

**Bureau of Environmental Health**  
 8930 Stanford Boulevard, Columbia, MD 21045  
 Main: 410-313-2640 | Fax: 410-313-2648  
 TDD 410-313-2323 | Toll Free 1-866-313-6300  
[www.hchealth.org](http://www.hchealth.org)  
 Facebook: [www.facebook.com/hocohealth](http://www.facebook.com/hocohealth)

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 5-9-19 **ONSITE SEWAGE DISPOSAL SYSTEM** P 5865484

APPROVAL DATE: 6/6/2019 **PERMIT: CONSTRUCTION** A \_\_\_\_\_

PROPERTY ADDRESS: 2595 MULLINIX MILL ROAD, MT AIRY, MD 21771

SUBDIVISION: HARRY N SHIPE LOT: 3 TAX ID: 04-596003

CONTRACTOR: FARM AND HOME EMAIL: \_\_\_\_\_

CONTRACTOR ADDRESS: 901 DRIVER ROAD PHONE: 410 422 2139

PROPERTY OWNER: GREGORY and JENNIFER SLEDZ EMAIL: 'Jsledz0830' or 'sledz.greg' @gmail.c

OWNER ADDRESS: 808COMMERCEPARKDR,UNIT2404,MS-70,ODENSBURG,NY13669 PHONE: \_\_\_\_\_

SEPTIC TANK SIZE (GALLONS): 1500 TANK MANUFACTURER: BABYLON (or equivalent)

PUMP MODEL: n.a. PUMP SIZE n.a. PUMP TANK CAPACITY: n.a.

DISTRIBUTION SYSTEM:  GRAVITY  PRESSURE DOSED BEDROOMS: 4 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>251</u>	INLET DEPTH: <u>2.0</u>
	TRENCH WIDTH: <u>2</u>	MAXIMUM BOTTOM DEPTH: <u>7.5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>6.0</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:		

ISSUED BY: R BRICKER ISSUE DATE: 5-9-19 EXPIRATION DATE: 5-9-20

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
- ELECTRICAL PERMIT ISSUED E n.a.
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

**NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.  
 PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.  
 CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**

NOT TO SCALE

**TRENCH/DRAINFIELD DATA**

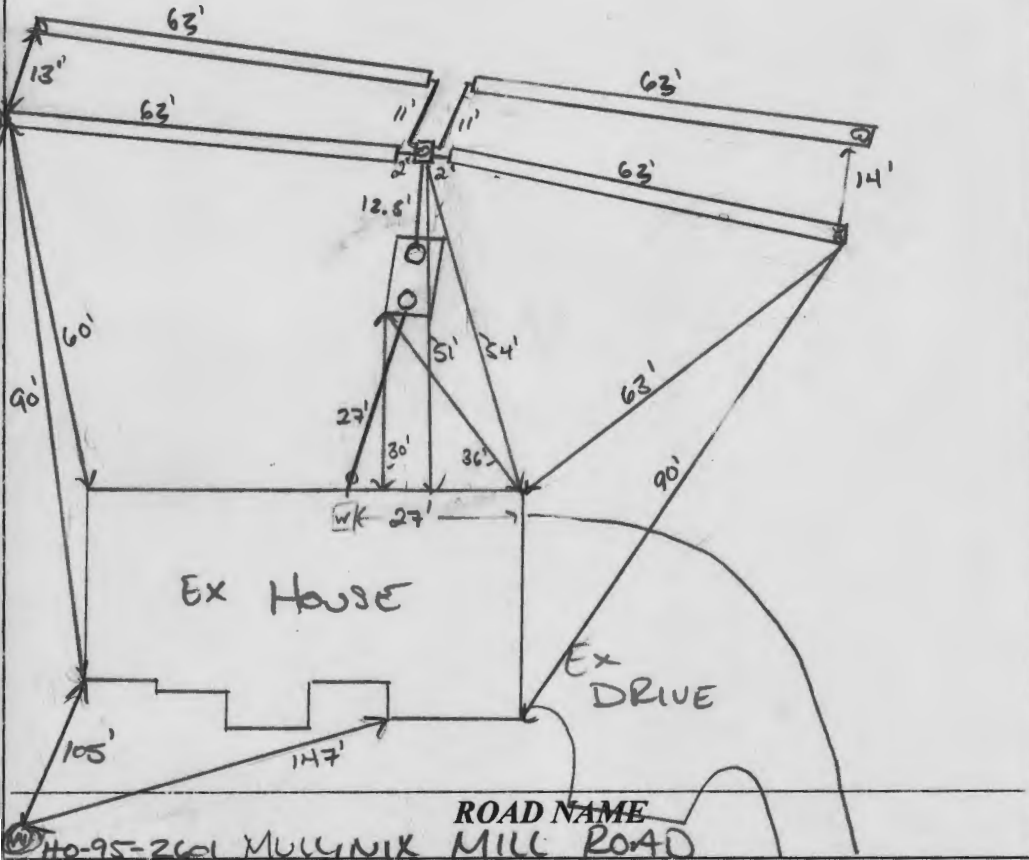
WIDTH	INLET	BOTTOM
2	2	7.5'
NUMBER OF TRENCHES		4
TOTAL LENGTH		252 F
ABSORPTION AREA		504 SF
DISTRIBUTION BOX LEVEL		SPEED
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

**SEPTIC TANK DATA**

SEPTIC TANK I LEVEL YES  
 MANUFACTURER BABYLON  
 CAPACITY 1500 GAL  
 SEAM LOC TOP  
 TANK LID DEPTH ~24" ~140  
 BAFFLES YES  
 BAFFLE FILTER NO  
 MANHOLE LOC FRONT/BACK  
 6" PORT LOC -  
 WATERTIGHT TEST -  
 SLOTTED YES  
 DATE ON LID 04/03/2019

**PUMP/SEPTIC TANK LEVEL**

MANUFACTURER \_\_\_\_\_  
 CAPACITY \_\_\_\_\_ GAL  
 SEAM LOC \_\_\_\_\_  
 TANK LID DEPTH \_\_\_\_\_  
 BAFFLES \_\_\_\_\_  
 BAFFLE FILTER \_\_\_\_\_  
 MANHOLE LOC \_\_\_\_\_  
 6" PORT LOC \_\_\_\_\_  
 WATERTIGHT TEST \_\_\_\_\_  
 SLOTTED \_\_\_\_\_  
 DATE ON LID \_\_\_\_\_



**PRE-CONSTRUCTION:**

5/24/2019 TANK + SDA STAKED. SDA CLOSE TO FOREST CON. CHECKED CONTOUR OF FOUR TRENCHES. OK TO START. (+)

INSTALLATION: 5/24/2019 SHC AND SEWER LINE INSTALLED TO TANK. TANK SET. D BOX SET AND TIED IN. (+) 6/6/2019 TRENCHES COMPLETE. MEASURES 1.5' TO TOP OF STONE ON LOW SIDE. D BOX LEVELED WITH SPEED LEVELS. OK TO BACKFILL (+)

FINAL INSPECTOR

DATE OF APPROVAL

06/06/2019

MULLINIX MILL ROAD  
50' R.O.W.  
L=10.07'  
R=1072.00'

MATCH LINE, THIS SHEET

30' ACCESS  
EASEMENT FOR  
LOT 3  
PLAT No. 22731

LOT 2  
HARRY N. SHIPE PROPERTY  
PLAT No.22731

*Wall Check  
OK 5-9-19  
JB*

MD STATE PLANE  
NAD 83/91  
STATE OF MARYLAND  
DEPARTMENT OF  
NATURAL RESOURCES  
L.677, F.001  
PARCEL 17

LOT 1  
HARRY N. SHIPE PROPERTY  
PLAT No.22731

MATCH LINE, THIS SHEET

STATE OF MARYLAND  
DEPARTMENT OF  
NATURAL RESOURCES  
L.677, F.001  
PARCEL 17

FOREST  
CONSERVATION  
EASEMENT  
(RETENTION)  
PLAT No.22972

TWO STORY FRAME  
WITH BASEMENT  
F.F.=627.4  
(SEE INSET FOR DETAILS)

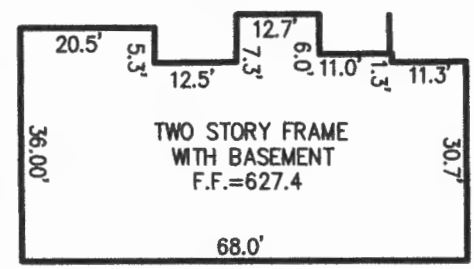
EXISTING  
SEWAGE DISPOSAL  
AREA

LOT 3  
HARRY N. SHIPE PROPERTY  
PLAT No.22972  
170,330 SQ. FT.  
OR 3.9102 AC±

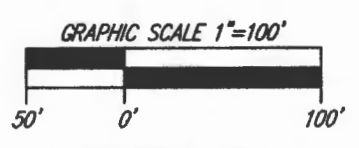
JAMES C. & THELMA J.  
STROUTH  
L.694, F.361  
PARCEL 48

MYRICK FAMILY TRUST  
L.10928, F.51  
PARCEL 45

EX. EASEMENT  
18432/375  
268.74'  
CURTIS E. & DENISE A.  
BOST  
L.3917, F.398  
PARCEL 64



INSET SCALE: 1"=30'



WALL CHECK SURVEY  
HARRY N. SHIPE PROPERTY

**LOT 3**  
PLAT No. 23972  
TAX MAP 12, GRID 17, PARCEL  
4TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

ADDRESS:  
2595 MULLINIX MILL ROAD  
MT. AIRY, MARYLAND 21771

PLAN PREPARED BY:

**NJR & ASSOCIATES**  
Land Surveying and Planning  
2770 STATE ROUTE 32  
WEST FRIENDSHIP, MD 21794  
TEL: (240) 508-3200

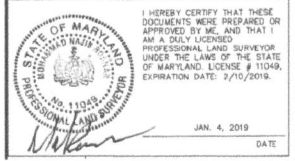
PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE # 11049, EXPIRATION DATE: 2/10/2021.

APRIL 16, 2019

- SEQUENCE OF CONSTRUCTION :**
1. REQUEST FOR PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. (2-WEEKS).
  2. CLEARING AND GRUBBING AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS. (1 DAY).
  3. CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS. (1 DAY).
  4. REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS (1 DAY).
  5. DRIVEWAY GRADING. (1 DAY).
  6. GRADING FOR THE REMAINDER OF THE SITE. (2 DAYS).
  7. UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES. (4 DAYS).
  8. CONSTRUCTION OF BUILDING, ROADS, AND OTHER CONSTRUCTION. (4 MONTHS).
  9. FINAL GRADING, LANDSCAPING, AND STABILIZATION. (3 DAYS).
  10. INSTALLATION OF STORMWATER MANAGEMENT MEASURES (4 DAYS).
  11. APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF PERIMETER CONTROLS. (1 WEEK).
  12. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF PERIMETER CONTROLS. (2 DAYS).
- NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

- LEGEND**
- EX. EVERGREEN TREE
  - EX. DECIDUOUS TREE
  - EX. FOREST CONSERVATION SIGN POST
  - PROP. SPOT ELEVATION
  - EX. CONTOUR
  - PROP. CONTOUR
  - EX. EDGE WOODED AREA
  - PROP. EDGE WOODED AREA
  - PROP. SUPER SILT FENCE
  - PROP. SILT FENCE
  - PROP. LIMIT OF DISTURBANCE
  - EX. TREE TO BE REMOVED
  - (TR) DENOTES (TO REMAIN)
  - (TBR) DENOTES (TO BE REMOVED)
  - EX. Paddock EASEMENT
  - EX. FOREST CONSERVATION EASEMENT
  - EX. SEPTIC RESERVE AREA
  - PROP. STABILIZED CONSTRUCTION ENTRANCE
  - SOIL DIVIDE LINE



**COMPUTATION OF THE REQUIRED ESDv:**

TOTAL PROPERTY SIZE = 170,330 SF  
 PIPE STEM = 10,793 SF  
 MINIMUM PROPERTY SIZE = 159,537 SF  
 LIMITS OF DISTURBANCE (L.O.D.) = 29,826 SF  
 PROPOSED IMPERVIOUS AREA = 5,229 SF  
 SOL: = HYDROLOGIC SERIES "B"

TARGET Pe:  
 % IMPERVIOUS AREA (I): PROP. IMPERVIOUS AREA = 5,229 = 17.5% (USE 20%)  
 USING TABLE 5.3 FOR "C" SOILS & 1% OF 40:  
 PE = 1.2"

TARGET RCN FOR WOODS IN GOOD CONDITION:  
 "B" SOILS = 55

TARGET ESDv:  
 PE = 1.2"  
 IMPERVIOUS = 17.5%  
 Rv = 0.05 + (0.009)(17.5) = 0.2075  
 A = 29,826 SF  
 ESDv = PE X RV X A  
 ESDv = 1.2 X 0.2075 X 29,826 = 619 CF

**COMPUTATION OF THE PROPOSED ESDv:**

MICRO-BIO RETENTION (M-6), "MBR"

ROOFTOP AREA = 2,302 SF  
 DRIVEWAY AREA = 2,570 SF  
 WALKWAY AND STOOP AREA = 357 SF  
 TOTAL IMPERVIOUS AREA = 5,229 SF  
 GRASS AREA TO MBR = 14,691 SF  
 TOTAL DRAINAGE AREA TO MBR = 19,920 SF

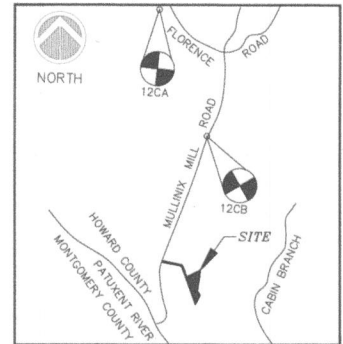
PE = 2.6"  
 IMPERVIOUS DRAINAGE AREA TO MBR = 26.3%  
 Rv = 0.05 + (0.009)(26.3) = 0.287  
 A = 19,920 SF  
 ESDv = PE X RV X A  
 ESDv = 2.6 X 0.287 X 19,920 = 1,239 CF

**STORMWATER MANAGEMENT SUMMARY**

FACILITY	ESDv CREDIT	TARGET Pe	REQUIRED Pe	CONTRIBUTING AREA	% IMPERVIOUS
MICRO-BIORETENTION (M-6)	1,239 CF	1.2"	2.6"	19,920 SF	26.3%
ESDv PROVIDED = 1,239 CF		ESDv REQUIRED = 619 CF		ESDv SURPLUS = +620 CF	

DIMENSIONS OF MICRO-BIO RETENTION		ELEVATIONS OF MICRO-BIO RETENTION	
POND DEPTH = 1.0 FT	TOP OF BERM = 591.50	TOP OF POND = 591.00	TOP OF SURFACE = 590.00
TOP POND AREA = 1,137 SF	INVERT OF UNDERDRAIN = 583.83	BOTTOM OF PIT = 585.75	
BOTTOM POND AREA = 730 SF (5A)			
POND VOLUME = (1,137 + 730) x 1.0 = 933 CF			
POND MEDIA DEPTH = 0.5 FT			
POND MEDIA VOLUME = 730 x 1.08 x 0.4 = 315 CF			
POND STORAGE VOLUME = (933 + 315) = 1,248 CF			



**SITE ANALYSIS DATA CHART**

TOTAL LOT AREA	= 3.910 ACRES (170,330 SF)
MINIMUM LOT SIZE (WITHOUT PIPE STEM)	= 3.682 ACRES (159,537 SF)
LOT AREA WITHIN THE LIMIT OF DISTURBANCE	= 0.685 ACRES (29,826 SF)
TOTAL LOT IMPERVIOUS AREA PROPOSED	= 0.120 ACRES (5,229 SF)
PROPOSED GREEN/OPEN AREA	= 2.901 ACRES (124,308 SF)
SITE USAGE	= SINGLE FAMILY DETACHED
L.O.D. AREA WITHIN WETLAND	= 0 ACRES
L.O.D. AREA WITHIN 25' WETLAND BUFFER	= 0 ACRES
L.O.D. AREA OF STEEP SLOPES	= 0 ACRES
L.O.D. AREA OF ERODIBLE SOILS	= 0 ACRES
L.O.D. AREA WITHIN 100'-YR FLOODPLAIN	= 0 ACRES
L.O.D. AREA WITHIN 100' STREAM BUFFER	= 0 ACRES
L.O.D. TOTAL FORESTED AREA	= 0 ACRES

- GENERAL NOTES**
1. THIS PLAN IS BASED ON A PREVIOUSLY APPROVED ENVIRONMENTAL CONCEPT PLAN (ECP-13-038).
  2. THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 10/06/13 COMPREHENSIVE ZONING PLAN.
  3. THIS PROPERTY IS LOCATED OUTSIDE THE METROPOLITAN DISTRICT AND IS TO BE SERVED BY PRIVATE WATER AND PRIVATE SEPTIC SYSTEM.
  4. THE SURVEY ON WHICH THIS PLAN IS BASED ON IS A FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY NJR & ASSOCIATES IN OCTOBER OF 2018.
  5. THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, ALTERNATIVE COMPLIANCE, OR BUILDING/GRADING PERMIT APPLICATIONS.
  6. THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL MONUMENTS 12CB AND 12CA.
  7. NO GRADING, REMOVAL OF VEGETATION COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS (SHADED) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.
  8. THERE ARE NO KNOWN BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
  9. THIS PROJECT IS LOCATED WITHIN THE LITTLE PATIENT RIVER WATERSHED.
  10. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT SUBDIVISION, FOREST CONSERVATION OR SITE DEVELOPMENT PLAN. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE LOCATION, DRIVEWAY LOCATION, TREE CLEARING, AND/OR OTHER REQUIREMENTS AS THE DEVELOPMENT PLAN PROCESS THROUGH THE PLAN REVIEW PROCESS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS.
  11. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  12. CONTRACTOR TO MAINTAIN POSITIVE SLOPE AWAY FROM THE FOUNDATION OF THE HOUSE.
  13. PREVIOUS SPZ FILE REFERENCE: ECP-13-038, F-13-046 AND F-13-115.
  14. THERE IS NO EXISTING STRUCTURE LOCATED ON THIS PROPERTY.
  15. THERE ARE NO EXISTING ENVIRONMENTAL FEATURES WITHIN THE L.O.D.
  16. NO SPECIMEN TREES ARE PROPOSED FOR REMOVAL.

**SOIL TABLE**

SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLOGIC
GgB	Genesee loam, 8 to 8% slope	B	No
GgC	Genesee loam, 8 to 15% slope	B	No
BrD	Bricklow Chert loam 15 to 25% slope	B	No
GmB	Glenville silt loam, 3 to 8% slope	C	Yes

PLAN PREPARED BY:  
**NJR & Associates**  
 Land Surveying and Planning  
 2770 STATE ROUTE 32  
 WEST FRIENDSHIP, MD 21794  
 TEL: (240) 508-3800

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE \_\_\_\_\_

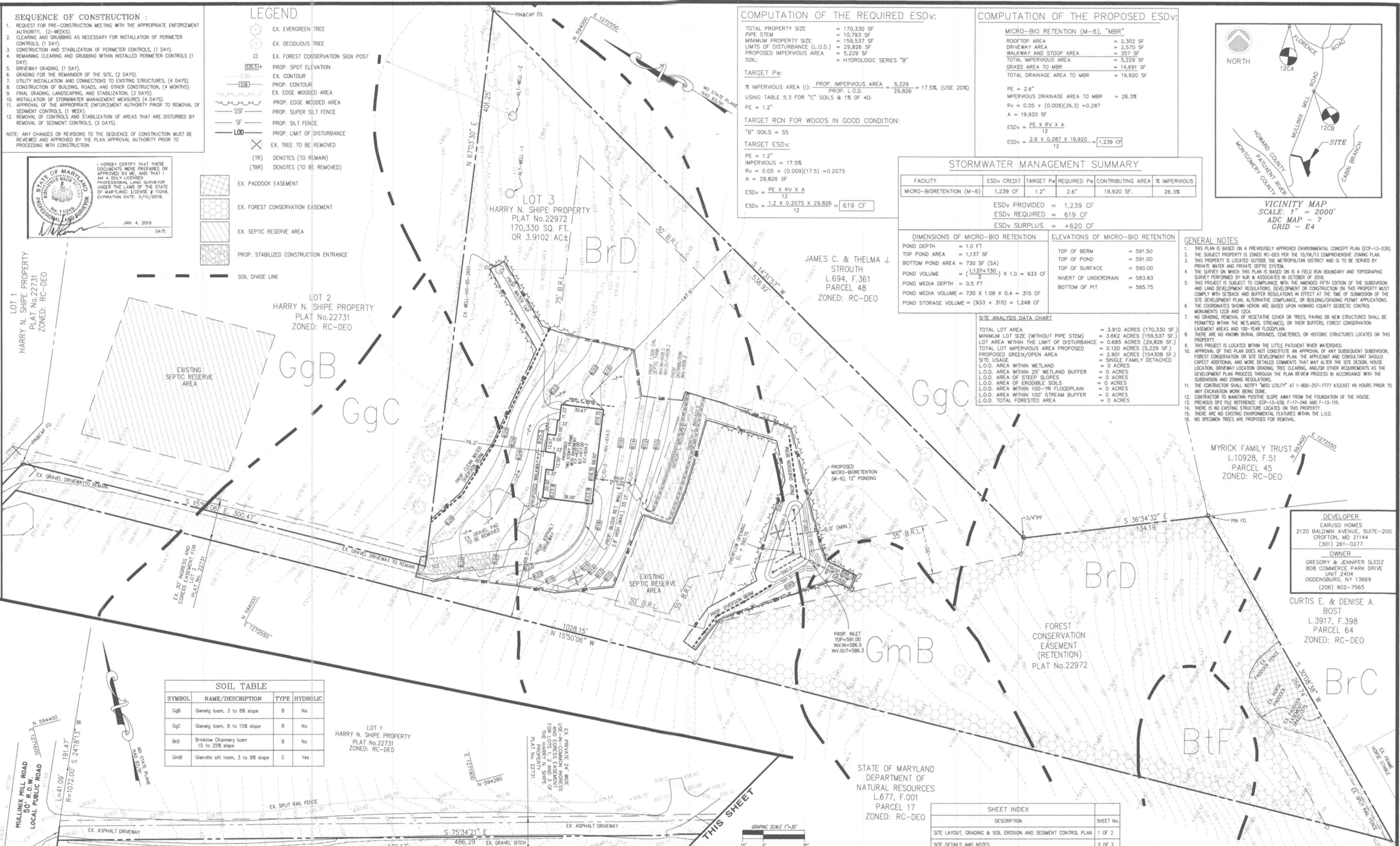
CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE \_\_\_\_\_

**SITE PLAN**  
 LOT 3  
 HARRY N. SHIPE PROPERTY  
 PLAT No. 22972  
 TAX MAP 12, GRID 17, PARCEL 75  
 2595 MULLINIX MILL ROAD, MT. AIRY, 21771  
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND ZONING = RC-DEO  
 SITE, STORMWATER MANAGEMENT, GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN  
 SCALE: 1" = 30' JOB NO.: 3506 DATE: DEC. 28, 2018 SHEET: 1 OF 2

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

**OWNER**  
 GREGORY & JENNIFER SLEDZ  
 808 COMMERCE PARK DRIVE  
 UNIT 2404  
 ODDENSBURG, NY 13669  
 (206) 902-7565

CURTIS E. & DENISE A. BOST  
 L.3917, F.398  
 PARCEL 64  
 ZONED: RC-DEO



**B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

**Definition**  
To stabilize disturbed soils with permanent vegetation.

**Purpose**  
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**
1. Seed Mixtures
    - a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness 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, playgrounds, 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 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.

**1. Kentucky Bluegrass/Full Sun Mixture:** For use in areas that receive intensive management. Irrigation required in the areas of central 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 by weight.

**2. Kentucky Bluegrass/Partial Sun Mixture:** For use in full sun areas where rapid establishment is necessary and when turf will be subjected to intensive management. Recommended Certified Kentucky Bluegrass Cultivars/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 total mixture by weight.

**3. Tall Fescue/Kentucky Bluegrass/Full Sun Mixture:** For use in drought prone areas and/or for areas receiving low to medium maintenance in full sun to medium shade. Recommended Certified Kentucky Bluegrass 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.

**4. Kentucky Bluegrass/Fine Fescue Shade Mixture:** For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas. 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 square feet.

**5. 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.

**6. Ideal Times of Seeding for Turf Grass Mixtures**  
Western MD: March 15 to June 1 August 1 to October 1 (Hardness Zones: 5b, 6a)  
Central MD: March 10 to May 15, August 15 to October 15 (Hardness Zones: 6b)  
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 7a, 7b)

**7. Till areas to receive seed by disk or other approved methods to a depth of 2 to 4 inches, level and rake the grass to prepare a proper seedbed. Remove stones and debris over 1/4 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.**

**8. 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) unless irrigation is already established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on sandy sites.**

**9. 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 to a uniform soil thickness of 1/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pots 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 uniformity as they are transported vertically with a firm grasp on the upper 10 percent of the section.
- d. Sod must not be harvested or transported 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 transported within this period must be approved by an agronomist or soil scientist prior to its installation.

**2. Sod Installation**

- 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 lightly 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.
- c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Ensure solid contact exists between sod roots and the underlying soil surface.
- d. Water the sod immediately following rolling and tamping into the underside of the new sod pad and soil surface below the sod area thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

**3. Sod Maintenance**

- a. In the absence of adequate rainfall, water daily during the first week or so after installation and uniformly as necessary to maintain moist soil to a depth of 4 inches. Water under 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 than 1/2 of the grass height must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

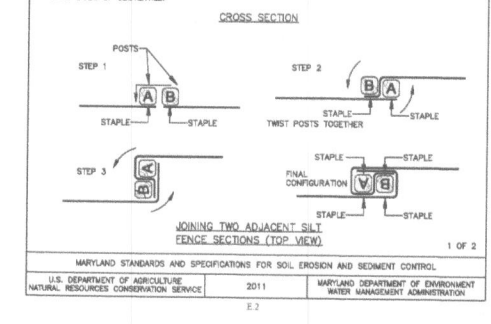
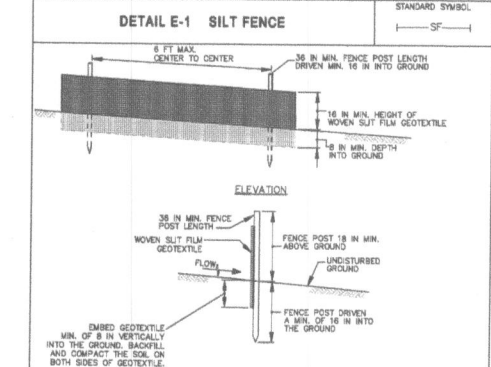
**4. Temporary Seeding Summary**

Hardness Zone (from Figure B.3):	Seed Mixture (from Table B.3):	Application Rate (lb/1000)	Seeding Dates	Seeding Depth	Fertilizer Rate (10-20-20)	Lime Rate
1	Cool Season Annual Ryegrass or Equal	40 lb/1000	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/4-1/2 in	436 lb/1000 (10 lb/1000 ft)	2 tons/1000 (1000 ft)
2	Warm Season Fescue Mixture or Equal	30 lb/1000	May 16 to July 31	1/2 in		

**Permanent Seeding Summary**

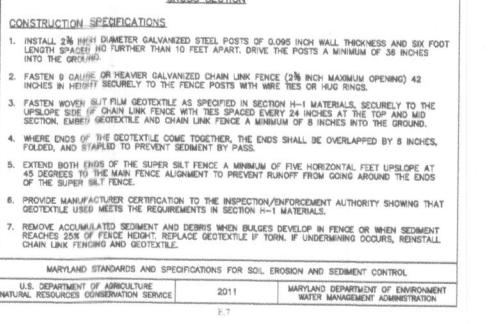
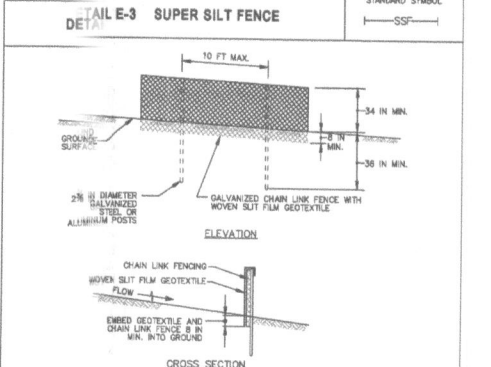
Hardness Zone (from Figure B.3):	Zone 6b	Fertilizer Rate (10-20-20)	Lime Rate				
No.	Species	Application Rate (lb/1000)	Seeding Dates	Seeding Depth	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
1	Cool Season Annual Ryegrass or Equal	40 lb/1000	May 1 to May 15, Aug. 1 to Oct. 15	1/4-1/2 in	43 pounds/1000 (10 lb/1000 ft)	90 lb/1000 (10 lb/1000 ft)	2 tons/1000 (1000 ft)
2	Warm Season Fescue Mixture or Equal	30 lb/1000	May 16 to July 31	1/2 in			

**DETAIL E-1 SILT FENCE**



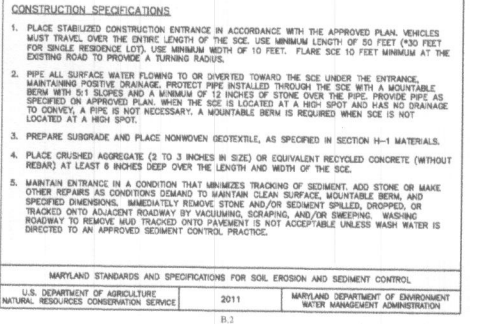
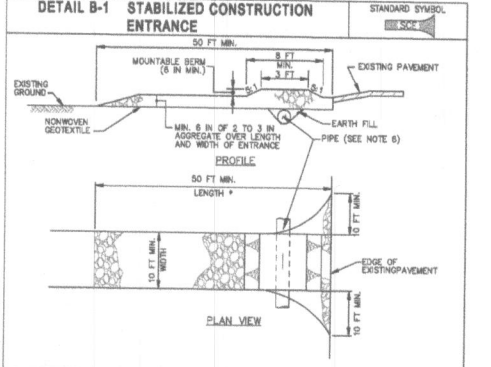
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**DETAIL E-3 SUPER SILT FENCE**



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**DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE**



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**I. BIORETENTION AREA SOIL SPECIFICATION**

**PLANTING SOIL:**  
THE BIORETENTION AREA SHALL CONSIST OF A PLANTING SOIL HAVING A HOMOGENEOUS MIX OF SOIL 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.

THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERBERIS, GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, GANDIAN THISTLE 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 - 6.5
ORGANIC MATTER	15 - 30%

THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE ABOVE SOILS:

PH ORGANIC MATTER: 1 TEST PER 900 CUBIC YARDS, BUT NOT MORE THAN 1 TEST PER BIORETENTION AREA.

ONE GRAIN SIZE ANALYSIS SHALL BE PERFORMED PER 900 CUBIC YARDS OF PLANTING SOIL, BUT NOT LESS THAN 1 TEST PER BIORETENTION AREA.

**II. BIORETENTION 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 PROCEDURE.
- 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 O5) - 10%
- SOLUBLE POTASH (K2O) - 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. TABLET.
3 GAL. CONTAINER	2 ea. 21 gm. TABLET.
5 GAL. CONTAINER	3 ea. 21 gm. TABLET.
7 GAL. CONTAINER	5 ea. 21 gm. TABLET.

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 BELOW 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 GROUND.
- THE MULCH AND PLANTED GROUND COVER BED SHOULD BE COVERED WITH A PRE-EMERGENT HERBICIDE.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

**B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION**

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

**Purpose**  
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.

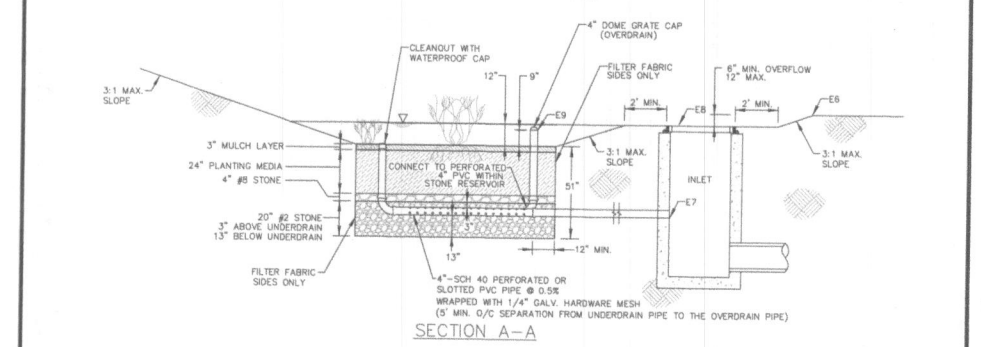
- Criteria**
1. Select one or more of the species or mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, 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. and maintain until the next seeding season.

**Temporary Seeding Summary**

Hardness Zone (from Figure B.3):	Seed Mixture (from Table B.3):	Application Rate (lb/1000)	Seeding Dates	Seeding Depth	Fertilizer Rate (10-20-20)	Lime Rate
1	Cool Season Annual Ryegrass or Equal	40 lb/1000	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/2 in	436 lb/1000 (10 lb/1000 ft)	2 tons/1000 (1000 ft)
2	Warm Season Fescue Mixture or Equal	30 lb/1000	May 16 to July 31	1/2 in		

**NOTES**

1. FACILITY SHALL BE MINIMUM OF 10 FT FROM ANY BUILDING.
2. FACILITY SHALL BE INSTALLED IN EXCAVATED VIRGIN SOIL (NOT FILL).
3. FACILITY SHALL BE MINIMUM 4' ABOVE THE SEASONAL HIGH WATER TABLE.
4. REGULAR INSPECTIONS SHALL BE REQUIRED DURING FOLLOWING STAGES OF THE CONSTRUCTION.
  - 4.1. DURING EXCAVATION TO SUBGRADE AND PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEM.
  - 4.2. DURING EXCAVATION TO PLANTING MEDIA.
  - 4.3. DURING CONSTRUCTION OF FINAL GRADING AND CONVEYANCE.
  - 4.4. UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.
5. 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.
6. THIS STANDARD IS A REFERENCE TO SHOW THE ELEMENTS AND MINIMUM DIMENSIONS FOR A MICRO-BIO RETENTION FACILITY. EACH FACILITY SHALL BE DESIGNED AND APPROVED ON A SITE SPECIFIC BASIS. THIS DETAIL PROVIDES BASIC SPACES TO INFORM WHERE AS-BUILT INFORMATION IS REQUIRED FOR SWH CLOSOUT.



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, 2011.

**MICRO-BIORETENTION (M-6) DETAIL (NOT TO SCALE)**

**PLANTING SCHEDULE - MICRO-BIORETENTION**

SHRUB	BOTANICAL NAME	COMMON NAME	CONDITION	SIZE	REMARKS
1	SHRUB	LEX GABRA	INKBERY	CONTAINER	12" PLANT 3' APART
2	SHRUB	HAMELIS VIRGINIANA	WITCH HAZEL	CONTAINER	12"-24" PLANT 3' APART
3	PERENNIAL	IRIS VERSICOLOR	BLUE FLAG	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRD
4	PERENNIAL	GERANIUM MACULATUM	CRANESBILL	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRD
5	PERENNIAL	SOLIDAGO SPHACELATA	GOLDEN FLEECE	SEEDLINGS	PLANT 15" APART, TRIANGULAR GRD

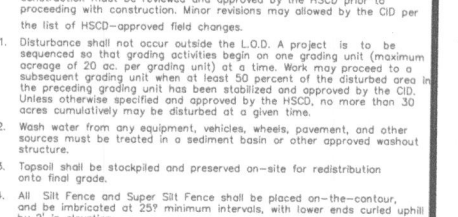
**HOWARD COUNTY CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**

1. 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 OD must be given at the following stages:
  - a. Prior to the start of earth disturbance.
  - b. Upon completion of the installation of perimeter erosion 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.
 Other building or grading inspection approvals may not be authorized until this initial approval by the CID. 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.
3. 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.
4. 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 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 cycles if the ground is frozen and stabilized (Sec. B-4-1) specifications shall be enforced in areas with >15% of cut and/or fill. Sloppies (Sec. B-4-8) in excess of 20 ft. must be benched with a stable outlet and steep slope, and highly erodible areas shall receive silt stabilization matting (Sec. B-4-6).
5. 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:
  - Total Area of Site: = 3,910 Acres (3,662 Acres w/O PIPE STEM)
  - Area to be roofed or paved: = 0.120 Acres.
  - Area to be vegetatively stabilized: = 3,790 Ac. Yds.
  - Total Cut: = 3700 Cu. Yds.
  - Total Fill: = 3900 Cu. Yds.
  - Office waste/hollow area location: = to be determined.
7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. 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 (routine, pre-storm event, during rain event)
  - b) Name of inspector
  - c) Weather information (current conditions as well as time and amount of rain)
  - d) Brief description of project's status (e.g., percent complete)
  - e) Evidence of sediment discharges
  - f) Identification of plan deficiencies
  - g) Identification of sediment controls that require maintenance
  - h) Identification of missing or improperly installed sediment controls
  - i) Compliance status regarding the sequence of construction and stabilization requirements
  - j) Photographs
  - k) Monitoring/sampling
  - l) Maintenance and/or corrective action performed
  - m) Notes associated with the inspection, items on general permit for Stormwater Associated with Construction Activities (NPDES, MDE).
9. 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 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 be allowed by the CID per 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. Unsubstantiated grading units 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 structure.
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 by 2' in elevation.
15. Stream channels must not be disturbed during the following restricted time periods (including):
  - a) Use I and IP March 1 - June 30
  - b) Use II and IIP October 1 - April 30
  - c) 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.

**OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIO RETENTION (M-6)**

1. The Owner shall maintain the plant material, mulch layer and soil 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 1, Table A-4.1 and 2.
2. The Owner shall perform a plant in the spring and in the fall of 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.
3. 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.
4. The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

**SITE PLAN LOT 3 HARRY N. SHIFF PROPERTY**



2595 MULLINX MILL ROAD, MT. AIRY, 21771  
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND ZONING = RC-DEO  
SITE, STORMWATER MANAGEMENT, GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 30' JOB NO.: 3506 DATE: DEC. 28, 2018 SHEET: 2 OF 2

PLAN PREPARED BY:

**NJR & ASSOCIATES**  
Land Surveying and Planning

2770 STATE ROUTE 32  
WEST FRIENDSHIP, MD 21794  
TEL: (240) 508-3200

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME OR THAT I AM A FULLY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE # 11049, EXPIRES DATE: 3/26/2019.

DEVELOPER  
CARUSO HOMES  
2120 BALDWIN AVENUE, SUITE-200  
CROFTON, MD 21114  
(301) 261-0277

OWNER  
GREGORY & JENNIFER SLEDZ  
808 COMMERCE PARK DRIVE  
UNIT 2404  
ODDENSBURG, NY 13669  
(206) 902-7565

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE

DATE