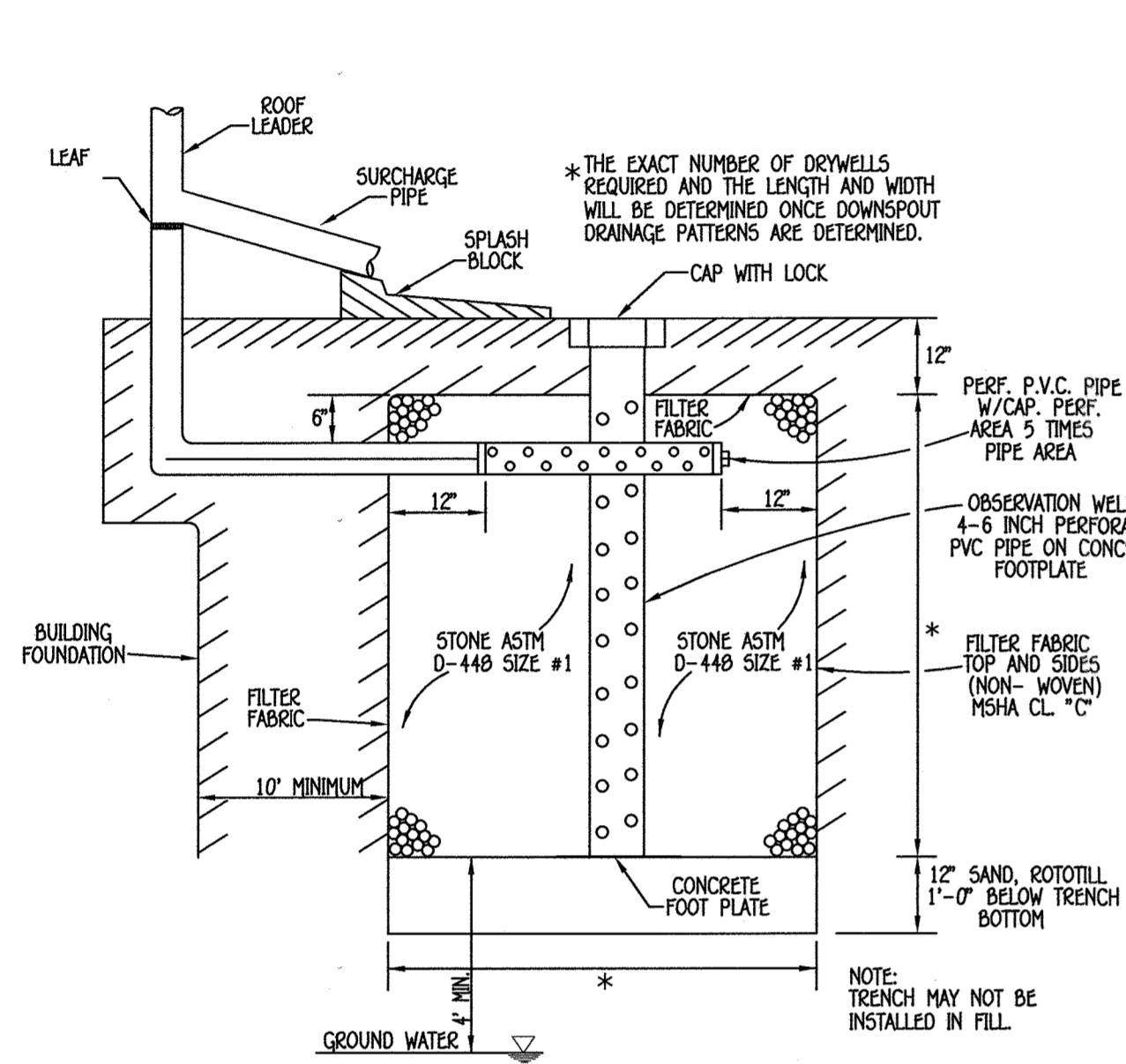


SHEET INDEX table with columns SHEET NO. and DESCRIPTION.

SOILS LEGEND table with columns SOIL, NAME, CLASS, and Lw FACTOR.

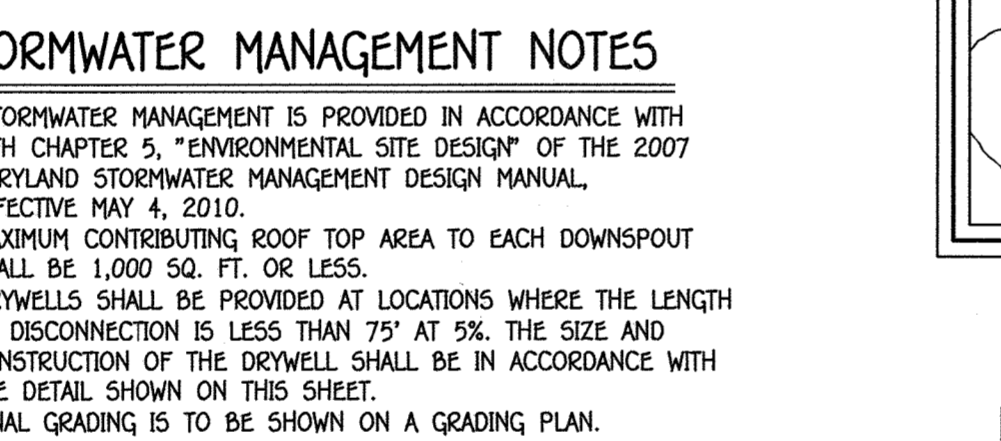
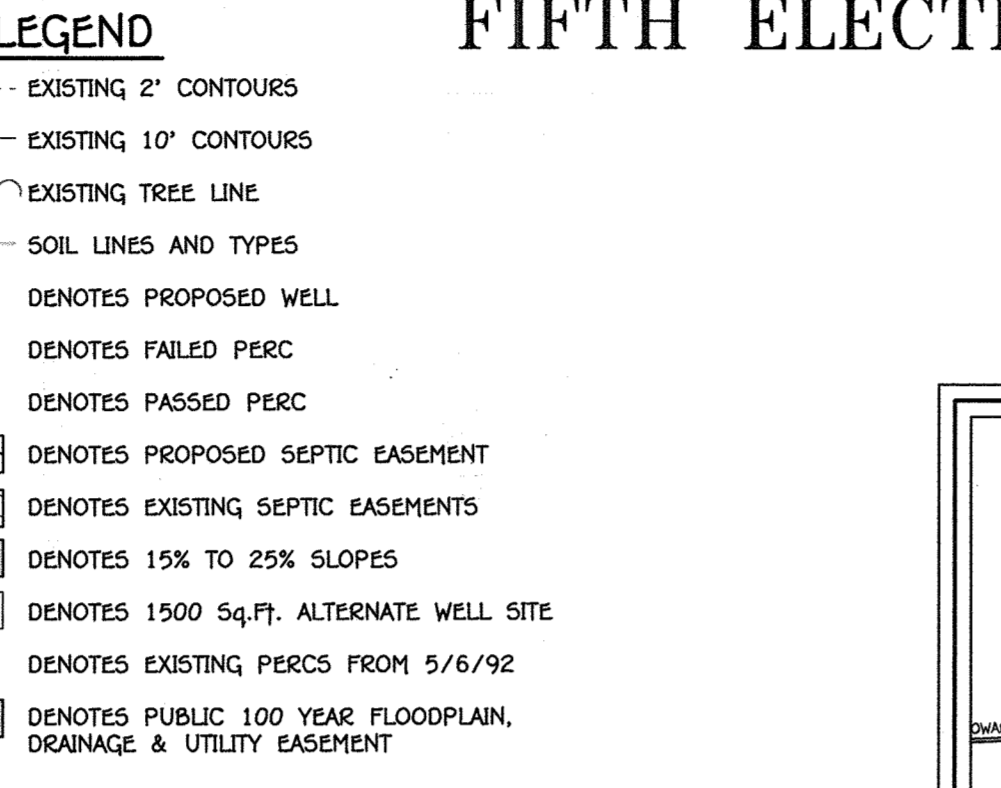


DRY WELL DETAIL (M-5) NOT TO SCALE

DRY WELL CHART table with columns DRYWELL NO., AREA OF ROOF PER DOWN SPOUT, VOLUME REQUIRED, VOLUME PROVIDED, AREA OF TREATMENT, and dimensions L, W, D.

Table B.4. Materials Specifications for Micro-Bioretenction, Rain Gardens & Landscape Infiltration. Lists materials like sand, mulch, pavers, and pipe with specifications.

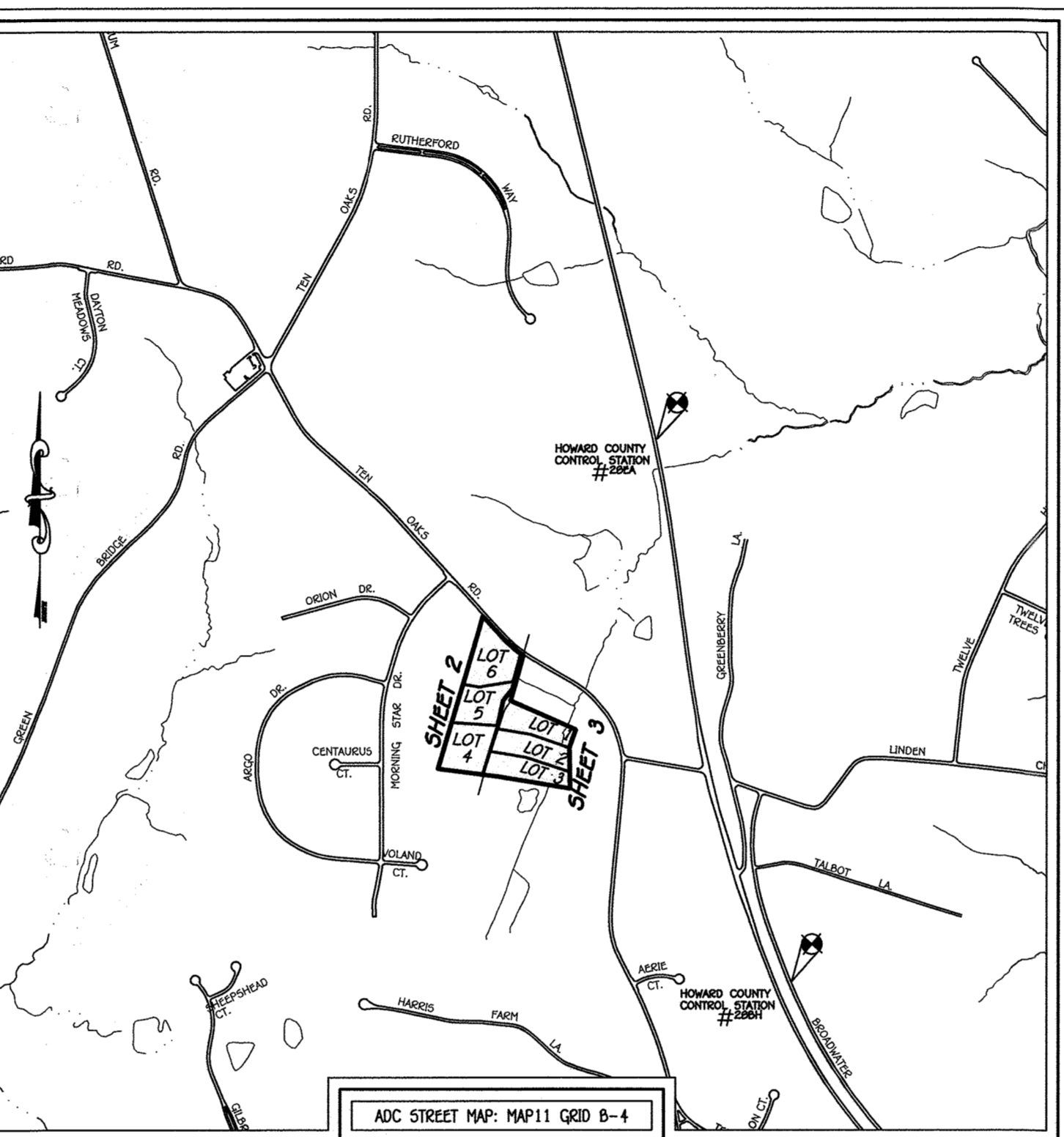
REVISION table with columns NO., REVISION, and DATE.



GUTTER DRAIN FILTER DETAIL NOT TO SCALE

STORMWATER MANAGEMENT NOTES. 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL... 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS... 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5% SLOPE... 4. FINAL GRADING IS TO BE SHOWN ON A GRADING PLAN.

SUPPLEMENTAL PLAN TEN OAKS FARM LOTS 1 THRU 6 TAX MAP No. 28 GRID No. 14 PARCEL Nos. 140 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP SCALE: 1" = 1200'

BENCHMARK INFORMATION table listing coordinates and elevations for two benchmarks: B.M. # 28EA and B.M. # 28HB.

SITE ANALYSIS DATA CHART table listing total area of submission, limit of disturbed area, present zoning, and proposed use.

STORMWATER MANAGEMENT SUMMARY table with columns AREA ID., ESDV REQUIRED CU.FT., ESDV PROVIDED CU.FT., and REMARKS.

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5). A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS... B. 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...

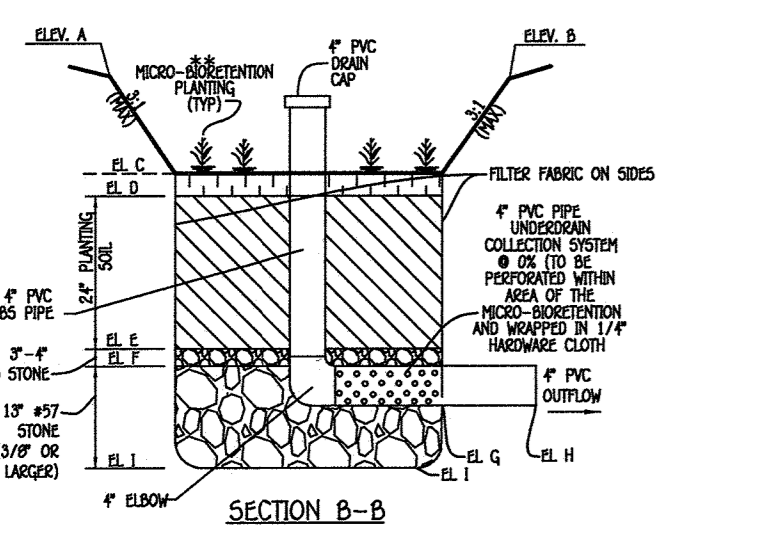
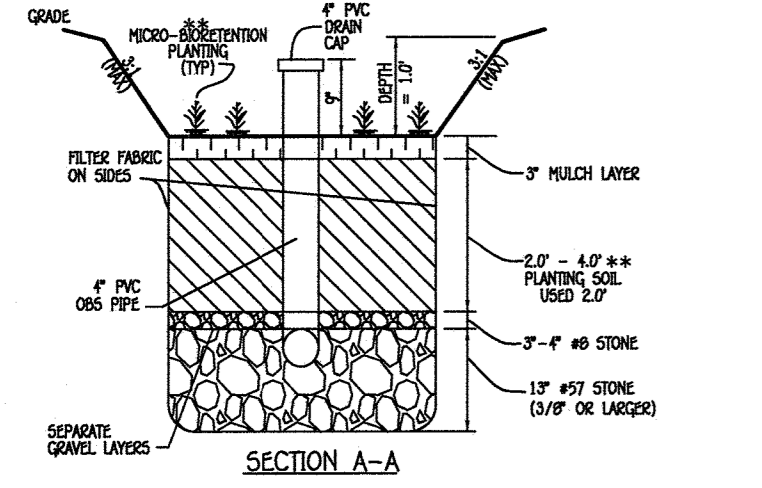
General Notes: 1. Subject Property is Zoned RR-DEO Per The 10/06/13 Comprehensive Zoning Plan. 2. Coordinates Based On NAD 83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 28EA And No. 28HB. 3. This Plan is Based On Field Run Monumented Boundary Survey Performed On Or About June 7, 2015 By Fisher, Collins & Carter, Inc. 4. B.C.L. Denotes Building Restriction Line. 5. Iron Pin Set Capped "I.C.C. 105". 6. Iron Pipe Or Iron Bar Found. 7. Denotes Angular Change In Bearing Of Boundary Or Right-Of-Way. 8. Denotes Concrete Monument Set With Aluminum Plate "I.C.C. 105". 9. Denotes Concrete Monument Or Stone Found. 10. For Flag Or Pipe Stem Lots, Refuse Collection, Snow Removal And Road Maintenance Are Provided To The Junction Of Flag Or Pipe Stem And The Road Right-Of-Way Line Only And Not Onto The Flag Or Pipe Stem Lot Driveway. 11. Driveways Shall Be Provided Prior To Residential Occupancy To Insure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements: a) Width - 12 Feet (16 Feet Serving More Than One Residence); b) Surface - Six (6") Inches Of Compacted Crusher Run Base With Tar And Chip Coating (1-1/2" Minimum); c) Geometry - 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius; d) Structures (Culverts/Bridges) - Capable Of Supporting 25 Gross Tons (H25-Loading); e) Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface; f) Structure Obstruction - Minimum 12 Feet; g) Maintenance - Sufficient To Ensure All Weather Use. 12. All Lot Areas Are More Or Less (±). 13. Distances Shown Are Based On Surface Measurement And Not Reduced To NAD 83 Grid Measurement. 14. No Cemeteries Exist On This Site Base On A Visual Site Visit And Based On An Examination Of The Howard County Cemetery Inventory Map. No Historic Structures Exist On This Site. 15. Property Subject To Prior Department Of Planning And Zoning File No's: WP-16-108, WP-16-159, And ECP-16-013. 16. The Floodplain Shown For This Project Is Based On Howard County Digital Floodplain & FEMA. 17. Private Water And Sewage Will Be Used Within This Site. 18. This Property Is Not Located Within The Metropolitan District. 19. There Is An Existing Historic Dwelling And Swimming Pool Located On Lot 4 Which Are To Remain. All Accessory Structures Are To Be Removed On Site. No New Buildings, Extensions Or Additions To The Existing Dwelling Are To Be Constructed At A Distance Less Than The Zoning Regulation Requirements. 20. This Plan is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill No. 45-2003 And The Zoning Regulations As Amended By Council Bill 75-2003. Development Or Construction On These Lots Or Parcels Must Comply With Setback And Buffer Regulations In Effect At The Time Of Submission Of The Site Development Plan, Waiver Petition Application Or Building/Grading Permit. 21. No Noise Study Is Required For This Project. 22. Section 16.121 Of The Subdivision Regulations Require A \$1,500.00 Payment For Fee-In-Lieu Of Providing Open Space For Non-Cluster Subdivisions In The RR-Zoning District. The Developer Will Pay The Fee-In-Lieu In The Amount Of \$7,500.00 Based On 5 Non-Cluster Lots x \$1,500/Lot. 23. Wetlands Evaluation And Report Prepared By Eco-Science Professionals, Inc. Dated December 4, 2015. There Is A 100 Year Floodplain, Wetland And A Perennial Stream Located On Lots 1, 2 And 3. A 35-Foot Environmental Buffer Has Been Provided From The 25-Foot Wetland Buffer. 24. The Lots Shown Hereon Comply With The Minimum Ownership, Width And Lot Area As Required By The Maryland State Department Of The Environment. 25. Stormwater Management Practices Are Required In Accordance With The Design Manual. Prior To Signature Approval Of The Final Plat Or Site Development Plan, The Developer Will Be Required To Execute The Declaration Of Covenant And/Or Stormwater Management Practices And A Maintenance Agreement. 26. Drywells (M-5), Non-Rooftop Disconnection (N-2), Micro-Bioretenction (M-6) And Bioretention (F-6) Have Been Provided To Treat Stormwater Management Requirements. These Devices Will Be Privately Owned And Maintained By The Individual Homeowner. Micro-Bioretenction (F-6) And Bioretention (F-6) Which Treats The Common Driveway Impervious Surface Will Have Maintenance Responsibilities Described In The Driveway Maintenance Agreement. 27. This Area Designates A Private Sewerage Easement Of At Least 10,000 Square Feet As Required By The Maryland State Department Of The Environment For Individual Sewerage Disposal. Improvements Of Any Nature In This Area Are Restricted Until Public Sewerage Is Available. These Easements Shall Become Null And Void Upon Connection To A Public Sewerage System. The County Health Officer Shall Have The Authority To Grant Variances For Encroachments Into The Private Sewerage Easement. Recordation Of A Modified Sewerage Easement Shall Not Be Necessary. 28. Wells On Lots 1 Thru 6 Must Be Drilled Prior To Howard County Health Department Signature Of The Final Plat. 29. This Subdivision Is Within Growth Tier III Which Allows Major Subdivisions Of Greater Than 4 Lots That Utilize On-Site Septic Systems. 30. The Private Use-In-Common Driveway Access Easement And Maintenance Agreement For Shaded Driveways Is Recorded Simultaneously With This Plat. Lots 1 Thru 6 Shall Be The Only Lots Permitted To Use This Shaded Driveway. 31. This Plan Has Been Prepared In Accordance With The Forest Conservation Act Requirements For Ten Oaks Farm Subdivision And The Landscape Manual. Financial Surety For The Required Perimeter Landscaping Will Be Posted As Part Of The Builders Grading Permit In The Amount Of \$15,050.00 (38 Shade Trees & 31 Evergreen Trees, Based On The Total Number Of Required Shade Trees @ \$300.00 Each & Evergreen Trees @ \$190.00 Each). 32. A Pre-Submission Community Meeting For This Project Was Held On July 20, 2015 In Accordance With Section 16.127 Of The Howard County Subdivision And Land Development Regulations. 33. This Site Is Not Adjacent To A Scenic Road. 34. This Project Is In Conformance With The Latest Howard County Standards Unless Waivers Have Been Approved. 35. No Grading, Removal Of Vegetative Cover And Trees, Paving And New Structures Are Permitted Within The 100 Year Floodplain, 25-Foot Wetland Buffers And 100-Foot Stream Buffer. 36. APFO Traffic Report Dated June, 2015 Prepared By Mars Group. 37. Free-Flow Speed Study Report Dated June, 2015 Prepared By Mars Group. 38. Subdivision Is Subject To Section 104.01 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 This Plat In The Land Records Office Of Howard County, Maryland. This Development Will Meet M.I.H.U. Alternative Compliance By A Payment Of A Fee-In-Lieu To The Department Of Housing For Each Required Unit. Moderate Income Housing Unit (M.I.H.U.) Tabulation: a. M.I.H.U. Required = (5 Units x 0%) = 0% 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. 39. The Forest Conservation Easement Areas Within This Subdivision Have Been Established To Fulfill The Requirements Of Section 16.1202 Of The Howard County Code And The Forest Conservation Act. No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined In The Deed Of Forest Conservation Agreement Allow For The Forest Conservation Act Requirements For Ten Oaks Farm Subdivision Will Be Met Through The On-Site Retention 1.45 (0.55 Credited) Acres Of Forest, And On-Site Planting Of 3.12 Acres (On-Lotside 3.01 Acres Of Forest Retention And 0.11 Acres Credit For Landscape Trees In FCC No. 1. No Surety Is Required For On-Lotside 3.01 Acres Of Forest Retention (F-16-123) Ten Oaks Farm. A Surety In The Amount Of \$65,957.60 (Based On 3.01 Acres x 43,560 Sq. Ft./Acre x \$50.50/Sq. Ft.) Is Provided. Credit Is Being Taken For 12 Proposed Landscape Trees @ 400 Sq. Ft. / Tree Which Equals 4,800 Sq. Ft. Of Landscape Credit (0.11 Acres). 40. This Plan Is In Conformance With The Latest Howard County Standards Unless Waivers Have Been Approved. The Planning Director Approved A Request To Waive Section 16.1202(b)(4)(i)(b) Lot Design Which States That For A Lot Or Buildable Preservation Parcel Of 10 Acres Or Greater In Size That (floodplains, wetlands, streams, TSS, and Forest Conservation Easements For Afforestation, Reforestation, Or Restoration) Shall Be Located On The Lot Or Parcel If The Building Envelope Is No Closer Than 35 Feet From These Environmental Features, Provided That A Deck May Project 10 Feet Beyond The Building Envelope. Approval Is Subject To The Following Conditions: 1. A 35 Foot Environmental Buffer Shall Be Provided From The Environmental Buffer And Forest Conservation Easements (From Whichever Extends Further Into The Lots) 2. Subject To The Approval Of ECP-16-013 And Approval Of WP-16-159. 3. Waiver Approval Is Conditioned On The Approval Of The Required Percolation Testing, And Any Well And Septic Requirements Of The Health Department. 4. No Grading, Removal Of Vegetative Cover And Trees, Paving And New Structures Are Permitted Within The Floodplain, Wetlands, Stream And Buffers For All Lots Except The Essential Driveway Crossing Disturbance. 5. At The Subdivision Plan And Building Permit Stages The Applicant Shall Make All Reasonable Efforts To Keep The Distance Between The Proposed House Sites And The Forest Conservation Easement Areas At A Minimum To Avoid Possible Future Encroachments By The Homeowners. 41. This Project Is In Conformance With The Latest Howard County Standards Unless Waivers Have Been Approved. 42. No Grading, Removal Of Vegetative Cover And Trees, Paving And New Structures Are Permitted Within The 100 Year Floodplain, 25-Foot Wetland Buffers And 100-Foot Stream Buffer. Except For The Use-In-Common Driveway. The Disturbance To The Stream Buffer Is Deemed As A Necessary Disturbance For The Construction Of The Widening Of The Existing Driveway, Per Section 16.116(c)(1)(i) Of The Subdivision Regulations. 43. All Construction Shall Be In Accordance With The Latest Standards And Specifications Of Howard County Plus MSHA Standards And Specifications, If Applicable. 44. 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. 45. The Contractor Shall Notify "Miss Utility" At 1-800-257-7777 At Least 48 Hours Prior To Any Excavation Work Being Done. 46. The Existing Topography Shown Herein Is Based On Howard County GIS Topography And Supplemented With Field Run Location Of Existing Driveways, On-Site Structures, Wetlands, And Streams Taken From A Field Run Survey Prepared By Fisher, Collins & Carter, Inc. Dated June 2015. 47. Existing Utilities Shown Based On Available County Information And Field Locations By Survey Prepared By Fisher, Collins & Carter, Inc. Dated June 2015. 48. Driveway Entrance To Be Provided In Accordance With Howard County Detail R-6.06. 49. Sight Distance At Ten Oaks Road Was Determined To Be Adequate By The Development Engineering Division. 50. Wells Must Be Drilled Prior To Howard County Health Department Signature Of The Final Plat. 51. The Following Shall Be Noted Regarding Traffic Control Signs In The County Right-Of-Way: (A) The R1-1 (Stop) Sign And The Street Name Sign (SNS) Assemblies For This Development Must Be Installed Before The Base Paving Is Completed. (B) The Traffic Control Device Locations Shown On The Plans Are Approximate And Must Be Field Approved By Howard County Traffic Division (410-313-2430) Prior To The Installation Of Any Of The Traffic Control Devices. (C) All Traffic Control Devices And Their Locations Shall Be In Accordance With The Latest Edition Of The Maryland Manual On Uniform Traffic Control Devices (MUTCD). (D) All Sign Posts Used For Traffic Control Signs Installed In The County Right-Of-Way Shall Be Mounted On A 2" Galvanized Steel, Perforated (Quick Punch), Square Tube Post (14 Gauge) Inserted Into A 2-1/2" Galvanized Steel, Perforated Square Tube Sleeve (14 Gauge). The Anchor Shall Not Extend More Than Two Quick Punch Holes Above Ground Level. A Galvanized Steel Pole Cap Shall Be Mounted On Top Of Each Post. (E) A Private Range Of Address Sign Shall Be Fabricated And Installed By Howard County Bureau Of Highways At The Driveway Access Point/End Of The Driveway, At The Expense Of The Developer/Owner's Expense. Contact Howard County Traffic Division At 410-313-5752 For Details And Cost Estimate. 52. This Plan Is Subject To WP-16-159 Approved Request For Alternative Compliance Of Section 16.145(a) To Not Require Submission Of A Site Plan, A Preliminary Engineering Division (PED) Approval Subject To The Following Conditions: 1. That Road Improvements Or Frontage Improvements Along Ten Oaks Road Are Not Required For This Subdivision. 2. The Development As Proposed Shall Not Impact Environmental Resources Or Buffers, Except For The Essential Driveway Crossing. 3. Planning Board Approval Of F-16-123 Is Required In Accordance With The Requirements Of Maryland Senate Bill 236 For Major Subdivisions In The Tier III Growth Area. 4. Add The Alternative Compliance Request Number, Purpose, Section, Date, And Conditions On All Subsequent Plan Submissions. 53. There is an existing dwelling dating to approximately 1902, to remain on Lot 4.

NO.	REVISION	DATE
1	REVISED CULVERT LABEL, NOTES, AND SECTION	5/19/17

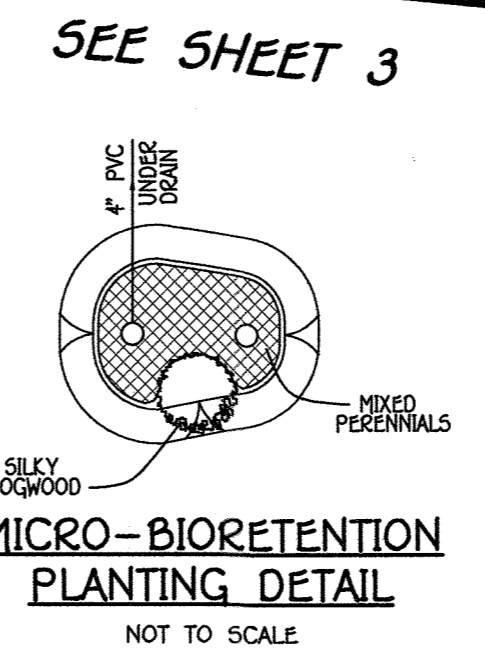
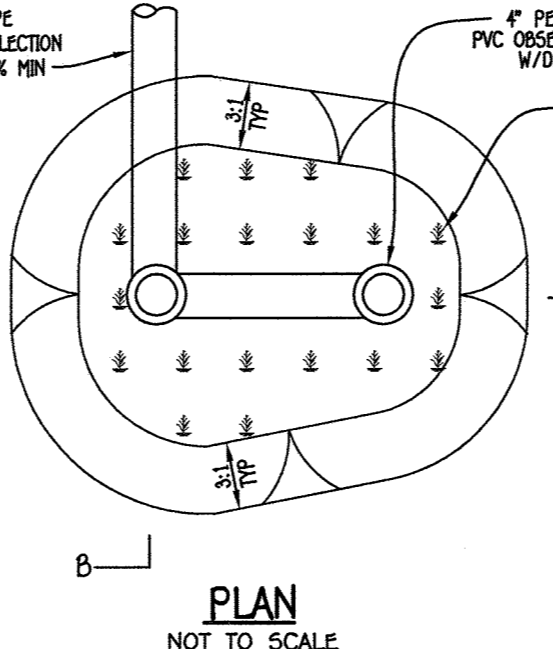


OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING ACCEPTABLE REPLACEMENT PLANT MATERIAL LIMITED TO THE FOLLOWING: 2000 MARKLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.



BIORETENTION & MICRO-BIORETENTION PLANT MATERIAL									
QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	NAME	MAXIMUM SPACING (FT.)			
MICRO-BIO	1 MICRO-BIO	2 MICRO-BIO	3 MICRO-BIO	BIO 5					
55	70	50	80	70	MIXED PERENNIALS	1.5 TO 3.0 FT.			
1	1	1	1	1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION			



STONE OUTLET SEDIMENT TRAP
 TRAP TYPE = ST-II
 DRAINAGE AREA = 0.80 AC.
 TOTAL STORAGE REQUIRED = 2,808 CU.FT.
 TOTAL STORAGE PROVIDED = 2,857 CU.FT.
 WET STORAGE REQUIRED = 1,404 CU.FT.
 WET STORAGE PROVIDED = 1,421 CU.FT. @ 518.70
 DRY STORAGE REQUIRED = 1,404 CU.FT.
 DRY STORAGE PROVIDED = 1,386 CU.FT. @ 520.10
 EXISTING GROUND ELEV AT OUTLET = 519.00
 BOTTOM OF TRAP ELEV = 516.00
 BOTTOM OF TRAP DIMENSIONS = 39 FT x 9 FT
 WEIR LENGTH = 4 FT
 WEIR CREST ELEV = 520.10
 CLEANOUT ELEV = 517.35
 TOP OF EMBANKMENT = 521.10
 SIDE SLOPES = 2:1
 EMBANKMENT WIDTH = 4 FT
 OUTLET PROTECTION APRON LENGTH = 15 FT
 OUTLET PROTECTION DEPTH = 19 INCHES

PROCEDURE FOR CULVERT PIPE REMOVAL & REPLACEMENT

- REPAIR CATCH BASIN AS NOTED ON PLANS
- INSTALL RIPRAP OUTFALL AT DOWNSTREAM END OF PROPOSED CULVERT PIPE AND HEADWALL.
- BLOCK WEIR OPENINGS OF CATCHBASIN.
- UTILIZE EARTHDOES TO DIVERT RUNOFF FROM AROUND AREA OF CULVERT.
- IF NEEDED DURING CULVERT REPLACEMENT, UTILIZE CLEAN WATER PIPE DIVERSION PER DETAIL C-6 TO DIRECT DRAINAGE AROUND CULVERT CONSTRUCTION TO RIPRAP OUTFALL.
- CONSTRUCT 36" CMP CULVERT PIPE PER PLAN WITH UPSTREAM CONNECTION TO EXISTING CATCH BASIN AND CONSTRUCT DOWNSTREAM HEADWALL.
- ADD ADDITIONAL RIPRAP AT BASE OF CULVERT PIPE AND HEADWALL IF NECESSARY BASED ON FINAL PIPE PLACEMENT.
- BACKFILL CULVERT AND LAY GRAVEL FOR DRIVEWAY BASE.
- SEED DISTURBED AREAS AS NEEDED.
- REMOVE BLOCKING OF CATCH BASIN AND REMOVE EARTHDOES AROUND CULVERT.

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 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."

Signature of Developer: *[Signature]* Date: 5/4/17

ENGINEER'S CERTIFICATE

"I 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."

Signature of Engineer: *[Signature]* Date: 5/3/17

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. 383096, EXPIRATION DATE: 01/12/2018.

Signature of Professional Engineer: *[Signature]* Date: 5/3/17

MICRO-BIORETENTION

BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1 (LOT 1)	512.00	512.00	511.00	510.75	508.75	508.50	508.25	507.50	507.50
2 (LOT 2)	516.00	516.00	515.00	514.75	512.75	512.50	512.25	511.00	511.00
3 (LOT 4)	533.80	533.80	532.80	532.55	530.55	530.30	530.05	528.00	528.00
4 (LOT 5)	521.00	521.00	520.00	519.75	517.75	517.50	517.25	515.00	515.00
5 (LOT 6)	522.50	522.50	521.50	521.25	519.25	519.00	518.75	518.50	518.00

DEVELOPER'S / BUILDER'S CERTIFICATE

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

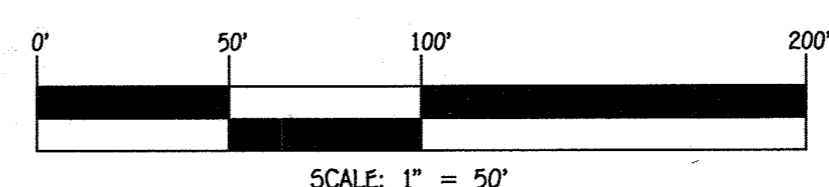
Signature of Developer: *[Signature]* Date: 5/4/17

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10672 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461 - 2955

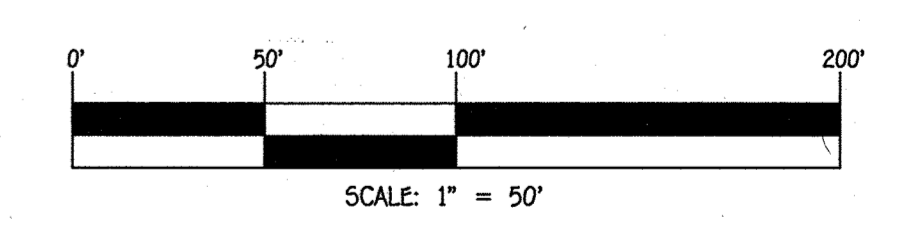
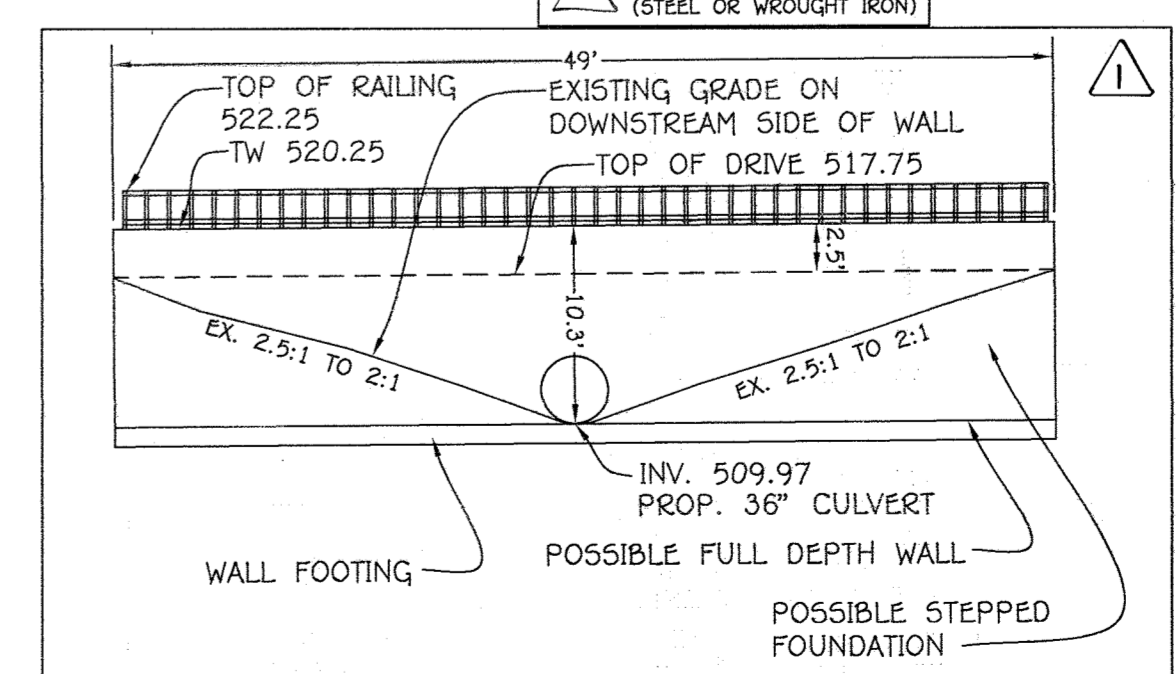
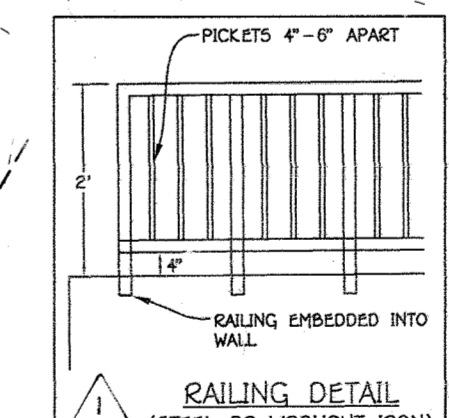
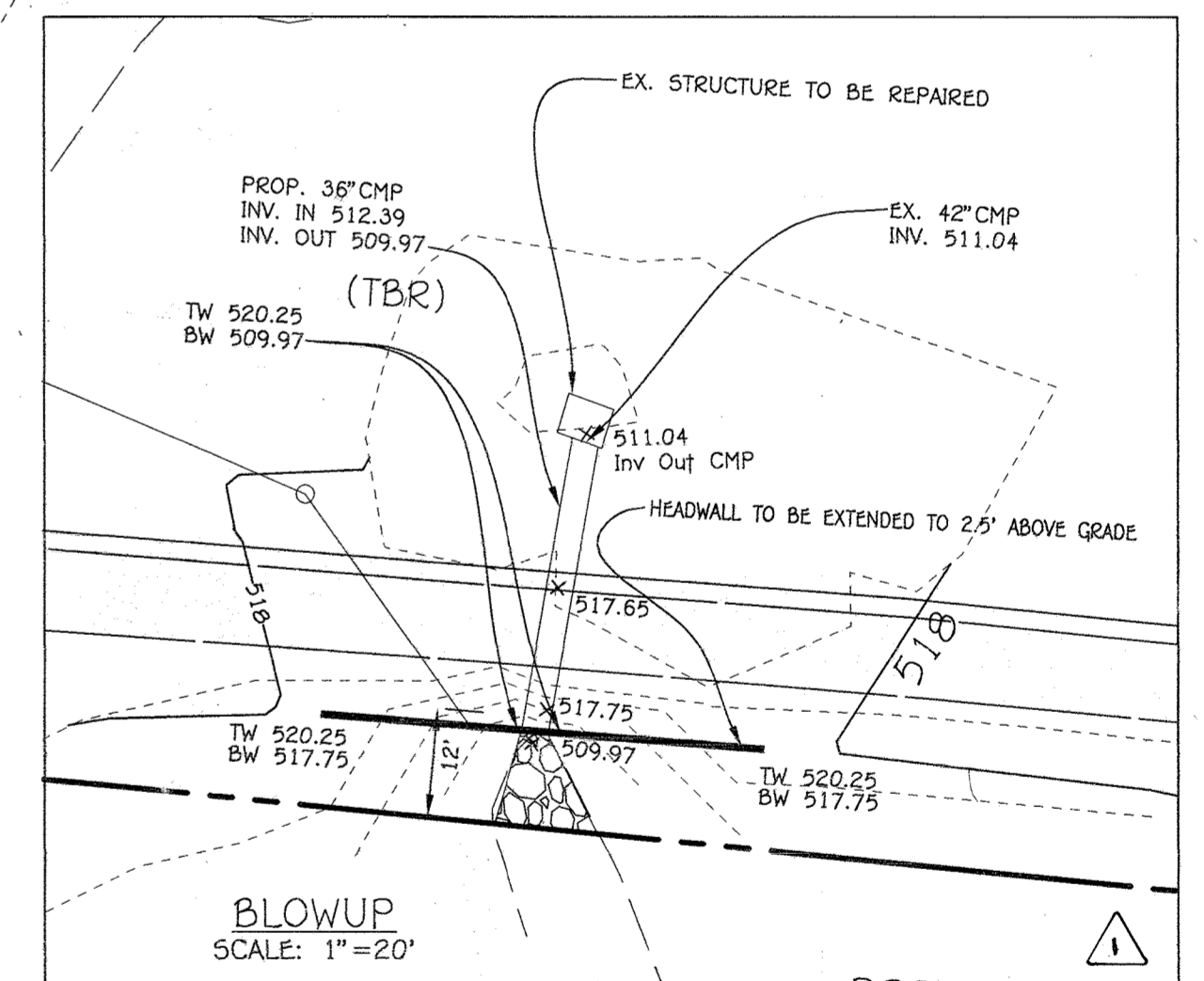
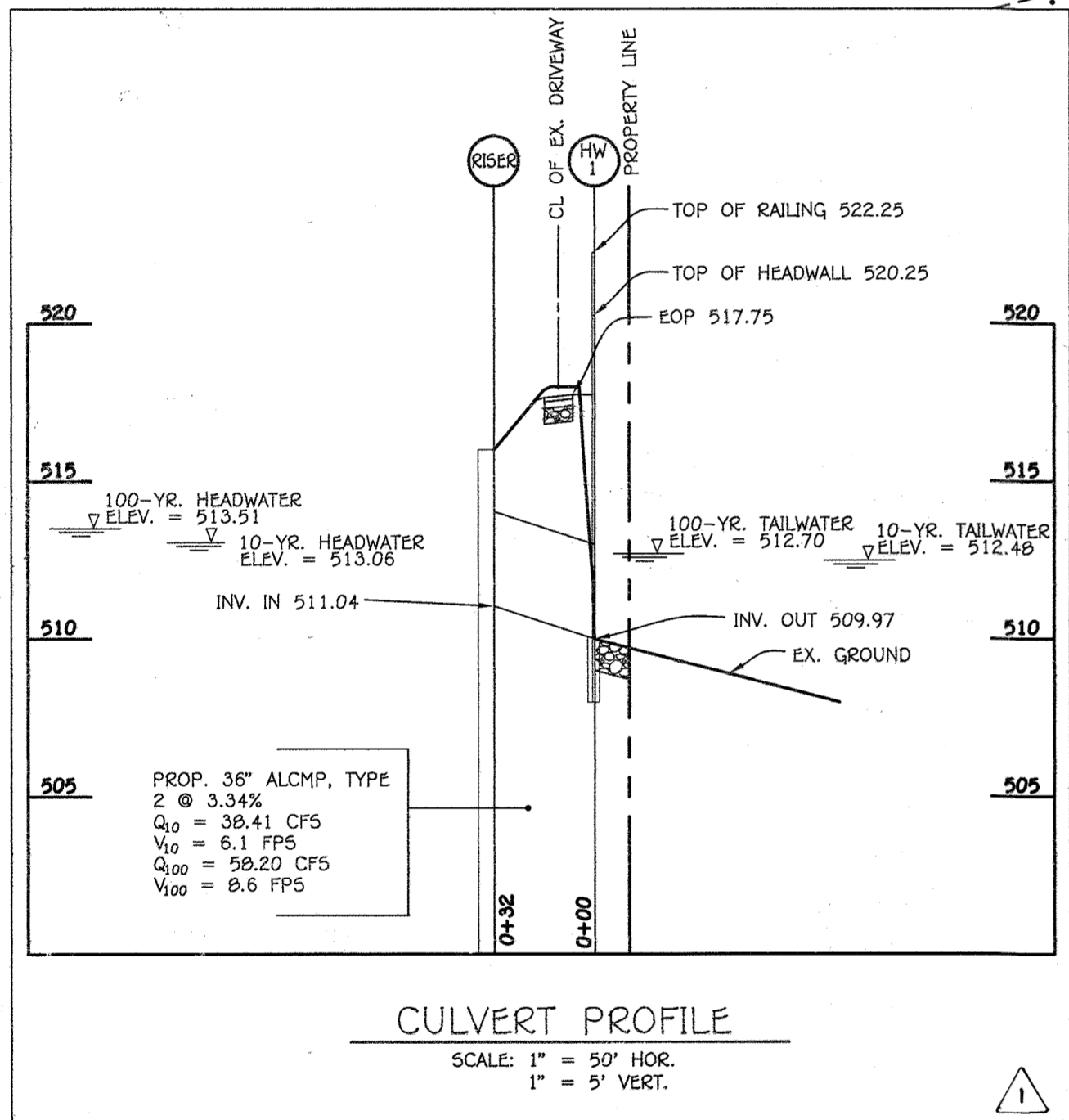
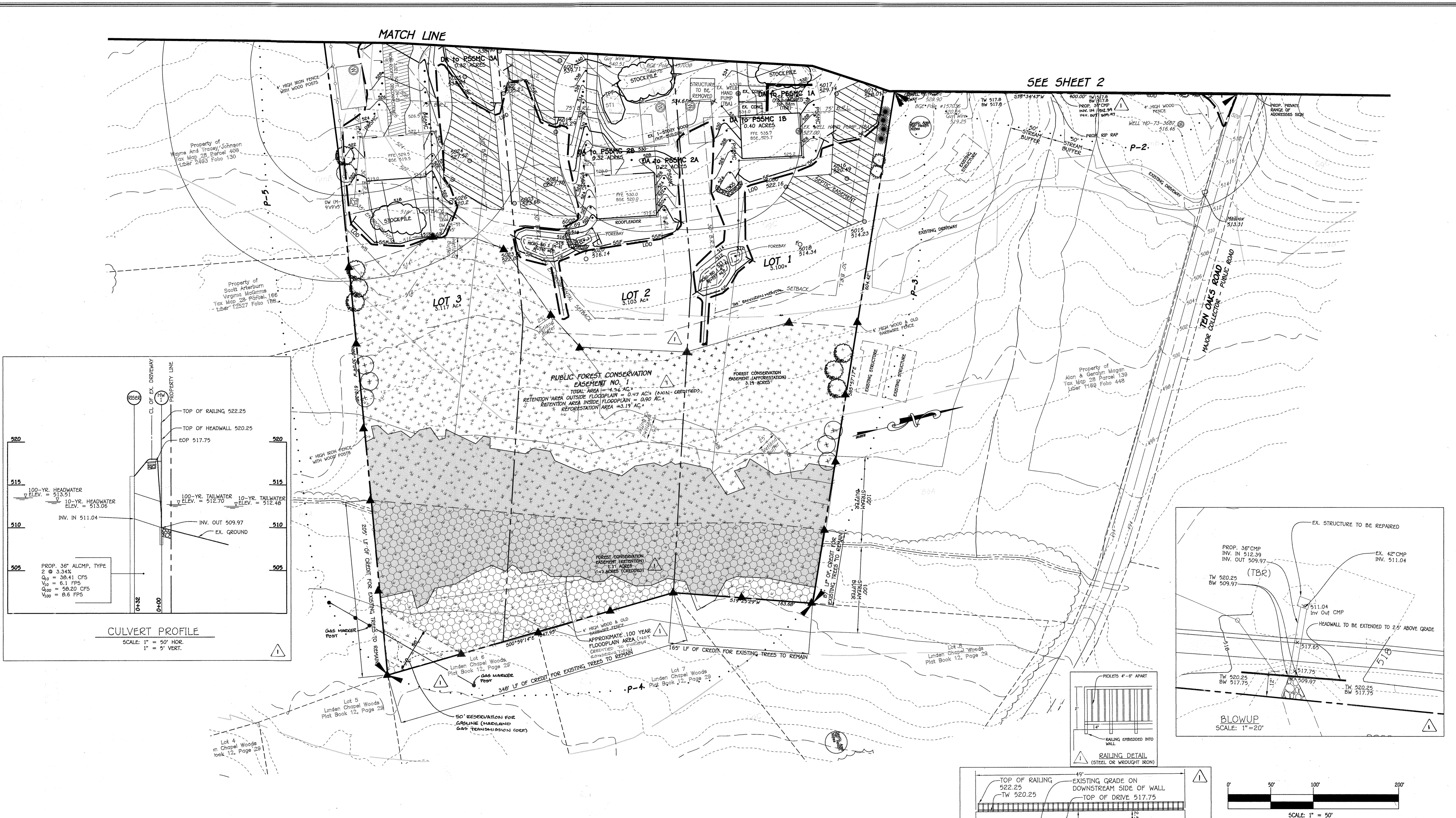
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development: *[Signature]* Date: 5-15-17
 Chief, Development Engineering Division: *[Signature]* Date: 5-12-17

OWNER: ORVILLE E. & PATRICIA L. SHEPHERD (ESTATE OF)
 5020 TEN OAKS ROAD
 CLARKSVILLE, MARYLAND 21029
 C/O JAMES GREENFIELD 443-324-4732

DEVELOPER: MG LAND HOLDINGS 1, LLC
 6420 AUTUMN SKY WAY
 COLUMBIA, MARYLAND 21044
 443-324-4732



SUPPLEMENTAL PLAN - TOPOGRAPHY, SOILS, STORMWATER MANAGEMENT, LANDSCAPE & FOREST CONSERVATION
TEN OAKS FARM
 LOTS 1 THRU 6
 ZONED RR-DEO
 TAX MAP No. 28 GRID No. 14 PARCEL Nos. 140
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2017
 SHEET 2 OF 5



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 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.

John C. Carl 5/4/17
 Signature of Developer Date

ENGINEER'S CERTIFICATE
 I 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.

Stephen J. Turt 5/3/17
 Signature of Engineer Date

DEVELOPER'S / BUILDER'S CERTIFICATE
 I/WE 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. 36306, EXPIRATION DATE: 01/12/2016.

John C. Carl 5/4/17
 NAME DATE

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 (410) 461 - 2955

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kathleen 5-16-17
 Chief, Division of Land Development Date

John 5-12-17
 Chief, Development Engineering Division Date

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36306, EXPIRATION DATE: 01/12/2016.

Stephen J. Turt 5/3/17
 Signature of Professional Engineer DATE

OWNER
 ORVILLE E. & PATRICIA L. SHEPHERD
 (ESTATE OF)
 5020 TEN OAKS ROAD
 CLARKSVILLE, MARYLAND 21029
 C/O JAMES GREENFIELD 443-324-4732

DEVELOPER
 MG LAND HOLDINGS 1, LLC
 6420 AUTUMN SKY WAY
 COLUMBIA, MARYLAND 21044
 443-324-4732

NO.	DESCRIPTION	DATE
1	REVISED GAS LINE ERE., FCE, CULVERT LABELS, ENVIRONMENTAL SETBACKS, AND FLOODPLAIN LABELS. ADDED CULVERT & HEADWALL DETAILS.	3/3/20

SUPPLEMENTAL PLAN - TOPOGRAPHY, SOILS, STORMWATER MANAGEMENT, LANDSCAPE & FOREST CONSERVATION
TEN OAKS FARM
 LOTS 1 THRU 6
 ZONED RR-DEO
 TAX MAP No. 28 GRID No. 14 PARCEL Nos. 140
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2017
 SHEET 3 OF 5

PLANTING / SOIL SPECIFICATIONS

- Planting of Nursery Stock Shall Take Place Between March 15th and April 30th or September 15th and November 15th.
- A Twelve (12) Inch Layer of Topsoil Shall Be Spread Over All Reformation Areas Impacted by Site Grading To Assure A Suitable Planting Area. If Applicable, Disturbed Areas Shall Be Seeded and Stabilized in Accordance With The Sediment & Erosion Control Plan For This Project. Planting Areas Not Impacted by Site Grading Shall Have No Additional Topsoil Installed.
- All Bare Root Planting Stock Shall Have Their Root System Dipped Into An Anti-Desiccant Gel Prior To Planting.
- Plants Shall Be Installed So That The Top Of The Root Mass Is Level With The Top Of Existing Grade. Backfill In The Planting Pits Shall Consist Of 3 Parts Existing Soil To 1 Part Fine Fines Or Equivalent.
- Fertilizer Shall Consist Of AgriForm 22-8-2, Or Equivalent, Applied As Per Manufacturer's Specifications.
- A Two (2) Inch Layer of Hardwood Mulch Shall Be Placed Over The Root Area Of All Plantings. See Planting Detail.
- Plant Material Shall Be Transported To The Site In A Tarp Or Covered Truck. Plants Shall Be Kept Moist Prior To Planting.
- All Non-Organic Debris Associated With The Planting Operation Shall Be Removed From The Site By The Contractor.

SEQUENCE OF PLANT INSTALLATION

- Follow Sequence of Construction shown on sheet 5.
- Proposed Reformation Areas Impacted by The Site Grading Shall Be Topsoiled and Stabilized As Per Note 2 Of The "Planting / Soil Specifications".
- Plants Shall Be Installed And Maintained As Per Notes And Specifications For This Project.
- Upon Completion Of The Plantings, Signage Shall Be Installed As Per The Signage Detail.
- Plantings Shall Be Guaranteed And Maintained In Accordance With The "Guarantee Requirements" And "Maintenance Of Plantings" Associated With This Project.

MULTIFLORA ROSE CONTROL NOTE:

BEFORE PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Season And Once In The Spring And Once In The Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturer's Specifications. Care Should Be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth Of Roses Is Able To More Successfully Managed.

FOREST PROTECTION GENERAL NOTES

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNS AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL, OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

REFORESTATION PLANTING NOTES

- Plants, Related Material, And Operations Shall Meet The Detailed Description As Given On The Plans And As Described Herein.
- Plant Material, Unless Otherwise Specified, Shall Be Nursery Grown, Uniformly Branched And Have A Vigorous Root System. Plant Material Shall Be Healthy, Vigorous Plants Free From Defects, Decay, Disturbing Roots, Sunscald Injuries, Abrasions Of The Bark, Plant Disease, Insect Pest Eggs, Borer, Infestations Or Objectionable Disfigurements. Plant Material That Is Weak Or Which Has Been Cut Back From Larger Grades To Meet Specified Requirements Will Be Rejected. Trees With Forked Leaders Will Not Be Accepted. Plants Shall Be Freshly Dug; No Heeled-in Plants Or Plants From Cold Storage Will Be Accepted.
- Unless Otherwise Specified, Plant Material Shall Conform To "American Standard For Nursery Stock" ANSI Z60.1-1990, Published By The American Association Of Nurserymen, Including All Addenda.
- Contractor Will Be Required To Guarantee Plant Material For A Period Of Two (2) Years After The Date Of Acceptance And Maintain A 75% Survivability At The End Of The Two (2) Years.
- To Lessen The Chance Of Loss, The Plantings Should Be Checked From Time To Time To Insure That They Are Receiving Sufficient Water. See "Maintenance Of Plantings" For Guidelines.
- The Location And Orientation Of All Plant Material Shall Be Randomly Planted In Designated Reformation Areas By The Contractor. Contractor Shall Be Responsible For Moving Any Plant Material Installed Without Approval.
- Mowing And Applying Herbicides To The Reformation Area Is Prohibited At Any An All Stages Of The Planting Process In Order To Encourage The Existing Saplings To Grow.
- Contractor Is Responsible For Installing And Pruning Plant Material In The Proper Planting Season For Each Plant Type, See Tree Planting & Maintenance Calendar.
- Upon Completion Of Installation, Signage Shall Be Installed As Shown.

MAINTENANCE OF PLANTINGS

- Maintenance Of Plantings Shall Last For A Period Of 26 Months.
- All Plant Material Shall Be Generally Watered Twice A Month During The 1st Growing Season. Watering May Be More Or Less Frequent Depending On Weather Conditions.
- During The 2nd Growing Season, Plant Material Shall Be Watered Once A Month From May To September, As Needed.
- Invasive Exotics And Noxious Weeds Shall Be Removed From The Reformation Area(s). Old Field Successional Species Shall Be Retained.
- Plants Shall Be Examined A Minimum Of Two (2) Times During The Growing Season For Serious Plant Pests And Diseases With The Appropriate Agent.
- Dead Branched Shall Be Pruned From The Plantings.

GUARANTEE REQUIREMENTS

A 75% Survival Rate For The Reformation Plantings Is Required At The End Of The 24 Month Maintenance Period. All Plant Material Below The 75% Threshold Is Required To Be Replaced At The Beginning Of The Next Growing Season.

PRE-CONSTRUCTION MEETING

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
 - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIFIC TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS.
 - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
 - MAKE ALL NECESSARY ADJUSTMENTS;
 - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
- ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBOREST.
- THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

**FOREST CONSERVATION WORKSHEET
VERSION 1.0**

BASIC SITE DATA:		20.12 Ac
A. TOTAL TRACT AREA:		1.76 Ac
B. AREA WITHIN 100 YEAR FLOODPLAIN:		18.36 Ac
C. NET TRACT AREA:		1.76 Ac
LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)		
AREA MGR	IDA	HDR
	MPD	CHA
INFORMATION FOR CALCULATIONS:		
D. AFForestation THRESHOLD:	0.20% x D =	3.67
E. FOREST CONSERVATION THRESHOLD:	0.25% x D =	4.99
F. EXISTING FOREST COVER:		0.55
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD:		0.00
H. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION:		0.00
I. CLEARING PERMITTED WITHOUT MITIGATION:		0.00
J. TOTAL AREA OF FOREST TO BE CLEARED:		0.00
K. TOTAL AREA OF FOREST TO BE RETAINED:		0.55
L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD:		0.00
M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD:		0.00
N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD:		0.00
O. TOTAL REFORESTATION REQUIRED:		0.00
P. TOTAL REFORESTATION REQUIRED:		0.00
Q. TOTAL REFORESTATION AND AFForestation REQUIRED:		0.00
R. TOTAL REFORESTATION AND AFForestation REQUIRED:		0.00
S. EXCESS FOREST CREDIT:		0.00

SCHEDULE A - PERIMETER LANDSCAPE EDGE

CATEGORY	P-1	P-2	P-3	P-4	P-5	P-6	TOTAL
ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	
LANDSCAPE TYPE	B	A	A	A	A	A	
LINEAR FEET OF PERIMETER TO REMAIN	447 L.F. (LESS ENTRIES)	400 L.F.	606 L.F.	512 L.F.	654 L.F. (LESS EX. TREELINE 519 L.F. REMAINING)	941 L.F. (LESS EX. HOUSE)	
CREDIT FOR EXISTING TREES TO REMAIN	N/A	N/A	87 LF OF EX. TREELINE 519 LF REMAINING	512 LF OF EX. TREELINE 0 LF REMAINING	205 LF OF EX. TREELINE 449 LF REMAINING	N/A	
NUMBER OF PLANTS REQUIRED	9/11	7	9	0	8	16	49
SHADE TREES	(447/50' = 8.9 OR 9)	(400/60' = 6.6 OR 7)	(519/60' = 8.6 OR 9)	0	(449/60' = 7.5 OR 8)	(941/60' = 15.6 OR 16)	11
EVERGREEN TREES	(447/40' = 11.2 OR 11)						
CREDIT FOR EXISTING VEGETATION	0	0	0	0	0	0	0
SHADE TREES	1	0	0	0	0	0	0
SMALL/MEDIUM DECIDUOUS TREES OR EVERGREENS	0	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED	8	14	6	0	8	16	38
SHADE TREES	11						31
EVERGREEN TREES							

NOTE: CREDIT IS BEING TAKEN FOR AN EXISTING 53.5' BOXELDER ALONG PERIMETER 1.

FCE - 3.12 acres

PLANTING REQUIRED: 624 = 2100 + 84 UNITS
PLANTING PROVIDED: 610 = 2135 + 84 UNITS (LANDSCAPE CREDIT)

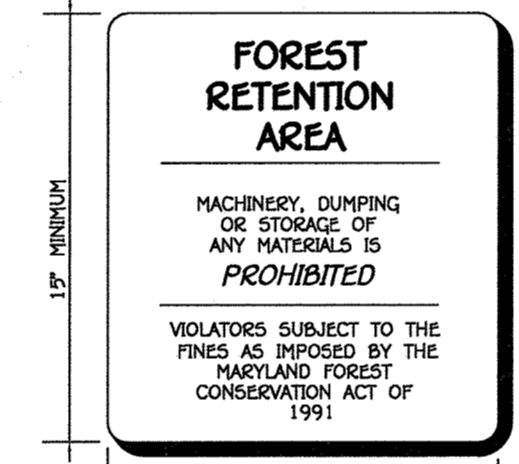
QTY	Species	Size (Spacing)
110	Acer rubrum - Red maple	2.5" - 3" CAL. FULL CROWN, B&B
100	Carya tomentosa - Hickory	2.5" - 3" CAL. FULL CROWN, B&B
100	Carya glabra - Pignut Hickory	2.5" - 3" CAL. FULL CROWN, B&B
40	Cornus florida - Flowering Dogwood	2.5" - 3" CAL. FULL CROWN, B&B
80	Liriodendron tulipifera - Yellow Poplar	2.5" - 3" CAL. FULL CROWN, B&B
80	Quercus alba - White oak	2.5" - 3" CAL. FULL CROWN, B&B
50	Quercus rubra - Red oak	2.5" - 3" CAL. FULL CROWN, B&B
20	Quercus whiteoak - White oak	2.5" - 3" CAL. FULL CROWN, B&B
15	Viburnum acerifolium - Mapleleaf Viburnum	2 gal.
15	Viburnum acerifolium - Arrowwood Viburnum	2 gal.

* Note: (1) SIZE PROPOSED TO BE UTILIZED AND PLANTED AT 200 TREES PER ACRE (200 TREES/ACRE X 3.12 ACRES = 624 TREES). (2) PLANTING UNITS: 3.5 UNITS = 1 - 1" CAL. TREE; 7 UNITS = 1 - 2" CAL. TREE. (3) CREDIT TAKEN FOR LANDSCAPE PLANTINGS - 22 TREES = 84 PLANTING UNITS. (4) SURVEY TO BE MADE ON 3.12 ACRES DUE TO LANDSCAPE CREDIT.

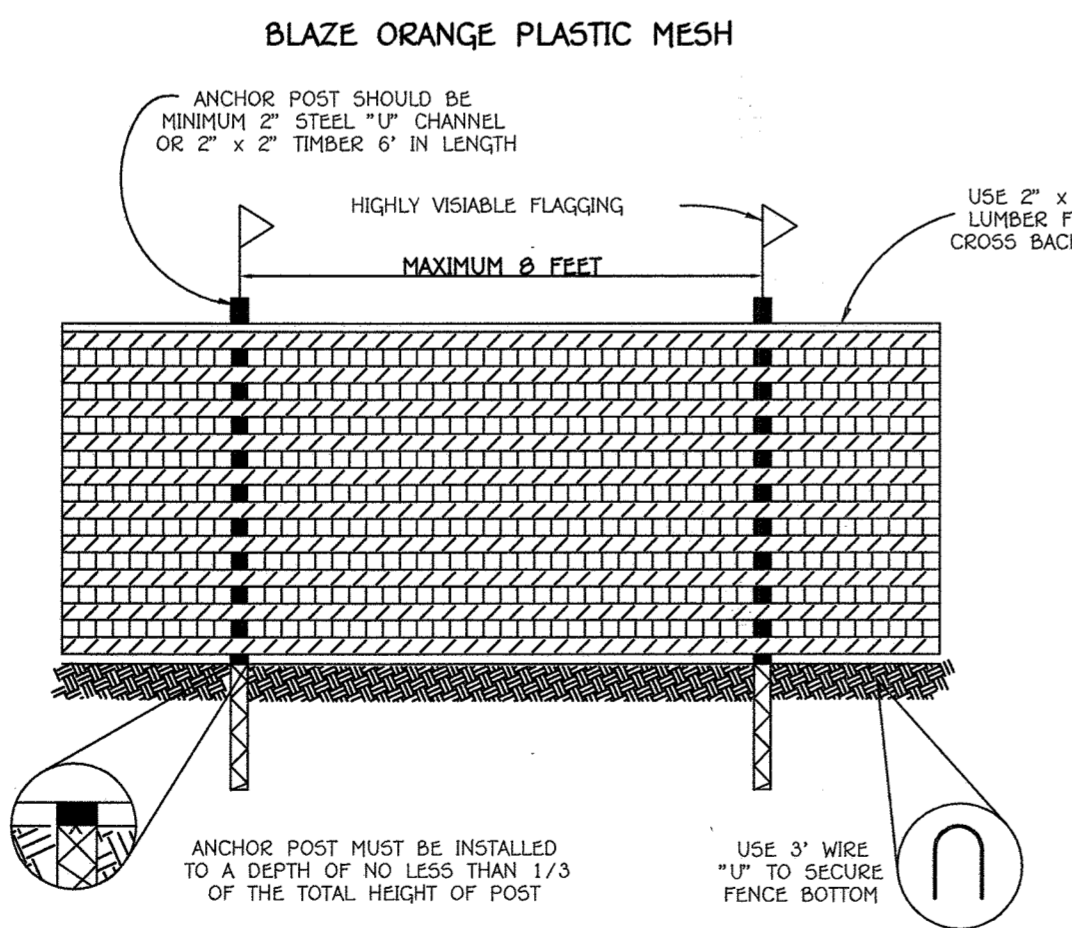
LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
16	(Symbol)	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5" - 3" CAL. FULL CROWN, B&B
16	(Symbol)	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2.5" - 3" CAL. FULL CROWN, B&B
20	(Symbol)	THUJA PLICATA (GIANT ARBOVITAE 'GREEN GIANT')	5' - 6' HT. B&B
11	(Symbol)	ILEX 'NELLIE R. STEVENS' (NELLIE STEVENS HOLLY)	5' - 6' HT. B&B
6	(Symbol)	PLATANUS X ACERIFOLIA (LONDON PLANE)	2.5" - 3" CAL. FULL CROWN, B&B

TOTAL: 38 SHADE TREES & 31 EVERGREENS



FOREST CONSERVATION SIGN DETAIL
NOT TO SCALE



- NOTES:**
- FOREST PROTECTION DEVICE ONLY.
 - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 - ROOT DAMAGE SHOULD BE AVOIDED.
 - PROTECTIVE SIGNAGE MAY BE USED.
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION DETAIL
NOT TO SCALE

DEVELOPER'S CERTIFICATE

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. 36386, EXPIRATION DATE: 01/12/2018.



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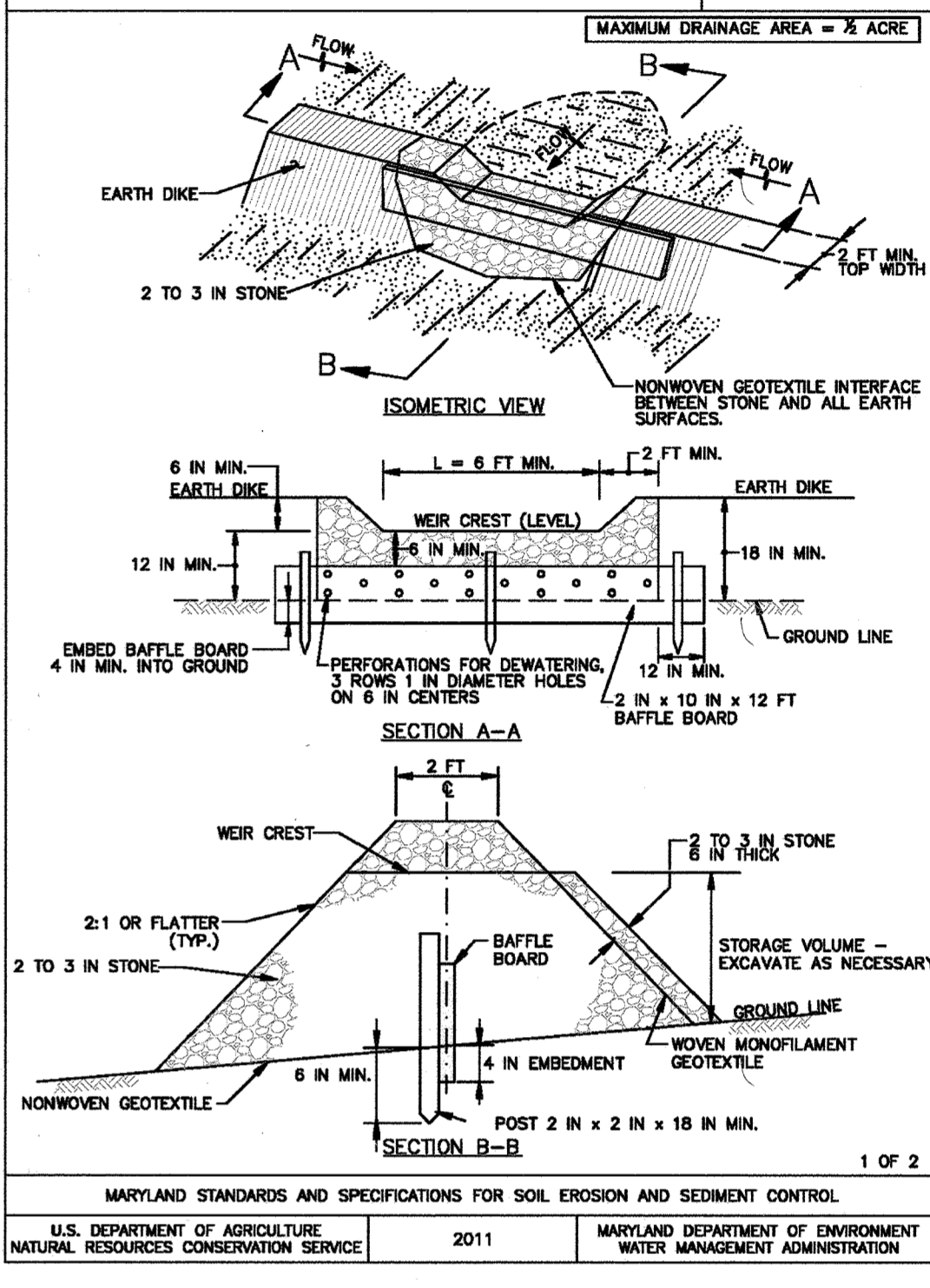
DEVELOPER
MG LAND HOLDINGS 1, LLC
6420 AUTUMN SKY WAY
COLUMBIA, MARYLAND 21044
443-324-4732

DEVELOPER'S / BUILDER'S CERTIFICATE

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

NAME: *Howard County* DATE: *5/1/17*

DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE



DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE

- CONSTRUCTION SPECIFICATIONS**
- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
 - USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
 - PERFORATE BAFFLE BOARD WITH 3 ROWS OF 1/2 INCH DIAMETER HOLES 8 INCHES ON CENTER, EMBED A MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND BAFFLE BOARD MINIMUM OF 12 INCHES INTO EARTH DIKE.
 - USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOLAYER GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
 - USE NONWOVEN AND WOVEN MONOLAYER GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
 - SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
 - REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN, MAINTAIN LINE, GRADE, AND CROSS SECTION.
 - UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND, WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

PLAN VIEW

ELEVATION VIEW

RISER STRUCTURE MODIFICATION DETAIL
NOT TO SCALE

DEVELOPER'S / BUILDER'S CERTIFICATE

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

NAME: *Howard County* DATE: *5/1/17*

DETAILS
TEN OAKS FARM
LOTS 1 THRU 6
ZONED RR-DEO
GRID No. 14 PARCEL Nos. 140
TAX MAP No. 28 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2017
SHEET 4 OF 5

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

A. Soil Preparation

- 1. Temporary Stabilization
a. Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
b. Apply fertilizer and lime as prescribed on the plans.

B. Topsoiling

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation...
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications...
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

C. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact rates 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, free flowing and suitable for accurate application by appropriate equipment...
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least calcium oxide plus magnesium oxide...

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

- 1. Application of seed and mulch to establish vegetative cover.
2. To protect disturbed soils from erosion during and after the construction.
3. To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.
4. Seeding
a. Specifications
i. All seed must meet the requirements of the Maryland State Seed Law...
ii. Fertilizers must be uniform in composition...

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 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."

Signature of Developer: [Signature] Date: 5/12/17

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

- 1. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread R or OD seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 1/2 inches.

TEMPORARY SEEDING NOTES (B-4-4)

- 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths.
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.

PERMANENT SEEDING NOTES (B-4-5)

- 1. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore.
2. Turfgrass Mixtures
a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

Table with columns: Hardness Zone (from Figure B.3), Species, Application Rate (lb/acre), Seeding Dates, Seeding Depth, Fertilizer Rate (10-20-20), Lime Rate (2 tons/acre).

Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland".

Table with columns: No., Species, Application Rate (lb/acre), Seeding Dates, Seeding Depth, N, P2O5, K2O, Fertilizer Rate (10-20-20), Lime Rate (2 tons/acre).

Notes: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

ENGINEER'S CERTIFICATE

"I 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."

Signature of Engineer: [Signature] Date: 5/3/17

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. 38366, EXPIRATION DATE: 01/12/2018.

Signature of Professional Engineer: [Signature] Date: 5/3/17

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

- 1. General Specifications
a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness to 3/8 inch, plus or minus 1/8 inch, at the time of cutting.
c. Sod must be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.

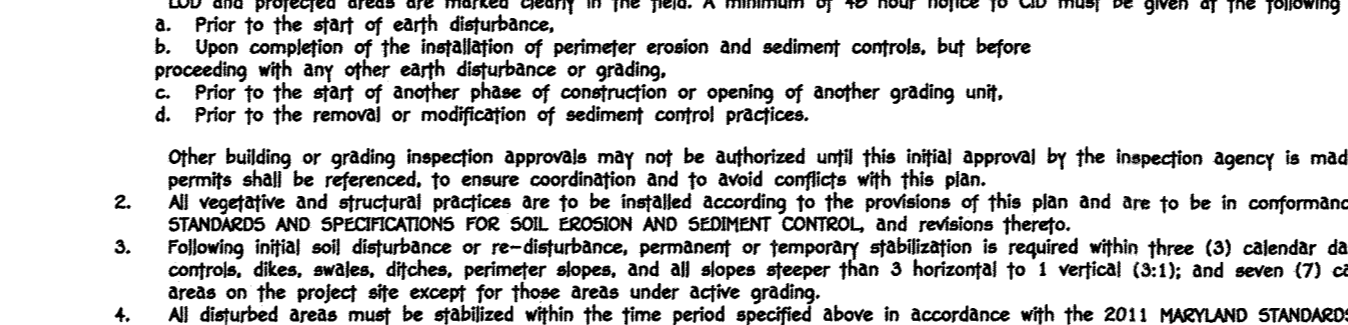
B-4-B STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

- 1. A mound or pile of soil protected by appropriate designed erosion and sediment control measures.
2. To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

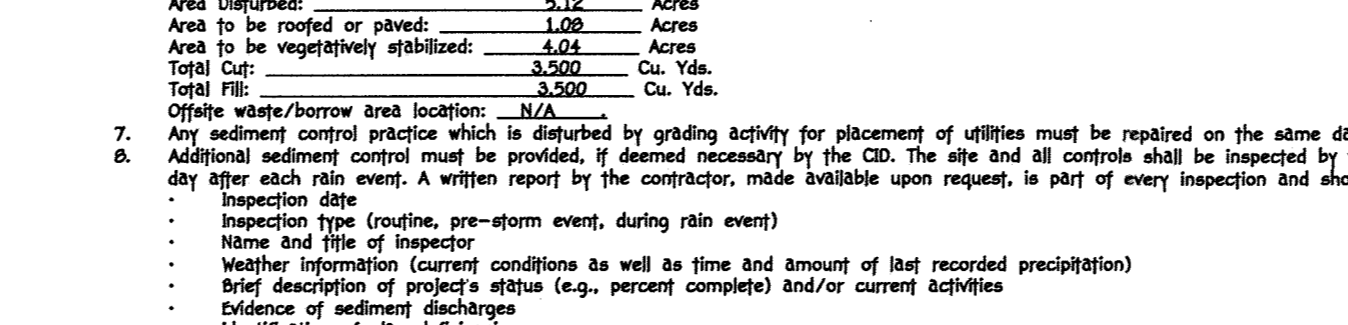
- 1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1095 after the LDD and protected areas are installed in the field.
2. Upon completion of the installation of perimeter erosion and sediment controls, and before proceeding with any other earth disturbance activities, the contractor shall submit a written report to the CID.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



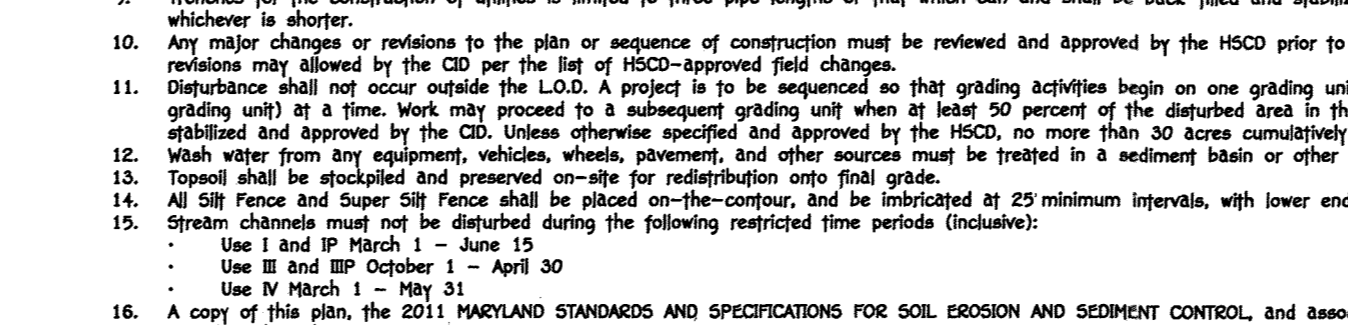
- 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SOIL. MINIMUM LENGTH OF 50 FEET (150 FEET FOR SINGLE RESOURCE LOTS). USE MINIMUM WIDTH OF 10 FEET. FLOOR SIZE TO BE MINIMUM 4 IN. HIGH.
2. PREPARE SURFACE FROM TOPSOIL OR EXISTING TOWARD THE SOIL UNDER THE ENTRANCE.

DETAIL E-3 SUPER SILT FENCE



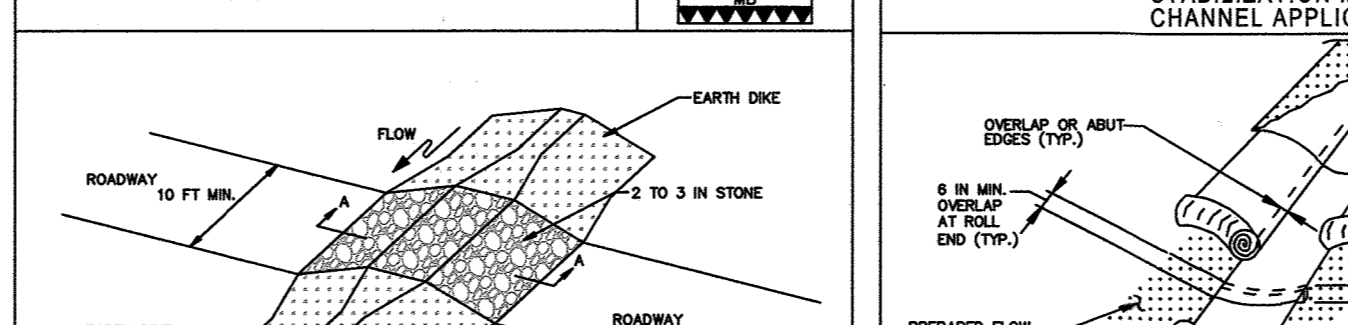
- 1. INSTALL 2 IN. MIN. DIAMETER GALVANIZED STEEL POSTS OF 60 LB INCH WALL THICKNESS AND 36 FT LONGER THAN FENCE HEIGHT TO THE FENCE POSTS WITH WIRE TIES OR IRON BRIGS.
2. FASTEN WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE SLOPE SIDE OF CHANNELS.

DETAIL C-1 EARTH DIKE



- 1. INSTALL EARTH DIKE IN ACCORDANCE WITH THE APPROVED PLAN. DIKE SHALL BE 4 FT MIN. WIDTH AND 2:1 SLOPE OR FLATTER.
2. CONSTRUCT DIKE FROM TOPSOIL OR EXISTING TOWARD THE SOIL UNDER THE DIKE.

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

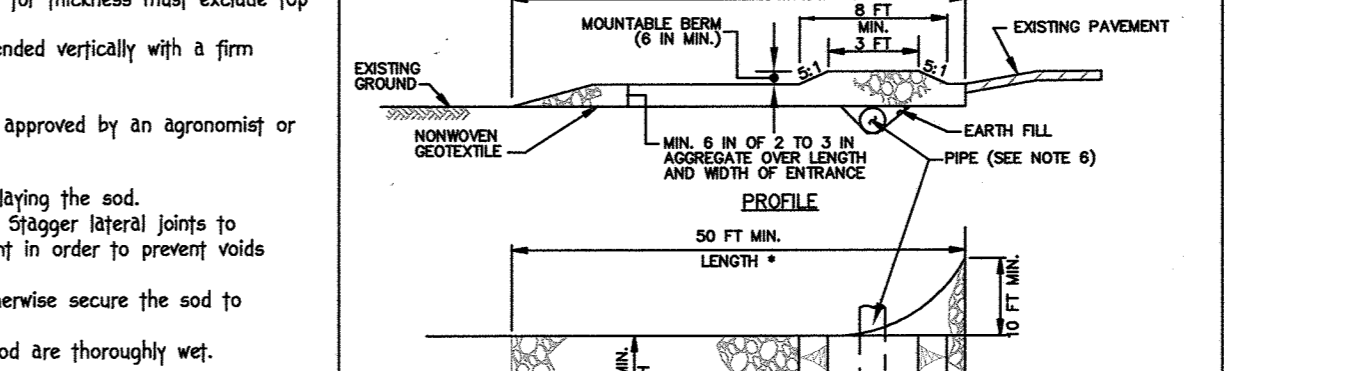


- 1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS OVER THE EARTH MOUND PRIOR TO PLACING STONE.

CONSTRUCTION SPECIFICATIONS

- 1. PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS OVER THE EARTH MOUND PRIOR TO PLACING STONE.
2. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTAIN BERM.

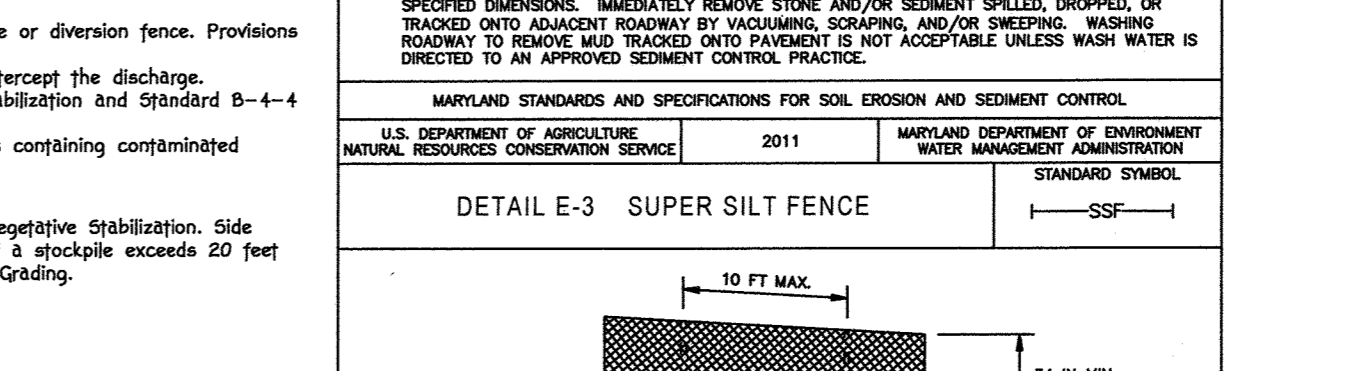
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SOIL. MINIMUM LENGTH OF 50 FEET (150 FEET FOR SINGLE RESOURCE LOTS). USE MINIMUM WIDTH OF 10 FEET.
2. PREPARE SURFACE FROM TOPSOIL OR EXISTING TOWARD THE SOIL UNDER THE ENTRANCE.

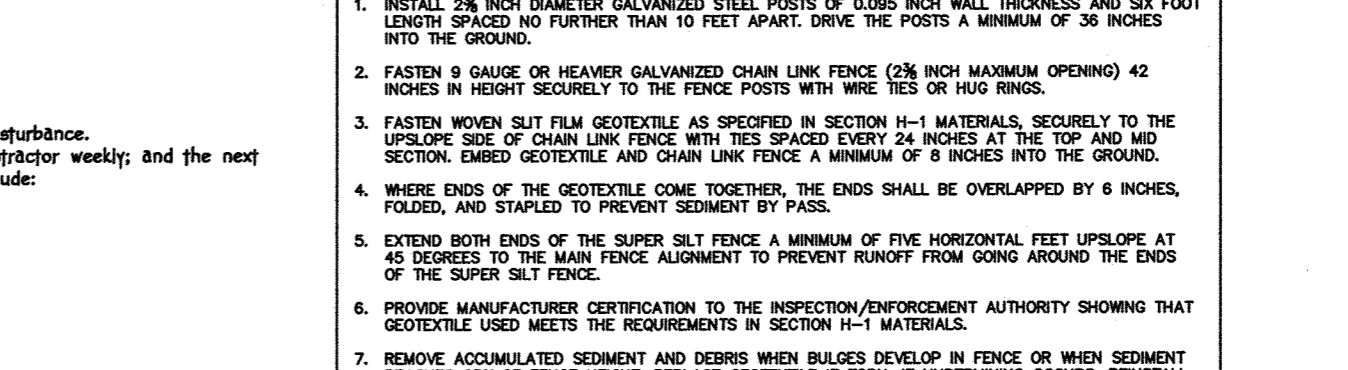
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. INSTALL 2 IN. MIN. DIAMETER GALVANIZED STEEL POSTS OF 60 LB INCH WALL THICKNESS AND 36 FT LONGER THAN FENCE HEIGHT TO THE FENCE POSTS WITH WIRE TIES OR IRON BRIGS.
2. FASTEN WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE SLOPE SIDE OF CHANNELS.

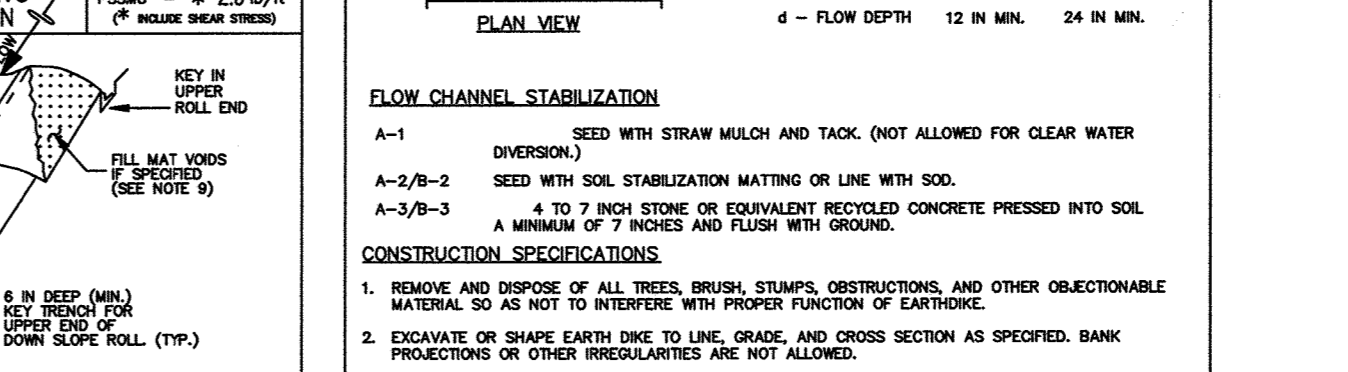
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. INSTALL EARTH DIKE IN ACCORDANCE WITH THE APPROVED PLAN. DIKE SHALL BE 4 FT MIN. WIDTH AND 2:1 SLOPE OR FLATTER.
2. CONSTRUCT DIKE FROM TOPSOIL OR EXISTING TOWARD THE SOIL UNDER THE DIKE.

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS OVER THE EARTH MOUND PRIOR TO PLACING STONE.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS)
2. NOTIFY "HES UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777.
3. NOTIFY THE HOWARD COUNTY ENGINEER AT 410-313-1095 AT LEAST 24 HOURS BEFORE STARTING WORK.

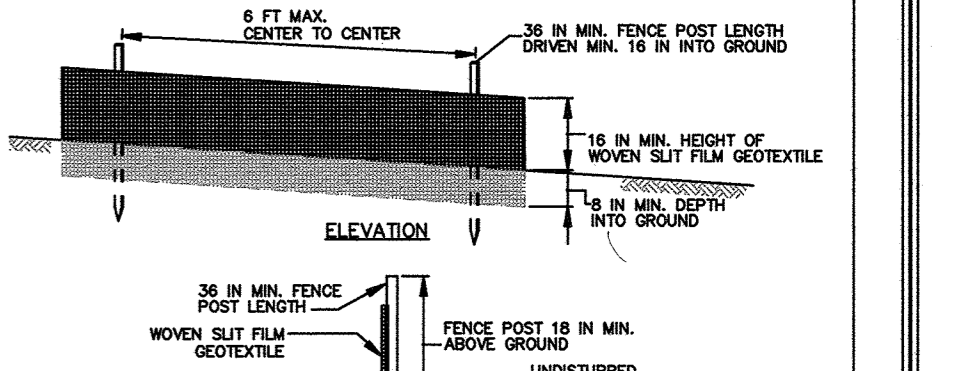
SEDIMENT & EROSION CONTROL NOTES & DETAILS

TEN OAKS FARM LOTS 1 THRU 6 ZONED RR-DEO

FATH MAP No. 28 GRID No. 14 PARCEL NOS. 140

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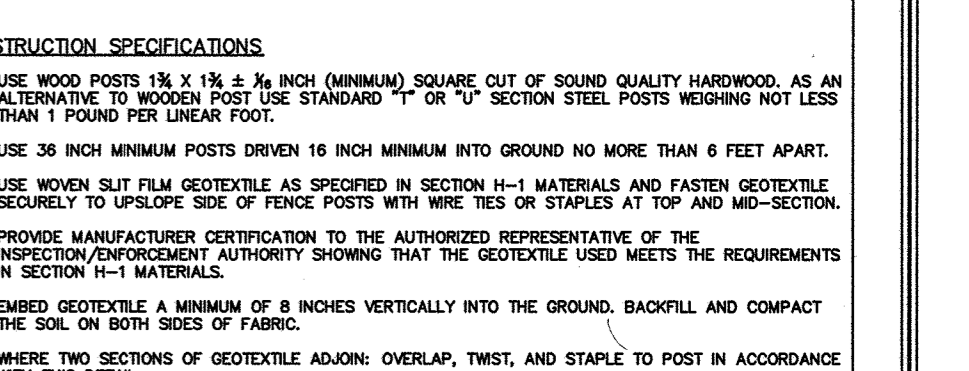
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. USE WOOD POSTS 1 1/2 x 1 1/2 x 6 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOOD POSTS USE STANDARD "T" OR "U" SECTION STEEL POSTS WEARING NOT LESS THAN 1 POUND PER LINEAL FOOT.
2. USE WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.

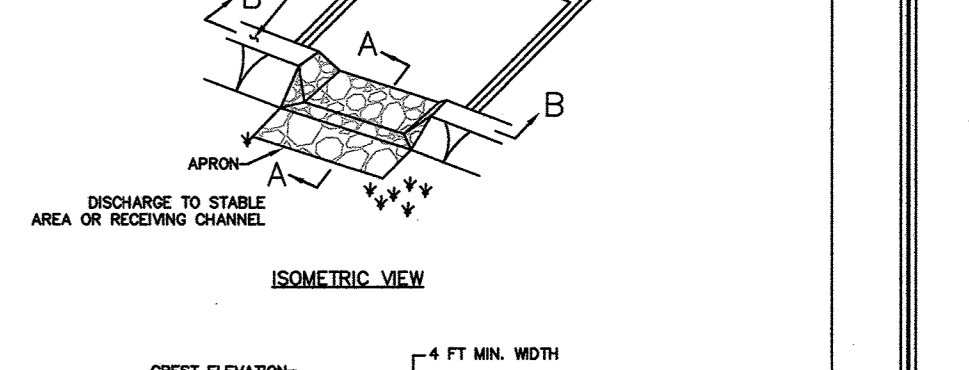
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

- 1. INSTALL 2 IN. MIN. DIAMETER GALVANIZED STEEL POSTS OF 60 LB INCH WALL THICKNESS AND 36 FT LONGER THAN FENCE HEIGHT TO THE FENCE POSTS WITH WIRE TIES OR IRON BRIGS.
2. FASTEN WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE SLOPE SIDE OF CHANNELS.

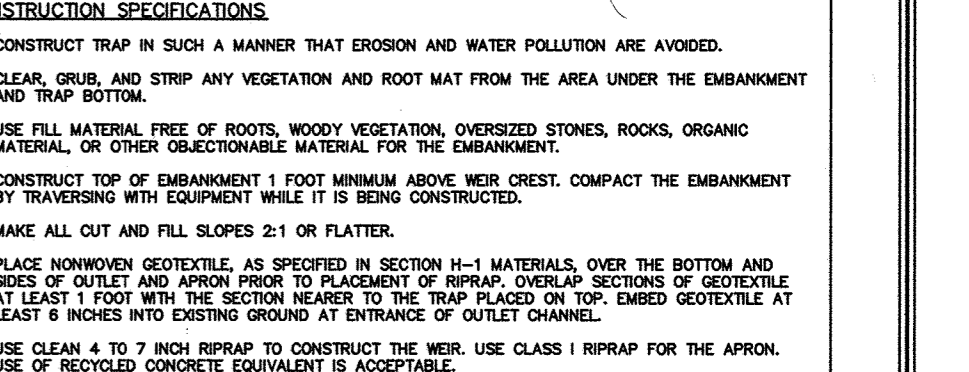
STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

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FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2017 SHEET 5 OF 5