

To stabilize disturbed soils with permanent vegetation.

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Conditions Where Practice Applies Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.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 Guide, Section 342 -Critical Area Planting. 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 'A pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary 2. Turfgrass Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playarounds, and commercial sites which will receive a medium to high level of maintenance. b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the

Permanent Seeding Summary. The summary is to be placed on the plan. i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation 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 Bluegrass Cultivars with each

ranging from 10 to 35 percent of the total mixture ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in fill sun areas where rapid 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 bluegross cultivars with each ranging from 10 to 35 percent of the total mixture by

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per

1000 square feet. One or more cultivars may be blended. iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed tur area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 11/4 to 3 pounds per 1000

Select turfgrass varieties from those listed in the most current university of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" 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 a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a Central MD: March Ito May 15, August 15 to October 15 (Hardiness Zone: 6b)

Southern MD, Eastern Shore: March Ito May IS, August 15 to October 15 (Hardiness Zones: 7a, 7b) d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones

and debris over 11/4 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty. e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/4 to 1 inch 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. Permanent Seeding Summary

Hardiness Zone (from Figure B.3): ZONE 6b Seed Mixture (from Table B.3): 9					Fertilizer Rate (10-20-20)			
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	N	P ₂ 0 ₅	к ₂ 0	Lime Rate
1	Cool Season Tall Fiscue & Kuntucky Bluegrass or equal	T.F. 60 lb/ac	May 1 to May 15. Aug. 15 to Oct. 15.	1/4-1/2 ln	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/a (90 lb/ 1000 sf)
		K.B. 40 lb/ac						

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

a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector. b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus '/4 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable. 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 grasp on the upper 10 percent of the d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival. 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 or soil scientist prior to its installation.

. Sod Installation a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laving 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 which would cause air drying of the roots.

. 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 prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface. d. 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. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours. . Sod Maintenance a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as

Water sod during the heat of the day to prevent wilting. b. After the first week, sod watering is required as necessary to maintain adequate moisture content. c. Do not mow until the sod is firmly rooted. No more

at least 3 inches unless otherwise specified.

necessary to maintain moist soil to a depth of 4 inches. than t/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of 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 at the following stages:

a. Prior to the start of earth disturbance, Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth

disturbance or grading. 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. 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.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 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 seven (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-) specifications shall be enforced in areas with >15? of cut and/or I. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis:

= 1.101 Acres. Total Area of Site: Area Disturbed: = 0.437 Acres. Area to be roofed or paved: = 0.142 Acres. = 0.295 Acres. be vegetatively stabilized: = 200± Cu. Yds. $= 50\pm$ Cu. Yds. Offsite waste/borrow area location: = To be determined

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

Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor 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 should include:

a) Inspection date Inspection type (routine, pre-storm event, during rain event)

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

Evidence of sediment discharges Identification of plan deficiencies Identification of sediment controls that require maintenance Identification of missing or improperly installed sediment controls

Compliance status regarding the sequence of construction and stabilization requirements k) Photographs Monitoring/sampling

m) Maintenance and/or corrective action performed n) Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE) Trenches for the construction of utilities is limited to three pipe

end of each workday, whichever is shorter. 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per

lengths or that which can and shall be back-filled and stabilized by the

the list of HSCD-approved field changes. 11. 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 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 CID. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

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

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

14. All Silt Fence and Super Silt Fence shall be placed on—the—contour, and be imbricated at 25? minimum intervals, with lower ends curled uphill

15. Stream channels must not be disturbed during the following restricted time periods (inclusive): Use I and IP March 1 - June 15 Use III and IIIP October 1 - April 30

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

(OWNER)

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

To stabilize disturbed soils with vegetation for up to 6 months. To use fast growing vegetation that provides cover on disturbed soils. Conditions Where Practice Applies Exposed soils where ground cover is needed for a period of 6 months

or less. For longer duration of time, permanent stabilization practices

are required. 1. Select one or more of the species or seed mixtures listed in Table B.I for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below 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. 2. For sites having soil tests performed, use and show the

recommended rates by the testing agency. Soil tests are not required for Temporary Seeding. 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. .b and maintain until

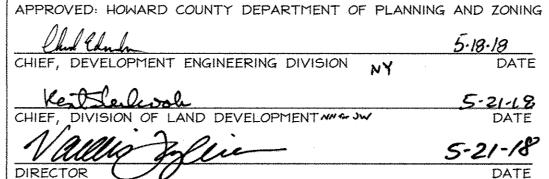
Temporary Seeding Summary

Hardiness Zone (from Figure B.3): ZONE 6b Seed Mixture (from Table B.3): Fertilize Seeding (10-20-20) Depth Application Rate (lb/ac) Seeding Dates Species 2003 HICKORY HILL LANE SILVER SPRING, MD 20906 Cool Seasor Annual May 15 40 lb/ac 436 lb/ac | 2 tons/ac Ryegrass (90 lb/ 10 lb/ 1000 sf) | 1000 sf) Warm Season 1ay 16 to 1/2 In Foxtail Millet or Equal 30 lb/ac

APPROVED: HOWARD SOIL CONSERVATION DISTRICT EFFERY & MELISSA DEANER

(DEVELOPER) CARUSO HOMES 2120 BALDWIN AVENUE. Ste 200 CROFTON, MD 21144 (301) 261-0277

BY THE HOWARD SOIL CONSERVATION DISTRICT.



0.02" to 0.04"

W=WIDTH

OUTFLOW

B-

" MULCH LAYER

#57 AGGREGATE

-10' #57 AGGREGATE

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

n/a

NO. 8 OR NO. 9

stone: 2" to 5"

NO. 57 OR NO. 6

4" to 6" rigid schedule 40

AGGREGATE

PVC or SDR35

(3/8" to 3/4")

(1/8" TO 3/8")

PLAN

4" PERF. PVC

(4x4) OR SMALLER

10' #57 AGGREGATE-

W/ 1/4" MASH

GALVANIZED

* NO Perforations where pipe is in soil. Perf. in stone only.

Rain Garden

Private

(NOT TO SCALE)

Notes

plantings are site-specific

PE Type 1 nonwoven

galvanized hardware cloth

-4" PERF. PVC OBSERVATION PIPE W/

GARDEN PLANTINGS

SECTION B-B

USDA soil types loamy sand or sandy loam; clay content < 5%

Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per

underneath pipes. Perforated pipe shall be wrapped with 1/4-inch

28 day strength and slump test; all concrete design (cast-in-place

professional structural engineer licensed in the State of Maryland

- design to include meeting ACI Code 350.R/89; vertical loading

Sand substitutions such as Diabase and Graystone (AASHTO)

#10 are not acceptable. No calcium carbonated or dolomitic sand

substitutions are acceptable. No "rock dust" can be used for sand.

standards requires design drawings sealed and approved by a

[H-10 or H-20]; allowable horizontal loading (based on soil

row: minimum of 3" of gravel over pipes; not necessary

or pre-cast) not using previously approved State or local

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

pressures); and analysis of potential cracking

aged 6 months, minimum; no pine or wood chips

UNDERDRAIN COLLECTION SYSTE

@ 1% MIN (TO B

__4" PVC

→ OUTFLO

D - 9.02

AREA OF RAIN

GARDEN)

rain garden plantings (typ

4" PVC PIPE UNDERDRAIN COLLECTION SYSTEM @ 1% MIN

GARDEN

INFLOW & -- ^-

⁷¹ 4" PERF. PVC

OBS. PIPE (WRAP

W/ 1/4" MASH

(4x4) OR SMALLER

Material

Plantings

Planting soil

[2' to 4' deep]

Organic content

Curtain drain

Geotextile

required)

Sand

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL

Pea gravel diaphragm

Gravel (underdrains and

Poured in place concrete (if

infiltration berms)

Underdrain piping

Mulch

V.

FILTER FABRIC -

PLANTINGS F 4"

SECTION A-A

Chief, Bureau of Engineering

Howard County, Maryland

Department of Public Works

Specification

see Appendix A, Table A.4

loamy sand (60 - 65%) &

compost (35-40%)

sandy loam (30%),

compost (40%)

(ASTM D 2974)

cobbles

AASHTO M-43

shredded hardwood

coarse sand (30%) &

Min. 10% by dry weight

pea gravel: ASTM-D-448

ornamental stone: washed

F 758, Type PS 28 or AASHTO

MSHA Mix No. 3; $f'_{c} = 3500$

psi @ 28 days, normal weight,

AASHTO-M-6 or ASTM-C-33

air-entrained; reinforcing to

meet ASTM-615-60

(TO BE PREFORATED WITHIN AREA OF RAIN GARDEN)

VII Com M.N. ROSHAN, L.S.

ENGINEERS CERTIFICATE "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT MAR. 31, 2018

DATE

PLANTING SOIL:

THE BIORETENTION AREA SHALL CONSIST OF A PLANTING SOIL HAVING A HOMOGENOUS MIX OF 50% CONSTRUCTION SAND, 20-30% TOPSOIL WITH AN ALLOWABLE 5% MAXIMUM CLAY CONTENT, AND 20-30% ORGANIC COMPOST OR MULCH TO PROVIDE A SOIL MEDIUM WITH HIGH HYDROLOGIC CAPACITY.

BIORETENTION AREA SOIL SPECIFICATION

THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUAKE GRASS, JOHNSON GRASS, MUGWART, NUTSEDGE, POISON IVY, CANDIAN THISTILE OR OTHER AS SPECIFIED.

IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.

THE PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

PH RANGE 5.5 - 6.5ORGANIC MATTER 15 - 30% THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE

ABOVE SOILS: PH ORGANIC MATTER: 1 TEST PER 90 CUBIC YARDS, BUT NOT MORE THAN 1 TEST PER BIORETENTION AREA. ONE GRAIN SIZE ANALYSIS SHALL BE PERFORMED PER 90 CUBIC YARDS OF PLANTING SOIL, BUT NO LESS THAN 1 TEST PER BIORETENTION AREA.

B. MULCH LAYER SPECIFICATION:

A MULCH LAYER SHALL BE PROVIDED ON TOP OF PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCTS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENTAL

OF THE APPROVED MULCH PRODUCTS, ALL MUST BE WELL AGED UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIALS, INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCK PILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

SAND SPECIFICATION: THE SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN ONE INCH IN DIAMETER.

SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED.

BIRORETENTION AREA PLANT SPECIFICATION

GENERAL PLANTING:

__ ROOT STOCK OF PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM SOURCE TO THE JOB SITE AND UNTIL PLANTED.

. WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL

THE DIAMETER OF PLANTING PIT MUST BE A MINIMUM OF SIX

INCHES LARGER THAN THE DIAMETER OF THE ROOT BALL.

THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4 OF THE BALL TO BE ABOVE THE EXISTING GRADE, LOOSE SOIL AT

THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND. __ THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED AT THE BOTTOM OF THE PIT.

__ THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED AT THE BOTTOM OF THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL. NEVER LIFT THE PLANT BY THE BRANCHES OR TRUNK.

__ SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THE CENTER OF THAT THE BALL IS APPROXIMATELY 1/4 ABOVE THE FINAL GRADE.

BACKFILL PLANTING PIT WITH EXISTING SOIL. __ MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING

__ NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL

AROUND THE EXPOSED SIDE OF THE BALL. ___ MAKE SURE MULCH DOES NOT CONTACT TREE'S TRUNK.

__ TREE SHALL BE BRACED USING 2" X 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. THE TREE IS BRACED TO THE STAKES UTILIZING HOSE AND WIRES.

FERTILIZER:

TREE AND SHRUB FERTILIZER SHALL BE A 21 gm. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2-YEAR) FERTILIZER TABLET WITH MINIMUM GUARANTEED ANALYSIS OF 20-10-5:

TOTAL NITROGEN (N) - 20% WATER SOLUBLE ORGANIC NITROGEN - 7% WATER IN SOLUBLE ORGANIC NITROGEN - 13% AVAILABLE PHOSPHORIC ACID (P2 05) - 10% SOLUBLE POTASH (K20) - 5%

__ FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER 1 ea, 21 gm. TABLETS. 3 GAL. CONTAINER 2 ea, 21 gm. TABLETS. 5 GAL. CONTAINER 3 ea, 21 gm. TABLETS. 7 GAL. CONTAINER 5 ea, 21 gm. TABLETS.

PLANTING NON-GRASS GROUND COVER:

THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWINGS: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASS OR LEGUMES).

BEFORE PLANTING BIODEGRADABLE POTS, THEY SHALL BE SPLIT, AND NON BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF THE POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.

THE GROUND COVER SHALL BE PLANTED SO THAT ROOTS ARE SURROUNDED BY THE SOIL BELLOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE-ROOT PLANTS SHALL BE COVERED TO THE CROWN.

THE MULCH AND PLANTED GROUND COVER BED SHOULD BE

SHOULD BE COVERED WITH A PRE-EMERGENT HERBICIDE. __ THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

SIGNATURE OF DEVELOPE

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

DEVELOPER'S CERTIFICATE 4117 2019 160 IING RCEL

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5 r ASSO(veying and Route 32 DSHIP, MD 2 508-3200

REVISIONS JAN. 31, 2018.

REVISED PER COMMENTS, REVISED PER COMMENTS. MAR. 9, 2018. - REVISED STABLIZ/SEEDING NOTES, MAR. 31, 2018.

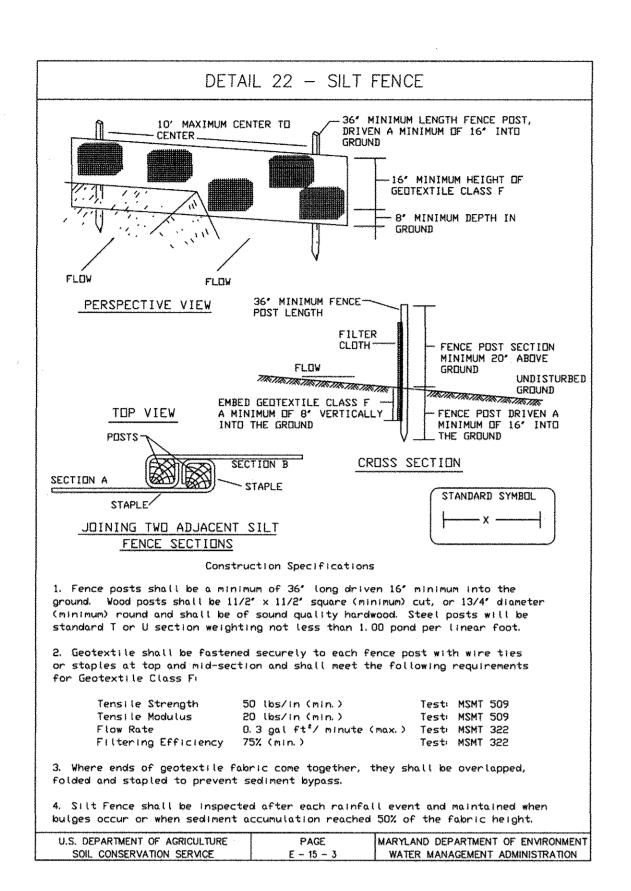
GRAPHIC SCALE 1"=20"

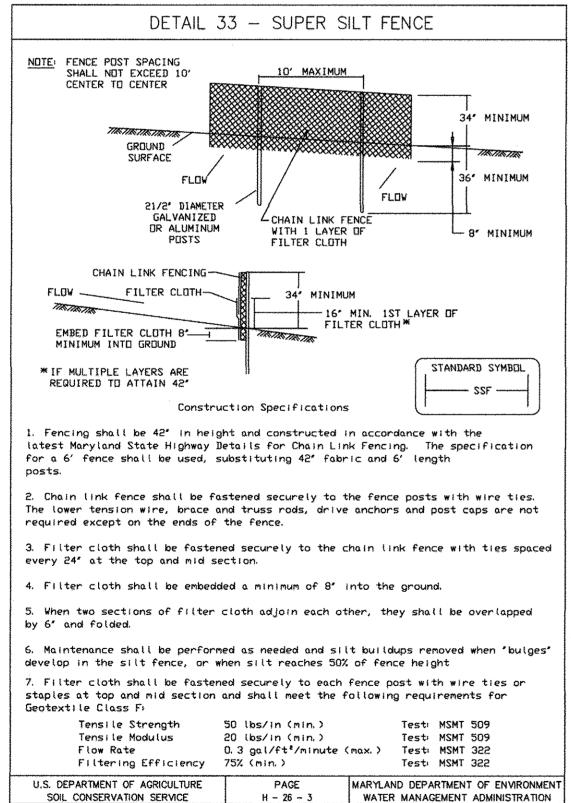
MAR. 5, 2017 JOB NUMBER: 3386 ILE NUMBER: 3386SITE LOTTED: MAR. 31, 2018

RAWN BY: NR SITE NOTES AND DETAILS

2 OF 3

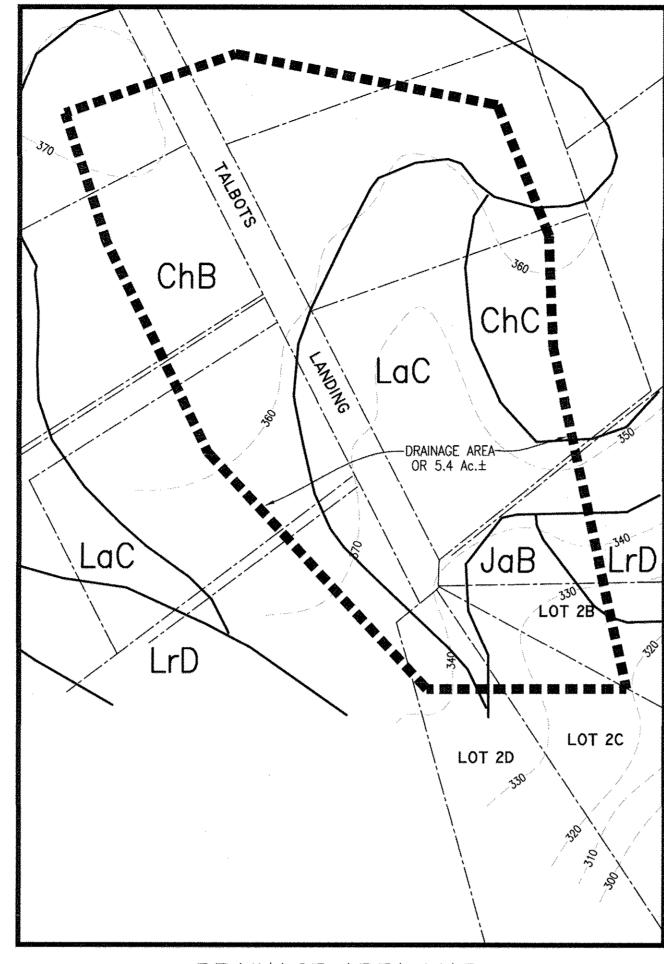
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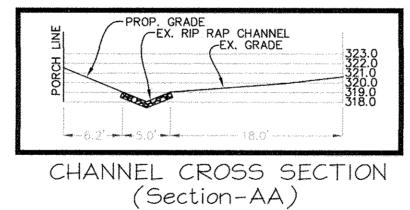


PLANTING NOTES:

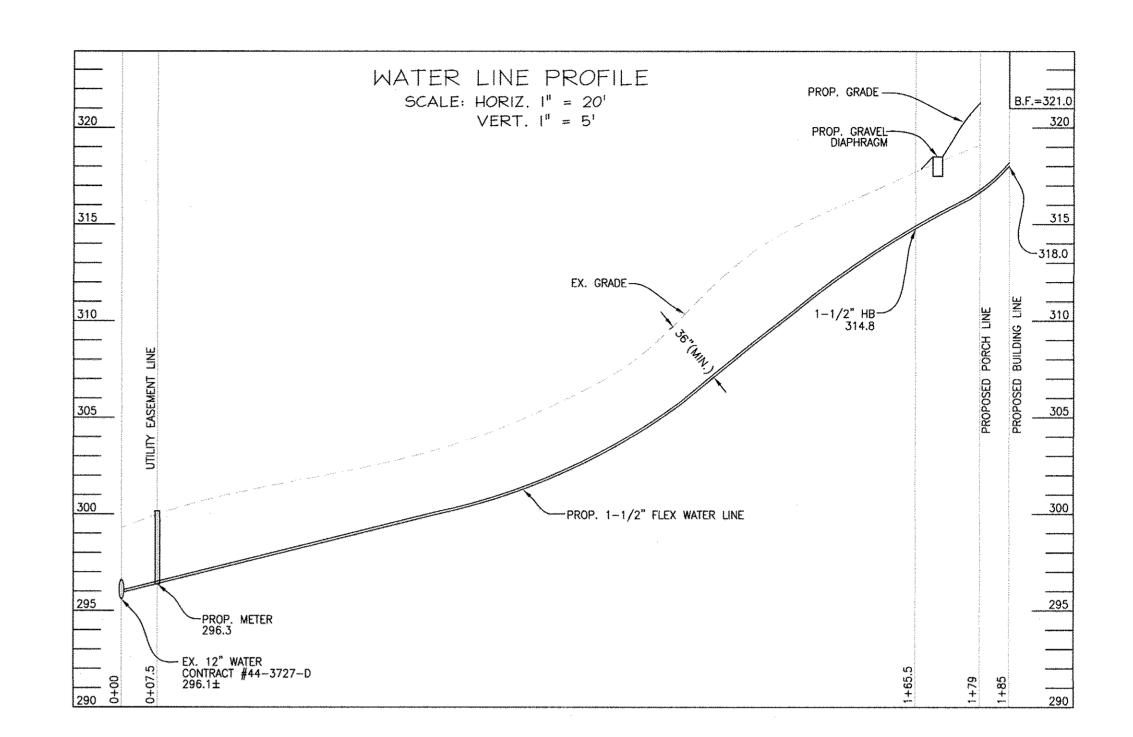
- 1. Plant a mix of shrubs and perennials.
- Reference standards: comply with those listed below.
- a. Nomenclature for plant materials shall be in accordance with Hortus III, by the staff of L.H. Bailey Hortorium. b. American Standard for Nursery Stock, ANSI Z60.1, latest edition, American Nursery & Landscape Association
- c. Landscape Specification Guidelines, latest edition, Landscape Contractors Association.
- 3. proceed with planting only when existing and forecast weather conditions are suitable for work, perform actual planting when ground is workable, i.e., moist, not wet or frozen.

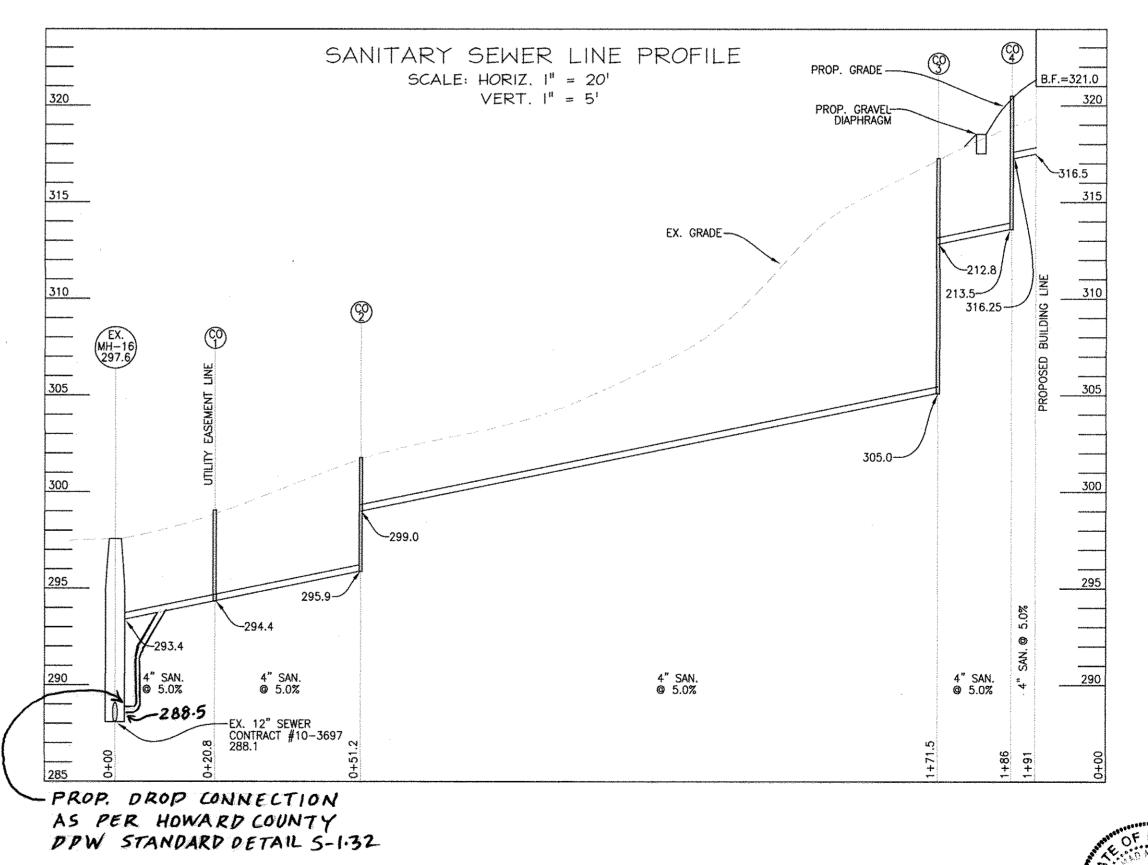


DRAINAGE AREA MAP SCALE: I" = 100'



SCALE: I" = 101 CHANNEL CROSS SECTION ANALYSIS DRAINAGE AREA = 5.4 Ac. TIME OF CONCENTRATION (Tc) = 5 Min. (Conservative) $L_{10}^{"} = 8.5^{"}/24 \text{ Hr.}$ $L_{100}^{"} = 12.75^{"}/24 \text{ Hr.}$ $S^{1/1}$ = SLOPE AT POINT OF STUDDY = $0.09^{1/1}$ COMPOSITE "C" FACTOR = 0.31 $Q = C \times L \times A$ $Q_{10} = 0.31 \times 8.5 \times 5.4 = 14.23 \text{ c.f.s.}$ $Q_{100} = 0.31 \times 12.75 \times 5.4 = 21.34 \text{ c.f.s.}$ $\Pi(Channel) = 0.04$ $V = \frac{1.486}{R} \times R^{2/3} \times (S)^{0.5}$ d = 1.3'A = 4.4 sf.P = 8.9' $V_{S/S} = \frac{1.486}{0.04} \times 0.44 \times (0.09)^{0.5} = 4.9 \text{ sf/s}$





APPROVED: HOWARD SOIL CONSERVATION DISTRICT APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING JEFFERY & MELISSA DEANER THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL 2003 HICKORY HILL LANE 5.18-18 BY THE HOWARD SOIL CONSERVATION DISTRICT. SILVER SPRING, MD 20906

(OWNER)

(DEVELOPER)

CARUSO HOMES

Ste 200

CROFTON, MD 21144 (301) 261-0277

2120 BALDWIN AVENUE,

 $Q = 4.9 \text{ sf/s} \times 4.4 \text{ sf} = 21.56 \text{ cfs} > Q_{100} > Q_{10} \text{ SO OKAY}.$

CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE 5-21-18 CHIEF, DÍVISION OF LAND DEVELOPMENT NA SA JW DATE 5-21-18 DATE

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

M.N. ROSHAN, L.S.

MAR. 31, 2018

DATE

DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL. PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT 417/20F

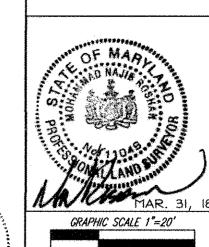
SIGNATURE OF DEVELOPER

DEVELOPER'S CERTIFICATE "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL

ASSOC eying ar ROUTE DSHIP, 508-య Land Slarro STA WEST FRI

REVISIONS REVISED PER COMMENTS. JAN. 31, 2018. REVISED PER COMMENTS, MAR. 9, 2018.

3- REVISED STABLIZ/SEEDING NOTES, MAR. 31, 2018.



MAR. 5, 2017 JOB NUMBER: 3386

W/1 - 04/04/8 FILE NUMBER: 3386SITE

LOTTED: MAR. 31, 2018 DRAWN BY: NR WATER AND ANITARY SEWER

PROFILE 3 OF 3

SDP-18-015