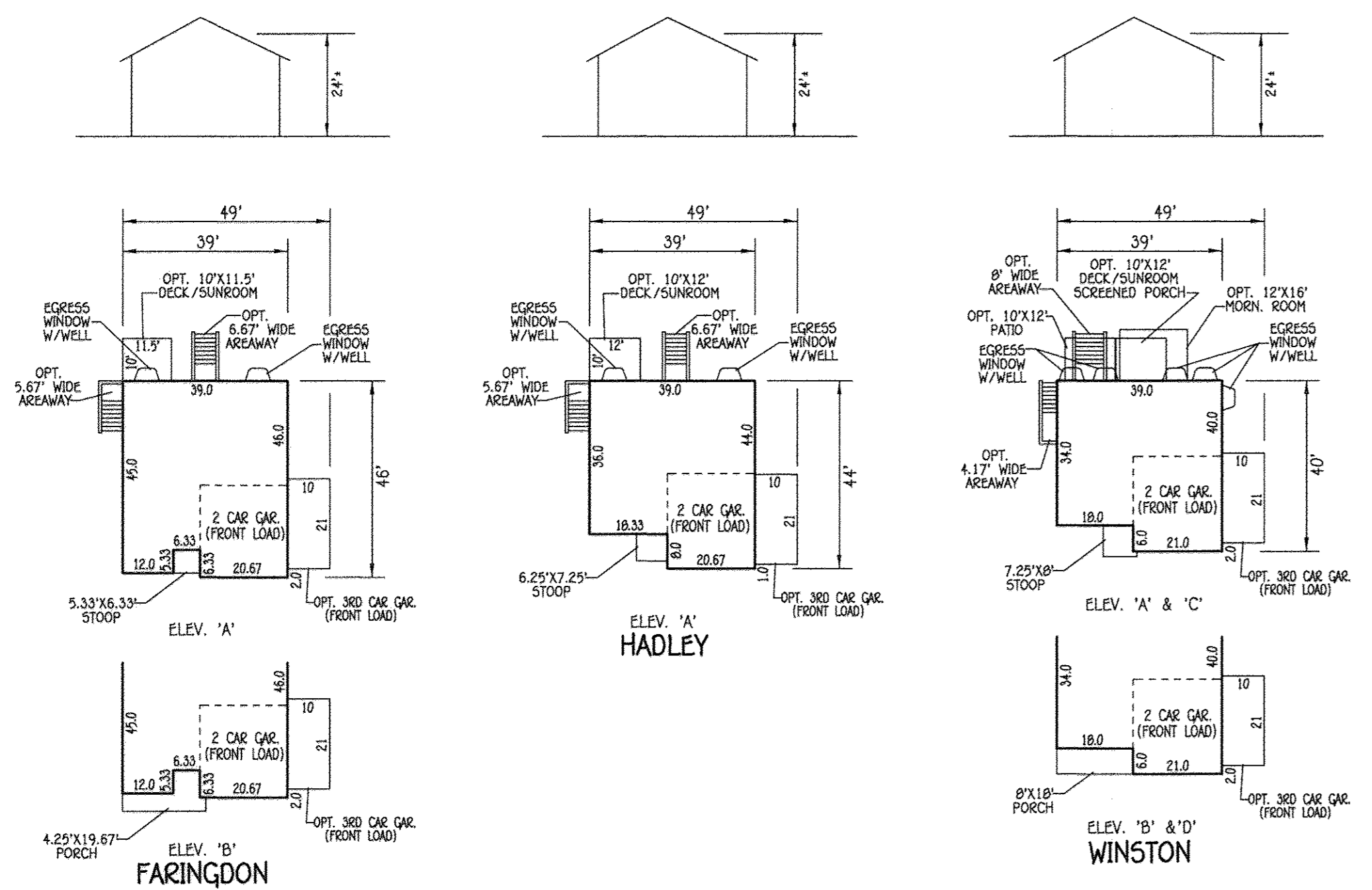


SHEET INDEX	
SHEET NO.	DESCRIPTION
1	SITE DEVELOPMENT PLAN, DETAILS & NOTES
2	SEDIMENT/EROSION CONTROL PLAN
3	SEDIMENT/EROSION CONTROL PLAN, DETAILS & NOTES

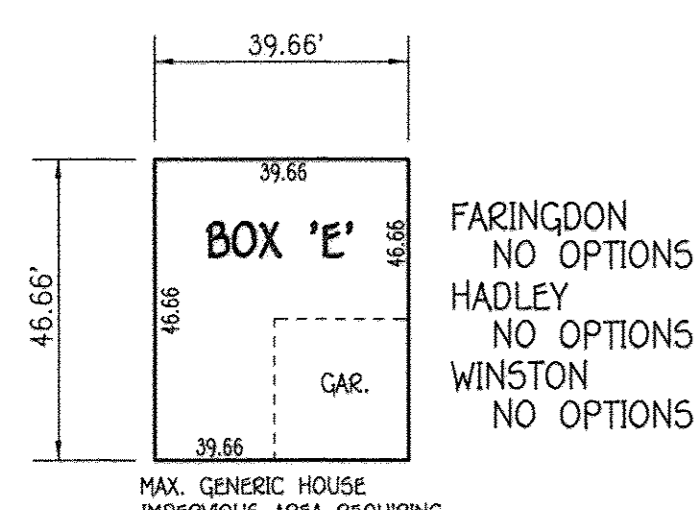
STREET ADDRESS & STORMWATER MANAGEMENT PRACTICES CHART					
LOT NO.	STREET ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF	DISCONNECTION OF NON-ROOFTOP RUNOFF	DRY WELLS	MICRO BIO-RETENTION
22	9153 RIVER HILL ROAD	N-1 (Y/N)	N-2 (Y/N)	Y	N

DRY WELL CHART						
LOT NO.	DRYWELL NUMBER	NO. OF DOWNSPOUTS	AREA OF ROOF PER DOWNSPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF STORAGE
22	M-5 (20a)	2	463 SQ.FT.	118 CU.FT.	120 CU.FT.	100%
22	M-5 (20b)	2	463 SQ.FT.	118 CU.FT.	120 CU.FT.	100%

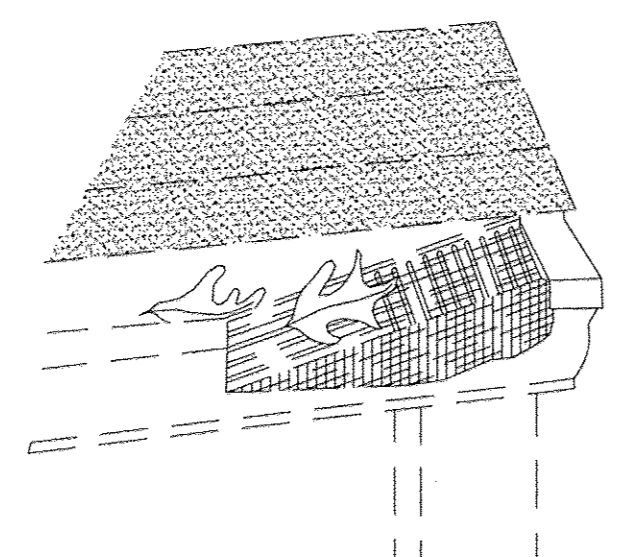
NOTE:
SEE SHEET 2 FOR SOIL BORING INFORMATION



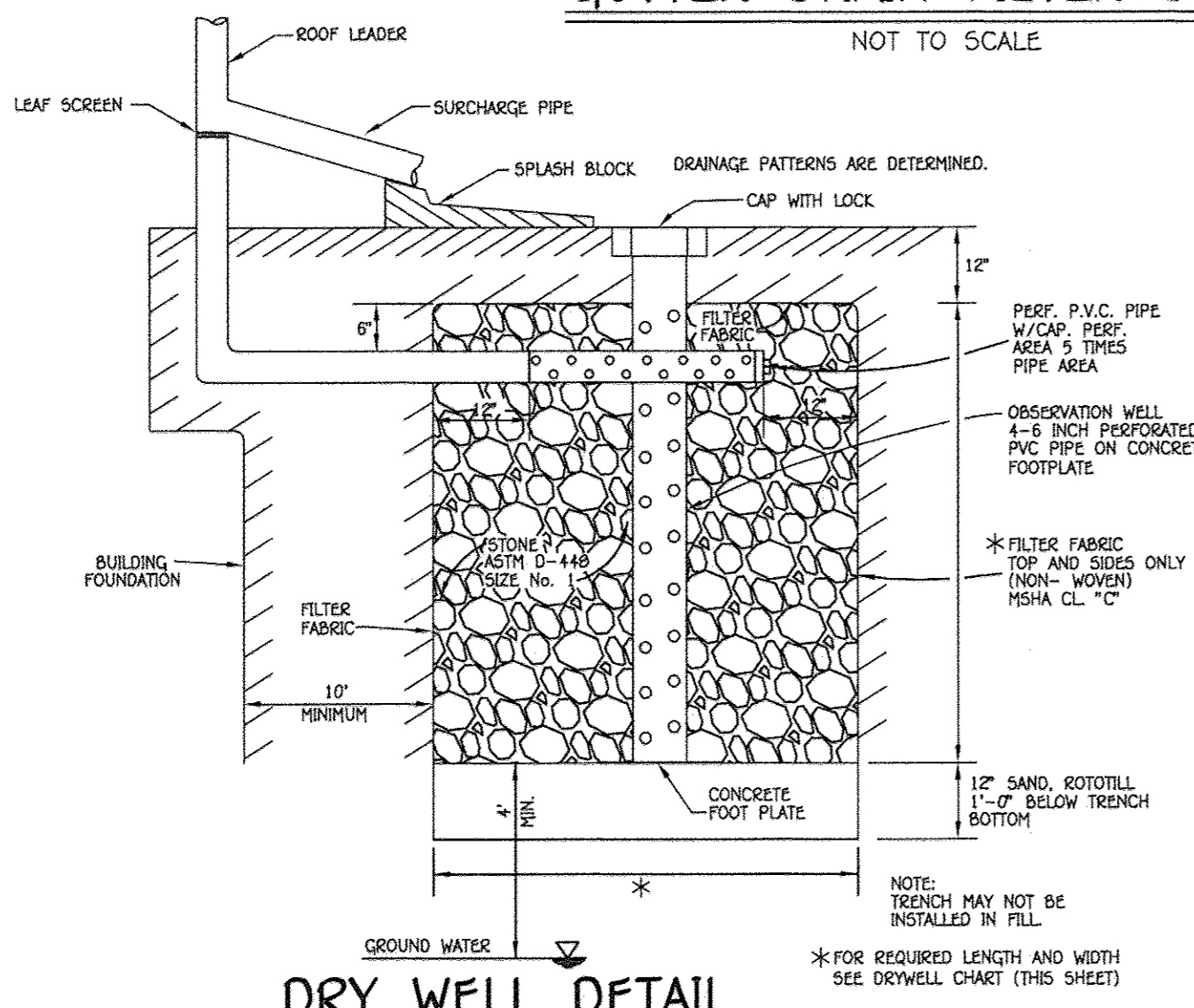
MODEL HOUSE TYPES
SCALE: 1" = 30'



GENERIC HOUSE BOX
SCALE: 1" = 30'



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE



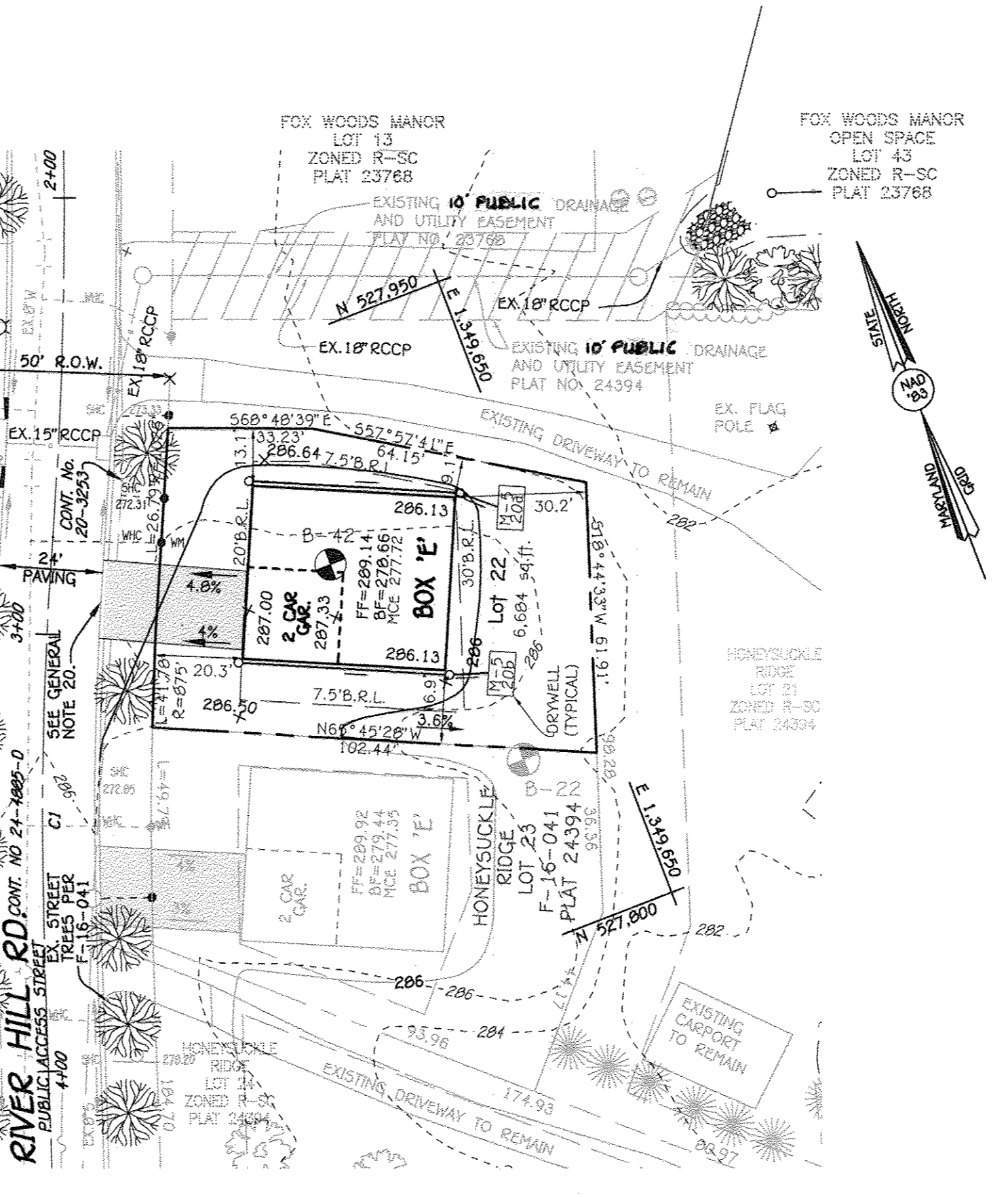
DRY WELL DETAIL
NOT TO SCALE

STORMWATER MANAGEMENT NOTES

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 1, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 2% SLOPE. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

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

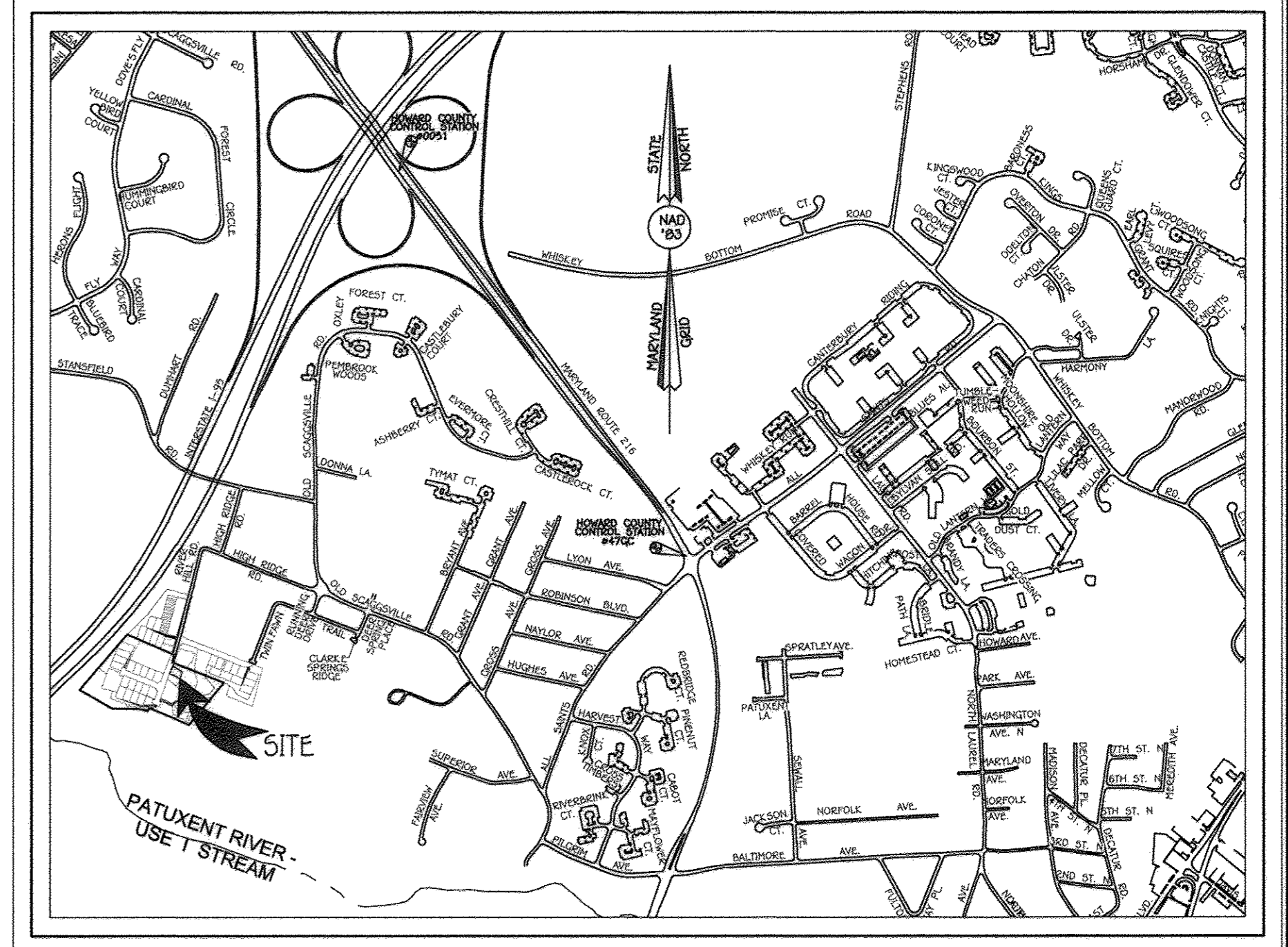
- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (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.



SITE PLAN
SCALE: 1" = 30'

SITE ANALYSIS DATA CHART

- TOTAL AREA OF SITE = 0.1535 AC.
- TOTAL AREA OF THIS SUBMISSION = 0.1535 AC.
- LIMIT OF DISTURBED AREA = 0.1580 AC.
- PRESENT ZONING DESIGNATION = R-5C
- PROPOSED USE: RESIDENTIAL
- SINGLE FAMILY DETACHED = 1 UNIT
- FLOOR SPACE ON EACH LEVEL OF BUILDING: N/A
- TOTAL NUMBER OF UNITS: 1
- 25 UNIT (FOR ENTIRE HONEYSUCKLE RIDGE PROJECT)
- MODERATE INCOME HOUSING UNIT REQUIRED = 2.5
- MODERATE INCOME HOUSING UNIT PROVIDED = 3 (SEE GENERAL NOTE 16)
- TOTAL NUMBER OF PARKING SPACES REQUIRED = 2 SPACES
- 1 UNIT (SFD) X 2 SPACES/UNITS = 2 SPACES
- TOTAL NUMBER OF PARKING SPACES PROVIDED = 4 SPACES
- 1 UNITS (SFD) X 4 (TWO CAR GARAGE AND TWO SPACES ON DRIVEWAY) = 4 SPACES
- OPEN SPACE ON SITE: N/A
- 4.0 AC. ENTIRE HONEYSUCKLE RIDGE PROJECT (F-16-041)
- RECREATIONAL OPEN SPACE AREA REQUIRED = 0,700 SF. (F-16-041)
- RECREATIONAL OPEN SPACE AREA PROVIDED = 12,031 SF. (F-16-041)
- BUILDING COVERAGE OF SITE: 0.4%
- THIS SUBMISSION: 27.7%
- TOTAL AREA OF FLOODPLAIN: 0.00 AC.
- TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.60 AC.
- N. THIS SUBMISSION: 0.0 AC.
- AREA OF WETLANDS = 0.11 AC.
- THIS SUBMISSION: 0.0 AC.
- AREA OF FOREST
- TOTAL FOREST EXISTING (F-16-041) = 2.05 AC.
- TOTAL FOREST CLEARED (F-16-041) = 0.70 AC.
- TOTAL FOREST RETAINED (F-16-041) = 1.35 AC.
- TOTAL AREA OF FOREST CONSERVATION EASEMENT ESTABLISHED UNDER F-16-041 AND SHOWN ON THIS PLAN = 2.77 AC.
- (INCLUDES RETENTION AND PLANTING)
- IMPERVIOUS AREA = 0.06 AC. (THIS SUBMISSION)



VICINITY MAP
SCALE: 1" = 1200'

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-5C AS GRANTED BY THE ZONING BOARD ON 10/6/13 COMPREHENSIVE ZONING PLAN.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1800 AT LEAST (5) FIVE 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.
- THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT FEBRUARY, 2014 BY FISHER, COLLINS & CARTER INC.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROVIDED BY HOWARD COUNTY GEODETIC CONTROL STATION HOWARD COUNTY MONUMENT 47GC N 528,939.728 E 1,354,223.554 HOWARD COUNTY MONUMENT 0051 N 532,404.156 E 1,351,627.334
- TOPOGRAPHIC CONTOURS BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED FEBRUARY 2014 AND SUPPLEMENTED BY FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN, (F-16-041) APPROVED ON DECEMBER, 2016.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDER'S EXPENSE.
- THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-16-041. FOR APPROVED WATER CONTRACT NO. 24-4849-D AND NO. 24-4805-D. FOR APPROVED SEWER CONTRACT NO. 24-4805-D. CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- STORMWATER MANAGEMENT WILL BE PROVIDED: 2 DRYWELLS (M-5). ADDITIONAL SWM DEVICES WERE PREVIOUSLY APPROVED ON THE ROAD CONSTRUCTION DRAWINGS FILED UNDER F-16-041 AND SITE DEVELOPMENT PLAN SDP-18-003.
- OPEN SPACE REQUIREMENTS FOR THESE LOTS HAVE BEEN PROVIDED UNDER F-16-041. THIS SDP IS SUBJECT TO THE 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 15' FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
 - WIDTH - 12' IF SERVING MORE THAN ONE RESIDENCE
 - SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45 FOOT TURNING RADIUS.
 - STRUCTURES - (BRIDGES/CULVERTS) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
 - DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE SUFFICIENT TO INSURE ALL WEATHER USE.
- NO GRADING, REMOVAL OF VEGETATION COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- MODERATE INCOME HOUSING UNIT AGREEMENT AND RESTRICTIONS WERE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AT THE RECORD PLAT STAGE OF THIS PROJECT. THREE (3) M.I.H.U. WILL BE PROVIDED ON-SITE.
- NOISE WAS ADDRESSED UNDER F-16-041.
- LANDSCAPING OBLIGATIONS FOR THE OVERALL HONEYSUCKLE RIDGE PROJECT HAVE BEEN FULFILLED UNDER F-16-041.
- FOREST CONSERVATION AGREEMENTS HAVE BEEN PROVIDED UNDER F-16-041 BY ON-SITE RETENTION, ON-SITE REFORESTATION AND OFF-SITE PLANTING ON THE FAIRLANE FARM, PHASE ONE, FOREST BANK (F-15-054).
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R.6.05.
- ERODIBLE SOILS EXIST ON-SITE. SEE SOIL LEGEND ON SHEET 2.

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
22	9153 RIVER HILL ROAD

LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 2' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	EXISTING STORM DRAIN LINE
(Symbol)	EXISTING SEWER LINE
(Symbol)	EXISTING WATER LINE
(Symbol)	PROPOSED CONTOUR 2' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	SPOT ELEVATION
(Symbol)	LIMIT OF DISTURBANCE
(Symbol)	SUPER SILT FENCE
(Symbol)	PROVIDE STORM DRAIN AND UTILITY EASEMENT
(Symbol)	STABILIZED CONSTRUCTION ENTRANCE
(Symbol)	EXISTING TREE
(Symbol)	SOILS DELINEATION

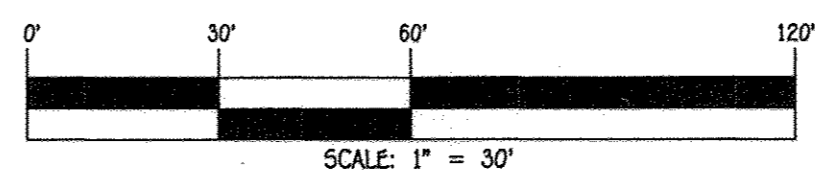
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21102
(410) 461-2895



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/19.

Frank John Malanahan II 11/19/17
DATE



SCALE: 1" = 30'

BUILDER

D. R. HORTON INC.
1356 BEVERLY RD. SUITE 300
MCLEAN, VA 22101
(571) 421-7738

OWNERS

DOUBLE R VENTURES, LLC
8318 FOREST STREET-SUITE 200
ELLICOTT CITY, MARYLAND 21103
(410) 707-7094

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 12-4-17
Chief, Division of Land Development KB
[Signature] 11/29/17
Chief Development Engineering Division
[Signature] 12-4-17
Director, Department of Planning and Zoning

SITE DEVELOPMENT PLAN, NOTES AND DETAILS

HONEYSUCKLE RIDGE LOT 22

PREVIOUS HOWARD COUNTY FILES: SP-15-005, WP-15-095, ECP-14-057, F-93-04, W&S CONT. #24-4849-D, #24-4805-D, F-16-041, SDP-18-003

ZONED: R-5C
PARCEL NO.: 359
GRID NO.: 1
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2017

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24391-24395	1	R-5C	50	SIXTH	6012.02

PREVIOUS HOWARD COUNTY FILES:
SP-15-005, WP-15-095, ECP-14-057, F-93-04, W&S CONT. #24-4849-D, #24-4805-D, F-16-041, SDP-18-003

SOILS LEGEND			
SOIL	NAME	Kv	CLASS
CeB	Chilum loam, 2 to 9 percent slopes	0.37	B
GgB	Gibbeton loam, 3 to 8 percent slopes	0.37	B

SOIL TYPES TAKEN FROM MAP 28 OF THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND FOUND ON THE HSCD WEBSITE.

NOTES:

- * Denotes Highly Erodible Soil per K factor > 0.35
- ** May contain hydric inclusions
- † Generally only within 100-year floodplain areas

**HILLS - CARNES
ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION**

Project Name Honeysuckle Ridge Boring No. B-42
 Location Howard County, Maryland Job # 16071A

SAMPLER
 Datum MSL Hammer Wt. 140 lbs. Hole Diameter 2 1/4" Foreman J. Russell
 Surf. Elev. 284 ft Hammer Drop 30 in. Rock Core Diameter _____ Inspector _____
 Date Started 02/19/2016 Pipe Size 2.0 in. Boring Method HSA Date Completed 02/19/2016

Elevation/ Depth	SOIL SYMBOLS/ SAMPLE CONDITIONS	Description	Boring and Sampling Notes	Rec.	NM%	SPT Blows	SPT Blows/Foot Curve	
							N	Curve
0		Brown, moist, medium stiff, sandy CLAY, trace gravel and mica. (CL: Clay)	Topsail - 3"	12"		2-3-2	10	30
5		Red to brown, moist, medium dense, SAND, some gravel, trace silt. (SP-SM; Loamy Sand)	Groundwater was not encountered while drilling.	14"		7-11-17	28	
10		Brown to gray, moist, loose, silty SAND, trace weathered rock and mica. (SM; Loamy Sand)		10"		10-10-11	21	
15		Bottom of boring at 13.0'	Boring was backfilled after 24 hours.	7"		5-5-5	10	
20				13"		3-4-4	8	

SAMPLER TYPE
 DRIVEN SPLIT SPOON UNLESS OTHERWISE
 PT - PRESSED SHELBY TUBE
 CA - CONTINUOUS FLIGHT AUGER
 RC - ROCK CORE

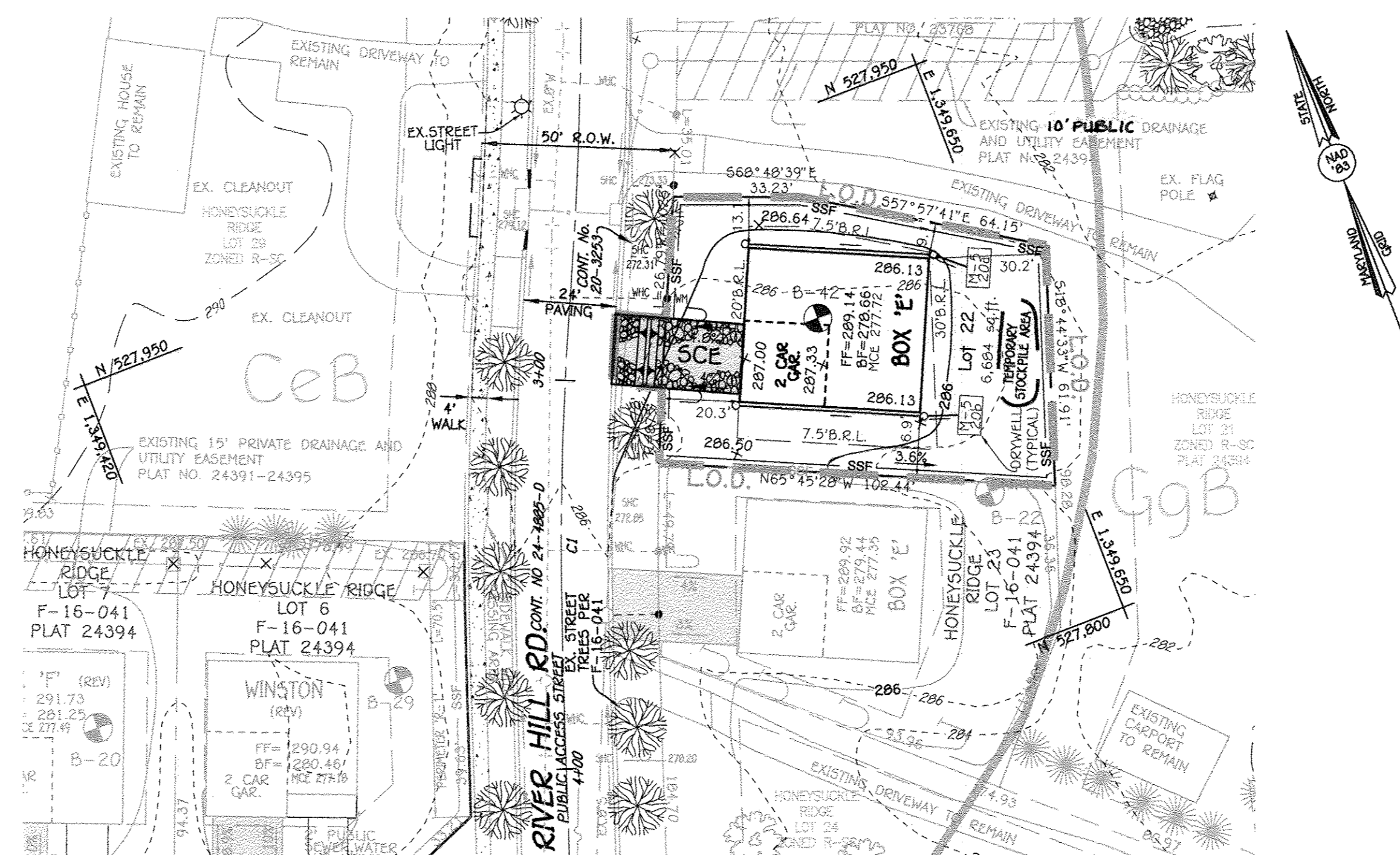
SAMPLE CONDITIONS
 D - DISINTEGRATED
 I - INTACT
 U - UNDISTURBED
 L - LOST

GROUND WATER
 AT COMPLETION
 AFTER 24 HRS.
 AFTER _____ HRS.

CAVE IN DEPTH
 ft. 9.5
 ft. 9.0

BORING METHOD
 HSA - HOLLOW STEM AUGERS
 CFA - CONTINUOUS FLIGHT AUGERS
 DC - DRIVING CASING
 MD - MUD DRILLING

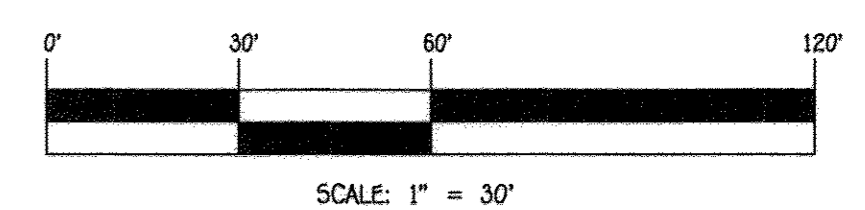
STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1" WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.



SEDIMENT CONTROL PLAN
 SCALE: 1" = 30'

LEGEND	
SYMBOL	DESCRIPTION
-272-	EXISTING CONTROL 2' INTERVAL
-270-	EXISTING CONTROL 10' INTERVAL
EX. 10' ELEC.	EXISTING STORM DRAIN LINE
EX. 8" S.W.	EXISTING SEWER LINE
EX. 6" S.W.	EXISTING WATER LINE
-272-	PROPOSED CONTROL 2' INTERVAL
-270-	PROPOSED CONTROL 10' INTERVAL
X279.30	SPOT ELEVATION
---	LINE OF DISTURBANCE
---	SUPER SILT FENCE
---	PRIVATE STORM DRAIN AND UTILITY EASEMENT
---	STABILIZED CONSTRUCTION ENTRANCE
---	EXISTING TREE
---	SOILS DELINEATION

- NOTE:
- 1) THIS PLAN IS TO BE USED FOR SEDIMENT AND EROSION CONTROL ONLY.
 - 2) ALL EXISTING SEDIMENT CONTROLS INSTALLED UNDER F-16-041 SHALL REMAIN UNLESS INSTRUCTED OTHERWISE BY THE SEDIMENT CONTROL INSPECTOR.
 - 3) WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR THE SUPER SILT FENCE CAN BE SUBSTITUTED FOR SILT FENCE DEPENDING ON SITE CONDITIONS.
 - 4) THE SEDIMENT CONTROL INSPECTOR MAY REQUEST THAT SUPER SILT FENCE BE SUBSTITUTED FOR SILT FENCE DEPENDING ON SITE CONDITIONS.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

NO.	REVISION	DATE



PROFESSIONAL CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR 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."

Patrick J. Williams 11/14/17
 SIGNATURE OF LICENSED PROFESSIONAL FRANK JOHN MANALANSAN II DATE

BUILDER/DEVELOPER'S CERTIFICATE

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

Patrick J. Williams 11-14-17
 SIGNATURE OF BUILDER PATRICK J. WILLIAMS DATE

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

John R. Horton 11/15/17
 HOWARD SCD DATE

BUILDER

D. R. HORTON INC.
 1356 BEVERLY RD - SUITE 300
 MCLEAN, VA 22101
 (571)-421-7738

OWNERS

DOUBLE R VENTURES, LLC
 8318 FORREST STREET-SUITE 200
 ELLICOTT CITY, MARYLAND 21043
 (410)-707-7094

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kurt Sealwood 12-4-17
 Chief, Division of Land Development Date

William J. J. J. 11-29-17
 Chief, Development Engineering Division Date

William J. J. J. 12-4-17
 Director, Department of Planning and Zoning Date

PROJECT: HONEYSUCKLE RIDGE SECTION: LOT 22

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24391-24395	1	R-SC	50	SIXTH	6012.02

PREVIOUS HOWARD COUNTY FILES:
 SP-15-005, WP-15-095, ECP-14-057, F-93-04, W&S CONT. #24-4849-D, #24-4885-D, F-16-041, SDP-18-003

**SEDIMENT AND EROSION
CONTROL PLAN**

**HONEYSUCKLE RIDGE
LOT 22**

PREVIOUS HOWARD COUNTY FILES: SP-15-005, WP-15-095, ECP-14-057, F-93-04, W&S CONT. #24-4849-D, #24-4885-D, F-16-041, SDP-18-003

ZONED: R-SC
 TAX MAP NO.: 50 PARCEL NO.: 359 GRID NO.: 1
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: NOVEMBER, 2017

SHEET 2 OF 3 **SDP-18-013**

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

- A. SOIL PREPARATION**
- TEMPORARY STABILIZATION**
 - SEEDING PREPARATION CONSISTS OF LOOSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISKS, HARROWS OR RIDGES RUNNING PARALLEL TO CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSED, IT MUST BE ROLLED OR GRADDED SMOOTH AND LEFT IN THE REQUIRED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - PERMANENT STABILIZATION**
 - A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOIL MOISTURE LESS THAN 500 PARTS PER HILLION (PPH).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO HOLD THE CAPACITY TO HOLD A MODERATE AMOUNT OF HUMUS. AN EXCEPTION IS LONGGRASS WHICH MAY BE PLANTED WITH A SANDY SOIL, LESS THAN 30 PERCENT SILT PLUS CLAY WHICH IS ACCEPTABLE.
 - SOIL CONTAINS 15 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - GRADED AREAS MUST BE MAINTAINED AS A TRUS AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SOAKED OR CHISELED TO A DEPTH OF 3 TO 5 INCHES.
 - APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS DICTATED BY THE RESULTS OF A SOIL TEST.
 - IF SOIL AMENDMENTS IN THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. BACK LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY BRACING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO LOOSEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL WORKING. FULL SUN MIXTURE FOR USE IN OPEN AREAS AND/OR AREAS RECEIVING LOW TO MEDIUM RAINFALL IN FULL SUN TO HEAVY SHADE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
 - TURFGRASS VEGETATION
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR VARIETIES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE, (ENTER SELECTED VARIETIES), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ENTIRELY TURFGRASS. FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
 - ENTIRELY TURFGRASS. FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
 - SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN TURFGRASS LAWNS FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CLOVERGRASS CULTIVARS TO 10 TO 20 PERCENT OF THE TOTAL MIXTURE. FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
 - SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN TURFGRASS LAWNS FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CLOVERGRASS CULTIVARS TO 10 TO 20 PERCENT OF THE TOTAL MIXTURE. FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
 - ALL FERTILIZERS AND SOIL AMENDMENTS MUST BE APPLIED AT THE TIME OF SEEDING. FERTILIZERS MUST BE APPLIED AT THE TIME OF SEEDING. FERTILIZERS MUST BE APPLIED AT THE TIME OF SEEDING. FERTILIZERS MUST BE APPLIED AT THE TIME OF SEEDING.

- B. TOPSOILING**
- SOIL TO BE PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW HUMUS, COARSE, SANDY, OR HEAVY CLAY MATERIALS. TOPSOIL SHOULD BE OBTAINED FROM A SOURCE THAT IS KNOWN TO BE FREE OF WEED SEEDS AND OTHER HARMFUL MATERIALS. TOPSOIL SHOULD BE OBTAINED FROM A SOURCE THAT IS KNOWN TO BE FREE OF WEED SEEDS AND OTHER HARMFUL MATERIALS.
 - TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
 - TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - A. THE TEXTURE OF THE EXPOSED SUBSURFACE MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - B. THE SOIL MOISTURE IS SO LOW THAT VEGETATION WILL NOT BE ABLE TO ESTABLISH.
 - C. FLOoding CONTINUES SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - D. THE SOIL IS SO ACIDIC THAT TREATMENT WHICH IS NOT FEASIBLE.
 - AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
 - TOPSOILING OPERATIONS SHOULD BE USED AS A MEASURE TO PREVENT EROSION OF EXPOSED AREAS. TOPSOILING OPERATIONS SHOULD BE USED AS A MEASURE TO PREVENT EROSION OF EXPOSED AREAS.
 - AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
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 - TOPSOILING OPERATIONS SHOULD BE USED AS A MEASURE TO PREVENT EROSION OF EXPOSED AREAS.

- C. SOIL AMENDMENTS (FERTILIZER & LIME SPECIFICATIONS)**
- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOMMENDED PRIVATE OR COMMERCIAL LABORATORY. SOIL ANALYSIS MUST BE PERFORMED BY THE SAME LABORATORY THAT PERFORMED THE SOIL TESTS THAT PROVIDED THE PERMANENT SEEDING SUMMARY.
 - FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FROM LUMP AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. FERTILIZERS MUST BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO FEDERAL AND STATE REGULATIONS. FERTILIZERS MUST BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO FEDERAL AND STATE REGULATIONS.
 - LIME MATERIALS MUST BE QUINCE LIME (HYDRATED OR BURNT LIME) MAY BE SUBSTITUTED EXCEPT WHEN HYDRATED WHICH CONTAINS AT LEAST 90 PERCENT TOTAL OXIDE (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GRINDING TO SUCH FINENESS THAT AT LEAST 90 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 90 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
 - LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GRADED LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE PER 1000 SQUARE FEET PRIOR TO THE PLACEMENT OF TOPSOIL.

DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIPPED OR TRACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLOSD TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED TO RESTORE SOIL BLOWING STRIPS. BEGIN PLANTING ON UNWOVEN SIDE OF THE SITE. CISEL-TYPE PLOWS SPACED ABOUT 12' APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
- BARBERS - SAND BARBERS, STICK BARBERS, SNOW FENCES, BURLAP FENCES, STRAW BALE DICES AND SIMILAR MATERIALS CAN BE USED TO CONTROL AIR CONTROLLING SOIL BLOWING, CURRENTS AND SOIL BLOWING. CURRENTS AND SOIL BLOWING. BARBERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 FEET. THESE HEIGHTS ARE EFFECTIVE IN:
 6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOO. EXISTING TREES OR LARGE SHRUBS MAY PROVIDE VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING - CONSIDER WITH LESS EROSION. SEE STANDARDS FOR TOPSOILING.
- STONE - COVER SURFACE WITH CRUSHED STONE OR COMPOSE GRAVEL.

TEMPORARY SEEDING NOTES (B-4-4)

DEFINITION

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

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROMOTES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE VEGETATION COVERS IS NEEDED FOR 6 MONTHS OR LESS. FOR LONGER DURATION OF THE PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

- SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DATES. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
- FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
- IF WHEN STABILIZATION IS REQUIRED, SOILS ARE HEAVILY ACIDIC OR HEAVY CLAYS, SPREAD GRADED LIME AT THE RATE OF 4 TO 8 TONS/ACRE PER 1000 SQUARE FEET PRIOR TO THE PLACEMENT OF TOPSOIL.

TEMPORARY SEEDING SUMMARY

SPECIES	APPLICATION RATE (LB./AC.)	SEEDING DATES	SEEDING DEPTH (INCHES)	FERTILIZER RATE (10-20-20)		LIME RATE (TONS/AC)
				N	P ₂ O ₅	
BARLEY	96	5/15 - 5/15	1"	45 LB./AC.	90 LB./AC.	2 TONS/AC
OATS	72	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF
RYE	112	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF

PERMANENT SEEDING SUMMARY

SPECIES	APPLICATION RATE (LB./AC.)	SEEDING DATES	SEEDING DEPTH (INCHES)	FERTILIZER RATE (10-20-20)		LIME RATE (TONS/AC)
				N	P ₂ O ₅	
BARLEY	96	5/15 - 5/15	1"	45 LB./AC.	90 LB./AC.	2 TONS/AC
OATS	72	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF
RYE	112	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF

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 (410) 461-2899

STATE OF MARYLAND
 PROFESSIONAL LAND SURVEYOR
 FRANK JOHN MANALANSAN II
 11/14/17

PERMANENT SEEDING NOTES (B-4-5)

- A. SEED MIXTURES**
- GENERAL USE**
 - SELECT ONE OR MORE OF THE SPECIES OR VARIETIES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED VARIETIES, APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHOULDER, STREAM BANKS, OR SLOPES OR SPECIAL PURPOSES SUCH AS WILDLIFE OR RESTORATION ARE TO BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CORTICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR PERMANENT SEEDING.
 - IF WHEN STABILIZATION IS REQUIRED, SOILS ARE HEAVILY ACIDIC OR HEAVY CLAYS, SPREAD GRADED LIME AT THE RATE OF 4 TO 8 TONS/ACRE PER 1000 SQUARE FEET PRIOR TO THE PLACEMENT OF TOPSOIL.
 - TURFGRASS VEGETATION**
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR VARIETIES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE, (ENTER SELECTED VARIETIES), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ENTIRELY TURFGRASS. FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED SEEDING RATES: 1.0 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING. IN ADDITION TO THE SOIL AMENDMENTS SHOWN ON THE PERMANENT SEEDING SUMMARY.
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PERMANENT SEEDING SUMMARY

SPECIES	APPLICATION RATE (LB./AC.)	SEEDING DATES	SEEDING DEPTH (INCHES)	FERTILIZER RATE (10-20-20)		LIME RATE (TONS/AC)
				N	P ₂ O ₅	
BARLEY	96	5/15 - 5/15	1"	45 LB./AC.	90 LB./AC.	2 TONS/AC
OATS	72	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF
RYE	112	5/15 - 5/15	1"	150 LB./AC.	150 LB./AC.	1000 SFF

- B. 500: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).**
- GENERAL SPECIFICATIONS**
 - A CLASS OF TURFGRASS 500 MUST BE MARYLAND STATE CERTIFIED. 500 LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - 500 MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS TO 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GRASS AND THATCH. BROKEN PANS AND TORN OR SHERD AREAS WILL NOT BE ACCEPTABLE.
 - STANDARD SIZE SECTIONS OF 500 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. 500 MUST NOT BE HARDEST OR TRANSPARENT WHEN HUMUS. CONTACT (EXCESSIVELY DRY) MAY INADEQUATELY AFFECT ITS SURVIVAL.
 - 500 MUST BE HARDEST, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 6 MONTHS. 500 NOT TRANSPARENT WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
 - 500 INSTALLATION**
 - DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY WATER THE 500, IMMEDIATELY PRIOR TO LAYING THE 500.
 - LAY THE FIRST ROW OF 500 IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STRAIGHT LATERAL JOINTS TO PROMOTE QUICK UNIFORM GROWTH AND STRENGTH. INSURE THAT 500 IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT WIND WHICH WOULD CAUSE OR DRAG OF THE SEEDS.
 - WHENEVER POSSIBLE, LAY SOIL WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH SERRATED JOINTS. SOIL AND TAMP, FIRM OR OTHERWISE SECURE THE SOIL TO PREVENT SURFACE SOIL LOSS. ENSURE SOIL CONTACT EXISTS BETWEEN 500 ROOTS AND THE UNDERLYING SOIL SURFACE.
 - WITHIN THE 500 IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE 500 IS FIRM AND SOIL SURFACE BELOW THE 500 IS FIRM. COMPLETE THE OPERATIONS OF LAYING, TAMPING, AND REGADING FOR ANY PIECE OF 500 WITHIN EIGHT HOURS.
 - 500 MAINTENANCE**
 - IN THE ABSENCE OF ADEQUATE RAINFALL, WATER ONLY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOON DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - AFTER THE FIRST WEEK, 500 WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. DO NOT HOW UNTIL THE 500 IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE MOW CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

STANDARD STABILIZATION NOTE

DEFINITION

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

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access to the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be established in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECS	SEEDING RATE 1/		SEEDING DEPTH 2/ (INCHES)	RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE 3/			
	LB./AC.	LB./1000 FT. 2		5b AND 6a	6b	7a AND 7b	
COOL-SEASON GRASSES							
ANNUAL KYRGRASS (LILIUM PERENNIS SSP. MULTIFLORUM)	40	1.0	0.5	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30	
BARLEY (HORDEUM VULGARIS)	96	2.2	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30	
OATS (AVENA SATIVA)	72	1.7	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30	
WHEAT (TRITICUM AESTIVUM)	120	2.9	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30	
CERIAL RYE (SECALE CEREALE)	112	2.8	1.0	MAR. 15 TO MAY 31; AUG. 31 TO OCT. 31	MAR. 1 TO MAY 15; AUG. 1 TO NOV. 15	FEB. 15 TO APR. 30; AUG. 15 TO DEC. 15	
WARM-SEASON GRASSES							
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	0.5	JUNE 1 TO JULY 31	MAY 16 TO JULY 31	MAY 1 TO AUGUST 14	
PEARL MILLET (Pennisetum GLAUCUM)	20	0.5	0.5	JUNE 1 TO JULY 31	MAY 16 TO JULY 31	MAY 1 TO AUGUST 14	

NOTES:

- SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN TONS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES.
- SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES. USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT FOR SMALLER-SEEDING GRASSES (ANNUAL KYRGRASS, PEARL MILLET, CERIAL RYE). GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CERIAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE.
- OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.

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

- DEFINITION**
- THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
- PURPOSE**
- TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
- CONDITIONS WHERE PRACTICE APPLIES**
- TO THE SURFACE OF ALL PERIMETER CONTROL, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.
- CRITERIA**
- ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOMMENDED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SEEDING SUCH MIXTURES ON ANY PROJECT. REFER TO TABLE B.4.3 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
 - MULCH ALWAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAW.
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- A. SEEDING**
- SPECIFICATIONS**
 - ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOMMENDED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SEEDING SUCH MIXTURES ON ANY PROJECT. REFER TO TABLE B.4.3 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
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 - APPLICATION**
 - DRY SEEDING THIS INCLUDES USE OF CONVENTIONAL DRIP OR BROADCAST SPREADERS.
 - INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1.
 - PERMANENT SEEDING TABLE B.4.3 OR SET-SPECIFIC SEEDING MIXTURES.
 - APPLY SEED TO TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH WHEATED ROLLER TO PROMOTE GOOD SEED TO SOIL CONTACT.
 - DRILL OR CULTIVATE/SEEDING RECOMMENDED SEEDS THAT APPLY AND COVER SEED WITH SOIL.
 - CULTIVATING OPERATIONS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING SEEDS THAT ARE NOT AFTER PLANTING.
 - APPLY SEED TO TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 - HYDROSEEDING APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN: 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P₂O₅ (PHOSPHORUS): 200 POUNDS PER ACRE; K₂O (POTASSIUM): 200 POUNDS PER ACRE.
 - LIME USE ONLY LIGHTLY AGGREGATED LIMESTONE (UP TO 3 TONS PER ACRE) MAY BE APPLIED BY HYDROSEEDING. NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - MIX SEEDS AND FERTILIZER ON SITE AND USE IMMEDIATELY AND WITHOUT INTERMISSION.
 - WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.
 - MULCHING**
 - MULCH MATERIALS (IN ORDER OF PREFERENCE)
 - STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLY, CALEK, DECEAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STRAW STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
 - WOOD CELLULOSE FIBER MULCH (WCM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO UNIFORM FIBER STATE.
 - WCM IS TO BE DRY OR CONTAIN A GERM OIL IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COAT TO FACILITATE VISUAL INSPECTION OF THE UNIFORM SPREAD SLURRY.
 - WCM, INCLUDING DYE, MUST CONTAIN NO SEEDING OR GROWTH INHIBITING FACTORS.
 - WCM 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 SOIL, FERTILIZER, AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST BE FREE FROM BUTTER-LIKE GROUND COVER, OR APPLICATION, HAVING MOISTURE ABSORPTION AND PRELIMINARY PROPERTIES AND MUST COVER AND HOLD GRASS SEEDS IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDINGS.
 - WCM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - WCM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 6.5, HIGH CONTENT OF 18 PERCENT HUMERUS AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
 - APPLICATION
 - APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
 - WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM SOIL 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 APPLICATOR, TUNE UP THE APPLICATION RATE TO 2.5 TONS PER ACRE.
 - WOOD CELLULOSE FIBER MULCH SHOULD BE APPLIED TO A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. NET THE WOOD CELLULOSE FIBER MULCH WITH WATER TO ATTAIN A MIXTURE WITH A HAZARD OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - SYNTHETIC BINDERS SUCH AS ACRYLIC UEA (ACRO-TRAC), DCA-70, PEROSET, STABIL-TAC, TARRA TACK, OR OTHER APPROVED GRADES, MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE REPEATED AS THE GRASS WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - LIGHTWEIGHT PLASTIC NETTING MAY BE APPLIED TO THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4-15 FEET WIDE AND 300 TO 3000 FEET LONG.
 - ANCHORING
 - PER