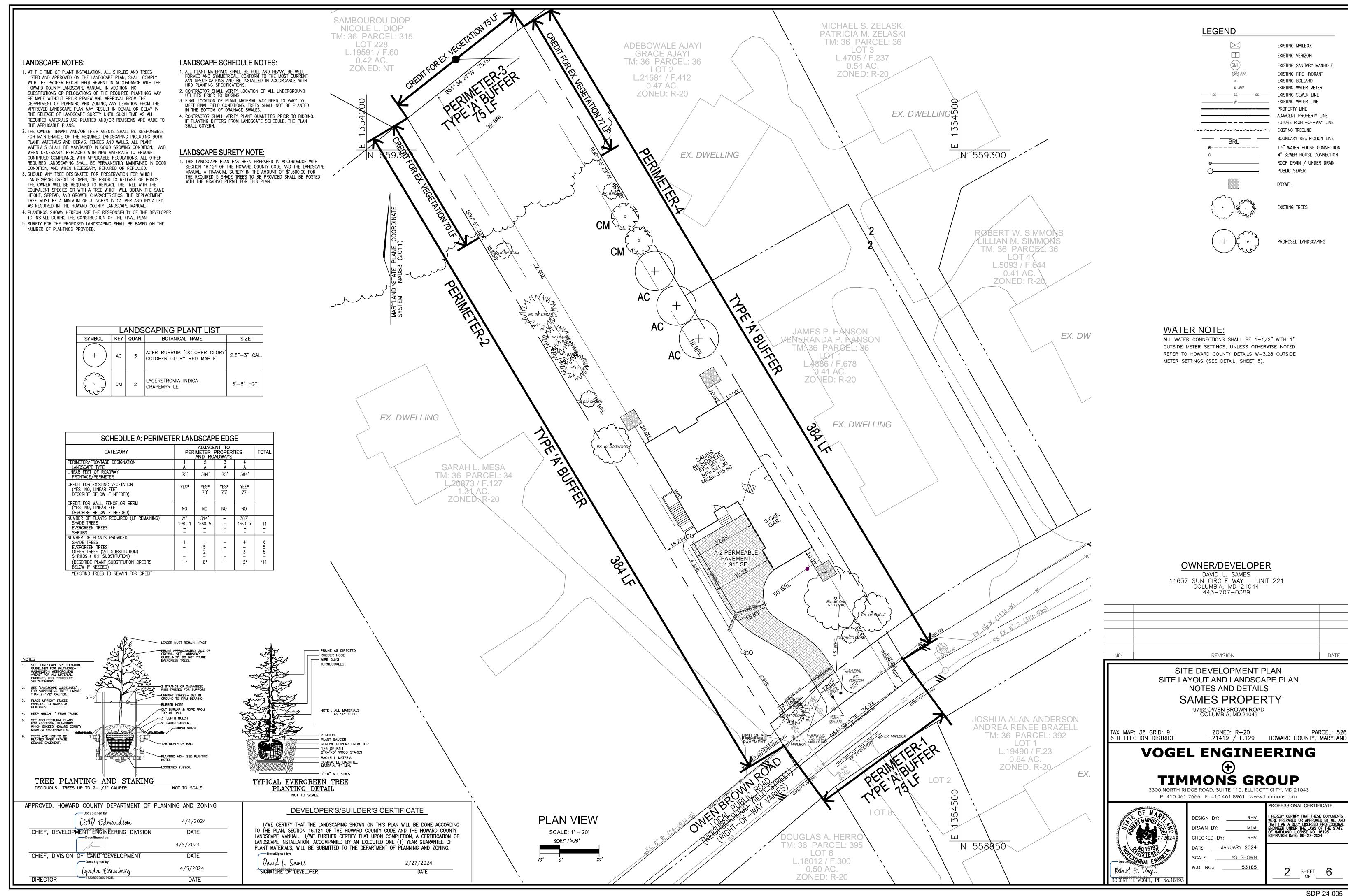
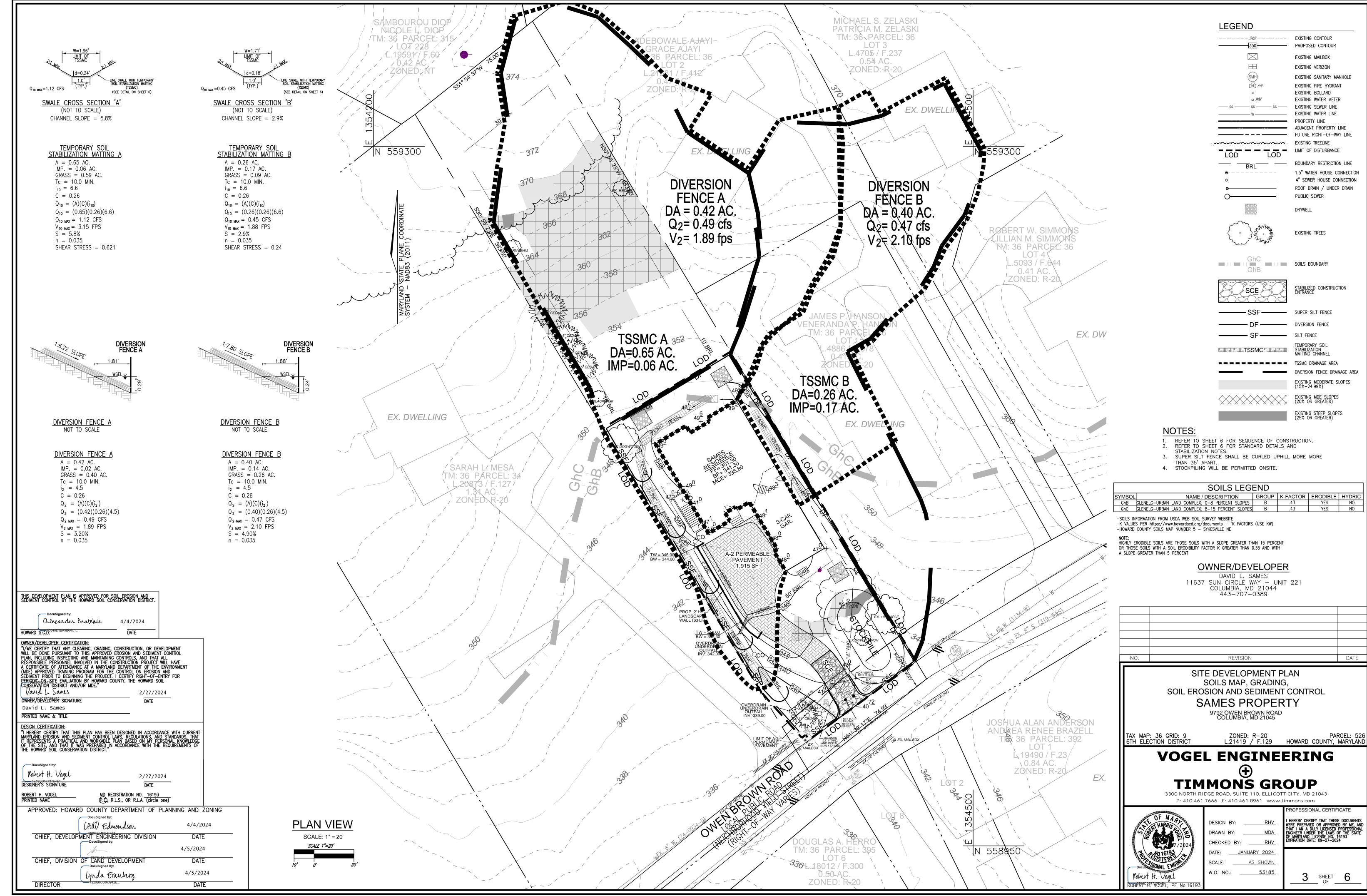
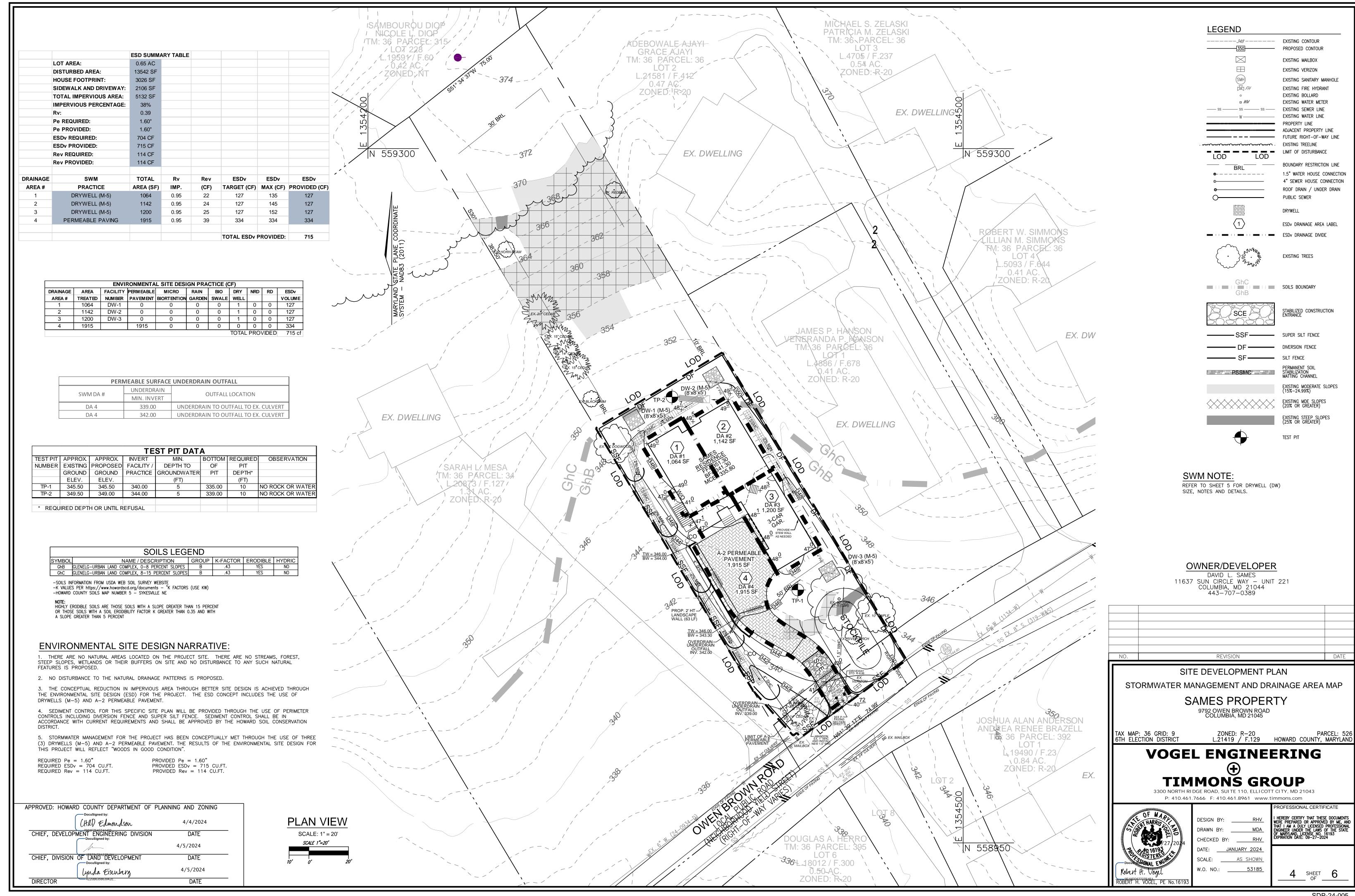
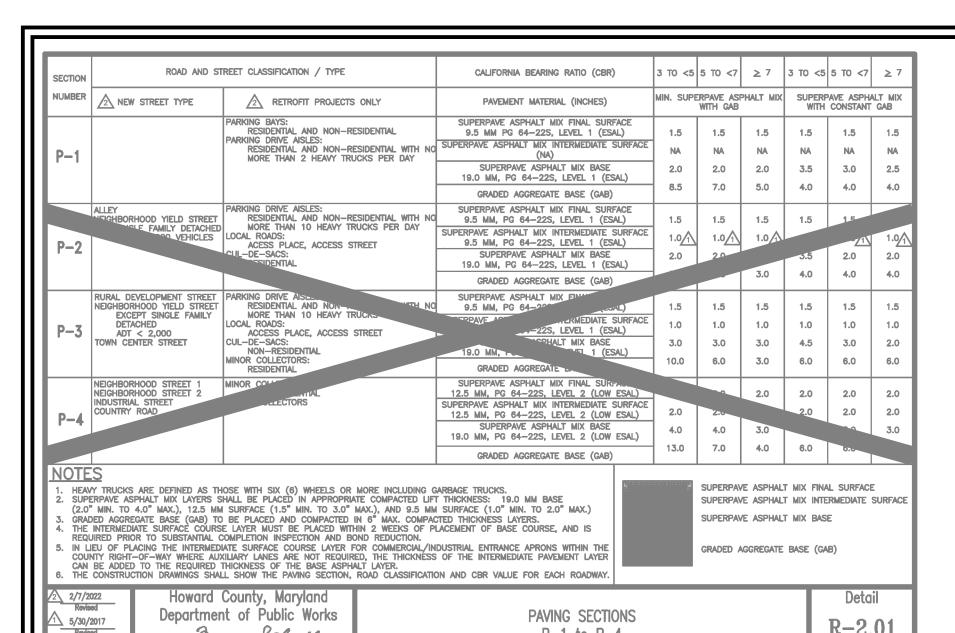
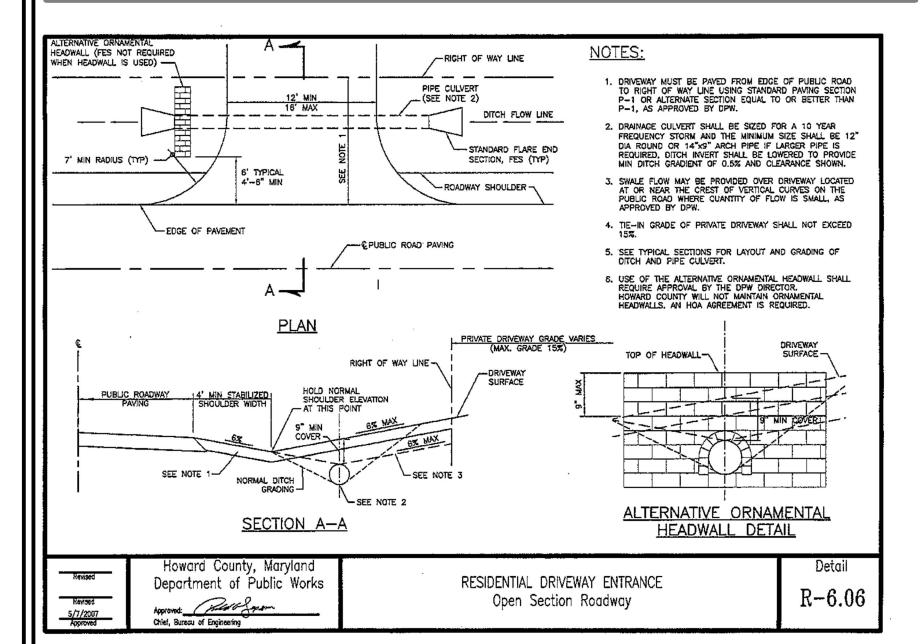
GENERAL NOTES SITE DEVELOPMENT PLAN **BENCHMARKS** . THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK. HOWARD COUNTY BENCHMARK - 36BA N 562135.54 E 1357571.67 ELEV. 416.77 2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK HOWARD COUNTY BENCHMARK - 36BB SAMES PROPERTY 3. ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS N 561504.23 E 1356203.72 ELEV. 409.25 HAVE BEEN APPROVED. 4. THE SUBJECT PROPERTY IS ZONED R-20 IN ACCORDANCE WITH THE 10/6/2013 COMPREHENSIVE ZONING PLAN AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/7/2007 PER COUNCIL BILLS 47-2007 AND 48-2007. 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 PETITION OR GRADING AND BUILDING PERMIT APPLICATIONS. 9792 OWEN BROWN ROAD 5. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON L.21419/F.129 AND A FIELD RUN BOUNDARY PERFORMED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED MAY 2022. COLUMBIA, MARYLAND 21045 3. THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY PERFORMED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED MAY 2022, AND IS SUPPLEMENTED WITH CURRENT HOWARD COUNTY GIS DATA. THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL. WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY CONTROL STATIONS 36BA AND 36BB WERE USED FOR THIS PROJECT. 3. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 9. STORMWATER MANAGEMENT IS TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING DRYWELLS (M-5) AND A-2 PERMEABLE PAVEMENT. ALL STORMWATER MANAGEMENT DEVICES SHALL BE PRIVATE AND ARE TO BE LOCATED WITHIN THE PRIVATE LOT. ALL STORMWATER MANAGEMENT DEVICES ARE TO BE OWNED AND MAINTAINED O. EXISTING UTILITIES ARE LOCATED FROM TOPOGRAPHIC SURVEY, AS-BUILT DRAWINGS AND HOWARD COUNTY GIS DATA. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. . ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE VICINITY MAP 2. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING: SCALE: 1"=2000' ADC MAP COORDINATE: 33-B2 BGE (CONSTRUCTION SERVICES) 410-637-8713 BGE (EMERGENCY) 410.685-0123 BUREAU OF UTILITIES LEGEND COLONIAL PIPELINE CO. 410-795-1390 MISS UTILITY 1-800-257-7777 STATE HIGHWAY ADMINISTRATION EXISTING MAILBOX EXISTING VERIZON 3. THIS PROPERTY IS NOT LOCATED IN A HISTORIC DISTRICT. 4. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. - WATER SERVICE FOR THIS PROJECT IS TO BE PROVIDED BY SERVICE CONNECTIONS FROM CONTRACT NO. 24-0934-D. EXISTING SANITARY MANHOLE - SEWER SERVICE FOR THIS PROJECT IS TO BE PROVIDED BY SERVICE CONNECTIONS FROM CONTRACT NO. 319-S. EXISTING FIRE HYDRANT . WATER AND SEWER SERVICE WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE. EXISTING BOLLARD PUBLIC WATER AND SEWER ALLOCATIONS WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME. EXISTING WATER METER 6. SHC ELEVATIONS ARE LOCATED AT THE PROPERTY LINE/EDGE OF EASEMENT. 17. ALL WATER HOUSE CONNECTIONS SHALL BE OUTSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLANS OR EXISTING WATER LINE 8. IN ACCORDANCE WITH SECTION 128 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 N 559450 ADJACENT PROPERTY LINE N 559450 PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD FUTURE RIGHT-OF-WAY LINE EXISTING TREELINE 9. DRIVEWAY ACCESS SHALL BE PROVIDED PRIOR TO ISSUANCE OF AN USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLING TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS: BOUNDARY RESTRICTION LINE A) WIDTH - 12' (16' IF SERVING MORE THAN ONE RESIDENCE) B) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1"-1.5" MIN.) C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45 FOOT TURNING RADIUS D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING) EXISTING TREES E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 DEPTH OVER THE DRIVEWAY SURFACE F) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE 20. FOR DRIVEWAY ENTRANCE DETAILS, REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06. 21. THERE ARE NO FOREST, WETLANDS, WETLAND BUFFERS, FLOODPLAINS, STREAMS, STREAM BUFFERS OR ANY OTHER NATURAL RESOURCES LOCATED WITHIN THE DEVELOPMENT AREA. 2. NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY. SHEET INDEX 23. PUBLIC TRASH AND RECYCLING COLLECTION WILL BE PROVIDED ALONG OWEN BROWN ROAD WITHIN 5' OF THE EDGE OF THE ROADWAY. 24. TO THE BEST OF THE OWNER'S KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES DESCRIPTION SHEET NO. EX. DWELLING EX. DWELLING 25. OWEN BROWN ROAD IS CLASSIFIED AS A LOCAL PUBLIC ROAD. SITE ACCESS SHALL BE VIA A PRIVATE DRIVEWAY OFF OWEN BROWN ROAD. COVER SHEET AND ARCHITECTURAL DETAILS 1 OF 6 26. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS FOR FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202(b)(2)(i) OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH FILING OF A DECLARATION OF INTENT WITH THE OWNER'S SITE LAYOUT AND LANDSCAPE PLAN NOTES AND DETAILS 2 OF 6 BUILDING PERMIT. THERE IS NO FOREST TO BE CLEARED AND THE SITE AREA IS LESS THAN 40,000 SF. 7. IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III, CHAPTER 4, SECTION 4.7(B)(5), A TRAFFIC STUDY SOILS MAP, GRADING, SOIL EROSION AND SEDIMENT CONTROL 3 OF 6 28. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN 200' OF STORMWATER MANAGEMENT AND DRAINAGE AREA MAP 4 OF 6 ANY EXISTING, OR PROPOSED, MINOR ARTERIAL RIGHT OF WAY LINE (OR HEIGHT CLASSIFICATION). 29. NO STEEP SLOPES OVER 20,000 SF CONTIGUOUS ARE LOCATED ONSITE. SITE DETAILS, ESDV AND STORMWATER MANAGEMENT NOTES AND DETAILS 5 OF 6 30. CERTIFIED TEST PITS HAVE BEEN PROVIDED TO VERIFY THE LOCATION OF GROUNDWATER AND/OR ROCK. TWO OPEN TEST PITS WERE OBSERVED BY VOGEL ENGINEERING + TIMMONS GROUP ON JULY 7, 2023. NO RÓCK OR GROUNDWATER WAS FOUND. GRADING, SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS 11. AN ENVIRONMENTAL CONCEPT PLAN (ECP-23-018) WAS APPROVED ON MAY 31, 2023. 32. PUBLIC STREET TREES ARE NOT REQUIRED FOR THIS PROJECT. 33. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$1,500.00 FOR THE REQUIRED 5 SHADE TREES TO BE PROVIDED SHALL BE POSTED WITH THE GRADING PERMIT FOR THIS PLAN. 4. IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III, CHAPTER 2, SECTION 2.9.B, PARKING IS REQUIRED AT TWO (2) SPACES PER UNIT. OFF STREET PARKING TO INCLUDE GARAGE SPACE AND DRIVEWAY. GARAGES COUNT AS A FULL SPACE. THE GARAGE SPACE SHALL NOT BE CONVERTED TO LIVING SPACE AND SHALL ONLY BE UTILIZED FOR VEHICULAR PARKING . THERE IS NO RIGHT-OF-WAY DEDICATION REQUIRED OR PROPOSED FOR THIS PROJECT. THE RIGHT-OF-WAY SHOWN IS ONLY TO BE RESERVED FOR FUTURE CONSIDERATION. OWNER/DEVELOPER 11637 SUN CIRCLE WAY - UNIT 221 COLUMBIA, MD 21044 443-707-0389 SITE ANALYSIS DATA SAMES RESIDENCE SCALE: 1"=30 559000 B. AREA OF PLAN SUBMISSION: 0.31 AC. C. LIMIT OF DISTUBANCE: REVISION . PRESENT ZONING DESIGNATION: R-20 RESIDENTIAL . PROPOSED USES FOR SITE AND STRUCTURES: RESIDENTIAL SINGLE-FAMILY DETACHED (SFD) FLOOR SPACE ON EACH LEVEL OF BUILDING (PER USE): SITE DEVELOPMENT PLAN G. TOTAL NUMBER OF UNITS ALLOWED: H. TOTAL NUMBER OF UNITS PROPOSED: I. MAXIMUM NUMBER OF EMPLOYEES/TENANTS ON SITE, PER USE: COVER SHEET AND ARCHITECTURAL DETAILS J. NUMBER OF PARKING SPACES REQUIRED: K. NUMBER OF PARKING SPACES PROVIDED: SAMES PROPERTY L. OPEN SPACE ON SITE: M. AREA OF RECREATIONAL OPEN SPACE REQUIRED: 9792 OWEN BROWN ROAD COLUMBIA, MD 21045 0.069 AC. (10.61%) N. BUILDING COVERAGE OF SITE: D. DPZ FILE REFERENCES: P. FLOOR AREA RATIO: TAX MAP: 36 GRID: 9 6TH ELECTION DISTRICT ZONED: R-20 PARCEL: 526 L.21419 / F.129 HOWARD COUNTY, MARYLAND PARKING TABULATION **VOGEL ENGINEERING** TOTAL NUMBER OF DWELLING UNITS PROPOSED: ESD PRACTICE 2 (2 SPACES PER SFD UNIT) OFF-STREET PARKING SPACES REQUIRED: OVERFLOW/GUEST PARKING SPACES REQUIRED: 0.5 (0.5 SPACES PER SFD UNIT) A-2 PERMEABLE PAVEMENT (SF) STREET ADDRESS **TIMMONS GROUP** TOTAL PARKING SPACES REQUIRED: 2.5 PARKING SPACES TOTAL PARKING SPACES PROVIDED: 3 OFF-STREET SPACES (IN GARAGE) 9792 OWEN BROWN ROAD 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING ADDRESS CHART BUILDING NO. STREET ADDRESS CHAD Edmondson 4/4/2024 9792 OWEN BROWN ROAD COLUMBIA, MD 21045 CHIEF, DEVELOPMENT ENGINEERING DIVISION PLAN VIEW CHECKED BY: 4/5/2024 PERMIT INFORMATION CHART SCALE: 1" = 50' DATE: JANUARY 2024 SUBDIVISION NAME SECTION/AREA LOT/PARCEL # CHIEF, DIVISION OF LAND DEVELOPMENT 526 FRONT ELEVATION PLAT # OR L/F GRID NO. ZONING TAX MAP | ELECT. DIST. CENSUS 7 W.O. NO.: 53185 4/5/2024 Lynda Eisenberg $_{\scriptscriptstyle \mathsf{OF}}^{\scriptscriptstyle \mathsf{SHEET}}$ $_{\scriptscriptstyle \mathsf{OF}}^{\scriptscriptstyle \mathsf{SHEET}}$ NOT TO SCALE L.21419/F.129 606603

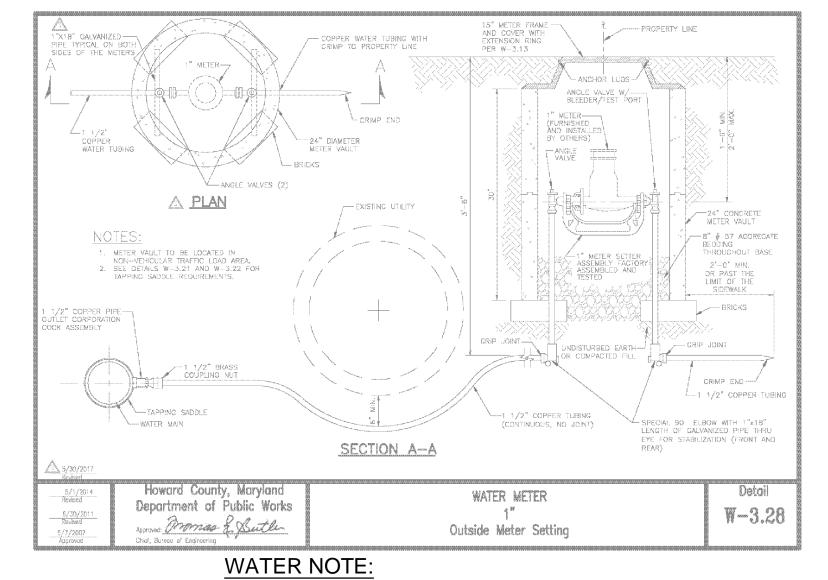












ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1"

OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED.

REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE

4/4/2024

DATE

4/5/2024

DATE

4/5/2024

METER SETTINGS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

(Hd) Edmondson

Lynda Eisenberg

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

A-2. PERMEABLE PAVEMENTS

BE PLACED IN A CONTAINED AREA.

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH PERMEABLE

- EROSION AND SEDIMENT CONTROL: FINAL GRADING FOR INSTALLATION SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM
- DISTURBED AREAS SHALL BE DIVERTED AROUND PROPOSED PAVEMENT LOCATIONS. SOIL COMPACTION: SUB SOILS SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED

WITH LIGHTWEIGHT, WIDE TRACKED EQUIPMENT TO MINIMIZE COMPACTION. EXCAVATED MATERIALS SHOULD

- DISTRIBUTION SYSTEMS: OVERDRAIN, UNDERDRAIN, AND DISTRIBUTION PIPES SHALL BE CHECKED TO ENSURE THAT BOTH THE MATERIAL AND PERFORATIONS MEET SPECIFICATIONS (SEE APPENDIX B.4). THE UPSTREAM ENDS OF PIPES SHOULD BE CAPPED PRIOR TO INSTALLATION. ALL UNDERDRAIN OR DISTRIBUTION PIPES USED SHOULD BE INSTALLED FLAT ALONG THE BED BOTTOM.
- SUBBASE INSTALLATION: SUBBASE AGGREGATE SHALL BE CLEAN AND FREE OF FINES. THE SUBBASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED ACCORDING TO THE SPECIFICATIONS (SEE APPENDIX

REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:

- DURING EXCAVATION TO SUB GRADE
- DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEM(S). DURING PLACEMENT OF THE CRUSHED STONE SUBBASE MATERIAL.
- DURING PLACEMENT OF THE SURFACE MATERIAL UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

MAINTENANCE CRITERIA:

THE FOLLOWING PROCEDURES SHOULD BE CONSIDERED ESSENTIAL FOR MAINTAINING PERMEABLE PAVEMENT

- PAVEMENTS SHOULD BE USED ONLY WHERE REGULAR MAINTENANCE CAN BE PERFORMED. MAINTENANCE AGREEMENTS SHOULD CLEARLY SPECIFY HOW TO CONDUCT ROUTINE TASKS TO ENSURE LONG-TERM
- PAVEMENT SURFACES SHOULD BE SWEPT AND VACUUMED TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
- TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREMATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
- DEICERS SHOULD BE USED IN MODERATION. WHEN USED, DEICERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

I. PAVEMENT SURFACES SHOULD BE SWEPT AND VACUUMED (IF POROUS CONCRETE) TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.

3. DEICERS SHOULD BE USED IN MODERATION. DEICERS SHOULD BE NON—TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE—INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications						
Material	Specification	Size	Notes			
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth			

TAKEN FROM 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II APPENDIX B.4.B CONSTRUCTION SPECIFICATIONS FOR ESD PRACTICES PERMEABLE PAVEMENTS & REINFORCED TURF

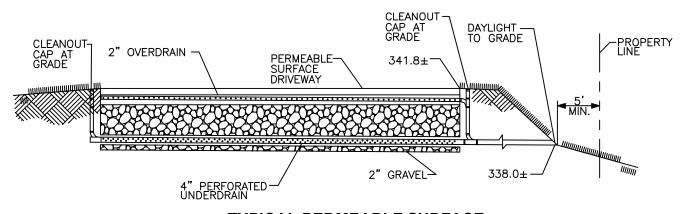
THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.

DESIGN THICKNESS — PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS MAY BE DESIGNED USING EITHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO, ACI 325.9R, ACI 330R) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES. MIX & INSTALLATION — TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1157) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TRIAL BATCHING) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTLING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED. AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO.16) AND NO. 89 (3/8 IN. TO NO.50) SIEVES. SINGLE-SIZED AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED. WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES. WATER QUALITY SHOULD MEET ACI 30A. AS A GENERAL RULE, POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR

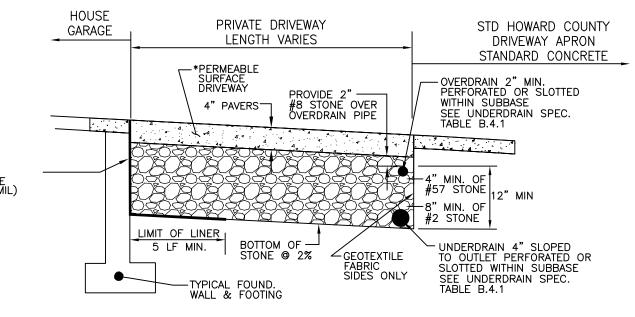
ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C 260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS. BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).

2. PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP) PAVER BLOCKS - BLOCKS SHOULD BE EITHER 3-1/8 IN. OR 4 IN. THICK, AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (40% PREFERRED) OF THE SURFACE AREA OPEN, INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED. INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND. BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).

REINFORCED GRASS PAVEMENT (RGP) - WHETHER USED WITH GRASS OR GRAVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.



TYPICAL PERMEABLE SURFACE **DRIVEWAY UNDERDRAIN / OVERDRAIN OUTLET DETAIL NOT TO SCALE**



*PERMEABLE CONCRETE OR PERMEABLE PAVERS TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE.

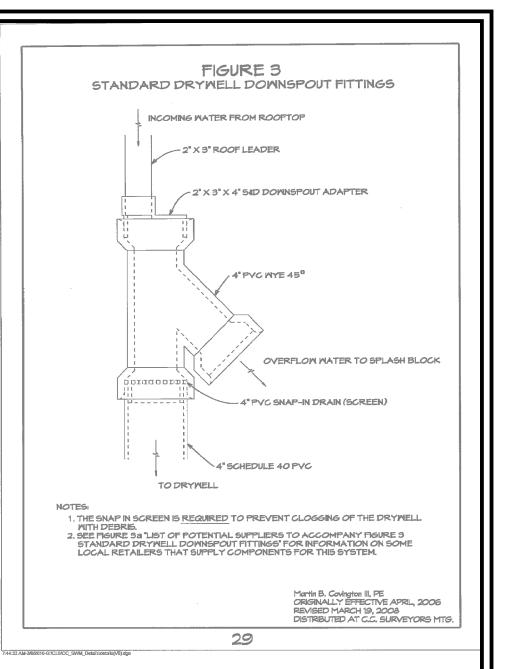
1. UNDERDRAIN SHALL BE LOCATED SUCH THAT IT CAN DAYLIGHT TO GRADE. 2. OVERDRAIN SHALL COMBINE WITH UNDERDRAIN AS DETAILED HEREON. 3. AN UNDERDRAIN CLEANOUT SHALL BE PROVIDED ON THE HIGH AND LOW SIDE OF THE DRIVEWAY. DETAIL - PERMEABLE SURFACE DRIVEWAY - 5% OR LESS

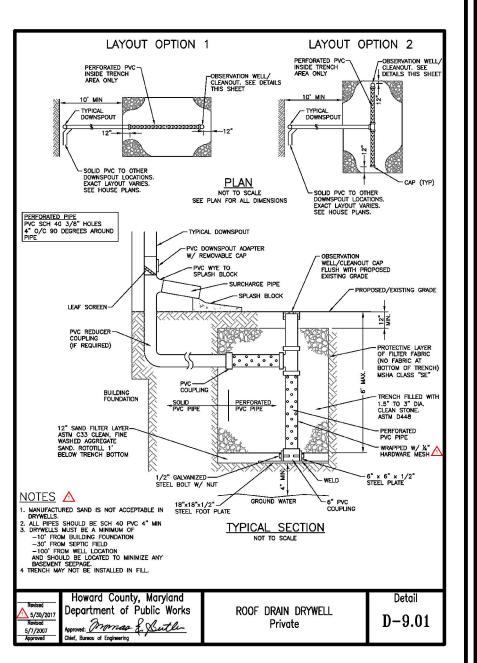
NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER DRY WELLS (M-5)

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.

- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.





OWNER/DEVELOPER DAVID L. SAMES 11637 SUN CIRCLE WAY - UNIT 221 COLUMBIA, MD 21044 443-707-0389

PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP) OR EQUIVALENT

PREPARE SUBGRADE SOILS

Permeable Paver Installation Guidelines Residential Driveways, Patios, and Walkways

MATERIALS NEEDED

Open Graded Base: Should be a clean stone (i.e. # 2 stone and AASHTO #57), which weighs approximately 120 pounds per cubic foot. Calculate the depth of stone using the average depth of the stone from the highest point to the lowest point (6-inch minimum depth for patios and walkways, 10-inch minimum depth for driveways). The maximum recommended depth of AASHTO #57 in the base is 4". The remaining depth of the base material should be # 2 stone. Calculate the project area and including an additional 2 feet around the perimeter* and an additional 5% for losses. (*Use of a compacted dense graded aggregate shoulder in the base where the base excavation terminates against soil will allow for a smaller over dig and the use of standard plastic edge restraints that can be spiked in place.)

Bedding Layer: AASHTO #8 crushed stone is recommended. Calculate the volume for a 2-inch bedding layer over the project area. Add an additional 20 percent for filling

Pavers: Eco Pavers are sold by the square foot. Calculate the square footage needed for your project and add 5% - 10% for cuts, waste, etc.

Edge Restraint: All exposed edges must be restrained. A 6" wide by 12" deep concrete curb is one recommended edge restraint system. But edge restraints including pre-cast, DGA shoulders wrapped in non-woven geotextile, plastic edge restraint systems connected with poly mesh, and mortared options may also work based on the application. Calculate the linear feet of edge restraint required. The curb should be either flush with the top of the pavers or set 1 1/2" below the top of paver if grass edge is desired. EP Henry's Curbstone can also be wet set in concrete as an alternative.

Separation Fabric: A non-woven fabric such as Mirafi 160N or Mirafi 140 N is recommended to be installed as a drainage and separation fabric between the # 2 stone open graded base and the natural subgrade soil. In addition, a layer of Mirafi 160N/140 N can be placed between the bedding Layer and the open grade base if needed.

TOOLS

Hammer, hard tooth garden rake, rubber hammer, level, tape measure, flat shovel, wheelbarrow, diamond blade wet saw, chalk line, plate compactor, stiff bristle street broom, wire cutters (or cutting bands on pavers), and 2-inch screed guide bars.

LAYOUT & PREPARATION Layout the limits of the driveway and edge restraint system. Mark the limits of the excavation on the ground. Before digging, always call your local utility companies to

locate and mark out any underground utilities.

For best results, the finished subgrade should be level. Excavate the soil providing the minimum recommended thickness at the lowest point of the driveway. For instance, a 50-foot long driveway with a 1/4" per foot slope will require a depth of 10 inches of stone at the lowest point and a depth of 22 inches of stone at the highest point. Extend the excavation beyond the edges of the driveway to allow for the installation of the concrete be cut with a wet saw as needed. To protect the pavers during compaction, place a edge restraints or a compacted 2-A Modified Stone shoulder wrapped in Mirafi 160 N/140 N geotextile. The subgrade should be clean and free of any organic materials such as topsoil and have adequate bearing capacity. The subsurface should be firm and not easily rutted. If the subgrade appears weak or damp, contact a professional engineer for further assistance. Do not compact the sub-grade soils, but dig the excavation in such a manner as to cause the least disturbance to the surface of the sub- Fill paver voids with No. 8 stone level with the paver surface. Voids may be topped with

Mirafi 160N/140 N geotextile fabric is recommended as a separation and drainage layer Engineering Notes: between the open-graded stone base and natural subgrade soil. Place the geotextile material over the subgrade soil and up the sides of the excavation taking care to remove any wrinkles. Where seams cannot be avoided, overlap the edges of the fabric by a minimum of two feet.

PREPARATION OF OPEN GRADED BASE

Open graded base materials must be free of fine materials allowing them to provide maximum storage capacity of runoff and ensuring a free flowing path to the soil. Take care not to track soil onto the fabric or allow sediment to wash into the excavation during construction, potentially clogging the system. The No. 2 stone sub-base (opengraded) needs to be installed before placing the # 57 stone.

AASHTO # 2 and # 57 stone are recommended for this installation. Place the # 2 stone in 6-inch lifts and compact. The material should be moist during installation. A 10-ton steel drum static roller should be used for compaction. A vibratory plate compactor can be used for smaller projects. There should be a minimum of four passes with the compactor or roller with no visible movement of the material. Continue installing the 3.2 stone in 6-inch lifts until the elevation is reached where 4 inches of AASHTO # 57 is required to bring the base to its finished elevation. The base should be smooth and level when completed and there should not be more than a 1/4" gap at any point along a straight edge.

BEDDING LAYER

Using screed boards, place a two-inch layer of moistened 3/8" minus AASHTO No. 8 bedding stone onto the open graded base. The coarse sand should be firmly set in the underlying stone. In order to ensure that the finer materials in the 3/8" minus AASHTO No. 8 stone do not migrate into the open graded base and cause settling, a separation fabric such as the one used under the open graded base can be used.

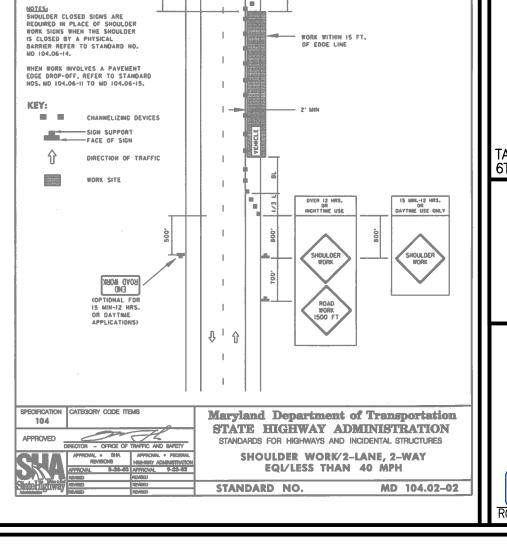
INSTALL PAVERS

Place the pavers in a running bond pattern, ensuring that the lugs interlock. Pavers can medium such as a piece of separation fabric between the plate compactor and the pavers. Using a 3-5 HP (5,000 pound force) vibrating plate compactor, begin at the outside perimeter and work inward. Make at least 2 passes over the pavers with the

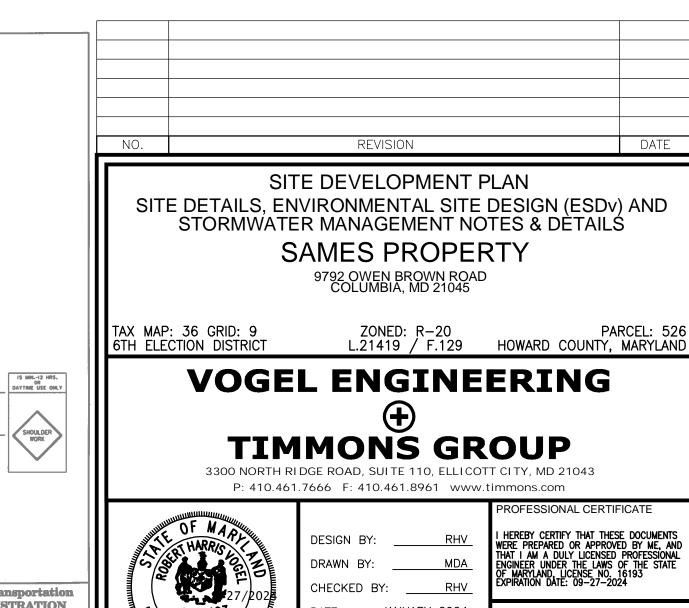
colored decorative stone (1/2") if desired.

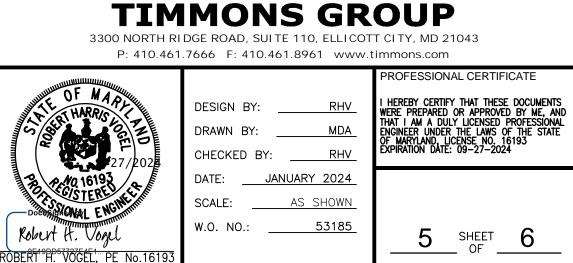
1.) For best results subgrade soil infiltration rates should be confirmed. Soils should

- have better than 0.5"/hour infiltration rates. 2.) The bottom of the open-graded stone should be a minimum of two feet above the seasonally high water table. 3.) Avoid over compacting or contaminating the natural subgrade soils.
- 4.) Under-drain piping and storage systems may be used if designed by a qualified professional engineer. For moist or clayey subgrade soils consult a geotechnical engineer. 6.) A sieve analysis of the bedding material and open-graded stone material should be reviewed to confirm it meets the following filter criteria:
- $D_{15 \text{ open graded base}} / D_{50 \text{ bedding material}} \le 5 \text{ and } D_{50 \text{ open graded base}} / D_{50 \text{ bedding material}} \ge 2$ open graded base = AASHTO #57
- bedding material = AASHTO #8 D₁₅ sieve size for which 15 percent of material is smaller D_{50 =} sieve size for which 50 percent of material is smaller



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION





AVOID CONFLICTS WITH THIS PLAN

HOWARD SOIL CONSERVATION DISTRICT 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

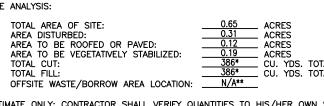
PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO

ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING T HE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 201 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. AND REVISIONS THERETI

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORAR 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) CALENDAF 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



* ESTIMATE ONLY; CONTRACTOR SHALL VERIFY QUANTITIES TO HIS/HER OWN SATISFACTION.
** TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, WITH AN APPROVED AND ACTIVE GRADING PERMIT. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR

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

> E (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT) NAME AND TITLE OF INSPECTOR

MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE

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 SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS

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)

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 ALLOWED BY THE CID PER THE LIST OF

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 CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER

SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
ALL 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

STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):

USE I AND IP MARCH 1 - JUNE 15 USE III AND IIIP OCTOBER 1 - APRIL 30 USE IV MARCH 1 - MAY 31

A COPY OF THIS PLAN. THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCION—SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

REV. 8/2015

ITEM 11, REGARDING PROJECT DISTURBANCE IS NO LONGER A REQUIREMENT OF THE STATE OF MARYLAND, HOWEVER REMAINS A REQUIREMENT OF HOWARD COUNTY.

SEQUENCE OF CONSTRUCTION

OBTAIN GRADING PERMIT. (1 WEEK)

REQUEST A PRE-CONSTRUCTION MEETING WITH HOWARD COUNTY DPW, CONSTRUCTION INSPECTION DIVISION (410)-313-5712 PRIOR TO BEGINNING CONSTRUCTION. (1 DAY)

NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)

STAKEOUT LIMITS OF DISTURBANCE. (1 DAY)

CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)

6. CLEARING AND GRUBBING AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS. (1 DAY)

INSTALL DIVERSION FENCE AND SUPER SILT FENCE. (2 DAYS)

8. PERFORM BALANCE CLEARING AND GRUBBING WITHIN LOD. (2 DAYS)

AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, ROUGH GRADE SITE. DO NOT GRADE SWALES OR INSTALL STORMWATER MANAGEMENT FACILITIES INITIALLY. RETAIN SHEET FLOW TO GREATEST EXTENT POSSIBLE. (1 WEEK)

10. CONSTRUCT HOME. (6 MONTHS)

11. COMPLETE INSTALLATION OF WATER AND SEWER SERVICE CONNECTIONS. (3 MONTHS)

12. FINE GRADE SITE AND ESTABLISH SWALES AS SHOWN ON PLAN. (2 DAYS)

13. STABILIZE ALL SWALES WITH TEMPORARY SOIL STABILIZATION MATTING. (1 DAY) 14. CONSTRUCT DRYWELL FACILITIES AND DRIVEWAY, INCLUDING A-2 PERMEABLE PAVEMENT. (1 WEEK)

15. STABILIZE ALL OTHER DISTURBED AREAS AND AREAS OF GRADING. (1 DAY)

16. INSTALL PROJECT LANDSCAPING. (1 DAY)

DIRECTOR

UPON STABILIZATION OF ALL DISTURBED AREAS, AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE DIVERSION FENCE, SUPER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE. (2 DAYS)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4/4/2024

4/5/2024

4/5/2024

DATE

(Hdl) Edmondson

ynda Eisenberg

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMEN

R-4-2 STANDARDS AND SPECIFICATIONS

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS **DEFINITION**

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CONDITIONS WHERE PRACTICE APPLIES WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION

A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT.
AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT
IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 2. PERMANENT STABILIZATION A. 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. II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON—SITE SOILS DO NOT MEET C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO

D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SUITABLE WHEEP OFFE CONTROLLED TO THE PROJECT OF THE PROJECT 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.

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCEM HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION. 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDANDED

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FLIRNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT

THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA: A. 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 1½ INCHES IN DIAMETER.

B. 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.

C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL. A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING B. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT

SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM OPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS OR WATER POCKETS C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

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

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES. 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.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND O 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.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS

PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

OWNER/DEVELOPER CERTIFICATION:

David L. Sames

David L. Sames

PRINTED NAME & TITLE

OWNER/DEVELOPER^SIGNATURE

"I/WE 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 ALL
RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE
A CERTIFICATE OF ATTENDANCE AT 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

2/27/2024

PERIODIC ON SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

B-4-3 STANDARDS AND SPECIFICATIONS

SEEDING AND MULCHING

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

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 <u>CRITERIA</u>

A. SEEDING

A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST B SUBJECT TO RE—TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RAT B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF T

GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS FEFFORTIVE THE INOCULANT LESS EFFECTIVE.

D. SOD 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 PHYTO-TOXIC MATERIALS. APPLICATION

A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING
TABLE 8.1, PERMANENT SEEDING TABLE 8.3, OR SITE—SPECIFIC SEEDING SUMMARIES.

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE

AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING. RATE IN EACH DIRECTION. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER(SLURRY INCLUDES SEED AND FERTILIZER I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE. II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION. IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, LYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AI APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A

HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO

8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT

2. APPLICATION A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

B. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH AND LOOPED TO THE APPLICATION PART TO SEE TO THE SOIL SURFACE THE ACRE THE APPLICATION PART TO SEE THE ACRE.

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. A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

I. 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. II. 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.

III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED. BANKS. USE OF ASPHALI BINDERS IS STRICTLY PROHIBITED.

IV. 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

> B-4-4 STANDARDS AND SPECIFICATIONS TEMPORARY STABILIZATION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

<u>PURPOSE</u> TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE 8.1 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 8.1 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

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b SEED MIXTURE (FROM TABLE B.1):					FERTILIZER RATE	LIME RATE	
NO	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	(10-20-20)		
1	COOL SEASON ANNUAL RYEGRASS OR EQUAL	40 LB / AC	MAR 1 TO MAY 15 AUG 1 TO OCT 15	1/2 IN.	436 LB/AC (10 LB PER 1000 SF)	2 TONS/AC (90 LB PER 1000 SF)	
2	WARM SEASON FOXTAIL MILLET OR EQUAL	30 LB / AC	MAY 16 TO JUL 31	1/2 IN.			

FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PAGE B.20, TABLE B.1, SHOWN ON SHEET X

"I HERBY 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

2/27/2024

D REGISTRATION NO. <u>16193</u>

(P.E), R.L.S., OR R.L.A. (circle one)

DESIGN CERTIFICATION:

DocuSigned by:

DESIGNER'S SIGNATURE

ROBERT H. VOGEL PRINTED NAME

Robert H. Vogel

B-4-5 STANDARDS AND SPECIFICATIONS PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA A. SEED MIXTURES

> 1. GENERAL USE
> A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 8.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED MIXTURE(S), APPLICATION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED MIXTURE(S),
> APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE
> SUMMARY IS TO BE PLACED ON THE PLAN.
> B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES,
> STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR

AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE 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.

D. 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 A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUND

AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35
PERCENT OF THE TOTAL MIXTURE BY WEIGHT. II. 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 100

SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDILIM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE
CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED. IV. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT.

SEEDING RATE: 11/2 TO 3 POUNDS PER 1000 SQUARE FEET. 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

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES: - WESTEM MD: MARCH 15 TO JUNE 1, AUGUST ITO 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 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY

ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES. B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS
A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. B, SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH. PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TOM OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.

D. 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
 A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS 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

WHICH WOULD CAUSE AIR DRYING OF THE ROUTS.

WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF E NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY W THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT

3. SOD MAINTENANCE A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE 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.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b SEED MIXTURE (FROM TABLE B.3):				FERTILIZER RATE (10–20–20)			LIME RATE	
NO	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P ₂ O ₅	K ₂ 0	
9	COOL SEASON TALL FESCUE	T.F. 60 LB / AC	MAR 1 TO MAY 15	1/4-1/2 IN.				2 TONS/AC (90 LB PER
•	BLUEGRASS PERENNIAL	K.B. 40 LB / AC	1110 45 50	1/ + 1/2 111.		1000 SF)		1000 SF)
	RYEGRASS OR EQUAL	P.R. 20 LB / AC						
4	WARM/COOL SEASON GRASS MIX DEERTOUNGE CREEPING RED FESCUE & CANADA WILD RYE	DT 15 LB / AC CRF 20 LB / AC CWR. 5 LB / AC	MAR 1 TO MAY 15 <><> MAY 16 TO JUNE 15*					

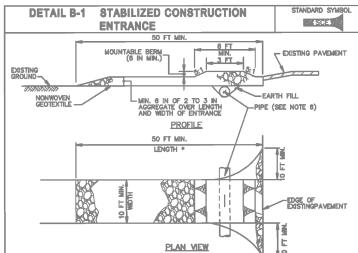
FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL - PAGES B.26 - B.32

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

4/4/2024

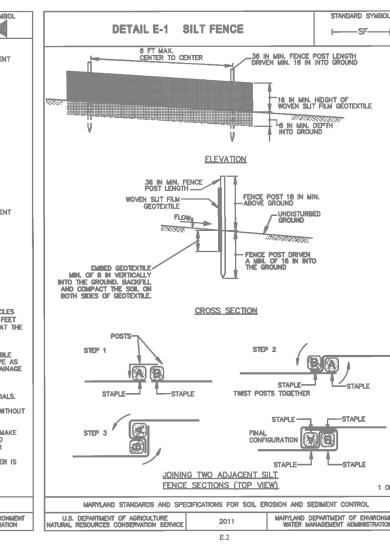
Olexander Bratchie

HOWARD S.C.D.



CONSTRUCTION SPECIFICATIONS PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN, VEHICLES
MUST TRAVEL OVER THE ENTRIE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET
FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE
EDISTING ROAD TO PROVIDE A TURNING RADIUS.

2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSTITVE DRAINAGE, PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTAINE BERMW WITH \$1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE, PROVIDE PIPE A SPECIFIED ON APPROVED PLAN, WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINA TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE. 5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, AND TRACKED ONTO ADJACENT ROADWAY BY VACULMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.



DETAIL E-1 SILT FENCE

Use wood posts 1% x 1% \pm 1% inch (minimum) square cut of sound quality hardwood. As an alternative to wooden post use standard "t" or "u" section steel posts weighing not less than 1 pound per linear foot.

. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.

USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.

EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.

EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

STANDARD SYMBOL

⊢——SF——

DETAIL E-3 SUPER SILT FENCE ----SSF----Historia Historia GROUND SURFACE WOVEN SLIT FILM GEOTEXTILE-FLOW CROSS SECTION CONSTRUCTION SPECIFICATIONS INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX F LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION M-1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

DETAIL C-9 DIVERSION FENCE

FLOW -

3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.

CONSTRUCTION SPECIFICATIONS

ELEVATION

. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING).

. USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.005 INCH WALL THICKNESS AND SIK FOOT LENGTH SPICED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCEPTED.

EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND, SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.

SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

SECTION

STANDARD SYMBO

STANDARD SYMBOL

├── DF ──

MAXIMUM DRAINAGE AREA = 2 /

SHEETING ON BOTH SIDES OF FENCE

DETAIL B-4-6-A TEMPORARY SOII TABILIZATION MATTING TSSMC - *0.621ib/ft^s (* INCLIDE SHEAR STRESS) CONSTRUCTION SPECIFICATIONS ISOMETRIC VIEW USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOU TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF ZXZ INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "I" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 1 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 12 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG. AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD.

OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM M

STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS. . ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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 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. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material

> and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading. 3. Runoff from the stockpile area must drain to a suitable sediment control practic

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

8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to

facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable

6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.

<u>Maintenance</u>

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

OWNER/DEVELOPER DAVID L. SAMES 11637 SUN CIRCLE WAY - UNIT 221 COLUMBIA, MD 21044 443-707-0389

RFVISION

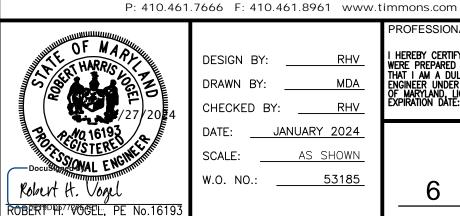
SITE DEVELOPMENT PLAN GRADING, SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS SAMES PROPERTY

AX MAP: 36 GRID: 9

VOGEL ENGINEERING

TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

L.21419 / F.129



5TH ELECTION DISTRICT

DESIGN BY: _____MDA_ DRAWN BY: RHV CHECKED BY: JANUARY 2024 DATE: SCALE: AS SHOWN W.O. NO.:

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. 16193
EXPIRATION DATE: 09-27-2024 SHEET

HOWARD COUNTY, MARYLAND

SDP-24-005