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8	SEDIMENT CONTROL NOTES AND DETAILS

**SUPPLEMENTAL, STORMWATER MANAGEMENT,
SOILS, GRADING & SEDIMENT CONTROL PLAN**

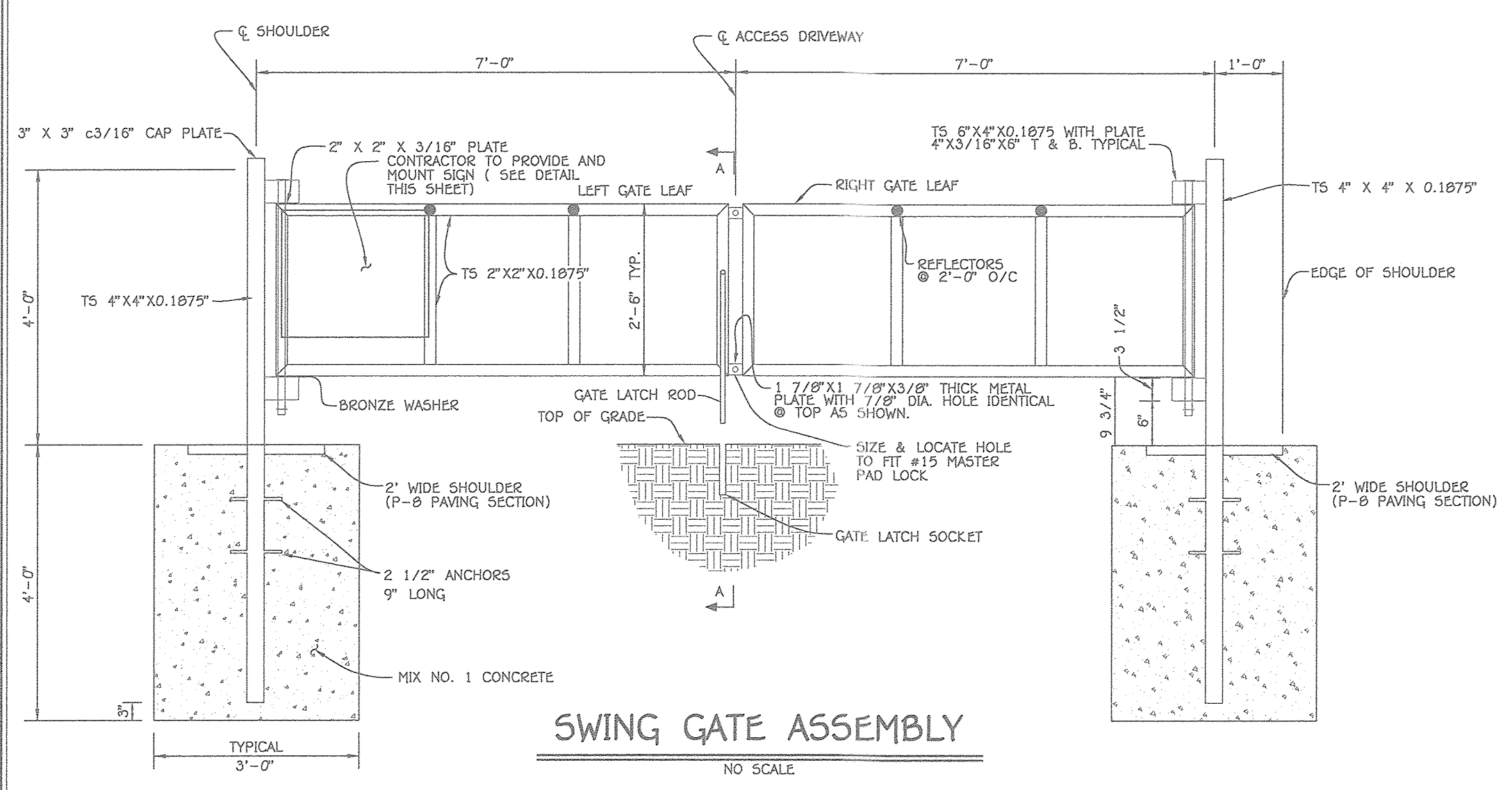
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>Kate Calhoun</i>	3/20/19	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT		
<i>D. Calhoun</i>	3-18-19	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	NY	
REVISIONS		
NO.	DESCRIPTION	DATE

**FOXLEIGH
NON-BUILDABLE
PRESERVATION PARCEL 'A'
ZONING: RC-DEO**

TAX MAP No. 23 GRID No. 9 PARCEL No. 112

GENERAL NOTES

- THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS AMENDED ON OCTOBER, 2003.
- SUBJECT PROPERTY ZONED RC-DEO PER 10/06/13 COMPREHENSIVE ZONING PLAN.
- a. GROSS AREA OF TRACT = 5.463 AC.*
b. AREA OF FLOODPLAIN = 0.00 AC.*
c. AREA OF 25% OR GREATER SLOPES = 0.03 AC.*
d. NET AREA OF TRACT = 5.433 AC.*
- AREA OF PUBLIC ROAD R/W = 0.011 AC.*
- a. AREA OF PROPOSED BUILDABLE LOTS = 0.00 AC.*
b. AREA OF PROPOSED NON-BUILDABLE PRESERVATION PARCEL 'A' = 5.463 AC.*
c. TOTAL LOT AREA (BUILDABLE AND NON-BUILDABLE) = 5.463 AC.*
- TOTAL NUMBER OF PROPOSED LOTS AND PARCELS: 1
a. BUILDABLE LOTS = 0
b. NON-BUILDABLE PRESERVATION PARCELS = 1
- HOWARD COUNTY PROJECT NUMBERS FOR THIS SITE: 50-4980-D, WP-16-011, ECP-18-044 & WP-19-015
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS ALTERNATIVE COMPLIANCE REQUESTS HAVE BEEN APPROVED.
- NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- SOILS INFORMATION TAKEN FROM SOIL SURVEY MAP NUMBER 18, HOWARD COUNTY, MARYLAND.
- BOUNDARY OUTLINE BASED ON A FIELD SURVEY THAT WAS PERFORMED BY FISHER, COLLINS AND CARTER, INC. DATED 01/11/2016.
- THERE IS NO EXISTING OR PROPOSED RESIDENTIAL DWELLINGS LOCATED ON TAX PARCEL #112, MAP #23 ALL SHEDS ARE TO BE REMOVED.
- TOPOGRAPHIC CONTOURS BASED ON FIELD RUN TOPOGRAPHY BY FISHER, COLLINS AND CARTER DATED 01/11/2016.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL NAD 83 WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0019 AND 0040 WERE USED FOR THIS PROJECT.
HOWARD COUNTY STATION 0019: N 580,468.128 FEET, E 1,333,675.518 FEET, ELEVATION: 365.842
HOWARD COUNTY STATION 0040: N 577,270.584 FEET, E 1,332,002.575 FEET, ELEVATION: 365.305
- THERE ARE AREAS OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.b
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND 37B SPECIFICATIONS. RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIR LOCATED BENEATH THE PROPOSED MICRO BIO-RETENTION AREA. THE SINGLE (1) MICRO BIO-RETENTION FACILITY WILL PROVIDE THE REQUIRED WATER QUALITY VOLUMES FOR ROAD IMPROVEMENTS PROPOSED. THE DESIGN IS IN COMPLIANCE WITH MDC CHAPTER 5, OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE SINGLE (1) MICRO BIO-RETENTION FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOWARD COUNTY THE H.C.O.A. THE PROPOSED 2' GRAVEL DIAPHRAGM AND PROPOSED GRASS SWALE CREDIT AREA ARE PRIVATELY OWNED AND MAINTAINED BY THE HOWARD COUNTY THE H.C.O.A.
- THERE IS NO FLOODPLAIN WITHIN NON-BUILDABLE PRESERVATION PARCEL 'A'.
- THIS PLAN IS EXEMPT FROM FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202(b)(1)(vi) OF THE HOWARD COUNTY CODE ALLOWING "RESUBDIVISIONS, THAT DO NOT CREATE ADDITIONAL LOTS, EXEMPT SUBDIVISIONS AND PLAT CORRECTIONS AS PROVIDED FOR IN SECTION 16.102 AND 16.103 OF THIS TITLE".
- THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD R/W LINE AND NOT THE PIPESTEM LOT DRIVEWAY.
- NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION.
- A SCENIC ROADS REPORT OR RECREATIONAL OPEN SPACE ARE NOT REQUIRED BECAUSE WE ARE NOT RECORDING ANY BUILDABLE LOTS.
- THE PURPOSE OF THIS PLAN IS TO ESTABLISH A PRESERVATION PARCEL FOR THE EXCLUSIVE DRIVEWAY TO SERVE TAX PARCELS #28, 108, 110, 111 AND 140.
- THERE ARE NO WETLANDS ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PLAN SINCE NO RESIDENTIAL DEVELOPMENT IS PROPOSED.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENTS.
- LANDSCAPING IS NOT REQUIRED SINCE THIS PLAN DOES NOT PROPOSE ANY RESIDENTIAL DEVELOPMENT. NON-BUILDABLE PRESERVATION PARCEL 'A' SOLE PURPOSE IS TO CREATE A SHARED COMMUNITY SYSTEM.
- THIS PLAN IS SUBJECT TO WP-19-015 WHICH ON SEPTEMBER 19, 2018 THE PLANNING DIRECTOR APPROVED A REQUEST FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.120(C)(2)(i) WHICH REQUIRES THAT PRESERVATION PARCELS WHICH CANNOT BE FURTHER DIVIDED UNDER CURRENT ZONING MUST HAVE A MINIMUM OF 20' OF PUBLIC ROAD FRONTAGE. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE FRONTAGE ONTO FOLLY QUARTER ROAD FOR THE PIPESTEM SERVING NON-BUILDABLE PRESERVATION PARCEL 'A' MAY NOT BE LESS THAN 16.68 FEET IN WIDTH, AS SHOWN ON THE EXHIBIT SUBMITTED WITH WP-19-015.
- THIS PLAN IS SUBJECT TO WP-16-111 WHICH ON AUGUST 12, 2016 THE PLANNING DIRECTOR APPROVED A RECONSIDERATION FOR ALTERNATIVE COMPLIANCE TO SECTION 16.102 AND SECTION 16.147 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH REQUIRES ANY DIVISION OF LAND BE PLATTED AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY VIA THE FINAL SUBDIVISION PLAT PROCESS. THE APPLICANT IS REQUESTING TO REVISE A COMMON PROPERTY LINE VIA THE ADJOINER DEED PROCESS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE ADJOINER DEED SHALL BE RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND WITHIN 60-DAYS FROM THE PREVIOUS APPROVAL DATE OF AUGUST 19, 2016 (ON OR BEFORE OCTOBER 18, 2016). THE ALTERNATIVE COMPLIANCE PETITION EXHIBIT MUST BE AN EXHIBIT ATTACHED TO THE RECORDED DEED. PREVIOUS APPROVAL CONDITIONS 2 THRU 11 REMAIN UNCHANGED FROM THE JUNE 20, 2016 DECISION LETTER.
 - RECORDED COPIES OF THE ADJOINER DEED SHALL BE SUBMITTED TO THIS DEPARTMENT FOR FILE RETENTION PURPOSES WITHIN 30-DAYS OF RECORDDATION.
 - THE ADJOINER DEED SHALL REFERENCE THE ALTERNATIVE COMPLIANCE PETITION FILE NUMBER (WP-16-111).
 - THE STRUCTURES ON THE ALTERNATIVE COMPLIANCE PETITION INDICATED "TO BE REMOVED" SHALL BE REMOVED PRIOR TO THE RECORDDATION OF THE ADJOINER DEED. PROOF OF DEMOLITION SHALL BE PROVIDED TO THIS DEPARTMENT PRIOR TO RECORDDATION OF THE DEED.
 - THE TWO PARCELS RECONFIGURED BY THE ADJOINER DEED SHALL COMPLY WITH THE RC-DEO ZONING REGULATIONS, INCLUDING BUT NOT LIMITED TO THE BUILDING SETBACKS AND ACCESSORY STRUCTURE USES.
 - APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION IS TO ADJUST THE COMMON PARCEL BOUNDARY BETWEEN PARCELS 112 & 113 (TAX MAP 23). NO OTHER LOTS ARE BEING LEGALLY ENDORSED. NO ADDITIONAL LOTS ARE BEING CREATED AND NO NEW DEVELOPMENT, CONSTRUCTION OR IMPROVEMENTS ARE PERMITTED UNDER THIS REQUEST.
 - AS SHOWN ON THE ALTERNATIVE COMPLIANCE PETITION EXHIBIT, RIGHT-OF-WAY ALONG FOLLY QUARTER ROAD SHALL BE DEDICATED TO THE COUNTY FOR THE PIPESTEM FRONTAGES OF PARCELS 87, 113 & 112. THE RIGHT-OF-WAY DEDICATION AREA SHALL MEET THE STANDARDS OF THE DESIGN MANUAL REGULATIONS.
 - PARCEL 112 SHALL BE A NON-BUILDABLE PRESERVATION PARCEL ONCE IT IS ENCOMBERED WITH THE COMMUNITY SHARED SEPTIC FIELD.
 - DEVELOPMENT OF THE BUILDABLE PARCELS AND ESTABLISHMENT OF THE COMMUNITY SHARED SEPTIC FIELD ON PARCEL 112 WILL REQUIRE AN ENVIRONMENTAL CONCEPT PLAN (ECP), A NATURAL RESOURCE INVENTORY SHALL BE SUBMITTED WITH THE ECP'S TO VERIFY THE PRESENCE OF ALL ENVIRONMENTAL FEATURES AND FORESTED AREA.
 - COMPLIANCE WITH THE HEALTH DEPARTMENT COMMENT DATED MARCH 29, 2016-THE HEALTH DEPARTMENT HAS REVIEWED THE REFERENCED ALTERNATIVE COMPLIANCE PETITION AND HAS NO OBJECTION TO THE ALTERNATIVE COMPLIANCE WITH THE CONDITION THAT THE NEW LOT DIMENSIONS MATCH THE MOST RECENTLY APPROVED PERC CERTIFICATION PLAN.
 - COMPLIANCE WITH THE DEVELOPMENT ENGINEERING COMMENT DATED APRIL 6, 2016-ACCESS WIDTH (FOR PARCEL 112) PIPESTEM WILL NEED TO ACCOMMODATE A SEPARATE DRIVEWAY FOR THE SHARED SEPTIC SYSTEM AND A USE-IN-COMMON DRIVEWAY FOR RESIDENTIAL LOTS.
- DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS-FOXLEIGH RECORDED IN LIBER 18340, FOLIO 150.



SWING GATE ASSEMBLY
NO SCALE

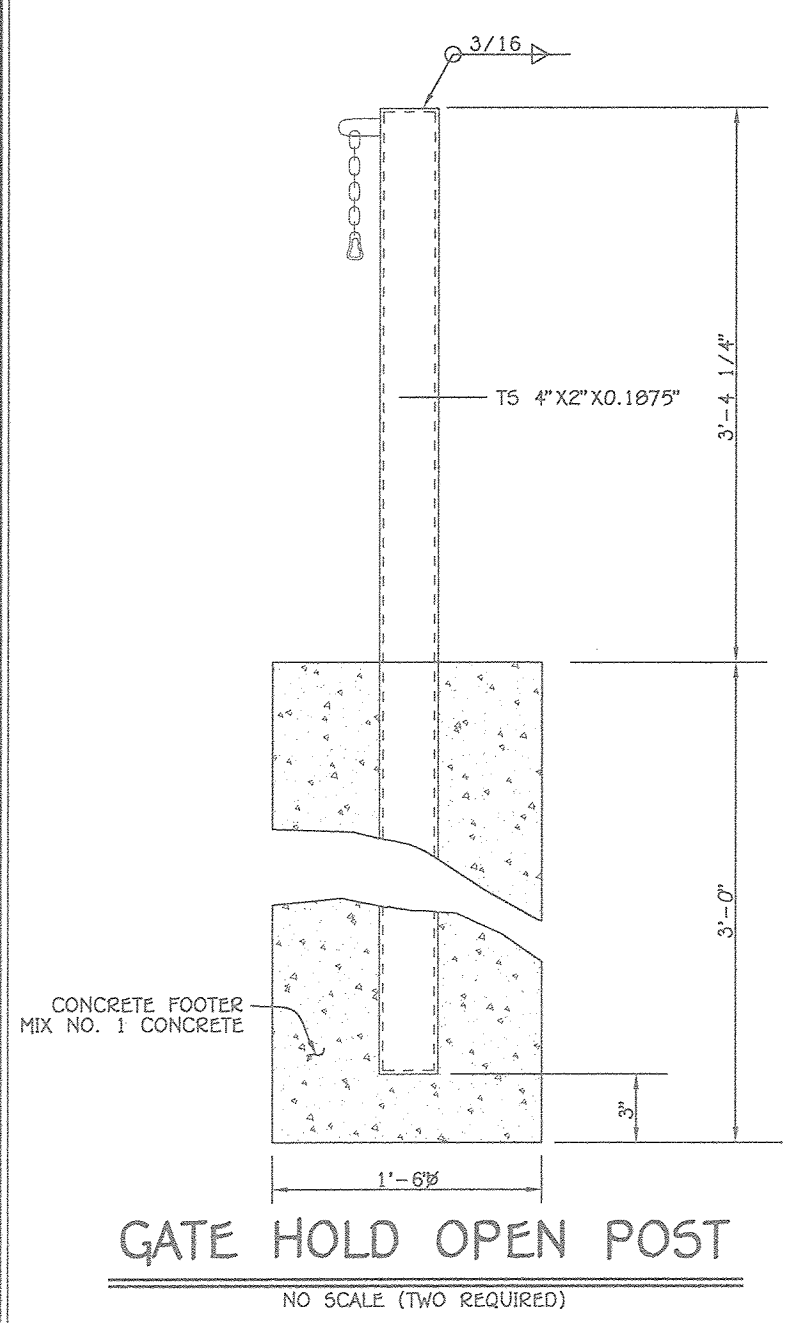
NOTE: THE SWING GATE MUST BE SET BACK 25 FEET FROM THE EDGE OF PAVING OF FOLLY QUARTER ROAD.

A. GATE FRAMES: 2" x 2" SQUARE x 0.1875" THICK GALVANIZED STEEL WELDED CONSTRUCTION
B. GATE POSTS: 4" x 4" x 0.1875" THICK GALVANIZED STEEL
C. GATE HOLLOWBACK POSTS: 2" x 4" x 0.1875" THICK GALVANIZED STEEL
D. GATE HOLLOWBACK & POST CAPS: GALVANIZED STEEL
E. MANUFACTURER: LONG FENCE COMPANY

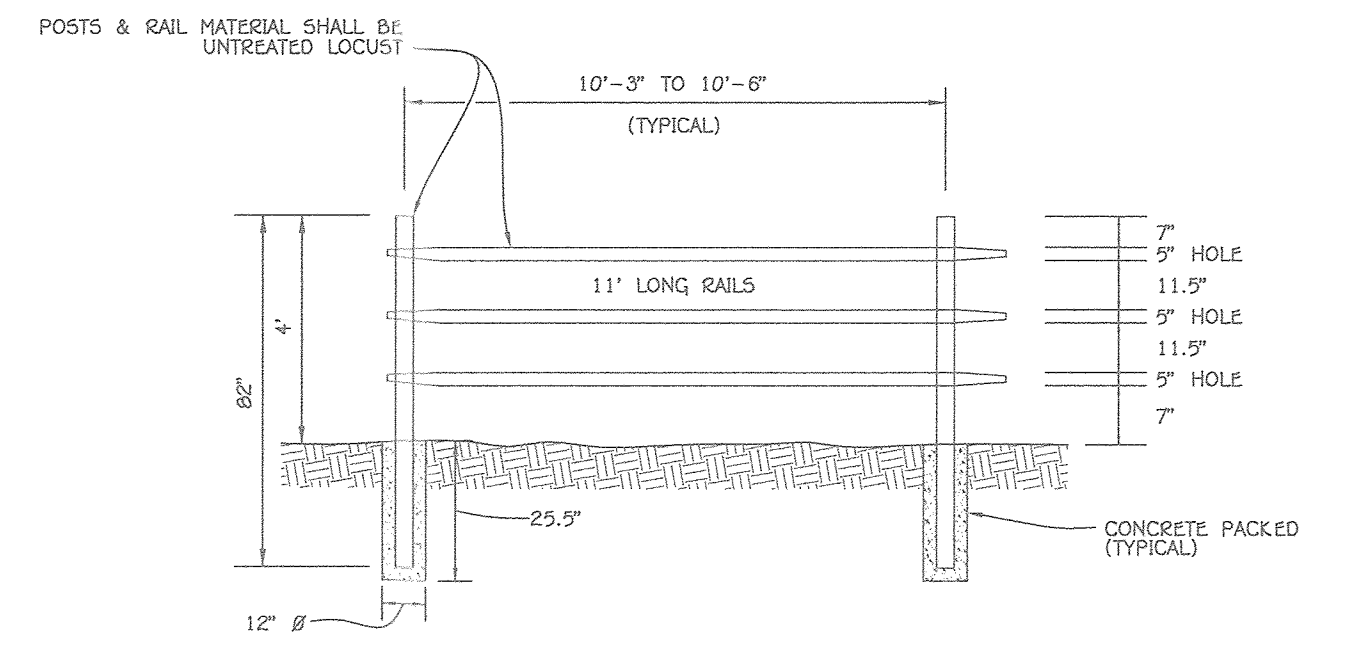


VICINITY MAP
SCALE: 1" = 2000'

**THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**



GATE HOLD OPEN POST
NO SCALE (TWO REQUIRED)



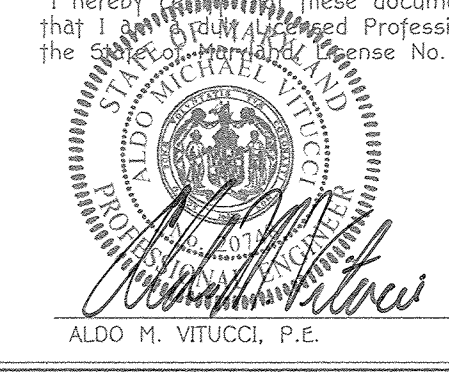
DETAIL: SPLIT RAIL FENCE
NO SCALE

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 5.463 AC.*
- LIMIT OF DEVELOPABLE AREA = 0.27 AC.* (PRIVATE DRIVEWAY ONLY)
- LIMIT OF DISTURBED AREA = 165,092 Sq. Ft. or 3.79 AC.*
- PRESENT ZONING DESIGNATION = RC-DEO (PER 10/06/13 COMPREHENSIVE ZONING PLAN).
- PROPOSED USE: SHARED SEPTIC FACILITY
- OPEN SPACE REQUIRED ON SITE: NONE
- RECREATIONAL AREA REQUIRED: NONE
- BUILDING COVERAGE OF SITE: NONE
- PREVIOUS HOWARD COUNTY FILES: 50-4980-D, WP-16-011, WP-19-015 AND ECP-18-044.
- TOTAL AREA OF FLOODPLAIN: 0.00 AC.
- TOTAL AREA OF SLOPES: 25% OR GREATER = 0.03 AC.
15%-24.99% = 0.20 AC.
- NET TRACT AREA = 5.433 AC.*
(TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.*
- TOTAL AREA OF STREAMS (INCLUDING BUFFER) = 0.00 AC.*
- TOTAL AREA OF FOREST = 3.39 AC.*
- TOTAL GREEN OPEN AREA = 3.50 AC.*
- TOTAL IMPERVIOUS AREA = 0.24 AC.*
- AREA OF ERODIBLE SOILS = 0.91 AC.* (WITHIN AREA OF DEVELOPMENT)

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-19."



02/21/19
DATE

**FOXLEIGH
NON-BUILDABLE
PRESERVATION PARCEL 'A'**

ZONED: RC-DEO
TAX MAP: #23 GRID: #9 PARCEL: #112
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JANUARY 23, 2019
SHEET 1 OF 8

REVISIONS		
NO.	DESCRIPTION	DATE



EXISTING CONDITIONS AND DEMOLITION PLAN
FOXLEIGH
 NON-BUILDABLE PRESERVATION PARCEL 'A'
 ZONED: RC-DEO
 TAX MAP: #23 GRID: #9 PARCEL: #112
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JANUARY 23, 2019
 SHEET 2 OF 8

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland License No. 20748, Expiration Date 2-22-19.

Aldo R. Vitucci
 ALDO R. VITUCCI, P.E.
 02/12/19 DATE

OWNER
 LAWRENCE R. HYMAN AND LOIS W. HYMAN
 3681 FOLLY QUARTER ROAD
 ELLICOTT CITY, MARYLAND 21042
 410-707-0450

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 9318 FORREST STREET SUITE 200
 ELLICOTT CITY, MD 21043
 ATTN: DONI DEWEER
 410-992-4600

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

I:\2019\04\03\Working\PROJECT PLANS\Support Sheet 2 Demo Plan.dwg, C-02, 2-16-19, 2/12/2019 12:55:21 PM, James, 1:1

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC, and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
- > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention plants, see figure A.5 and Table A.4 for planting material guidance).
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary.
- > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or sod.
- > Temporarily divert flows from seeded areas until vegetation is established.
- > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

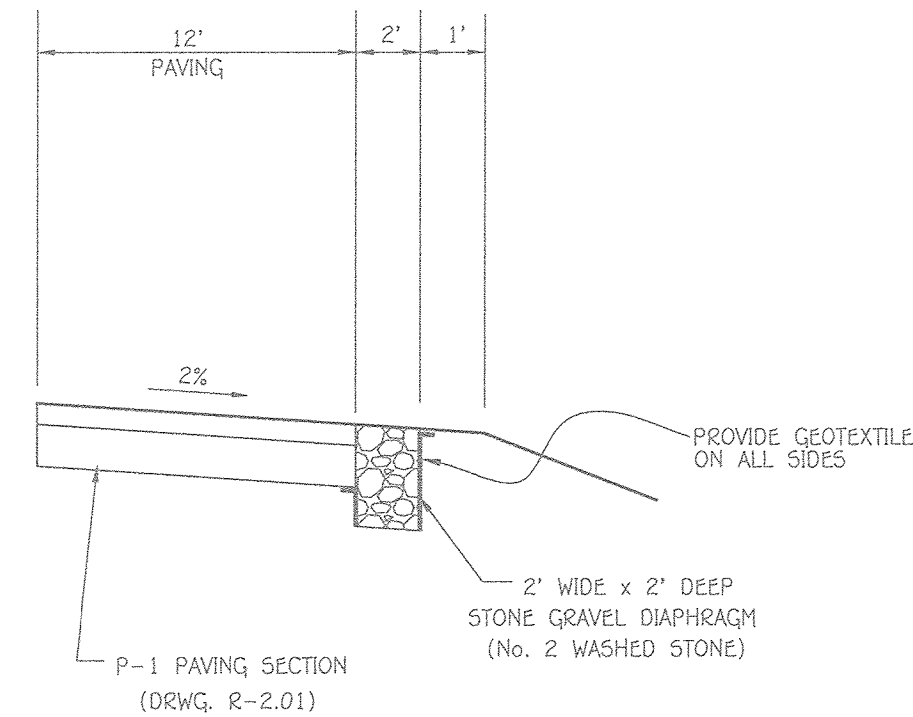
The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

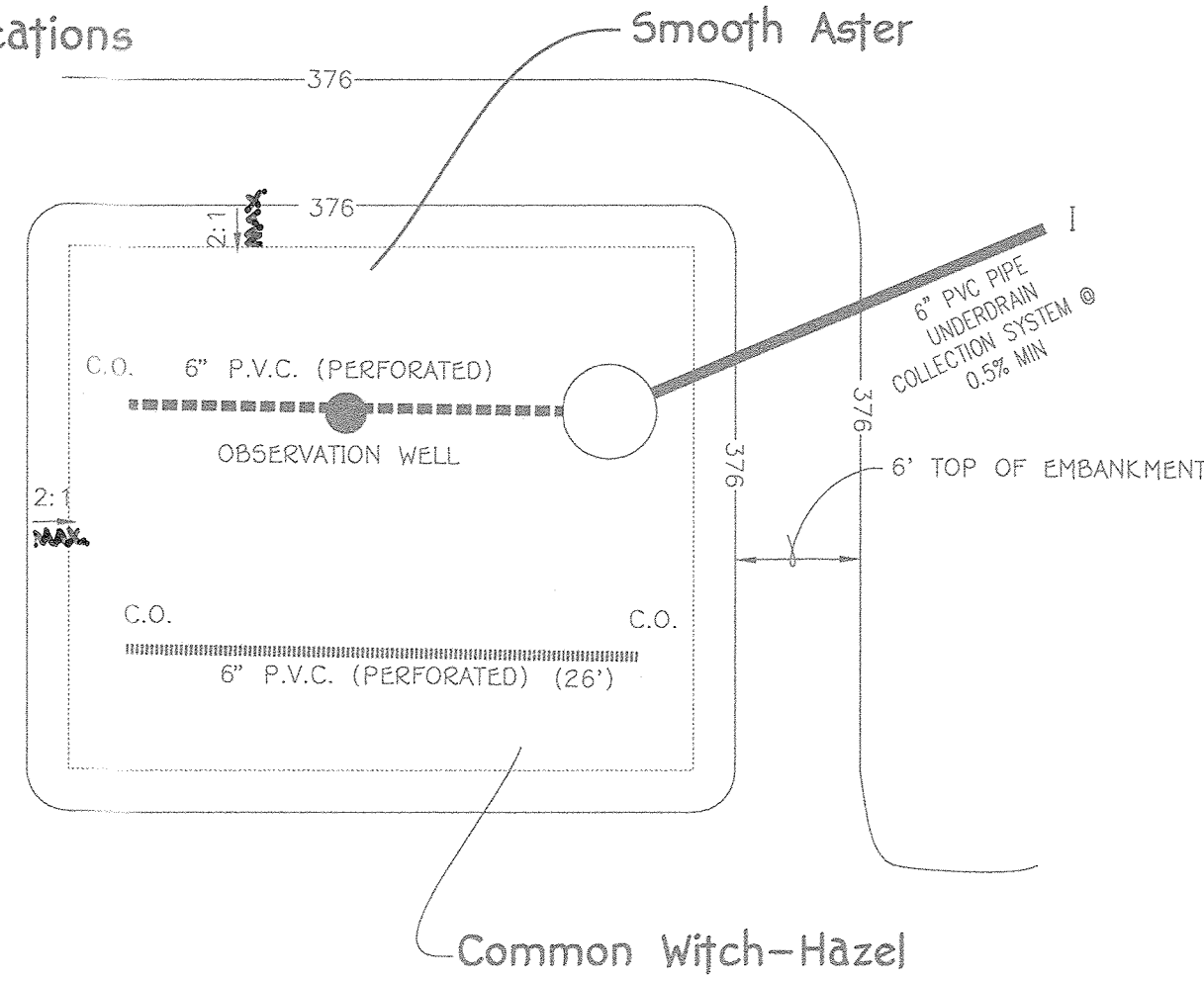
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge

is the highest elevation and generally supports plants adapted to drier conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Clayton and Schueler, 1997.



TYPICAL DRIVEWAY SECTION (STA. 0+00 TO STA. 2+00)
NO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
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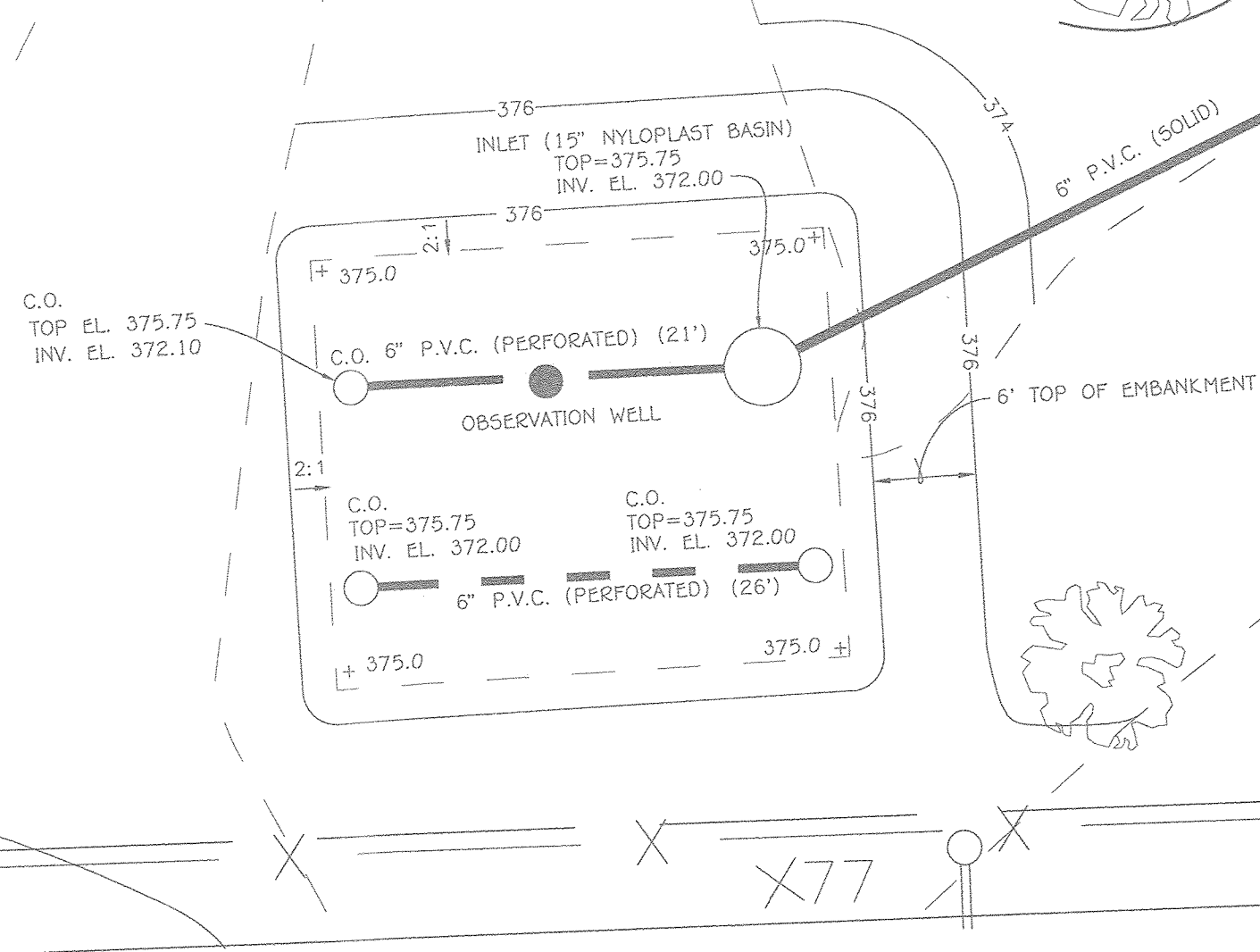


MICRO BIO-RETENTION PLANTING DETAIL
NOT TO SCALE

Operation And Maintenance Schedule For Bio-retention Areas (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year, during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

MICRO BIO-RETENTION (M-6)
30' x 25' BOTT.



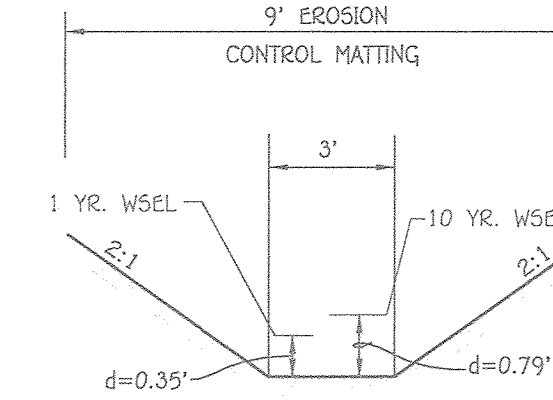
M-6 MICRO-BIO-RETENTION DETAIL
SCALE: 1" = 10"

OWNER
LAWRENCE R. HYMAN
AND LOIS W. HYMAN
3681 FOLLY QUARTER ROAD
ELLCOTT CITY, MARYLAND 21142
410-707-0490

DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
8310 FORREST STREET
SUITE 200
ELLCOTT CITY, MD 21143
ATT: DON REUWER
410-992-4600

MICRO BIO-RETENTION PLANT MATERIAL				
QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
50	Aster labeis 'Bluebird' Smooth Aster	#1	Cont.	18" O.C.
25	Hamelis virginiana Common Witch-Hazel	2'4"-3'0" H.	Cont.	36" O.C.

MICRO BIO-RETENTION DATA									
MICRO BIO-RETENTION FILTER	A	B	C	D	E	F	G	H	I
#1	376.00	376.00	375.25	375.00	373.00	372.67	372.00	371.00	371.50

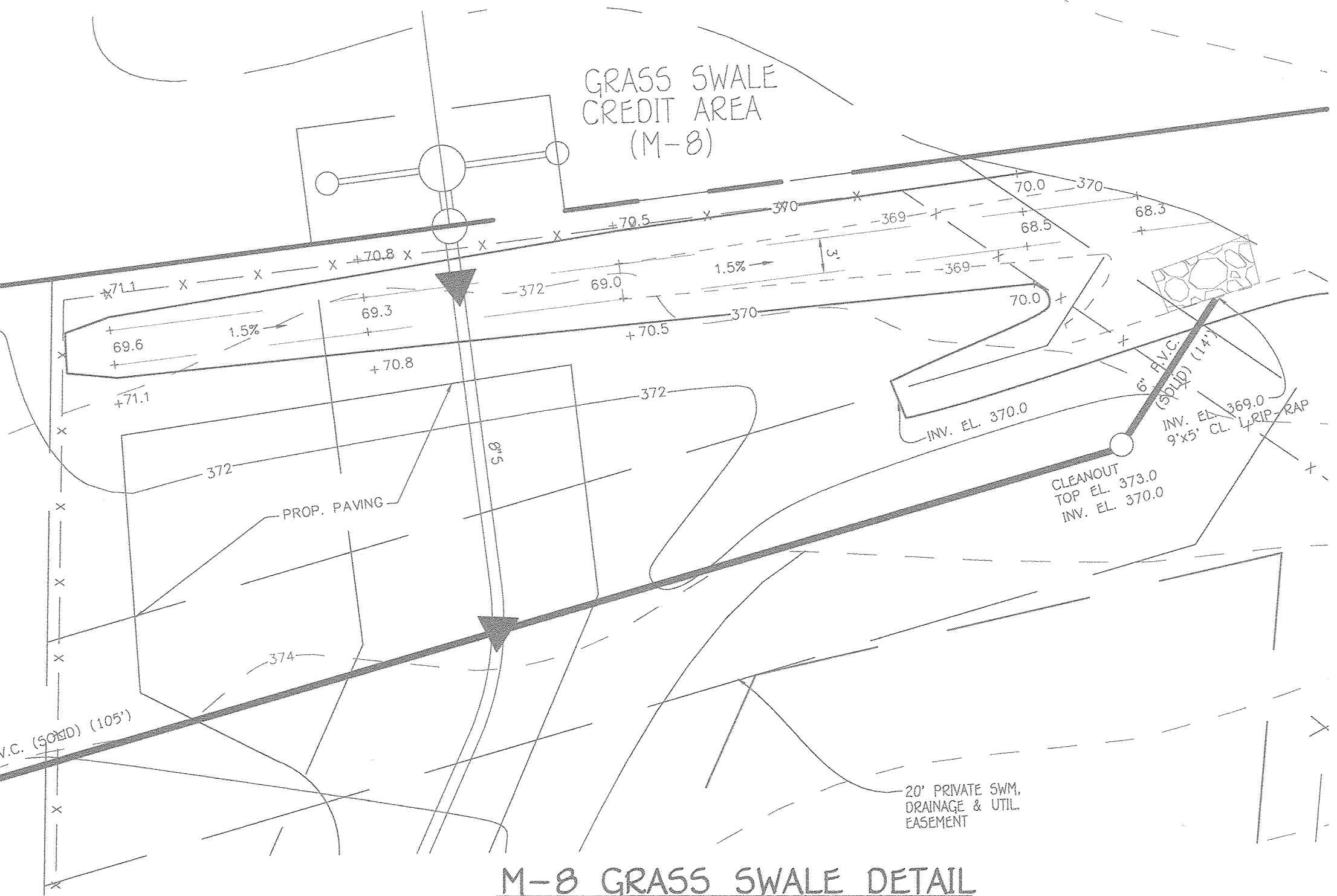


TYPICAL GRASS SWALE SECTION
NO SCALE

Operation And Maintenance Schedule For Privately Owned And Maintained Open Channel Systems Grass Swales And Wet Swales, (M-8)

- The open channel system shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The open channel shall be mowed a minimum of 4 times during the growing season to maintain a maximum grass height of less than 6 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the open channel system shall be repaired as soon as it is noticed.
- Remove silt in the open channel system when it exceeds 25% of the original WQV.
- Inspect check dams twice a year for structural integrity. Restore check dams to original condition as applicable.

PROPERTY OF
LAWRENCE R. HYMAN
AND LOIS W. HYMAN
TAX MAP 23 PARCEL 28
LIBER 1368 FOLIO 434



M-8 GRASS SWALE DETAIL
SCALE: 1" = 10'

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland License No. 20748, Expiration Date 2-22-19.

ALDO M. VIUCCI, P.E.
DATE: 02/16/19

STORMWATER MANAGEMENT NOTES & DETAILS

FOXLEIGH
NON-BUILDABLE
PRESERVATION PARCEL 'A'

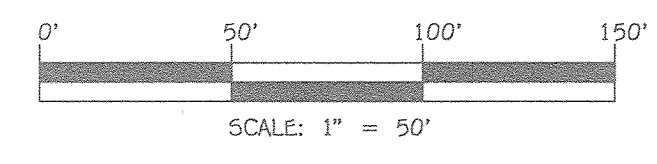
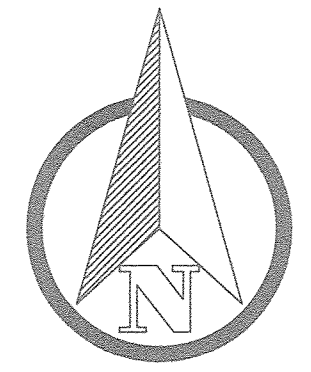
ZONED: RC-DEO
TAX MAP: #23 GRID: #9 PARCEL: #112
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JANUARY 23, 2019
SHEET 4 OF 8

<i>Katsulis</i>	3/20/19	
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE	
<i>Chilchuk</i>	3-18-19	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE	
REVISIONS		
NO.	DESCRIPTION	DATE

SOILS LEGEND			
SOIL	NAME	Kw VALUES	CLASS
GbB	Gladstone loam, 3 to 6 percent slopes	0.20	B
GgA	Glenelig loam, 0 to 3 percent slopes	0.20	B
GgC	Glenelig loam, 6 to 15 percent slopes	0.20	B
GmB	Glenville silt loam, 3 to 6 percent slopes	0.37	C
M&C	Manor loam, 6 to 15 percent slopes	0.24	B

NOTES:
 * Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas
 *** Denotes erodible soil type

- LEGEND**
- EXISTING 2' CONTOURS
 - EXISTING 10' CONTOURS
 - ~~~~~ EXISTING TREE LINE
 - ~~~~~ PROPOSED TREE LINE
 - ⊠ DENOTES PROPOSED HOUSE
 - ▭ DENOTES 15%-24.9% SLOPES
 - ▭ DENOTES 25% AND GREATER SLOPE
 - SBB— 100' TOP OF STREAM BANK BUFFER
 - DENOTES SWM DRAINAGE AREAS
 - ⊙ DENOTES DRAINAGE AREAS
 - ▭ USE-IN-COMMON DRIVEWAY EASEMENT LIBER 18340, FOLIO 168



SWM DRAINAGE AREA		
DRAINAGE AREA	AREA AC. +/-	REMARKS
A	0.90	MICRO BIO-RETENTION
B	0.35	STONE DIAPHRAGM
C	0.13	GRASS CHANNEL CREDIT



SOILS MAP AND STORMWATER MANAGEMENT DRAINAGE AREA MAP
FOXLEIGH
 NON-BUILDABLE PRESERVATION PARCEL 'A'
 ZONED: RC-DEO
 TAX MAP: #23 GRID: #9 PARCEL: #112
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JANUARY 23, 2019
 SHEET 5 OF 8

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-19.

Aldo H. Vitucci
 ALDO H. VITUCCI, P.E.
 02/16/19
 DATE

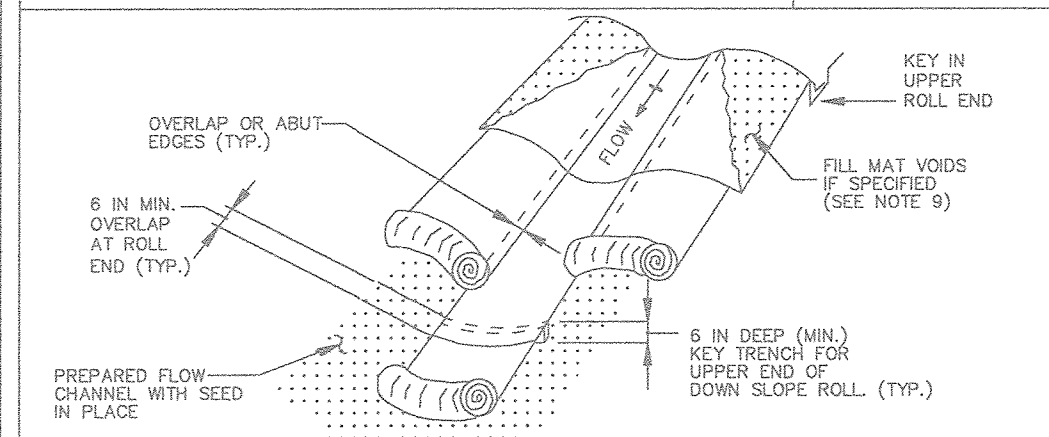
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2895

OWNER
 LAWRENCE R. HYMAN
 AND LOIS W. HYMAN
 3681 FOLLY QUARTER ROAD
 ELLICOTT CITY, MARYLAND 21042
 410-707-0450

DEVELOPER
 LAND DESIGN & DEVELOPMENT, INC.
 8318 FORREST STREET
 SUITE 200
 ELLICOTT CITY, MD 21043
 ATT: DON REUVER
 410-992-4600

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

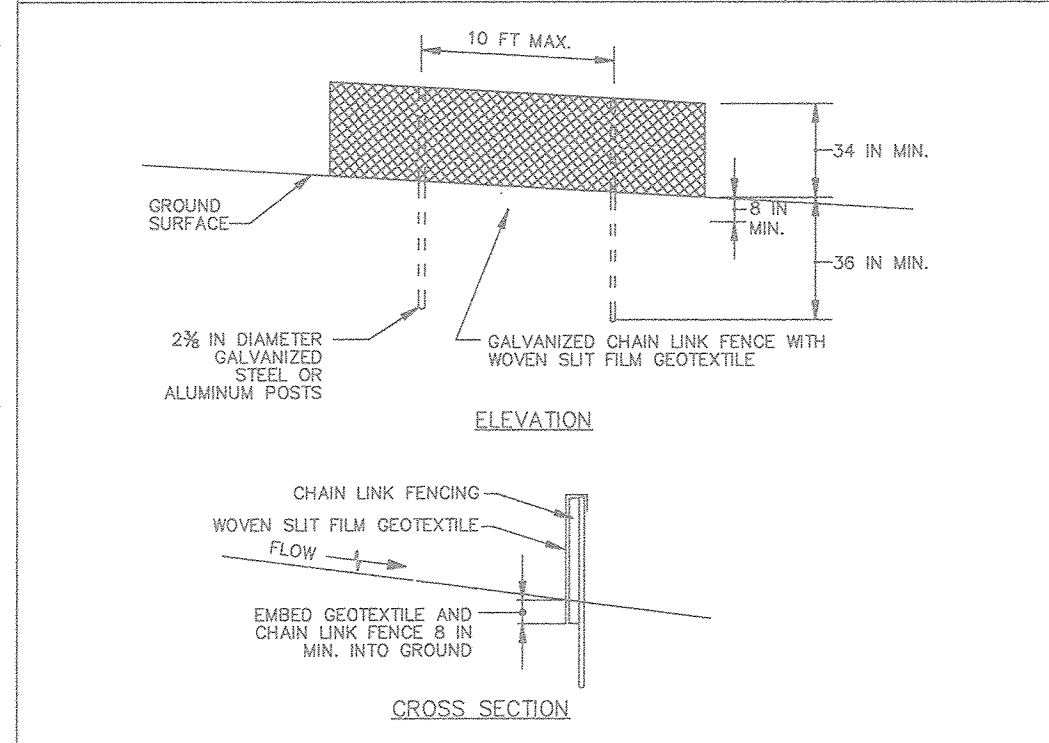


- CONSTRUCTION SPECIFICATIONS:**
- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
 - USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN HEAVY SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED ESTABLISHMENT AND NON-HARMFUL TO THE SOIL. IF PRESENT, NETTING MUST BE EXTENDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2-1/2 INCHES AND SUFFICIENTLY BONDED TO SEW ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
 - SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1/2 TO 3/4 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAPLES MUST BE ROUGH-SAWN HARDWOOD, 1/2 TO 3/4 INCHES IN LENGTH, 1-1/2 INCHES IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
 - PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS. UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 - UNROLL MATTINGS IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDING SURFACE, AVOID STRETCHING THE MATTING.
 - OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
 - KEY IN THE TOP OF SLOPE END OF MAT 8 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
 - STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MINIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
 - IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEPT AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
 - ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE



- CONSTRUCTION SPECIFICATIONS:**
- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.000 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
 - FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUB RINGS.
 - FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 8 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS:**
- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2 1/2 INCH MAXIMUM OPENING).
 - USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.000 INCH WALL THICKNESS AND 26 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
 - FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHERE TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNSTREAM.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

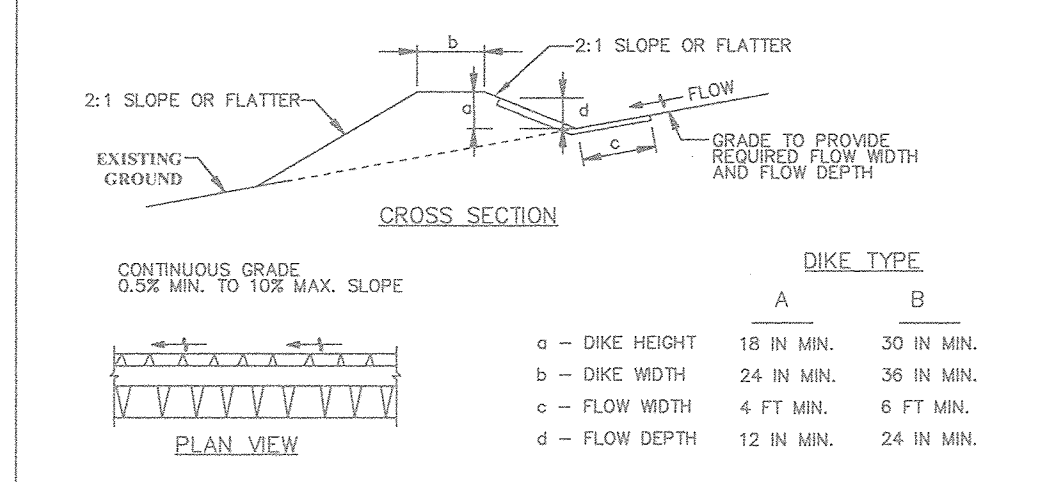
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PLACE ELICOTT CITY, MARYLAND 21142 (410) 451-1995

DETAIL C-1 EARTH DIKE



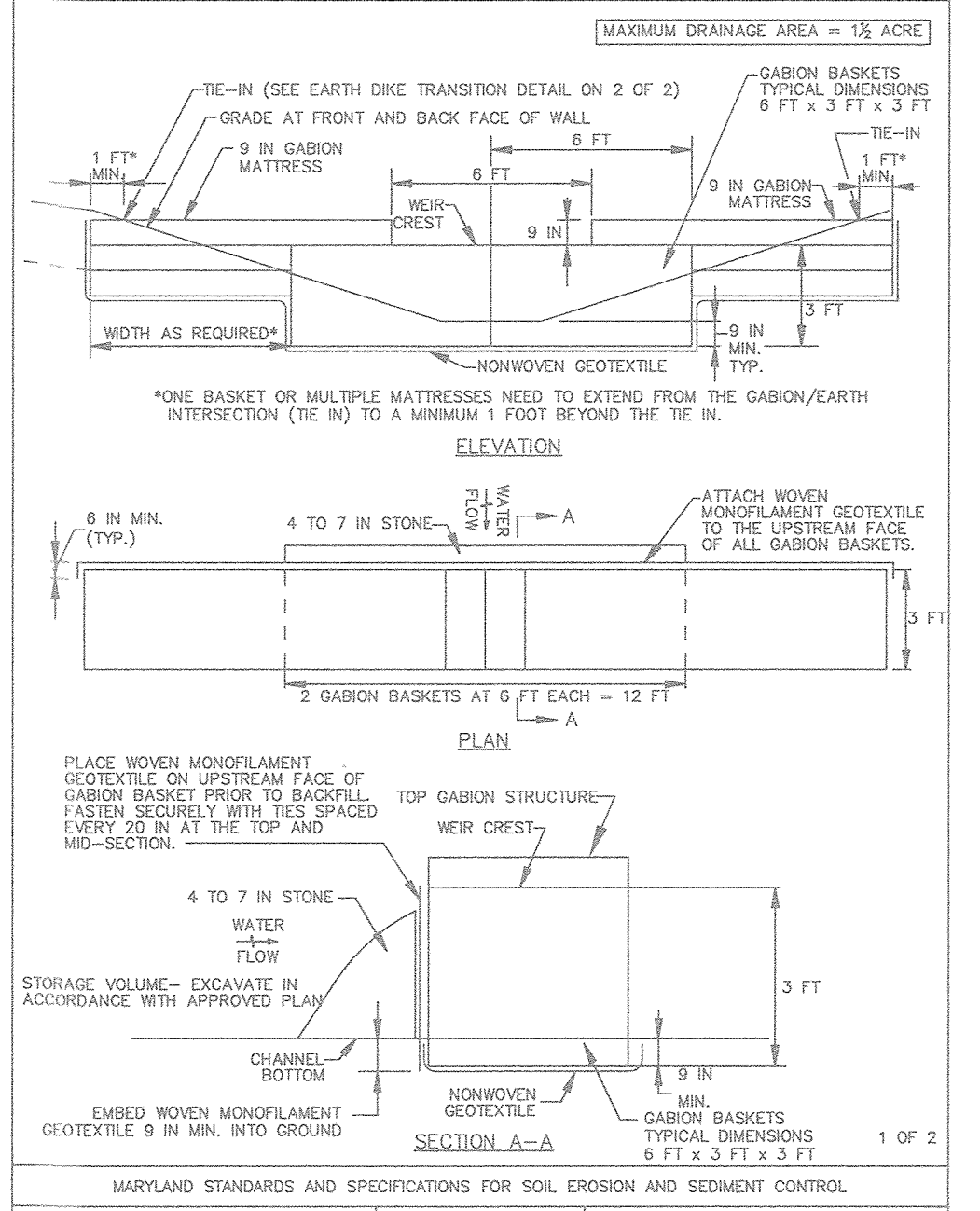
- FLOW CHANNEL STABILIZATION**
- A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
- A-2/3-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
- A-3/3-3 SEED WITH 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL. A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL E-8 TEMPORARY GABION OUTLET STRUCTURE

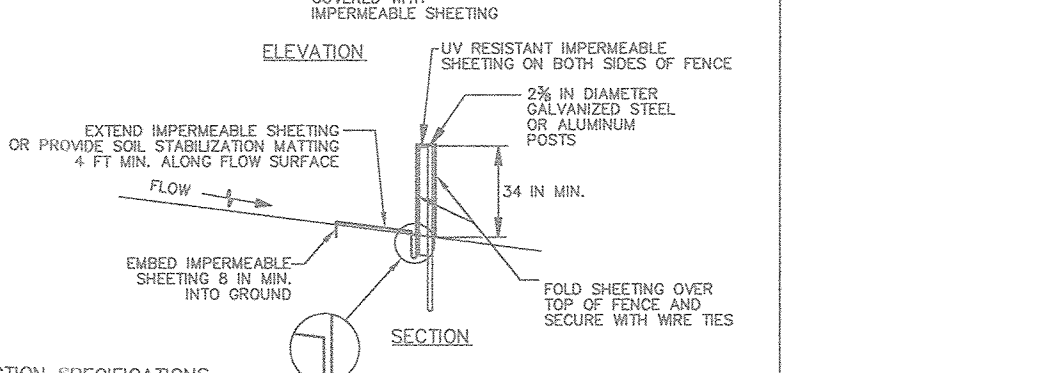


- CONSTRUCTION SPECIFICATIONS:**
- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
 - USE BASKETS MADE OF 1 1/2 GAUGE WIRE OR HEAVIER.
 - USE NONWOVEN AND WOVEN MONOLAYER GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
 - INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
 - EMBED THE GABION OUTLET STRUCTURE INTO THE SOIL A MINIMUM OF 9 INCHES. PROVIDE NONWOVEN GEOTEXTILE UNDER ALL GABIONS.
 - FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WIRE MESH.
 - MAKE THE WEIR CREST OF THE GABION OUTLET STRUCTURE 9 INCHES LOWER THAN THE TOP OF THE ADJACENT GABIONS.
 - PROVIDE A MINIMUM WEIR CREST OF 6 FEET.
 - ATTACH WOVEN MONOLAYER GEOTEXTILE TO THE UPSLOPE FACE OF GABION BASKETS AND COVER WITH 4 TO 7 INCH STONE.
 - REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 12 INCHES OF THE WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO FUNCTION. MAINTAIN LINE, GRADE, AND CROSS SECTION.
 - UPON REMOVAL OF GABION OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS:**
- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2 1/2 INCH MAXIMUM OPENING).
 - USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.000 INCH WALL THICKNESS AND 26 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
 - FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHERE TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNSTREAM.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

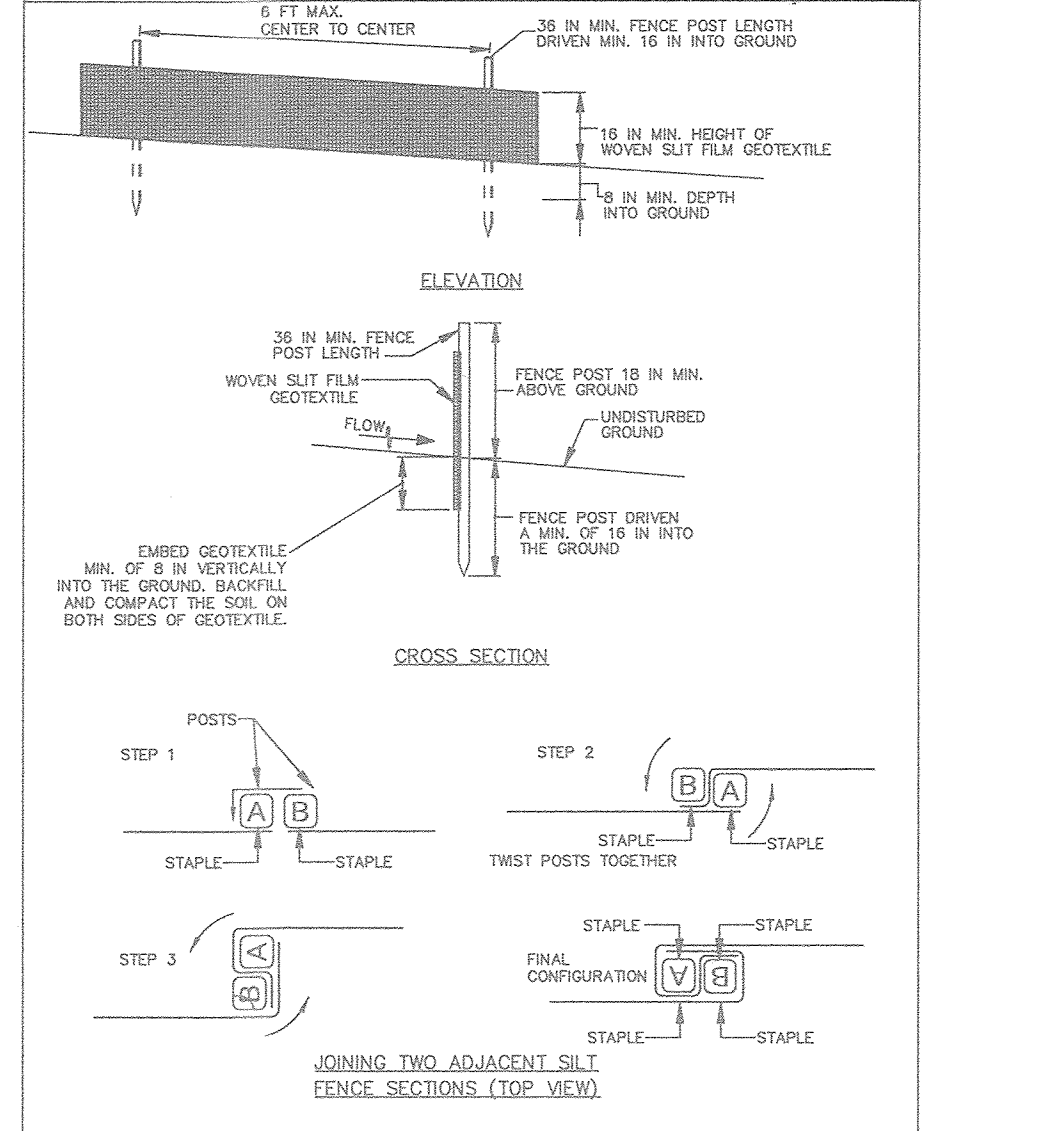
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PLACE ELICOTT CITY, MARYLAND 21142 (410) 451-1995

DETAIL E-1 SILT FENCE

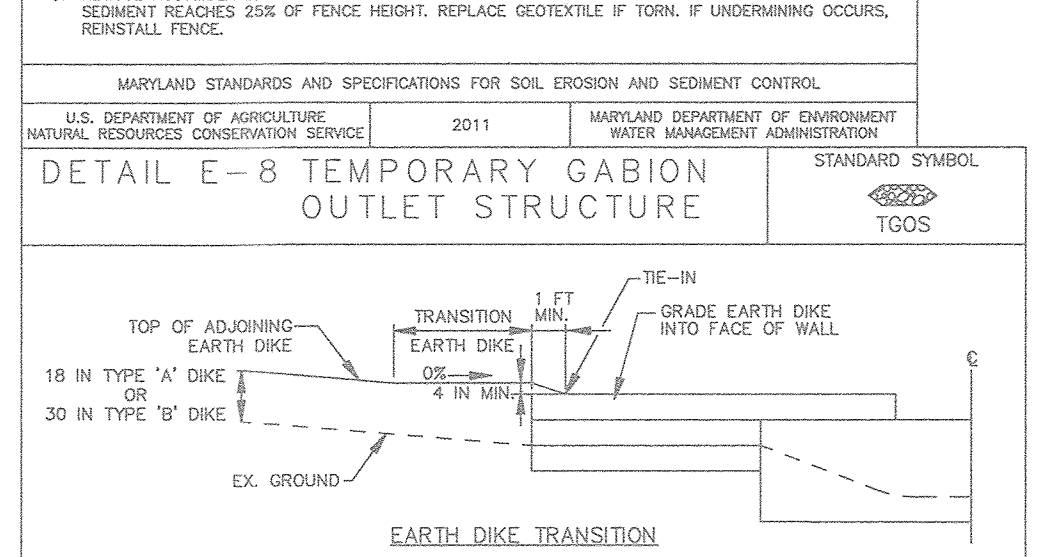


- CONSTRUCTION SPECIFICATIONS:**
- USE WOOD POSTS 1 1/2 x 1 1/2 x 3/4 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
 - USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN, OVERLAP, TIE, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 50% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL E-8 TEMPORARY GABION OUTLET STRUCTURE

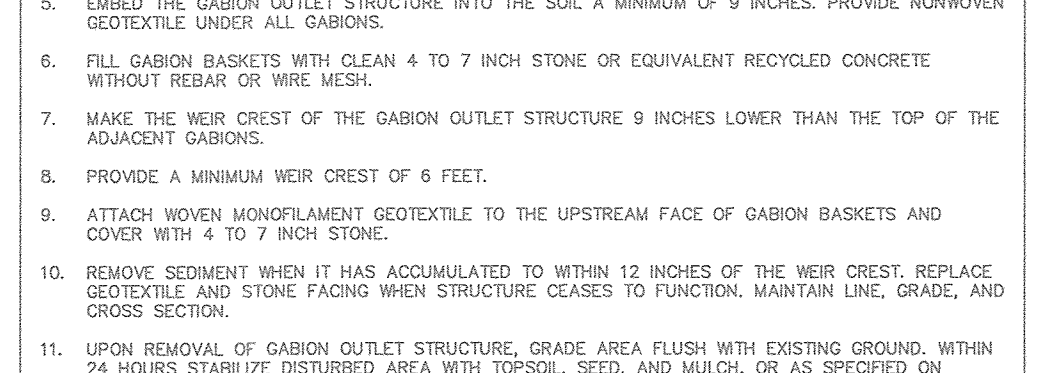


- CONSTRUCTION SPECIFICATIONS:**
- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
 - USE BASKETS MADE OF 1 1/2 GAUGE WIRE OR HEAVIER.
 - USE NONWOVEN AND WOVEN MONOLAYER GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
 - INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
 - EMBED THE GABION OUTLET STRUCTURE INTO THE SOIL A MINIMUM OF 9 INCHES. PROVIDE NONWOVEN GEOTEXTILE UNDER ALL GABIONS.
 - FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WIRE MESH.
 - MAKE THE WEIR CREST OF THE GABION OUTLET STRUCTURE 9 INCHES LOWER THAN THE TOP OF THE ADJACENT GABIONS.
 - PROVIDE A MINIMUM WEIR CREST OF 6 FEET.
 - ATTACH WOVEN MONOLAYER GEOTEXTILE TO THE UPSLOPE FACE OF GABION BASKETS AND COVER WITH 4 TO 7 INCH STONE.
 - REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 12 INCHES OF THE WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO FUNCTION. MAINTAIN LINE, GRADE, AND CROSS SECTION.
 - UPON REMOVAL OF GABION OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS:**
- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2 1/2 INCH MAXIMUM OPENING).
 - USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.000 INCH WALL THICKNESS AND 26 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
 - FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHERE TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNSTREAM.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

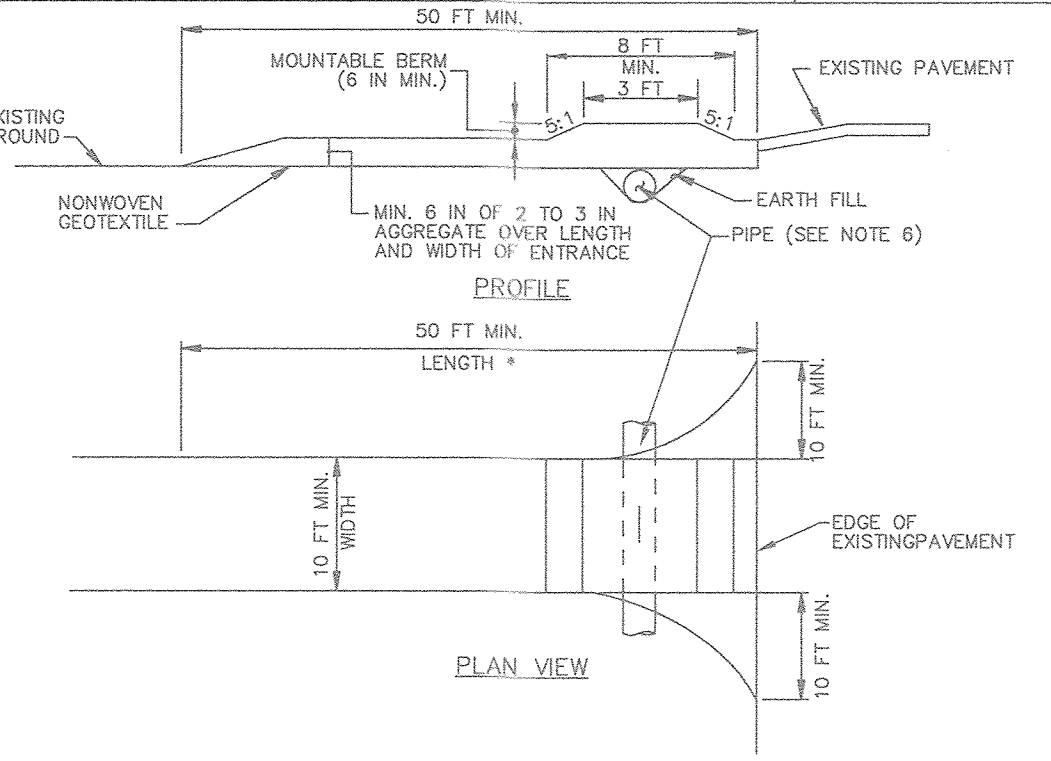
DETAIL C-9 DIVERSION FENCE



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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

DETAIL E-8 TEMPORARY GABION OUTLET STRUCTURE

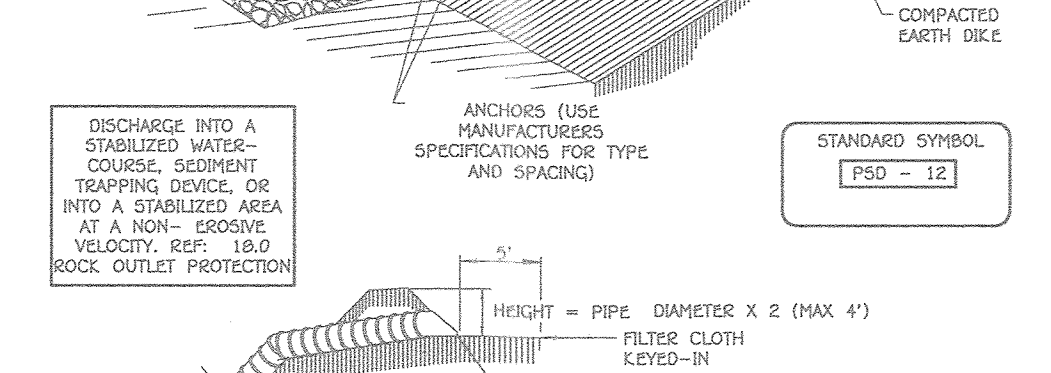


- CONSTRUCTION SPECIFICATIONS:**
- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
 - USE BASKETS MADE OF 1 1/2 GAUGE WIRE OR HEAVIER.
 - USE NONWOVEN AND WOVEN MONOLAYER GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
 - INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
 - EMBED THE GABION OUTLET STRUCTURE INTO THE SOIL A MINIMUM OF 9 INCHES. PROVIDE NONWOVEN GEOTEXTILE UNDER ALL GABIONS.
 - FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WIRE MESH.
 - MAKE THE WEIR CREST OF THE GABION OUTLET STRUCTURE 9 INCHES LOWER THAN THE TOP OF THE ADJACENT GABIONS.
 - PROVIDE A MINIMUM WEIR CREST OF 6 FEET.
 - ATTACH WOVEN MONOLAYER GEOTEXTILE TO THE UPSLOPE FACE OF GABION BASKETS AND COVER WITH 4 TO 7 INCH STONE.
 - REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 12 INCHES OF THE WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO FUNCTION. MAINTAIN LINE, GRADE, AND CROSS SECTION.
 - UPON REMOVAL OF GABION OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

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DETAIL C-9 DIVERSION FENCE



- CONSTRUCTION SPECIFICATIONS:**
- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2 1/2 INCH MAXIMUM OPENING).
 - USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.000 INCH WALL THICKNESS AND 26 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
 - FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
 - SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
 - EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
 - WHERE TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNSTREAM.
 - KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

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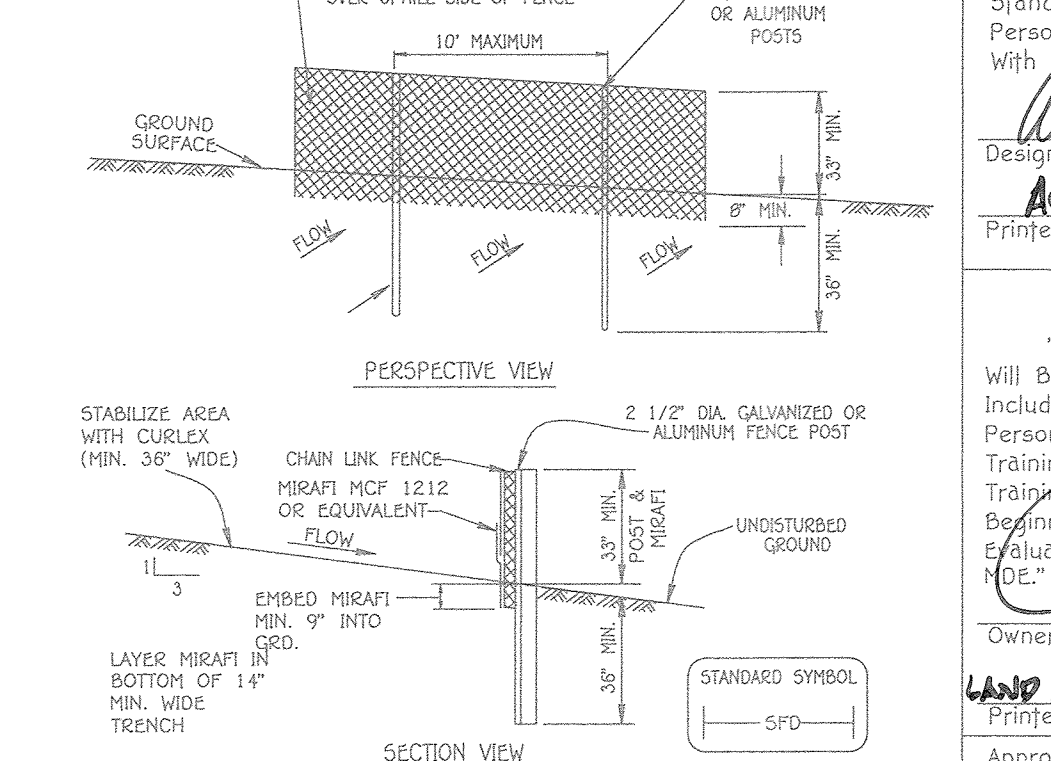
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DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

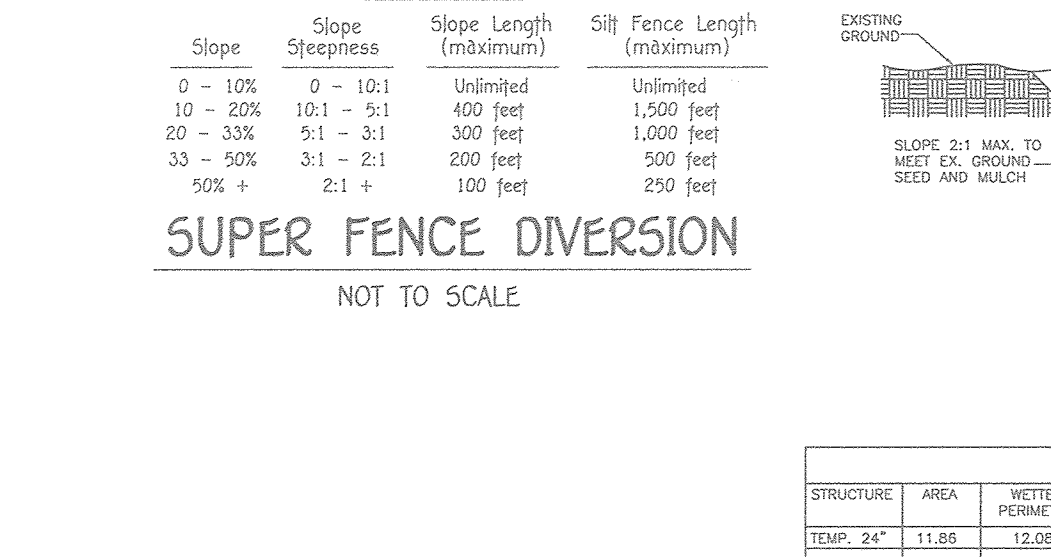


- CONSTRUCTION SPECIFICATIONS:**
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MAY TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING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

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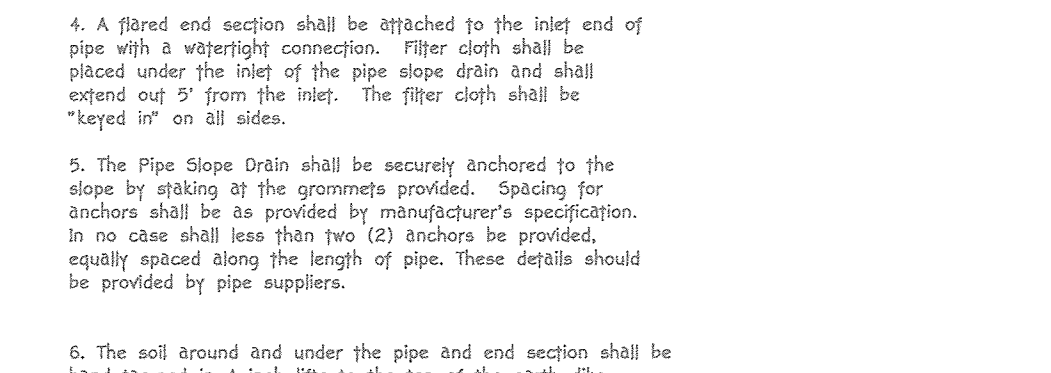


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