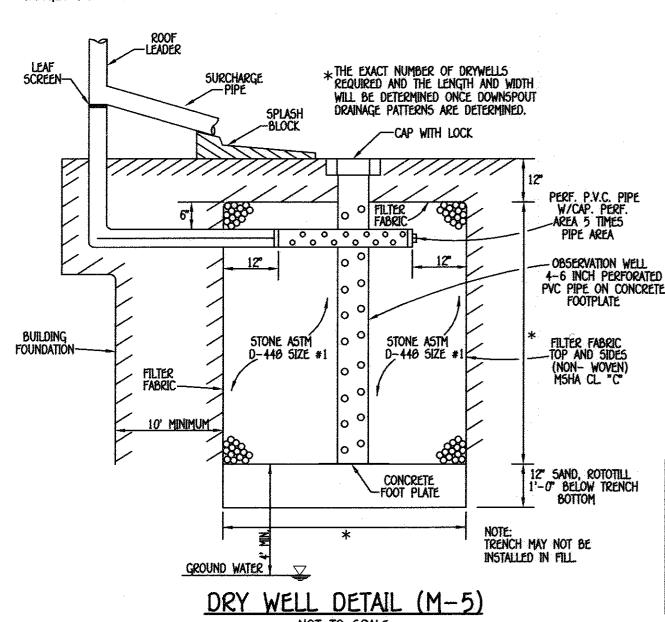
	SHEET INDEX
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT & EROSION CONTROL NOTES & DETAILS

50IL5 LEGEND				
50IL	NAME	CLA55	K FACTOR	
Со	Codorus and Hatboro silt loams, 0 to 3 percent slopes	С	0.32	
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	В	0.37	
GhC	Gleneig-Urban land complex, 0 to 15 percent slopes	8	0.37	
GmC	Glenville silt loam, 8 to 15 percent slopes	С	0.43	
Guß	Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes	C	0.43	
MaD	Manor loam, 15 to 25 percent slopes	8	0.32	

	STORMWA	ITER MAN	AGEMENT SUMMARY
area id.	E50v REQUIRED CU.FT.	E5DV PROVIDED CU.FT.	REMARK5
SITE	550	562	DRY WELLS (M-5) & MICRO-BIORETENTION (M-6)
TOTAL	550	562	

GROSS SITE AREA = 0.55 ACRES LOD = 0.38 ACRES RCN = 55TARGET Pe = 1.2"



see Appendix A; Table A.4

compost 35-40% sandy loam 30%

coarse sand 30%

Min. 10% by dry weight (ASTM D 2974)

pea gravel: ASTM-0-446

ornamental stone: washed cobbles

M5HA Mix No. 3; f = 3500 psi at 28 days, normal weight,

air-entrained; reinforcing to meet ASTM-615-60

AASHTO-M-6 or ASTM-C-33

shredded hardwood

Organic Content

Pea gravel diaphragi

Gravel (underdrains and infiltration berms)

Poured in place concrete (if

Underdrain piping

Curtain drain

# SIXTH ELECTION DISTRICT

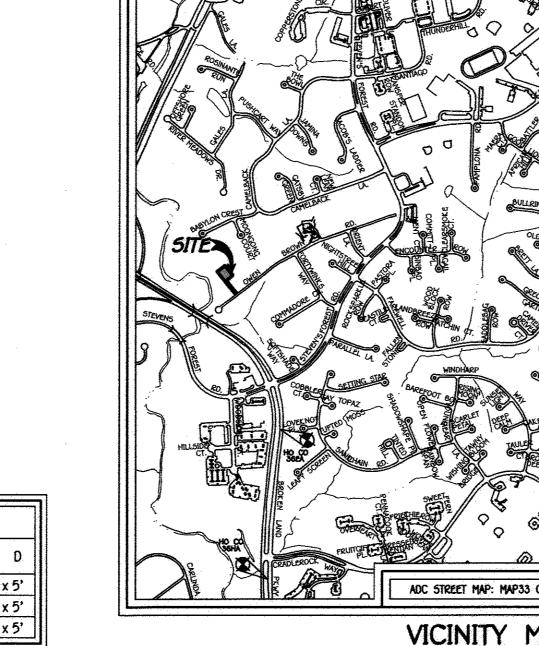
GUTTER DRAIN FILTER DETAIL

## STORMWATER MANAGEMENT NOTES

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010. 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT
- SHALL BE 1,000 SQ. FT. OR LESS. 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- 4. FINAL GRADING IS SHOWN ON THE SITE DEVELOPMENT PLAN.

DRY WELL CHART					
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
SIDE (FRONT)	923 5Q. FT.	88 C.F.	200 C.F.	100%*	10' x 10' x 5'
SIDE (REAR)	423 5Q. FT.	41 C.F.	50 C.F.	100%*	5' x 5' x 5'
REAR	757 5Q. FT.	72 C.F.	200 C.F.	100%*	10' x 10' x 5'

\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.



BENCHMARK INFORMATION

E 1.354.535.280

N 555,116,606

E 1,354,381.451

TAX MAP No. 36 GRID No. 8

VICINITY MAP

(LOCATED AT BROKEN LAND PARKWAY, O.1 MILES SOUTH OF STEVENS FOREST ROAD)

B.M.#1 - HOWARD COUNTY CONTROL STATION #36EA - HORIZONTAL - NAD '83)

B.M.#2 - HOWARD COUNTY CONTROL STATION #36HA - HORIZONTAL - (NAD '83) (LOCATED AT BROKEN LAND PARKWAY & CRADDLEROCK WAYIN])

ELEVATION = 354.861 - VERTICAL - (NAVD '88)

ELEVATION = 292.221 - VERTICAL - (NAVD '88)

SITE DEVELOPMENT PLAN

STANDAFER PROPERTY

LOT 2

9832 OWEN BROWN ROAD

# OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.

OWNED AND MAINTAINED DRY WELLS (M-5)

- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- F. 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.

# SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 23,900 SQ.FT. OR 0.55 AC. ±.

  B. LIMIT OF DISTURBED AREA = 16,300 SQ.FT. OR 0.30 Ac. ± PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL PREVIOUS HOWARD COUNTY FILES: PLAT#20444, F-08-048. TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC

PARCEL NO. 175

HOWARD COUNTY, MARYLAND

- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC. TOTAL AREA OF EXISTING FOREST = N/A (EXEMPT FROM FOREST CONSERVATION REQUIREMENTS SINCE LOT
- TOTAL GREEN OPEN AREA = 0.46 AC+ TOTAL IMPERVIOUS AREA = 0.09 AC+ TOTAL AREA OF ERODIBLE SOILS = 0.28 AC. TOTAL AREA OF ROAD DEDICATION = 0.00 AC.

IS LESS THAN 40,000 5Q.FT.)

DESCRIPTION **SYMBOL** DESCRIPTION EXISTING 2' CONTOURS - 182 PROPOSED CONTOUR EXISTING 10' CONTOURS SPOT ELEVATION LOD LIMITS OF DISTURBANCE - SOILS LINES AND TYPE >>>> EXISTING TREELINE >>>>> PROPOSED TREELINE - SF - SILT FENCE EXISTING FENCE LINE P55MC PERMANENT SOIL STABILIZATION MATTING EXISTING PAVING --- 55F--- SUPER SILT FENCE PROPOSED PAVING STABILIZES CONSTRUCTION ENTRANCE Drainage area divide

LEGEND

### General Notes:

- SUBJECT PROPERTY ZONED R-20 PER 10/06/13 COMPREHENSIVE ZONING PLAN.
  BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY SHANABERGER & LANE, DATED FEB. 06, 2009, LOT BOUNDARY PER PLAT #20444. TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY BY FISHER, COLLINS & CARTER, INC. DATED JULY, 2016, AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVA
- INTERPOLATED FOR 2' CONTOUR INTERVAL

  THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND

  STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 36EA AND 36HA WERE USED FOR THIS PROJECT.

  PREVIOUS DPZ FILE NUMBERS: PLAT NO. 20444, F-08-048.

  STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009.
- NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED.
- THIS PROPERTY IS LOCATED INSIDE THE METROPOLITAN DISTRICT.

ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:

- ALL AREAS ARE MORE OR LESS (±).

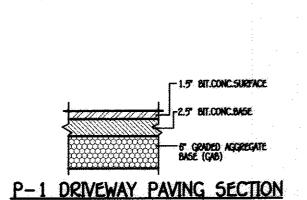
  DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 GRID MEASUREMENT.

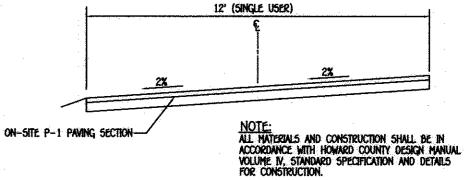
  FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF FLAG OR PIPE STEM AND ROAD RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY.

  DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE
  - A). WIDTH 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE); 3). SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING. (1 -1/2" MINIMUM);
  - C). GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS; D). STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING); .). Drainage elements - capable of safely passing 100 year flood with no more than 1 foot depth over surface; ). STRUCTURE CLEARANCE - MINIMUM 12 FEET;
- G). MAINTENANCE SUFFICIENT TO ENSURE ALL WEATHER USE. NO HISTORIC STRUCTURES OR CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE
- SITE IS NOT ADJACENT TO A SCENIC ROAD. NO 100 YEAR FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SIT
- NO WETLANDS EXIST ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE, INC. DATED JUNE 2016. LOT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS SINCE IT IS A SINGLE LOT WITH A TOTAL AREA LESS THAN 40,000 SF
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIMISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OF construction on these lots must comply with setback and buffer regulations in effect—at the time (
- THE SITE DEVELOPMENT PLAN, ALTERNATIVE COMPLIANCE APPLICATION OR BUILDING/GRADING PERMIT.
  THERE ARE NO WETLANDS ON THIS SITE, SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE, INC. DATED JUNE 2016. 18. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. NO STRUCTURES EXIST ON THIS PROPERTY.
- PROPERTY LOCATED ON HOWARD COUNTY SOIL SURVEY MAP #18. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

  THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- 23. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF AN
- TRASH AND RECYCLABLES COLLECTION WILL BE AT OWEN BROWN ROAD WITHIN 5' OF THE COUNTY ROADWAY. THE MAINTENANCE OF THIS COLLECTION AREA SHOULD BE REFERENCED IN THE PRIVATE USE—IN-COMMON ACCESS AGREEMENT.

  DRIVEWAY SHALL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-6.06 IN THE VOL. IV DESIGN MANUAL
- 26. IN ACCORDANCE WITH SECTION 128 (0)(a)(1)(e) OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR
- EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN
  - STATE HIGHWAY ADMINISTRATION GE(UNDERGROUND DAMAGE CONTROL) 410.707.9060 1.800.257.7777
  - COLONIAL PIPELINE COMPANY HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 410,795,1390 410.313.4900 410.313.2640 1.800.252.1133
- 1.000.743.0033/410.224.9210 ANY DAMAGE TO PUBLIC RIGHT-OF WAYS. PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENS 29. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.8 OF THE HOWARD COUNTY CODE. WATER AND SEWER SERVICE FOR THIS PROJECT WILL BE PROVIDED THROUGH PUBLIC WATER CONTRACT NO. 710-D-W AND BY PUBLIC SEWER
- PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT ALL WATER HOUSE CONNECTIONS SHALL BE OUTSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLANS OR IN SPECIFICATIONS.
- TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO HISTORIC STRUCTURES EXISTING ON THIS SITE. TO THE BEST OF THE OWNERS' KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS EXISTING ON THIS SITE.
- 36. THE PROPOSED ACCESS SHALL BE PROVIDED BY THE EXISTING USE -IN-COWMON DRIVEWAY TO OWEN BROWN ROAD UNDER F-08-048.
  37. A USE-IN-COMMON ACCESS MAINTENANCE AGREEMENT WAS PREVIOUSLY RECORDED AS LIBER 11510 FOLIO 378.
  38. OPEN SPACE REQUIREMENTS FOR THIS PROJECT HAVE BEEN MET THROUGH A PAYMENT OF FEE-IN-LIEU FOR ONE LOT IN THE AMOUNT OF \$1,500.00
- 39. THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM. 40. PARKING FOR THIS PROJECT IS PROVIDED AS FOLLOWS:
- 4 SPACES (2 CAR GARAGES = 2 SPACES + 2 SPACES PER PRIVATE ON-LOT DRIVEWAYS)
  TWO CAR GARAGE SHALL BE USED FOR PARKING PURPOSES ONLY OR STORAGE SPACE.
- 41. VISITOR AND QUEST PARKING IS RESTRICTED ALONG THE USE-IN-COMMON DRIVEWAY.
  42. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED AT THE LOCATION SHOWN ON SHEET 2 BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND
- 43. LANDSCAPING FOR LOT 2 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IS NOT REQUIRED SINCE CREDIT IS BEING TAKEN FOR EXISTING TREES TO REMAIN.





TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION

STORMWATER MANAGEMENT PRACTICES					
LOT NO.	ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF (N-1) Y/N, NUMBER	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER
2	9832 OWEN BROWN ROAD	No	NO	YES, THREE (3)	Y, ONE (1)

	used for sand.		
		#X	
OWNERS / DEVELOPER			
CHIE LUTTO DOODSOTISS INC			
BLUE WATER PROPERTIES INC. PO BOX 8596			
ELKRIDGE, MARYLAND 21075			
410-796-5410			
EIGUSO COLLING & CAOTEO INC			
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS			
CIVIL ENGINEERING CONSOLIANTS & LAND SORVETORS			
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE	· · · · · · · · · · · · · · · · · · ·		
ELLICOTT CITY, MARYLANO 21042			
(410) 461 - 2055			

NO.

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

stone: 2" to 5"

No. 57 or No.

0.02" to 0.04"

plantings are site-specific

aged 6 months, minimum

PE Type 1 nonwoven

ISDA soil types loamy sand or sandy loam; clay content <5!

Slotted or perforated pipe; 3/8" pert. 6 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth

on-site testing of poured-in-place concrete required

H-201; allowable horizontal loading (based on soil pressures); and analysis of potential cracking

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 ACI Code 350.R/89; vertical loading EH-10 or

#10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be

DATE X

the HOWARD SOIL CONSERVATION DISTRICT.

This development plan is approved for soil erosion and sediment control by

PROFESSIONAL CERTIFICATION 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. 38386, EXPIRATION

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

SIGNATURE OF DEVELOPER ENGINEER'S CERTIFICATE

1/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED OF THE HOWARD SOIL CONSERVATION DISTRICT."

APPROVED: DEPARTMENT OF PLANNING AND ZONING 8-9-17 PARCEL NO. STANDAFER PROPERTY LOT 2 175 TAX/ZONE ELEC. DIST. CENSUS TR. #20444 R-20 606603

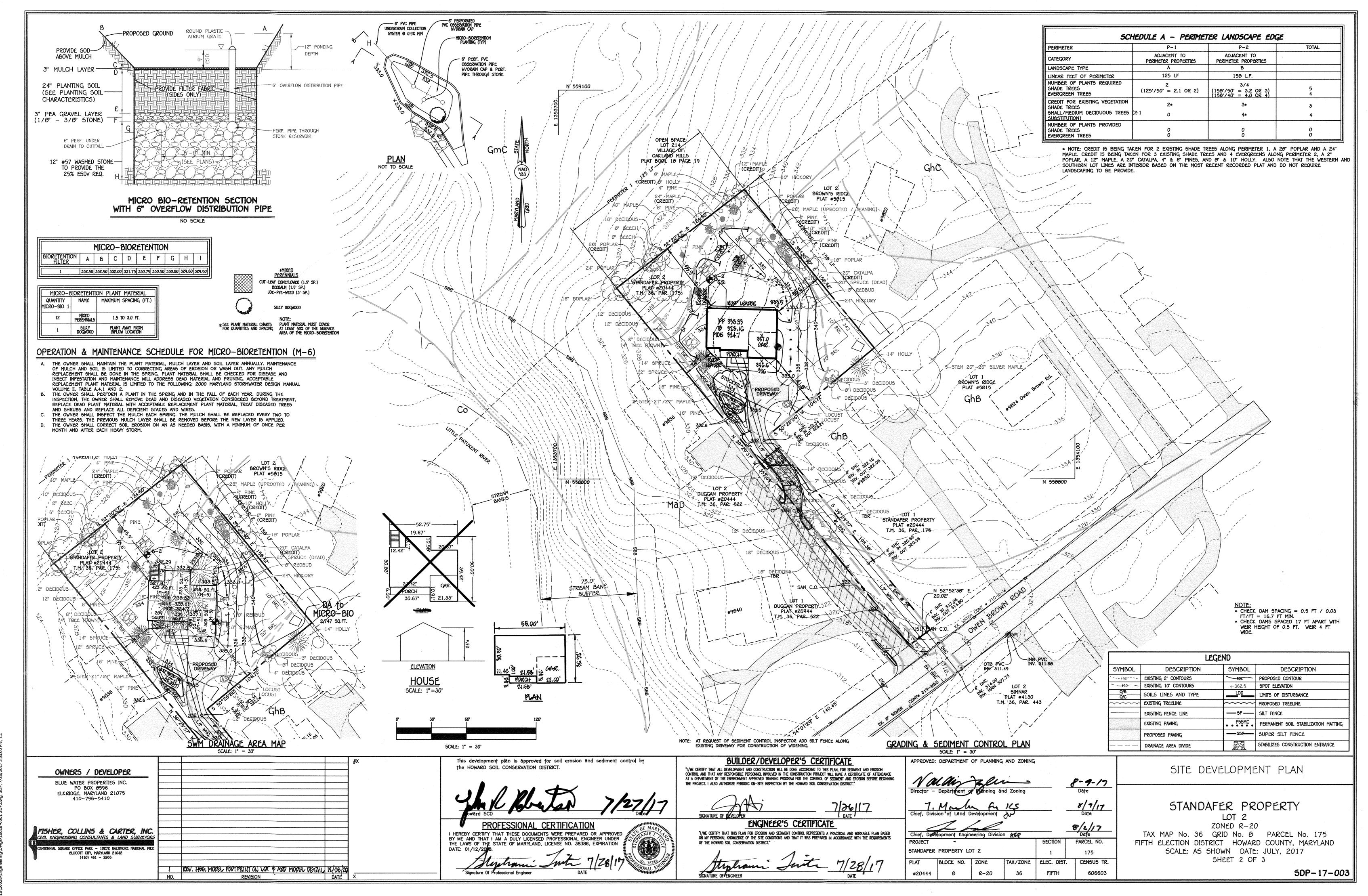
STANDAFER PROPERTY

LOT 2

TITLE SHEET

ZONED R-20 TAX MAP No. 36 GRID No. 8 PARCEL No. 175 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2017

> SHEET 1 OF 3 5DP-17-003



A MAIN ACTUAL CERCA DOLLE ACTUAL ACTU

A. Soil Preparation

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions

i. Soil pH between 6.0 and 7.0. i. Soluble sälts less than 500 pärts per million (ppm)

iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

v. Soil contains 1.5 percent minimum organic matter by weight.
 v. Soil contains sufficient pore space to permit adequate root penetration

 Application of amendments or topsoil is required if on-site soils do not meet the above conditions. c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter. b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nu sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Erosion and sediment control practices must be maintained when applying topsoil

Uniformly distribute topsoil in a 5 to 0 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

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

### C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to

such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #20 mesh sieve 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or

other suitable means. 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

### 8-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Purpose
To protect disturbed soils from erosion during and at the end of construction

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of

b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the around thaws. c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficien time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or

site-specific seeding summaries.

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with

Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must

be firm after planting.

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.

c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per

acre total of soluble nitrogen; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre. ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

iv. When hydroseeding do not incorporate seed into the soil.

1. Mulch Materials (in order of preference)

OWNERS / DEVELOPER

BLUE WATER PROPERTIES INC.

PO BOX 8596 ELKRIDGE, MARYLAND 21075 410-796-5410

QUARE OFFICE PARK - 10272 BALTIMORE NATI

**FLUCOTT CITY, MARYLAND 21042** 

a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of
noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty.

Note: Use only sterile straw mulch in areas where one species of grass is desired. b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical

This development plan is approved for soil erosion and sediment control by

PROFESSIONAL CERTIFICATION

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. 38386, EXPIRATION DATE: 01/12/2018.

ENGINEER'S CERTIFICATE

BUILDER/DEVELOPER'S CERTIFICATE

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

STANDAFER PROPERTY LOT 2

BLOCK NO.

DETAIL B-1 STABILIZED CONSTRUCTION Sie ENTRANCE -PIPE (SEE NOTE 6) PROFILE 50 FT MIN. PLAN VIEW PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTRE 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 5:1 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 MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. HAMEDIATELY REMOVE STONE AND/OR SEDMENT 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 2011 DETAIL E-3 SUPER SILT FENCE ├──SSF── 10 FT MAX. AND HELIEN GALVANIZED CHAIN LINK FENCE WITH HOVEN SLIT FILM GEOTEXTILE MOVEN SLIT FILM GEOTEXTILE-PLOW \_\_\_\_

CONSTRUCTION SPECIFICATIONS

PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THE

. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERWINING OCCURS, REDISTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL 2011 CHECK DAM -4 TO 7 IN STONE (TYP.) \_\_\_12 IN MIN.

To IN | , 4 TO 7 IN STONE 

CONSTRUCTION SPECIFICATIONS

\* SPACING = 0.5 FT / 0.04 FT/FT = 12.5 FT MIN

PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE, CONSTRUCT THE CHECK DAM WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES, PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS, FORM THE WERR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (% TO 1% INCH).

CROSS SECTION

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE—HALF OF THE HEIGHT OF THE WEST CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE

TURAL RESOURCES CONSERVATION SERVICE

2011

\* CHECK DAMS SPACED 13 FT APART WITH WEIR HEIGHT OF 0.5 FT. WEIR 4 FT WIDE.

SECTION

ELEC. DIST

8-9-17

8-1-17

PARCEL NO.

CENSUS TR.

606603

SEDIMENT & EROSION CONTROL NOTES & DETAILS

INSTALL TEMPORARY SEEDING. (1 DAY)

STANDAFER PROPERTY

LOT 2

ZONED R-20

TAX MAP No. 36 GRID No. 8 PARCEL No. 175 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JULY, 2017 SHEET 3 OF 3

SILT FENCE

ELEVATION V

CROSS SECTION

JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

USE WOOD POSTS 1% X 1%  $\pm$   $\chi_{\rm e}$  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 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED 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.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

USE NATTING 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 MEAVE. 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 GERMINATION AND NON-TINJURIOUS TO THE SKIN, IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MASMAUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED 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 MATTING 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 SEEDED SURFACE, AVOID STRETCHING THE MATTING.

KEY IN THE TOP OF SLOPE END OF MAT 6 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.

IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED ONCE THE MATTING IS KEYED 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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SECURENT CONTROL

SHEAR STRESS FOR PSSMC (LOWER) =  $62.4 \text{ LBS/FT}^6 \times 0.1 \text{ FT } \times 0.04 = 0.25 \text{ LBS/FT}^2$ 

SHEAR STRESS FOR PSSMC (UPPER) =  $62.4 \text{ LBS/FT}^6 \times 0.1 \text{ FT} \times 0.06 = 0.37 \text{ LBS/FT}^8$ 

2011

SEQUENCE OF CONSTRUCTION

1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/ INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.

REMOVE NECESSARY TREES AND ROUGH GRADE LOTS. UPON ROUGH GRADING OF SWALES, INSTALL TEMPORARY CHECK DAMS. (2 WEEKS)

CONSTRUCT HOUSE AND DRIVEWAY. INSTALL SEWER AND WATER HOUSE CONNECTIONS.

UPON COMPLETION OF STABILIZATION, INSTALL PERMANENT SOIL STABILIZATION MATTING IN SWALE AS SHOWN. (1 WEEK)
INSTALL PERMANENT SEEDING WITH CONSTRUCTION. (1 DAY)
UPON COMPLETION OF STABILIZATION, INSTALL MICRO-BIORETENTION FACILITY. (2 DAYS)

INSTALL ROOF LEADERS & DRYWELLS UPON CONSTRUCTION OF HOUSE, FINE GRADE, AND

ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF

CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL

OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS)
NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT

INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND SUPER SILT FENCE.

(\* NOLUCE SHEAR STRESS)

\_36 IN MIN. FENCE POST LENGTH DRIVEN MIN. 16 IN INTO GROUND

DETAIL E-1

STAPLE-

PERMANENT SOIL STABILIZATION MATTIN

5DP-17-003

rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter The resulting seedbed must be in such condition that future moving of grasses will pose no difficulty. e. If soil moisture is deficient, supply new seedings with adequate water for plant growth ( 1/2 to 1 inch weighted roller to provide good seed to soil contact.

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites. iii. Mix seed and fertilizer on site and seed immediately and without interruption. 6 TALL FESCUE I FISHER. COLLINS & CARTER. INC VIL ENGINEERING CONSULTANTS & LAND SURVEYORS DATE

Permanent Seeding Summary Hardiness Zone (from Figure B.3): 6b Fertilizer Rate (10-20-20) Lime Rate Seed Mixture (from Table B.3): P205 Depths (lb/ac) Dates Mar. 1-May 15 1/4-1/2 45 lbs. 90 lb/ac 90 lb/ac 2 tons/ac Aug. 15-Oct. 15 in. per acre (2 lb/ (2 lb/ (90 lb/ 100 (1.0 lb/ 1000 sf) | 1000 sf) | 1000 sf)

WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 WCFM, including dye, must contain no germination or growth inhibiting factors.

iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption

and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of

iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

a. Apply mulch to all seeded areas immediately after seeding.
 b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done
by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:

 A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a
minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can

iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be

v. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usual

Exposed soils where ground cover is needed for a period of 6 months or less. For longer

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate

along with application rates, seeding dates and seeding depths. If this Summary is not put on

the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw

mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Depths

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure 8.3) and based on the site condition or purpose found on Table 8.2. Enter selected mixture(s), application

rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per

1000 square feet (150 pounds persacre) at the time of seeding in addition to the soil amendments shown

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will

Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation

bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid

required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass

Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky

establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet.

Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas

Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding

establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3

Select turggrass varieties from those listed in the most current University of Maryland

Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 t

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and

October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15

(Hardiness Zone: 6b) Southern MO, Eastern Shore: March 1 to May 15, August 15 to October 15

a reliable means of consumer protection and assures a pure genetic line

receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified

Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides

(10-20-20)

2. For sites having soil tests performed, use and show the recommended rates by the

Dates

3/1 - 5/15

8/15 - 10/15

Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below

available in rolls 4-15 feet wide and 300 to 3,000 feet long.

Seed Mixture (from Table B.1):

OATS

A. Seed Mixtures

in the Permanent Seeding Summary

summary is to be placed on the plan.

receive a medium to high level of maintenance.

(lb/ac)

72

PERMANENT SEEDING NOTES (B-4-5)

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

duration of time, permanent stabilization practices are required.

testing agency. Soil tests are not required for Temporary Seeding.

To use fast growing vegetation that provides cover on disturbed soils.

leavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is

Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

operate safely. If used on sloping land, this practice should follow the contour.

Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

the HOWARD SOIL CONSERVATION DISTRICT.

THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter)

top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.

grasp on the upper 10 percent of the section.

which would cause air drying of the roots.

grass height of at least 3 inches unless otherwise specified.

must be provided in accordance with Section 8-3 Land Grading.

4. Access the stockpile area from the upgrade side.

at the following stages:

been obtained from the CID. Site Analysis: Total Area of Site:

Area to be roofed or paved:

inspection date

rea to be vegetatively stabilized:

Evidence of sediment discharges Identification of plan deficiencies

each workday, whichever is shorter.

Use I and IP March 1 - June 15

shall be on-site and available when the site is active.

a. Prior to the start of earth disturbance,

a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.

Sod must not be harvested or transplanted when moisture content (excessively dry of wet) may adversely affect its survival

prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and

. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.

Complete the operations of laying, tamping, and irrigating for any piece of sod within eight hours.

b. After the first week, sod watering is required as necessary to maintain adequate moisture content.

8-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

c. Upon completion of the installation of perimeter crossion and sediment controls, but before

proceeding with any other earth disturbance or grading,
c. Prior to the start of another phase of construction or opening of another grading unit,
d. Prior to the removal or modification of sediment control practices.

inspection type (routine, pre-storm event, during rain event)

identification of sediment controls that require maintenance identification of missing or improperly installed sediment controls

nance and/or corrective action performed

Name and title of inspector
Weather information (current conditions as well as time and amount of last recorded precipitation)
Brief description of project's status (e.g., percent complete) and/or current activities

Compliance status regarding the sequence of construction and stabilization requirements

2 in elevation.

Stream channels must not be disturbed during the following restricted time periods (inclusive):

A mound or pile of soil protected by appropriately designed erosion and sediment control measures

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

3. Runoff from the stockpile area must drain to a suitable sediment control practice.

b. 5od must be machine cut at a uniform soil thickness to % inch, plus or minus % inch, at the time of cutting. Measurement for thickness must exclude

c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm

e, Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist

a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to

promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids

Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to

Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet.

a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4

c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a

2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching

5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions

6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.

7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard 8-4-1 Incremental Stabilization and Standard 8-4-4

8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES

A pre-construction meeting must occur with the Howard County Department of Public Works. Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and sever

(7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec.

B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15 of cut and/or fill. Stockpiles

All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has

Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance

weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and

Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE)

construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.

Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum

Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of

acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more

than 30 acres cumulatively may be disturbed at a given time.

Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout

Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

All 51th Fence and Super 51th Fence shall be placed on-the-contour, and be imbricated at 25 minimum intervals, with lower ends curted uphill by

Use IV March 1 - May 31
 16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits

Sec. 8-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section 8-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section 8-3 Land Grading.

General Specifications

APPROVED: DEPARTMENT OF PLANNING AND ZONING "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING TAX/ZONE