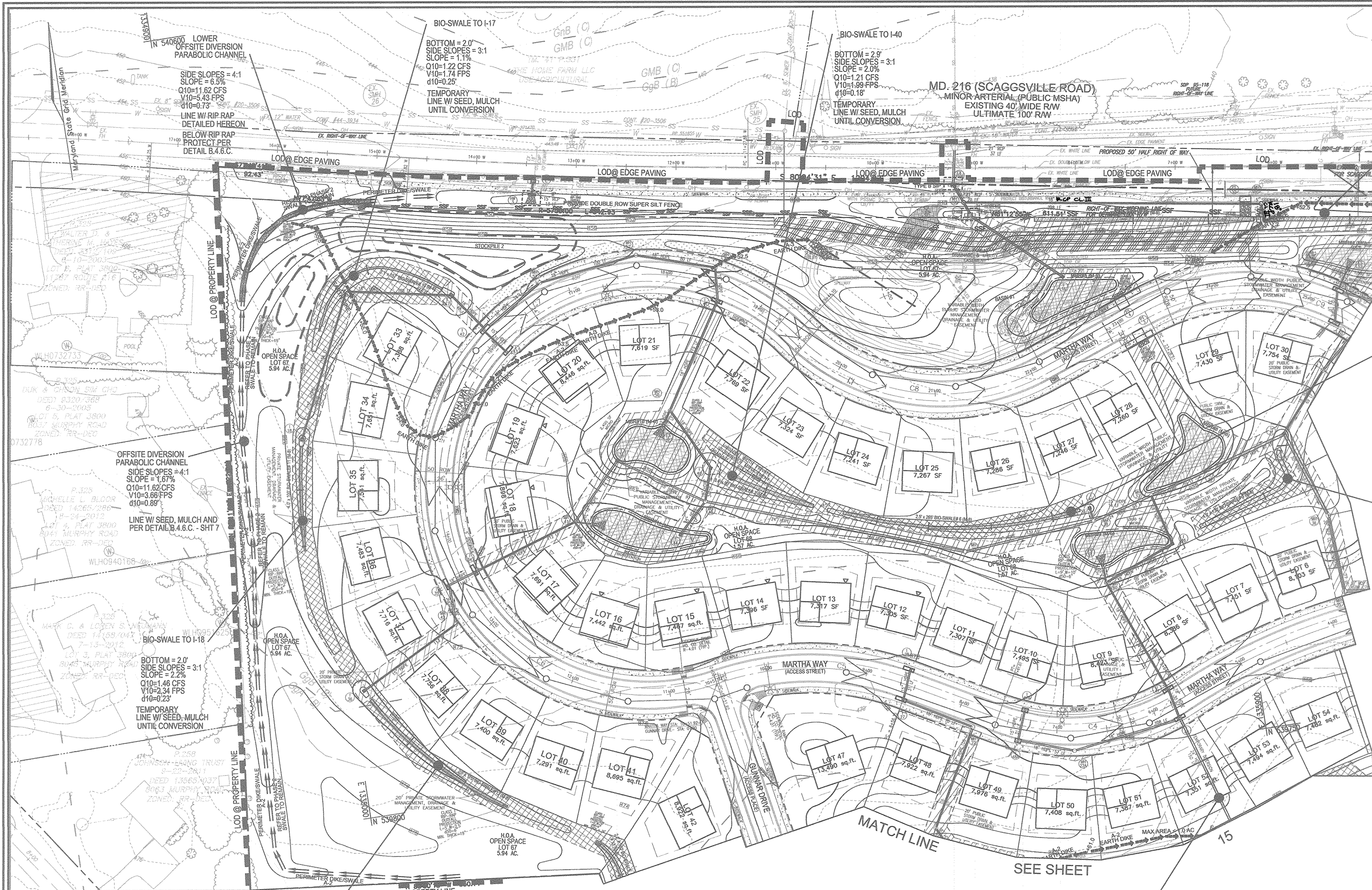
**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21143
TEL: 410.461.7666
FAX: 410.461.8961



DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
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. 10115
EXPIRATION DATE: 09-27-2018

12 SHEET OF 48



LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MALEBX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES
- EXISTING TREE LINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EARTH DIKE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- PERIMETER DIKE / SWALE
- STANDARD INLET PROTECTION
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PUBLIC SEWER & UTILITY EASEMENT

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

- NOTES**
- REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 18 FOR BASIN DETAILS
 - REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BLVD. REVISE CIRCULAR TRUCK APRON. AMEND STORM DRAIN PROFILES & SCHEDULES AND BIO-SWALE CHART	8/9/17

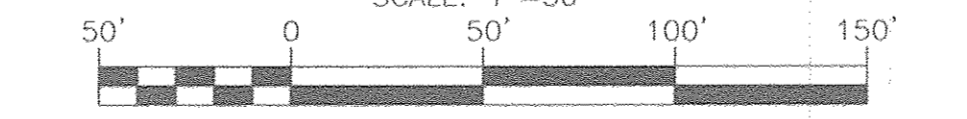
MATCH LINE SEE SHEET 15

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

BIO-SWALE TO I-36
BOTTOM = 2.5'
SIDE SLOPES = 2.5:1 & 3:1
SLOPE = 1.7%
Q10=2.06 CFS
V10=2.30 FPS
d10=0.27'
TEMPORARY LINE W/ SEED, MULCH UNTIL CONVERSION

NOTE:
FOR DISTURBANCES WITHIN THE SHA RIGHT-OF-WAY, THE STATE HIGHWAY ADMINISTRATION REQUIRES SAME DAY STABILIZATION FOR ANY AREA WHICH DOES NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.

PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



PHASE 1 - SEDIMENT CONTROLS ARE SHOWN HEREON AND ARE TO BE UTILIZED. REMOVAL OF ANY DEVICE SHALL BE AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.

TEMPORARILY DIVERT STORM DRAIN TO DIKE - 24" HDPE

- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2" IN ELEVATION.

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

APPROVED: *John R. Robertson* 8/20/16
HOWARD SOIL CONSERVATION DISTRICT

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	WATER LOGGED	K FACTOR	PERCENT EROSION	CURS SLOPE
Sa1	DRY SELL LOW, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
Ga	GLENCLE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gsb	GLENCLE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gsb	GLENCLE SELL LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
Gsb	GLENCLE-SHELL SELL LOAM, 0 TO 8 PERCENT SLOPES	C	PROBABLY PARTIALLY	NO	0.37	NO	PARTIAL
Mbc	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY. NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. ... 10/25/2016
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Murn 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Murn 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERSON ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER/DEVELOPER SIGNATURE:
Chris Murn 9/26/16
CHRIS MURN
PRINTED NAME & TITLE

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DESIGNER'S SIGNATURE:
Robert H. Vogel 9/26/16
ROBERT H. VOGEL
PRINTED NAME

MD REGISTRATION NO. 16193
P.E., R.L.S., OR P.L.A. (Circle one)

FINAL ROAD CONSTRUCTION PLAN
PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN

MAPLE LAWN SOUTH
PHASE 1 - SECTION 1

NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
LOT 1-64, NON-BUILDABLE BULK PARCEL 'A',
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELIGOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
REF: ECR-14-093, WP-15-136, PRM415, SP-15-014

ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

PROFESSIONAL CERTIFICATE
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. 16193 (EXPIRES: 08-27-2018)

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

13 SHEET OF 48

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

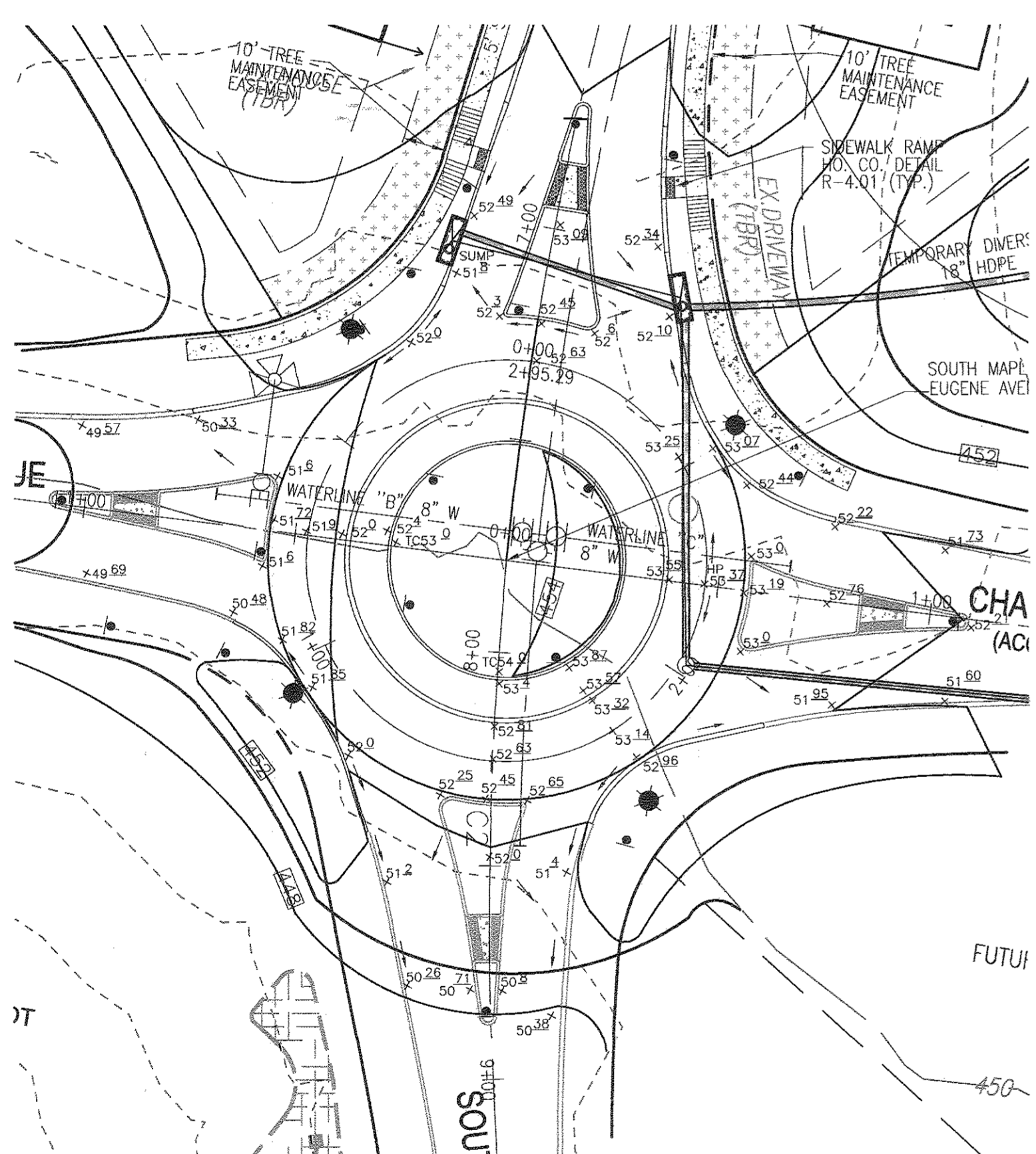
BIO-SWALE TO I-30
BOTTOM = 3.0'
SIDE SLOPES = 3:1
SLOPE = 2.0%
Q10=3.00 CFS
V10=2.65 FPS
d10=0.29'
TEMPORARY LINE W/ SEED, MULCH UNTIL CONVERSION

E 133850
N 539550

MATCH LINE - SEE SHEET 13

MATCH LINE - SEE SHEET 12

MATCH LINE - SEE SHEET 15



TRAFFIC CIRCLE ENLARGEMENT
SCALE: 1"=30'

NOTES
1. ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
2. IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2' IN ELEVATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/25/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

[Signature] 11-1-16
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

OWNER/DEVELOPER CERTIFICATION:
"I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

[Signature] 9/22/16
OWNER/DEVELOPER SIGNATURE
Chris Murn
PRINTED NAME & TITLE

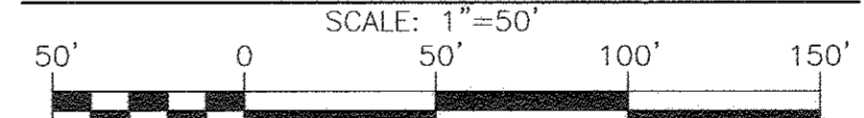
DESIGN CERTIFICATION:
"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS; THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE; AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 9/22/16
DESIGNER'S SIGNATURE
ROBERT H. VOGEL
DATE

THIS DESIGN PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 10/20/16
HOWARD S.C.D.
DATE

MD REGISTRATION NO. 16193
P.E., R.L.S., OR R.L.A. (circle one)
[Signature] 10/20/16
DATE

PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



PHASE 1 - SEDIMENT CONTROLS ARE SHOWN HEREON AND ARE TO BE UTILIZED. REMOVAL OF ANY DEVICE SHALL BE AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.

- NOTES
- REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 18 FOR BASIN DETAILS
 - REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING SPECIMEN TREE
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EARTH DIKE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- CURB INLET PROTECTION
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- FOREST CONSERVATION AREA AFFORESTATION
- FOREST CONSERVATION AREA RETENTION

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENTS	K FACTOR	ERODIBLE	PERCENTS
BaA	BALD SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
GgA	GLENN SILT LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GgB	GLENN SILT LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GhB	GLENN SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
GhB	GLENN SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
Mac	MACKEY LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF GhB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NO. _____ REVISION _____ DATE _____

FINAL ROAD CONSTRUCTION PLAN
PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
OFF. REG. EXP. 12-31-2013, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

14 SHEET OF 48

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23						
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K FACTOR	ERODIBILITY
G1A	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO
G1B	GENUINE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES
G1C	GENUINE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES
G1D	GENUINE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES
G1E	GENUINE BAILE SILET LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO
M1C	MINOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES

TAKEN FROM: USDA, SCS-NEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF G1B, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NOTES

1. REFER TO SHEET 17 FOR SEQUENCE OF CONSTRUCTION
2. REFER TO SHEET 18 FOR BASIN DETAILS
3. REFER TO SHEETS 16 FOR STANDARD DETAILS AND STABILIZATION NOTES

MATCH LINE - SEE SHEET 13
 LOD @ PROPERTY LINE



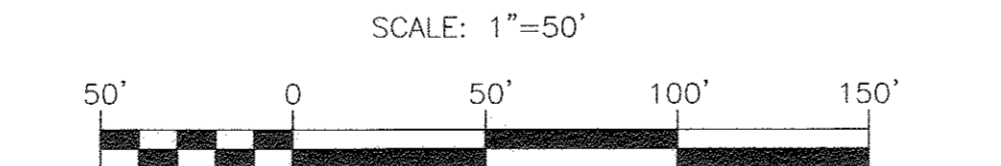
LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- +40.28 PROPOSED SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING SPECIMEN TREE
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- LOD LIMIT OF DISTURBANCE
- EARTH DIKE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- PERMETER DIKE / SWALE
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- FOREST CONSERVATION AREA AFFORESTATION
- FOREST CONSERVATION AREA RETENTION
- PUBLIC SEWER & UTILITY EASEMENT

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN



- NOTES**
1. ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 2. IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2' IN ELEVATION.

NOTE:
 STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/26/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION SR

[Signature] 11-4-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERSON ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

[Signature] 9/26/16
 OWNER/DEVELOPER SIGNATURE
 CRISTINA MURRAY
 PRINTED NAME & TITLE

DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 9/26/16
 DESIGNER'S SIGNATURE
 ROBERT H. VOGEL
 PRINTED NAME
 MD REGISTRATION NO. 16193
 (P.E.) R.L.S. OR R.L.A. (circle one)

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

[Signature] 10/20/16
 HOWARD S.C.D.

NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL "A", NON-BUILDABLE BULK PARCEL "B", AND OPEN SPACE LOTS 65-69
 TWP. REP. EGP-14-053, WP-15-136, PB#415, SP-15-014 ZONED: R-ED-MD-3 HOWARD COUNTY, MARYLAND

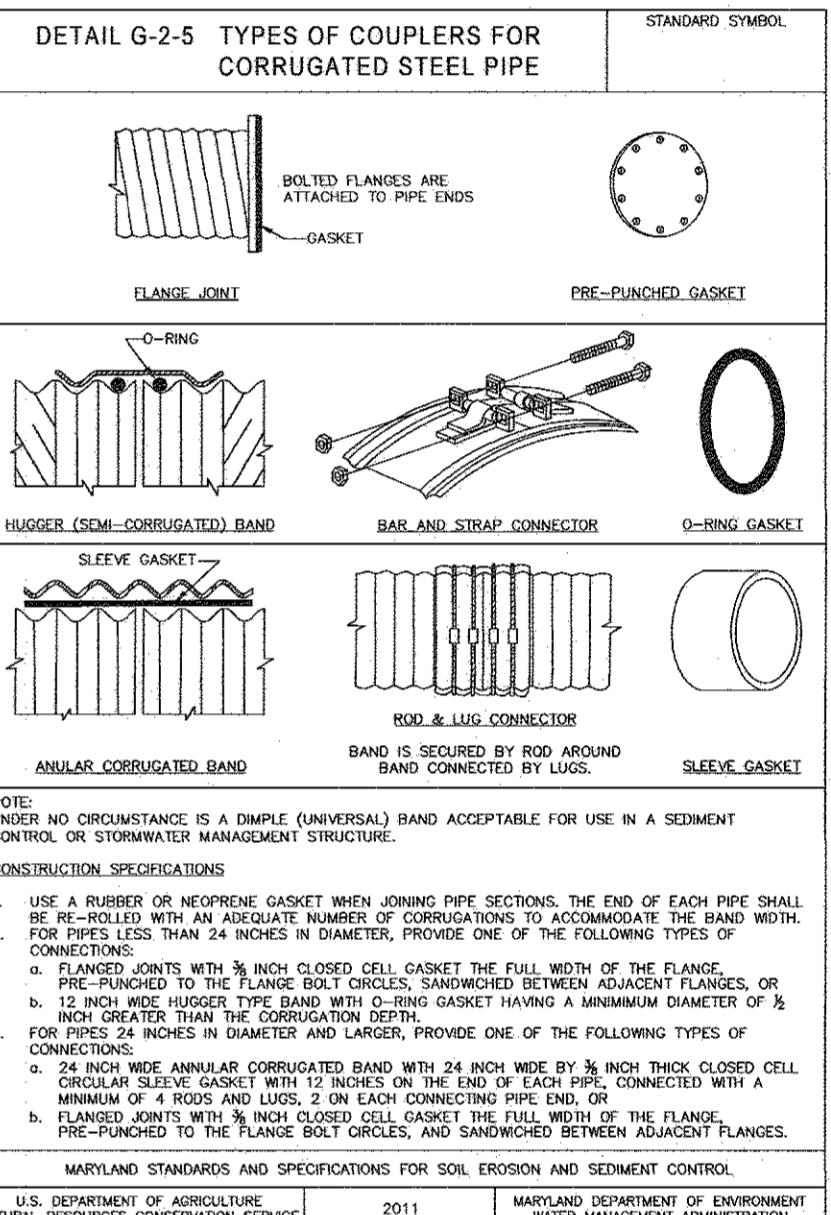
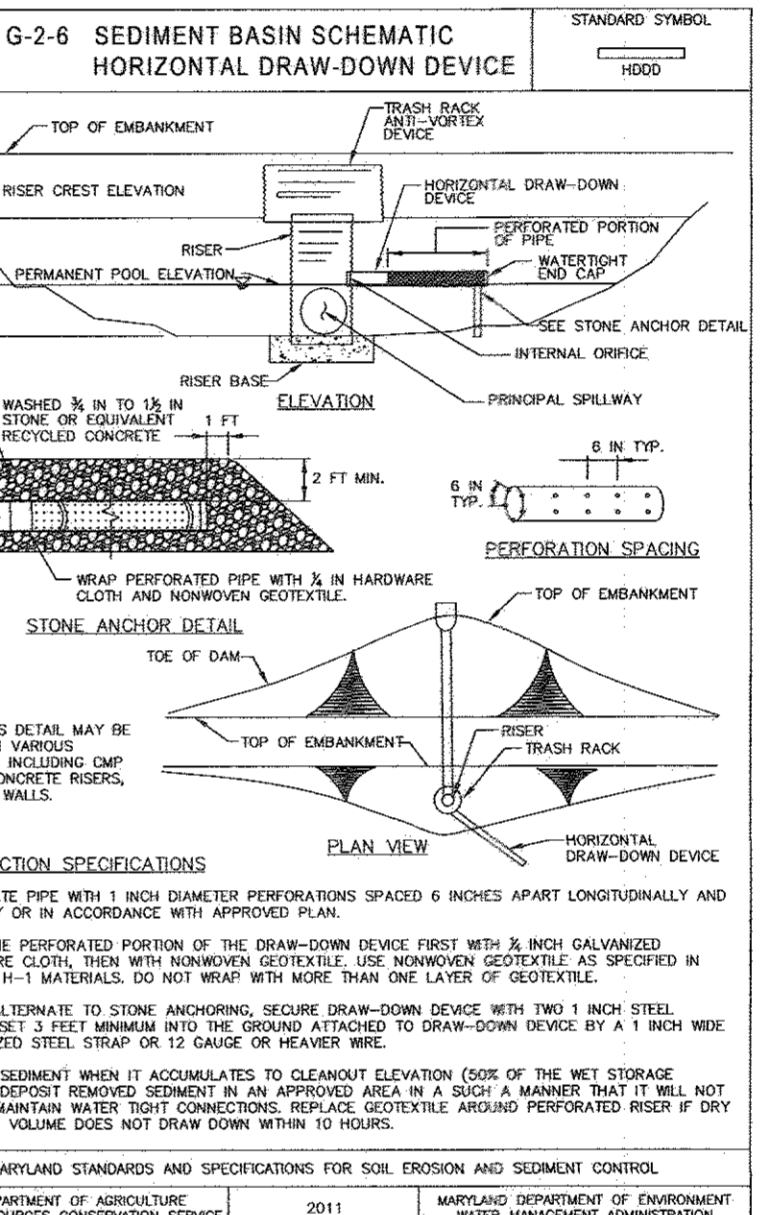
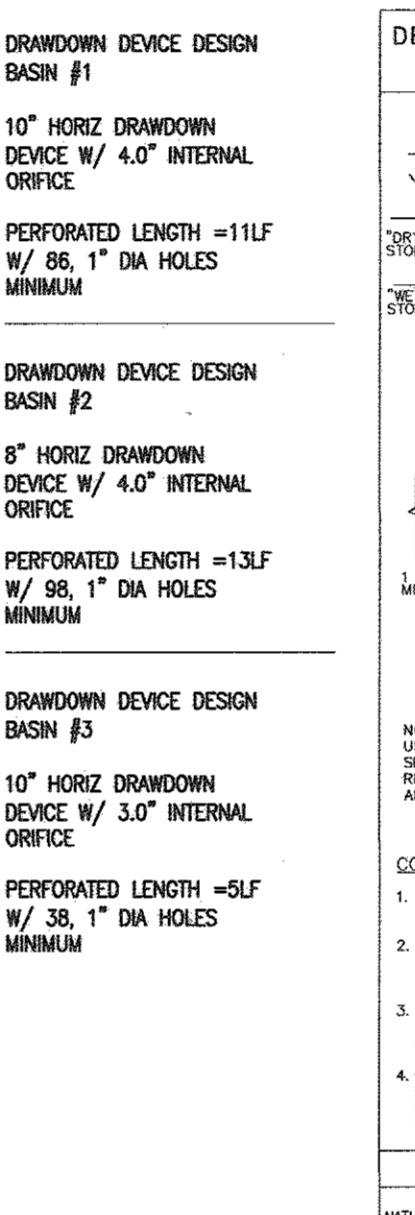
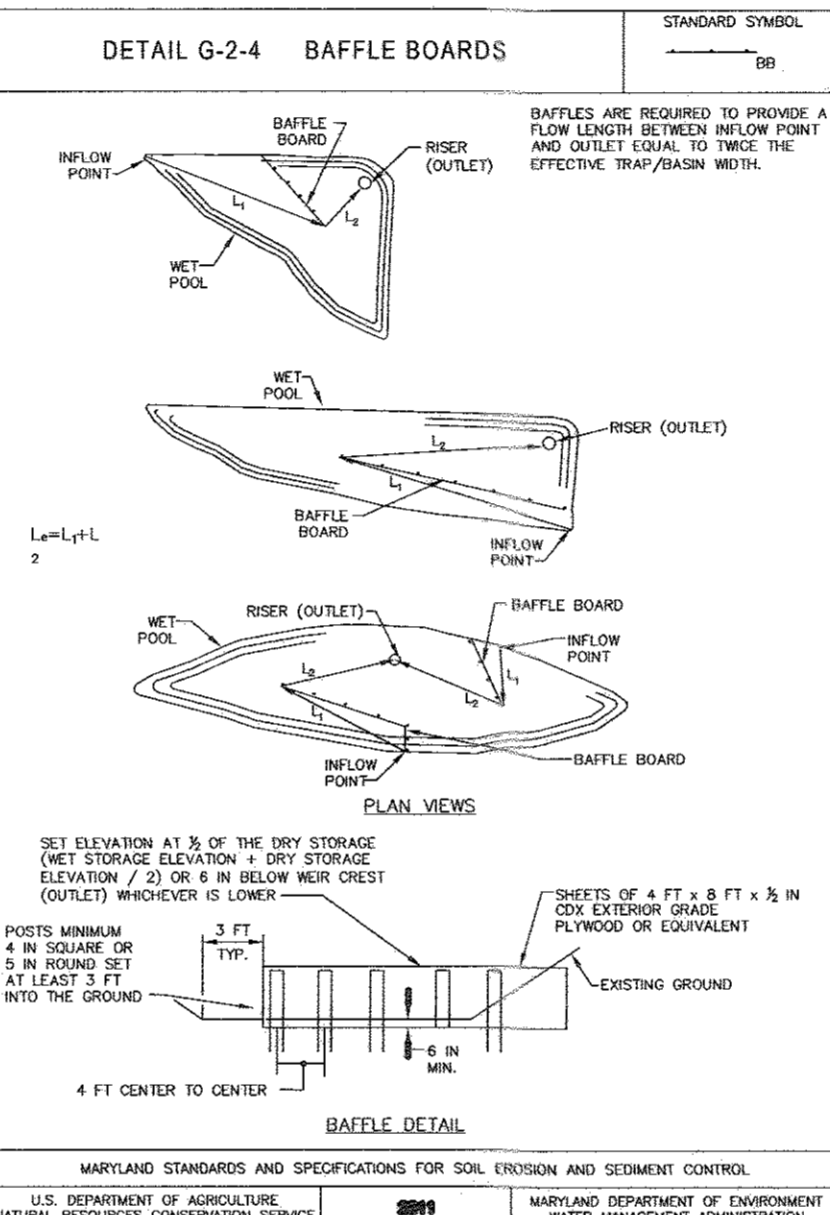
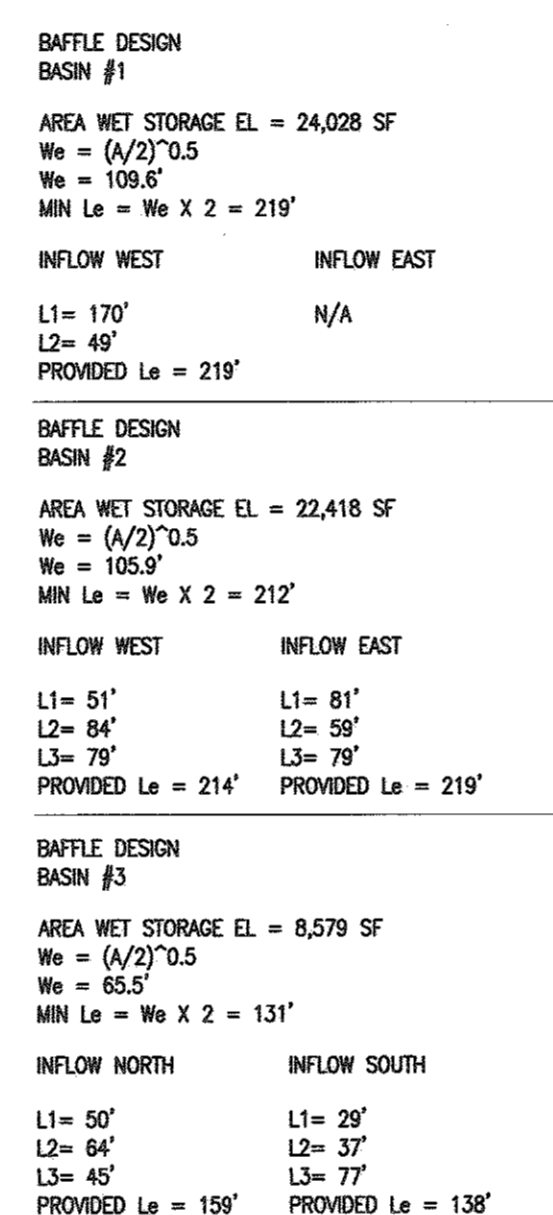
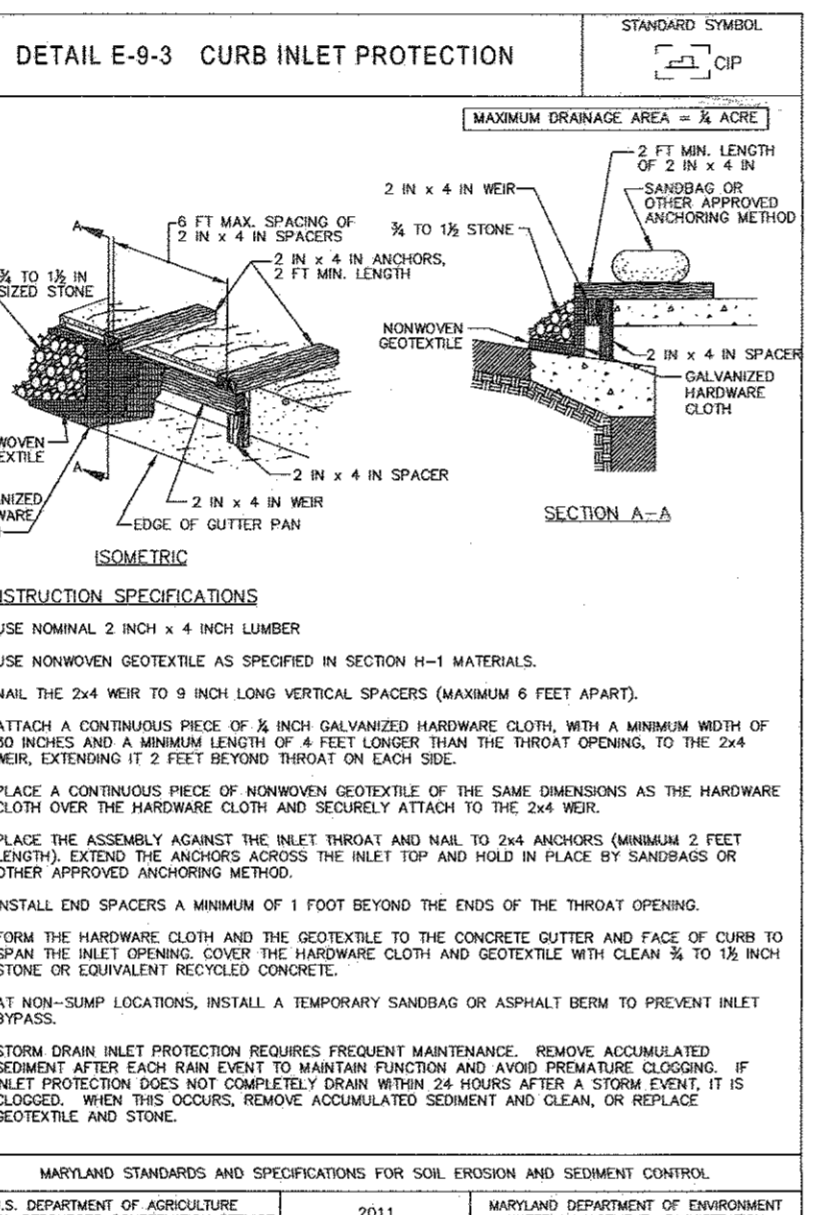
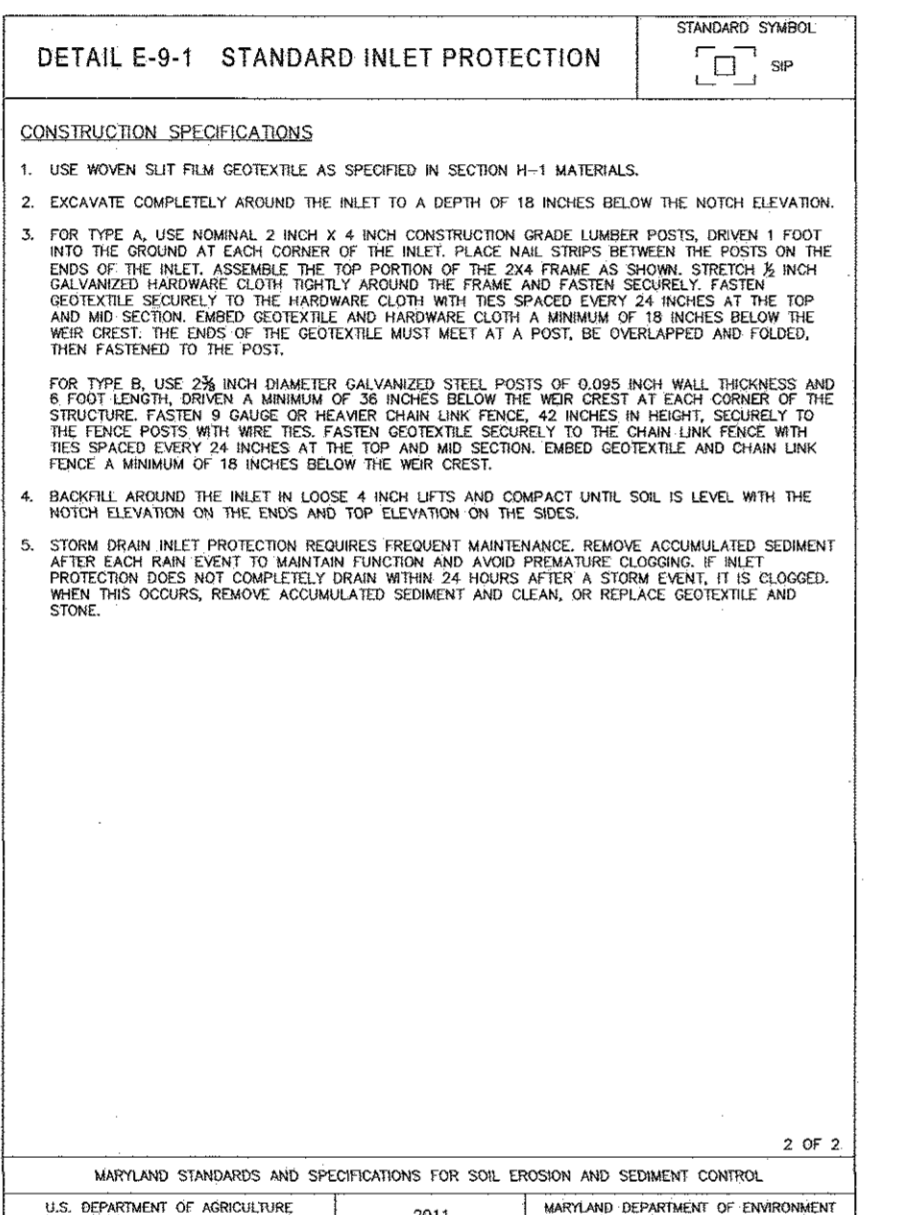
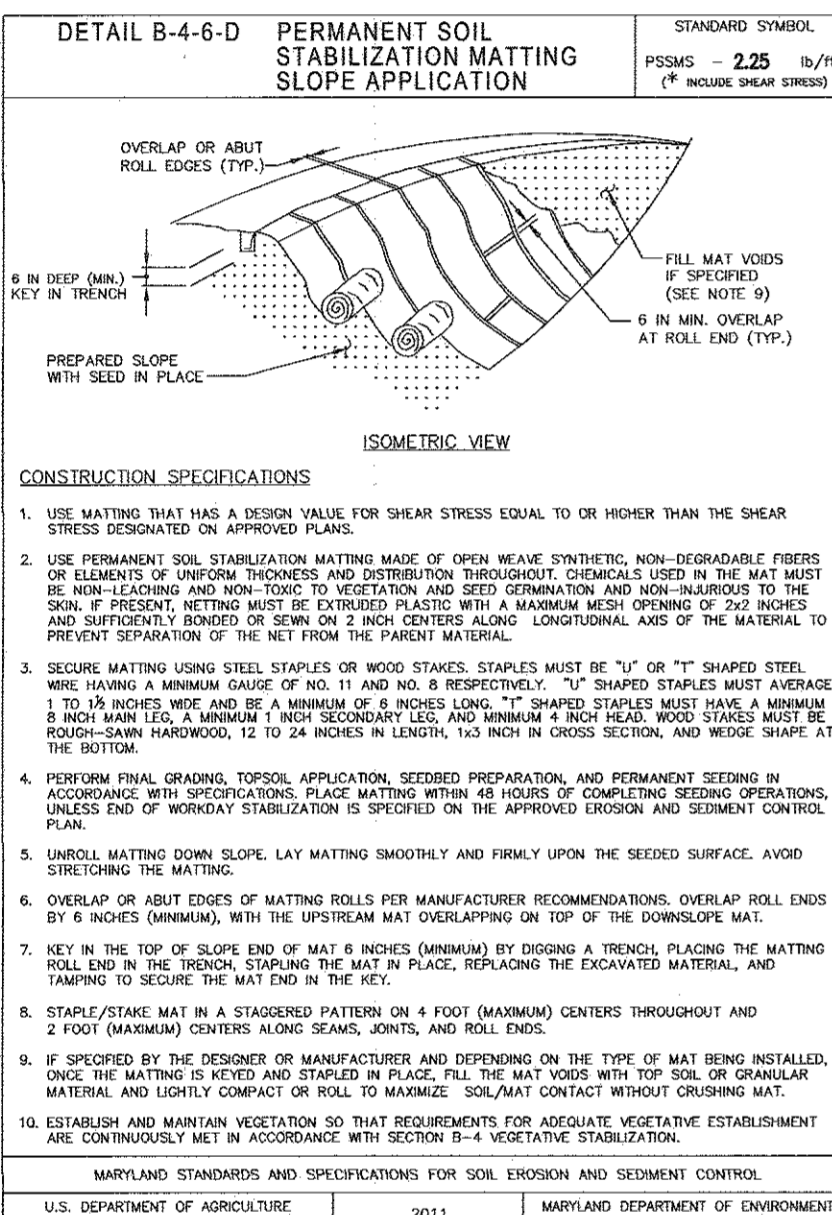
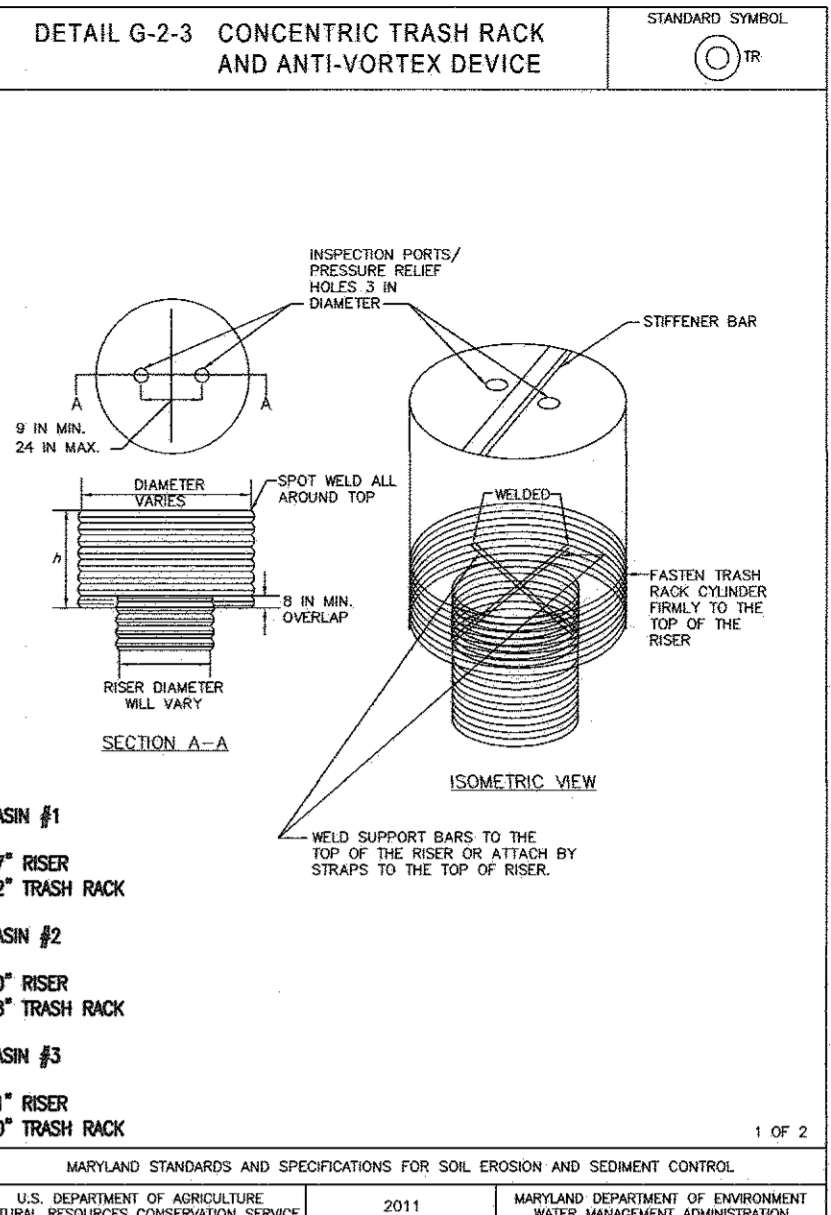
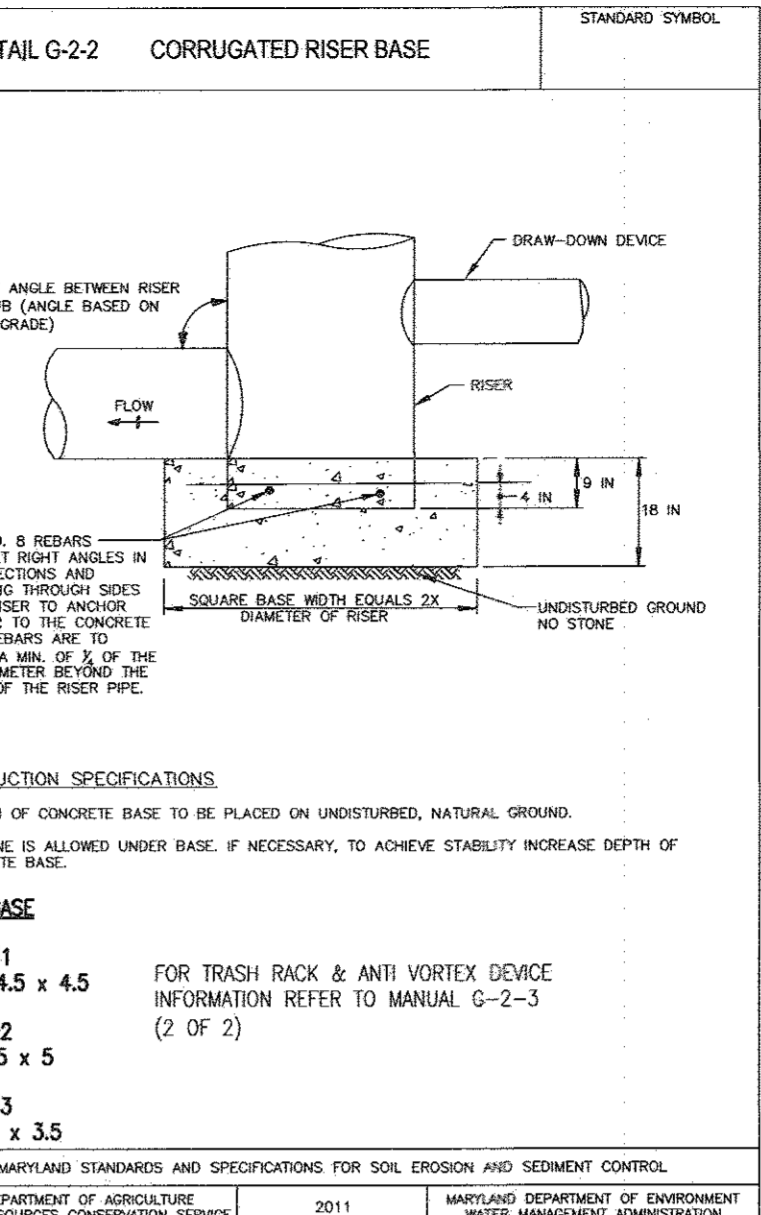
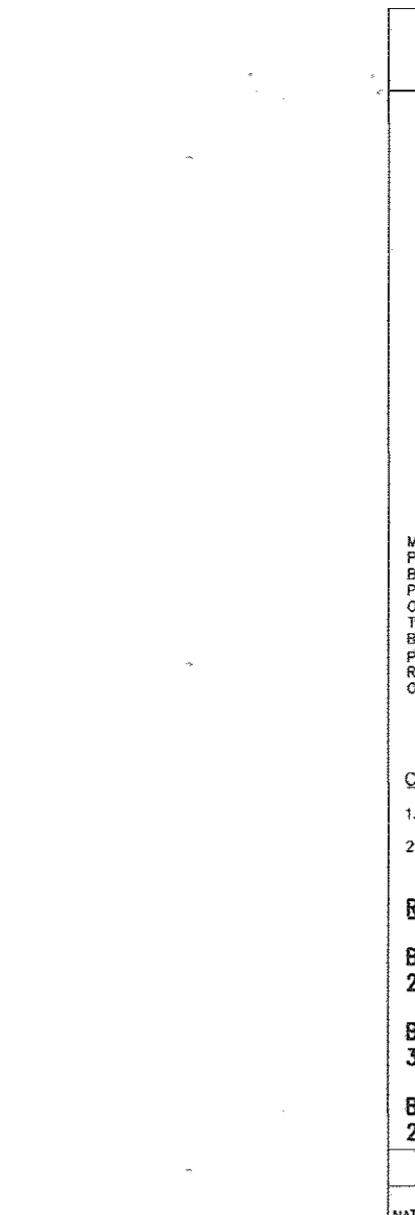
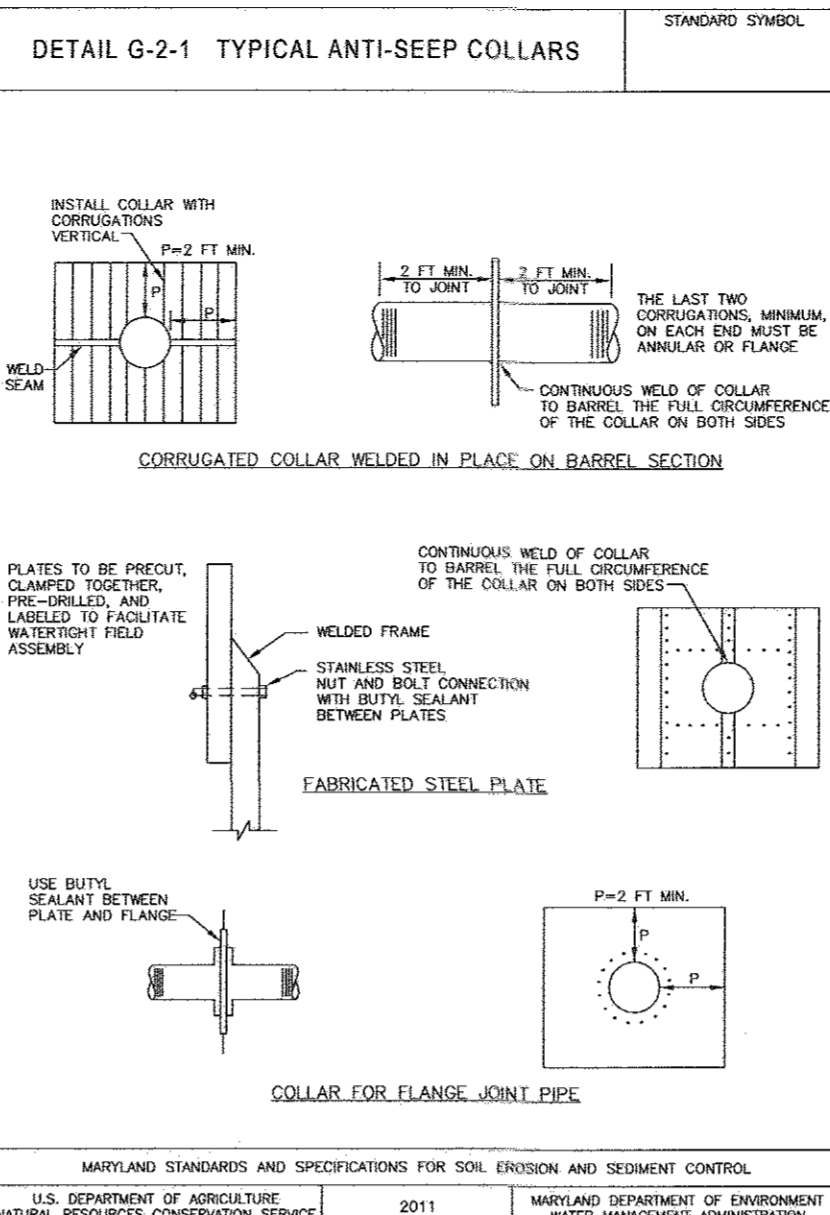
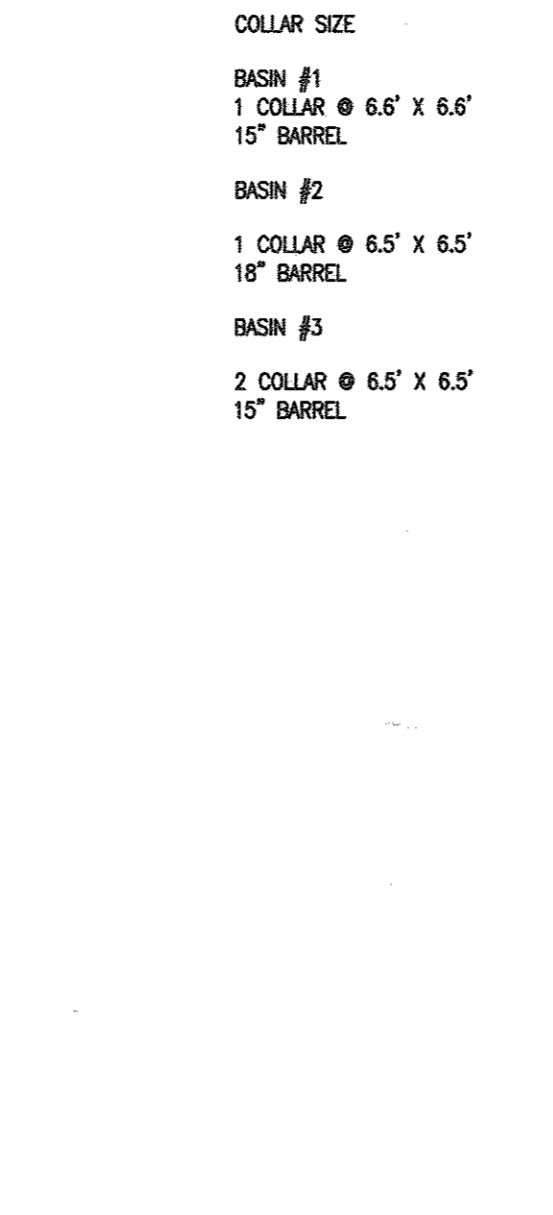
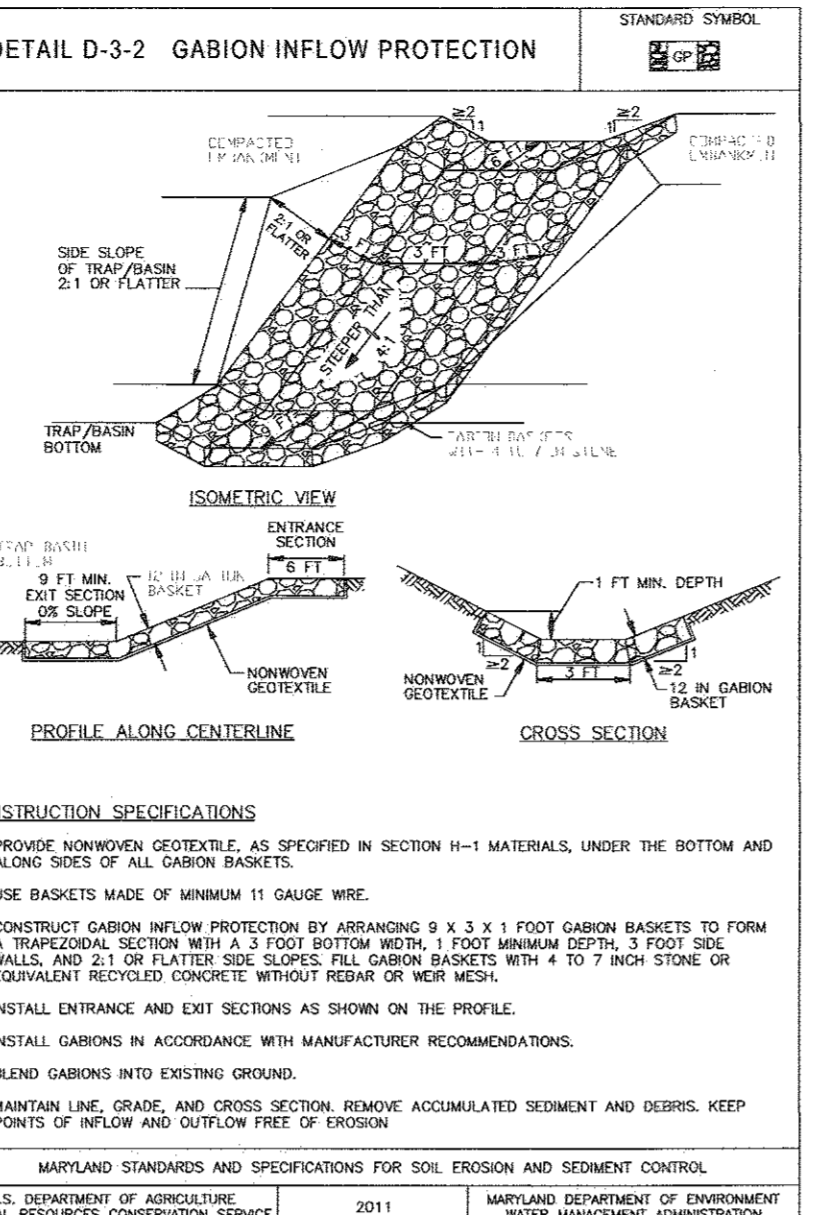
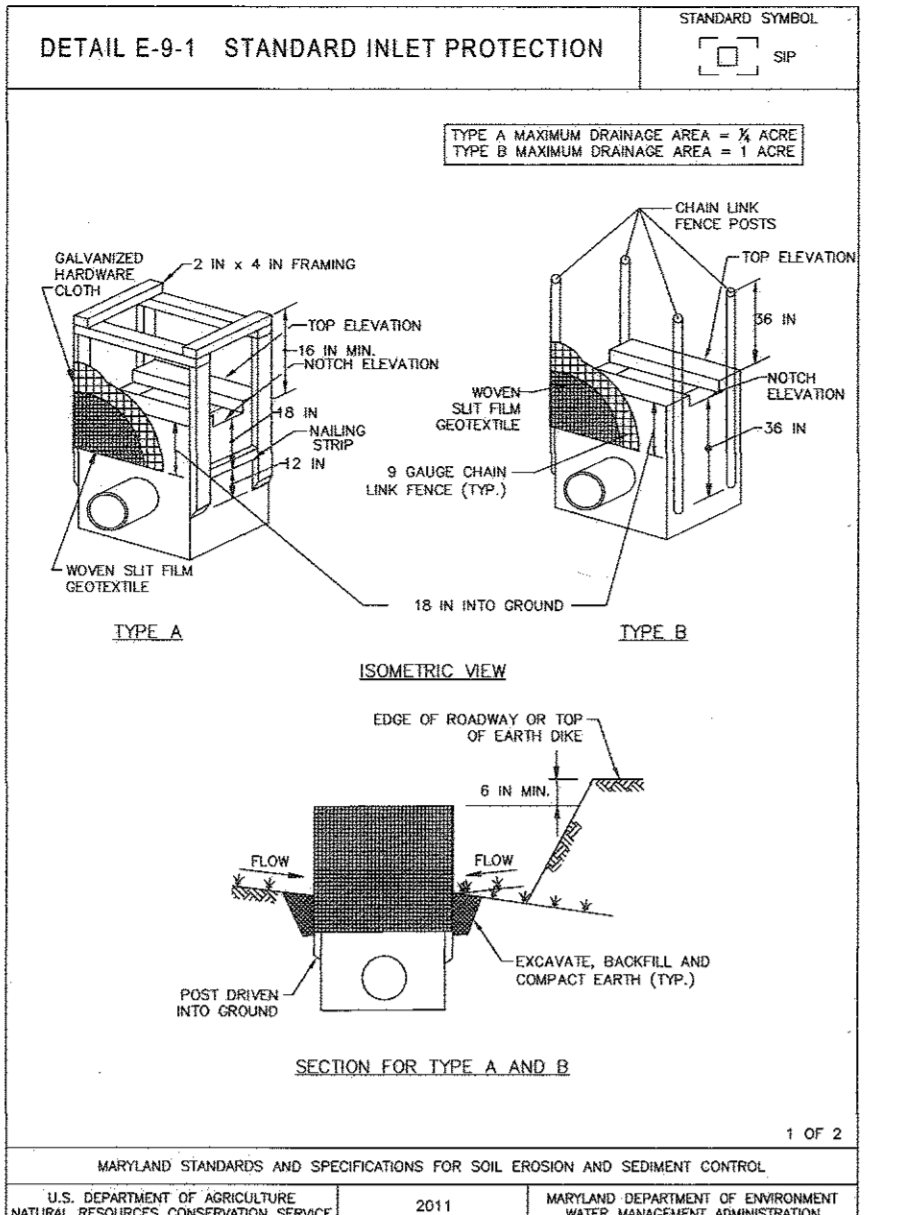
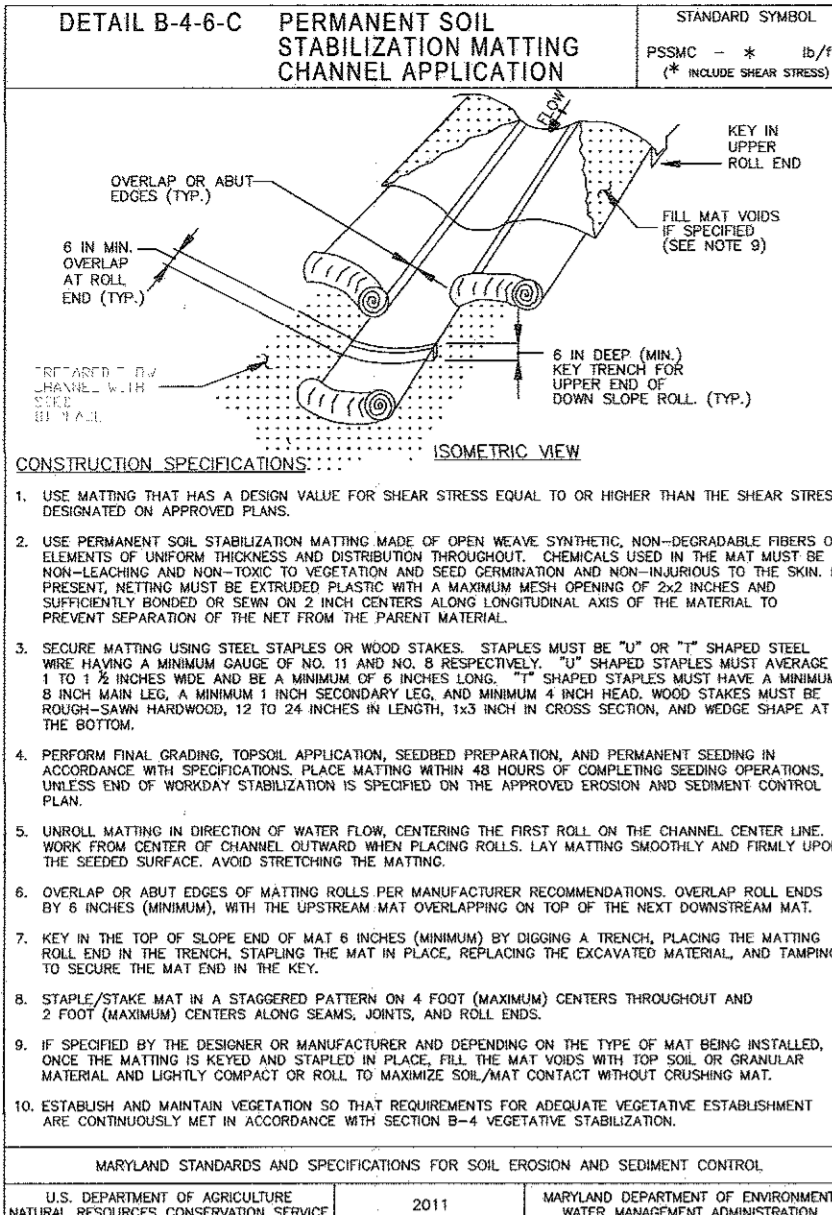
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE 09-27-2018

15 SHEET OF 48



NOTE:
FOR DISTURBANCES WITHIN THE SHA RIGHT-OF-WAY, THE STATE HIGHWAY ADMINISTRATION REQUIRES SAME DAY STABILIZATION FOR ANY AREA WHICH DOES NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDC.

DESIGNER'S SIGNATURE:
Robert H. Vogel, P.E.
DATE: 10/25/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
DATE: 10/25/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
DATE: 11-4-16

SEQUENCE OF CONSTRUCTION

1. OBTAIN MSHA ACCESS PERMIT AND GRADING PERMIT. - 1 DAY
2. DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION (1 DAY)
3. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1800) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)
4. STARTUP LIMITS OF DISTURBANCE - 3 DAYS

DISTURBANCE NOTE:
THE PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM AREA OF 20 ACRES 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 ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 20 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

PHASE 1 GRADING WORK - SHEETS 7-10 (TOTAL GRADING UNIT 1 - 20 ACRES)
GRADING UNIT 1A - 8 ACRES

- INSTALL STABILIZED CONSTRUCTION ENTRANCE, WHERE SHOWN HEREON. COMPLETE AND CLEANING AND GRUBBING ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS. - 1 DAY
- COMPLETE AND CLEANING AND GRUBBING ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS. - 1 DAY
- ALL PIPE MATERIALS FOR THE CONSTRUCTION OF SEDIMENT BASIN #1 SHALL BE ON-SITE PRIOR TO THE CONSTRUCTION OF THE BASIN.
- WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CONSTRUCT SEDIMENT BASIN #1 PER THE DETAILS AND SPECIFICATIONS SHOWN HEREON AND INSTALL PERMETER CONTROLS AT THE LIMIT OF DISTURBANCE, WHERE SHOWN OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. - 7 DAYS
- EARTH DIKES DIRECTING SITE DISTURBANCES TO THE BASIN SHALL BE CONSTRUCTED AT THE SAME TIME AS THE SEDIMENT BASIN. EARTH DIKES SHALL BE LINED AS DETAILED HEREON. TEMPORARY MATTING IS MADE WITH DEGRADABLE (6 MONTH) NATURAL OR MANAGED FIBERS OF UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND IS SMOOTHER RESISTANT. - 1 DAY
- THE SEDIMENT BASIN SHALL BE DEPLETED BY PUMPING. THE ACCUMULATED SEDIMENT FROM THE BASIN SHALL BE PLACED UP GRASS FROM THE STRUCTURE AND SUCH A HANDLED ONLY WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR. ELEVATION HAS BEEN REACHED. - 2 DAYS
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT CONTROL INSPECTOR. - 2 DAYS
- ONCE GRADING OPERATIONS ARE COMPLETE, STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 DAYS
- INSTALL CURB & GUTTER FOR STORM DESCRIBED IN ITEM 11, INSTALL ROAD SUBGRADE AND BASE COURSE FINISH. - 4 DAYS

PHASE 2 GRADING WORK SHEETS 12 AND 14.

- COMPLETE GRADING REQUIRED TO BRING MD 216 IMPROVEMENTS AND SOUTH MAPLE LANE ROWLAND TO SUBGRADE TO AND INCLUDING THE TRAFFIC CIRCLE AND DRAINAGE AREA TO BASIN #3 TO FINAL GRADE (REFER TO PHASE 2 GRADING PLANS). - 10 DAYS
- INSTALL UTILITIES (WATER, SEWER AND STORMDRAIN) WITHIN MD216, THE SOUTH MAPLE LANE ROWLAND CORRIDOR AND THE UP TO THE 1440 = 2044 MARINA WAY INTERSECTION. INSTALL STORM DRAIN DIVERSION FROM INLET TO DIVERT SOUTH MAPLE LANE ROWLAND DRAINAGE TOWARD BASIN #3 - 3 WEEKS
- ONCE GRADING OPERATIONS ARE COMPLETE, STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 DAYS
- INSTALL CURB & GUTTER FOR STORM DESCRIBED IN ITEM 11, INSTALL ROAD SUBGRADE AND BASE COURSE FINISH. - 4 DAYS

REFER TO "DISTURBANCE NOTE" ABOVE.

AT THIS TIME, GRADING UNIT 1A - LAND AREA LOTS 58 - 64 AND EASTWARD SHOULD BE AT GRADE AND STABILIZED ACCOUNTING FOR 8 ACRES OF DISTURBANCE

WITH AT LEAST 50 PERCENT OF THE DISTURBED AREA DRAINING TOWARD BASIN #3 STABILIZED AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, PROCEED TO THE CONSTRUCTION OF BASIN #1 & #2

GRADING UNIT #1B - 12 ACRES

- COMPLETE ANY CLEARING AND GRUBBING ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS TOWARD BASIN #1 & #2 - (1 DAY)
- ALL PIPE MATERIALS FOR THE CONSTRUCTION OF THE SEDIMENT BASIN #1 & #2 SHALL BE ON-SITE PRIOR TO THE CONSTRUCTION OF THE BASINS.
- BASIN #1: WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, INSTALL STORM DRAIN SYSTEM CROSSING UNDER MD 216 TO BE RECONSTRUCTED. CROSSING THE PIPE CROSSING UNDER MD 216, RECONSTRUCTING 216A AND ADJOINING THE MARINA WAY "CORBEL" - 1 WEEK
- WITH ALL AREAS DRAINING TOWARD BASIN #1 STABILIZED AND WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, BACKFILL BASIN #1 AND STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. INSTALL INLET PROTECTION AT PT 4. - 2 DAYS
- WITH CONTRIBUTING AREA STABILIZED, CONSTRUCT STORMWATER FEATURE MICRO-BORRENTION TO RECEIVE CLEANWATER RUNOFF THROUGH PT 4. - 5 DAYS
- COMPLETE REMAINING BASIN #2 SITE GRADING, BRONING MATERIAL THROUGH THE OPENING AT THE MARINA WAY / GUNNAR DRIVE INTERSECTION FOR THE GUNNAR DRIVE AND SOUTH SIDE OF MARINA WAY PHASE 2 SUBGRADE ELEVATIONS AND COMPLETED FILLS FOR PROPOSED HOME PADS - 1 MONTH
- INSTALL REMAINING UTILITIES (WATER, SEWER AND STORMDRAIN) ALLOW FOR CONTINUED CONFORMANCE OF SEDIMENT LADEN WATER TO BASIN #2. - 2 WEEKS
- WITH ROADS TO SUBGRADE AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, EXPAND LOT TO ALLOW FOR STORM DRAIN TO CONVEY WATER TO THE BASINS THROUGH TEMPORARY PIPE DISCHARGES. - 5 DAYS
- WITH MASS GRADING COMPLETE, STABILIZE COMPLETED AREAS WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 WEEKS
- ON CHANNEL DRAIN, INSTALL CURB & GUTTER, SUBGRADE AND BASE COURSE PAVEMENT - 2 WEEKS
- INSTALL INLET PROTECTION FOR AREAS NOT DRAINING TO BASINS OR TO STORMWATER FEATURES. - 1 DAY
- WITH CONTRIBUTING AREA STABILIZED, CONSTRUCT STORMWATER FEATURES MICRO-BORRENTION AND BIO-SWALES TO RECEIVE CLEANWATER RUNOFF. PROTECT INSTALLED FEATURES DURING HOME CONSTRUCTION. - 2 MONTHS
- BASIN #2 & #3 SHALL BE DEPLETED BY PUMPING. THE ACCUMULATED SEDIMENT FROM THE BASINS SHALL BE PLACED UP GRASS FROM THE STRUCTURE AND SUCH A HANDLED ONLY WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR. ELEVATION HAS BEEN REACHED. - 2 DAYS
- WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, COMPLETE ANY REMAINING FILL GRADING IN ACCORDANCE WITH SUBGRADE MANAGEMENT CRITERIA AND TOPSOIL PER THE SPECIFICATIONS SHOWN HEREON, AND STABILIZE DISTURBED AREAS WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 1 WEEK
- ONCE GRADING OPERATIONS ARE COMPLETE, STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 WEEKS
- AFTER PERMISSION HAS BEEN GIVEN BY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING E/S CONTROLS AND STABILIZE THE DISTURBED AREAS FROM THE AFOREMENTIONED DISTURBANCES WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 3 WEEKS

REFER TO "DISTURBANCE NOTE" ABOVE. AT THIS TIME, LAND AREA LOTS 33 - 41 SHOULD BE AT GRADE AND STABILIZED ACCOUNTING FOR 4 ACRES OF DISTURBANCE. THIS WILL ALLOW FOR DISTURBANCE WITHIN THE INTERIOR OF THE MARINA WAY CIRCLE (M4-12 TO I-33).

COMPLETE THE INSTALLATION OF THE STORM DRAINS WITHIN THE INTERIOR OF THE MARINA WAY CIRCLE (M4-12 TO I-33). TEMPORARILY DIVERT STORM DRAINAGE FROM M4-30 TOWARD BASIN #2. AT THIS TIME, THE LIMIT DISTURBANCE TOWARD BASIN #2 TO THAT REQUIRED FOR STORM DRAIN INSTALLATION. - 2 WEEKS
- COMPLETE THE INSTALLATION OF UTILITIES (WATER, SEWER AND STORMDRAIN) WITHIN THE ABOVE MD 216 / MARINA WAY CORRIDOR CONNECTION TO ITEM 23 WORK. IMMEDIATELY STABILIZE DISTURBANCES WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 3 WEEKS
- COMPLETE REMAINING MARINA WAY / OPEN SPACE LOT STORM DRAINS AND GRADING OPERATIONS. STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 3 WEEKS

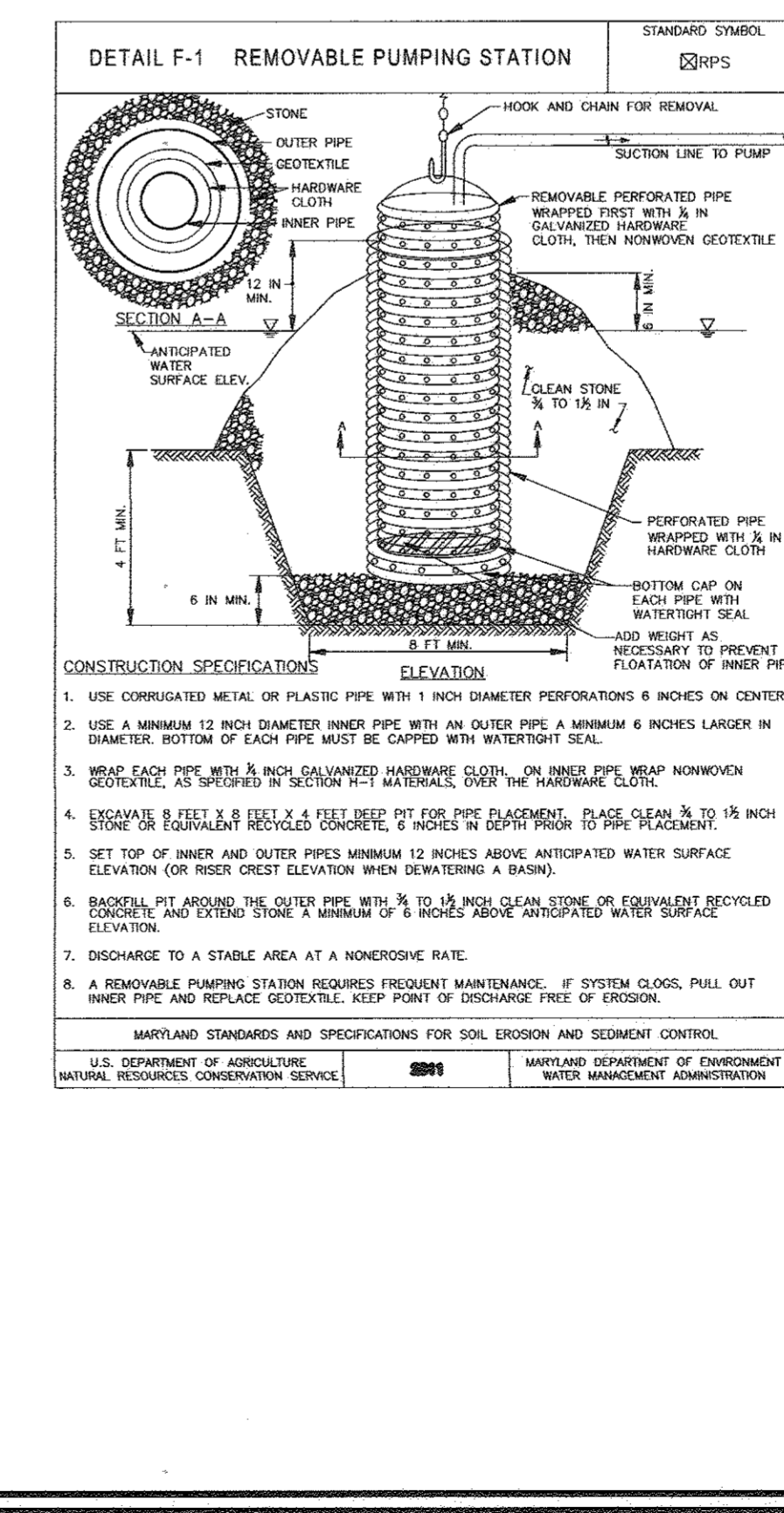
WITH AT LEAST 50 PERCENT OF THE DISTURBED AREA DRAINING TOWARD BASIN #1 STABILIZED AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN DISTURBANCE AREA TRANSITION FROM GRADING UNIT #1B TO GRADING UNIT #2

GRADING UNIT #2 - 12 ACRES

UP TO 20 ACRES IS ALLOWED FOR FINE GRADING OPERATIONS TO ACHIEVE PHASE 2 FINISHED GRASSES IN ACCORDANCE WITH SHEETS 12-15.

- COMPLETE REMAINING MARLA LANE SOUTH PHASE 1 SECTION 1 GRADING WORK. MAINTAIN STORM DRAIN TEMPORARILY DISCHARGES. - 2 WEEKS
- INSTALL CURB & GUTTER, PLACE MARINA WAY TO STONE BASE AND INSTALL BASE COURSE PAVEMENT. LEAVE AN OPENING AT THE MARINA WAY / GUNNAR DRIVE INTERSECTION FOR ANY REMAINING GRADING OPERATIONS WITHIN THE MARINA WAY "CORBEL" - 1 WEEK
- WITH ALL AREAS DRAINING TOWARD BASIN #1 STABILIZED AND WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, BACKFILL BASIN #1 AND STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. INSTALL INLET PROTECTION AT PT 4. - 2 DAYS
- WITH CONTRIBUTING AREA STABILIZED, CONSTRUCT STORMWATER FEATURE MICRO-BORRENTION TO RECEIVE CLEANWATER RUNOFF THROUGH PT 4. - 5 DAYS
- COMPLETE REMAINING BASIN #2 SITE GRADING, BRONING MATERIAL THROUGH THE OPENING AT THE MARINA WAY / GUNNAR DRIVE INTERSECTION FOR THE GUNNAR DRIVE AND SOUTH SIDE OF MARINA WAY PHASE 2 SUBGRADE ELEVATIONS AND COMPLETED FILLS FOR PROPOSED HOME PADS - 1 MONTH
- INSTALL REMAINING UTILITIES (WATER, SEWER AND STORMDRAIN) ALLOW FOR CONTINUED CONFORMANCE OF SEDIMENT LADEN WATER TO BASIN #2. - 2 WEEKS
- WITH ROADS TO SUBGRADE AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, EXPAND LOT TO ALLOW FOR STORM DRAIN TO CONVEY WATER TO THE BASINS THROUGH TEMPORARY PIPE DISCHARGES. - 5 DAYS
- WITH MASS GRADING COMPLETE, STABILIZE COMPLETED AREAS WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 WEEKS
- ON CHANNEL DRAIN, INSTALL CURB & GUTTER, SUBGRADE AND BASE COURSE PAVEMENT - 2 WEEKS
- INSTALL INLET PROTECTION FOR AREAS NOT DRAINING TO BASINS OR TO STORMWATER FEATURES. - 1 DAY
- WITH CONTRIBUTING AREA STABILIZED, CONSTRUCT STORMWATER FEATURES MICRO-BORRENTION AND BIO-SWALES TO RECEIVE CLEANWATER RUNOFF. PROTECT INSTALLED FEATURES DURING HOME CONSTRUCTION. - 2 MONTHS
- BASIN #2 & #3 SHALL BE DEPLETED BY PUMPING. THE ACCUMULATED SEDIMENT FROM THE BASINS SHALL BE PLACED UP GRASS FROM THE STRUCTURE AND SUCH A HANDLED ONLY WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR. ELEVATION HAS BEEN REACHED. - 2 DAYS
- WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, COMPLETE ANY REMAINING FILL GRADING IN ACCORDANCE WITH SUBGRADE MANAGEMENT CRITERIA AND TOPSOIL PER THE SPECIFICATIONS SHOWN HEREON, AND STABILIZE DISTURBED AREAS WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 1 WEEK
- ONCE GRADING OPERATIONS ARE COMPLETE, STABILIZE WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 2 WEEKS
- AFTER PERMISSION HAS BEEN GIVEN BY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING E/S CONTROLS AND STABILIZE THE DISTURBED AREAS FROM THE AFOREMENTIONED DISTURBANCES WITH PERMANENT SEDIMENT MATURE AND STRAW MULCH. - 3 WEEKS

NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGOWSIE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO. REVISION DATE

FINAL ROAD CONSTRUCTION PLAN
GRADING AND SOIL EROSION,
AND SEDIMENT CONTROL PLAN - DETAILS

MAPLE LAWN SOUTH PHASE 1 - SECTION 1
LOT 1 - NON-BUILDABLE PARCEL A,
NON-BUILDABLE PULP PARCEL B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
DPZ REF: ECP-14-023, WP-15-136, PRF#145, SP-15-014

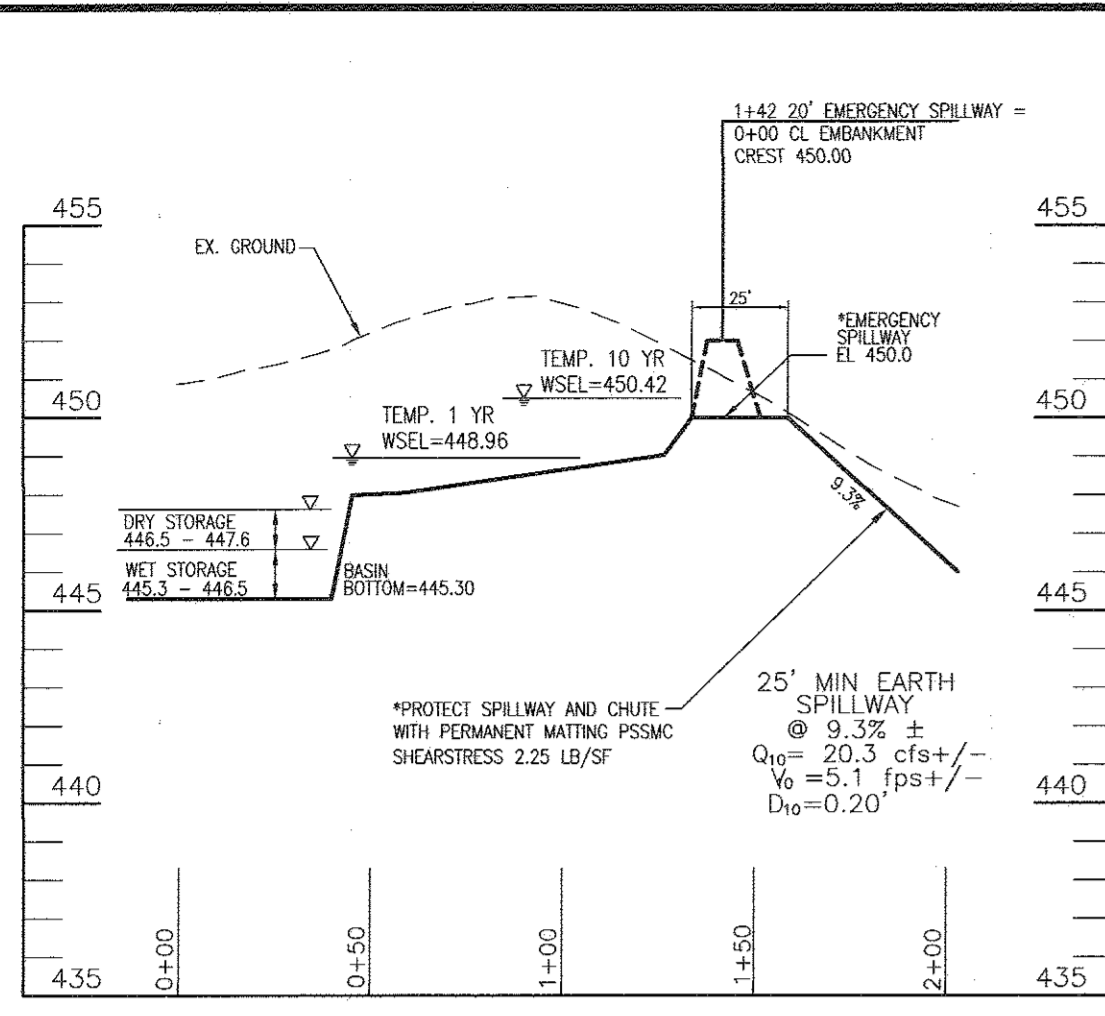
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS - SURVEYORS - PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

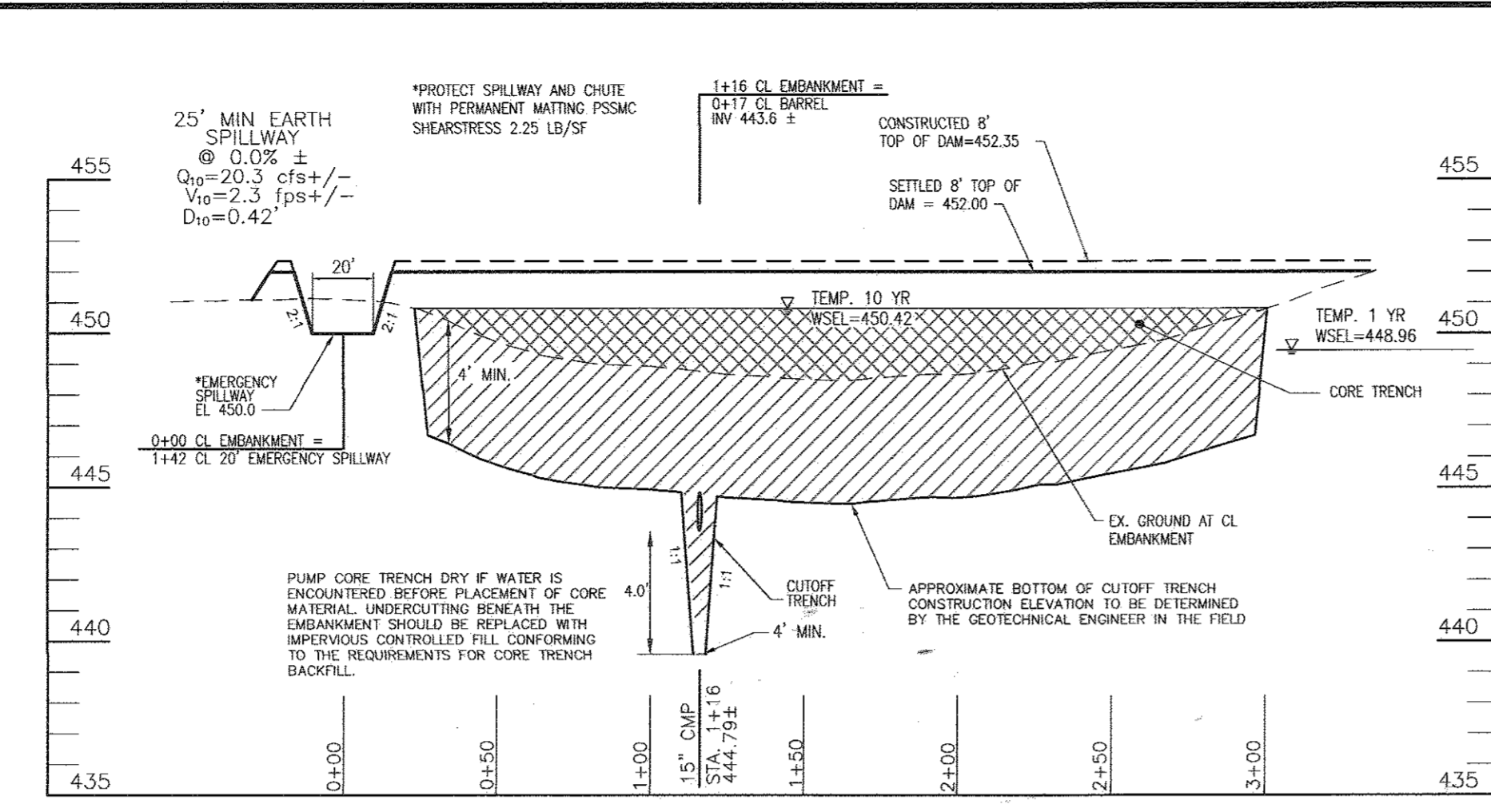
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER 16193, EXPIRATION DATE: 09-27-2018

17 SHEET OF 48

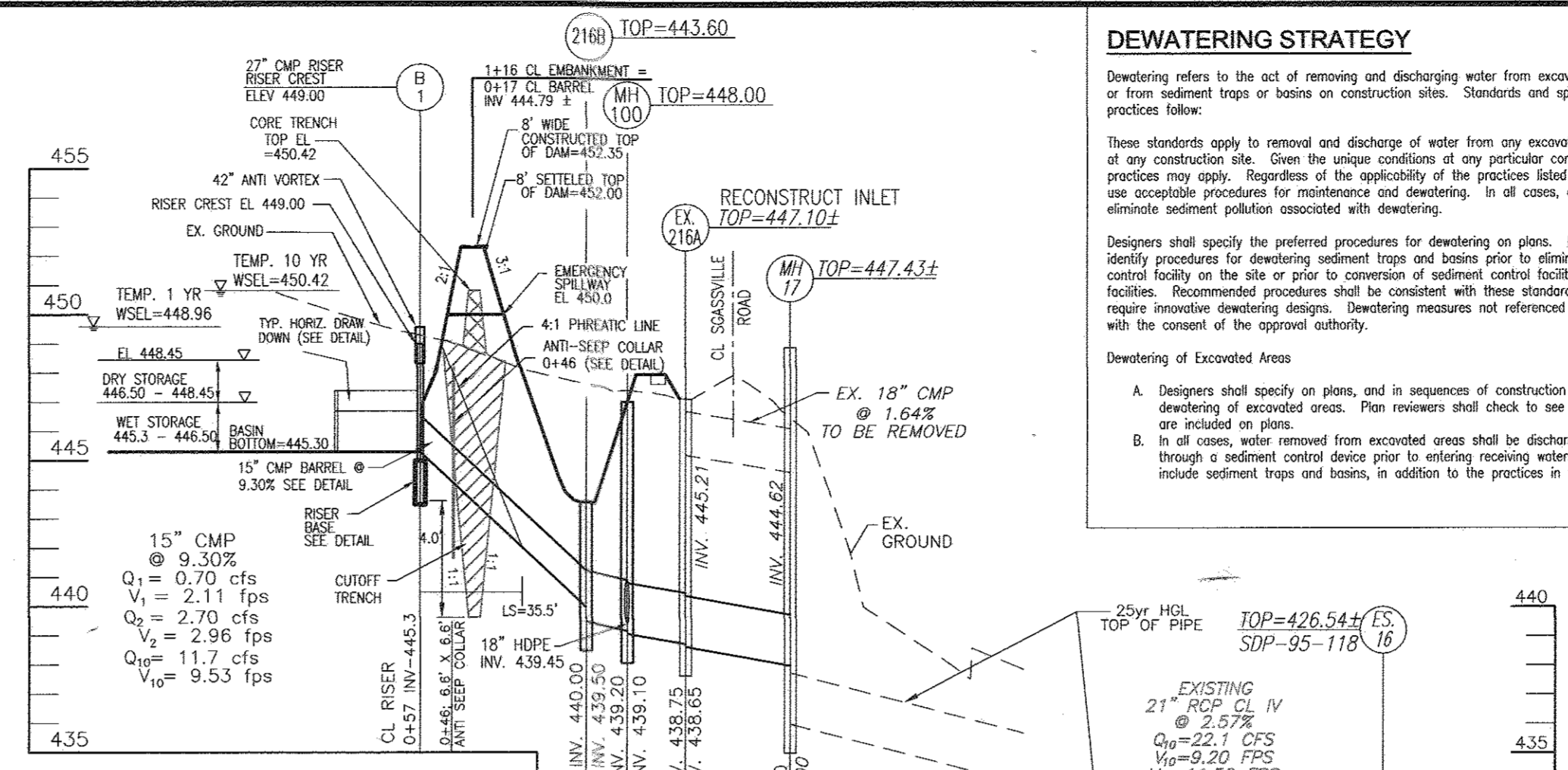
ROBERT H. VOGEL, PE No.16193



**SEDIMENT BASIN #1
PROFILE ALONG CL EMERGENCY SPILLWAY**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #1
PROFILE ALONG CL OF EMBANKMENT**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #1
PROFILE ALONG CL OF BARREL**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

DEWATERING STRATEGY

Dewatering refers to the act of removing and discharging water from excavated areas on construction sites or from sediment traps or basins on construction sites. Standards and specifications for dewatering practices follow:

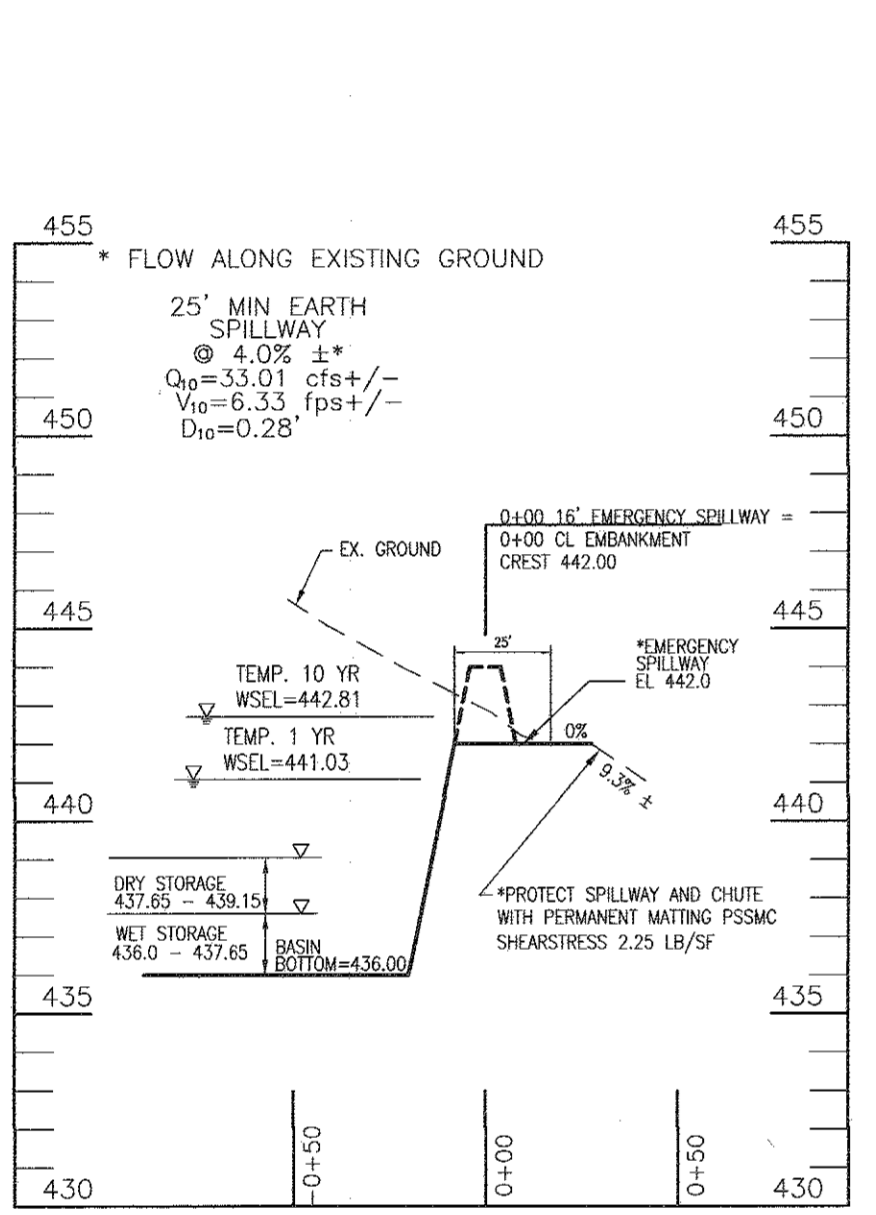
- Pumping of water to an existing sediment basin or trap in which the entire volume of water from the area to be dewatered can be contained without discharge to receiving waters.
- Pumping of water to an existing sediment basin or trap such that the entire volume of water from the area to be dewatered can be managed without exceeding the design outflow from the sediment control structure.
- Removable Pumping Station? Standards and specifications for Removable Pumping Station on Detail 20A.
- Use of a Sump Pit? Standards and specifications for a sump pit on Detail 20B.
- Sediment Tank? Standards and specifications for a sump pit on Detail 21.

Designers shall specify the preferred procedure for dewatering on plans. In particular, designers should identify procedures for dewatering sediment traps and basins prior to elimination of the last sediment control facility on the site or prior to construction of sediment control facilities to stormwater management facilities. Recommended procedures shall be consistent with these standards. Atypical site conditions may require innovative dewatering designs. Dewatering measures not referenced in this standard may be used with the consent of the approval authority.

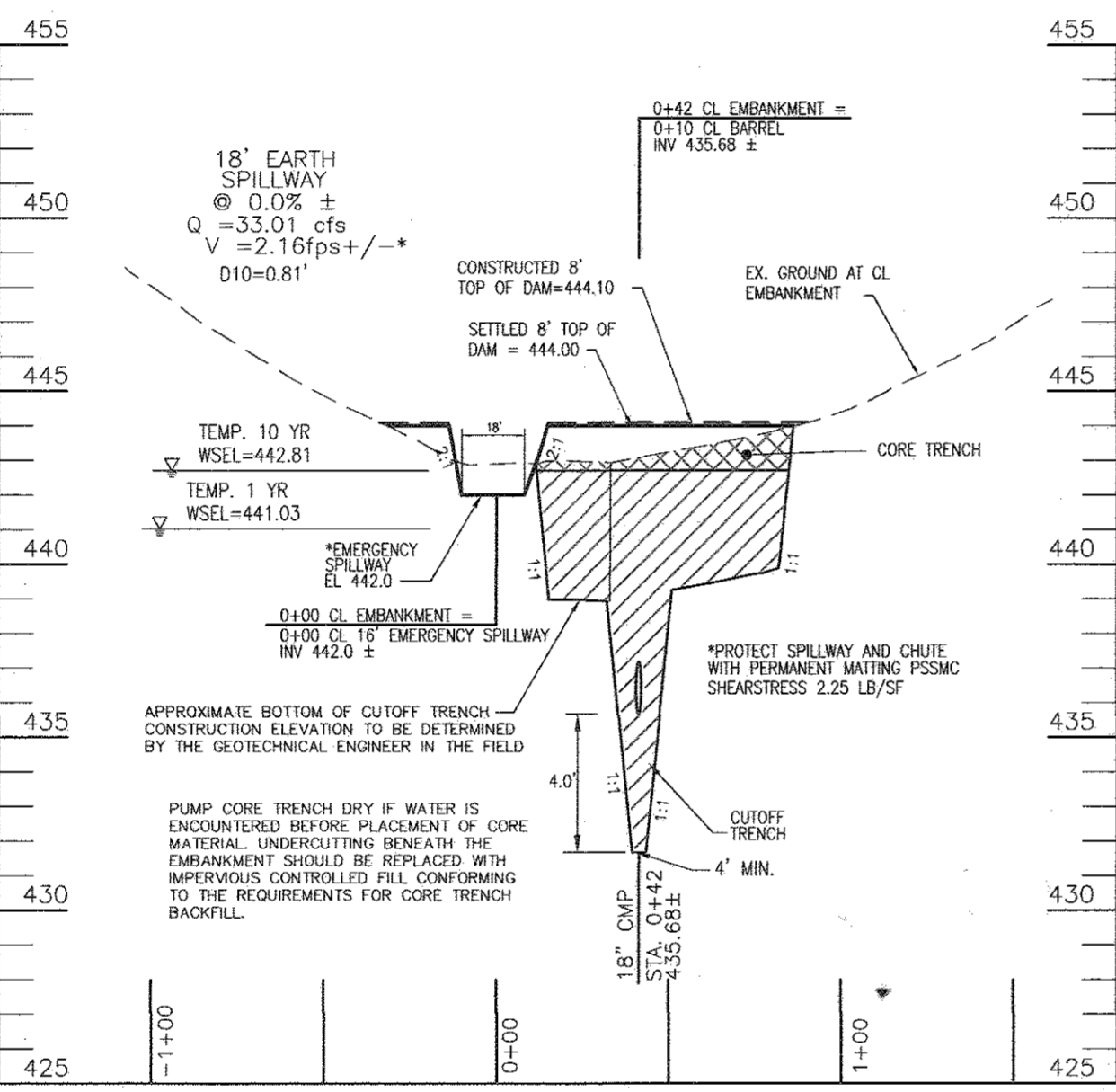
Dewatering of Excavated Areas

- Designers shall specify on plans, and in measures of construction included on plans, practices for dewatering of excavated areas. Plan reviewers shall check to see that procedures for dewatering are included on plans.
- In all cases, water removed from excavated areas shall be discharged such that it shall pass through a sediment control device prior to entering receiving waters. Sediment control devices include sediment traps and basins, in addition to the practices in this section.

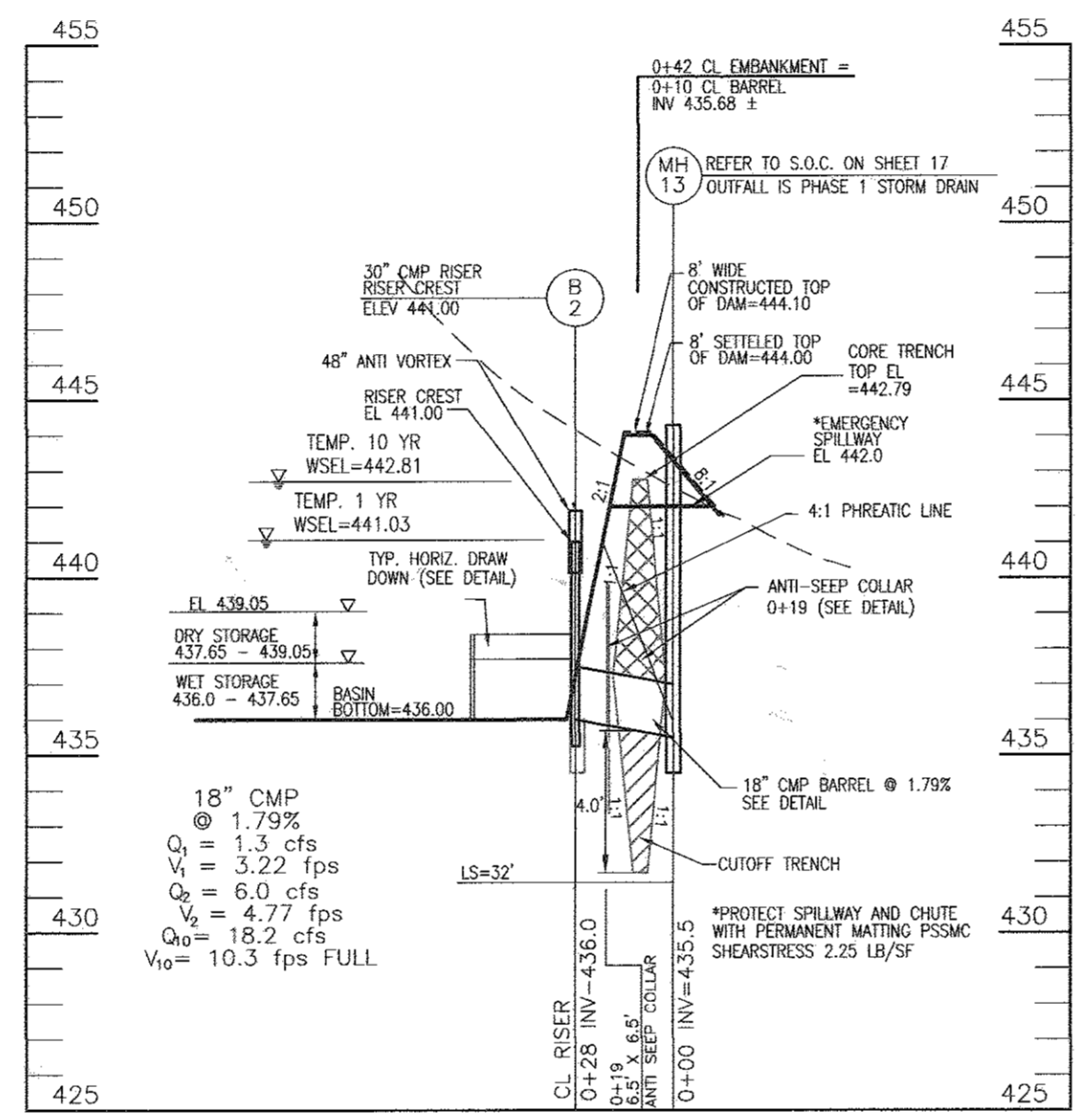
- Approved Practices for Dewatering of Excavated Areas
- Pumping of water to an existing sediment basin or trap in which the entire volume of water from the area to be dewatered can be contained without discharge to receiving waters.
 - Pumping of water to an existing sediment basin or trap such that the entire volume of water from the area to be dewatered can be managed without exceeding the design outflow from the sediment control structure.
 - Removable Pumping Station? Standards and specifications for Removable Pumping Station on Detail 20A.
 - Use of a Sump Pit? Standards and specifications for a sump pit on Detail 20B.
 - Sediment Tank? Standards and specifications for a sump pit on Detail 21.
- Dewatering of Sediment Traps and Basins
- Designers shall specify on plans, and in sequence of construction included on plans, the practices for dewatering of traps and basins. Plan reviewers shall check to see that procedures for dewatering to be used are included on plans. In all cases, water removed from traps and basins shall be discharged so that it passes through a sediment control device prior to entering receiving waters.
- Approved Practices for Dewatering of Traps and Basins
- Removable pumping station.
 - Use of a Sump Pit.
 - Use of a Hoisting Action hose to pump the cleaner water from the top of the pond. As the cleaner water is pumped the suction hose will lower and eventually encounter sediment laden water. When this happens the pumping operation will cease. Provisions shall be made to filter water.



**SEDIMENT BASIN #2
PROFILE ALONG CL EMERGENCY SPILLWAY**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #2
PROFILE ALONG CL OF EMBANKMENT**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #2
PROFILE ALONG CL OF BARREL**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

CONSTRUCTION SPECIFICATIONS

- INSTALL SEDIMENT CONTROL PRACTICES NECESSARY TO CONSTRUCT BASIN, CLEAR AND GRUB TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL FROM THE AREAS WHERE THE EMBANKMENT IS TO BE PLACED. DO NOT CLEAR THE POOL AREA UNTIL COMPLETION OF THE EMBANKMENT, UNLESS THE POOL AREA IS TO BE USED FOR BORROW, SALVAGE TOPSOIL FOR LATER USE. EXCAVATE CUT-OFF TRENCH ALONG CENTERLINE OF PROPOSED EMBANKMENT A MINIMUM DEPTH OF 4 FEET AND A BOTTOM (MIN. 4 FEET) WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND COMPACTION EQUIPMENT. CONSTRUCT SIDE SLOPES 1:1 OR FLATTER. CUT-OFF TRENCH MUST BE CONTINUOUS AND EXTEND THE ENTIRE LENGTH OF EMBANKMENT. COMPACTION REQUIREMENTS ARE THE SAME AS THOSE FOR THE EMBANKMENT. DEWATER THE TRENCH DURING THE BACKFILLING/COMPACTION OPERATIONS, USING AN APPROVED PRACTICE.
- CONSTRUCT EMBANKMENT OF CLEAN SOIL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, OR OTHER OBJECTIONABLE MATERIAL. FILL MATERIAL FOR IMPERVIOUS CORE AND CUT-OFF TRENCH MUST CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH, OR CL AND MUST HAVE AT LEAST 30 PERCENT PASSING THE #200 SIEVE. USE FILL MATERIAL CONTAINING SUFFICIENT MOISTURE SO THAT THE SOIL CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN SIX-INCH TO EIGHT INCH THICK CONTINUOUS LIFTS OVER THE ENTIRE LENGTH OF THE FILL. OBTAIN COMPACTION BY PASSING CONSTRUCTION EQUIPMENT OR COMPACTOR OVER THE FILL, SO THAT THE ENTIRE SURFACE OF EACH LAYER OF FILL IS TRAVERSED AT LEAST FOUR TIMES. CONSTRUCT THE EMBANKMENT TO AN ELEVATION A MINIMUM OF 10 PERCENT HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT.
- INSTALL PRINCIPAL SPILLWAY PRIOR TO, OR CONCURRENTLY WITH, FILL PLACEMENT. DO NOT EXCAVATE EMBANKMENT FOR PLACEMENT OF SPILLWAY. ALL PIPE CONNECTIONS INCLUDING ANTI-SEEP COLLARS MUST BE COMPLETELY WATER-TIGHT. INSTALL FILTER DIAPHRAGM WHEN SPECIFIED ON PLAN. BARREL CONNECTION TO RISER MUST BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ATTACH BARREL STUD TO RISER AT THE SAME PERCENT (SLOPE) OF GRADE AS THE BARREL. FOR CONCRETE RISER/BARREL ASSEMBLY, POUR RISER WITH BARREL IN PLACE OR SET PRE-CAST RISER AND INSTALL PROTECTION COLLAR FOR WATER-TIGHT CONNECTION. PLACE FILL MATERIAL AROUND THE PIPE SPILLWAY IN FOUR (4) INCH LIFTS AND HAND COMPACT AROUND THE PIPE TO A DEPTH OF 1.5 TIMES THE PIPE DIAMETER (MINIMUM). SECURELY INSTALL ANTI-VORTEX DEVICE AND TRASH RACK AS SHOWN ON PLAN.
- INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED NATURAL GROUND. CONSTRUCT SPILLWAY WITHIN A TOLERANCE OF ± 0.2 FEET.
- STABILIZE EMBANKMENT AND ASSOCIATED DISTURBED AREAS WITHIN THREE (3) DAYS OF COMPLETION WITH SEED AND MULCH. MONITOR EMBANKMENT AND MAINTAIN EROSION FREE DURING THE LIFE OF THE BASIN.
- INSTALL FENCING AND SIGNAGE IN ACCORDANCE WITH THE APPROVED PLAN.
- REMOVE SEDIMENT WHEN ACCUMULATED MATERIAL HAS REACHED 25 PERCENT OF THE TOTAL STORAGE CAPACITY. RESTORE BASIN TO ORIGINAL DESIGN VOLUME. PLACE REMOVED SEDIMENTS IN A CONTROLLED AREA AND STABILIZE. DO NOT DEPOSIT SEDIMENT DOWNSTREAM OF THE EMBANKMENT, ADJACENT TO A STREAM OR FLOODPLAIN.
- WHEN THE CONTRIBUTING DRAINAGE AREA IS STABLE, THE BASIN CAN BE REMOVED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN.
- A SEDIMENT BASIN (DESIGNED, BUILT, AND CERTIFIED AS A STORMWATER MANAGEMENT STRUCTURE), MAY BE CONVERTED WHEN THE CONTRIBUTORY DRAINAGE AREA IS STABLE. PROPERLY DEWATER BASIN, MODIFY OUTLET STRUCTURE, PERFORM ADDITIONAL GRADING, AND PROVIDE REQUIRED STORAGE VOLUME IN ACCORDANCE WITH APPROVED STORMWATER MANAGEMENT PLANS.

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

John R. Robertson 10/22/16
HOWARD S.C.D. DATE

OWNER/DEVELOPER CERTIFICATION:
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR CONSTRUCTION ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Chris Mum
OWNER/DEVELOPER SIGNATURE
PRINTED NAME & TITLE

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

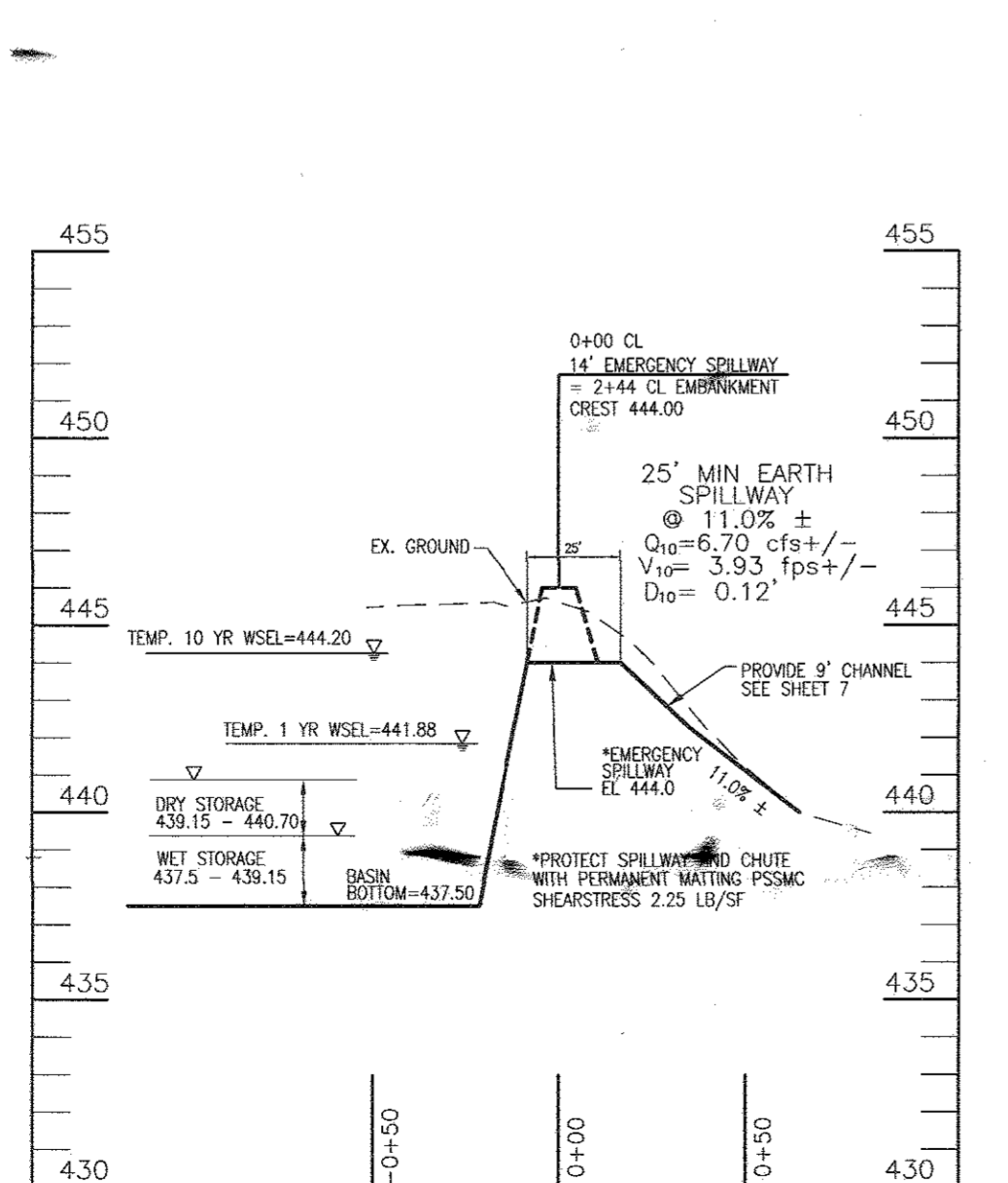
Robert H. Vogel
DESIGNER'S SIGNATURE
ROBERT H. VOGEL
PRINTED NAME & TITLE

MD REGISTRATION NO. 16193
P.E., R.L.S., OR R.L.A. (circle one)

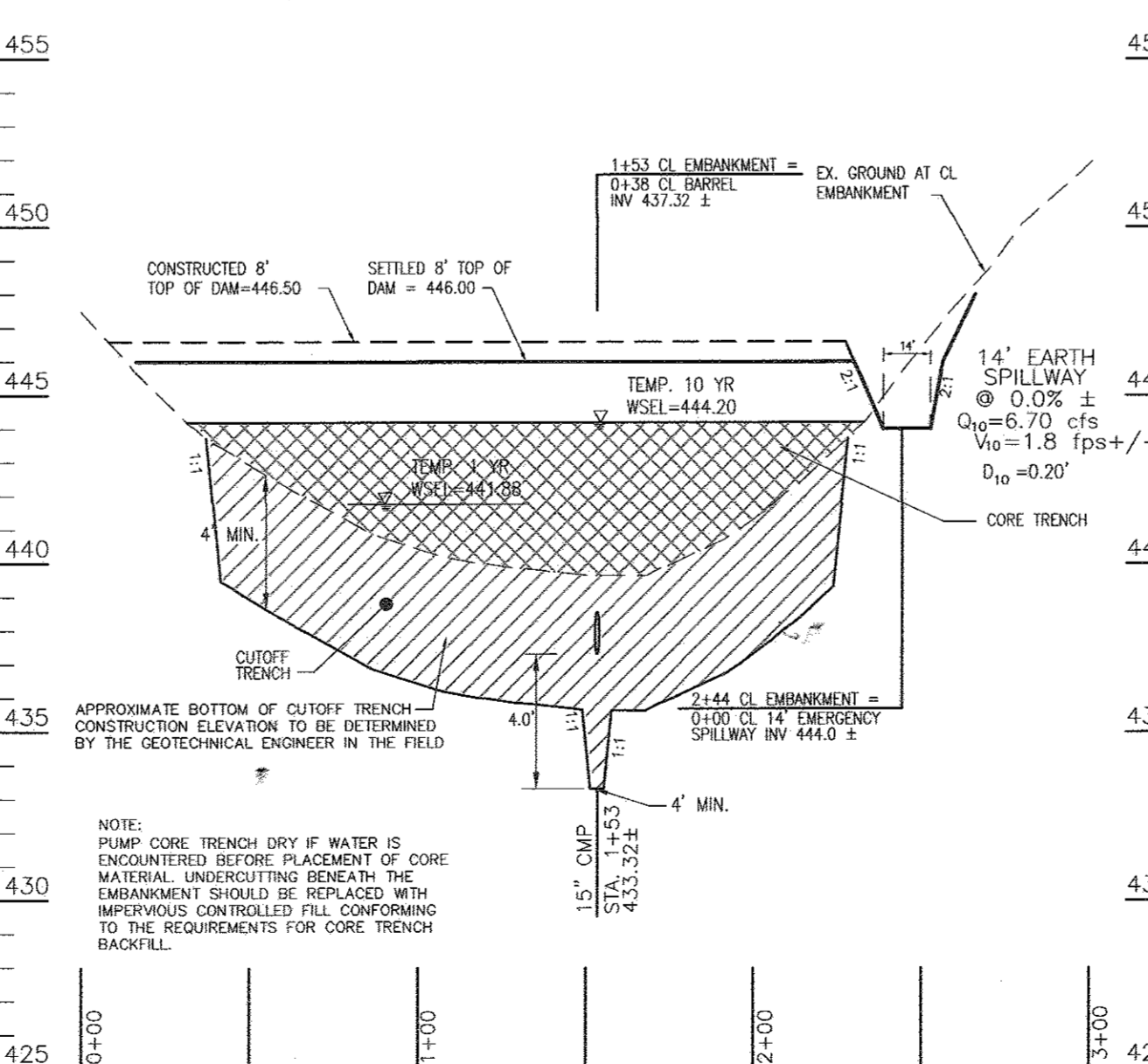
APPROVED: *Howard County Department of Public Works*
CHIEF, BUREAU OF HIGHWAYS DATE 10/25/2016

APPROVED: *Howard County Department of Planning and Zoning*
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/3/16

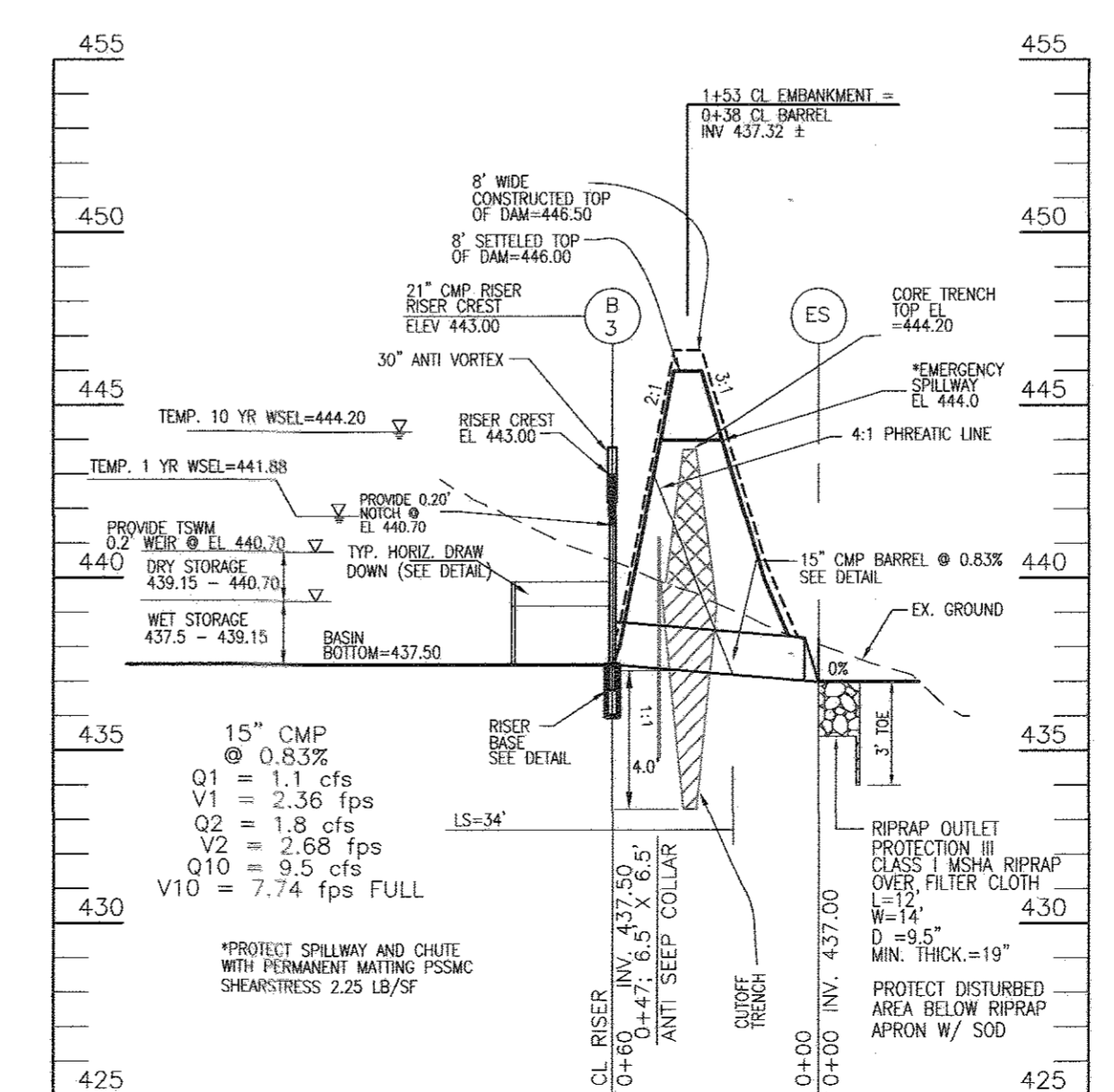
Kate Schaefer
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11-4-16



**SEDIMENT BASIN #3
PROFILE ALONG CL EMERGENCY SPILLWAY**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #3
PROFILE ALONG CL OF EMBANKMENT**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**SEDIMENT BASIN #3
PROFILE ALONG CL OF BARREL**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

OWNER
MAPLE LAWN FARMS, INC.
11786 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
SEDIMENT BASIN - NOTES AND DETAILS
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MOD-3
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DPY REF: ECP-14-093, WP-15-136, PBA415, SP-15-014

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34
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. EXPIRATION DATE: 09-27-2018
18 SHEET OF 48

LEGEND:

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREE LINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR

- DRAINAGE AREA DIVIDE
- PROPOSED STREET LIGHT
- 10' TREE MAINTENANCE EASEMENT
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT

- NOTES:**
1. WORST CASE 5 MIN. TC ASSUMED THROUGHOUT DESIGN.
 2. PERCENT IMPERVIOUS SHOWN, IGNORES STORMWATER MANAGEMENT "CREDITS"; I.E. ROOFTOP DISCONNECTS
 3. DESIGN ASSUMES COMPLETE FAILURE OF PROPOSED MICRO-SCALE PRACTICES

OWNER
 MAPLE LAWN, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2681 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE
1	REVISE & PATHWAY (BY GLW)	7.10.23

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN DRAINAGE AREA MAP
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
 5TH ELECTION DISTRICT
 DEPT REF: ECP-14-093, WP-15-136, PR#415, SP-15-014

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PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

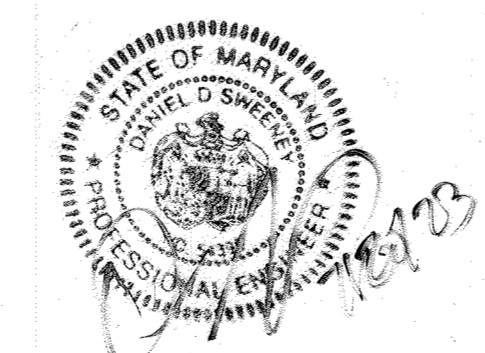
19 SHEET OF 48

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

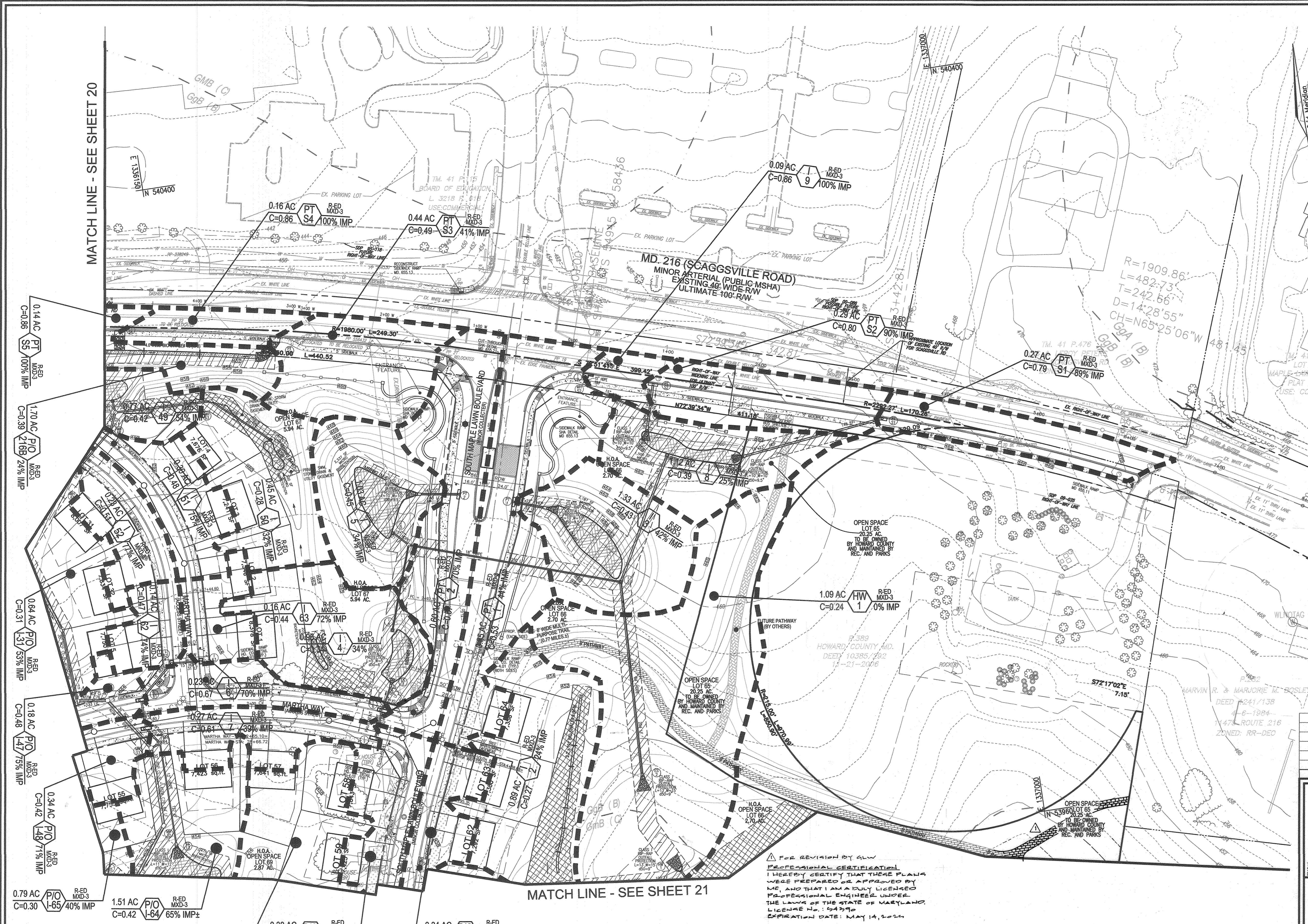
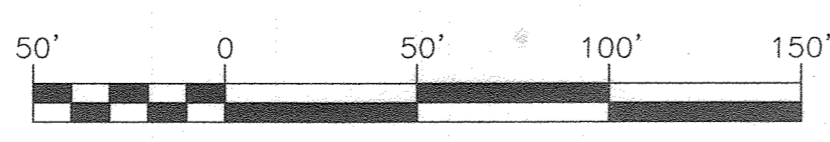
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	TOUR	PERCENT	K FACTOR	PERCENT	PERCENT	PERCENT
BaA	BAILEY SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	NO	0.32	NO	NO	NO	NO
GaA	GLENNVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO	NO
GaB	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO	NO
GaBb	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES	NO	NO
GaBc	GLENNVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL	NO	NO
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BAILEY COMPONENT OF GaB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 54290, EXPIRATION DATE: MAY 14, 2024



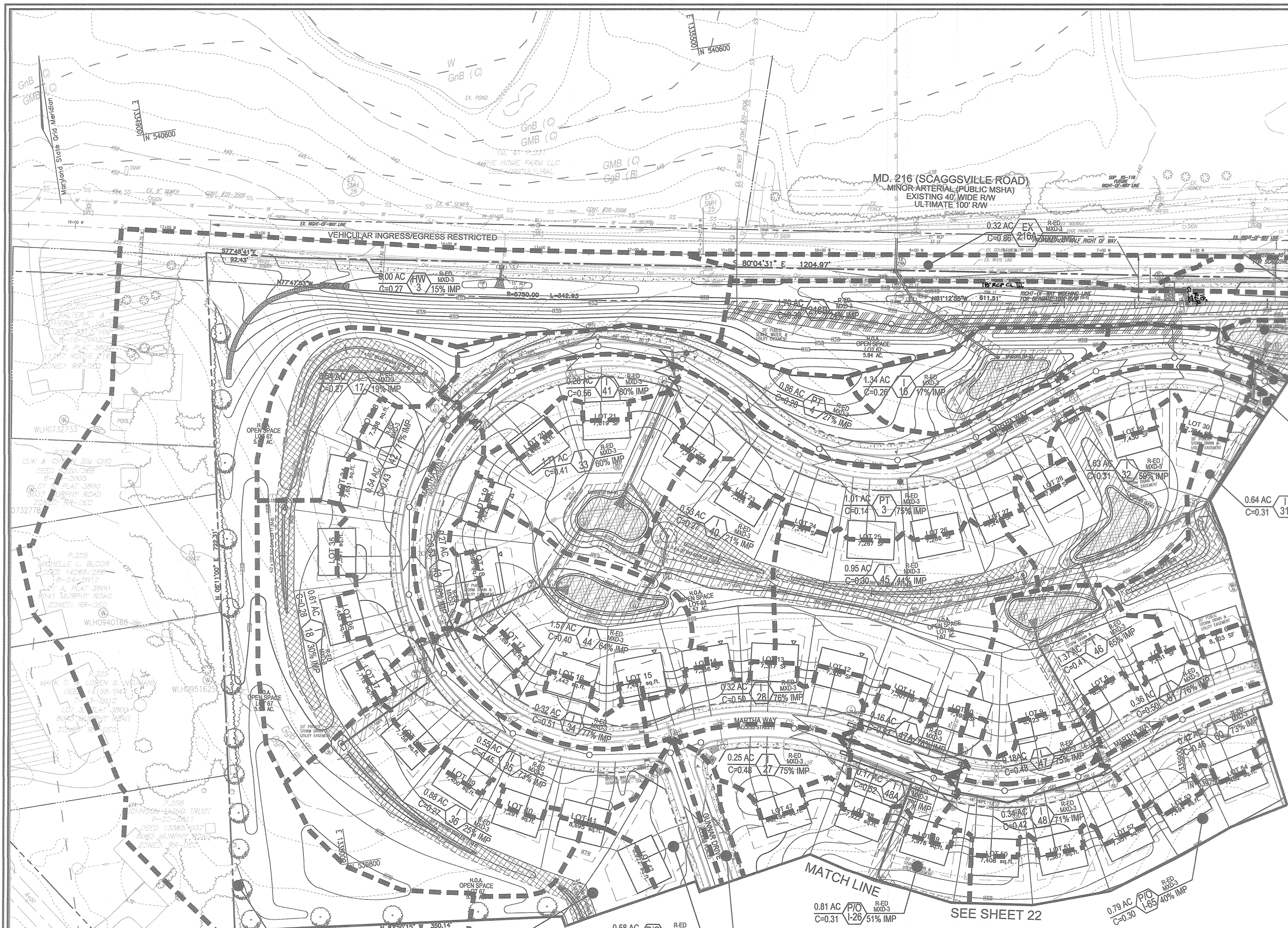
STORM DRAIN DRAINAGE AREA MAP
 SCALE: 1"=50'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 11/3/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11-4-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



LEGEND:

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
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- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREE LINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR

DRAINAGE AREA 'C' FACTOR	INLET #	ZONING	% IMPERVIOUS
0.14 AC C=0.86	PT S5	R-ED MXD-3	100% IMP
0.77 AC C=0.42	I 49	R-ED MXD-3	54% IMP
0.30 AC C=0.48	I 51	R-ED MXD-3	75% IMP
0.23 AC C=0.51	I 52	R-ED MXD-3	77% IMP
0.64 AC C=0.31	I 31	R-ED MXD-3	53% IMP

NOTES:

- WORST CASE 5 MIN. TC ASSUMED THROUGHOUT DESIGN.
- PERCENT IMPERVIOUS SHOWN, IGNORES STORMWATER MANAGEMENT "CREDITS", I.E. ROOFTOP DISCONNECTS
- DESIGN ASSUMES COMPLETE FAILURE OF PROPOSED MICRO-SCALE PRACTICES

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DEVELOPER
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 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BVD, REVISE CIRCLE TRUCK AFRONT AVENUE STORM DRAIN PROFILES & SCHEDULES AND BIOSWALE CHART	8/9/17

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN DRAINAGE AREA MAP
MAPLE LAWN SOUTH PHASE 1 - SECTION A
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRID 2 - PARCEL 115 ZONED: R-ED-MXD-3 HOWARD COUNTY, MARYLAND
 2018 ELECTION DISTRICT DIST REF: ECP-14-003, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7866 FAX: 410.461.9961

PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
 ROBERT H. VOGEL
 No. 16193
 PROFESSIONAL ENGINEER

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018

20 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/26/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/3/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-4-16

STORM DRAIN DRAINAGE AREA MAP
 SCALE: 1"=50'

50' 0 50' 100' 150'

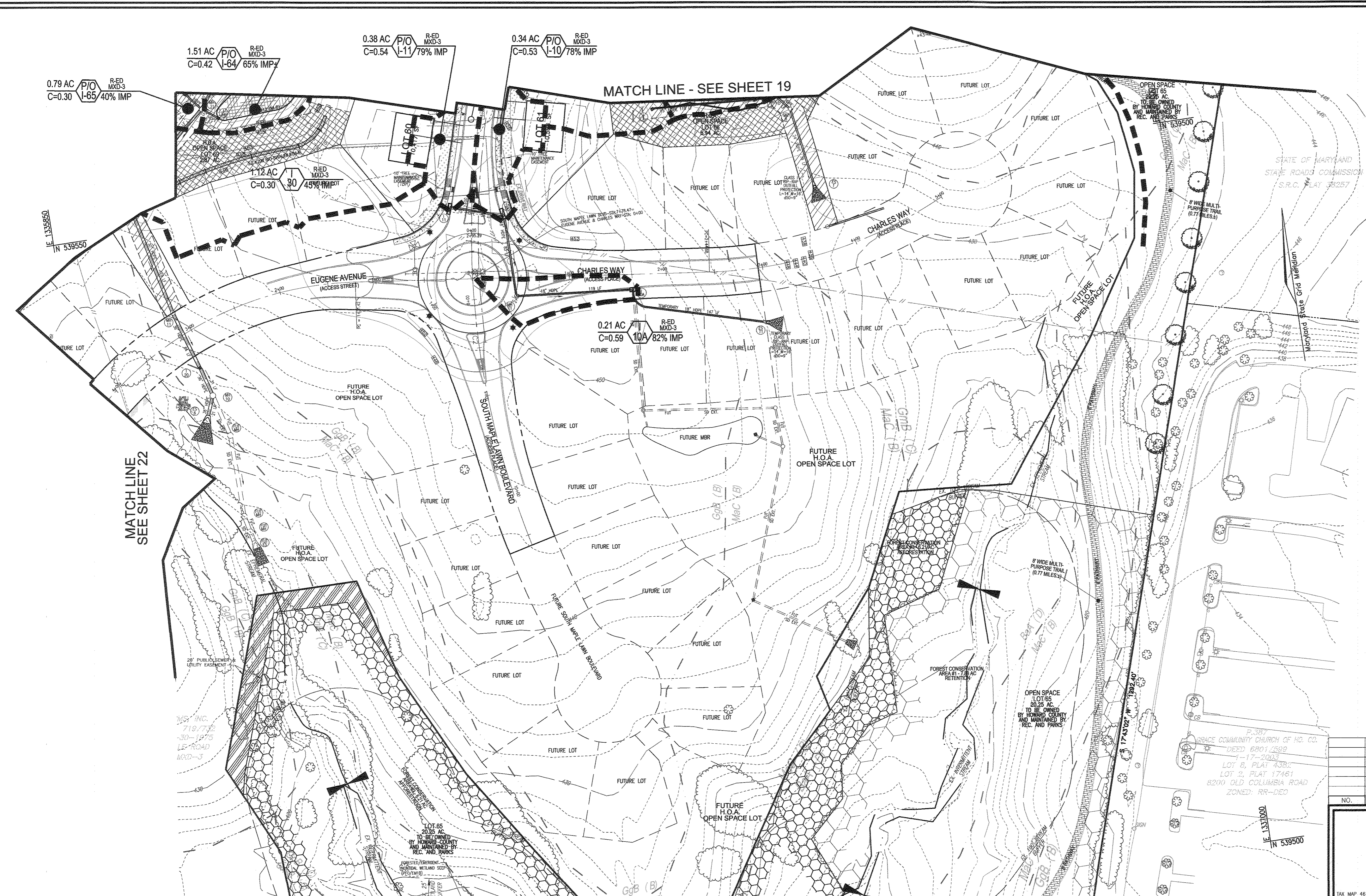
MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRO	PERCENT HYDRIC	K FACTOR	PERCENT PERMEABLE	ERODIBILITY
BaA UNLE Silt LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
GaA CLEVELAND LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GaB CLEVELAND LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GmB CLEVELAND Silt LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
GmC CLEVELAND Silt LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	ERODIBLE
MmC MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

*BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC



LEGEND:

- EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - EXISTING TREELINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - PROPOSED SIDEWALK
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
- DRAINAGE AREA** **INLET** **ZONING**
- 'C' FACTOR** **#** **% IMPERVIOUS**
- DRAINAGE AREA DIVIDE
 - PROPOSED PUBLIC DRAINAGE AND UTILITY EASEMENT
 - PROPOSED STREET LIGHT
 - 10' TREE MAINTENANCE EASEMENT
 - PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
 - PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
 - FOREST CONSERVATION AREA AFFORESTATION
 - FOREST CONSERVATION AREA RETENTION
 - PUBLIC SEWER & UTILITY EASEMENT

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

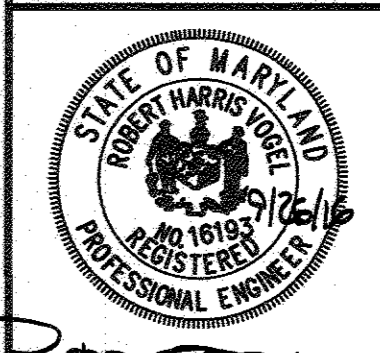
DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN DRAINAGE AREA MAP
MAPLE LAWN SOUTH PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DPZ REF: EOP-14-083, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

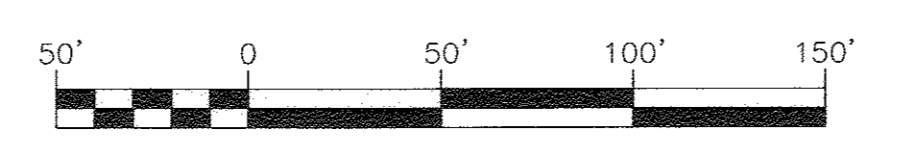


PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRES DATE: 09-30-2018.

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

- NOTES:**
1. WORST CASE 5 MIN. TC ASSUMED THROUGHOUT DESIGN.
 2. PERCENT IMPERVIOUS SHOWN, IGNORES STORMWATER MANAGEMENT "CREDITS", I.E. ROOFTOP DISCONNECTS.
 3. DESIGN ASSUMES COMPLETE FAILURE OF PROPOSED MICRO-SCALE PRACTICES

STORM DRAIN DRAINAGE AREA MAP
 SCALE: 1"=50'



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT MOISTURE	K FACTOR	PERCENT ERODIBLE	ERODIBILITY
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	0.32	NO	YES	NO
GgA	GLENNVILLE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	0.20	YES	NO	NO
GgB	GLENNVILLE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	0.20	YES	NO	NO
GmB	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	0.37	YES	YES	NO
GmC	GLENNVILLE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	0.37	NO	PARTIAL	NO
MacC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	0.74	YES	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/5/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11-4-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

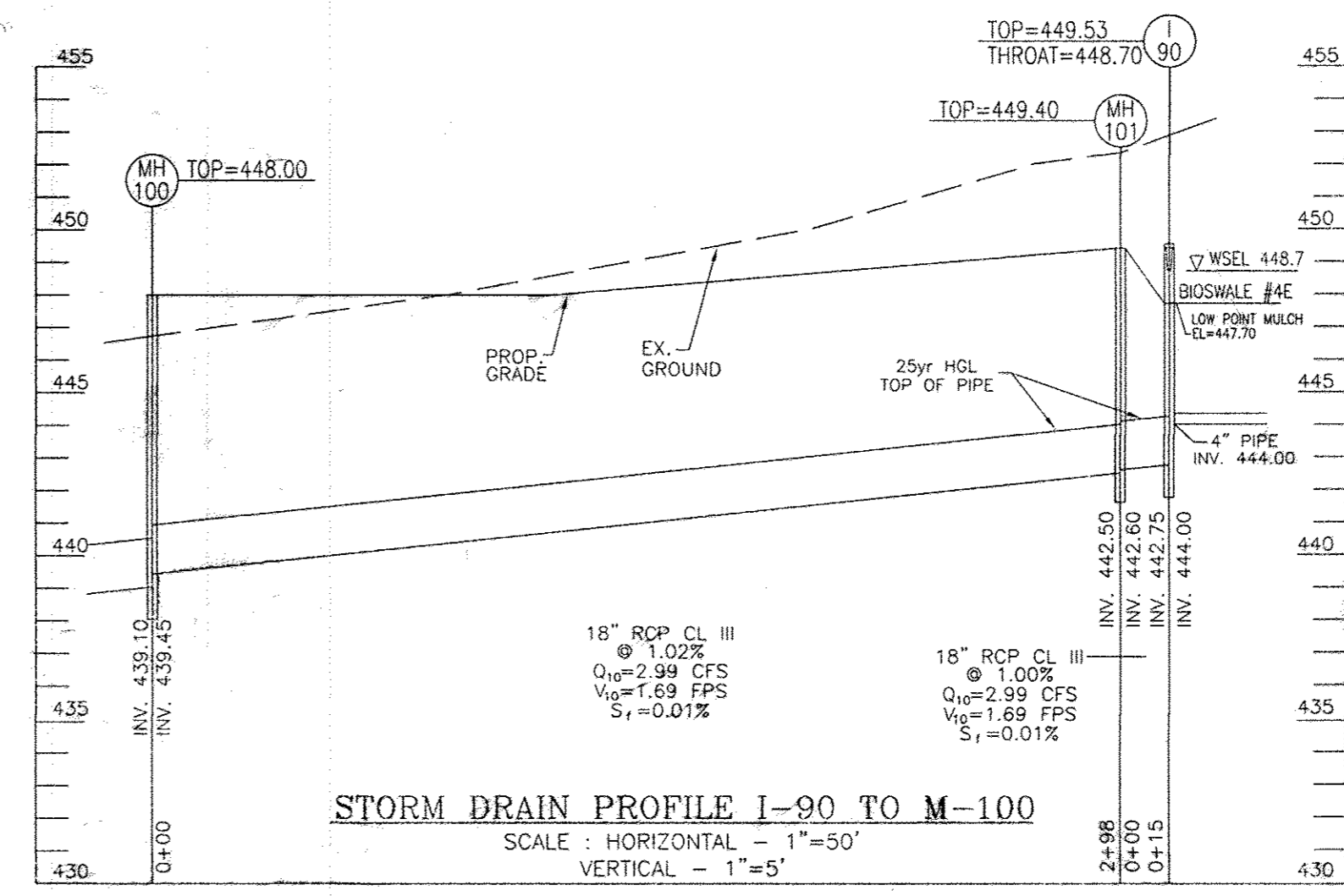
LEGEND:

- EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - EXISTING TREELINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - PROPOSED SIDEWALK
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
- DRAINAGE AREA**
C FACTOR
- INLET #**
- ZONING**
% IMPERVIOUS
- DRAINAGE AREA DIVIDE
 - PROPOSED STREET LIGHT
 - PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
 - PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT



MATCH LINE - SEE SHEET 21

MATCH LINE - SEE SHEET 20



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT PERCENTS	K FACTOR	PERCENT PERCENTS
BaA	BALU SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO
CgA	GLENELE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES
CgB	GLENELE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES
GmB	GLENEVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES
GmB	GLENEVILLE-SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO
MuG	MUNDY LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY. NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT. *BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC.

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BLVD. REVISE CIRCLE TRUCK APPROX. AMEND STORMDRAIN PROFILES & SCHEDULES AND BIOSWALE CHART.	8/9/17

FINAL ROAD CONSTRUCTION PLAN

STORM DRAIN DRAINAGE AREA MAP

MAPLE LAWN SOUTH PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69

ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIGOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

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. 16193 EXPIRATION DATE: 09-27-2018.

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RVE
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

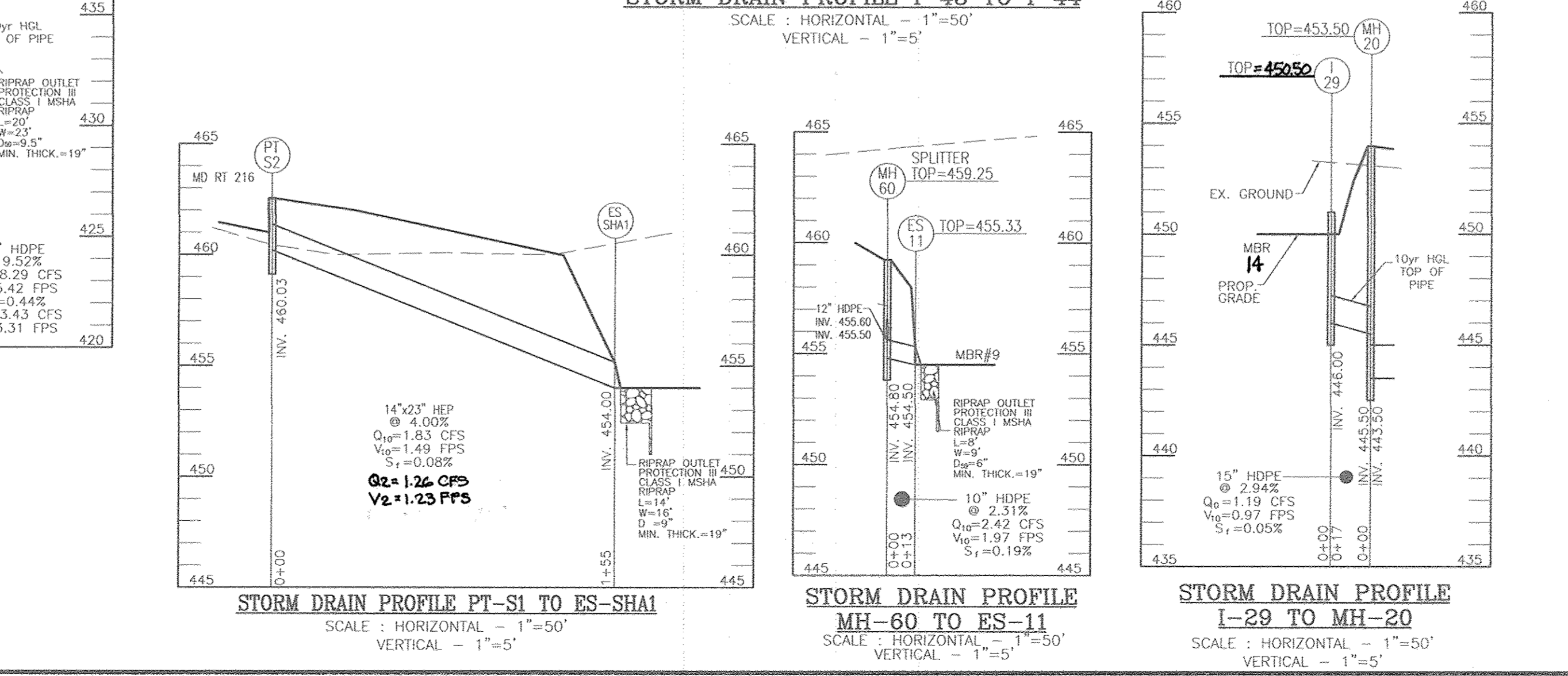
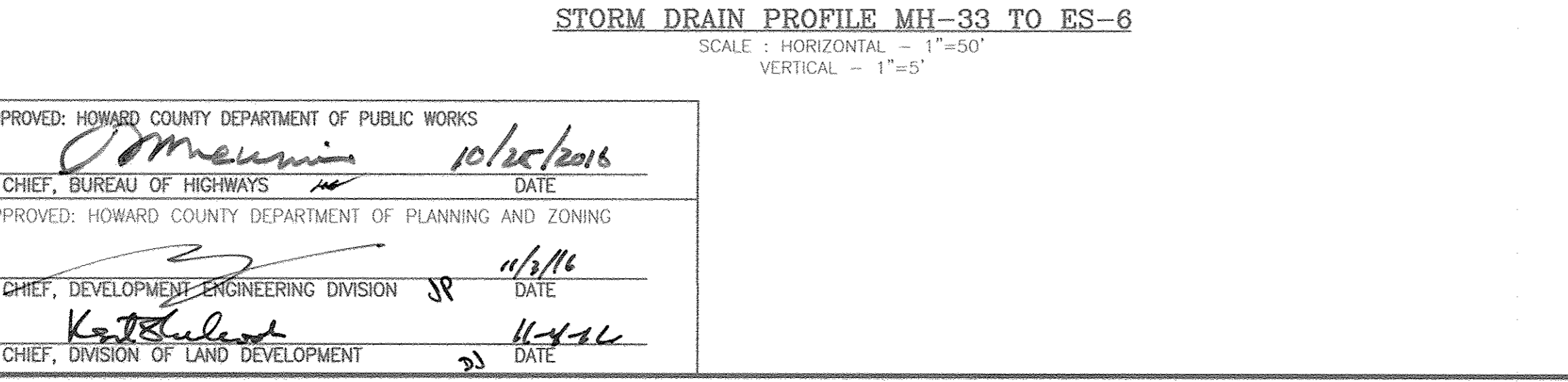
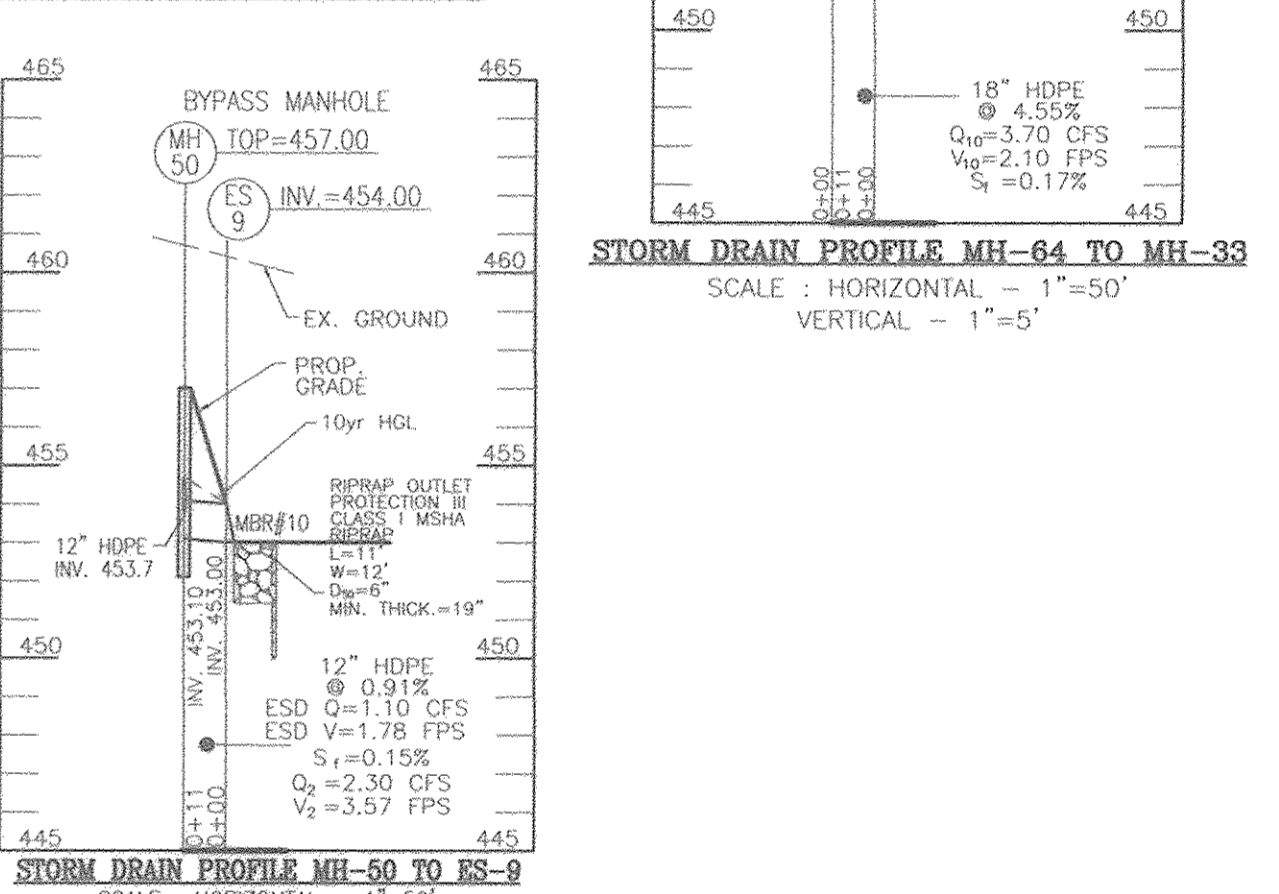
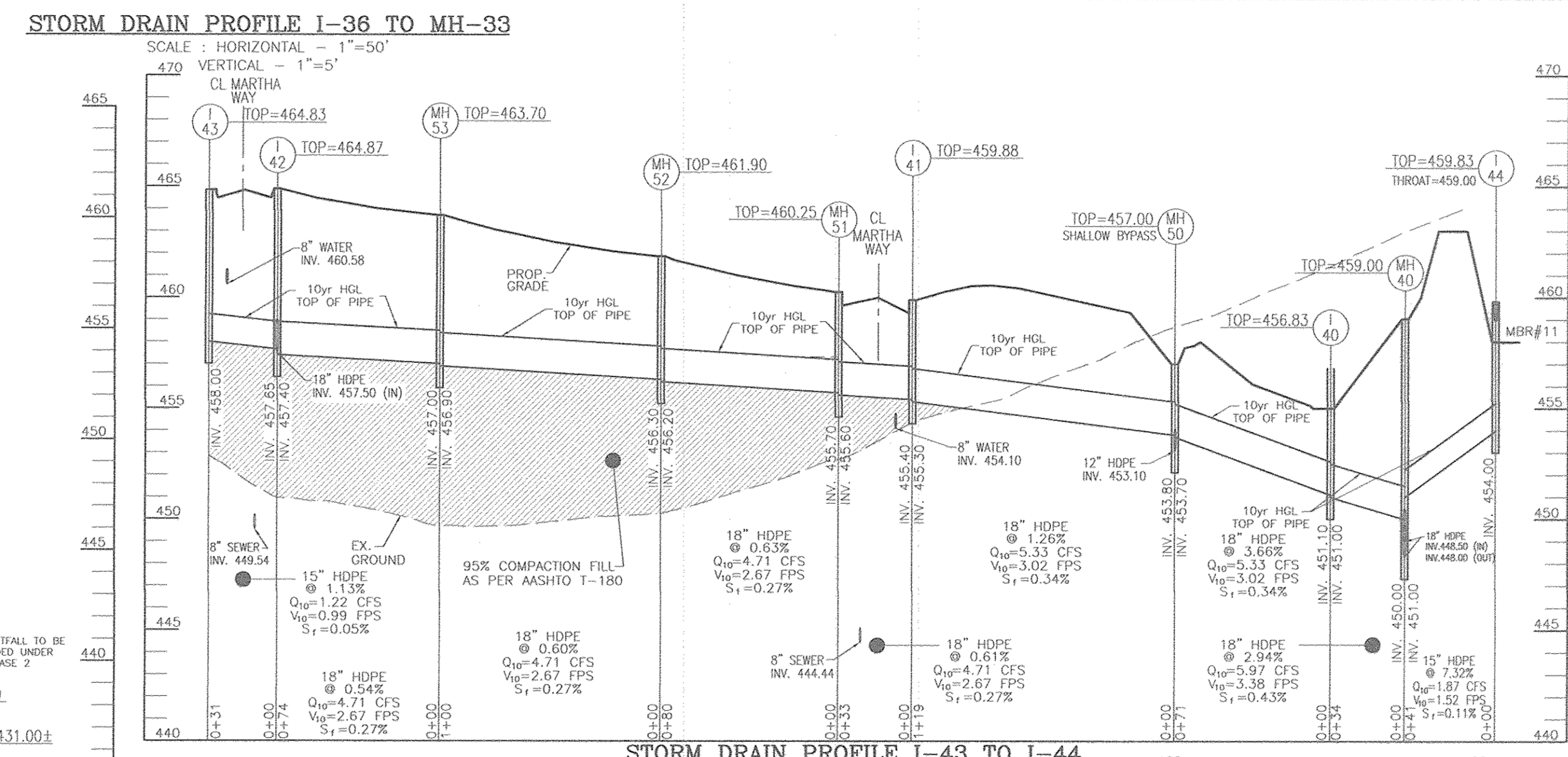
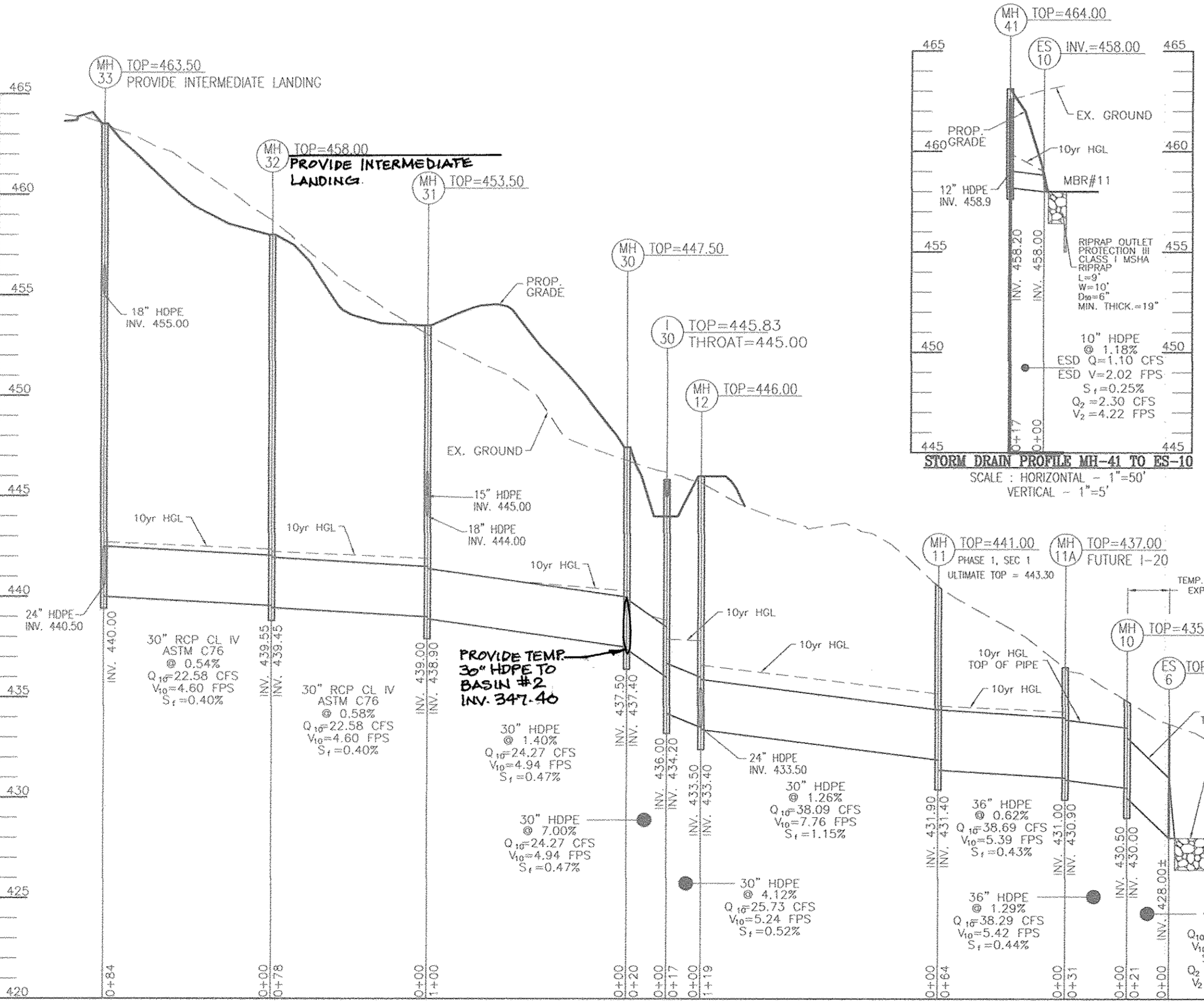
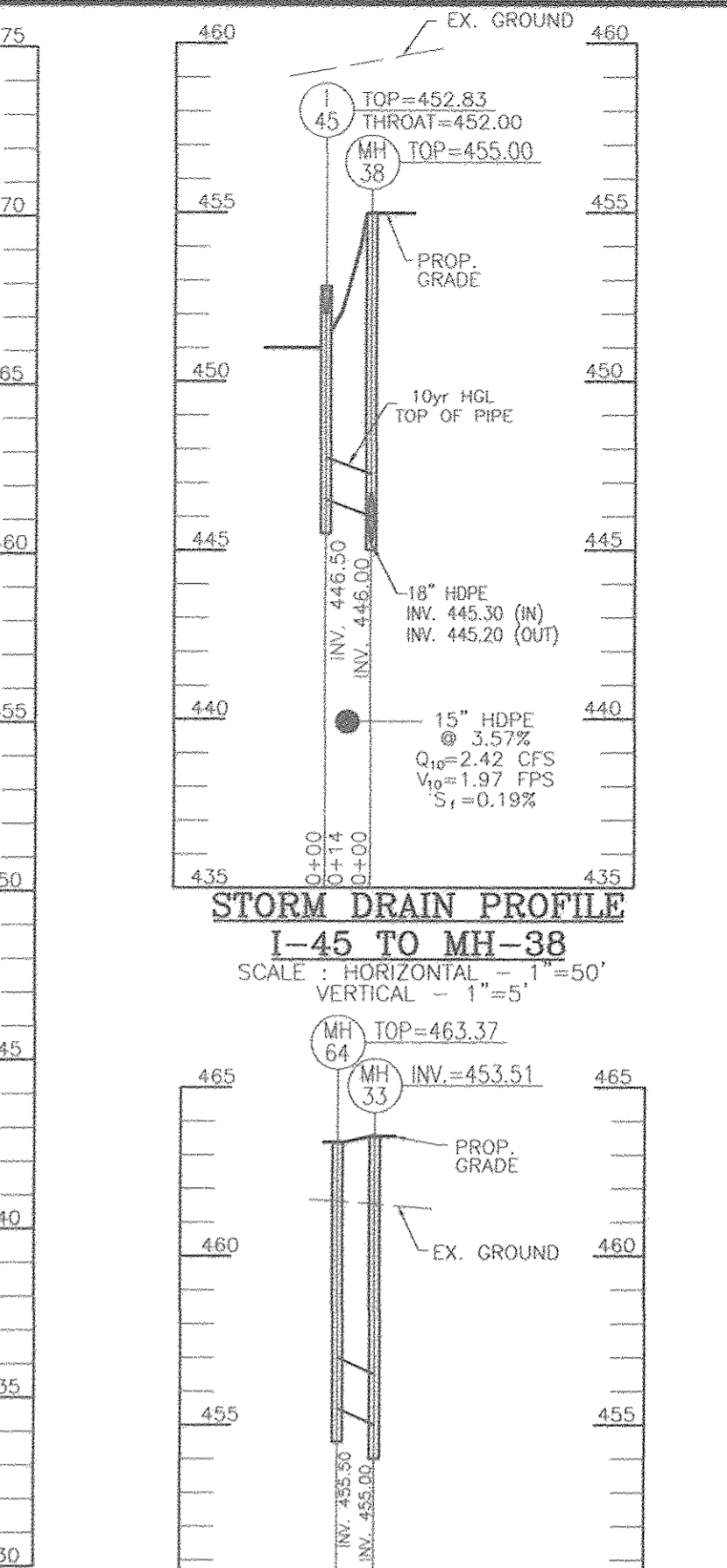
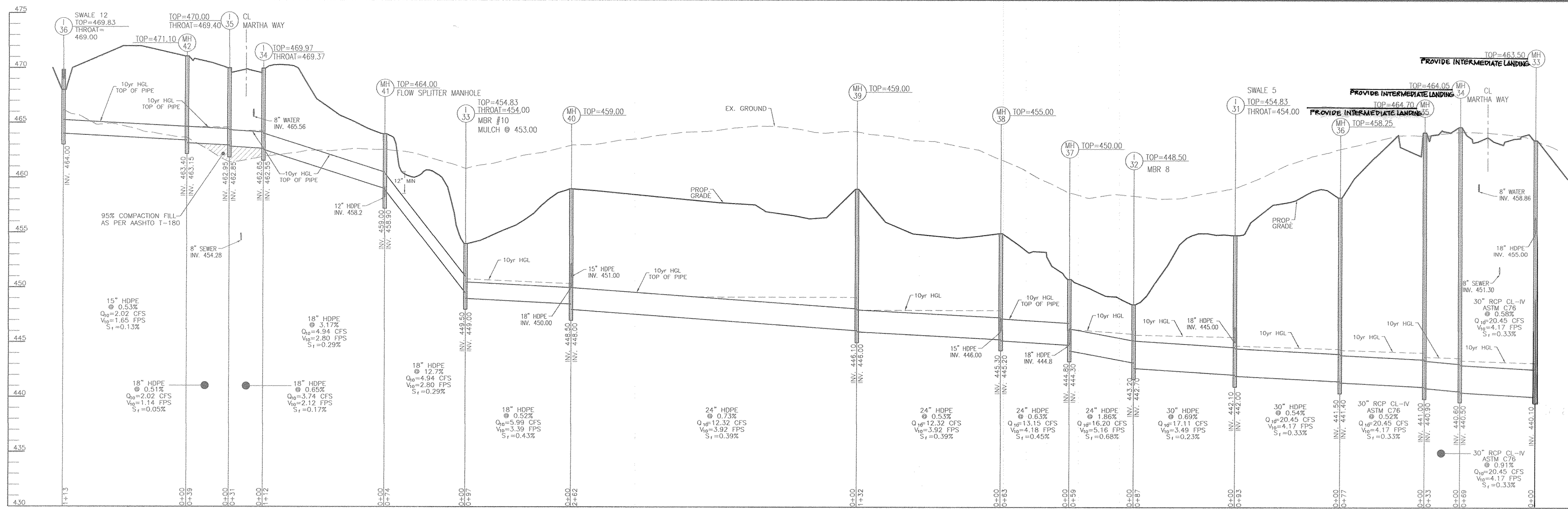
22 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11/3/16

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 11-4-16

STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=50'



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BLVD. REVISE CURB TRUCK APRON. AMEND STORM DRAIN PROFILES & SCHEDULES AND BIOSWALE CHART	8/9/17

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN PROFILES
MAPLE LAWN SOUTH
PHASE 1 - SECTION 'A'
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113
SOIL ELECTION DISTRICT
BPZ REF: ECP-14-093, WP-15-136, PBJ415, SP-15-014
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8951

PROFESSIONAL CERTIFICATE
DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RVE
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

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. 16160
EXPIRATION DATE: 09-27-2018

23 SHEET OF 48

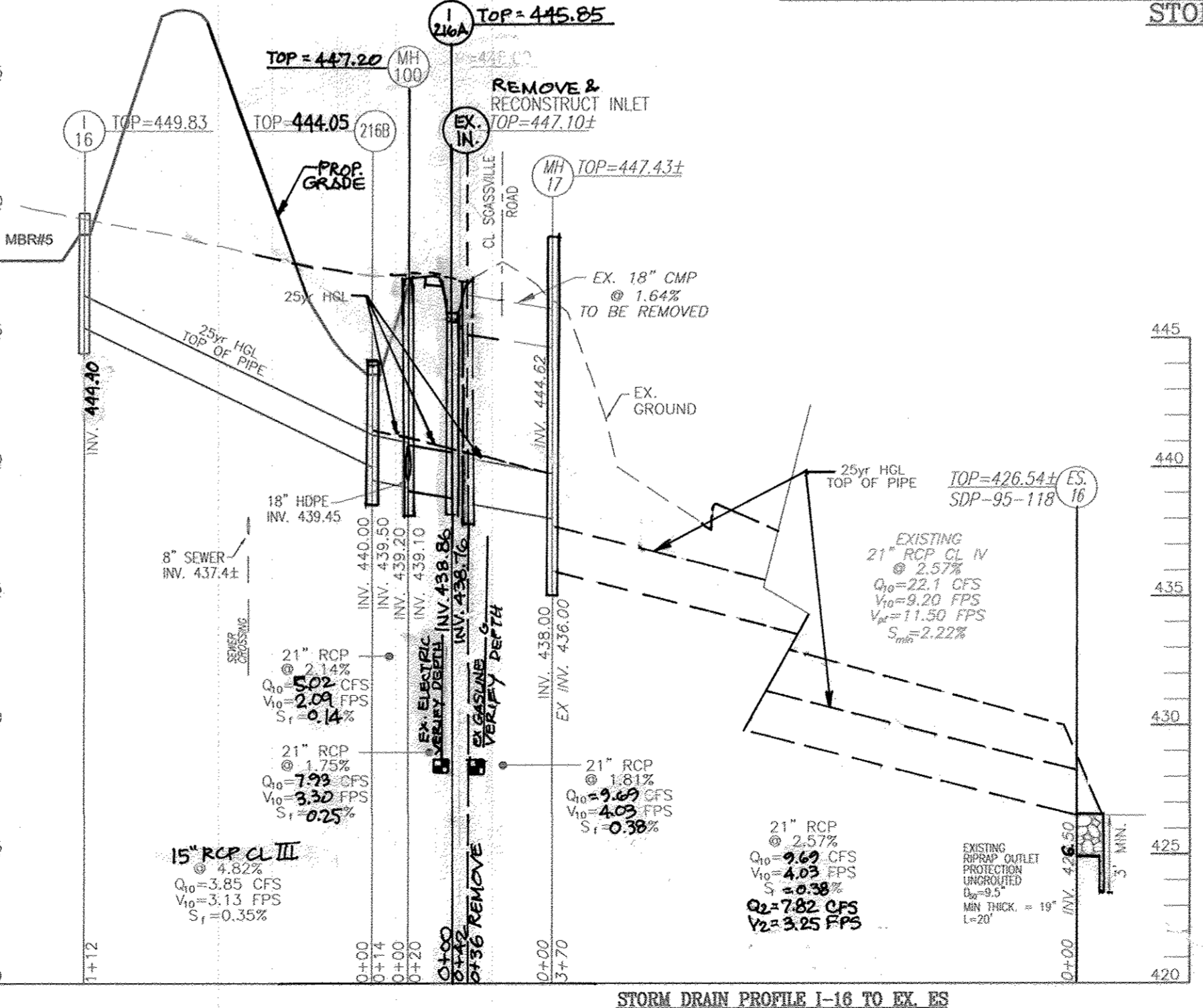
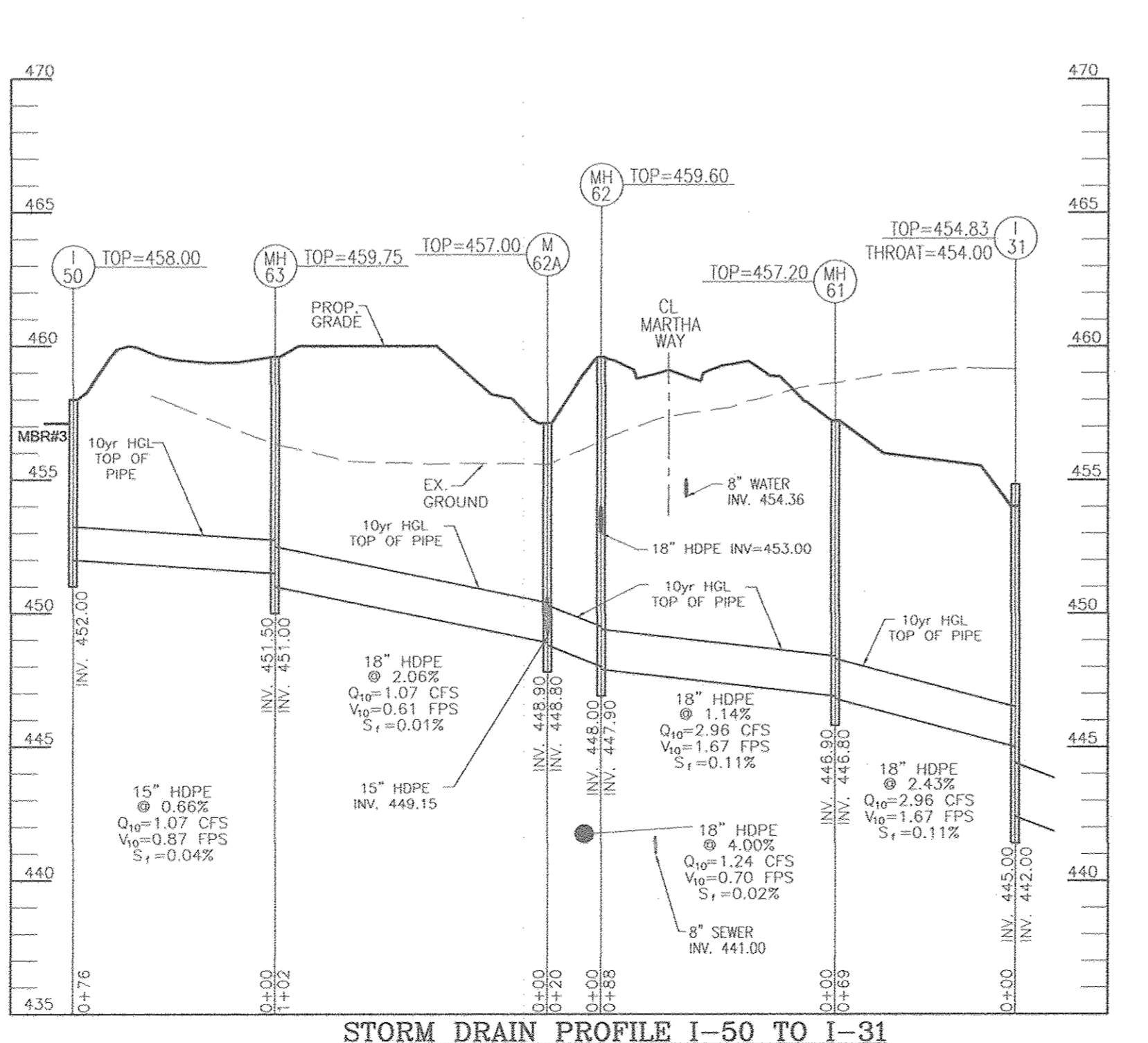
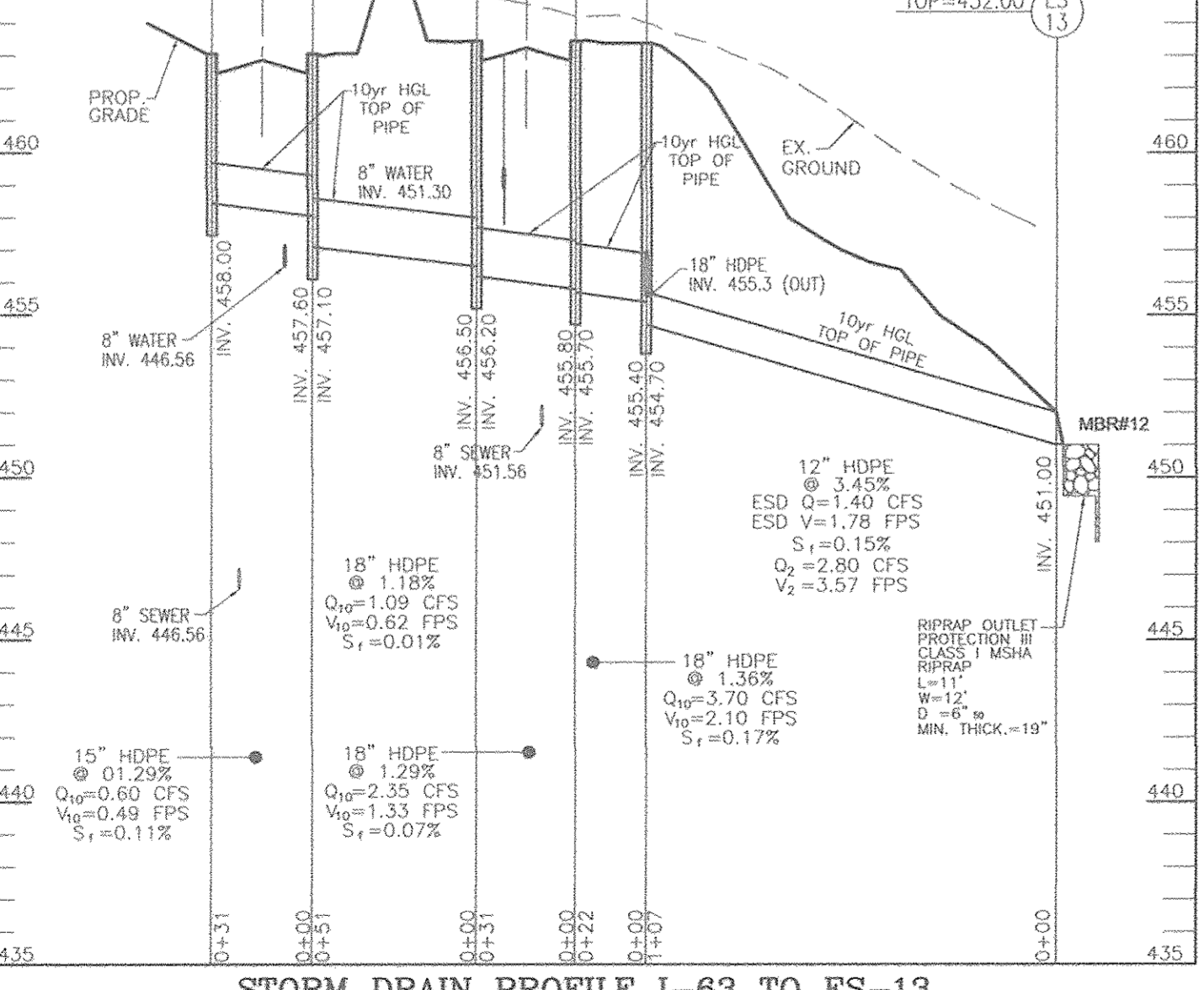
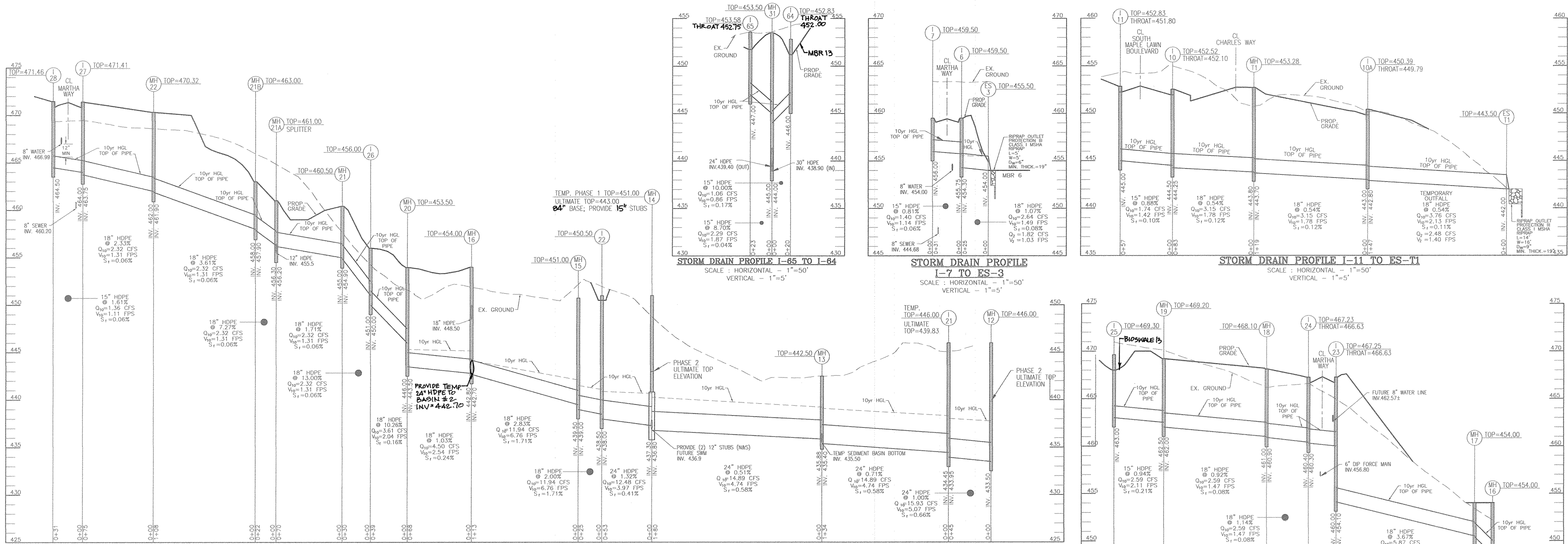
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/3/16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-1-16



OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE
1	REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BLVD. REVISE CIRCULAR TRUCK APRON. AMEND STORM DRAIN PROFILES & SCHEDULES AND BIO SWALE CHART	8/9/17

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN PROFILES
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL "B", AND OPEN SPACE LOTS 65-69
 NON-BUILDABLE BULK PARCEL "B", AND OPEN SPACE LOTS 65-69
 TOWN MAP 46 - GRID 2 - PARCEL 113
 50TH ELECTION DISTRICT
 DPZ REF: ECP-14-003, WP-15-136, PPA#15, SP-15-014
 JONED: R-ED-MKD-3
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

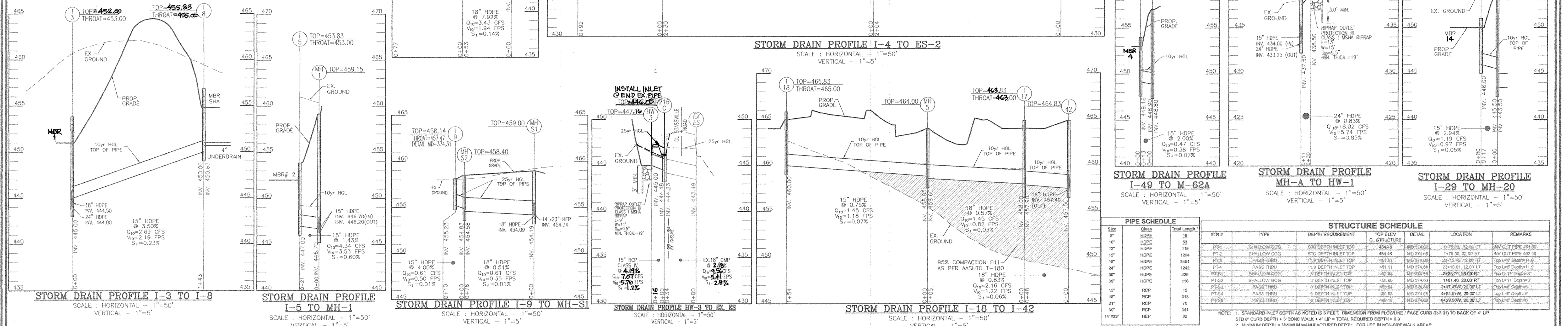
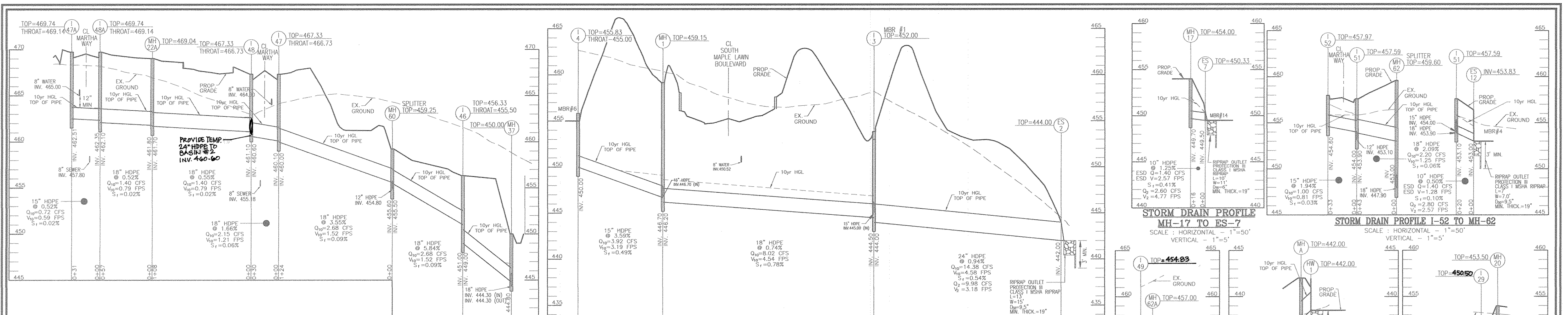
PROFESSIONAL CERTIFICATE
 DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

24 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT



STR #	TYPE	INV. IN	INV. OUT	TOP OF UPPER/LOWER	DETAIL	LOCATION	REMARKS
ES-01	18\"/>						

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/3/16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-14-16

OWNER: MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 2220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

REVISIONS: REVISE LIMITS OF STANDARD CURB & GUTTER ALONG SOUTH MAPLE LAWN BLVD. REVISE CIRCULAR TRUCK APRON. AMEND STORM DRAIN PROFILES & SCHEDULES AND BIOSWALE CHAMBER. 8/9/17

FINAL ROAD CONSTRUCTION PLAN
 STORM DRAIN PROFILES
 MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAP MAP 46 - GRID 2 - PARCEL 113
 5TH ELECTION DISTRICT
 DPZ REF: ECP-14-023, WP-15-136, PB#415, SP-15-014

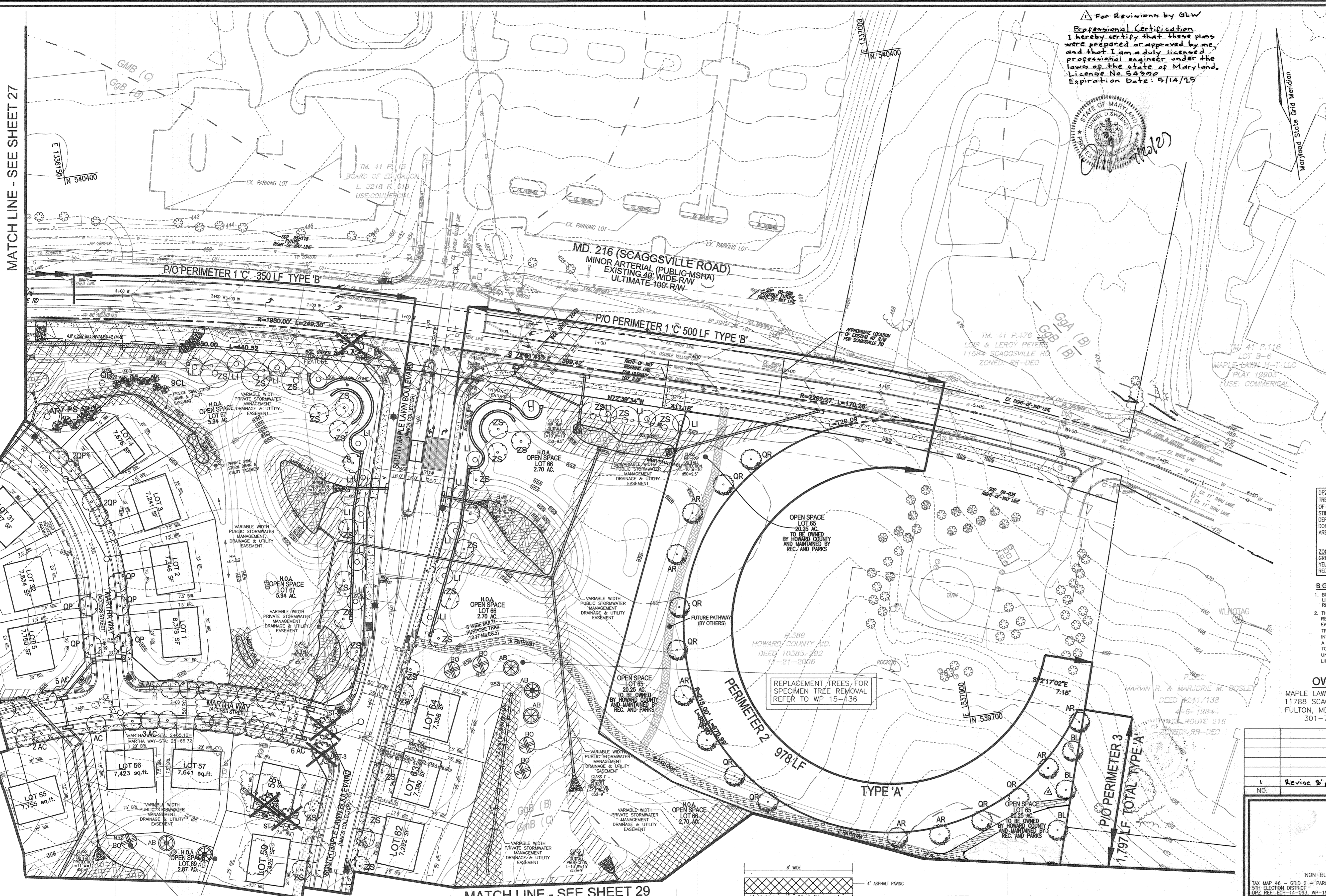
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410-461-7666
 FAX: 410-461-8961

DESIGN BY: RVE
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 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
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PROFESSIONAL CERTIFICATE
 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. 16193, EXPIRATION DATE: 09-27-2016

25 SHEET OF 48

MATCH LINE - SEE SHEET 27



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. 54399. Expiration Date: 5/14/25



LEGEND:

---	EXISTING CONTOUR
- - - -	PROPOSED CONTOUR
○	PROPOSED SPOT ELEVATION
○	EXISTING SPOT ELEVATION
○	EXISTING CURB AND GUTTER
○	PROPOSED CURB AND GUTTER
○	EXISTING UTILITY POLE
○	EXISTING LIGHT POLE
○	EXISTING MAILBOX
○	EXISTING SIGN
○	EXISTING SANITARY MANHOLE
○	EXISTING SANITARY LINE
○	EXISTING CLEANOUT
○	EXISTING FIRE HYDRANT
○	EXISTING WATER LINE
○	EXISTING STORM DRAIN
○	EXISTING OVER HEAD LINE
○	PROPOSED STORM DRAIN INLET
○	EXISTING TREELINE
○	PROPERTY LINE
○	RIGHT-OF-WAY LINE
○	SOILS BOUNDARY
○	PERIMETER LANDSCAPING
○	PROPOSED STREET TREE
○	BCE GREEN ZONE
○	BCE YELLOW ZONE
○	PROPOSED STREET LIGHT
○	FUTURE 8' PATHWAY BY OTHERS
○	8' PATHWAY
○	10' TREE MAINTENANCE EASEMENT
○	EXISTING SPECIMEN TREE
○	EXISTING SPECIMEN TREE TO BE REMOVED

DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES. AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

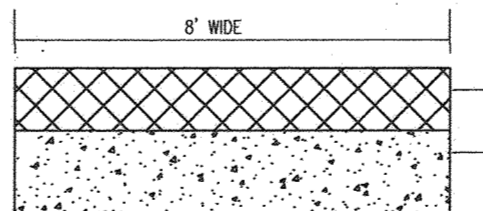
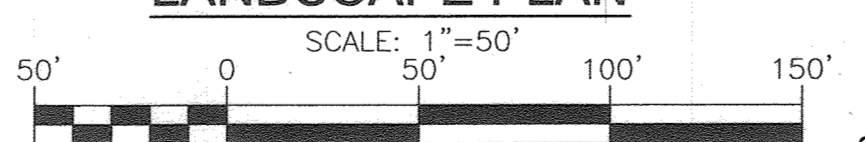
BG & E NOTES:
1. BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
2. THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTITUTIONAL ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLE WITHHOLD PERMISSION.

OWNER: MAPLE LAWN FARMS, INC. 11788 SCAGGSVILLE ROAD FULTON, MD 20759-0562 301-725-2074
DEVELOPER: MAPLE LAWN PARTNERS, LLC 2661 RIVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401 443-472-2846

NOTE:
1. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

REPLACEMENT TREES FOR SPECIMEN TREE REMOVAL REFER TO WP 15-136

MATCH LINE - SEE SHEET 29
LANDSCAPE PLAN



NOTE:
THE H.O.A. SHALL MAINTAIN ANY AND ALL ORNAMENTAL PLANTINGS WITHIN THE NON-FOREST CONSERVATION EASEMENT PORTIONS OF OPEN SPACE LOT 65 THROUGH A MAINTENANCE EASEMENT WITH HOWARD COUNTY

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	HYDRO	K FACTOR	PERCENT FORESTED	ERODIBLE SOILS
BaA	SHALE Silt loam, 0 to 3 percent slopes	D	YES	NO	0.32	NO	YES
GaA	GLENNHILL loam, 0 to 3 percent slopes	B	NO	NO	0.20	YES	NO
GaB	GLENNHILL loam, 3 to 8 percent slopes	B	NO	NO	0.20	YES	NO
GmB	GLENNHILL silt loam, 3 to 8 percent slopes	C	NO	NO	0.37	NO	YES
T	GLENNHILL-shale silt loam, 0 to 8 percent slopes	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
MmC	MANOR loam, 8 to 15 percent slopes	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WE8 SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
SIGNATURE OF DEVELOPER
DATE

NOTE:
NO FOREST CONSERVATION EASEMENT OR PORTIONS THEREOF ARE PROPOSED ON THIS SHEET

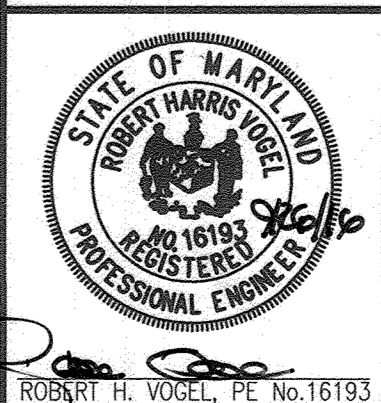
NOTE:
* LANDSCAPING PROPOSED IN PERIMETER 1 AND ALONG ROAD A HAVE BEEN PROPOSED AS PART OF A LANDSCAPE PLAN PREPARED BY: THE LAND PLANNING & DESIGN GROUP INC. 6500 WESTVIEW DRIVE, SUITE 103 FREDERICK, MARYLAND 21703 (301) 695-6172 - FAX (301) 695-6219

Revision 2' pathway (by GLW) 7/20/13

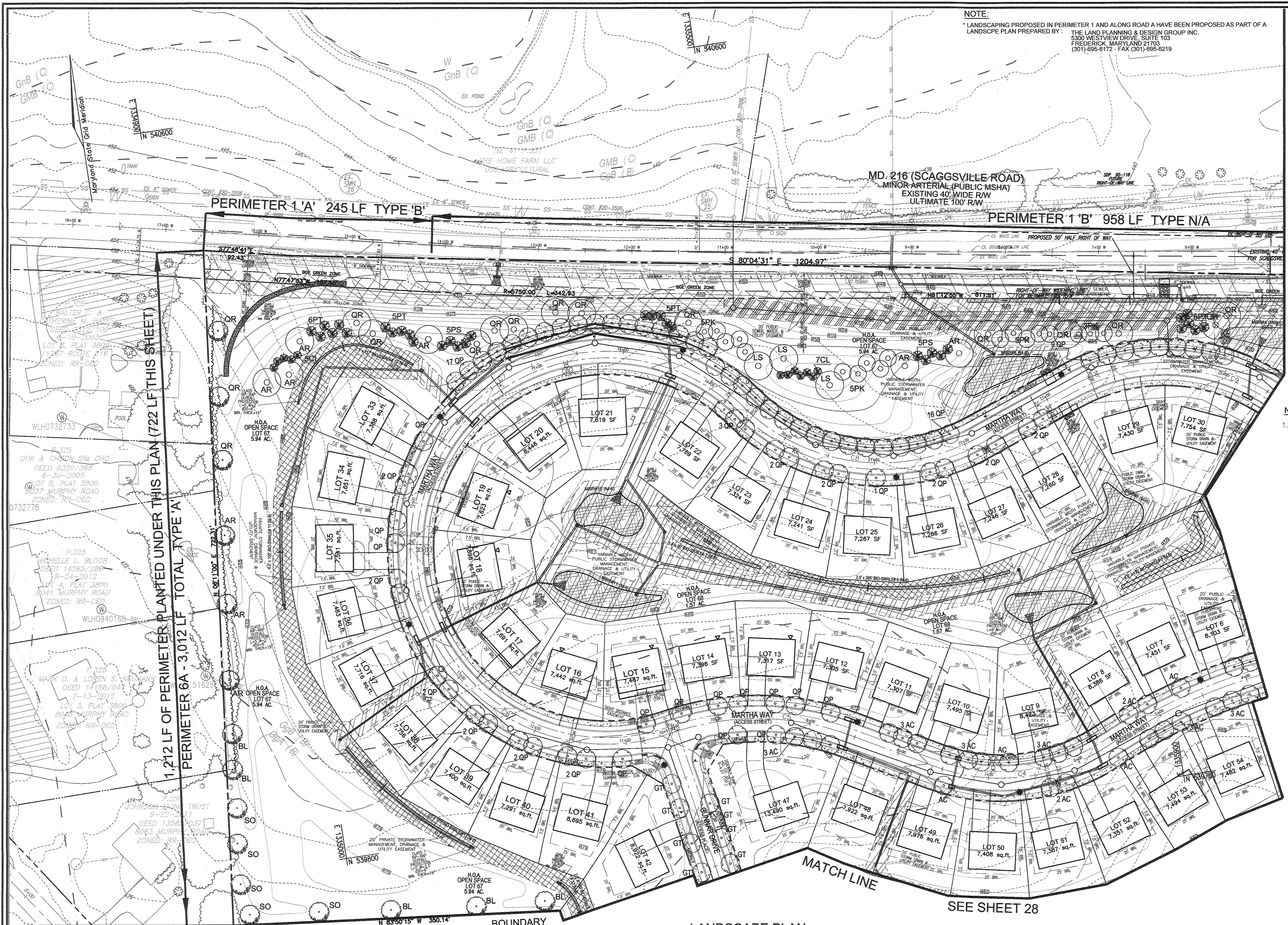
NO.	REVISION	DATE
1	Revise 2' pathway (by GLW)	7/20/13

FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
DPZ REF: ECP-14-093, WP-15-136, PBF415, SP-15-014 HOWARD COUNTY, MARYLAND

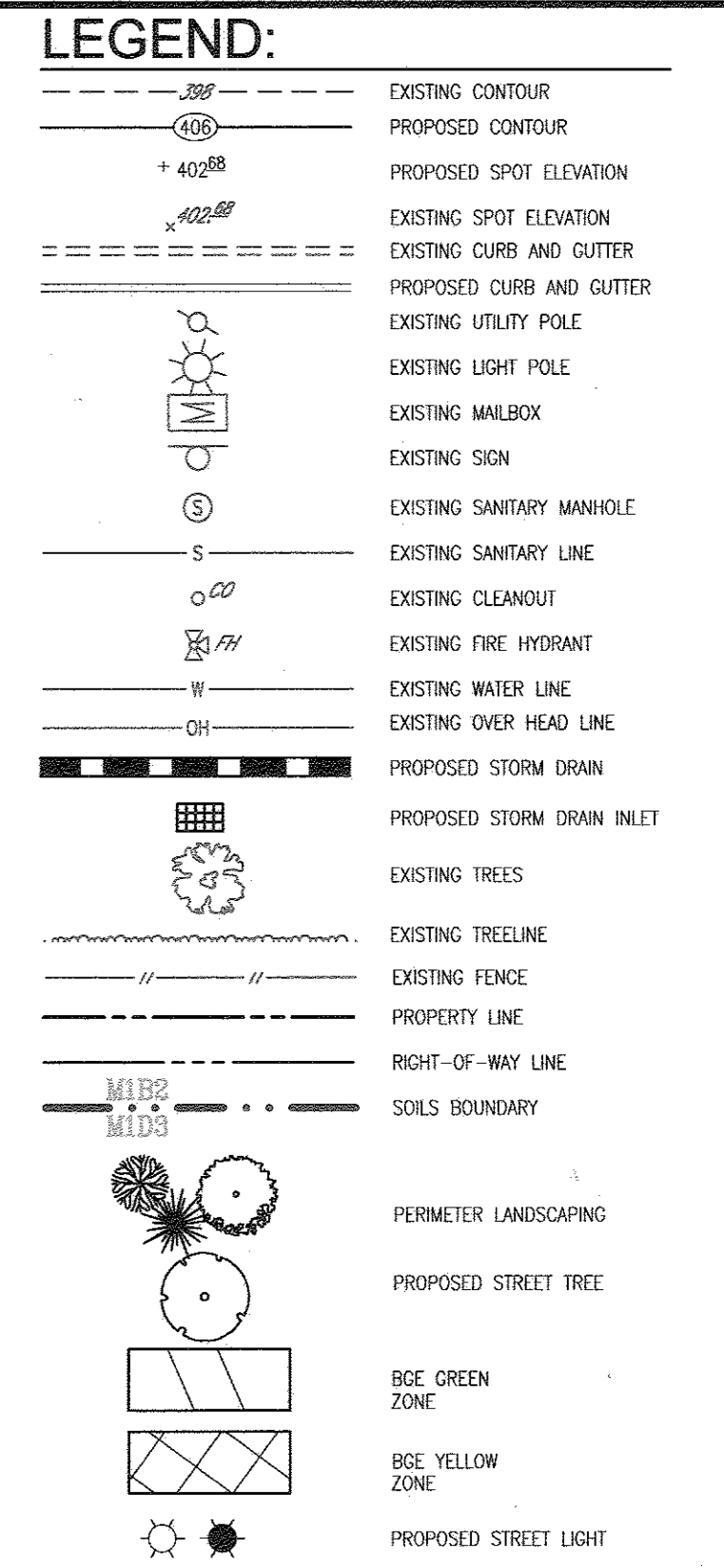
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7866 FAX: 410.461.8961



DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34
PROFESSIONAL CERTIFICATE
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. 16193. EXPIRATION DATE: 09-27-2018
26 SHEET OF 48



NOTE:
 * LANDSCAPING PROPOSED IN PERIMETER 1 AND ALONG ROAD A HAVE BEEN PROPOSED AS PART OF A LANDSCAPE PLAN PREPARED BY: THE LAND PLANNING & DESIGN GROUP INC.
 5300 WESTVIEW DRIVE, SUITE 103
 FREDERICK, MARYLAND 21703
 (301)-695-6172 - FAX (301)-695-6219



MATCH LINE - SEE SHEET 26

- NOTE:**
- IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

BOE'S POLICES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BOE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BOE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DISTANT ZONES. AS THE DISTANCE FROM BOE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

B.G. & E. NOTES:

- BOE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BOE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
- THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BOE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT IF BOE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

OWNER: MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
 LOTS 1-54, NON-BUILDABLE BULK PARCEL 'A',
 AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MED-3
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DPZ REF: EOP-14-093, WP-15-136, PB415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHY
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

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. 16193 EXPIRATION DATE: 09-27-2018

27 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 11/3/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

9/26/16
 SIGNATURE OF DEVELOPER

LANDSCAPE PLAN
 SCALE: 1"=50'

50' 0 50' 100' 150'

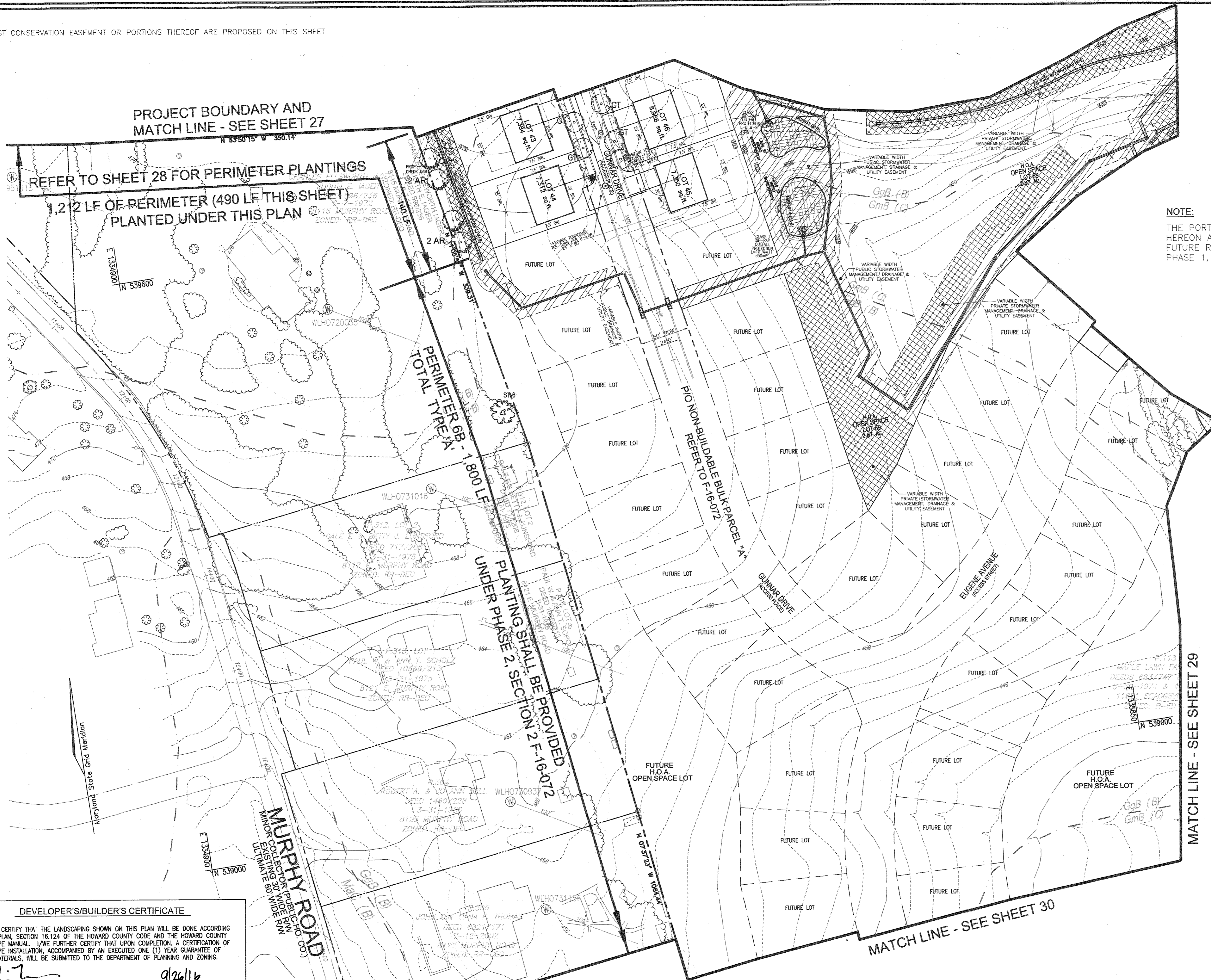
MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	WATER INCLUSIONS	K FACTOR	PERCENT PAVED	PERCENT FORESTED
B/A	SMALL SLOPE, 0 TO 3 PERCENT SLOPES	B	YES	YES	0.32	NO	YES
B/B	SHALLOW SLOPE, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G/B	SHALLOW SLOPE, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.20	YES	NO
G/B	SHALLOW SLOPE, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	NO
G/B	SHALLOW SLOPE, 3 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
M/C	MODERATE SLOPE, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY, MD
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE (COMPONENT OF G/B), ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NOTE:
 NO FOREST CONSERVATION EASEMENT OR PORTIONS THEREOF ARE PROPOSED ON THIS SHEET

NOTE:
NO FOREST CONSERVATION EASEMENT OR PORTIONS THEREOF ARE PROPOSED ON THIS SHEET



NOTE:
THE PORTION OF PERIMETER 6 AS SHOWN HEREON AND THE STREET TREES FOR THE FUTURE ROADS SHALL BE PROVIDED UNDER PHASE 1, SECTION 2, F-16-072.

LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	PROPOSED UTILITY POLE
	EXISTING LIGHT POLE
	PROPOSED LIGHT POLE
	EXISTING MAILBOX
	PROPOSED MAILBOX
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING SANITARY MANHOLE
	PROPOSED SANITARY MANHOLE
	EXISTING SANITARY LINE
	PROPOSED SANITARY LINE
	EXISTING CLEANOUT
	PROPOSED CLEANOUT
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	EXISTING TREES
	PROPOSED TREES
	EXISTING TREE LINE
	PROPOSED TREE LINE
	EXISTING FENCE
	PROPOSED FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED SIDEWALK
	PERIMETER LANDSCAPING
	PROPOSED STREET TREE
	PROPOSED STREET LIGHT

- NOTE:**
1. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

OWNER:
MAPLE LAWN FARMS, INC.
11788 SCAGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER:
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

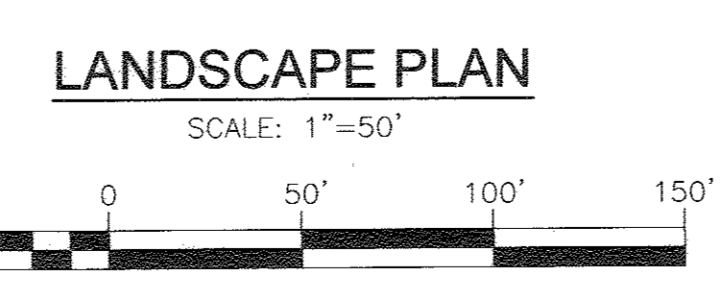
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/26/16
SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT ORGANIC	K FACTOR	PERCENT FERTILE	PERCENT POTENTIAL
Bga	ONE SOIL LOAM, 0 TO 3 PERCENT SLOPES	B	NO	0.32	NO	NO	NO
Bga	CLEVELED LOAM, 0 TO 3 PERCENT SLOPES	B	NO	0.20	YES	NO	NO
GaB	CLEVELED LOAM, 3 TO 8 PERCENT SLOPES	B	NO	0.20	YES	NO	NO
GmB	CLEVELED SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	0.37	YES	YES	YES
GmB	CLEVELED SILET LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	0.37	NO	PARTIAL	NO
Mac	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	0.24	YES	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

*BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

FINAL ROAD CONSTRUCTION PLAN

LANDSCAPE PLAN

MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-84, NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 48 - GRID 2 - PARCEL 113 ZONED R-EO-MOD-3
5TH ELECTION DISTRICT
GPZ REF: EOP-14-093, WP-15-136, PB415, SP-15-014 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

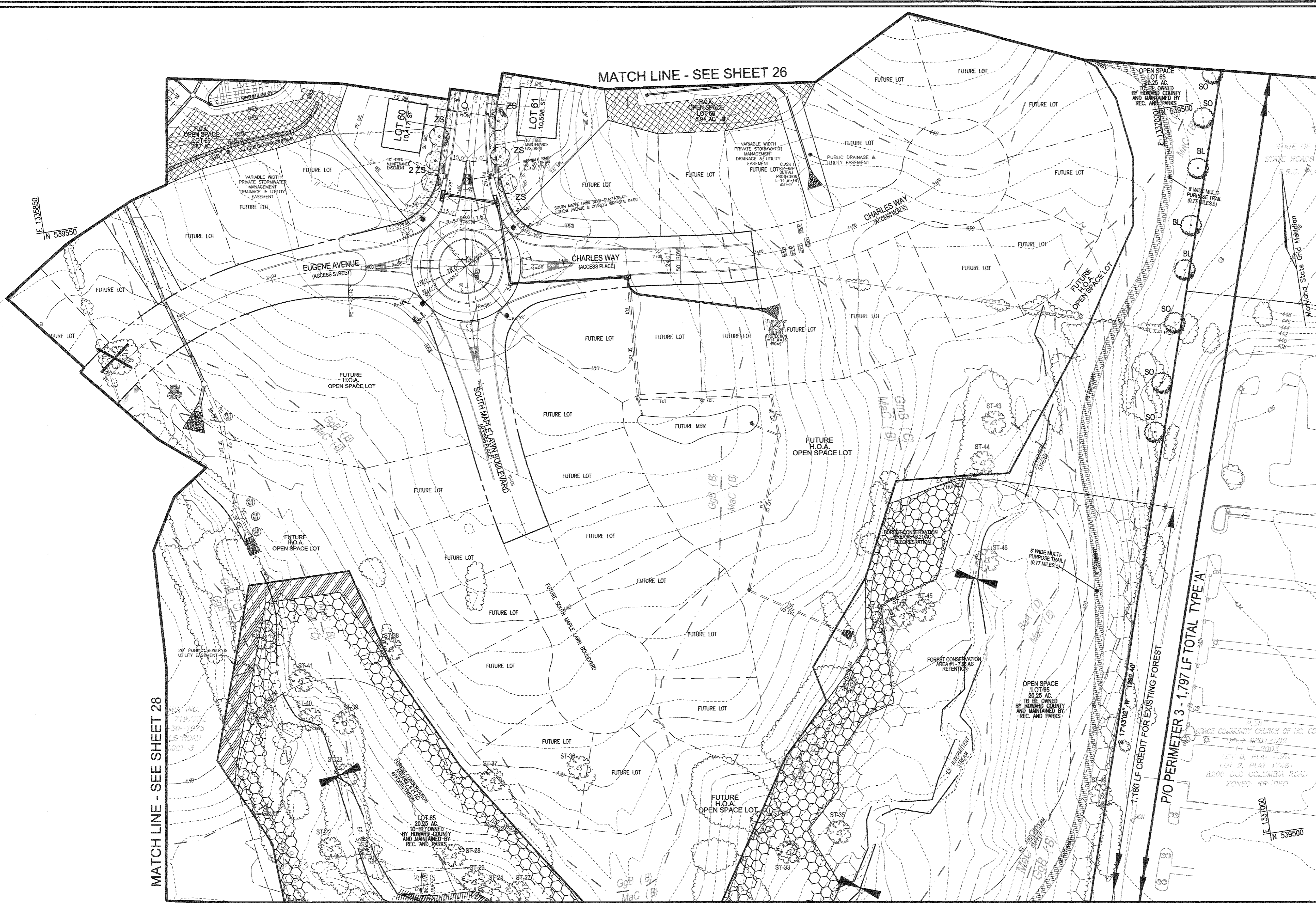
PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
ROBERT H. VOGEL
REGISTERED PROFESSIONAL ENGINEER
NO. 16193
EXPIRES 09-27-2018

DESIGN BY: RVE
DRAWN BY: RHY
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

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. 16193, EXPIRATION DATE: 09-27-2018

28 SHEET OF 48



LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING OVER HEAD LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	EXISTING TREES
	EXISTING TREELINE
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED SIDEWALK
	PERIMETER LANDSCAPING
	PROPOSED STREET TREE
	PROPOSED FOREST REFORESTATION/AFFORESTATION EASEMENT
	PROPOSED STREET LIGHT
	8' PATHWAY
	10' TREE MAINTENANCE EASEMENT
	EXISTING SPECIMEN TREE
	EXISTING SPECIMEN TREE TO BE REMOVED

NOTE:
THE H.O.A. SHALL MAINTAIN ANY AND ALL ORNAMENTAL PLANTINGS WITHIN THE NON-FOREST CONSERVATION EASEMENT PORTIONS OF OPEN SPACE LOT 65 THROUGH A MAINTENANCE EASEMENT WITH HOWARD COUNTY

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2861 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE PLAN**

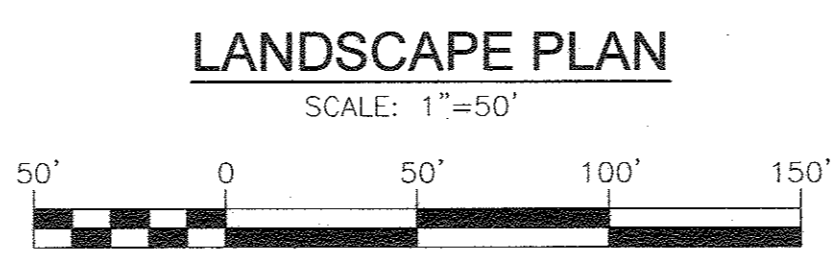
**MAPLE LAWN SOUTH
PHASE 1 - SECTION 1**

LOTS 1-84, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP #6 - GRID 2 - PARCEL 113 ZONED: R-E-UD-3
5TH ELECTION DISTRICT REF: ECP-14-093, WP-15-138, PB-415, SP-15-014 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT SLOPES	K FACTOR	PERCENT ERODIBLE	OTHER SLOPE
B5A	BALE Silt LOAM, 0 TO 3 PERCENT SLOPES	D	YES	0.32	0.32	NO	YES
G5A	GLENGLE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G5B	GLENGLE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G5C	GLENGLE Silt LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
G5D	GLENGLE-BALE Silt LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF G5B, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
M. M... 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

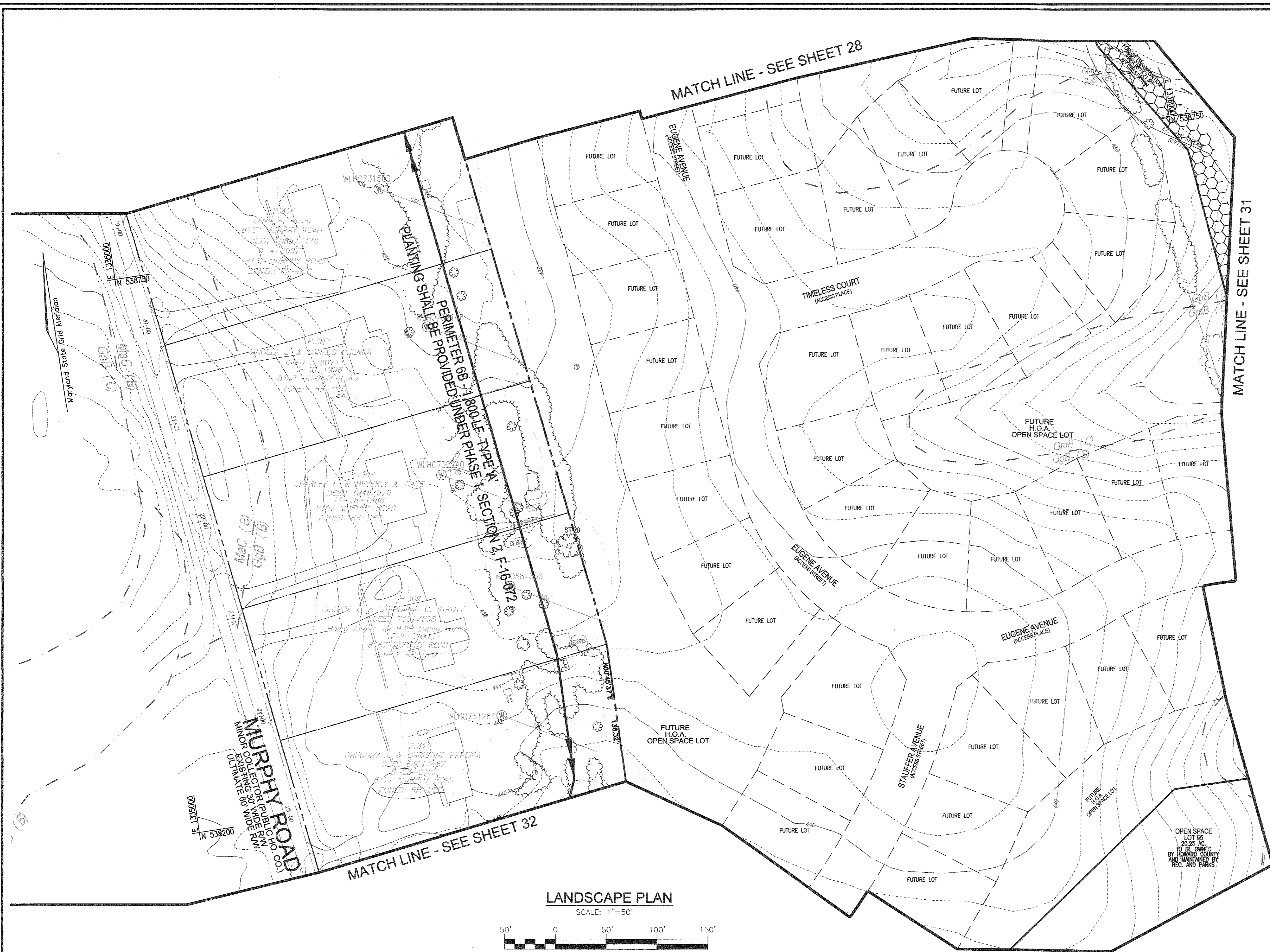
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
V. K... 11/11/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

V. K... 11/11/16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER'S/BUILDER'S CERTIFICATE
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Ch... 9/26/16
SIGNATURE OF DEVELOPER DATE

NOTE:
1. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.



LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING OVER HEAD LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	EXISTING TREES
	EXISTING TREELINE
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED SIDEWALK
	PROPOSED FOREST RESTORATION/AFFORESTATION EASEMENT

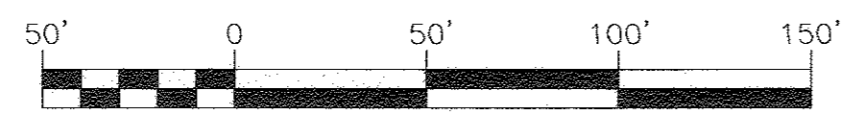
NOTE:
THE PORTION OF PERIMETER 6 AS SHOWN HEREON AND THE STREET TREES FOR THE FUTURE ROADS SHALL BE PROVIDED UNDER PHASE 1, SECTION 2, F-16-072.

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

LANDSCAPE PLAN

SCALE: 1"=50'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/16/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/26/16
SIGNATURE OF DEVELOPER DATE

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	ERODIBLE	K FACTOR	PERCENT PASTURE	PERCENT FOREST
B5A	BALF SALT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
G3A	GLENNIE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G3B	GLENNIE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G3C	GLENNIE SALT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
G3D	GLENNIE-SALT SALT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY*	0.37	NO	PARTIAL
M3C	MINOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

*BALE COMPONENT OF G3B, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE PLAN

MAPLE LAWN SOUTH
PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'S', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
1977 REF: F27-14-053, WP-15-136, PB#415, SP-15-014

ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8951

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

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. 16193 EXPIRATION DATE: 09-27-2018

30 SHEET OF **48**

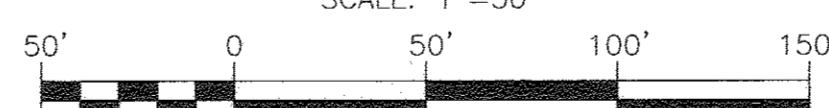
MATCH LINE - SEE SHEET 29

MATCH LINE - SEE SHEET 30

MATCH LINE - SEE SHEET 33

LANDSCAPE PLAN

SCALE: 1"=50'



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K FACTOR	ERODIBLE	STURDY
BaA BALE Silt loam, 0 to 3 percent slopes	D	YES	YES	0.32	NO	YES
CgA CLEWELL LOAM, 0 to 3 percent slopes	B	NO	NO	0.20	YES	NO
CgB CLEWELL LOAM, 3 to 8 percent slopes	B	NO	NO	0.20	YES	NO
CmB CLEWELL Silt loam, 3 to 8 percent slopes	C	NO	NO	0.37	YES	YES
CgB CLEWELL-BALE Silt loam, 0 to 8 percent slopes	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL
MaC MAJOR LOAM, 8 to 15 percent slopes	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WE8 SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K_f GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *BALE COMPONENT OF CgB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

- NOTE:
1. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN: THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 2. THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature of Developer: *Chit* DATE: 9/26/16
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Signature: *Michael* DATE: 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Signature: *Kathleen* DATE: 11/3/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 Signature: *Kathleen* DATE: 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- +402.88 PROPOSED SPOT ELEVATION
- +402.88 EXISTING SPOT ELEVATION
- ==== EXISTING CURBS AND GUTTER
- ==== PROPOSED CURBS AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING OVER HEAD LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- PROPOSED SIDEWALK
- PERIMETER LANDSCAPING
- PROPOSED STREET TREE
- EXISTING WETLAND
- PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)
- PROPOSED FOREST CONSERVATION EASEMENT (AFFORESTATION)
- PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION)
- PROPOSED STREET LIGHT
- FUTURE 8' PATHWAY BY OTHERS
- 8' PATHWAY
- PROPOSED 8' PATHWAY PHASE 1, SECTION 2
- PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT

NOTE:
 THE H.O.A. SHALL MAINTAIN ANY AND ALL ORNAMENTAL PLANTINGS WITHIN THE NON-FOREST CONSERVATION EASEMENT PORTIONS OF OPEN SPACE LOT 65 THROUGH A MAINTENANCE EASEMENT WITH HOWARD COUNTY

OWNER: MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

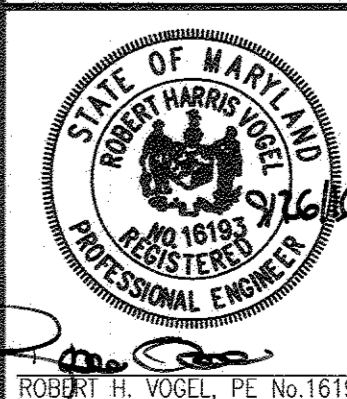
FINAL ROAD CONSTRUCTION PLAN
 LANDSCAPE PLAN

MAPLE LAWN SOUTH
 PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-HD-3 HOWARD COUNTY, MARYLAND
 5TH ELECTION DISTRICT
 DPZ REF: ECP-14-093, WP-15-136, P9#15, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

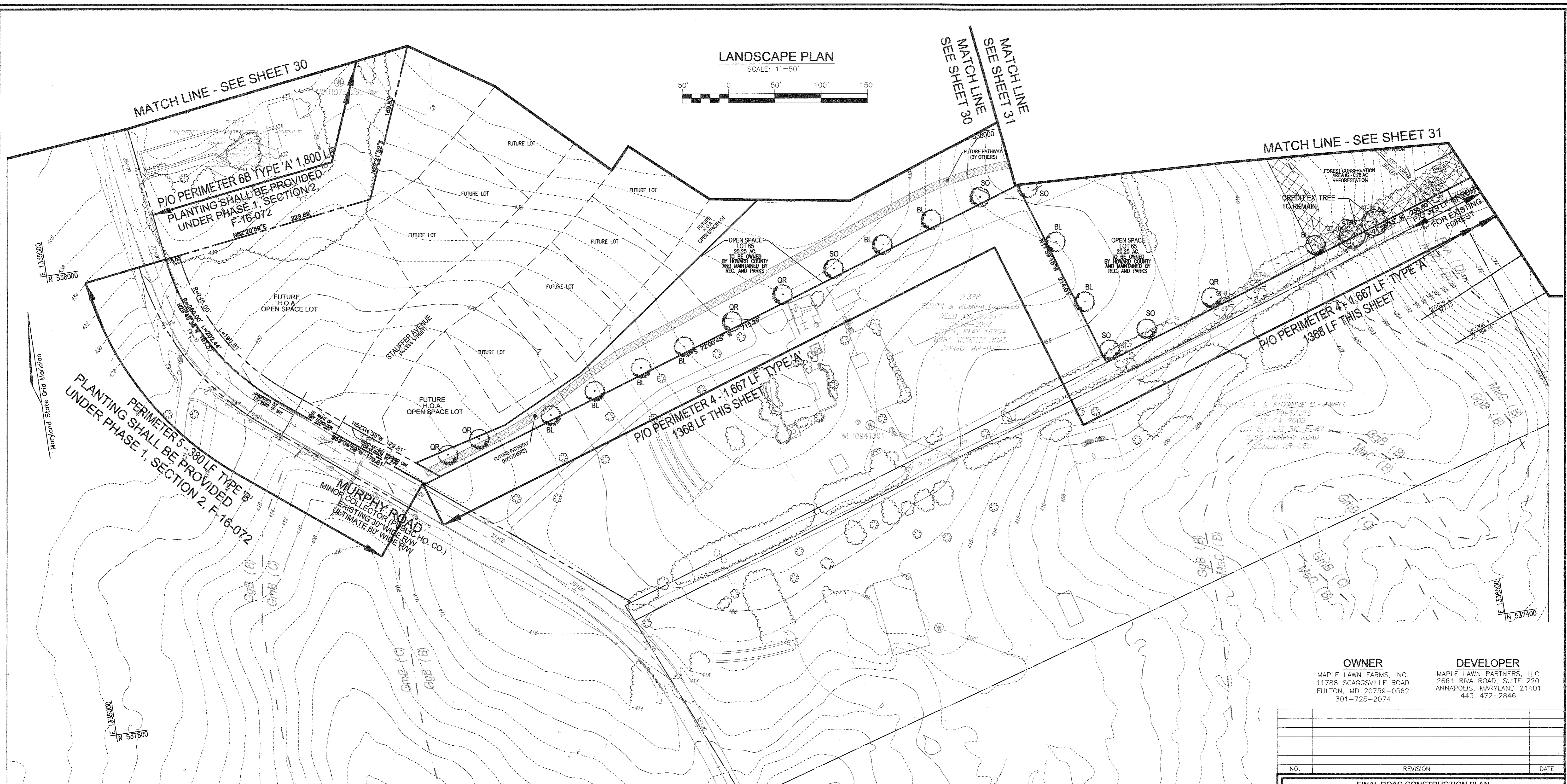
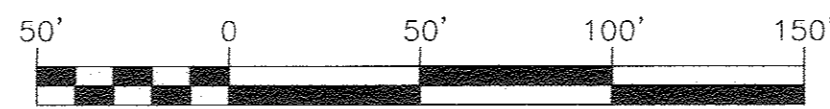


PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

LANDSCAPE PLAN

SCALE: 1"=50'



MATCH LINE - SEE SHEET 30

MATCH LINE
SEE SHEET 31
MATCH LINE
SEE SHEET 30

MATCH LINE - SEE SHEET 31

Maryland State Grid Meridian

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT SLOPES	K FACTOR	ERODIBLE SOILS	CRUISE SLOPE RISK
Bsa BARE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES
Gya GLENHED SILT LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gyb GLENHED SILT LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
Gmb GLENHED SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
Ghd GLENHED SILT LOAM, 0 TO 3 PERCENT SLOPES	C	PARTIALLY	PARTIALLY*	0.37	NO	PARTIAL
Msc MANKY LOAM, 8 TO 15 PERCENT SLOPES	H	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
 *SMALL COMPONENT OF Gmb, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

- NOTE:
- IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

LEGEND:

--- 300 ---	EXISTING CONTOUR	W	EXISTING WATER LINE	+	PERIMETER LANDSCAPING
--- 400 ---	PROPOSED CONTOUR	OH	EXISTING OVER HEAD LINE	+	PROPOSED STREET TREE
+ 402.68	PROPOSED SPOT ELEVATION	-----	PROPOSED STORM DRAIN	+	PROPOSED FOREST REFORESTATION/AFFORESTATION EASEMENT
+ 422.87	EXISTING SPOT ELEVATION	-----	PROPOSED STORM DRAIN INLET	+	PROPOSED STREET LIGHT
=====	EXISTING CURB AND GUTTER	-----	EXISTING TREES	+	FUTURE 8' PATHWAY BY OTHERS
=====	PROPOSED CURB AND GUTTER	-----	EXISTING TREELINE	+	PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION)
-----	EXISTING UTILITY POLE	-----	EXISTING FENCE	+	
-----	EXISTING LIGHT POLE	-----	PROPERTY LINE	+	
-----	EXISTING MAILBOX	-----	RIGHT-OF-WAY LINE	+	
-----	EXISTING SIGN	-----	SOILS BOUNDARY	+	
-----	EXISTING SANITARY MANHOLE	-----	PROPOSED SIDEWALK	+	
-----	EXISTING SANITARY LINE	-----		+	
-----	EXISTING CLEANOUT	-----		+	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/26/16
 SIGNATURE OF DEVELOPER DATE

OWNER: MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO. REVISION DATE

FINAL ROAD CONSTRUCTION PLAN
 LANDSCAPE PLAN
 MAPLE LAWN SOUTH
 PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 HOWARD COUNTY, MARYLAND

TAX MAP 46 - GRD 2 - PARCEL 113 ZONED: R-ED-MXD-3
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DEPT. REF. EOP-14-293, WP-15-136, PBF#15, SP-15-014

ROBERT H. VOGEL
ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2018

32 SHEET OF 48

GENERAL NOTES

WATERSHED NAME: ROCKY GORGE DAM
WATERSHED NUMBER: 02131107

- A. GROSS SITE AREA: 91.31 AC. +/-
- NET SITE AREA: 89.9 AC.
- B. AREA OF 100-YEAR FLOODPLAIN: 0.82 AC NON-CRITICAL
- C. AREA OF WETLANDS AND BUFFERS(ONSITE): 0.60 AC.*
- AREA OF STREAM AND BUFFERS(ONSITE): 0.79 AC.*
- D. AREA OF > 25% STEEP SLOPES: 0.62 AC.
- E. EXISTING FOREST: 8.27 AC. (REFER TO FSD)
- F. ZONED: R-ED-MXD-3 FARMLAND
- G. EXISTING USE: RESIDENTIAL
- H. PROPOSED USE: RESIDENTIAL

* WETLAND & STREAM BUFFERS OVERLAP, TOTAL ONSITE ENVIRONMENTAL AREAS= 1.41 AC.

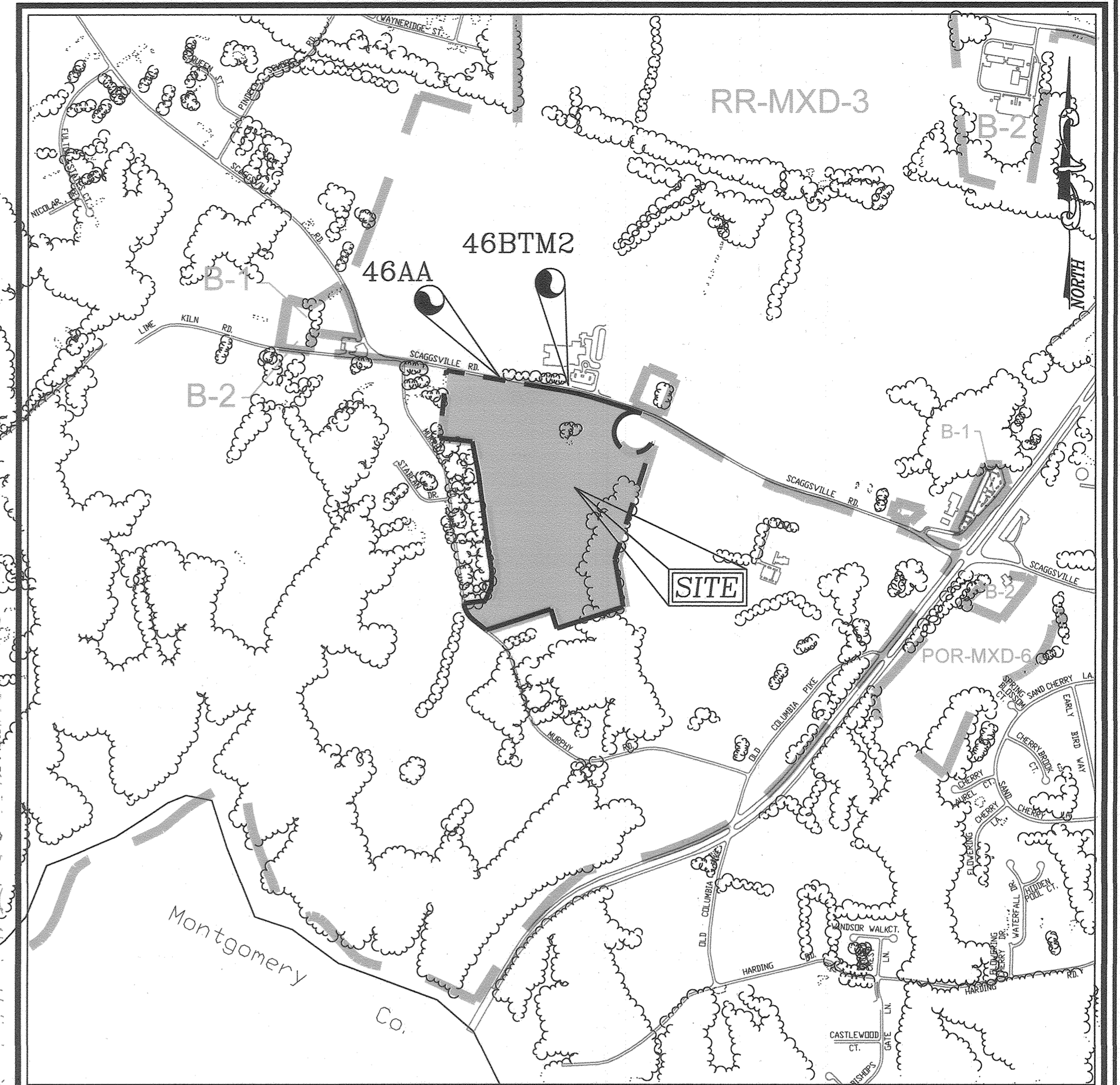
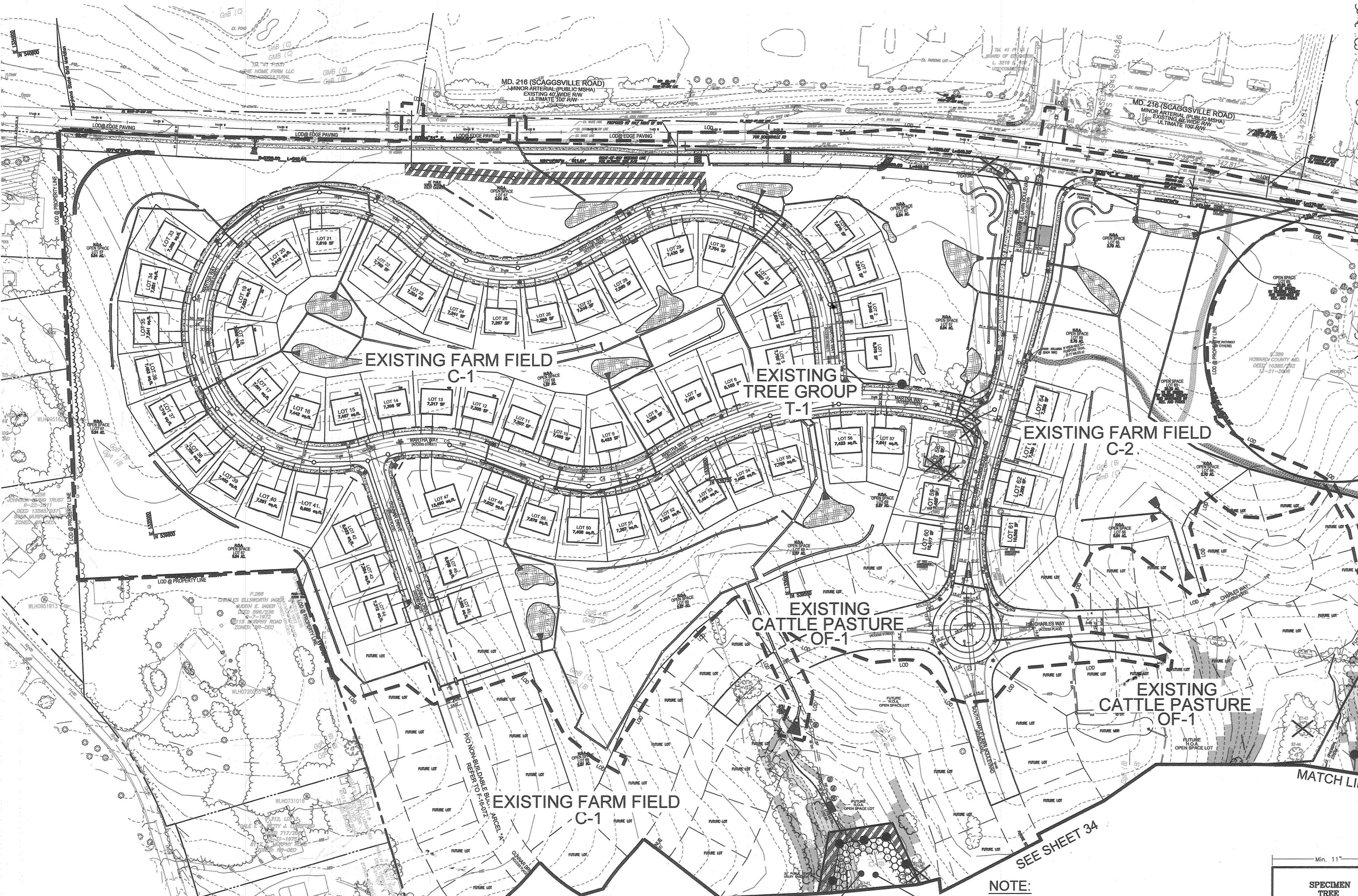
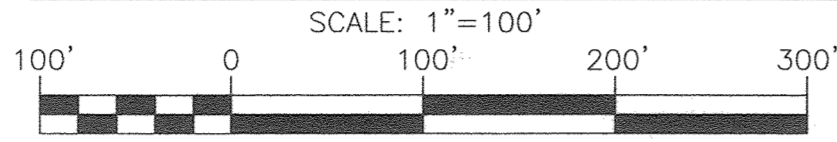
GENERAL NOTES

1. STEEP SLOPES ARE AS SHOWN HEREON.
2. IN ACCORDANCE WITH THE WILDLIFE & HERITAGE SERVICE LETTER DATED MAY 16, 2014, THERE ARE NO STATE OR FEDERAL RECORDS FOR RARE, THREATENED OR ENDANGERED STATE OR FEDERAL RECORDS FOR RARE, THREATENED OR ENDANGERED SPECIES WITHIN THE BOUNDARIES OF THE PROJECT SITE AS DELINEATED. REFERENCE ER#2014.0686.HO FOREST RESOURCES IDENTIFIED IN FOREST STAND DELINEATION BY KLEBASKO ENVIRONMENTAL, LLC. C/O MR. MICHAEL J. KLEBASKO, P.W.S., DATED MAY 2014.
3. FOR SPECIMEN TREE LIST, REFER TO SHEET 34.
4. WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON THE DELINEATION BY ENVIRONMENTAL SYSTEMS ANALYSIS, INC. (ESA), AUGUST 2013.
5. NONE OF THE ENVIRONMENTALLY SENSITIVE AREAS WILL BE DISTURBED.
6. PER WP-15-136, ANY SPECIMEN TREES THAT SHALL REMAIN ONSITE (THAT ARE WITHIN THE LIMIT OF DISTURBANCE) MUST BE PROTECTED WITH TREE PROTECTION DEVICES.

LEGEND:

- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING OVER HEAD LINE
- EXISTING TREE LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- LIMIT OF DISTURBANCE
- PROPOSED STREET LIGHT
- MODERATE SLOPES (15% - 24.99%)
- STEEP SLOPES (>25%)

FOREST CONSERVATION PLAN



VICINITY MAP

SCALE: 1"=1000'
ADC MAP COORDINATES: 5052-D7

BENCHMARKS

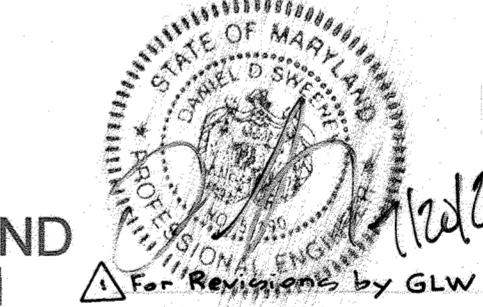
HOWARD COUNTY BENCHMARK 41GE
N 541,559.779 E 1,333,698.385 ELEV: 465.047 FT.
HOWARD COUNTY BENCHMARK 46AA
N 540,396.42 E 1,335,505.32 ELEV: 447.014 FT.

FOREST STAND DELINEATION PLAN
PREPARED BY
MICHAEL J. KLEBASKO
QUALIFIED PROFESSIONAL
PER COMAR 08.19.06.01
Klebasco Environmental, LLC
8373 Piney Orchard Parkway, Suite 207
Odenton, Maryland 21113
Phone: (410) 672-5990
FAX: (410) 672-5995

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

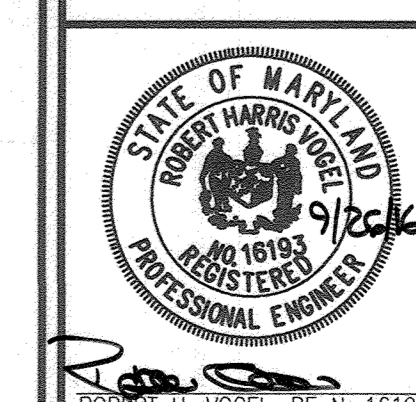
Professional Certification
I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state Maryland, License No. 54992, Expiration Date: 5/14/15



NO.	REVISION	DATE
1	Revise 2' pathway (by GLW)	7-20-13

FINAL ROAD CONSTRUCTION PLAN
FOREST CONSERVATION PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
BPP REF: ECP-14-093, WP-15-136, PB#415, SP-15-014
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7656
FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34
33 SHEET OF 48

P/O FOREST CONSERVATION AREA # 3 AFFORESTATION 6.21 ACRES

NOTE

REFER TO SHEET 34 FOR THE FOREST CONSERVATION EASEMENTS

THIS PROJECT IS SUBJECT TO WP-15-136. ON MAY 26, 2015, THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 18.1205(A)(7) OF THE AMENDED FIFTH EDITION WHICH REQUIRES THE RETENTION OF SPECIMEN TREES HAVING A DIAMETER OF 3" OR MORE AND SECTION 18.121(e)(1) OF THE AMENDED FIFTH EDITION WHICH REQUIRES OPEN SPACE LOTS TO HAVE A MINIMUM OF 40 FEET OF FRONTAGE ON A PUBLIC ROAD FOR ACCESS BY PEDESTRIANS AND MAINTENANCE VEHICLES.

APPROVAL IS SUBJECT TO THE FOLLOWING FIVE (5) CONDITIONS:

- 1) REMOVAL OF THE ELEVEN (11) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2 TO 1 REPLACEMENT TREES (22 TOTAL) WITH A MINIMUM 3" CALIPER TRUNK. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON EITHER THE LANDSCAPE OR FOREST CONSERVATION PLAN WITH THE FINAL PLAN.
- 2) THE FORTY-THREE (43) REMAINING SPECIMEN TREES MUST REMAIN UNDISTURBED, UNLESS A NEW WAVEYER PETITION IS FILED WITH ADEQUATE JUSTIFICATION.
- 3) ANY SPECIMEN TREE THAT SHALL REMAIN ONSITE (THAT ARE WITHIN THE LIMIT OF DISTURBANCE) MUST BE PROTECTED WITH TREE PROTECTION DEVICES AND, SUCH DEVICES MUST BE DEPICTED ON FOREST CONSERVATION PLANS AND THE SITE DEVELOPMENT PLAN.
- 4) ALL PROPOSED OPEN SPACE LOTS MUST PROVIDE THE MINIMUM PUBLIC ROAD FRONTAGE AS SHOWN AND APPROVED ON THE SP PLAN (SP-15-014). OPEN SPACE LOTS 177, 178 AND 179 SHOULD HAVE AT LEAST ONE PUBLIC ROAD FRONTAGE STRIP OF 20 FEET IN WIDTH.
- 5) PROVIDE A NOTE ON SP-15-014, THE FINAL PLAN AND THE SITE DEVELOPMENT PLAN THAT INCLUDES THIS WAIVER'S FILE NUMBER. THE SECTIONS TO BE WAIVED, THE WAIVER DECISION, THE DATE OF THE DECISION AND ALL CONDITIONS OF APPROVAL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/6/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K FACTOR	ERODIBLE	PERCENT
B6a	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	NO	0.32	NO	YES
G8a	CLAYED LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G8b	CLAYED LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
G8c	CLAYED LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
G8d	CLAYED LOAM, 3 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY*	0.37	NO	PARTIAL
M2c	MINOR LOAM, 6 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF G8b, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

FOREST STAND DELINEATION PLAN

PREPARED BY
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QUALIFIED PROFESSIONAL
FOR CONAR 08-19-06-01
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Odenton, Maryland 21113
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FAX: (410) 672-5993

FOREST CONSERVATION
AREA #3
AFFORESTATION
6.21 ACRES

EXISTING
CATTLE PASTURE
OF-1

MATCH LINE - SEE SHEET 33

SPECIMEN TREE TABLE

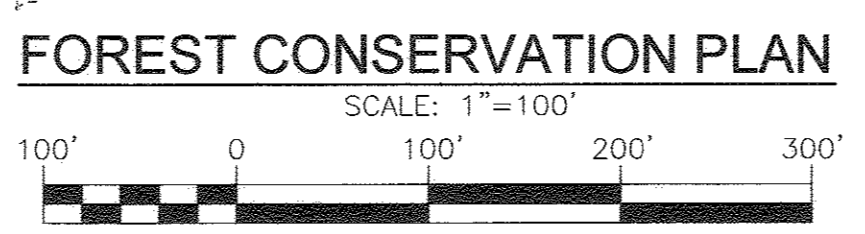
NO.	COMMON NAME	SCIENTIFIC NAME	DBH (INCHES)	CONDITION RATING	CONDITION / COMMENTS	
1	REMOVE	BLACK WALNUT	JUGLANS NIGRA	44	POOR	POWER LINE PRUNING; LARGE CAVITY IN TRUNK; BROKEN LIMBS
2	REMOVE	BASSWOOD	TILIA AMERICANA	49	POOR	CAVITY IN TRUNK; 3 CO-DOMINANT LEADERS; BROKEN LIMBS; WEAK CROTCH
3	REMOVE	WHITE ASH	FRAXINUS AMERICANA	30	POOR	BROKEN LIMBS
4	REMOVE	SILVER MAPLE	ACER SACCHARINUM	48	POOR	CRITICAL ROOT ZONE DISTURBANCE; BROKEN LIMBS; EPICORMIC BRANCHING
5	REMOVE	CATALPA	CATALPA SPECIOSA	37	POOR	BROKEN LIMBS; VERY HEAVY VINE COVER (ENGLISH IVY)
6	OFFSITE	PIN OAK	QUERCUS PALUSTRIS	35	GOOD	
7	OFFSITE	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	32	GOOD	
8	OFFSITE	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	37	VERY POOR	LARGE CAVITY IN TRUNK
9	OFFSITE	SCARLET OAK	QUERCUS COCCINEA	66	FAIR	TWIN; SPLIT AT 6'; WEAK CROTCH; SOME BROKEN LIMBS
10	OFFSITE	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	40	FAIR	TWIN; SPLIT AT 6'; CO-DOMINANT LEADER
11	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	45	GOOD	
12	REMAIN	SCARLET OAK	QUERCUS COCCINEA	53	POOR	TWIN; SPLIT AT 7'; WEAK CROTCH; POOR STRUCTURE
13	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	37	VERY POOR	LARGE CAVITY AT BASE, BROKEN LIMBS
14	REMAIN	RED MAPLE	ACER RUBRUM	38	FAIR	SLIGHT LEAN; SOME BROKEN LIMBS
15	REMAIN	RED MAPLE	ACER RUBRUM	31	POOR	MULTI-TRUNK WITH WEAK CROTCH; BROKEN LIMBS
16	REMAIN	SOUTHERN RED OAK	QUERCUS FALCATA	36	FAIR	BROKEN LIMBS; VINE COVER (ENGLISH IVY)
17	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	37	POOR	
18	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	37	GOOD	
19	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	34	POOR	TWIN; SPLIT AT 3'; HEAVY VINE COVER (TRUMPET CREEPER); BROKEN LIMBS
20	OFFSITE	WHITE OAK	QUERCUS ALBA	36	GOOD	TWIN; SPLIT AT 6'
21	REMAIN	RED MAPLE	ACER RUBRUM	48	FAIR	EXPOSED ROOTS ON STEEP SLOPE; POOR FORM
22	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	38	GOOD	
23	REMAIN	SYCAMORE	PLATANUS OCCIDENTALIS	37	POOR	BROKEN LIMBS; CROWN DIE-BACK
24	REMAIN	WHITE OAK	QUERCUS ALBA	44	POOR	CAVITY AT BASE OF TRUNK
25	REMOVE	SYCAMORE	PLATANUS OCCIDENTALIS	38	POOR	BROKEN OFF MAIN LEADER
26	REMAIN	WHITE OAK	QUERCUS ALBA	36	GOOD	
27	REMAIN	WHITE OAK	QUERCUS ALBA	49	GOOD	
28	REMAIN	WHITE OAK	QUERCUS ALBA	31	GOOD	
29	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	31	FAIR	BROKEN LIMBS; EPICORMIC BRANCHING
30	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	35	POOR	CROWN DIE-BACK; BROKEN LIMBS
31	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	36	FAIR	BROKEN LIMBS
32	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	36	VERY POOR	LIGHTNING STRIKE; BROKEN LIMBS
33	REMAIN	SYCAMORE	PLATANUS OCCIDENTALIS	34	GOOD	TWIN TRUNKS; SPLIT AT 9'
34	REMAIN	SYCAMORE	PLATANUS OCCIDENTALIS	30	GOOD	
35	REMAIN	RED MAPLE	ACER RUBRUM	36	FAIR	TWIN TRUNKS; LEANING
36	REMOVE	SYCAMORE	PLATANUS OCCIDENTALIS	32	POOR	BROKEN LIMBS; CROWN DIE-BACK
37	REMOVE	SYCAMORE	PLATANUS OCCIDENTALIS	32	GOOD	
38	REMOVE	SYCAMORE	PLATANUS OCCIDENTALIS	34	POOR	BROKEN LIMBS; STORM DAMAGE; BROKEN OFF TWIN
39	REMAIN	SYCAMORE	PLATANUS OCCIDENTALIS	38	POOR	BROKEN LIMBS; CROWN DIE-BACK
40	REMAIN	SYCAMORE	PLATANUS OCCIDENTALIS	30	FAIR	BROKEN LIMBS
41	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	37	FAIR	
42	REMOVE	SYCAMORE	PLATANUS OCCIDENTALIS	36	GOOD	TWIN; SPLIT AT 5.5'; POOR STRUCTURE
43	REMOVE	PIN OAK	QUERCUS PALUSTRIS	41	GOOD	
44	REMAIN	PIN OAK	QUERCUS PALUSTRIS	35	GOOD	
45	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	31	FAIR	BROKEN LIMBS
46	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	31	POOR	BROKEN OFF MAIN LEADER; LEANING
47	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	32	POOR	CAVITY; SEVERE LEAN
48	REMAIN	RED MAPLE	ACER RUBRUM	35	GOOD	
49	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	33	POOR	HEAVY VINE COVER (POISON IVY); LEANING
50	REMAIN	WHITE OAK	QUERCUS ALBA	53	GOOD	
51	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	34	GOOD	
52	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	41	POOR	LARGE CAVITY; BROKEN LIMBS
53	REMAIN	SCARLET OAK	QUERCUS COCCINEA	30	FAIR	BROKEN LIMBS; WIRE THROUGH TRUNK
54	REMAIN	YELLOW POPLAR	LIRIODENDRON TULIPIFERA	38	FAIR	POOR STRUCTURE

1. * 11 SPECIMEN TREES DESIGNATED AS "REMOVE", REQUIRE REMOVAL PER PROJECT PROPOSAL TO INCLUDE: PROPOSED ROAD CONSTRUCTION, UTILITY INSTALLATION, GRADING REFER TO GENERAL NOTE 48, SHEET 1 OR NOTE ON SHEET 33, REGARDING WP 15-136.
2. ANY SPECIMEN TREE DESIGNATED AS TO REMAIN AND LOCATED WITHIN THE LIMITS OF DISTURBANCE SHALL BE PROTECTED WITH BLAZE ORANGE TREE PROTECTION FENCING, DETAIL ON SHEET 35

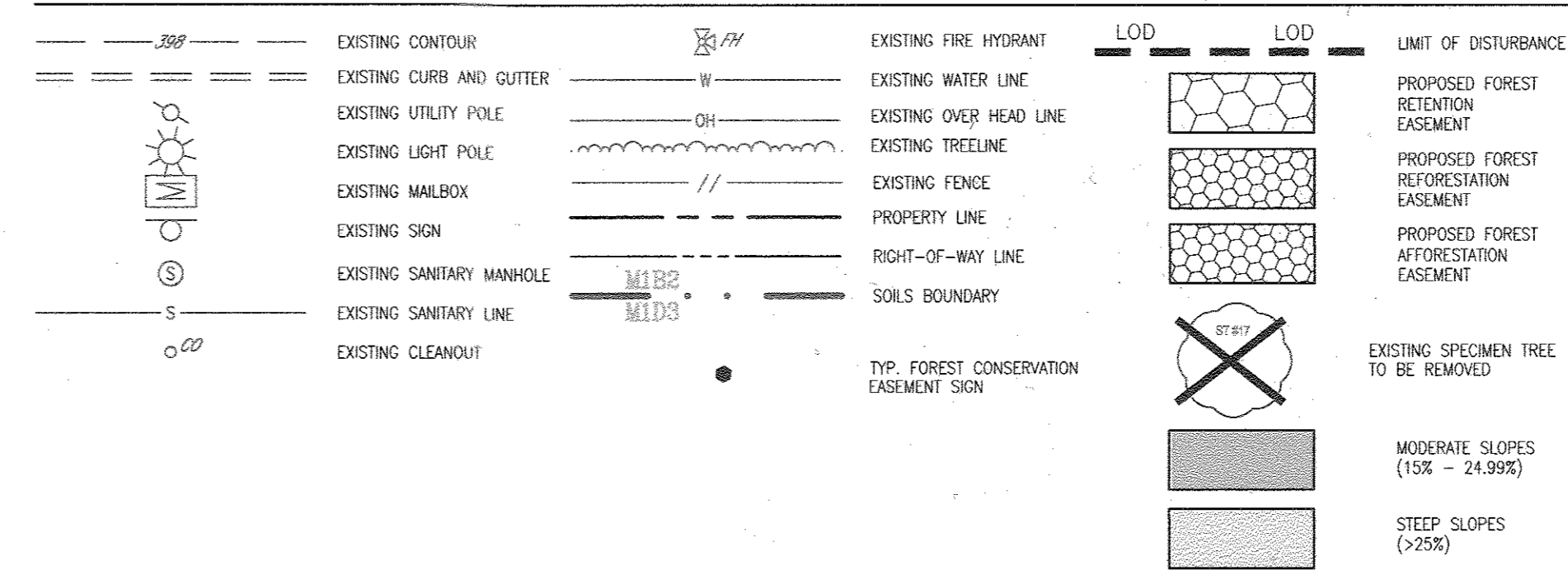
FOREST CONSERVATION
AREA #1
RETENTION
7.88 ACRES TOTAL
6.96 AC CREDITED / 0.92 AC NON-CREDITED

FOREST CONSERVATION
AREA #2
REFORESTATION
0.78 ACRES

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074
DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846



LEGEND:



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT ERODIBLE	K FACTOR	PERCENT ERODIBLE	PERCENT ERODIBLE
BaA	BALE Silt LOAM, 0 TO 3 PERCENT SLOPES	D	YES	NO	0.32	NO	YES
GcA	GLENNIE LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GcB	GLENNIE LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO
GcBb	GLENNIE Silt LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES
GcBc	GLENNIE-Silt Silt LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	NO	0.37	NO	PARTIAL
Msc	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF GcB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Michael Mearns 10/25/2016
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Kat Schulze 11-4-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION JR
CHIEF, DIVISION OF LAND DEVELOPMENT

FINAL ROAD CONSTRUCTION PLAN
FOREST CONSERVATION PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL A
NON-BUILDABLE BULK PARCEL B, AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
DZ, REF. 15-14-03, WP-15-136, PB#415, SP-15-014
ZONED: R-ED-MXD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.2666
FAX: 410.461.8995

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 09-27-2018

34 SHEET OF 48

AFFORESTATION PLAN

A. PLANTING PLAN AND METHODS
PLANT SPECIES SELECTION WAS BASED ON OUR KNOWLEDGE REGARDING PLANT COMMUNITIES IN MARYLAND'S...

B. PLANTING AND SOIL SPECIFICATIONS
PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAIL AND PLANTING SPECIFICATIONS...

C. MAINTENANCE OF PLANTINGS
FOR INFORMATION REGARDING MAINTENANCE OF THE AFFORESTATION PLANTINGS, SEE SECTION VIII B.

D. GUARANTEE REQUIREMENTS
A 90 PERCENT SURVIVAL RATE OF THE AFFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON...

E. SECURITY FOR AFFORESTATION
SECTION 16-1209 OF THE HOWARD COUNTY FOREST CONSERVATION ACT REQUIRES THAT A DEVELOPER SHALL POST...

F. CONSTRUCTION PERIOD PROTECTION PROGRAM
1. SOIL PROTECTION TECHNIQUES
A. SOIL PROTECTION AREA (CRITICAL ROOT ZONE)

2. FENCING AND SIGNAGE
EXISTING FOREST LIMITS OCCURRING WITHIN 25 FEET OF THE LIMITS OF DISTURBANCE SHALL BE PROTECTED USING...

3. PRE-CONSTRUCTION MEETING
UPON STAKING OF LIMITS OF DISTURBANCE A PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE DEVELOPER...

4. STORAGE FACILITIES/EQUIPMENT CLEANING
ALL EQUIPMENT STORAGE, PARKING, SANITARY FACILITIES, MATERIAL STOCKPILING, ETC. ASSOCIATED WITH...

5. DESTRUCTION OF CONSTRUCTION
THE FOLLOWING TIMETABLE REPRESENTS THE PROPOSED TIMETABLE FOR DEVELOPMENT. THE ITEMS OUTLINED IN...

6. CONSTRUCTION MONITORING
ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL...

7. POST-CONSTRUCTION MEETING
UPON COMPLETION OF CONSTRUCTION, ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL...

8. POST-CONSTRUCTION MANAGEMENT PLAN
HOWARD COUNTY REQUIRES A TWO YEAR POST-CONSTRUCTION MANAGEMENT PLAN BE PREPARED AS PART OF...

9. FENCING AND SIGNAGE
PERMANENT SIGNAGE INDICATING THE LIMITS OF THE RETENTION/AFFORESTATION AREA SHALL BE MAINTAINED...

10. GENERAL SITE INSPECTIONS/MAINTENANCE OF PLANTINGS
SITE INSPECTIONS WILL BE PERFORMED A MINIMUM OF THREE TIMES DURING THE GROWING SEASON. THE PURPOSE...

11. MAINTENANCE OF AFFORESTATION PLANTINGS WILL INVOLVE THE FOLLOWING STEPS:
WATERING - ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON...

12. IDENTIFICATION OF SERIOUS PLANT PESTS AND DISEASES, TREATMENT WITH APPROPRIATE AGENT.
PRUNING OF DEAD BRANCHES.
AFTER 12 AND 24 MONTHS, REPLACEMENT OF PLANTS, IF REQUIRED, IN ACCORDANCE WITH THE...

13. EDUCATION
THE DEVELOPER WILL PROVIDE APPROPRIATE MATERIALS TO PROPERTY OWNERS INFORMING THEM OF THE LOCATION...

14. FINAL INSPECTION
AT THE END OF THE TWO YEAR POST-CONSTRUCTION MANAGEMENT PERIOD, ECO-SCIENCE PROFESSIONALS, OR...

HOWARD COUNTY FOREST CONSERVATION WORKSHEET
ZONED R-ED-MXD-3 NET TRACT AREA: 91.33 AC

LAND USE CATEGORY
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-20

BREAK EVEN POINT: (2.1) + F = BREAK EVEN POINT (0 AC)
FOREST RETENTION ABOVE THRESHOLD W/ NO MITIGATION = 0 AC

PROPOSED FOREST CLEARING:
TOTAL AREA OF FOREST TO BE CLEARED = 0.39 AC

PLANTING REQUIREMENTS:
RESTORATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 2S) = 0.00 AC

FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS
OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT.

PLANTING NOTES:
PLANTING DENSITY BASED SPACING REQUIREMENTS WHIPS WITH SHELTER @ 11' ON CENTER.

PLANTING/SOIL SPECIFICATIONS
1. INSTALLATION OF BAREROOT/PLUG PLANT STOCK SHALL TAKE PLACE BETWEEN MARCH 15 -

2. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF TWO YEARS.
PLANTINGS MUST RECEIVE 2 GALLONS OF WATER, EITHER THROUGH PRECIPITATION OR

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FOREST CONSERVATION EASEMENT TABLE
EASEMENT RETENTION RESTORATION/AFFORESTATION TOTAL

REFORESTATION/AFFORESTATION PLANTING SCHEDULE
FOREST CONSERVATION EASEMENTS 6.99 ACRES

EASEMENT #2: 0.78 AC (REFORESTATION) @ 200 TREES/AC. = 156 TREES
QTY. BOTANICAL NAME SIZE SPACING

EASEMENT #3: 6.21 AC (AFFORESTATION) @ 200 TREES/AC. = 1,242 TREES
QTY. BOTANICAL NAME SIZE SPACING

REFORESTATION/AFFORESTATION PROVIDED
6.99 ACRES
1" CALIPER TREES @ 200 TREES PER ACRE OR EQUAL

PLANTING NOTES:
PLANTING DENSITY BASED SPACING REQUIREMENTS WHIPS WITH SHELTER @ 11' ON CENTER.

PLANTING/SOIL SPECIFICATIONS
1. INSTALLATION OF BAREROOT/PLUG PLANT STOCK SHALL TAKE PLACE BETWEEN MARCH 15 -

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GENERAL NOTES:
THE SCAGGSVILLE ROAD AND 100' X STREET TREE PLANTING UP TO THE 1,700' OF INTERSECTION HAS BEEN PROPOSED BY THE LAND PLANNING & DESIGN GROUP, INC.

2. This plan for landscape purposes only. See Site Plan for all layout and grading information.

3. Plants shall meet or exceed current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regards to size, growth, size of ball, and density of branch structure.

4. All plants (B & I or container) shall be properly identified by weatherproof labels securely attached thereto before delivery to project site. Labels shall identify plants by name species and size. Labels shall not be removed until the final inspection by the Landscape Architect.

5. Any materials and/or work may be rejected by the Landscape Architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.

6. Plant quantities shown in the plant list are for Landscape Architects convenience only. Prior to submitting a bid or estimate, Contractors shall verify that total quantities shown on the plant match quantities indicated in plant list. Should discrepancies occur, plan information shall take priority, and Landscape Architect shall be notified immediately.

7. The Contractor shall furnish all plants to complete the work as indicated on the plan and specified in the plant list.

8. Substitutions in plant species or size shall not be permitted except with the written approval of the Landscape Architect.

9. Plants shall be located as shown on the drawings and by scaling or as designated in the field by the Landscape Architect. All locations are to be approved by the Landscape Architect before excavation.

10. All tree trunks shall be located outside of the eight distance easements. Any limbs or foliage disrupting clear sight lines shall be removed.

11. The Land Planning & Design Group, Inc. is not responsible for the accuracy of the storm drain inlets, pipes or utilities as shown on these plans or which may differ from these plans as a result of any field adjustments.

12. Contractor shall contact Miss Utility (1-800-257-7777) prior to any excavation and shall take all necessary precautions to protect the existing utilities and maintain uninterrupted services. Any damage incurred due to the contractor's operation shall be repaired immediately at contractor's expense.

13. The Contractor must verify all utility locations prior to construction. Should any conflicts occur between proposed construction or planting and actual utility locations, the owner and the landscape architect must be notified prior to any excavation or grading. All entrance walls, pipes, and planting bed locations must be field staked by the contractor and the location approved by the owner prior to construction.

14. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the Landscape Architect. Such changes shall be made by the Contractor without additional compensation. No changes of location shall be made without the approval of the Landscape Architect.

15. No work in public right-of-way shall be done unless all the required permits are obtained.

16. All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow.

17. During planting operations, excess and waste materials shall be promptly and frequently removed from the site.

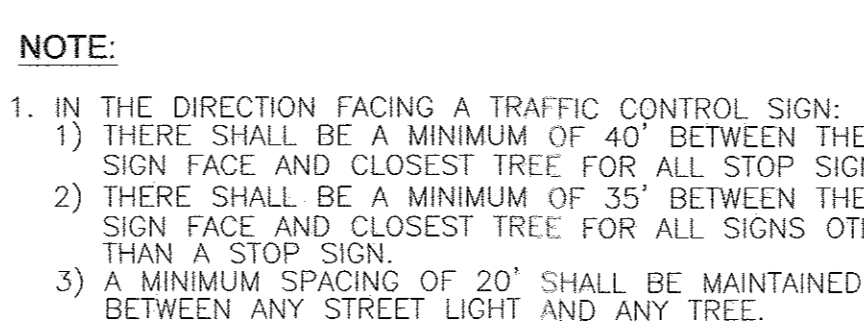
18. Notify LPDG to review and approve final grading and stakeout prior to construction.

19. All tree trunks shall be located outside of easements.

STREET TREE CALCULATIONS
STREET NAME LINEAR FEET NO. REQUIRED NO. PROVIDED

STREET TREE PLANTING SCHEDULE
KEY QUAN BOTANICAL NAME SIZE REM.

THE LAND PLANNING & DESIGN GROUP INC. SOUTH MAPLE LAWN BLVD - STREET TREE PLANTING SCHEDULE
KEY QUAN BOTANICAL NAME SIZE REM.



NOTES:
1. IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.

SCHEDULE A - PERIMETER LANDSCAPE EDGE
CATEGORY ADJACENT TO ROADWAYS PERIMETER PROPERTIES TOTAL

PERIMETER FRONTAGE DESIGNATION
LANDSCAPE TYPE LINE FEET OF ROADWAY FRONTAGE/PERIMETER

NUMBER OF PLANTS PROVIDED
SHRUBS TREES EVERGREEN TREES OTHER TREES (21 SUBSTITUTION)

THE LAND PLANNING & DESIGN GROUP INC. PERIMETER 1 - LANDSCAPE SCHEDULE AND MD 216 - STREET TREE PLANTING SCHEDULE

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

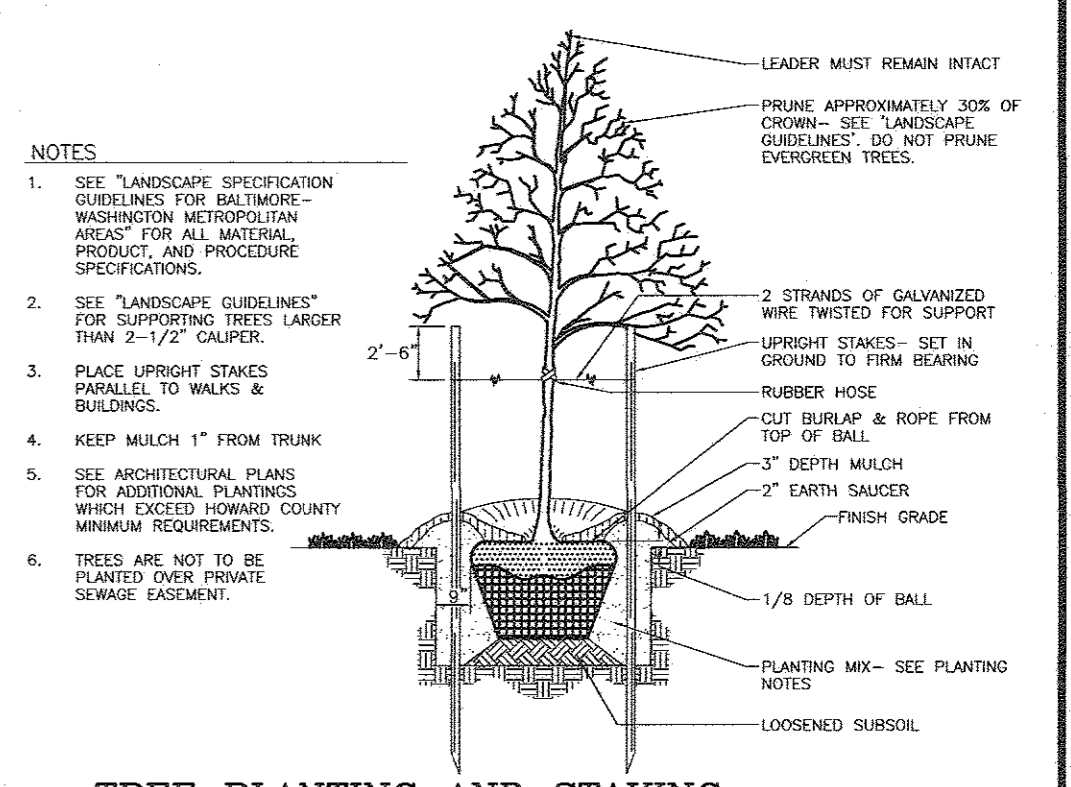
LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

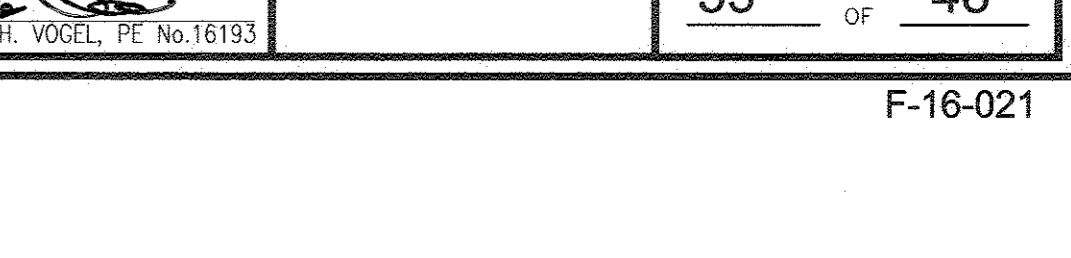
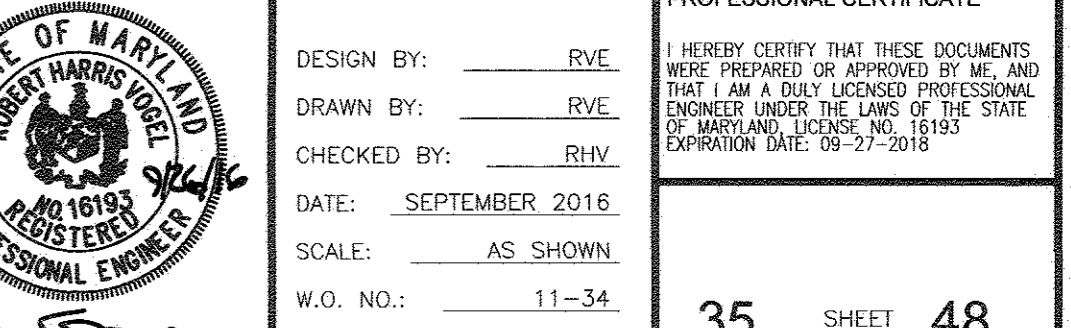
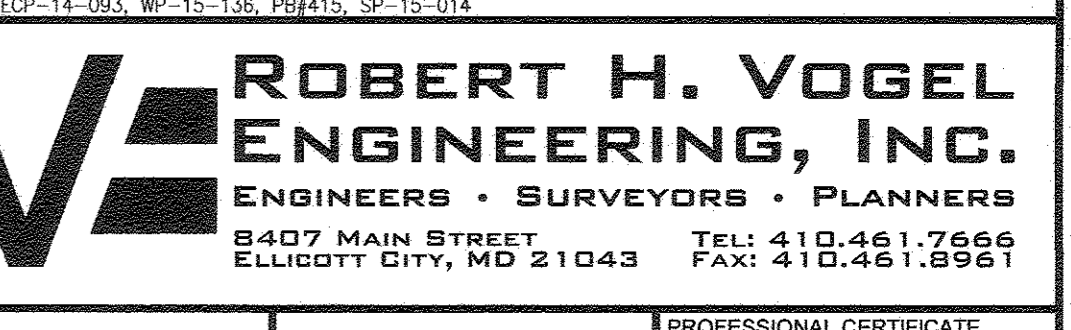
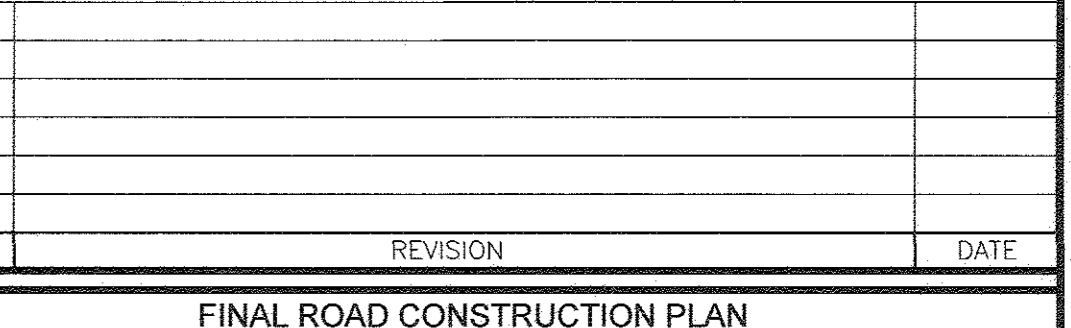
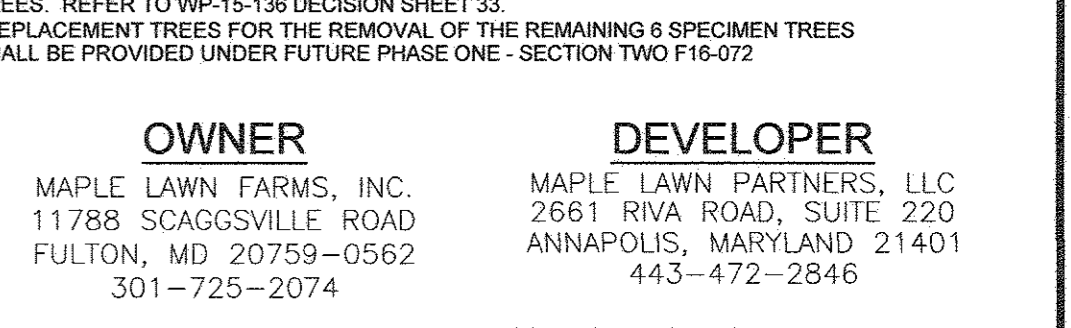
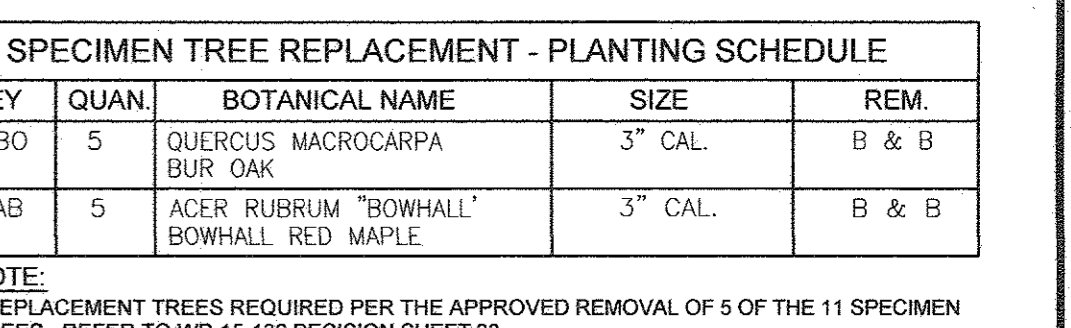
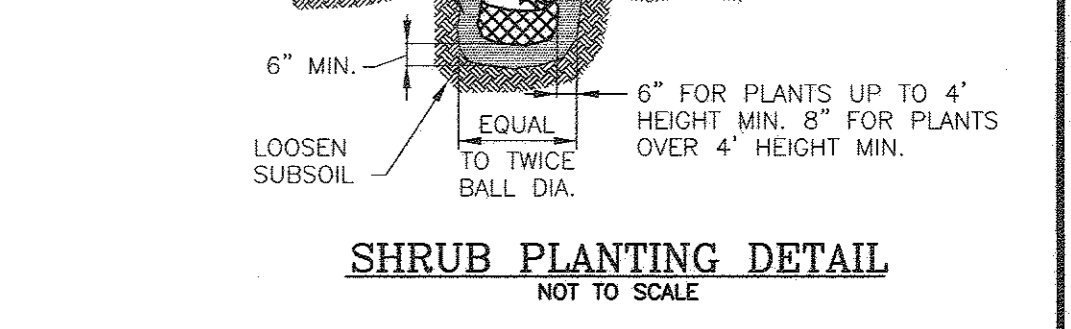
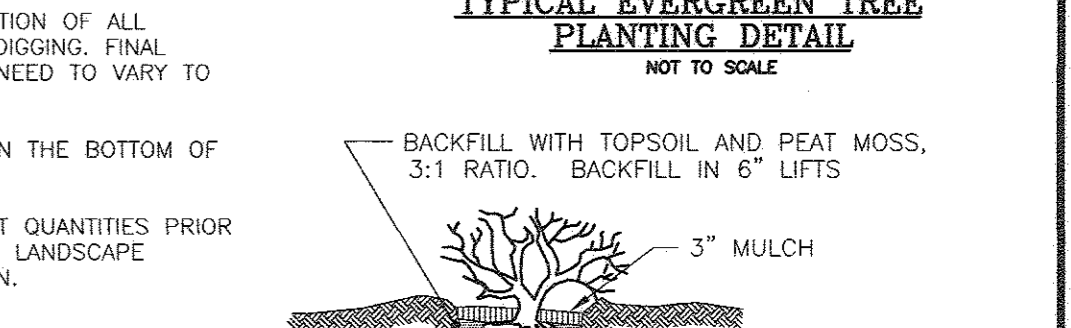
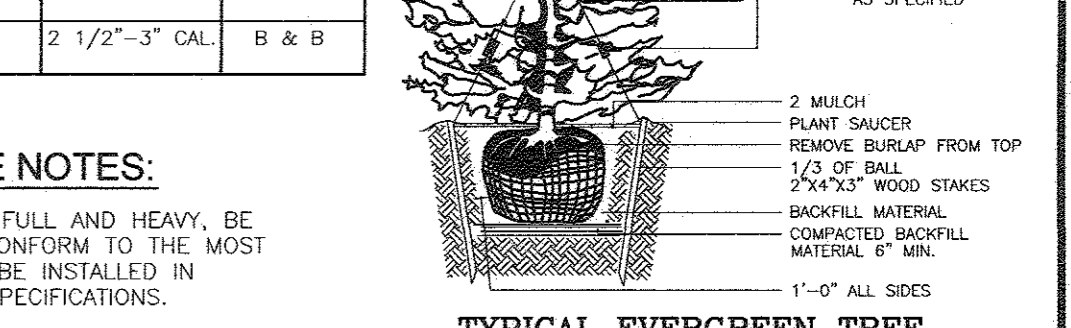
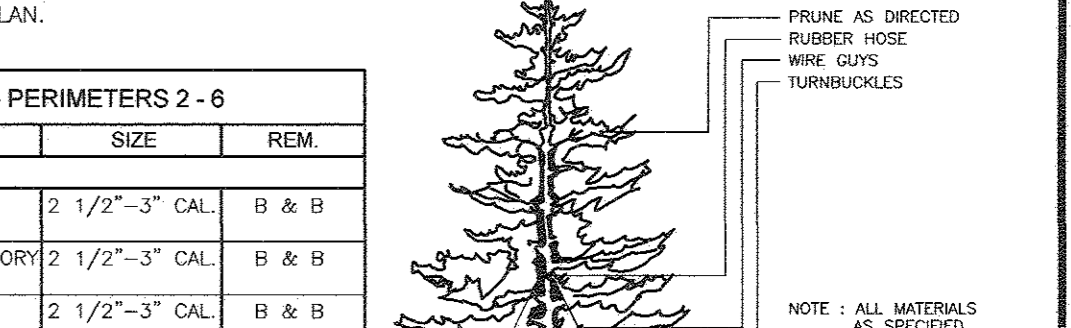
LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.

LANDSCAPE SCHEDULE - PERIMETERS 2-6
KEY QUAN BOTANICAL NAME SIZE REM.



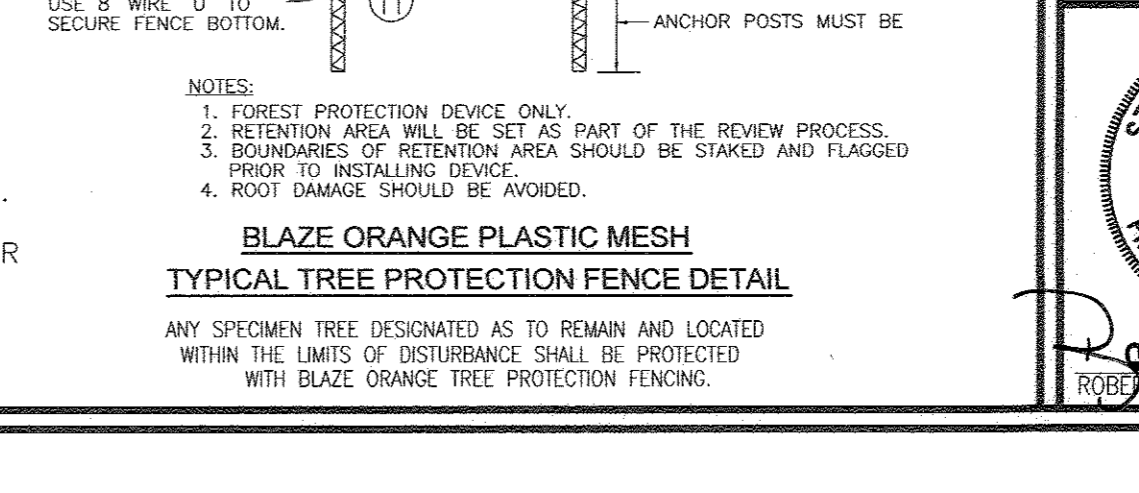
TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
10/20/2016
CHIEF, BUREAU OF HIGHWAYS

DEVELOPER/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.121 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.

FOREST RETENTION AREAS AND NOTES
1. THE WETLANDS AND WETLAND BUFFERS ARE LOCATED ON OPEN SPACE LOT 65.



DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-384
35 SHEET OF 48

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- NON-STRUCTURAL ROOFTOP DISCONNECTIONS
- MICRO-SCALE PRACTICE BOX-SWALE (M-8)
- MICRO-SCALE PRACTICE MICRO BIORETENTION / BIORETENTION (M-6)
- 200 GAL. RAIN BARREL
- DRAINAGE DIVIDE
- DRAINAGE AREA DESIGNATION
- PROPOSED DRYWELL
- STORMWATER MANAGEMENT TEST PIT
- SOIL BORING



MATCH LINE - SEE SHEET 37

AREA #11
31,774 SF
0.73 AC.

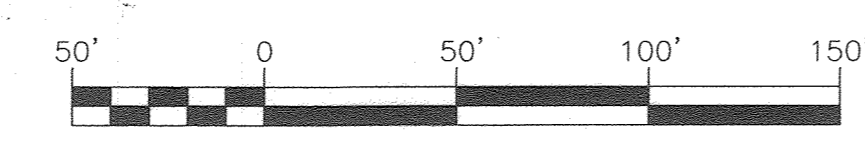
AREA #18
66,241 SF
1.52 AC.

AREA #18
66,241 SF
1.52 AC.

AREA #36
48,574 SF
1.12 AC.

AREA #28
64,160 SF
1.47 AC.
FACILITY TO BE
CONSTRUCTED
UNDER PHASE 2

STORMWATER MANAGEMENT
DRAINAGE AREA MAP
SCALE: 1"=50'



Lot	ONLOT STORMWATER MANAGEMENT PRACTICES		
	M-S	M-1	N-1
	Drywell	Rain Barrel	15' Disconnect
Lot 1	1	1	1
Lot 2	1	1	1
Lot 3	1	1	1
Lot 4	1	1	1
Lot 5	1	1	1
Lot 31	1	1	2
Lot 32	1	1	2
Lot 55	1	1	2
Lot 56	1	1	1
Lot 57	2	1	1
Lot 58	2	1	1
Lot 59	2	1	1
Lot 62	2	1	1
Lot 63	2	1	1
Lot 64	2	1	1

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23									
SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT HYDRIC	K FACTOR	PERCENT PERCOLATION	PERCENT SLOPE	ERODIBILITY		
							FACTOR	CLASSIFICATION	GROUP
BGA BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	YES			
GMA GLENLEIGH LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO			
GGB GLENLEIGH LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO			
GMB GLENLEIGH SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES			
GWB GLENLEIGH-BLAKE SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL			
MGC MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO			

For Revisions by GLW
Professional Certification
I hereby certify that these plans were prepared or approved by me and that I am a duly licensed professional under the laws of the State of Maryland, License No. 54300, Expiration Date: 5/14/25

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE
1	Rev. B'pathway (by GLW)	7/20/23

FINAL ROAD CONSTRUCTION PLAN
STORMWATER MANAGEMENT
DRAINAGE AREA MAP
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REV. SEP-14-09, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043 TEL: 410.481.7666
FAX: 410.481.8991

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2018

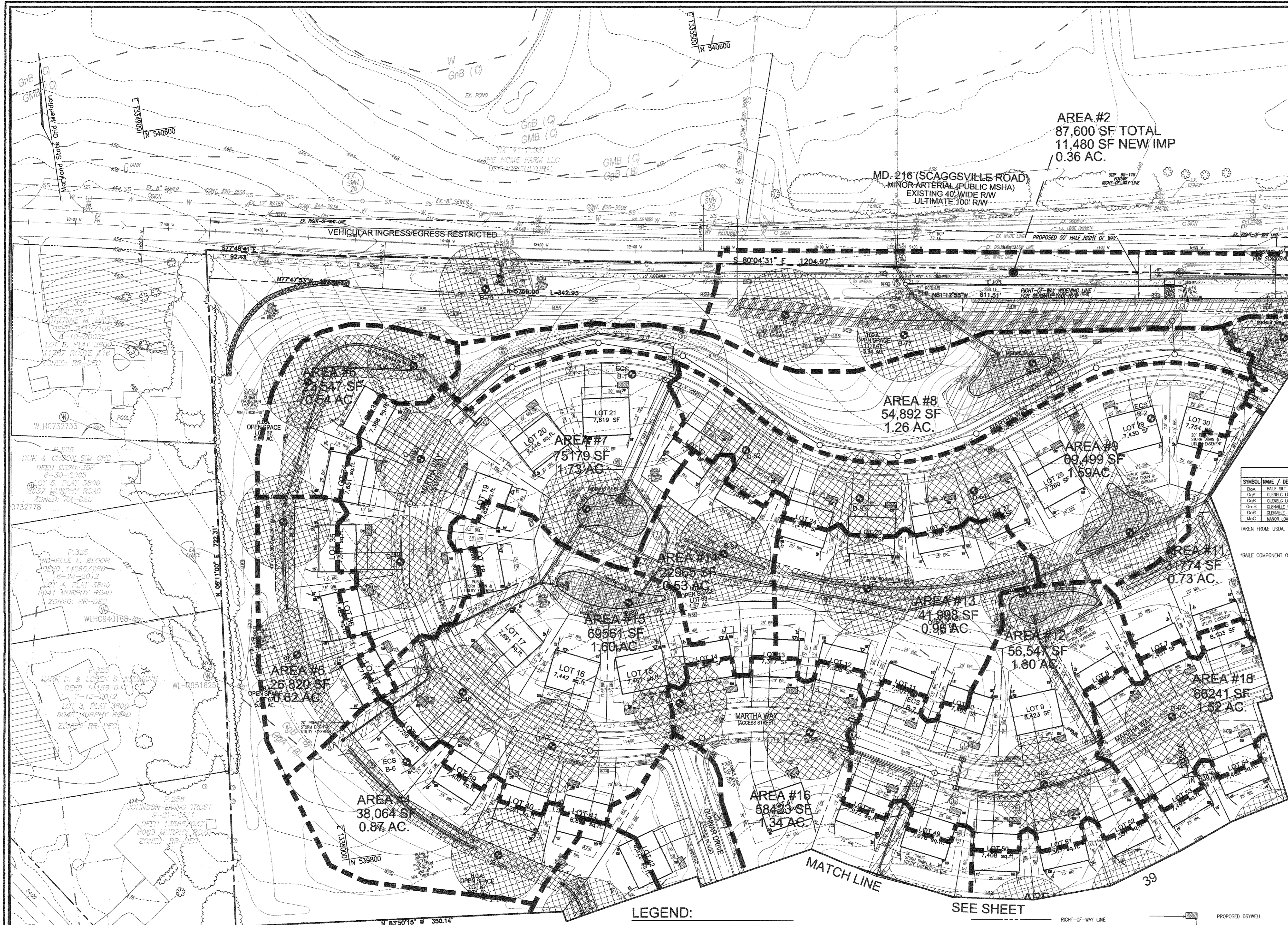
36 SHEET OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
10/25/2016
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
4/6/16
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
11/16
DATE

NOTE:
ESDV EQUAL TO PE = 1.6" IS PROVIDED WITHIN EACH SUB DRAINAGE AREA



MATCH LINE - SEE SHEET 36

ONLOT STORMWATER MANAGEMENT PRACTICES			
Lot	M-5	M-1	N-1
	Drywell	Rain Barrel	15' Disconnect
Lot 6	1	1	2
Lot 7	1	1	2
Lot 8	1	1	2
Lot 9	1	1	2
Lot 10	1	1	2
Lot 11	1	1	1
Lot 12	1	1	1
Lot 13	1	1	2
Lot 14	1	1	2
Lot 15	1	1	2
Lot 16	1	1	2
Lot 17	1	1	2
Lot 18	1	1	2
Lot 19	1	1	2
Lot 20	1	1	2
Lot 21	1	1	2
Lot 22	1	1	2
Lot 23	1	1	2
Lot 24	1	1	2
Lot 25	1	1	2
Lot 26	1	1	2
Lot 27	1	1	1
Lot 28	1	1	1
Lot 29	1	1	1
Lot 30	1	1	2
Lot 33	1	1	2
Lot 34	1	1	2
Lot 35	1	1	2
Lot 36	1	1	2
Lot 37	1	1	2
Lot 38	1	1	2
Lot 39	1	1	2
Lot 40	1	1	2
Lot 41	1	1	1
Lot 42	1	1	1
Lot 47	1	1	1
Lot 48	1	1	2
Lot 49	1	1	2
Lot 50	1	1	2
Lot 51	1	1	2
Lot 52	1	1	2
Lot 53	1	1	2
Lot 54	1	1	2

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT SAND	K FACTOR	PERCENT CLAY	PERCENT SILT
BsA	D	YES	0.32	NO	NO	NO
GsA	B	NO	0.20	YES	NO	NO
GsB	B	NO	0.20	YES	NO	NO
GsC	C	NO	0.37	YES	YES	NO
GsD	C	PARTIALLY	0.37	NO	PARTIAL	NO
MsC	B	NO	0.24	YES	NO	NO

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

*BASE COMPONENT OF GsB; ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

NOTE: ESDv EQUAL TO PE = 1.6" IS PROVIDED WITHIN EACH SUB DRAINAGE AREA

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

MATCH LINE SEE SHEET 39

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/11/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11-14-16

STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=50'

LEGEND:

	EXISTING CONTOUR		EXISTING SANITARY MANHOLE		RIGHT-OF-WAY LINE
	PROPOSED CONTOUR		EXISTING SANITARY LINE		PROPOSED SIDEWALK
	PROPOSED SPOT ELEVATION		EXISTING CLEANOUT		NON-STRUCTURAL ROOFTOP DISCONNECTIONS
	EXISTING SPOT ELEVATION		EXISTING FIRE HYDRANT		MICRO-SCALE PRACTICE (M-5)
	EXISTING CURB AND GUTTER		EXISTING WATER LINE		MICRO-SCALE PRACTICE (M-6)
	PROPOSED CURB AND GUTTER		PROPOSED STORM DRAIN		200 GAL RAIN BARREL
	EXISTING UTILITY POLE		PROPOSED STORM DRAIN INLET		DRAINAGE DIVIDE
	EXISTING LIGHT POLE		EXISTING TREE LINE		DRAINAGE AREA DESIGNATION
	EXISTING MAILBOX		EXISTING FENCE		
	EXISTING SIGN		PROPERTY LINE		

AREA #3

NO. _____ REVISION _____ DATE _____

FINAL ROAD CONSTRUCTION PLAN
STORMWATER MANAGEMENT DRAINAGE AREA MAP
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A'
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 7 PARCEL 113
 5TH ELECTION DISTRICT
 DIST. REF: ECP-14-093, WP-15-136, P04115, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

37 SHEET OF 48

AREA #17
32,830 SF
0.75 AC.

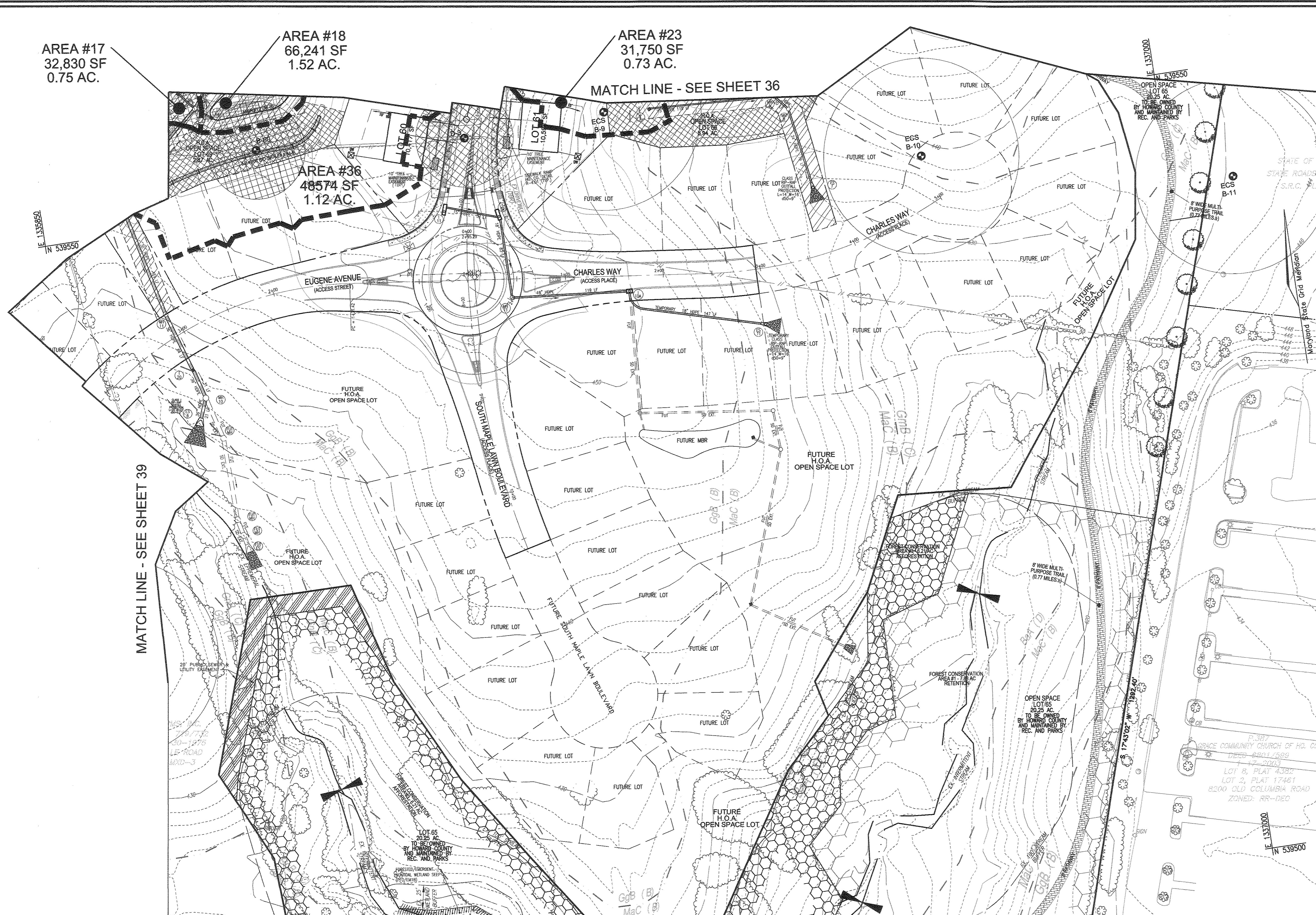
AREA #18
66,241 SF
1.52 AC.

AREA #23
31,750 SF
0.73 AC.

AREA #36
48,574 SF
1.12 AC.

MATCH LINE - SEE SHEET 36

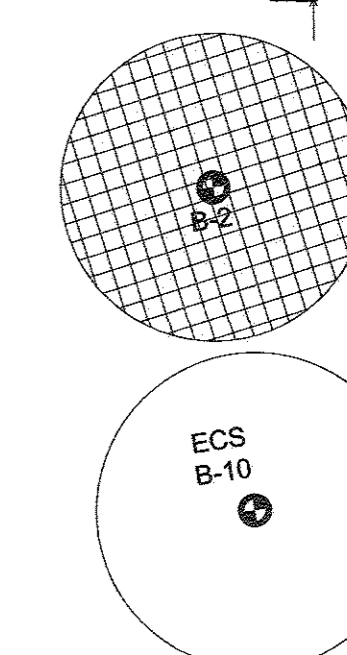
MATCH LINE - SEE SHEET 39



LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- NON-STRUCTURAL ROOFTOP DISCONNECTIONS
- MICRO-SCALE PRACTICE BIO-SWALE (M-8)
- MICRO-SCALE PRACTICE MICRO BIO-RETENTION / BIO-RETENTION (M-9)
- 200 GAL RAIN BARREL
- DRAINAGE DIVIDE
- DRAINAGE AREA DESIGNATION
- PROPOSED DRYWELL
- STORMWATER MANAGEMENT TEST PIT
- SOIL BORING
- PUBLIC STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
- 10' TREE MAINTENANCE EASEMENT

AREA #3

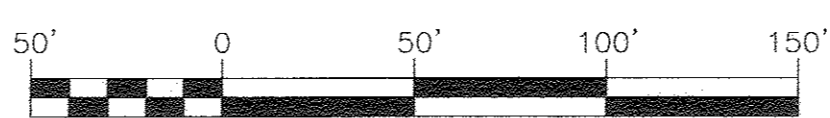


NOTE:
ESDv EQUAL TO PE = 1.6" IS PROVIDED WITHIN EACH SUB DRAINAGE AREA

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=50'



MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT INCLUSION	K FACTOR	PERCENT SAND	PERCENT SILT	PERCENT CLAY
BaA BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	YES	0.32	NO	NO	YES
GaA GLENELO LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO
GgB GLENELO LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	NO
GmB GLENELO SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES	NO
GnB GLENELO-SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL	NO
MgC MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF GmB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

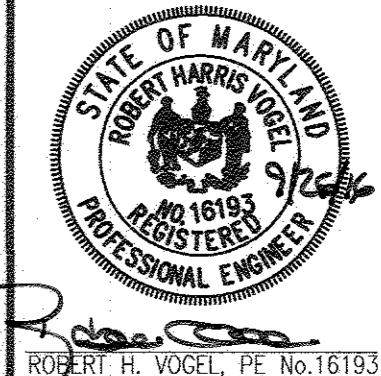
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/4/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11/16/16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ONLOT STORMWATER MANAGEMENT PRACTICES

Lot	M-5 Drywell	M-1 Rain Barrel	N-1 15' Disconnect
Lot 60	2	1	1
Lot 61	2	1	1

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961



DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE: 09-27-2018

ONLOT STORMWATER MANAGEMENT PRACTICES				
Lot	M-5	M-1	N-1	
	Drywell	Rain Barrel	15'	Disconnect
Lot 43	1	1	1	1
Lot 44	1	1	1	1
Lot 45	1	1	1	2
Lot 46	1	1	1	2

MATCH LINE - SEE SHEET 37
N 83°50'15" W 350.14'

AREA #16
58,423 SF
1.34 AC.

AREA #17
32,830 SF
0.75 AC.

AREA #40
36,260 SF
0.83 AC.

AREA #39
62,891 SF
1.44 AC.

PROPOSED BUILDABLE BULK PARCEL "A"
REFER TO F-16-072

LEGEND:

- 389 --- EXISTING CONTOUR
- 406 --- PROPOSED CONTOUR
- 402.68 --- PROPOSED SPOT ELEVATION
- 402.68 --- EXISTING SPOT ELEVATION
- 402.68 --- EXISTING CURB AND GUTTER
- 402.68 --- PROPOSED CURB AND GUTTER
- 402.68 --- EXISTING UTILITY POLE
- 402.68 --- EXISTING LIGHT POLE
- 402.68 --- EXISTING MAILBOX
- 402.68 --- EXISTING SIGN
- 402.68 --- EXISTING SANITARY MANHOLE
- 402.68 --- EXISTING SANITARY LINE
- 402.68 --- EXISTING CLEANOUT
- 402.68 --- EXISTING FIRE HYDRANT
- 402.68 --- EXISTING WATER LINE
- 402.68 --- PROPOSED STORM DRAIN
- 402.68 --- PROPOSED STORM DRAIN INLET
- 402.68 --- EXISTING TREES (FIELD LOCATED)
- 402.68 --- EXISTING TREELINE (FIELD LOCATED)
- 402.68 --- EXISTING VEGETATION (APPROXIMATE LOCATION)
- 402.68 --- EXISTING FENCE
- 402.68 --- PROPERTY LINE
- 402.68 --- RIGHT-OF-WAY LINE
- 402.68 --- PROPOSED SIDEWALK
- 402.68 --- NON-STRUCTURAL ROOFTOP DISCONNECTS
- 402.68 --- MICRO-SCALE PRACTICE BIO-SWALE (M-5)
- 402.68 --- MICRO-SCALE PRACTICE MICRO BIORETENTION / BIORETENTION (M-6)
- 402.68 --- 200 GAL RAIN BARREL
- 402.68 --- DRAINAGE DIVIDE
- 402.68 --- DRAINAGE AREA DESIGNATION
- 402.68 --- PROPOSED DRYWELL
- 402.68 --- STORMWATER MANAGEMENT TEST PIT
- 402.68 --- SOIL BORING

MATCH LINE - SEE SHEET 38

MAPPED SOILS TYPES - CLARKSVILLE SE MAP #23

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO		PERCENT SAND	K FACTOR	SLOPE	
			D	YES			PERCENT	PERCENT
Ba	BARE SILT LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.32	NO	NO	
Ga	GLENNLEIGH LOAM, 0 TO 3 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	
Gb	GLENNLEIGH LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	YES	NO	
GmB	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	NO	NO	0.37	YES	YES	
GmB	GLENNVILLE-SILT LOAM, 0 TO 8 PERCENT SLOPES	C	PARTIALLY	PARTIALLY	0.37	NO	PARTIAL	
MaC	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.24	YES	NO	

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT
*BALE COMPONENT OF GbE, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRO

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

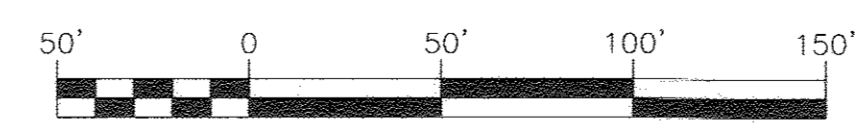
DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11-4-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**STORMWATER MANAGEMENT
DRAINAGE AREA MAP**
SCALE: 1"=50'



NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
STORMWATER MANAGEMENT
DRAINAGE AREA MAP
**MAPLE LAWN SOUTH
PHASE 1 - SECTION 1**
LOTS 1-64, NON-BUILDABLE BULK PARCEL "A",
NON-BUILDABLE BULK PARCEL "B", AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
REF: CCP-14-195, WP-15-136, PB415, SP-15-014
ZONED: R-ED-MD-3
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERS, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLIGOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRES DATE: 09-27-2018

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RIV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.D. NO.: 11-34

39 SHEET OF 48

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

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

2. FILTERING MEDIA OR PLANTING SOIL
 THE SOIL SHALL BE A UNIFORM MIX OF STONES, STRIPS, 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 HINDERANCE 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 15.04.01. PLANTING SOIL SHALL BE A UNIFORM MIX OF SAND, SILT AND CLAY WITH THE FOLLOWING CHARACTERISTICS:
 • SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
 • ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (80%-85%) AND COMPOST (20% TO 40% OF SANDY LOAM (LOR), COARSE SAND (LOR), AND COMPOST (40%).
 • CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
 • RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SUIPURI) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS OBTAINED.

3. COMPACTION
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EQUIPMENT HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EXCAVATION 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 ALLEVATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS SHALL BE TO RESTRUCTURE THE SOIL PROFILE THROUGH THE 12 INCH PONDING ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. RETIERS SHOULD NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL TO 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP AWAY PONDING WATER BEFORE PREPARING (ROTTOTILLING) 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 LINE. 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 SOIL AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

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

5. PLANT INSTALLATION
 COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
 ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED 1/8TH OF THE SOIL 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. SHARPEN 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 ACCADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDED FERTILIZERS DEFERS, OR AT A MINIMAL DEFERS, THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL AND FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

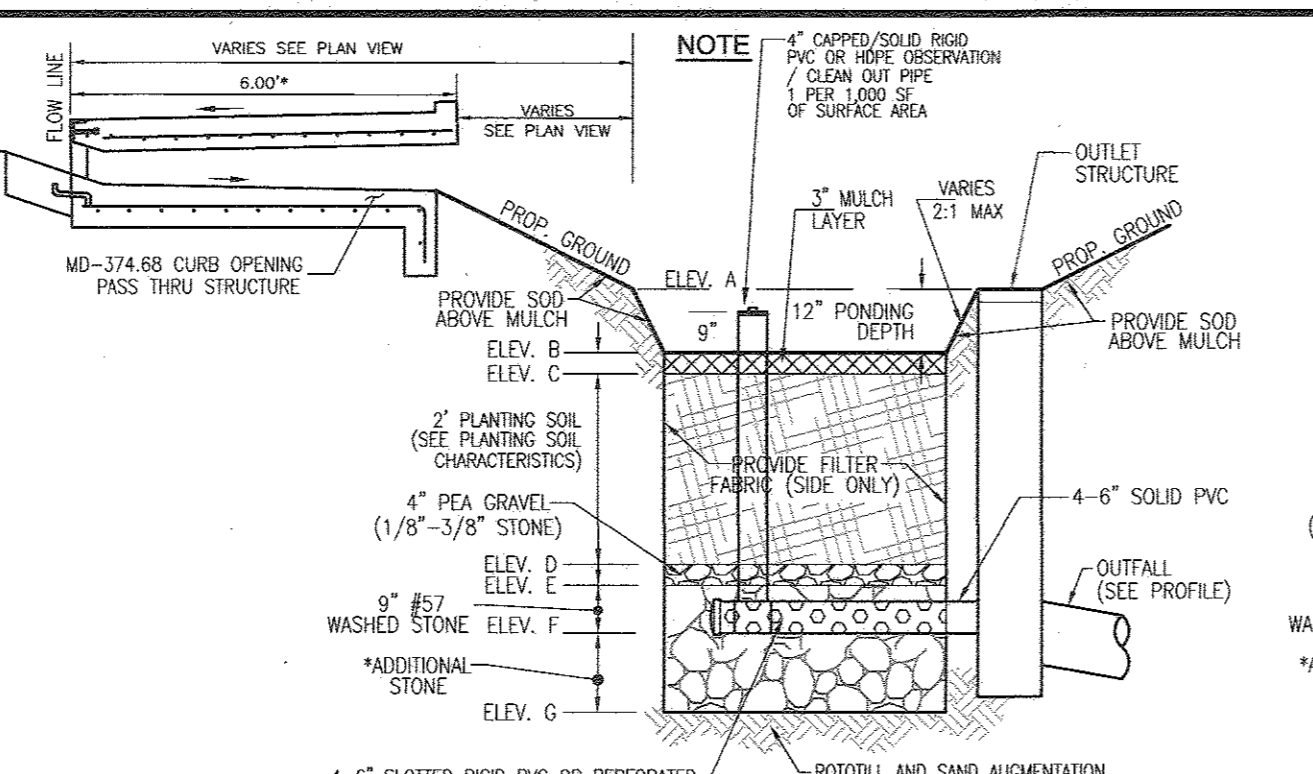
6. UNDERDRAINS
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 • PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HOPE).
 • PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 6) GALVANIZED HARDWARE CLOTH.
 • GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
 • THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
 • A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 • A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 2".
 THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

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

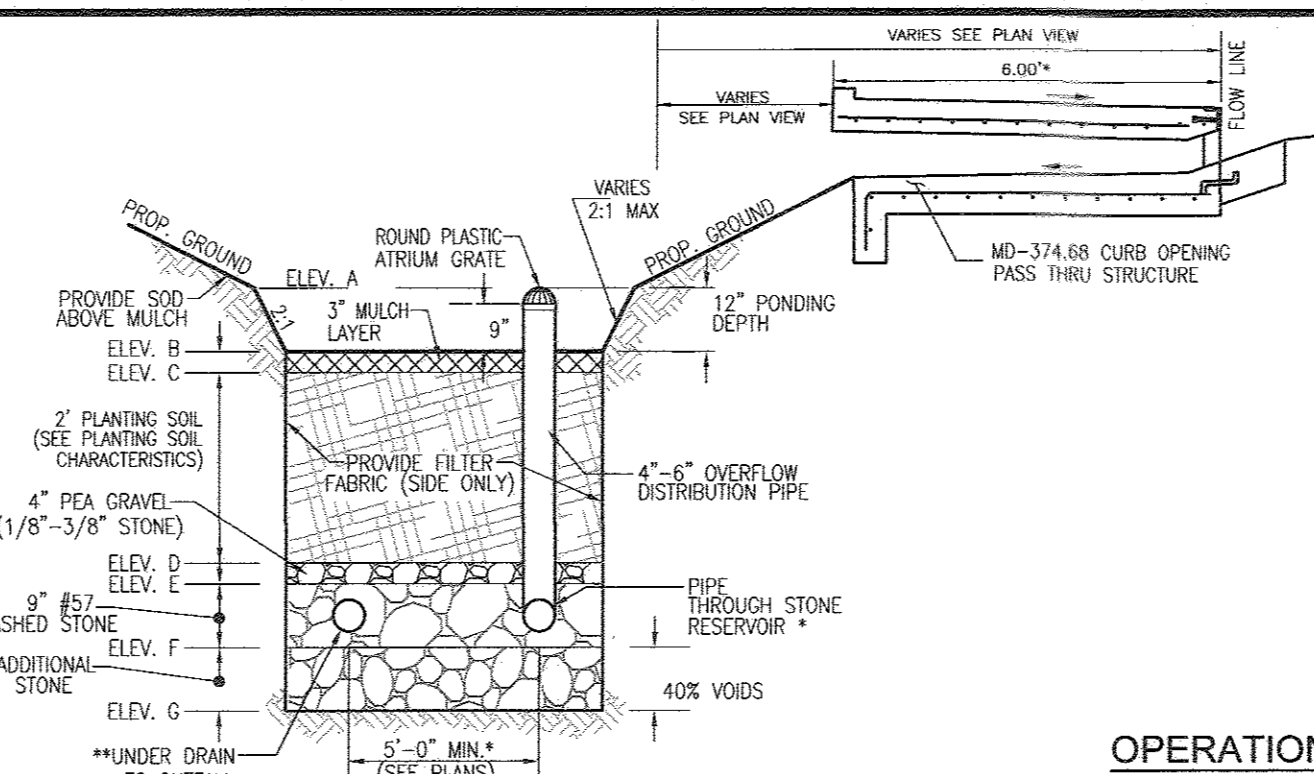
Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Planting soil (2" to 4" deep)	See Appendix A, Table A.4 loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%) course sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	n/a	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	shredded hardwood
Curtain drain	ornamental stone: washed cobble	stone: 2" to 5"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/4" TO 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; F _c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-61-50	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACT Code 350 R.89; vertical loading (14-10 or 14-20); allowable horizontal loading based on soil pressure); and analysis of potential cracking.
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



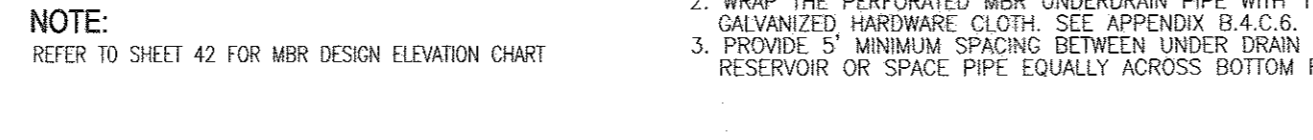
MICRO-BIORETENTION (UNDERDRAIN) NOT TO SCALE
 *ADDITIONAL STONE PROVIDED FOR 10 YEAR ATTENUATION/REV



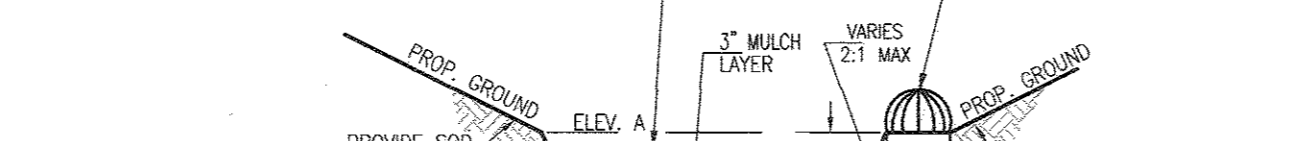
MICRO-BIORETENTION (OVERFLOW) NOT TO SCALE
 *ADDITIONAL STONE PROVIDED FOR 10 YEAR ATTENUATION/REV

MICROBIORETENTION NOTES:
 1. ONLY THE SIDES OF MICRO BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICRO BIORETENTION WILL CAUSE THE MEDIA TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
 2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH. SEE APPENDIX B.4.C.6.
 3. PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

NOTE:
 REFER TO SHEET 42 FOR MBR DESIGN ELEVATION CHART



TYPICAL SMALL MICRO-BIORETENTION MBR#7 NOT TO SCALE
 *ADDITIONAL STONE PROVIDED FOR 10 YEAR ATTENUATION/REV



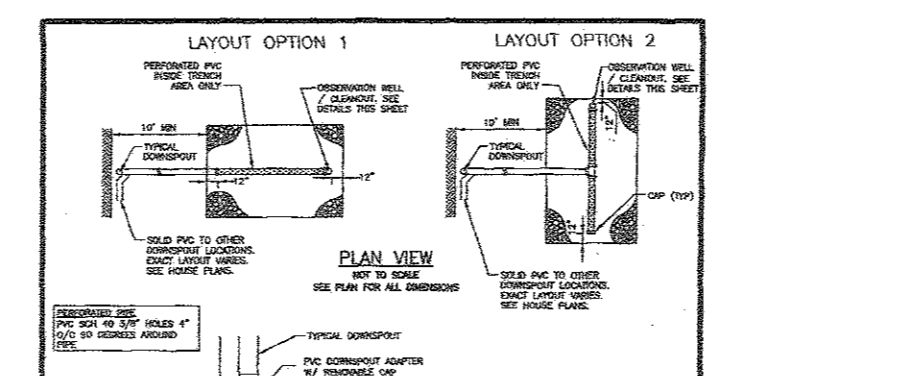
TYPICAL SPILLWAY SECTION NOT TO SCALE



TYPICAL SPILLWAY PROFILE NOT TO SCALE



DETAILS OF WEIR OUTLET MICRO-BIORETENTION/BIO-SWALE



TYPICAL RAIN BARREL DESIGN



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

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

ON-LOT DRYWELL - DESIGN ELEVATION CHART

DW	DA	DW LOCATION	NO. OF DWS	PROP. TOP*	TOP*	INV. STONE*	SURFACE FT	STONE DEPTH FT	SAND DEPTH FT
21	#4	F	1	457.00	456.00	452.00	6X12	4	1
23	64	R	1	451.00	450.00	446.00	6X6	4	1
63	R	1	450.50	449.50	445.50	6X6	4	1	
62	R	1	448.00	448.00	444.00	6X6	4	1	
61	R	1	448.50	447.50	443.50	6X6	4	1	
28	58	F	1	459.00	458.00	454.00	6X12	4	1
59	F	1	447.80	446.80	442.80	6X12	4	1	
58	F	1	455.00	454.00	450.00	6X12	4	1	
61	F	1	455.00	454.00	450.00	6X12	4	1	
62	F	1	457.50	456.50	452.50	6X12	4	1	
63	F	1	459.00	458.00	454.00	6X12	4	1	
36	57	R	1	454.00	453.00	449.00	6X6	4	1
58	R	1	457.00	456.00	452.00	6X6	4	1	
59	R	1	455.00	454.00	450.00	6X6	4	1	
60	R	1	454.00	453.00	449.00	6X6	4	1	
7	18	F	1	469.00	468.00	464.00	6X12	4	1
19	F	1	467.00	466.00	462.00	6X12	4	1	
20	F	1	464.00	463.00	459.00	6X12	4	1	
21	F	1	461.50	460.50	456.50	6X12	4	1	
33	F	1	466.50	465.50	461.50	6X12	4	1	
34	F	1	467.50	466.50	462.50	6X12	4	1	
35	F	1	469.00	468.00	464.00	6X12	4	1	
36	F	1	469.50	468.50	464.50	6X12	4	1	
37	F	1	470.50	469.50	465.50	6X12	4	1	
9	22	F	1	459.50	458.50	454.50	6X12	4	1
23	F	1	458.00	457.00	453.00	6X12	4	1	
24	F	1	457.00	456.00	452.00	6X12	4	1	
25	F	1	455.50	454.50	450.50	6X12	4	1	
26	F	1	455.00	454.00	450.00	6X12	4	1	
27	F	1	453.50	452.50	448.50	6X12	4	1	
28	F	1	453.00	452.00	448.00	6X12	4	1	
29	F	1	452.00	451.00	447.00	6X12	4	1	
30	F	1	455.50	454.50	450.50	6X12	4	1	
10	31	F	1	460.50	459.50	455.50	6X12	4	1
32	F	1	464.50	463.50	459.50	6X12	4	1	
3	F	1	463.50	462.50	458.50	6X12	4	1	
4	F	1	462.50	461.50	457.50	6X12	4	1	
12	9	F	1	468.50	467.50	463.50	6X12	4	1
10	F	1	470.00	469.00	465.00	6X12	4	1	
11	F	1	471.50	470.50	466.50	6X12	4	1	
48	F	1	471.00	470.00	466.00	6X12	4	1	
49	F	1	470.00	469.00	465.00	6X12	4	1	
50	F	1	469.50	468.50	464.50	6X12	4	1	
51	F	1	469.00	468.00	464.00	6X12	4	1	
52	F	1	468.50	467.50	463.50	6X12	4	1	
15	15	F	1	474.50	473.50	469.50	6X12	4	1
16	F	1	473.50	472.50	468.50	6X12	4	1	
17	F	1	471.50	470.50	466.50	6X12	4	1	
38	F	1	472.00	471.00	467.00	6X12	4	1	
39	F	1	473.00	472.00	468.00	6X12	4	1	
40	F	1	473.50	472.50	468.50	6X12	4	1	
41	F	1	474.00	473.00	469.00	6X12	4	1	
16	12	F	1	472.20	471.20	467.20	6X12	4	1
13	F	1	473.00	472.00	468.00	6X12	4	1	
14	F	1	473.50	472.50	468.50	6X12	4	1	
47	F	1	473.00	472.00	468.00	6X12	4	1	
18	1	F	1	464.00	463.00	459.00	6X12	4	1
2	F	1	465.00	464.00	460.00	6X12	4	1	
5	F	1	464.00	463.00	459.00	6X12	4	1	
6	F	1	465.00	464.00	460.00	6X12	4	1	
7	F	1	465.50	464.50	460.50	6X12	4	1	
8	F	1	467.50	466.50	462.50	6X12	4	1	
53	F	1	467.50	466.50	462.50	6X12	4	1	
54	F	1	465.50	464.50	460.50	6X12	4	1	
55	F	1	464.50	463.50	459.50	6X12	4	1	
19A	56	F	1	463.00	462.00	458.00	6X12	4	1
57	F	1	462.00	461.00	457.00	6X12	4	1	
39	42	F	1	472.00	471.00	467.00	6X12	4	1
44	F	1	471.00	470.00	466.00	6X12	4	1	
43	F	1	469.50	468.50	464.50	6X12	4	1	
45	F	1	468.50	467.50	463.50	6X12	4	1	
46	F	1	470.50	469.50	465.50	6X12	4	1	

* DESIGN SHALL BE FINE TUNED UNDER FUTURE SITE DEVELOPMENT PLAN
 R= REAR OF LOT
 F= FRONT OF LOT

OPERATION AND MAINTENANCE SCHEDULE FOR MICROBIORETENTION / BIO-SWALE AREAS

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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 HARLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 11/30/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

[Signature] 11/2/16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

BUSHMAN BR2205 (205 GALLON) RAIN HARVESTING SYSTEM OR EQUIVALENT RAIN BARREL DETAIL NOT TO SCALE

BUSHMAN BR2205 Round Tank

- 205 Gallon Capacity
- High Quality UV Resistant Polyethylene Construction
- Removable Drain and Overflow Pipes
- Interior Mesh Filter to Catch Debris
- UV Resistant UV Stabilized Polyethylene
- Quick Connect Hose and Adapter Fittings
- Standard 1/2" NPT Threaded Hose End
- Standard 1/2" NPT Threaded Hose End
- Standard 1/2" NPT Threaded Hose End

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED RAINWATER HARVESTING (M-1)

- A. THE OWNER SHALL EMPTY BARRELS ON A MONTHLY BASIS AND CLEAN BARREL WITH A HOSE.
- B. THE OWNER SHALL VERIFY INTEGRITY OF LEAF SCREENS, GUTTERS, DOWNSPUTS, SPOUTS, AND MOSQUITO SCREENS, AND CLEAN AND REMOVE ANY DEBRIS.
- C. THE OWNER SHALL REPLACE DAMAGED COMPONENTS AS NEEDED.
- D. THE OWNER SHALL ALLOW THE BARREL TO DRAIN BY BOTTOM SPOUT DURING THE WINTER SEASON.

205 GAL = 27.41 CUFT
 7.48 GAL/CUFT = 27.41 CUFT

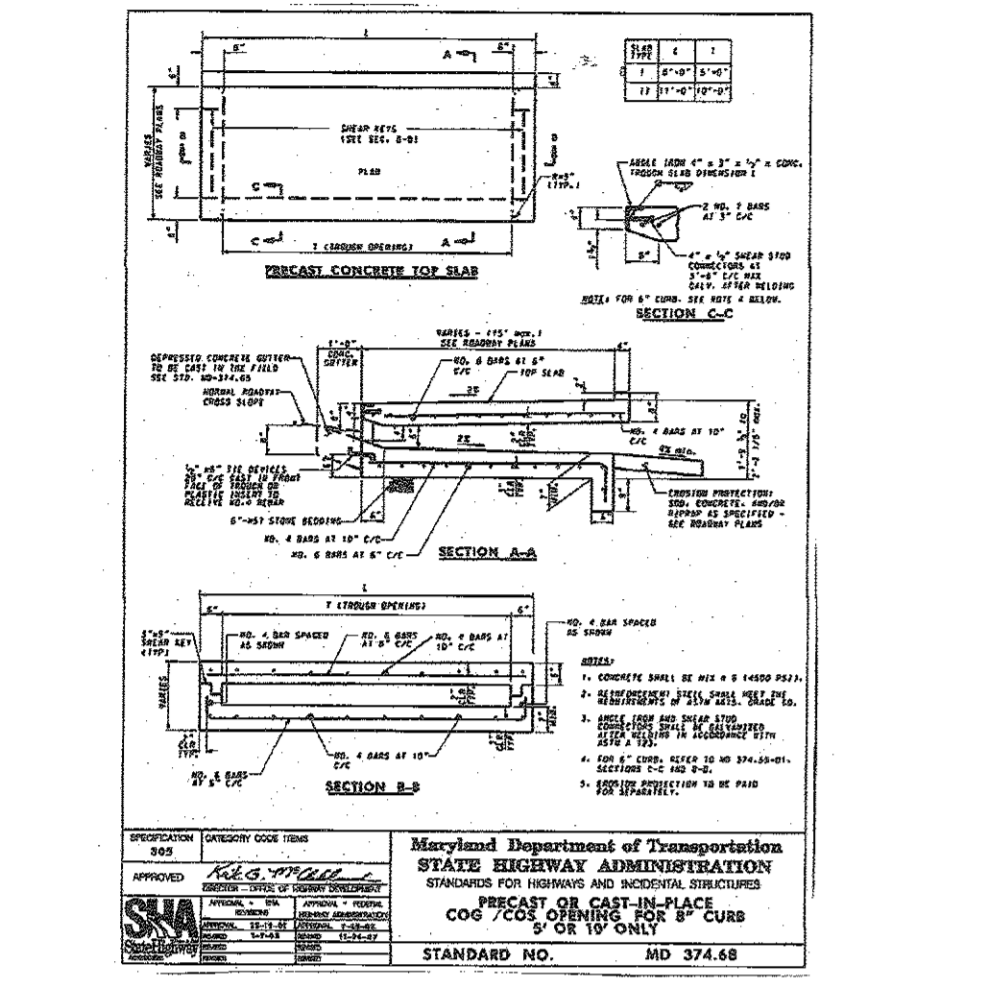
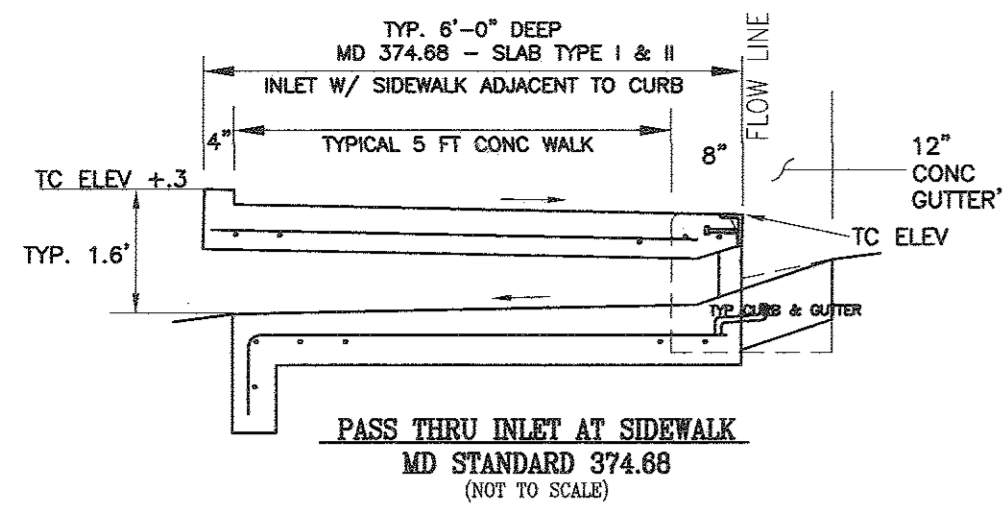
N-1. DISCONNECTION OF ROOFTOP RUNOFF CONSTRUCTION CRITERIA:

- THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:
- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF
 - SITE

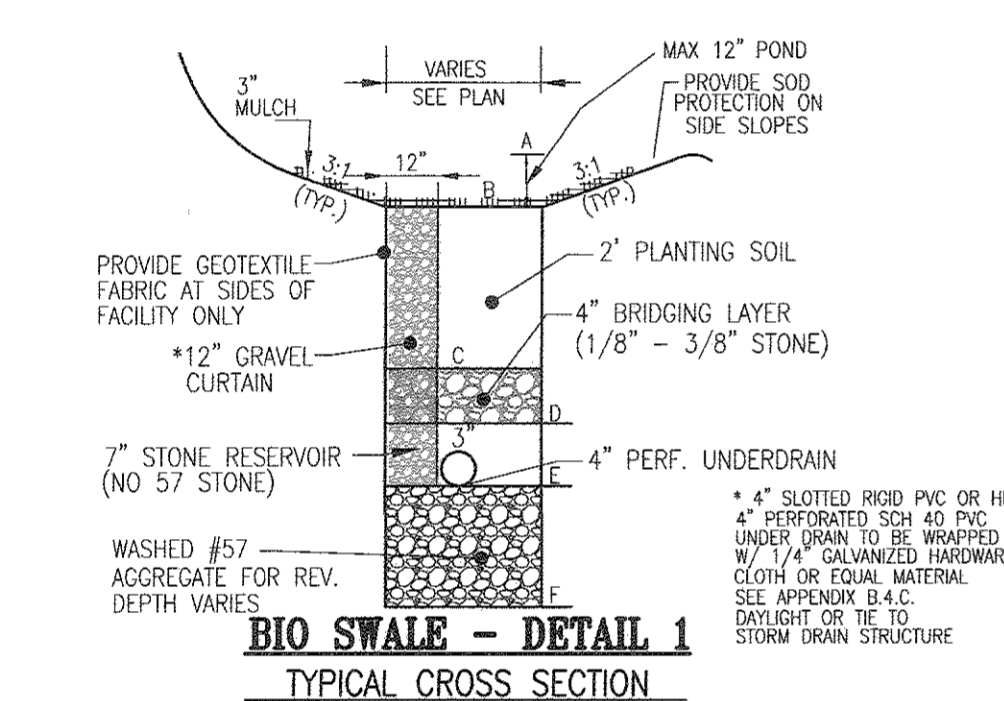
STORMWATER MANAGEMENT TEST PIT DATA

Maple Lawn South - Phase 1 Test Pit Data

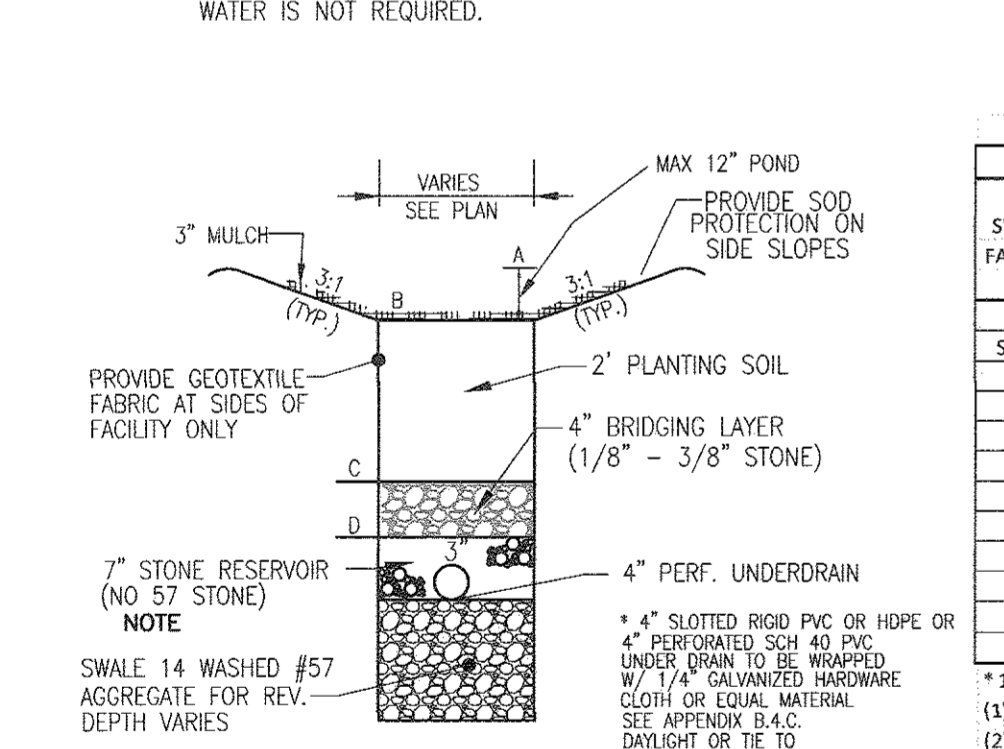
Test Pit No.	Ex. Ground FIELD	Test Pit Prop. Depth	Test Pit Depth Excavated	Test Pit Condition *
MICROSCALE - MBR, DRYWELL AND BIOSWALE TEST PITS				
B-2	458.91	16.2	16.2	DRY
B-3	448.62	9.3	9.3	DRY
B-40	454.14	15.5	15.5	DRY
B-62	451.51	8.8	8.8	DRY
B-63	453.14	5.2	8.0	DRY
B-64	458.76	18.9	18.9	DRY
B-65	454.12	11.4	11.4	DRY
B-66	452.99	10.4	10.4	DRY
B-67	470.53	14.9	14.9	DRY
B-68	473.57	12.6	12.6	DRY
B-69	473.65	11.7	11.7	DRY
B-71	465.85	9.0	9.0	DRY
B-72	463.17	7.2	8.0	DRY
B-73	457.49	3.4	8.0	DRY
B-74	449.97	-3.0	8.0	DRY
B-75	447.65	9.7	9.7	DRY
B-76	451.95	13.9	13.9	DRY
B-77	449.19	11.1	11.1	DRY
B-78	450.03	11.2	11.2	DRY
B-79	454.62	8.6	8.6	DRY
B-82	461.80	18.7	18.7	DRY
B-83	463.63	11.7	11.7	DRY
B-84	457.91	19.1	19.1	DRY
B-85	462.12	19.2	19.2	DRY
B-86	463.91	18.8	18.8	DRY
B-87	462.91	16.9	16.9	DRY
B-88	464.60	13.7	13.7	DRY
B-89	459.87	14.1	14.1	DRY
D-1	457.40	7.7	8.0	DRY
D-2	459.44	11.8	11.8	DRY
D-3	458.44	13.0	13.0	DRY
D-42	465.75	12.2	12.2	DRY
D-43	465.63	8.9	8.9	DRY
D-46	468.81	4.9	8.0	DRY
D-47	469.78	6.9	8.0	DRY
D-48	465.83	4.9	8.0	DRY
D-49	456.77	-1.2	8.0	DRY
D-50	452.40	-3.6	8.0	DRY
D-52	458.38	10.9	10.9	DRY
D-53	458.70	12.7	12.7	DRY
D-54	456.27	12.5	12.5	DRY
D-57	459.23	6.3	8.0	DRY
D-58	463.75	9.8	8.0	DRY
D-59	464.71	10.8	10.8	DRY
D-60	464.72	12.8	12.8	DRY
D-62	462.16	6.3	8.0	DRY
D-63	465.38	7.6	8.0	DRY
D-65	469.89	8.0	8.0	DRY



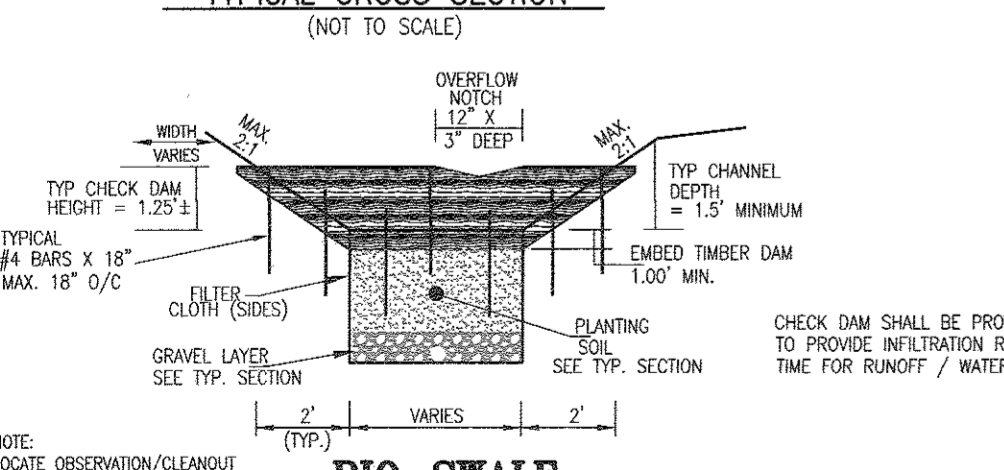
TYPICAL CURB OPENING INLETS



BIO-SWALE - DETAIL 1 TYPICAL CROSS SECTION



BIO-SWALE - DETAIL 2 TYPICAL CROSS SECTION



BIO-SWALE CHECK DAM - VIEW 1 TYPICAL CROSS SECTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 11/3/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 11/1/16
 CHIEF, DIVISION OF LAND DEVELOPMENT

BIO-SWALE - DESIGN ELEVATION CHART

SWALE FACILITY	BIO-SWALE DETAIL	LOW PT. ESD WSEL	TOP MULCH	BOTTOM PLANT SOIL	BOTTOM PEA GRAVEL	INV PIPE (1) D	ADDITIONAL STONE	INV STONE	WIDTH FT	LENGTH FT
SHA 4	SHA (2)	442.75	441.75	439.50	439.17	438.59	2.70	435.89	2.2	191
5	2	454.00	453.00	450.75	450.42	449.84	2.70	447.14	4	130
6	2	452.00	451.00	448.75	448.42	447.84	2.70	445.14	2.5	265
7	2	456.00	455.00	452.75	452.42	451.84	2.70	449.14	3.4	90
8	2	448.00	447.00	444.75	444.42	443.84	2.70	441.14	3	200
9	2	452.75	451.75	449.50	449.17	448.59	2.70	445.89	2	320
10	2	454.00	453.00	450.75	450.42	449.84	2.70	447.14	2.1	157
11	1	465.00	464.00	461.75	461.42	460.84	2.70	458.14	4	100
12	1	469.00	468.00	465.75	465.42	464.84	2.70	462.14	2.5	370
13	1	468.80	467.80	465.55	465.22	464.64	2.70	461.94	2	380

BIO-SWALE PLANTING SCHEDULE

BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
PANICUM VIRGATUM SWITCHGRASS	1 GALLON	CONT
IRIS VERSICOLOR BLUE FLAG	2" POT	1' O.C.
LIRIOPE MUSCARI 'MAJESTIC' MAJESTIC LILY TURF	2" POT	1' O.C.

PLANTING REQUIREMENTS

SWALE FACILITY	MULCH	PLANTINGS REQUIRED	PLANTINGS OR EQUAL SUBSTITUTION	SWITCHGRASS	BLUE FLAG - IRIS VERSICOLOR	LILY TURF
3	420	10	6	100	100	100
5	520	12	8	100	100	100
6	563	15	9	200	100	100
7	326	7	3	100	100	100
8	600	14	8	200	100	100
9	640	15	8	200	100	100
10	330	8	4	100	100	100
11	400	9	5	100	100	100
12	425	10	4	100	100	100
13	360	8	4	100	100	100

BIO-SWALE - DESIGN ELEVATION CHART

SWALE FACILITY	BIO-SWALE DETAIL	LOW PT. ESD WSEL	TOP MULCH	BOTTOM PLANT SOIL	BOTTOM PEA GRAVEL	INV PIPE (1) D	ADDITIONAL STONE	INV STONE	WIDTH FT	LENGTH FT
SHA 4E	SHA (2)	448.70	447.70	445.50	445.17	444.59	2.70	441.89	4	205
SHA 4D	SHA (2)	445.00	444.00	441.75	441.42	440.84	2.70	438.14	4	220

ECS - SOIL BORING LOGS

OWNER: MAPLE LAWN FARMS, INC. 11788 SCAGGSVILLE ROAD, FULTON, MD 20759-0562, 301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC 2651 RIVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401, 443-472-2846

FINAL ROAD CONSTRUCTION PLAN
 STORMWATER MANAGEMENT NOTES AND DETAILS AND SOIL BORING LOGS
 MAPLE LAWN SOUTH PHASE 1 - SECTION 1
 LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
 2311 ELEC DISTRICT
 D02 REF: EOP-14-093, WP-15-136, PR#415, SP-15-014

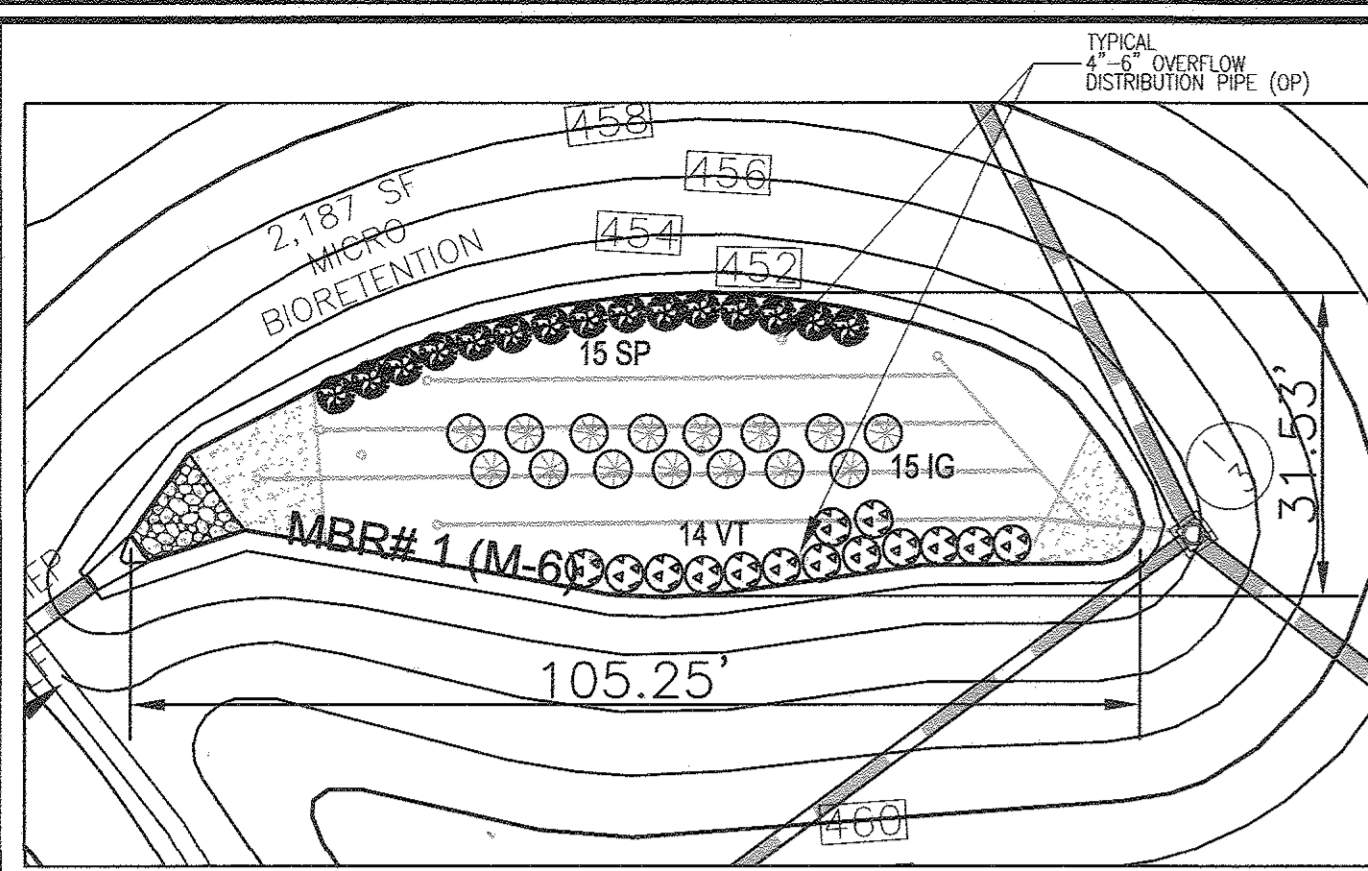
ZONED: R-ED-MD-3
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

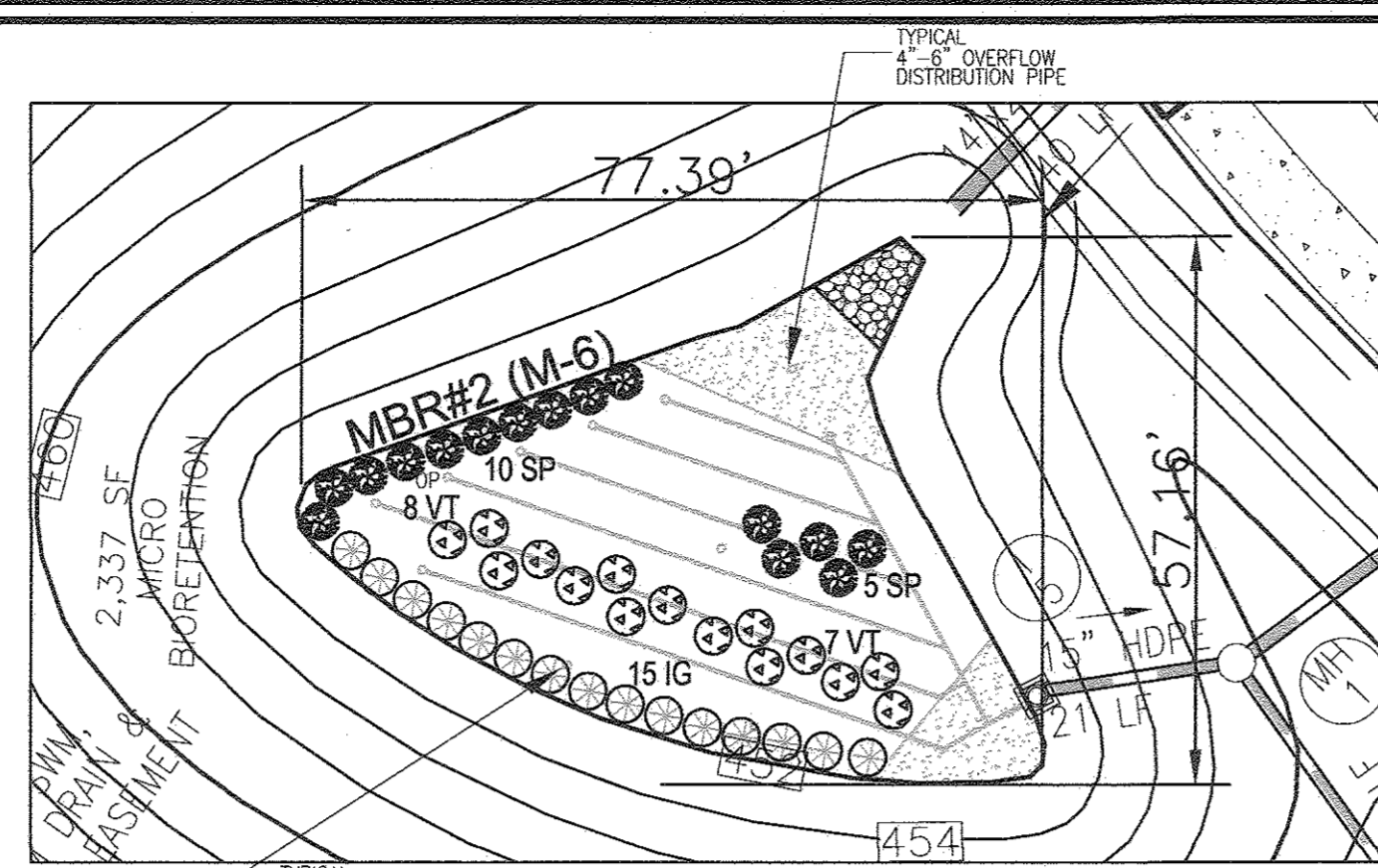
DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHY
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.D. NO.: 11-34

PROFESSIONAL CERTIFICATE
 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. 16193, EXPIRATION DATE: 09-27-2018

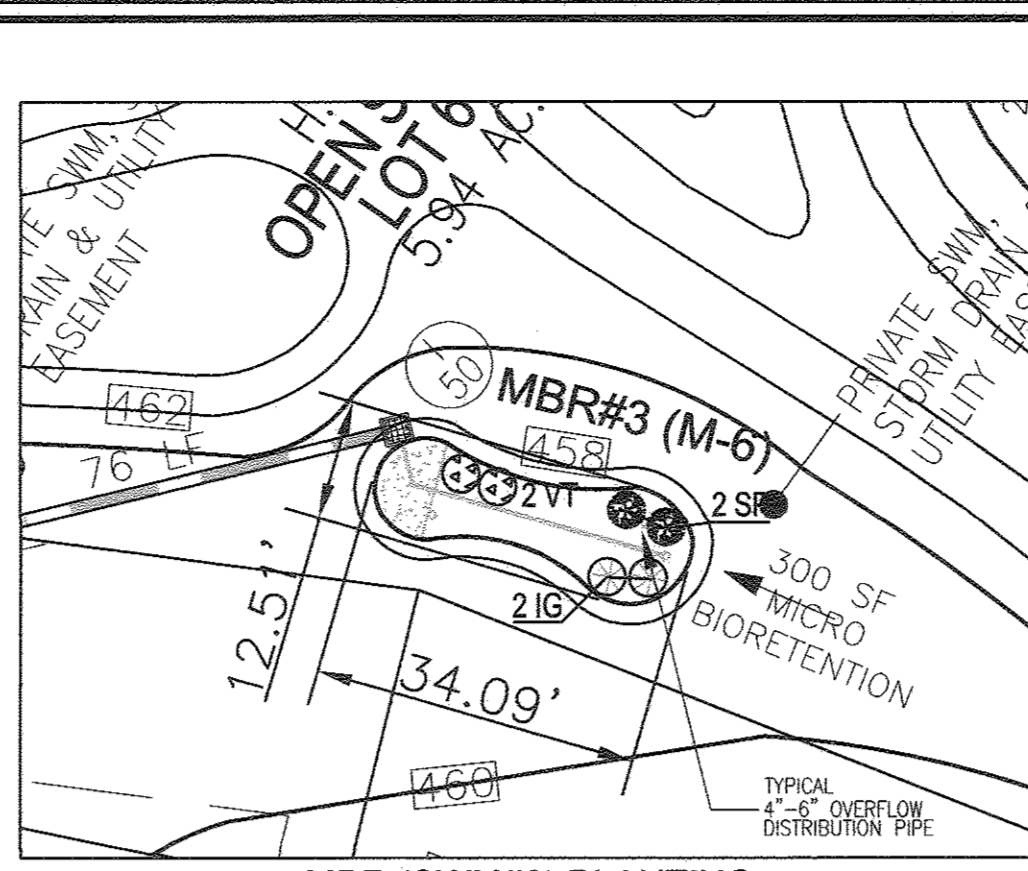
41 OF 48



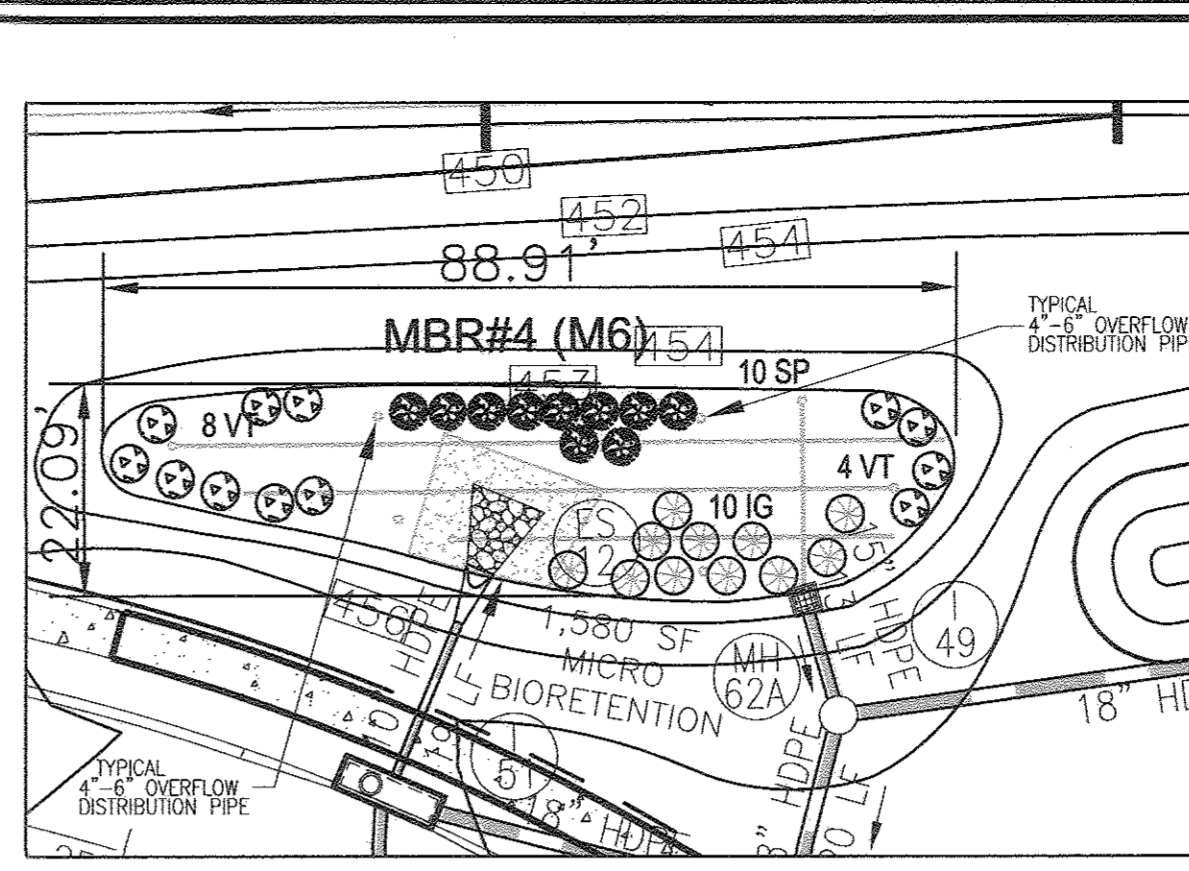
MBR (SWM#1) PLANTING
SCALE: 1"=20'



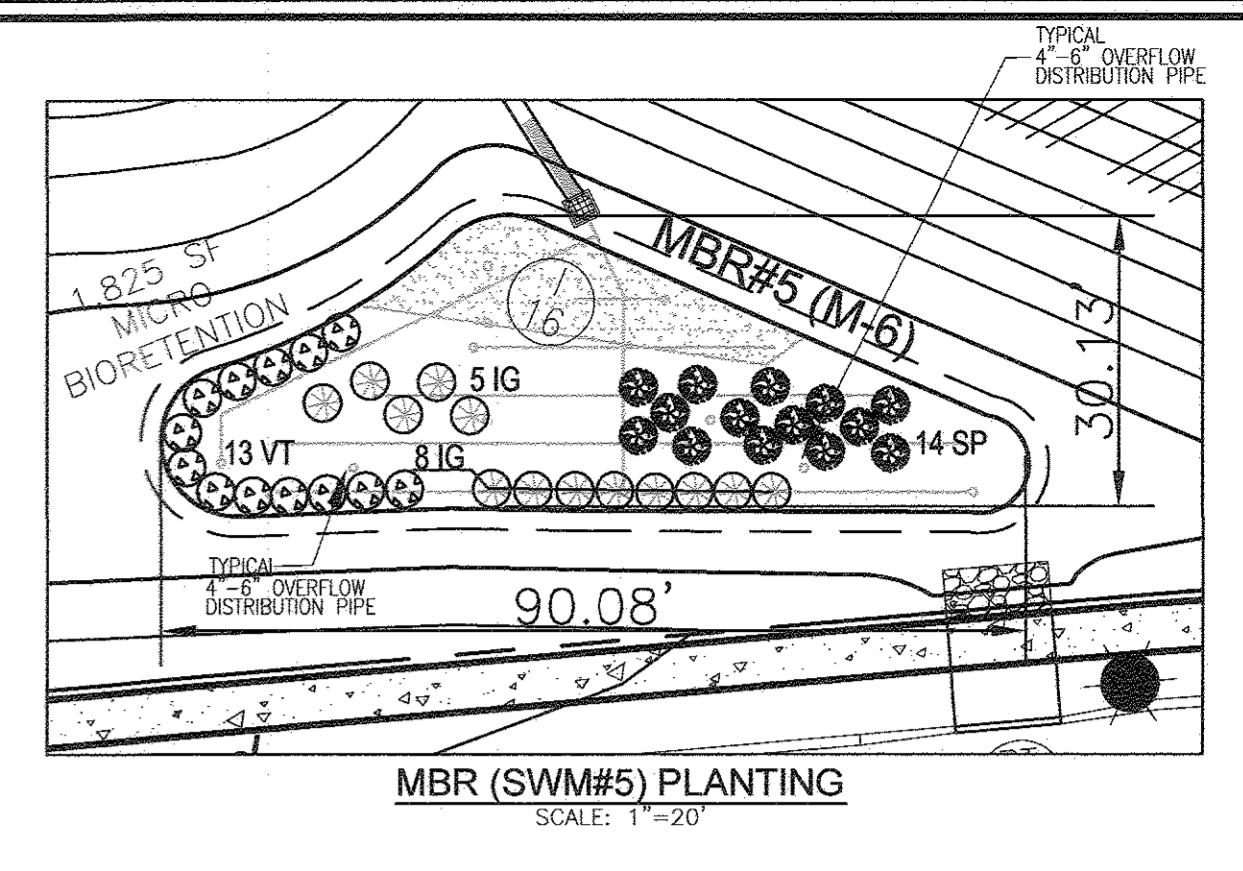
MBR (SWM#2) PLANTING
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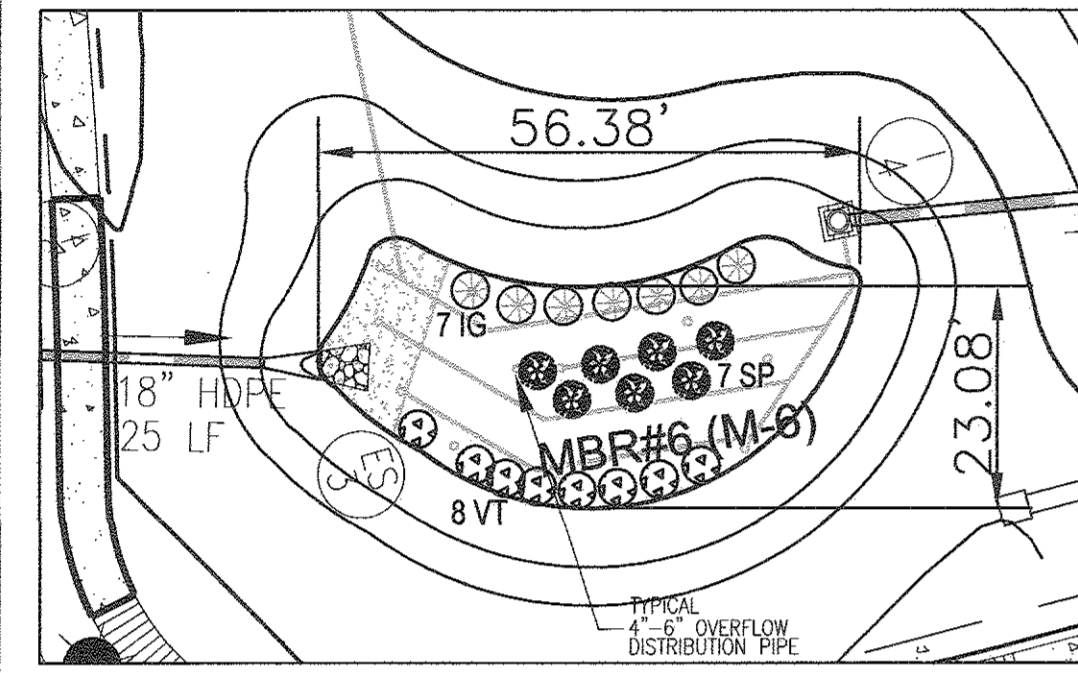
MBR (SWM#3) PLANTING
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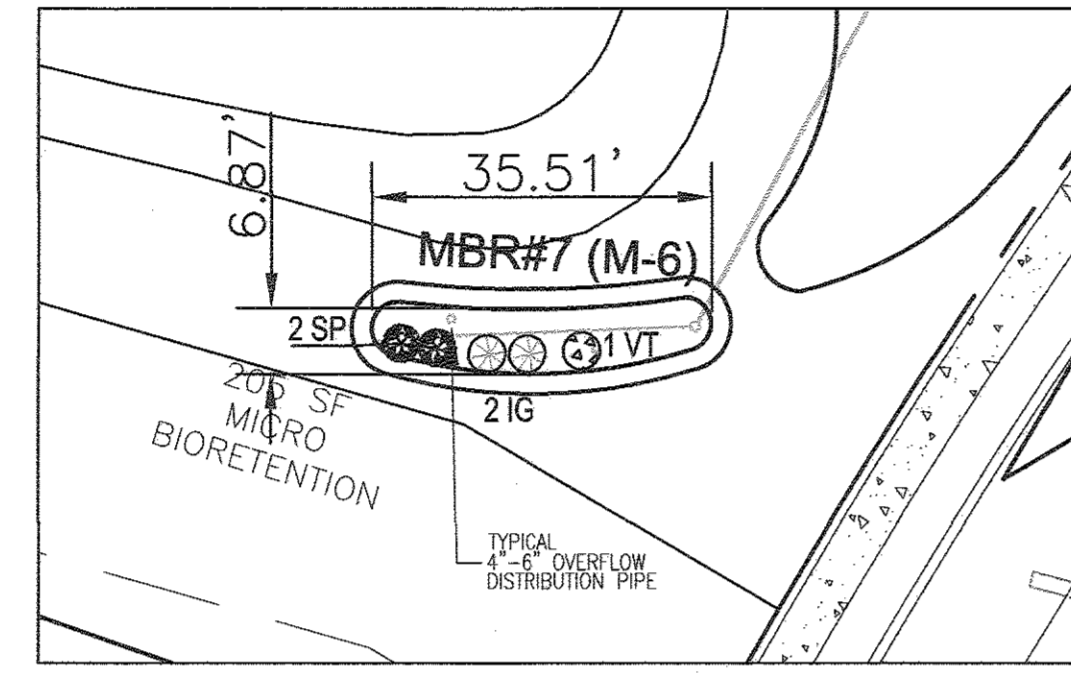
MBR (SWM#4) PLANTING
SCALE: 1"=20'



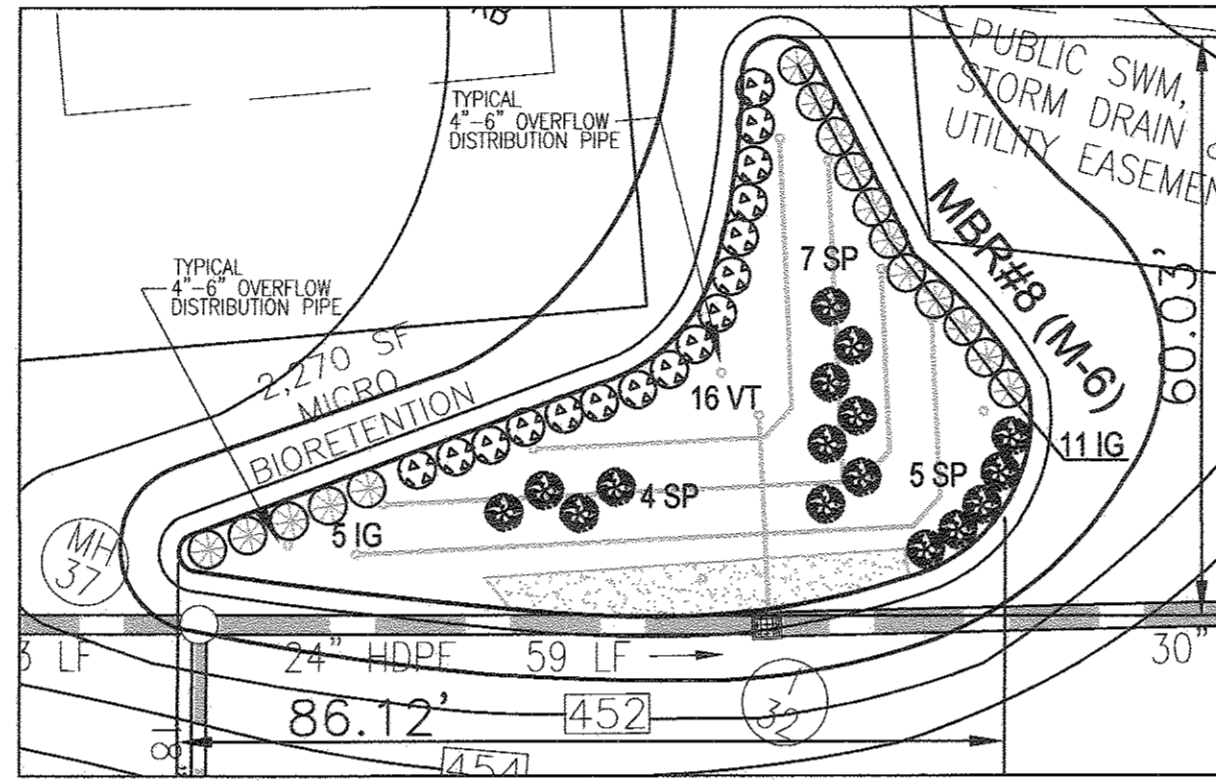
MBR (SWM#5) PLANTING
SCALE: 1"=20'



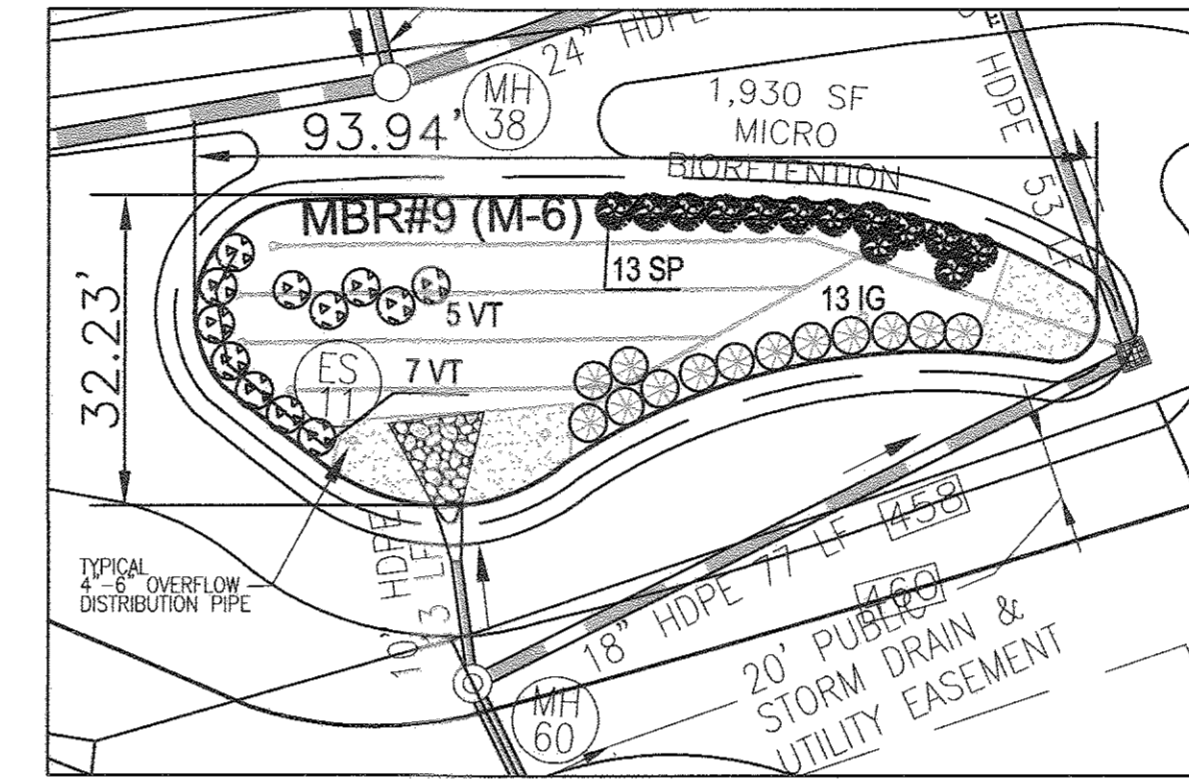
MBR (SWM#6) PLANTING
SCALE: 1"=20'



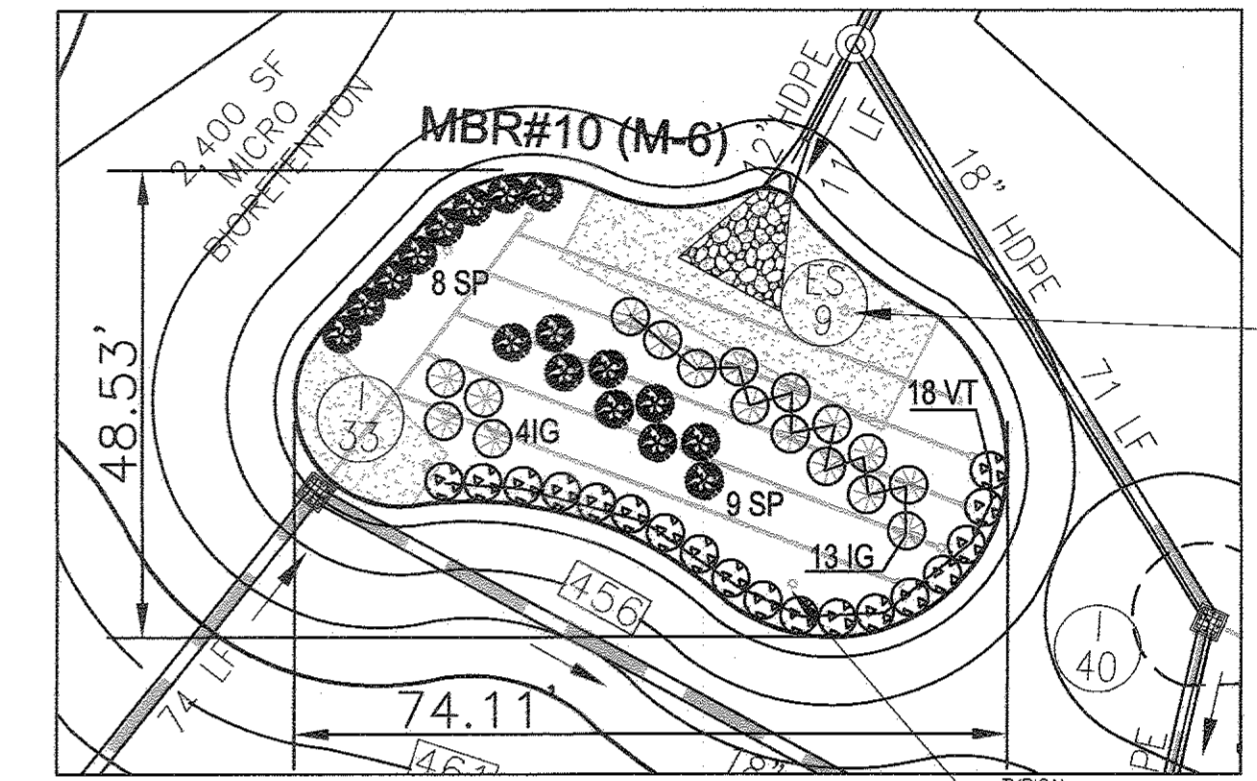
MBR (SWM#7) PLANTING
SCALE: 1"=20'



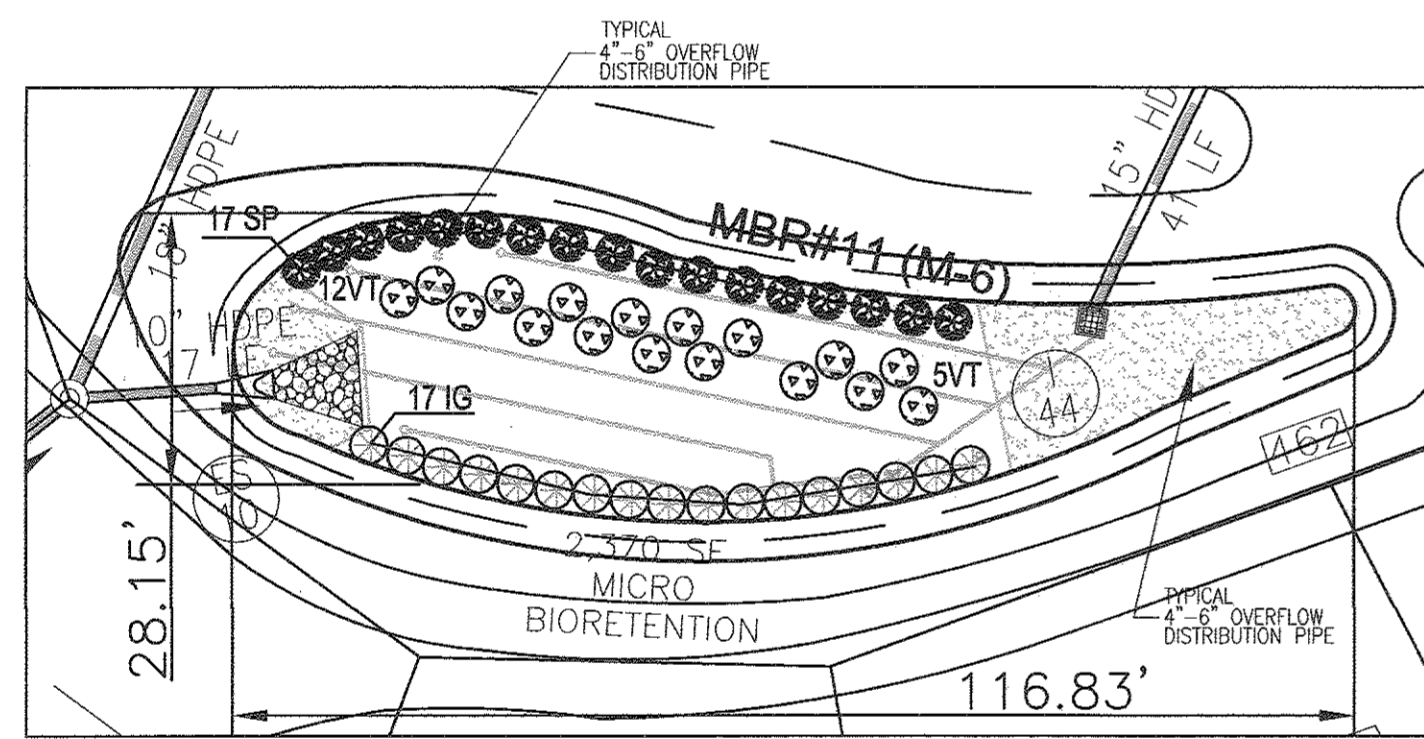
MBR (SWM#8) PLANTING
SCALE: 1"=20'



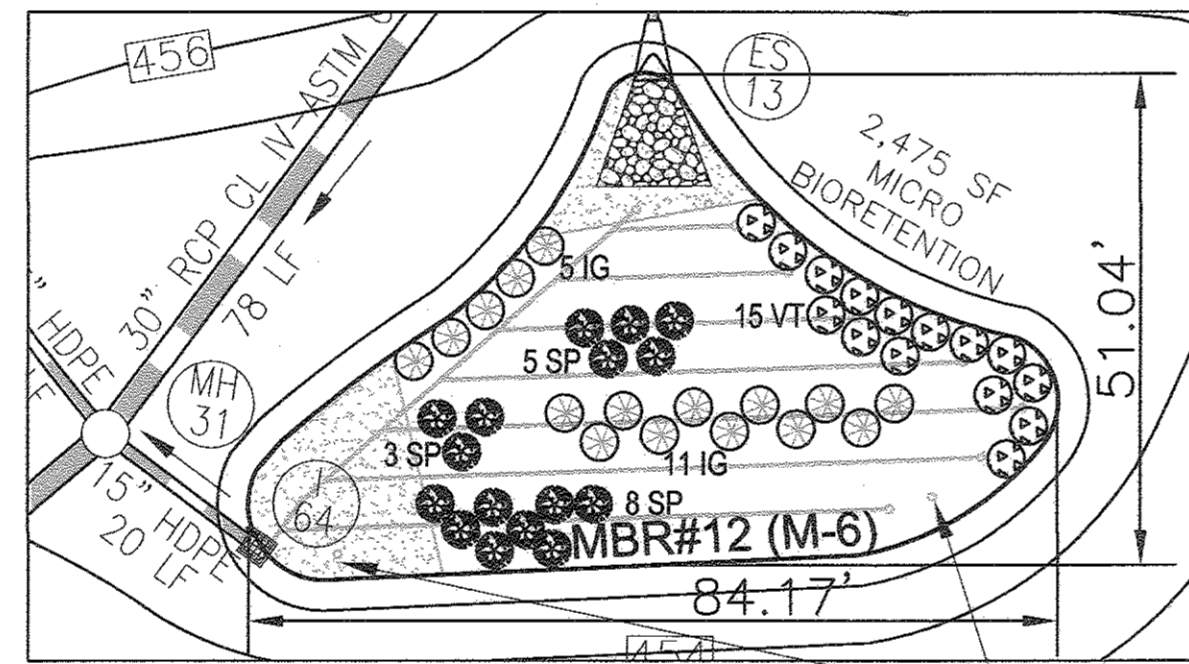
MBR (SWM#9) PLANTING
SCALE: 1"=20'



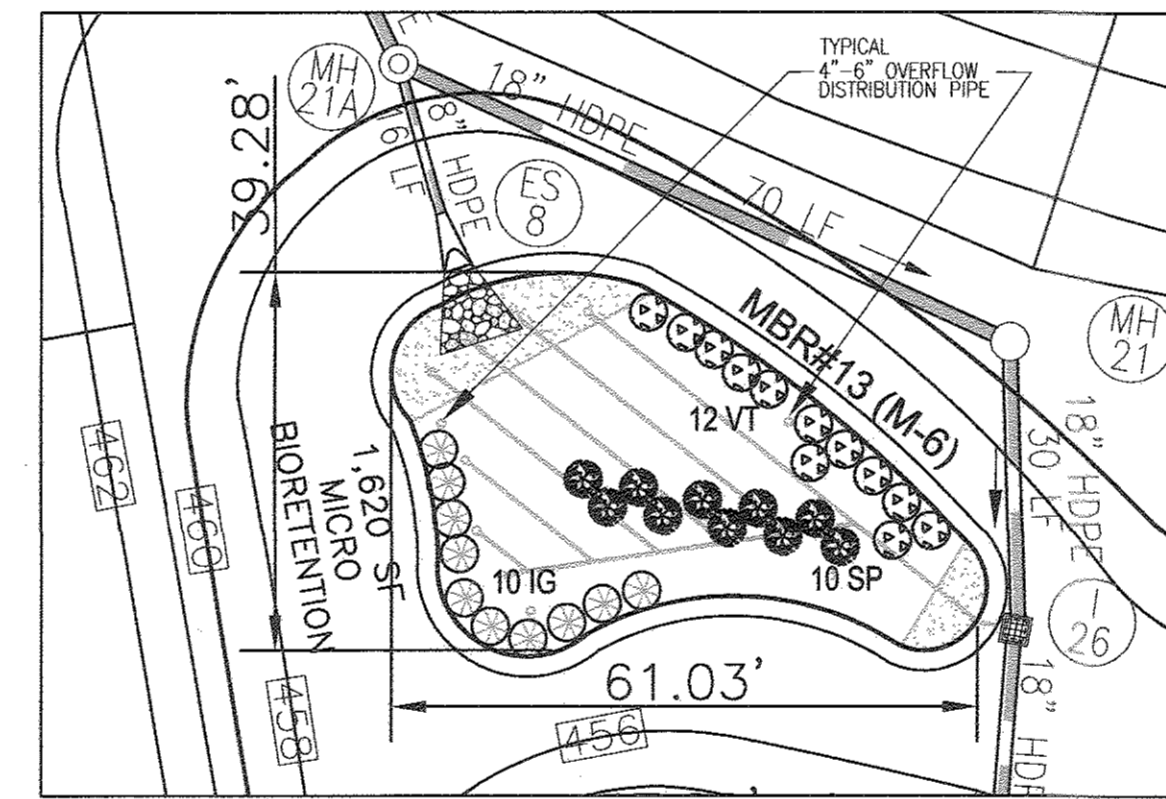
MBR (SWM#10) PLANTING
SCALE: 1"=20'



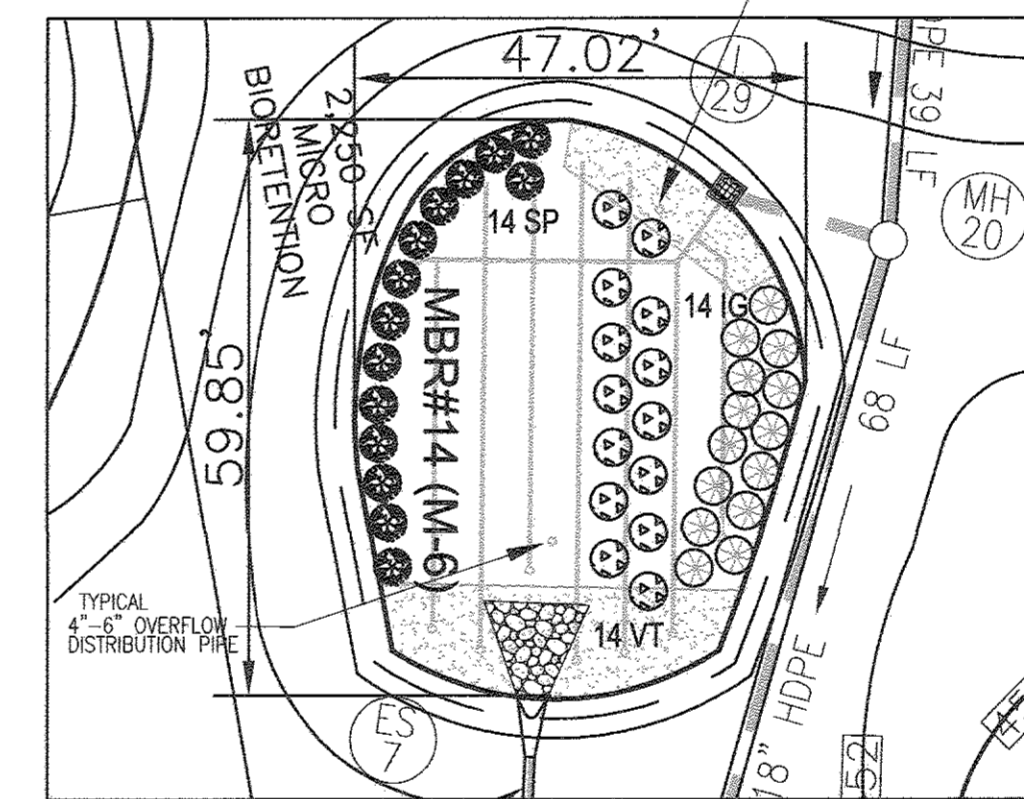
MBR (SWM#11) PLANTING
SCALE: 1"=20'



MBR (SWM#12) PLANTING
SCALE: 1"=20'



MBR (SWM#13) PLANTING
SCALE: 1"=20'



MBR (SWM#14) PLANTING
SCALE: 1"=20'

MICRO-BIORETENTION PLANTING SCHEDULE NOTES

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
5. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDS SUMMARY.
6. FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH.

OWNER

MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER

MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

MICRO-BIORETENTION FACILITY PLANTING REQUIREMENTS						
MBR FACILITY #	MULCH SF	PLANTINGS REQUIRED	PLANTINGS OR EQUAL SUBSTITUTION			LILY TURF SF
			SPICEBUSH	INKBERRY	CRANBERRY	
1	2187	50	15	15	14	300
2	2337	54	15	15	15	450
3	300	7	2	2	2	50
4	1580	36	10	10	12	200
5	1825	42	14	13	13	100
6	1100	25	7	7	8	150
7	205	5	2	2	1	0
8	2270	52	16	16	16	200
9	1930	44	13	13	12	300
10	2400	55	17	17	18	150
11	2370	54	17	17	17	150
12	2475	57	16	16	15	500
13	1620	37	10	10	12	250
14	2250	52	14	14	14	500
SHA	1500	34	8	8	8	500

MICRO-BIORETENTION PLANTING SCHEDULE			
SYMBOL	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
VT	VIBURNUM PENTANTUM / NARROWWOOD	5 GALLON	CONT
IG	ILEX GLABRA / INKBERRY	3 GALLON	CONT
SP	LINDERA BENZON / SPICEBUSH	3 GALLON	CONT
	IRIS VERSICOLOR / BLUE FLAG	2" POT	1' O.C.

1. MICRO-BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.229 STEMS PER SQ FT).
2. (50 SF) MAESTIC LILY TURF = 1 PLANTING UNIT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

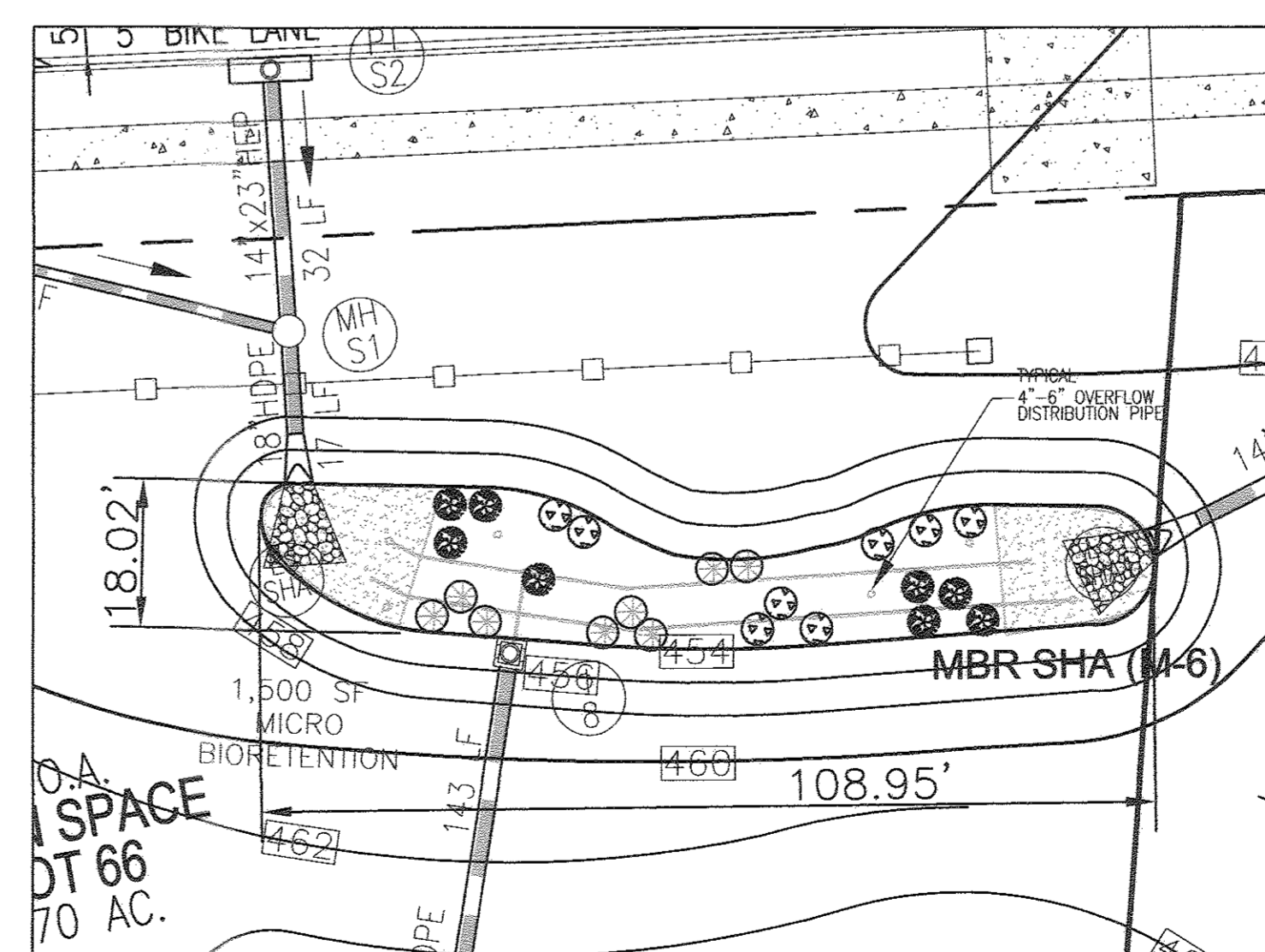
Table A.4 Commonly Used Species for Bioretention Areas

Trees	Shrubs	Herbaceous Species
<i>Acer rubrum</i>	<i>Aesculus parviflora</i>	<i>Andropogon virginicus</i>
Red Maple	Bottlebrush Buckeye	Broomsedge
<i>Betula nigra</i>	<i>Cephalanthus occidentalis</i>	<i>Eupatorium perpurea</i>
River Birch	Buttonbush	Joe Pye Weed
<i>Juniperus virginiana</i>	<i>Hamamelis virginiana</i>	<i>Scirpus pungens</i>
Eastern Red Cedar	Witch Hazel	Three Square Balm
<i>Chionanthus virginicus</i>	<i>Vaccinium corymbosum</i>	<i>Iris verticillata</i>
Fringe-tree	Highbush Blueberry	Blue Flag
<i>Nyssa sylvatica</i>	<i>Ilex glabra</i>	<i>Lobelia cardinalis</i>
Black Gum	Inkberry	Cardinal Flower
<i>Diospyros virginiana</i>	<i>Ilex verticillata</i>	<i>Panicum virgatum</i>
Persimmon	Winterberry	Switchgrass
<i>Platanus occidentalis</i>	<i>Viburnum dentatum</i>	<i>Dichanthium scoparium</i>
Sycamore	Arrowwood	Broom Panic Grass
<i>Quercus palustris</i>	<i>Lindera benzoin</i>	<i>Rudbeckia laciniata</i>
Pin Oak	Spicebush	Tall Coneflower
<i>Quercus phellos</i>	<i>Myrica pennsylvanica</i>	<i>Scirpus cyperinus</i>
Willow Oak	Bayberry	Woolgrass
<i>Salix nigra</i>		<i>Vernonia noveboracensis</i>
Black willow		New York Ironweed

Note 1: For more options on plant selection for bioretention, consult Bioretention Manual (ETAB, 1993) or the Design of Stormwater Filtering Systems (Clayton and Schueler, 1997).

MICRO-BIORETENTION FACILITY - DESIGN ELEVATION CHART										
MBR FACILITY #	ESD WSEL A	TOP MULCH B	TOP PLANT SOIL C	BOTTOM PLANT SOIL D	BOTTOM PEA GRAVEL E	INV PIPE (F)	ADDITIONAL STONE *	INV STONE G	SURFACE AREA SF	APPROX DIM
2	453.00	452.00	451.75	449.75	449.42	448.67	2.70	445.97	2337	SEE PLAN
3	454.00	453.00	452.75	450.75	450.42	449.67	2.70	446.97	300	SEE PLAN
4	454.00	453.00	452.75	450.75	450.42	449.67	2.70	446.97	1580	SEE PLAN
5	449.00	448.00	447.75	445.75	445.42	444.67	2.70	441.97	1825	SEE PLAN
6	455.00	454.00	453.75	451.75	451.42	450.67	2.70	447.97	1100	SEE PLAN
7	460.00	459.00	458.75	456.75	456.42	455.67	2.70	452.97	205	SEE PLAN
8	448.50	447.50	447.25	445.25	444.92	444.17	2.70	441.47	2270	SEE PLAN
9	455.50	454.50	454.25	452.25	451.92	451.17	2.70	448.47	1930	SEE PLAN
10	454.00	453.00	452.75	450.75	450.42	449.67	2.70	446.97	2400	SEE PLAN
11	459.00	458.00	457.75	455.75	455.42	454.67	2.70	451.97	2370	SEE PLAN
12	452.00	451.00	450.75	448.75	448.42	447.67	2.70	444.97	2475	SEE PLAN
13	456.00	455.00	454.75	452.75	452.42	451.67	2.70	448.97	1620	SEE PLAN
14	450.50	449.50	449.25	447.25	446.92	446.17	2.70	443.47	2250	SEE PLAN
SHA	455.00	454.00	453.75	451.75	451.42	450.67	0.00	450.67	1500	SEE PLAN

* 10 YEAR STORM ATTENUATION / REV
(1) UNDERDRAIN PIPE AND OVERFLOW DISTRIBUTION PIPE



MBR (SHA) PLANTING
SCALE: 1"=20'

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
MICRO-BIORETENTION FACILITIES
PLANTING NOTES AND DETAILS
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID - PARCEL 113
5TH ELECTION DISTRICT
DPT REF: ECP-10-08, WF-15-126, PB#415, SP-15-014
ZONED: R-ED-MD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

42 SHEET OF 48

LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING TREE LINE
	PROPOSED CURB
	PROPOSED STANDARD SIDEWALK
	PROP. MICRO BIORETENTION AREA
	FULL DEPTH PAVEMENT SECTION REQUIRED REFER TO TYPICAL SECTION
	GRADING, RE'D. 2" MILL. VARIABLE DEPTH WEDGE/LEVEL AND RESURFACING REFER TO TYPICAL SECTION
	SHA TURFGRASS SOD ESTABLISHMENT WITH 4" TOPSOIL
	TYPE "D" SOIL STABILIZATION MATTING AND SEED IN CONFORMANCE WITH SECTION 7.05 SHEET 20
	TYPE "A" SOIL STABILIZATION MATTING AND SEED IN CONFORMANCE WITH SECTION 7.05 SHEET 20
	MEADOW ESTABLISHMENT STABILIZATION/TYPE "D" SOIL STABILIZATION MATTING

NOTES:

1. ADA RAMP TO BE CONSTRUCTED TO SHA STANDARDS AS SPECIFIED HEREON
2. THE ACCELERATION LANE SHALL BE 11' AND THE DECELERATION LANE SHALL BE 11' EXCLUDING THE GUTTER PAN. SEE TYPICAL SECTION SHEET 23
3. FOR TYPICAL SECTIONS, SEE SHEET 23
4. REFER TO SHEET 22 FOR RAMP DETAILS
5. UTILITY POLE RELOCATIONS ARE APPROXIMATE. ACTUAL DESIGN WILL BE COMPLETED BY UTILITY OWNER (BGE / VERIZON)
6. UNDERGROUND UTILITIES WITHIN THE LIMITS OF ROAD IMPROVEMENTS SHALL BE RELOCATION AT THE DISCRETION AND DIRECTION OF THE UTILITY OWNER.

LOIS & LEROY PEIERS
11584 SCAGGSVILLE RD
ZONED: RR-DEO

SHA BL STA 6+24.4, 36' RT MEET EX C&G W/ NEW MD620.02 TYPE A CURB FILLET, PROPOSED SIDEWALK AND RECONSTRUCT ENTRANCE AS REQUIRED

LIMIT OF WORK
SHA BL STA 7+45
END RESURFACING AND RE-STRIPING

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
22651 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
MD 216 (SCAGGSVILLE ROAD)
ROADWAY IMPROVEMENT PLAN**

**MAPLE LAWN SOUTH
PHASE 1 - SECTION 1**

NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
JAX MAP 46 - GRID 2 - PARCEL 113
2318 ELECTION DISTRICT
702 REF: ECP-14-093, W-15-136, PB#15, SP-15-014
ZONED: B-ED-UD-3
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

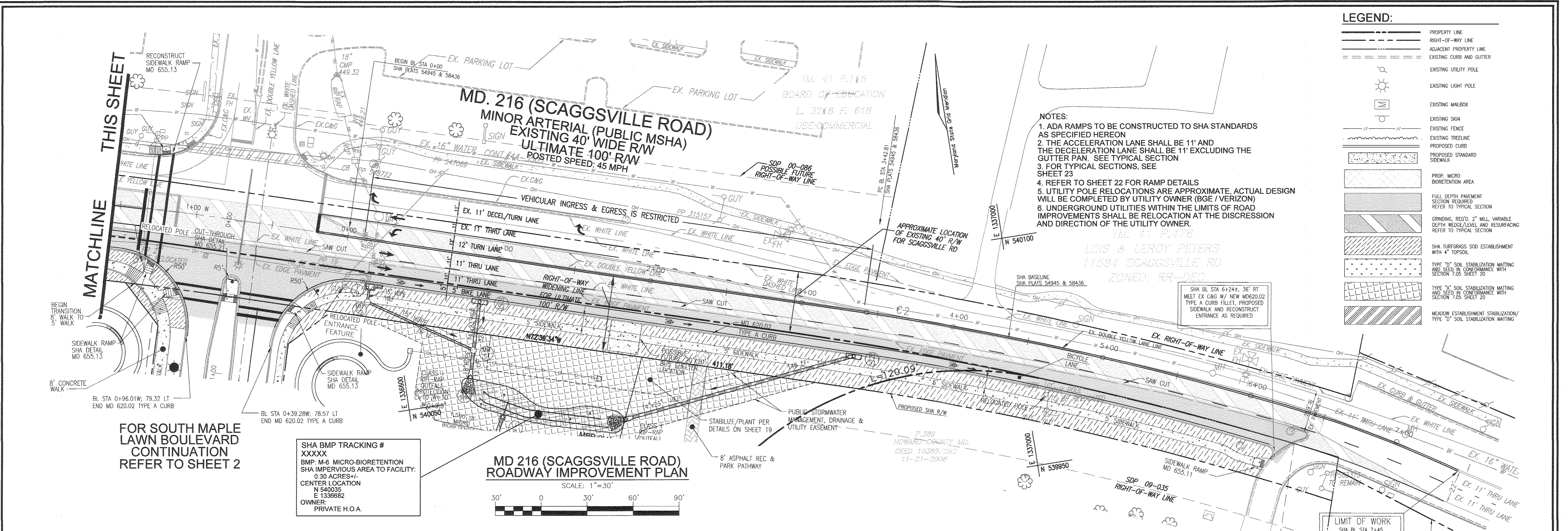
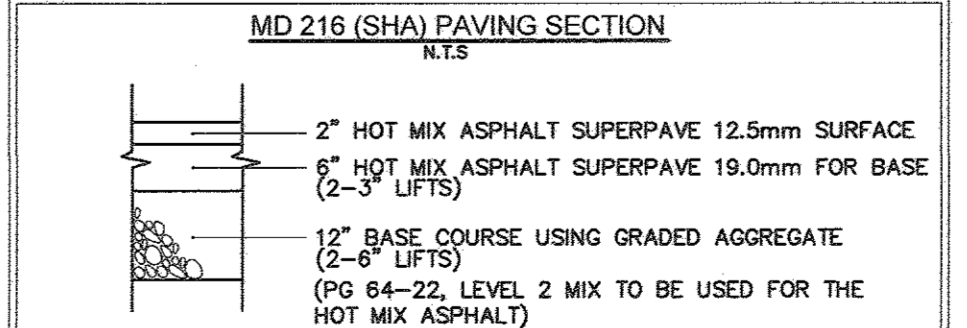


PROFESSIONAL CERTIFICATE

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. 16193, EXPIRATION DATE: 09-27-2018

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

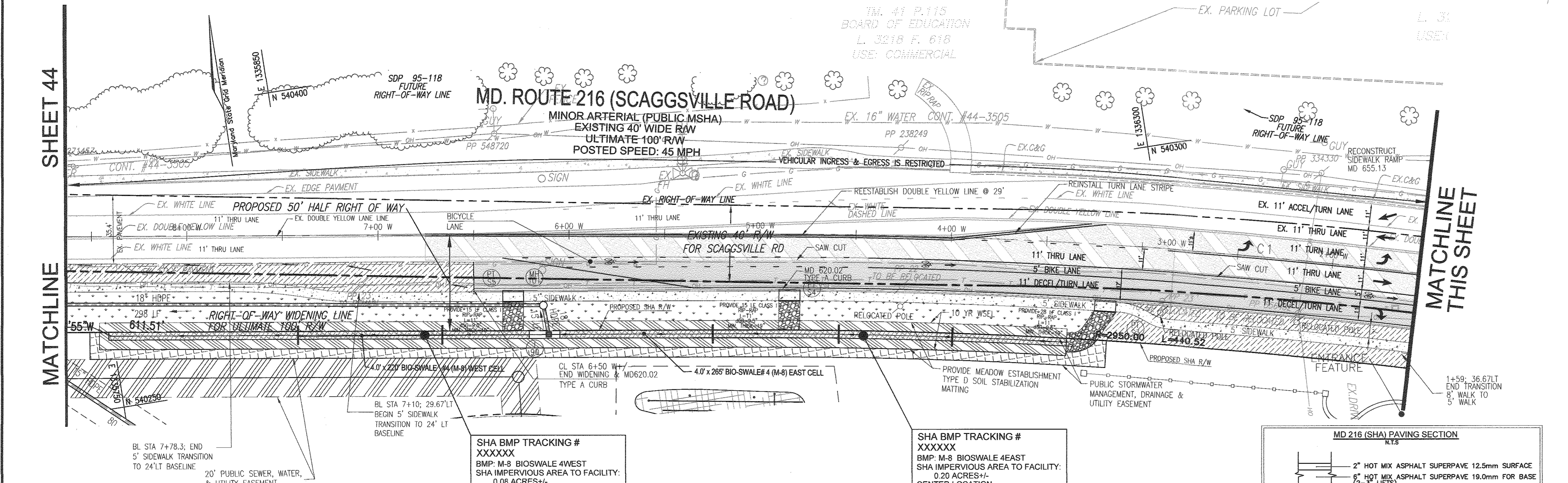
43 SHEET OF 48



SHA BMP TRACKING #
XXXXXX
BMP: M-6 MICRO-BIORETENTION
SHA IMPERVIOUS AREA TO FACILITY:
0.30 ACRES+/-
CENTER LOCATION
N 540035
E 1339682
OWNER:
PRIVATE H.O.A.

**MD 216 (SCAGGSVILLE ROAD)
ROADWAY IMPROVEMENT PLAN**

SCALE: 1"=30'



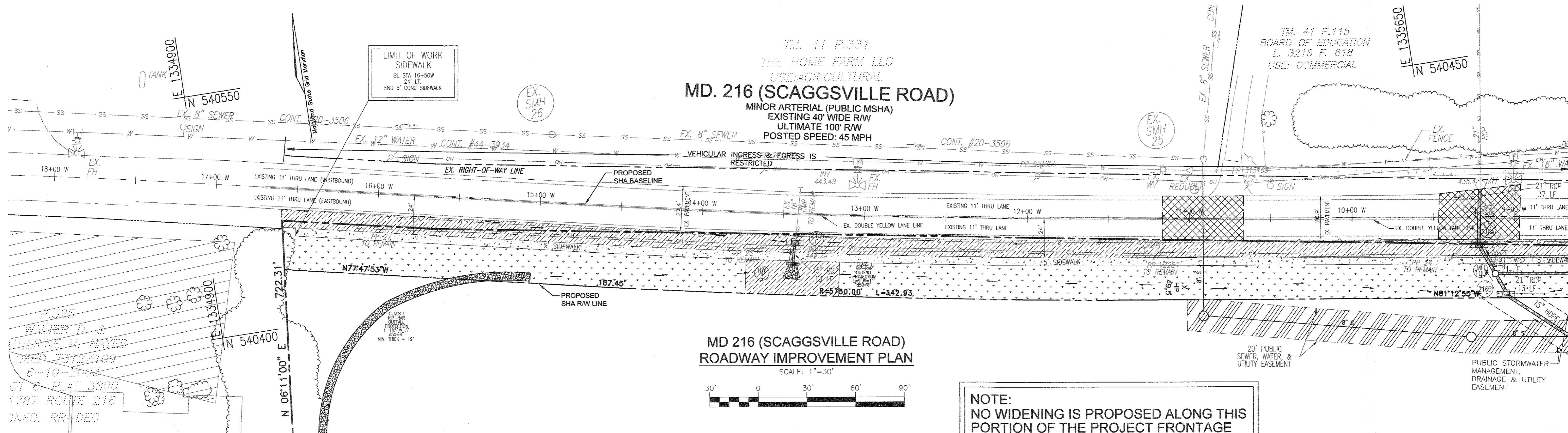
SHA BMP TRACKING #
XXXXXX
BMP: M-8 BIOSWALE 4WEST
SHA IMPERVIOUS AREA TO FACILITY:
0.08 ACRES+/-
CENTER LOCATION
N 540270
E 1339897
OWNER:
PRIVATE H.O.A.

SHA BMP TRACKING #
XXXXXX
BMP: M-8 BIOSWALE 4EAST
SHA IMPERVIOUS AREA TO FACILITY:
0.20 ACRES+/-
CENTER LOCATION
N 540230
E 1336112
OWNER:
PRIVATE H.O.A.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/26/2016
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

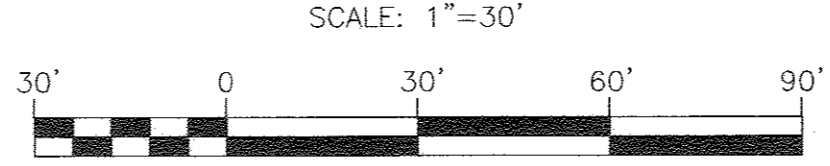
[Signature] 11-4-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



TM. 41 P.331
 THE HOME FARM LLC
 USE: AGRICULTURAL
MD. 216 (SCAGGSVILLE ROAD)
 MINOR ARTERIAL (PUBLIC MSHA)
 EXISTING 40' WIDE R/W
 ULTIMATE 100' R/W
 POSTED SPEED: 45 MPH

TM. 41 P.115
 BOARD OF EDUCATION
 L. 3218 F. 018
 USE: COMMERCIAL

**MD 216 (SCAGGSVILLE ROAD)
 ROADWAY IMPROVEMENT PLAN**

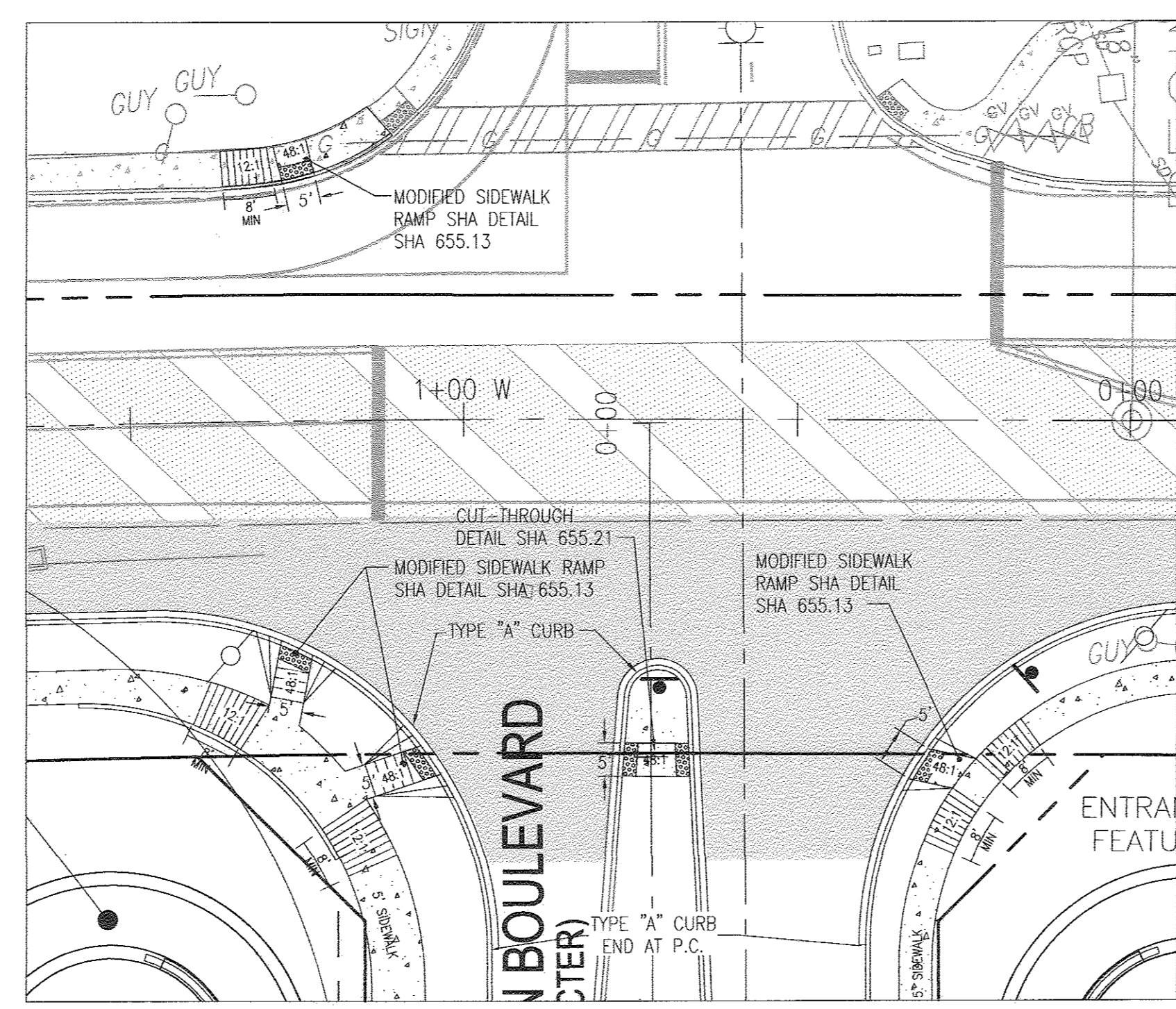


NOTE:
 NO WIDENING IS PROPOSED ALONG THIS
 PORTION OF THE PROJECT FRONTAGE
 ROADSIDE EDGE OF 5' SIDEWALK
 OFFSET 24 FEET LEFT OF BASELINE

LEGEND:

- PROPERTY LINE
- - - RIGHT-OF-WAY LINE
- - - ADJACENT PROPERTY LINE
- - - EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- ☀ EXISTING LIGHT POLE
- ☐ EXISTING MAILBOX
- EXISTING SIGN
- EXISTING FENCE
- EXISTING TREELINE
- PROPOSED CURB
- PROPOSED STANDARD SIDEWALK
- ▨ SHA TURFGRASS SOD ESTABLISHMENT WITH 4" TOPSOIL
- ▨ TYPE "D" SOIL STABILIZATION MATTING AND SEED IN CONFORMANCE WITH SECTION 7.05 SHEET 20
- ▨ TYPE "A" SOIL STABILIZATION MATTING AND SEED IN CONFORMANCE WITH SECTION 7.05 SHEET 20
- ▨ MEADOW ESTABLISHMENT STABILIZATION/TYPE "D" SOIL STABILIZATION MATTING

- NOTES:**
1. ADA RAMPS TO BE CONSTRUCTED TO SHA STANDARDS AS SPECIFIED HEREON
 2. THE DECELERATION LANE SHALL BE 11' EXCLUDING THE GUTTER PAN. SEE TYPICAL SECTION



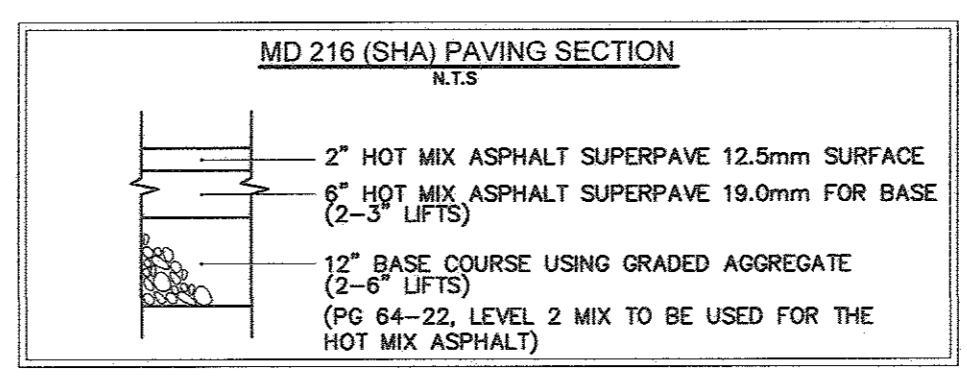
SIDEWALK RAMP DETAIL
 SCALE: 1"=20'

CURVE TABLE

ROAD	CURVE	LENGTH	RADIUS*	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
SCAGGSVILLE ROAD	C3	339.95'	5700.00'	37°25'02"	170.03	S79°30'24"E	339.90

TRENCH BACKFILL

TRENCH BACKFILL FOR STORM DRAINS AND UTILITIES SHALL CONFORM TO STANDARD DETAIL MD-578.01 OR AS DETAILED ON THE PLANS. IF STEEL PLATES ARE USED, THEY MUST BE 1" THICK MINIMUM, PROPERLY SECURED WITH ANCHORS AND TEMPORARY PAVEMENT MEDGINS, AND EXTEND 1 FOOT MINIMUM BEYOND ALL EDGES OF THE TRENCH. THE TRENCH SHALL BE BACKFILLED WITH FLOWABLE BACKFILL FOR UTILITY CURBS OR OTHER APPROVED MATERIAL UP TO THE BOTTOM OF THE FULL DEPTH PAVEMENT PATCHING SECTION. THE FULL DEPTH PATCHING PAVEMENT SECTION, CONSISTING OF THE SPECIFIED GRADED AGGREGATE AND HOT MIX ASPHALT, SHALL BE PLACED AND CONSTRUCTED TO BE FLUSH WITH EXISTING ROAD SURFACE GRADE. FOLLOWING THIS, THE PAVEMENT SHALL BE RESURFACED AS SHOWN ON THE PLANS. IF RESURFACING OF THE EXISTING ROADWAY IS NOT SHOWN ON THE PLANS, THE EXISTING PAVEMENT SHALL BE MILLED AND OVERLAD FOR 25 FEET IN EACH DIRECTION (MEASURED FROM THE CENTERLINE OF THE TRENCH) FOR THE FULL WIDTH OF THE ROADWAY. MILL OR GRIND 2" AND REPLACE WITH 2" OF THE ABOVE-NOTED HOT MIX ASPHALT SUPERPAVE MIX.



OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVAL ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

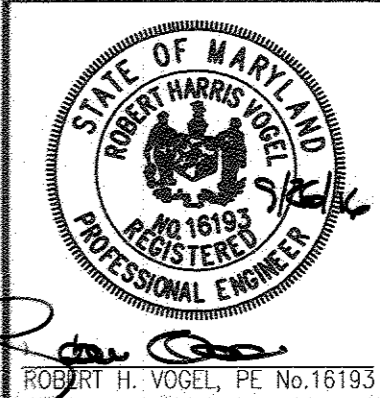
NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
 MD 216 (SCAGGSVILLE ROAD)
 ROADWAY IMPROVEMENT PLAN**

**MAPLE LAWN SOUTH
 PHASE 1 - SECTION 1**

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 46 - ORD 2 - PARCEL 113 ZONED: R-ED-MXD-3
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SPZ REF: ECP-14-093, WP-15-136, PB#415, SP-15-014

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE

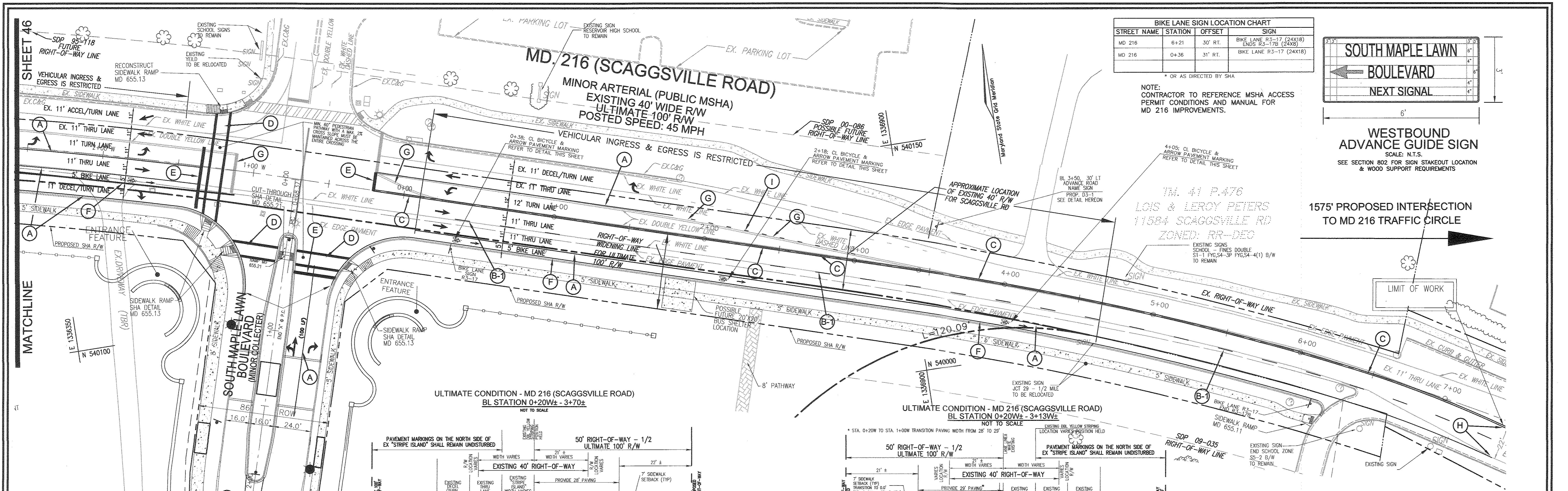
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-30-2018.

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RRV
 DATE: SEPTEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

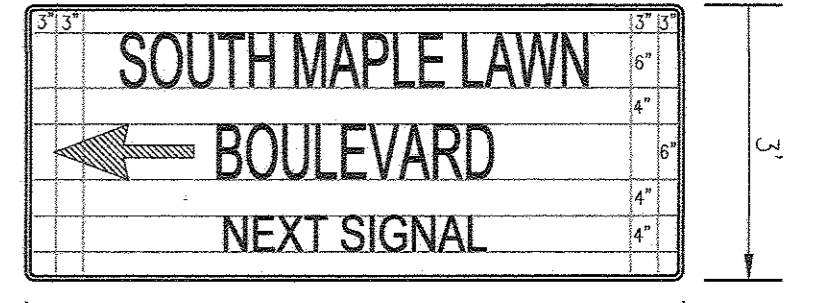
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 11/6/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: 11/4/16
 CHIEF, DIVISION OF LAND DEVELOPMENT



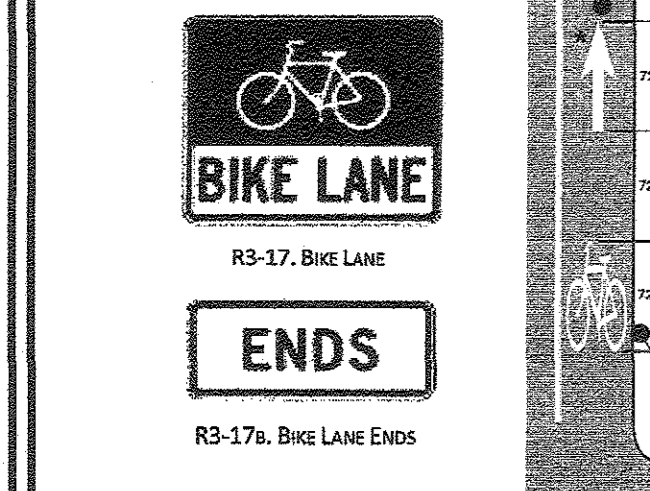
STREET NAME	STATION	OFFSET	SIGN
MD 216	6+21	30' RT.	BIKE LANE R3-17 (24x18) ENDS R3-17B (24x8)
MD 216	0+36	31' RT.	BIKE LANE R3-17 (24x18)



WESTBOUND ADVANCE GUIDE SIGN
SCALE: N.T.S.
SEE SECTION 802 FOR SIGN STAKEOUT LOCATION & WOOD SUPPORT REQUIREMENTS

1575' PROPOSED INTERSECTION TO MD 216 TRAFFIC CIRCLE

NOTE: END DOUBLE YELLOW LINE @ SOUTH MAPLE LAWN BOULEVARD STA. 2+92.00 ±



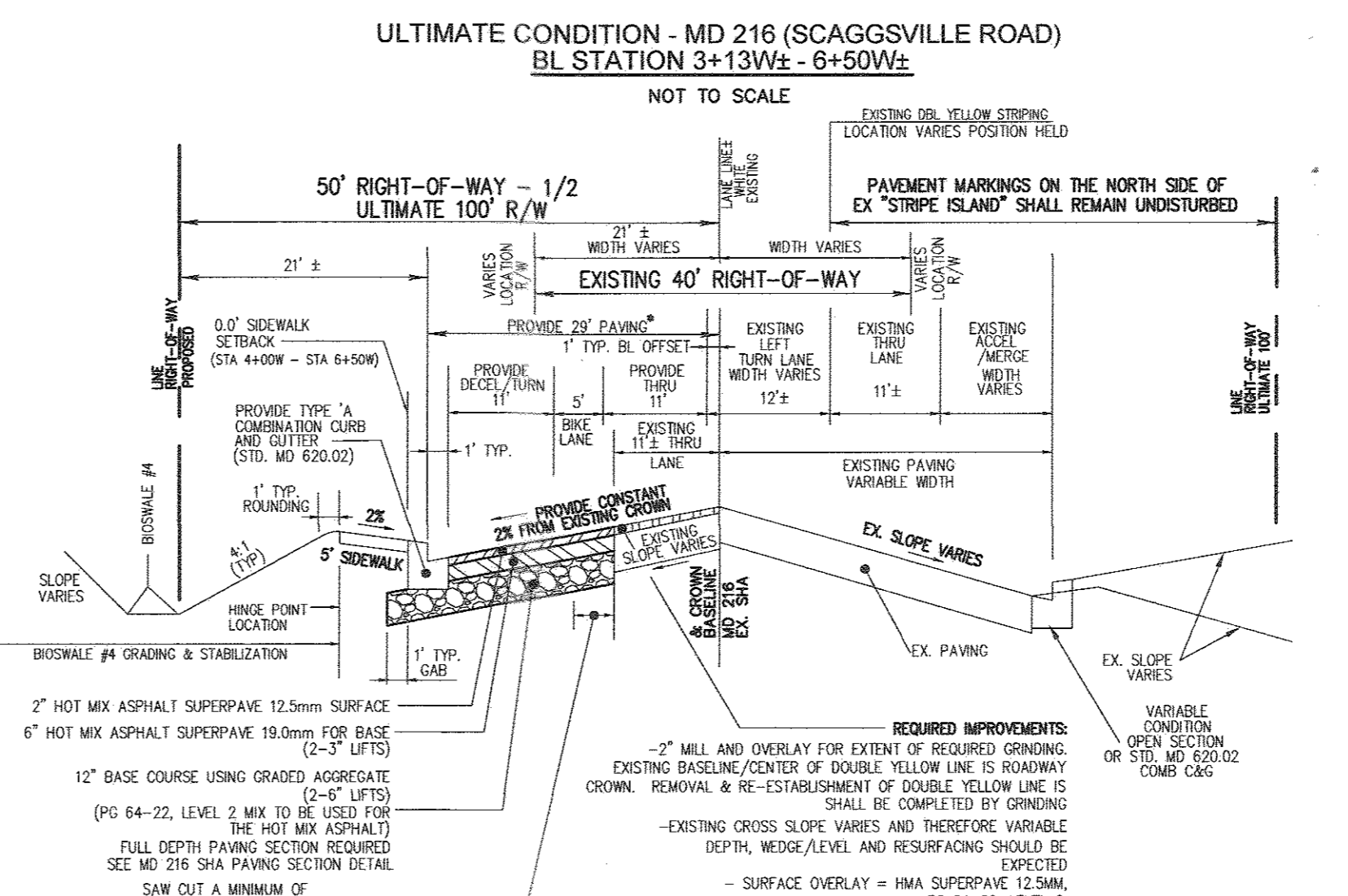
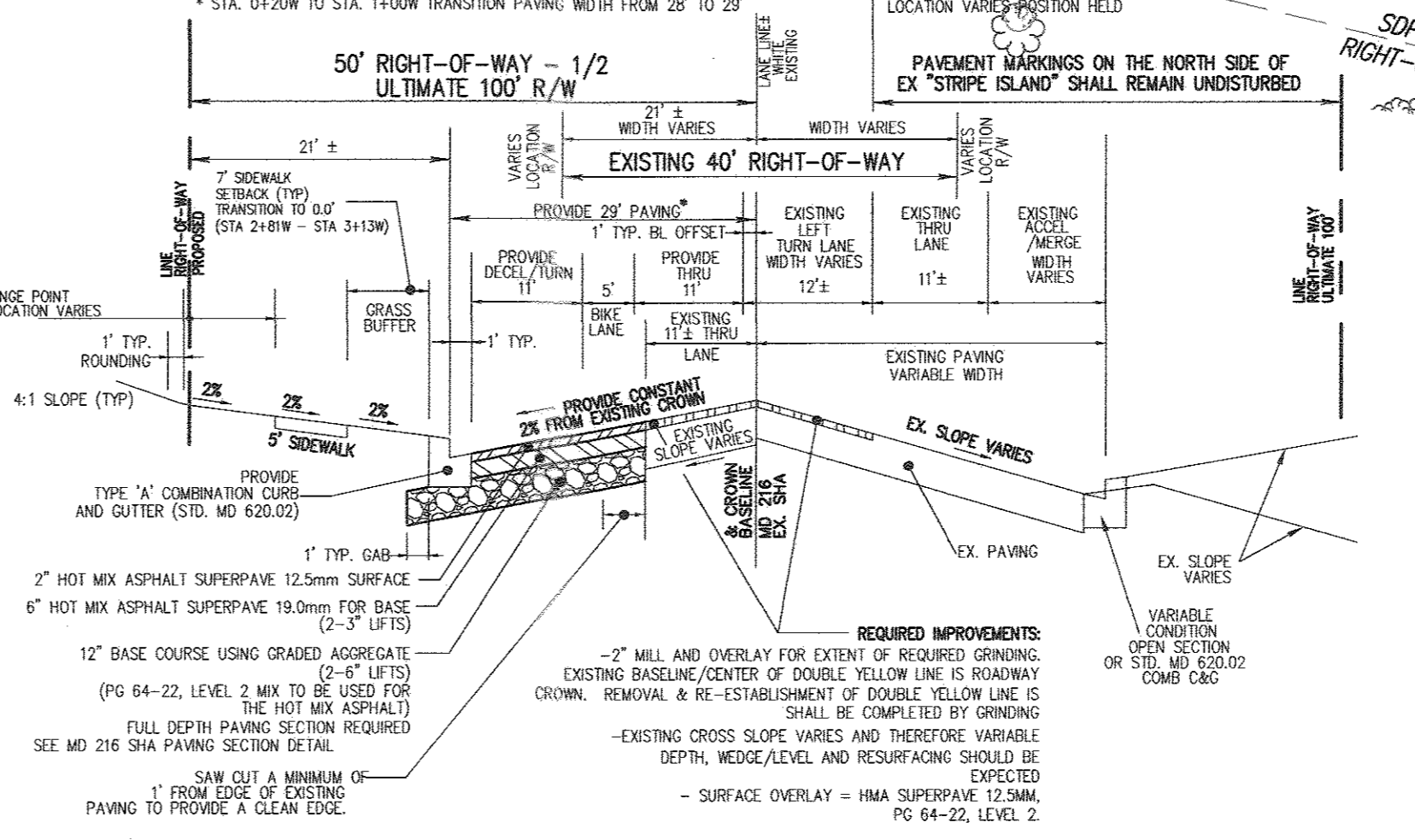
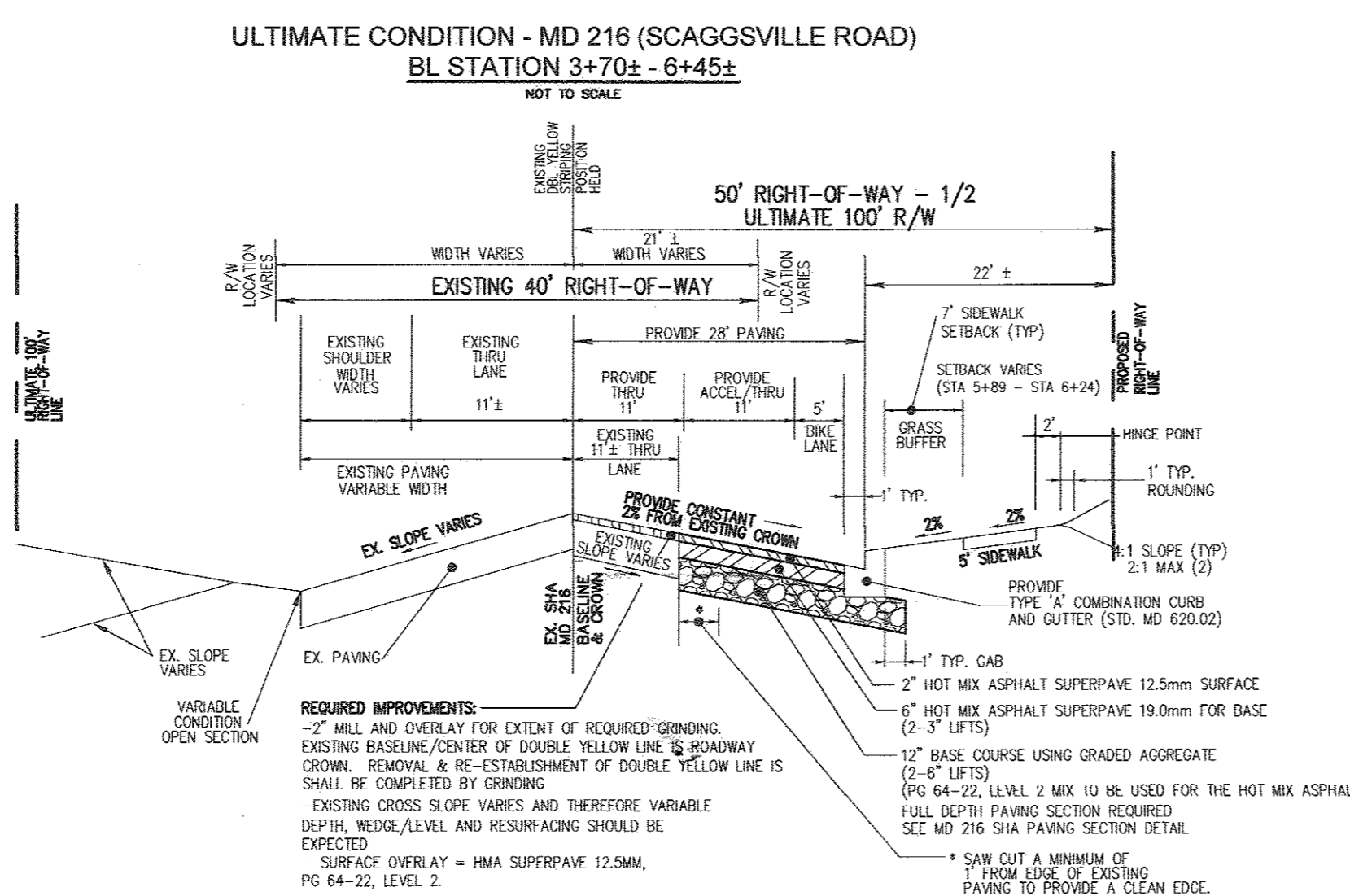
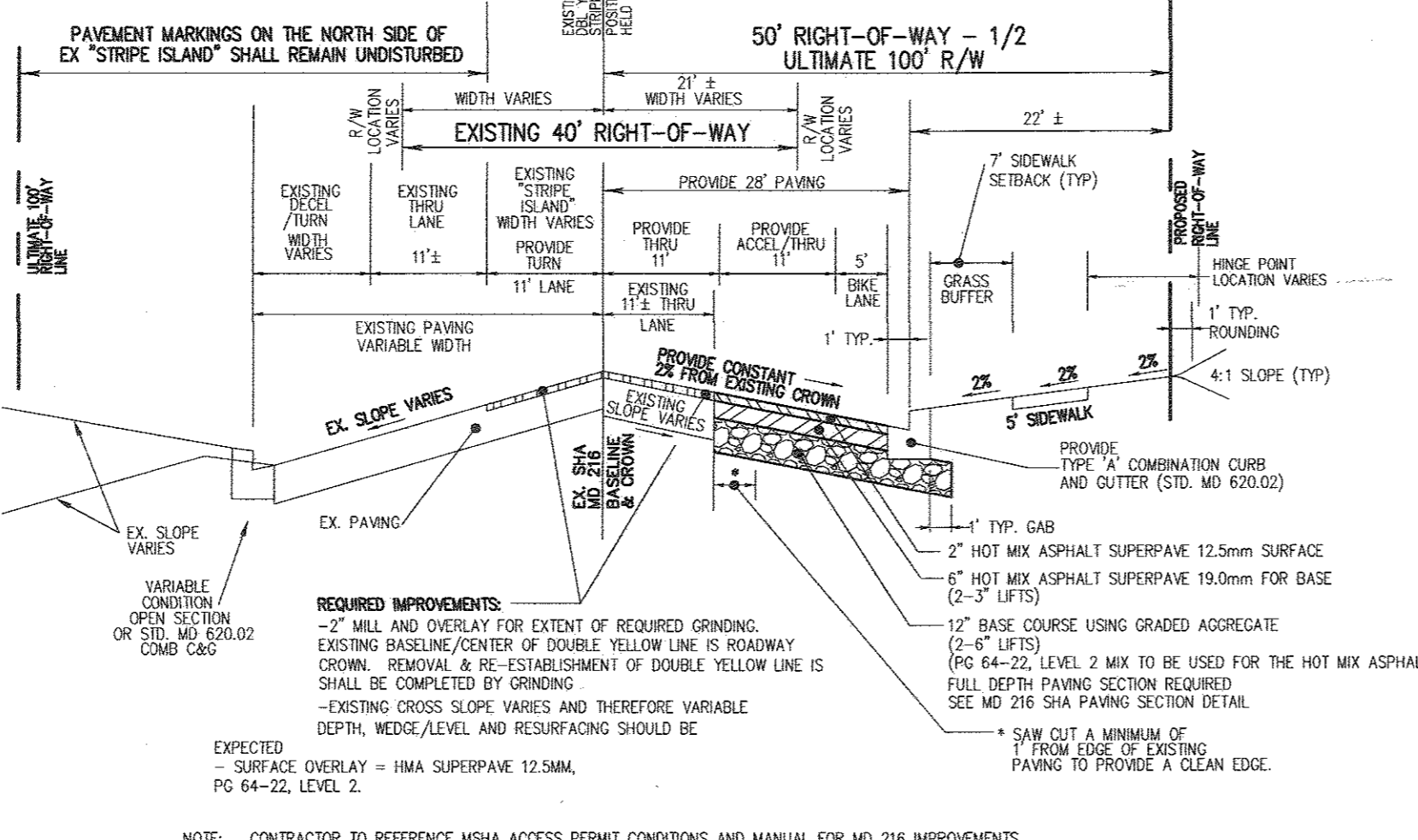
PAVEMENT MARKING DETAILS

- A. INSTALL 5 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR LANE LINE.
- B. INSTALL 5 IN. WIDE YELLOW SOLID PAVEMENT MARKING FOR LANE LINE.
- B-1. INSTALL 5 IN. WIDE WHITE BROKEN PAVEMENT MARKING (10' SEGMENT - 30 FT. GAP) FOR LANE LINE.
- C. INSTALL 5 IN. WIDE DOUBLE YELLOW PAVEMENT MARKING - FOR CENTER LINE.
- D. INSTALL CROSSWALK PAVEMENT MARKINGS 12" WIDE.
- E. INSTALL 24 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR STOP LINE.
- F. INSTALL 5 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR BIKE LANE DELINEATION.
- G. REMOVE EXISTING PAVEMENT MARKINGS BY GRINDING.
- H. TIE TO EXISTING MARKINGS.
- I. INSTALL 5 IN. WIDE WHITE BROKEN PAVEMENT MARKING (TYPE 1 - 3-9-3)
- * MIDER LINES MAY BE INSTALLED AT THE DISCRETION OF THE ASSISTANT DISTRICT ENGINEER FOR TRAFFIC.

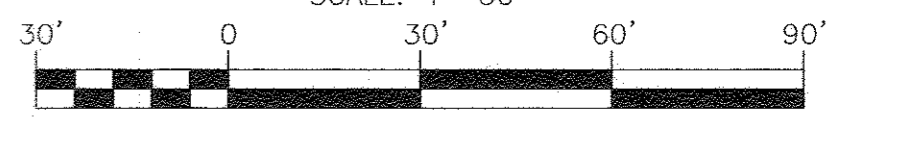
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/26/2016
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/3/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 11-4-16
CHIEF, DIVISION OF LAND DEVELOPMENT



MD 216 (SCAGGSVILLE ROAD) AND SOUTH MAPLE LAWN BOULEVARD SIGNING / PAVEMENT MARKING PLAN
SCALE: 1"=30'



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2861 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO. _____ REVISION _____ DATE _____

FINAL ROAD CONSTRUCTION PLAN
MD 216 (SCAGGSVILLE ROAD) AND SOUTH MAPLE LAWN BOULEVARD SIGNING / PAVEMENT MARKING PLAN
MAPLE LAWN SOUTH PHASE 1 - SECTION 1
LOTS 1-64, NON-BUILDABLE BULK PARCEL "A", NON-BUILDABLE BULK PARCEL "B", AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113
5TH ELECTION DISTRICT
REF. REV. EOP-14-003, WP-15-136, PBA415, SP-15-014
ZONED: R-ED-MD-3
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIGOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHW
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

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. 16193, EXPIRATION DATE: 09-27-2018.

45 SHEET OF 48

BIKE LANE SIGN LOCATION CHART			
STREET NAME	STATION	OFFSET	SIGN
MD 216	7+33W	19' LT.	BIKE LANE R3-17 (24X18) BEGINS R3-17CP (24X8)
MD 216	6+60W	19' LT.	BEGIN RT TURN YIELD TO BIKES R4-4 (36X30)

* OR AS DIRECTED BY SHA

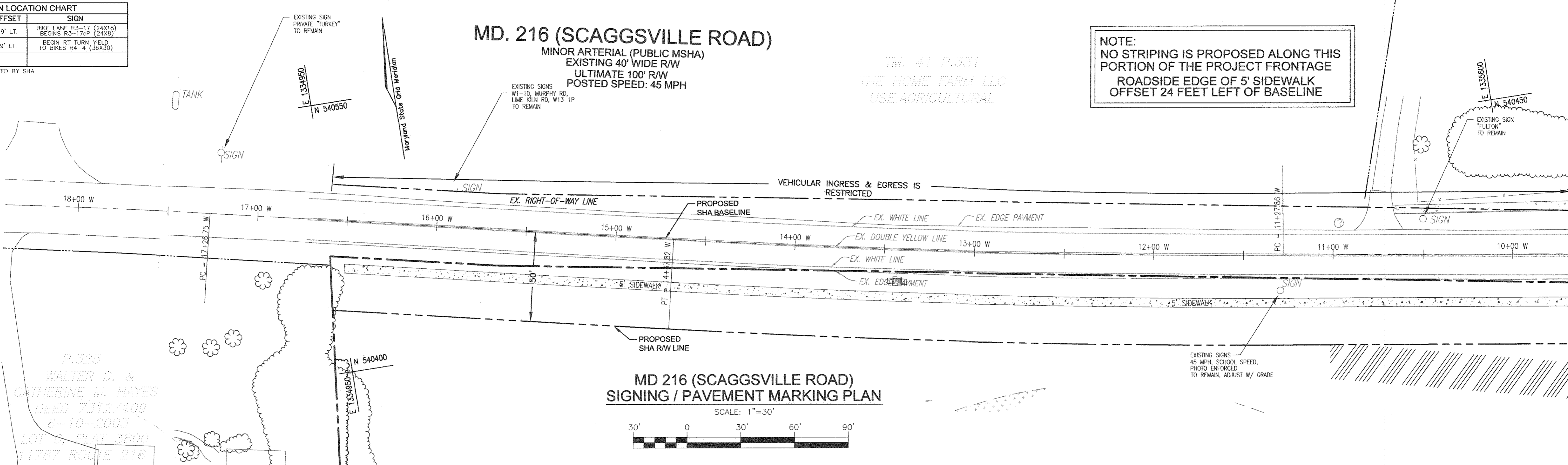
MD. 216 (SCAGGSVILLE ROAD)

MINOR ARTERIAL (PUBLIC MSHA)
EXISTING 40' WIDE R/W
ULTIMATE 100' R/W
POSTED SPEED: 45 MPH

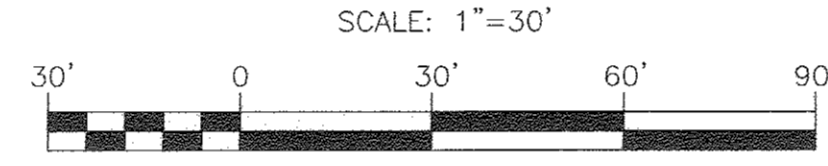
TM: 41 P.331
THE HOME FARM LLC
USE AGRICULTURAL

NOTE:
NO STRIPING IS PROPOSED ALONG THIS
PORTION OF THE PROJECT FRONTAGE
ROADSIDE EDGE OF 5' SIDEWALK
OFFSET 24 FEET LEFT OF BASELINE

THIS SHEET
MATCHLINE



MD 216 (SCAGGSVILLE ROAD) SIGNING / PAVEMENT MARKING PLAN



THIS SHEET

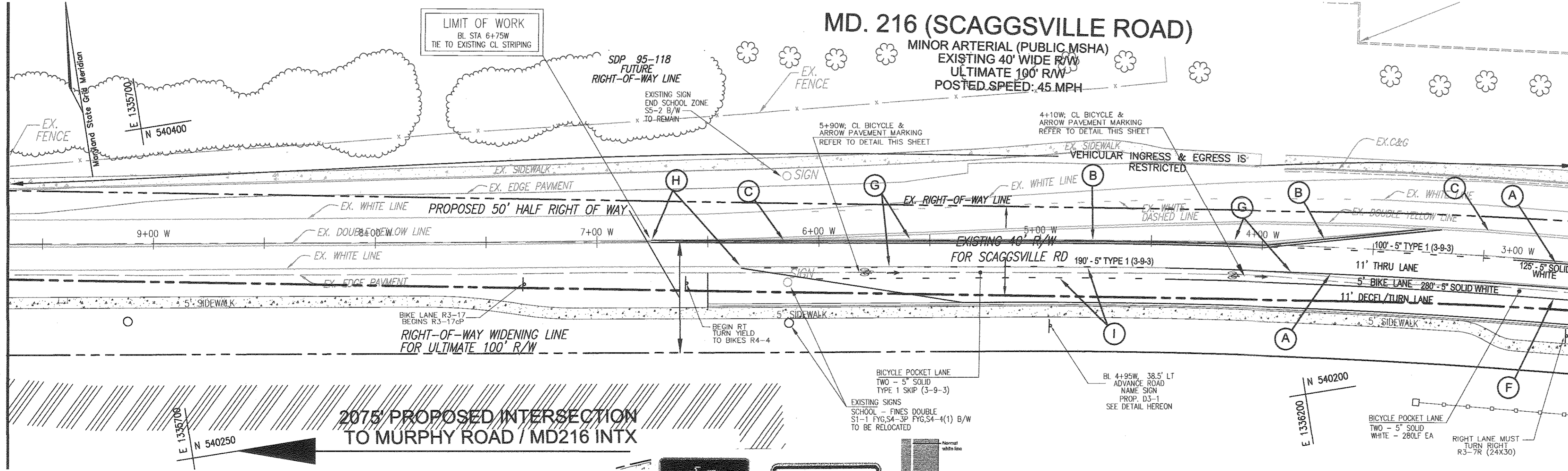
MATCHLINE

MD. 216 (SCAGGSVILLE ROAD)

MINOR ARTERIAL (PUBLIC MSHA)
EXISTING 40' WIDE R/W
ULTIMATE 100' R/W
POSTED SPEED: 45 MPH

SHEET 45

MATCHLINE



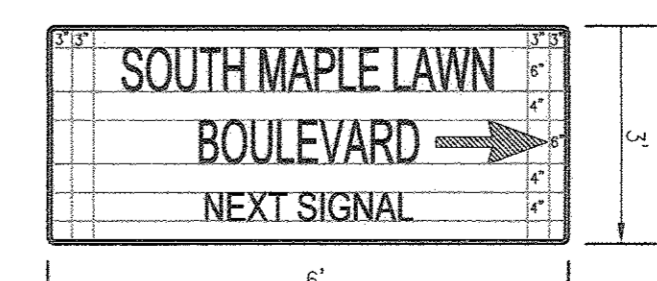
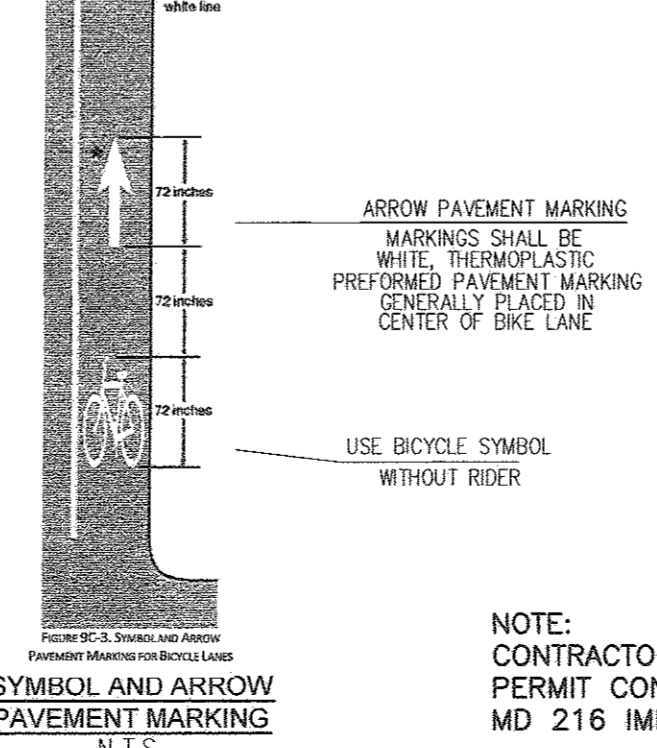
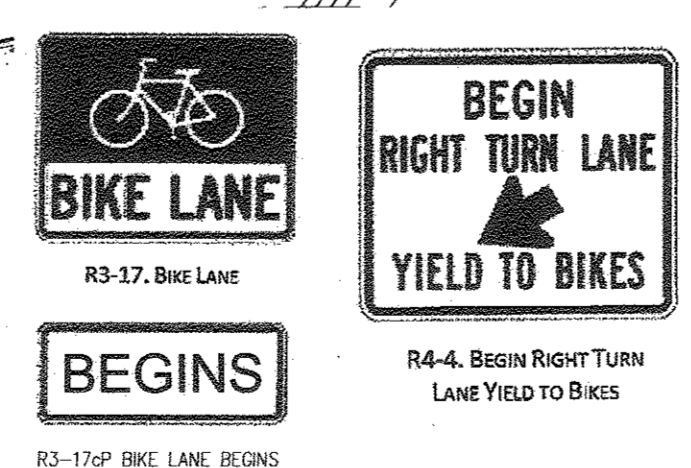
PAVEMENT MARKING DETAILS

- INSTALL 5 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR LANE LINE.
 - INSTALL 5 IN. WIDE DOUBLE YELLOW PAVEMENT MARKING
 - RE-INSTALL 5 IN. WIDE DOUBLE YELLOW PAVEMENT MARKING - FOR CENTER LINE.
 - INSTALL CROSSWALK PAVEMENT MARKINGS 12" WIDE
 - INSTALL 24 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR STOP LINE.
 - INSTALL 5 IN. WIDE WHITE SOLID PAVEMENT MARKING FOR BIKE LANE DELINEATION.
 - REMOVE EXISTING PAVEMENT MARKINGS BY GRINDING.
 - TIE TO EXISTING MARKINGS.
 - INSTALL 5 IN. WIDE WHITE BROKEN PAVEMENT MARKING (TYPE 1 - 3-9-3)
- * WIDER LINES MAY BE INSTALLED AT THE DISCRETION OF THE ASSISTANT DISTRICT ENGINEER FOR TRAFFIC

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

2075 PROPOSED INTERSECTION TO MURPHY ROAD / MD216 INTX



**EASTBOUND
ADVANCE GUIDE SIGN**
SCALE: N.T.S.
SEE SECTION 802 FOR SIGN STAKEOUT LOCATION
& WOOD SUPPORT REQUIREMENTS
SEE NOTES SHEET 25

NOTE:
CONTRACTOR TO REFERENCE MSHA ACCESS
PERMIT CONDITIONS AND MANUAL FOR
MD 216 IMPROVEMENTS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/25/2016
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 11/2/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 11/4/16
CHIEF, DIVISION OF LAND DEVELOPMENT

NO. _____ REVISION _____ DATE _____

**FINAL ROAD CONSTRUCTION PLAN
MD 216 (SCAGGSVILLE ROAD) AND
SOUTH MAPLE LAWN BOULEVARD
SIGNING / PAVEMENT MARKING PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 1**

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
TAX MAP 46 - GRID 2 - PARCEL 113 ZONED: R-ED-MXD-3
5TH ELECTION DISTRICT (SFP REF: EDP-14-093, WP-15-136, PRF415, SP-15-014) HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERS, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHY
DATE: SEPTEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

PROFESSIONAL CERTIFICATE
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. 16193
EXPIRATION DATE: 09-27-2018

46 SHEET OF 48

ROBERT H. VOGEL, PE No. 16193



MID. 216 (SCAG)
 MINOR ARTERIAL
 EXISTING 40'
 ULTIMATE
 CONW/44-3505 W
 EX. SIDEWALK

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN

**MAPLE LAWN SOUTH
 PHASE 1 - SECTION 1**

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
 NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69
 TAX MAP 45 - GRID 2 - PARCEL 113
 5TH ELECTION DISTRICT
 892, REF. 02-14-083, WP-15-136, PB#415, SP-15-014
 ZONED: R-ED-MXD-3
 HOWARD COUNTY, MARYLAND

**Robert H. Vogel
 Engineering, Inc.**
 Engineers • Surveyors • Planners
 8407 Main Street, #1043
 Ellicott City, MD 21043 Fax: 410-481-8969

PROFESSIONAL CERTIFICATE

DESIGN BY: RVE
 DRAWN BY: RVE
 CHECKED BY: RHY
 DATE: AUGUST 2016
 SCALE: AS SHOWN
 W.O. NO.: 11-34

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. 18183
 EXPIRATION DATE 09-27-2018

47 OF 48

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 10/25/2016
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 11-4-26
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 11-4-26
 CHIEF, DIVISION OF LAND DEVELOPMENT

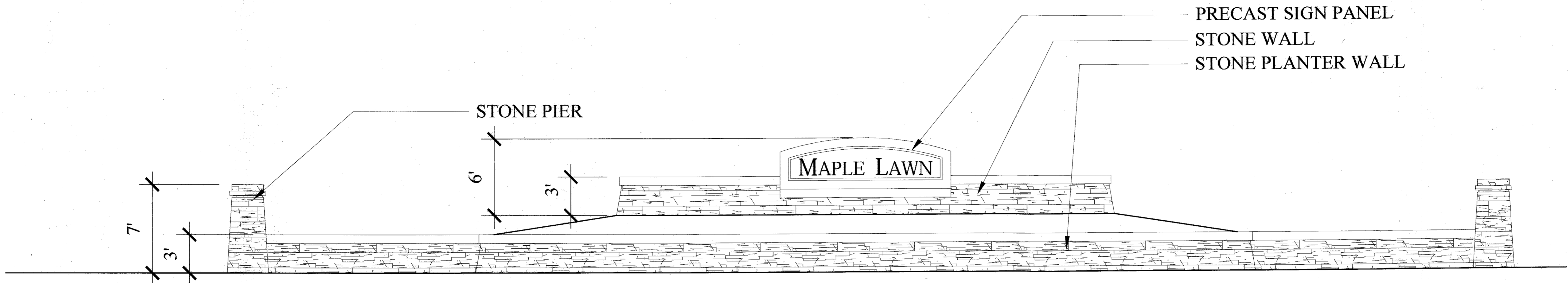
**THE LAND
 PLANNING
 & DESIGN
 GROUP
 INC.**

5300 WESTVIEW DRIVE
 SUITE 103
 FREDERICK, MD. 21701
 (301)-695-6172
 FAX (301)-695-6219

LAND PLANNING • SITE PLANNING • LANDSCAPE ARCHITECTURE

LPDG

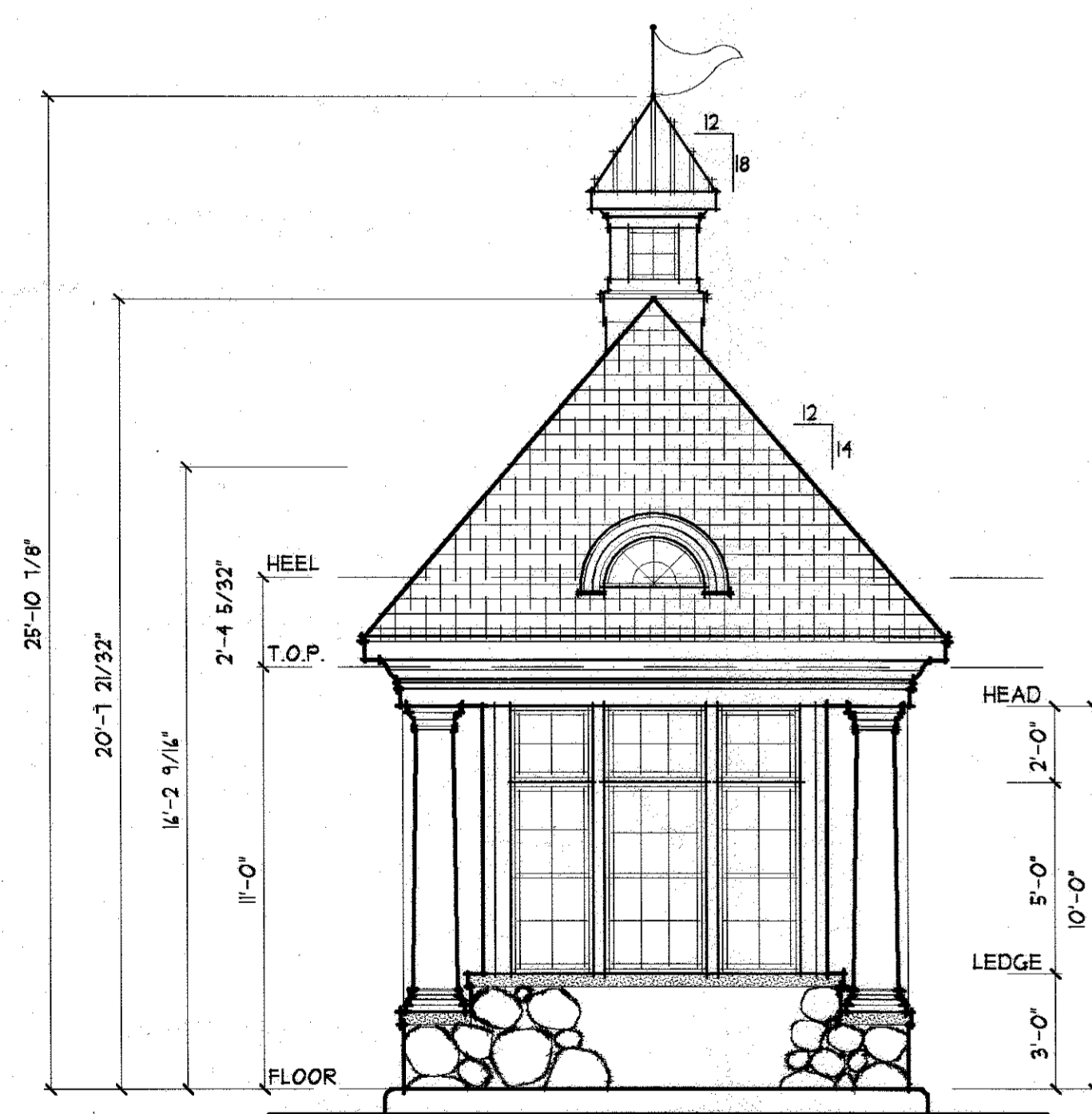
**Robert H. Vogel
 ENGINEER**
 1168
 LANDSCAPE ARCHITECT
 JAMES LOUIS BISH
 STATE OF MARYLAND



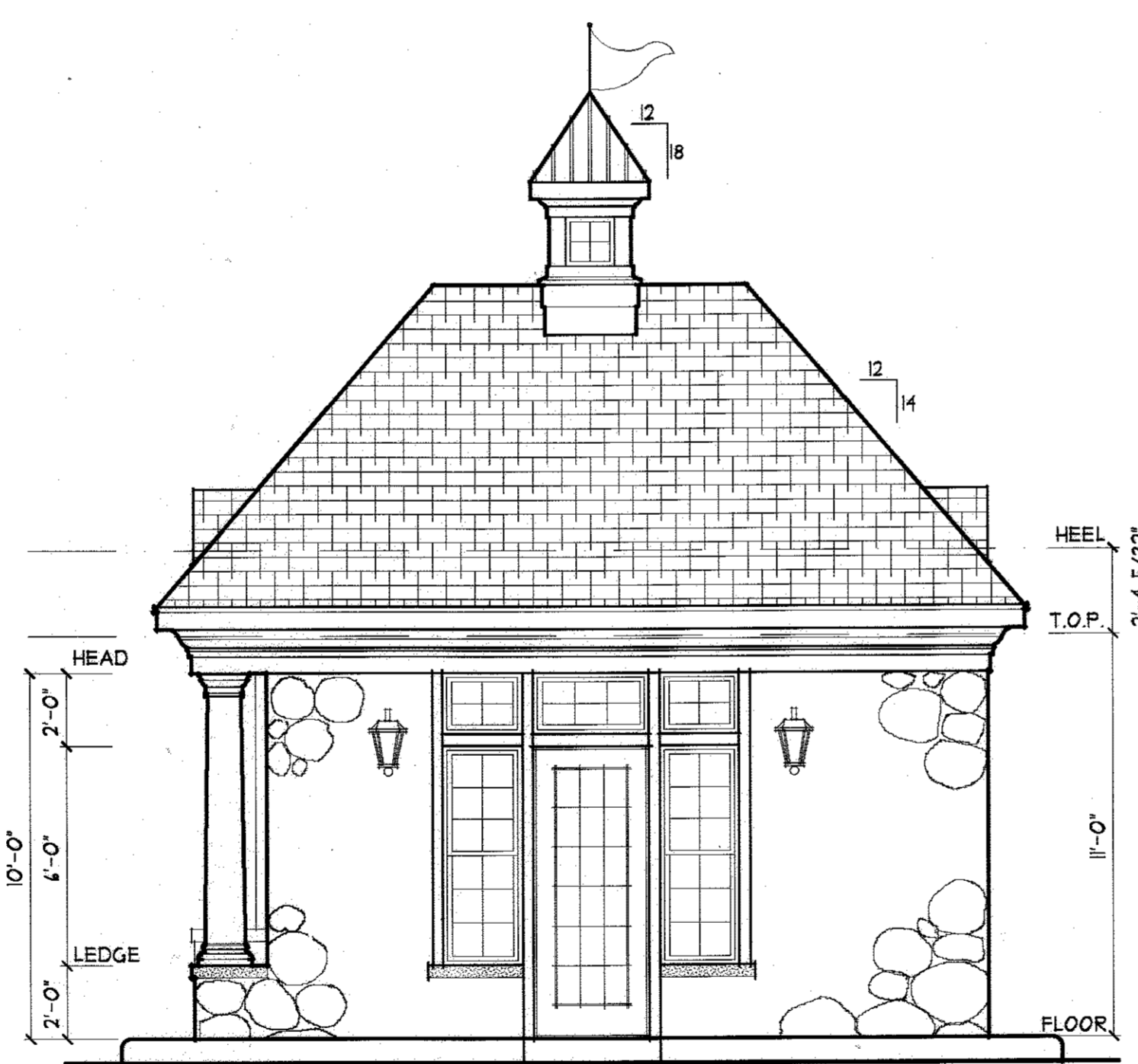
ENTRANCE ELEVATION

SCALE: 1/4" = 1'-0"

NOTE: FINAL DESIGN AND APPEARANCE MAY VARY DEPENDING ON FINAL SITE PLAN AND ENGINEERING CONSTRAINTS



FRONT ELEVATION



RIGHT SIDE ELEVATION

GATEHOUSE DETAIL

SCALE: 1/4" = 1'-0"

NOTE: FINAL DESIGN AND APPEARANCE MAY VARY DEPENDING ON FINAL SITE PLAN AND ENGINEERING CONSTRAINTS

Techo-Bloc
San Marino
Large rectangles

DESCRIPTION: Paver
TEXTURE: Stone

Specifications per pallet		Imperial	Metric
Coloring	FULL PALLET	77.14 sq ft	7.17 m ²
	HALF PALLET	44.08 sq ft	4.10 m ²
Weight	FULL PALLET	3,550 lbs.	1,628 kg
	HALF PALLET	2,084 lbs.	927 kg
Number of rows	FULL PALLET	7	
	HALF PALLET	4	
Slope capacity per row		11.02 sq ft/row	1.02 m ² /row
Linear coverage per row		22.40 lin. ft/row	6.83 lin. m/row

APPLICATIONS
Pedestrian or light vehicular traffic, residential driveways, porches and covering pool decks.

NOTES
* Colors only available on half pallets.
See page 193 for more technical information.

SANDLEWOOD COLOR

Unit dimensions	sq. ft.	sq. m.	Units/pallet
Height: 3 3/4"	100	9.29	49 units
Depth: 5 1/4"	150	13.92	73 units
Length: 8 1/4"	325	30.06	153 units

PAVER DETAIL

SCALE: NTS

NOTE: FINAL DESIGN AND APPEARANCE MAY VARY OR APPROVED EQUAL FOR PAVER DETAIL

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN

MAPLE LAWN SOUTH PHASE 1 - SECTION 1

LOTS 1-64, NON-BUILDABLE BULK PARCEL 'A',
NON-BUILDABLE BULK PARCEL 'B', AND OPEN SPACE LOTS 65-69

TAX MAP 46 - GRID 2 - PARCEL 113
57th ELECTION DISTRICT
ECP, REP, ECP-14-093, WP-15-136, PEF415, SP-15-014
HOWARD COUNTY, MARYLAND

Robert H. Vogel
Engineering, Inc.
Engineers • Surveyors • Planners
8407 Main Street
Ellicott City, MD 21043
Tel: 410.481.7666
Fax: 410.481.8961

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2018.

DESIGN BY: RVE
DRAWN BY: RVE
CHECKED BY: RHV
DATE: AUGUST 2016
SCALE: AS SHOWN
W.O. NO.: 11-34

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS
DATE: 10/25/2016

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 9/3/16

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 11-4-16

THE LAND
PLANNING
& DESIGN
GROUP
INC.
5300 WESTVIEW DRIVE
SUITE 103
FREDERICK, MD. 21701
(301)-695-6172
FAX (301)-695-6219

LPDG

LAND PLANNING • SITE PLANNING • LANDSCAPE ARCHITECTURE

LANDSCAPE ARCHITECT
1166
JAMES LOUIS BAISH
STATE OF MARYLAND

STATE OF MARYLAND
ROBERT H. VOGEL
REGISTERED PROFESSIONAL ENGINEER
NO. 16193
EXPIRES 09-27-2018

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