

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

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

- General Specifications
  - Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
  - Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 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.
  - 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 1/0 percent of the section.
  - Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
  - 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
  - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
  - 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.
  - 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
  - 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 inches. Water sod during the heat of the day to prevent wilting.
  - After the first week, sod watering is required as necessary to maintain adequate moisture content.
  - Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

## 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:
  - 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,
  - 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.
- 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-4-1) specifications shall be enforced in areas with > 15' of cut and/or fill. 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.
- Site Analysis:
 

Total Area of Site:	0.99 Acres
Area Disturbed:	0.67 Acres
Area to be roofed or paved:	0.124 Acres
Area to be vegetatively stabilized:	0.542 Acres
Total Cut:	45.8 Cu. Yds.
Total Fill:	587 Cu. Yds.

 Offsite waste/borrow area location: SITE WITH ACTIVE GRADING PERMIT.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 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:
  - 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)
  - 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
  - Photographs
  - Monitoring/sampling
  - Maintenance and/or corrective action performed
  - 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 lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
- 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.
- 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.
- Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
- Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
- All Silt Fence and Super Silt Fence shall be placed on-the-contour, or be imbricated at 25' maximum intervals, with lower ends curled uphill by 2' in elevation.
- Stream channels must not be disturbed during the following restricted time periods (inclusive):
  - Use I and IP March 1 - June 15
  - Use III and IIIIP October 1 - April 30
  - Use IV March 1 - May 31
- 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.

## B-4-8 STANDARDS AND SPECIFICATIONS

### FOR STOCKPILE AREA

#### Definition

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

#### Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

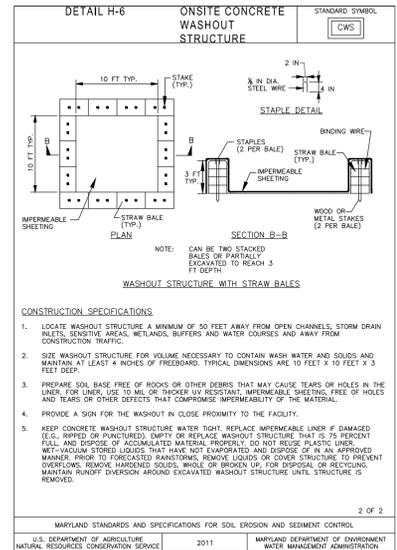
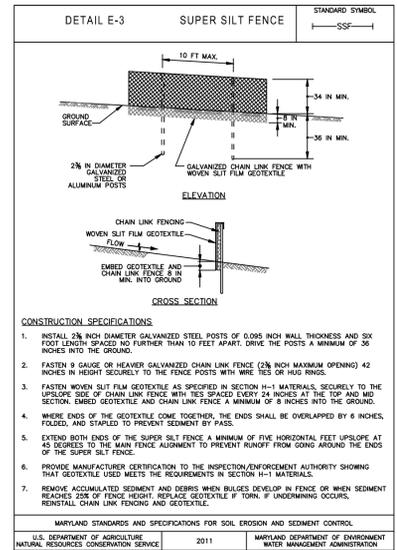
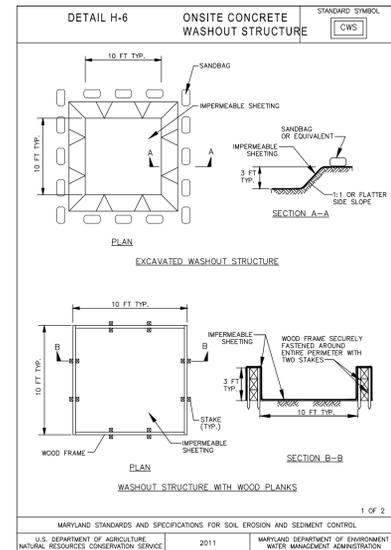
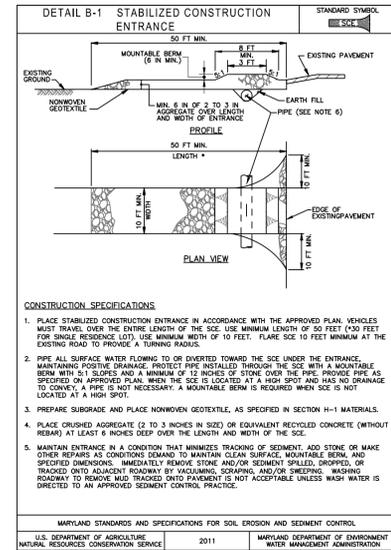
#### Conditions Where Practice Applies

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

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- 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 must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrade side.
- 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 must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4.1 Incremental Stabilization and Standard B-4.4 Temporary Stabilization.
- 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 impervious sheeting.

#### Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-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 B-3 Land Grading.



**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**

- Seed Mixtures
  - General Use
    - 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.
    - 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.
    - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
    - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 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.
  - Turfgrass Mixtures
    - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
    - 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.
      - 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 by weight.
      - Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full 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 bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      - 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.
      - Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For 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 pounds per 1000 square feet.

- Notes:**  
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 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, 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 1 1/2 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 seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.**

HARDINESS ZONE (from figure B.3):		7a			FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac.)	SEEDING DATES	SEEDING DEPTHS	N	P <sub>2</sub> O	K <sub>2</sub> O	
	CREeping RED FESCUE KENTUCKY BLUEGRASS	60/15	2/15 - 4/30 8/15 - 10/31	1/4 - 1/2 in.	45 pounds per acre (1.0 lb/1000 sq ft)	90 lb/ac (2 lb/1000 sq ft)	90 lb/ac (2 lb/1000 sq ft)	2 tons/ac (90 lb/1000 sq ft)
	TALL FESCUE PERENNIAL RYEGRASS WHITE CLOVER	40/25/5	2/15 - 4/30 8/15 - 10/31	1/2"	45 pounds per acre (1.0 lb/1000 sq ft)	90 lb/ac (2 lb/1000 sq ft)	90 lb/ac (2 lb/1000 sq ft)	2 tons/ac (90 lb/1000 sq ft)

### Owners/Developer Certification:

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training as a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

William Verdecchia  
Owner's Developer's Signature  
Date: 8/14/2023

Maitreyi Verdecchia  
Printed Name & Title

### Design Certification:

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Matthew Sichel  
Designer's Signature  
Date: 8/15/2023

Matthew Sichel  
Printed Name  
MD Registration No. 28935  
P.E., R.L.S., or R.L.A. (circle one)

### Howard SCD Signature Block:

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
Alexander Bratovic  
Howard Soil Conservation District  
Date: 9/13/2023

### APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division  
Date: 9/14/2023

Chief, Division of Land Development  
Date: 9/14/2023

Director  
Date:

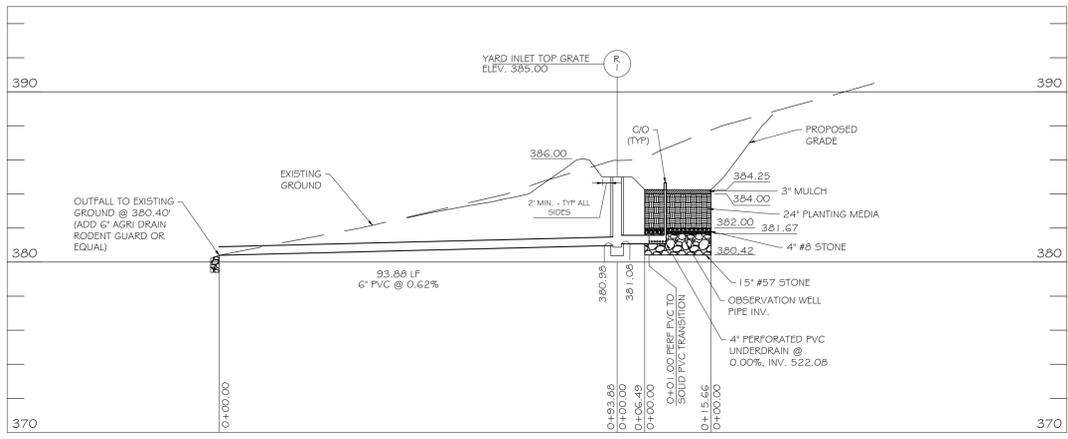
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 26836 EXPIRATION DATE: 01/18/2024 EMAIL: ERIC.KOHL@KCI.COM



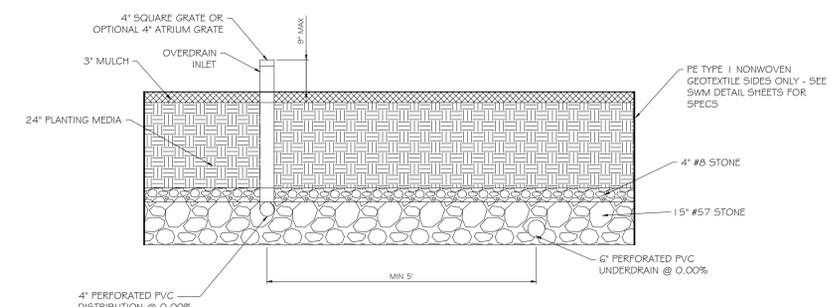
REVISIONS		DATE
NO.	DESCRIPTION	BY
		8/14/2023
		N.T.S.
		DESIGNED BY: FW
		DRAWN BY: JDL

WILLIAM & MAITREYI VERDECCHIA  
SITE DEVELOPMENT PLAN DETAILS  
THE BETTY L. JONES PROPERTY SUBDIVISION  
10080 REED LANE  
ELLCOTT CITY, MD 21042  
ZONING: R-20 TAX MAP: 17 PARCEL: 0174 ELECTION DIST: 9A

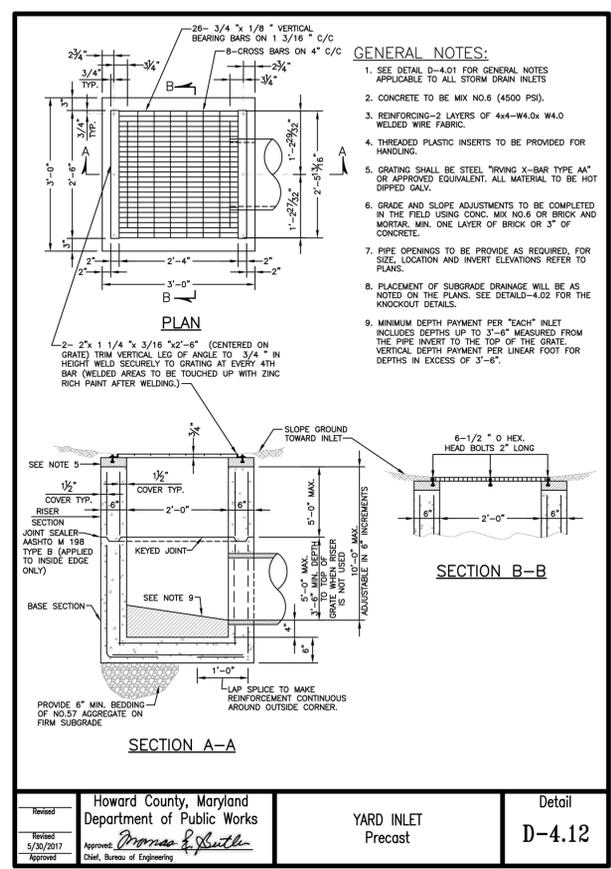
DRAWING NO.  
ZhoRL1  
SHEET 4 OF 4  
KCI JOB NUMBER  
271803754.96



(A-A) MICRO BIORETENTION PROFILE  
SCALE: H1"=20'  
V1"=5'

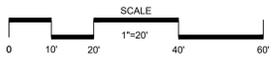
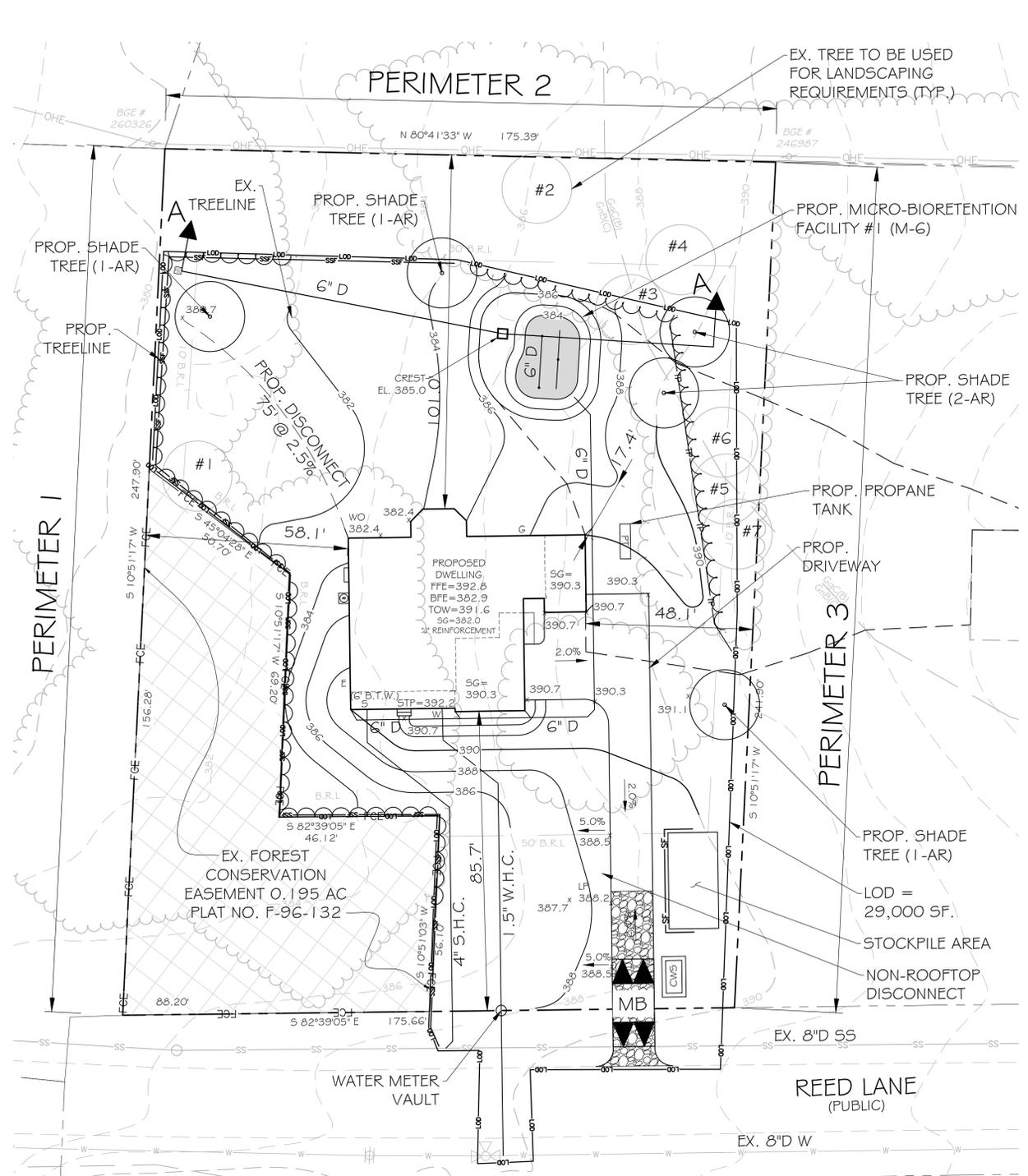


MICRO BIORETENTION TYPICAL SECTION  
SCALE: 1"=1'



- GENERAL NOTES:**
- SEE DETAIL D-4.01 FOR GENERAL NOTES APPLICABLE TO ALL STORM DRAIN INLETS.
  - CONCRETE TO BE MIX NO.6 (4500 PSI).
  - REINFORCING-2 LAYERS OF 4x4-W4.0x4.0 WELDED WIRE FABRIC.
  - THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
  - GRATING SHALL BE STEEL "IRVING X-BAR TYPE A4" OR APPROVED EQUIVALENT. ALL MATERIAL TO BE HOT DIPPED GALV.
  - GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONC. MIX NO.6 OR BRICK AND MORTAR. MIN. ONE LAYER OF BRICK OR 3" OF CONCRETE.
  - PIPE OPENINGS TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO PLANS.
  - PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS NOTED ON THE PLANS. SEE DETAIL D-4.02 FOR THE KNOCKOUT DETAILS.
  - MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-8" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE GRATE. VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-8".

Howard County, Maryland Department of Public Works	YARD INLET Precast	Detail D-4.12
Approved: <i>Thomas J. Smith</i> Chief, Bureau of Engineering		



**DRAWING LEGEND**

---	EXISTING MINOR CONTOUR (2' INTERVAL)	---	EXISTING MAJOR CONTOUR (10' INTERVAL)
---	ADJACENT PROPERTY LINE	---	ADJACENT PROPERTY LINE
---	EXISTING PROPERTY BOUNDARY	---	EXISTING PROPERTY BOUNDARY
---	EXISTING ROAD / EDGE OF PAVING	---	EXISTING ROAD CENTERLINE
---	PROPOSED MINOR CONTOUR (2' INTERVAL)	---	PROPOSED MAJOR CONTOUR (10' INTERVAL)
---	EXISTING BUILDING	---	EXISTING BUILDING
---	PROPOSED BUILDING	---	PROPOSED BUILDING
---	PROPOSED SPOT ELEVATION	---	LIMIT OF DISTURBANCE
---	PROPOSED SILT FENCE	---	PROPOSED SILT FENCE
---	BrC	---	GdB
---	SOIL DELINEATION LINE	---	SOIL DELINEATION LINE
---	T-P	---	TREE PROTECTION FENCE
---	MB	---	MOUNTABLE BERM
---	CWS	---	CONCRETE WASHOUT
---	---	---	STABILIZED CONSTRUCTION ENTRANCE
---	---	---	FOREST CONSERVATION EASEMENT
---	---	---	NON-ROOFTOP DISCONNECT
---	---	---	EXISTING TREE LINE
---	---	---	PROPOSED TREE LINE

**Owners/Developer Certification:**

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training as a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

William Verdecchia  
Owner's/Developer's Signature  
Date: 8/14/2023

Maitreyi Verdecchia  
Printed Name & Title

**Design Certification:**

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, and that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Matthew Sichel  
Designer's Signature  
Date: 8/15/2023

Matthew Sichel  
Printed Name  
MD Registration No. 28935  
P.E., R.L.S., or R.L.A. (circle one)

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Development Engineering	Date
Chief, Division of Land Development	Date
Director	Date

**Howard SCD Signature Block:**

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Alexander Bratovic  
Howard Soil Conservation District  
Date: 9/13/2023

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. 26838 EXPIRATION DATE: 01/18/2024 EMAIL: ERIC.KOHL@KCI.COM



**KCI TECHNOLOGIES**

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

936 RIDGEBROOK ROAD  
SPRINGSBORO, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
FAX: (410) 316-7818

NO.	DATE	DESCRIPTION	BY

WILLIAM & MAITREYI VERDECCHIA  
MICRO-BIORETENTION DETAILS

THE BETTY L. JONES PROPERTY SUBDIVISION

10080 REED LANE  
ELLCOTT CITY, MD 21042

ZONING: R-20 TAX MAP: 17 GRID: 20 PARCEL: 0174 ELECTION DIST: 9A

DRAWING NO. **ZhoRL1**

SHEET 2 OF 4  
KCI JOB NUMBER 271803754.96

### B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

**Definition**  
Using vegetation as cover to protect exposed soil from erosion.  
**Purpose**  
To promote the establishment of vegetation on exposed soil.  
**Conditions Where Practice Applies**  
On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

**Effects on Water Quality and Quantity**  
Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.  
Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

**Adequate Vegetative Establishment**  
Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

- Adequate vegetative stabilization requires 95 percent groundcover.
- If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
- If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
- Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

### 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**
- Select one or more of the species or seed mixtures listed in Table B.1 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.
  - For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
  - 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.

HARDINESS ZONE (from figure B.3):		7a			FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac.)	SEEDING DATES	SEEDING DEPTHS		
	FOXTAIL MILLET ( <i>Setaria italica</i> )	30 LBS.	5/1 - 8/14	1/2"	43G lb/ac (10 lb/ 1000 sq)	2 tons/ac (90 lb/ 1000 sq)
	ANNUAL RYEGRASS ( <i>Lolium perenne</i> ssp. multiflorum)	40 LBS.	2/15 - 4/30 AND 8/15 - 11/30	1/2"		

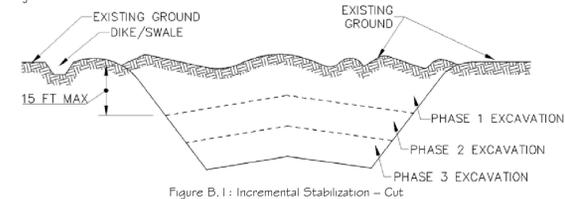
**NOTE:**  
1. SEEDING RATES FOR THE WARM SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX.

### B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

**Definition**  
Establishment of vegetative cover on cut and fill slopes.  
**Purpose**  
To provide timely vegetative cover on cut and fill slopes as work progresses.  
**Conditions Where Practice Applies**  
Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

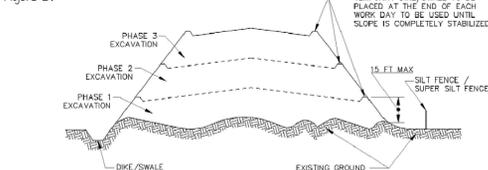
- Criteria**
- A. Incremental Stabilization - Cut Slopes
- Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
  - Construction sequence example (Refer to Figure B.1):
    - Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
    - Perform Phase 1 excavation, prepare seedbed, and stabilize.
    - Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
    - Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

**Note:** Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.



- B. Incremental Stabilization - Fill Slopes
- Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
  - Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
  - At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
  - Construction sequence example (Refer to Figure B.2):
    - Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
    - At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
    - Place Phase 1 fill, prepare seedbed, and stabilize.
    - Place Phase 2 fill, prepare seedbed, and stabilize.
    - Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

**Note:** Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.



### B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

**Definition**  
The process of preparing the soils to sustain adequate vegetative stabilization.  
**Purpose**  
To provide a suitable soil medium for vegetative growth.  
**Conditions Where Practice Applies**  
Where vegetative stabilization is to be established.

- Criteria**
- A. Soil Preparation
- Temporary Stabilization
    - 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.
    - Apply fertilizer and lime as prescribed on the plans.
    - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
  - Permanent Stabilization
    - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      - Soil pH between 6.0 and 7.0.
      - Soluble salts less than 500 parts per million (ppm).
      - 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.
      - Soil contains 1.5 percent minimum organic matter by weight.
      - 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.
    - 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.
    - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
    - 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. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site 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.

- B. Topsoiling
- 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.
  - 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.
  - Topsoiling is limited to areas having 2:1 or flatter slopes where:
    - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
    - 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.
    - The original soil to be vegetated contains material toxic to plant growth.
    - The soil is so acidic that treatment with limestone is not feasible.
  - Areas having slopes steeper than 2:1 require special consideration and design.
  - Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
    - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be 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.
    - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
    - 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.
  - Topsoil Application
    - Erosion and sediment control practices must be maintained when applying topsoil.
    - Uniformly distribute topsoil in a 5 to 8 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.
    - 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)
- 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.
  - 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 laws and must bear the name, trade name or trademark and warranty of the producer.
  - 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 98 to 100 percent will pass through a #20 mesh sieve.
  - 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.
  - 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.

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

**Definition**  
The application of seed and mulch to establish vegetative cover.  
**Purpose**  
To protect disturbed soils from erosion during and at the end of construction.  
**Conditions Where Practice Applies**  
To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

- Criteria**
- A. Seeding
- Specifications
    - All seed must meet the requirements 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 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
    - Mulch alone may be applied between the fall and spring seedings dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
    - 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 cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
    - Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
  - Application
    - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      - 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.
      - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
    - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      - Cultipacker 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.
      - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
    - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      - 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; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
      - 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.
      - Mix seed and fertilizer on site and seed immediately and without interruption.
      - When hydroseeding do not incorporate seed into the soil.

- B. Mulching
- Mulch Materials (in order of preference)
    - 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.
    - Wood Cellulose Fiber Mulch (WCFFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      - WCFFM 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.
      - WCFFM, including dye, must contain no germination or growth inhibiting factors.
      - WCFFM 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 the grass seedlings.
      - WCFFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
      - WCFFM 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.
  - Application
    - Apply mulch to all seeded areas immediately after seeding.
    - 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.
    - Wood cellulose fiber used as mulch must be applied at 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.
  - Anchoring
    - 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 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.
      - Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petrosel, 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 heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

**Owners/Developer Certification:**  
"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training as a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."  
William Verdecchia  
Owner's/Developer's Signature  
Date: 8/14/2023  
Maireyi Verdecchia  
Printed Name & Title

**Design Certification:**  
"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
Matthew Siechel  
Designer's Signature  
Date: 8/15/2023  
Matthew Siechel  
Printed Name  
MD Registration No.: 28935  
P.E., R.L.S., or R.L.A. (circle one)

**Howard SCD Signature Block:**  
This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
Alexander Bratovich  
Howard Soil Conservation District  
Date: 9/13/2023

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
9/13/2023  
Chief, Development Engineering Division  
Date: 9/14/2023  
Chief, Division of Land Development  
Date: 9/14/2023  
Director  
Date:

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. 26838 EXPIRATION DATE: 01/18/2024 EMAIL: ERIC.KOHL@KCI.COM



**KCI TECHNOLOGIES**  
ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS  
936 RIDGEBROOK ROAD  
SPRING, MARYLAND 21152  
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FAX: (410) 316-7818

REVISIONS			DATE
NO.	DATE	DESCRIPTION	BY
			8/14/2023
			N.T.S.
			FFW
			JDL

**WILLIAM & MAITREYI VERDECCHIA SITE DEVELOPMENT PLAN NOTES**  
THE BETTY L. JONES PROPERTY SUBDIVISION  
10080 REED LANE  
ELLCOTT CITY, MD 21042  
ZONING: R-20 TAX MAP: 17 GRID: 20 PARCEL: 0174 ELECTION DIST: 9A

DRAWING NO.  
ZhoRL1  
SHEET 3 OF 4  
KCI JOB NUMBER  
271803754.96

LOT INFORMATION

OWNER: WILLIAM & MAITREYI VERDECCHIA
817 STREEPER ST
BALTIMORE, MD 21224
PHONE: 240.731.9666
EMAIL: MVERDECCHIA102@GMAIL.COM
DEED REF: 274598
PLAT REF: 12217
TAX MAP: 17 GRID: 20 PARCEL: 0174 LOT: 2
SITE ADDRESS: 10080 REED LANE
ELLCOTT CITY, MD 21042

DEVELOPER: KEYSTONE CUSTOM HOMES
227 GRANITE RUN DR., SUITE 100
LANCASTER, PA 17601
EMAIL: GREENSMITH@KEYSTONECUSTOMHOME.COM
PHONE: 717-464-9060

Table with 3 columns: SETBACKS, MIN. LOT AREA, PROPOSED. Rows include MIN. LOT AREA, MIN. LOT WIDTH, FRONT YARD, SIDE YARD, REAR YARD, BLDG. HEIGHT.

- 1. NO WETLANDS, STREAMS, FLOODPLAIN, STEEP SLOPES, OR ASSOCIATED BUFFERS EXIST WHICH MAY AFFECT THE CONSTRUCTION OF THE PROPOSED BUILDING AND ITS APPURTENANCES.
2. 10080 REED LANE IS LOCATED WITHIN THE METROPOLITAN DISTRICT; THEREFORE, ROAD FRONTAGE IMPROVEMENTS SHALL BE ADDRESSED AT SITE DEVELOPMENT.
3. HOWARD COUNTY IS GRANTED ACCESS TO ANY ON LOT SWM FACILITIES FOR INSPECTION IN THE EVENT OF A MALFUNCTION.
4. NO PERSON SHALL PLACE ANY OBSTRUCTION IN AN EASEMENT ASSOCIATED WITH A FEDERAL OR STATE REGULATED RESOURCE WITHOUT PRIOR WRITTEN AUTHORIZATION BY THE APPROPRIATE REGULATORY AUTHORITY.
5. THE MUNICIPALITY, ITS AGENTS AND EMPLOYEES SHALL HAVE THE RIGHT TO ENTER ANY PROPERTY WHERE STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL FACILITIES ARE LOCATED FOR THE PURPOSE OF INSPECTING AND, IF NECESSARY, IN THE EVENT THE RESPONSIBLE PARTIES FAIL TO DO SO, MAINTAINING OR REPAIRING SAID FACILITIES.
6. STORMWATER MANAGEMENT WILL BE PROVIDED VIA A MICRO-BIO RETENTION POND (M-G) AND NONROOFTOP DISCONNECT.
7. NO WAIVERS WERE APPROVED OR APPLIED FOR WITH THIS PROJECT.

- 8. SUMMARY OF FINDINGS FOR APFO TRAFFIC ANALYSIS:
A. DATE OF REPORT: NOT APPLICABLE
B. DATE OF COUNT(S): NOT APPLICABLE
C. REPORT SUBMITTED AS PART OF PLAN NUMBER: NOT APPLICABLE
D. PROVIDE STATEMENT THAT SCHOOLS WERE IN SESSION ON THAT DATE(S), NOT APPLICABLE
E. LIST INTERSECTIONS STUDIED, IDENTIFY INTERSECTION AS STATE OR COUNTY JURISDICTION, AND LABEL LOS FOR THE HORIZON YEAR OF EACH INTERSECTION: NOT APPLICABLE
F. PROVIDE STATEMENT AS TO WHETHER MITIGATION IS REQUIRED AND EXPLAIN THE METHOD OF MITIGATION/IN LIEU FEE: NOT APPLICABLE

\*THIS IS A SINGLE LOT DEVELOPMENT THAT WAS PREVIOUSLY SUBDIVIDED AS PART OF F-96-132. THIS SINGLE LOT SITE DEVELOPMENT PLAN CREATES LESS THAN 5 PEAK HOUR TRIPS AND THEREFORE IS EXEMPT FROM THE ROADS TEST REQUIREMENTS\*.

Table with 2 columns: BREAKDOWN OF IMPERVIOUS AREA OUTSIDE OF ROW, HOUSE, WALKWAY, PORCH, DRIVEWAY (PAVED), TOTAL. Values include 2,958 SQ. FT., 150 SQ. FT., 150 SQ. FT., 2,295 SQ. FT., 5,403 SQ. FT.

Table with 2 columns: SITE ANALYSIS DATA CHART, a. TOTAL PROJECT AREA, b. AREA OF PLAN SUBMISSION, c. LIMIT OF DISTURBANCE, d. PRESENT ZONING DESIGNATION, e. PROPOSED USE FOR SITE AND STRUCTURES, f. FLOOR SPACE ON EACH LEVEL, g. TOTAL NUMBER OF UNITS ALLOWED, h. TOTAL NUMBER OF UNITS PROPOSED, i. MAXIMUM NUMBER OF TENANTS, j. NUMBER OF PARKING SPACES REQUIRED, k. NUMBER OF PARKING SPACES PROVIDED, l. OPEN SPACE ON SITE, m. AREA OF RECREATION OPEN SPACE REQUIRED, n. BUILDING COVERAGE OF SITE, o. APPLICABLE DPZ FLOOR REFERENCES, p. OTHER INFORMATION, q. NUMBER OF REQUIRED AND PROVIDED MIHUS, r. MIXED USE PROJECT INFORMATION.

GENERAL NOTES:

- 1. IN ACCORDANCE WITH SECTION 1.28.0 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.
2. IN ACCORDANCE WITH THE SUB REGULATIONS, BAY WINDOWS OR CHIMNEYS NOT MORE THAN 10 FEET IN WIDTH MAY PROJECT MORE THAN 4 FEET INTO ANY SETBACK, PORCHES OR DECKS MAY PROJECT NOT MORE THAN 3 FEET INTO THE FRONT OR REAR YARD SETBACKS. EXTERIOR BASEMENT AREWAYS/STAIRWAYS MAY NOT ENCRACH INTO ANY BRL.
3. THE SUBJECT PROPERTY IS ZONED R-20 PER THE 1/06/13 COMPREHENSIVE ZONING PLAN.
4. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
4.1. WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE)
4.2. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1 1/2" MIN)
4.3. GEOMETRY - MAX. 15% GRADE, MAX 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS.
4.4. STRUCTURE - (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25) (LOADING)
4.5. DRAINAGE ELEMENTS - SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
4.6. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
5. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
6. FLAG AND PILESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PILESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PILESTEM LOT DRIVEWAY.
7. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 1.6.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT AREA ALLOWED.
8. LANDSCAPING NOTE
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 1.6.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. THE EXISTING FORESTED AREAS WILL BE UTILIZED TO SATISFY LANDSCAPING REQUIREMENTS.
8.1 LANDSCAPING HAS BEEN PROVIDED IN ACCORDANCE WITH SECTION 1.6.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF \$1,500.00 WILL BE POSTED WITH THE GRADING PERMIT FOR THE 5 PROPOSED SHADE TREES.
9. FOREST CON NOTE
9.1. THIS PLAT COMPLIED WITH THE REQUIREMENTS OF SECTION 1.6.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY UTILIZING THE EXISTING FOREST CONSERVATION EASEMENT THAT WAS PREVIOUSLY ESTABLISHED UNDER THE FINAL PLAT F-96-132. THE EXISTING FOREST CONSERVATION EASEMENT IS LOCATED IN THE FRONT OF THE LOT AND CONSISTS OF 0.195 AC.
10. THE 65DBA NOISE LINE ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPT OF HOUSING AND URBAN DEVELOPMENT.
11. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES, AND ALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
12. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTION OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPING PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPING SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

NOTES

- 1. FACILITY SHALL BE A MINIMUM OF 10FT 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 THE CONCRETE SYSTEMS.
4.2. DURING PLACEMENT OF PLANTING MEDIA.
4.3. DURING CONSTRUCTION OF APURTMENT CONVEGANCE.
4.4. UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.
5. E1 TO E8 AS-BUILT SPOT ELEVATION LOCATIONS.
6. THIS STANDARD IS A REFERENCE TO SHOW THE ELEMENTS AND MINIMUM DIMENSIONS FOR A MICRO-BIORETENTION FACILITY. EACH FACILITY SHALL BE DESIGNED AND APPROVED ON A SITE SPECIFIC BASIS. THIS DETAIL PROVIDES BLANK SPACES TO INFORM WHERE AS-BUILT INFORMATION IS REQUIRED FOR SWM CLOSURE.
AS-BUILT FACILITY DIMENSIONS
WIDTH (A) - FT
LENGTH (B) - FT
DEPTH (C) - FT
AS-BUILT FACILITY ELEVATIONS
E1 - FT CORNER
E2 - FT CORNER
E3 - FT CORNER
E4 - FT CORNER
E5 - FT CORNER
E6 - FT CORNER
E7 - FT OUTLET
E8 - FT TOP OF INLET

\*SEE SECTION A-A ON SHEET 2 FOR ELEVATIONS

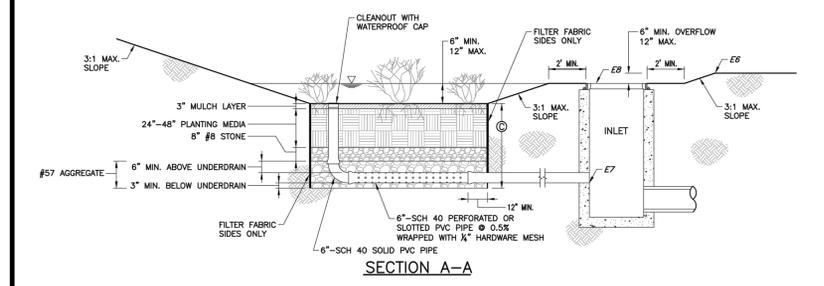


Table with 2 columns: HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS, and Detail D-9.03. Includes signature of Thomas J. Butler, Chief, Bureau of Engineering.

DRAWING LEGEND

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for LIMIT OF DISTURBANCE, PROPOSED SILT FENCE, SOIL DELINEATION LINE, TREE PROTECTION FENCE, MOUNTABLE BERM, CONCRETE WASHOUT, STABILIZED CONSTRUCTION ENTRANCE, FOREST CONSERVATION EASEMENT, NON-ROOFTOP DISCONNECT, EXISTING TREE LINE, PROPOSED TREE LINE.

Table with 2 columns: ADDRESS CHART, LOT / PARCEL #, STREET ADDRESS. Values: LOT 2 / PARCEL 174, 10080 REED LANE, ELLCOTT CITY, MD 21042.

Table with 2 columns: SYMBOL, DESCRIPTION, Kw. Values: Gg(C) GLENELG LOAM, 8-15% SLOPES, 0.24; Grr(C) GLENVILLE-BAILE SILT LOAM, 0-8% SLOPES, 0.43.

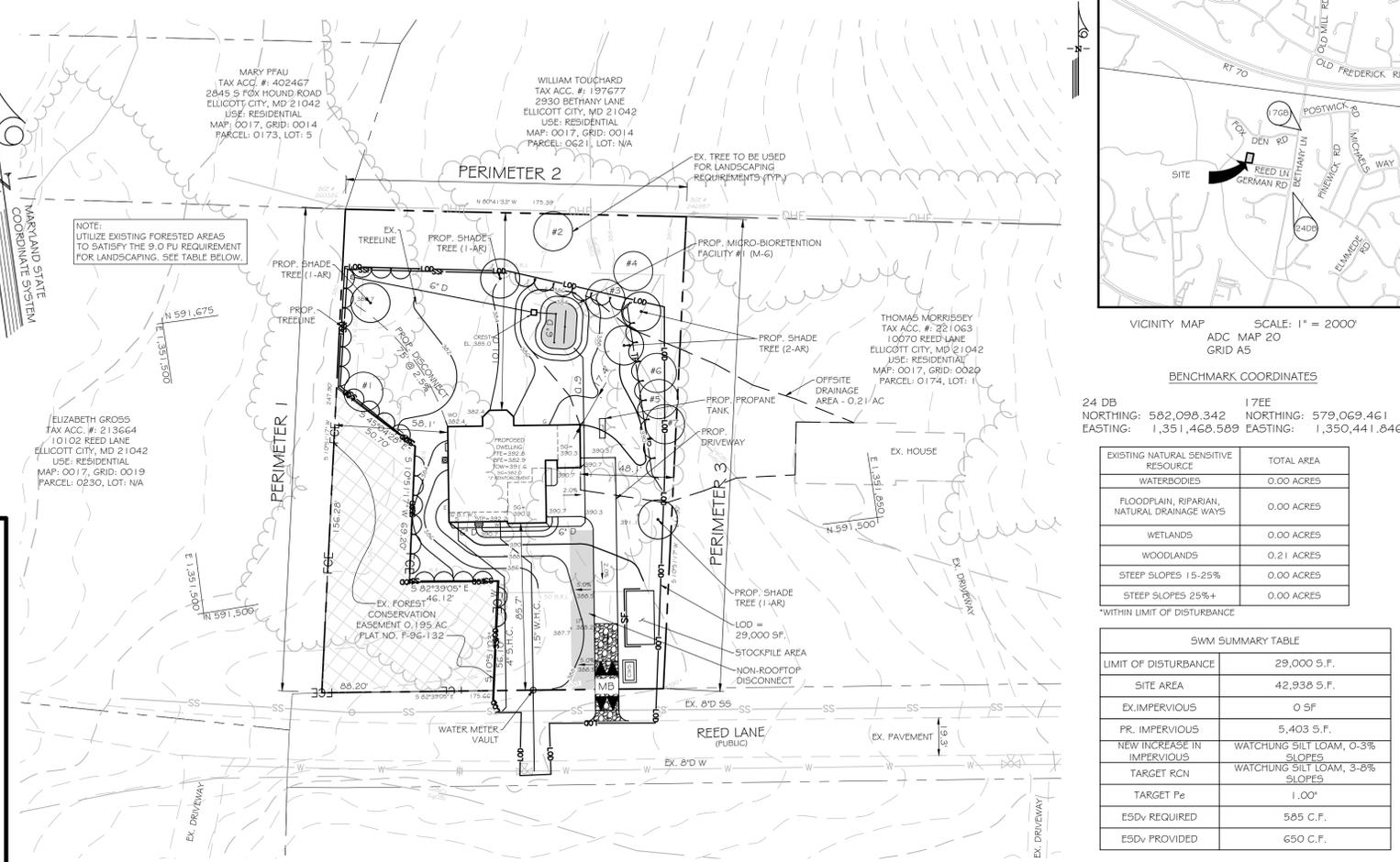
Table with 2 columns: SHEET INDEX, SHEET NO., SHEET. Values: 1 SITE DEVELOPMENT PLAN, 2 MICRO-BIORETENTION DETAILS, 3 SITE DEVELOPMENT NOTES, 4 SITE DEVELOPMENT DETAILS.

DEVELOPER'S/OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE, AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature and date of William & Maitreyi Verdecchia, dated 6/7/2023.

APPROVED: DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: Alexander Bratolovic, dated 9/14/2023. Chief, Division of Land Development: Lynda Brubaker, dated 9/14/2023. Director: [Signature], dated [Blank].



LANDSCAPE TABULATIONS

Table with 4 columns: DESCRIPTION, LANDSCAPING TYPE, REQUIREMENT, TOTAL. Includes sections for REQUIRED PLANTING, EXISTING TREES ON SITE TO BE USED TO SATISFY REQUIRED PLANTINGS, and PROPOSED TREES TO BE PLANTED ON SITE.

SCHEDULE A : PERIMETER LANDSCAPE EDGE

Table with 4 columns: CATEGORY, ADJACENT TO PERIMETER PROPERTIES, and TOTAL. Includes sections for LANDSCAPE TYPE, CREDIT FOR EXISTING VEGETATION, NUMBER OF PLANTS REQUIRED, and NUMBER OF PLANTS PROVIDED.

LIMITS OF DRAINAGE TO EACH PRACTICE

Table with 2 columns: PRACTICE, DRAINAGE AREA. Values: MICRO-BIORETENTION d1, d3, d4; ROOFTOP DISCONNECT d2.

MICRO-BIO PRACTICE SUMMARY

Table with 6 columns: MICRO-BIO (M-G), DA (S.F.), IMPERVIOUS (%), Pe (IN.) 1 YR. STORM, Pe (IN.) PROVIDED, ESDv PROVIDED (C.F.). Values: 1.00, 8683, 27, 2.60, 2.52, 535 (USE 532).

ROOFTOP DISCONNECT PRACTICE SUMMARY

Table with 4 columns: ROOF DRAIN NO., AREA TREATED (S.F.), Pe (IN.), ESDv REQUIRED/PROVIDED (C.F.). Values: 1, 604, 1.00, 47.8.

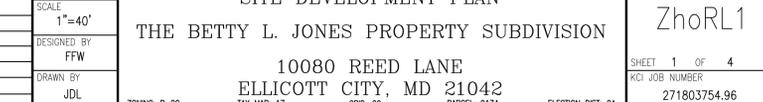
NON-ROOFTOP DISCONNECT PRACTICE SUMMARY

Table with 4 columns: DISCONNECT AREA, AREA TREATED (S.F.), Pe (IN.), ESDv REQUIRED/PROVIDED (C.F.). Values: 900, 1.00, 71.3.

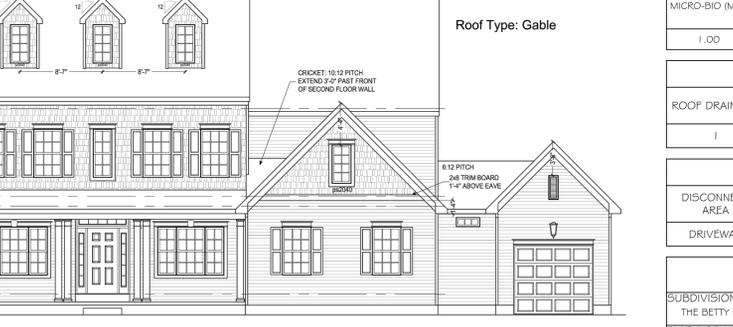
PERMIT INFORMATION CHART

Table with 4 columns: SUBDIVISION NAME, SECTION / AREA, LOT / PARCEL NO., PLAT # OR LP PLAT #. Values: THE BETTY L. JONES PROPERTY, 42,938 SF, LOT 2 / PARCEL 174, PLAT # 2217.

PROPOSED BUILDING DRAINAGE AREA PLAN



PROPOSED BUILDING FRONT ELEVATION PLAN



PROPOSED BUILDING FRONT ELEVATION PLAN SCALE: N.T.S.

Professional certification and seal for Eric Kohl, a Licensed Professional Engineer in Maryland, License No. 26838, dated 08/21/2023.

Project information and contact details for William & Maitreyi Verdecchia, including address (10080 REED LANE, ELLCOTT CITY, MD 21042), phone (410-316-7800), and website (www.kci-technologies.com).