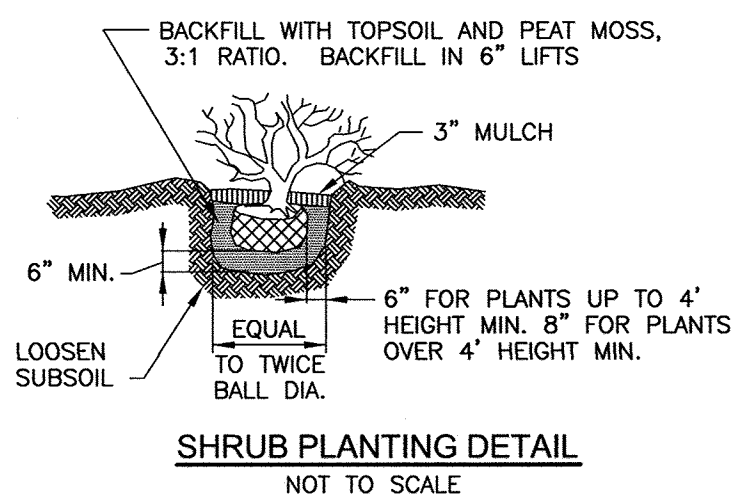


THESE AREAS DESIGNATE A MINIMUM 10,000 SQ FT PRIVATE SEWAGE DISPOSAL AREA REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BE MULL AND VOID UPON CONNECTION TO A PUBLIC SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE DISPOSAL AREA. RECORDATION OF A MODIFIED SEWAGE DISPOSAL AREA SHALL NOT BE NECESSARY.

**GENERAL NOTES:**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THIS AGRICULTURAL PRESERVATION SUBDIVISION IS EXEMPT FROM LANDSCAPE BUFFER REQUIREMENTS PER SECTION 16.126(c) OF THE HOWARD COUNTY LANDSCAPE MANUAL.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- NO LANDSCAPING TO BE INSTALLED WITHIN ANY PUBLIC EASEMENT FOR WATER, SEWER, OR STORMDRAIN.
- ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.



**"MICRO-BIORETENTION" PLANTINGSCHEDULE NOTES:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- SEE THIS SHEET FOR TYPICAL PLANTING SPECIFICATIONS AND DETAILS.
- MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER SQUARE ACRE (.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDV SUMMARY.

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING FENCE
- EXISTING TREE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- GAS LINE
- GAS TRANSFORMER
- GAS METER
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED SIDEWALK
- EX. PRIVATE SEPTIC EASEMENT
- PROPOSED PRIVATE SEWAGE DISPOSAL AREA
- EXISTING PRIVATE WELL
- PROPOSED PRIVATE WELL
- PROPOSED STORM DRAIN UNDERDRAIN/ CLEANOUT
- DEVELOPMENT AREA / LIMIT OF DISTURBANCE
- MICRO-BIORETENTION (M-6)
- RAIN GARDEN (M-7)
- 24' PRIVATE USE-IN-COMMON EASEMENT FOR THE BENEFIT OF LOTS 1-6 AND RESIDUE PARCEL 25
- PRIVATE 20' DRAINAGE & UTILITY EASEMENT
- 24' PRIVATE ACCESS AND STORMWATER MANAGEMENT EASEMENT FOR THE BENEFIT OF LOT 3
- PROPOSED PLANTS
- PROPOSED GROUND COVER

**LANDSCAPE NOTES**

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANT 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.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIES PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

**LANDSCAPE SCHEDULE NOTE:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**NOTES:**

- NO SPECIMEN TREES ARE TO BE REMOVED.
- STORM DRAINS ARE PROPOSED ONSITE.
- ALL LOTS HAVE USE-IN-COMMON ACCESS TO A PUBLIC ROAD, BUT NO PUBLIC ROAD FRONTAGE.

**NOTE:**

ONLY A PORTION OF THE TOTAL PARCEL IS SHOWN ON THIS SUPPLEMENTAL PLAN.

BIORETENTION PLANTING SCHEDULE				
KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IG	9	ILEX VERTICILLATA "WINTERBERRY"	1 GALLON	18" O.C.
IV	9	VIBURNUM DENTATUM ARROWWOOD VIBURNUM	1 GALLON	18" O.C.
HQ	8	ASTER NOVAE-ANGLIAE NEW ENGLAND ASTER	1 GALLON	30" O.C.
LR	19	LOBELIA CARDINALIS CARDINAL FLOWER	4' HT	SPECIMEN QUALITY STRAIGHT LEADER
PV	20	KALMIA LATIFOLIA MOUNTAIN LAUREL	4' HT	SPECIMEN QUALITY STRAIGHT LEADER

PERENNIALS/GROUND COVER PLANTING SCHEDULE				
LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
	65	RUDEBECKIA HIRTA BLACK EYED SUSAN	4" POT	12"-15" O.C. FOR SIDES AND BOTTOM OF MBR. MIX ALL VARIETIES IN A NATURALIZED RANDOM PATTERN THROUGHOUT. PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP.
	65	PHLOX STOLONIFERA CREEPING PHLOX	1 QT.	

MICRO-BIORETENTION PLANTING REQUIREMENTS		PLANTINGS PROVIDED								PERENNIALS/GROUND COVER PROVIDED	
MBR #	LF AREA	STEMS REQUIRED (0.0227)	STEMS PROVIDED	IG	IV	HQ	LR	PV	BA	AG	TOTAL
SWM #2	89	553	17	17	2	3	2	5	5	19	38
SWM #3	158	1323	40	48	7	6	6	14	15	46	92
<b>TOTALS</b>	<b>247</b>	<b>1876</b>	<b>57</b>	<b>65</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>19</b>	<b>20</b>	<b>65</b>	<b>130</b>

BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0227 STEMS PER SQUARE FOOT).



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 5-15-19

DEVELOPER'S/BUILDER'S CERTIFICATE  
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature]  
 SIGNATURE OF DEVELOPER  
 DATE: April 10 2019

OWNER/DEVELOPER  
 GRATIA PLENA, LLC  
 11140 HOMEWOOD ROAD  
 ELLICOTT CITY, MD 21042  
 PHONE: 443-677-4612

NO. \_\_\_\_\_ REVISION \_\_\_\_\_ DATE \_\_\_\_\_

**SUPPLEMENTAL PLAN LAYOUT AND LANDSCAPE PLAN**  
**CUNNINGHAM PROPERTY**  
 3 LOT AG  
 4979 SHEPPARD LANE  
 L15767/F.426

ELECTION DISTRICT 5 ZONED: RC-DEO (RURAL CONSERVATION)  
 TAX MAP: 29 GRID:13 PARCEL:25 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRES ON 06-27-2018

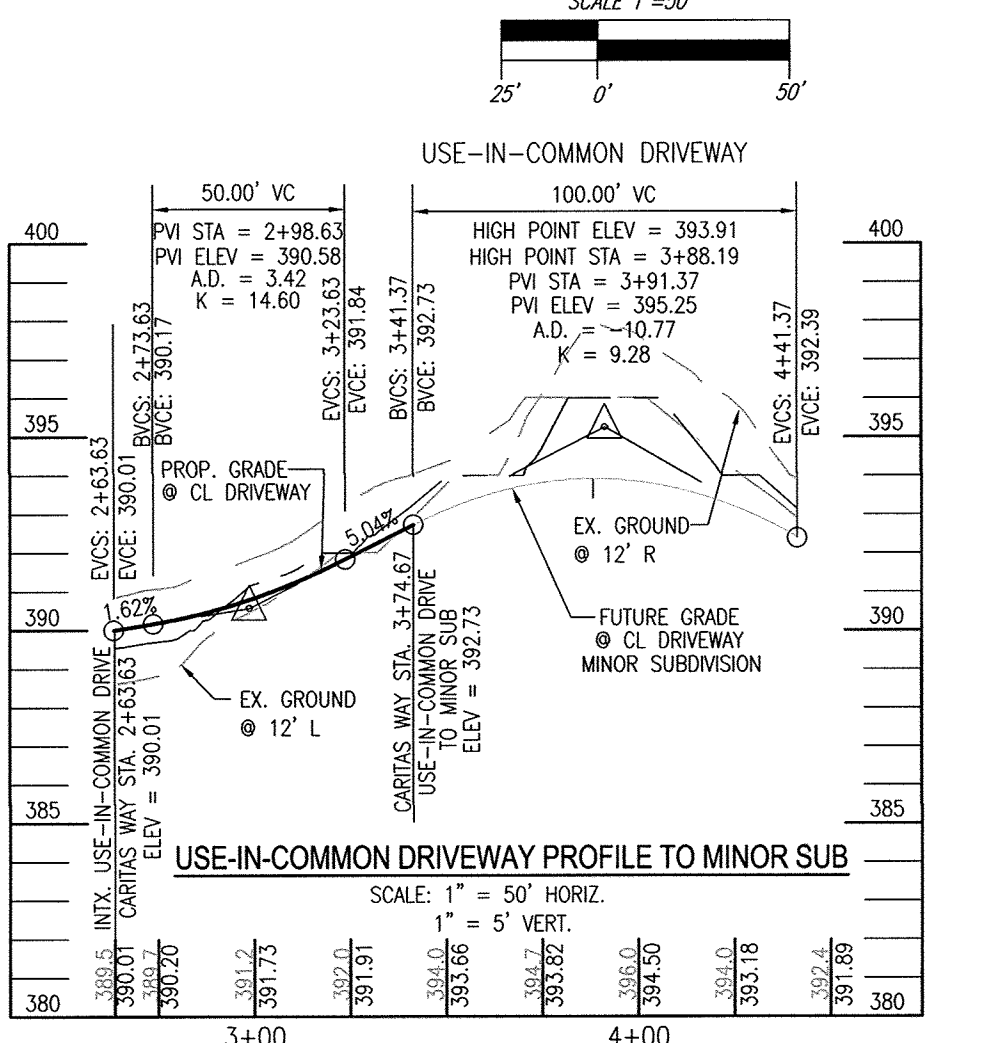
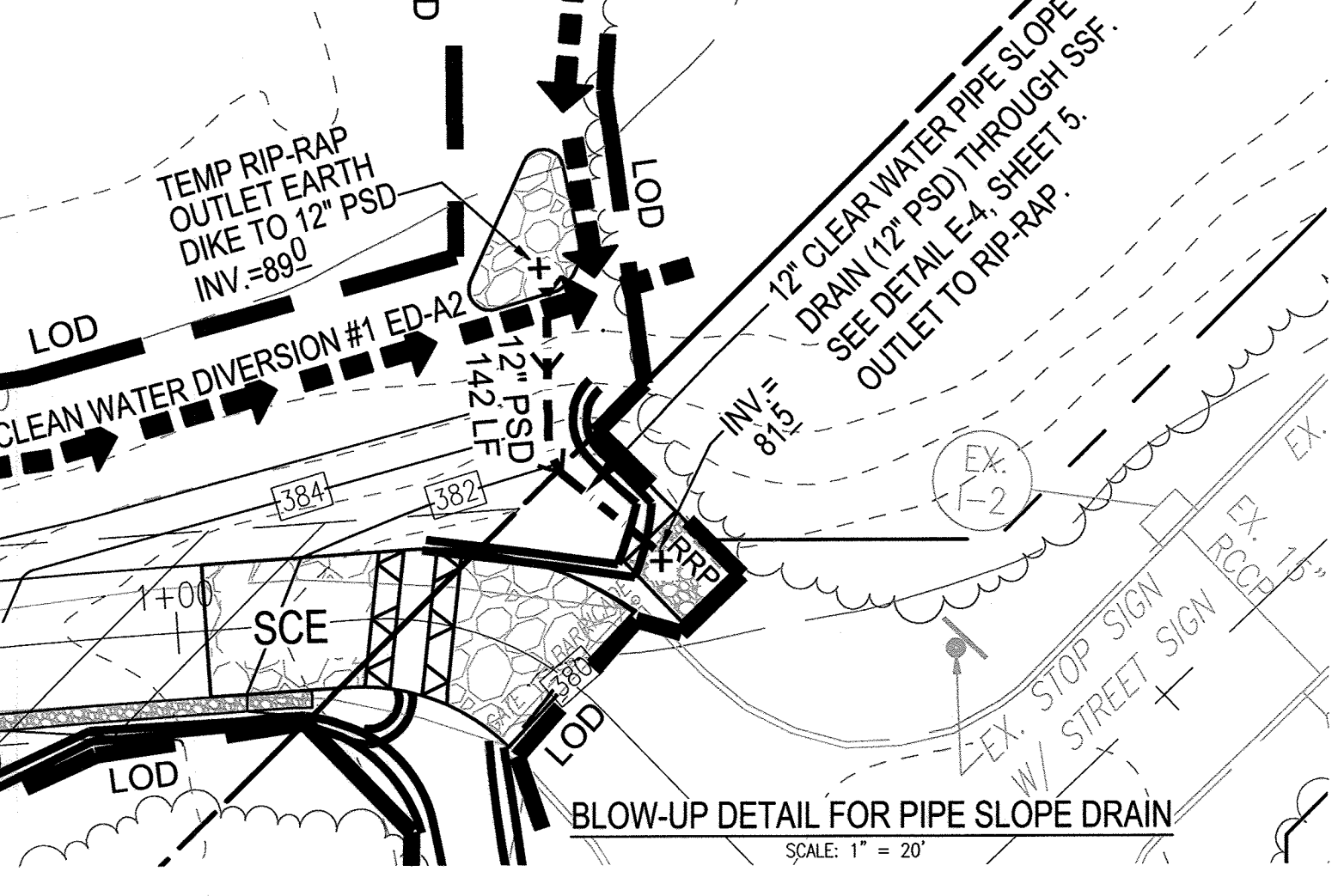
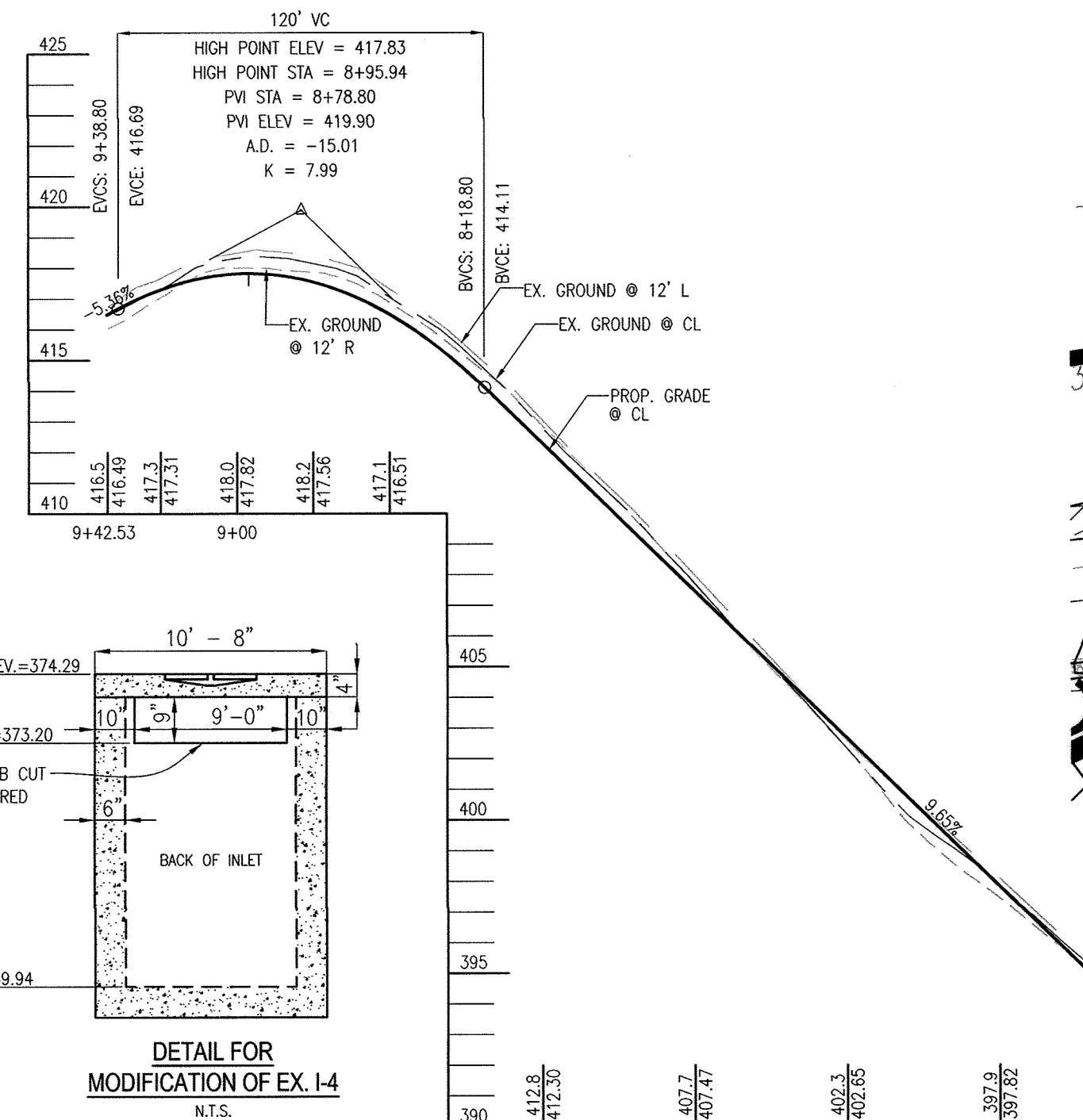
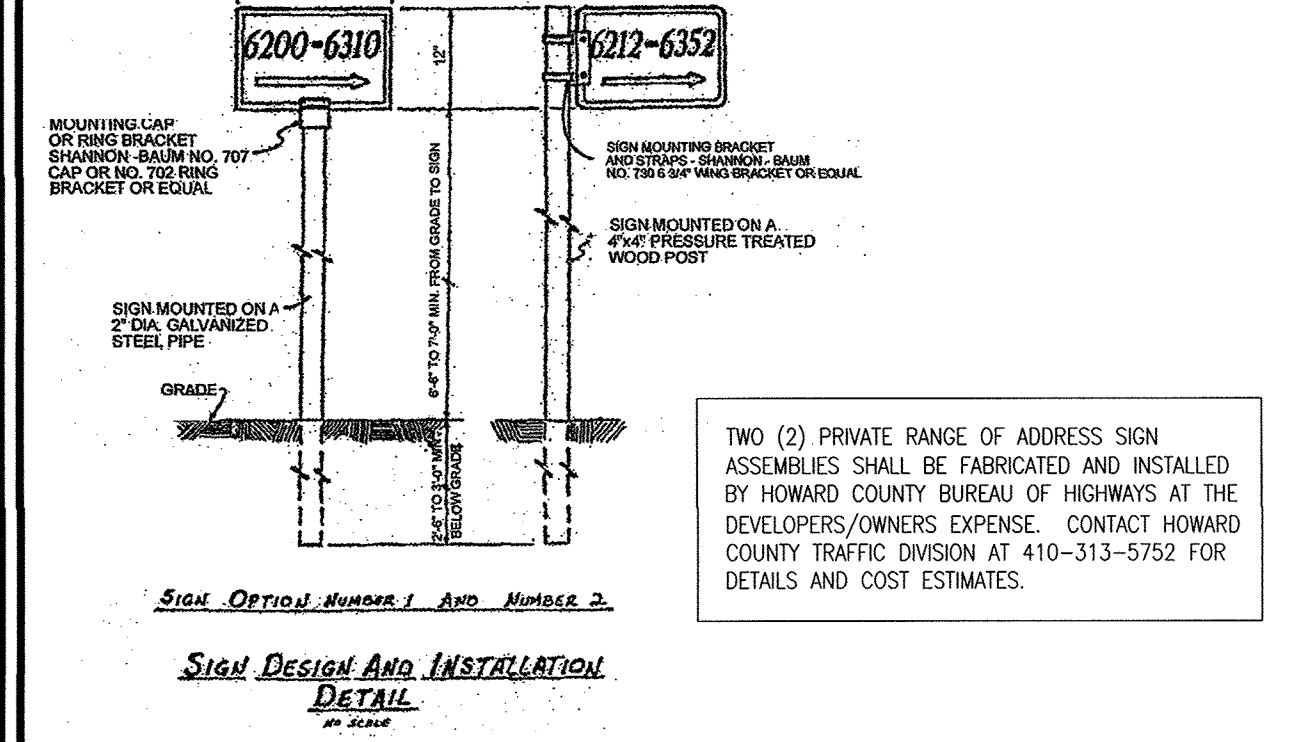
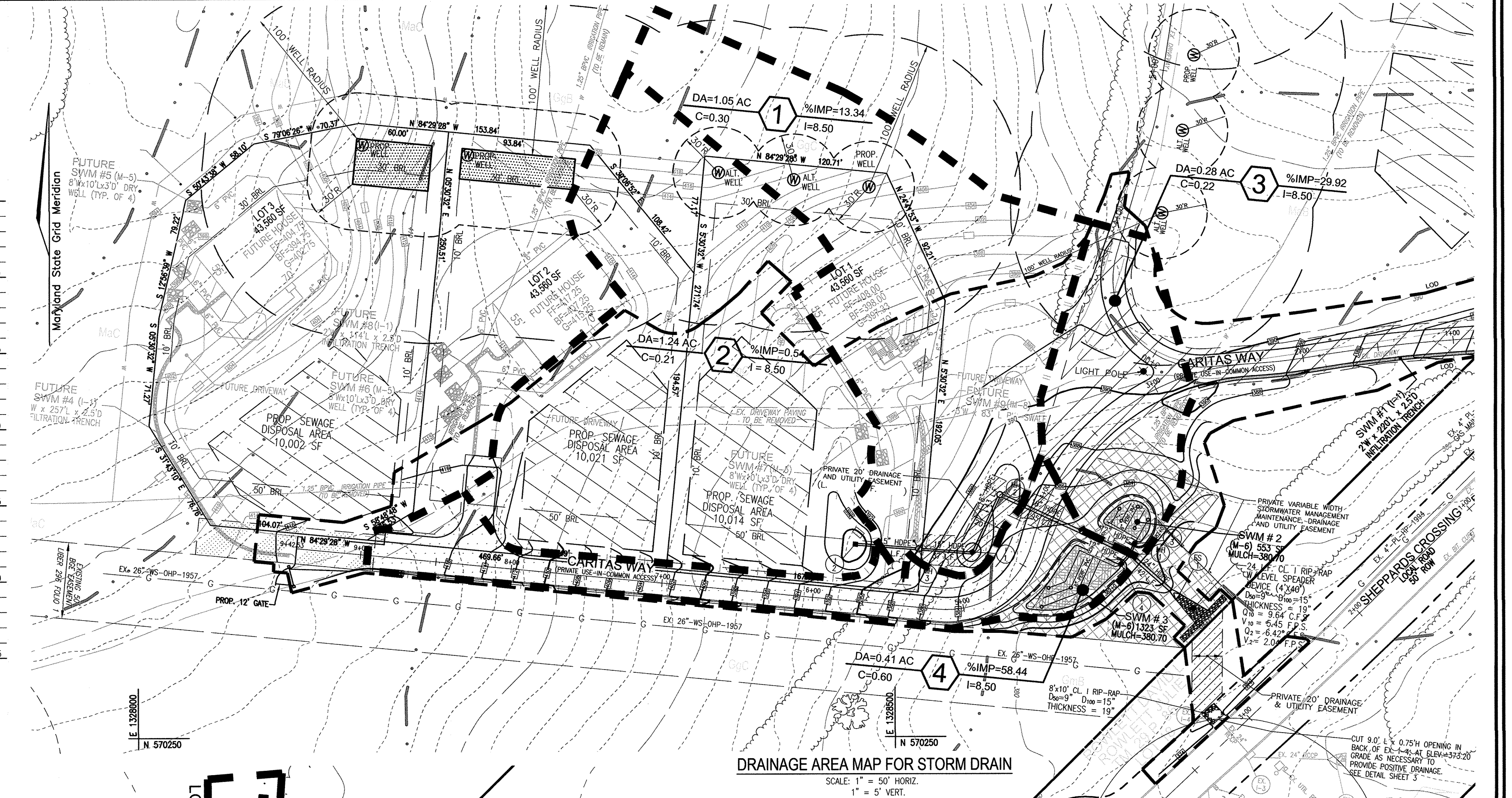
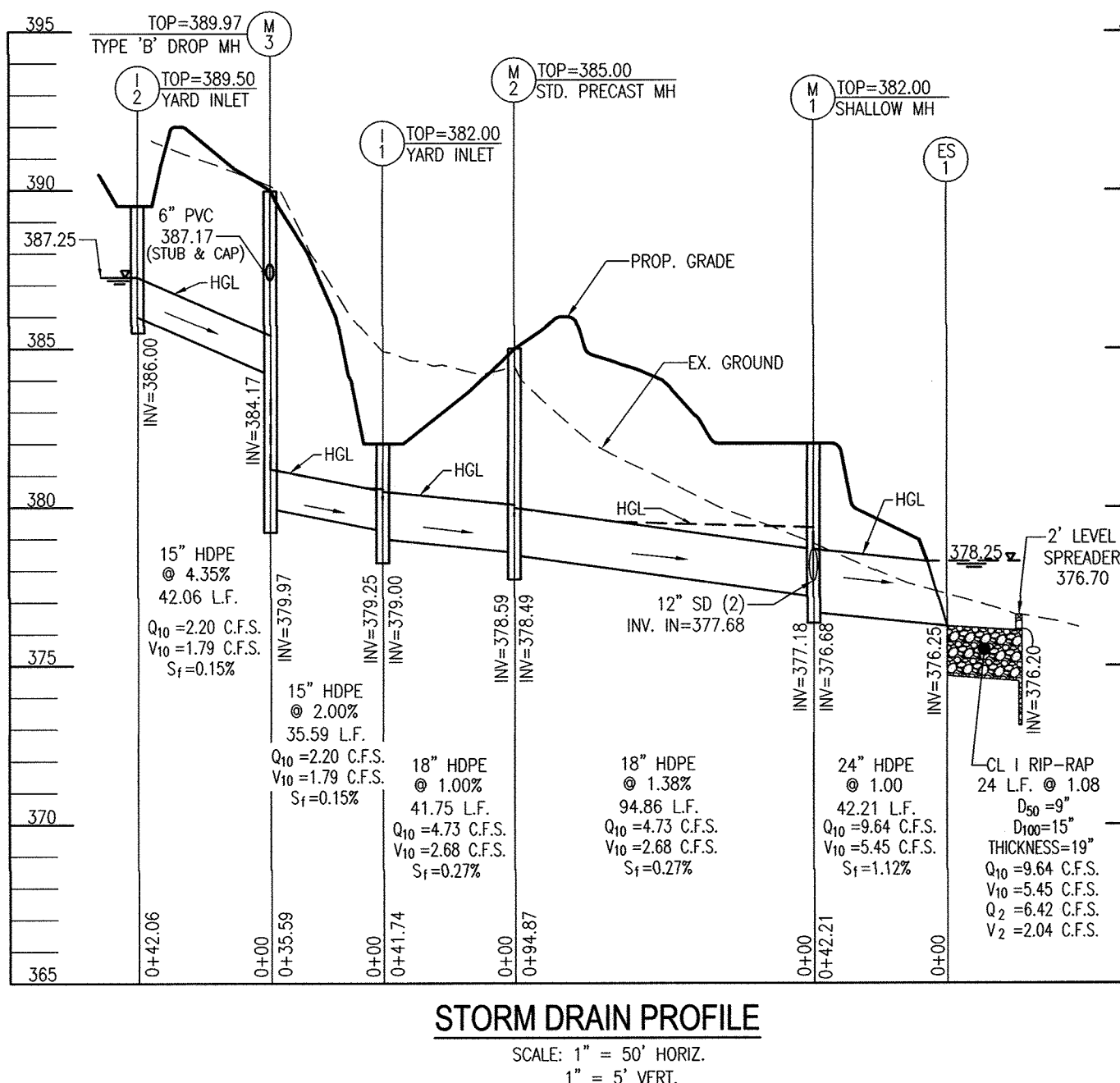
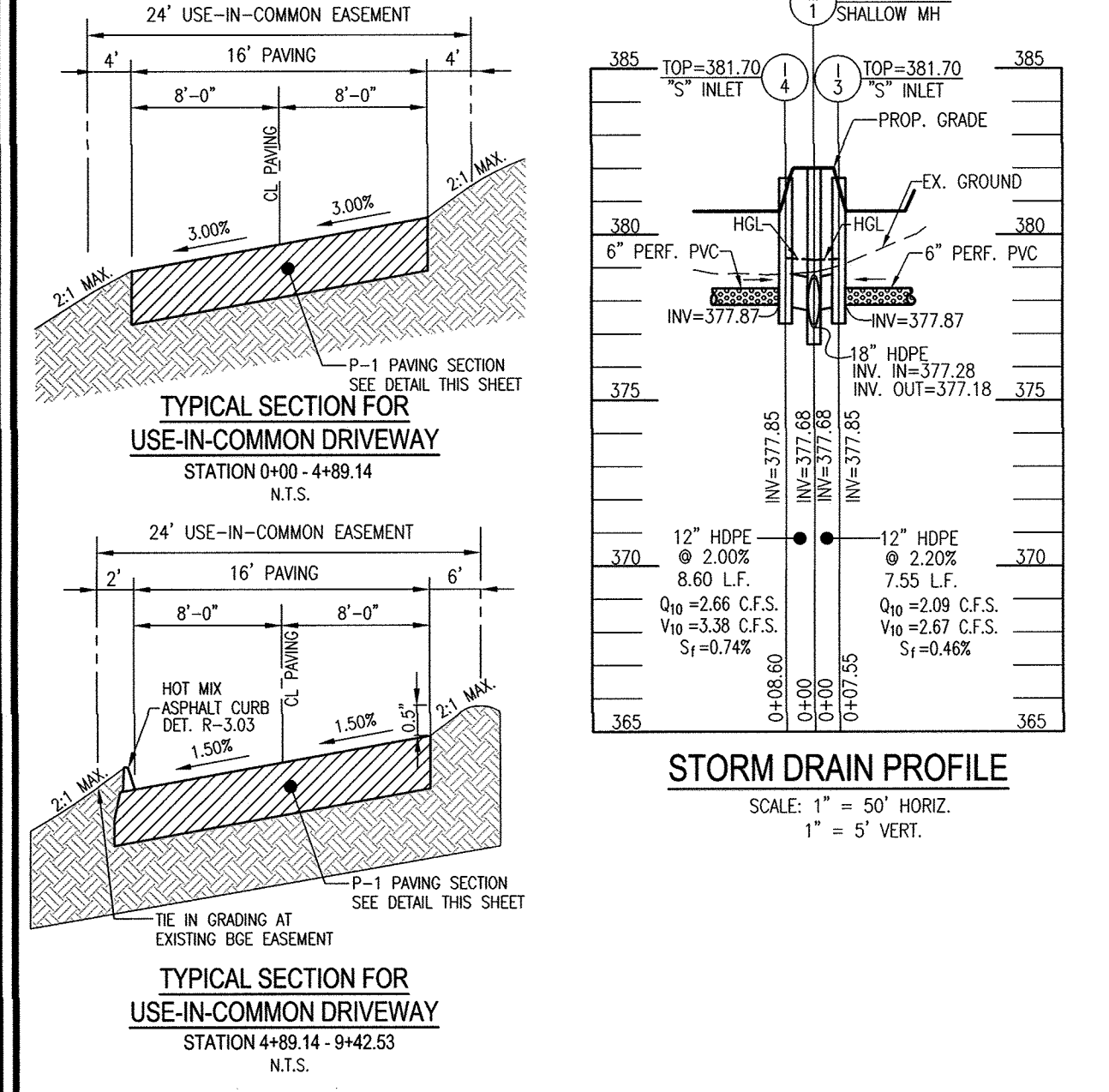
DESIGN BY: GAH  
 DRAWN BY: GAH  
 CHECKED BY: RHV  
 DATE: APRIL 2019  
 SCALE: AS SHOWN  
 W.O. NO.: 14-52

2 SHEET OF 6

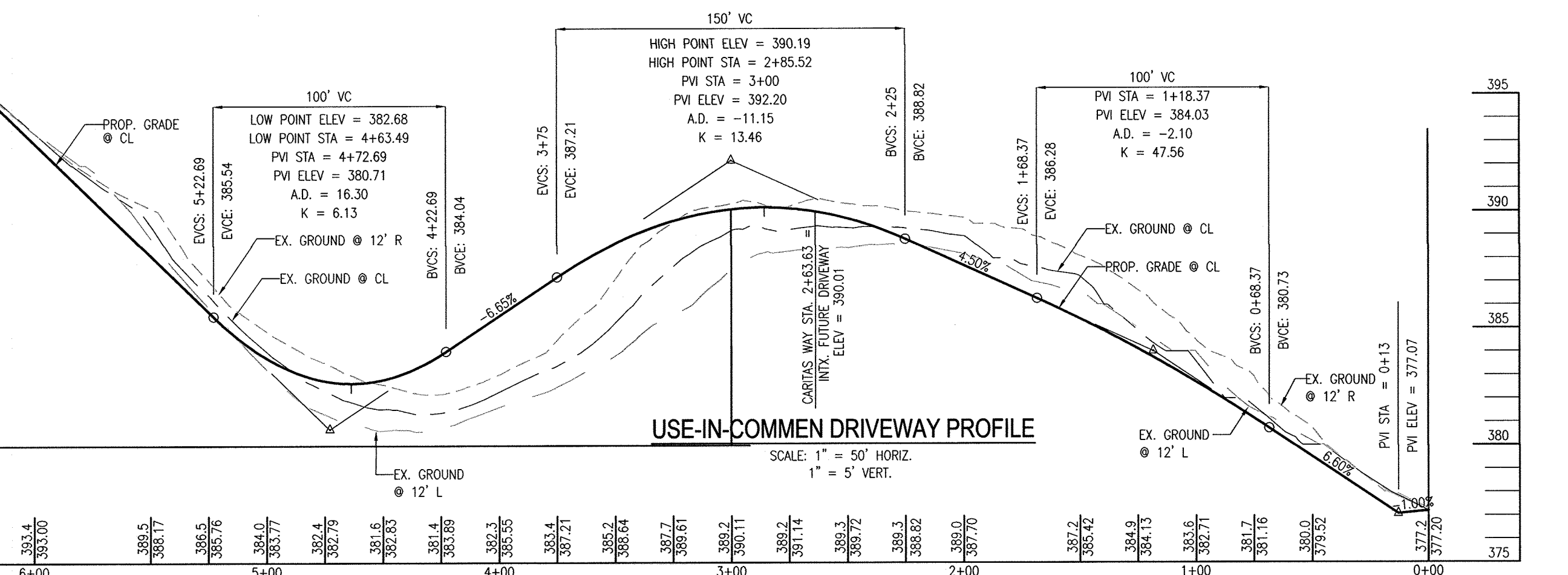
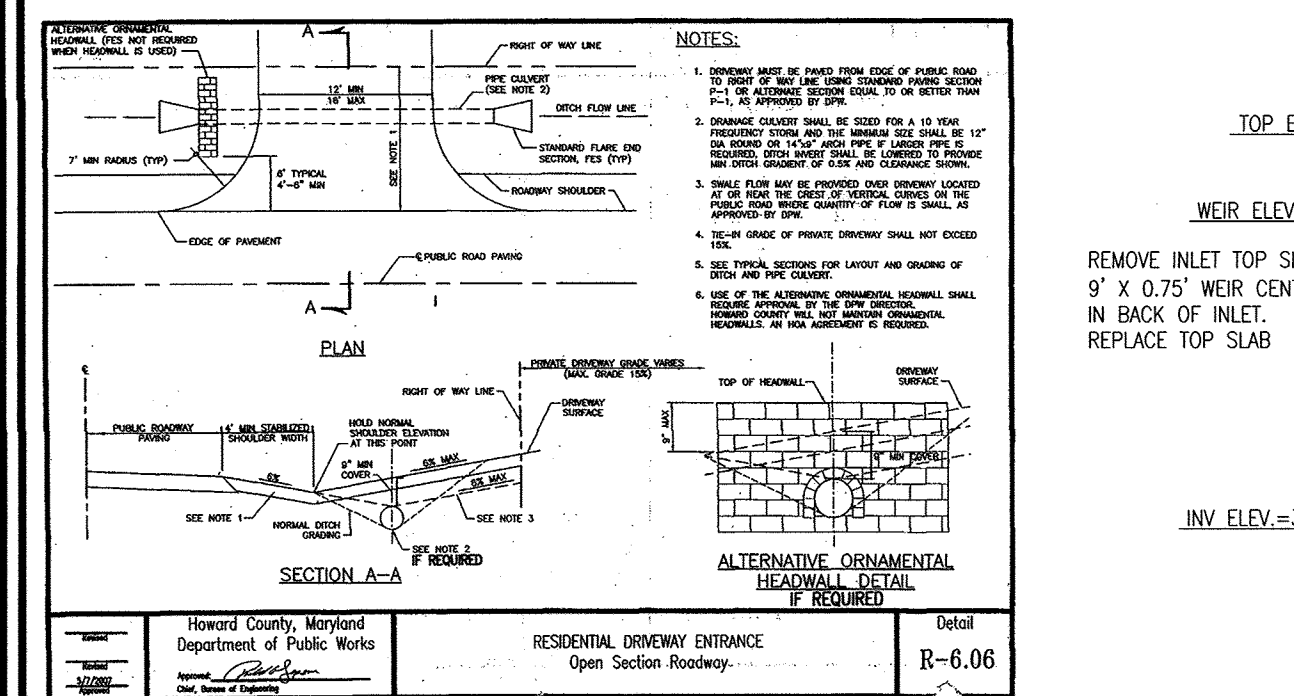
STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
I-1	YARD INLET	N 570,371.01 E 1,331,051.49	382.00	379.25	379.00	HO. CO. STD D-4.14
I-2	YARD INLET	N 570,376.32 E 1,330,974.03	389.50			HO. CO. STD D-4.14
I-3	TYPE 'S' INLET	N 570,376.13 E 1,331,158.68	381.70	377.87	377.85	HO. CO. STD D-4.22
I-4	TYPE 'S' INLET	N 570,362.99 E 1,331,149.78	381.70	377.85	377.85	HO. CO. STD D-4.22
MH-1	SHALLOW PRECAST MANHOLE	N 570,369.17 E 1,331,155.77	382.00	377.68	377.68	HO. CO. STD G-5.13
MH-2	SHALLOW PRECAST MANHOLE	N 570,408.66 E 1,331,069.52	385.00	376.59	376.49	HO. CO. STD G-5.13
MH-3	SHALLOW PRECAST MANHOLE	N 571,083.64 E 1,329,441.36	389.97	384.17	379.97	HO. CO. STD G-5.13
ES-1	24" HDPE END SECTION	N 570,341.22 E 1,331,187.41	-	376.25	-	ADS 'NYLOPLAST' OR EQUAL

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
12"	HDPE	16 LF
15"	HDPE	79 LF
18"	HDPE	137 LF
24"	HDPE	42 LF
6"	PVC (SOLID)	972 LF
6"	PVC (PERFORATED)	604 LF

NOTES:  
 1. TOP ELEVATIONS/LOCATION ARE AT CENTER OF GRADE FOR 'S' INLETS AND AT CENTER TOP OF SLAB FOR 'Y' INLETS. LOCATION AND INVERT FOR END SECTIONS IS AT END (AT RIP-RAP). TOP ELEVATIONS DO NOT APPLY.  
 2. ALL TOP SLABS AND GRATES SHALL BE SET LEVEL.  
 3. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DETAILS.  
 4. THERE ARE A TOTAL OF 15 CLEANOUTS FOR BIO-RETENTION AND ROOF DRAINS.



DRAINAGE AREAS FOR STORM DRAINAGE				
INLET / AREA NO.	AREA (AC.)	C FACTOR	IMPERVIOUS %	REMARKS
1/E	1.06	0.3032	14.08	To 1-1
2/D	1.24	0.2188	1.34	To 1-2
3/G	0.28	0.2238	28.85	To 1-3
4/F	0.42	0.5888	56.31	To 1-4



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE: 5-15-19

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 6-6-19

CHIEF, DIVISION OF LAND DEVELOPMENT

SECTION	NO.	DATE	DESCRIPTION
P-1	1	5/15/19	ISSUED FOR PERMITTING
P-2	1	5/15/19	ISSUED FOR PERMITTING
P-3	1	5/15/19	ISSUED FOR PERMITTING
P-4	1	5/15/19	ISSUED FOR PERMITTING

SUPPLEMENTAL PLAN  
 SITE PROFILES AND DETAILS  
 AND DRAINAGE AREA MAP FOR STORM DRAIN  
**CUNNINGHAM PROPERTY**  
 3 LOT AG  
 4979 SHEPPARD LANE  
 L.15767/F.426  
 ELECTION DISTRICT 5  
 TAX MAP: 29 GRID:13 PARCEL:25  
 ZONED: RC-DEO (RURAL CONSERVATION)  
 HOWARD COUNTY, MARYLAND

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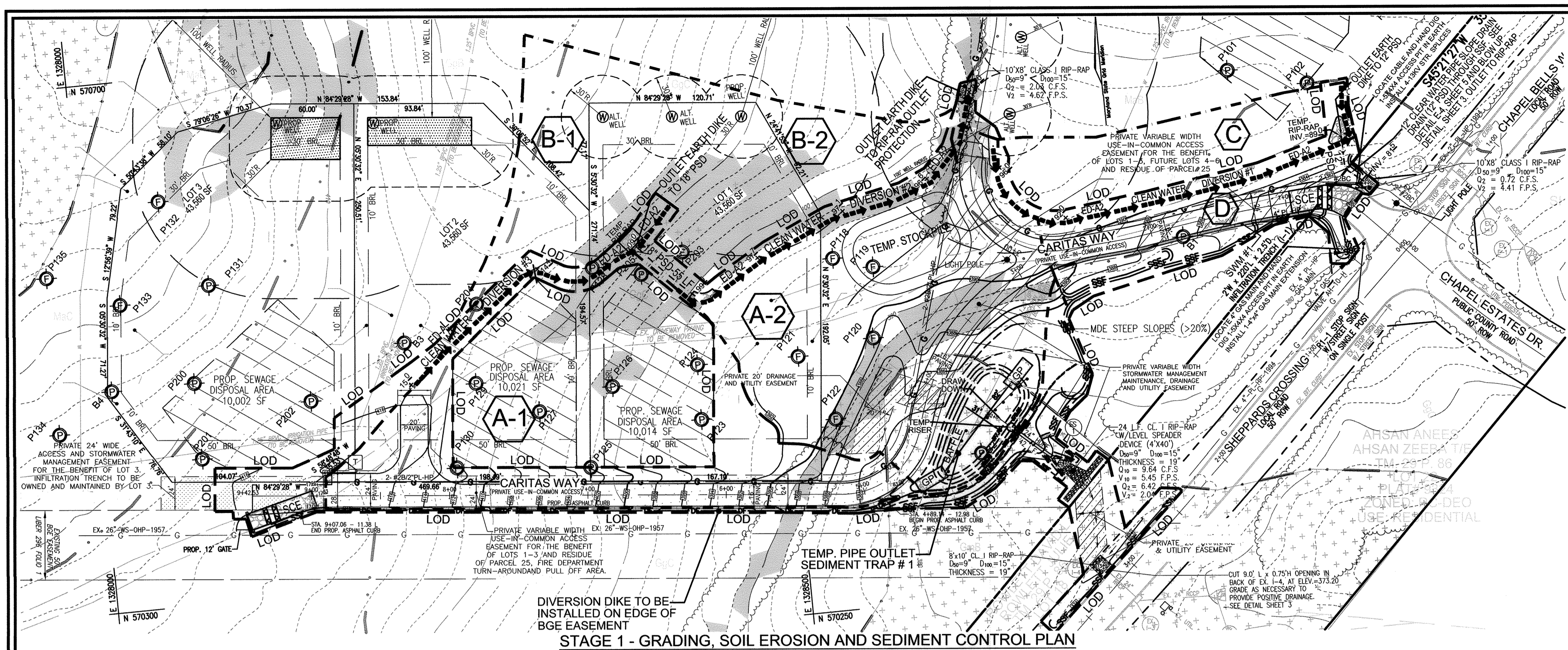
PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 EXPIRATION DATE: 09-27-2018

DESIGN BY: GAH  
 DRAWN BY: GAH  
 CHECKED BY: RHV  
 DATE: APRIL 2019  
 SCALE: AS SHOWN  
 W.O. NO.: 14-62

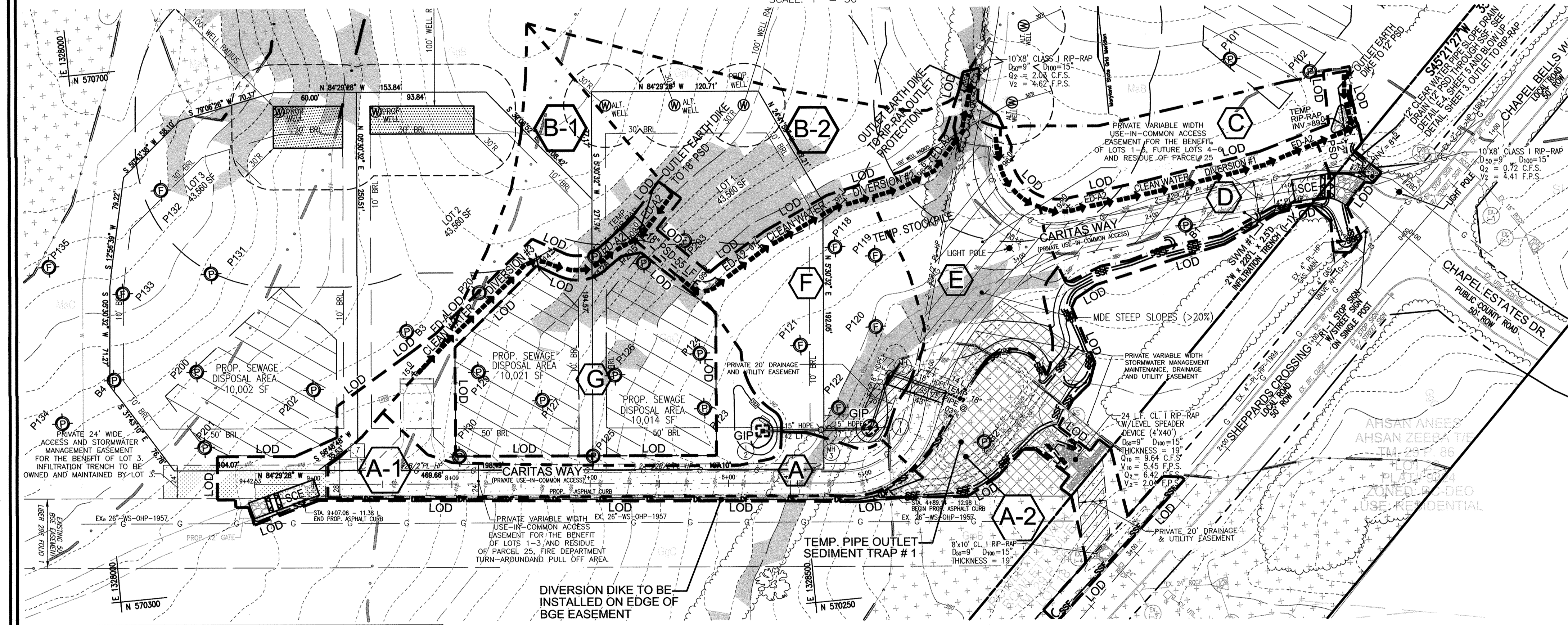
OWNER/DEVELOPER  
 GRATIA PLENA, LLC  
 11140 HOMEWOOD ROAD  
 ELLICOTT CITY, MD 21042  
 PHONE: 443-677-4612

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER

3 SHEET OF 6



STAGE 1 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN  
SCALE: 1" = 50'

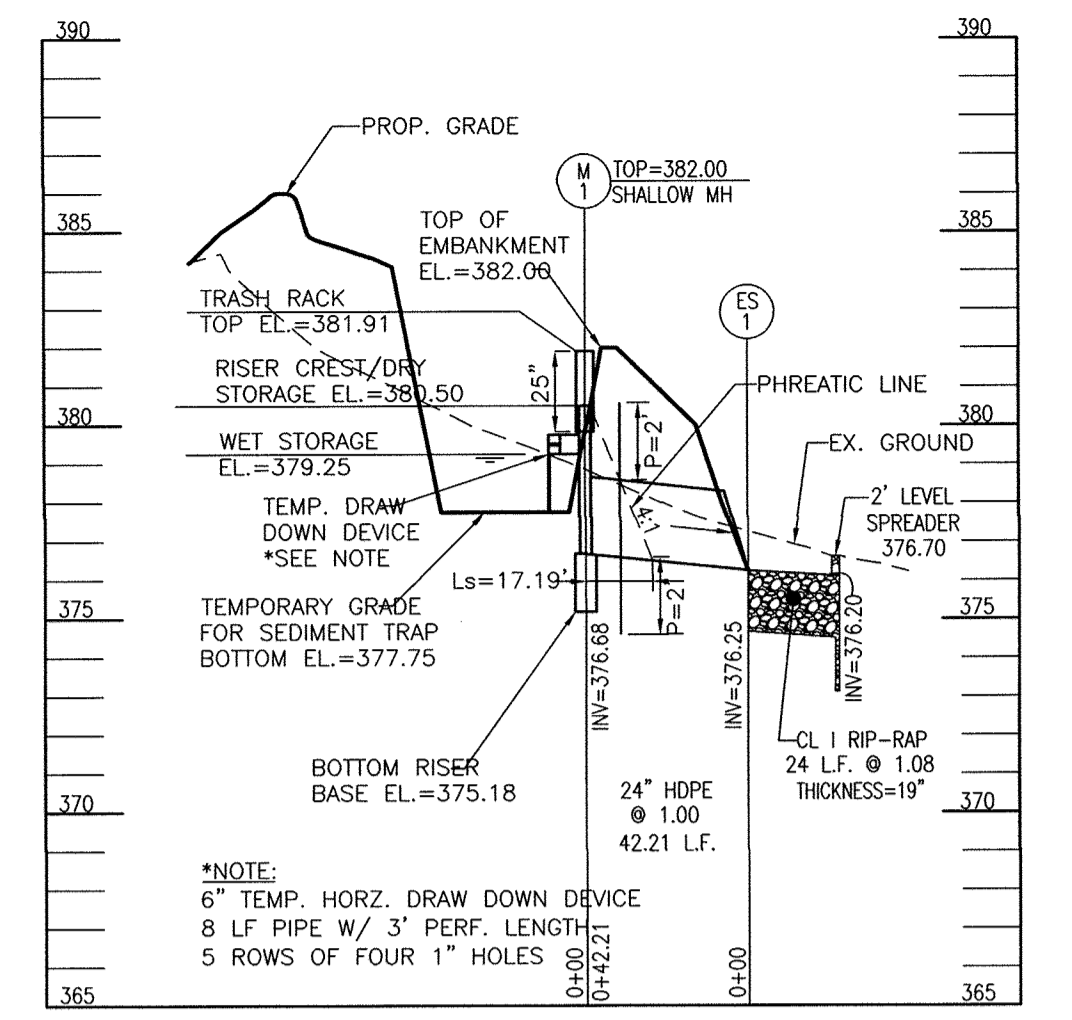


STAGE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN  
SCALE: 1" = 50'

**NOTES:**

- NO SPECIMEN TREES ARE TO BE REMOVED.
- STORM DRAINS ARE PROPOSED ON-SITE.
- ALL FUTURE LOTS HAVE USE-IN-COMMON ACCESS TO A PUBLIC ROAD, BUT NO PUBLIC ROAD FRONTAGE.

PIPE OUTLET SEDIMENT TRAP ST-1, TRAP NO. 1		
DRAINAGE AREA - INITIAL	1.93	ACRES
DRAINAGE AREA - FINAL	1.93	ACRES
TOTAL STORAGE REQUIRED	6948	CF
TOTAL STORAGE PROVIDED	7412	CF
WET STORAGE REQUIRED	3474	CF
WET STORAGE PROVIDED	3646	CF
DRY STORAGE REQUIRED	3474	CF
DRY STORAGE PROVIDED	4637	CF
TRAP BOTTOM ELEVATION	377.75	FT
TRAP BOTTOM DIMENSIONS	32 x 78"	FT x FT
RISER CREST (DRY STORAGE) ELEVATION	380.75	FT
OUTLET (WET STORAGE) ELEVATION	379.25	FT
CLEANOUT ELEVATION	378.50	FT
TOP OF EMBANKMENT ELEVATION	382.25	FT
SIDE SLOPE	2:1	H:V RATIO
EMBANKMENT TOP WIDTH	4	FT
PRINCIPAL SPILLWAY MATERIAL (BARREL, RISER, ANTI-SEEP COLLAR)	HDPE	
RISER DIAMETER	36	IN
BARREL DIAMETER	24	IN
TRASH RACK DIAMETER	54	IN
TRASH RACK HEIGHT	25	IN
ANTI-SEEP COLLAR DIMENSIONS	6 x 6	FT
OUTLET PROTECTION - LENGTH	24	FT
OUTLET PROTECTION - WIDTH	12	FT
OUTLET PROTECTION - DEPTH	19	IN



TEMPORARY SEDIMENT TRAP #1 PROFILE  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.

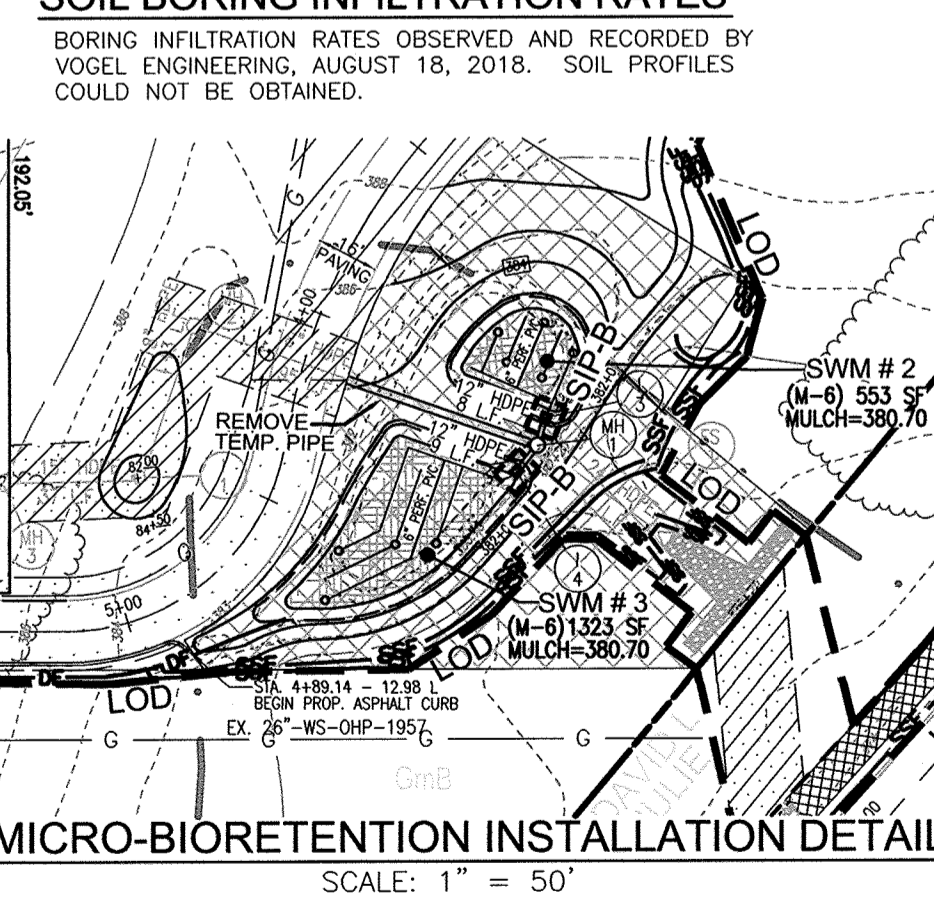
SOIL BORING LOGS FOR ESD Svm	N.T.S. (NOT TO SCALE)
<b>P#129</b> 1" DROP IN 2 MINUTES RATE=30"/HR (PASS)	<b>P#204</b> 1" DROP IN 2 MINUTES RATE=30"/HR (PASS)
<b>P#134</b> 1" DROP IN 13 MINUTES RATE=4.62"/HR (PASS)	<b>P#201</b> 1" DROP IN 2 MINUTES RATE=30"/HR (PASS)
<b>B#1</b> 2" DROP IN 15 MINUTES RATE=8"/HR (PASS)	<b>B#2</b> 0.5" DROP IN 15 MINUTES RATE=2"/HR (PASS)
<b>B#3</b> 3" DROP IN 15 MINUTES RATE=12"/HR (PASS)	<b>B#4</b> 5.5" DROP IN 15 MINUTES RATE=22"/HR (PASS)

LEGEND	
EXISTING CONTOUR	PROPOSED PRIVATE WELL
PROPOSED CONTOUR	PROPOSED STORM DRAIN UNDERPASS/ CLEANOUT
EXISTING CURB AND CUTTER	EARTH DIKE
PROPOSED CURB AND CUTTER	SUPER SILT FENCE
EXISTING LIGHT POLE	SILT FENCE
EXISTING MAILBOX	DIVERSION FENCE
EXISTING SIGN	DEVELOPMENT AREA / LIMIT OF DISTURBANCE
EXISTING TREE	STABILIZED CONSTRUCTION ENTRANCE
PROPERTY LINE	
RIGHT-OF-WAY LINE	
SOILS BOUNDARY	MICRO-BIORETENTION (M-6) RAIN GARDEN (M-7)
EXISTING TREELINE	
PROPOSED TREELINE	PRIVATE VARIABLE WIDTH USE-IN-COMMON ACCESS EASEMENT FOR THE BENEFIT OF LOTS 1-3 AND RESIDUE OF PARCEL 25, FIRE DEPARTMENT TURN-AROUND AND PULL OFF AREA
PROPOSED SIDEWALK	PRIVATE VARIABLE WIDTH USE-IN-COMMON EASEMENT FOR THE BENEFIT OF LOTS 1-6 AND RESIDUE OF PARCEL 25
PROPOSED PRIVATE SEWAGE DISPOSAL AREA	PRIVATE VARIABLE WIDTH STORMWATER MANAGEMENT MAINTENANCE, DRAINAGE AND UTILITY EASEMENT
DRAINAGE AREA FOR SEDIMENT CONTROL	PRIVATE 20' DRAINAGE AND UTILITY EASEMENT
HIGHLY ERODIBLE SOILS	PRIVATE 24' WIDE ACCESS AND STORMWATER MANAGEMENT EASEMENT FOR THE BENEFIT OF LOT 3
MDE STEEP SLOPES >20%	

**SOIL BORING INFILTRATION RATES**

BORING INFILTRATION RATES OBSERVED AND RECORDED BY VOGL ENGINEERING, INC. AUGUST 18, 2018. SOIL PROFILES COULD NOT BE OBTAINED.

**MICRO-BIORETENTION INSTALLATION DETAIL**



MICRO-BIORETENTION INSTALLATION DETAIL  
SCALE: 1" = 50'

MAPPED SOILS TYPES - CLARKSVILLE NW / NE MAP #16 / 17						
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRC	HYDRC INCLUSIONS	PRIME FARMLAND
G8B	GLENNVILLE LOAM, 3 TO 8 PERCENT SLOPES	B	.20	NO	NO	YES
G8C	GLENNVILLE LOAM, 8 TO 15 PERCENT SLOPES	B	.20	NO	NO	YES
G8B	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C	.37	NO	YES	YES
M8B	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	.24	NO	NO	YES
M8C	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	.24	NO	NO	YES
M8D	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	.24	NO	NO	YES

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 5/18/19

DESIGN CERTIFICATION:  
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A RATIONAL AND WORKABLE PLAN BASED ON THE PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*[Signature]*  
ROBERT H. VOGEL  
DATE: 4/10/19

INfiltration TRENCH INSTALLATION DETAIL  
SCALE: 1" = 50'  
*[Signature]*  
DATE: 5/18/19

SEDIMENT CONTROL DRAINAGE AREA CHART						
AREA	PRACTICE DESCRIPTION	DETAIL NO.	STAGE 1 ACRES	STAGE 2 ACRES	TYPE	SLOPE LENGTH
A-1	DIVERSION FENCE	C-9	1.00	0.29	-	9.63%
A-2	PIPE OUTLET SEDIMENT TRAP #1 (INCLUDES AREA A-1)	C-1-1	1.93	-	S1-1	SEE TRAP DATA CHART THIS SHEET
B-1	STANDARD INLET PROTECTION (INCLUDES AREA A-1)	C-9-1	-	0.39	B	-
B-2	TEMPORARY CLEAN WATER DIVERSION DIKE & PIPE SLOPE DRAIN	C-1 / D-1	0.31	0.31	A-2	0.5%/6.7%/17.5%
B-3	TEMPORARY CLEAN WATER DIVERSION DIKE & PIPE SLOPE DRAIN	C-1 / D-1	0.32	0.32	A-2	5.0%/14.8%/17.5%
D	SUPER SILT FENCE - DOUBLE ROW	E-3	0.19	0.19	-	12%
E	SUPER SILT FENCE	E-3	-	0.69	-	11.2%
F	GABION INLET PROTECTION	E-9-7	-	0.43	-	-
G	GABION INLET PROTECTION	E-9-7	-	0.71	-	-

NOTE: ONLY A PORTION OF THE TOTAL PARCEL (AREA OF LOD) IS SHOWN ON THIS SUPPLEMENTAL PLAN.

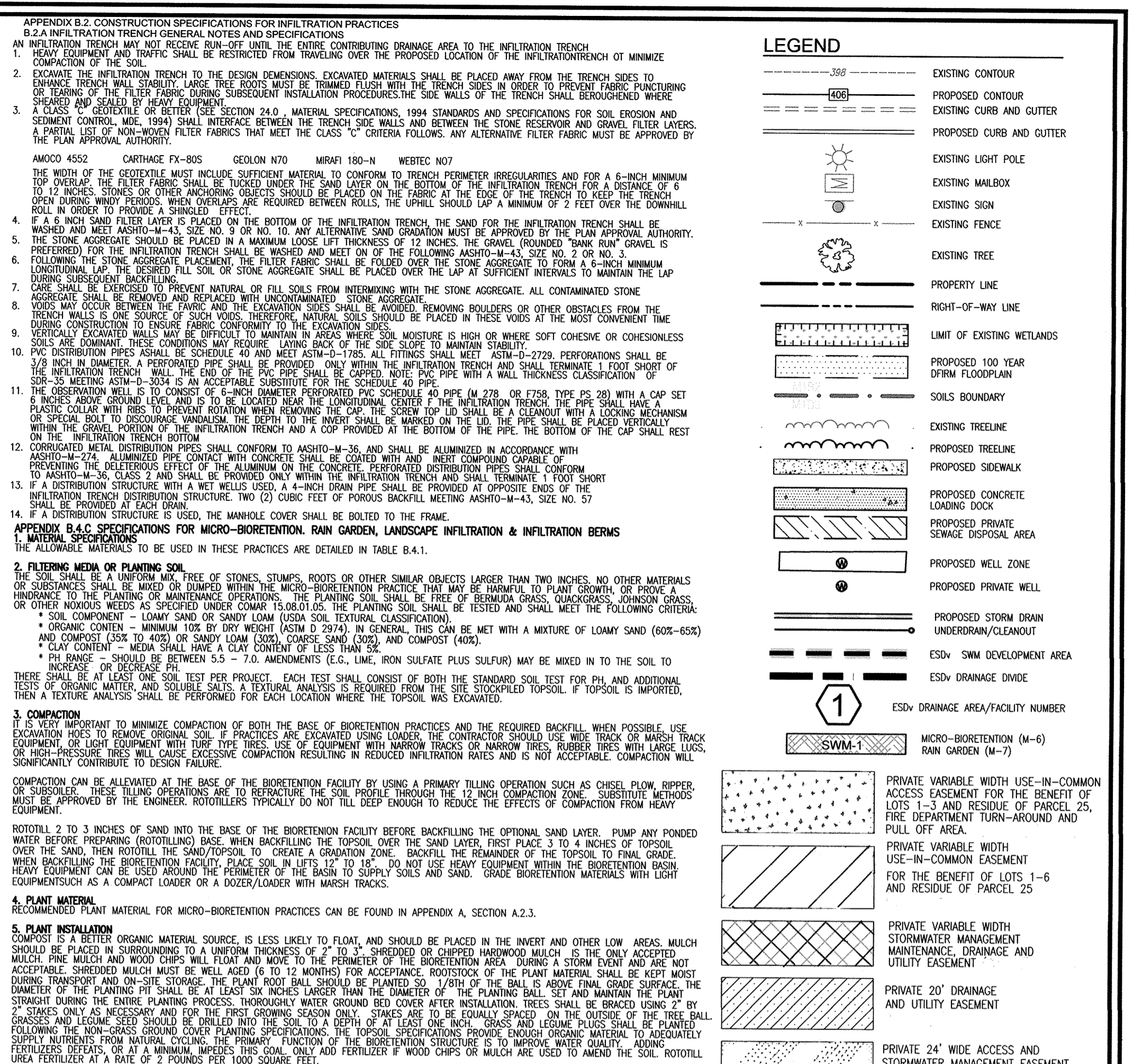
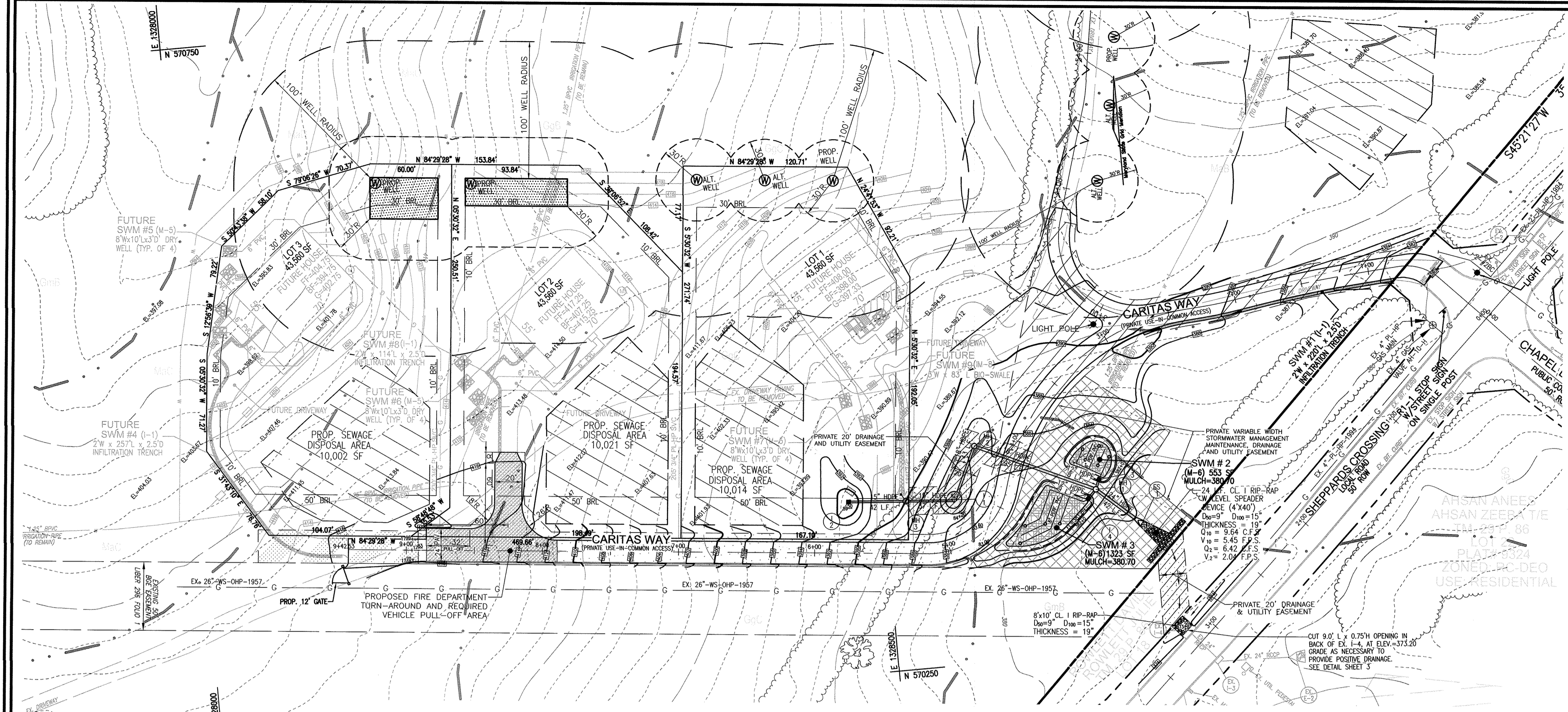
NO.	REVISION	DATE

SUPPLEMENTAL PLAN  
GRADING, SOIL EROSION AND  
SEDIMENT CONTROL PLAN  
CUNNINGHAM PROPERTY  
3 LOT AG  
4979 SHEPPARD LANE  
L.1576/F.426  
ELECTION DISTRICT 5  
TAX MAP: 29 GRID:13 PARCEL:25  
ZONED: RC-DEO (RURAL CONSERVATION)  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERS & SURVEYORS, P.C.**  
8407 MAIN STREET  
ELICOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE  
STATE OF MARYLAND  
ROBERT H. VOGEL, P.E. No. 16193  
DESIGN BY: GAH  
DRAWN BY: GAH  
CHECKED BY: RHY  
DATE: APRIL 2019  
SCALE: AS SHOWN  
W.O. NO.: 14-62  
4 SHEET OF 6





**ESDv DRAINAGE AREA MAP**  
SCALE: 1" = 50'

Appendix B.4 Construction Specifications for Environmental Site Design Practices

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

Material	Specification	Notes
Plantings	See Appendix A, Table A.4	USDA soil types heavy sand or sandy loam; clay content < 5%
Plantings	Plantings in 2' to 4' deep	USDA soil types heavy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Mulch	Pea gravel diameter	NO. 8 OR NO. 9 (1/8" TO 3/8")
Curtain drain	Material	NO. 8 OR NO. 9 (1/8" TO 3/8")
Underdrain piping	Material	NO. 8 OR NO. 9 (1/8" TO 3/8")
Placed in place concrete (if required)	Material	NO. 8 OR NO. 9 (1/8" TO 3/8")
Sand	Material	NO. 8 OR NO. 9 (1/8" TO 3/8")

**6" x 6" CHECK DAM**  
TYPICAL CROSS SECTION

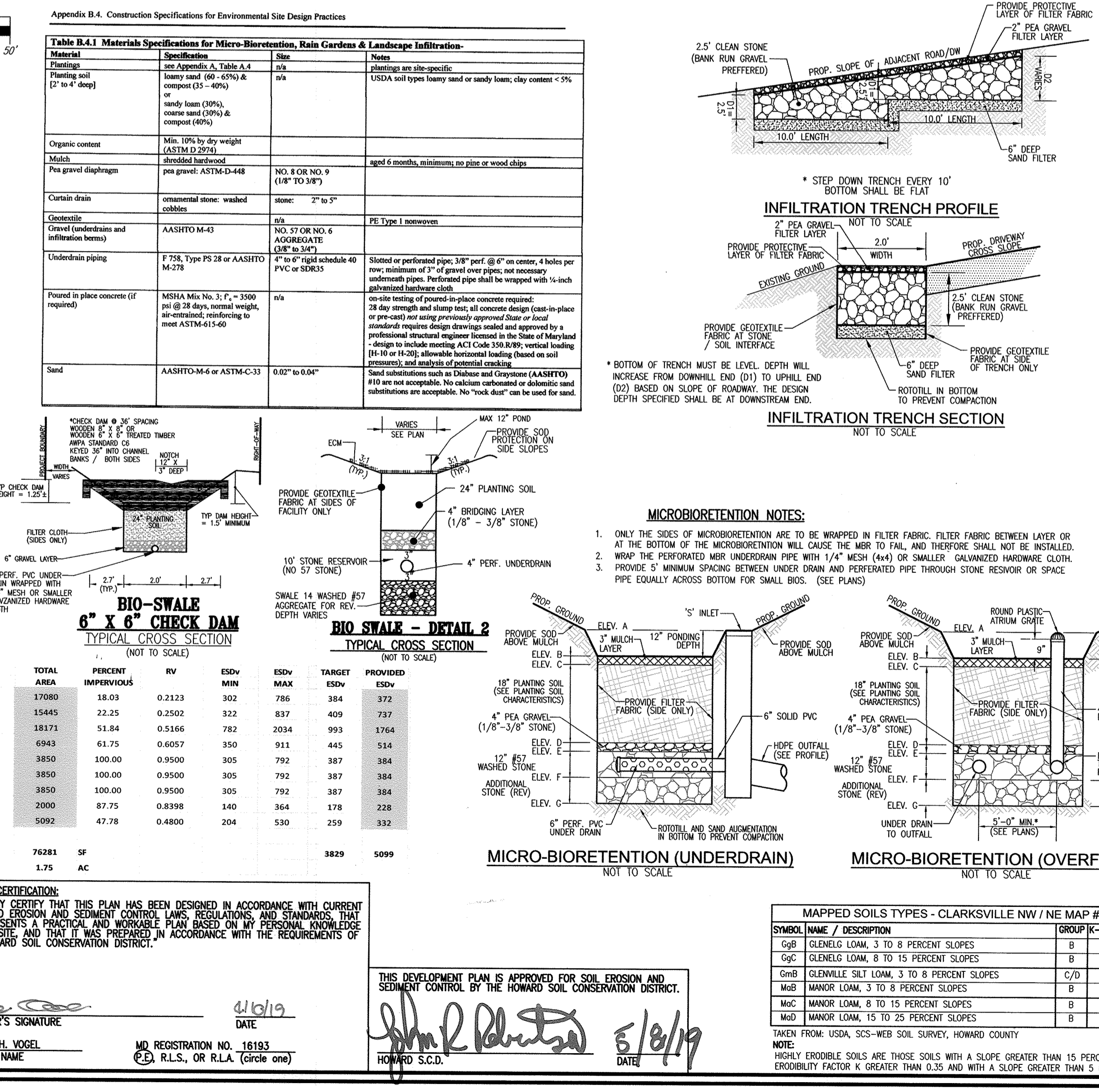
**BIO-SWALE - DETAIL 2**  
TYPICAL CROSS SECTION

**ENVIRONMENTAL SITE DESIGN PRACTICE VOLUMES PROVIDED**

Drainage Area #	Area (SF)	Facility	Volume (cu yd)
1	17080	SWM #1	372
2	15445	SWM #2	737
3	18171	SWM #3	1764
4	6943	SWM #4	0
5	3850	SWM #5	0
6	3850	SWM #6	0
7	3850	SWM #7	0
8	3850	SWM #8	0
9	4071	SWM #9	0
<b>TOTALS</b>	<b>25011</b>	<b>332</b>	<b>1152</b>

**DRAINAGE FACILITY TYPE & NO.**

Facility	Area (SF)	Volume (cu yd)
SWM #1 INFILTRATION TRENCH (I-1)	3080	14000
SWM #2 MBR (M-6)	9420	12009
SWM #3 INFILTRATION TRENCH (I-1)	9420	9751
SWM #4 INFILTRATION TRENCH (I-1)	9420	2656
SWM #5 DRY WELL (M-5)	3850	50
SWM #6 DRY WELL (M-5)	3850	50
SWM #7 DRY WELL (M-5)	3850	50
SWM #8 INFILTRATION TRENCH (I-1)	1755	245
SWM #9 BIOSWALE (M-8)	2433	2659
<b>TOTAL AREA</b>	<b>76281</b>	<b>1.75</b>



**OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), AND ENHANCED FILTERS (M-9)**

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY.
2. THE OWNER SHALL MAINTAIN THE MULCH AND SOIL LAYER LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT.
3. THE OWNER SHALL MAINTAIN THE MULCH AND SOIL LAYER LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT.
4. THE OWNER SHALL MAINTAIN THE MULCH AND SOIL LAYER LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1) AND DRY WELLS (M-5)**

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE DATE AT WHICH THE FACILITY DRAINAGE.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVEN (7) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO MONITOR COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

**APPENDIX B.2 CONSTRUCTION SPECIFICATIONS FOR INFILTRATION PRACTICES**

1. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
2. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
3. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
4. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
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15. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
16. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
17. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
18. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
19. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS
20. INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS

**APPENDIX B.3 SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS**

1. MATERIAL SPECIFICATIONS
2. FILTERING MEDIA OR PLANTING SOIL
3. COMPACTION
4. PLANT MATERIAL
5. PLANT INSTALLATION
6. UNDERDRAINS
7. MICROBIORETENTMENT

**NOTES:**

1. APPROVAL OF THIS FINAL PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED BUILDING AND/OR GRADING PERMIT.
2. REVIEW OF THIS PLAN FOR COMPLIANCE WITH ZONING AND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE PERMIT STAGES, AND THEREFORE THIS PLAN IS SUBJECT TO ADDITIONAL AND MORE DETAILED COMMENTS AS THE PLAN PROGRESSES THROUGH THE PERMIT PROCESS.
3. THERE IS AN INTERMITTENT STREAM WHICH CROSSES THE NORTHWEST CORNER OF THE SITE AND HAS A 50' STREAM BUFFER. THERE IS A SMALL AREA OF WETLANDS ALSO IN THE NORTHWEST CORNER OF THE SITE. THE TOPOGRAPHY CONTAINS SEVERAL AREAS OF CONTIGUOUS STEEP SLOPES IN THE NORTHEAST CORNER OF THE PROPERTY BOUNDARY. ACCORDING TO CURRENT FORM APPROVED BY FEMA AND HOWARD COUNTY, THERE IS AN AREA OF 100% FLOODPLAIN LOCATED ON THIS PROPERTY. NONE OF THESE ENVIRONMENTAL FEATURES ARE PRESENT INSIDE THE DEVELOPMENT AREA FOR THIS PROJECT.

**REVISION**

NO.	REVISION	DATE

**STANDARD SOILS TYPES - CLARKVILLE NW / NE MAP #16 / 17**

STANDARD NAME / DESCRIPTION	GROUP / FACTOR	HYDRO / HYDROLOGIC	PRIME / FARMLAND	SLOPE / POTENTIAL
G8r GLENELE LOAM, 3 TO 8 PERCENT SLOPES	B	20	NO	NO
G9c GLENELE LOAM, 8 TO 15 PERCENT SLOPES	B	20	NO	NO
GmB GLENELE SILT LOAM, 3 TO 8 PERCENT SLOPES	C/D	24	NO	YES
M8B MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	37	NO	NO
M8C MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	24	NO	NO
M8D MANOR LOAM, 15 TO 25 PERCENT SLOPES	B	24	NO	NO

**OWNER/DEVELOPER CERTIFICATION:**

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

**DESIGNER CERTIFICATION:**

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

**DESIGNER:** ROBERT H. VOGEL, P.E., R.L.S., OR R.L.A. (circle one)

**DATE:** 5/19/19

**OWNER/DEVELOPER SIGNATURE:** [Signature]

**DATE:** 5/19/19

**OWNER/DEVELOPER PRINTED NAME & TITLE:** [Name]

**DESIGNER SIGNATURE:** [Signature]

**DATE:** 5/19/19

**DESIGNER PRINTED NAME:** ROBERT H. VOGEL

**MO REGISTRATION NO. 16193**

**REG. R.L.S., OR R.L.A. (circle one)**

**DATE:** 5/19/19

**HOWARD S.C.D.**

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

**MAPPED SOILS TYPES - CLARKVILLE NW / NE MAP #16 / 17**

**OWNER/DEVELOPER:** GRATIA PLENA, LLC, 11140 HOMEWOOD ROAD, ELLICOTT CITY, MD 21042, PHONE: 443-677-4612

**PROFESSIONAL CERTIFICATE:**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A duly licensed PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16833, EXPIRATION DATE 09-30-2026.

**ROBERT H. VOGEL, P.E. No. 16193**

**DATE:** APRIL 2019

**SCALE:** AS SHOWN

**W.O. NO.:** 14-62

**6 SHEET OF 6**

DESIGN BY: RIV  
 DRAWN BY: ONB  
 CHECKED BY: RHW  
 DATE: OCTOBER 2019  
 SCALE: AS SHOWN  
 W.O. NO.: 14-82  
 SHEET 7 OF 7

STATE OF MARYLAND  
 BOARD OF PROFESSIONAL ENGINEERS  
 PROFESSIONAL CERTIFICATE

ROBERT H. VOGEL, PE No. 16193  
 CIVIL ENGINEER  
 1140 HOWARD ROAD  
 ELLICOTT CITY, MD 21042  
 PHONE: 443-877-4612  
 OWNER/DEVELOPER  
 GRAYVA FLEX, LLC

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 WWW.TIMONS.COM

**TIMONS GROUP**

3 LOT AG  
 4978 SHEPARD LANE  
 L 15787/F 426  
 ELECTION DISTRICT 5  
 TAX MAP: 29 GRID:13  
 PARCEL 25  
 ZONED: RC-30

HOWARD COUNTY, MARYLAND

NO.	REVISION	DATE
1	REVISE SEQUENCE OF CONSTRUCTION PHASING	10-4-23

**REVISED SUPPLEMENTAL PLAN**  
**GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN (STAGE 2)**  
**CUNNINGHAM PROPERTY**  
**3 LOT AG**  
**4978 SHEPARD LANE**  
**L 15787/F 426**  
**HOWARD COUNTY, MARYLAND**

**LEGEND**

EXISTING CONTOUR  
 PROPOSED CONTOUR  
 PROPOSED CURB AND GUTTER  
 PROPOSED CURB AND GUTTER  
 EXISTING UTILITY POLE  
 EXISTING UTILITY POLE  
 EXISTING LIGHT POLE  
 EXISTING LIGHT POLE  
 EXISTING MAJOR  
 EXISTING MAJOR  
 EXISTING SIGN  
 EXISTING SIGN  
 PROPOSED PRIVATE WELL  
 PROPOSED PRIVATE WELL  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 DEVELOPMENT AREA / LIMIT OF DISTURBANCE  
 DEVELOPMENT AREA / LIMIT OF DISTURBANCE  
 STABILIZED CONSTRUCTION ENTRANCE  
 STABILIZED CONSTRUCTION ENTRANCE  
 EROSION CONTROL MATTING  
 EROSION CONTROL MATTING  
 MICRO-BIORETENTION (M-7)  
 MICRO-BIORETENTION (M-7)  
 24' PERCENT OR GREATER IN-COMMON EASEMENT FOR THE BENEFIT OF LOTS 1-3  
 24' PERCENT OR GREATER IN-COMMON EASEMENT FOR THE BENEFIT OF LOTS 1-3  
 MODERATE SLOPES > 20%  
 MODERATE SLOPES > 20%  
 HIGHLY ERODIBLE SOILS  
 HIGHLY ERODIBLE SOILS  
 DRAINAGE AREA FOR SEDIMENT CONTROL  
 DRAINAGE AREA FOR SEDIMENT CONTROL

EXISTING CONTOUR  
 PROPOSED CONTOUR  
 PROPOSED CURB AND GUTTER  
 PROPOSED CURB AND GUTTER  
 EXISTING UTILITY POLE  
 EXISTING UTILITY POLE  
 EXISTING LIGHT POLE  
 EXISTING LIGHT POLE  
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 EXISTING MAJOR  
 EXISTING SIGN  
 EXISTING SIGN  
 PROPOSED PRIVATE WELL  
 PROPOSED PRIVATE WELL  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 SLOPE SILT FENCE  
 DEVELOPMENT AREA / LIMIT OF DISTURBANCE  
 DEVELOPMENT AREA / LIMIT OF DISTURBANCE  
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 MODERATE SLOPES > 20%  
 HIGHLY ERODIBLE SOILS  
 HIGHLY ERODIBLE SOILS  
 DRAINAGE AREA FOR SEDIMENT CONTROL  
 DRAINAGE AREA FOR SEDIMENT CONTROL

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 11/18/23

CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 11/18/23

OWNER/DEVELOPER SIGNATURE: *Thomas H. Cunningham*  
 DATE: 11/18/23

DESIGNER'S SIGNATURE: *Robert H. Vogel*  
 DATE: 11/18/23

NO. REGISTRATION NO. 16193  
 P.E. R.H.S., OR R.L.Y. (ORAL EXAM)  
 DATE: 11/18/23

THE DESIGN PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 DATE: 11/18/23

DESIGN CERTIFICATION:  
 THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT DESIGN STANDARDS AND REGULATIONS FOR THE CONTROL OF EROSION AND SEDIMENTATION ON THE PROJECT SITE.  
 I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND AND THAT I AM THE DESIGNER OF THIS PLAN.  
 I HAVE REVIEWED THE PLAN AND I AM SURE THAT IT COMPLIES WITH ALL APPLICABLE REGULATIONS AND STANDARDS.  
 I HAVE ALSO REVIEWED THE PLAN AND I AM SURE THAT IT COMPLIES WITH ALL APPLICABLE REGULATIONS AND STANDARDS.  
 I HAVE ALSO REVIEWED THE PLAN AND I AM SURE THAT IT COMPLIES WITH ALL APPLICABLE REGULATIONS AND STANDARDS.  
 I HAVE ALSO REVIEWED THE PLAN AND I AM SURE THAT IT COMPLIES WITH ALL APPLICABLE REGULATIONS AND STANDARDS.

**NOTE:**  
 HOUSE CONSTRUCTION AND IMPROVEMENTS FOR LOTS 1-3 SHALL BE PROVIDED ON A SUBSEQUENT FUTURE PLAN.

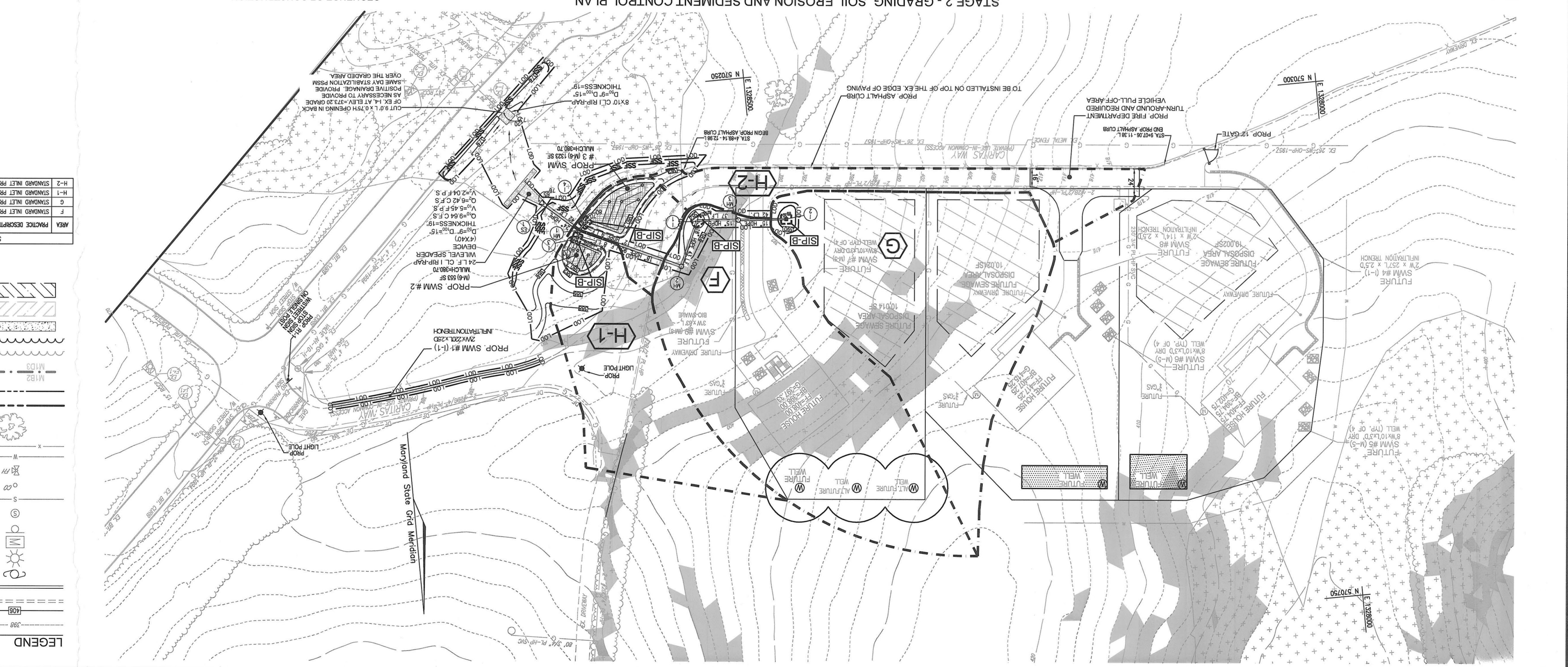
MAPPED SOILS TYPES - CLARKSVILLE NW/NE MAP #16 / 17  
 SOIL EROSION RISK FACTOR  
 SOIL EROSION RISK FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT  
 HIGHLY ERODIBLE SOILS ARE THOSE WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT

**SEQUENCE OF CONSTRUCTION**

1. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)  
 2. DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION. (1 DAY)  
 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, AS SHOWN HEREON. (1 DAY)  
 4. CLEAR AND GRAB ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS. (1 DAY)  
 5. INSTALL PERMETER CONTROLS INCLUDING SUPER SILT FENCE (DOUBLE ROW AT SOUTH SIDE OF LOT) AND PERMETER CONTROLS. (1 DAY)  
 6. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR & GRAB SITE. (1 DAY)  
 7. INSTALL STONE SUBBASE, BASE COURSE, AND FINAL PAVING FOR USE-IN-COMMON ACCESS (CARRIAGES WAY) AND FIRE TURN LANE. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 8. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 9. INSTALL STREET LIGHT AND STREET SIGNAGE (CONTRACTOR TO COORDINATE WITH HOWARD COUNTY TRAFFIC DIVISION FROM FIELD LOCATIONS) (4 DAYS)  
 10. CONTRACTOR SHALL INSPECT AND REPAIR NECESSARY MAINTENANCE ON THE SEGMENT AND REPAIR DAMAGE TO EXISTING INFRASTRUCTURE. (4 WEEKS)  
 11. INSTALL STREET LIGHT AND STREET SIGNAGE (CONTRACTOR TO COORDINATE WITH HOWARD COUNTY TRAFFIC DIVISION FROM FIELD LOCATIONS) (4 DAYS)  
 12. CONTRACTOR SHALL INSPECT AND REPAIR NECESSARY MAINTENANCE ON THE SEGMENT AND REPAIR DAMAGE TO EXISTING INFRASTRUCTURE. (4 WEEKS)

**STAGE 1**  
 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, AS SHOWN HEREON. (1 DAY)  
 2. CLEAR AND GRAB ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS. (1 DAY)  
 3. INSTALL PERMETER CONTROLS INCLUDING SUPER SILT FENCE (DOUBLE ROW AT SOUTH SIDE OF LOT) AND PERMETER CONTROLS. (1 DAY)  
 4. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR & GRAB SITE. (1 DAY)  
 5. INSTALL STONE SUBBASE, BASE COURSE, AND FINAL PAVING FOR USE-IN-COMMON ACCESS (CARRIAGES WAY) AND FIRE TURN LANE. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 6. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 7. INSTALL STREET LIGHT AND STREET SIGNAGE (CONTRACTOR TO COORDINATE WITH HOWARD COUNTY TRAFFIC DIVISION FROM FIELD LOCATIONS) (4 DAYS)  
 8. CONTRACTOR SHALL INSPECT AND REPAIR NECESSARY MAINTENANCE ON THE SEGMENT AND REPAIR DAMAGE TO EXISTING INFRASTRUCTURE. (4 WEEKS)

**STAGE 2**  
 1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, AS SHOWN HEREON. (1 DAY)  
 2. CLEAR AND GRAB ON-SITE AREA FOR THE INSTALLATION OF PERMETER CONTROLS. (1 DAY)  
 3. INSTALL PERMETER CONTROLS INCLUDING SUPER SILT FENCE (DOUBLE ROW AT SOUTH SIDE OF LOT) AND PERMETER CONTROLS. (1 DAY)  
 4. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR & GRAB SITE. (1 DAY)  
 5. INSTALL STONE SUBBASE, BASE COURSE, AND FINAL PAVING FOR USE-IN-COMMON ACCESS (CARRIAGES WAY) AND FIRE TURN LANE. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 6. IMMEDIATELY STABILIZE ALL GRADED AREAS (2 WEEKS)  
 7. INSTALL STREET LIGHT AND STREET SIGNAGE (CONTRACTOR TO COORDINATE WITH HOWARD COUNTY TRAFFIC DIVISION FROM FIELD LOCATIONS) (4 DAYS)  
 8. CONTRACTOR SHALL INSPECT AND REPAIR NECESSARY MAINTENANCE ON THE SEGMENT AND REPAIR DAMAGE TO EXISTING INFRASTRUCTURE. (4 WEEKS)



SCALE: 1" = 50'  
 SCALE: 1" = 50'

NOTE:  
 HOUSE CONSTRUCTION AND IMPROVEMENTS FOR LOTS 1-3 SHALL BE PROVIDED ON A SUBSEQUENT FUTURE PLAN.