SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	P-10	P-11	P-12	P-13	P-14	P-15
CATEGORY	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL
LANDSCAPE TYPE	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
LINEAR FEET OF PERIMETER	129.80' L.F.	322.88' L.F.	111.24' L.F.	131.75' L.F.	142.96' L.F.	106.21' L.F.	131.38' L.F.	99.86' L.F.	120.18' L.F.	88.52' L.F.	108.36' L.F.	304.13' L.F.	123.46' L.F.	1059.99' L.F.	164.68' L.F.
CREDIT FOR EXISTING VEGETATION SHADE TREES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CREDIT FOR WALL/FENCE OR BERM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF PLANTS REQUIRED	129.80'/60=2.16	322.88'/60=5.38	111.24'/60=1.85	131.75'/60=2.19	142.96'/60=2.38	106.21'/60=1.77	131.38'/60=2.19	99.86'/60=1.64	120.18'/60=2.00	88.52'/60=1.47	108.36'/60=1.80	304.13'/60=5.07	123.46'/60=2.06	1059.99'/60=17.66	164.68'/60=2.74
SHADE TREES	2	5	2	2	2	2	2	2	2	1	2	5	2	18	3
EVERGREEN TREES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SHRUBS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED															
SHADE TREES	2	5	2	2	2	2	2	2	2	1	2	5	2	18	3
EVERGREEN TREES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SHRUBS (2:1) SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER	P-16	P-17	P-18	TOTAL
CATEGORY	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	ADJACENT TO NON-BUILDABLE PRESERVATION PARCEL	—
LANDSCAPE TYPE	A	A	A	—
LINEAR FEET OF PERIMETER	226.45' L.F.	318.00' L.F.	319.75' L.F.	—
CREDIT FOR EXISTING VEGETATION SHADE TREES	0	0	0	—
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0	—
CREDIT FOR WALL/FENCE OR BERM	0	0	0	—
NUMBER OF PLANTS REQUIRED	226.45'/60=3.77	318.00'/60=5.30	319.75'/60=5.34	
SHADE TREES	4	5	6	66
EVERGREEN TREES	0	0	0	0
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	4	5	5	66
EVERGREEN TREES	0	0	0	0
SHRUBS (2:1) SUBSTITUTION)	0	0	0	0

A LANDSCAPE SURETY FOR 66 SHADE TREES IN THE AMOUNT OF $19,800.00 (66 SHADE TREES @ $300 EACH) SHALL BE PROVIDED WITH THE GRADING PERMITS. FOR THE INDIVIDUAL LOTS AS FOLLOWS:
LOT 5 = 36 SHADE TREES @ $300.00 = $10,800.00
LOT 6 = 6 SHADE TREES @ $300.00 = $1,800.00
LOT 7 = 4 SHADE TREES @ $300.00 = $1,200.00
LOT 8 = 9 SHADE TREES @ $300.00 = $2,700.00
LOT 9 = 11 SHADE TREES @ $300.00 = $3,300.00

LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
6		CORNUS FLORIDA WHITE FLOWERING DOGWOOD	8'-10' HGT
6		CORNUS FLORIDA " RUBRA" RED FLOWERING DOGWOOD	8'-10' HGT
7		CORNUS KOUSA KOUSA DOGWOOD	8'-10' HGT
6		PRUNUS SERRULATA "KWANSAN" KWANSAN CHERRY	2 1/2" - 3" CALIPER FULL CROWN, B&B
22		ACER RUBRUM 'OCTOBER GLORY' OCTOBER RED MAPLE	2 1/2" - 3" CALIPER FULL CROWN, B&B
19		GLEDITSIA TRIACANTHOS INERMIS "IMPERIAL" IMPERIAL THORNLESS HONEYLOCUST	2 1/2" - 3" CALIPER FULL CROWN, B&B

At The Time Of Plant Installation All Shrubs And Trees Listed And Approved On The Landscape Plan, Shall Comply With The Proper Height Requirement In Accordance With The Howard County Landscape Manual. In Addition, No Substitutions Or Relocations Of The Required Plantings May Be Made Without Prior Review And Approval From The Department Of Planning And Zoning. Any Deviation From The 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 Revision Are Made To The Applicable Plans.

The Owner, Tenants 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 Be Maintained In Good Growing Conditions, And When Necessary, Replaced With New Materials To Ensure Continued Compliance With Applicable Regulations. All Other Required Landscaping Shall Be Permanently Maintained In Good Condition, And When Necessary, Repaired Or Replaced.

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion of Certification of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Walter Clint Dustin — Date: Jun 8 2009

Beverly Ann Dustin — Date: Jun. 8 2009

FOREST CONSERVATION WORKSHEET
VERSION 1.0

BASIC SITE DATA:

A. TOTAL TRACT AREA	33.70
B. AREA WITHIN FORESTED 100 YEAR FLOODPLAIN	0.70
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00
D. NET TRACT AREA	33.00

LAND USE CATEGORY: (from table 3.2.1, page40, Manual)
ARA MDR IDA HDR MPD CIA
X

INFORMATION FOR CALCULATIONS:

E. AFFORESTATION THRESHOLD	20% x D =	6.60
F. FOREST CONSERVATION THRESHOLD	0.25% x D =	8.25

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	3.36
H. AREA OF FOREST ABOVE REFORESTATION THRESHOLD	0.00
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD:	0.00

BREAK EVEN POINT: BREAK-EVEN POINT 0.00

J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	0.00
K. CLEARING PERMITTED WITHOUT MITIGATION	0.00

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED OR RETAINED OUTSIDE FCE	0.00
M. TOTAL AREA OF FOREST TO BE RETAINEDIN FCE	3.36

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	0.00
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	0.00
Q. CREDIT FOR SITE RETENTION ABOVE CONSERVATION THRESHOLD	0.00
R. TOTAL REFORESTATION REQUIRED	0.00
S. TOTAL AFORESTION REQUIRED	3.24
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	3.24

ON-SITE SIGNAGE

FOREST CONSERVATION EASEMENT

UNAUTHORIZED DISTURBANCE OR VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991.

TREES FOR YOUR FUTURE

15" MINIMUM

11" MINIMUM

▲ = SIGN

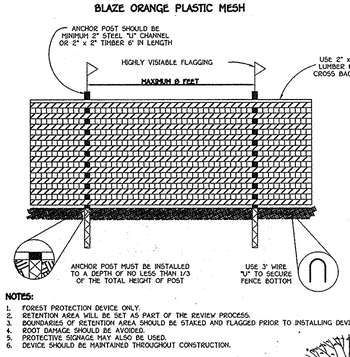
MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B

JOHN P. CANOLES

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

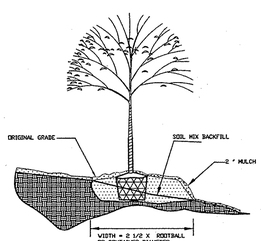
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

BLAZE ORANGE PLASTIC MESH

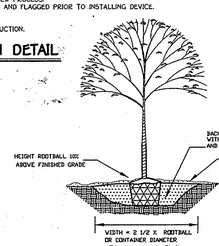


NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT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

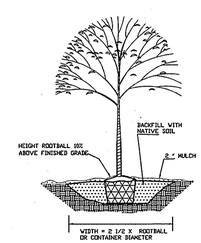
TREE PROTECTION DETAIL
NOT TO SCALE



Planting on Slope



Disturbed Soil



Undisturbed Soil

OWNER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

DEVELOPER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

Construction Period Protection Program

A. Forest Protection Techniques

1. Soil Protection Area (Critical Root Zone)

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface.

The limit of disturbance (LOD) line depicted on the plan shows the proposed extent of construction activities. Eco-Science Professionals, or another qualified professional designated by the developer, will assist in the field flagging of the LOD to ensure that the Critical Root Zone for the Forest Retention Area is determined in accordance with the in-field Edge Determination Guidelines in Appendix B. Eco-Science Professionals, or another qualified professional, will also assess the condition of the new forest edge to determine if selective thinning or pruning is needed to improve the condition of the edge.

2. Fencing And Signage

All forest retention areas will be protected from unauthorized intrusion by appropriate signage and fencing. Signage and fencing will be installed prior to any construction activity. Installation of these devices will be supervised by Eco-Science Professionals or another qualified professional. Fencing will placed along all LOD lines that occur within 35 feet of existing treelines. Signage will be placed along the edge of the FCE every 100 feet. Fencing will consist of blaze orange mesh fence or super silt fence. See Forest Conservation Plan for standard specifications.

B. Pre-Construction Meeting

Upon staking of limits of disturbance and installation of all signage, a pre-construction meeting will be held between the developer, contractor and Appropriate County inspector. The purpose of the meeting will be to verify that all tree protection measures outlined in the FCP are in place, that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

C. Storage Facilities/Equipment Cleaning

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas shown within the limit of disturbance. Washing of equipment will be prohibited from all forest retention areas. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into wetlands, streams and other environmentally sensitive areas.

D. Sequence of Construction

The following timetable represents the proposed timetable for construction of the proposed project. The construction start date for this project has not been formalized. The actual project start date is predicated on the issuance of all necessary permits and approvals for the project. The items outlined in the Forest Conservation Plan will be enacted upon commencement of the project.

Below find a sequence of construction

1. Install all tree protection signage, fencing, and sediment control devices. (7 Days)
2. Hold pre-construction meeting between developer, contractor and County inspector. (1 Day)
3. Grade site and construct improvements. Stabilize all disturbed areas in accordance with grading plan. (14 Days)
4. Remove sediment control. Replace any forest retention signage in poor condition. (2 Days)
5. Hold post-construction meeting with County inspectors to ensure compliance with FCP. (1 Day)

E. Construction Monitoring

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan. This will include inspections to ensure that signage is properly maintained and that no unauthorized intrusions have been made into forest retention areas.

F. Activities Permitted During Construction

The forest conservation plan will allow the following activities within forest resources during the construction phase of the project:

1. Passive recreation (birdwatching, hiking, etc.)

These activities will not damage or negatively impact the forest resources on the property.

G. Post-Construction Meeting

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and request for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that all Forest Conservation Easement areas have been properly retained and that all post construction protection measures (permanent signage) have been installed.

Post-Construction Management Plan

The post-construction management plan will further ensure that all Forest Conservation Easement Areas are maintained. The developer will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property:

A. Signage

Signage indicating the limits of the forest retention areas shall be maintained.

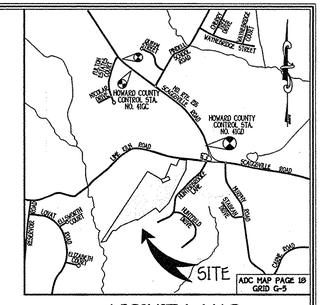
REFORESTATION
FOREST CONSERVATION EASEMENT No. 2
(3.24 AC)

Qty	Species	Size	Spacing
350	Acer rubrum - Red Maple	3-4'	11' RAN
90	Acer saccharinum - Silver Maple	3-4'	11' RAN
90	Carpinus caroliniana - American Hornbeam	3-4'	11' RAN
90	Nyssa sylvatica - Black Gum	3-4'	11' RAN
90	Platanus occidentalis - American Sycamore	3-4'	11' RAN
90	Quercus palustris - Pin Oak	3-4'	11' RAN
334	Salix nigra - Black Willow	3-4'	11' RAN

ALL PLANTING WILL REQUIRE TREE SHELTERS
TOTAL TREES PROPOSED= 350 X 3.24 = 1134 TREES

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE: 1-15-09

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE: 1/23/09
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE: 1-23-09



VICINITY MAP
SCALE: 1" = 2,000'

GENERAL NOTES:

1. Subject Property Zoned RR-DEO Per 02/02/04 Comprehensive Zoning Plan And The "Comp Lite " Zoning Amendments Effective 07/28/06.
2. Coordinates Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 41GD And No. 46GC
   Sta. 41GD N 541495.6336 (meters), E 1333747.2310 (meters)
   Sta. 41GC N 543290.6326 (meters), E 1331697.8578 (meters)
3. This Plat Is Based On Field Run Monumented Boundary Survey Performed On Or About December, 2005, By Fisher, Collins & Carter, Inc.
4. B.R.L. Denotes Building Restriction Line.
5. ● Denotes Iron Pin Set Capped "F.C.C. 106".
6. Denotes Iron Pipe Or Iron Bar Found
7. O Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.
8. ■ Denotes Concrete Monument Set With Aluminum Plate "F.C.C. 106".
9. Denotes Concrete Monument Or Stone Found.
10. For Flag Or Pipestem Lots, Refuse Collection, Snow Removal And Road Maintenance Are Provided To The Junction Of The Flag Or Pipestem And Road Right-Of-Way Line Only And Not Onto The Flag Or Pipestem Lot Driveway.
11. Driveway(s) Shall Be Provided Prior To Issuance Of A Residential Occupancy Permit For Any New Dwelling To Ensure 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 - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius
    d) Structures (Culverts/Bridges) - Capable Of Supporting 25 gross Tons (H-125-Loading)
    e) Drainage Elements - Capable Of Safety Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface.
    f) Structure Clearances - Minimum 12 Feet
    g) Maintenance - Sufficient To Ensure All Weather Use.
12. All Lot Areas Are More Or Less (+ or -).
13. Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement.
14. No Grading, Removal Of Vegetative Cover Or Trees, Or Placement Of New Structures Is Permitted Within The Limits Of Wetlands, Streams(s), Or Their Buffers And Forest Conservation Easement Areas.
15. Denotes Wetlands Area Outline.
16. Denotes Existing Centerline Of Stream.
17. 406.2 Denotes Public 100 Year Floodplain Elevation.
18. Denotes Limit Of Public 100 Year Floodplain, Drainage And Utility Easement.
19. Previous Department Of Planning And Zoning File Numbers: WP-07-099, F-07-100.
20. There Is An Existing Dwelling/Structure(s) Located On Buildable Preservation Parcel 'A' To Remain. No New Buildings, Extensions Or Additions To The Existing Dwelling(s) Are To Be Constructed At A Distance Less Than The Zoning Regulations Require.
21. Landscaping For Lots 5 Thru 9 On File With This Plat Is Provided In Accordance With A Certified Landscape Plan In Accordance With Section 16.124 Of The Howard County Code And The Landscape Manual.
    A Landscape Surety For 66 Shade Trees In The Amount Of $ 19,800.00 Is Posted With The Grading Permit.
22. This Plat Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill 45-2003 And The Zoning Regulations As Amended By Council Bill 75-2003 And The July 28, 2006 Update Of The Howard County Zoning Regulations. Development Or Construction On These Lots 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.
23. In Accordance With The Landscape Manual Preservation Parcels Are Not Required To Be Buffered Or Screened From Adjacent Properties.
24. No Cemeteries Exist On This Site Based On A Visual Site Visit And Based on An Examination Of The Howard County Cemetery Inventory Map.
25. Forest Stand Delineation And Wetland Delineation Was Prepared By Eco-Science Professionals, Inc. Dated November 16, 2006 And Approved Under F-07-100.
26. The Forest Conservation Easement Has Been Established To Fulfill The Requirements Of Section 16.1200 Of The Howard County Code And 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 Easement Are Allowed.
27. This Area Designates A Private Sewerage Easement Of 10,000 Square Feet As Required By The Maryland State Department Of The Environment For Individual Sewage 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 Adjustments To The Private Sewerage Easement. Recordation Of A Modified Easement Shall Not Be Necessary.
28. The Lots Shown Hereon Comply With The Minimum Ownership Width And Lot Area As Required By The Maryland State Department Of The Environment.
29. Water Quality Volume (WQv) And Groundwater Recharge Volume (Rev) Stormwater Management Requirements Are Proposed To Be Met In Accordance With Chapter 5 of the 2000 Maryland Stormwater Management Design Manual By Applying The Criteria Found In Chapter 3, Section 3.4 "Stormwater Filtering Systems" And Chapter 5, Section 5.2 "Disconnection Of Rooftop Runoff Credit" And Section 5.3 "Disconnection Of Non Rooftop Runoff Credit". Applied To The Individual Lots As Follows:
    Lots 5, 8 and 9 - Bioretention Filter System And Non-Rooftop Disconnection (D/W);
    Lot 6 - Bioretention Filter System, Rooftop Disconnection And Non-Rooftop Disconnection (D/W);
    Lot 7 - Rooftop Disconnection And Non-Rooftop Disconnection (D/W).
30. The Property Is Located Outside Of The Metropolitan District.
31. A Maintenance Agreement For The 30' Private Use-In-Common Driveway For Lots 5 Thru 9 And Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels B ,C D, And The Private Cemetery Has Been Recorded Among The Land Records Of Howard County, Maryland Simultaneously With The Recording Of This Plat.
32. This Project Complies With The Requirements Of Section 16.1200 Of The Howard County Code For Forest Conservation With An Obligation Of 6.60 Acres Provided By 3.36 Acres Of On Site Retention, And 3.24 Acres Of On Site Afforestation Planting With Forest Conservation Surety In The Amount Of $99,839.52 Shall Be Provided With The Developer's Agreement. Based On 3.36 Acres (Retention) x 43,560 Sq.ft./Ac. x $0.20/Sq.ft.= $29,272.32 And 3.24 Acres (Reforestation) x 43,560 Sq.ft./Ac. x $0.50/Sq.ft. = $70,567.20.
33. All Wells Shall Be Drilled Prior To Final Plat Recordation. It Is The Developers Responsibility To Schedule The well Drilling Prior To Final Plat Submission. It Will Not Be Considered "Government Delay" If The Well Drilling Holds-up The Health Department Signature Of The Record Plat.
34. Stream Buffers Are Measured From The Top Of Bank Of The Stream.
35. Part Of This Property Is Located Within 2500 Feet Of The Triadelphia Reservoirs. Comar 26.04.02.04K States: "A Lot Located Within 2500 Feet Of The Normal Water Level Of Existing Or Proposed Water Supply Reservoirs, Measured Horizontally Or Within A 5000-foot Radius Upstream From The Water Intake On Streams Used As Potable Water Supply Sources And A 5000-foot Radius Of Water Intake Located Within A Reservoir Shall Have An Area Of Not Less Than 2 Acres With A Minimum Width Of 175 Feet.
36. The Floodplain Delineation Shown On This Plat Is Based On Field Run Cross Sections Provided By Fisher, Collins & Carter, Inc. Dated September 20, 2006. And Approved Under F-07-100. The On-Site Floodplain Area Is 2.00 Acres.
37. Plat Subject To WP-07-099 Which The Planning Director Approved On May 29, 2007 Pertaining To The Creation Of Lots 1, 2 And 3, F-07-100.
38. Open Space Requirement For lot 5 Is Provided By A Fee-In-Lieu Payment Of $1500.00
39. Density Tabulation
    a). Gross Site (Lot 4) Acreage = 33.702 Ac.
    b). Cluster Area Of Subdivision = 29.274 Ac.
        (Lot 4 Total Recorded Acreage - Proposed Lot 5 Acreage)
        (33.702 Ac. - 4.428 Ac.)
    c). Allowed Density (RR-DEO) Cluster Lots = 6 D.U.
        (Cluster Area of Subdivision÷1 D.U./4.25 Ac.)
        29.274 Ac.÷1 D.U./4.25 Ac. = 6.89 D.U.
    d). Proposed Density (RR-DEO) Cluster Area Of Subdivision = 5
        (Lots 6,7,8,9 And Buildable Pres. Parcel 'A')
    e). Density Units To Be Acquired For This Subdivision = 0
        (Proposed Density Units - Allowed Density Units)
        (5 Units. - 6 Units)
40. Articles Of Incorporation Of The Dustin's Golden Fields Homeowners Association, Inc. Is Filed With The State Department Of Assessments And Taxation On
41. Buildable Preservation Parcel 'A' Is Privately Owned And Encumbered By An Easement Agreement With The Dustin's Golden Fields Homeowners Association, Inc. And Howard County, Maryland. Non-Buildable Preservation Parcels 'B', 'C' And 'D' Are Privately Owned And Encumbered By An Easement Agreement With The Dustin's Golden Fields Homeowners Association, Inc. And Howard County, Maryland. This Agreement Prohibits Further Subdivision Of The Parcel, Outlines The Maintenance Responsibilities Of Its Owner And Enumerates The Uses Permitted On The Property.
42. Topography Shown In This Plan Is Based Upon Aerial Topography Flown By Harford Aerial Surveys In August Of 2006 And Supplemented With The 2004 Howard County Aerial Topography Maps For The Off-Site Areas. Field Run Topography Was Used To Supplement The Information Used In The 100 Year Floodplain Study.
43. Plat Subject To WP-09-040 Which The Planning Director On November 6, 2008 Approved A Request To Waive The Following:
    Section 16.120(b)(6)(ii) The Length Of A Pipestem To Serve A Non-Cluster Lot May Not Exceed 1500 Feet In Length.

LEGEND

492	EXISTING 2' CONTOURS
490	EXISTING 10' CONTOURS
482	PROPOSED CONTOUR
	DISCONNECTED IMPERVIOUS AREA
	DISCONNECTION RECEIVING AREA

NOTE: UNIT SIZE SHOWN REFLECT NOMINAL BUILDING SIZE AND IS SUBJECT TO FINAL ARCHITECTURE. FINAL DOWNSPOUT LOCATIONS SUBJECT TO FINAL ARCHITECTURE.

GLB2 / MLC2	SOILS LINES AND TYPE
L.O.D.	LIMIT OF DISTURBANCE (L.O.D.)
	STREAM AND TOP OF BANK
SB	75' STREAM BANK BUFFER
WL	LIMIT OF WETLANDS
	WETLANDS AREA
WB	25' WETLANDS BUFFER
	EXISTING TREELINE
	PROPOSED TREELINE
FP	LIMIT OF EXISTING 100-YEAR FLOODPLAIN PLAT Nos. 19666-19668
FP 400.7	100 YEAR FLOODPLAIN ELEVATION
	EXISTING FOREST CONSERVATION EASEMENT PLAT Nos. 19666-19668
	EXISTING ENVIRONMENTALLY SENSITIVE DEVELOPMENT CREDIT EASEMENT PLAT Nos. 19666-19668
	PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)
	PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION)
	PROPOSED PRIVATE USE-IN-COMMON ACCESS EASEMENT

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADDED SHEETS 4 & 5	4/14/15

SUPPLEMENTAL PLAN, TOPOGRAPHY, SOILS, STORMWATER MANAGEMENT, FOREST CONSERVATION AND PERIMETER LANDSCAPING PLAN

Dustin's Golden Fields

Lots 5 Thru 9, Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels 'B', 'C' & 'D'

A Resubdivision Of Lot 4, As Shown On Plats Entitled "Dustin Property, Lots 1 Thru 4" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 19666 Thru 19668.

Zoned: RR-DEO
Tax Map No.: 46 Parcel No.: 103 Grid No.: 1
Fifth Election District, Howard County, Maryland
Date: January 6, 2008
Scale 1"=50'
Sheet 1 of 5

F-09-078

1:\2005\05972\dwg\RECORD PLATS\05972 Support Plan Lots 5 Thru 9.dwg, 1/6/2009 10:40:34 AM, 1:1

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 1-15-09

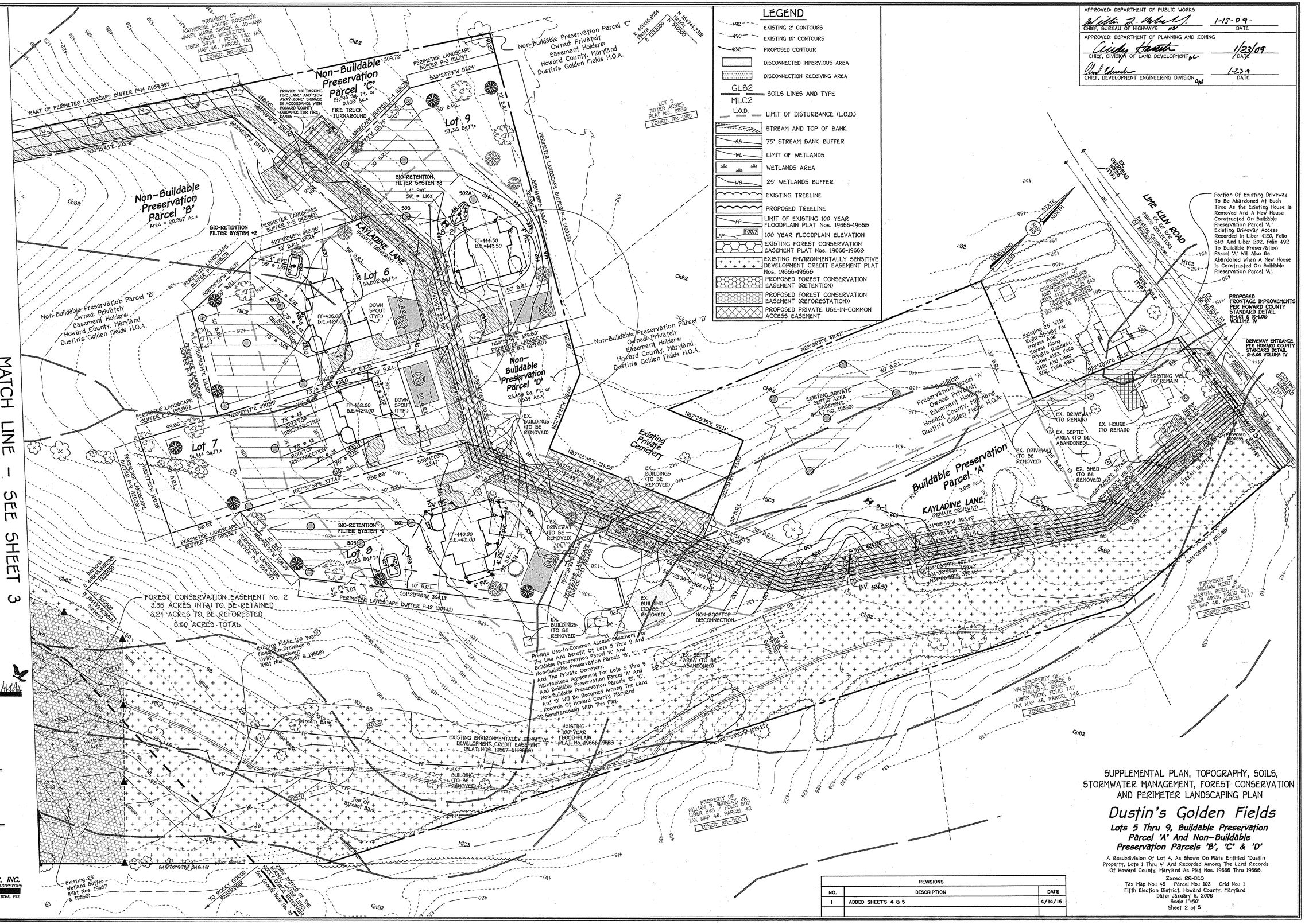
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/23/09

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 1-23-9

LEGEND

- 492 — EXISTING 2' CONTOURS
- 490 — EXISTING 10' CONTOURS
- 492 — PROPOSED CONTOUR
- DISCONNECTED IMPERVIOUS AREA
- DISCONNECTION RECEIVING AREA
- GLB2 / MLC2 — SOILS LINES AND TYPE
- L.O.D. — LIMIT OF DISTURBANCE (L.O.D.)
- STREAM AND TOP OF BANK
- SB — 75' STREAM BANK BUFFER
- WL — LIMIT OF WETLANDS
- WETLANDS AREA
- WB — 25' WETLANDS BUFFER
- EXISTING TREELINE
- PROPOSED TREELINE
- FP — LIMIT OF EXISTING 100 YEAR FLOODPLAIN PLAT Nos. 19666-19668
- FP 400.7 — 100 YEAR FLOODPLAIN ELEVATION
- EXISTING FOREST CONSERVATION EASEMENT PLAT Nos. 19666-19668
- EXISTING ENVIRONMENTALLY SENSITIVE DEVELOPMENT CREDIT EASEMENT PLAT Nos. 19666-19668
- PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)
- PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION)
- PROPOSED PRIVATE USE-IN-COMMON ACCESS EASEMENT



MD DNR Qualified Professional
USACOE Wetland Delineator
Certification • WDCP93M1006100448

JOHN P. CANOLES

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

OWNER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

DEVELOPER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADDED SHEET'S 4 & 5	4/14/15

SUPPLEMENTAL PLAN, TOPOGRAPHY, SOILS, STORMWATER MANAGEMENT, FOREST CONSERVATION AND PERIMETER LANDSCAPING PLAN

Dustin's Golden Fields

Lots 5 Thru 9, Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels 'B', 'C' & 'D'

A Resubdivision Of Lot 4, As Shown On Plats Entitled "Dustin Property, Lots 1 Thru 4" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 19666 Thru 19668.

Zoned: RR-DEO
Tax Map No.: 46 Parcel No.: 103 Grid No.: 1
Fifth Election District, Howard County, Maryland
Date: January 6, 2008
Scale 1"=50'
Sheet 2 of 5

F-09-028

I:\2005\05072\dwg\RECORD PLATS\05072 Support Plan Lots 5 Thru 9.dwg, 1/6/2009 11:22:18 AM, 1:1

APPROVED: DEPARTMENT OF PUBLIC WORKS	
CHIEF, BUREAU OF HIGHWAYS	1-15-09 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DIVISION OF LAND DEVELOPMENT	1/23/09 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	1-23-9 DATE

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADDED SHEETS 4 & 5	4/14/15

MIXED PERENNIALS* — CUT-LEAF CONEFLOWER, CARDINAL FLOWER, TRADESCANT ASTER

MIXED GRASSES* — TUFTED FESCUE, BROOM SEDGE, SWITCH GRASS

SILKY DOGWOOD

*SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING

NOTES: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE RAINGARDEN

BIORETENTION FILTER PLANTING DETAIL

NOT TO SCALE

BIORETENTION FILTER PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

BIORETENTION FILTER DATA										
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I	
1	427.5	427.5	427.0	426.75	424.25	423.50	422.68	22'	10'	
2	428.0	428.0	427.5	427.25	424.75	424.00	423.54	22'	10'	
3	441.5	441.5	441.0	440.75	438.25	437.50	437.0	VARIES	SEE PLAN	
4	382.5	382.5	382.0	381.75	379.25	378.50	377.94	22'	10'	

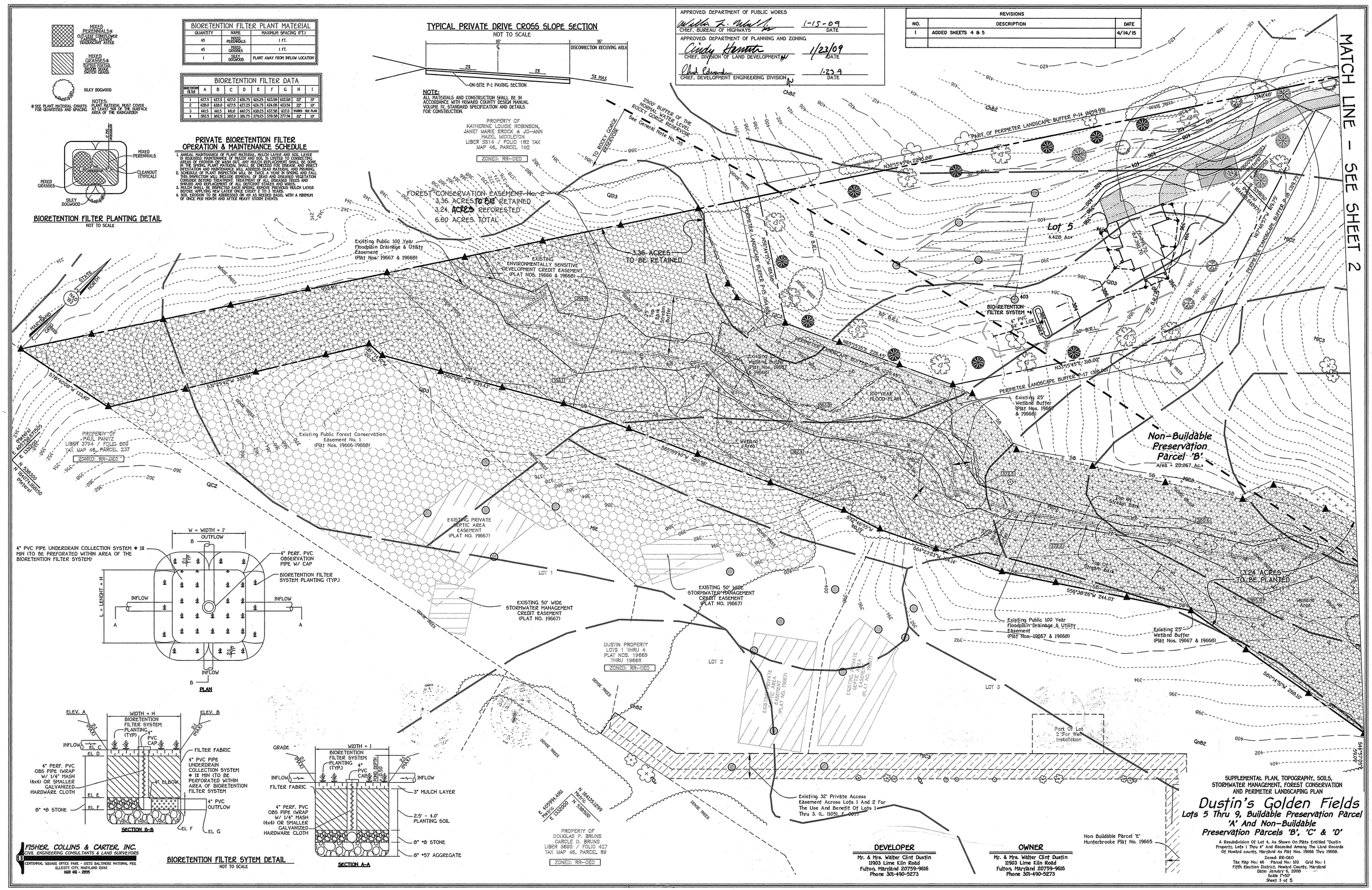
PRIVATE BIORETENTION FILTER OPERATION & MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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 MATERIALS AND PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS MUST BE ACCOMPLISHED WITHIN ONE (1) YEAR FROM FIND DATE.
3. MULCH SHALL BE REPLENISHED EACH SPRING. REMOVE ANY PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS. WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION

NOT TO SCALE

NOTE:
ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.



BIORETENTION FILTER SYTEM DETAIL

NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DEVELOPER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

OWNER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

SUPPLEMENTAL PLAN, TOPOGRAPHY, SOILS, STORMWATER MANAGEMENT, FOREST CONSERVATION AND PERIMETER LANDSCAPING PLAN

Dustin's Golden Fields

Lots 5 Thru 9, Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels 'B', 'C' & 'D'

A Resubdivision Of Lot 4, As Shown On Plats Entitled "Dustin Property, Lots 1 Thru 4" And Recorded Among The Land Records Of Howard county, Maryland As Plat Nos. 19666 Thru 19668.

Zoned RR-DEO
Tax Map No: 46 Parcel No: 103 Grid No: 1
Fifth Election District, Howard County, Maryland
Date: January 6, 2008
Scale 1"=50'
Sheet 3 of 5

F-09-028

I:\2005\05072\dwg\RECORD PLATS\05072 Support Plan Lots 5 Thru 9.dwg, 1/6/2009 10:50:54 AM, 1:1

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

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (B-4-4)

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
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.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 – 5/15, 8/15 – 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72	3/1 – 5/15, 8/15 – 10/15	1"		
RYE	112	3/1 – 5/15, 8/15 – 10/15	1"		

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 – Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

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.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

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

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

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
8	TALL FESCUE	100	Mar. 1–May 15 Aug. 1–Oct. 15	1/4–1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

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

Purpose

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

Conditions Where Practice Applies

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

Criteria

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 the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control 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 device 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. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
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.

Maintenance

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

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

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
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 thaws.
c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application
a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
iii. Mix seed and fertilizer on site and seed immediately and without interruption.
iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
a. 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 sterile straw mulch in areas where one species of grass is desired.
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.
ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

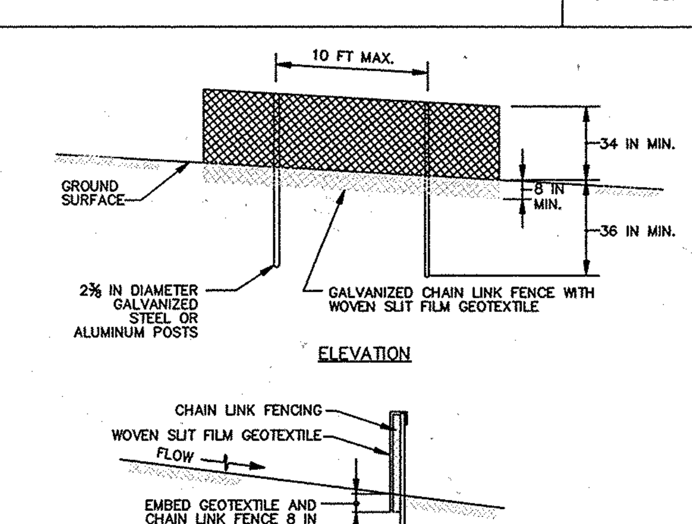
1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
6) SITE ANALYSIS:

TOTAL AREA OF SITE	20.808	AC.
AREA DISTURBED	3.09	AC.
AREA TO BE ROOFED OR PAVED	0.57	AC.
AREA TO BE VEGETATIVELY STABILIZED	2.53	AC.
TOTAL CUT		
TOTAL FILL		
OFFSITE WASTE/BORROW AREA LOCATION	N/A	

7) ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS)

2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK. IN ADDITION, NOTIFY AT&T PRIOR TO ANY ACTIVITY WITHIN THEIR EASEMENT.

3. INSTALL STABILIZED CONSTRUCTION ENTRANCES & SUPER-SILT FENCE WHERE SHOWN ON THE PLANS. CLEAR AND GRUB WHERE NECESSARY FOR DRIVEWAY CONSTRUCTION. (1 WEEK)

4. STABILIZE ALL DISTURBED AREAS WITH TEMPORARY SEEDING. CONTACT THE COUNTY SEDIMENT EROSION CONTROL INSPECTOR BEFORE PROCEEDING. (2 DAYS)

5. REMOVE EXISTING DRIVEWAY AND RAZE EXISTING STRUCTURES AS SHOWN ON SHEET 4. (2 WEEKS)

6. INSTALL EARTH DIKE DIVERSION AS SHOWN ON SHEET 4 TO DIVERT FLOW FOR CULVERT CONSTRUCTION. INSTALL PROPOSED CULVERT FOR THE NEW DRIVEWAY AS SHOWN ON SHEET 4. IMMEDIATE STABILIZATION OF THE UPSTREAM END OF CULVERT Via SOD. (2 WEEKS)

7. GRADE DRIVEWAY TO SUB BASE. (3 WEEKS)

8. STABILIZE ALL DISTURBANCE WITH TEMPORARY SEEDING. RECEIVE PERMISSION TO CONTINUE FROM THE EROSION AND SEDIMENT CONTROL INSPECTOR. (2 DAYS)

9. INSTALL SUB-BASE. PAVE DRIVEWAY UP TO THE INTERMEDIATE SURFACE LAYER WITH THE P-1 SECTION. SEE R-2.01 OF HOWARD COUNTY DESIGN MANUAL VOLUME IV. (1 WEEK)

10. INSTALL BASE COURSE OF PAVING FOR DRIVEWAY. (1 WEEK)

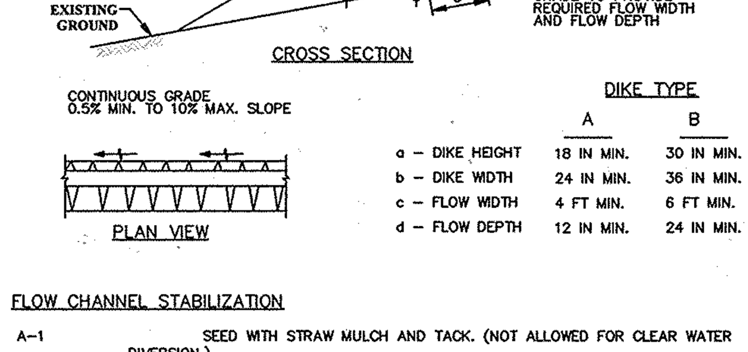
11. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING. (2 DAYS)

12. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR START REMOVING THE SEDIMENT CONTROL FEATURES AND STABILIZE THE AREAS WITH PERMANENT SEEDING (1 WEEK)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A-1 (PLACE DESIGNATION (e.g. A-1) ON FLOW CHANNEL SIDE OF DIKE.)



DIKE TYPE	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

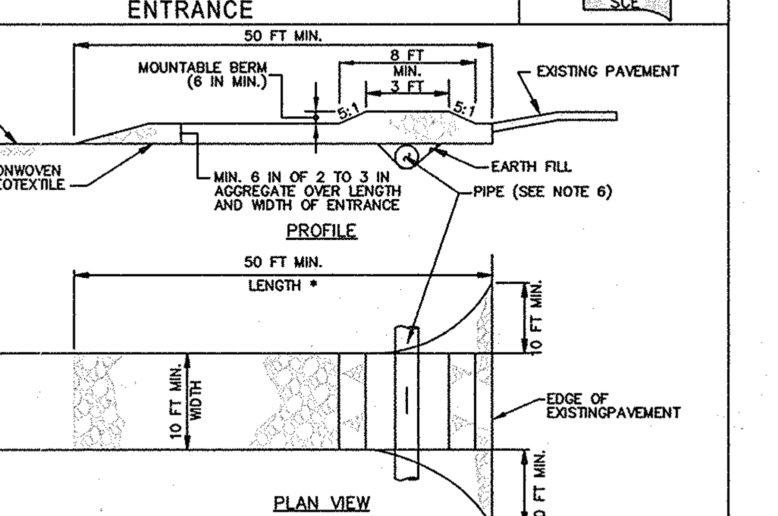
CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



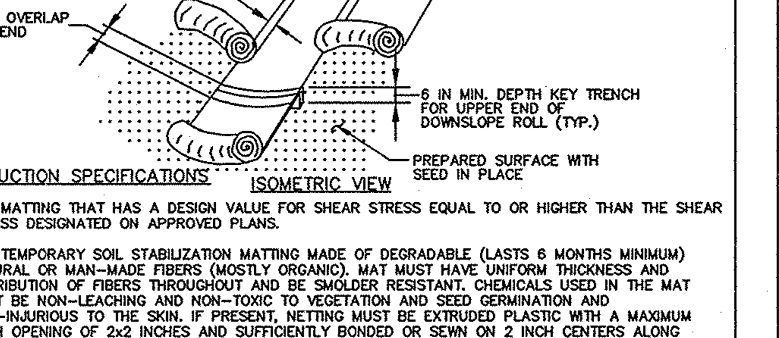
CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



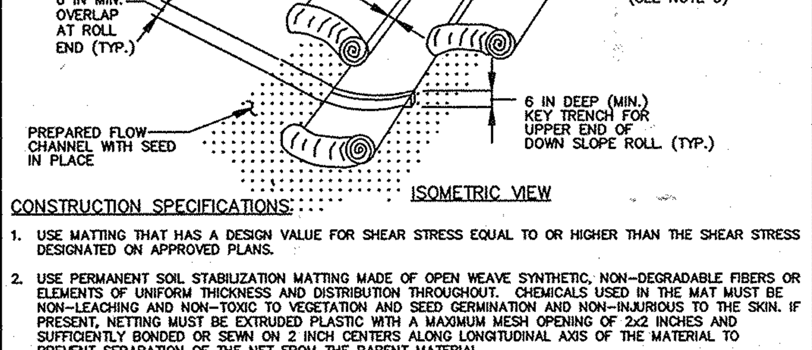
CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

STANDARD SYMBOL: PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



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. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer — 7/13/15 Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — 7-13-15 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 7/22/15 Date

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — 8-06-15 Date

Chief, Development Engineering Division — 8/3/15 Date

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 7/27/2015 Date

REVISIONS

NO.	DESCRIPTION	DATE
1	NEW SHEET	4-14-15

7/13/15

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

OWNER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

DEVELOPER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

SEDIMENT & EROSION CONTROL NOTES AND DETAILS

Dustin's Golden Fields

Lots 5 Thru 9, Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels 'B', 'C' & 'D'

A Resubdivision Of Lot 4, As Shown On Plats Entitled "Dustin Property, Lots 1 Thru 4" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 19666 Thru 19668.

Zoned: RR-DEO
Tax Map No.: 46 Parcel No.: 103 Grid No.: 1
Fifth Election District, Howard County, Maryland
Date: April 14, 2015
Sheet 5 of 5

F-09-028

I:\2005\05072\dwg\RECORD PLATS\05072 redline Support Plan Lots 5 Thru 9.dwg, 7/13/2015 8:33:42 AM, 1:1

ENGINEER'S CERTIFICATE

I Hereby 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 — Date: 7/15/15

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — Date: 7-15-15

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — Date: 7/22/15

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — Date: 8-6-15

Chief, Development Engineering Division — Date: 8/3/15

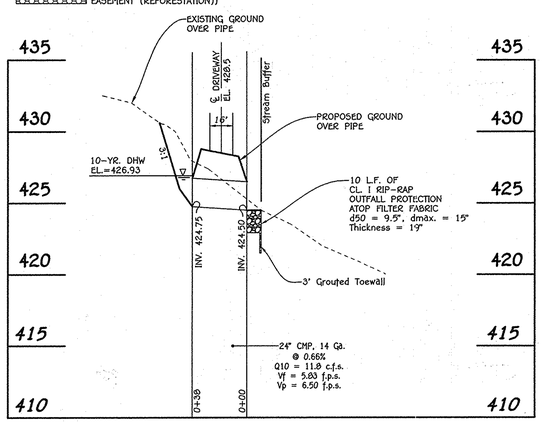
Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — Date: 7/27/2015

REVISIONS		
NO.	DESCRIPTION	DATE
1	NEW SHEET	4-14-15

LEGEND

- 492 — EXISTING 2' CONTOURS
- 490 — EXISTING 10' CONTOURS
- 492 — PROPOSED CONTOUR
- L.O.D. — LIMIT OF DISTURBANCE (L.O.D.)
- SB — STREAM AND TOP OF BANK
- SB — 75' STREAM BANK BUFFER
- WL — LIMIT OF WETLANDS
- WETLANDS AREA
- WB — 25' WETLANDS BUFFER
- EXISTING TREELINE
- PROPOSED TREELINE
- FP — LIMIT OF EXISTING 100 YEAR FLOODPLAIN PLAT Nos. 19666-19668
- FP 100.7 — 100 YEAR FLOODPLAIN ELEVATION
- EXISTING FOREST CONSERVATION EASEMENT PLAT Nos. 19666-19668
- EXISTING ENVIRONMENTALLY SENSITIVE DEVELOPMENT CREDIT EASEMENT PLAT Nos. 19666-19668
- PROPOSED FOREST CONSERVATION EASEMENT (RETENTION)
- PROPOSED FOREST CONSERVATION EASEMENT (REFORESTATION))

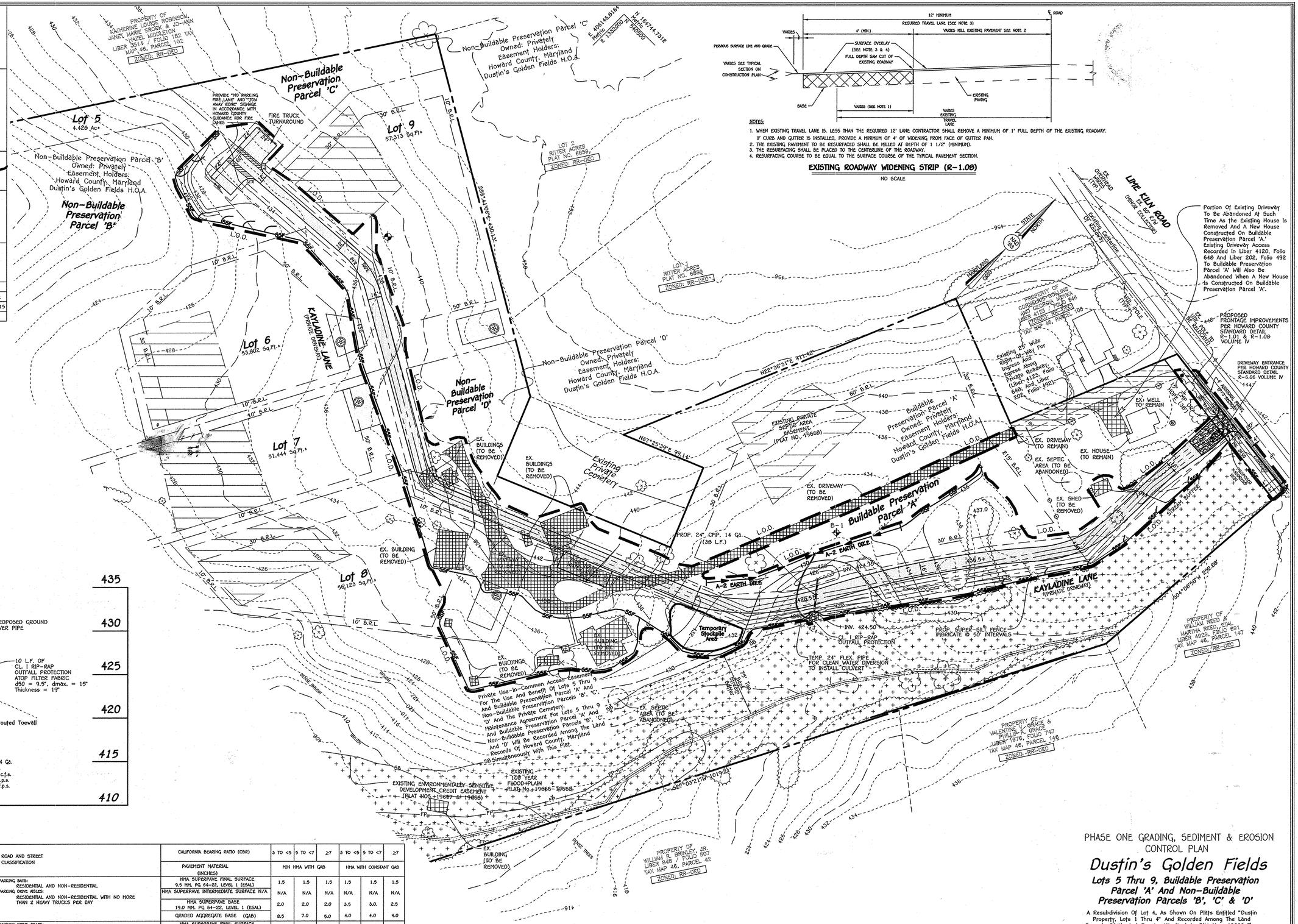


PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (E5AL)	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE	N/A	N/A	N/A	N/A	N/A	N/A
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (E5AL)	2.0	2.0	2.0	3.5	3.0.	2.5
		GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0
P-3	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL MINOR COLLECTORS: RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (E5AL)	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (E5AL)	1.0	1.0	1.0	1.0	1.0	1.0
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (E5AL)	3.0	3.0	3.0	4.5	3.0	2.0
		GRADED AGGREGATE BASE (GAB)	10.0	6.0	3.0	6.0	6.0	6.0

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855



NOTES:

1. WHEN EXISTING TRAVEL LANE IS, LESS THAN THE REQUIRED 12' LANE CONTRACTOR SHALL REMOVE A MINIMUM OF 1' FULL DEPTH OF THE EXISTING ROADWAY. IF CURB AND GUTTER IS INSTALLED, PROVIDE A MINIMUM OF 4' OF WIDENING FROM FACE OF GUTTER PAN.
2. THE EXISTING PAVEMENT TO BE RESURFACED SHALL BE MILLED AT DEPTH OF 1 1/2" (MINIMUM).
3. THE RESURFACING SHALL BE PLACED TO THE CENTERLINE OF THE ROADWAY.
4. RESURFACING COURSE TO BE EQUAL TO THE SURFACE COURSE OF THE TYPICAL PAVEMENT SECTION.

EXISTING ROADWAY WIDENING STRIP (R-1.08)

NO SCALE

PHASE ONE GRADING, SEDIMENT & EROSION CONTROL PLAN

Dustin's Golden Fields

Lots 5 Thru 9, Buildable Preservation Parcel 'A' And Non-Buildable Preservation Parcels 'B', 'C' & 'D'

A Resubdivision Of Lot 4, As Shown On Plats Entitled "Dustin Property, Lots 1 Thru 4" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 19666 Thru 19668.

Zoned: RR-DEO
Tax Map No.: 46 Parcel No.: 103 Grid No.: 1
Fifth Election District, Howard County, Maryland
Date: April 14, 2015
Scale 1"=50'
Sheet 4 of 5

OWNER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

DEVELOPER
Mr. & Mrs. Walter Clint Dustin
11903 Lime Kiln Road
Fulton, Maryland 20759-9616
Phone 301-490-5273

F-09-028

I:\2005\05072\dwg\RECORD PLATS\05072 redline Support Plan Lots 5 Thru 9.dwg, 7/14/2015 11:14:08 AM, 1:1