

- THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION TITLED "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS", JULY 2008 AS CURRENTLY AMENDED.
2. SAMPLING OF MATERIALS (BANK RUN GRAVEL, ETC.) SHALL BE DONE IN ACCORDANCE WITH THE ST. MARY'S COUNTY SUBDIVISION ROAD CONSTRUCTION AND INSPECTION PROCEDURES TO INSURE COMPLIANCE WITH THE CURRENT MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS.
3. STABILIZATION OF ALL DRAINAGE CHANNELS, ROAD SHOULDERS, SLOPES AND OTHER DISTURBED AREAS WILL BE COMPLETED PRIOR TO ACCEPTANCE OF THE ROAD INTO THE ST. MARY'S COUNTY HIGHWAY MAINTENANCE SYSTEM.
4. STANDARD END SECTIONS (SHA STANDARD NO. 370.01 AND 371.01). ALL REINFORCED CONCRETE PIPE SHALL BE MINIMUM CLASS IV. ALL REINFORCED PIPE END SECTIONS SHALL BE IN ACCORDANCE WITH SHA STANDARD NO. 368.03 AND 368.04.
5. STONE OR RIPRAP SHALL BE CLASS I AS PER MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS, SECTION 901.02 01 AS CURRENTLY AMENDED.
6. ALL RIPRAP IS TO BE PLACED ON DRY FILTER CLOTH. FILTER CLOTH SHALL MEET THE REQUIREMENTS OF SECTION 921.09 OF THE MARYLAND SHA SPECIFICATIONS AS CURRENTLY AMENDED.
7. SOD OR SEED MIXTURES USED IN LINING DRAINAGE CHANNELS SHALL BE KENTUCKY 31 TALL FESCUE, UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION, AND SHALL BE IN ACCORDANCE WITH MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS SECTION 920.04.
8. SOILS FOUND TO BE UNSUITABLE FOR CONSTRUCTION SHALL BE EXCAVATED AND REMOVED AS ENCOUNTERED DURING CONSTRUCTION OF ROAD.
9. AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ST. MARY'S COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION AT 301-475-4200, EXT "3531"
10. ATTENTION IS CALLED TO PUBLIC SERVICE COMMISSION ORDER NUMBER 60838, CHAPTER 863, EFFECTIVE DATE AUGUST 1, 1974, AND SECTION 26A, ARTICLE 18 OF THE ANNOTATED CODE OF MARYLAND, 1954, REGARDING THE PROTECTION OF UNDERGROUND UTILITIES AND THE RESPONSIBILITY OF THE CONTRACTOR CONTAINED THEREIN. THE CONTRACTOR SHALL CONTACT OTHER UTILITY COMPANIES WHICH OPERATE IN THE AREA AND NOT IN THE "MISS UTILITY" PROGRAM.
11. THE CONTRACTOR SHALL USE MIRAFI 140N NON WOVEN FABRIC (FOR PRACTICES THAT REQUIRE INFILTRATION)
12. ALL HANDICAP SPACES SHALL BE CONSTRUCTED TO MEET THE AMERICAN WITH DISABILITIES ACT REQUIREMENTS
13. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF ST. MARY'S COUNTY AGENCIES.
14. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION, NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
15. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
16. DEBRIS SHALL NOT BE BURIED ON SITE AND ALL UNSUITABLE MATERIAL AND SOLID WASTE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES.
17. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH OSHA STANDARDS) AND ANY ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
18. CONTRACTOR TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. THAT ARE TO REMAIN, CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAMAGE DUE TO ANY EXISTING, ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND REPLACE ALL SIGNAL, INTERCONNECT CABLE, CONDUITS, AND ANY UNDERGROUND, ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION, REPAIR SHALL BE EQUAL TO OR BETTER THAN EXISTING.
19. ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS INDICATED IN SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT

OF 8

CONCEPT SITE PLAN  
CORTEAU VINEYARD  
CHARLOTTE HALL  
FIFTH ELECTION DISTRICT  
ST. MARY'S COUNTY, MARYLAND

BACK OF CURB  
EST MANAGEMENT PRACTICE  
BOTTOM OF WALL  
CORRUGATED METAL PIPE  
CLEAN OUT  
DEPTH  
ELEVATION  
EDGE OF PAVE  
END SECTION  
EASEMENT  
EXISTING  
FINISHED FLOOR  
FLOW LINE  
FEET  
HIGH POINT  
INVERT  
LENGTH  
LINEAR FEET  
LIMIT OF DISTURBANCE  
MANHOLE  
PROPOSED  
RADIUS  
REINFORCED CONC. PIPE  
RIGHT OF WAY  
SANITARY SEWER  
STORM DRAIN  
SQUARE FEET  
TOP OF CURB  
TELEPHONE & CABLE  
TOP OF WALL  
TYPICAL  
WIDTH  
WITH

LU&GM #19-132-000



25% SLOPES

EXISTING GRAPE ARBORS

STREAM BUFFERS

LINEAR WETLAND

EXISTING 125' EXPANDED STREAM BUFFER

N/F  
MARK FREDERICK JR  
TM 5, GRID 1, PARCEL 70  
4389/240  
ZONED: RPD  
USE: RESIDENTIAL

N/F  
MARK FREDERICK JR  
TM 5, GRID 1, PARCEL 70  
4389/240  
ZONED: RPD  
USE: RESIDENTIAL

TO CHARLOTTE HALL

LOT 1 - LOT 2

LOT 4

10/11/19

LOT 6

FD 2070  
ZONED: RNC  
USE: RESIDENTIAL

LOT 9

LOT 10

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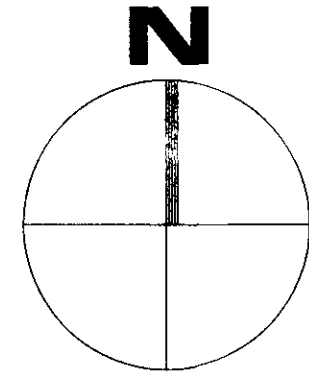
LOT 30

LOT 31

SECTION 2, LAUREL RIDGE SUBDIV

USE: RESIDENTIAL

1/25/2019 10:30:08 AM



N/F  
SEAN & HOLLY GARDNER  
TM 5, GRID 2, PARCEL 53  
3493/160  
ZONED: RPD  
USE: RESIDENTIAL

TO GOLDEN BEACH

N/F  
HAROLD WAYNE HODGES  
TM-5, GRID 2, PARCEL 38  
262/187  
ZONED: RPD  
USE: RESIDENTIAL  
-HISTORICAL SITE: CONRAD FARMHOUSE

FAITH HILLS SUBDIVISION  
PB 43/33  
ZONED: RPD  
USE: RESIDENTIAL

TIA & CRAIG MELANSON  
LOT 3  
FAITH HILLS SUBDIVISION  
PB 43/33  
ZONED: RPD  
USE: RESIDENTIAL

JASON & CAROLYN ROSE  
LOT 4  
FAITH MILLS SUBDIVISION  
PB 43/33  
ZONED: RPD  
USE: RESIDENTIAL

N/F  
PAULA CONNICK  
3724/663  
ZONED: RNC  
USE: RESIDENTIAL

ACT/CG	OWNER	ADDRESS	LEGAL DESCRIPTION
190042194	MOORE, JOHANNA A - NANCY C	38702 CHESEA PL	LOT 1 - SECTION 1 - LAUREL RIDGE
190001049	CALKINS, GLEN J.B. - GARDNER HOLLY	38500 FAITH HILLS WAY	5.229 ACRES - N/5 FAITH HILLS SUBD - MECHANICSVILLE
190056671	ROSE, JACOB P. - ROSE, CAROLYN	38860 FAITH HILLS WAY	LOT 14 PLAT 43/3 - FAITH HILLS SUBD
190042175	BERNARDI, ANGELO S & O	38519 LAUREL RIDGE DR	LOT 10 - SECTION 1 - LAUREL RIDGE
190042073	CONNICK, PALMA E.	29633 ALL FAITH CHURCH RD	7.04 ACRES - W/ ALL FAITH CHURCH - MECHANICSVILLE
190001188	HOGS, HAROLD WAYNE	29637 ALL FAITH CHURCH RD	8.04 ACRES - W/5 ALL FAITH CHURCH RD - MECHANICSVILLE
190043093	WETHERALL, KEVIN J. & MARGARET E WETHERALL	29634 JENNIFER DR	LOT 33 - SECTION 2 - LAUREL RIDGE
190043077	GORDON, GERALD D - CAROL S	29674 JENNIFER DR	LOT 35 - SECTION 2 - LAUREL RIDGE
190043069	POLK, ROBERT D - CONNIE L	29606 JENNIFER DR	LOT 30 - SECTION 2 - LAUREL RIDGE
190043095	POLO, HILLARY D	29606 JENNIFER DR	LOT 32 - SECTION 2 - LAUREL RIDGE
190042176	NABA, LARRY	38408 CHESEA PL	LOT 43 SECTION 1 - LAUREL RIDGE
190026567	ARNOLD, CHARLES H JR. & BETIE ANNE ARNOLD	29651 ALL FAITH CHURCH RD	LOT 9 - SECTION 1 - HOLLY ACRES
190042208	CAMP, MARTHA A	38570 CHESEA PL	LOT 3 - SECTION 1 - LAUREL RIDGE
190040565	MELANSON, TIA & MELANSON CRAIG	38720 FAITH HILLS WAY	LOT 1 - PLAT 43/3 - FAITH HILLS SUBDIVISION
190042122	CLARK, LEE S SR & CLARK, CRAIG A	385 CHESEA PL	LOT 6 - SECTION 1 - LAUREL RIDGE
190042067	COLE, CAROL & ANGEL T F	38519 LAUREL RIDGE DR	LOT 10 - SECTION 1 - LAUREL RIDGE
190042224	NIXON, ROBERT EMERY	38523 CHESEA PL	LOT 1 - SECTION 1 - LAUREL RIDGE
190042178	WHITMAN, KATHLEEN P & JAMES	38880 FAITH HILLS WAY	LOT 14 PLAT 43/3 - FAITH HILLS SUBDIVISION
190043107	PHILLIPS, TIMOTHY L - DENISE L	2964 JENNIFER DR	LOT 34 - SECTION 2 - LAUREL RIDGE
190042126	ERICKSON, GUYA C TRUSTEE ET AL - ERICKSON, THOMAS C TRUSTEE ET AL	38518 CHESEA PL	LOT 4 - SECTION 2 - LAUREL RIDGE
190042143	SWARTY, DALE E	00000 NO ADDRESS	OPEN SPACE - SECTION 4A - LAUREL RIDGE
190050564	LONG LOOKED FOR COME AT LAST LLC	38625 GOLDEN BEACH	244.07 ACRES - S/5 GOLDEN BEACH RD - MECHANICSVILLE
190042827	VENEZIANI, DANIEL P & VENEZIANI JESSICA DEAN	38474 GOLDEN BEACH RD	ADJUSTED PARCEL 63A - PLAT 66/58 - N/ARY ST
190043924	FREDERICK, MARK D R	38006 GOLDEN BEACH RD	LOT 1 - PLAT 15/61 - CHARLES CONRAD DR TRUS

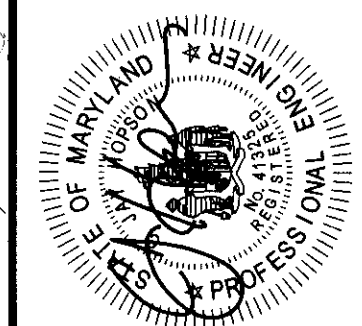
## REVISIONS

DATE \_\_\_\_\_

**MISS UTILITY NOTE:**

INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM THE RECORDS OF THE CITY OF CHICAGO AND THE UTILITIES DEPARTMENT. EXCAVATION TO A MAXIMUM DEPTH OF 6' REVEALED NO EXISTING UTILITIES OR LITIGATION. ALL EXISTING UTILITIES AND UTILITY CROSSINGS BY ELEVATING TEST PIT BY HAND, WERE WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT MISS UTILITY AT 1-800-297-7777, 48 HOURS PRIOR TO THE START OF EXCAVATION IF CLEARANCES ARE LESS THAN SHOWN ON THIS DRAWING OR TWELVE (12) INCHES; WHOEVER IS LESS, CONTACT THE APPROPRIATE AGENCY BEFORE PROCEEDING WITH ANY WORK. CONSTRUCTION CLEARANCES LESS THAN NOTED REQUIRE PERMISSIONS TO THIS PERM.

**JHOPSON**  
CONSULTING LLC  
Civil Engineering • Construction Management



## EXISTING CONDITIONS PLAN

Tax Map / Grid / Parcel:  
TM 5, GD 1, PCL 39

Zoning: RPD

Water Category:

Liber / Folio: 3992/190

Date: **APRIL 2019**

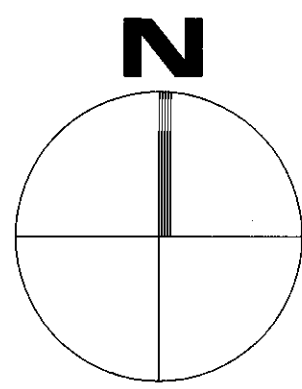
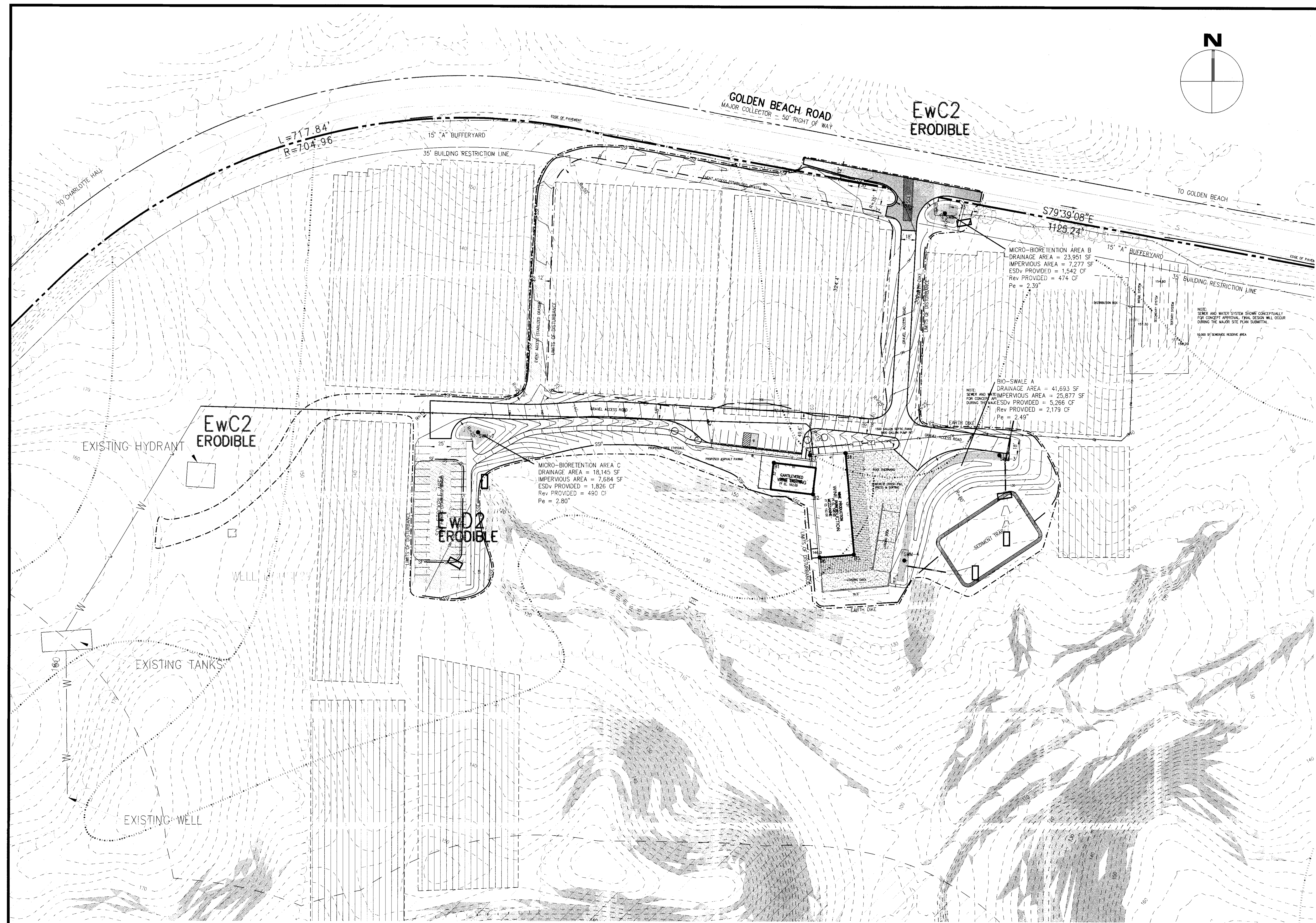
A horizontal scale bar with vertical tick marks at each end and in the middle. The text "ONE INCH" is centered above the bar.

CONCEPT SWM, E&S PLAN

SHEET 2

LU&GM #19-132-0008





REVISIONS

DATE

MISS UTILITY NOTE

INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS DETERMINED BY DIGGING TEST PITS BY HAND. THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND UTILITY CROSSINGS BY DIGGING TEST PITS BY HAND, SHALL BE SHOWN ON THE FINAL DESIGN. THE LOCATION OF ALL EXISTING UTILITIES AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE DESIGNER IMMEDIATELY. CLEARANCES LESS THAN MAY REQUIRE REVISIONS TO THIS PLAN.

JHOPSON

CONSULTING LLC

Civil Engineering - Construction Management

P.O. Box 462

Solomons, Maryland 20688

443.404.5498 • 240.577.2527 • jay@jh-llc.com

STATE OF MARYLAND

ENGINEER

PROFESSIONAL SEAL

DATE: SEPTEMBER 30, 2019

OVERALL CONCEPT DEVELOPMENT PLAN

CONCEPT SITE PLAN

CORTEAU VINEYARD

CHARLOTTE HALL

FIFTH ELECTION DISTRICT

ST. MARY'S COUNTY, MARYLAND

Tax Map / GMD / Parcel:

TM 5, GD 1, PCL 39

Zoning:

RPD

Sewer Category:

NPS

Water Category:

NPS

Lot / Folio:

3992/190

Drawn By:

cjh

Date:

APRIL 2019

ONE INCH

1" = 50'

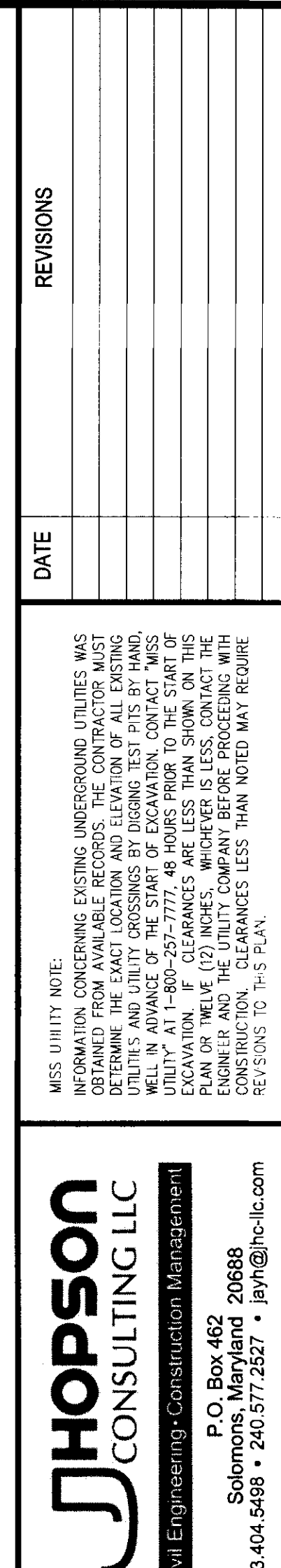
CONCEPT SWM E&S PLAN

SHEET 3

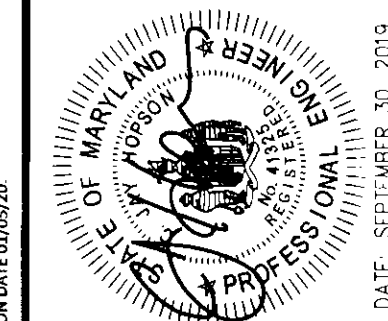
OF 8

LU&GM #19-132-0008





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.



## WINERY CONCEPT DEVELOPMENT PLAN

**CONCEPT SITE PLAN  
CORTEAU VINEYARD  
CHARLOTTE HALL  
FIFTH ELECTION DISTRICT  
ST. MARY'S COUNTY, MARYLAND**

Tax Map / Grid / Parcel:

TM 5, GD 1, PCL 39

Zoning: R1

Sewer Category: **N**

Liber / Folio: 3992/190

Drawn By: \_\_\_\_\_

Date: APRIL 2019

ONE INCH  
1" = 30'

CONCEPT SWM, E&amp;S PLAN

SHEET 4

OF 8

ESD Practices													
Practice Number	Type	Drainage Area	Impervious Area	I	Rv	Target Pe	Target ESDv	ESDv provided	Max ESDv allowable	Rev Provided	Pe Provided	As-built ESDv	As-built P <sub>i</sub>
DA-5	Bio-Swale	41693	25877	0.62	0.61	1.8	3,806	5,266	5,921	2179	2.49		
DA-3	Micro-bioretention	23951	7277	0.30	0.32	1.8	1,162	1,542	1,808	474	2.39		
DA-4	Micro-bioretention	18145	7884	0.42	0.43	1.8	1,173	1,826	1,825	490	2.80		
Untreated		33966	871										
Totals		117755	41709				6,142	8,634	9,554	3144			



**1. Material Specifications**  
The allowable materials to be used in bioretention area are detailed in Table B.4.1.

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quack grass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

pH range	5.2 - 7.0
organic matter	1.5 - 4% (by weight)
magnesium	35 lb./ac
phosphorus (phosphate - P2O5)	75 lb./ac
potassium (potash - K2O)	85 lb./ac
soluble salts	not to exceed 500 ppm

3. **Compaction**  
It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoses to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

Recommended plant material for bioretention areas can be found in Appendix A, Section A.2.3.

Mulch should be placed to a uniform thickness of 3". Shredded hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

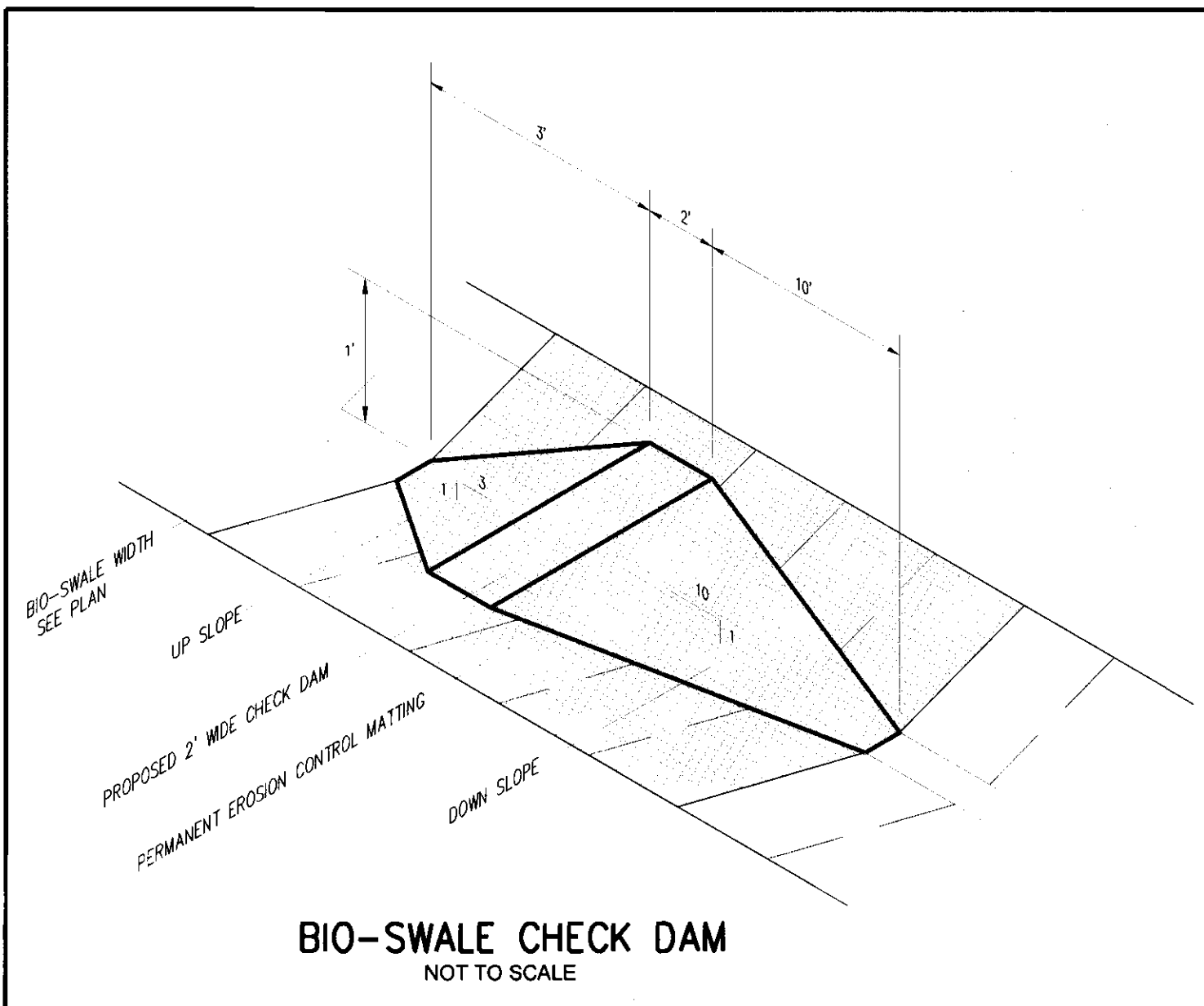
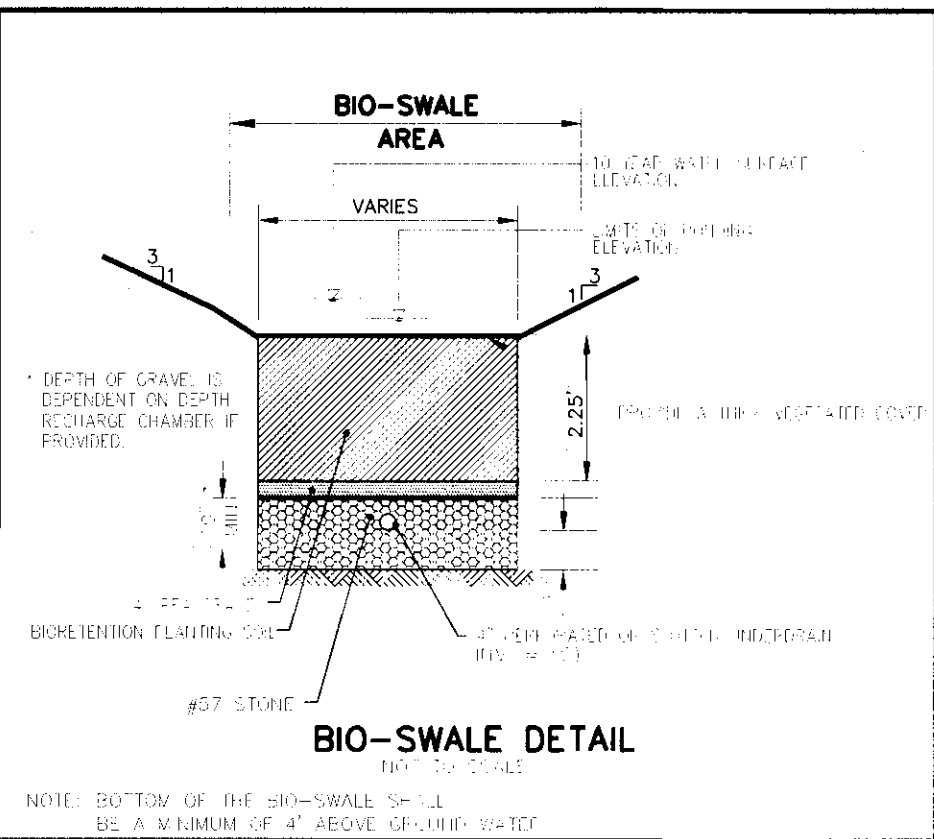
The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains are to be placed on a 3'-0" wide section of filter cloth. Pipe is placed next, followed by the gravel bedding. The ends of underdrain pipes not terminating in an observation well shall be capped.

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5 %. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE APPENDIX A, TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL	LOAMY SAND (60-69% S & COMPOST 35-40% OR  SANDY LOAM (30% COARSE SAND (30% S & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM, CLAY CONTENT <5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM D 2974)		
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL, ASTM D 448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE, WASHED COBBLES	STONE 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE I, NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	ASH/TO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 750, TYPE PS 28 OR ASH/TO M 2/8	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE, 3/8" PER' @ 6" ON CENTER, 4 HOLES PER ROW, MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDER DRAIN PIPES, PERFORATED PIPE SHALL BE WRAPPED WITH 14 INCH GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX NO. 3, F = 3500 PS 3 (28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED, REINFORCING TO MEET ASTM 615-40)	N/A	ON-SITE TESTING OF POURED IN PLACE CONCRETE REQUIRED 28 DAY STRENGTH AND SLUMP TEST, ALL CONCRETE DESIGN CAST IN PLACE OR PRE-CAST NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND, DESIGN TO INCLUDE MEETING A3 CODE 3601R88, VERTICAL LOADING (H-10 OR H-20), ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES), AND ANALYSIS OF POTENTIAL CRACKING
SAND (1" DEEP)	ASH/TO M-6 OR ASTM C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DOLomite AND GRAVSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.



1. Materials and construction shall be in accordance with the 2000 Maryland Stormwater Design Manual including, but not limited to, Appendix "B.4" Section B.4.C for construction specifications.
2. Structure to be located at least 10' away from foundation walls, 25' from septic easements and 50' from confined water supplies.
3. Micro-bioretenment shall not be constructed until the contributing drainage area is stabilized.
4. During site construction, structures shall be delineated with highly visible stakes. Runoff shall be diverted away from and use of heavy equipment avoided on top of proposed structure.
5. Planting soil may be mixed on-site prior to installation. Soils should not be placed under saturated conditions. Filter media should be placed in horizontal layers (12" max) and allowed to compact.
6. Gravel for the underdrain system shall be clean, washed, and free of fines. The upstream end of the pipe should be capped.
7. Optimum planting time for landscaping is during the fall. Spring planting is acceptable, with watering.
8. Micro-bioretenment shall be inspected at a minimum:
  - a) During excavation to subgrade and placing of soil.
  - b) During placement of soil media.
  - c) During construction of apparent conveyance
  - d) Upon completion of final grading and establishment of permanent stabilization.

Visual inspection of the stormwater management facilities after major rain events. Any sign of erosion should be repaired immediately.

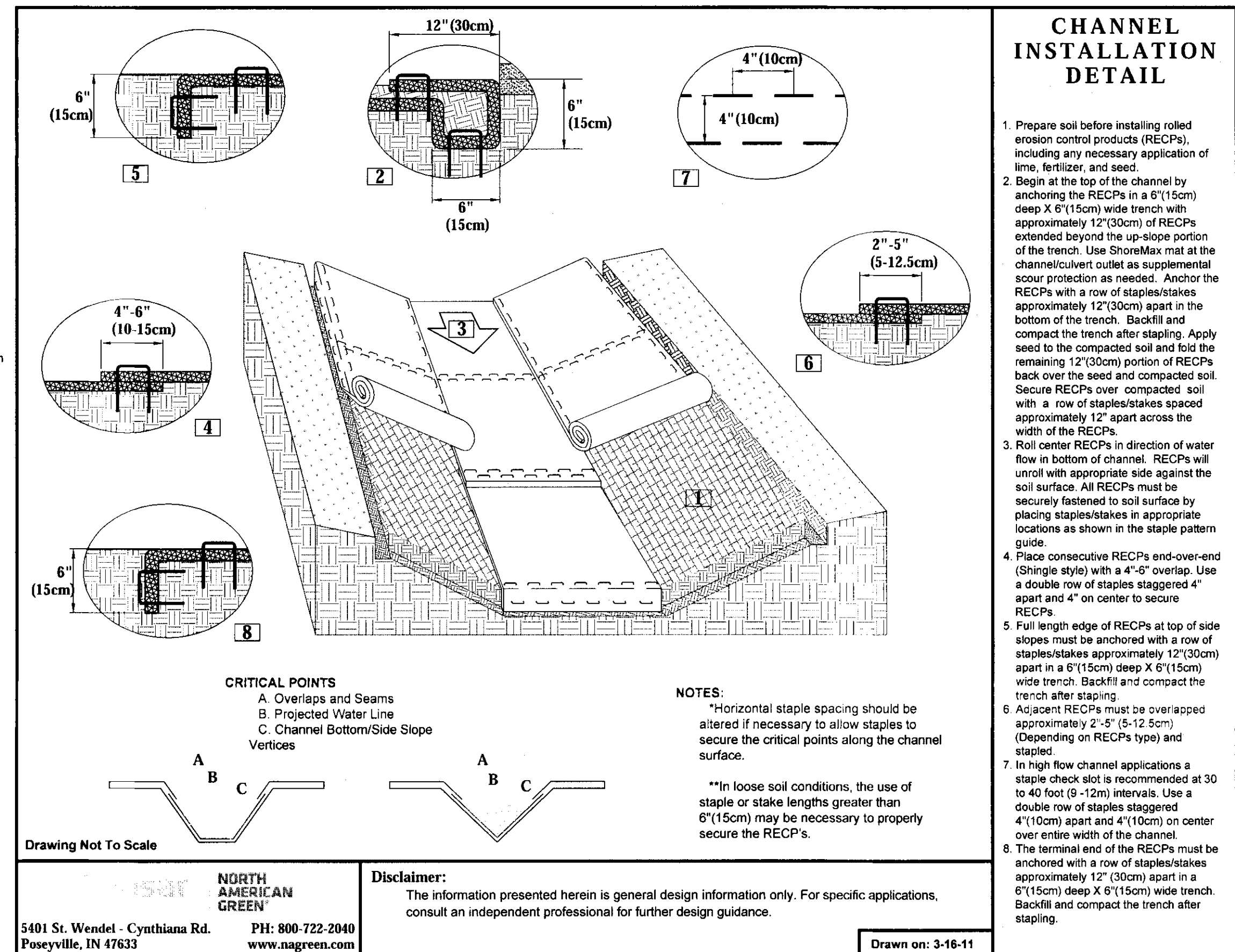
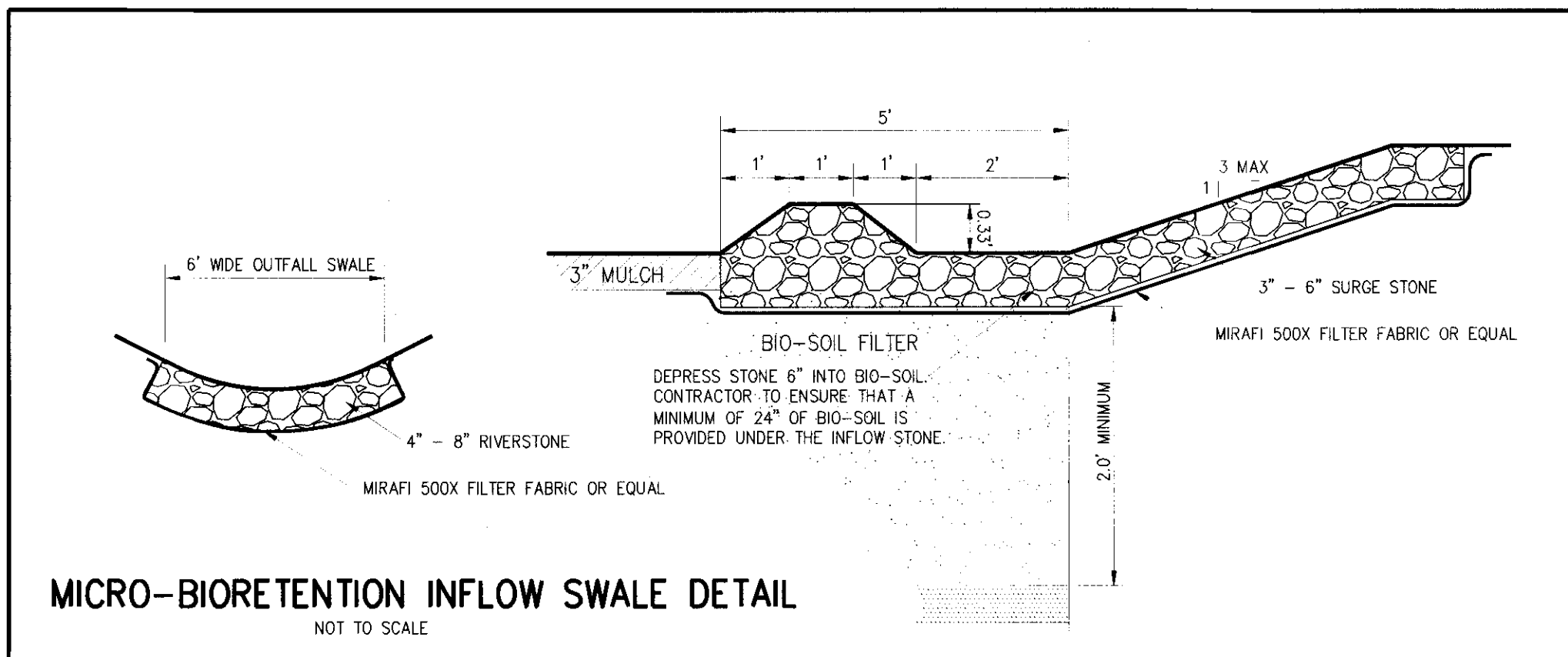
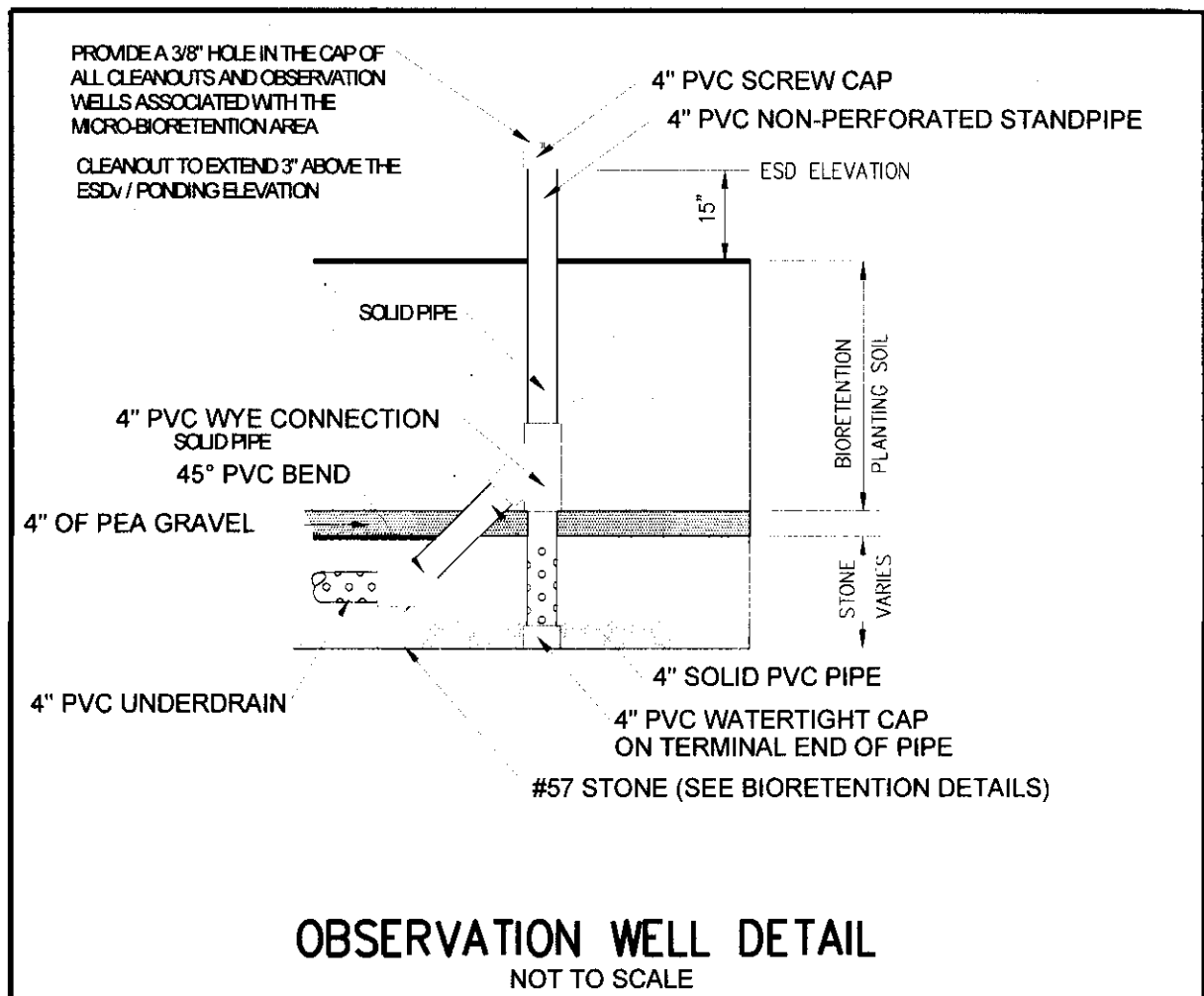
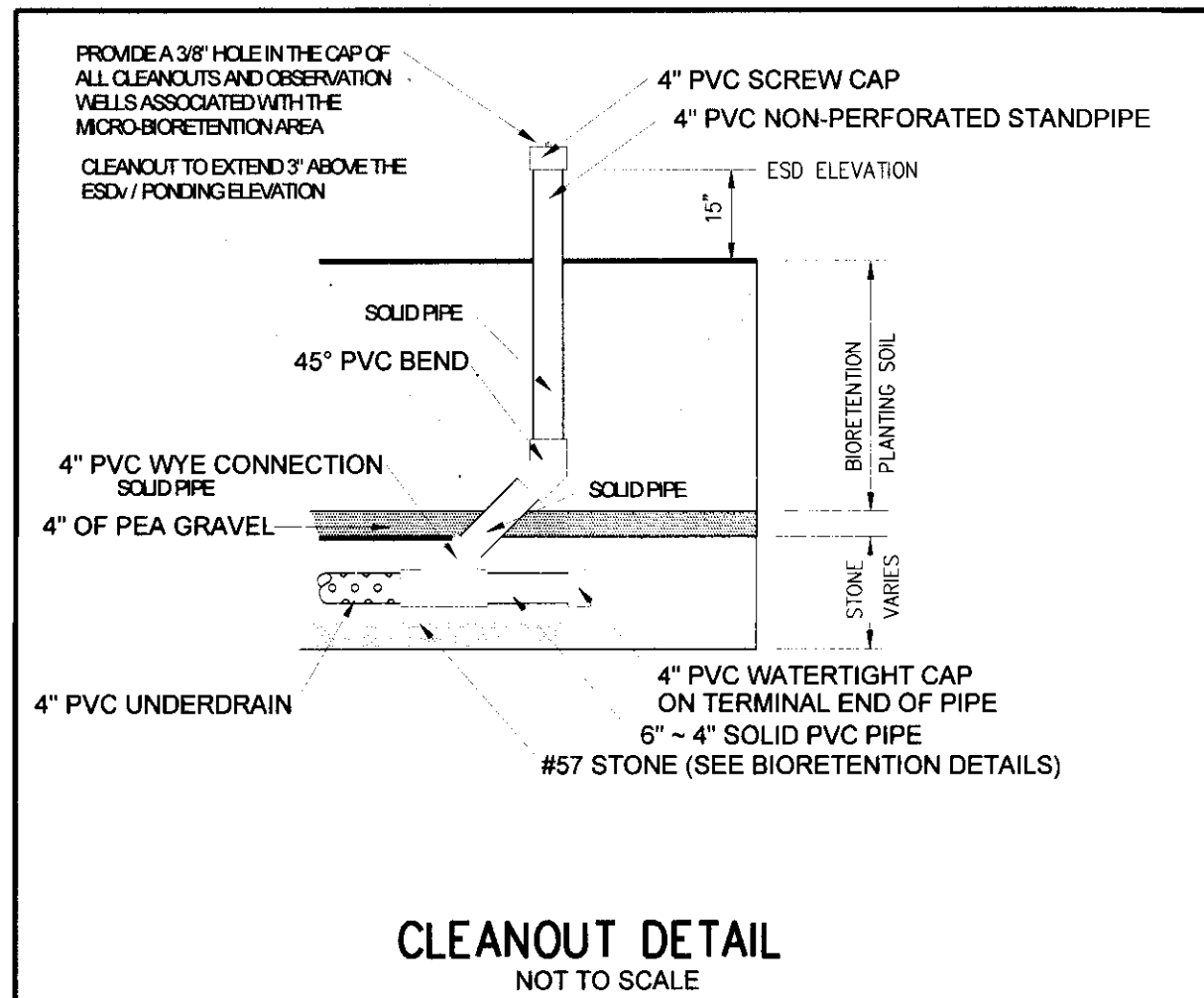
Trash and debris shall be removed as necessary. Silt/settled sand shall be removed from the filter bed when the accumulation exceeds one inch.

When the filtering capacity of the filter diminishes substantially (i.e., when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments should be disposed in an acceptable manner (i.e. landfill).

If ponding continues to be an issue then removal and replacement of the pea gravel bridgework and/or the filter bed itself may be necessary (Does not apply to Submerged Grass Wetlands)

Grass cover should be mowed a minimum of 3 times per growing season to maintain maximum grass heights less than 12 inches. Areas devoid of mow should be re-mulched on an annual basis.

Dead or diseased plant material shall be replaced.



THIS DETAIL TO BE UTILIZED FOR ALL PERMANENT EROSION CONTROL MATTING

### SUITABILITY OF ESD DEVICES

Micro-bioretenion and Bio-Swales have been proposed on this site. Soil in this area is generally C. Underdrains will be provided in all micro-bioretenion areas and bio-swales. Drainage areas must be kept below the 30,000 SF threshold for micro-bioretenion areas and under 1.0 acres for bio-swales.

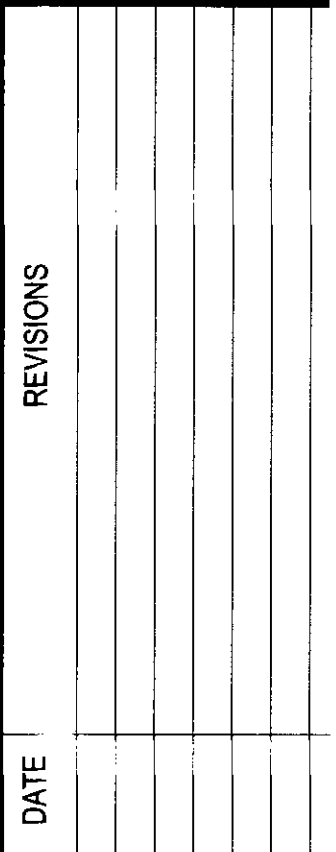
Rain Gardens have not been proposed because of the relatively large drainage areas with little opportunity to minimize the size.

IU&GM #19-132-0008









**W-55 UTILITY NOTE:**  
 INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM THE AVAILABLE RECORDS. THE RECORDS INDICATE THAT CONTACT WAS MADE WITH THE UTILITY COMPANIES TO DETERMINE THE EXACT LOCATION OF THE UTILITIES. THE UTILITY COMPANIES ADVISED THAT THE UTILITIES WERE LOCATED IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MISS" WELL AT 1-800-267-1777, 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS EXCAVATION, IF CLEARANCES ARE LESS THAN 12 INCHES, CONTACT THE ENGINEER AND THE UTILITY COMPANY BEFORE PROCEEDING WITH CONSTRUCTION. CLEARANCES LESS THAN NOTED MAY REQUIRE

**JHOPSON**  
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Civil Engineering - Construction Management  
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PRE-DEVELOPED DRAINAGE AREA MAP

CONCEP SITE PLAN  
CORTEAU VINEYARD  
CHARLOTTE HALL  
FIFTH ELECTION DISTRICT

Tax Map / Grd / Parcel:	
TM 5, GD 1, PCL 39	
Zoning:	RPD
Sewer Category:	NPS
Water Category:	NPS
Libert / Folio:	3992/190
Drawn By:	cjh
Date:	APRIL 2019

ONE INCH  
1" = 50'

CONCEPT SAM, E&S PLAN  
SHEET 7  
OF 8

LU&GM #19-132-00



