

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-20 PER THE 10-6-13 COMPREHENSIVE ZONING PLAN AND BEING DEVELOPED UNDER THE R-ED CRITERIA.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS BASED ON A PLAN PREPARED BY FISHER COLLINS & CARTER, INC.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0023 AND 30AB WERE USED FOR THIS PROJECT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE STREAMS, OR THEIR REQUIRED BUFFERS AND FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, IF APPLICABLE.
- THERE ARE NO ON-SITE STEEP SLOPES GREATER THAN 25%.
- PER F-20-010 THERE IS NO FLOODPLAIN, STREAMS, WETLANDS OR THEIR BUFFERS LOCATED WITHIN THE LIMIT OF DISTURBANCE.
- PER F-20-010 THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
- THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- ON MAY 16, 2019 THE PLANNING BOARD OF HOWARD COUNTY, MARYLAND APPROVED PB NO. 444 FOR SP-19-001, CENTENNIAL RESERVE DUE TO THE DEVELOPMENT UTILIZING THE R-ED ZONING REGULATIONS.
- THE FOREST CONSERVATION REQUIREMENTS FOR F-20-010 CENTENNIAL RESERVE SUBDIVISION HAVE BEEN MET THROUGH THE ON-SITE REFORESTATION OF 2.02 ACRES OF ON-SITE PLANTING.
- PREVIOUS DPZ FILES: ECP-19-022, WP-19-047, SP-19-001, PB CASE NO. 444, F-20-010, SDP-20-041
- WATER WILL BE FROM PUBLIC WATER MAIN CONTRACT NUMBERS: 24-5088-D.
- SEWER WILL BE FROM PUBLIC SEWER MAIN CONTRACT NUMBERS: 24-5088-D
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THIS PLAN IS SUBJECT TO SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS.
- F-20-010 HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$12,450.00 HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT UNDER F-20-010. THERE IS NOT PROPOSED LANDSCAPING SHOWN UNDER THIS SDP. LANDSCAPING IS PROVIDED UNDER F-20-010.
- A PRE-SUBMISSION COMMUNITY MEETING FOR CENTENNIAL RESERVE WAS HELD ON SEPTEMBER 17, 2018.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- EXISTING UTILITIES SHOWN ARE BASED ON A PLANS PROVIDED BY FISHER, COLLINS & CARTER, INC. UNDER F-20-010.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THIS SUBDIVISION IS SUBJECT TO SECTION 104.0.F OF THE ZONING REGULATIONS. AT LEAST 10% OF THE SUBDIVISION IS SUBJECT TO SECTION 104.0.F OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U. REQUIREMENT WILL BE MET. THE M.I.H.U. AGREEMENT AND COVENANTS WILL BE RECORDED SIMULTANEOUSLY WITH THE PLAN IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF FEE-IN-LIEU TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT. a. M.I.H.U. REQUIRED (17 LOTS x 10% = 2 M.I.H.U.) b. M.I.H.U. PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS REQUIRED BY THE DEVELOPMENT. c. AN EXECUTED M.I.H.U. AGREEMENT WITH THE HOWARD COUNTY HOUSING DEPARTMENT HAS BEEN COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE PLAT UNDER F-20-010.
- THIS SUBDIVISION IS SUBJECT TO WP-19-047 (REVISED), WITH APPROVAL ON JUNE 12, 2019. THE PLANNING DIRECTOR APPROVED THESE REQUESTS FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.1205(A)(7) - ON-SITE FOREST RETENTION AND SECTION 16.119(E)(1) ACCESS RESTRICTIONS - AS AN ALTERNATIVE COMPLIANCE AND SECTION 16.119(F)(1) - ACCESS RESTRICTIONS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - PER DEED COMMENTS: DIRECT ACCESS TO CENTENNIAL LANE WILL ONLY BE PERMITTED IF THE PROPOSED ACCESS MEETS ALL CURRENT DESIGN STANDARDS REGARDING LAYOUT, SLOPES AND SIGHT DISTANCES. ANY DEFICIENCY MUST BE REMEDIATED OR THE DIRECT ACCESS TO CENTENNIAL LANE WILL NOT BE PERMITTED.
 - REMOVAL OF SPECIMEN TREE #15 SHALL BE MITIGATED 2:1 BY PLANTING 2 NATIVE TREES OF 2.5" CALIPER, PREFERABLY WITHIN THE FOREST CONSERVATION EASEMENT. PLEASE ADD THE TREES FOR MITIGATION TO THE LANDSCAPE PLANS WITH A NOTE IDENTIFYING WHICH TREES SATISFY THIS CONDITION OF APPROVAL.
 - FOR RELIEF OF SECTION 16.119(O)(1) ACCESS RESTRICTIONS - AS AN ALTERNATIVE COMPLIANCE, THE DEVELOPER SHALL PROVIDE THE PAVED WALKING PATH AS PROPOSED IN THE EXHIBITS AND PLANS THAT CONNECTS CENTENNIAL RESERVE WITH CENTENNIAL WOODS LANE.
 - UPDATE ANY NOTES ON THE PLAN THAT WERE REQUIRED UNDER THE PREVIOUS APPROVAL DATED JANUARY 24, 2019 AND PERTAIN TO THE ADJONER DEED LOT 6 TO INDICATE THAT SINCE LOT 6 IS NO LONGER PART OF THE SUBDIVISION, THE APPROVAL FOR RELIEF OF SECTION 16.147 IS VOID.
 - APPROVAL IS SUBJECT TO COMPLIANCE WITH ALL SRC COMMENTS REGARDING APPROVAL OF SP-19-001 CENTENNIAL RESERVE.
 - THE PREVIOUS APPROVAL OF SECTION 16.147 FINAL SUBDIVISION PLAN AND FINAL PLAT IS VOID SINCE PARCEL 6 HAS BEEN REMOVED FROM THE SUBDIVISION.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND RIGHT-OF-WAY AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- DRIVEWAY APRON TO BE PER STANDARD DETAIL R-6.03, R-6.05 AND R-6.06.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATES.
- STORM WATER MANAGEMENT FOR THESE LOTS WILL UTILIZE DRYWELLS (M-5) AS PREVIOUSLY APPROVED UNDER F-20-010. THESE FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY THE LOT OWNER. STORMWATER MANAGEMENT IN OPEN SPACE LOTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. HOWARD COUNTY WILL MAINTAIN THE PIPES AND THE HOA WILL MAINTAIN FACILITY FACILITIES.
- A NOISE STUDY WAS APPROVED FOR THIS DEVELOPMENT UNDER F-20-010.
- THE 65dBA NOISE LINE ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREA BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPT. OF HOUSING AND URBAN DEVELOPMENT.
- TRASH PAD MAINTENANCE AND LANDSCAPE SCREENING SHALL BE THE RESPONSIBILITY OF THE LOT OWNERS WHO ACCESS ONTO THE APPLICABLE SHARED DRIVEWAY AND SHALL BE MADE PART OF THE USE-IN-COMMON MAINTENANCE AGREEMENTS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WILL NOT BE RESPONSIBLE FOR UPKEEP.
- THERE ARE NO HISTORIC HOUSES LOCATED ON-SITE PER F-20-010.
- OPEN SPACE DEDICATION TO A HOMEOWNER'S ASSOCIATION SHALL BE ON THE PLAT IN ACCORDANCE WITH SECTION 16.121(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- A DESIGN MANUAL WAIVER HAS BEEN APPROVED ALLOWING A ROADWAY RADIUS LESS THAN 210-FEET AND IS SUBJECT TO THE FOLLOWING DPW COMMENTS: - THE PAVEMENT WIDTH MUST BE WIDENED ALONG THE INSUFFICIENT CURVE. - NO PARKING SIGNS MUST BE PLACED ALONG THE INSUFFICIENT CURVE.
- PER F-20-010 NO DECKS, PATIOS, SHEDS, OR OTHER IMPERVIOUS STRUCTURES OR SURFACES SHALL EXTEND INTO THE DRAINAGE EASEMENT AT THE REAR OF LOTS 9 THRU 17.
- PER SECTION 128.0.A.1.e. OF THE ZONING REGULATIONS, DECKS AND ENCLOSED PORCHES ARE PERMITTED IN THE SETBACKS. PLEASE NOTE THAT CENTENNIAL RESERVE DEVELOPMENT IS SUBJECT TO A 75' PROJECT BRL MEASURED FROM THE PROJECT BOUNDARY AND A 25' REAR BRL MEASURED FROM THE LOT LINES. PER SECTION 108.0.C.3.b. OF THE ZONING REGULATIONS ALL STRUCTURES, INCLUDING ROOM EXTENSIONS, SHED AND PLAYSETS CANNOT BE WITHIN THE 75' PROJECT BRL.
- THE PROPOSED DWELLINGS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.

RESIDENTIAL SITE DEVELOPMENT PLAN

CENTENNIAL RESERVE

LOTS 1-16

2ND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

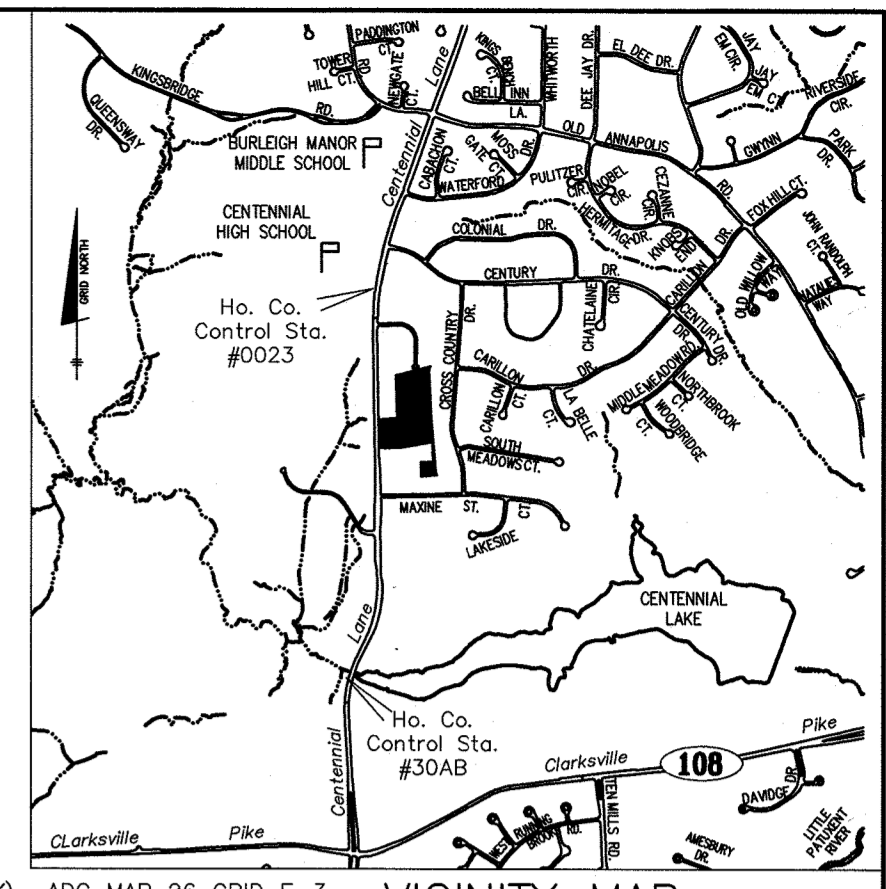
PROJECT BACKGROUND INFORMATION

PRESENT ZONING: R-20
 LOCATION: TAX MAP 30 - GRID 01 - PARCELS 4, 5, 174, AND 449
 APPLICABLE DPZ FILE REFERENCES: ECP-19-022, WP-19-047, F-20-010, SP-19-001, PB CASE # 444, SDP-20-041
 DEED REFERENCES: L. 18832 / F. 0115, L. 18372 / F. 0097, L. 1393 / F. 0455, L. 18832 / F. 0172

PROPOSED USE OF SITE: SINGLE FAMILY DETACHED
 PROPOSED WATER AND SEWER SYSTEMS: PUBLIC WATER & SEWER

SITE DATA TABULATION

1) TOTAL PROJECT AREA.....	8.13 AC.(F-20-10)
2) AREA OF 100-YR. FLOODPLAIN.....	0.00 AC.
3) AREA OF STEEP SLOPES:	
MODERATE STEEP SLOPES: 15-25.0%.....	0.00 AC.
STEEP SLOPES: 25% OR GREATER.....	0.00 AC.
4) AREA OF EXISTING FOREST.....	0.00 AC.
5) AREA OF ERODIBLE SOILS.....	0.00 AC.
6) AREA OF WETLANDS (INCLUDING BUFFER).....	0.00 AC.
7) AREA OF STREAM BUFFER (OUTSIDE WETLANDS & BUFFER).....	0.00 AC.
8) NET AREA OF LOT.....	2.76 SF±
9) APPROXIMATE LIMIT OF DISTURBANCE.....	2.96 AC±
10) PRESENT ZONING DESIGNATION.....	R-20(USING R-ED REQUIREMENTS)
11) PROPOSED USES FOR THE SITE & STRUCTURES.....	RESIDENTIAL-SFD
12) NUMBER OF PARKING SPACES REQUIRED.....	40(25/DWELLING)
13) NUMBER OF PARKING SPACES PROVIDED.....	48(TWO IN GARAGE ONE IN DRIVEWAY)
14) TOTAL IMPERVIOUS AREA.....	1.24 AC±
15) TOTAL UNITS ALLOWED (F-20-10).....	17 UNITS
16) TOTAL UNITS PROVIDED (F-20-10).....	17 UNITS
17) TOTAL UNITS PER THIS PLAN.....	16 UNITS



BENCH MARKS

HO. CO. #0023 (NAD '83)	ELEV. 479.248
N 577373.143	E 1349751.273
HO. CO. #30AB (NAD '83)	ELEV. 361.90
N 573239.385	E 1349547.846

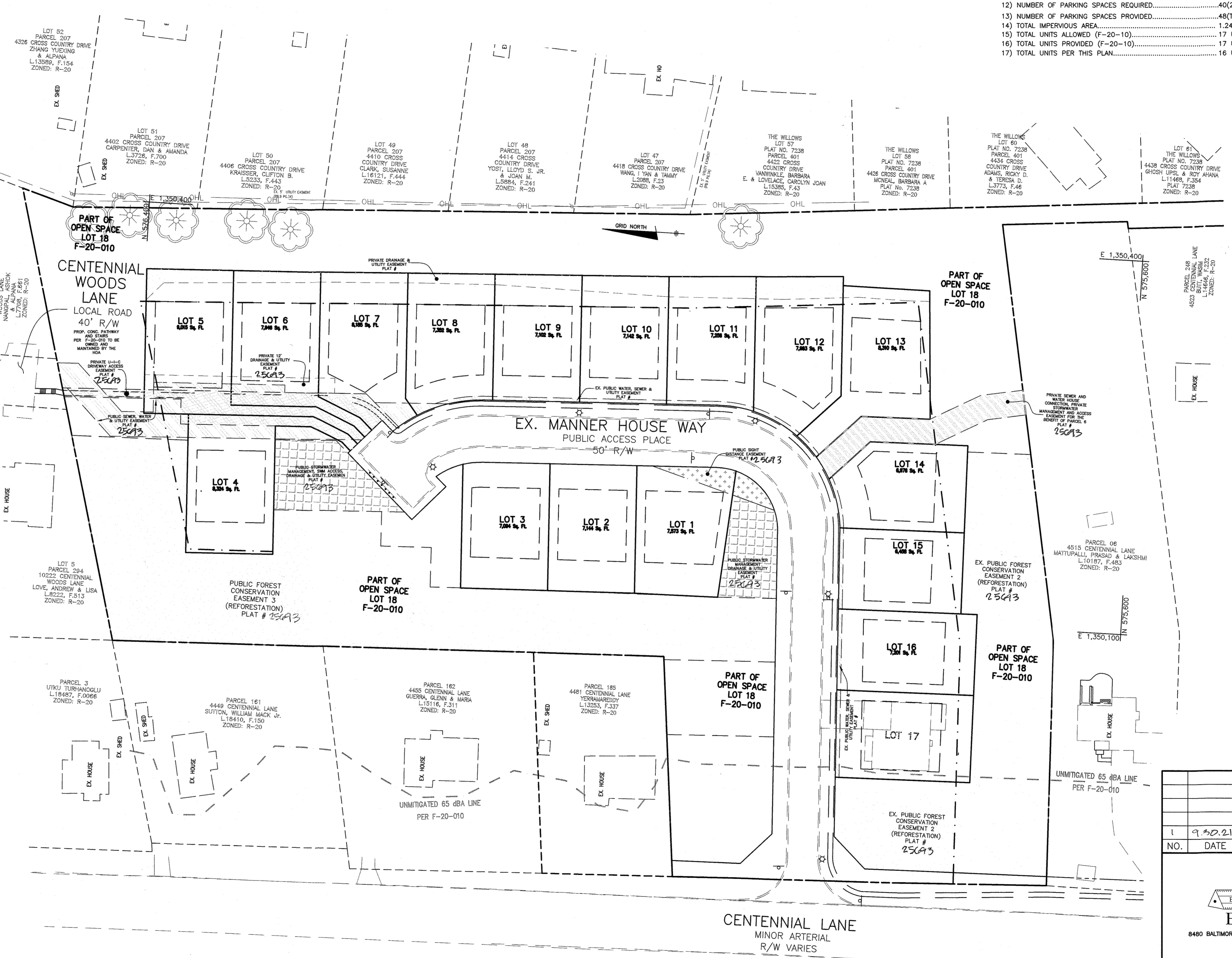
ON-LOT STORMWATER MANAGEMENT PRACTICES

LOT NUMBER	ADDRESS	NON-ROOFTOP DISCONNECT (NUMBER)	DRYWELLS M-5 (NUMBER)	MICRO-BIO RETENTION (NUMBER)	GRASS SWALE M-8 (NUMBER)
1	5027 MANNER HOUSE WAY	0	3	0	0
2	5031 MANNER HOUSE WAY	0	3	0	0
3	5035 MANNER HOUSE WAY	0	3	0	0
4	5049 MANNER HOUSE WAY	0	2	0	0
5	5052 MANNER HOUSE WAY	0	2	0	0
6	5048 MANNER HOUSE WAY	0	2	0	0
7	5044 MANNER HOUSE WAY	0	3	0	0
8	5040 MANNER HOUSE WAY	0	3	0	0
9	5036 MANNER HOUSE WAY	0	2	0	0
10	5032 MANNER HOUSE WAY	0	1	0	0
11	5028 MANNER HOUSE WAY	0	1	0	0
12	5024 MANNER HOUSE WAY	0	1	0	0
13	5020 MANNER HOUSE WAY	0	0	0	0
14	5012 MANNER HOUSE WAY	0	3	0	0
15	5008 MANNER HOUSE WAY	0	3	0	0
16	5004 MANNER HOUSE WAY	0	3	0	0

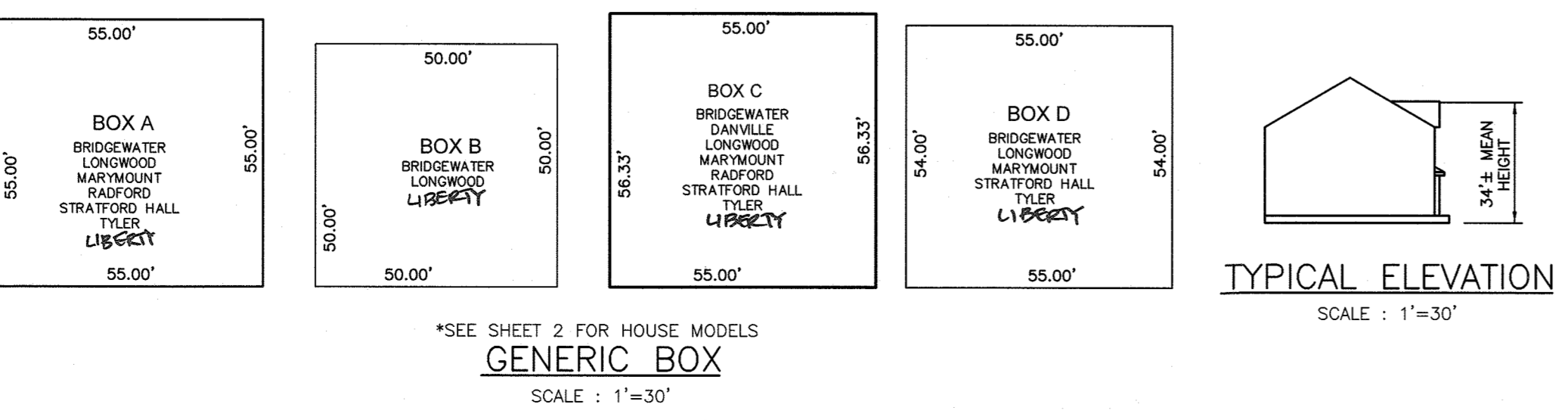
ADDRESS CHART

LOT NUMBER	ADDRESS	LOT NUMBER	ADDRESS
1	5027 MANNER HOUSE WAY	9	5036 MANNER HOUSE WAY
2	5031 MANNER HOUSE WAY	10	5032 MANNER HOUSE WAY
3	5035 MANNER HOUSE WAY	11	5028 MANNER HOUSE WAY
4	5049 MANNER HOUSE WAY	12	5024 MANNER HOUSE WAY
5	5052 MANNER HOUSE WAY	13	5020 MANNER HOUSE WAY
6	5048 MANNER HOUSE WAY	14	5012 MANNER HOUSE WAY
7	5044 MANNER HOUSE WAY	15	5008 MANNER HOUSE WAY
8	5040 MANNER HOUSE WAY	16	5004 MANNER HOUSE WAY

M.I.H.U. NOTE PER F-20-010: PLEASE NOTE THAT LOTS 1-16 IN THIS SUBDIVISION ARE SUBJECT TO SECTION 13.402(c)(e) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS FOR THE MODERATE INCOME HOUSING UNITS (M.I.H.U.) FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

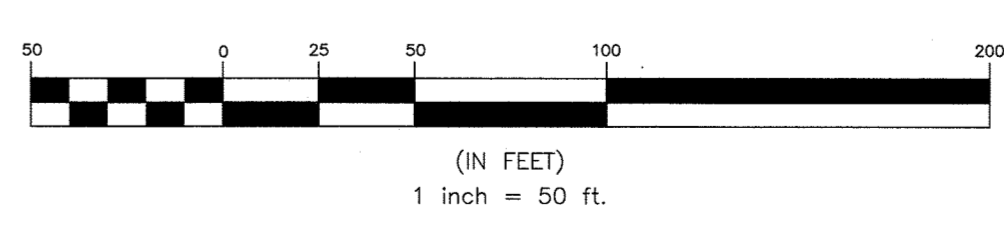


APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DIRECTOR



SHEET INDEX

SHEET	TITLE
1	COVER SHEET
2	SITE LAYOUT PLAN
3	GRADING, SEDIMENT & EROSION CONTROL PLAN
4	SEDIMENT CONTROL NOTES AND DETAILS
5	STORMWATER MANAGEMENT DRAINAGE AREA MAP
6	STORMWATER MANAGEMENT NOTES, DETAILS AND BORING LOGS



PERMIT INFORMATION CHART

SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL#
CENTENNIAL RESERVE	N/A	449
PLAT No. 25-613-2364-18D	GRID No. 01	ZONE R-20
TAX MAP 30	ELECTION DISTRICT 2 ND	CENSUS TRACT 6023.04

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BCI-CIVILENGINEERING.COM

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. 23790, Expiration Date: 6-30-2021.

A. Meloy 2/2/21

OWNER: CENTENNIAL RESERVE, LLC
 308 MARGOTHY ROAD
 SEVERN PARK, MD 21146
 240.319.1735

DEVELOPER: NVR HOMES
 9720 PATUXENT WOODS DRIVE
 COLUMBIA, MD 21046
 410.379.5956

CENTENNIAL RESERVE SINGLE FAMILY LOTS 1-16

TAX MAP: 30 GRID: 01 PARCEL: 04,05,174 & 449
 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND

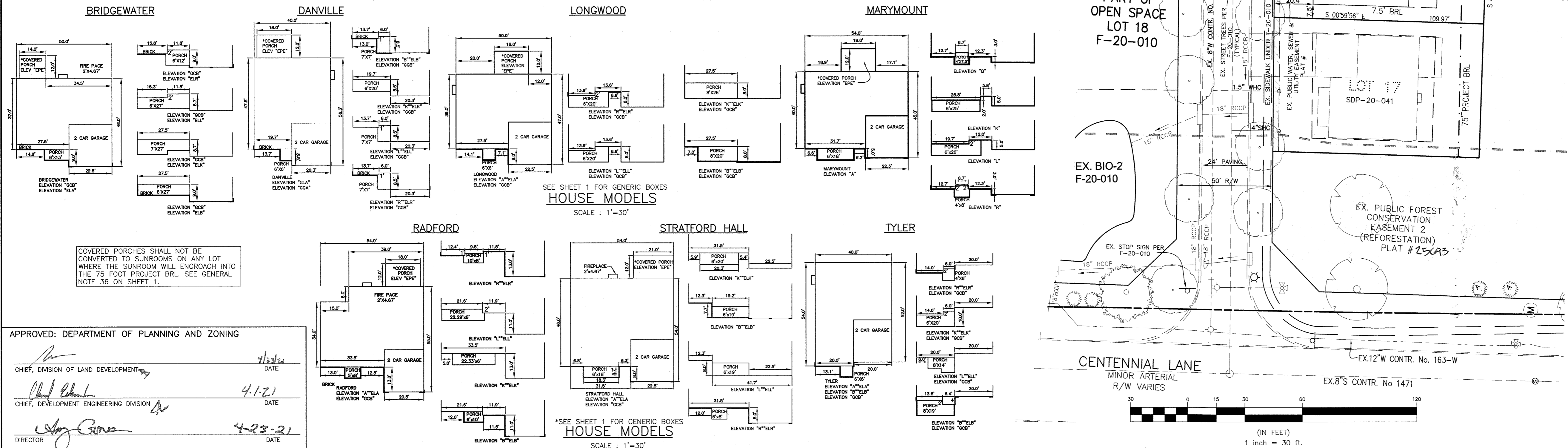
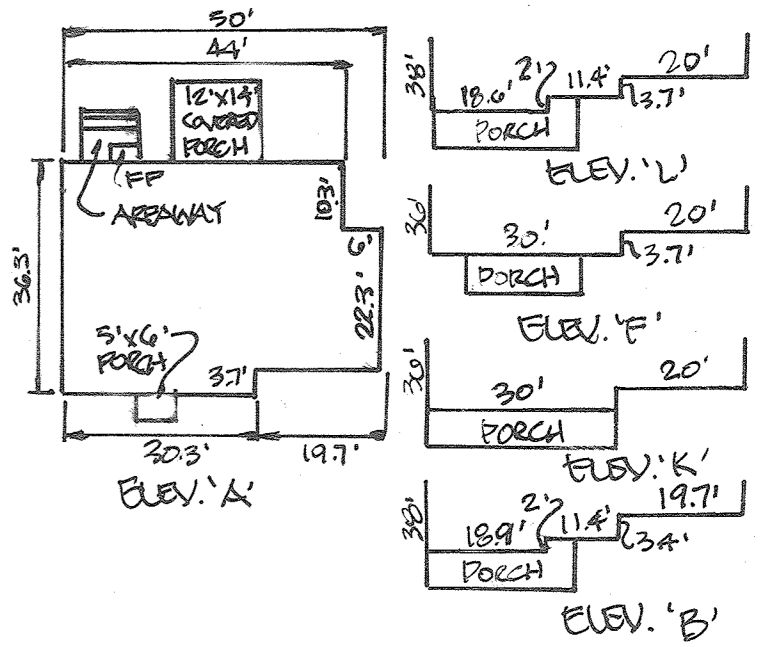
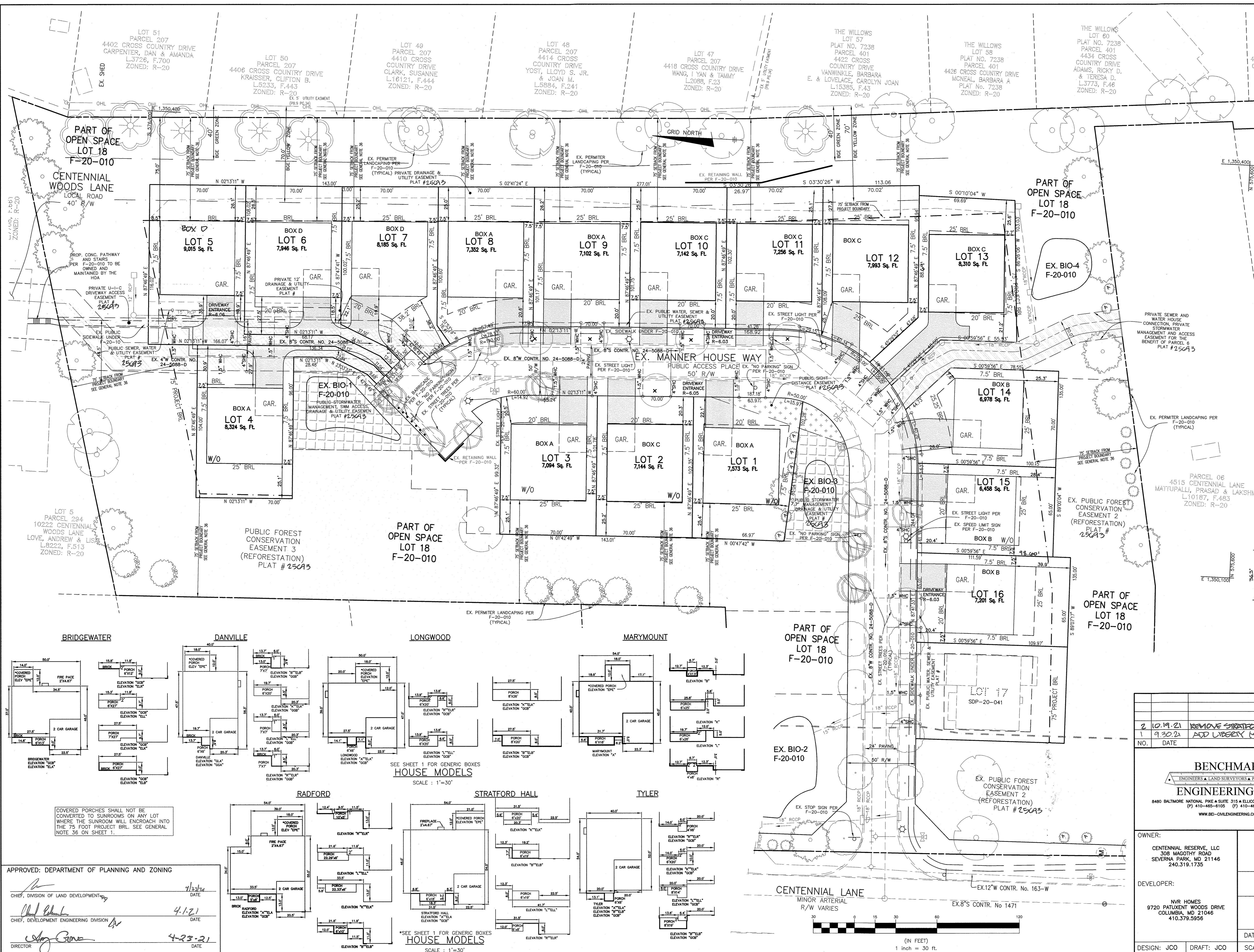
A RESIDENTIAL SITE DEVELOPMENT PLAN COVER SHEET

DATE: JANUARY 2021 BEI PROJECT NO. 2995
 SCALE: AS SHOWN SHEET 1 OF 6

DESIGN: JCO DRAFT: JCO

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- EXISTING STRUCTURE
- PROPOSED GENERIC BOX
- EX. FOREST CONSERVATION EASEMENT F-20-010
- EX. PUBLIC WATER & SEWER EASEMENT
- EX. PUBLIC DRAINAGE & UTILITY EASEMENT
- EX. PRIVATE USE-IN-COMMON EASEMENT
- EX. PUBLIC STORMWATER MANAGEMENT DRAINAGE & UTILITY EASEMENT
- EX. PUBLIC SIGHT DISTANCE EASEMENT
- EX. PRIVATE WATER & SEWER EASEMENT
- STREET TREES PER F-20-010
- PERMITS PLANTING PER F-20-010



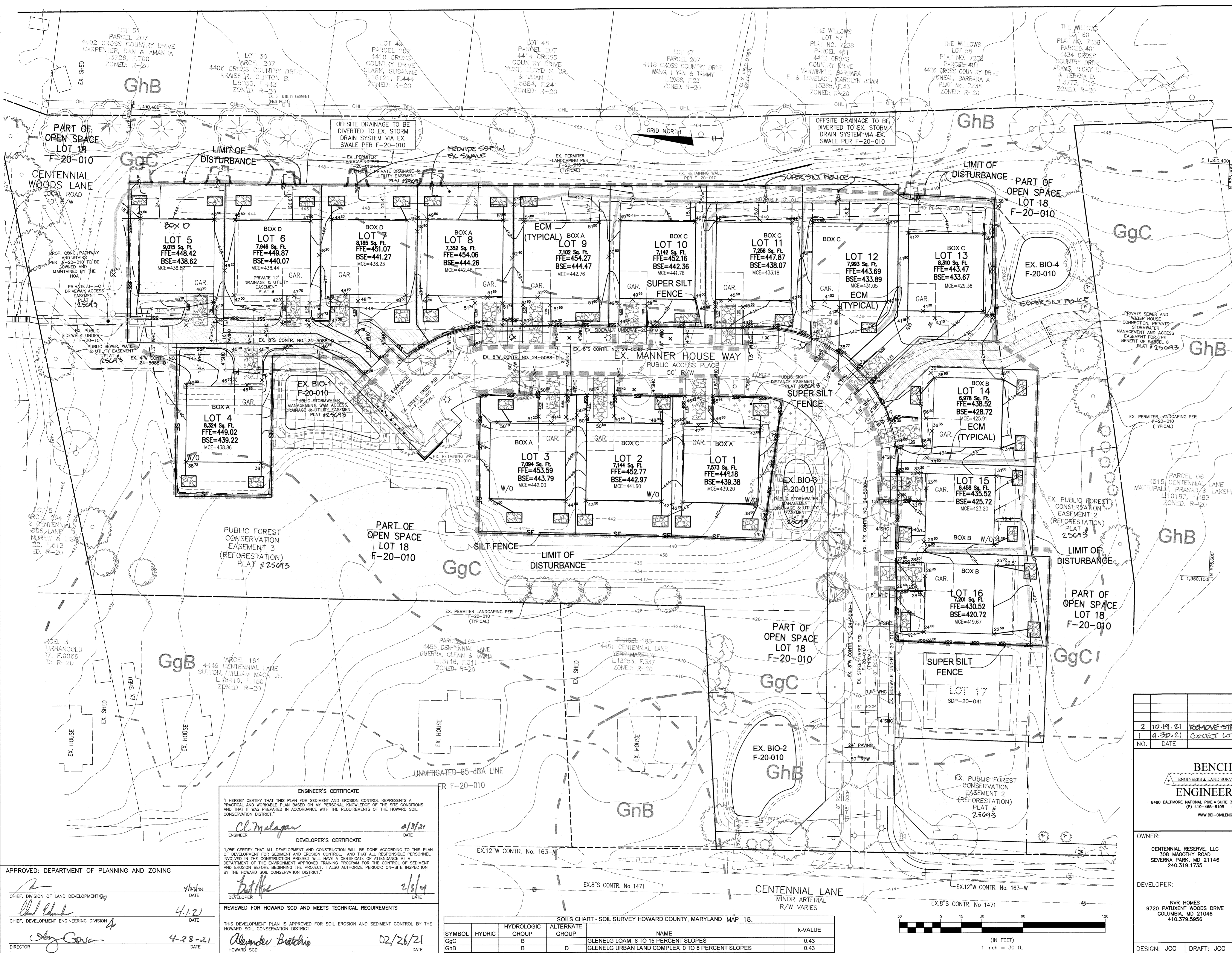
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 4/23/21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 4.1.21
 DIRECTOR *[Signature]* 4-23-21

2 10.19.21 REMOVE STRATFORD HALL LOTS 2 ADD BOX D		REVISION	
1 9.30.21 ADD LIBERTY MODEL		REVISION	
NO.	DATE	REVISION	
OWNER:		CENTENNIAL RESERVE SINGLE FAMILY LOTS 1-16	
DEVELOPER:		TAX MAP: 30 GRID; 01 PARCEL: 04,05,174 & 449 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND A RESIDENTIAL SITE DEVELOPMENT PLAN SITE LAYOUT PLAN	
DESIGN: JCO		DATE: JANUARY 2021	BEI PROJECT NO. 2995
DRAFT: JCO		SCALE: 1"=30'	SHEET 2 OF 6

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS
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 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-ENL-ENGINEERING.COM

Cl. Malaga 5/17/21



LEGEND

- EXISTING CONTOURS: 368, 370, 368
- PROPOSED CONTOURS: 368
- EXISTING TREELINE: [Symbol]
- EXISTING STRUCTURE: [Symbol]
- PROPOSED GENERIC BOX: [Symbol]
- EX. FOREST CONSERVATION EASEMENT F-20-010: [Symbol]
- EX. PUBLIC WATER & SEWER EASEMENT: [Symbol]
- EX. PUBLIC DRAINAGE & UTILITY EASEMENT: [Symbol]
- EX. PRIVATE USE-IN-COMMON EASEMENT: [Symbol]
- EX. PUBLIC STORMWATER MANAGEMENT & UTILITY EASEMENT: [Symbol]
- EX. PUBLIC SIGHT DISTANCE EASEMENT: [Symbol]
- EX. PRIVATE WATER & SEWER EASEMENT: [Symbol]
- STREET TREES PER F-20-010: [Symbol]
- PERIMETER PLANTING PER F-20-010: [Symbol]
- SILT FENCE: SF
- SUPER SILT FENCE: SSF
- EROSION CONTROL MATTING: [Symbol]
- LIMIT OF DISTURBANCE: [Symbol]
- STABILIZED CONSTRUCTION ENTRANCE: [Symbol]
- PROP. DRYWELL: [Symbol]
- SOILS DELINEATION: [Symbol]
- SOILS BOUNDARY: GbC

SEWER HOUSE CONNECTION CHART

STATION	LOT	ELEVATION AT PUMP	ELEVATION AT 8' W	H.C.E.	S.E.	F.F.
1+27.00	17	411.00	411.25	415.00	415.10	424.90
1+47.00	15	414.50	414.75	419.00	420.10	429.90
1+70.00	15	417.75	418.00	423.00	424.00	433.90
3+23.00	14	420.25	420.75	425.00	426.10	436.00
4+01.00	14	423.25	423.75	428.00	429.10	439.00
4+31.00	10	423.00	424.00	428.00	429.10	439.00
4+54.00	12	425.00	426.00	431.00	432.10	442.00
4+81.00	11	427.00	428.00	433.00	434.10	444.00
4+84.00	11	427.00	428.00	433.00	434.10	444.00
4+89.00	10	428.00	429.00	434.00	435.10	445.00
4+92.00	10	428.00	429.00	434.00	435.10	445.00
4+93.00	10	428.00	429.00	434.00	435.10	445.00
4+94.00	10	428.00	429.00	434.00	435.10	445.00
4+95.00	10	428.00	429.00	434.00	435.10	445.00
4+96.00	10	428.00	429.00	434.00	435.10	445.00
4+97.00	10	428.00	429.00	434.00	435.10	445.00
4+98.00	10	428.00	429.00	434.00	435.10	445.00
4+99.00	10	428.00	429.00	434.00	435.10	445.00
5+02.00	7	432.50	433.00	438.00	439.10	449.00
1+07.00	5	433.25	433.50	438.50	439.60	449.50
1+38.00	2	433.60	434.00	439.00	440.10	450.00
1+59.00	2	433.60	434.00	439.00	440.10	450.00
1+97.00	2	433.60	434.00	439.00	440.10	450.00

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] 4/23/21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] 4/1/21
 DIRECTOR: [Signature] 4-23-21

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 ENGINEER: *Cl. Malagan* 2/3/21

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 DEVELOPER: [Signature] 2/3/21

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 [Signature] 02/26/21

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

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND MAP 18.

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
GgC		B	D	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	0.43
GhB		B	D	GLENELG URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.43

2 10.19.21 REMOVE STRATFORD HALL LOT 5 & ADD BOX D
 1 9.30.21 CORRECT LOT 1 FIRST FLOOR ELEVATION

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 315 & ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-5105 (F) 410-465-6644
 WWW.BE-CVLENGINEERING.COM

CENTENNIAL RESERVE SINGLE FAMILY LOTS 1-16

TAX MAP: 30 GRID; 01 PARCEL: 04,05,174 & 449
 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND

A RESIDENTIAL SITE DEVELOPMENT PLAN GRADING, SEDIMENT & EROSION CONTROL PLAN

DATE: JANUARY 2021 BEI PROJECT NO. 2995
 SCALE: 1"=30' SHEET 3 OF 6

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION: The process of preparing the soil 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.

1. General Use: Using vegetation to cover exposed soil from erosion.

2. 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 horizontal soil preparation, soil amendments and topsoiling, seeding and mulching; temporary stabilization; and permanent stabilization.

3. Effects on Water Quality and Quantity: Stabilization practices are used to restore 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 rainwater.

4. Planting Vegetation: Effects on Water Quality and Quantity: 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 to runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone.

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

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

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

B-4.1 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: The process of preparing the soil 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.

1. General Use: Using vegetation to cover exposed soil from erosion.

2. 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 horizontal soil preparation, soil amendments and topsoiling, seeding and mulching; temporary stabilization; and permanent stabilization.

3. Effects on Water Quality and Quantity: Stabilization practices are used to restore 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 rainwater.

4. Planting Vegetation: Effects on Water Quality and Quantity: 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 to runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone.

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

B-4.2 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: The process of preparing the soil 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.

1. General Use: Using vegetation to cover exposed soil from erosion.

2. 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 horizontal soil preparation, soil amendments and topsoiling, seeding and mulching; temporary stabilization; and permanent stabilization.

3. Effects on Water Quality and Quantity: Stabilization practices are used to restore 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 rainwater.

4. Planting Vegetation: Effects on Water Quality and Quantity: 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 to runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone.

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

B-4.3 STANDARDS AND SPECIFICATIONS FOR SOIL AMENDMENTS

DEFINITION: The process of preparing the soil 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.

1. General Use: Using vegetation to cover exposed soil from erosion.

2. 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 horizontal soil preparation, soil amendments and topsoiling, seeding and mulching; temporary stabilization; and permanent stabilization.

3. Effects on Water Quality and Quantity: Stabilization practices are used to restore 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 rainwater.

4. Planting Vegetation: Effects on Water Quality and Quantity: 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 to runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone.

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

B-4.4 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: The process of preparing the soil 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.

1. General Use: Using vegetation to cover exposed soil from erosion.

2. 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 horizontal soil preparation, soil amendments and topsoiling, seeding and mulching; temporary stabilization; and permanent stabilization.

3. Effects on Water Quality and Quantity: Stabilization practices are used to restore 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 rainwater.

4. Planting Vegetation: Effects on Water Quality and Quantity: 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 to runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone.

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

ENGINEER'S CERTIFICATE

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

DEVELOPER'S CERTIFICATE

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

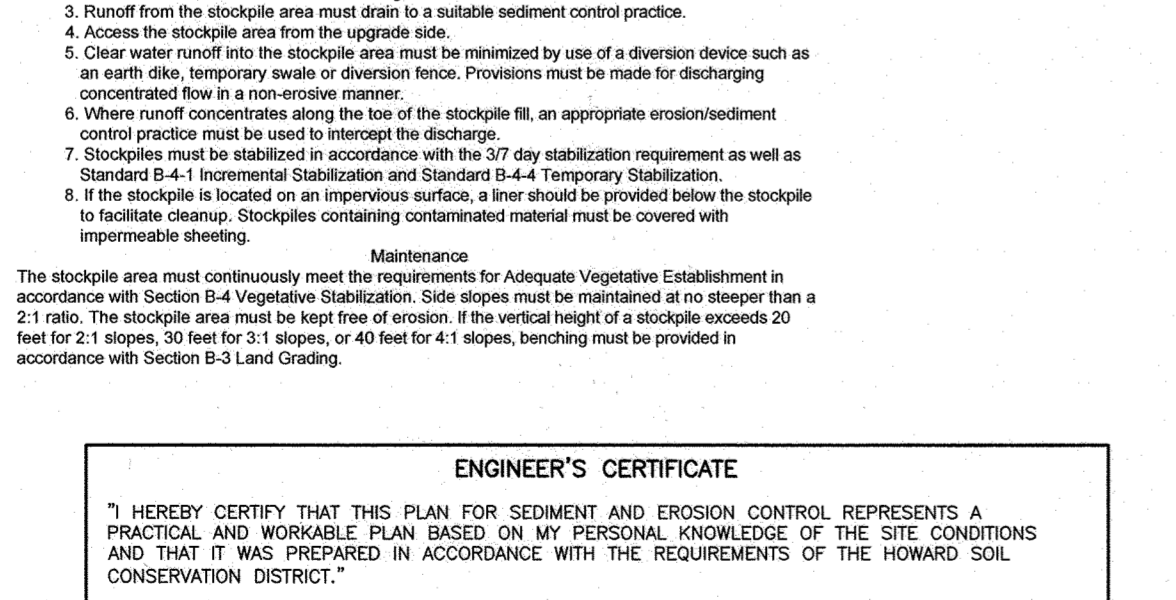
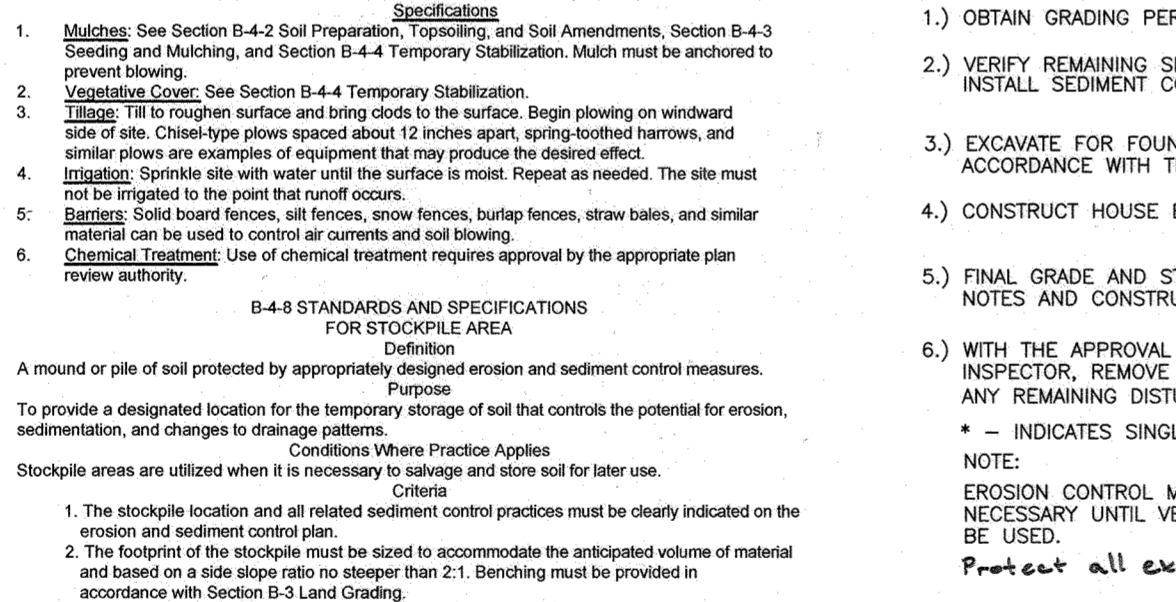
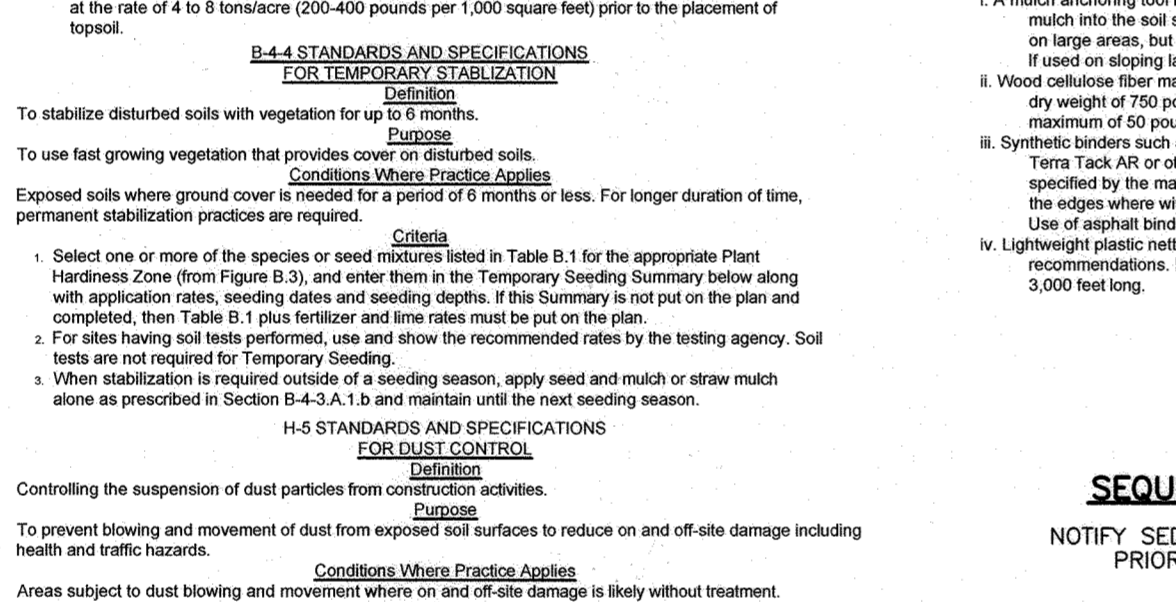
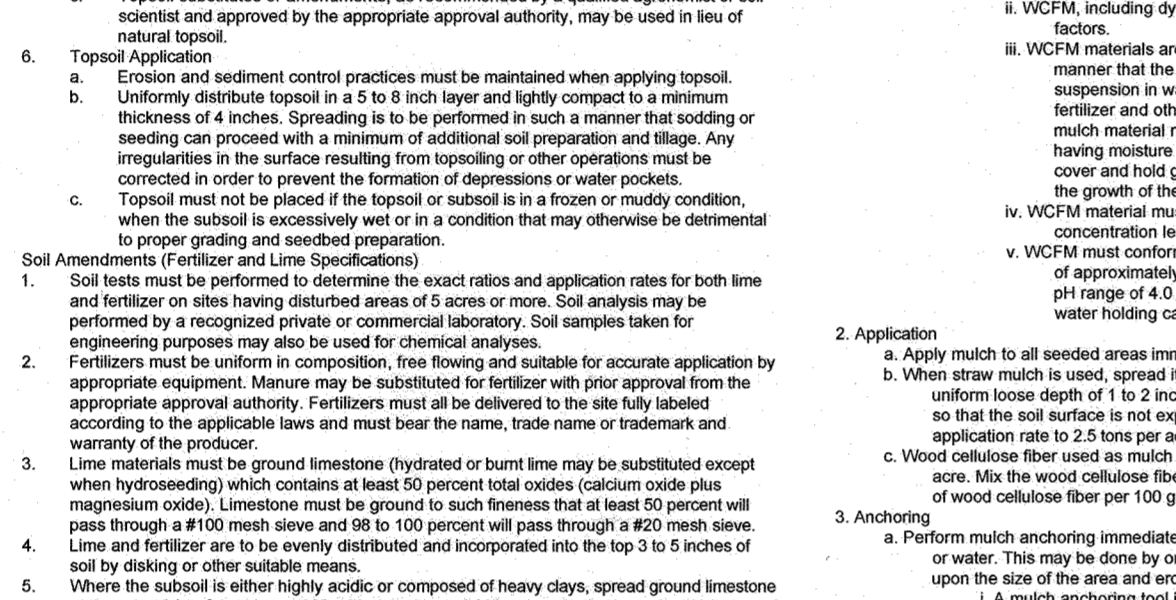
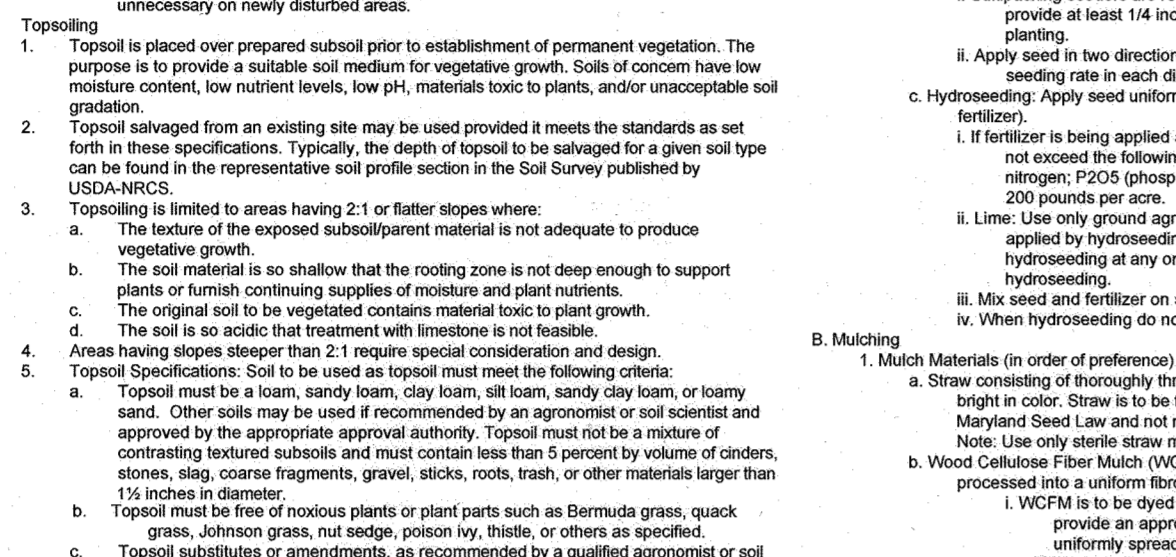
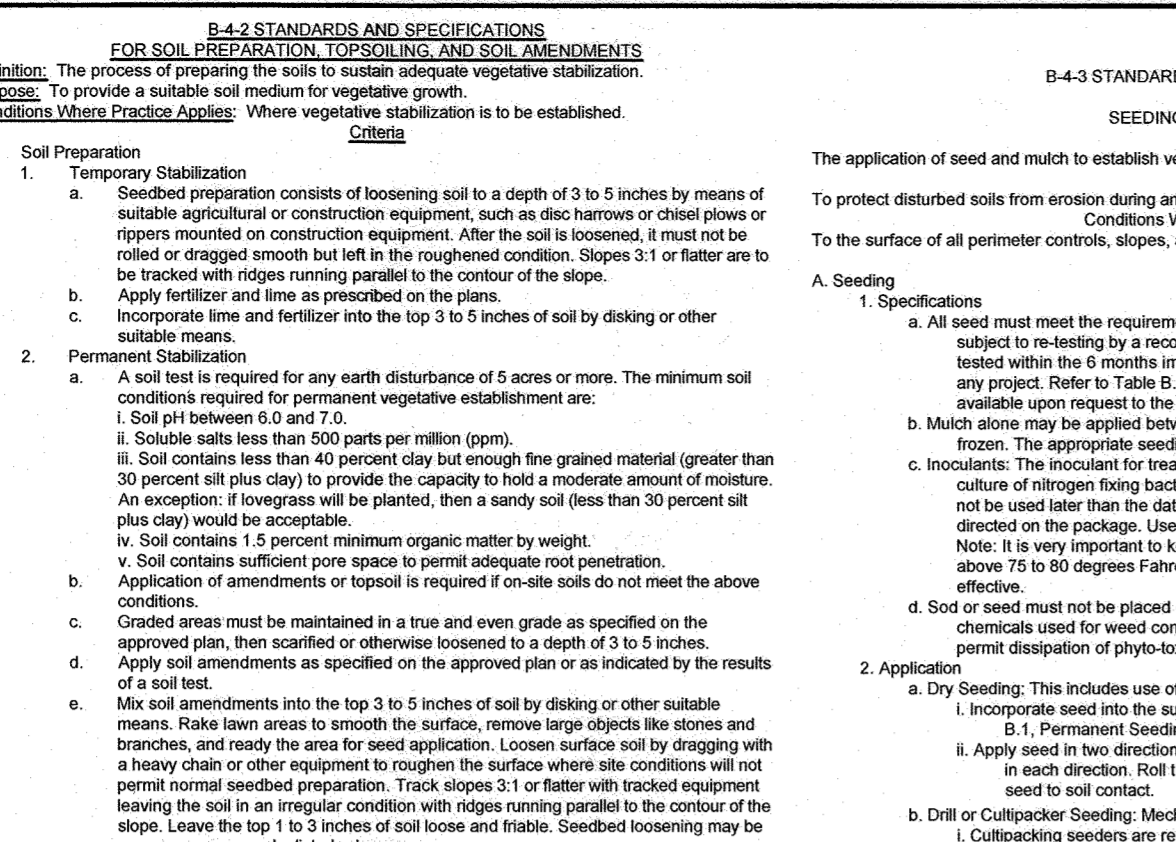


Table B.1 - Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate (lb./1000 sq. ft.)	Seeding Depth (inches)	Stand #s	Revised Seeding Dates by Plant Hardiness Zone 3/	7 and 9/
Annual Ryegrass (Elymus repens) ssp. (RR)	4.0	0.5		Mar 1 to May 15; Aug 1 to Oct 31	
Annual Ryegrass (Elymus repens) ssp. (RR)	96	2.2	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Oats (Avena sativa)	72	1.7	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Wheat (Triticum aestivum)	120	2.8	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Corn (Zea mays)	120	2.8	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Warm Season Grasses					
Fescue (Festuca arvensis)	30	0.7	0.5	May 15 to Jul 31	
Perennial Ryegrass (Lolium perenne)	30	0.7	0.5	May 15 to Jul 31	

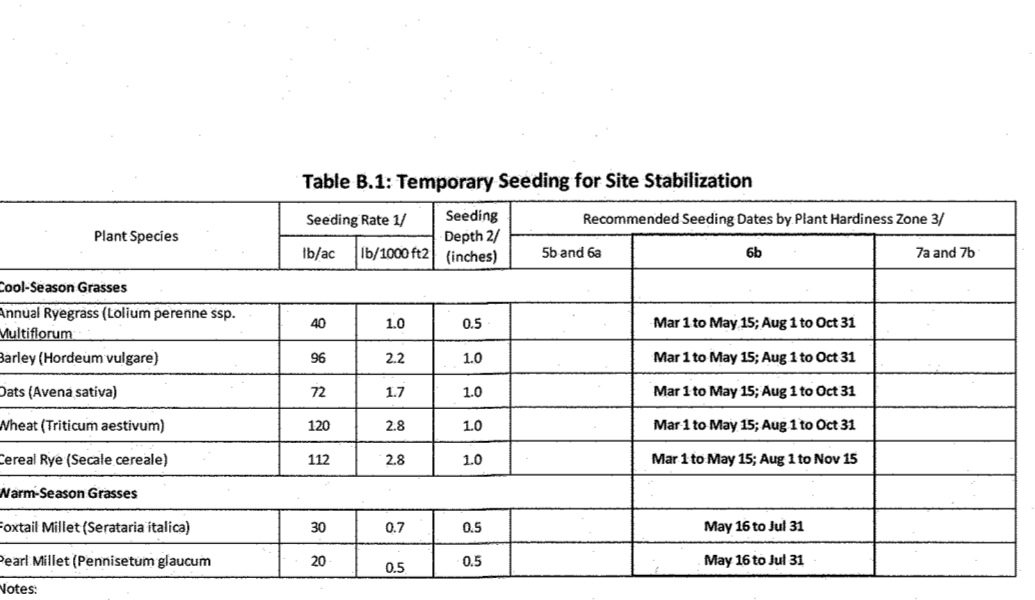
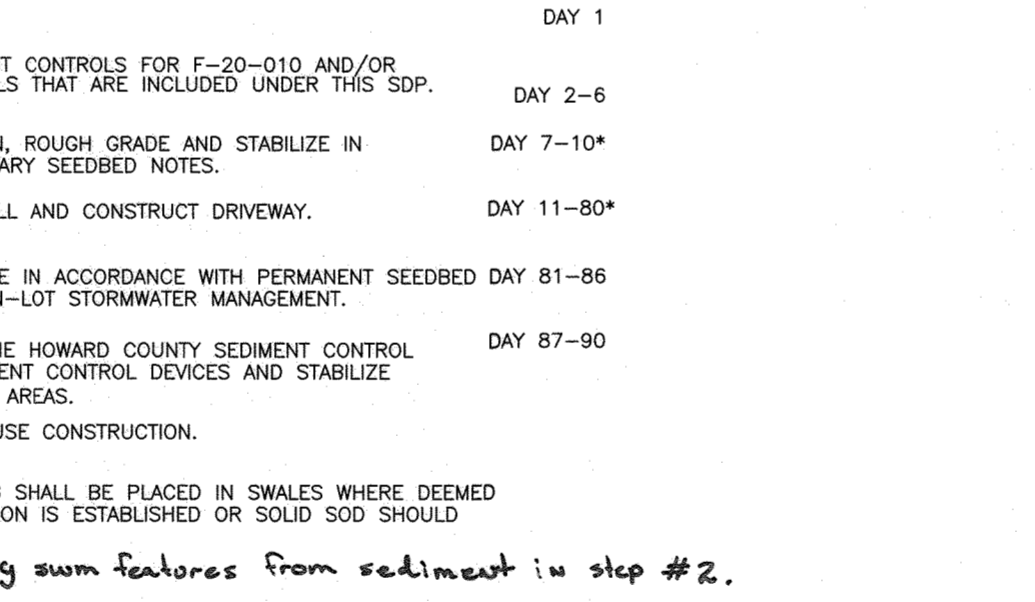
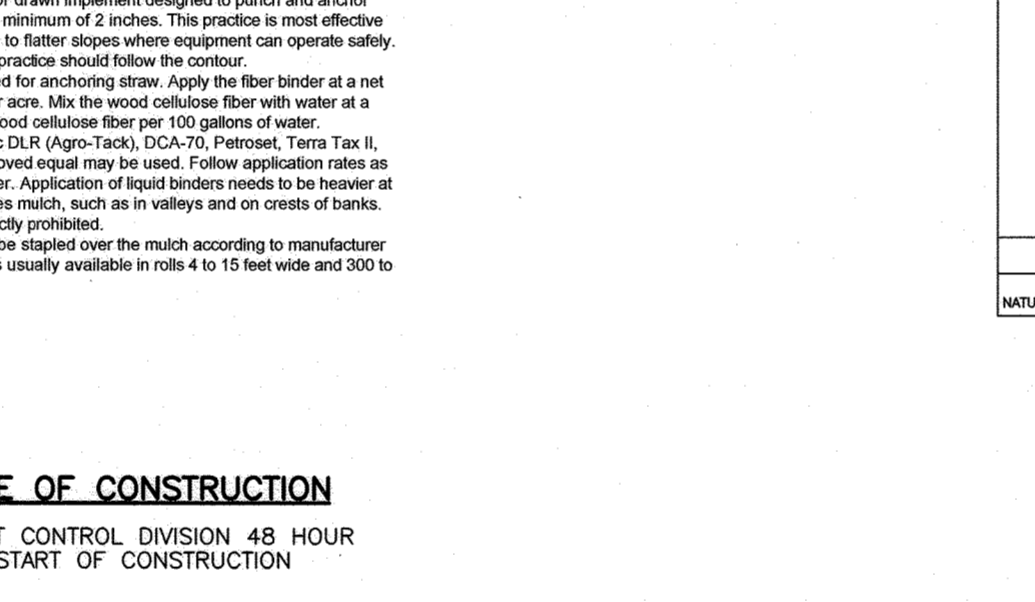
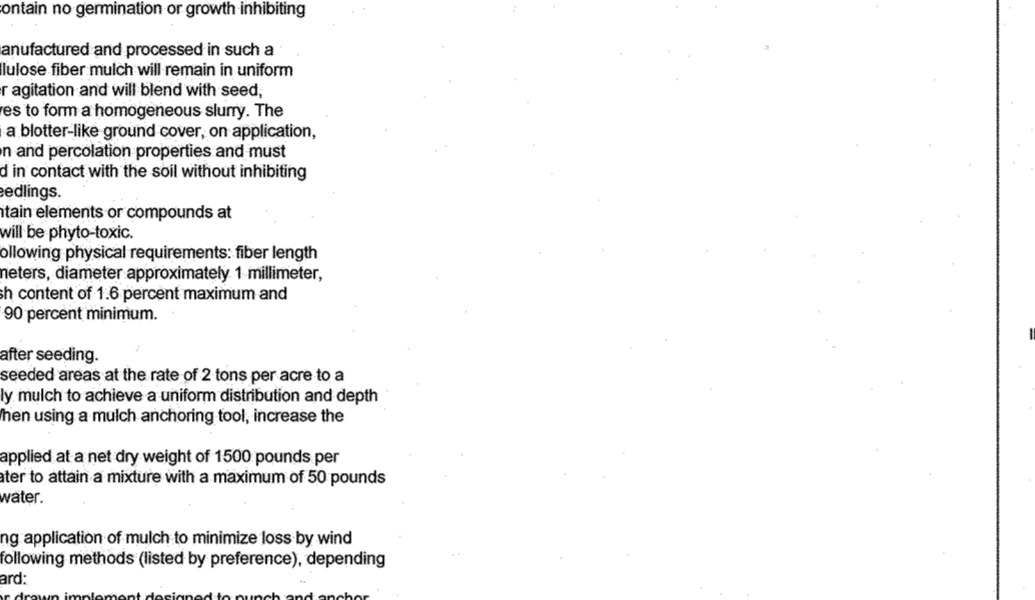
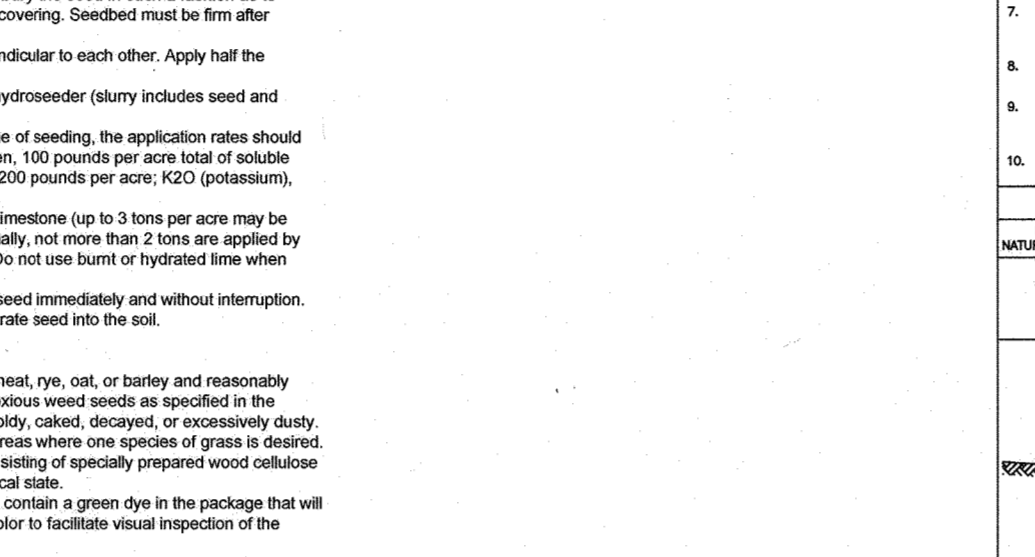
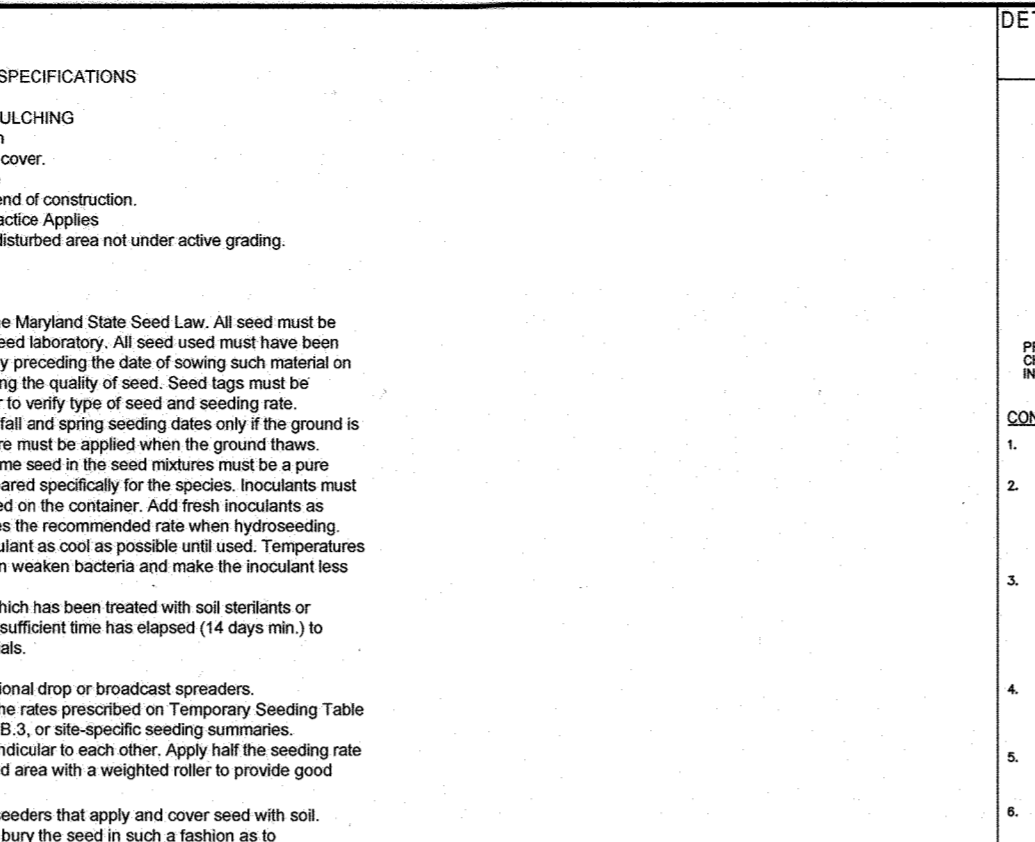


Table B.1 - Permanent Seeding Summary

Hardness Zone (from Figure B.3)	Plant Species	Application Rate (lb./ac)	Seeding Depth (inches)	Seeding Dates	Fertilizer Rate (lb./1000 sq. ft.)	Time Rate
1	Fescue, Tall	60	0.5	Mar 1 to May 15	45 pounds	2 tons/c (900/1000)
	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)
2	Fescue, Tall	60	0.5	Mar 1 to May 15	45 pounds	2 tons/c (900/1000)
	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)

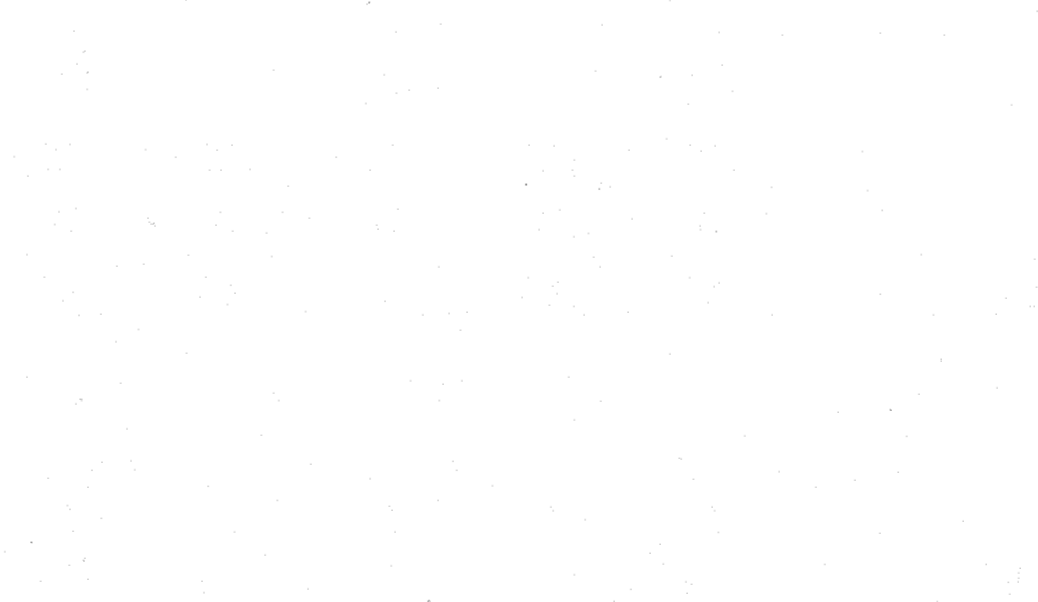
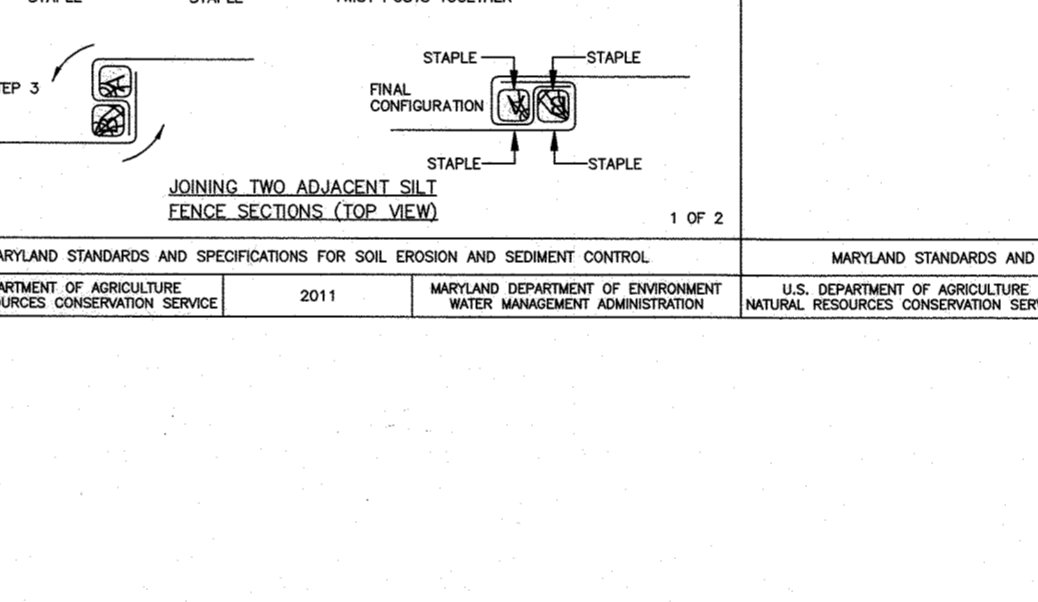
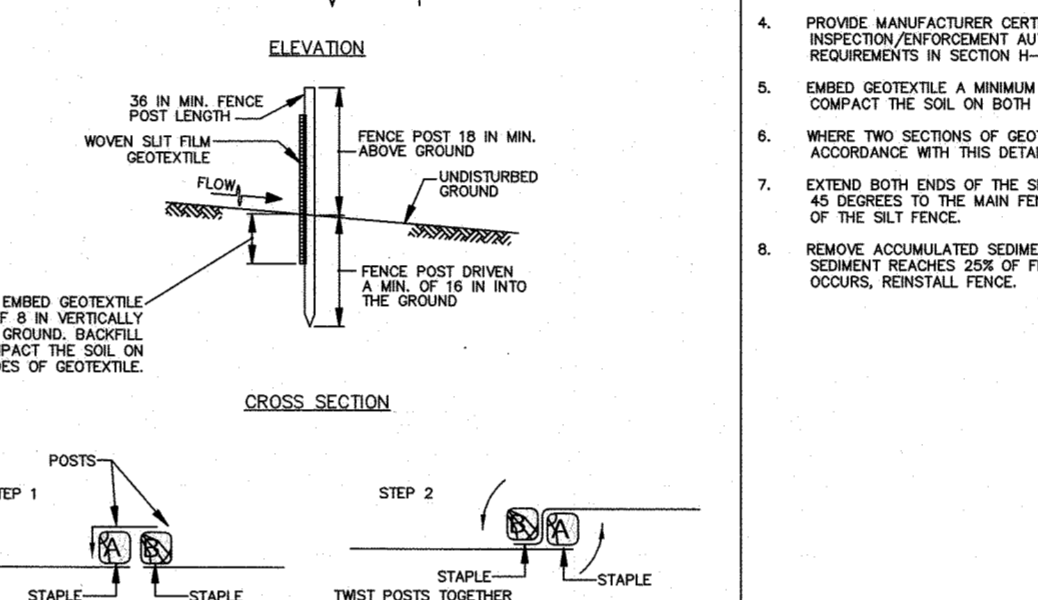
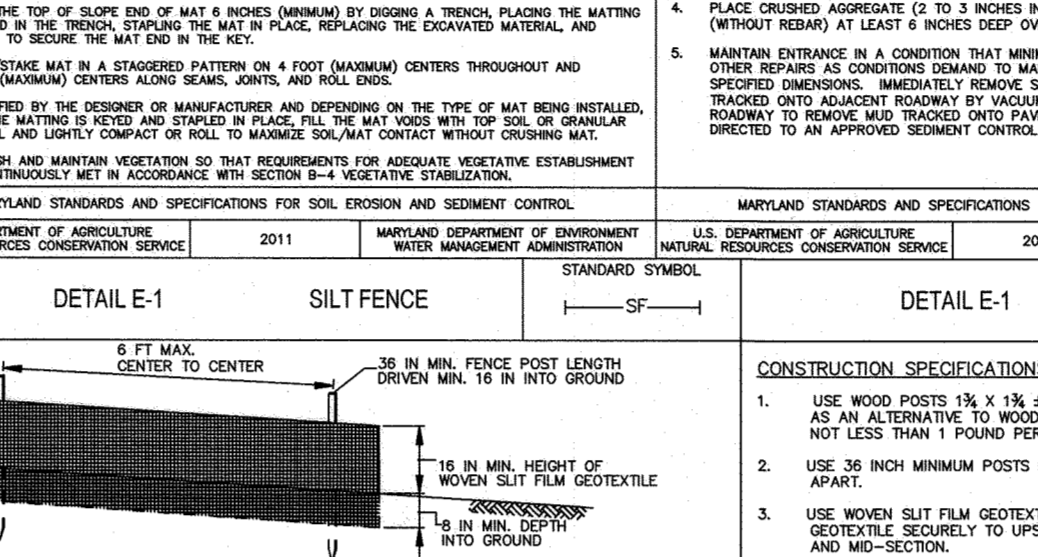
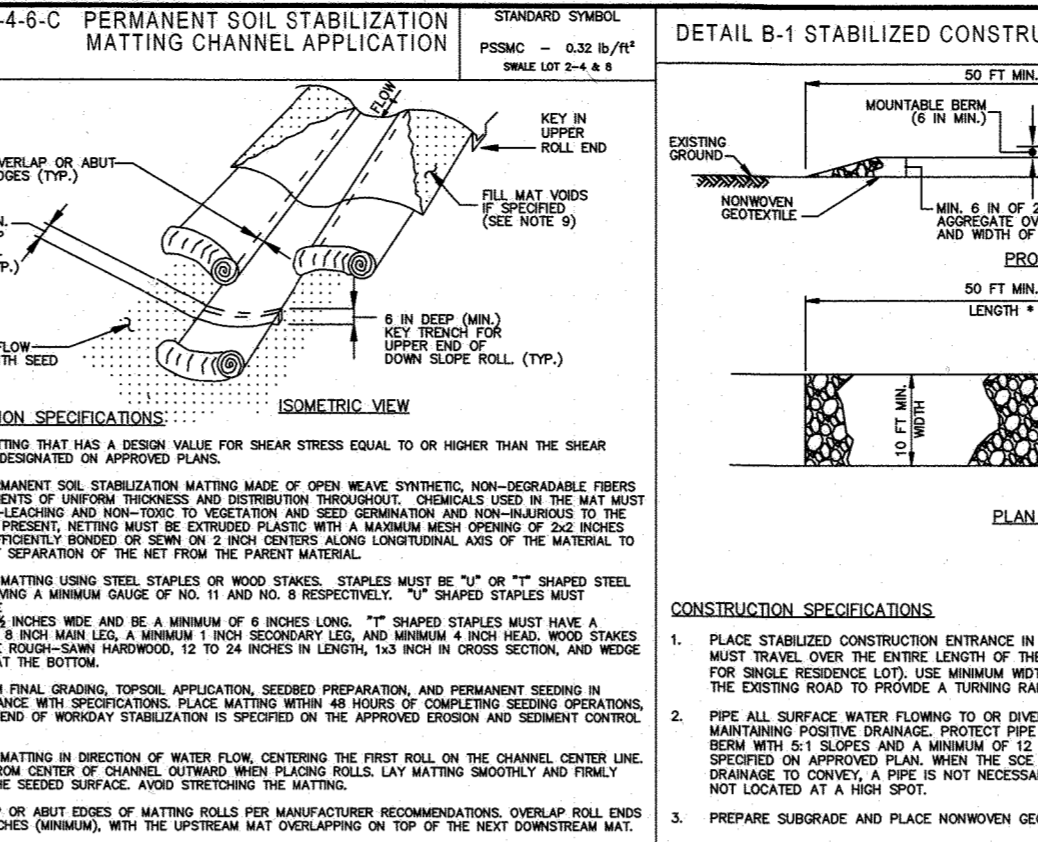


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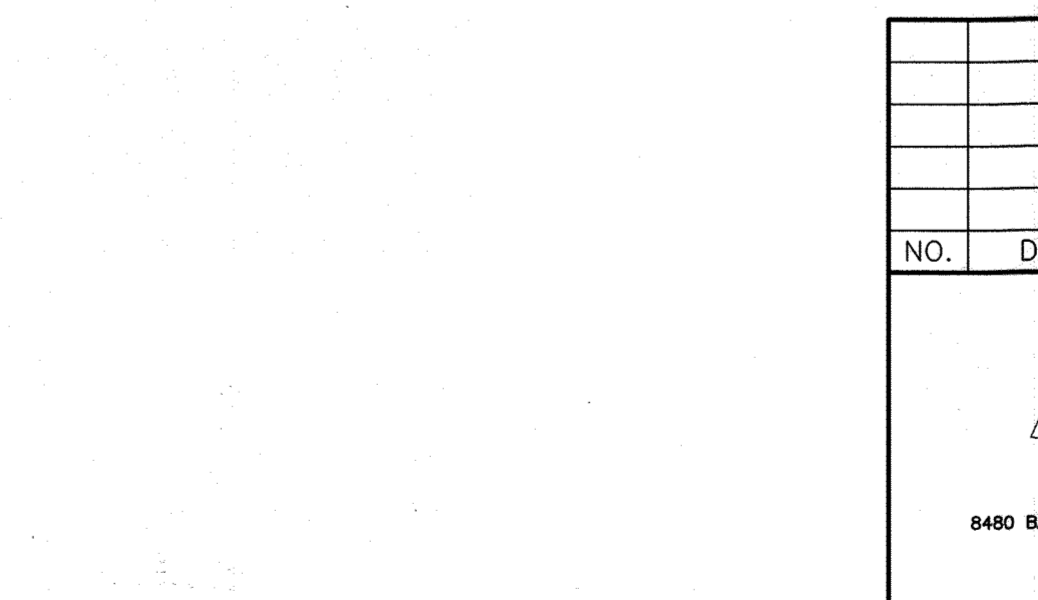
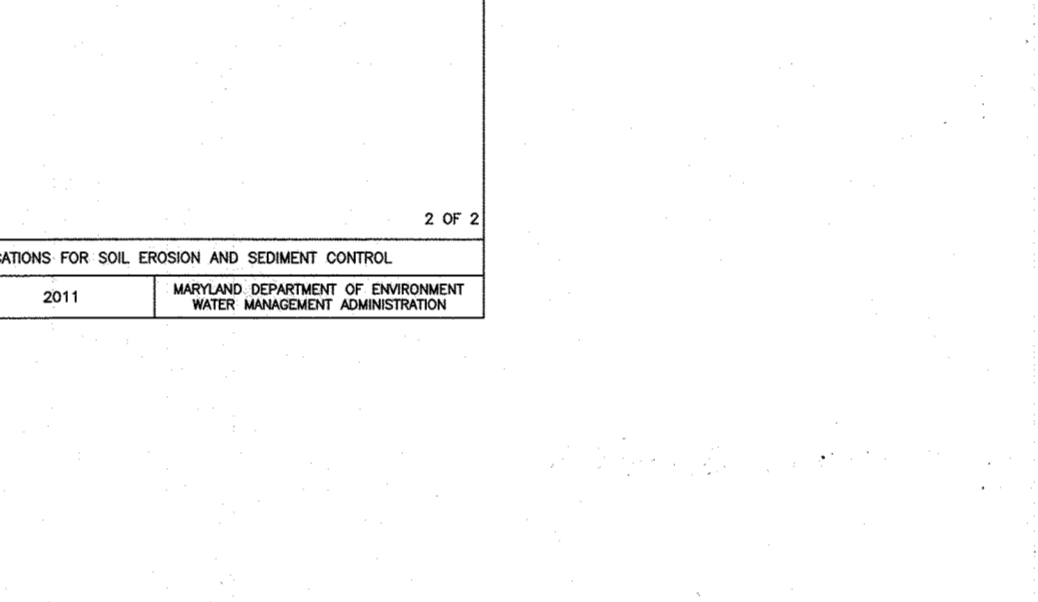
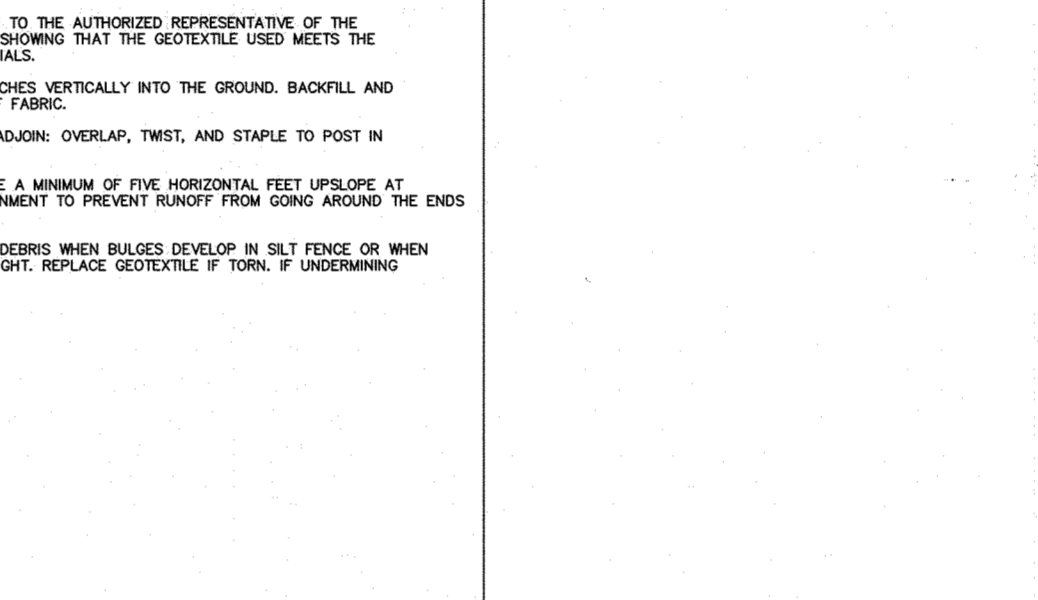
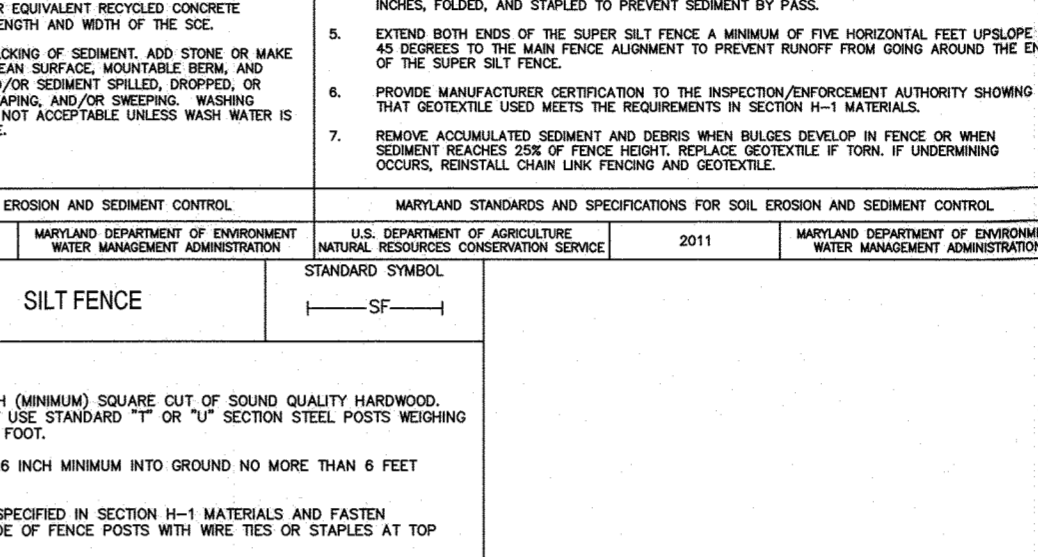
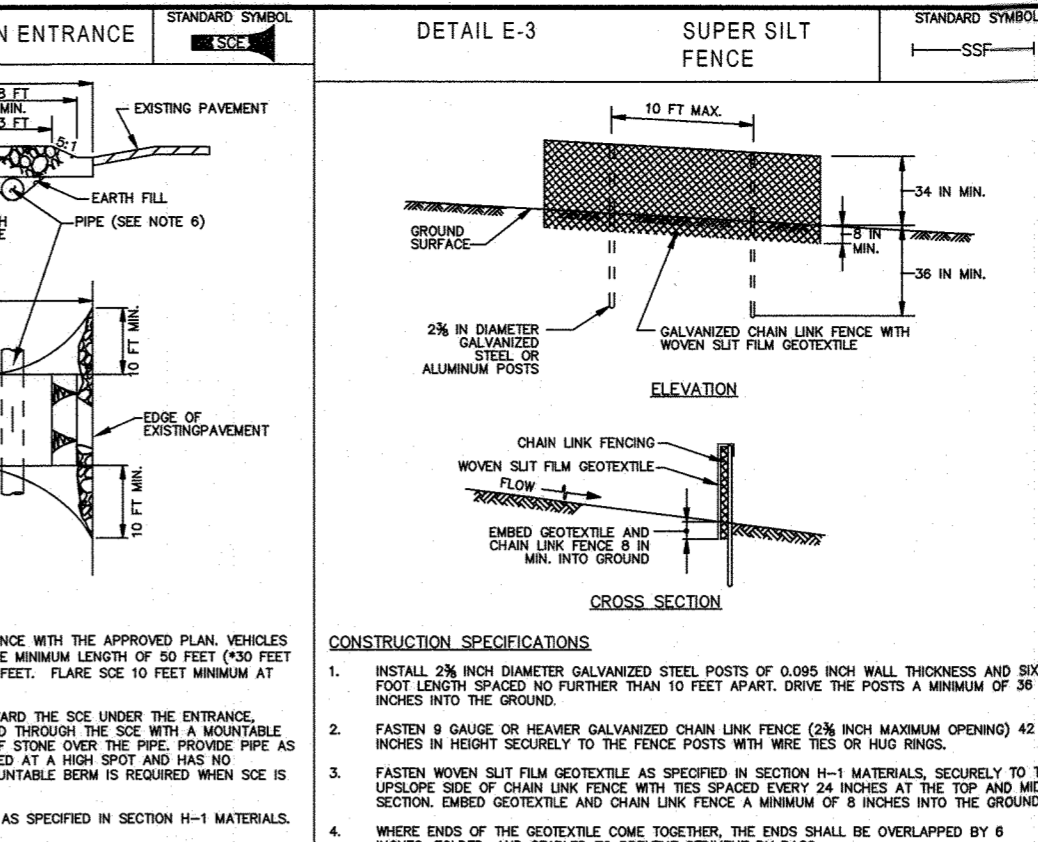


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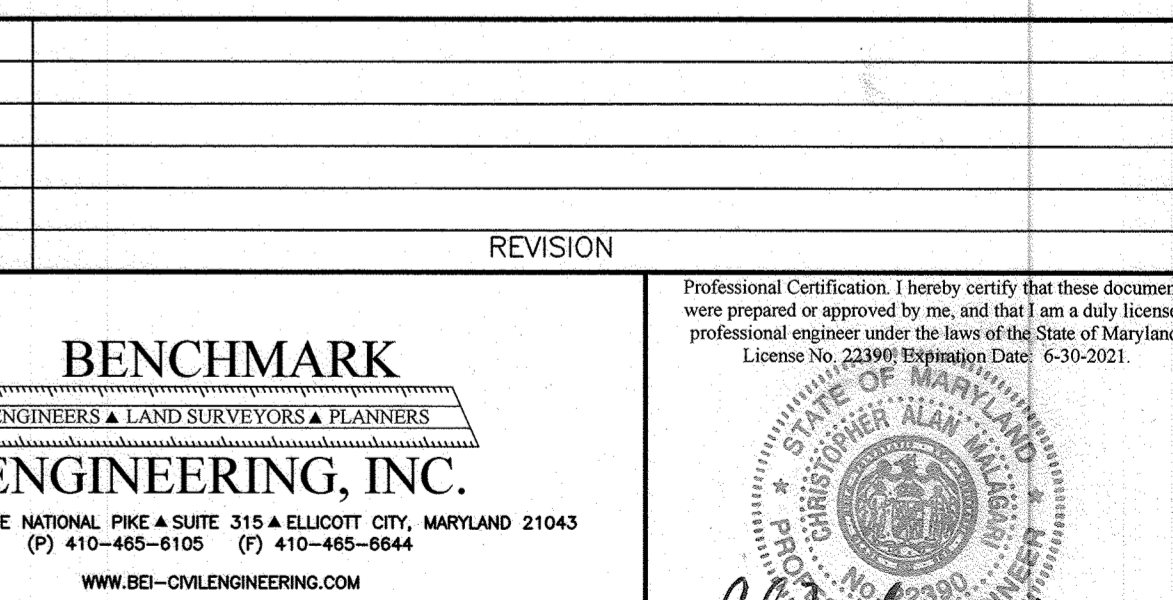
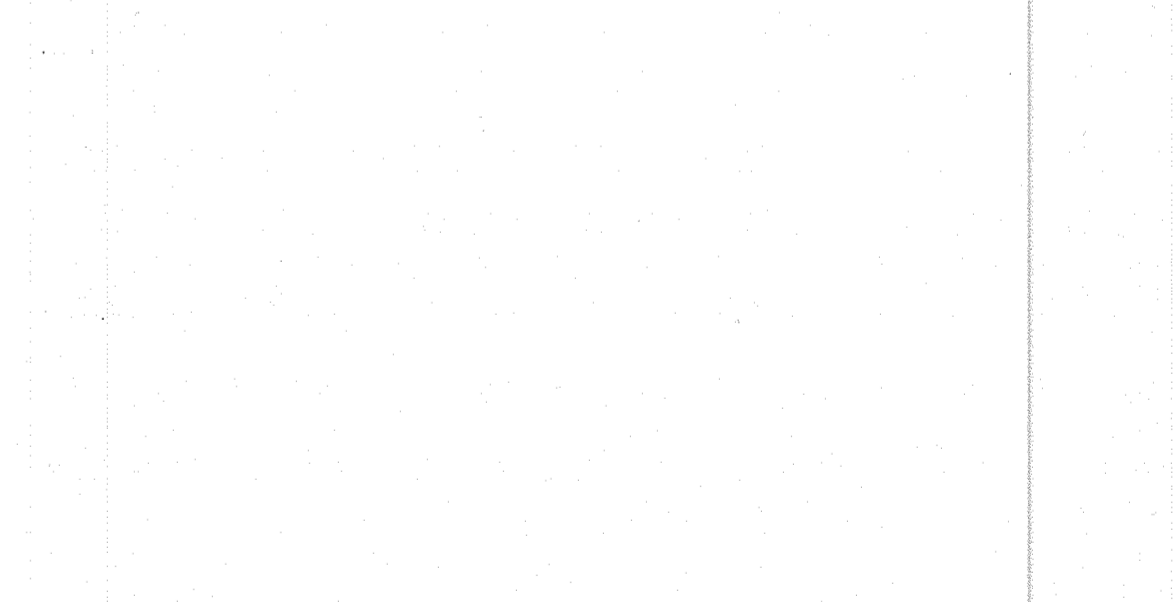
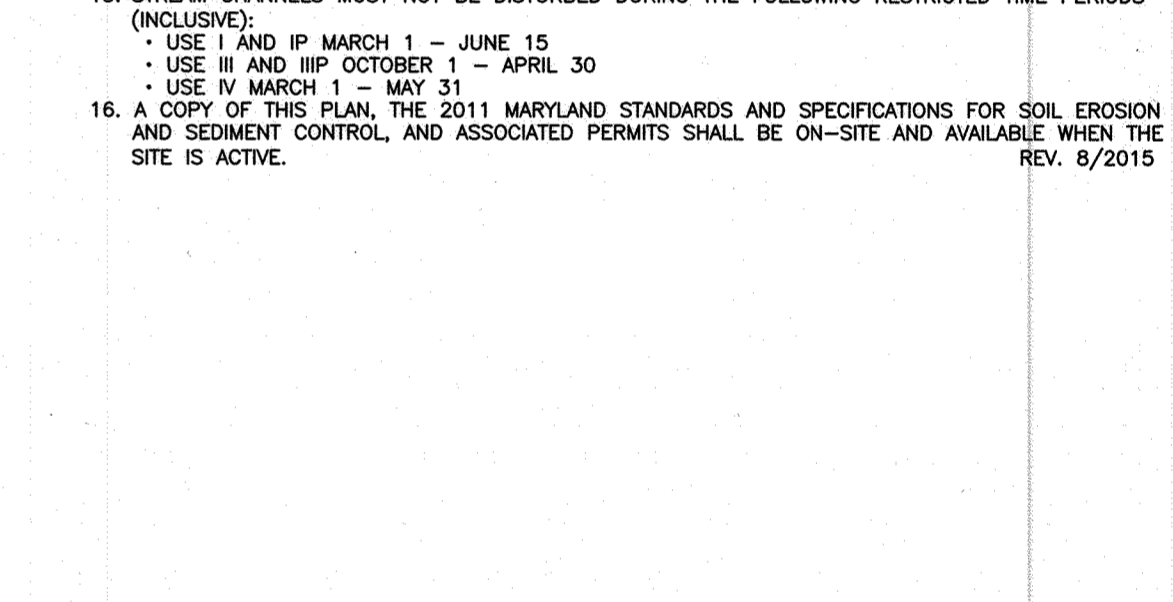
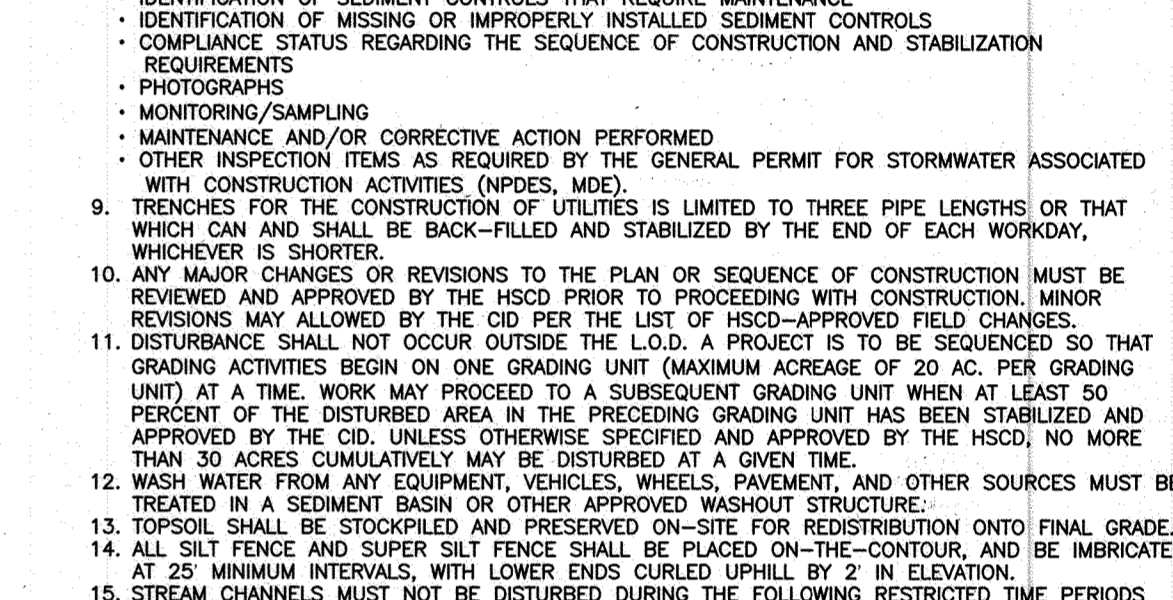
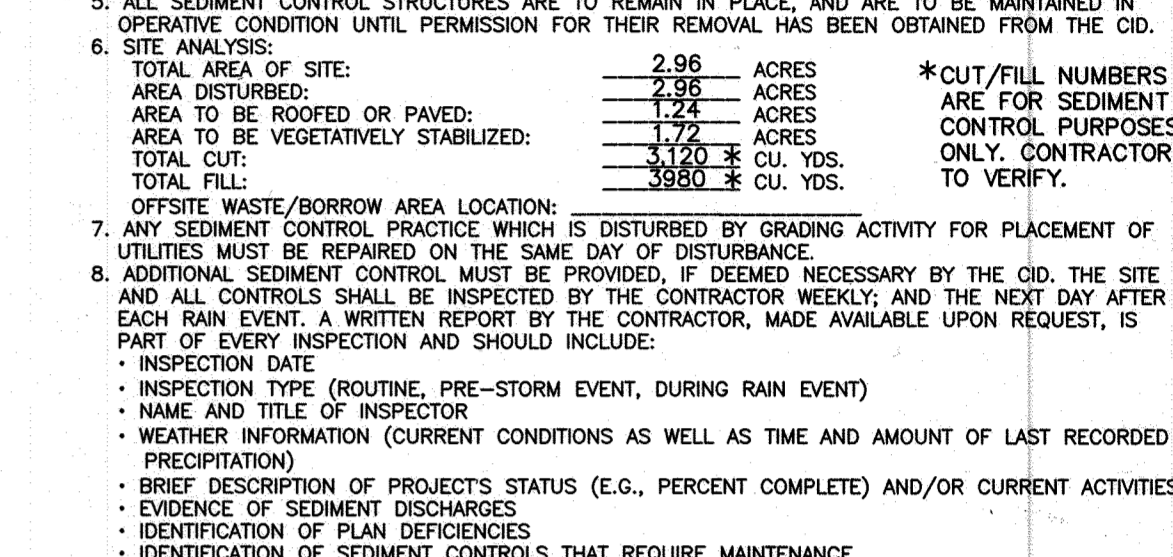
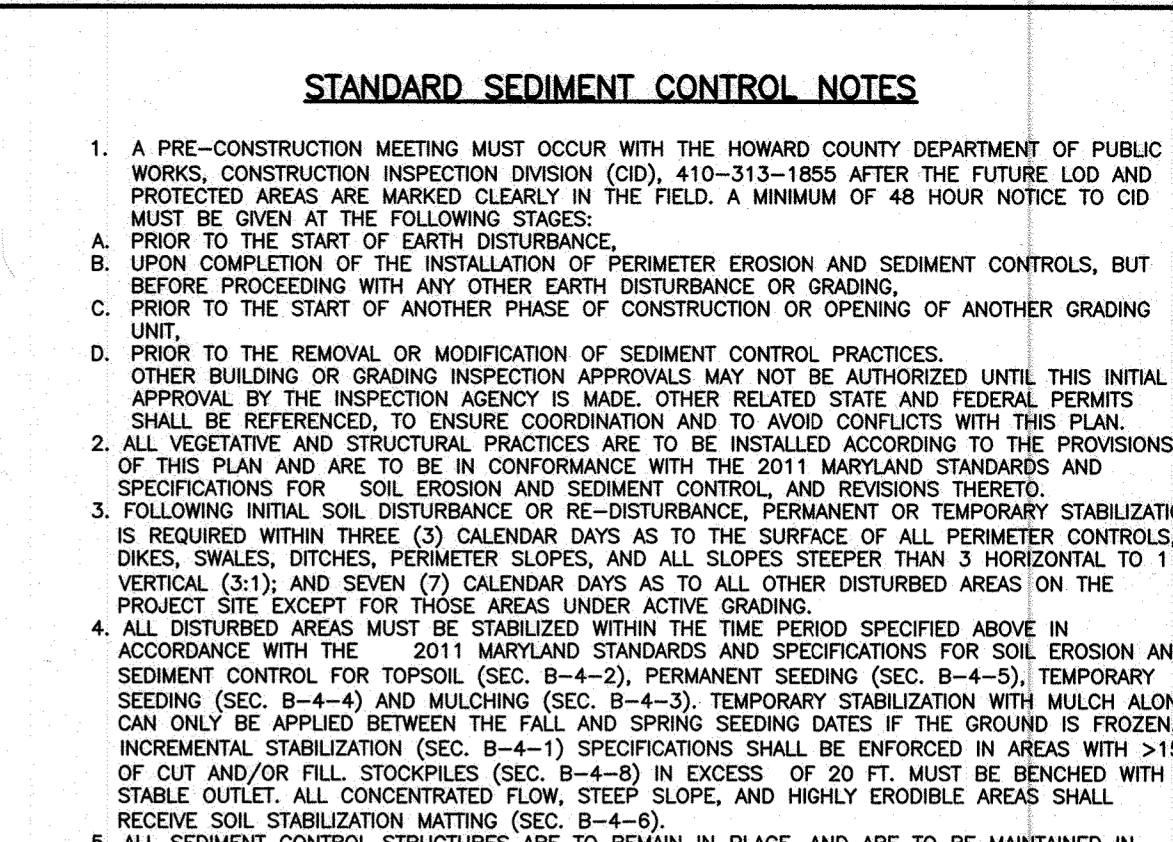


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	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)
2	Fescue, Tall	60	0.5	Mar 1 to May 15	45 pounds	2 tons/c (900/1000)
	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)

STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-213-1655 AFTER THE FUTURE L.O.D AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:

A. BEFORE THE START OF EARTH EXCAVATION AND BEFORE THE START OF ANY OTHER DISTURBANCE OF THE EARTH.

B. UPON COMPLETION OF THE INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.

C. AT THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.

D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED TO ENSURE COORDINATION AND TO ENSURE COMPLIANCE WITH THESE PLAN REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER CONTROLS, DIKES, SWALES, PERMETER SLOPES AND ALL SLOPES WITH A HORIZONTAL SLOPE OF 3:1 OR STEEPER. VERTICAL (3:1) AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (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.

5. TEMPORARY 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 BENCH WITH STABLE OUTLET, ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-4).

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIONAL CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED BY THE CID.

7. OFFSITE WASTE/BORROW AREA LOCATION

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEMAILED NECESSARY BY THE CID, THE SITE AND ALL CONSTRUCTION ACTIVITIES (NPDES, MCI) MUST BE STOPPED 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-CONSTRUCTION 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 CONTROL DEFICIENCIES

- 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, MCI)

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HCSO PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY APPROVED BY THE CID PER THE LIST OF HCSO-APPROVED REVISIONS.

11. DISTURBANCE SHALL NOT OCCUR UNDER 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 AT LEAST 24 HOURS AFTER THE 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 HCSO. NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, PAVEMENT, AND OTHER SOURCES MUST BE RECYCLED OR REUSED ON THE PROJECT SITE.

13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION UNTIL FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBERGATED AT 25 MINIMUM INTERVALS, WITH LOWER SECTIONS CURLED UPWARD BY 2 IN ELEVATION.

15. STRIP CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUDES):

- USE II AND III MARCH 1 - JUNE 15
- USE II AND III APRIL 1 - APRIL 30
- USE II AND III MARCH 1 - MAY 15

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

REV. 6/2015

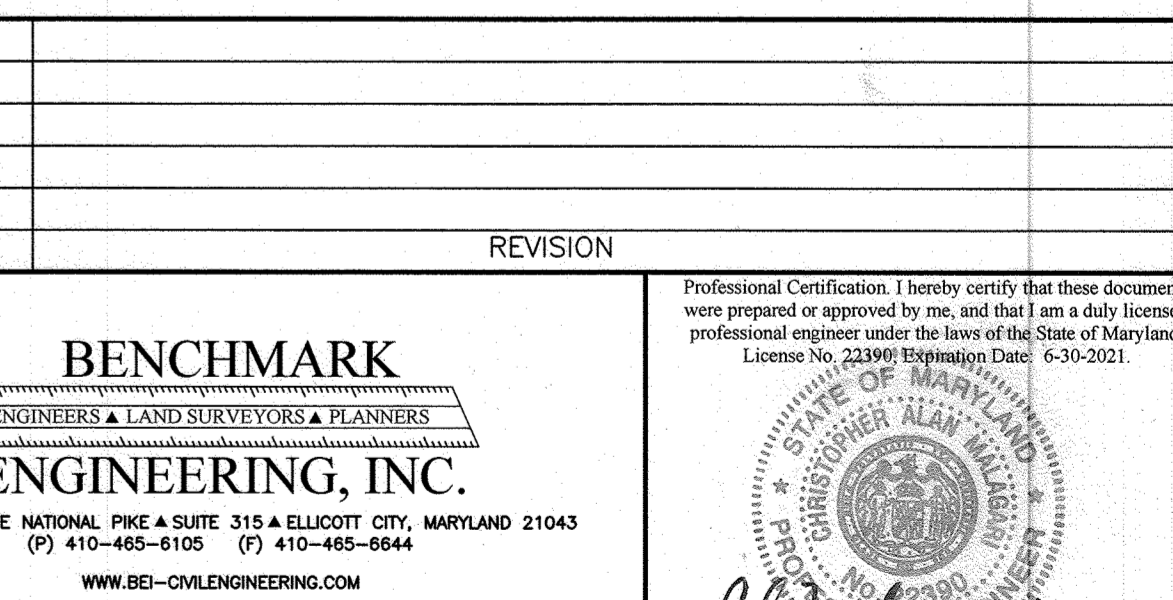
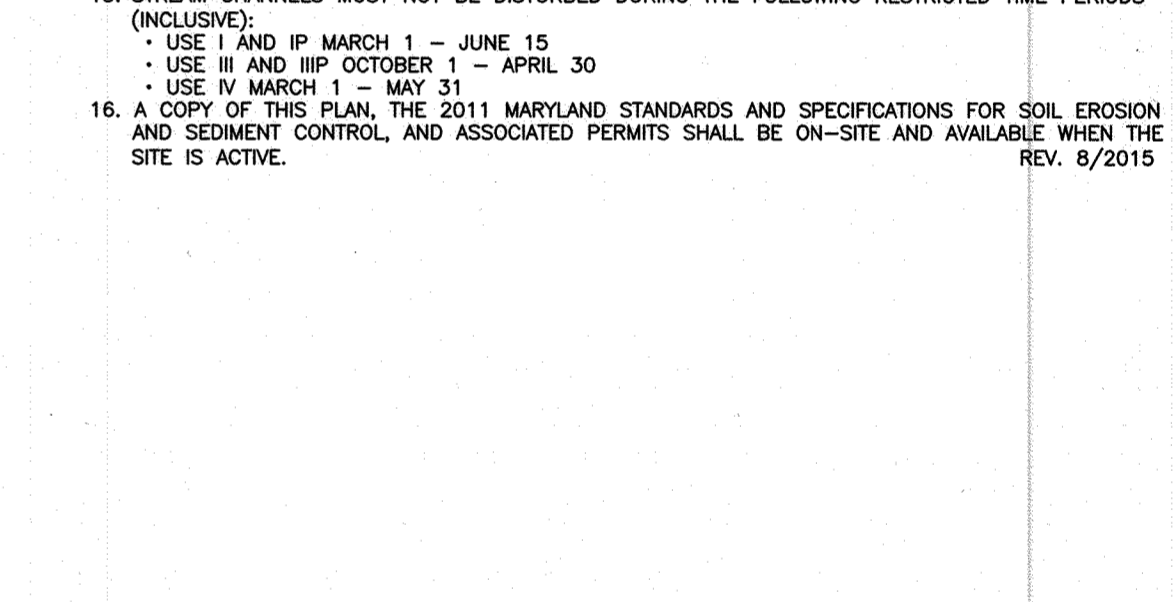
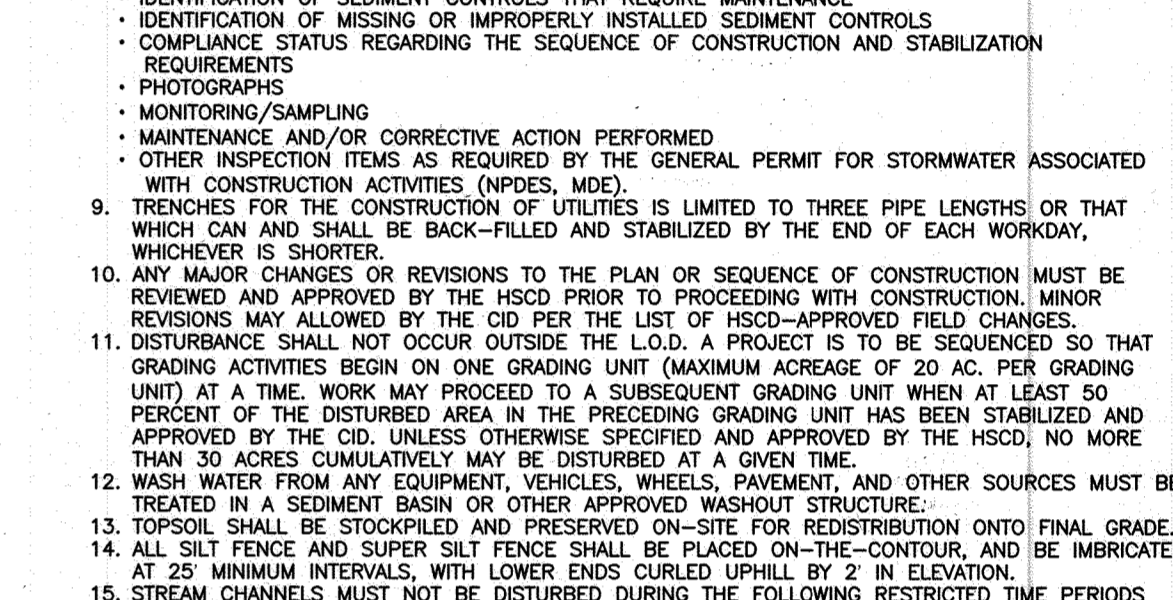
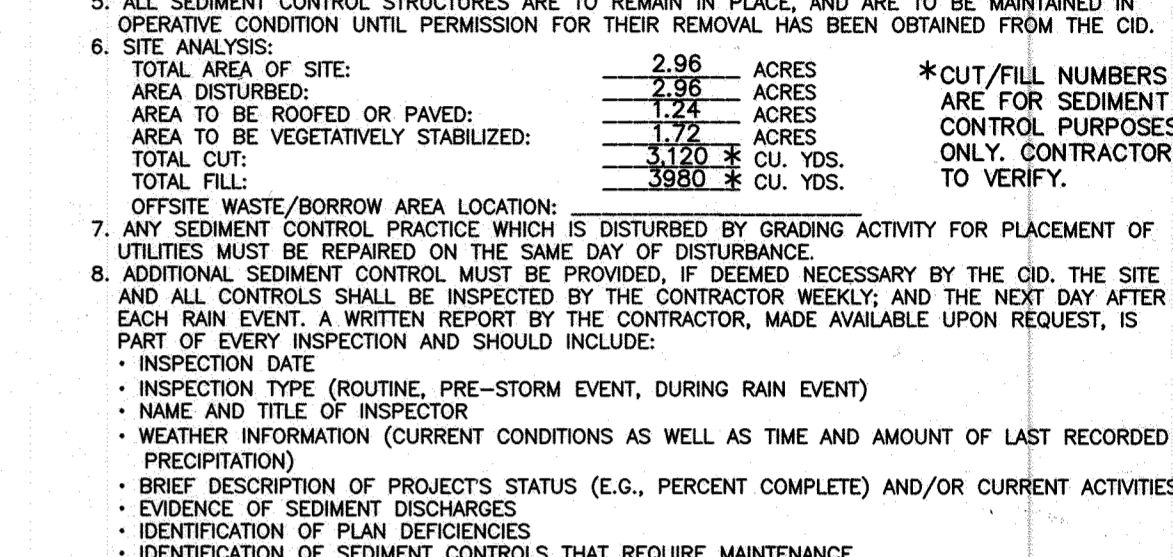
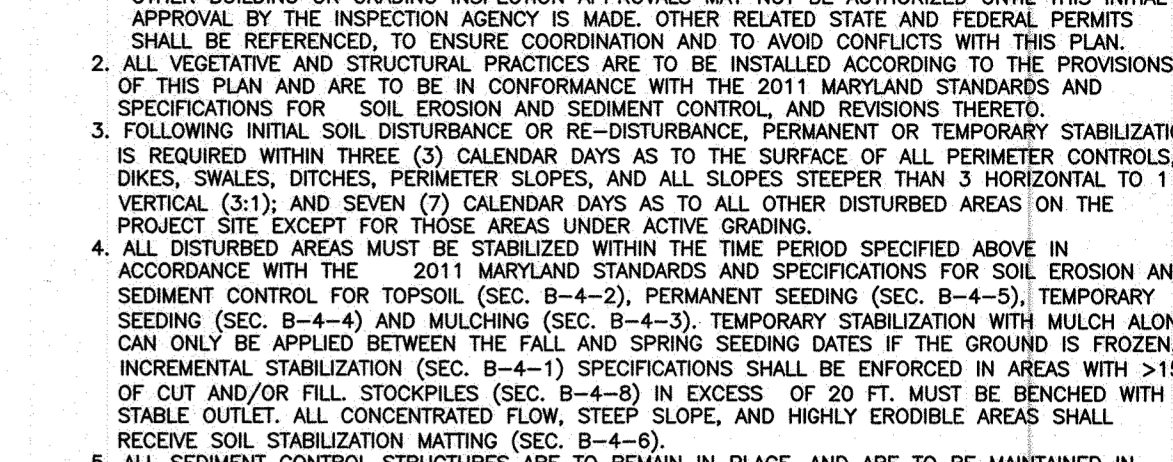
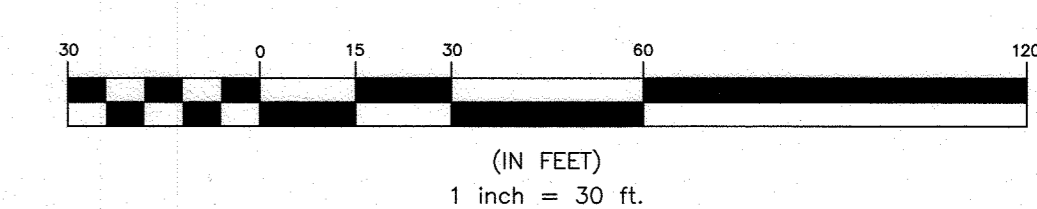
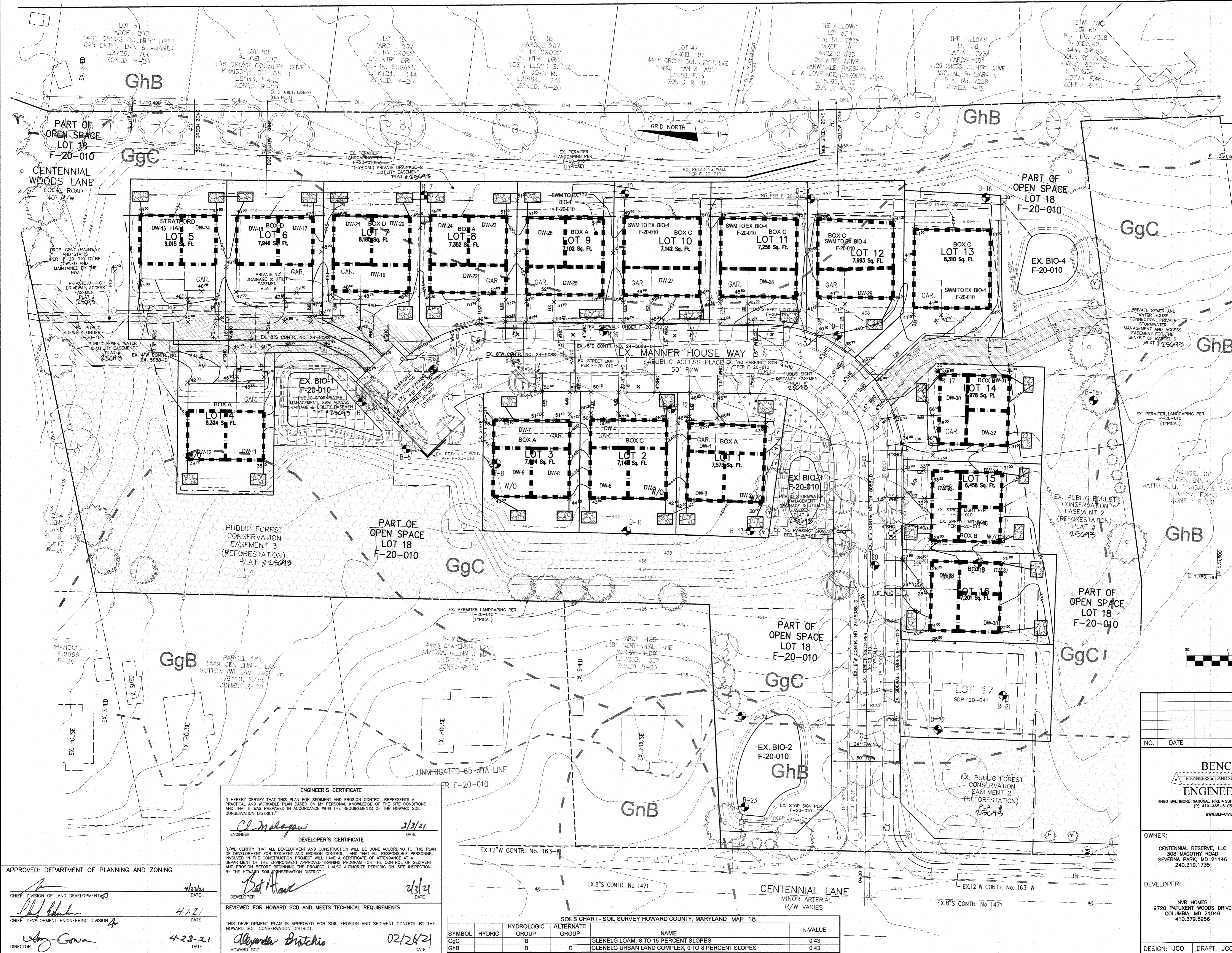


Table B.1 - Permanent Seeding Summary

Hardness Zone (from Figure B.3)	Plant Species	Application Rate (lb./ac)	Seeding Depth (inches)	Seeding Dates	Fertilizer Rate (lb./1000 sq. ft.)	Time Rate
1	Fescue, Tall	60	0.5	Mar 1 to May 15	45 pounds	2 tons/c (900/1000)
	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)
2	Fescue, Tall	60	0.5	Mar 1 to May 15	45 pounds	2 tons/c (900/1000)
	Bluegrass, Kentucky	40	0.5	Mar 1 to May 15	per acre (10/10)	2 tons/c (900/1000)

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- EXISTING STRUCTURE
- PROPOSED GENERIC BOX
- EX. FOREST CONSERVATION EASEMENT F-20-010
- EX. PUBLIC WATER & SEWER EASEMENT
- EX. PUBLIC DRAINAGE & UTILITY EASEMENT
- EX. PRIVATE USE-IN-COMMON EASEMENT
- EX. PUBLIC STORMWATER MANAGEMENT & UTILITY EASEMENT
- EX. PUBLIC SIGHT DISTANCE EASEMENT
- EX. PRIVATE WATER & SEWER EASEMENT
- STREET TREES PER F-20-010
- PERIMETER PLANTING PER F-20-010
- PROP. DRYWELL
- SOILS DELINEATION SOILS BOUNDARY
- DRAINAGE AREA TO DRYWELL
- SWM BORINGS (BY OTHERS)



APPROVED: DEPARTMENT OF PLANNING AND ZONING

4/23/21

4-23-21

ENGINEER'S CERTIFICATE

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

Cl. Molagani 2/3/21
ENGINEER DATE

DEVELOPER'S CERTIFICATE

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

Butt Have 2/3/21
DEVELOPER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

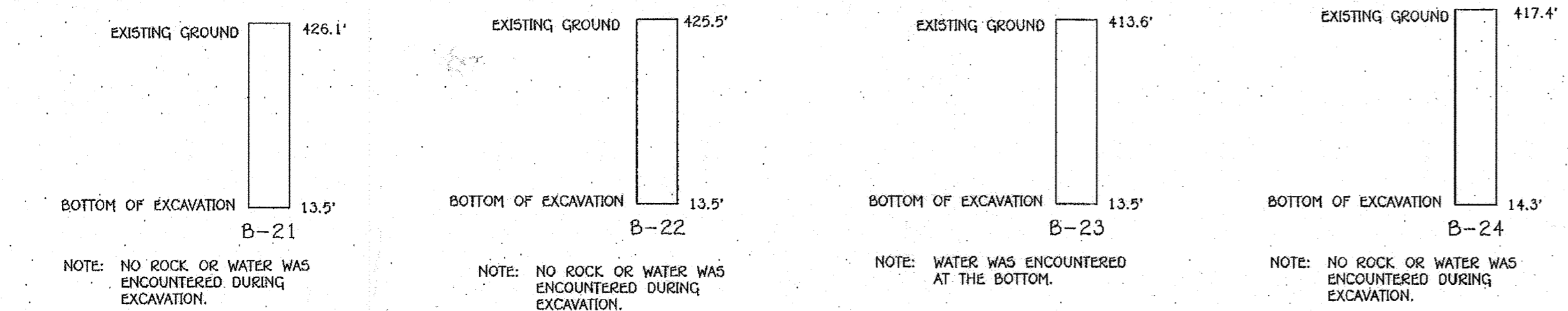
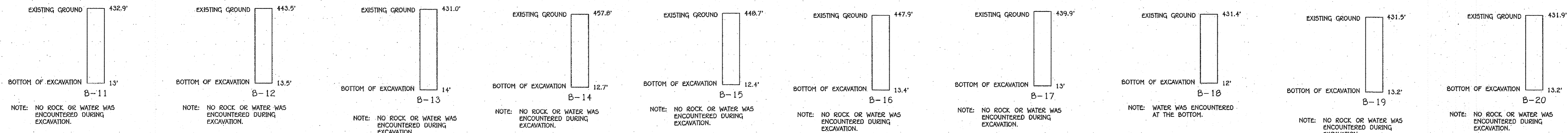
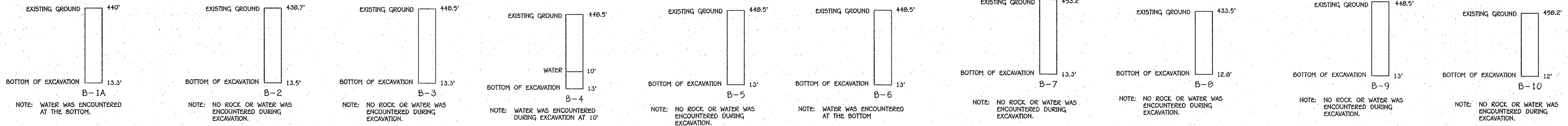
Alvander Butcher 02/26/21
HOWARD SCD DATE

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND MAP 18.

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GgC		B	D	GLENELG LOAM, 8 TO 15 PERCENT SLOPES	0.43
GhB		B	D	GLENELG URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.43

NO. DATE REVISION		<p>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. 23390, Expiration Date: 6-30-2021.</p>
<p>BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6104 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM</p>		
OWNER:	CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MD 21146 240.319.1735	
DEVELOPER:	NVR HOMES 9720 PATUXENT WOODS DRIVE COLUMBIA, MD 21046 410.379.5956	
CENTENNIAL RESERVE SINGLE FAMILY		
LOTS 1-16		
TAX MAP: 30 GRID; 01 PARCEL: 04,05,174 & 449 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND		
A RESIDENTIAL SITE DEVELOPMENT PLAN STORMWATER MANAGEMENT DRAINAGE AREA MAP		
DESIGN: JCO	DRAFT: JCO	DATE: JANUARY 2021 BEI PROJECT NO. 2995
SCALE: 1"=30'	SHEET 5 OF 6	

NOTE: SOIL PROFILES BASED ON ON-SITE OBSERVATION ON NOVEMBER 2, 2010. B-1 WAS NOT EXCAVATED DUE TO LOCATION OF AN EXISTING UTILITY LINE.



NOTE: BORINGS PROVIDED BY FISHER COLLINS & CARTER (PER FINAL PLAN F-20-010).

DRY WELL DESIGN (M-5)

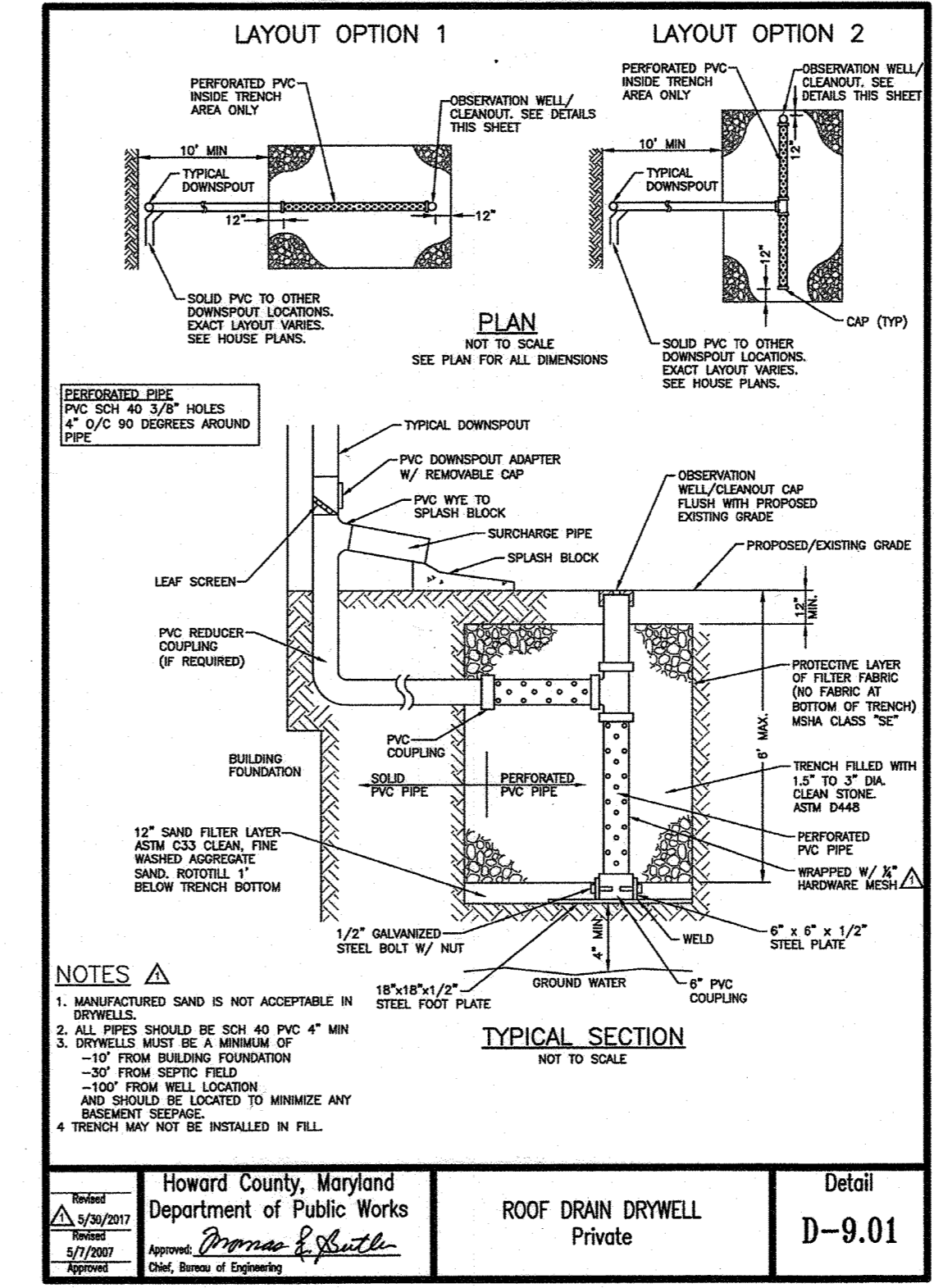
Lot No.	Drywell No.	Length (ft)	Width (ft)	Stone Depth (ft)	Grade	Top of Stone	Bottom of Stone
1	DW-1	11.00	9.00	4.00	442.2	441.2	437.2
1	DW-2	11.00	8.00	4.00	439.2	438.2	434.2
1	DW-3	11.00	8.00	4.00	441.0	440.0	436.0
2	DW-4	11.00	9.00	4.00	447.3	446.3	442.3
2	DW-5	11.00	8.00	4.00	441.6	440.6	436.6
2	DW-6	11.00	8.00	4.00	441.8	440.8	436.8
3	DW-7	11.00	7.00	4.00	447.7	446.7	442.7
3	DW-8	11.00	7.00	4.00	442.0	441.0	437.0
3	DW-9	11.00	7.00	4.00	442.0	441.0	437.0
4	DW-11	11.00	8.00	4.00	436.0	435.0	431.0
4	DW-12	11.00	8.00	4.00	436.0	435.0	431.0
5	DW-14	11.00	7.00	4.00	444.8	443.8	439.8
5	DW-15	11.00	7.00	4.00	443.0	442.0	438.0
6	DW-17	11.00	7.00	4.00	446.5	445.5	441.5
6	DW-18	11.00	7.00	4.00	445.0	444.0	440.0
7	DW-19	11.00	9.00	4.00	447.2	446.2	442.2
7	DW-20	11.00	9.00	4.00	447.5	446.5	442.5
7	DW-21	11.00	9.00	4.00	448.2	447.2	443.2
8	DW-22	11.00	9.00	4.00	448.0	447.0	443.0
8	DW-23	11.00	9.00	4.00	451.0	450.0	446.0
8	DW-24	11.00	9.00	4.00	448.5	447.5	443.5
9	DW-25	11.00	9.00	4.00	449.8	448.8	444.8
9	DW-26	17.50	6.00	4.00	451.0	450.0	446.0
10	DW-27	17.50	6.00	4.00	446.0	445.0	441.0
11	DW-28	11.00	9.00	4.00	442.0	441.0	437.0
12	DW-29	11.00	9.00	4.00	439.8	438.8	434.8
14	DW-31	13.00	7.00	4.00	433.8	432.8	428.8
14	DW-32	13.00	7.00	4.00	431.0	430.0	426.0
15	DW-33	11.00	9.00	4.00	428.5	427.5	423.5
15	DW-34	11.00	7.00	4.00	430.0	429.0	425.0
15	DW-35	11.00	7.00	4.00	425.5	424.5	420.5
15	DW-36	14.00	7.00	4.00	424.0	423.0	419.0
16	DW-37	11.00	9.00	4.00	425.0	424.0	420.0
16	DW-38	11.00	9.00	4.00	423.0	422.0	418.0

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED 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.
- A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- 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.

MATERIALS & SPECIFICATIONS FOR DRY WELLS

MATERIAL	SPECIFICATION	SIZE	NOTES:
GEOTEXTILE (CLASS "C")	N/A	1 1/2" TO 2 1/2"	PE TYPE 1 NONWOVEN
GRAVEL	AASHTO M 43	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 2" OF GRAVEL OVER PIPES.
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	
SAND	AASHTO M-6 OR ASTM-C-33	.02" TO .04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NT ROCK DUST CAN BE USED FOR SAND.



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DIRECTOR

DATE: 4-23-21

NO. DATE REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-8644
 WWW.BE-ENGINEERING.COM

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. 23300-ES/Engineer/June 6-30-2021.

CENTENNIAL RESERVE SINGLE FAMILY
 LOTS 1-16

TAX MAP: 30 GRID: 01 PARCEL: 04,05,174 & 449
 ZONED: R-20
 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND

A RESIDENTIAL SITE DEVELOPMENT PLAN
 STORMWATER MANAGEMENT NOTES,
 DETAILS AND BORING LOGS

DATE: JANUARY 2021 BEI PROJECT NO. 2995
 DESIGN: JCO DRAFT: JCO SCALE: AS SHOWN SHEET 6 OF 6

OWNER: CENTENNIAL RESERVE, LLC
 308 MAGGOTHY ROAD
 SEVERNA PARK, MD 21146
 240.319.1735

DEVELOPER: NVR HOMES
 9720 PATUXENT WOODS DRIVE
 COLUMBIA, MD 21046
 410.379.5956

Howard County, Maryland
 Department of Public Works
 Approved: *Bernice L. Smith*
 Chief, Bureau of Engineering

Detail
 ROOF DRAIN DRYWELL
 Private
 D-9.01