

GENERAL NOTES

- 1.) THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- 2.) THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH 2'-FOOT CONTOUR INTERVALS PREPARED BY WINGS AERIAL MAPPING CO., INC. FLOWN ON APRIL 6, 2004.
- 3.) THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 21A AND 27CA WERE USED FOR THIS PROJECT.
- 4.) WATER IS PRIVATE.
- 5.) SEWER IS PRIVATE.
- 6.) STORMWATER MANAGEMENT SHALL BE PROVIDED BY 4 EXTENDED DETENTION WITH MICRO-PPOOL FACILITIES AND BY NATURAL AREA CONSERVATION AND SHEETFLOW TO BUFFER CREEKS. THE FACILITIES SHALL BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY THE HOMEOWNERS ASSOCIATION AND HOWARD COUNTY.
- 7.) EXISTING UTILITIES ARE BASED UPON AERIAL SURVEY LOCATIONS.
- 8.) THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY BENCHMARK ENGINEERING, INC. DATED JULY, 2004 AND APPROVED UNDER SP-05-014.
- 9.) THE WETLANDS DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONAL, INC. IN MARCH, 2004.
- 10.) THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC. IN NOVEMBER, 2004.
- 11.) A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- 12.) THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLS CARNES ENGINEERING ASSOCIATES, INC. IN NOVEMBER, 2004 AND SUPPLEMENTED IN APRIL, 2005.
- 13.) THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 2-2-04 COMPREHENSIVE ZONING PLAN. ALL ADJACENT PROPERTIES ARE ZONED RC-DEO PER THE 2-2-04 COMPREHENSIVE ZONING PLAN.
- 14.) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THIS SITE.
- 15.) THERE SHALL BE NO DISTURBANCE WITHIN THE 100-YR FLOODPLAIN, WETLANDS, STREAMS, THEIR BUFFERS OR 25% OR GREATER STEEP SLOPES THAT ARE AT LEAST 20,000 SF. OF CONTIGUOUS AREA EXCEPT FOR THE DISTURBANCES TO THE FLOODPLAIN IN THE AREA OF THE OUTFALL OF SWMP#2 AND THE STREAM BUFFER IN THE AREA OF THE OUTFALL OF SWMP#3 THESE AREAS HAVE BEEN ZONED AS NECESSARY DISTURBANCES BY DPZ AND HSCD IN ACCORDANCE WITH SECTION 16.116(c) OF THE SUBDIVISION REGULATIONS IN ORDER TO DISCHARGE ONTO SLOPES LESS THAN 10%.
- 16.) BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED DURING JULY, 2004 BY BENCHMARK ENGINEERING, INC.
- 17.) FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN NOVEMBER, 2004.
- 18.) THIS PROJECT IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 19.) THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE BUILDING OR GRADING PERMIT APPLICATION.

20.) THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT'S STREAM BUFFERS, WETLANDS, FLOODPLAIN AND EXISTING FOREST AND TO PRESERVE THE RURAL CHARACTER OF SCENIC ROXBURY ROAD BY PROVIDING LANDSCAPING AND STREET TREES. THEY WILL BE PRIVATELY OWNED, THEY ARE ENCUMBERED BY AN EASEMENT AGREEMENT WITH HOWARD COUNTY AND THE HOMEOWNERS ASSOCIATION. THIS AGREEMENT PROHIBITS FURTHER SUBDIVISION OF THE PARCEL, OUTLINES THE MAINTENANCE RESPONSIBILITIES OF ITS OWNER AND ENUMERATES THE USES PERMITTED ON THE PROPERTY.

21.) THE PURPOSE OF THE PRESERVATION PARCELS AND THE JUSTIFICATION FOR THE DESIGN OF THE CLUSTER SUBDIVISION IS AS FOLLOWS:
PRESERVATION PARCELS 'A' AND 'B' ARE PROPOSED AS NON-BUILDABLE PARCELS THAT SHALL INCLUDE BUT NOT BE LIMITED TO STORM DRAINS, UTILITY EASEMENTS, AND NATURAL AREA CONSERVATION CREDIT. PARCEL 'A' SHALL HELP PRESERVE THE RURAL CHARACTER OF SCENIC ROXBURY ROAD BY PROVIDING LANDSCAPING AND STREET TREES. THEY WILL BE PRIVATELY OWNED, THEY ARE ENCUMBERED BY AN EASEMENT AGREEMENT WITH HOWARD COUNTY AND THE HOMEOWNERS ASSOCIATION. THIS AGREEMENT PROHIBITS FURTHER SUBDIVISION OF THE PARCEL, OUTLINES THE MAINTENANCE RESPONSIBILITIES OF ITS OWNER AND ENUMERATES THE USES PERMITTED ON THE PROPERTY.

PRESERVATION PARCEL 'C' IS PROPOSED AS A NON-BUILDABLE PARCEL TO PRESERVE ENVIRONMENTALLY SENSITIVE AREAS INCLUDING STEEP SLOPES, STREAM BUFFERS, WETLANDS, FLOODPLAIN AND EXISTING FOREST AND TO PRESERVE THE RURAL CHARACTER OF SCENIC ROXBURY ROAD BY PROVIDING LANDSCAPING AND STREET TREES. IT WILL BE DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS. IT IS ENCUMBERED BY AN EASEMENT AGREEMENT WITH THE HOWARD COUNTY ASSOCIATION. THIS AGREEMENT PROHIBITS FURTHER SUBDIVISION OF THE PARCEL, OUTLINES THE MAINTENANCE RESPONSIBILITIES OF ITS OWNER AND ENUMERATES THE USES PERMITTED ON THE PROPERTY.

PRESERVATION PARCELS 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z' ARE PROPOSED AS NON-BUILDABLE PARCELS FOR STORMWATER MANAGEMENT FACILITIES AS A REQUIREMENT TO CONTROL STORMWATER RUNOFF. THEY WILL BE OWNED BY THE HOMEOWNERS ASSOCIATION. THEY ARE ENCUMBERED BY AN EASEMENT AGREEMENT WITH HOWARD COUNTY. THIS AGREEMENT PROHIBITS FURTHER SUBDIVISION OF THE PARCEL, OUTLINES THE MAINTENANCE RESPONSIBILITIES OF ITS OWNER AND ENUMERATES THE USES PERMITTED ON THE PROPERTY.

BULK PARCELS 'AA' THRU 'HH' ARE PROPOSED AS NON-BUILDABLE BULK PARCELS. THEY ARE TO BE RESUBDIVIDED AT A LATER DATE AS PHASE 2 OF THIS SUBDIVISION. THEY WILL BE SUBDIVIDED IN 53 ADDITIONAL 1 ACRE LOTS, 1 NON-BUILDABLE PRESERVATION PARCEL FOR THE SHARED SEPTIC SYSTEM AND 1 NON-BUILDABLE PRESERVATION PARCEL.

22.) THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
23.) WELLS SHALL BE DRILLED PRIOR TO RECORD PLAT SUBMITTAL FOR SIGNATURE. IT IS THE DEVELOPER'S RESPONSIBILITY TO DRILL THE WELLS. IT WILL NOT BE CONSIDERED TO BE GOVERNMENTAL DELAY IF THE WELLS ARE NOT COMPLETED PRIOR TO THE SUBMISSION'S MILESTONE DATE.
24.) GROUNDWATER APPROPRIATION PERMIT SHALL BE OBTAINED PRIOR TO THE SUBMITTAL OF THE RECORD PLAT FOR SIGNATURE.

25.) DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE).
B) SURFACE - 8" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45° TURNING RADIUS.
D) STRUCTURES/CULVERTS/BRIDGES - CAPABLE OF SUPPORTING 25 GROSS TONS (HDS LOAD).
E) DRAINAGE ELEMENTS - CAPABLE OF MAXIMUM PASSING 10" MIN. FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

26.) LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN INCLUDED WITH THE ROAD CONSTRUCTION PLAN SET IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH A DPW DEVELOPER'S AGREEMENT WITH SURETY IN THE AMOUNT OF \$87,750.00.
27.) THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1209 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

28.) THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 27.0 ACRES SHALL BE MET BY THE ON-SITE RETENTION OF 10.9 AC. OF NET TRACT AREA FOREST WITHIN A FOREST CONSERVATION EASEMENT, THE ON-SITE AFForestation OF 13.1 AC. WITHIN A FOREST CONSERVATION EASEMENT AND BY THE ON-SITE REFORESTATION OF 3.0 AC. WITHIN A FOREST CONSERVATION EASEMENT. WITH A DPW DEVELOPER'S AGREEMENT WITH SURETY IN THE TOTAL AMOUNT OF \$445,518.88.
29.) OPEN SPACE IS NOT REQUIRED AS PRESERVATION PARCEL 'C' SHALL BE DEDICATED TO HOWARD COUNTY, MARYLAND.
30.) ALL DRIVEWAY CULVERTS SHALL BE 15" RCP OR EQUIVALENT EXCEPT FOR THE CULVERT FOR LOT 31 WHICH SHALL BE 24" RCP.
31.) AN ADDITIONAL 779 AC. OF REFORESTATION ABOVE THE REQUIREMENT SHALL BE USED FOR THE ESTABLISHMENT OF A PRIVATE FOREST MITIGATION BANK WITH A DPW DEVELOPER'S AGREEMENT WITH SURETY IN THE AMOUNT OF \$109,666.20.

EDGEWOOD FARM

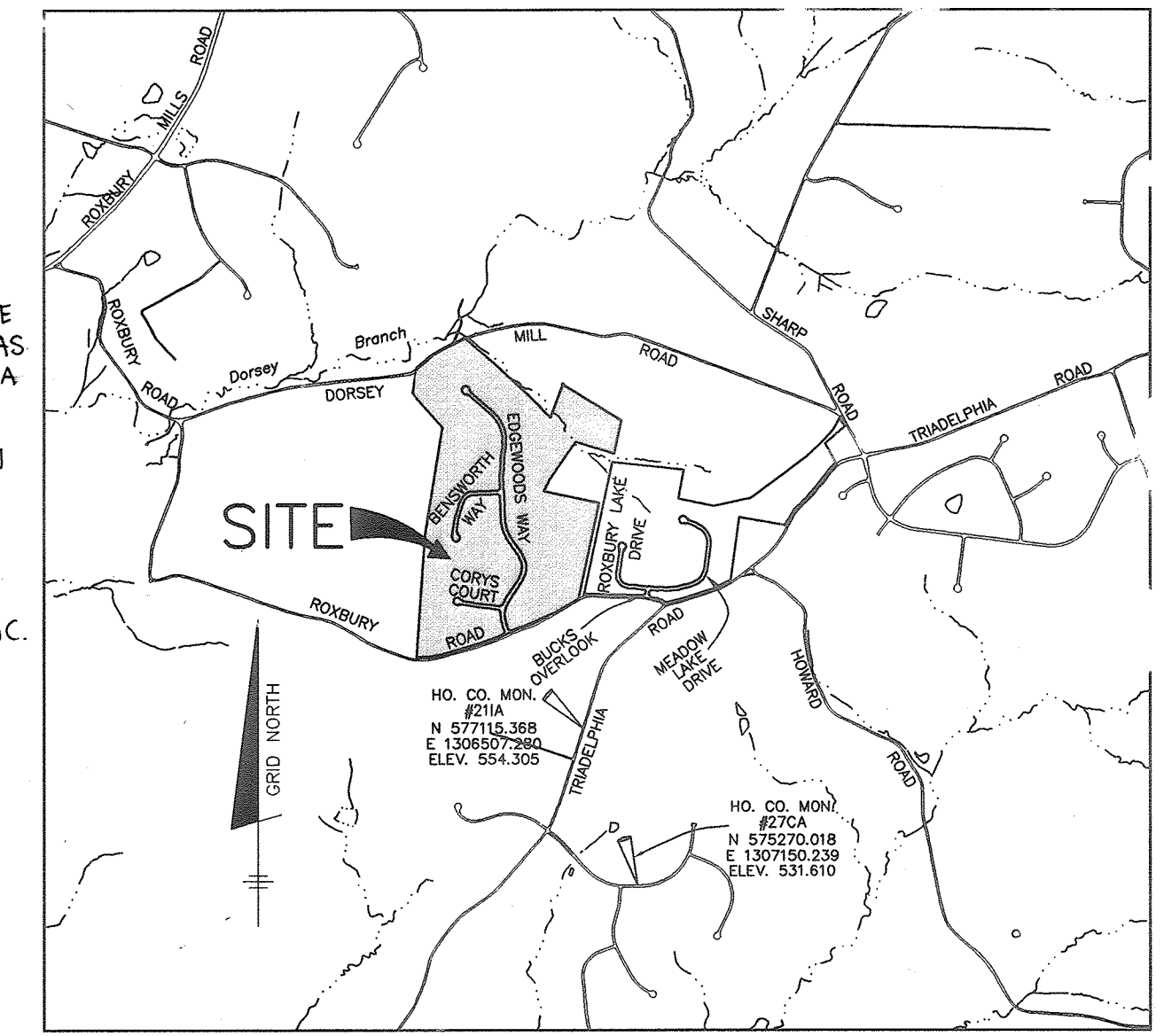
ROADS, STORMWATER MANAGEMENT AND STORM DRAIN CONSTRUCTION PLANS

HORIZONTAL DATUM FOR THIS AS-BUILT SURVEY IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM MAD '83/FEBRUARY 2014. AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 21A & 27CA

VERTICAL DATUM FOR THIS AS-BUILT SURVEY IS NORTH AMERICAN VERTICAL DATUM NAVD 1988 AS PROJECTED BY THE ABOVE MENTIONED HOWARD COUNTY GEODETIC CONTROL STATIONS OR HOWARD COUNTY VERTICAL CONTROL BENCH MARKS 21A & 27CA

THIS AS-BUILT SURVEY WAS PERFORMED BY ESE CONSULTANTS INC.

THE INSTRUMENTS WERE USED IN PERFORMING THIS AS-BUILT SURVEY: 1 SECOND ROBOTIC TOTAL STATION & PRISM; RTK GPS SCANNER, DIGITAL LEVEL.



21A - STAMPED BRASS DISC SET 1" - 2" BELOW SURFACE ON A CONCRETE COLUMN (3" DEEP). LOCATED 4' FROM WEST EDGE OF TRAPELPHIA ROAD BY FROM BISE POLE (#154879).

27CA - STAMPED BRASS DISC SET 1" - 2" BELOW SURFACE ON A CONCRETE COLUMN (3" DEEP). LOCATED 2.8' FROM PK. HALL IN MACOMAN CURVE ON NORTH SIDE OF MICHELLE DRIVE. (APPROX. 15E' FROM SAPLING DRIVE).

VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS DATA CHART

GENERAL SITE DATA

- 1.) PRESENT ZONING: RC-DEO
- 2.) APPLICABLE DPZ FILE REFERENCES: SP-05-014
- 3.) PROPOSED USE OF SITE: RESIDENTIAL (SFD)
- 4.) PROPOSED WATER AND SEWER SYSTEMS: PRIVATE

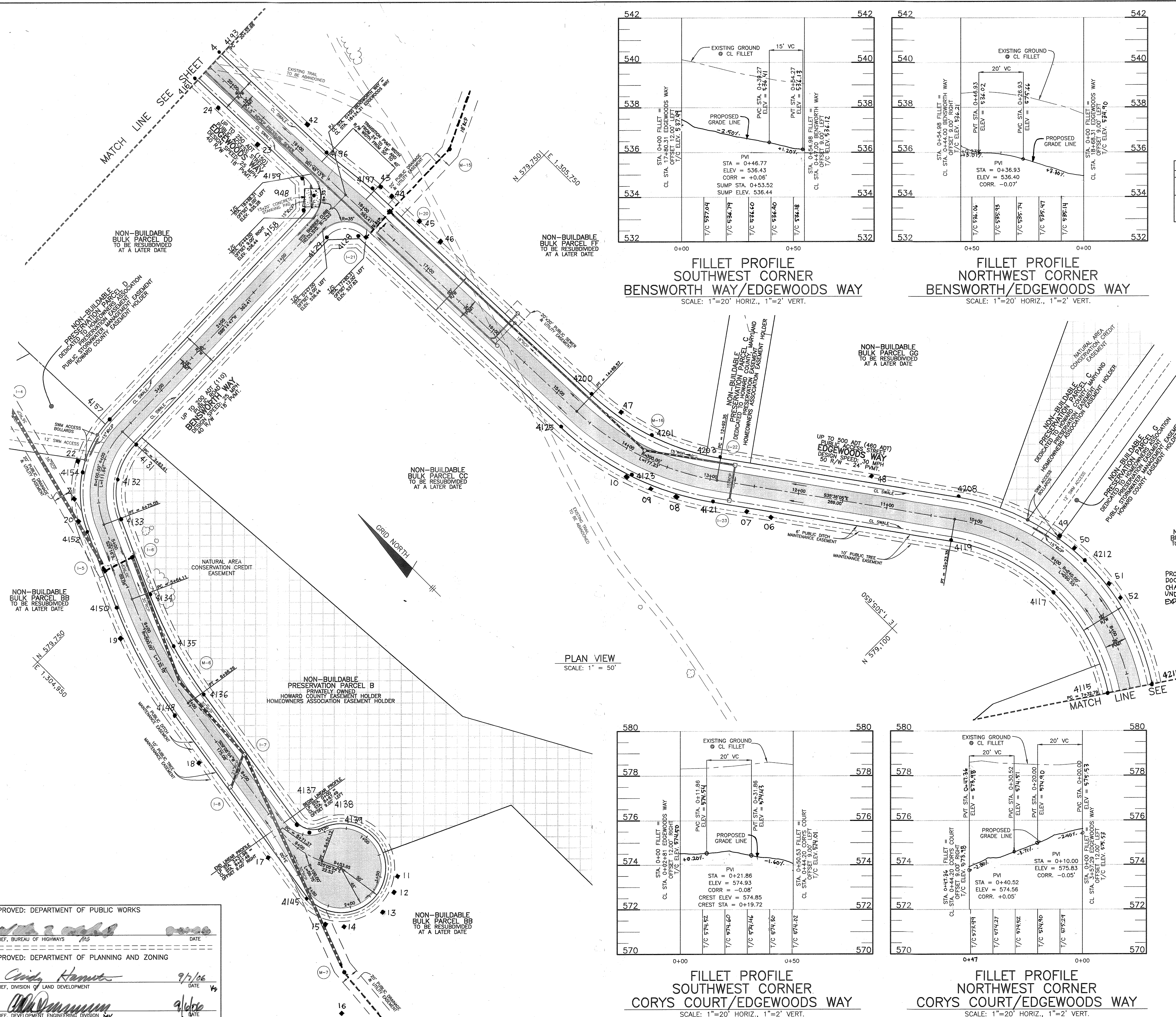
AREA TABULATION

- 1.) GROSS TRACT AREA: 131.87 AC.±
- 2.) AREA WITHIN 100-YEAR FLOODPLAIN: 4.28 AC.±
- 3.) TOTAL AREA OF 25% OR GREATER STEEP SLOPES: 7.07 AC.±
AREA NOT IN FLOODPLAIN (FOR NTA CALC): 6.97 AC.±
- 4.) NET TRACT AREA: 120.62 AC.±
- 5.) TOTAL NUMBER OF LOTS ALLOWED PER ZONING:
1 UNIT PER 4.25 GROSS ACRES: 31
1 UNIT PER 2 NET ACRES (MAX): 60
- 6.) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION: 7
- 7.) AREA OF CLUSTER LOTS: 7.51 AC.±
- 8.) AREA OF NON-BUILDABLE PRESERVATION PARCELS: 57.26 AC.±
- 9.) AREA OF BUILDABLE PRESERVATION PARCELS: N/A
- 10.) AREA OF NON-BUILDABLE BULK PARCELS: 60.67 AC.±
- 11.) AREA OF BUILDABLE BULK PARCELS: N/A
- 12.) AREA OF ROAD RIGHT-OF-WAY: 6.43 AC.±
- 13.) OPEN SPACE ON-TOTAL SITE*: N/A
- 14.) AREA OF RECREATIONAL OPEN SPACE REQUIRED: N/A

*5% OF GROSS REQUIRED (6.59 AC) OR NONE IF THE PRES. PARCEL IS DEDICATED TO THE HOMEOWNERS ASSOCIATION OR HOWARD COUNTY. (PRESERVATION PARCEL 'C' SHALL BE DEDICATED TO HOWARD COUNTY)

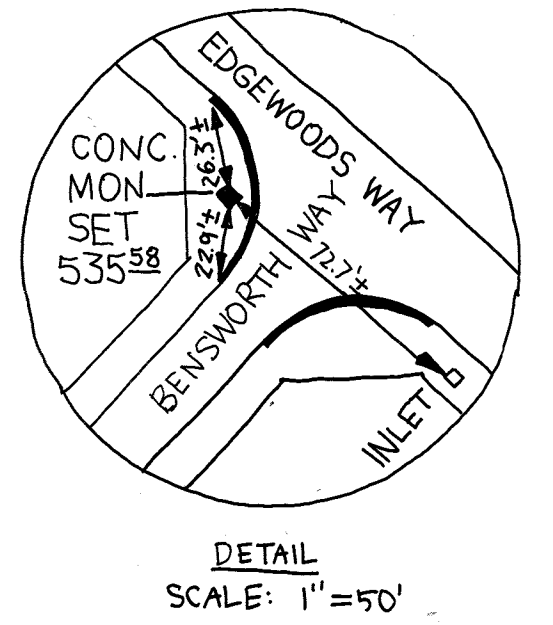
POINT #	NORTHING	EASTING
01	578620.25	1304984.42
02	578624.75	1304994.13
03	578629.25	1305003.84
04	578633.75	1305013.55
05	578638.25	1305023.26
06	578642.75	1305032.97
07	578647.25	1305042.68
08	578651.75	1305052.39
09	578656.25	1305062.10
10	578660.75	1305071.81
11	578665.25	1305081.52
12	578669.75	1305091.23
13	578674.25	1305100.94
14	578678.75	1305110.65
15	578683.25	1305120.36
16	578687.75	1305130.07
17	578692.25	1305139.78
18	578696.75	1305149.49
19	578701.25	1305159.20
20	578705.75	1305168.91
21	578710.25	1305178.62
22	578714.75	1305188.33
23	578719.25	1305198.04
24	578723.75	1305207.75
25	578728.25	1305217.46
26	578732.75	1305227.17
27	578737.25	1305236.88
28	578741.75	1305246.59
29	578746.25	1305256.30
30	578750.75	1305266.01
31	578755.25	1305275.72
32	578759.75	1305285.43
33	578764.25	1305295.14
34	578768.75	1305304.85
35	578773.25	1305314.56
36	578777.75	1305324.27
37	578782.25	1305333.98
38	578786.75	1305343.69
39	578791.25	1305353.40
40	578795.75	1305363.11
41	578800.25	1305372.82
42	578804.75	1305382.53
43	578809.25	1305392.24
44	578813.75	1305401.95
45	578818.25	1305411.66
46	578822.75	1305421.37
47	578827.25	1305431.08
48	578831.75	1305440.79
49	578836.25	1305450.50
50	578840.75	1305460.21
51	578845.25	1305469.92
52	578849.75	1305479.63
53	578854.25	1305489.34
54	578858.75	1305499.05
55	578863.25	1305508.76
56	578867.75	1305518.47
57	578872.25	1305528.18
58	578876.75	1305537.89
59	578881.25	1305547.60
60	578885.75	1305557.31
61	578890.25	1305567.02
62	578894.75	1305576.73
63	578899.25	1305586.44
64	578903.75	1305596.15
65	578908.25	1305605.86
66	578912.75	1305615.57
67	578917.25	1305625.28
68	578921.75	1305634.99
69	578926.25	1305644.70
70	578930.75	1305654.41
71	578935.25	1305664.12
72	578939.75	1305673.83
73	578944.25	1305683.54
74	578948.75	1305693.25
75	578953.25	1305702.96
76	578957.75	1305712.67
77	578962.25	1305722.38
78	578966.75	1305732.09
79	578971.25	1305741.80
80	578975.75	1305751.51
81	578980.25	1305761.22
82	578984.75	1305770.93
83	578989.25	1305780.64
84	578993.75	1305790.35
85	578998.25	1305800.06
86	579002.75	1305809.77
87	579007.25	1305819.48
88	579011.75	1305829.19
89	579016.25	1305838.90
90	579020.75	1305848.61
91	579025.25	1305858.32
92	579029.75	1305868.03
93	579034.25	1305877.74
94	579038.75	1305887.45
95	579043.25	1305897.16
96	579047.75	1305906.87
97	579052.25	1305916.58
98	579056.75	1305926.29
99	579061.25	1305936.00
100	579065.75	1305945.71

POINT#	NORTHING	EASTING
3146	578307.28	1305629.36
3147	578311.78	1305639.07
4045	577948.88	1304958.33
4046	577953.38	1304968.04
4047	577957.88	1304977.75
4048	577962.38	1304987.46
4049	577966.88	1304997.17
4050	577971.38	1305006.88
4051	577975.88	1305016.59
4052	577980.38	1305026.30
4053	577984.88	1305036.01
4054	577989.38	1305045.72
4055	577993.88	1305055.43
4056	577998.38	1305065.14
4057	578002.88	1305074.85
4058	578007.38	1305084.56
4059	578011.88	1305094.27
4060	578016.38	1305103.98
4061	578020.88	1305113.69
4062	578025.38	1305123.40
4063	578029.88	1305133.11
4064	578034.38	1305142.82
4065	578038.88	1305152.53
4066	578043.38	1305162.24
4067	578047.88	1305171.95
4068	578052.38	1305181.66
4069	578056.88	1305191.37
4070	578061.38	1305201.08
4071	578065.88	1305210.79
4072	578070.38	1305220.50
4073	578074.88	1305230.21
4074	578079.38	1305239.92
4075	578083.88	1305249.63
4076	578088.38	1305259.34
4077	578092.88	1305269.05
4078	578097.38	1305278.76
4079	578101.88	1305288.47
4080	578106.38	1305298.18
4081	578110.88	1305307.89
4082	578115.38	1305317.60
4083	578119.88	1305327.31
4084	578124.38	1305337.02
4085	578128.88	1305346.73
4086	578133.38	1305356.44
4087	578137.88	1305366.15
4088	578142.38	1305375.86
4089	578146.88	1305385.57
4090	578151.38	1305395.28
4091	578155.88	1305404.99
4092	578160.38	1305414.70
4093	578164.88	1305424.41
4094	578169.38	1305434.12
4095	578173.88	1305443.83
4096	578178.38	1305453.54
4097	578182.88	1305463.25
4098	578187.38	1305472.96
4099	578191.88	1305482.67
4100	578196.38	1305492.38
4101	578200.88	1305502.09
4102	578205.38	1305511.80
4103	578209.88	1305521.51
4104	578214.38	1305531.22
4105	578218.88	1305540.93
4106	578223.38	1305550.64
4107	578227.88	1305560.35
4108	578232.38	1305570.06
4109	578236.88	1305579.77
4110	578241.38	1305589.48
4111	578245.88	1305599.19
4112	578250.38	1305608.90
4113	578254.88	1305618.61
4114	578259.38	1305628.32
4115	578263.88	1305638.03
4116	578268.38	1305647.74
4117	578272.88	1305657.45
4118	578277.38	1305667.16
4119	578281.88	1305676.87
4120	578286.38	1305686.58
4121	578290.88	1305696.29
4122	578295.38	1305706.00
4123	578299.88	1305715.71
4124	578304.38	



CENTERLINE CONTROL DATA				
STREET NAME	STATION	NORTH	EAST	
EDGEWOODS WAY	PC = 7+32.79	578863.79	1305789.78	
	PT = 10+23.35	579136.89	1305785.40	
	PC = 12+92.35	579355.61	1305628.80	
	PT = 14+69.57	579521.07	1305572.87	
BENSWORTH WAY	PC = 20+32.98	580084.22	1305555.63	
	BEGIN = 0+00.00	579875.64	1305562.01	
	PC = 3+63.41	579864.52	1305198.77	
	PT = 4+75.05	579805.69	1305110.68	
BENSWORTH WAY	PC = 5+64.11	579724.51	1305074.05	
	PT = 6+96.29	579578.28	1305036.17	
	PC = 8+71.37	579425.42	1305008.37	
	PT = 9+31.12	579367.13	1305016.54	
END = 9+53.65	579346.72	1305026.10		

CENTER LINE CURVE DATA							
STREET NAME	STATION	RADIUS	LENGTH	DELTA	TANGENT	CHORD	
EDGEWOODS WAY	STA. 7+32.79 TO 10+23.35	240.00'	290.55'	69°21'52"	166.07'	N00°55'09"W	273.13'
	STA. 12+92.35 TO 14+69.57	300.00'	177.23'	33°50'52"	91.28'	N18°40'39"W	174.66'
BENSWORTH WAY	STA. 3+63.41 TO 4+75.05	100.00'	111.64'	63°57'54"	62.44'	S56°15'50"W	105.93'
	STA. 5+64.11 TO 6+96.29	500.00'	132.18'	15°08'49"	66.48'	S16°42'28"W	131.80'
	STA. 8+71.37 TO 9+31.12	100.00'	59.75'	34°13'58"	30.80'	S07°58'55"E	58.86'



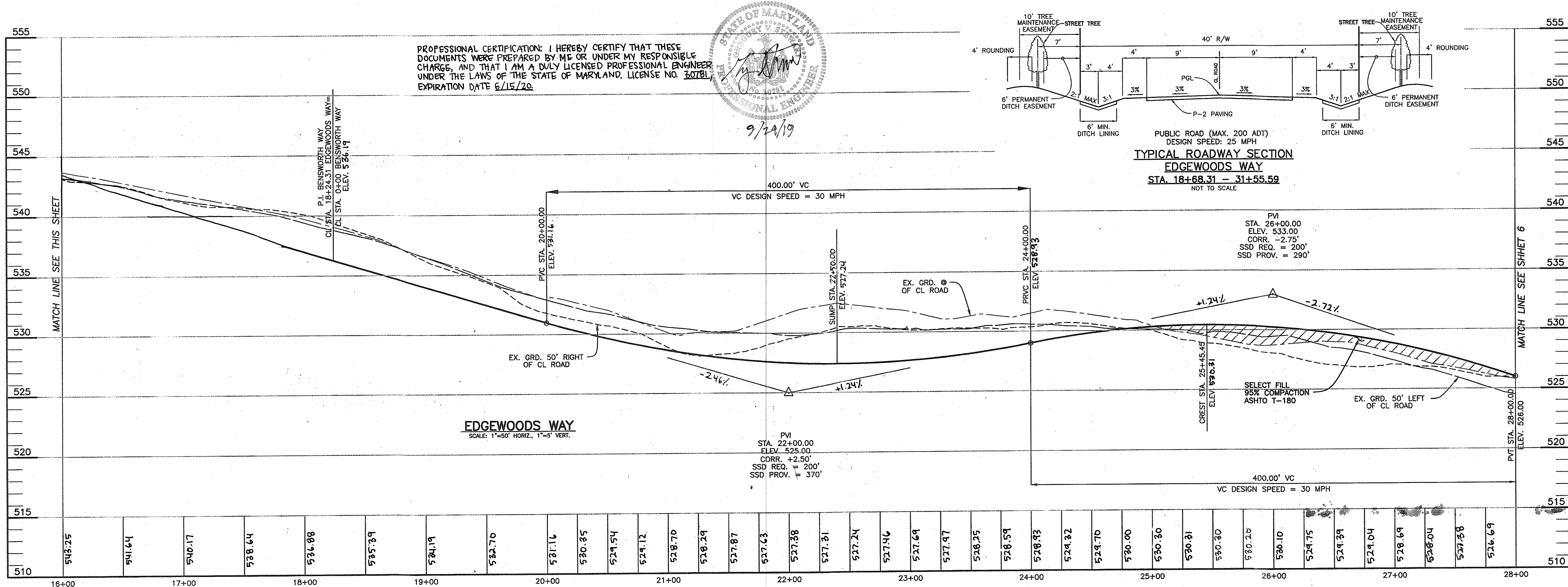
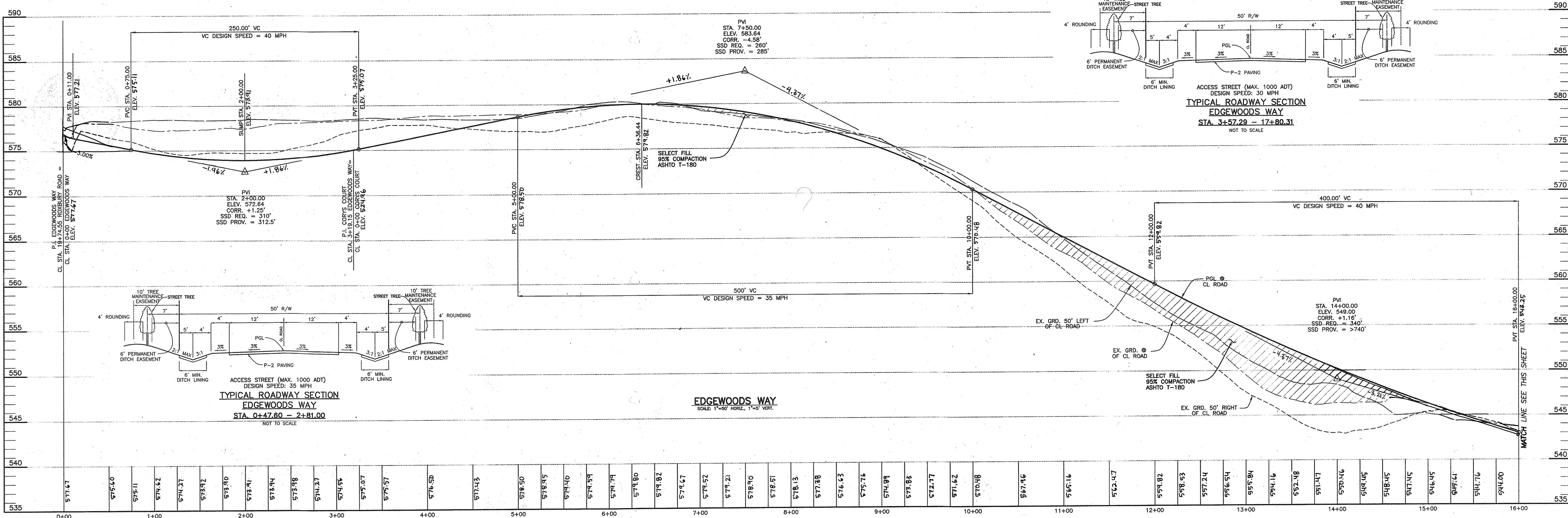
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/1/06

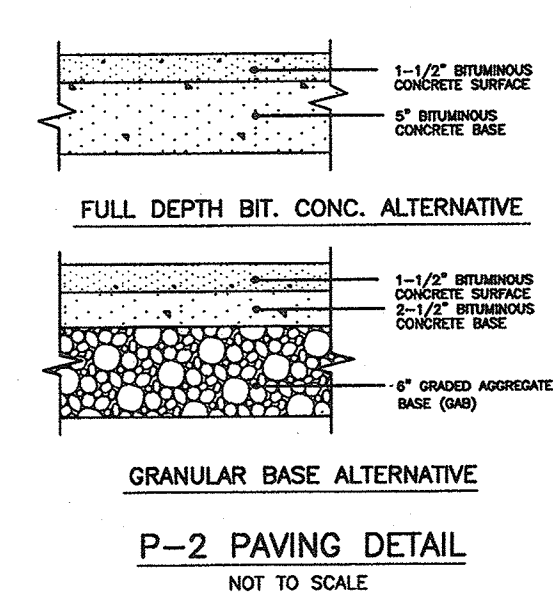
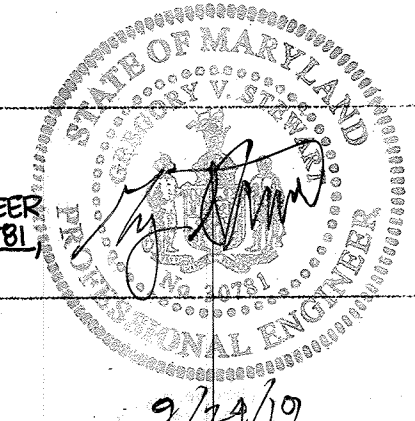
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/6/06

CHIEF, DEVELOPMENT ENGINEERING DIVISION

AS-BUILT BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-485-6105 FAX: 410-485-6844 WWW.BE-CIVILENGINEERING.COM		 7/11/06
OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE LOTS 1-7: NON-BUILDABLE BULK PARCELS 'A'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'	
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND	TITLE: ROAD PLAN AND PROFILES
DESIGN: DBT DRAFT: DBT CHECK: DAM	DATE: JULY, 2006 SCALE: AS SHOWN	PROJECT NO. 1550 SHEET 3 OF 27



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.



APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Cindy Hamer
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE 7/7/06

DATE 9/6/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

NO.	DATE	REVISION

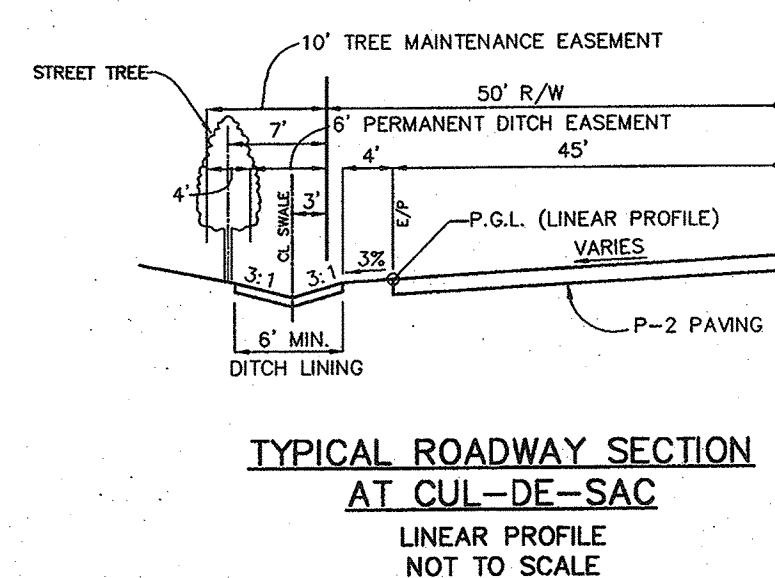
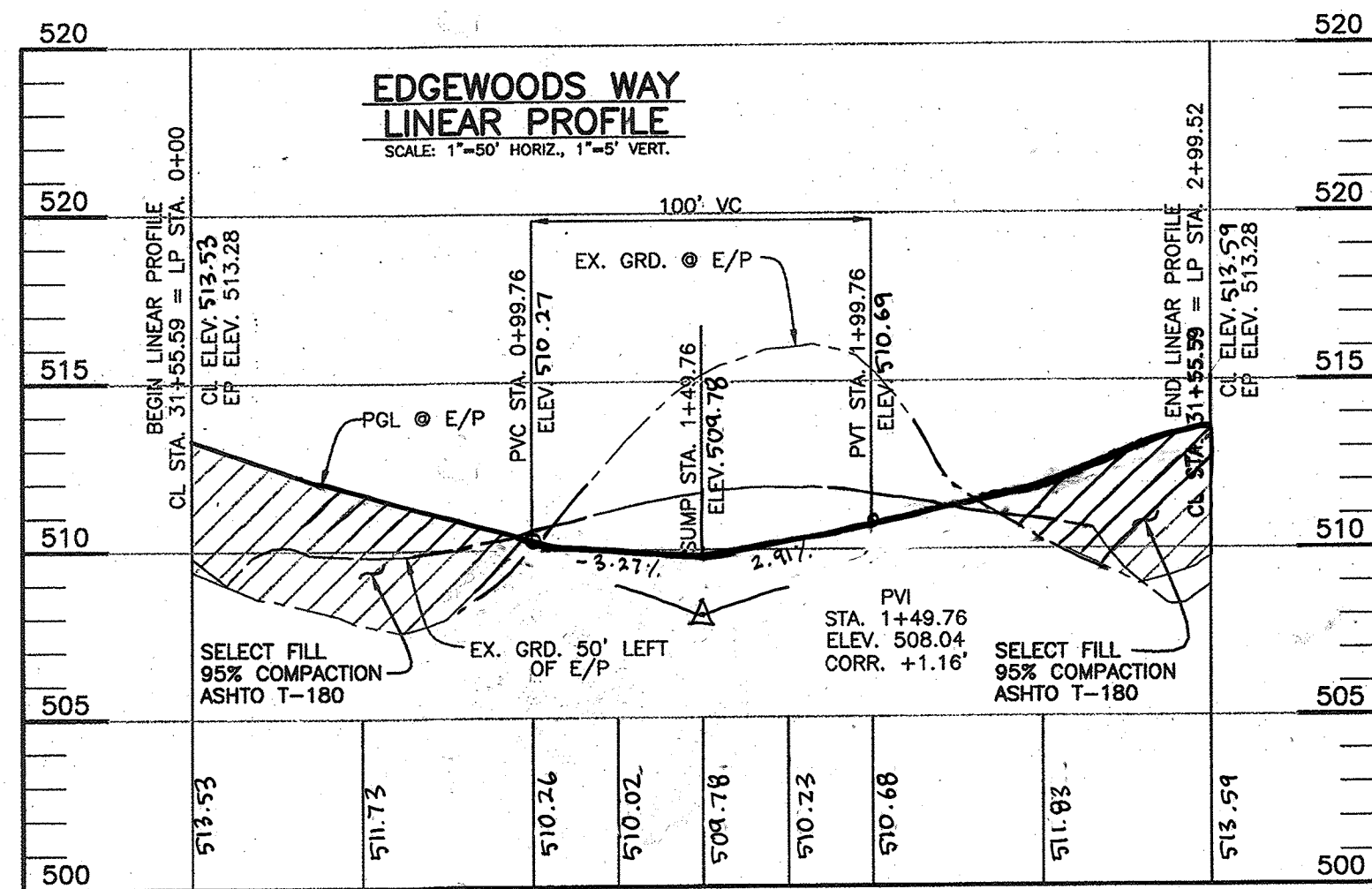
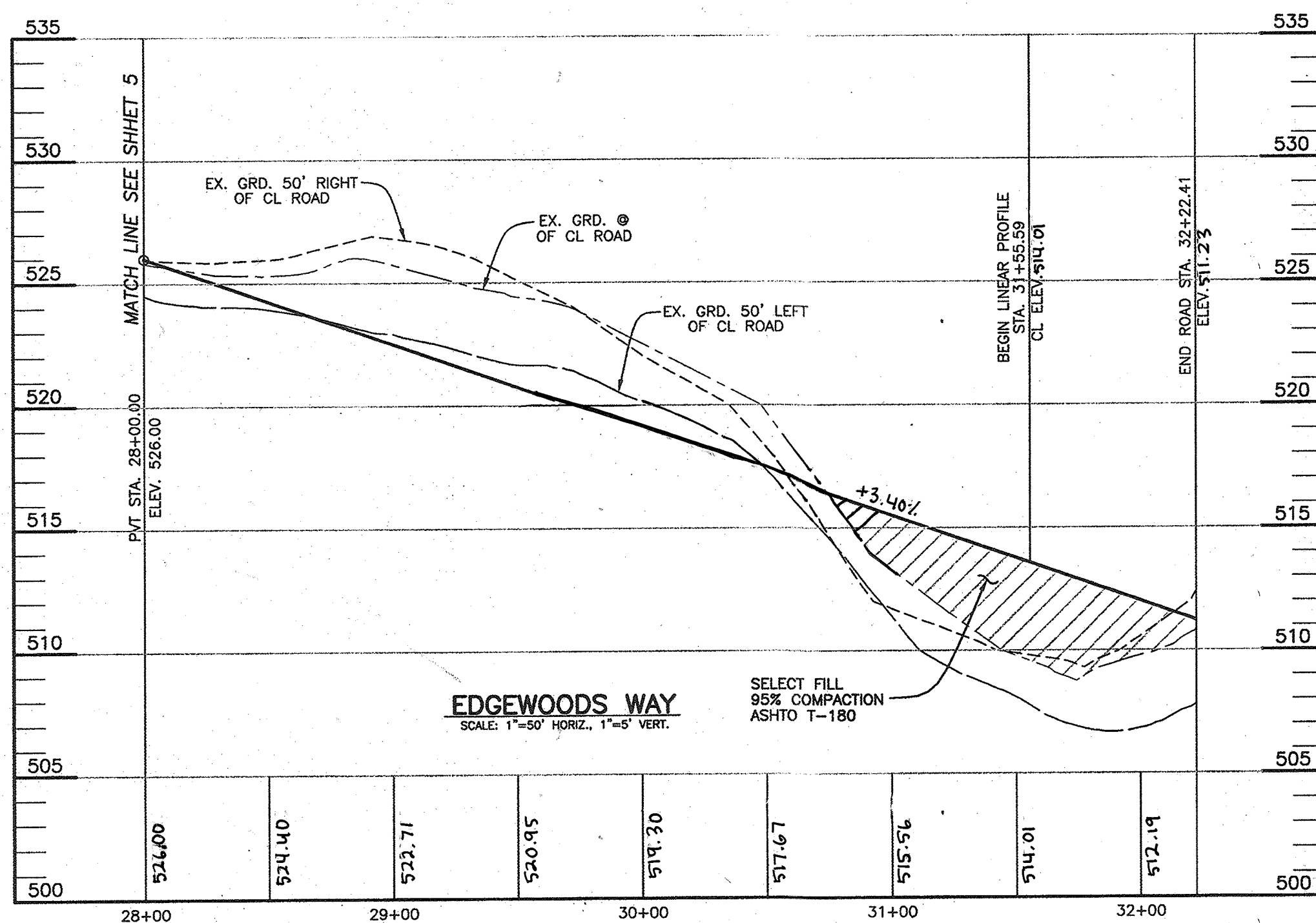
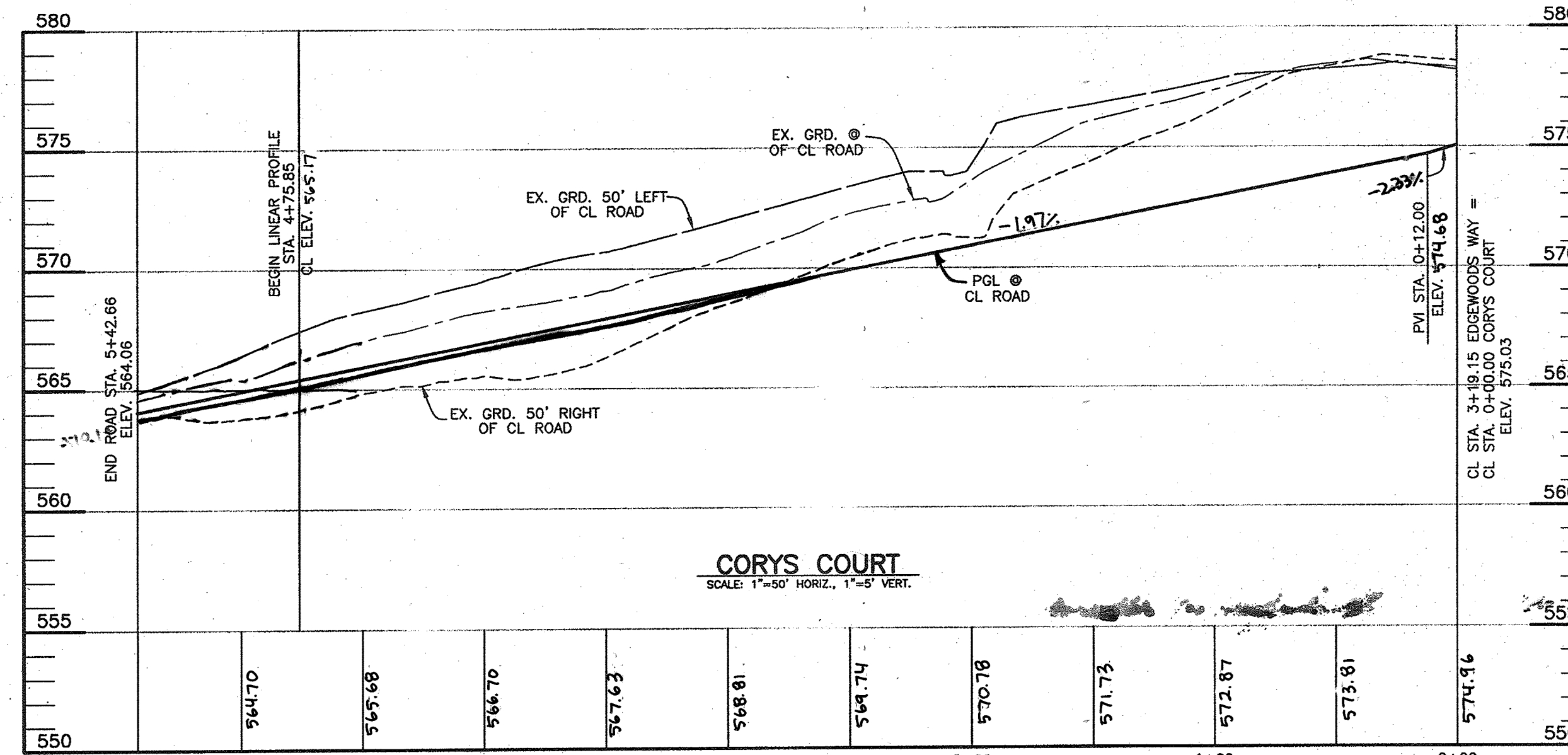
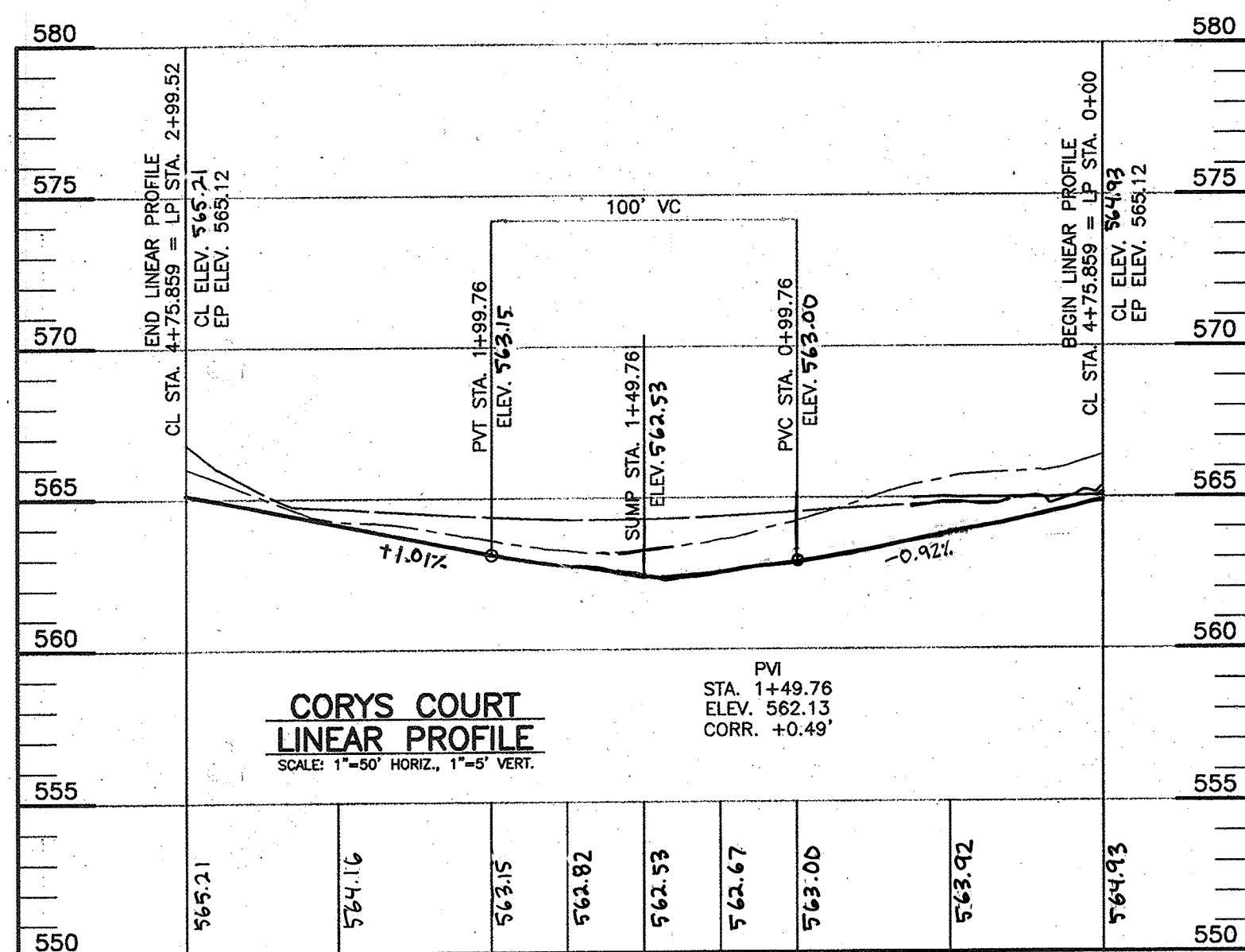
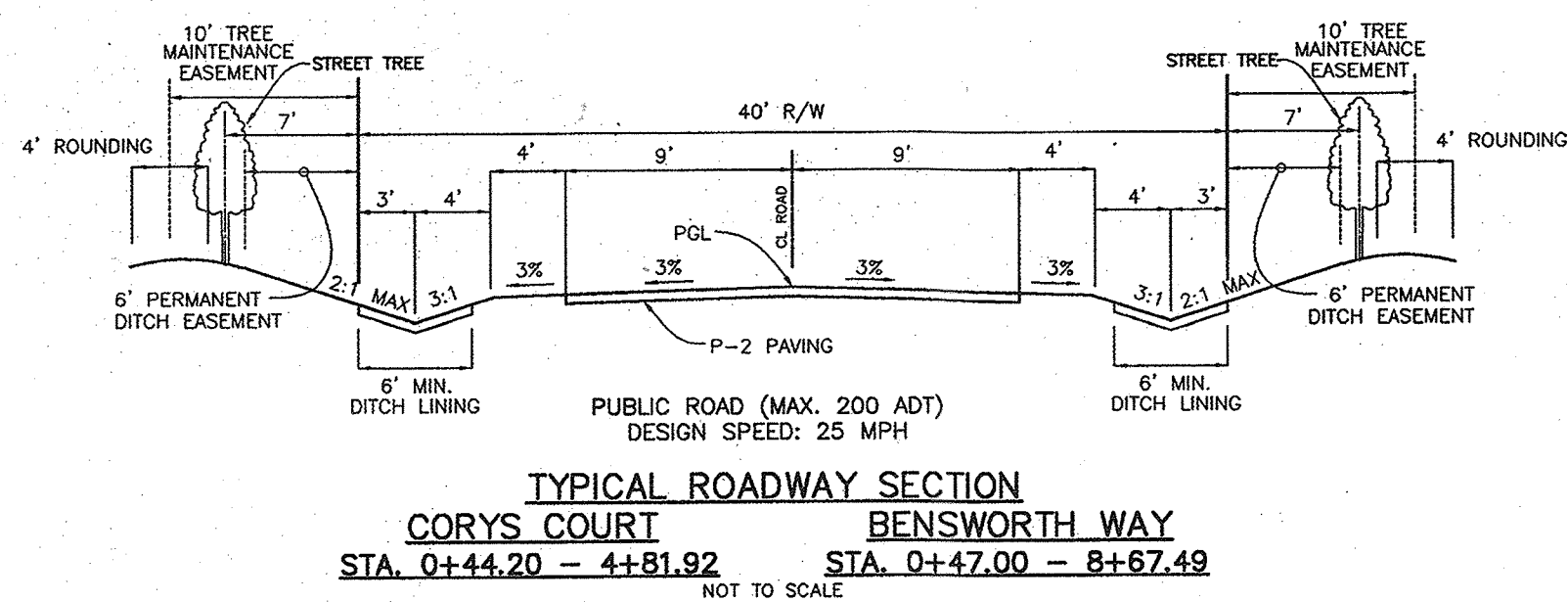
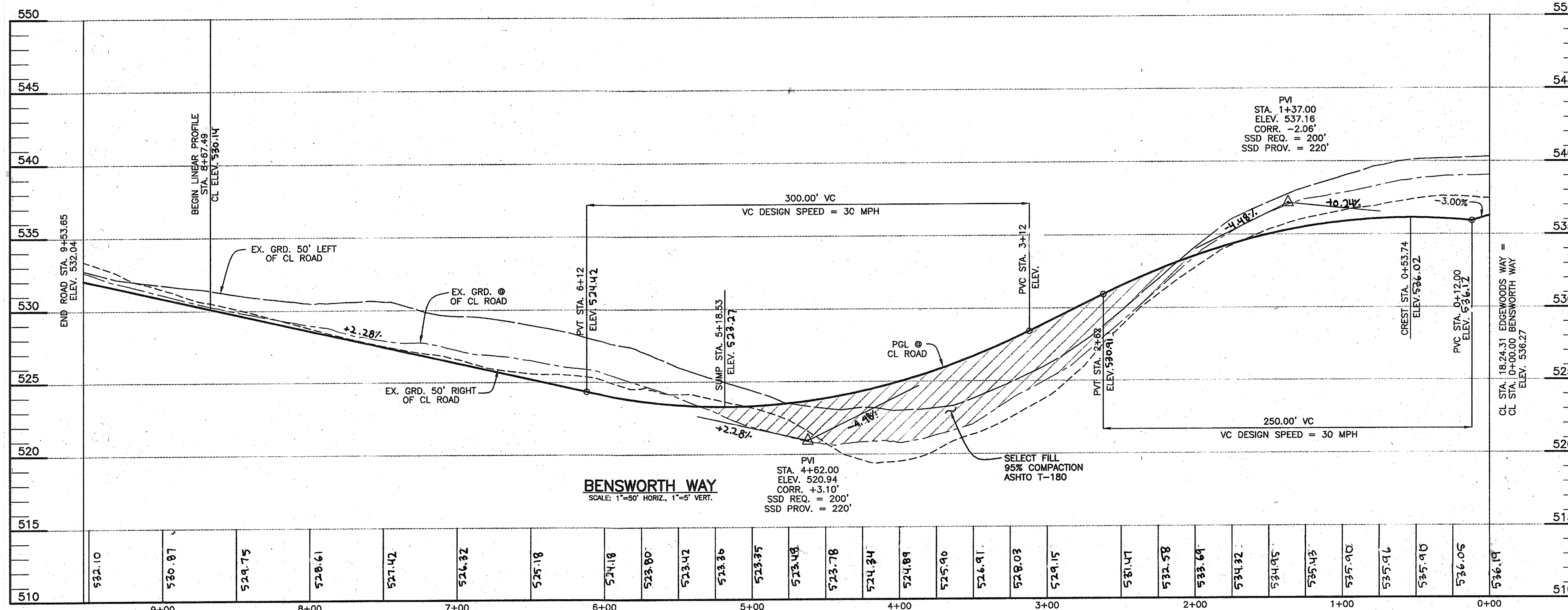
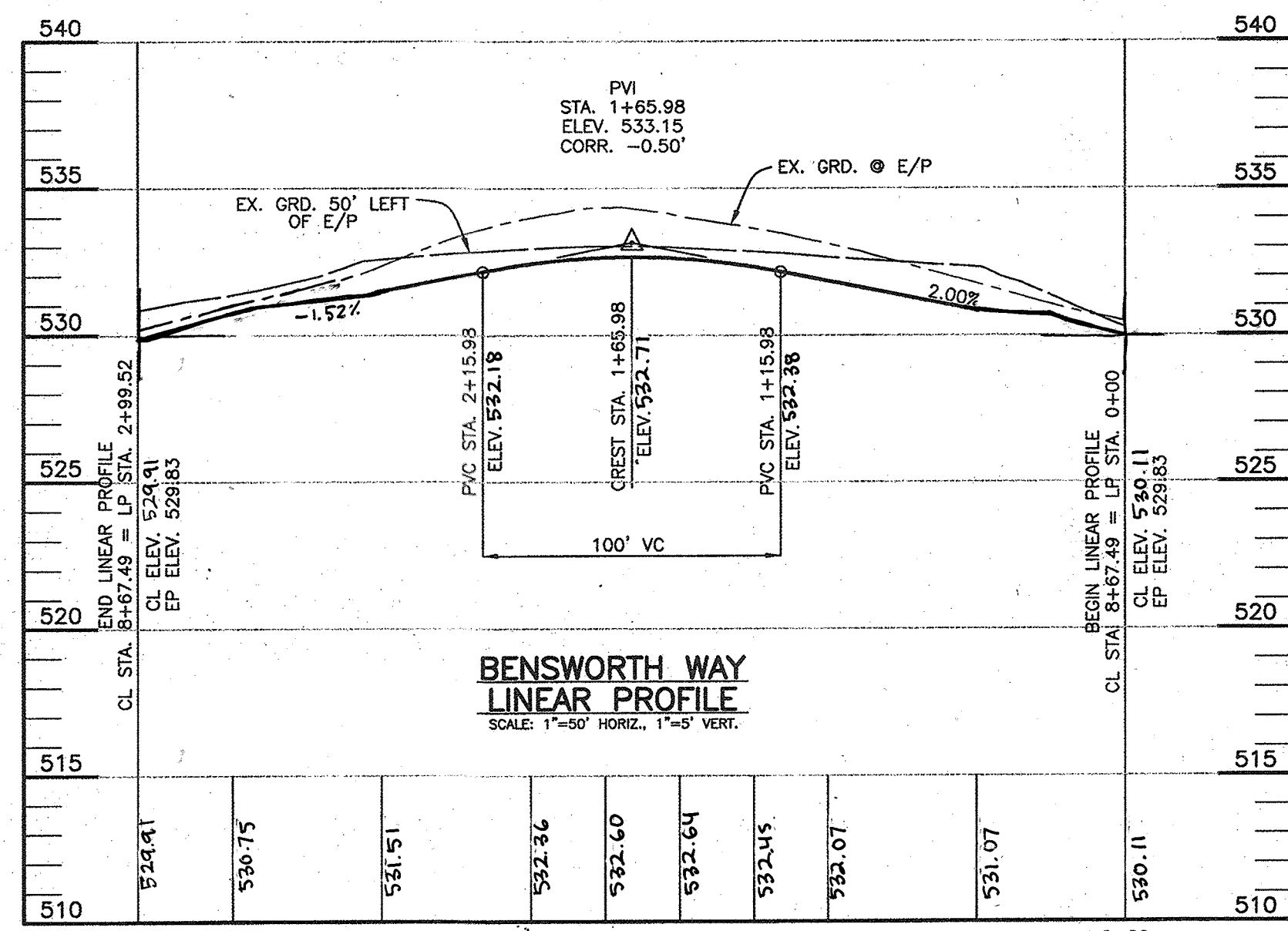
AS-BUILT BENCHMARK
ENGINEERING, INC.
 6480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644
 WWW.BEI-CVLENGINEERING.COM

OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 PARCEL 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DATE: JULY, 2006	PROJECT NO. 1550
SCALE: AS SHOWN	SHEET 5 OF 27

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.



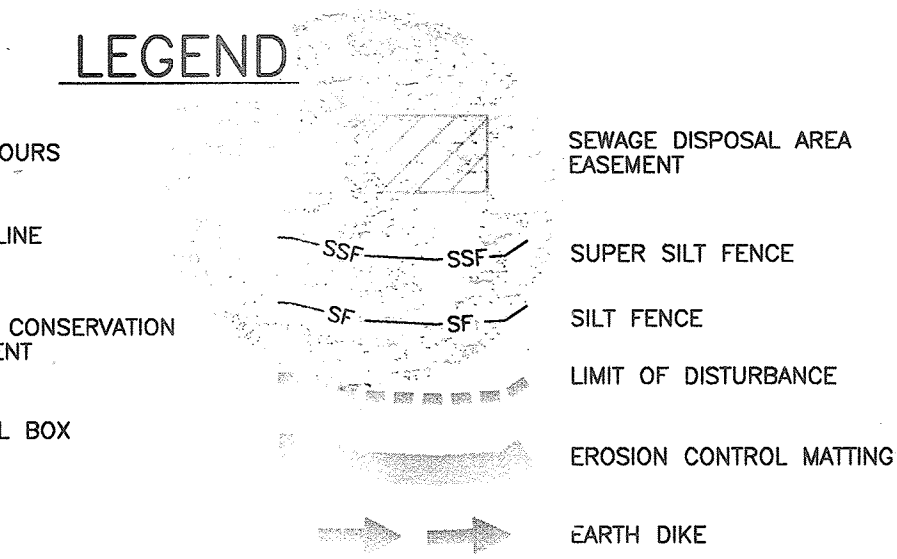
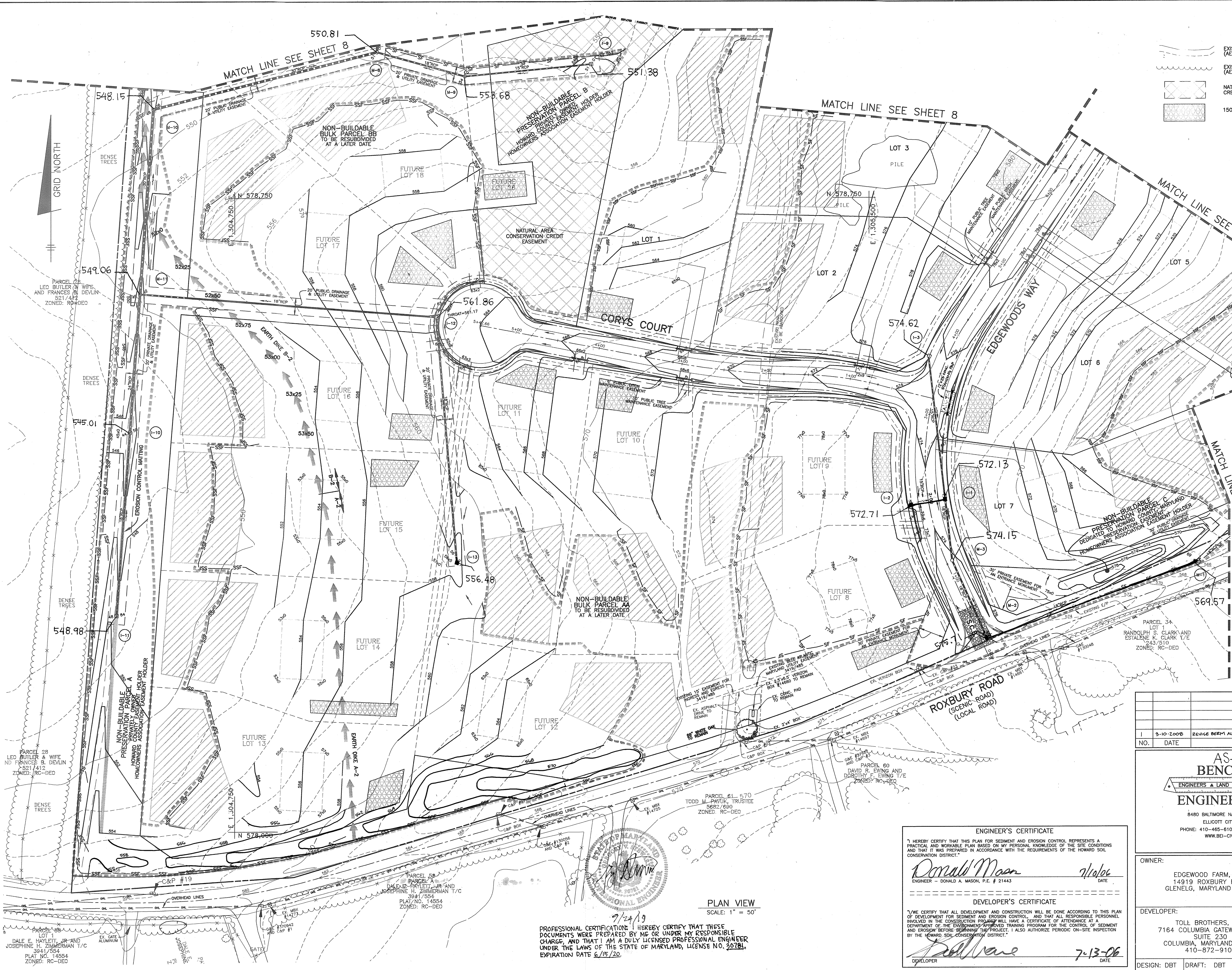
9/29/19



APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] CHIEF, DIVISION OF LAND DEVELOPMENT DATE

<p>AS-BUILT BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-8105 FAX: 410-465-6844 WWW.BE-CIVILENGINEERING.COM</p>		<p>STATE OF MARYLAND <i>Donald M. Moore</i> PROFESSIONAL ENGINEER 7/11/06</p>	
OWNER:	EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT:	EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER:	TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION:	TAX MAP: 21, GRID: 22 PARCELS: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DESIGN: DBT	DRAFT: DBT	CHECK: DAM	TITLE: ROAD PROFILES
DATE: JULY, 2006	PROJECT NO. 1550	SCALE: AS SHOWN	SHEET 6 OF 27



- NOTES:
1. EROSION CONTROL MATTING TO BE PLACED IN ALL ROADSIDE DITCHES.
 2. CONTRACTOR SHALL CURL ALL ENDS OF SILT FENCE AND SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
 3. NO MORE THAN 20 AC MAY BE UNSTABILIZED AT ANY TIME.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jan Meyer / *for* 8/19/06
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John S. Kelly 8/19/06
 HOWARD SCD DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

[Signature] / *[Signature]*
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Carole Hamstra 9/7/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/6/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
1	3-10-2008	REVISE BERM ALONG LOTS 12 & 13, REVISE STANDING PAD LOCATION & SIZE.

AS-BUILT BENCHMARK

ENGINEERS • LAND SURVEYORS • PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 211043
 PHONE: 410-485-8105 FAX: 410-485-8844
 WWW.BE-CIVLENGINEERING.COM

Donald Mason
 PROFESSIONAL ENGINEER
 7/13/06

ENGINEER'S CERTIFICATE

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

Donald Mason 7/13/06
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE

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

Donald Mason 7-13-06
 DEVELOPER DATE

OWNER: EDGEWOOD FARM, INC.
 14919 ROXBURY ROAD
 GLENELG, MARYLAND 21737

PROJECT: EDGEWOOD FARM
 PHASE 1
 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH'
 NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'

LOCATION: TAX MAP: 21, GRID: 22
 PARCEL 90
 ELECTION DISTRICT NO. 4
 HOWARD COUNTY, MARYLAND

DEVELOPER: TOLL BROTHERS, INC.
 7164 COLUMBIA GATEWAY DRIVE
 SUITE 230
 COLUMBIA, MARYLAND 21046
 410-872-9105

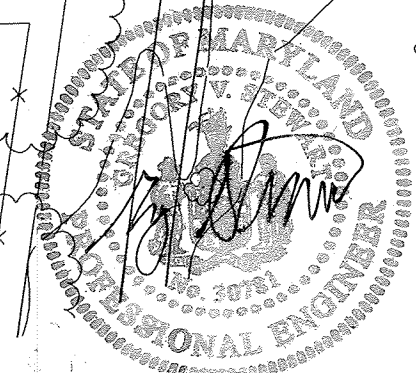
TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN

DATE: JULY, 2006 PROJECT NO. 1550
 SCALE: AS SHOWN SHEET 7 OF 27

DESIGN: DBT DRAFT: DBT CHECK: DAM

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.

7/24/19



PLAN VIEW
 SCALE: 1" = 50'

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. 21443
 DONALD A. MASON
 DATE

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION, THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE THE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason 7/10/06
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THE PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

John A. Mason 7-13-06
 DEVELOPER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim May 8/9/06
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John A. Mason 8/9/06
 HOWARD SCD DATE

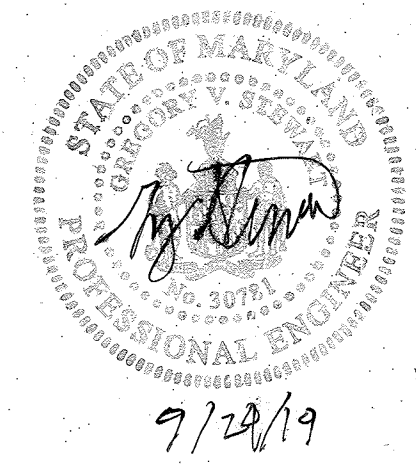
APPROVED: DEPARTMENT OF PUBLIC WORKS

John A. Mason 8/9/06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

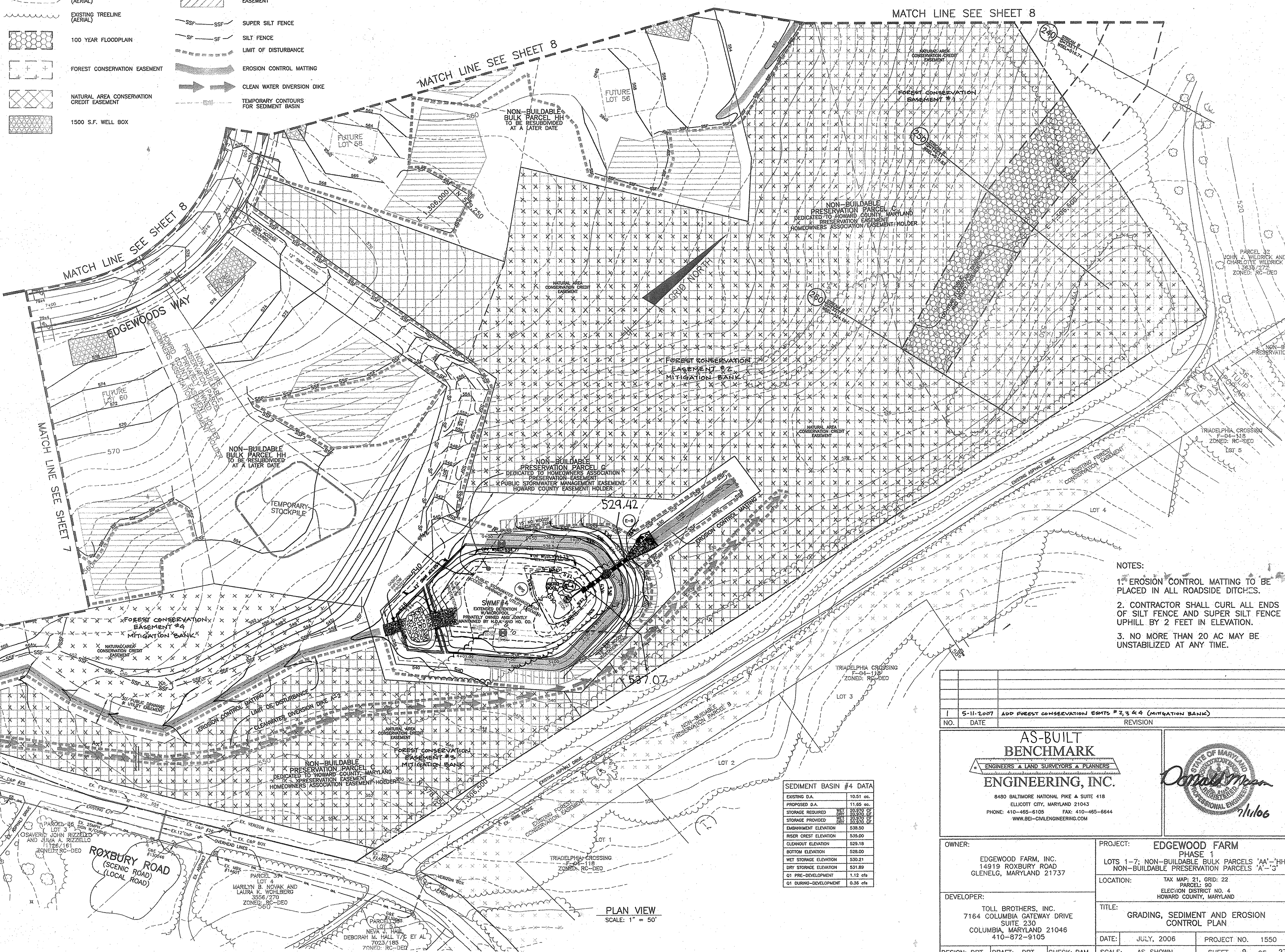
Condy Hamilton 9/7/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Mike 9/10/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20181, EXPIRATION DATE 6/15/20.



LEGEND

- EXISTING CONTOURS (AERIAL)
- EXISTING TREELINE (AERIAL)
- 100 YEAR FLOODPLAIN
- FOREST CONSERVATION EASEMENT
- NATURAL AREA CONSERVATION CREDIT EASEMENT
- 1500 S.F. WELL BOX
- SEWAGE DISPOSAL AREA EASEMENT
- SUPER SILT FENCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- EROSION CONTROL MATTING
- CLEAN WATER DIVERSION DIKE
- TEMPORARY CONTOURS FOR SEDIMENT BASIN

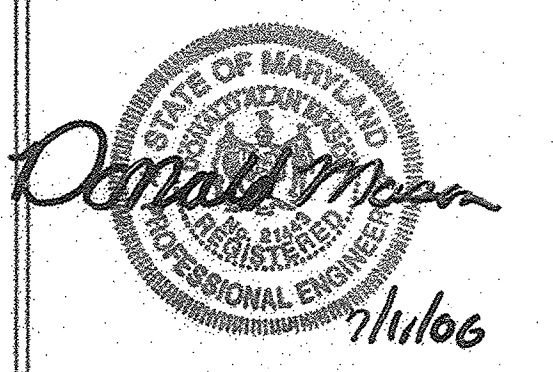


- NOTES:**
1. EROSION CONTROL MATTING TO BE PLACED IN ALL ROADSIDE DITCHES.
 2. CONTRACTOR SHALL CURL ALL ENDS OF SILT FENCE AND SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
 3. NO MORE THAN 20 AC MAY BE UNSTABILIZED AT ANY TIME.

NO.	DATE	REVISION
1	5-11-2007	ADD FOREST CONSERVATION EMTS # 2, 3 & 4 (MITIGATION BANK)

AS-BUILT BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644
 WWW.BEI-CIVLENGINEERING.COM



SEDIMENT BASIN #4 DATA

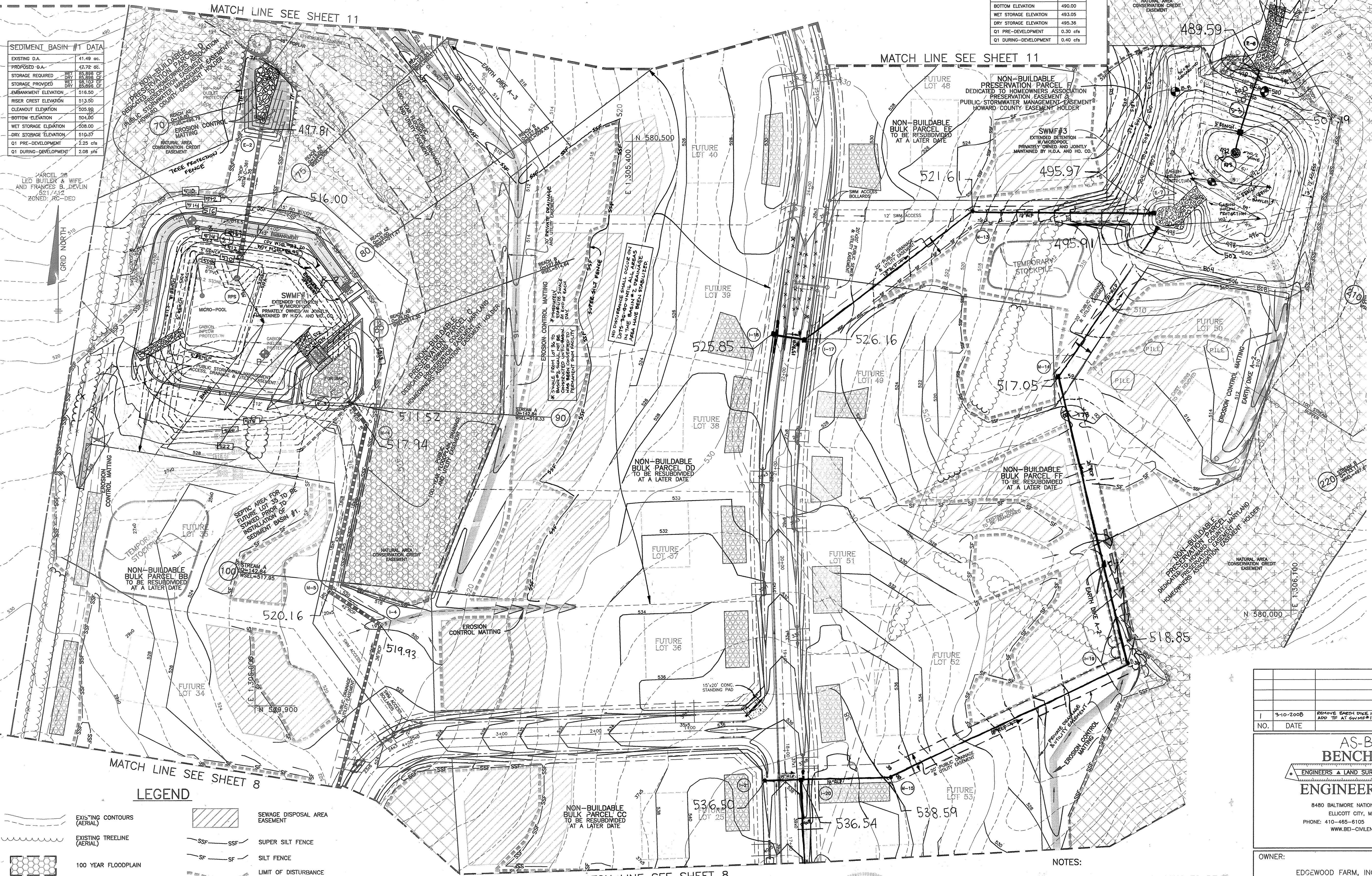
EXISTING D.A.	10.51 ac.
PROPOSED D.A.	11.65 ac.
STORAGE REQUIRED	20,970 cu ft
STORAGE PROVIDED	20,970 cu ft
EMBANKMENT ELEVATION	538.50
RISER CREST ELEVATION	535.00
CLEANOUT ELEVATION	529.18
BOTTOM ELEVATION	528.00
WET STORAGE ELEVATION	530.21
DRY STORAGE ELEVATION	531.89
Q1 PRE-DEVELOPMENT	1.12 cfs
Q1 DURING-DEVELOPMENT	0.38 cfs

OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 PARCELS 80 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN	DATE: JULY, 2006 PROJECT NO.: 1550
DESIGN: DBT DRAFT: DBT CHECK: DAM	SCALE: AS SHOWN SHEET: 9 OF 27

PLAN VIEW
 SCALE: 1" = 50'

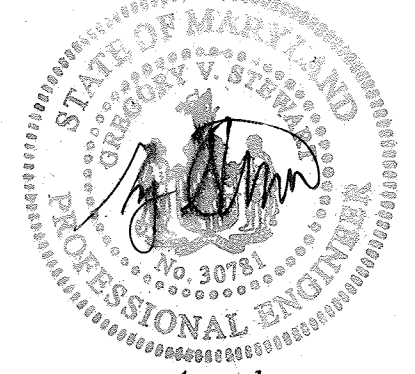
SEDIMENT BASIN #1 DATA	
EXISTING D.A.	41.49 ac.
PROPOSED D.A.	47.72 ac.
STORAGE PROVIDED	35,334 CF
EMBANKMENT ELEVATION	516.50
RISER CREST ELEVATION	513.50
CLEANOUT ELEVATION	505.90
BOTTOM ELEVATION	504.50
WET STORAGE ELEVATION	508.00
DRY STORAGE ELEVATION	510.37
Q1 PRE-DEVELOPMENT	2.25 cfs
Q1 DURING-DEVELOPMENT	2.08 cfs

SEDIMENT BASIN #3 DATA	
EXISTING D.A.	6.54 ac.
PROPOSED D.A.	19.63 ac.
STORAGE PROVIDED	35,334 CF
EMBANKMENT ELEVATION	502.00
RISER CREST ELEVATION	499.00
CLEANOUT ELEVATION	491.64
BOTTOM ELEVATION	490.00
WET STORAGE ELEVATION	493.05
DRY STORAGE ELEVATION	495.36
Q1 PRE-DEVELOPMENT	0.30 cfs
Q1 DURING-DEVELOPMENT	0.40 cfs



LEGEND	
	EXISTING CONTOURS (AERIAL)
	EXISTING TREELINE (AERIAL)
	100 YEAR FLOODPLAIN
	FOREST CONSERVATION EASEMENT
	NATURAL AREA CONSERVATION CREDIT EASEMENT
	1500 S.F. WELL BOX
	SEWAGE DISPOSAL AREA EASEMENT
	SSF — SSF SUPER SILT FENCE
	SF — SF SILT FENCE
	LIMIT OF DISTURBANCE
	EROSION CONTROL MATTING
	CLEAN WATER DIVERSION DIKE
	TEMPORARY CONTOURS FOR SEDIMENT BASIN

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.



- NOTES:
1. EROSION CONTROL MATTING TO BE PLACED IN ALL ROADSIDE DITCHES.
 2. CONTRACTOR SHALL CURL ALL ENDS OF SILT FENCE AND SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
 3. NO MORE THAN 20 AC MAY BE UNSTABILIZED AT ANY TIME.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. 21443
DATE

DONALD A. MASON

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE THE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason 7/13/06
ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Jim Ryan 8/1/06
DEVELOPER DATE

USDA - NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE

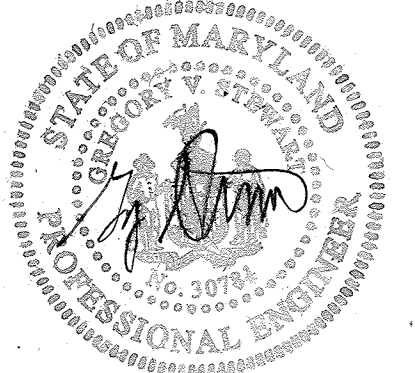
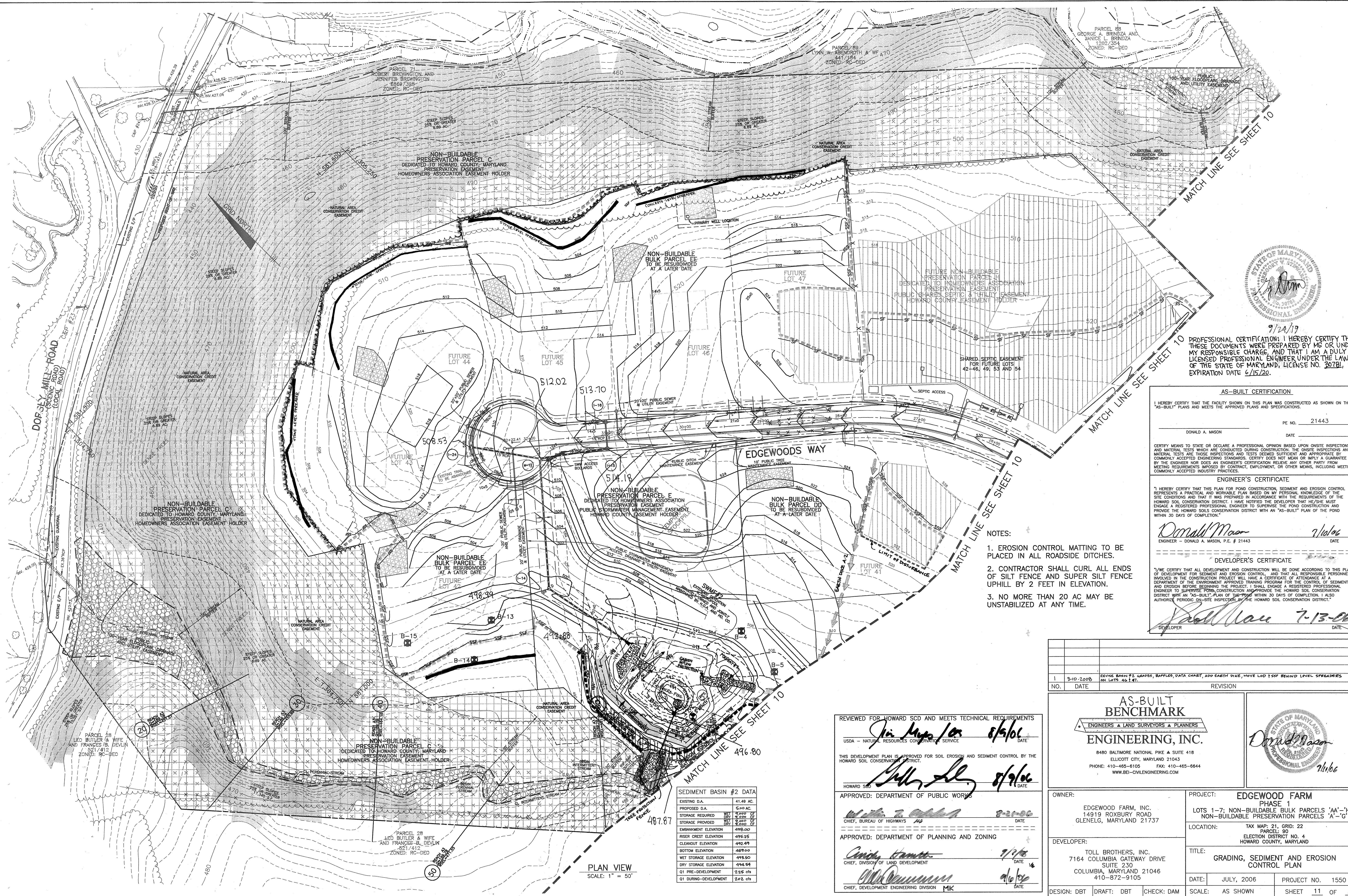
NO.	DATE	REVISION
1	3-10-2008	REMOVE BATH DITCH IN REAR OF LOTS 36-40, ADD 9'x6' ADD 6'x4'6" NOTE, AND DISTURBANCE NOTE ADD TP AT SWMF#1 OUTFALL, REVISE SWMF#3 CONSTRUCTION

AS-BUILT BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-485-8105 FAX: 410-485-6844
WWW.BE-CIVILENGINEERING.COM

Donal Mason 7/13/06

OWNER:	EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT:	EDGEWOOD FARM PHASE 1 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER:	TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION:	TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DESIGN:	DBT	DRAFT:	DBT
CHECK:	DAM	DATE:	JULY, 2006
SCALE:	AS SHOWN	PROJECT NO.:	1550
		SHEET:	10 OF 27



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20781, EXPIRATION DATE 6/15/20.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. 21443
DONALD A. MASON
DATE

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE THE POND CONSTRUCTION AND PROVIDE THE HOWARD SOILS CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald A. Mason 7/10/06
ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOILS CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOILS CONSERVATION DISTRICT.

Donald A. Mason 7-13-06
DEVELOPER DATE

- NOTES:**
1. EROSION CONTROL MATTING TO BE PLACED IN ALL ROADSIDE DITCHES.
 2. CONTRACTOR SHALL CURL ALL ENDS OF SILT FENCE AND SUPER SILT FENCE UPHILL BY 2 FEET IN ELEVATION.
 3. NO MORE THAN 20 AC MAY BE UNSTABILIZED AT ANY TIME.

SEDIMENT BASIN #2 DATA

EXISTING D.A.	41.49 AC.
PROPOSED D.A.	6.90 AC.
STORAGE REQUIRED	9,500 CF
STORAGE PROVIDED	9,500 CF
EMBANKMENT ELEVATION	498.00
RISER CREST ELEVATION	495.25
CLEANOUT ELEVATION	492.49
BOTTOM ELEVATION	489.00
WET STORAGE ELEVATION	493.50
DRY STORAGE ELEVATION	494.54
Q1 PRE-DEVELOPMENT	2.25 cfs
Q1 DURING-DEVELOPMENT	2.02 cfs

PLAN VIEW
SCALE: 1" = 50'

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Donald A. Mason 8/5/06 DATE
USA - NATURAL RESOURCES CONSERVATION SERVICE

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

John A. [Signature] 8/9/06 DATE
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PUBLIC WORKS

Christy Hamlett 9/9/06 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Michael [Signature] 9/10/06 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

NO.	DATE	REVISION
1	3-10-2006	REVISE BASIN #2, GRAPES, BAPLES, DATA CHART, ADD EARTH DIKE, MOVE LOD 1 & 2 BEHIND LEVEL SPREADERS ON LOTS 46 & 47.

AS-BUILT BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8844
WWW.BEI-CVLENGINEERING.COM

Donald A. Mason 7/10/06

OWNER:	EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT:	EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER:	TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION:	TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DESIGN:	DBT	DRAFT:	DBT
CHECK:	DAM	SCALE:	AS SHOWN
DATE:	JULY, 2006	PROJECT NO.:	1550
DATE:	JULY, 2006	SHEET:	11 OF 27

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped to topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and shore breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, branches, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately 6 inches above the ground line. For dry streambeds and management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the slope and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable material. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire surface to be filled. The most permeable borrow material shall be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of the fill is compacted by the equipment. The equipment shall be of heavy equipment or rubber tired shall be achieved by a minimum of four complete passes of a sheepsfoot, compaction roll or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ± 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be a least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" to 10" inch pipe shall meet the requirements of ASTM M252 Type S, and 12" through 24" inch shall meet the requirements of ASTM M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth to provide adequate support.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete - The following criteria shall apply for concrete pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" to 10" inch pipe shall meet the requirements of ASTM M252 Type S, and 12" through 24" inch shall meet the requirements of ASTM M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth to provide adequate support.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diagrams - When a drainage diagram is used, a registered professional engineer will supervise the design and construction inspection.

Concrete - Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi, 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding) over and on the side of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent flooding the pipe. When using flowable fill, all metal pipe shall be bluminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill 24" or greater over the structure or pipe. Backfill outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bluminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. High zinc galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

1. Seed and cover with straw mat.

2. Seed and cover with Erosion Control Matting or fiber with sod.

3. Seed and cover of recycled concrete equivalent placed into the soil 3" minimum.

4. Temporary earth dikes shall have unimproved grass/soil growth to an outlet.

5. Spill alternatives may be necessary for erosion control less than 14'.

6. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

7. Runoff diverted from an undisturbed area shall convey directly into an undisturbed, non-eroded area of a non-eroded area.

8. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to be in contact with the proper functioning of the dike.

9. The dike shall be excavated at the grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which could impede normal flow.

10. Fill shall be compacted by other moving equipment.

11. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

12. Inspection and maintenance shall be provided periodically and after each rain event.

13. Backfilling shall conform to "Structure Backfill".

14. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

15. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THERETO.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4. ALL SEDIMENT TRAPS/BASINS SHOWN SHALL HAVE SUITABLE WARNING SIGNS POSTED AROUND THEIR PERIMETER AT INTERVALS NOT GREATER THAN 100 FEET IN ACCORDANCE WITH VOLUME I, CHAPTER 7 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 5) SOI (SEC. 5A), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52), TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL FURTHER ACTION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

Table with 2 columns: Description and Value. Includes: TOTAL AREA OF SITE (131.9 ACRES), AREA DISTURBED (67.7 ACRES), AREA TO BE ROOFED OR PAVED (2.7 ACRES), AREA TO BE VEGETATIVELY STABILIZED (65.0 ACRES), TOTAL CUT (96,000 CY), TOTAL FILL (96,000 CY), OFFSITE WASTE AREA LOCATION (N/A).

TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) FOR PERIOD MARCH 1 THROUGH APRIL 30, AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT) FOR THE PERIOD NOVEMBER 18 THROUGH FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

- 1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- 2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOO. OPTION (3) SEED WITH 3 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TOPSOIL SPECIFICATIONS

- 1. Topsoil salvaged from the existing site may be used provided that it meets that standards as set forth in these specifications. Typically the depth of topsoil to be salvaged for a given type soil can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- 2. Topsoil Specifications - Soil to be used on topsoil must meet the following:
 - 1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, or other soil type as used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Replant, topsoil shall not be used if containing texture subsalts and shall contain less than 5% by volume of cinders, stones, soil, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.
 - 2. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - 3. Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure.
- 3. For sites having disturbed areas under 5 acres:
 - 1. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- 4. For sites having disturbed areas over 5 acres:
 - 1. On soil meeting Topsoil specifications, obtain tests dictating fertilizer and lime amendments required to bring soil into compliance with the following:
 - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - b. Organic content or topsoil shall be not less than 1.5 percent by weight.
 - 2. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - 3. No soil shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of phytotoxic materials.
- 5. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- 6. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- 7. Topsoil Application:
 - 1. When topsoiling, minimum needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
 - 2. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that bedding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - 3. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- 8. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - 1. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to perform amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted sludge shall be applied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus and 1.5 percent potassium. The material shall be applied at a rate of 4 to 8 cu/yd/1,000 square feet, and the method of application shall be such that the compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - 2. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and the method of application shall be as specified below.
- 9. References: Guidelines Specifications, Soil Preparation and Fertilizing, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

30.0 DUST CONTROL

Controlling dust blowing and movement on construction sites and roads.

Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies: This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications: 1. Mulch - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tracked to prevent blowing.

2. Vegetative Cover - See standards for temporary vegetative cover.

3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.

4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.

5. Barriers - Solid board barriers, all fences, snow fences, barbed fences, straw bales, and similar material can be used to control dust and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.

6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

7. Permanent Methods: Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with soil. Existing trees or large shrubs may afford valuable protection if they are in place.

8. Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.

9. Stone - Cover surface with crushed stone or coarse gravel.

10. Agriculture Handbook 346. Wind Erosion Factors in the United States and Their Use in Predicting Soil Loss.

11. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

12. On soil meeting Topsoil specifications, obtain tests dictating fertilizer and lime amendments required to bring soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content or topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No soil shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of phytotoxic materials.

e. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

f. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

1. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to perform amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

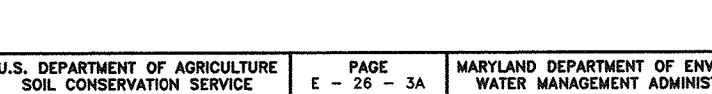
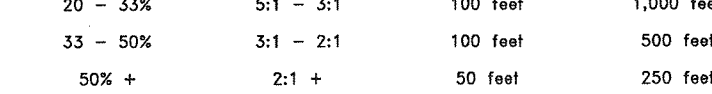
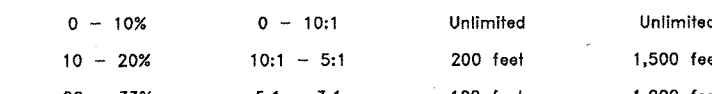
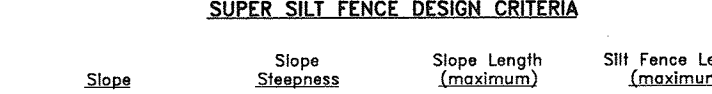
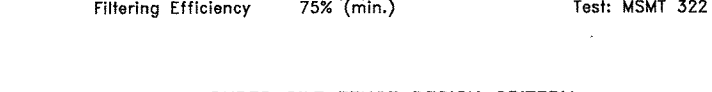
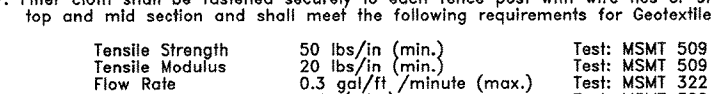
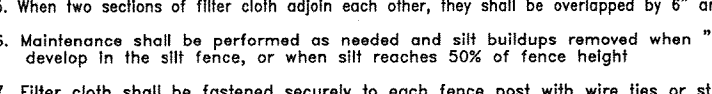
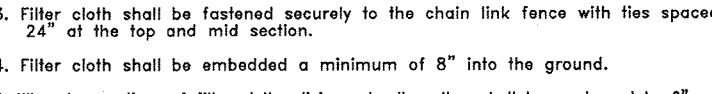
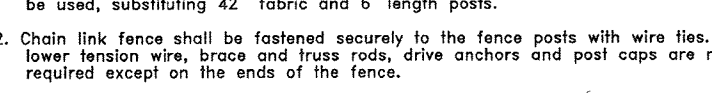
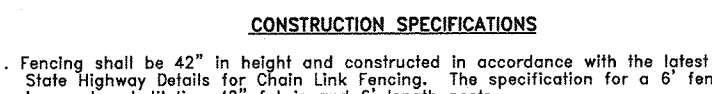
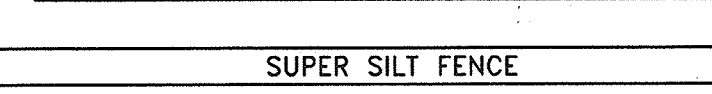
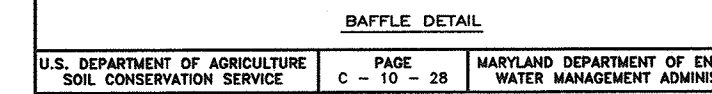
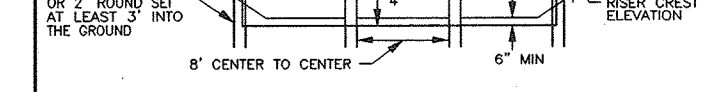
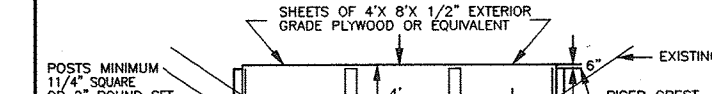
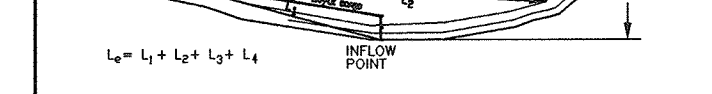
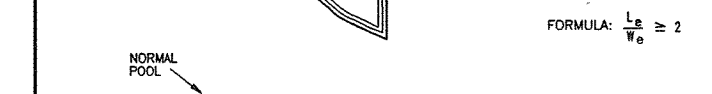
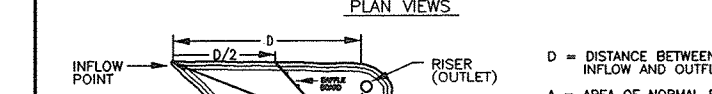
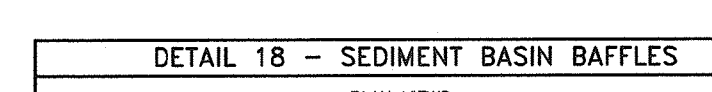
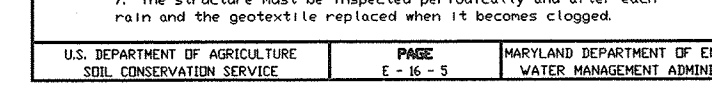
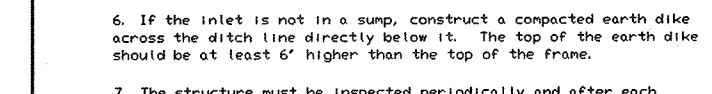
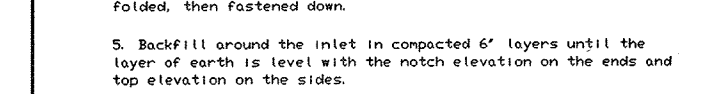
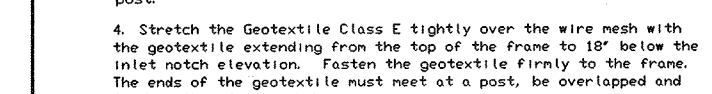
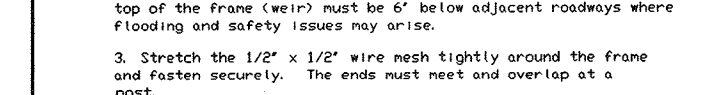
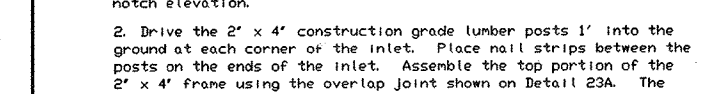
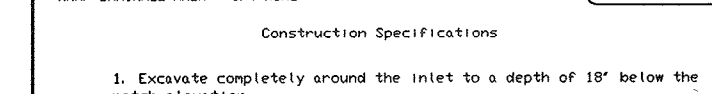
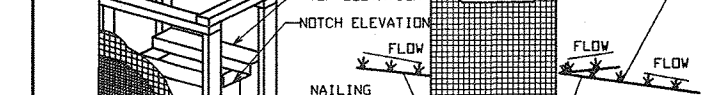
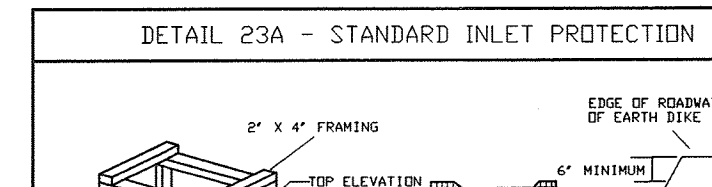
a. Composted sludge shall be applied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus and 1.5 percent potassium. The material shall be applied at a rate of 4 to 8 cu/yd/1,000 square feet, and the method of application shall be such that the compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and the method of application shall be as specified below.

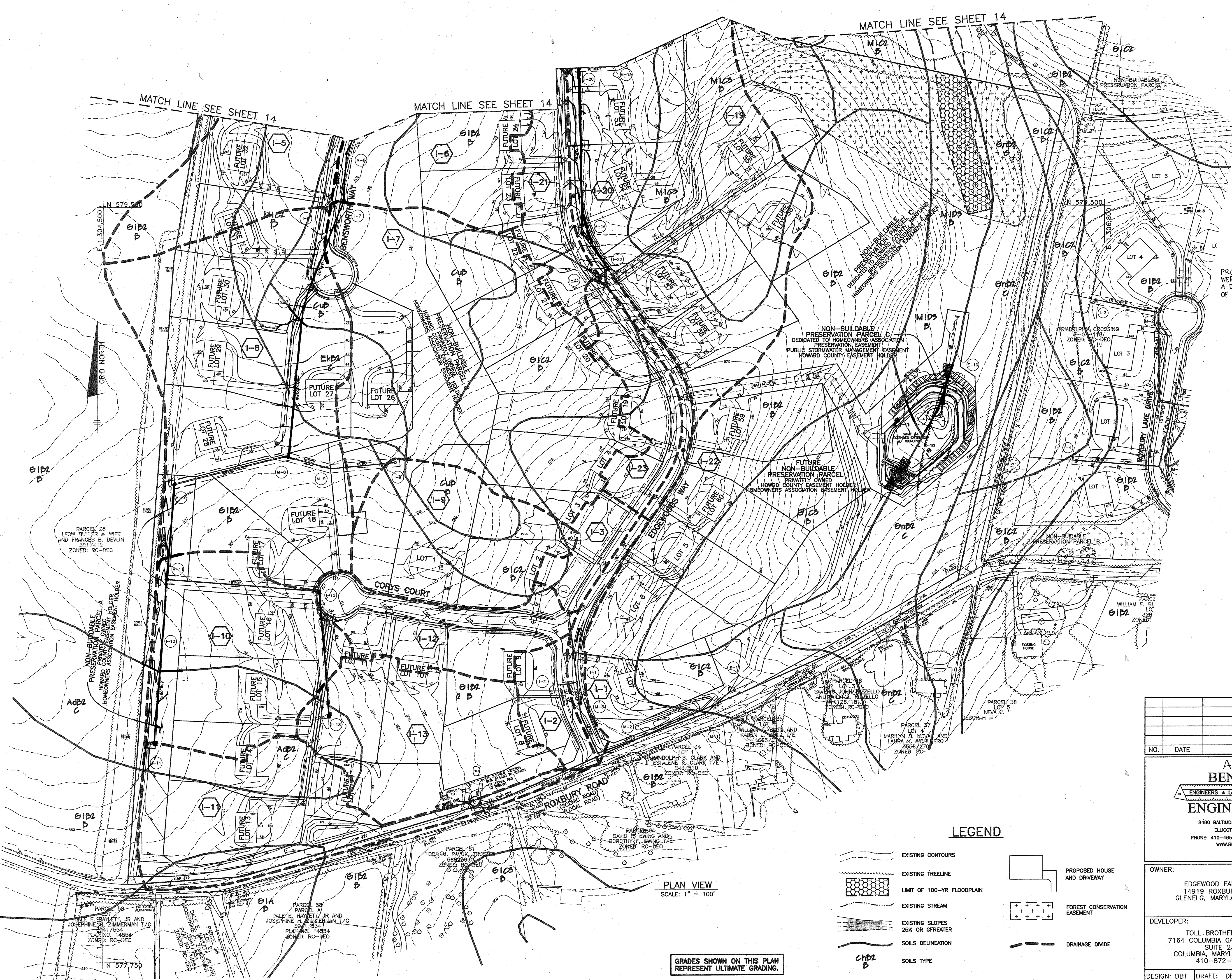
e. References: Guidelines Specifications, Soil Preparation and Fertilizing, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.



SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION

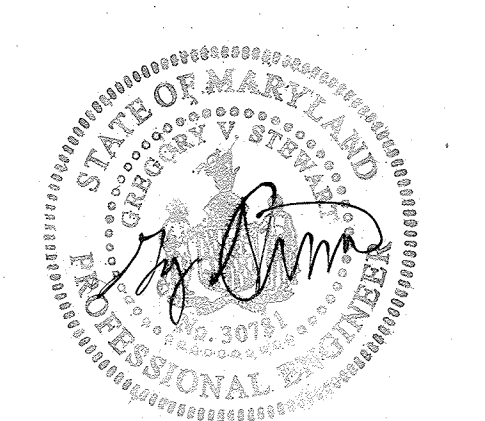
- 1. OBTAIN GRADING PERMIT. (DAY 1)
- 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION FENCES, SUPER SILT FENCES, SILT FENCES, AND TEMPORARY CLEANWATER DIVERSION DIKES. (DAY 2-12) DO NOT INSTALL SUPER SILT FENCE ALONG LOTS 37-40 AT THIS TIME.
- 3. INSTALL ALL 4 SEDIMENT BASINS (DAY 13-60)
- 4. INSTALL EARTH DIKES (DAY 61-68)
- 5. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, BRING ROAD BEDS TO SUBGRADE AND STABILIZE SLOPES IN ACCORDANCE WITH TEMPORARY SEEDING NOTES. UPLIFT DUST CONTROL METHODS. NO MORE THAN 20 AC. MAY BE UNSTABILIZED AT ANY TIME. (DAY 64-81)
- 6. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, INSTALL STORM DRAINS AND SWALES. DO NOT INSTALL SWALE ALONG REAR OF LOTS 37 TO BASIN #2 AT THIS TIME. (DAY 82-112)
-



MATCH LINE SEE SHEET 14

MATCH LINE SEE SHEET 14

MATCH LINE SEE SHEET 14



9/22/19

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30701, EXPIRATION DATE 6/15/20.

STORM DRAIN DATA						
INLET NO.	AREA (AC)	% IMPERVIOUS	SOIL CLASS	ZONING	'C' FACTOR	
I-1	0.46	40.9	B	RC-DEO	0.43	
I-2	0.79	25.8	B	RC-DEO	0.28	
I-3	0.68	25.9	B	RC-DEO	0.27	
I-4	3.35	18.2	B	RC-DEO	0.21	
I-5	3.18	22.6	B	RC-DEO	0.27	
I-6	3.47	16.3	B	RC-DEO	0.22	
I-7	8.14	15.0	B	RC-DEO	0.20	
I-8	8.06	19.5	B	RC-DEO	0.21	
I-9	2.93	15.5	B	RC-DEO	0.20	
I-10	3.80	9.7	B	RC-DEO	0.20	
I-11	3.70	19.6	B,C	RC-DEO	0.25	
I-12	1.95	32.3	B	RC-DEO	0.33	
I-13	3.47	17.8	B,C	RC-DEO	0.21	
I-14	1.32	6.7	B	RC-DEO	0.18	
I-15	0.28	41.4	B	RC-DEO	0.44	
I-16	0.80	26.8	B	RC-DEO	0.29	
I-17	0.70	32.6	B	RC-DEO	0.35	
I-18	1.62	27.7	B	RC-DEO	0.29	
I-19	8.23	16.6	B	RC-DEO	0.20	
I-20	0.29	51.7	B	RC-DEO	0.52	
I-21	1.50	26.1	B	RC-DEO	0.27	
I-22	0.38	50.0	B	RC-DEO	0.51	
I-23	1.33	28.6	B	RC-DEO	0.30	
I-24	0.90	35.1	B	RC-DEO	0.34	

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. Bl...
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/2/06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/2/06

Mark...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/6/06

NO.	DATE	REVISION

AS-BUILT BENCHMARK

ENGINEERS • LAND SURVEYORS • PLANNERS

ENGINEERING, INC.

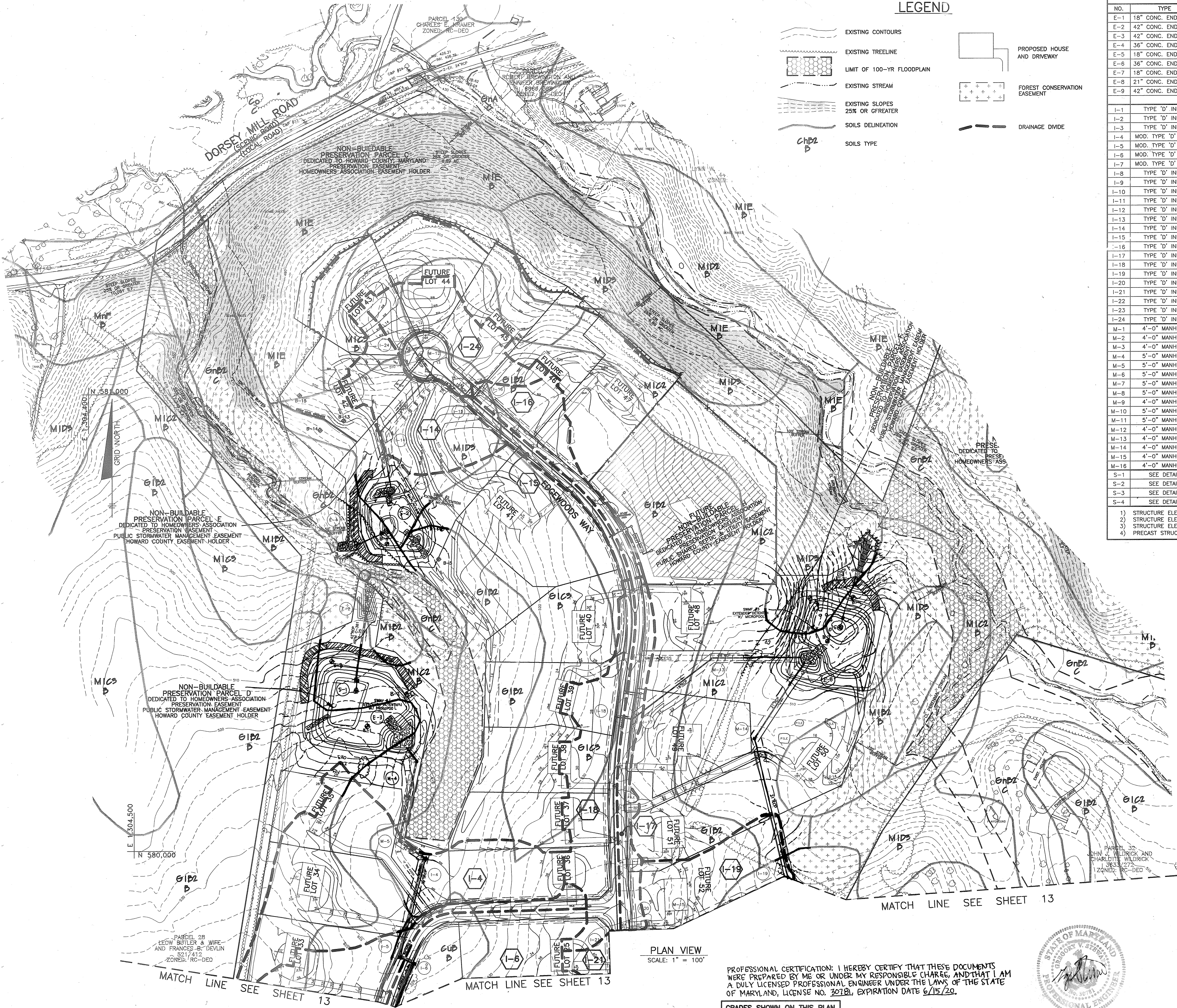
8480 BALTIMORE NATIONAL PIKE • SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 WWW.BEI-CIVILENGINEERING.COM

OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737		PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'	
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105		LOCATION: TAX MAP: 21, GRID: 22 PARCEL: 80 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND	
DESIGN: DBT DRAFT: DBT CHECK: DAM		TITLE: STORM DRAIN DRAINAGE AREA MAP	
DATE: JULY, 2006		PROJECT NO. 1550	
SCALE: AS SHOWN		SHEET 13 OF 27	

- LEGEND**
- EXISTING CONTOURS
 - EXISTING TREELINE
 - LIMIT OF 100-YR FLOODPLAIN
 - EXISTING STREAM
 - EXISTING SLOPES 25% OR GREATER
 - SOILS DELINEATION
 - SOILS TYPE
 - PROPOSED HOUSE AND DRIVEWAY
 - FOREST CONSERVATION EASEMENT
 - DRAINAGE DIVIDE

PLAN VIEW
SCALE: 1" = 100'

GRADES SHOWN ON THIS PLAN REPRESENT ULTIMATE GRADING.



LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- LIMIT OF 100-YR FLOODPLAIN
- EXISTING STREAM
- EXISTING SLOPES 25% OR GREATER
- SOILS DELINEATION
- SOILS TYPE
- PROPOSED HOUSE AND DRIVEWAY
- FOREST CONSERVATION EASEMENT
- DRAINAGE DIVIDE

STRUCTURE SCHEDULE									
NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	HO. CO. STD.			
E-1	18" CONC. END SECT.	N 578375.41 E 1305944.17	---	561.58	---	SD - 5.51			
E-2	42" CONC. END SECT.	N 580523.22 E 1305007.52	---	497.81	---	SD - 5.51			
E-3	42" CONC. END SECT.	N 580231.04 E 1305093.97	---	511.52	---	SD - 5.51			
E-4	36" CONC. END SECT.	N 580667.38 E 1304980.52	---	487.87	---	SD - 5.51			
E-5	18" CONC. END SECT.	N 580796.21 E 1305060.70	---	483.88	---	SD - 5.51			
E-6	36" CONC. END SECT.	N 580579.01 E 1306075.19	---	487.59	---	SD - 5.51			
E-7	18" CONC. END SECT.	N 580420.49 E 1305981.98	---	495.97	---	SD - 5.51			
E-8	21" CONC. END SECT.	N 580409.38 E 1305964.97	---	445.41	---	SD - 5.51			
E-9	42" CONC. END SECT.	N 579100.28 E 1306439.43	---	524.42	---	SD - 5.51			
I-1	TYPE 'D' INLET	CL STA. 2+00.00 OFFSET 20.00' RIGHT (EDGEWOODS WAY)	567.88 (PP)	567.05	572.13	SD - 4.11 OR 4.39			
I-2	TYPE 'D' INLET	CL STA. 2+00.00 OFFSET 20.00' LEFT (EDGEWOODS WAY)	---	569.24	572.71	SD - 4.11 OR 4.39			
I-3	TYPE 'D' INLET	CL STA. 3+64.22 OFFSET 20.00' LEFT (EDGEWOODS WAY)	---	570.70	574.62	SD - 4.11 OR 4.39			
I-4	MOD. TYPE 'D' INLET	N 579985.79 E 1305133.41	513.54	513.60	519.98	---	MODIFIED		
I-5	MOD. TYPE 'D' INLET	CL STA. 5+18.53 OFFSET 17.00' RIGHT (BENS WORTH WAY)	514.71	514.65	521.42	---	SEE DETAIL		
I-6	MOD. TYPE 'D' INLET	CL STA. 5+18.53 OFFSET 17.00' LEFT (BENS WORTH WAY)	515.54	515.44	522.20	---	SHEET 16		
I-7	MOD. TYPE 'D' INLET	CL STA. 7+80.00 OFFSET 17.00' LEFT (BENS WORTH WAY)	520.33 (CP)	519.87	524.96	---	---		
I-8	TYPE 'D' INLET	CL STA. 8+00.00 OFFSET 17.00' RIGHT (BENS WORTH WAY)	---	523.49	527.34	SD - 4.11 OR 4.39			
I-9	TYPE 'D' INLET	N 579908.48 E 1305171.37	---	547.73	551.38	SD - 4.11 OR 4.39			
I-10	TYPE 'D' INLET	N 578473.28 E 1304626.25	540.99	540.39	545.01	SD - 4.11 OR 4.39			
I-11	TYPE 'D' INLET	N 578256.45 E 1304610.58	---	544.50	548.98	SD - 4.11 OR 4.39			
I-12	TYPE 'D' INLET	LP STA. 1+49.76 OFFSET 8.00' LEFT (CORY'S COURT)	550.78	550.64	554.18	SD - 4.11 OR 4.39			
I-13	TYPE 'D' INLET	N 578324.94 E 1305011.90	---	552.24	556.48	SD - 4.11 OR 4.39			
I-14	TYPE 'D' INLET	N 580918.66 E 1305038.00	494.75	494.74	498.99	SD - 4.11 OR 4.39			
I-15	TYPE 'D' INLET	CL STA. 31+01.53 OFFSET 17.00' LEFT (EDGEWOODS WAY)	509.85	509.62	514.18	SD - 4.11 OR 4.39			
I-16	TYPE 'D' INLET	CL STA. 31+01.53 OFFSET 17.00' RIGHT (EDGEWOODS WAY)	---	510.00	513.70	SD - 4.11 OR 4.39			
I-17	TYPE 'D' INLET	CL STA. 22+40.00 OFFSET 17.00' RIGHT (EDGEWOODS WAY)	521.74	521.65	524.11	SD - 4.11 OR 4.39			
I-18	TYPE 'D' INLET	CL STA. 22+40.00 OFFSET 17.00' LEFT (EDGEWOODS WAY)	---	521.99	525.85	SD - 4.11 OR 4.39			
I-19	TYPE 'D' INLET	N 579945.34 E 1305930.30	514.24	514.06	518.86	SD - 4.11 OR 4.39			
I-20	TYPE 'D' INLET	CL STA. 17+72.30 OFFSET 20.00' RIGHT (EDGEWOODS WAY)	523.84 (CP)	521.68	526.54	SD - 4.11 OR 4.39			
I-21	TYPE 'D' INLET	CL STA. 17+72.30 OFFSET 20.00' LEFT (EDGEWOODS WAY)	521.99 (CP)	520.80	524.50	SD - 4.11 OR 4.39			
I-22	TYPE 'D' INLET	CL STA. 12+75.00 OFFSET 20.00' RIGHT (EDGEWOODS WAY)	550.57	550.37	554.45	SD - 4.11 OR 4.39			
I-23	TYPE 'D' INLET	CL STA. 12+75.00 OFFSET 20.00' LEFT (EDGEWOODS WAY)	---	551.12	554.47	SD - 4.11 OR 4.39			
I-24	TYPE 'D' INLET	LP STA. 1+47.76 OFFSET 8.00' LEFT (EDGEWOODS WAY)	---	502.77	508.53	SD - 4.11 OR 4.39			
M-1	4'-0" MANHOLE	N 578322.68 E 1305884.47	562.04	562.02	564.57	G - 5.12			
M-2	4'-0" MANHOLE	CL STA. 0+23.54 OFFSET 7.00' RIGHT (EDGEWOODS WAY)	544.97	544.80	547.11	G - 5.12			
M-3	4'-0" MANHOLE	CL STA. 1+20.40 OFFSET 7.00' RIGHT (EDGEWOODS WAY)	566.28	566.11	571.15	G - 5.12			
M-4	5'-0" MANHOLE	N 580198.90 E 1305117.65	511.64	511.58	517.94	G - 5.03			
M-5	5'-0" MANHOLE	N 580021.78 E 1305079.01	518.07	518.00	520.14	G - 5.03			
M-6	5'-0" MANHOLE	CL STA. 6+71.15 OFFSET 5.72' LEFT (BENS WORTH WAY)	518.19	518.27	525.04	G - 5.13			
M-7	5'-0" MANHOLE	N 579267.26 E 1304948.35	527.72	527.46	534.38	G - 5.13			
M-8	5'-0" MANHOLE	N 578923.09 E 1304917.97	544.77 (CP)	544.78	550.81	G - 5.13			
M-9	4'-0" MANHOLE	N 578894.27 E 1305022.04	524.84 (CP)	524.77	531.68	G - 5.12			
M-10	5'-0" MANHOLE	N 578855.36 E 1304653.87	526.08	526.46	534.15	G - 5.13			
M-11	5'-0" MANHOLE	N 578637.16 E 1304638.10	526.77	526.11	534.01	G - 5.13			
M-12	4'-0" MANHOLE	CL STA. 31+88.65 OFFSET 23.27' LEFT (EDGEWOODS WAY)	512.07 (CP)	512.03	517.02	G - 5.12			
M-13	4'-0" MANHOLE	N 580420.49 E 1305764.35	515.15	514.98	521.61	G - 5.12			
M-14	4'-0" MANHOLE	N 580249.54 E 1305859.15	506.89	506.84	517.06	G - 5.12			
M-15	4'-0" MANHOLE	N 579827.18 E 1305678.66	529.95	529.70	539.59	G - 5.12			
M-16	4'-0" MANHOLE	CL STA. 13+80.96 OFFSET 7.32' RIGHT (EDGEWOODS WAY)	543.46	543.45	551.08	G - 5.12			
S-1	SEE DETAIL	N 580376.11 E 1304983.86	508.08	507.48	516.00	---			
S-2	SEE DETAIL	N 580694.07 E 1305037.01	488.78	488.78	494.80	---			
S-3	SEE DETAIL	N 580505.59 E 1306051.98	486.24	486.24	490.19	---			
S-4	SEE DETAIL	N 579039.13 E 1306429.53	524.98	524.94	527.07	---			

- 1) STRUCTURE ELEVATION AND LOCATION FOR MANHOLES IS AT THE TOP AND CENTER OF RIM.
- 2) STRUCTURE ELEVATION AND LOCATION FOR INLETS IS AT THE TOP CENTER OF SLAB FOR 'D' INLETS.
- 3) STRUCTURE ELEVATION AND LOCATION FOR ENDECTIONS IS AT THE MIDPOINT AT THE END OF STRUCTURE.
- 4) PRECAST STRUCTURES MEETING HS-20 LOADING MAY BE USED.

APPROVED: DEPARTMENT OF PUBLIC WORKS
John J. Wilbur
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/2/06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamitt
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/6/06

Mike Damann
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/6/06

NO.	DATE	REVISION
1	3-10-2006	REVISE TOP ELEV. OF I-12 IN STRUCTURE SCHEDULE

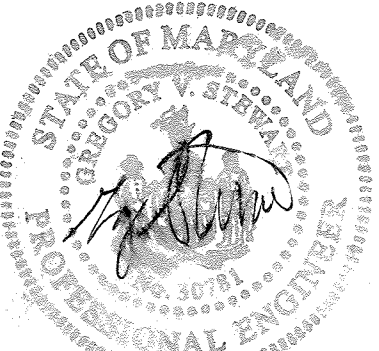
BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 WWW.BE-CVLENGINEERING.COM

Donald Mason
 PROFESSIONAL ENGINEER
 7/10/06

OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE I LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DESIGN: DBT	DRAFT: DBT
CHECK: DAM	SCALE: AS SHOWN
DATE: JULY, 2006	PROJECT NO. 1550
SHEET 14	OF 27

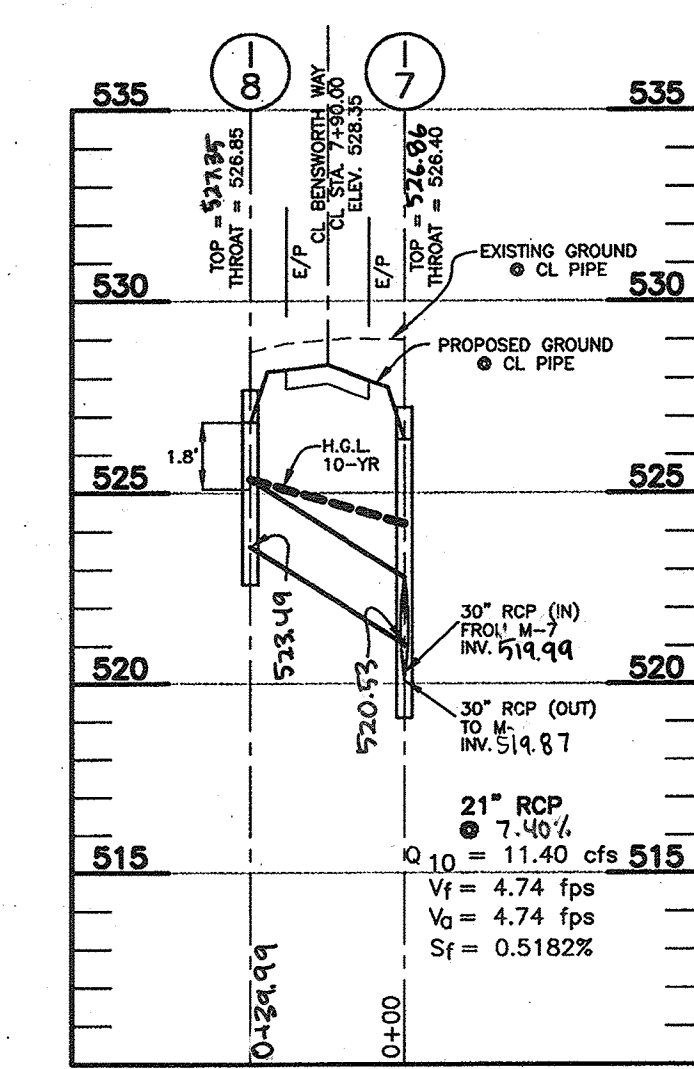
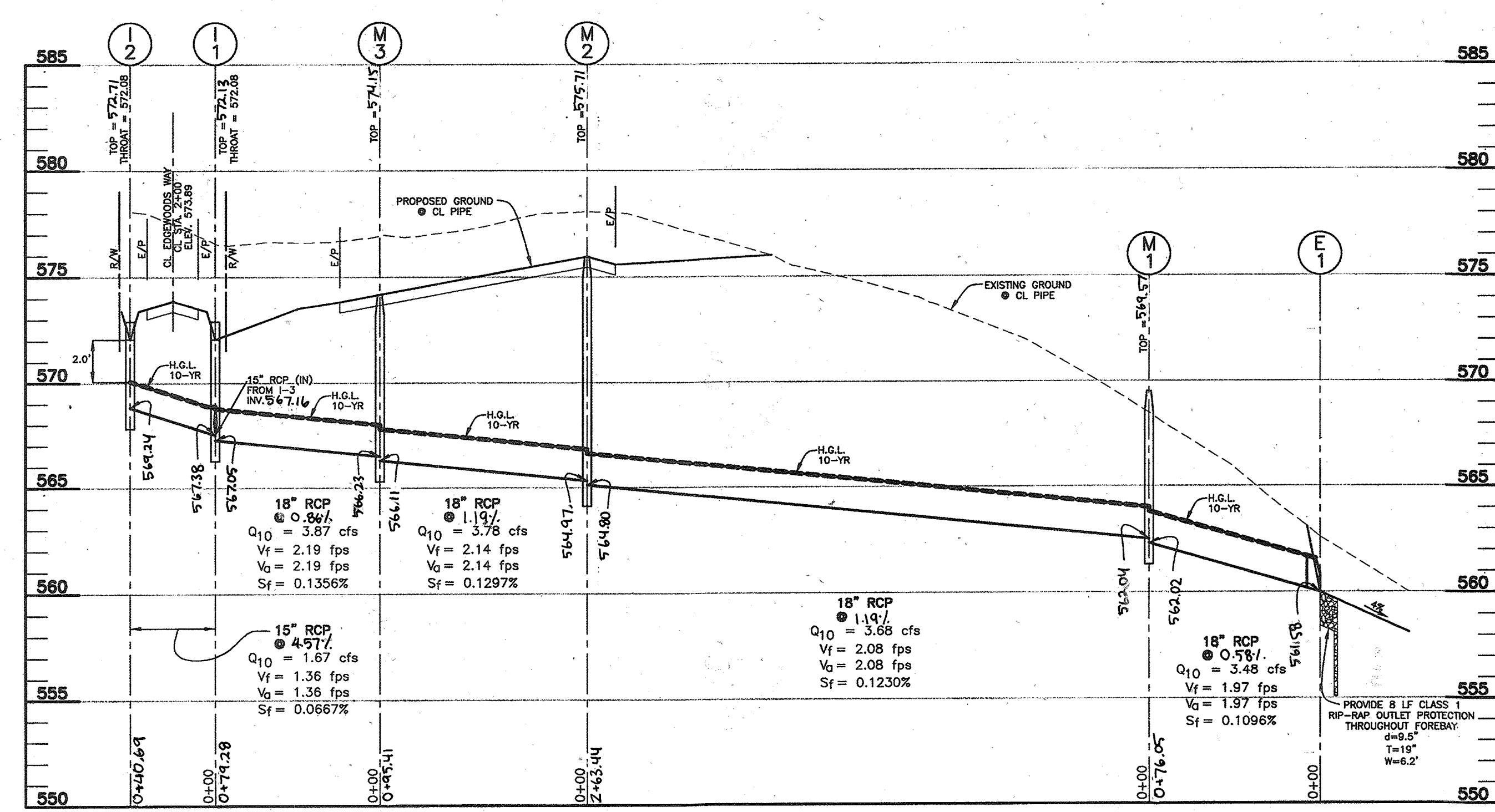
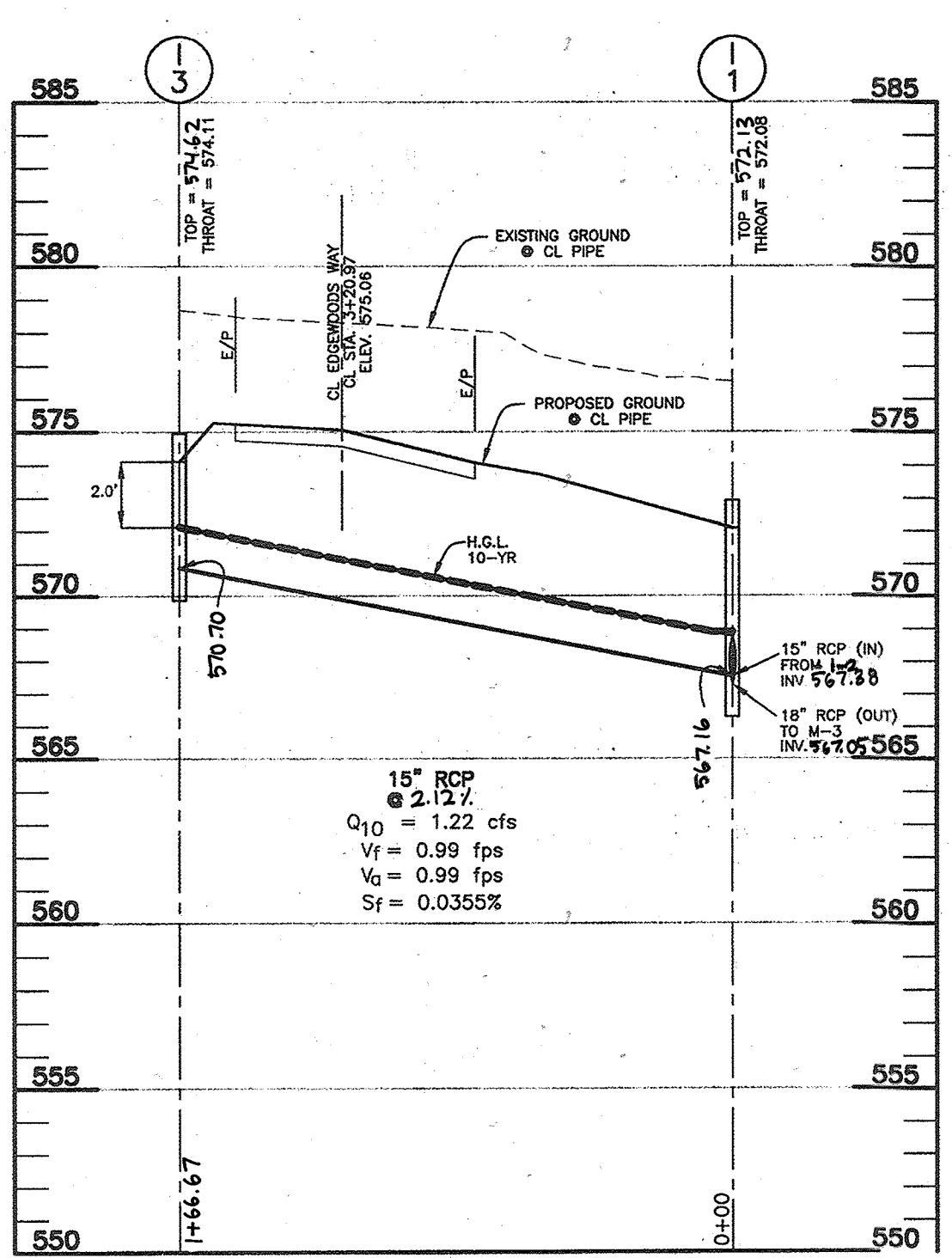
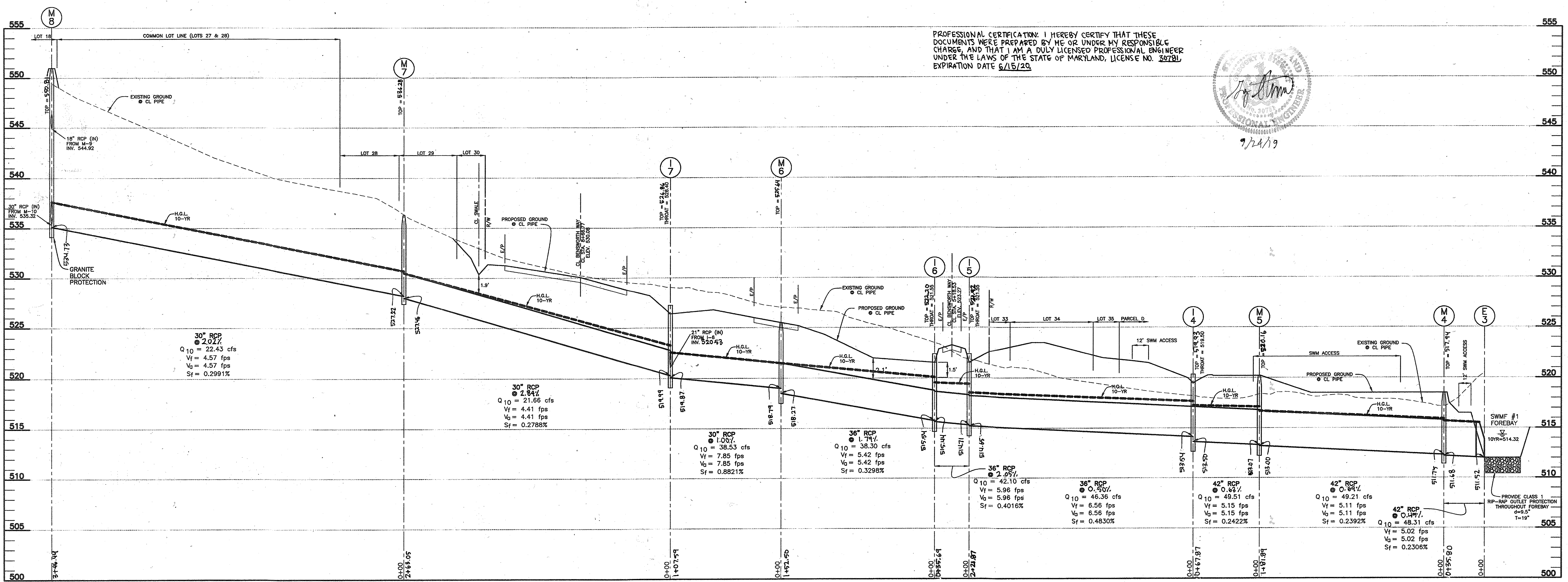
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30181, EXPIRATION DATE 6/15/20.

GRADES SHOWN ON THIS PLAN REPRESENT ULTIMATE GRADING.



9/24/06

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28781, EXPIRATION DATE 6/15/20.



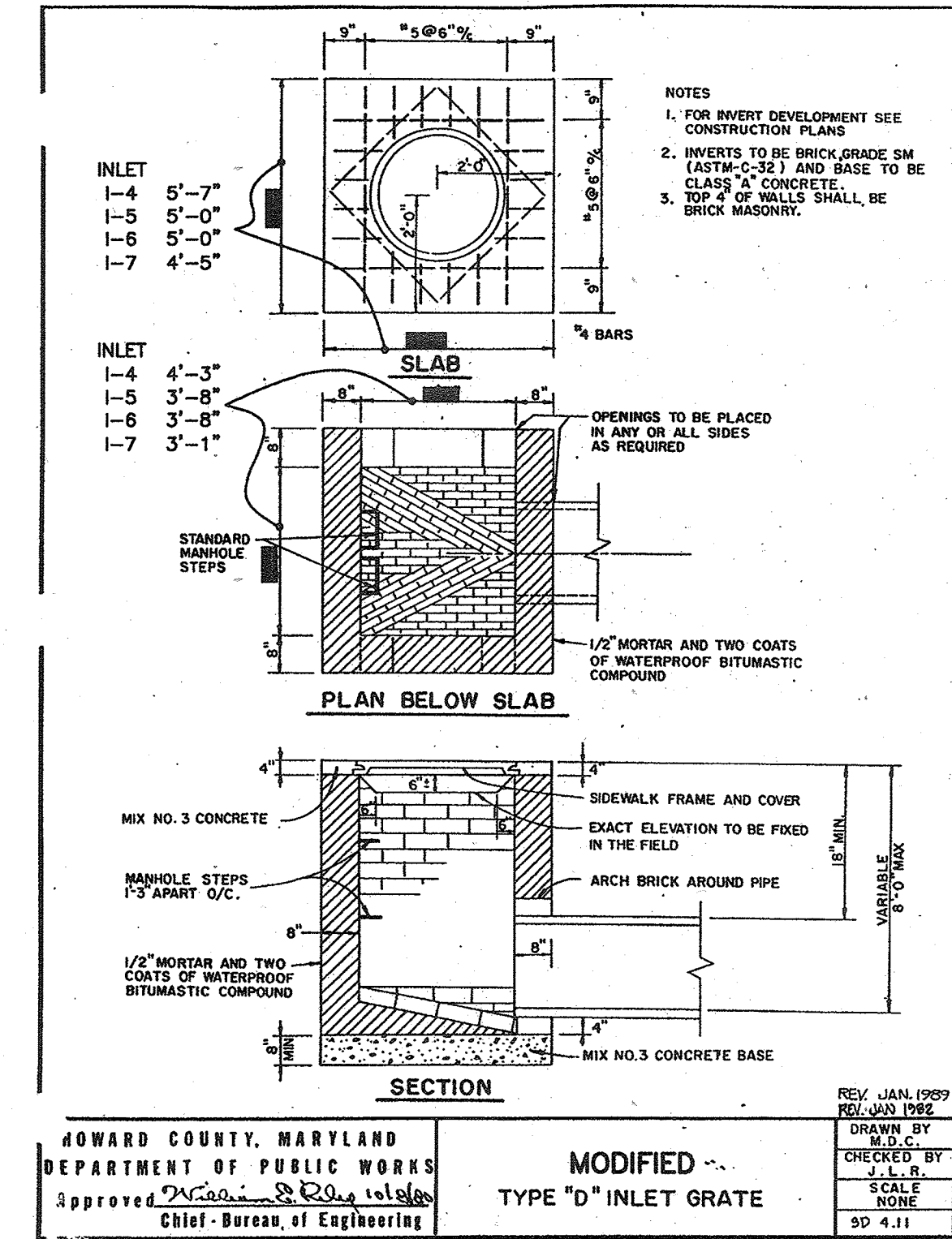
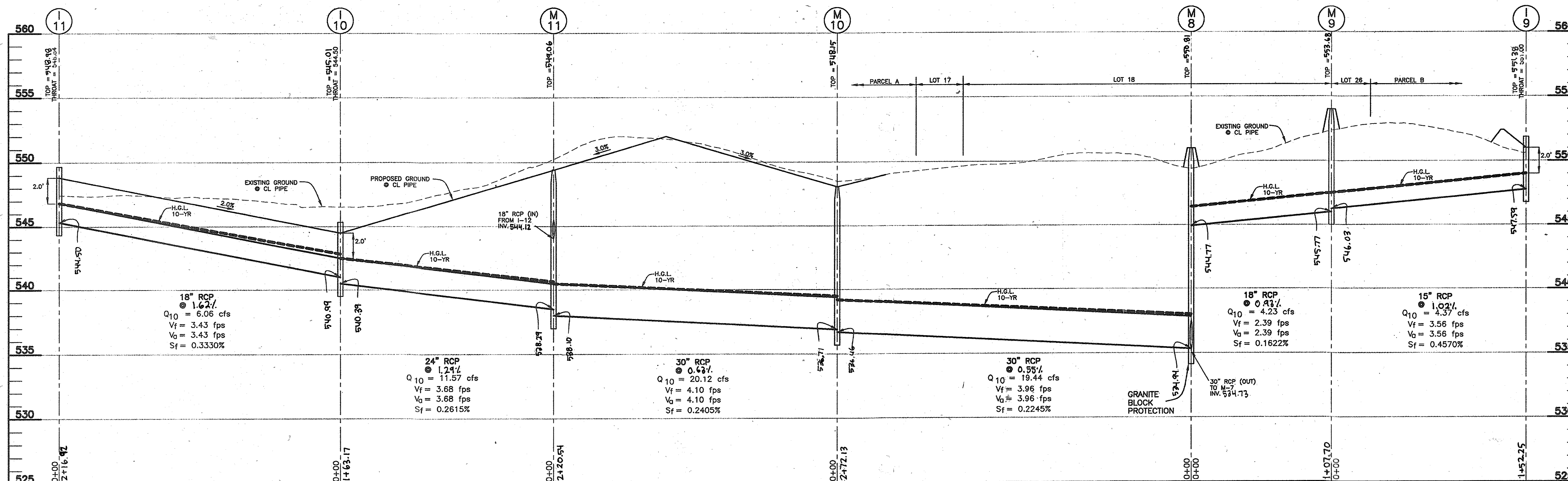
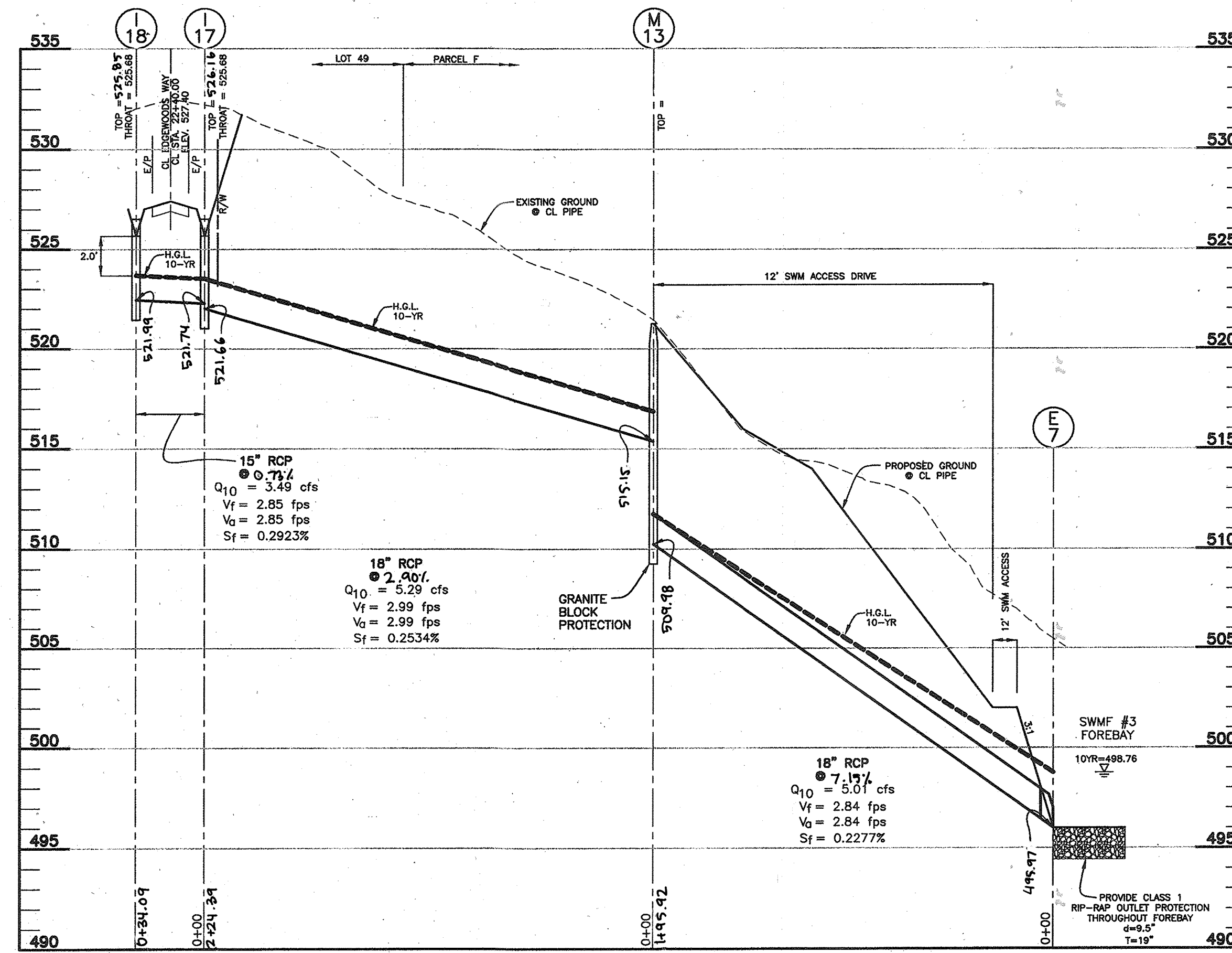
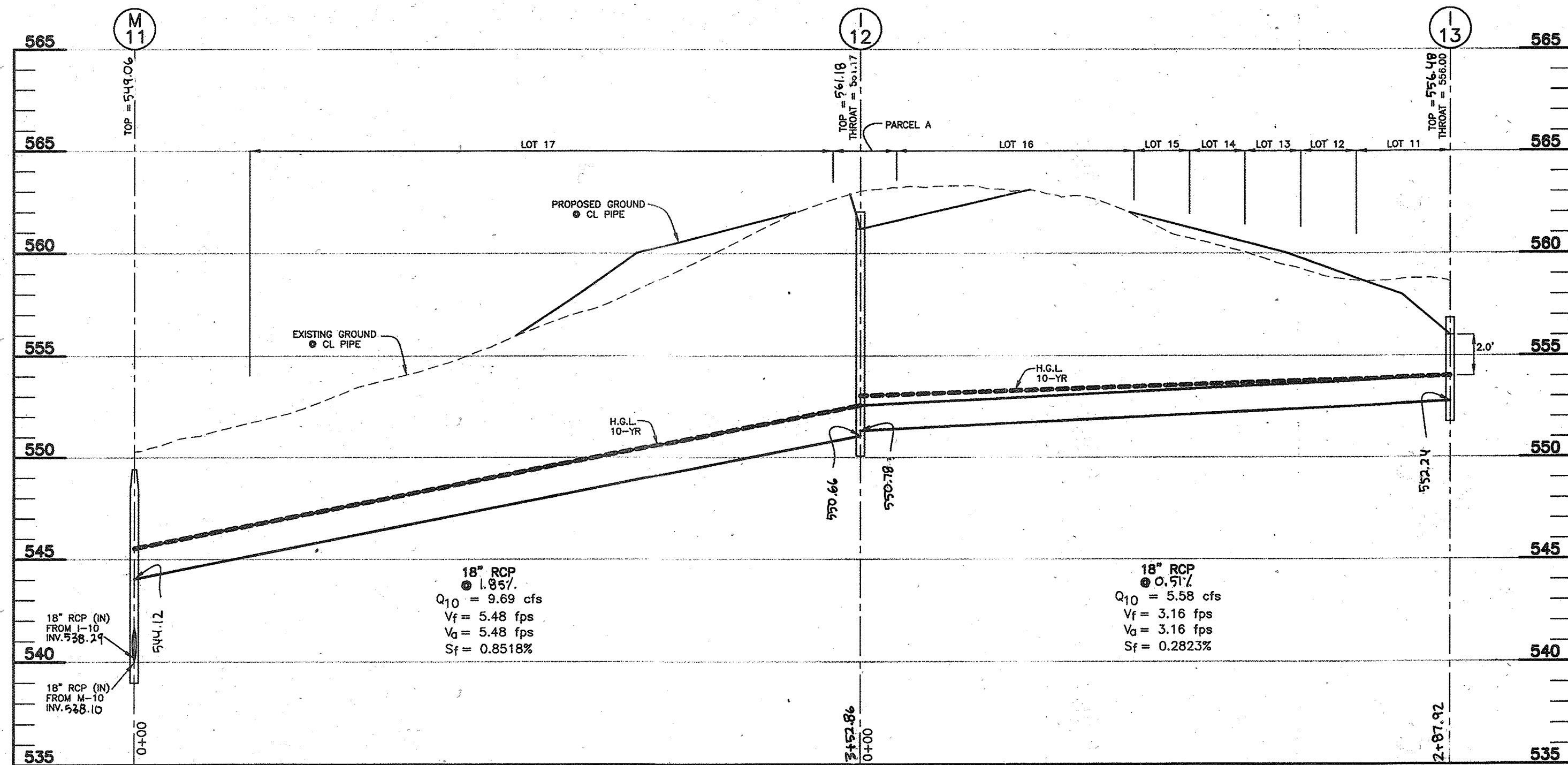
* ALL STORM DRAIN PIPE SHALL HAVE A MINIMUM OF 1.5 FEET OF COVER.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division

NO. DATE		REVISION	
AS-BUILT BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 phone: 410-465-8105 • fax: 410-465-6844 www.bei-cvleengineering.com			
OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737		PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'A'-HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-G'	
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105		LOCATION: TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND	
TITLE: STORM DRAIN PROFILES		DATE: JULY, 2006 PROJECT NO. 1550	
DESIGN: DBT	DRAFT: DBT	CHECK: DAM	SCALE: 1" = 50' HORIZ. 1" = 5' VERT.
SHEET 15 OF 27		PROFESSIONAL ENGINEER	



9/24/19
 PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.



* ALL STORM DRAIN PIPE SHALL HAVE A MINIMUM OF 1.5 FEET OF COVER.

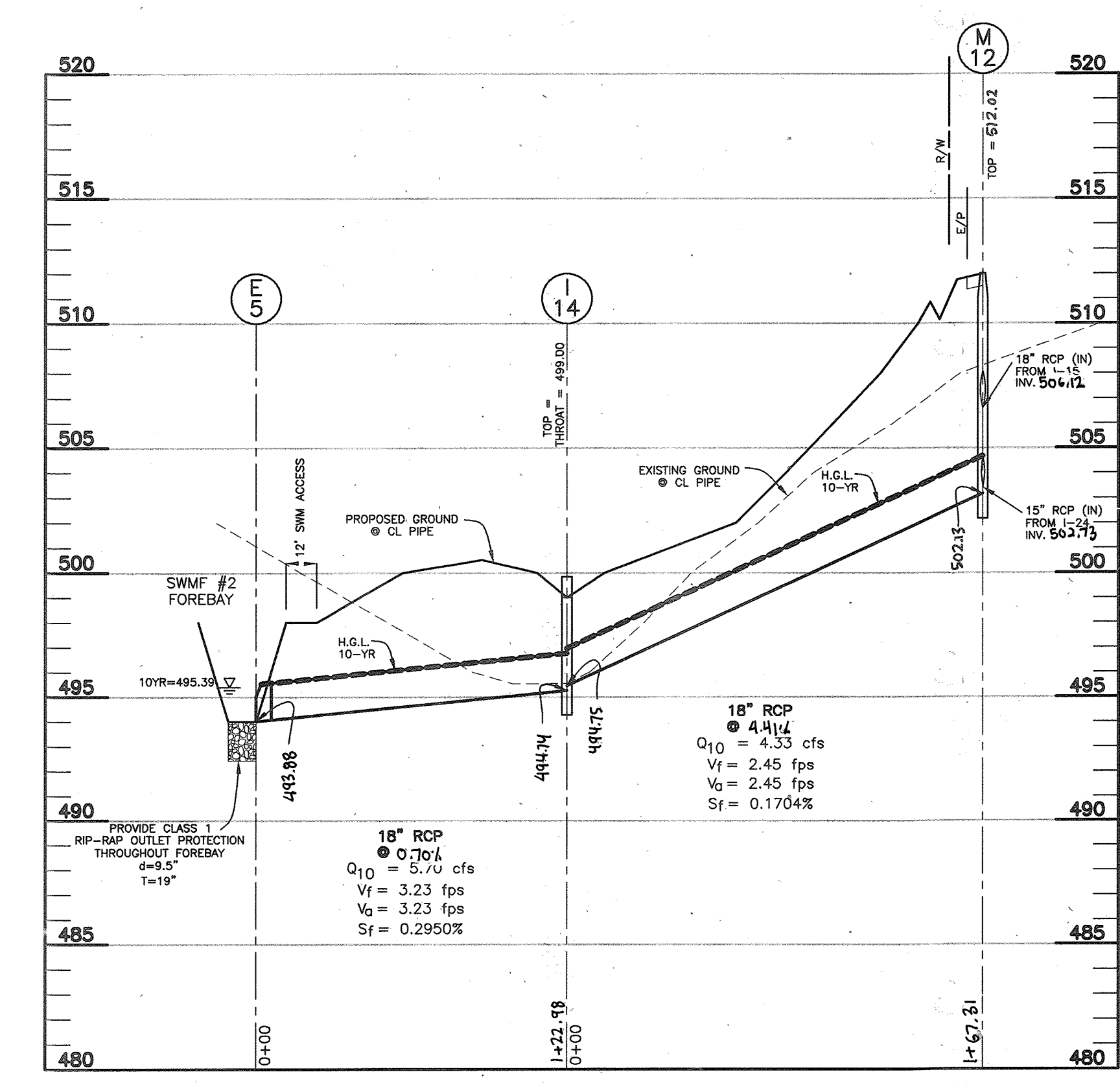
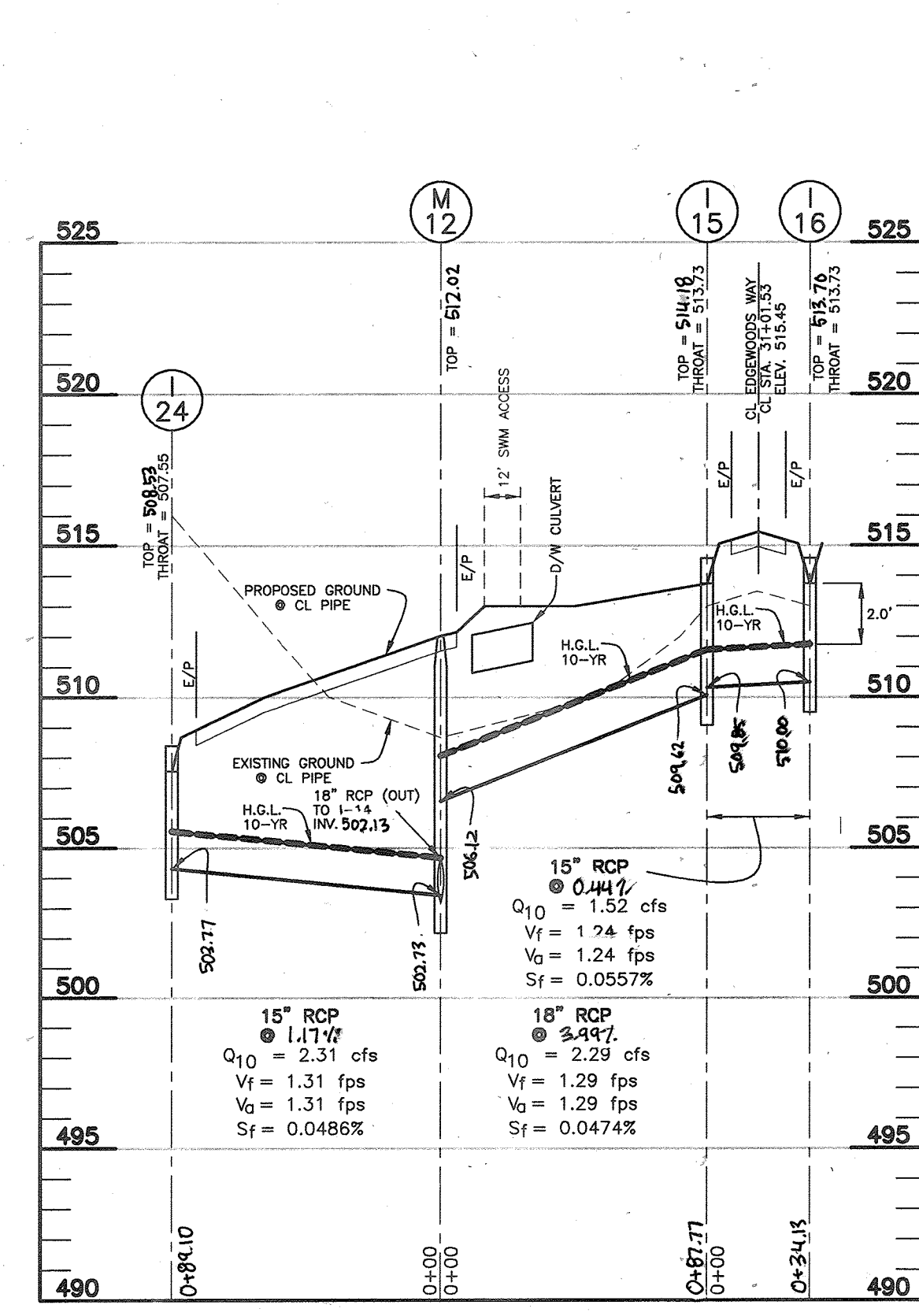
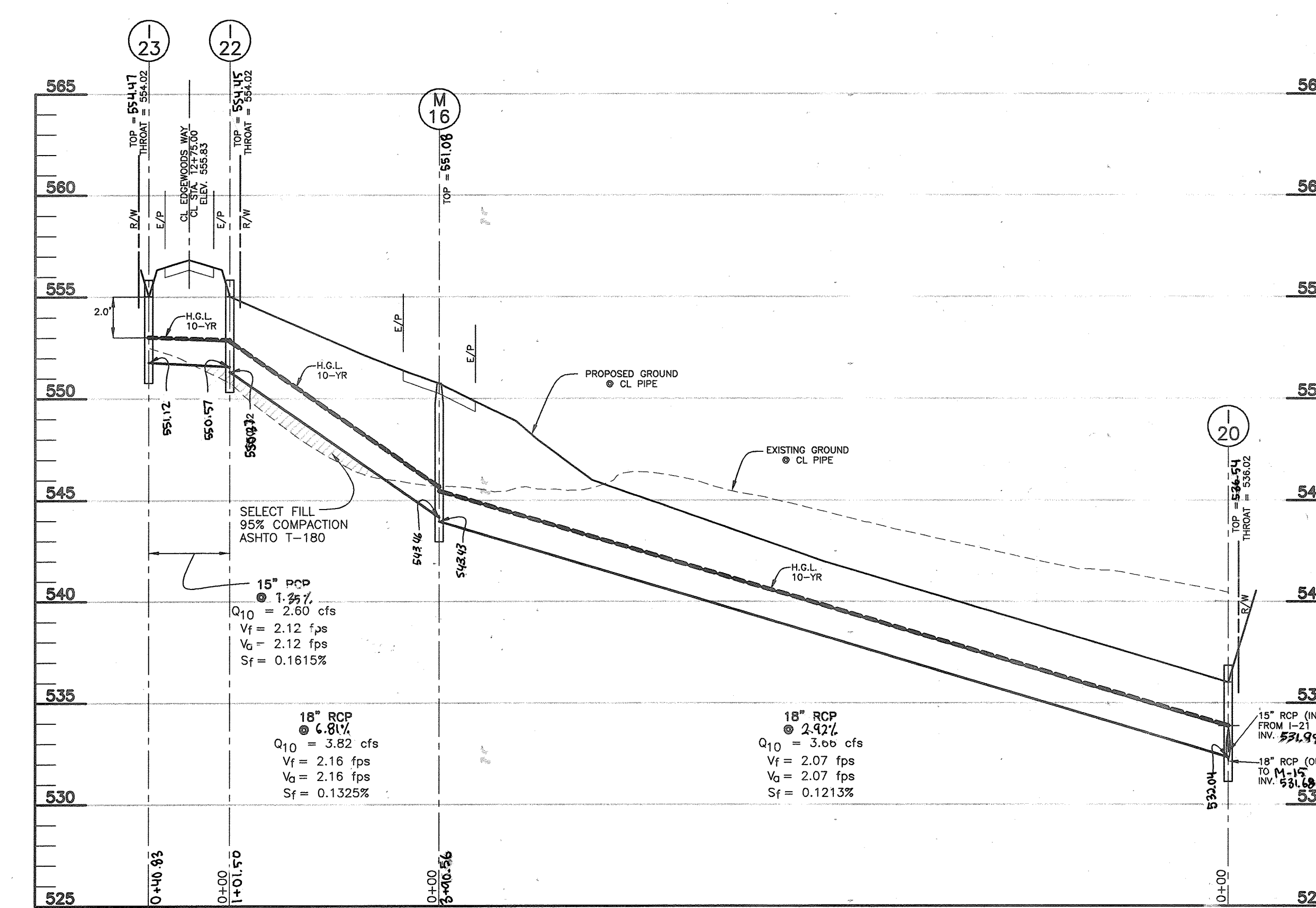
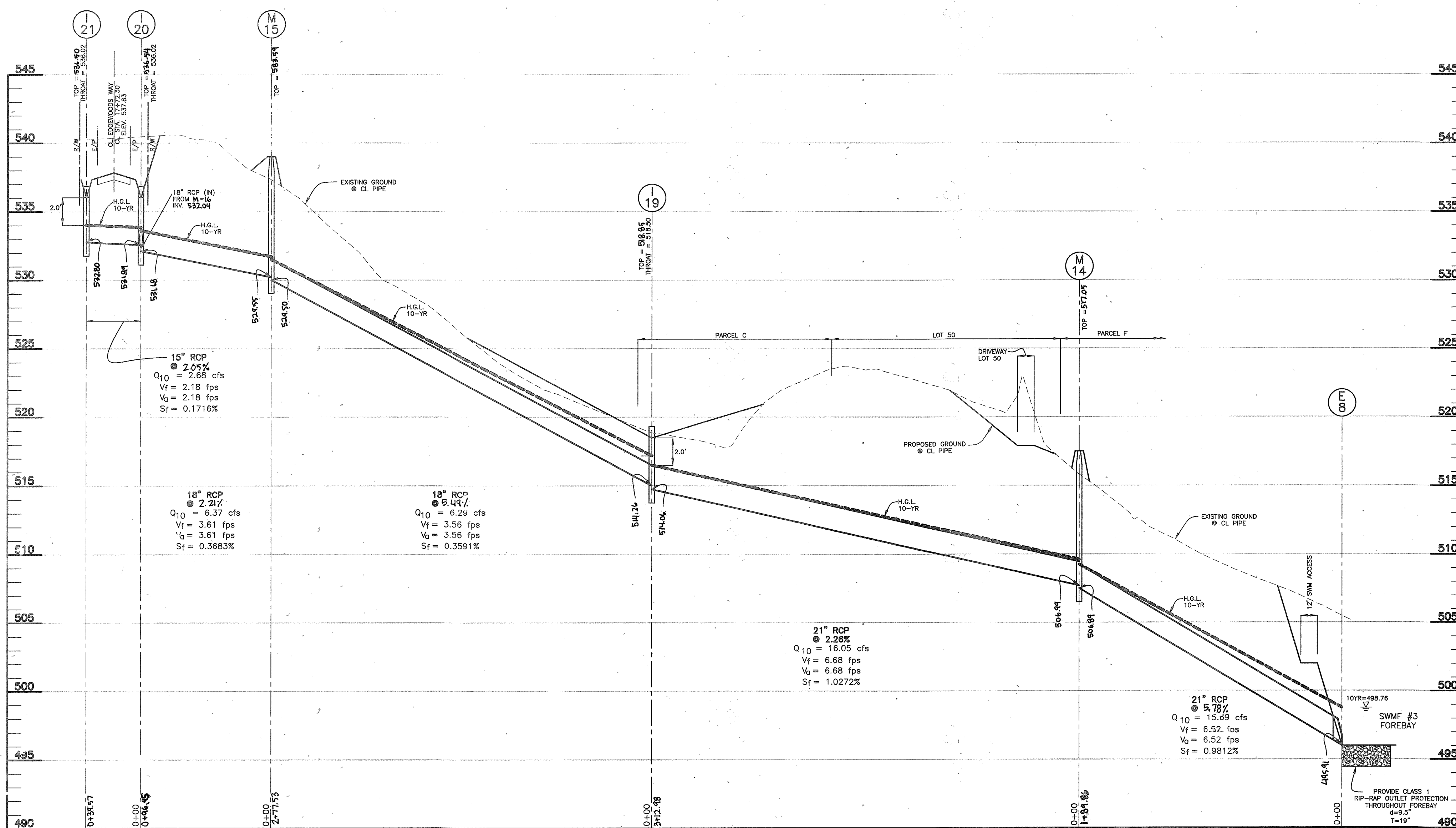
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development

NO. DATE		REVISION	
AS-BUILT			
BENCHMARK ENGINEERING, INC.			
8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLCOTT CITY, MARYLAND 21043 phone: 410-465-6105 & fax: 410-465-6644 WWW.BEI-CVLENGINEERING.COM			
OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737		PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'	
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105		LOCATION: TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND	
TITLE: STORM DRAIN PROFILES			
DATE: JULY, 2006	PROJECT NO. 1550	SHEET 16 OF 27	
DESIGN: DBT	DRAFT: DBT	CHECK: DAM	SCALE: 1" = 50' HORIZ. 1" = 5' VERT.



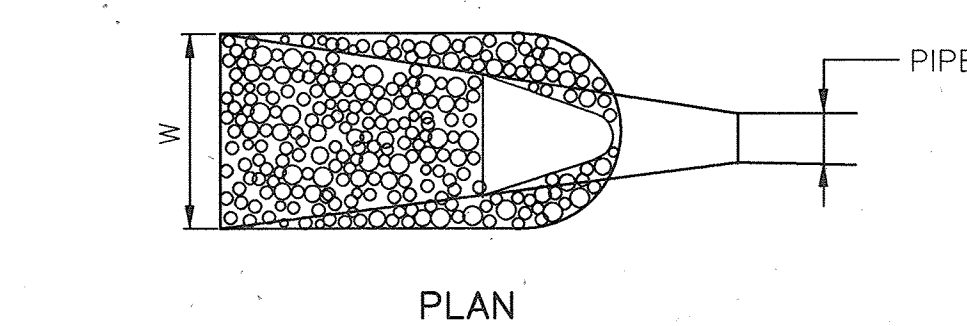
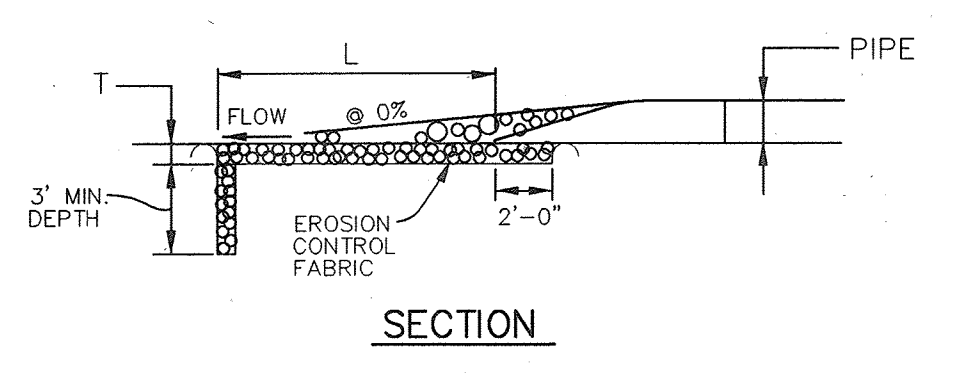
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.

9/28/19



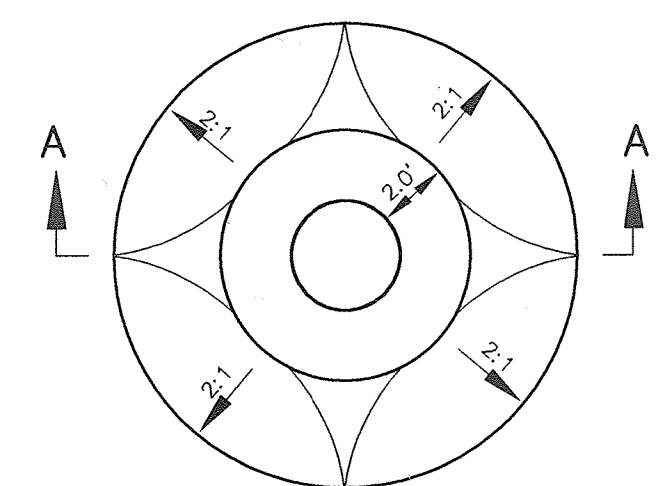
CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILL.
3. GEOTEXTILE CLASS C2B OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE FABRIC. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLAYS MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE Voids BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
5. THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

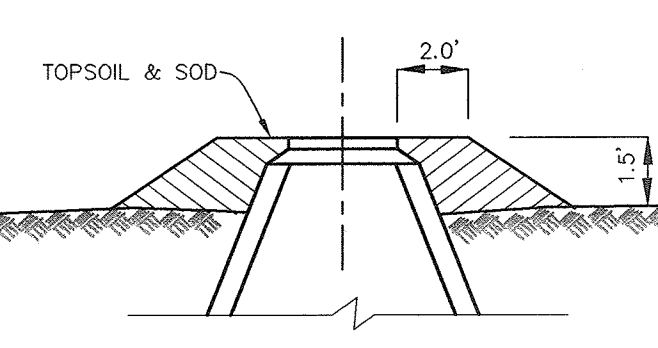


STRUCTURE	D-50	LENGTH (L)	WIDTH (W)	THICKNESS (T)	SHA CLASS
E-1	9.5"	10'	5.5'	19"	I
E-2	9.5"	55'	24.7'	19"	I
E-3	9.5"	FOREBAY	FOREBAY	19"	I
E-4	9.5"	23'	12.2'	19"	I
E-5	9.5"	FOREBAY	FOREBAY	19"	I
E-6	9.5"	30'	15'	19"	I
E-7	9.5"	FOREBAY	FOREBAY	19"	I
E-8	9.5"	FOREBAY	FOREBAY	19"	I
E-9	9.5"	25'	13.5'	19"	I

OUTLET PROTECTION DETAIL NOT TO SCALE



PLAN VIEW



SECTION A-A

- NOTES:
- 1.) ALL MANHOLE FRAME AND COVERS SHALL BE FLUSH WITH GRADE EXCEPT WHEN SHOWN ON PROFILE TO BE SET HIGHER THAN GRADE.
 - 2.) MANHOLE FRAME AND COVERS TO BE SET HIGHER THAN GRADE SHALL BE SET IN ACCORDANCE WITH THIS DETAIL.

FILL AROUND MANHOLE NOT TO SCALE

* ALL STORM DRAIN PIPE SHALL HAVE A MINIMUM OF 1.5 FEET OF COVER.

PIPE SIZE	LENGTH	TYPE
* 15"	1200'	RCCP CLASS IV
* 21"	20'	RCCP CLASS IV
15"	560'	RCCP CLASS IV
18"	3143'	RCCP CLASS IV
21"	544'	RCCP CLASS IV
24"	164'	RCCP CLASS IV
30"	1210'	RCCP CLASS IV
36"	405'	RCCP CLASS IV
42"	286'	RCCP CLASS IV
36"	135'	ASTM C-361 (B-25)
42"	207'	ASTM C-361 (B-25)

* DRIVEWAY CULVERTS

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

NO.	DATE	REVISION
1	3-10-2008	REVISE PIPE SCHEDULE TO INDICATE RCCP CLASS IV FOR DRIVEWAY CULVERTS

BENCHMARK AS-BUILT ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 phone: 410-465-6105 • fax: 410-465-6644
 www.BEI-CMLEENGINEERING.COM

OWNER: EDGEWOOD FARM, INC.
 14919 ROXBURY ROAD
 GLENELG, MARYLAND 21737

DEVELOPER: TOLL BROTHERS, INC.
 7164 COLUMBIA GATEWAY DRIVE
 SUITE 230
 COLUMBIA, MARYLAND 21046
 410-872-9105

PROJECT: EDGEWOOD FARM PHASE 1
 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH'
 NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'

LOCATION: TAX MAP: 21, GRID: 22
 PARCEL: 90
 ELECTION DISTRICT NO. 4
 HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES

DATE: JULY, 2006 PROJECT NO. 1550
 SCALE: 1" = 50' HORIZ. 1" = 5' VERT. SHEET 17 OF 27

DESIGN: DBT DRAFT: DBT CHECK: DAM

LEGEND

- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING STREAM
- LIMIT OF 100-YR FLOODPLAIN
- FOREST CONSERVATION EASEMENT
- LANDSCAPE PERIMETER DESIGNATION
- LANDSCAPE CREDIT PERIMETER
- NATURAL AREA CONSERVATION CREDIT EASEMENT
- SWM 15' NO WOODY VEGETATION ZONE

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJ. TO										
	SCENIC ROADWAY (1)	PERMETER PROP. (2)	PERMETER PROP. (3)	PERMETER PROP. (4)	PERMETER PROP. (5)	PERMETER PROP. (6)	PERMETER PROP. (7)	SCENIC ROADWAY (8)	ROADWAY (LOT 8) (9)	ROADWAY (LOT 2) (10)	ROADWAY (LOT 36) (11)
LANDSCAPE TYPE	C	A	A	A	A	A	A	C	B	B	B
LINEAR FEET OF ROADWAY FRONTAGE/PERMETER	992'	2363'	1057'	1836'	296'	2845'	283'	233'	224'	304'	325'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES* 475'	YES* 513'	YES* 1538'	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	992'	1888'	544'	298'	296'	2845'	283'	233'	224'	304'	325'
SHADE TREES	25	32	9	5	5	48	7	5	5	6	7
EVERGREEN TREES	50	-	-	-	-	14	6	6	6	8	8
OTHER TREES (2-1 SUBSTITUTE) SHRUBS	-	-	-	-	-	-	-	-	-	-	-
NUMBER OF PLANTS REQUIRED	992'	1888'	544'	298'	296'	2845'	283'	233'	224'	304'	325'
SHADE TREES	25	32	9	5	5	48	7	5	5	6	7
EVERGREEN TREES	50	-	-	-	-	14	6	6	6	8	8
OTHER TREES (2-1 SUBSTITUTE) SHRUBS	-	-	-	-	-	-	-	-	-	-	-

SCHEDULE D SWM PERIMETER LANDSCAPING

	SWM				TOTALS
	1	2	3	4	
LINEAR FEET OF PERIMETER	1187'	939'	908'	999'	
CREDIT FOR EXISTING VEGETATION (NO, YES AND %) (DESCRIBE BELOW IF NEEDED)	YES, 25.3%	YES, 28.2%	YES, 33.0%	YES, 42.1%	
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
LINEAR FEET OF REQUIRED PLANTING BUFFER TYPE	887'	674'	608'	578'	
NUMBER OF TREES REQUIRED	18	14	13	12	57
SHADE TREES	23	17	16	15	71
EVERGREEN TREES	18	14	13	12	57
NUMBER OF TREES PROVIDED	23	17	16	15	71
SHADE TREES					
EVERGREEN TREES					

STREET TREE SCHEDULE

ROAD NAME	PERIMETER	TREES REQ.	TREES PROV.
EDGEWOODS WAY	6330'	159	159
CORYS COURT	1163'	29	29
BENSWORTH WAY	1984'	50	50
ROXBURY ROAD	1960'	49	49
TOTAL		287	287

LANDSCAPE NOTES:

- TREES SHOULD BE PLANTED A MINIMUM OF 6 FEET FROM THE EDGE OF PAVING AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
- TREES MUST BE PLANTED A MINIMUM OF 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
- SEE TREE PLANTING DETAIL - THIS SHEET.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURVEY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.
- THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$87,750.00 (\$83,300.00 FOR 211 SHADE TREES, \$24,450.00 FOR 163 EVERGREENS).

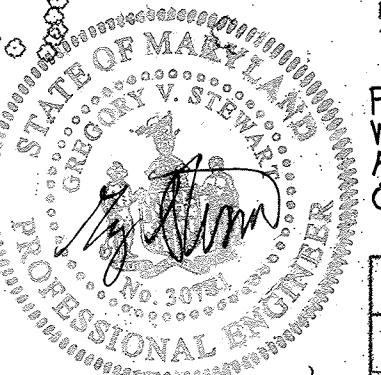
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30721, EXPIRATION DATE 6/15/20.

PUBLIC STREET TREE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS	DESCRIPTION
	45	PLATANUS X ACERIFOLIA 'BLOODGOOD'	2 1/2" MIN. CAL. B&B FULL HEAD	SHADE TREES ALONG PERIMETER TO BE PROVIDED BY THE DEVELOPER
	176	ACER RUBRA 'OCTOBER GLORY'	2 1/2" MIN. CAL. B&B FULL HEAD	SHADE TREES ALONG PERIMETER TO BE PROVIDED BY THE DEVELOPER
	66	ACER SACCHARUM 'GREEN MOUNTAIN'	2 1/2" MIN. CAL. B&B FULL HEAD	SHADE TREES ALONG PERIMETER TO BE PROVIDED BY THE DEVELOPER

LANDSCAPE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS	DESCRIPTION
	154	QUERCUS RUBRA (Red Oak)	2-1/2" - 3" cal.	SHADE TREES ALONG PERIMETER TO BE PROVIDED BY THE DEVELOPER
	163	PINUS STROBUS (Eastern White Pine)	6" - 8" ht.	EVERGREEN TREES ALONG PERIMETER TO BE PROVIDED BY THE DEVELOPER
	57	TAXUS CANADENSIS (Greenupine)	2-1/2" - 3" cal.	SHADE TREES ALONG SIM FACILITIES TO BE PROVIDED BY THE DEVELOPER



PARCEL 227 CLARKS WOODS EDGEBROOK FARMS, INC. NON-BUILDABLE PRESERVATION PARCEL A DEDICATED TO HOWARD COUNTY, MARYLAND HOMEOWNERS ASSOCIATION EASEMENT HOLDER
 PLAT NO. 142003 ZONED: RC-DEO
 DATE: 9/7/06

NO.	DATE	REVISION
1	3-10-2006	REVISED SHAPE OF SWM# 23 AND PERIMETER TREE LOCATIONS

BENCHMARK AS-BUILT
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE - SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 WWW.BE-CIVILENGINEERING.COM

OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA CANYON DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 PARCEL: 80 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
TITLE: LANDSCAPE AND STREET TREE PLAN	
DATE: JULY, 2006	PROJECT NO. 1550
DESIGN: DBT	DRAFT: DBT
CHECK: DAM	SCALE: AS SHOWN
SHEET 19 OF 27	

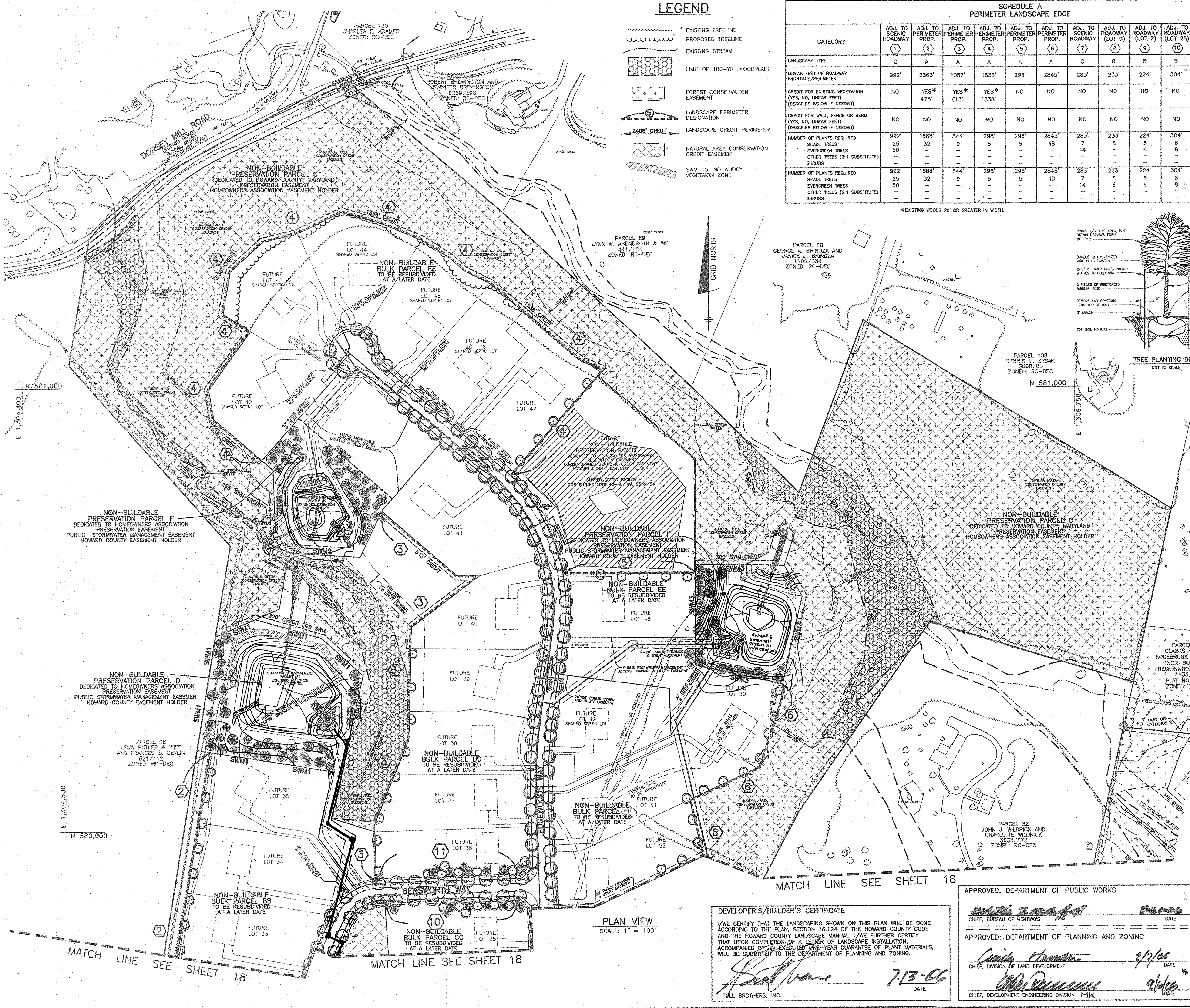
DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THIS PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY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

Seal Mason 7-13-06 DATE
 TOLL BROTHERS, INC.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Mark J. ... 9/7/06 DATE
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy ... 9/7/06 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

Don ... 9/6/06 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



FCE #4 MITIGATION BANK - 0.73 AC.
PLANTING UNITS REQUIRED: 511
PLANTING UNITS PROVIDED: 511

QTY	SPECIES	SIZE	SPACING	TOTAL UNITS
25	Acer rubrum - Red maple	1" cal.	15' o.c.	
25	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
10	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
40	Quercus alba - White oak	1" cal.	15' o.c.	
40	Quercus rubra - Red oak	1" cal.	15' o.c.	
146	Total 1" caliper trees (2.5 planting units per tree)	FCA unit credit		511
TOTAL UNIT CREDIT				511

FCE #2 MITIGATION BANK - 5.30 AC.
PLANTING UNITS REQUIRED: 3710
PLANTING UNITS PROVIDED: 3711

QTY	SPECIES	SIZE	SPACING	TOTAL UNITS
10	Acer rubrum - Red maple	1" cal.	15' o.c.	
10	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
14	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
10	Quercus alba - White oak	1" cal.	15' o.c.	
10	Quercus rubra - Red oak	1" cal.	15' o.c.	
53	Total 1" caliper trees (2.5 planting units per tree)	FCA unit credit		189
176	Acer rubrum - Red maple	2.5" whp	11' o.c.	
176	Acer saccharinum - Silver maple	2.5" whp	11' o.c.	
176	Cornus florida - Flowering dogwood	2.5" whp	11' o.c.	
176	Diopis virginiana - Persimmon	2.5" whp	11' o.c.	
176	Liriodendron tulipifera - Tulip poplar	2.5" whp	11' o.c.	
176	Platanus occidentalis - Sycamore	2.5" whp	11' o.c.	
176	Prunus serotina - Black cherry	2.5" whp	11' o.c.	
176	Quercus alba - White oak	2.5" whp	11' o.c.	
176	Quercus rubra - Red oak	2.5" whp	11' o.c.	
177	Viburnum prunifolium - Blackhaw	2.5" whp	11' o.c.	
176	Total whp plantings (2.5 planting units per tree)	FCA unit credit		3622
TOTAL UNIT CREDIT				3711

FCE #3 MITIGATION BANK - 1.76 AC.
PLANTING UNITS REQUIRED: 1232
PLANTING UNITS PROVIDED: 1232

QTY	SPECIES	SIZE	SPACING	TOTAL UNITS
10	Acer rubrum - Red maple	1" cal.	15' o.c.	
10	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
14	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
10	Quercus alba - White oak	1" cal.	15' o.c.	
10	Quercus rubra - Red oak	1" cal.	15' o.c.	
69	Total 1" caliper trees (2.5 planting units per tree)	FCA unit credit		242
50	Acer rubrum - Red maple	2.5" whp	11' o.c.	
50	Acer saccharinum - Silver maple	2.5" whp	11' o.c.	
40	Cornus florida - Flowering dogwood	2.5" whp	11' o.c.	
15	Diopis virginiana - Persimmon	2.5" whp	11' o.c.	
85	Liriodendron tulipifera - Tulip poplar	2.5" whp	11' o.c.	
85	Platanus occidentalis - Sycamore	2.5" whp	11' o.c.	
85	Prunus serotina - Black cherry	2.5" whp	11' o.c.	
55	Quercus alba - White oak	2.5" whp	11' o.c.	
55	Quercus rubra - Red oak	2.5" whp	11' o.c.	
25	Viburnum prunifolium - Blackhaw	2.5" whp	11' o.c.	
495	Total whp plantings (2.5 planting units per tree)	FCA unit credit		980
TOTAL UNIT CREDIT				1232

APPENDIX G
FOREST CONSERVATION WORKSHEET
NOTE: THIS SUBDIVISION PLAN IS USING "RURAL CLUSTER OPTION B" OF THE APPENDIX I OF THE FOREST CONSERVATION MANUAL BY INCLUDING THE ENTIRE SITE AREA IN THE CALCULATIONS TO SATISFY ITS FOREST CONSERVATION REQUIREMENT.

I. BASIC SITE DATA

ACRES (1/10 acre)	
GROSS SITE AREA	131.9
AREA WITHIN 100 YEAR FLOODPLAIN	4.3
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	N/A
NET TRACT AREA	127.6
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C1/0, I)	R-RMD

II. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	127.6
B. REFORESTATION THRESHOLD (25% x A)	31.9
C. AFFORESTATION MINIMUM (20% x A)	25.5
D. EXISTING FOREST ON NET TRACT AREA	12.4
E. FOREST AREAS TO BE CLEARED	1.5
F. FOREST AREAS TO BE RETAINED	10.9

III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION

1. Reforestation
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.

GO TO SECTION IV
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.

2. Afforestation
If existing forest areas are less than the afforestation minimum (if D is less than C), afforestation requirements apply.

GO TO SECTION V

V. AFFORESTATION CALCULATIONS

A. NET TRACT AREA	127.6
B. AFFORESTATION MINIMUM (20% x A)	25.5
C. EXISTING FOREST ON NET TRACT AREA	12.4
D. FOREST AREAS TO BE CLEARED	1.5
E. FOREST AREAS TO BE RETAINED	10.9

SELECT THE ALTERNATE THAT APPLIES.

1. No clearing below the minimum
If existing forests are less than the afforestation minimum (if C is less than B) and NO clearing is proposed, the following calculations apply.

TOTAL AFFORESTATION REQUIRED
B - C

Afforestation must make total forest area equal the minimum required.

2. Clearing below the minimum

If existing forests are less than the afforestation minimum (if C is less than B) and clearing is proposed, the following calculations apply.

AFFORESTATION FOR UNFORESTED AREAS BELOW MINIMUM
B - C

REFORESTATION FOR CLEARING BELOW MINIMUM
D x 2

TOTAL AFFORESTATION + REFORESTATION REQUIRED
(B - C) + (D x 2)

Afforestation requires the total forest area to be equal to the minimum and it requires compensation for clearing.

LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- LIMIT OF 100-YR FLOODPLAIN
- EXISTING STREAM
- EXISTING SLOPES 25% OR GREATER
- SOILS DELINEATION
- SOILS TYPE
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGNAGE
- TREE PROTECTION FENCE

FOREST MITIGATION NOTE:

THE SALE OF FOREST CREDITS MAY BEGIN UPON ACCEPTANCE BY THE COUNTY OF THE PROFESSIONAL CERTIFICATION AND VERIFICATION OF THE AFFORESTATION, PLANTING AND INSTALLATION OF REQUIRED PROTECTION MEASURES, SIGNATURE APPROVAL OF THE FOREST CONSERVATION PLAN, EXECUTION OF THE LEGAL DOCUMENTS PROCESSED UNDER THE DEVELOPER'S AGREEMENT, POSTING OF THE REQUIRED FINANCIAL SURETY AND RECREATION OF THE FINAL PLAN ESTABLISHING THE FOREST CONSERVATION EASEMENTS.

* FOREST CONSERVATION EASEMENT BEARING AND DISTANCE DESCRIPTIONS ARE PROVIDED ON THE FINAL PLATS (19255 - 19261)

NO.	DATE	REVISION
1	11-13-18	ADD SALE #5 TO FOREST MIT. CHART (CHARSVILLE SQ.)
2	12-16-10	REMOVE SALE TO HAWES PROPERTY & REVISE BANK CHART
3	2-20-17	REMOVE CLARKSBURG SQUARE & ADD PARK AT LOCUST THICKET TO FOREST BANK CHART
4	9-10-08	REVISE FOREST MITIGATION BANK CHART TO ADD CEDAR GROVE 0.97 AC.
5	7-31-08	REVISE FOREST MITIGATION BANK CHART #3 FROM 1.24 AC TO 1.00 AC, CHART 4 FROM 0.73 AC TO 0.97 AC.
6	3-10-2008	REVISE FOREST CONSERVATION NOTE G.
7	12-6-07	ADD SALES FOR F-08-065, F-08-088, F-07-110 TO FOREST MITIGATION BANK
8	9-27-07	ADD SALE FOR CLOVERFIELD SECT. II TO FOREST MITIGATION BANK
9	5-11-2007	ADD FOREST MITIGATION BANK EASEMENTS, PLANTING CHARTS, NOTES, REVISE SHEET TITLE.

FOREST CONSERVATION NOTES:

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE RETENTION BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE AND ARE NOT ALREADY PROTECTED WITH SUFFICIENT FENCE.
- PERMANENT SIGNAGE SHALL BE PLACED 50'-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- PORTIONS OF THE SITE OCCURRING WITHIN THE 100-YEAR FLOODPLAIN ARE NOT INCLUDED AS PART OF THE NET TRACT AREA OF THE SITE. AREAS OF FLOODPLAIN FOREST OCCURRING WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT WILL BE PROTECTED BY THE EASEMENT. SUCH RESTRICTIONS BUT HAVE NOT BEEN CREDITED TOWARD THE PROJECTS FCA OBLIGATIONS.
- THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 27.0 ACRES SHALL BE MET BY THE ON-SITE RETENTION OF 10.9 AC. OF NET TRACT AREA FOREST WITHIN A FOREST CONSERVATION EASEMENT, THE ON-SITE AFFORESTATION OF 13.1 AC. WITHIN A FOREST CONSERVATION EASEMENT AND BY THE ON-SITE REFORESTATION OF 3.0 AC. WITHIN A FOREST CONSERVATION EASEMENT.

10. AN ADDITIONAL 7.79 AC. OF REFORESTATION ABOVE THE REQUIREMENT SHALL BE USED FOR THE ESTABLISHMENT OF A PRIVATE FOREST MITIGATION BANK WITH A DPW DEVELOPER'S AGREEMENT WITH SURETY IN THE AMOUNT OF \$169,666.20.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20788, EXPIRATION DATE 6/15/20.

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACE Wetland Delimitator
Certification # FDC0900004403

P.O. Box 5056 0166 Am., MD 21057 (410) 592-6752

FOREST MITIGATION BANK CHART
TOTAL INITIAL ACRES: 7.79 AC.

SALE	PROJECT	REFORESTATION OBLIGATION	ACRES REMAINING FOR FUTURE SALE
1	CLOVERFIELD SEC. II (F-07-91)	1.73 AC.	6.06 AC.
2	KINGS WOODS SEC. 5 (F-08-065)	2.44 AC.	3.62 AC.
3	CANTINGER PROPERTY (F-08-088)	1.00 AC.	2.62 AC.
4	CEDAR GROVE (F-08-045)	0.97 AC.	1.65 AC.
5	PARK AT LOCUST THICKET	1.65 AC.	0

PLAN VIEW
SCALE: 1" = 100'

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1985

Forest Conservation Area

REFORESTATION PROJECT

Trees For Your Future

SIGNAGE NOT TO SCALE

MULTIFLORA ROSE CONTROL NOTE

MULTIFLORA ROSE IS PREVALENT IN CERTAIN AREAS TO BE AFFORESTED. PRIOR TO PLANTING ALL MULTIFLORA ROSE SHOULD BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWED BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDE TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.

PLANTING NOTES:

- MULTIFLORA ROSE CONTROL MAY BE REQUIRED AS PART OF THIS PLANTING PLAN.
- BAREROOT PLANT MATERIAL MAY BE USED TO OFFSET THE COST OF MULTIFLORA ROSE REMOVAL AND MAINTENANCE. IF BAREROOT MATERIAL IS USED IT MUST BE PLANTED IN MARCH - APRIL AND AN ANTI-DESCICANT GEL SHOULD BE UTILIZED TO PROTECT PLANTS FROM WINTER DAMAGE. CONTAINER GROWN STOCK IS RECOMMENDED.
- PLANTS SHOULD BE FLAGGED TO AID ON LOCATION DURING MAINTENANCE. PLANTINGS SHOULD ALSO BE PLANTED IN A GRID PATTERN TO FACILITATE MAINTENANCE AND REMOVAL OF INVASIVE AND EXOTIC SPECIES.

PLANTING/SOIL SPECIFICATIONS

- PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH. CONTAINER STOCK MAY BE PLANTED BETWEEN FEBRUARY 1ST AND OCTOBER 31ST.
- A TWELVE (12) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL REFORESTATION AREAS IMPACTED BY SITE GRADING TO ASSURE A SUFFICIENT PLANTING MEDIA. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.
- ALL BAREROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESCICANT GEL.
- PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS LIVING SOIL TO 1 PART TOPSOIL.
- FERTILIZER SHALL CONSIST OF AIRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURERS SPECIFICATIONS.
- A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTS.
- PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.
- ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

- PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
- UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST RETENTION AREA PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.
- PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

- MAINTENANCE OF ALL PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS.
- ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS DURING SECOND GROWING SEASON.
- INVASIVE EXOTICS AND HARMFUL WEEDS WILL BE REMOVED FROM REFORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
- PLANTS WILL BE EXAMINED A MINIMUM OF TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.
- ROAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

- AFTER ONE GROWING SEASON PLANT MATERIAL SHALL BE MAINTAINED AT 90% SURVIVAL THRESHOLD.
- AT THE END OF THE 24 MONTH MAINTENANCE PERIOD ALL PLANT MATERIAL BELOW THE 75% THRESHOLD WILL BE REPLACED AS OF THE BEGINNING OF THE NEXT GROWING SEASON.
- THE CONTRACTOR WILL NOT BE LIABLE FOR PLANT LOSS DUE TO THEFT OR VANDALISM. HOWEVER, DEVELOPER SHALL BE RESPONSIBLE UNTIL RELEASE FROM THE COUNTY SURETY OBLIGATION.

SURETY FOR REFORESTATION

- THE DEVELOPER SHALL POST A SURETY BOND (LETTER OF CREDIT) TO ENSURE THAT REFORESTATION MAINTENANCE IS COMPLETED. UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY, THE BOND SHALL BE RELEASED.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30318, EXPIRATION DATE 6/15/20.



FCE Planting Area #1 - 0.6 acres

Planting units required: 420
Planting units proposed: 420

Qty	Species	Size	Spacing	Total Units
4	Acer rubrum - Red maple	1" cal.	15' o.c.	
4	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
8	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
4	Quercus alba - White oak	1" cal.	15' o.c.	
2	Quercus rubra - Red oak	1" cal.	15' o.c.	
24	Total 1" caliper trees (3.5 planting units per tree)			84
17	Liquidambar styraciflua	2-3" whip	11' o.c.	
23	Quercus palustris	2-3" whip	11' o.c.	
59	Acer saccharinum	2-3" whip	11' o.c.	
9	Cercis canadensis	2-3" whip	11' o.c.	
22	Quercus alba - White oak	2-3" whip	11' o.c.	
36	Quercus rubra - Red oak	2-3" whip	11' o.c.	
5	Viburnum lentago	2-3" whip	11' o.c.	
168	Total whip plantings (2 planting units per tree)			336
				Total Unit Credit: 420

FCE Planting Area #3 - 0.5 acres

Planting units required: 350
Planting units proposed: 351

Qty	Species	Size	Spacing	Total Units
1	Acer rubrum - Red maple	1" cal.	15' o.c.	
1	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
2	Quercus alba - White oak	1" cal.	15' o.c.	
2	Quercus rubra - Red oak	1" cal.	15' o.c.	
6	Total 1" caliper trees (3.5 planting units per tree)			21
22	Liquidambar styraciflua	2-3" whip	11' o.c.	
26	Quercus palustris	2-3" whip	11' o.c.	
21	Cercis canadensis	2-3" whip	11' o.c.	
20	Quercus alba - White oak	2-3" whip	11' o.c.	
21	Quercus rubra - Red oak	2-3" whip	11' o.c.	
20	Acer saccharinum	2-3" whip	11' o.c.	
16	Viburnum lentago	2-3" whip	11' o.c.	
168	Total whip trees (2 planting units per tree)			330
				Total Unit Credit: 351

FCE Planting Area #2 - 1.4 acres

Planting units required: 980
Planting units proposed: 981

Qty	Species	Size	Spacing	Total Units
8	Acer rubrum - Red maple	1" cal.	15' o.c.	
8	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
18	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
8	Quercus alba - White oak	1" cal.	15' o.c.	
8	Quercus rubra - Red oak	1" cal.	15' o.c.	
50	Total 1" caliper trees (3.5 planting units per tree)			175
41	Liquidambar styraciflua	2-3" whip	11' o.c.	
59	Quercus palustris	2-3" whip	11' o.c.	
61	Acer saccharinum	2-3" whip	11' o.c.	
20	Cercis canadensis	2-3" whip	11' o.c.	
55	Quercus alba - White oak	2-3" whip	11' o.c.	
36	Quercus rubra - Red oak	2-3" whip	11' o.c.	
20	Viburnum lentago	2-3" whip	11' o.c.	
403	Total whip plantings (2 planting units per tree)			806
				Total Unit Credit: 981

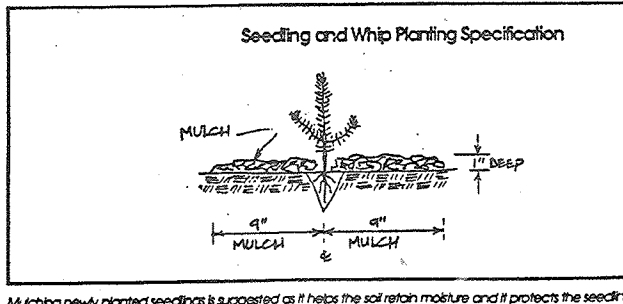
FCE Planting Area #4 - 13.6 acres

Planting units required: 9920
Planting units proposed: 9921

Qty	Species	Size	Spacing	Total Units
35	Acer rubrum - Red maple	1" cal.	15' o.c.	
35	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
40	Quercus alba - White oak	1" cal.	15' o.c.	
40	Quercus rubra - Red oak	1" cal.	15' o.c.	
150	Total 1" caliper trees (3.5 planting units per tree)			525
595	Liquidambar styraciflua	2-3" whip	11' o.c.	
760	Quercus palustris	2-3" whip	11' o.c.	
560	Cercis canadensis	2-3" whip	11' o.c.	
1558	Quercus alba - White oak	2-3" whip	11' o.c.	
1024	Quercus rubra - Red oak	2-3" whip	11' o.c.	
614	Acer saccharinum	2-3" whip	11' o.c.	
375	Viburnum lentago	2-3" whip	11' o.c.	
4486	Total whip trees (2 planting units per tree)			8996
				Total Unit Credit: 9921

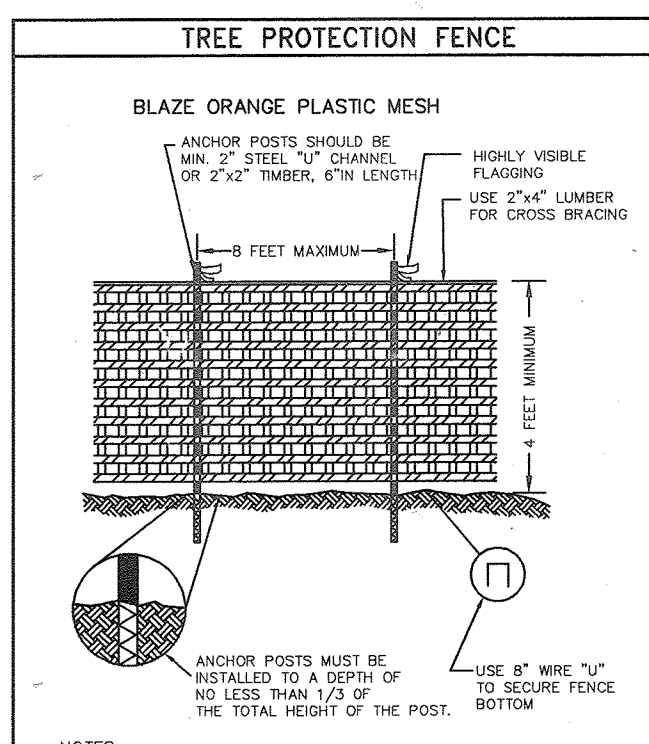
2" CALIPER TREES = 7 PLANTING UNITS
1" CALIPER TREES = 3.5 PLANTING UNITS
WHIPS W/SHelters = 2 PLANTING UNITS
SEEDLINGS = 1 PLANTING UNIT

PLANTING SHALL BE INSTALLED IN A CURVILINEAR FASHION ALONG A CONTOUR TO AVOID A GRID APPEARANCE BUT SHOULD BE SPACED TO FACILITATE MAINTENANCE. LARGER STOCK TREES (1" AND 2" CALIPER) SHOULD BE STAGGERED ALONG THE OUTER PERIMETER OF THE PLANTING AREAS TO SERVE AS A DEMARCATION OF THE FCE.



LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- LIMIT OF 100-YR FLOODPLAIN
- EXISTING STREAM
- EXISTING SLOPES 25% OR GREATER
- SOILS DELINEATION
- SOILS TYPE
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGNAGE
- TREE PROTECTION FENCE



- NOTES:**
- FOREST PROTECTION DEVICE ONLY.
 - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICES.
 - AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
 - DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION.
 - PROTECTIVE SIGNAGE IS ALSO REQUIRED.

PLAN VIEW
SCALE: 1" = 100'

* FOREST CONSERVATION EASEMENT BEARING AND DISTANCE DESCRIPTIONS SHALL BE PROVIDED ON THE FINAL PLAT.

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD 008 Certified Professional
USACOE Maryland Professional
Certification #1720291/MD06104102

P.O. Box 5056 Glen Allen, MD 21057 (410) 592-6752

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT

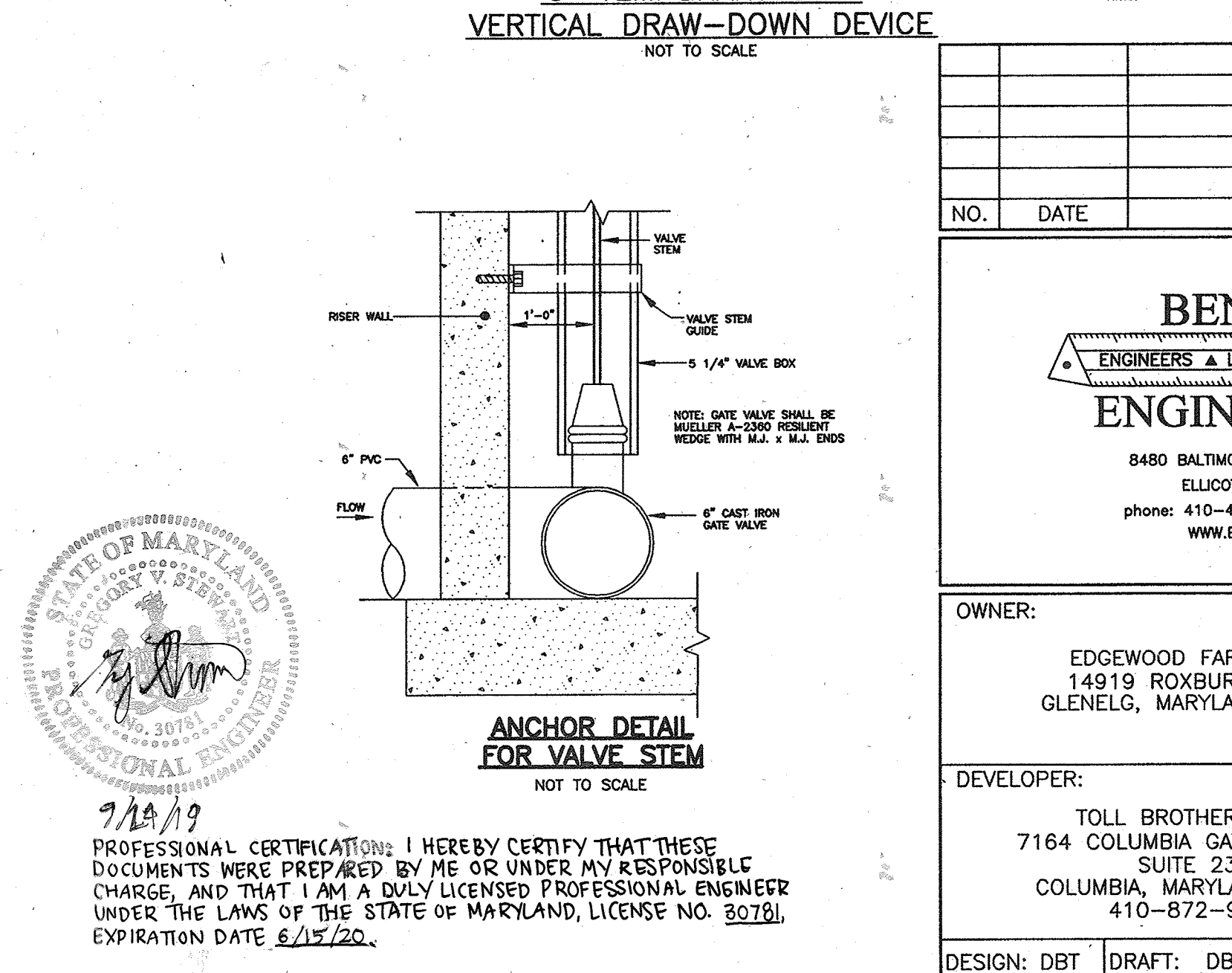
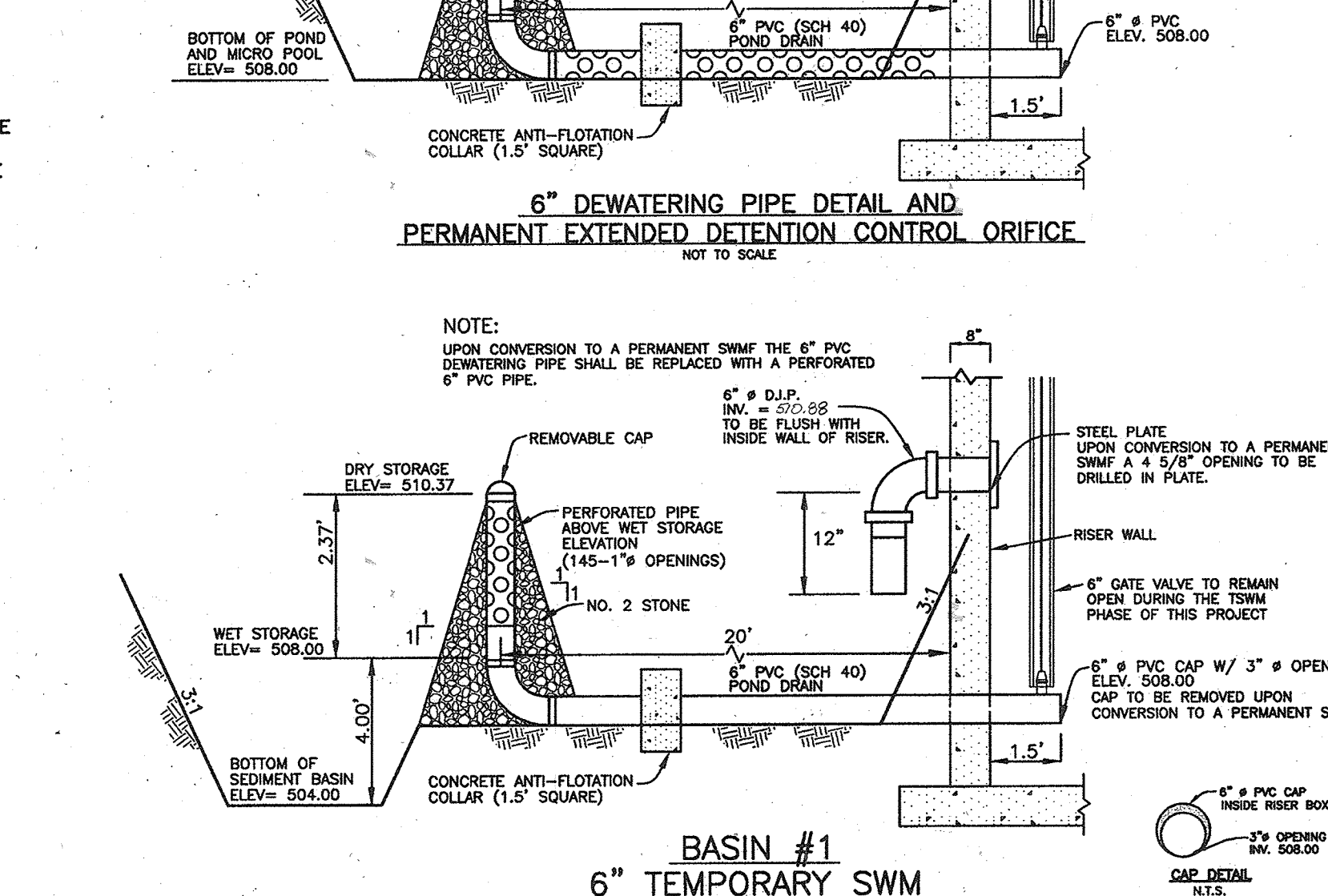
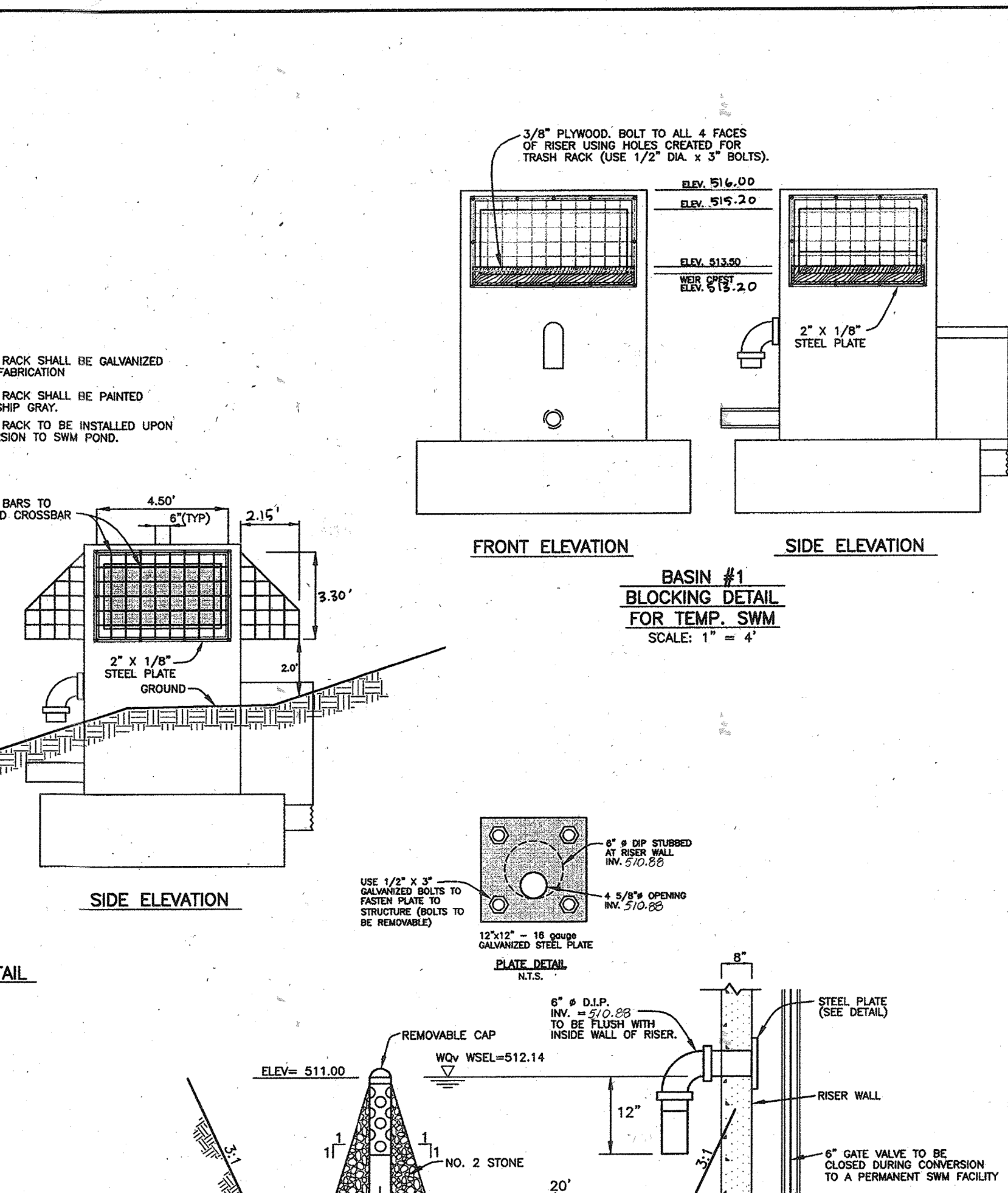
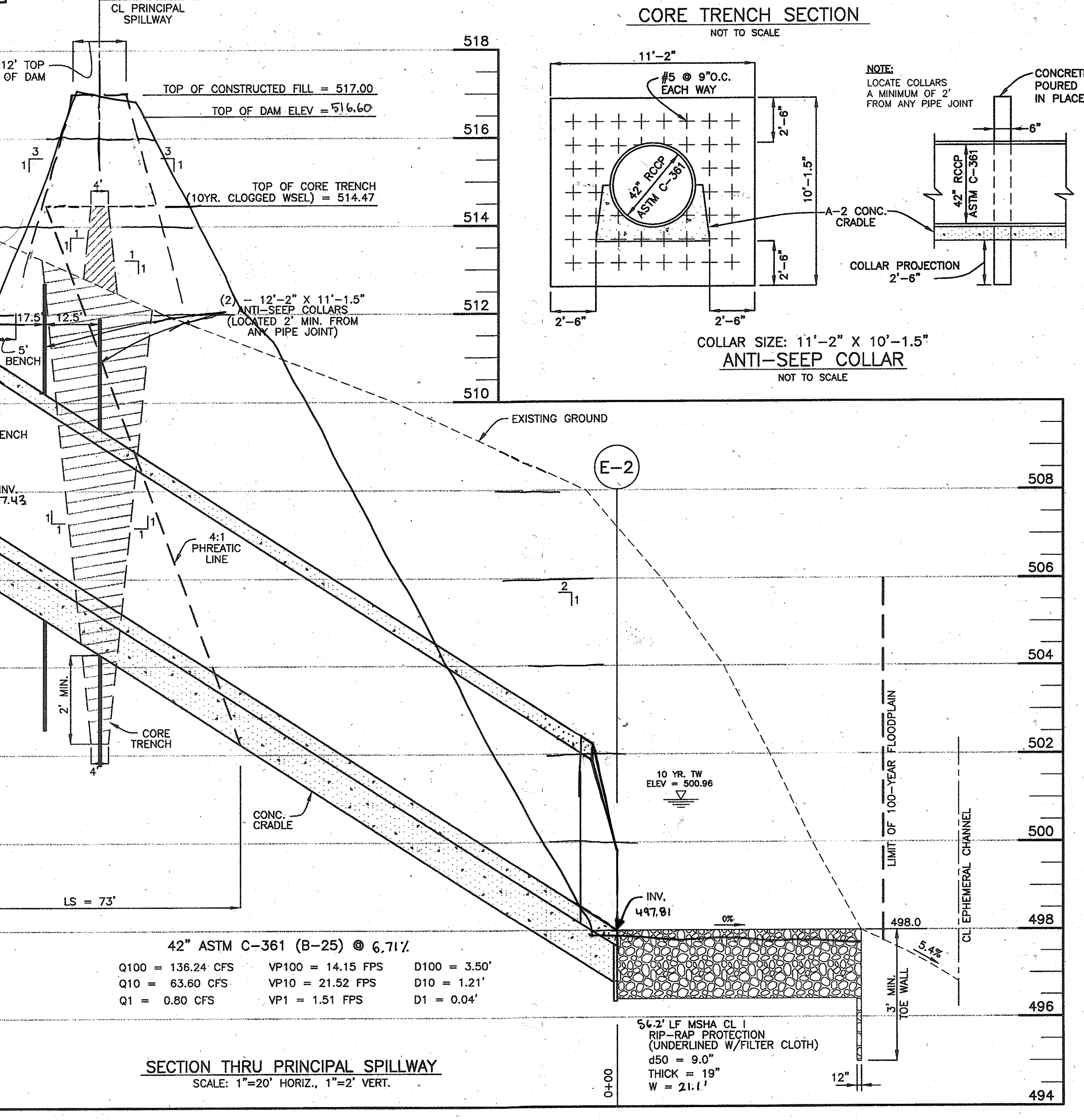
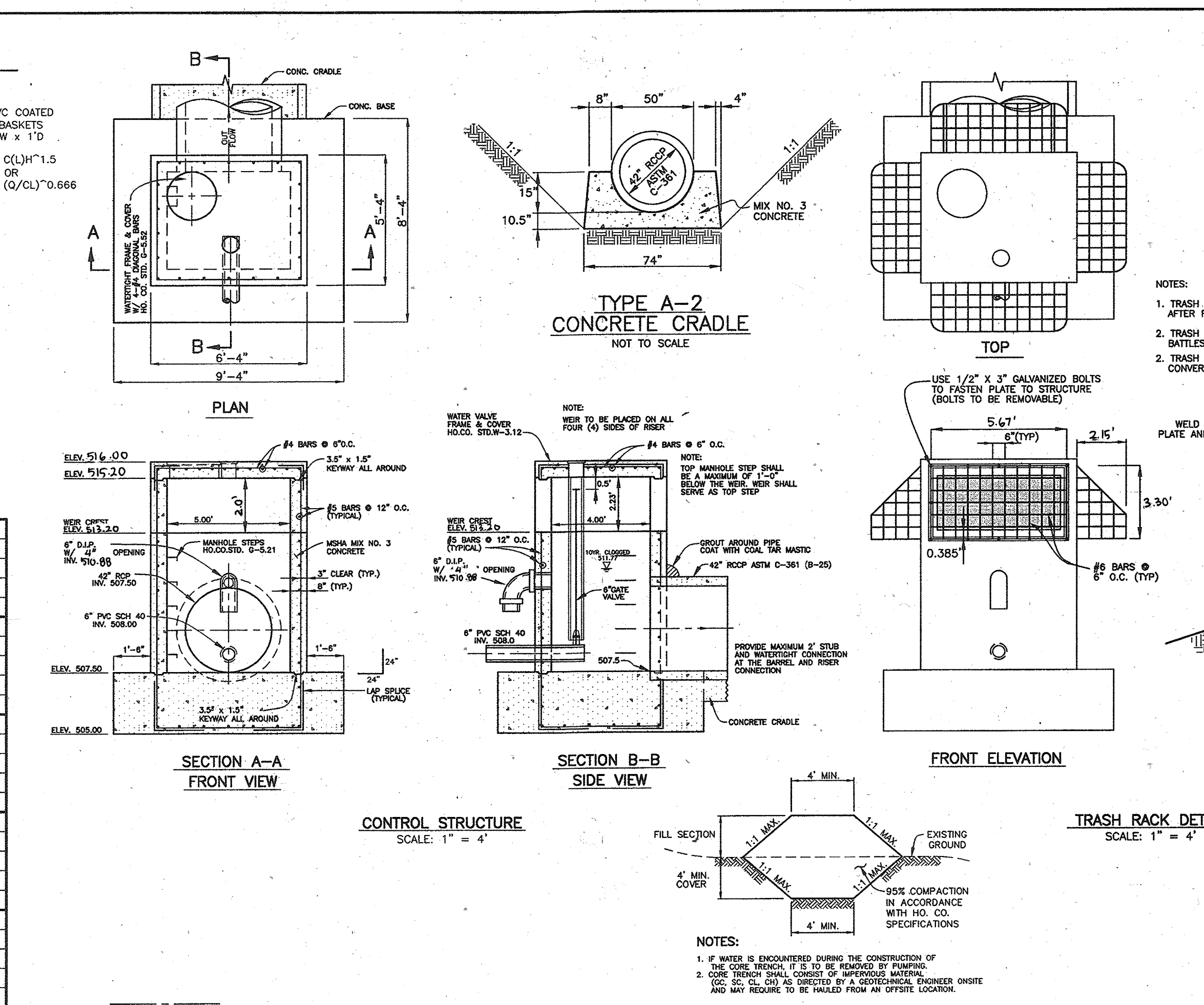
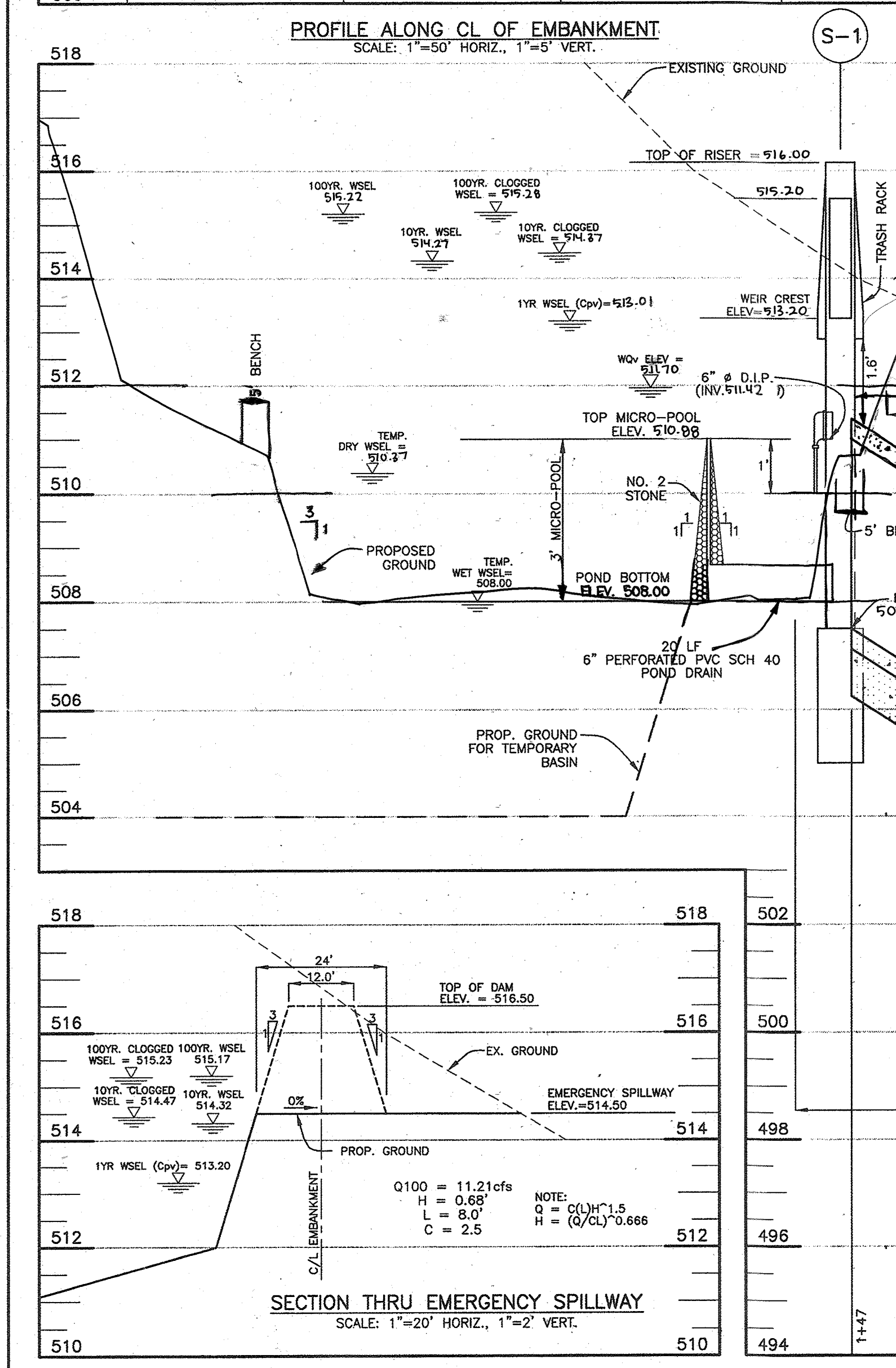
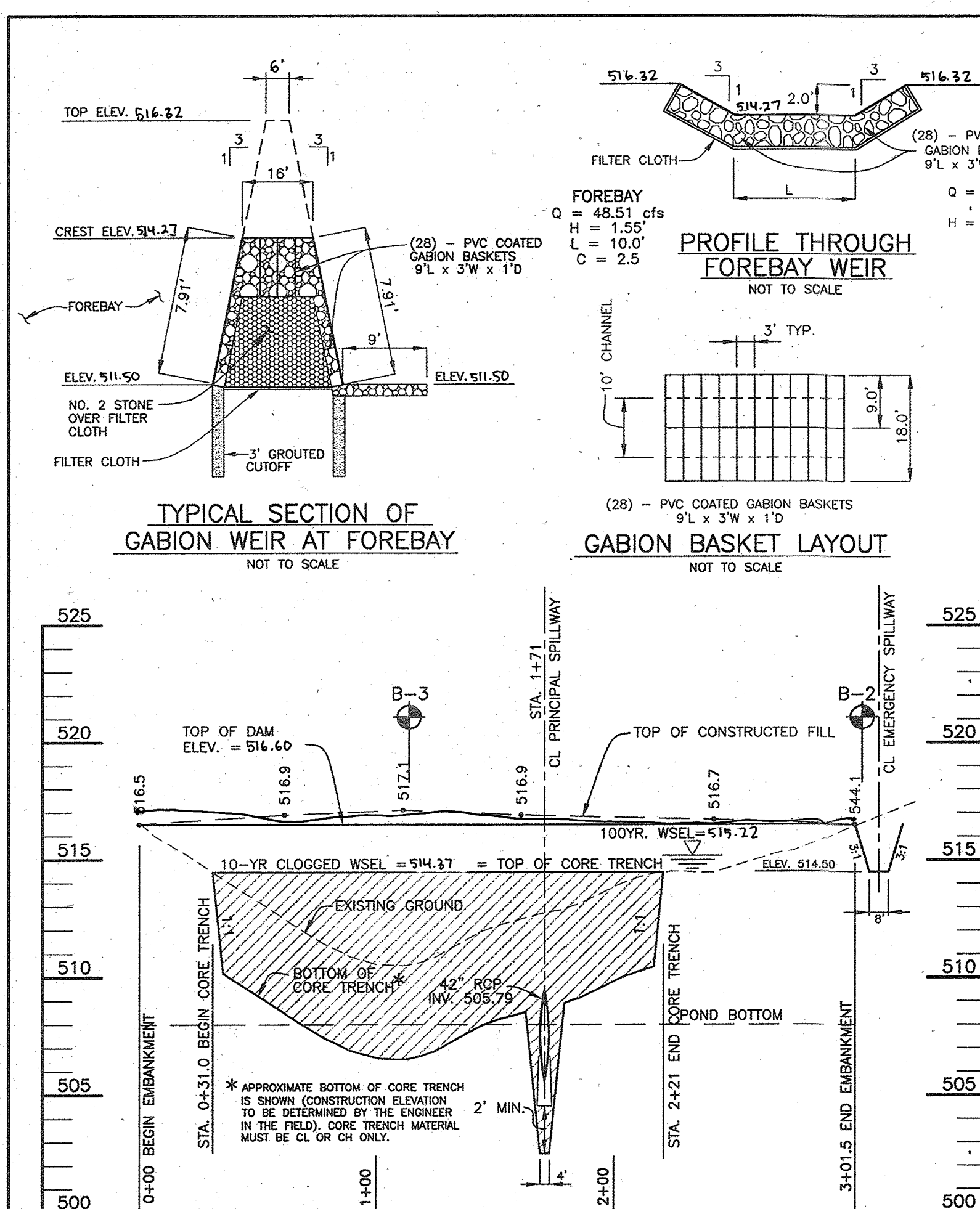
NO.	DATE	REVISION
1	3-10-2006	REMOVE TREE PROTECTION FENCE EXCEPT AROUND OUTFALLS OF SWMP #1 AND #2. REVISE WHIP SPECIES AND QUANTITIES.

BENCHMARK AS-BUILT ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
WWW.BEI-CVLENGINEERING.COM

Donal Moon
PROFESSIONAL ENGINEER

OWNER:	EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT:	EDGEWOOD FARM PHASE 1 LOTS 1-7: NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER:	TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION:	TAX MAP: 21, GRID: 22 PARCEL: 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
DESIGN: DBT	DRAFT: DBT	CHECK: DAM	TITLE: FOREST CONSERVATION PLAN
DATE: JULY, 2006	PROJECT NO. 1550	SCALE: AS SHOWN	SHEET 21 OF 27



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND JOINTLY MAINTAINED EXTENDED DETENTION POND.
ROUTINE MAINTENANCE TO BE PERFORMED BY H.O.A.:

1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MAINTAINED TO A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIP-RAP OR GRASS OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE TO BE PERFORMED BY HO. CO.:

1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, RISER, AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.
2. SEDIMENTS SHALL BE REMOVED FROM THE POND, AND FOREBAY, NO LATER THAN WHEN THE CAPACITY OF THE POND, OR FOREBAY, IS HALF FULL OF SEDIMENT. WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. 21443
DATE

DONALD A. MASON

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

I/VE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL EMPLOYED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I SHALL AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

7-13-06
DATE

DEVELOPER

BY THE ENGINEER:

I/VE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7/13/06
DATE

ENGINEER - DONALD A. MASON, P.E. # 21443

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

8/1/06
DATE

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

8/1/06
DATE

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS

8/1/06
DATE

CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

9/2/06
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

9/16/06
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION

AS-BUILT

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 A FAX: 410-465-6644
WWW.BE-CMLEENGINEERING.COM

OWNER: EDGEWOOD FARM, INC.
14919 ROXBURY ROAD
GLENELG, MARYLAND 21737

DEVELOPER: TOLL BROTHERS, INC.
7164 COLUMBIA GATEWAY DRIVE
SUITE 230
COLUMBIA, MARYLAND 21046
410-872-9105

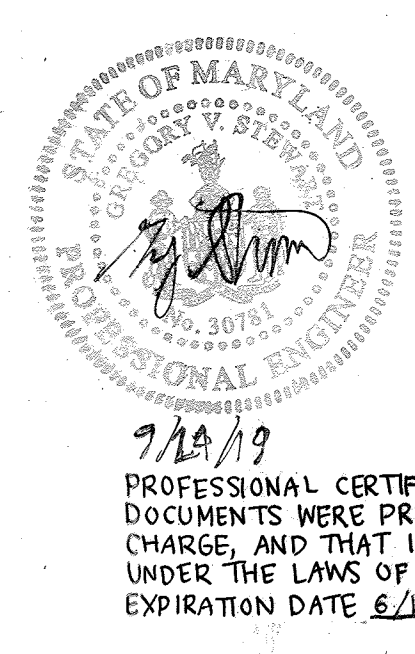
PROJECT: EDGEWOOD FARM PHASE 1
LOTS 1-7; NON-BUILDABLE BULK PARCELS "AA"- "HH"
NON-BUILDABLE PRESERVATION PARCELS "A"- "G"

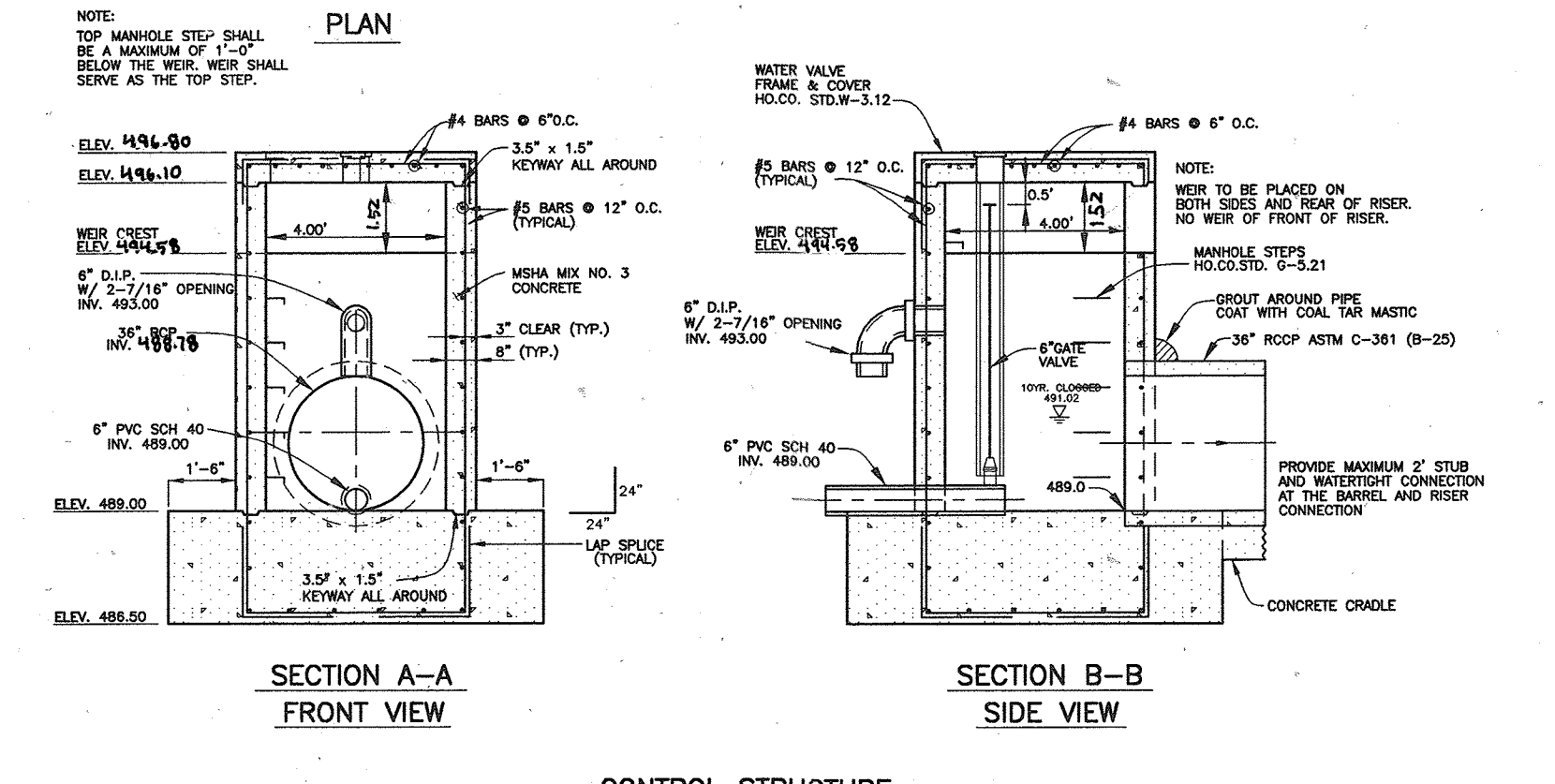
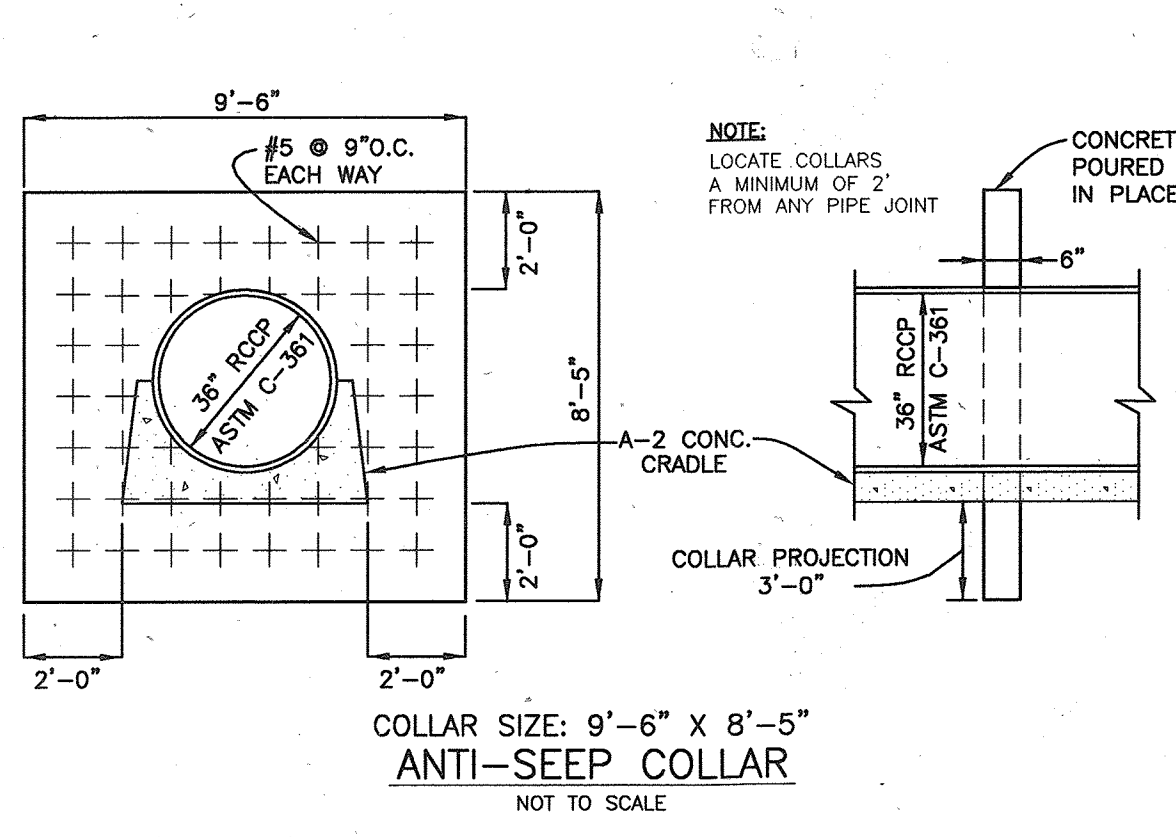
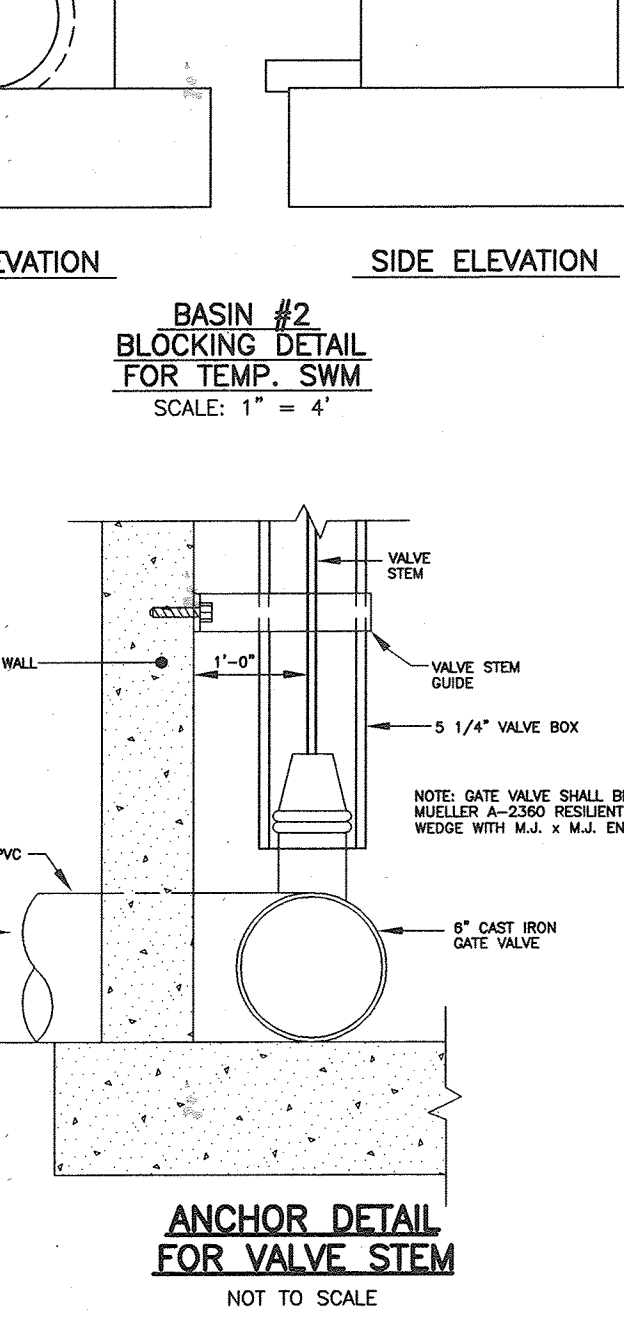
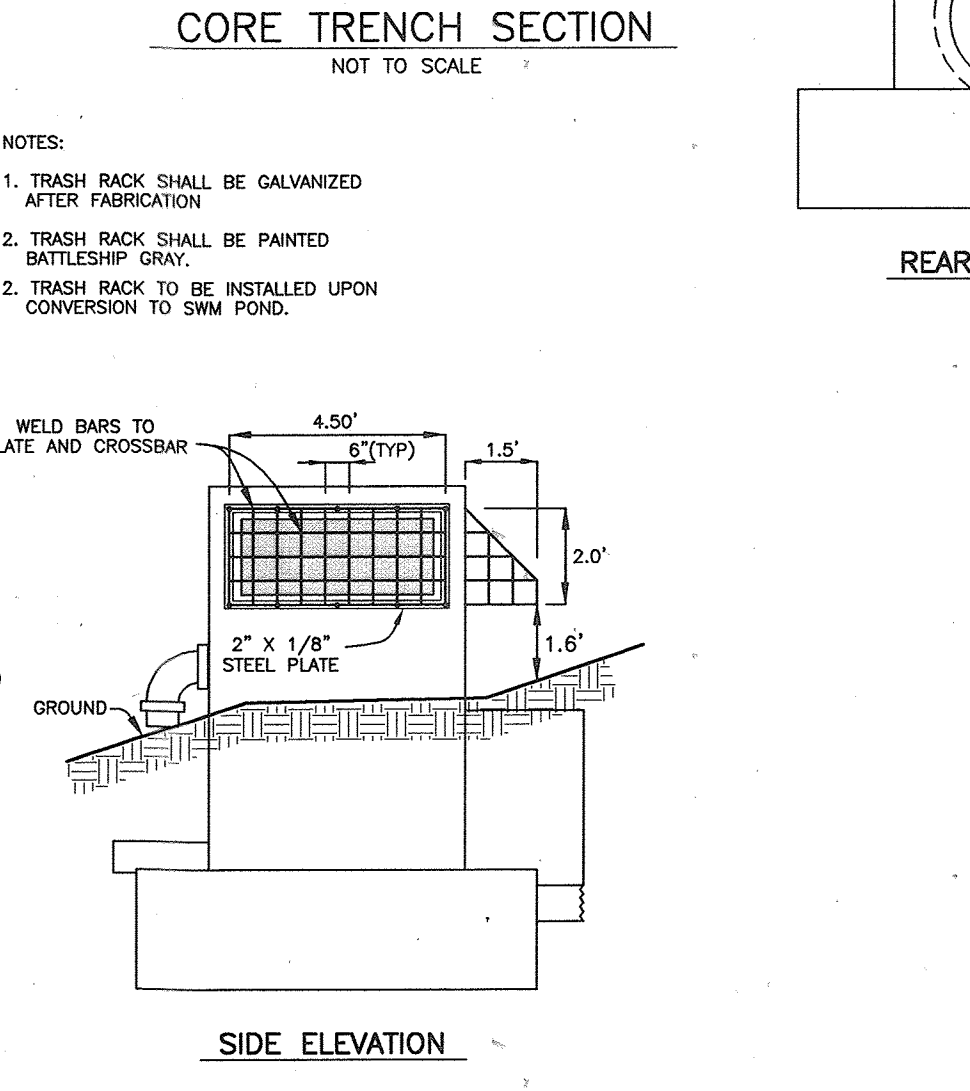
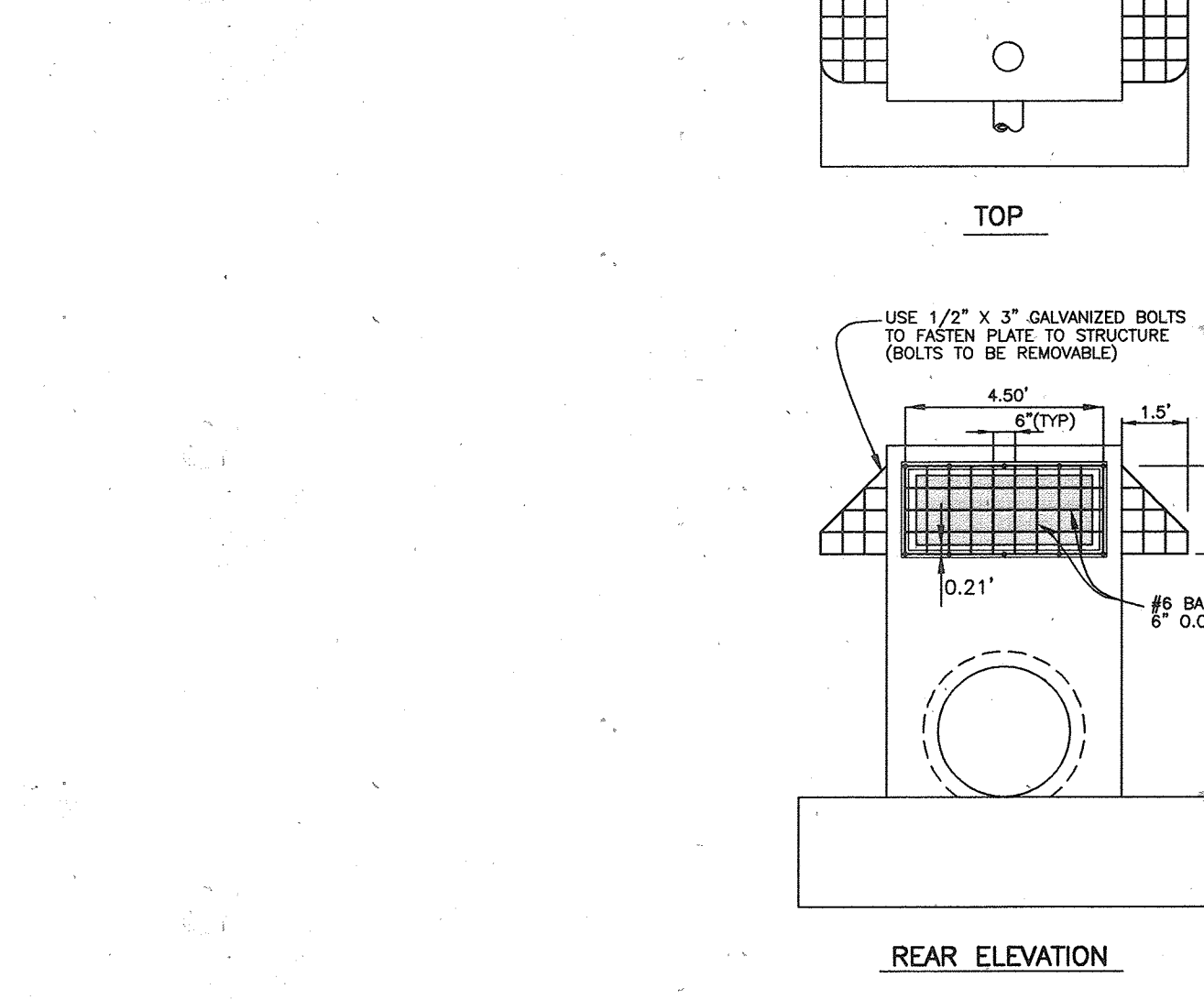
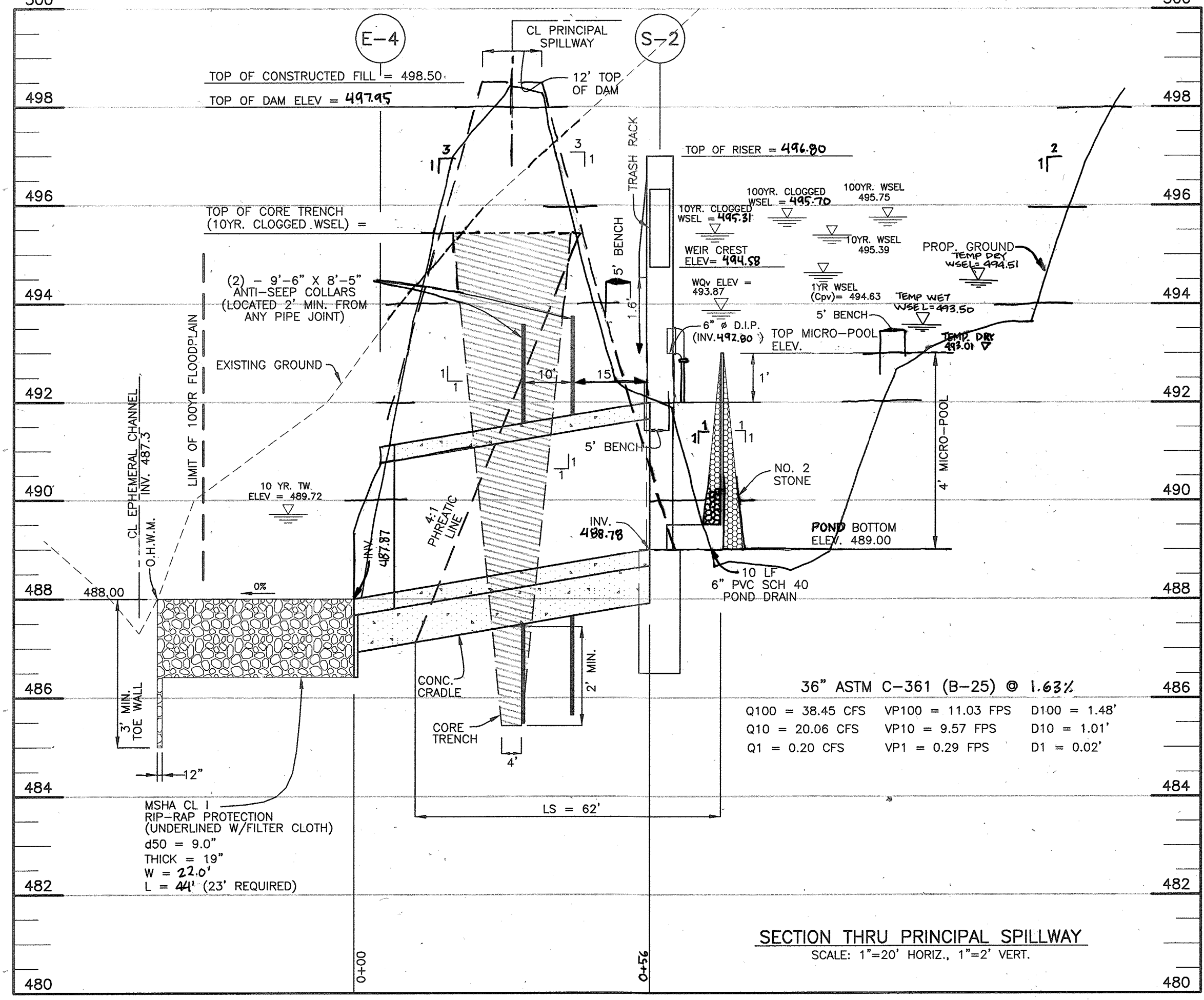
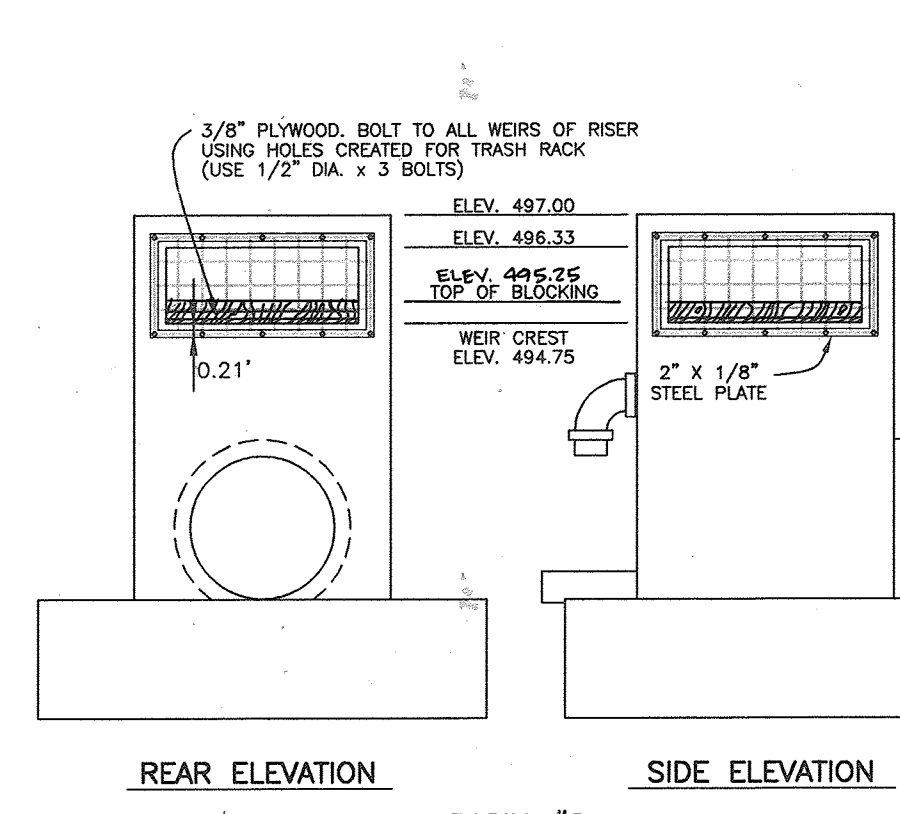
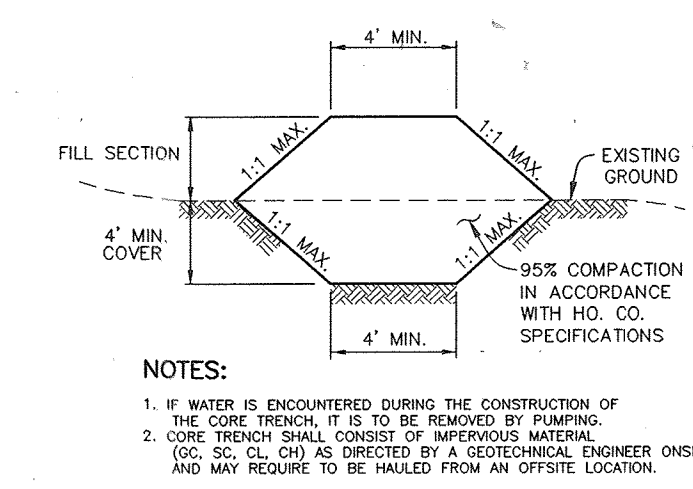
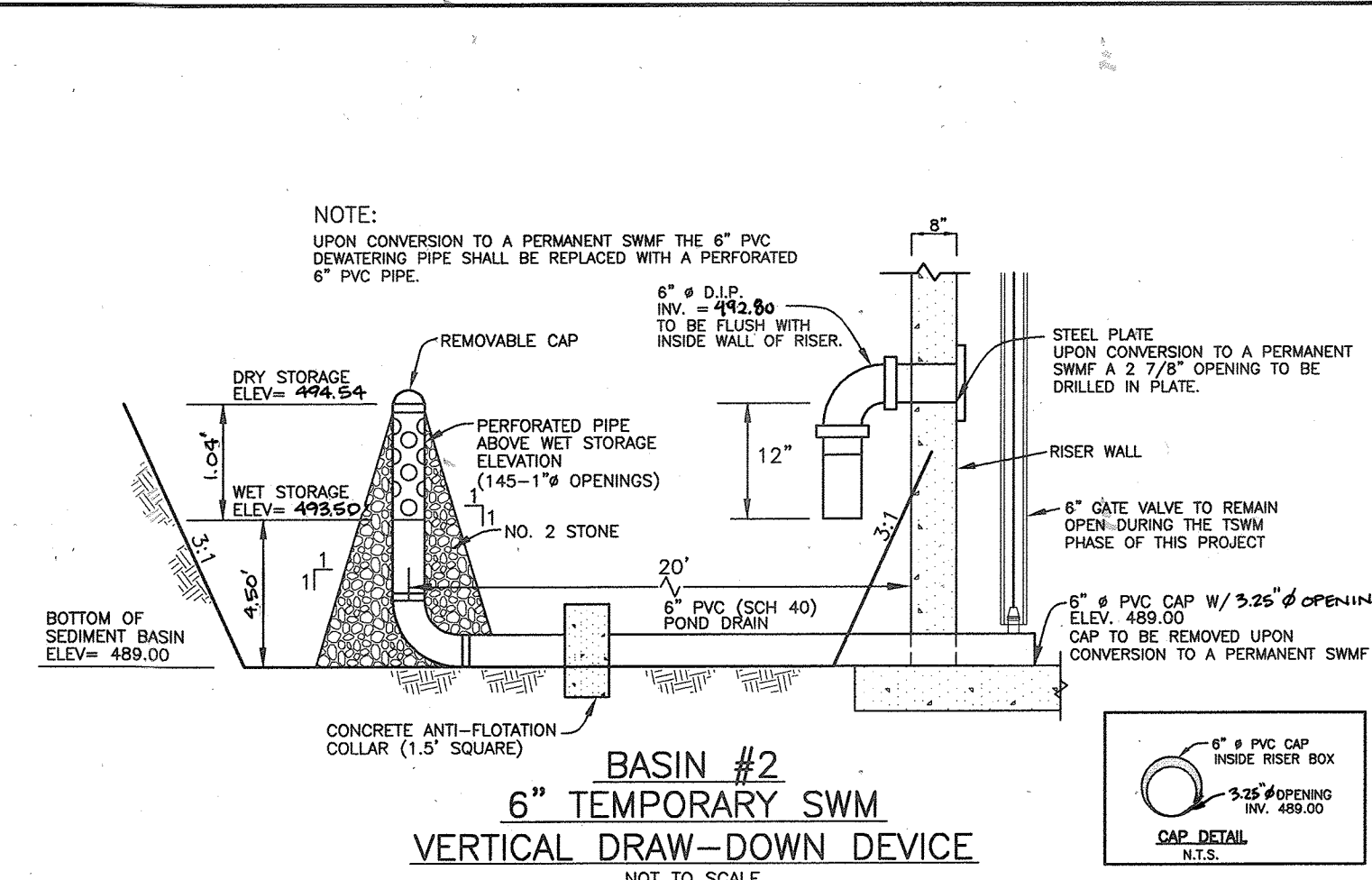
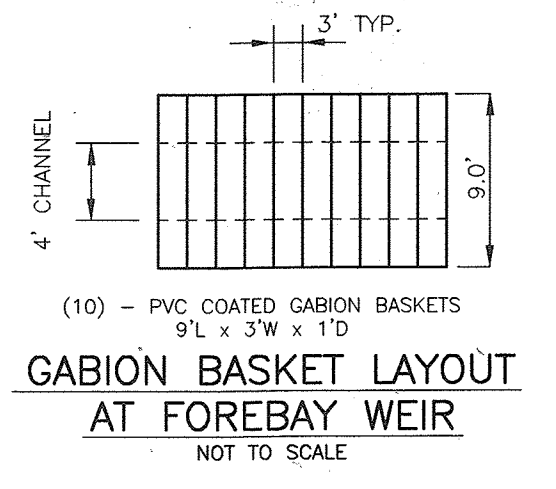
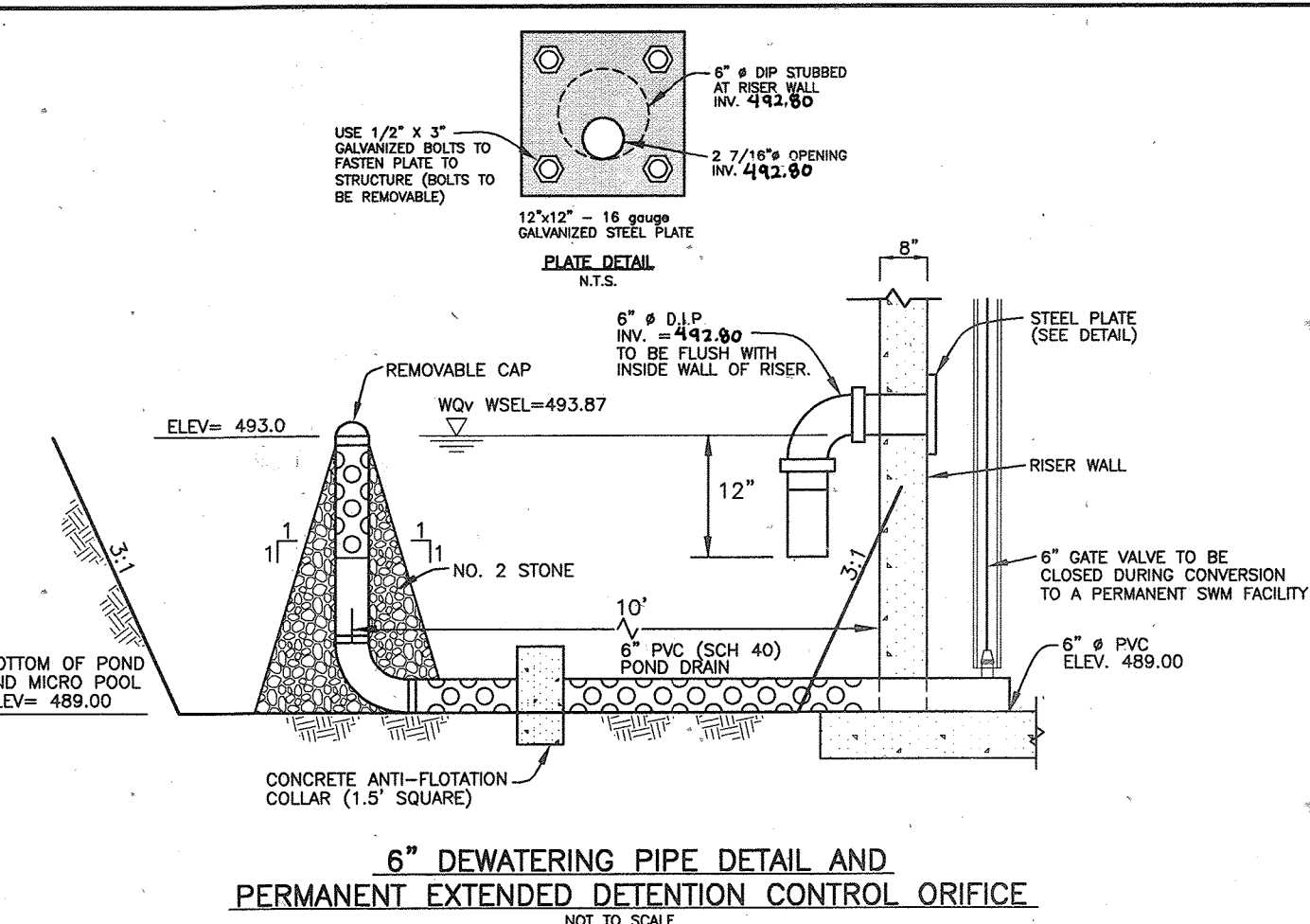
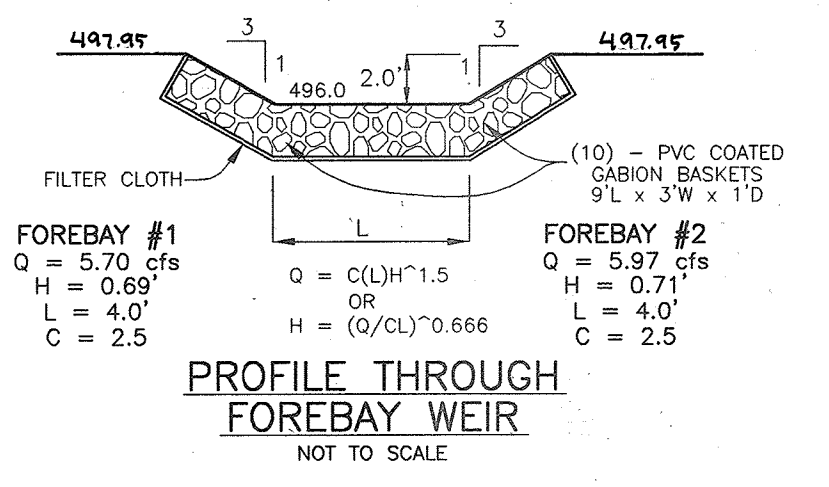
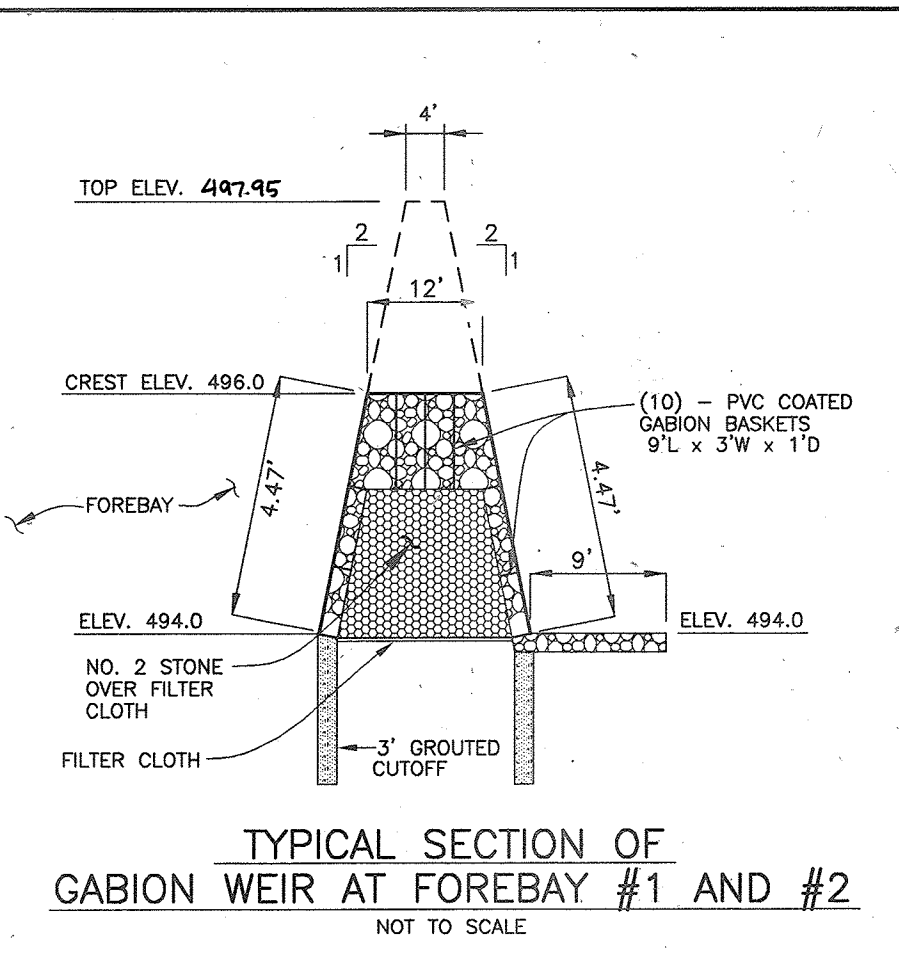
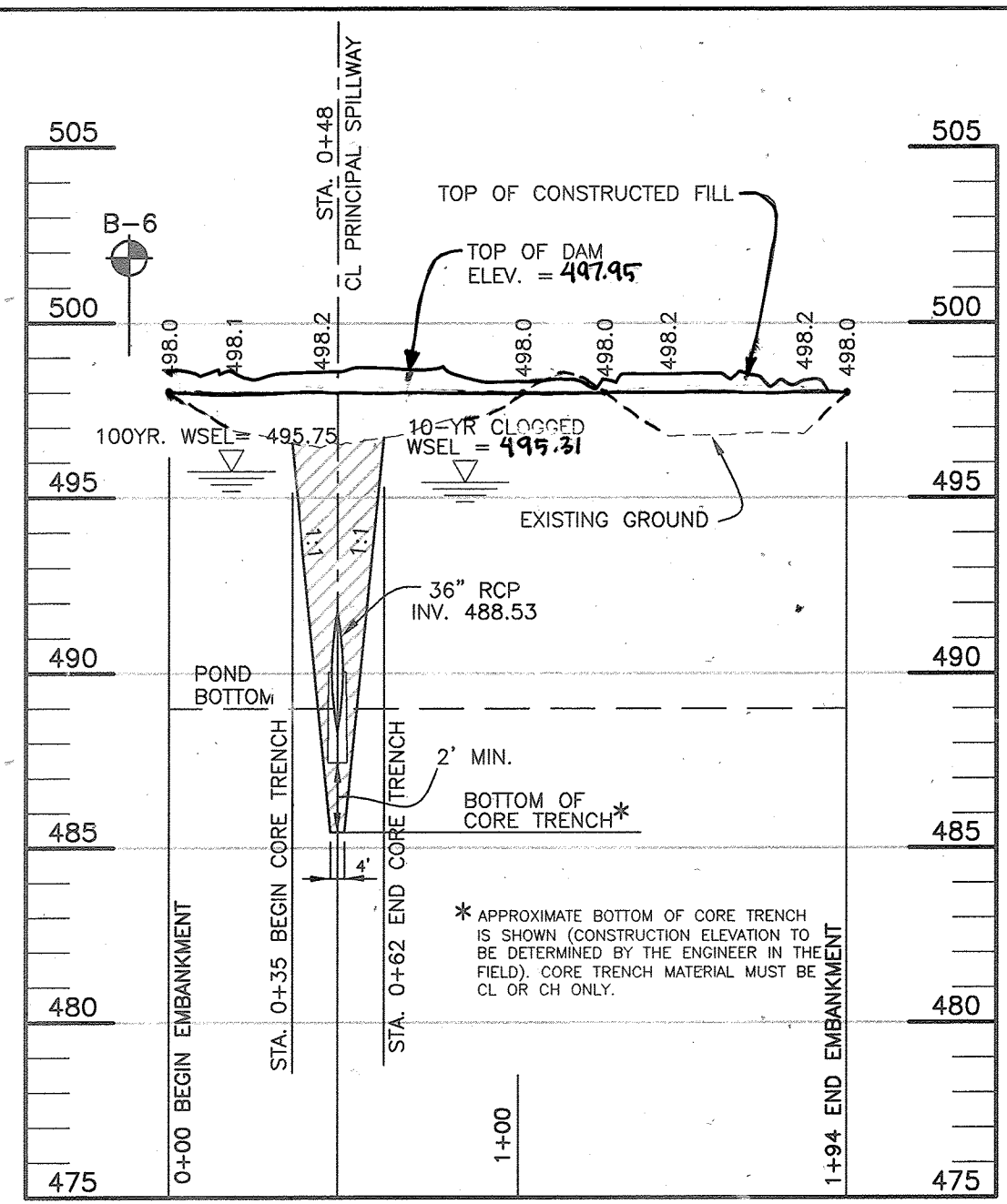
LOCATION: TAX MAP: 21, GRID: 22
PARCEL: 90
ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT FACILITY #1 DETAILS

DATE: JULY, 2006 PROJECT NO. 1550

DESIGN: DBT DRAFT: DBT CHECK: DAM SCALE: 1" = 100' SHEET 22 OF 27





GEOTECHNICAL ENGINEER RECOMMENDATIONS:

EMBANKMENT AND CUT-OFF TRENCH CONSTRUCTION

THE AREAS OF THE PROPOSED SWM FACILITIES SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE TO BE CONSTRUCTED. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT TO PREVENT THE FRESHNESS OF A GOOD SOIL SURFACE FROM BEING DESTROYED BY ACCESS TO A DUMP TRUCK. THE EXPOSED MATERIALS SHOULD BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER (DCP) OR EQUIPMENT IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MDS-10 CODE NO. 378 POND STANDARDS/SPECIFICATIONS, SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH, OR CL AND MUST HAVE AT LEAST 3% PASSING THE #200 SIEVE.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE, A FINE-GRAINED SOIL, INCLUDING SILT/CLAY WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. ALL FILL MATERIALS MUST BE PROPERLY COMPACTED IN ACCORDANCE WITH MDS-10 CODE NO. 378 POND STANDARDS/SPECIFICATIONS.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED EXTENDED DETENTION POND ROUTINE MAINTENANCE TO BE PERFORMED BY H.O.A.:

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIP-RAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE TO BE PERFORMED BY HO. CO.:

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEDIMENTS SHALL BE REMOVED FROM THE POND, AND FOREBAY, NO LATER THAN WHEN THE CAPACITY OF THE POND, OR FOREBAY, IS HALF FULL OF SEDIMENT, OR, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. 21443

DONALD A. MASON DATE

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN I AM A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Donal Mason 7-13-06 DATE

BY THE ENGINEER:

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donal Mason 7/13/06 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

Jin Myung 8/9/06 DATE

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Donal Mason 8/9/06 DATE

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS

Donal Mason 8/9/06 DATE

CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Donal Mason 9/1/06 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

Donal Mason 9/1/06 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
1	3-10-2008	REVISE TEMP DEAN-DOWN DETAIL, BLOCKING DETAIL, TEMP WEIR DRY WSEL'S ON PRINCIPAL SPILLWAY PROFILE

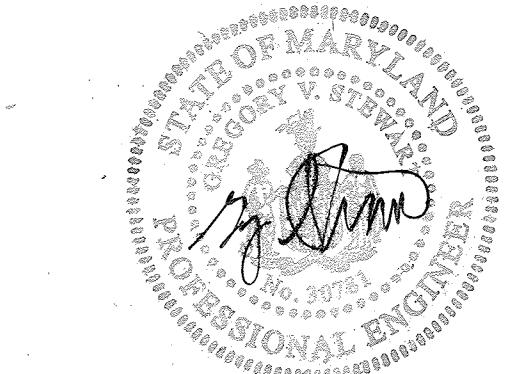
AS-BUILT

BENCHMARK ENGINEERING, INC.

ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-485-8105 FAX: 410-485-6844
WWW.BEI-ONLINEENGINEERING.COM

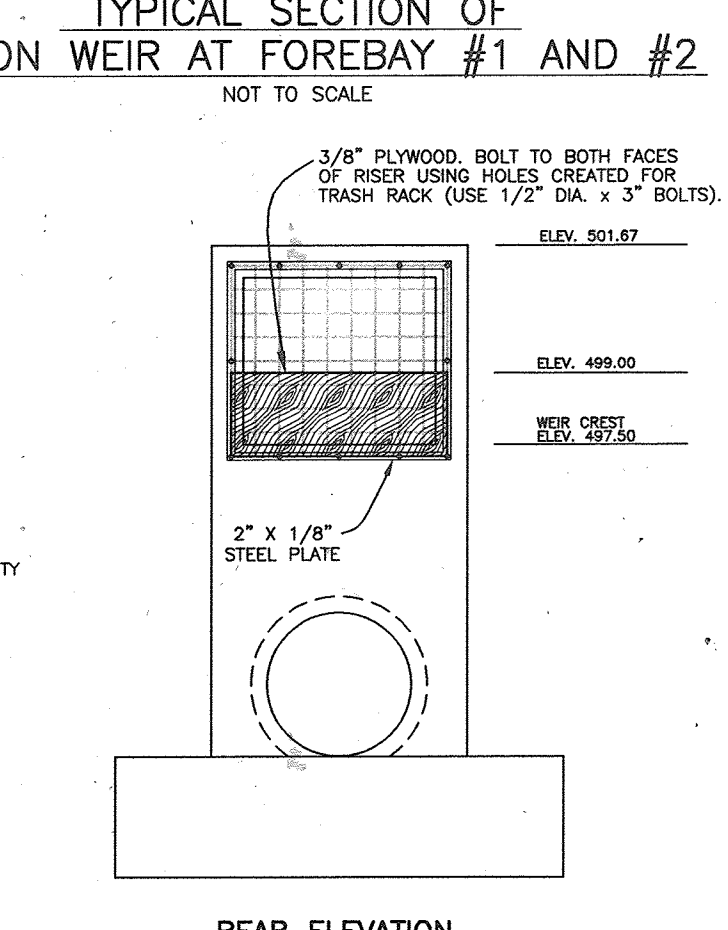
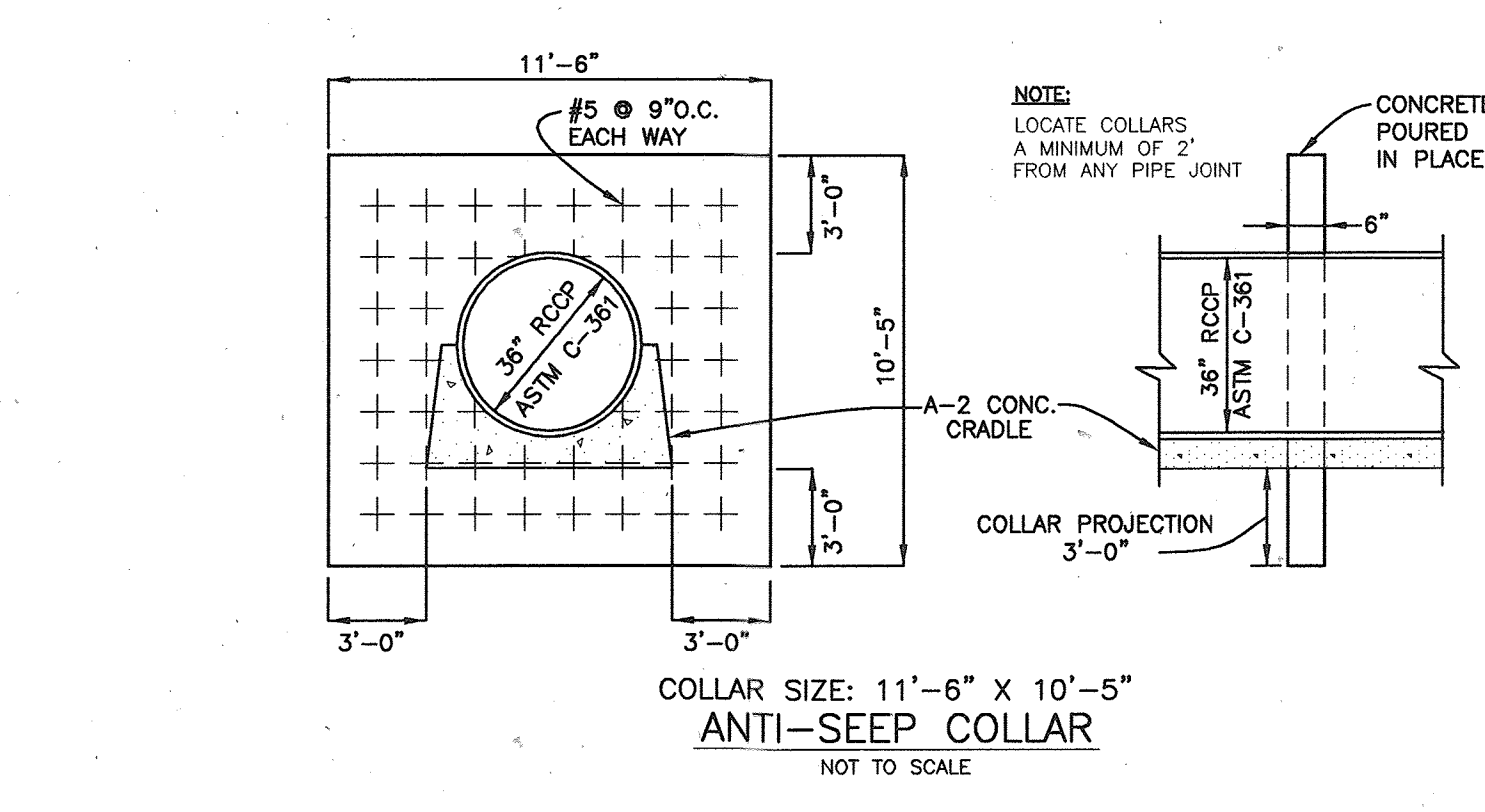
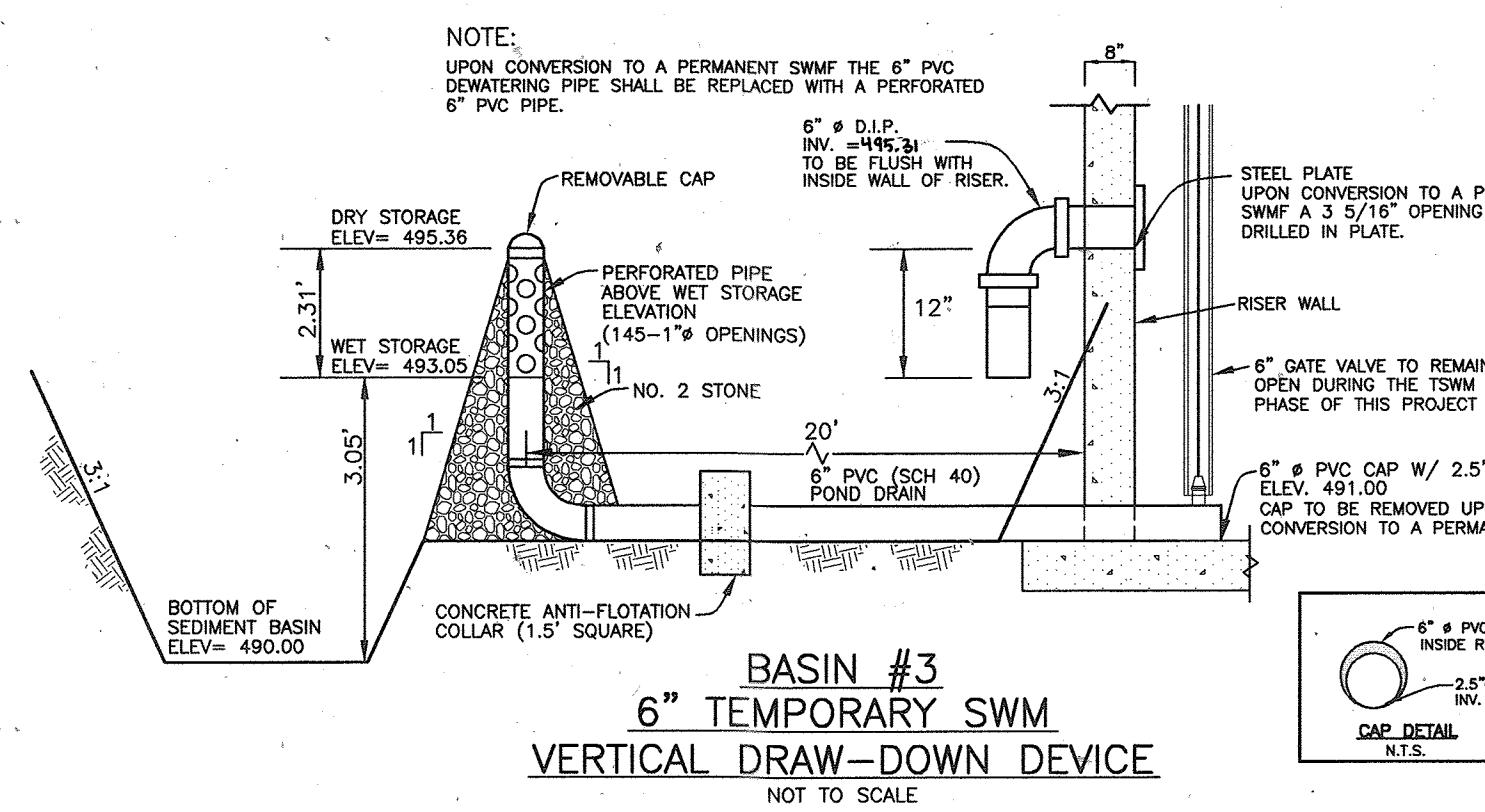
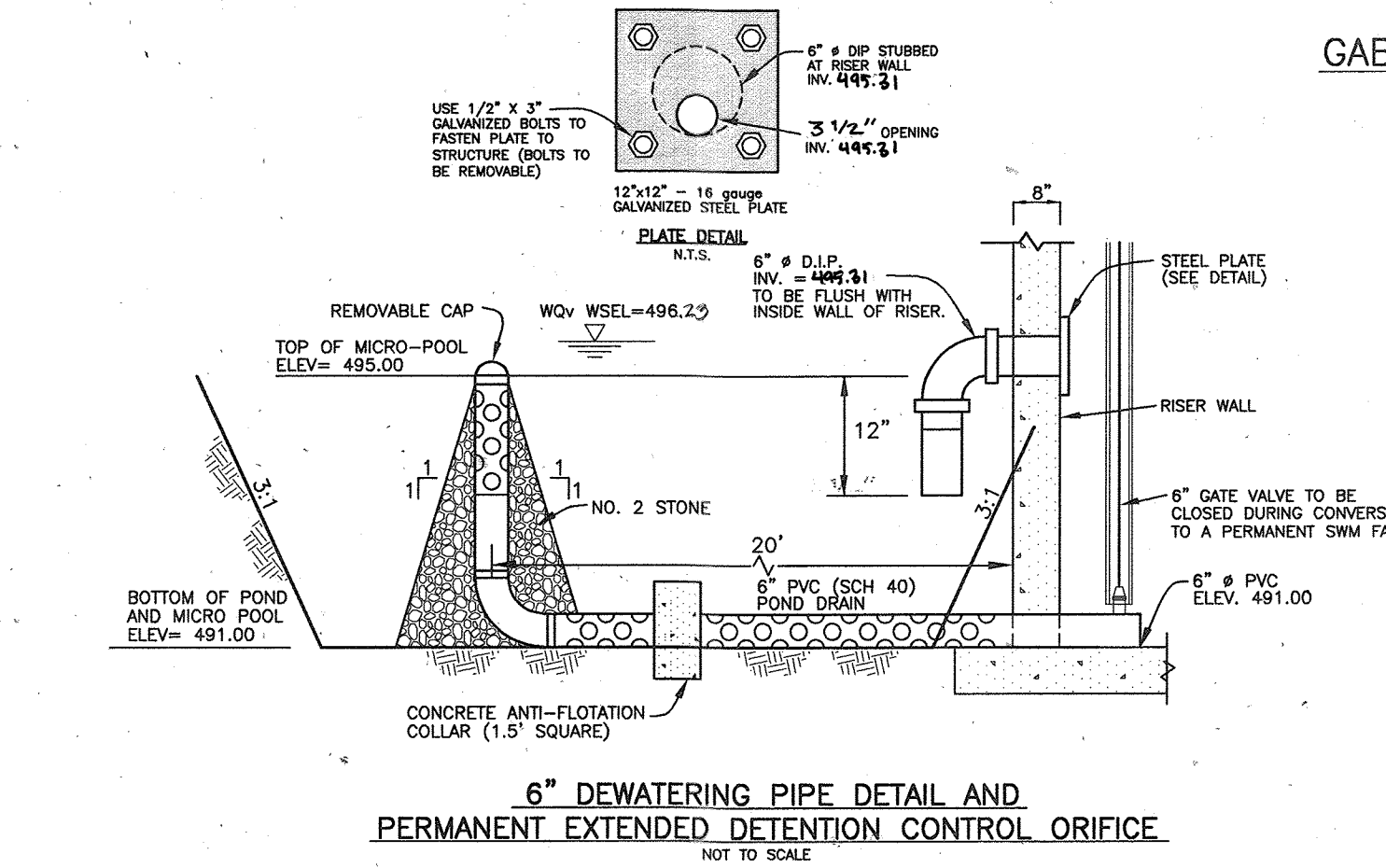
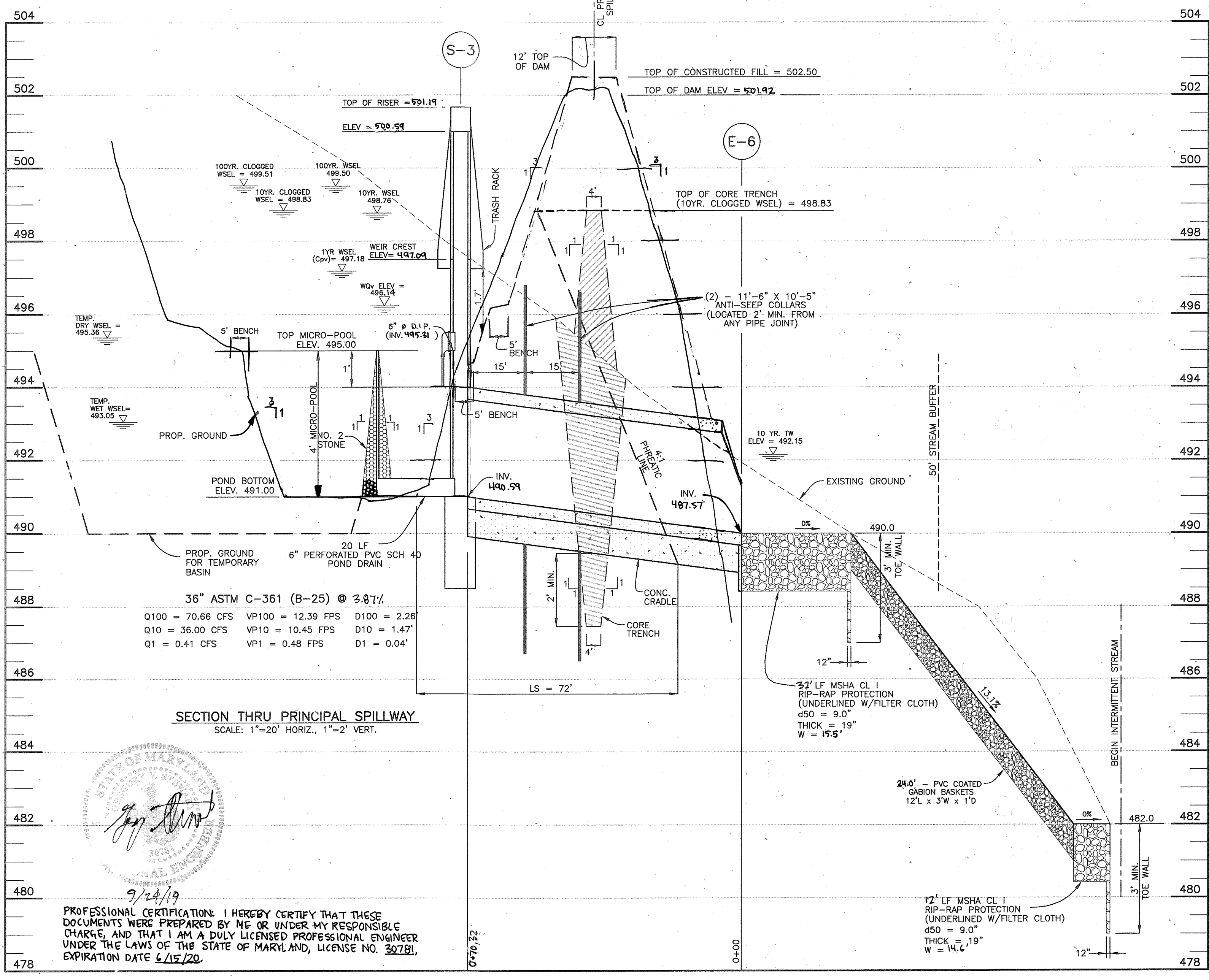
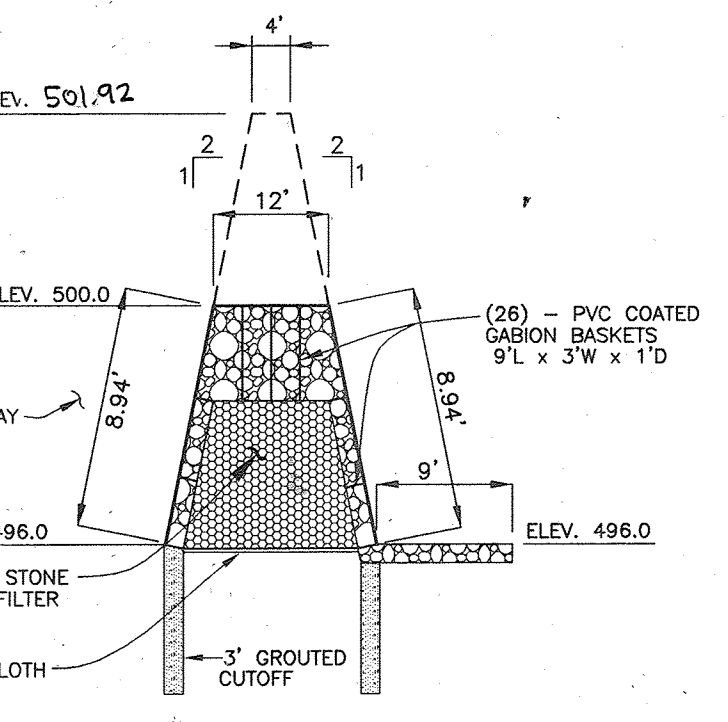
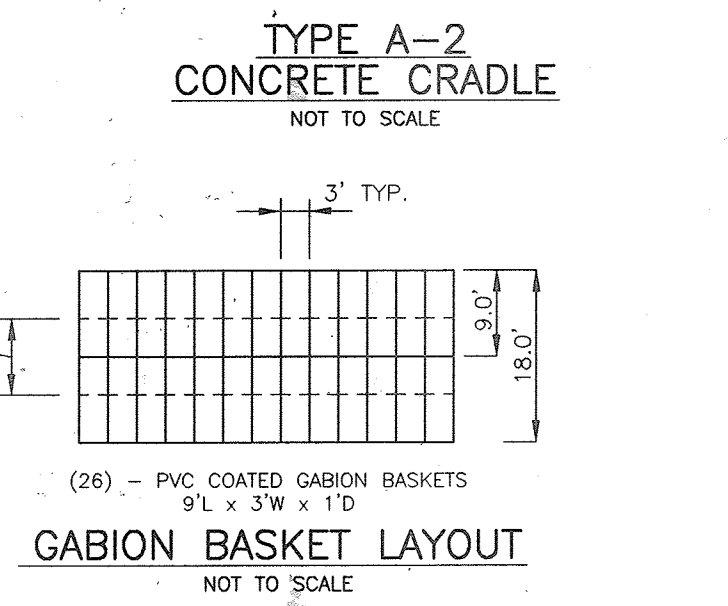
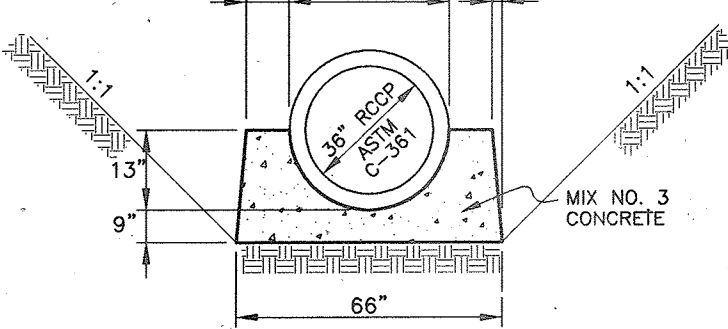
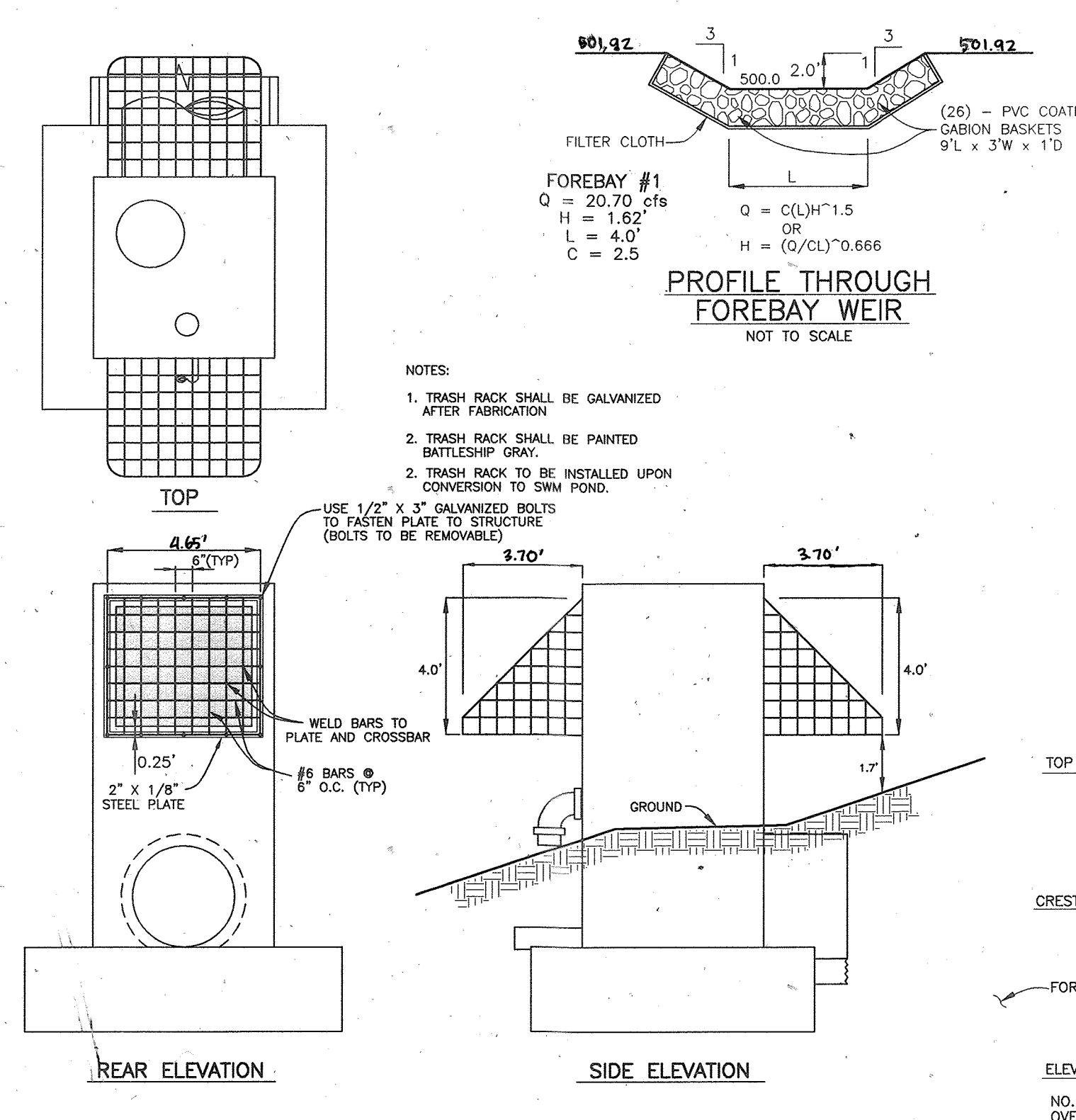
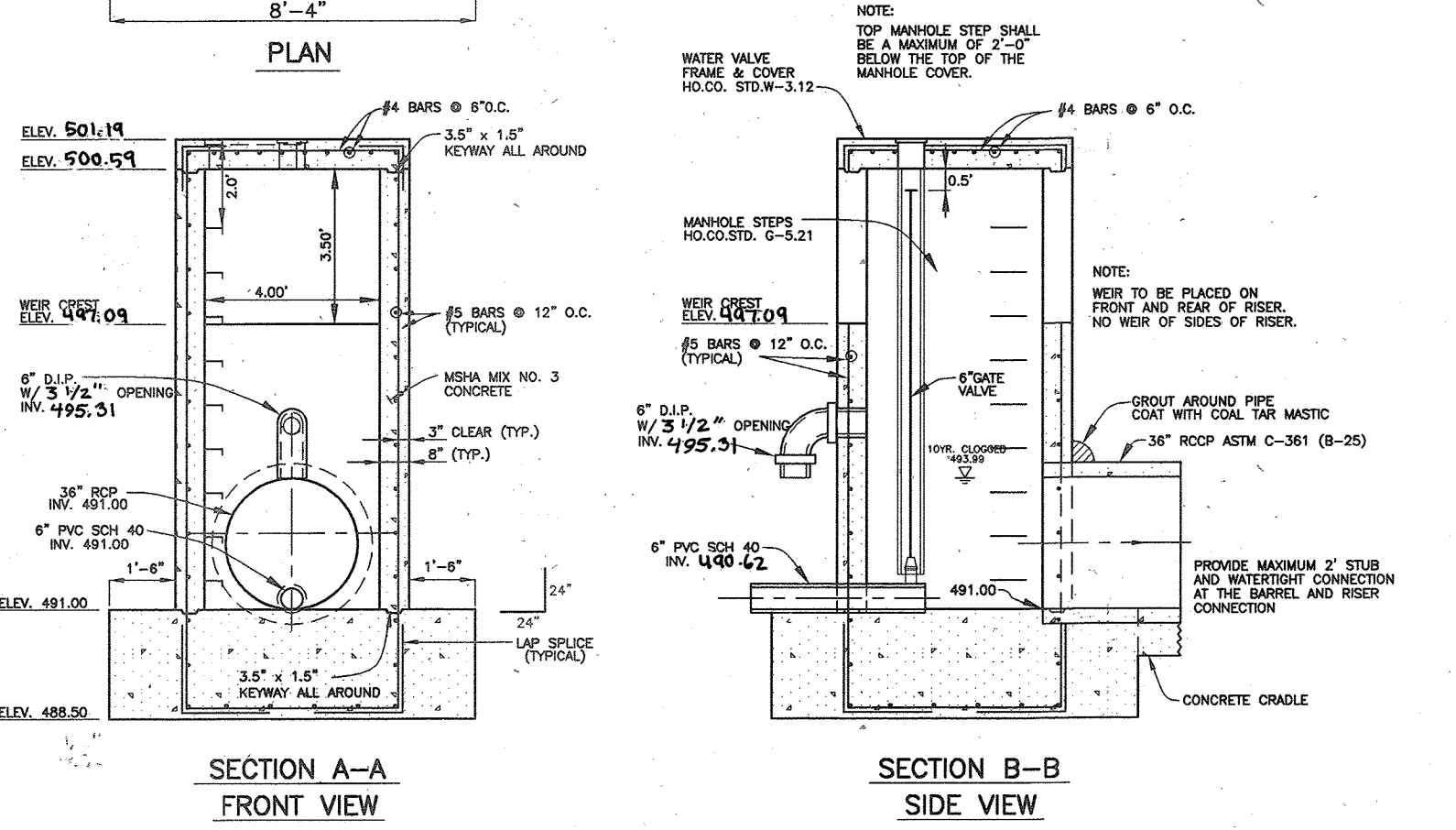
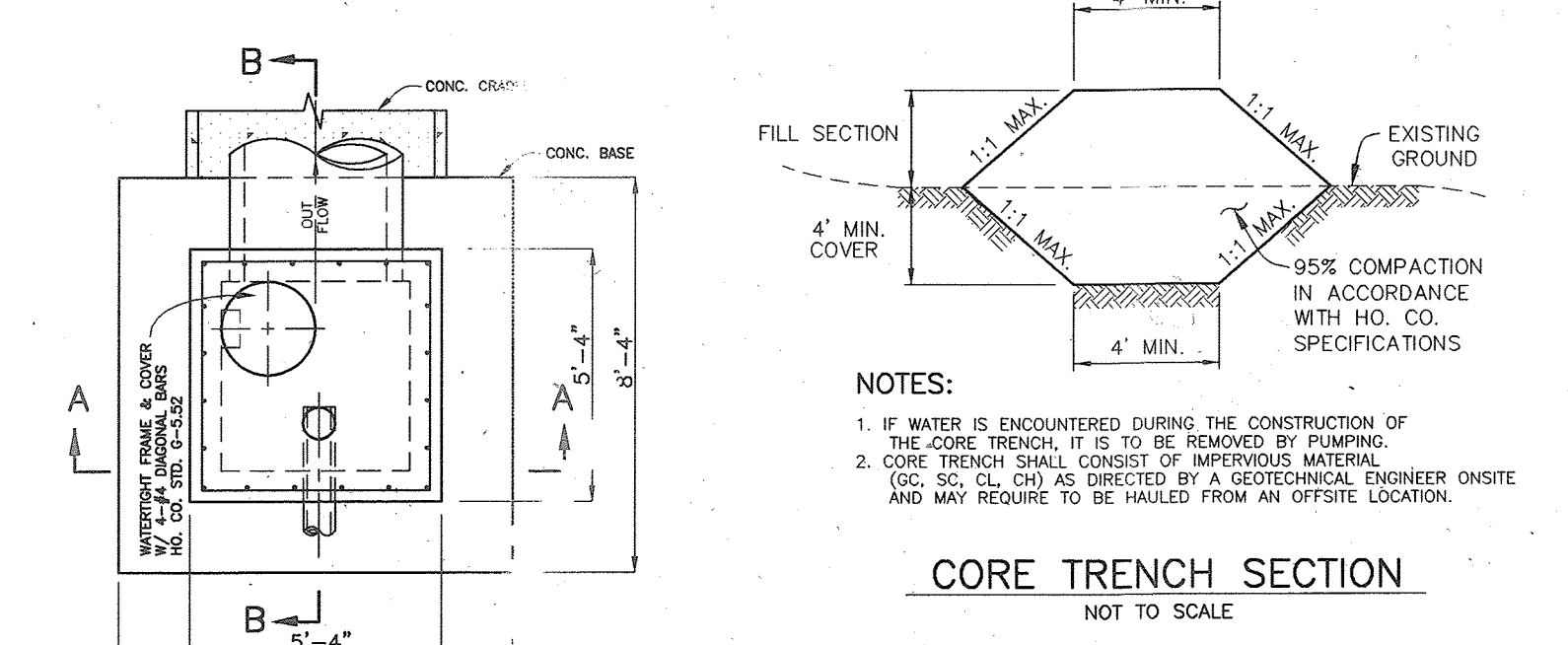
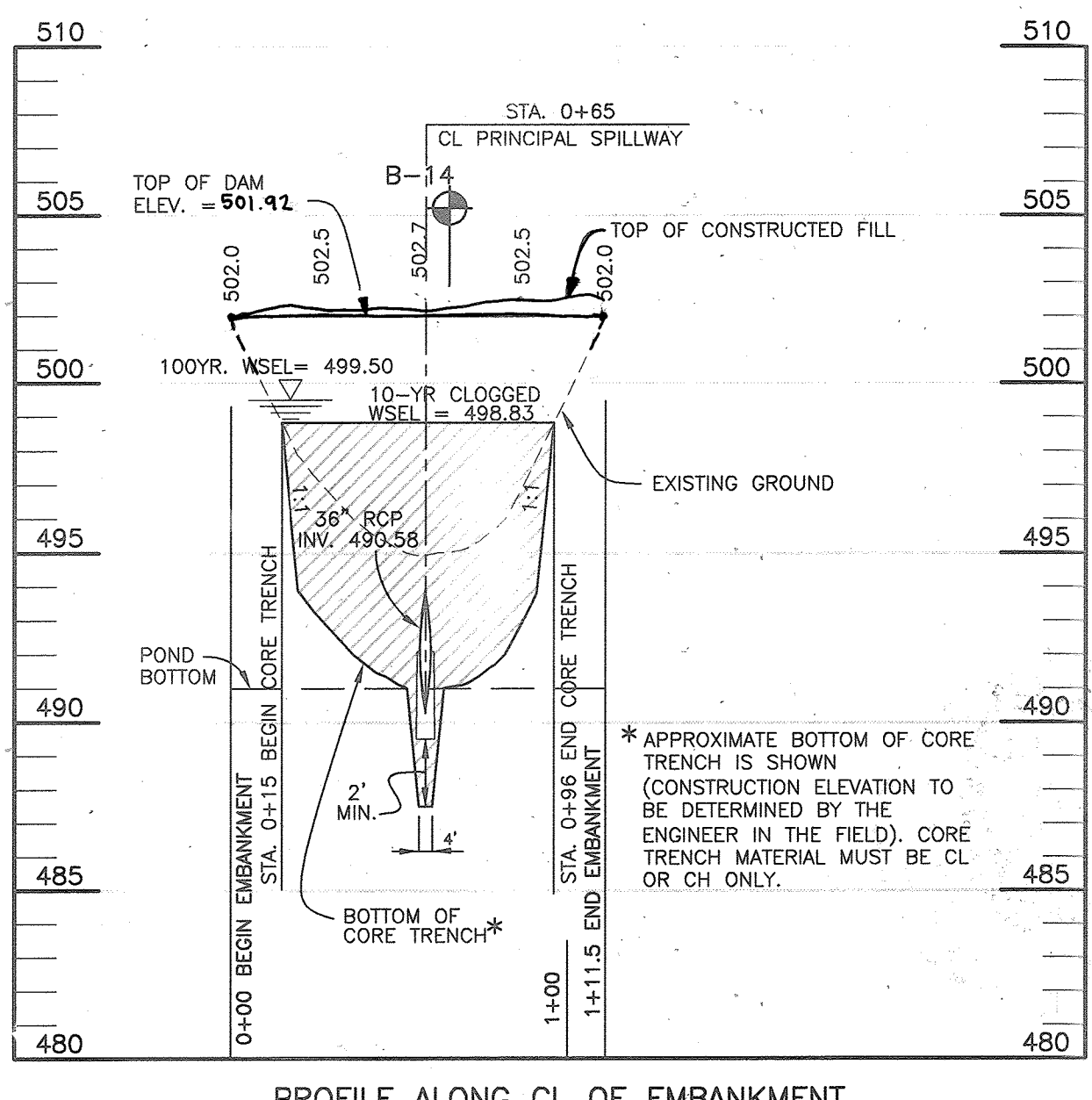
OWNER: EDGEWOOD FARM, INC. 14919 ROXBURY ROAD GLENELG, MARYLAND 21737	PROJECT: EDGEWOOD FARM PHASE 1 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH' NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'
DEVELOPER: TOLL BROTHERS, INC. 7164 COLUMBIA GATEWAY DRIVE SUITE 230 COLUMBIA, MARYLAND 21046 410-872-9105	LOCATION: TAX MAP: 21, GRID: 22 PARCELS 90 ELECTION DISTRICT NO. 4 HOWARD COUNTY, MARYLAND
TITLE: STORMWATER MANAGEMENT FACILITY #2 DETAILS	DATE: JULY, 2006 PROJECT NO.: 1550
DESIGN: DBT DRAFT: DBT CHECK: DAM	SCALE: AS SHOWN SHEET: 23 OF 27



9/24/19

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30781, EXPIRATION DATE 6/15/20.

EMBANKMENT AND CUT-OFF TRENCH CONSTRUCTION
THE AREAS OF THE PROPOSED SWM FACILITIES SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREAS IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES...



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND JOINTLY MAINTAINED EXTENDED DETENTION POND ROUTINE MAINTENANCE TO BE PERFORMED BY H.O.C.D.
1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS...

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE 'AS-BUILT' PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

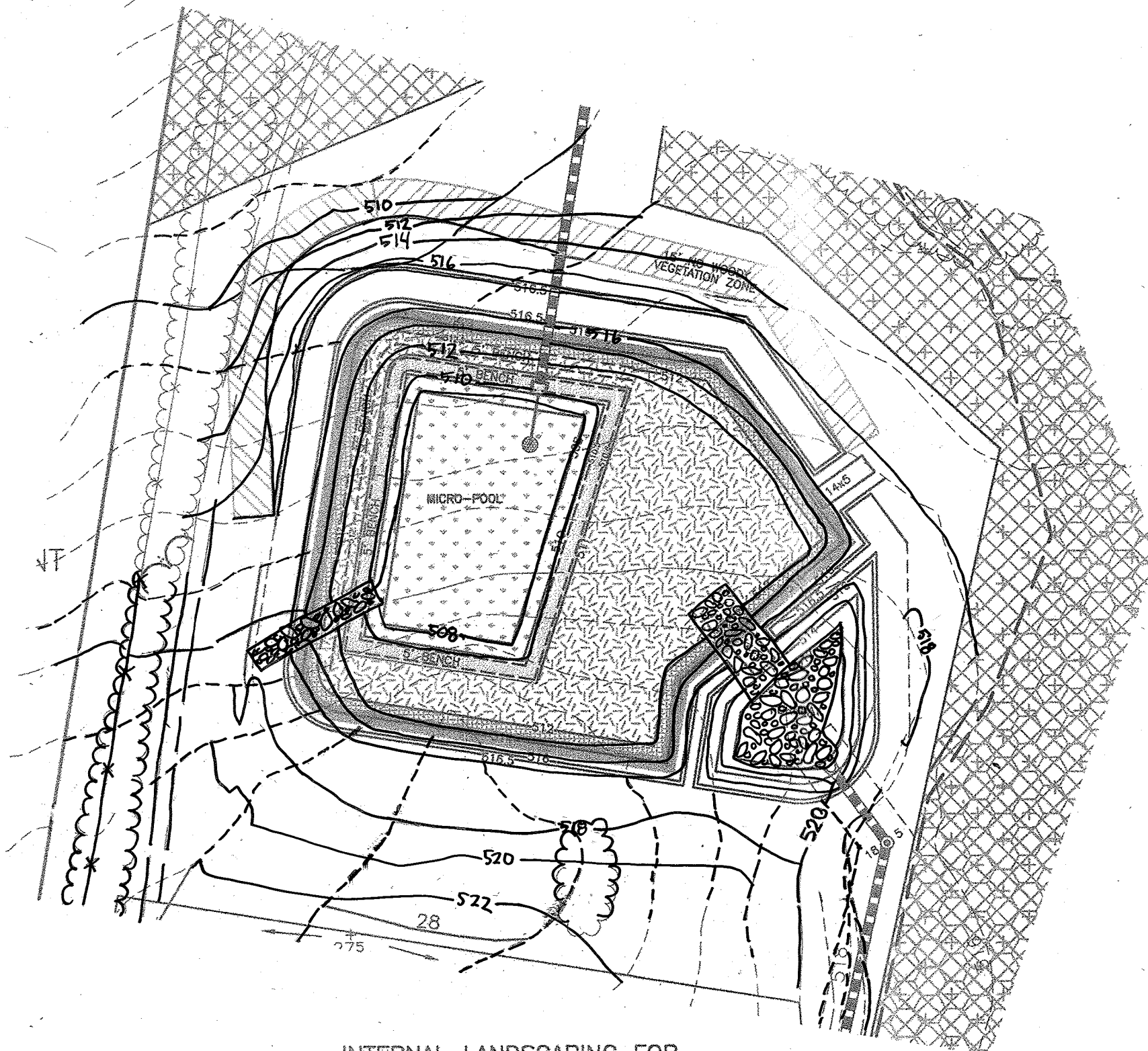
BY THE ENGINEER:
I HAVE CERTIFIED THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS...

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

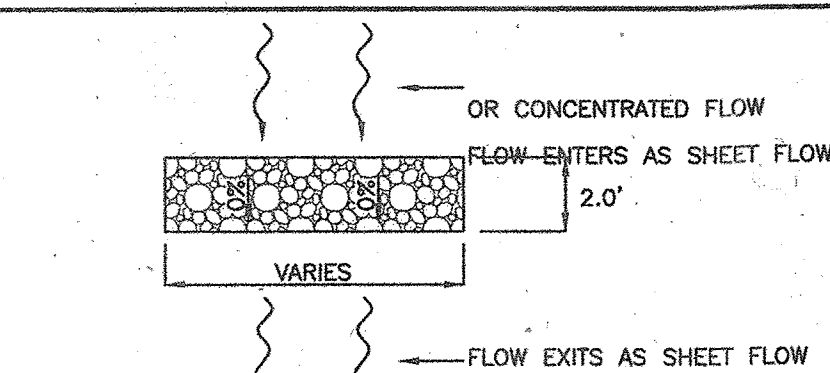
AS-BUILT BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644 WWW.BE-CIVLENGINEERING.COM
OWNER: EDGEWOOD FARM, INC.
PROJECT: EDGEWOOD FARM PHASE 1
TITLE: STORMWATER MANAGEMENT FACILITY #3 DETAILS

PLANTING SCHEDULE FOR EXTENDED DETENTION FACILITY #1				
ZONE	AREA (SF)	ELEVATION RANGE	PLANT MIX	QUANTITIES
1 DEEP WATER POOL	7,740	508.00 - 510.50	100% WATER LILLY	860
			50% BROAD WATER WEED	131
2 SHALLOW WATER BENCH (low marsh)	2,368	510.50 - 511.00	25% DUCK POTATO	68
			25% ARROW ARUM	66
3 SHORELINE FRINGE (high marsh)	12,145	511.00 - 512.20	50% CUTGRASS, RICE	675
			50% SWITCHGRASS	675
4 RIPARIAN FRINGE	1,791	512.20 - 513.20	50% LOVEGRASS-MEADOW	100
			25% VIOLETS, COMMON BLUE	50
5 FLOODPLAIN TERRACE	3,734	513.20 - 515.17	25% CONEFLOWER, CUT-LEAF	50
			75% WITCHGRASS, NEEDLE-LEAF	311
6 UPLAND SLOPES	0	N/A	25% CONEFLOWER, SWEET	104
			N/A	N/A

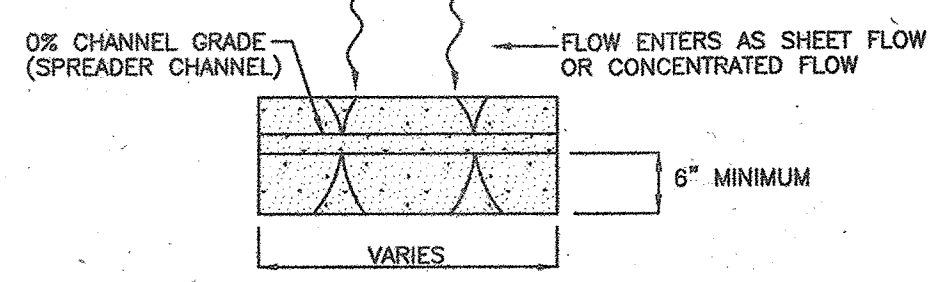
NOTE: ALL PLANTINGS TO BE QUART BULBS SPACED AT 3' O.C.



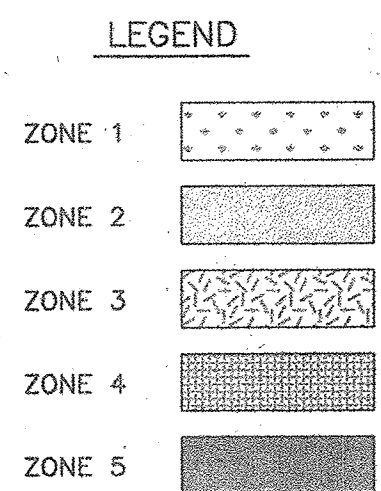
INTERNAL LANDSCAPING FOR EXTENDED DETENTION FACILITY #1
SCALE: 1" = 50'



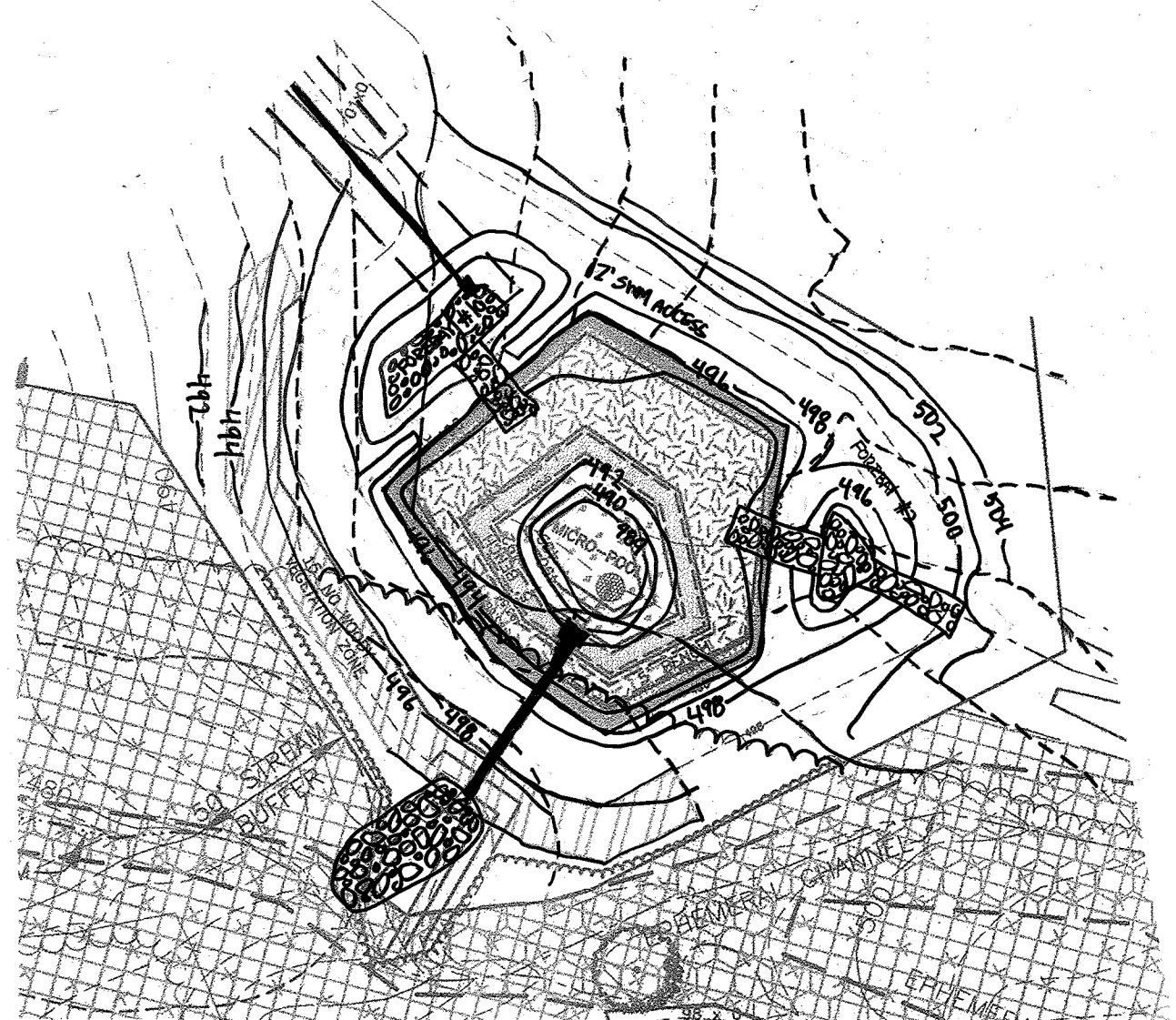
STONE TRENCH LEVEL SPREADER DETAIL
NOT TO SCALE



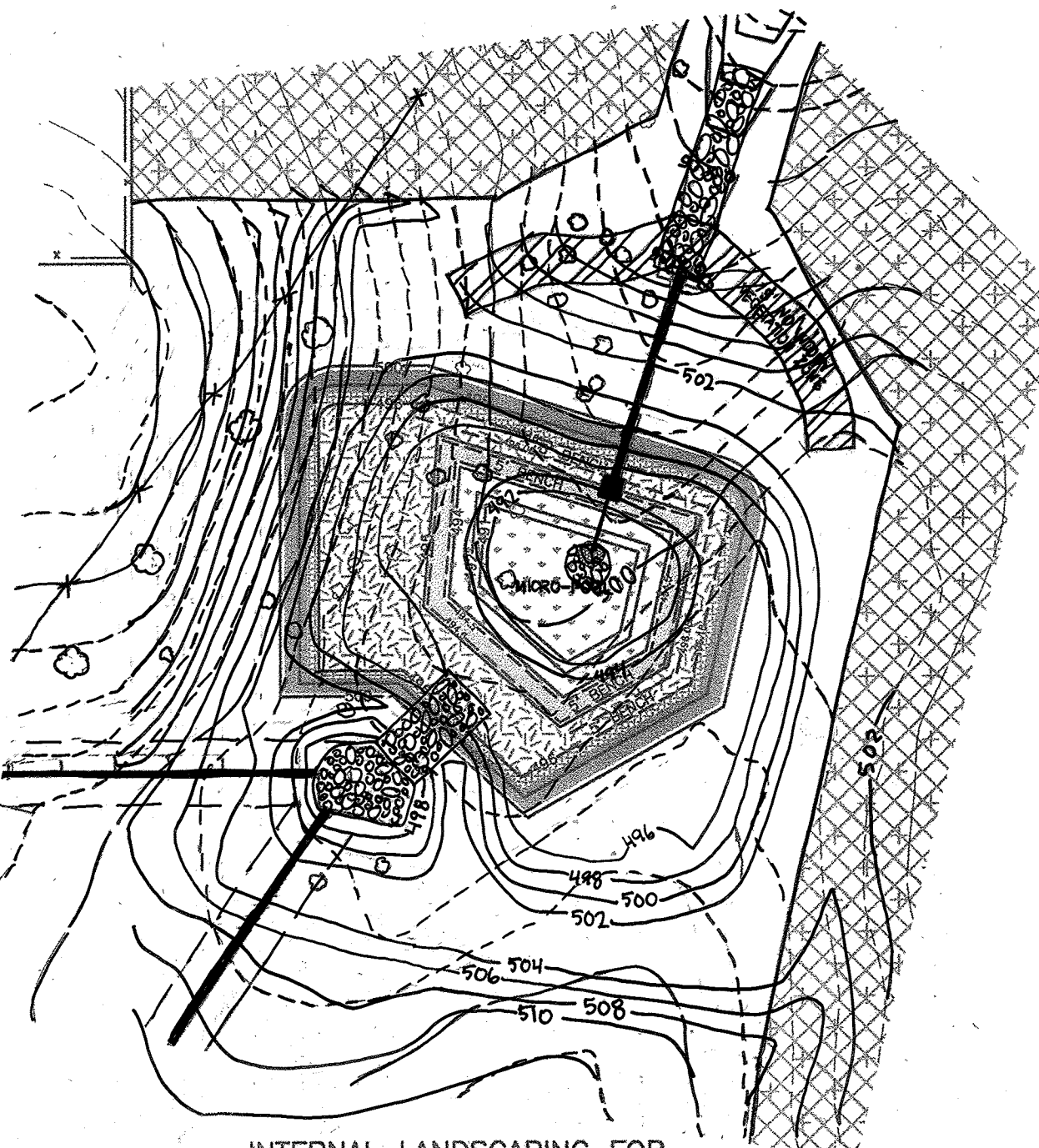
CONCRETE LEVEL SPREADER DETAIL
NOT TO SCALE



- NOTES:
1. LOOSEN SOIL IN PLANTING ZONES TO A DEPTH OF THREE TO FIVE INCHES BEFORE PLANTING.
 2. PLANTING HOLES TO HAVE A DIAMETER 6" GREATER THAN THE ROOT BALL BEING PLANTED IN THEM.
 3. NO WOODY VEGETATION IS PERMITTED WITHIN 15' OF THE TOE OF SLOPE OR 25' OF THE SPILLWAY.



INTERNAL LANDSCAPING FOR EXTENDED DETENTION FACILITY #2
SCALE: 1" = 50'



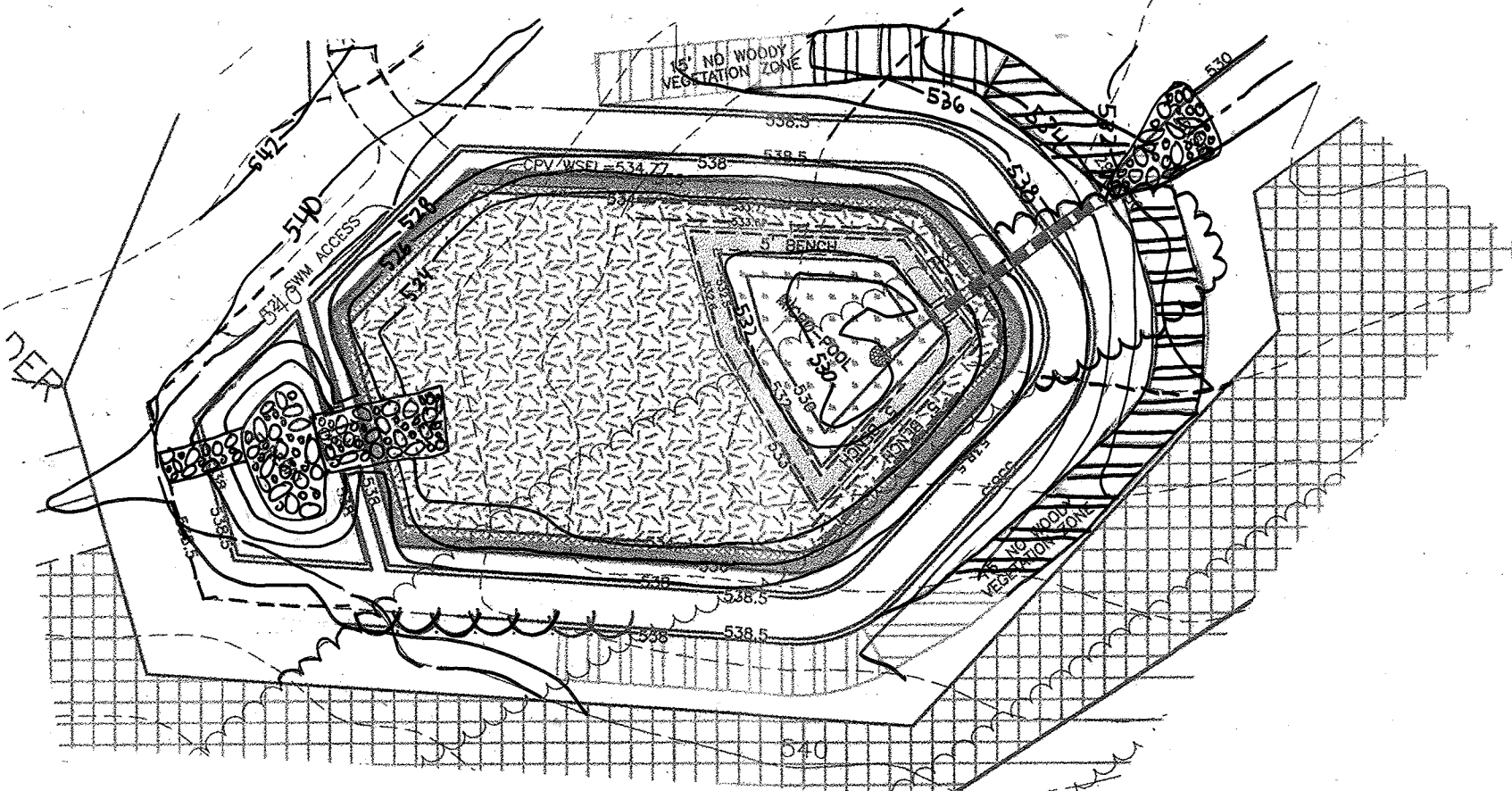
INTERNAL LANDSCAPING FOR EXTENDED DETENTION FACILITY #3
SCALE: 1" = 50'

PLANTING SCHEDULE FOR EXTENDED DETENTION FACILITY #2				
ZONE	AREA (SF)	ELEVATION RANGE	PLANT MIX	QUANTITIES
1 DEEP WATER POOL	1,953	489.00 - 492.50	100% WATER LILLY	217
			50% BROAD WATER WEED	66
2 SHALLOW WATER BENCH (low marsh)	1,191	492.50 - 493.00	25% DUCK POTATO	33
			25% ARROW ARUM	33
3 SHORELINE FRINGE (high marsh)	3,982	493.00 - 494.00	50% CUTGRASS, RICE	221
			50% SWITCHGRASS	221
4 RIPARIAN FRINGE	534	494.00 - 494.63	50% LOVEGRASS-MEADOW	30
			25% VIOLETS, COMMON BLUE	15
5 FLOODPLAIN TERRACE	993	494.63 - 495.75	25% CONEFLOWER, CUT-LEAF	83
			75% WITCHGRASS, NEEDLE-LEAF	28
6 UPLAND SLOPES	0	N/A	25% CONEFLOWER, SWEET	104
			N/A	N/A

NOTE: ALL PLANTINGS TO BE QUART BULBS SPACED AT 3' O.C.

PLANTING SCHEDULE FOR EXTENDED DETENTION FACILITY #3				
ZONE	AREA (SF)	ELEVATION RANGE	PLANT MIX	QUANTITIES
1 DEEP WATER POOL	3,623	491.00 - 494.50	100% WATER LILLY	403
			50% BROAD WATER WEED	90
2 SHALLOW WATER BENCH (low marsh)	1,620	494.50 - 495.00	25% DUCK POTATO	45
			25% ARROW ARUM	45
3 SHORELINE FRINGE (high marsh)	5,886	495.00 - 498.18	50% CUTGRASS, RICE	310
			50% SWITCHGRASS	310
4 RIPARIAN FRINGE	1,172	496.18 - 497.18	50% LOVEGRASS-MEADOW	65
			25% VIOLETS, COMMON BLUE	33
5 FLOODPLAIN TERRACE	2,965	497.18 - 499.50	25% CONEFLOWER, CUT-LEAF	247
			75% WITCHGRASS, NEEDLE-LEAF	82
6 UPLAND SLOPES	0	N/A	25% CONEFLOWER, SWEET	104
			N/A	N/A

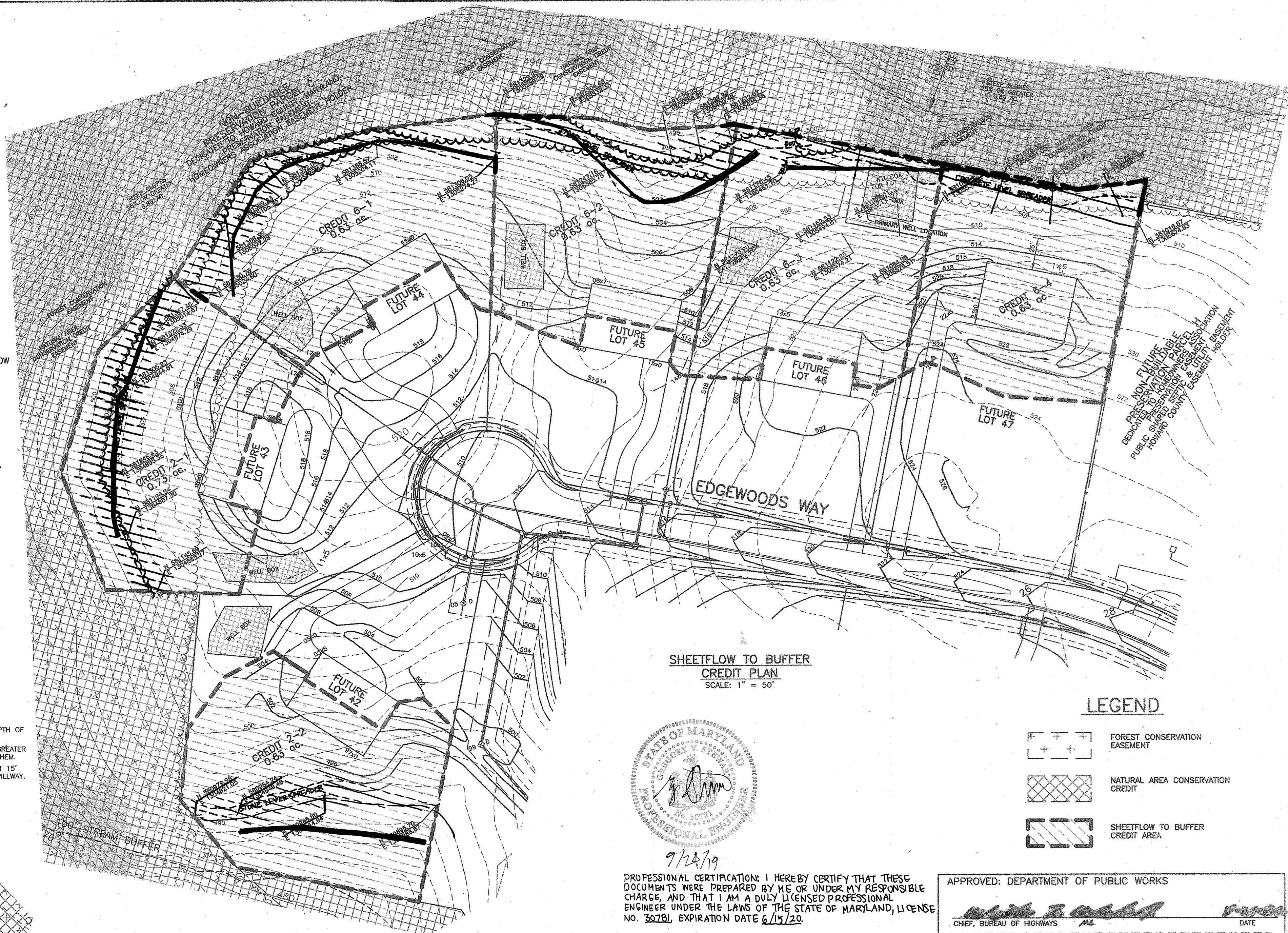
NOTE: ALL PLANTINGS TO BE QUART BULBS SPACED AT 3' O.C.



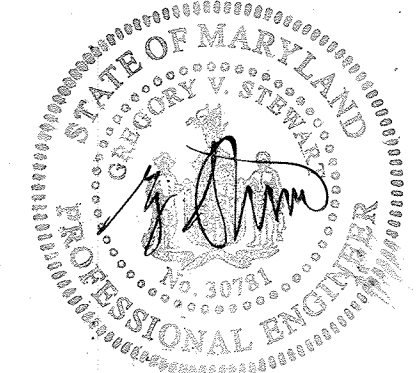
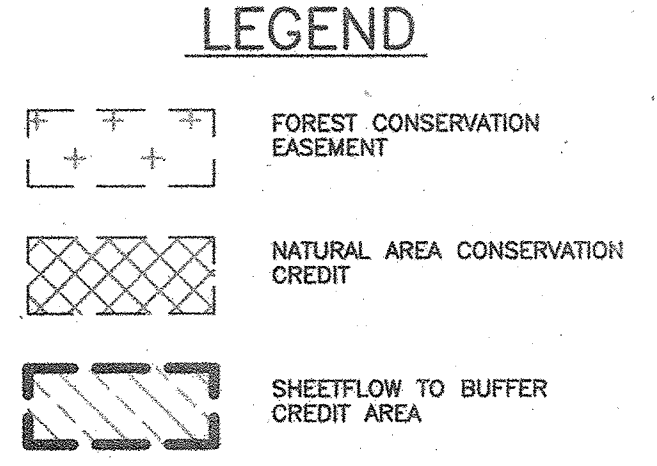
INTERNAL LANDSCAPING FOR EXTENDED DETENTION FACILITY #4
SCALE: 1" = 50'

PLANTING SCHEDULE FOR EXTENDED DETENTION FACILITY #4				
ZONE	AREA (SF)	ELEVATION RANGE	PLANT MIX	QUANTITIES
1 DEEP WATER POOL	2,664	530.00 - 532.50	100% WATER LILLY	296
			50% BROAD WATER WEED	82
2 SHALLOW WATER BENCH (low marsh)	1,467	532.50 - 533.00	25% DUCK POTATO	41
			25% ARROW ARUM	41
3 SHORELINE FRINGE (high marsh)	11,848	533.00 - 534.00	50% CUTGRASS, RICE	647
			50% SWITCHGRASS	647
4 RIPARIAN FRINGE	1,100	534.00 - 534.77	50% LOVEGRASS-MEADOW	61
			25% VIOLETS, COMMON BLUE	31
5 FLOODPLAIN TERRACE	2,321	534.77 - 536.35	25% CONEFLOWER, CUT-LEAF	31
			75% WITCHGRASS, NEEDLE-LEAF	193
6 UPLAND SLOPES	0	N/A	25% CONEFLOWER, SWEET	65
			N/A	N/A

NOTE: ALL PLANTINGS TO BE QUART BULBS SPACED AT 3' O.C.



SHEETFLOW TO BUFFER CREDIT PLAN
SCALE: 1" = 50'



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 362781, EXPIRATION DATE 6/14/20.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/2/06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/2/06

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/2/06

NO.	DATE	REVISION

AS-BUILT
BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELICOTT CITY, MARYLAND 21043
 phone: 410-465-6105 & fax: 410-465-6644
 WWW.BEI-CVLENGINEERING.COM

OWNER: EDGEWOOD FARM, INC.
 14919 ROXBURY ROAD
 GLENELG, MARYLAND 21737

DEVELOPER: TOLL BROTHERS, INC.
 7164 COLUMBIA GATEWAY DRIVE
 SUITE 230
 COLUMBIA, MARYLAND 21046
 410-872-9105

PROJECT: EDGEWOOD FARM
 PHASE 1
 LOTS 1-7; NON-BUILDABLE BULK PARCELS 'AA'-'HH'
 NON-BUILDABLE PRESERVATION PARCELS 'A'-'G'

LOCATION: TAX MAP: 21, GRID: 22
 PARCEL: 90
 ELECTION DISTRICT NO. 4
 HOWARD COUNTY, MARYLAND

TITLE: INTERNAL SWMF LANDSCAPING PLAN AND SHEETFLOW TO BUFFER CREDIT PLAN

DATE: JULY, 2006 PROJECT NO. 1550
 SCALE: AS SHOWN SHEET 26 OF 27

DESIGN: DBT DRAFT: DBT CHECK: DAM

