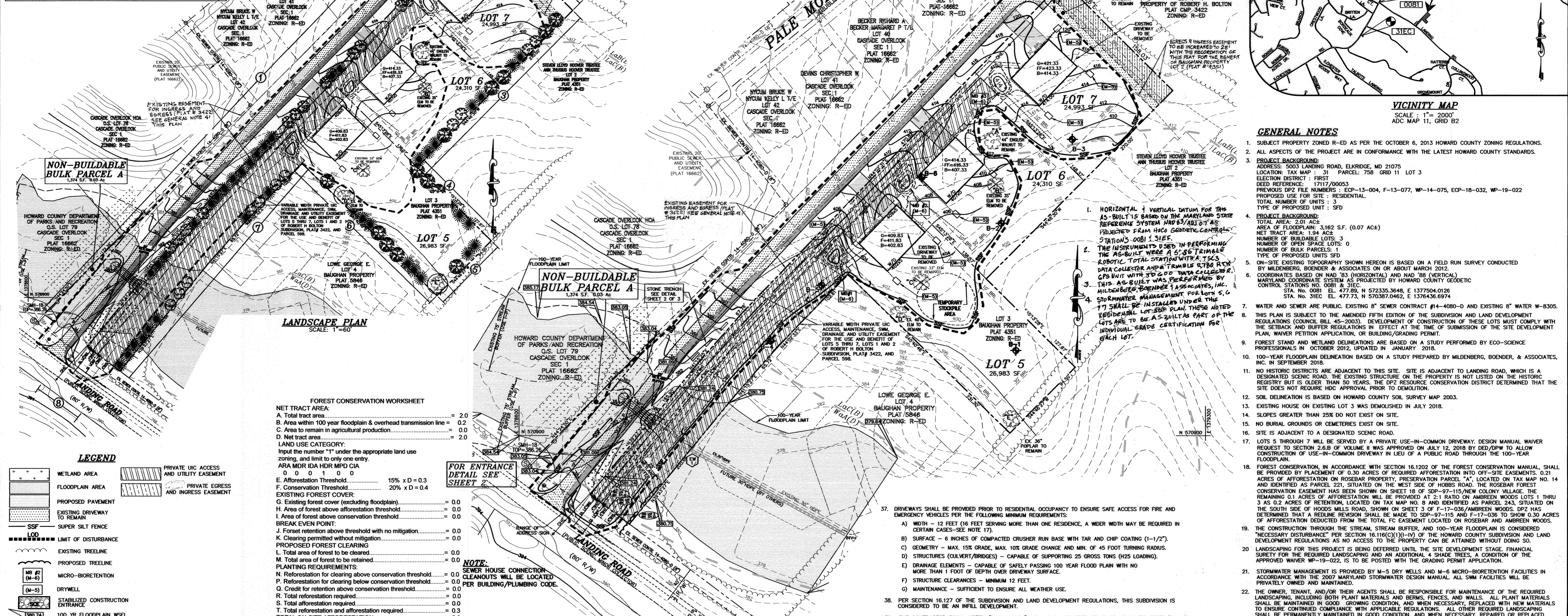


SOILS DESCRIPTION		
DESIGNATION	HYDROLOGICAL GROUP	DESCRIPTION
LoB	B	LAGORE SILT LOAM, 3 TO 8 PERCENT SLOPES
LoC	B	LAGORE SILT LOAM, 8 TO 15 PERCENT SLOPES
Woa	D	WATCHUNG SILT LOAM, 0 TO 3 PERCENT SLOPES

INDEX OF DRAWINGS	
NO.	DESCRIPTION
1	SUPPLEMENTAL, LANDSCAPING AND FOREST CONSERVATION PLAN
2	DETAILS AND SPECIFICATIONS
3	SEDIMENT CONTROL NOTES AND DETAILS



FOREST CONSERVATION WORKSHEET	
NET TRACT AREA:	
A. Total tract area	= 2.0
B. Area within 100 year floodplain and overhead transmission line	= 0.2
C. Area to remain in agricultural production	= 0.0
D. Net tract area	= 2.0
LAND USE CATEGORY:	
Input the number "1" under the appropriate land use zoning, and limit to only one entry.	
AREA MOD. OR HDR. MAP. OR CIA	0 0 0 1 0 0
E. Afforestation Threshold	15% x D = 0.3
F. Conservation Threshold	20% x D = 0.4
EXISTING FOREST COVER:	
G. Existing forest cover (excluding floodplain)	= 0.0
H. Area of forest above afforestation threshold	= 0.0
I. Area of forest above conservation threshold	= 0.0
BREAK EVEN POINT:	
J. Forest retention above threshold with no mitigation	= 0.0
K. Clearing permitted without mitigation	= 0.0
PROPOSED FOREST CLEARING:	
L. Total area of forest to be cleared	= 0.0
M. Total area of forest to be retained	= 0.0
PLANTING REQUIREMENT:	
N. Reforestation for clearing above conservation threshold	= 0.0
P. Reforestation for clearing below conservation threshold	= 0.0
Q. Credit for retention above conservation threshold	= 0.0
R. Total reforestation required	= 0.0
S. Total afforestation required	= 0.3
T. Total reforestation and afforestation required	= 0.3
TOTAL ON-SITE AFFORESTATION	= 0.3

LEGEND	
	WETLAND AREA
	FLOODPLAIN AREA
	PROPOSED PAVEMENT
	EXISTING DRIVEWAY TO REMAIN
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	MICRO-BIORETENTION
	DRYWELL
	STABILIZED CONSTRUCTION ENTRANCE
	100 YEAR FLOODPLAIN WSEL
	PRIVATE UIC ACCESS AND UTILITY EASEMENT
	PRIVATE EGRESS AND INGRESS EASEMENT

ENGINEER'S 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.

5.21.2020
SIGNATURE OF ENGINEER
SAMER A. ALOMER P.E.
PRINTED NAME OF ENGINEER

MIHU TRACKING CHART	
TOTAL NUMBER OF LOTS/UNITS	3
NUMBER OF MIHU REQUIRED	3
NUMBER OF MIHU PROVIDED ON-SITE (EXEMPT FROM APFO ALLOCATIONS)	0
NUMBER OF APFO ALLOCATION REQUIRED (REMAINING LOTS/UNITS)	0
MIHU FEE - (N/LIEU) (INDICATED LOT/UNIT NUMBERS)	5-7

SCHEDULE A - PERIMETER LANDSCAPED EDGE									
CATEGORY	ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO ROADS		TOTAL				
LANDSCAPE TYPE	B (PERIMETER 1)	B (PERIMETER 2)**	B (PERIMETER 3)**	B (PERIMETER 4)	B (PERIMETER 5)**	B (PERIMETER 6)**	B (PERIMETER 7)	B (PERIMETER 8)	
LINEAR FEET OF PERIMETER	711.50 LF	158.03 LF	270.00 LF	127.97 LF	94.50 LF	231.30 LF	338.09 LF	50.00 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) OR IF TREES	NO	NO	NO	NO	1 SHADE TREE	1 SHADE TREE	NO	N/A	
CREDIT FOR WALL, FENCE, OR BEAM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	N/A	
NUMBER OF PLANTS REQUIRED									
SHADE TREES	14 SHADE TREES	3 SHADE TREES	5 SHADE TREES	3 SHADE TREES	2 SHADE TREES	5 SHADE TREES	7 SHADE TREES	0 SHADE TREES	39 SHADE TREES
EVERGREEN TREES	18 EVERGREEN TREES	7 EVERGREEN TREES	7 EVERGREEN TREES	3 EVERGREEN TREES	2 EVERGREEN TREES	8 EVERGREEN TREES	8 EVERGREEN TREES	0 EVERGREEN TREES	48 EVERGREEN TREES
SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS	0 SHRUBS
NUMBER OF PLANTS PROVIDED									
SHADE TREES	14 SHADE TREES	3 SHADE TREES	9 SHADE TREES	3 SHADE TREES	1 SHADE TREE	4 SHADE TREES	7 SHADE TREES	0 SHADE TREES	41 SHADE TREES
EVERGREEN TREES	18 EVERGREEN TREES	7 EVERGREEN TREES	7 EVERGREEN TREES	3 EVERGREEN TREES	2 EVERGREEN TREES	8 EVERGREEN TREES	8 EVERGREEN TREES	0 EVERGREEN TREES	48 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (1:1 SUBSTITUTION)	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES	0 SUBSTITUTION TREES

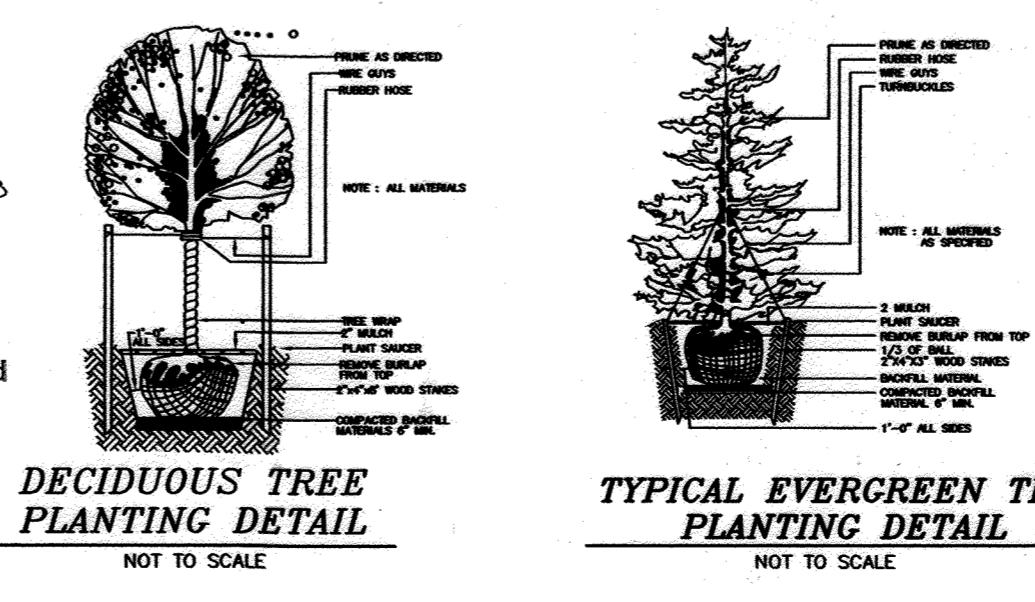
OWNER/DEVELOPER
LRP, LLC
7350-B GRACE DRIVE
COLUMBIA, MD 21044
(410)997-0296

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. 26859, EXP DATE 08/08/21

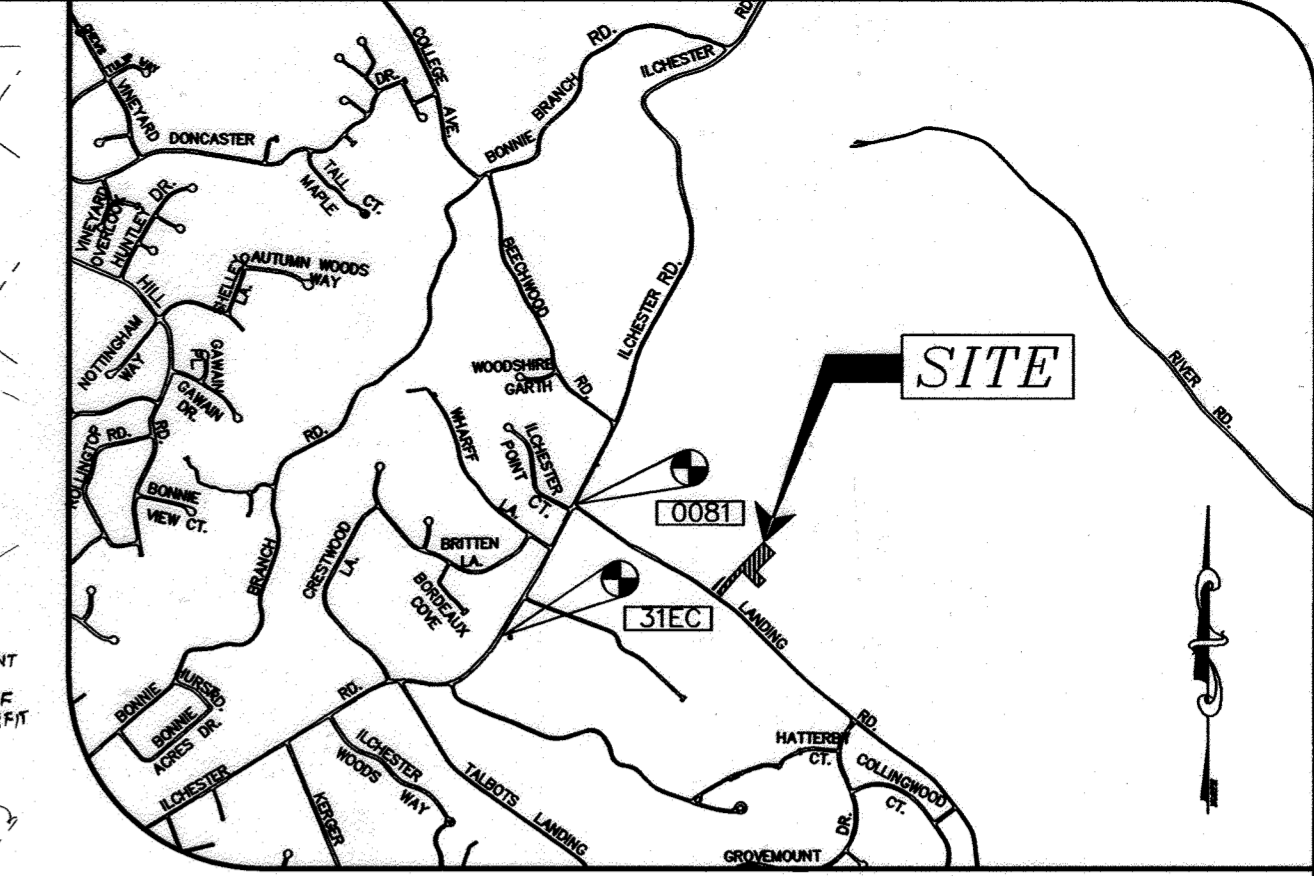
5.21.2020
DATE
SAMER A. ALOMER P.E.

SPECIMEN TREE DATA CHART			
KEY	SPECIES, SIZE (dbh)	CONDITION	COMMENTS
A	ENGLISH WALNUT (44")	GOOD, NON-NATIVE	TO REMAIN
B	SIBERIAN ELM (35")	GOOD, NON-NATIVE	TO BE REMOVED
C	SIBERIAN ELM (33")	GOOD, NON-NATIVE	TO BE REMOVED
D	SIBERIAN ELM (40")	FAIR, SOME DIEBACK NOTED, NON-NATIVE	TO REMAIN
E	TULIP POPLAR (36")	GOOD	TO REMAIN

I hereby certify that the facility shown on this plan was constructed as shown on the 'As-Built' plans and meets with the approved plans and specifications.



PERIMETER LANDSCAPE REQUIREMENT PLANTING SCHEDULE				
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
18		RUBRUM 'RED SUNSET' OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	RED SUNSET RED MAPLE OR EQUIVALENT	2.5"-3" CAL.
13		GLEDITSIA TRACANTHOS INERMIS IMPERIAL THORNLESS HONEYLOCUST OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	IMPERIAL THORNLESS HONEYLOCUST OR EQUIVALENT	2.5"-3" CAL.
10		PRUNUS SARGENTI OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	SARGENT CHERRY OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	2.5"-3" CAL.
48		CUPRESSOCYPRUS LEYLANDII LEVLAND CYPRESS OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	LEVLAND CYPRESS OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL	6"-8" HEIGHT
TOTAL				89 TREES (41 SHADE TREES, 48 EVERGREENS)



VICINITY MAP
SCALE: 1" = 200'
ADC MAP 11, GRID B2

- GENERAL NOTES**
- SUBJECT PROPERTY ZONED R-ED AS PER THE OCTOBER 6, 2013 HOWARD COUNTY ZONING REGULATIONS.
 - ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
 - PROJECT BACKGROUND:**
ADDRESS: 5003 LANDING ROAD, ELK RIDGE, MD 21075
LOCATION: TAX MAP 31 PARCEL 758 GRID 11 LOT 3
ELECTION DISTRICT - FIRST
DEED REFERENCE: 17117/00053
PREVIOUS DPT FILE NUMBERS: EOP-13-004, F-13-077, WP-14-075, ECP-18-032, WP-19-022
PROPOSED USE FOR SITE: RESIDENTIAL
TOTAL NUMBER OF UNITS: 3
TYPE OF PROPOSED UNIT: SFD
 - PROJECT BACKGROUND:**
TOTAL AREA: 2.01 AC.
AREA TO BE DEVELOPED: 3,162 S.F. (0.07 AC.)
NET TRACT AREA: 1.94 AC.
NUMBER OF BUILDABLE LOTS: 3
NUMBER OF OPEN SPACES: 0
NUMBER OF BULK PARCELS: 1
TYPE OF PROPOSED UNITS: SFD
 - ON-SITE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY CONDUCTED BY MILDBERG, BOENDER & ASSOCIATES ON OR ABOUT MARCH 2012.
 - COORDINATES BASED ON NAD '83 (HORIZONTAL) AND NAD '83 (VERTICAL) MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 0081 & 31EC.
 - STORMWATER MANAGEMENT FOR LOTS 5, 6 & 7 SHALL BE INSTALLED UNDER THE RESIDENTIAL LOTS AND SHALL BE PART OF THE INDIVIDUAL GRADE CERTIFICATION FOR EACH LOT.
 - WATER AND SEWER ARE PUBLIC. EXISTING 8" SEWER CONTRACT #14-080-D AND EXISTING 8" WATER W-8305.
 - THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OF CONSTRUCTION OF THESE LOTS MUST COMPLY WITH THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT.
 - FOREST STAND AND METAL DELINEATIONS ARE BASED ON A STUDY PERFORMED BY ECO-SCIENCE PROFESSIONALS IN OCTOBER 2012, UPDATED IN JANUARY 2018.
 - 100-YEAR FLOODPLAIN DELINEATION BASED ON A STUDY PREPARED BY MILDBERG, BOENDER & ASSOCIATES, INC. IN SEPTEMBER 2018.
 - NO HISTORIC DISTRICTS ARE ADJACENT TO THIS SITE. SITE IS ADJACENT TO LANDING ROAD, WHICH IS A DESIGNATED SCENIC ROAD. THE EXISTING STRUCTURE ON THE PROPERTY IS NOT LISTED ON THE HISTORIC REGISTRY BUT IS OLDER THAN 50 YEARS. THE DPT RESOURCE CONSERVATION DISTRICT DETERMINED THAT THE SITE DOES NOT REQUIRE HBC APPROVAL PRIOR TO DEMOLITION.
 - SOIL DELINEATION IS BASED ON HOWARD COUNTY SOIL SURVEY MAP 2003.
 - EXISTING HOUSE ON EXISTING LOT 3 WAS DEMOLISHED IN JULY 2018.
 - SLOPES GREATER THAN 25% DO NOT EXIST ON SITE.
 - NO BURIAL GROUNDS OR CEMETERIES EXIST ON SITE.
 - SITE IS ADJACENT TO A DESIGNATED SCENIC ROAD.
 - LOTS 5 THROUGH 7 WILL BE SERVED BY A PRIVATE USE-IN-COMMON DRIVEWAY. DESIGN MANUAL WAIVER REQUEST TO SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL, ALL SIM FACILITIES WILL BE PROVIDED BY PLACEMENT OF 0.30 ACRES OF REQUIRED AFFORESTATION INTO OFF-SITE EASEMENTS, 0.21 ACRES OF AFFORESTATION ON ROSEBAR PROPERTY, PRESERVATION PARCEL "A", LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS LOT 24, PARCEL 224, SITUATED ON THE WEST SIDE OF HOBBS ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115-N/CONV. THE REMAINING 0.1 ACRES OF AFFORESTATION WILL BE PROVIDED AT 2:1 RATIO ON AMBREEN WOODS LOTS 1 THRU 3 AS 0.2 ACRES OF RETENTION, LOCATED ON TAX MAP NO. 8 AND IDENTIFIED AS PARCELS 243, SITUATED ON THE SOUTH SIDE OF HOBBS ROAD, SHOWN ON SHEET 3 OF F-17-036/AMBREEN WOODS. DPZ HAS DETERMINED THAT A REDLINE REVISION SHALL BE MADE TO SDP-97-115 AND F-17-036 TO SHOW 0.30 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL TO EASEMENT LOCATED ON ROSEBAR AND AMBREEN WOODS.
 - THE CONSTRUCTION THROUGH THE STREAM, STREAM BUFFER, AND 100-YEAR FLOODPLAIN IS CONSIDERED "NECESSARY DISTURBANCE" PER SECTION 16.116(C)(1)-(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS NO ACCESS TO THE PROPERTY CAN BE ATTAINED WITHOUT DOING SO.
 - LANDSCAPING FOR THIS PROJECT IS BEING DEFERRED UNTIL THE SITE DEVELOPMENT STAGE. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING AND AN ADDITIONAL 4 SHADE TREES, A CONDITION OF THE APPROVED WAIVER WP-19-022, IS TO BE POSTED WITH THE GRADING PERMIT APPLICATION.
 - STORMWATER MANAGEMENT IS PROVIDED BY M-5 DRY WELLS AND M-6 MICRO-BIORETENTION FACILITIES IN ACCORDANCE WITH THE SUBDIVISION AND STORMWATER DESIGN MANUAL. ALL SIM FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
 - THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS SHALL MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUOUS COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPLACED OR REPLANTED.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTION OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
 - A FEE IN LIEU IN THE AMOUNT OF \$4,500 WILL BE PAID TO SATISFY THE OPEN SPACE REQUIREMENT OF SECTION 16.121(a)(2) OF THE SUBDIVISION REGULATIONS.
 - THIS R-ED ZONED SUBDIVISION IS BEING DEVELOPED UNDER THE R-20 REGULATIONS IN ACCORDANCE WITH SECTION 107.011 OF THE ZONING REGULATIONS. LAND DEVELOPED PURSUANT TO THIS SECTION IS NOT SUBJECT TO THE R-ED DISTRICT REGULATIONS, INCLUDING THE REQUIREMENT FOR PLANNING BOARD REVIEW.
 - PER SECTION 16.134(b)(3) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SIDEWALKS ALONG LANDING ROAD ARE NOT REQUIRED SINCE IT IS CLASSIFIED AS A SCENIC ROAD.
 - A PRIVATE RANGE OF ADDRESS SIGN SHALL BE FABRICATED AND INSTALLED BY THE HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPER'S / OWNER'S EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATE.
 - RESIDENTIAL DRIVEWAY ENTRANCE, HOWARD COUNTY STANDARDS R-6.06 ARE TO BE USED.
 - THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORING LANDSCAPING, BERMS, FENCES, SIMILAR HOUSE TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
 - ALL LOTS/RESIDENTIAL UNITS IN THIS SUBDIVISION ARE SUBJECT TO THE MIHU 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 APPLICATION.
 - NO NOISE OR TRAFFIC STUDIES ARE REQUIRED FOR THIS PROJECT.
 - A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON APRIL 23, 2018 AT THE ELK RIDGE LIBRARY AT 6:00 PM.
 - CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
 - 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.
 - A TOTAL OF FIVE (5) SPECIMEN TREES EXIST ON-SITE. TWO TREES ARE PROPOSED TO BE REMOVED AND THREE TREES ARE PROPOSED TO REMAIN. THIS PLAN IS SUBJECT TO WP-19-022, SEEKING AN ALTERNATIVE COMPLIANCE TO SECTIONS 16.1205(a)(7) WHICH STATES THAT STATE CHAMPION TREES, TREES 75% OF THE DIAMETER OF STATE CHAMPION TREES AND TREES 30" IN DIAMETER OR LARGER SHALL BE LEFT IN AN UNDISTURBED CONDITION DURING CONSTRUCTION. THIS ALTERNATIVE COMPLIANCE WAS APPROVED ON OCTOBER 10, 2018, SUBJECT TO THE FOLLOWING CONDITIONS:

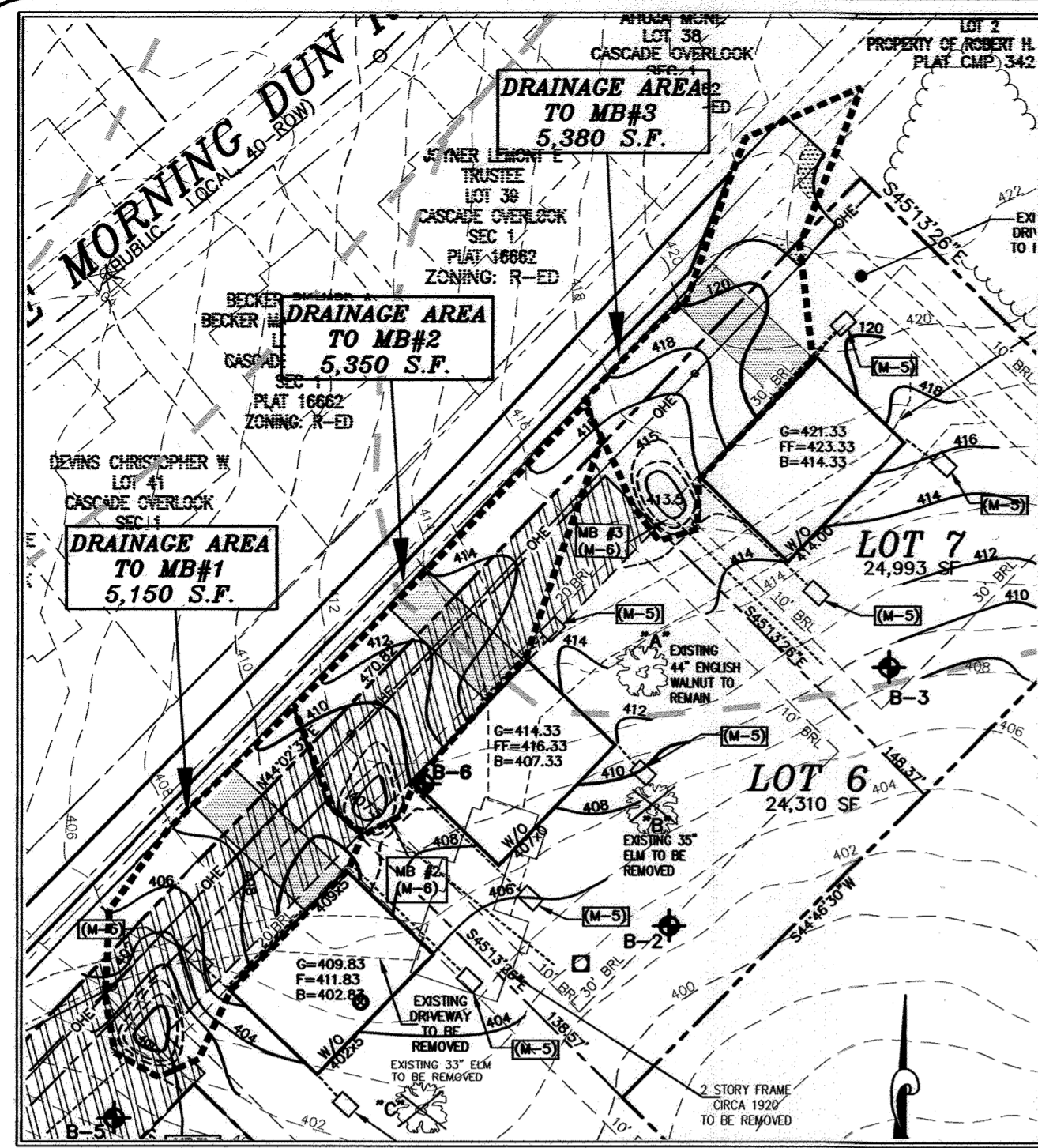
- ADD THE ALTERNATIVE COMPLIANCE PETITION WP-19-022, ON F-19-023, BAUGHAN PROPERTY AS A GENERAL NOTE STATING THE REQUEST, THE APPROVAL DATE AND CONDITIONS.
- SHOW THE 2-SPECIMEN TREES BEING REMOVED AND LABELED PER WP-19-022 ON THE SUPPLEMENTAL PLAN. THE SPECIMEN TREE REMOVAL WILL BE MITIGATED BY THE 2 TO 1 PLANTING OF 4 PERIMETER LANDSCAPE TREES OF 1 1/2" TO 3" CALIPER NATIVE TREES.
- THE APPLICANT SHALL TAKE THE NECESSARY STEPS TO PROTECT THE THREE REMAINING SPECIMEN TREES DURING THE CONSTRUCTION ACTIVITY TO PROTECT THEM AND THEIR CRITICAL ROOT ZONES.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE FUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.

MILDBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland, 21044
(410) 997-0296 Fax

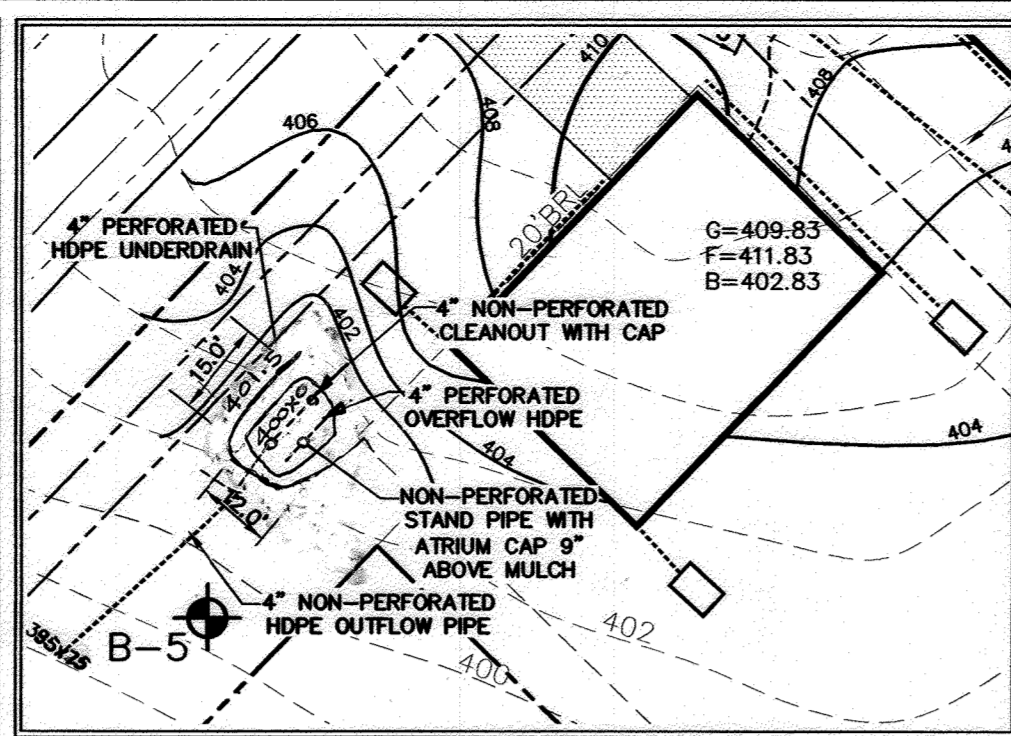
REPLACEMENT SHEET
BAUGHAN PROPERTY, LOTS 5-7 & NON-BUILDABLE BULK PARCEL A
RESUBDIVISION OF LOT 3, 5003 LANDING RD
TAX MAP 31, GRID 11, PARCEL 758
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SUPPLEMENTAL, LANDSCAPING AND FOREST CONSERVATION PLAN

Project: 17-001
Date: MAY 2020
Illustration: MAM
Scale: 1" = 60'
App: AS-BUILT
Sheet: 2 of 3
DEC 2020
CORRECTIONS OF EASEMENT LABELS AND GENERAL NOTE 4
NO

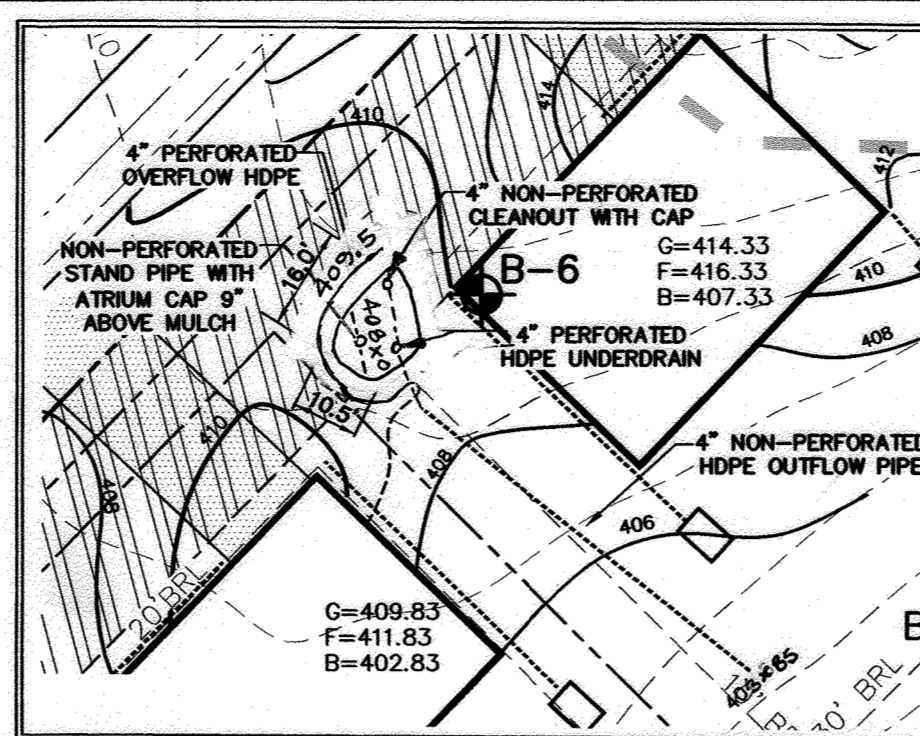
1 OF 3
F-19-023



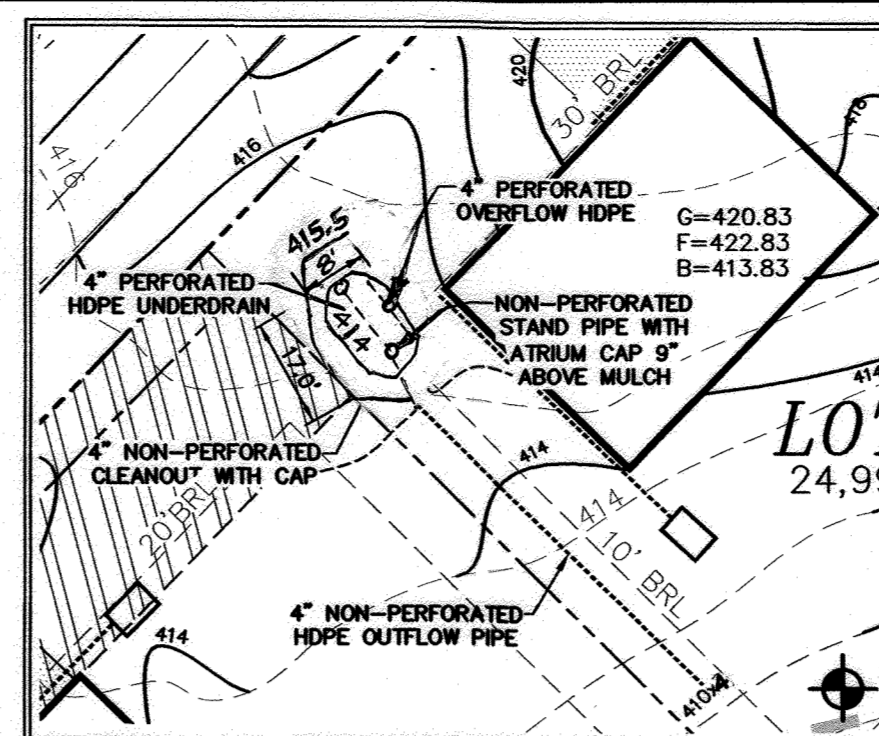
DRAINAGE AREA MAP TO MICRO-BIORETENTION
SCALE: 1"=50'



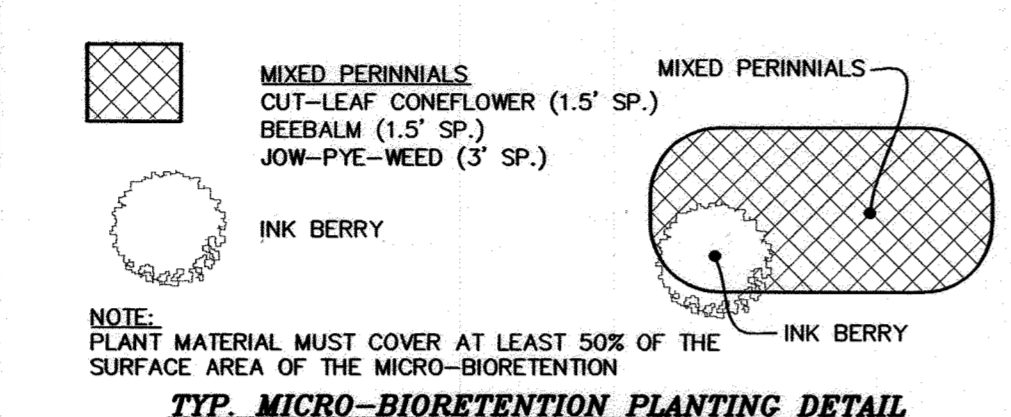
MICRO-BIORETENTION #1 DETAIL
SCALE: 1"=30'



MICRO-BIORETENTION #2 DETAIL
SCALE: 1"=30'



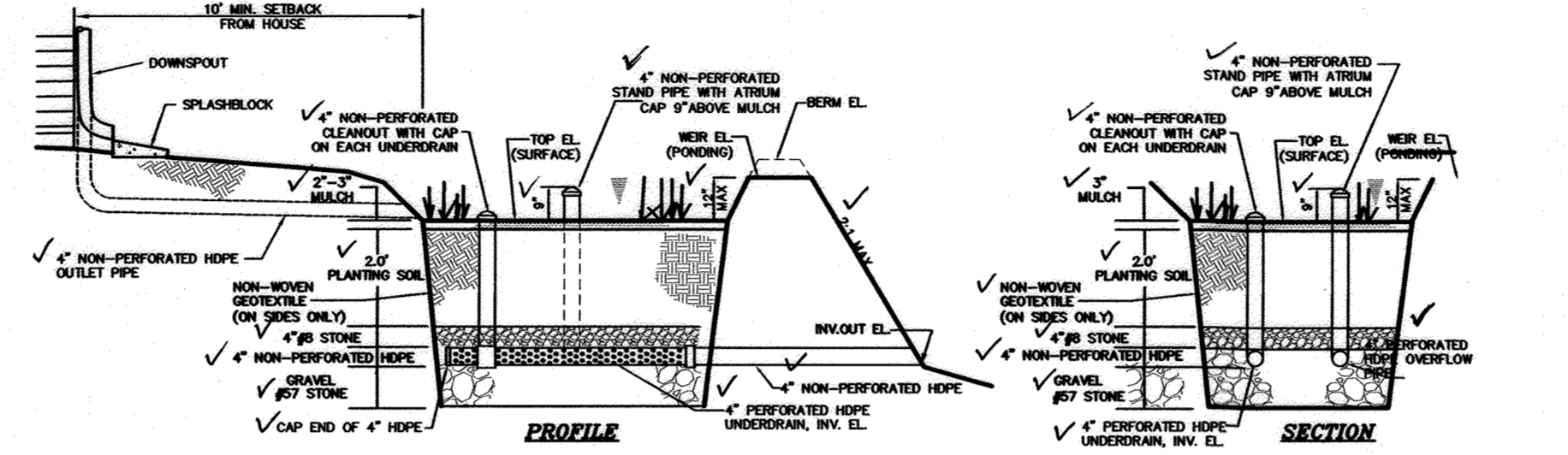
MICRO-BIORETENTION #3 DETAIL
SCALE: 1"=30'



TYP. MICRO-BIORETENTION PLANTING DETAIL
NTS

SWM PRACTICES SCHEDULE

AREA	PROPOSED PRACTICES	REQUIRED ESDV	PROVIDED ESDV
LOT 5	M-6, MICRO-BIORETENTION (MB #2) M-5, DRYWELLS (3 EACH)	189 C.F. 182 C.F.	240 C.F. 195 C.F.
LOT 6	M-6, MICRO-BIORETENTION (MB #3) M-5, DRYWELLS (3 EACH)	178 C.F. 182 C.F.	229 C.F. 195 C.F.
LOT 7	M-6, MICRO-BIORETENTION (MB#4) M-5, DRYWELLS (3 EACH)	184 C.F. 182 C.F.	248 C.F. 195 C.F.
EX. UIC PWMT	M-5, GRAVEL TRENCHES	49 C.F.	72 C.F.
TOTAL		1,146 C.F.	1,374 C.F.



MICRO-BIORETENTION (M-6) DESIGN DATA
NTS

MICRO-BIORETENTION (M-6) DESIGN DATA

FACILITY	TOP EL. (SURFACE)	WEIR EL. (PONDING)	BERM EL.	INV. IN.	INV. OUT.	SURFACE AREA	PONDING AREA	PONDING DEPTH	GRAVEL DEPTH BELOW UNDERDRAN
MB-1	400.00	401.00	401.50	397.00	395.75	143.5 S.F.	280 S.F.	12"	15"
MB-2	408.00	409.00	409.50	405.00	403.75	152 S.F.	280 S.F.	12"	12"
MB-3	414.00	415.00	415.50	411.00	410.75	165 S.F.	280 S.F.	12"	12"

GEOTECHNICAL CONSULTANTS, INC.
P.O. Box 2071
Columbia, MD 21045-2071
Phone: (410) 381-9330
Fax: (410) 381-1064
e-mail: moan@geot.com

March 23, 2013
Mildenberg, Boender & Associates, Inc.
6800 Deepwater Road, Suite 15
Ellicott City, Maryland 21077

Attn: Mr. Jeff Sloman, P.E.
Ref: Limited Subsurface Exploration
Proposed Residential Buildings
Baughan Property, Lots 5 through 7 and Bulk Parcel "A"
Howard County, Maryland
GEAT Project No. G-221

Geotechnical:
On March 13, 2013, GEAT Consultants, Inc. utilized a hand auger to bore six (6) soil borings at the approximate locations shown on the attached sheet. The purpose of the borings was to evaluate the presence/absence of bedrock and groundwater at the locations shown. The number, location, and depth of the borings were determined by other means and the borings were staked-out in the field by others.

Our field observations are summarized in Table 1 below:

Boring No.	Depth to Groundwater (ft)	Depth to hand-auger Bottom (ft)	Termination Depth (ft)
B-1	N/A	1.5*	5.0
B-2	N/A	N/A	5.0
B-3	N/A	N/A	5.0
B-4	N/A	N/A	7.0
B-5	N/A	N/A	8.5
B-6	N/A	4.5*	7.0

* Offset 2 ft and try again.

Notes:
All depths are below existing ground surface.
It should be noted that the actual level of groundwater and the amount and level of perched water should be anticipated to fluctuate through the year, depending on variations in precipitation, surface run-off, infiltration, site topography, drainage, and other factors not evident at the time of our exploration. GEAT cannot be responsible for changes in groundwater conditions at the site due to seasonal variations and changes caused by other factors such as grading operations at the site.

GEAT appreciates the opportunity to provide this geotechnical engineering service to you. Should you have any questions regarding this letter report, or require additional services, please feel free to contact our office.

Sincerely,
Moan Abouzahm, PE

MGWC 4.3: CULVERT INSTALLATION

Proposed installation sequence for culverts:

DESCRIPTION
The following is a typical installation sequence for culverts which details the minimum requirements to be incorporated into the project.

EFFECTIVE USES & LIMITATIONS
This method has been chosen in order to illustrate a general sequence of construction and is not suitable for all projects. Therefore, the construction sequence should be reviewed and modified as necessary to meet specific project needs. Consideration of a bridge or bottomless walls should be made prior to selecting a culvert.

CONSTRUCTION SEQUENCE
All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. (See the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control.) A construction sequence, such as the proposed one listed below, should then be followed (refer to Detail 4.3.)

- A diversion pipe as shown in MGWC 1.4: Diversion Pipe or other measure should be installed and a sanding or stone barrier as shown in MGWC 1.5: Sanding/Stone Diversion should be constructed downstream to divert the streamflow into the diversion.
- A sanding or stone barrier should be placed downstream to prevent the flow from backwashing into the construction area.
- Culverts should be installed such that the following requirements are met:
 - The culvert slope should match the streambed slope while not exceeding 3%.
 - Culverts should be depressed when possible to encourage siltation for improved fish passage as shown in MGWC 4.5: Depressed Culverts.
 - For non-depressed culverts, the outfall height should not exceed 5 inches (12 centimeters), and concrete aprons should be installed whenever possible.
 - The stable width/depth ratio of the bankfull stage stream channel should be maintained with the culvert design. Use of elliptical pipe may help attain the proper channel dimension especially for B, C, and E stream types.
 - A flow channel should be constructed through the riprap placement across the stream bed.
- The disturbed sections of the channel, including the slopes and streambed, should be stabilized with methods approved by the WMA.
- The construction area should be dewatered, and the temporary stream diversion removed starting at the downstream section and moving upstream.
- Finally, the dewatering basins should be returned to the original grade, the silt fence removed, and all disturbed areas seeded and mulched.

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Maryland's Guidelines To Waterway Construction
DETAIL 4.3: CULVERT INSTALLATION-STAGES 1&2

STAGE 1

Installation Guidelines:

- provide sandbags or stones to divert the channel
- remove the portion of pier and the southeast abutment and headwall
- install the first segment of pipe and build the headwall
- stabilize the stream bed inlet with Class 1 riprap

STAGE 2

Installation Guidelines:

- redirect the channel as shown
- remove the rockhead abutment and headwall
- install the pipe and build the headwall
- stabilize the remaining stream inlet with Class 1 riprap

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Maryland's Guidelines To Waterway Construction
DETAIL 4.3: CULVERT INSTALLATION-STAGES 3&4

STAGE 3

Installation Guidelines:

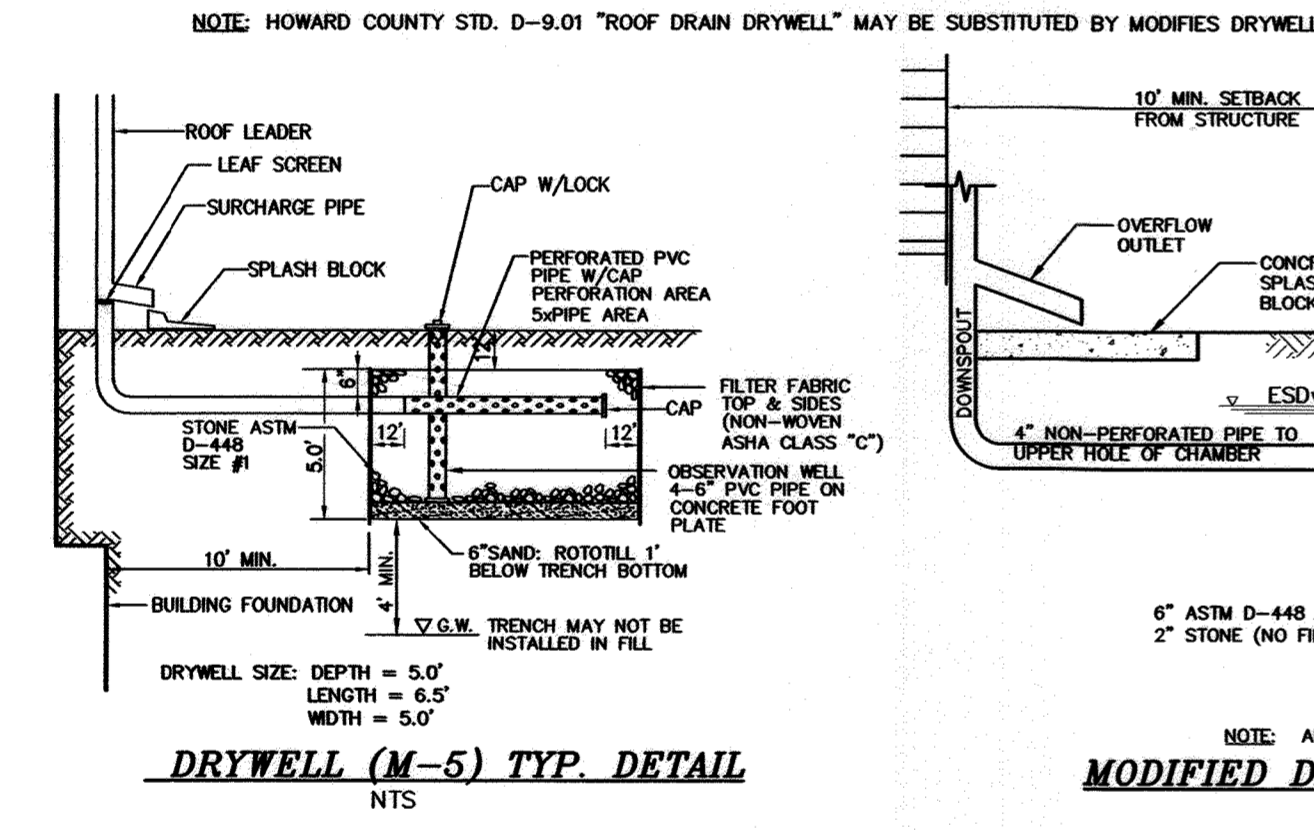
- redirect the channel as shown
- remove the remaining abutment and wingwall
- build the last portion of pipe and headwall
- stabilize the stream bed inlet with riprap
- restore the road surface

STAGE 4

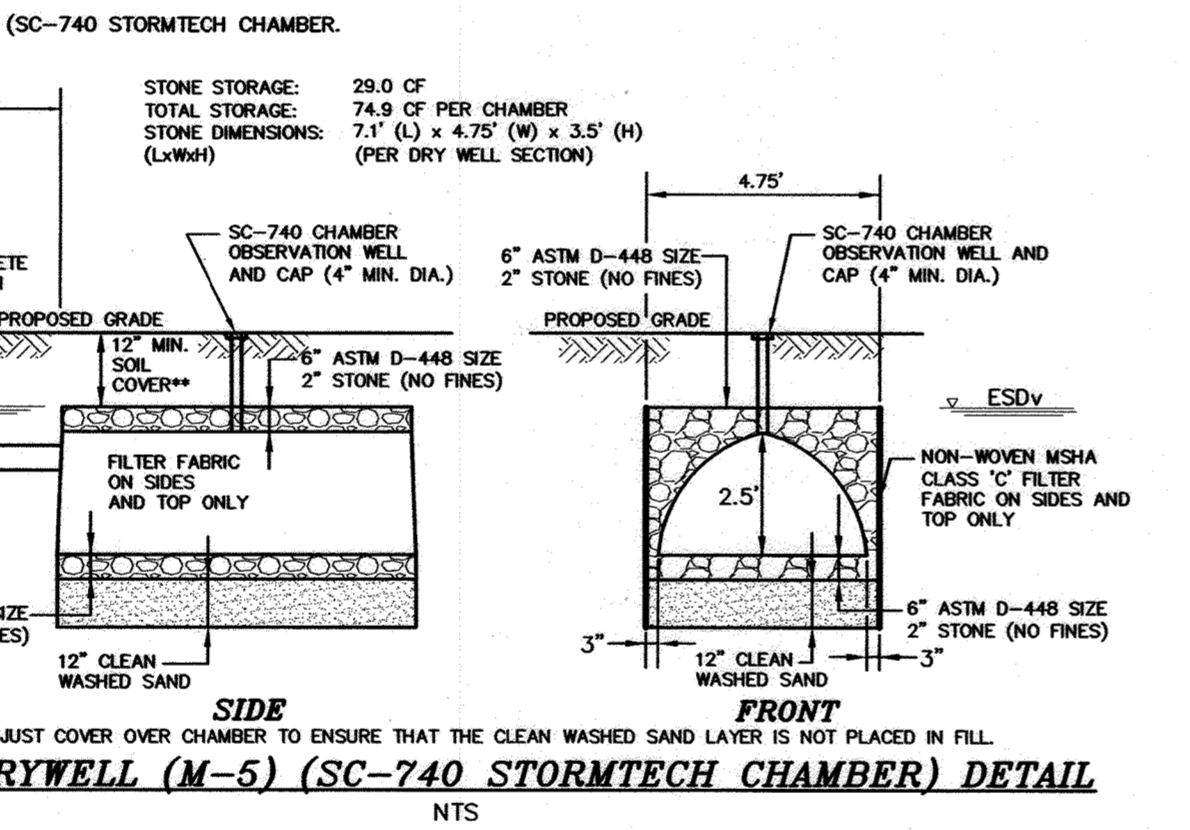
Installation Guidelines:

- remove traffic barriers
- stabilize all disturbed areas with seed and mulch
- remove sediment control devices

MD STATE DEPARTMENT OF THE ENVIRONMENT
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DRYWELL (M-5) TYP. DETAIL
NTS



MODIFIED DRYWELL (M-5) (SC-740 STORMTECH CHAMBER) DETAIL
NTS

ENGINEER'S 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.

Signature of Engineer: *S. A. Alomer*
Date: 5/21/20

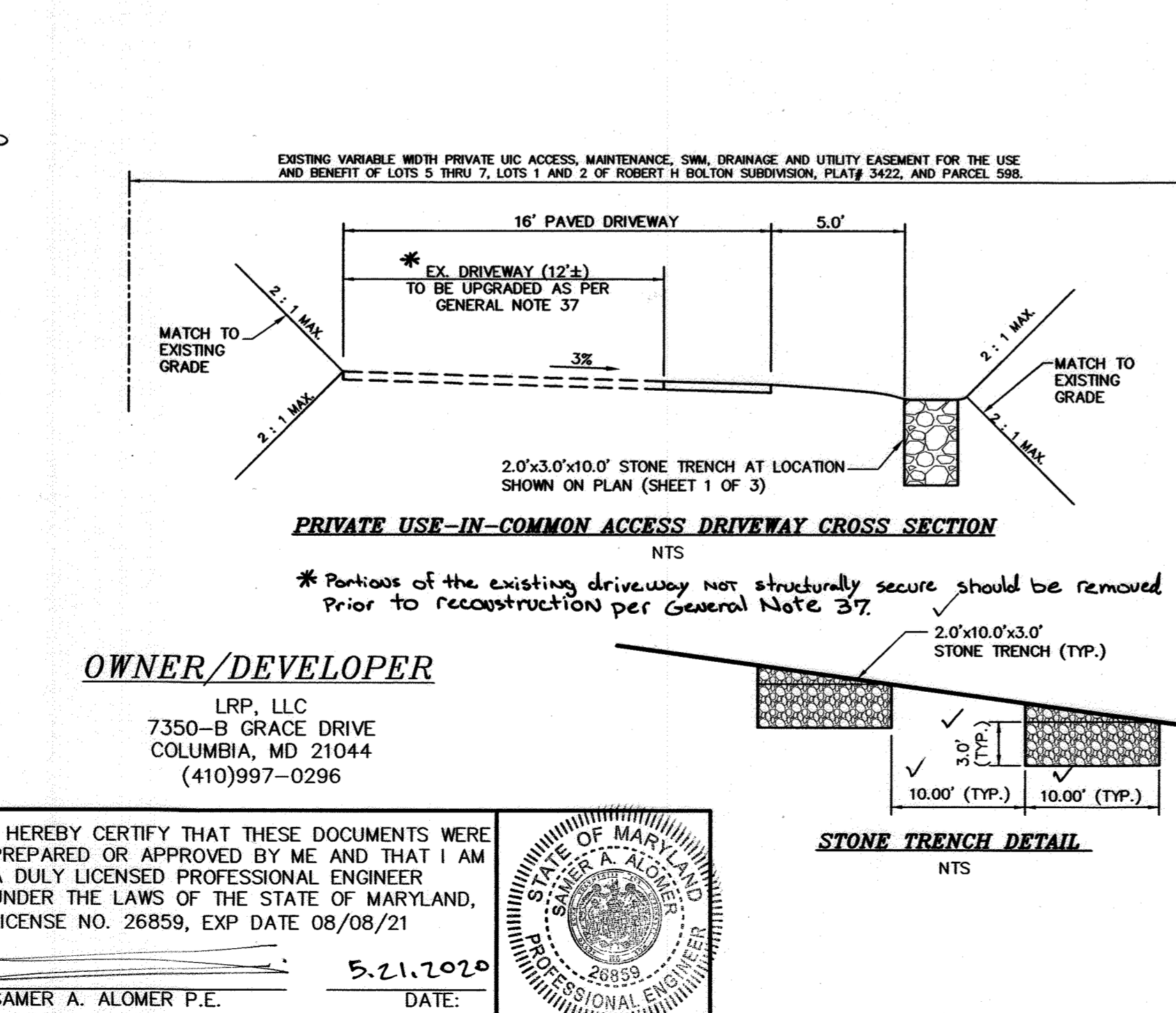
DEVELOPER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO CONDUCT PERIODIC ON-SITE INSPECTION.

Signature of Developer: *LRP LLC*
Date: 5/19/20

Signature of Engineer: *Samer A. Alomer*
Date: 06/15/2020

Signature of Chief: *Janet*
Date: 7.16.20

Signature of Chief: *7/22/2020*
Date: 7/22/2020

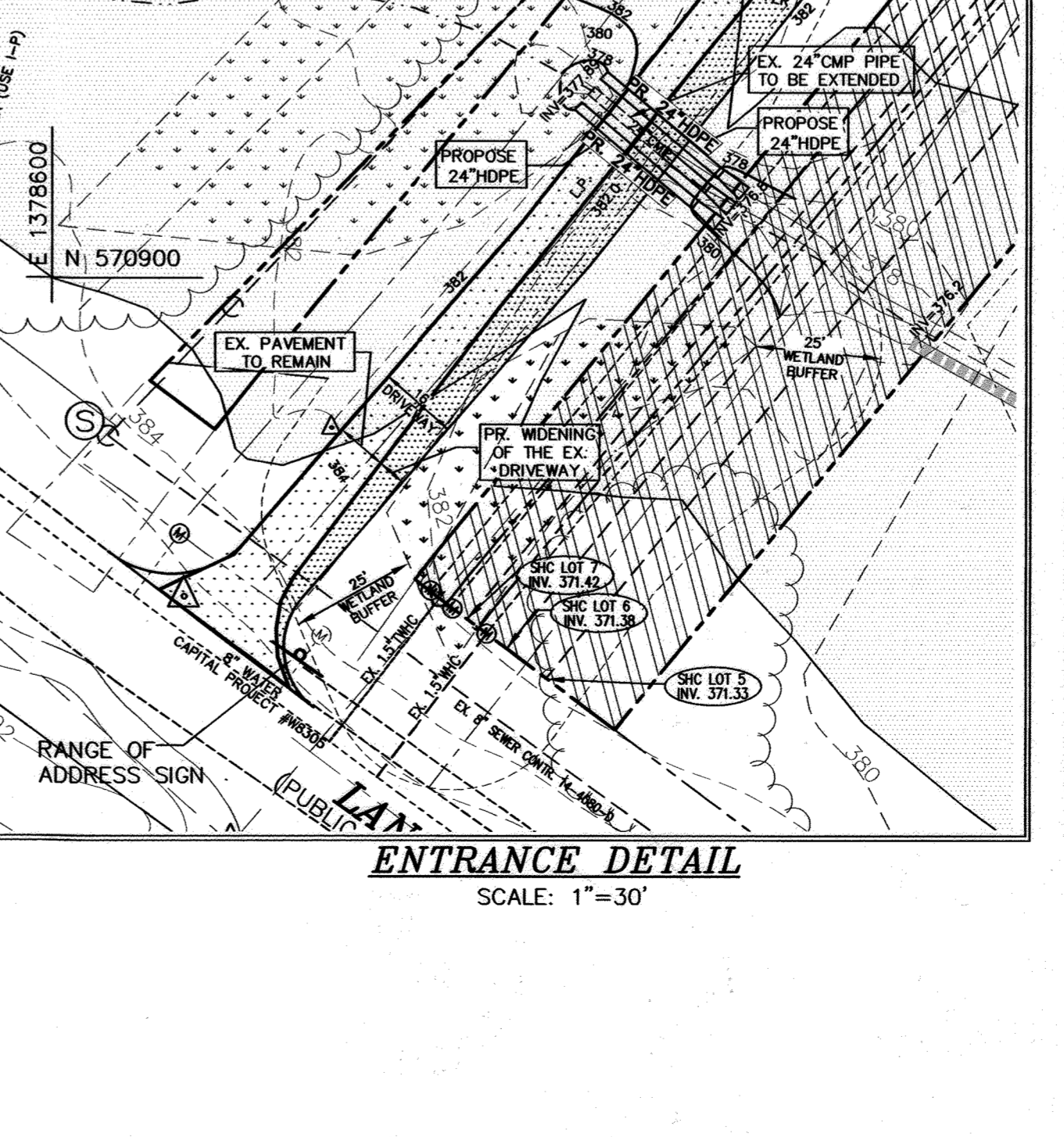


OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- 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 ENSURE 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.

ENTRANCE DETAIL
SCALE: 1"=30'

I hereby certify that the facility shown on this plan was constructed as shown on the 'As-Built' plans and meets with the approved plans and specifications.



REPLACEMENT SHEET

BAUGHAN PROPERTY, LOTS 5-7 & NON-BUILDABLE BULK PARCEL A
RESUBDIVISION OF LOT 3, 5003 LANDING RD
TAX MAP 31, GRID 11, PARCEL 758
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Tel. (410) 997-0296 Fax.

2 OF 3
F-19-023

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

DEFINITION THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION. PURPOSE TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CRITERIA A. SOIL PREPARATION 1. TEMPORARY STABILIZATION a. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

2. PERMANENT STABILIZATION a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

b. TOPSOILING IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

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

d. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY...

e. LIME MATERIALS MUST BE GROUND LIME (HYDRATED OR BURNT LIME) WHICH MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING. LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE...

f. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY...

g. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE...

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY...

3. LIME MATERIALS MUST BE GROUND LIME (HYDRATED OR BURNT LIME) WHICH MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING. LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE...

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACID OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

STANDARD SEDIMENT CONTROL NOTES 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD...

2. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT...

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1)...

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL... TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3)...

5. SITE ANALYSIS: TOTAL AREA OF SITE: 2.01 ACRES AREA DISTURBED BY CONSTRUCTION: 1.47 ACRES AREA TO BE ROOFED OR PAVED: 1.04 ACRES AREA TO BE VEGETATIVE STABILIZED: 1.04 ACRES TOTAL CUT: 5,000 CU. YDS. TOTAL FILL: 5,000 CU. YDS.

(B-4-3) STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CRITERIA A. SEEDING 1. SPECIFICATIONS a. SEEDS MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY...

b. MULCH ALONE MAY 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 IS NOT FROZEN. MULCHING SHOULD BE APPLIED IMMEDIATELY UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

c. INCULCANTS: THE INCULCANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INCULCANTS MUST NOT BE USED LATER THAN DATE INDICATED ON THE CONTAINER AND FRESH INCULCANTS ARE BEST. INCULCANTS ARE BEST USED FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING...

d. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY...

2. MULCHING a. MULCH MATERIALS (IN ORDER OF PREFERENCE) 1. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STEER STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE. 1. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO MATCH THE SOIL COLOR...

c. ANCHORING a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A MINIMUM OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION...

d. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DITCH SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.

e. STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE. CRITERIA 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.

2. THE FOOTPRINT OF STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DITCH SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.

6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.

7. STOCKPILE MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCORPORATING STABILIZATION AND STANDARD B-4-2 TEMPORARY STABILIZATION.

8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

9. 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 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. 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.

10. 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.

11. DISTURBANCE CHANGES AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIALS, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN WATER FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIALS, OR OTHER DELETERIOUS SUBSTANCE.

(B-4-5) STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION. PURPOSE TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA A. SEED MIXTURES 1. GENERAL USE a. SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED IN THE SITE CONDITION OR PURPOSE.

b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD GUIDE, SECTION 342-CRITICAL AREA PLANTING FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW RATES RECOMMENDED BY THE SOIL TESTING AGENCY.

c. AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZER (40-0-0) AT 3 1/2 POUNDS PER 1000 SF, (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES a. AREAS WHERE TURFGRASS MAY BE DESIRE INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

b. SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.

c. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE IS 1.5 TO 2.0 POUNDS PER 1000 SF. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 CENT.

d. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MAINTENANCE. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS CULTIVARS: 2 POUNDS MIXTURE PER 1000 SF. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS EACH RANGING FROM 10 TO 35 CENT.

e. KENTUCKY BLUEGRASS/FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN FULL SUN TO PARTIAL SHADE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FESCUE AND GO TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER 1000 SF.

f. TALL FESCUE: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE. RECOMMENDED CERTIFIED TALL FESCUE CULTIVARS 65 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 PERCENT OF THE TOTAL MIXTURE OR MORE CULTIVARS MAY BE BLENDED.

g. KENTUCKY BLUEGRASS/TALL FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN FULL SUN TO PARTIAL SHADE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FESCUE AND GO TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER 1000 SF.

h. CENTRAL MID: MARCH 15 TO MAY 1, AUGUST 1 TO OCTOBER 1 (HARDNESS ZONES: 5B,6A) SOUTHERN MID: MARCH 15 TO MAY 1, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONES: 7A, 7B)

i. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONE AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASS WILL PROCEED WITHOUT DIFFICULTY.

j. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL EVERY 3 TO 4 DAYS UNTIL ROOTS ARE ESTABLISHED. WHEN HYDROSEEDING, WHEN ESTABLISHED, THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASON, OR ON ADVERSE SITES.

DEFINITION A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. PURPOSE TO PROTECT A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CRITERIA 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.

2. THE FOOTPRINT OF STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DITCH SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.

(B-4-4) STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOIL WITH VEGETATION FOR UP TO 6 MONTHS. PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURB SOIL.

CRITERIA 1. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY ALONG WITH APPLICATION RATES, SEEDING DATES, AND SEEDING DEPTHS. THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.1.A, AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

REPLACEMENT CERTIFICATE 1. OBTAIN GRADING PERMIT (1 DAY) 2. PERFORM CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS (5 DAYS)

3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION INDICATED (1 DAY) 4. CONSTRUCT PERIMETER CONTROLS: SUPER SILT FENCES (SSF) (6 DAYS)

5. CLEAR AND GRUB SITE (2 DAYS) 6. INSTALL WATER AND SEWER HOUSE CONNECTIONS WITHIN THE EASEMENT (10 DAYS)

7. EXTEND EXISTING 24" CMP PIPE AND INSTALL 24" HDPE UNDER EXISTING DRIVEWAY (7 DAYS) 8. UPGRADE EXISTING DRIVEWAY (14 DAYS)

9. STABILIZE DISTURBED AREA (1 DAY) 10. MICRO-BIORETENTION FACILITIES MW#1, MW#2 AND MW#3 TO BE COMPLETED AT THE SITE DEVELOPMENT STAGE AFTER THE CONSTRUCTION OF THE HOUSES.

11. WITH THE APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE SUPER SILT FENCE FROM THE PIPESTEM AREA (1 DAY) 12. LEAVE IN PLACE THE REMAINING SUPER SILT FENCE FOR FUTURE CONSTRUCTION OF THE HOUSES (SDP STAGE).

TEMPORARY SEEDING FOR SITE STABILIZATION PLANT SPECIES SEEDING RATE SEEDING DEPTH RECOMMENDED SEEDING DATES BY PLANT HARDNESS ZONE

COOL SEASON GRASSES ANNUAL RYEGRASS (LOLIUM PERENNIS SSP. MULTIFLORUM) 40 1.0 0.5 MAR 15 TO MAY 31; MAR 1 TO MAY 15; FEB 15 TO APR 30; AUG 1 TO SEP 30; AUG 1 TO OCT 15; FEB 15 TO APR 30; AUG 15 TO NOV 30

WARM SEASON GRASSES FOXTAIL MILLET (SETARIA ITALICA) 30 0.7 0.5 JUN 1 TO JUL 31; MAY 16 TO JUL 31; MAY 1 TO AUG 14

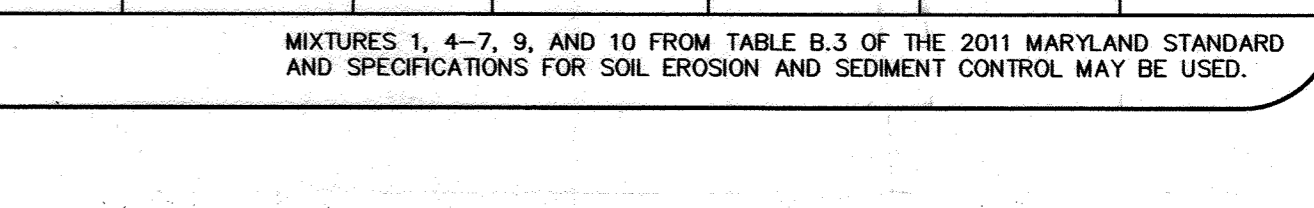
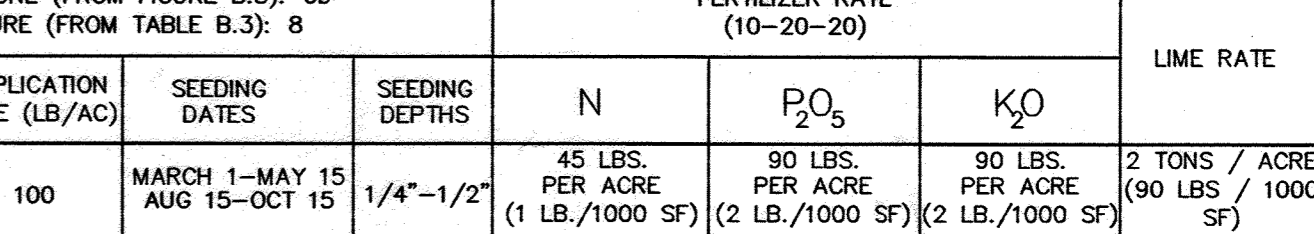
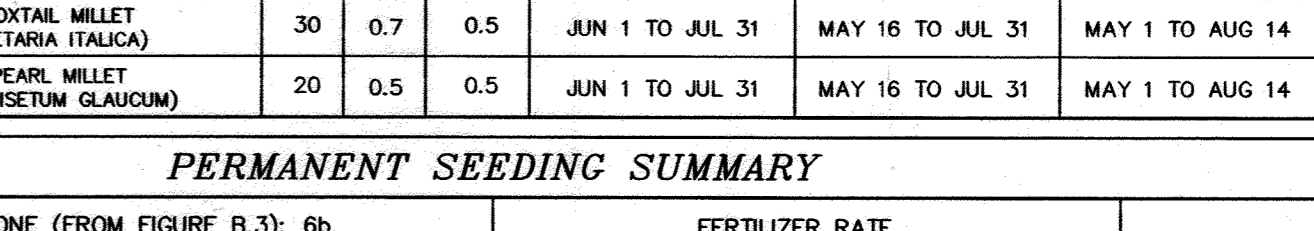
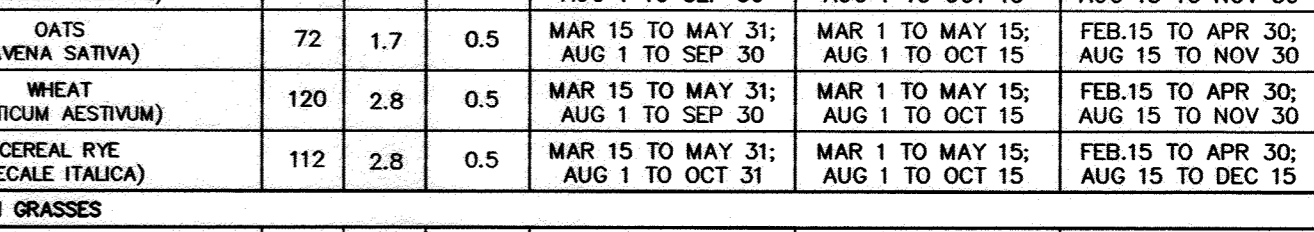
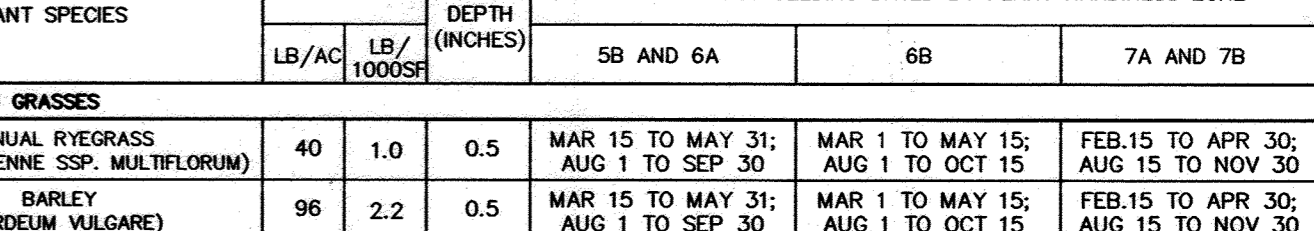
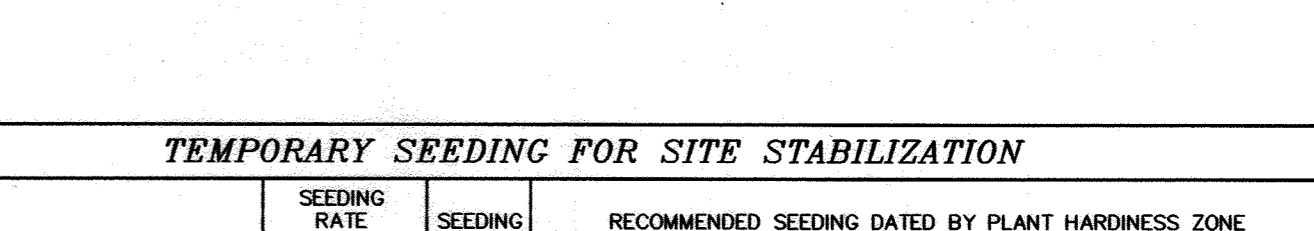
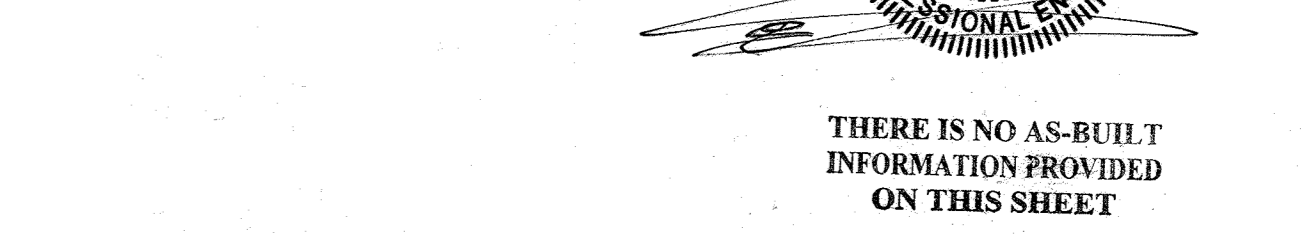
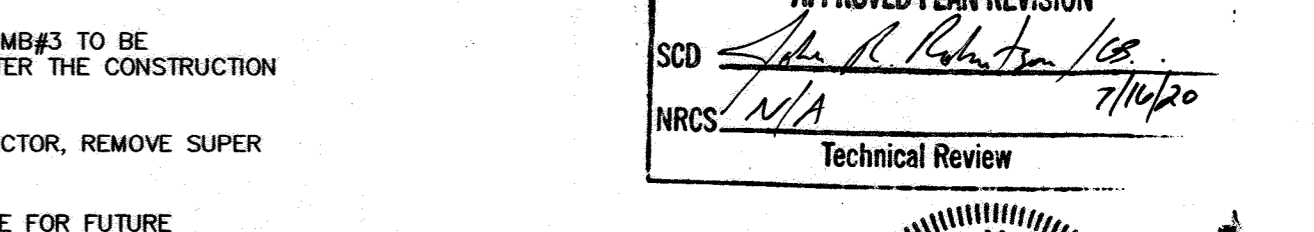
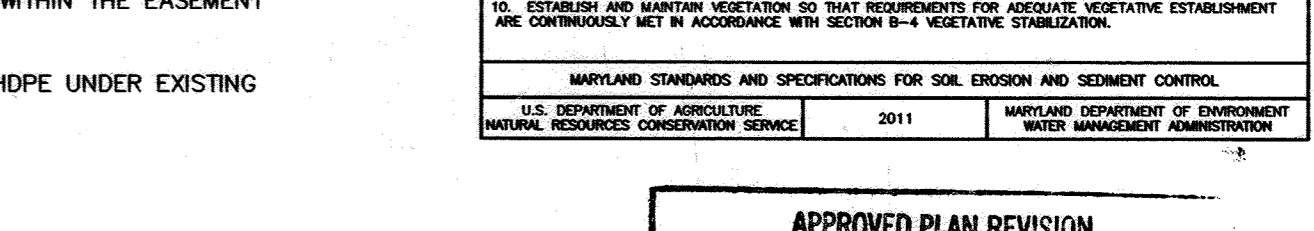
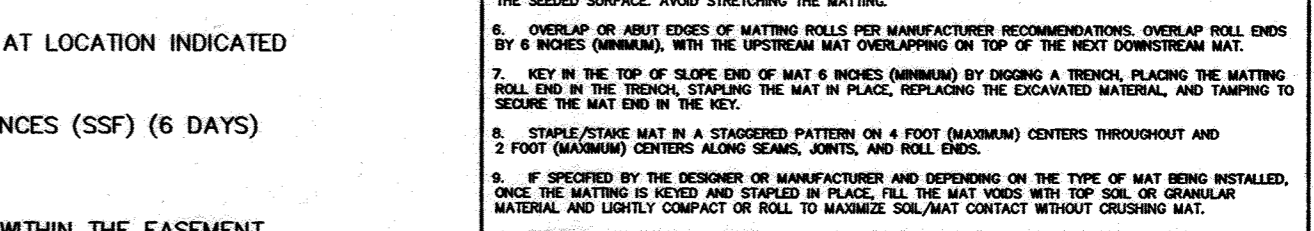
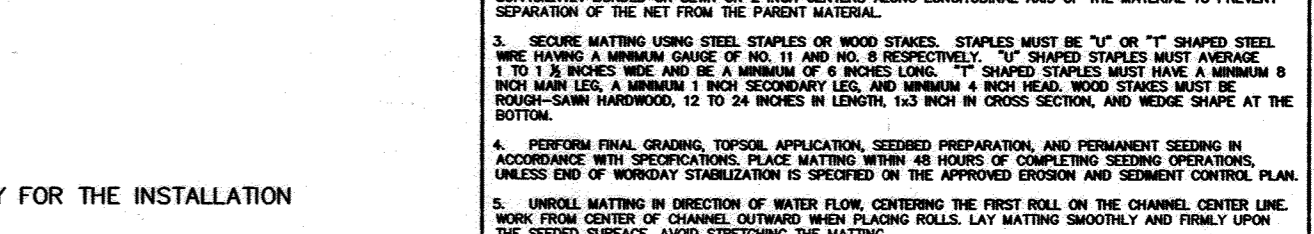
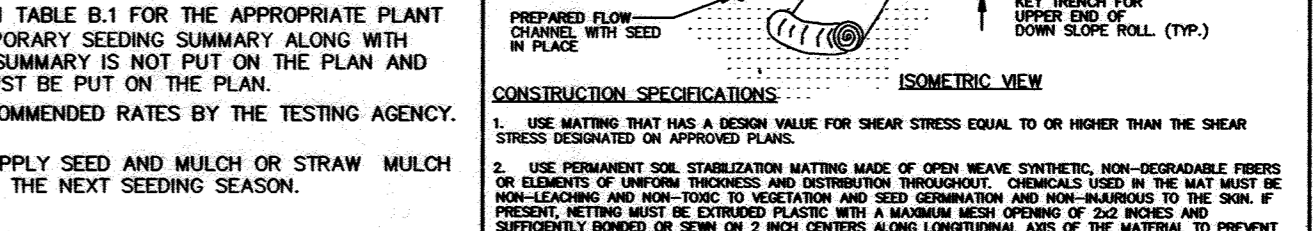
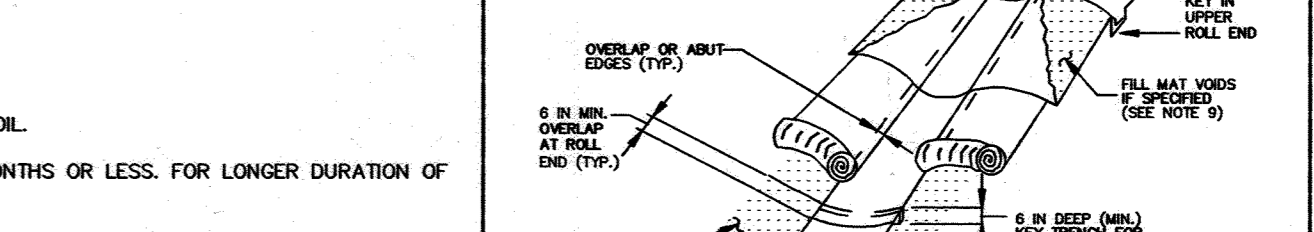
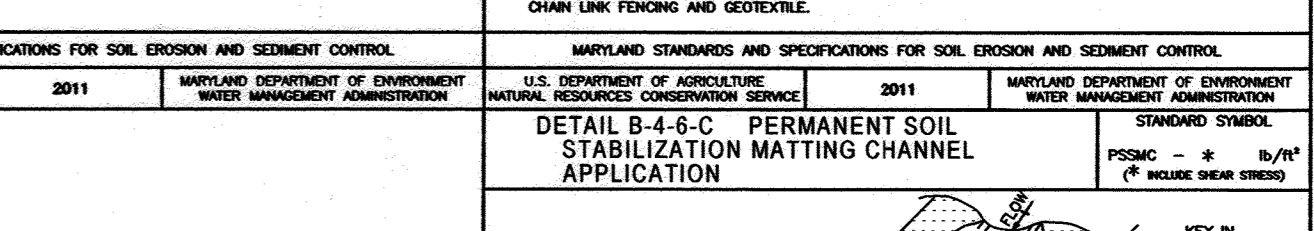
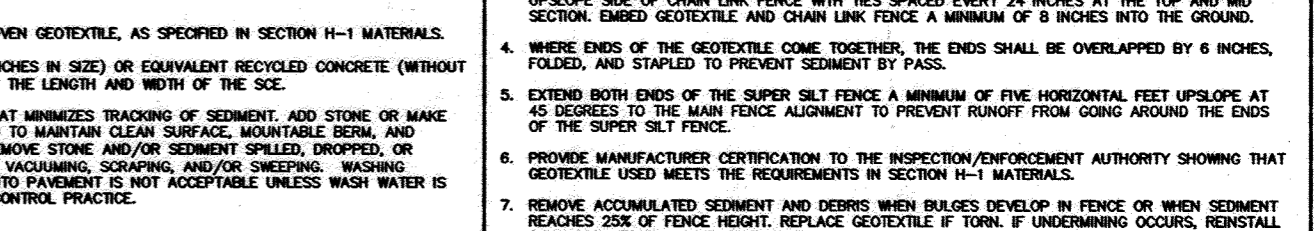
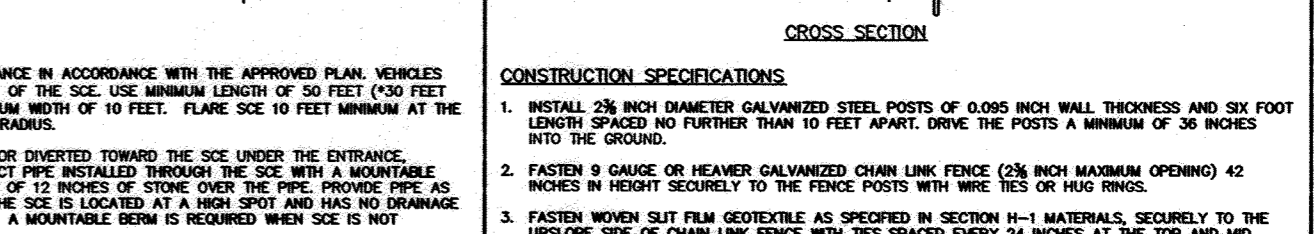
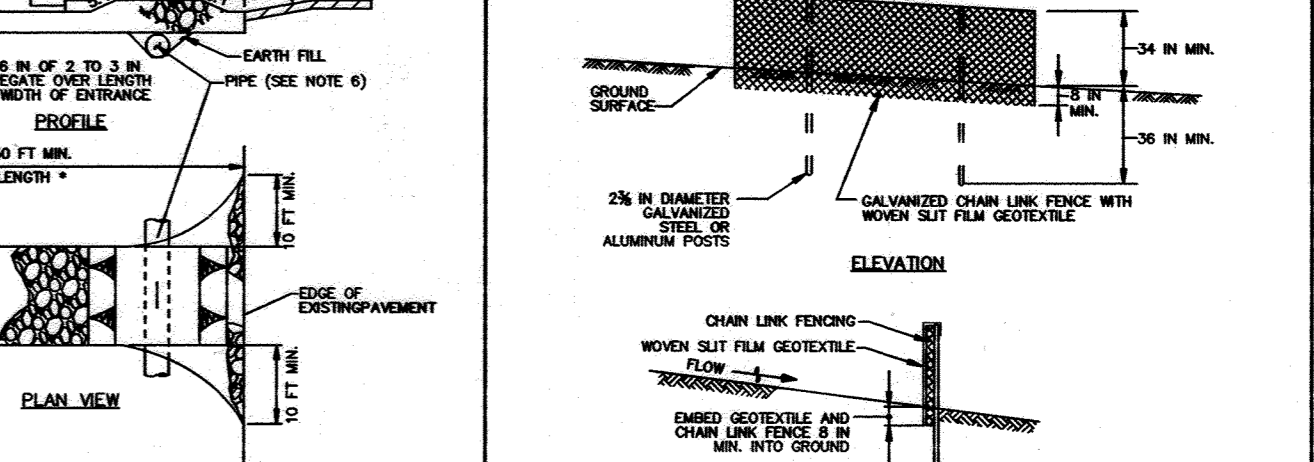
PERMANENT SEEDING SUMMARY HARDNESS ZONE (FROM FIGURE B.3): 6b SEED MIXTURE (FROM TABLE B.3): 8

NO. SPECIES APPLICATION RATE (LB/AC) SEEDING DATES SEEDING DEPTHS N P2O5 K2O LIME RATE

1 TALL FESCUE 100 MARCH 1-MAY 15 AUG 15-OCT 15 1/4"-1/2" 45 LBS. PER ACRE (1 LB./1000 SF) 90 LBS. PER ACRE (2 LB./1000 SF) 90 LBS. PER ACRE (2 LB./1000 SF) 2 TONS / ACRE (90 LBS. / 1000 SF)

MIXTURES 1, 4-7, 9, AND 10 FROM TABLE B.3 OF THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MAY BE USED.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



DATE JULY 2020 PROJECT 17-001 ENGINEERING MAM MAM SCALE 1"=60'

REVISIONS description date

REPLACEMENT CERTIFICATE BAHUGHAN PROPERTY, LOTS 5-7 & NON-BUILDABLE BULK PARCEL A RESUBDIVISION OF LOT 3, 5003 LANDING RD. PARCEL 75B TAX MAP 31, GRID 11, HOWARD COUNTY, MARYLAND

FIRST ELECTION DISTRICT SEDIMENT CONTROL NOTES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC. 7830-B Grace Drive, Chantilly, Maryland 21044 (410) 997-0296 Fax

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