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 a its roots may be found, The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

2. Fencing and Signage

Existing forest limits occurring within 25 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

B. Pre-Construction Meeting

Upon staking of limits of disturbance 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 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 outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to area within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

D. Sequence of Construction

The following timetable represents the proposed timetable for development of the subject property. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

1. Install all signage and sediment control devices.
2. Hold pre-construction meeting between developer, contractor and County inspector.
3. Build access roads, install water and sewer, and construct houses. Stabilize all disturbed areas accordingly.
4. Remove sediment control.
5. Hold post-construction meeting with County inspectors to assure compliance with FCP. Submit Certification of Retention.

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.

F. 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 arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that forest retention requirements have been met

POST-CONSTRUCTION MANAGEMENT PLAN

Howard County requires a two year post-construction management plan be prepared as part of the Forest Conservation Plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by 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. Fencing and Signage

Permanent signage indicating the limits of the retention/planting area shall be maintained.

B. General Site Inspections

Site inspections will be performed to insure that retention of the forest is met in accordance with this plan and that the forest edge remains healthy and stable.

C. Education

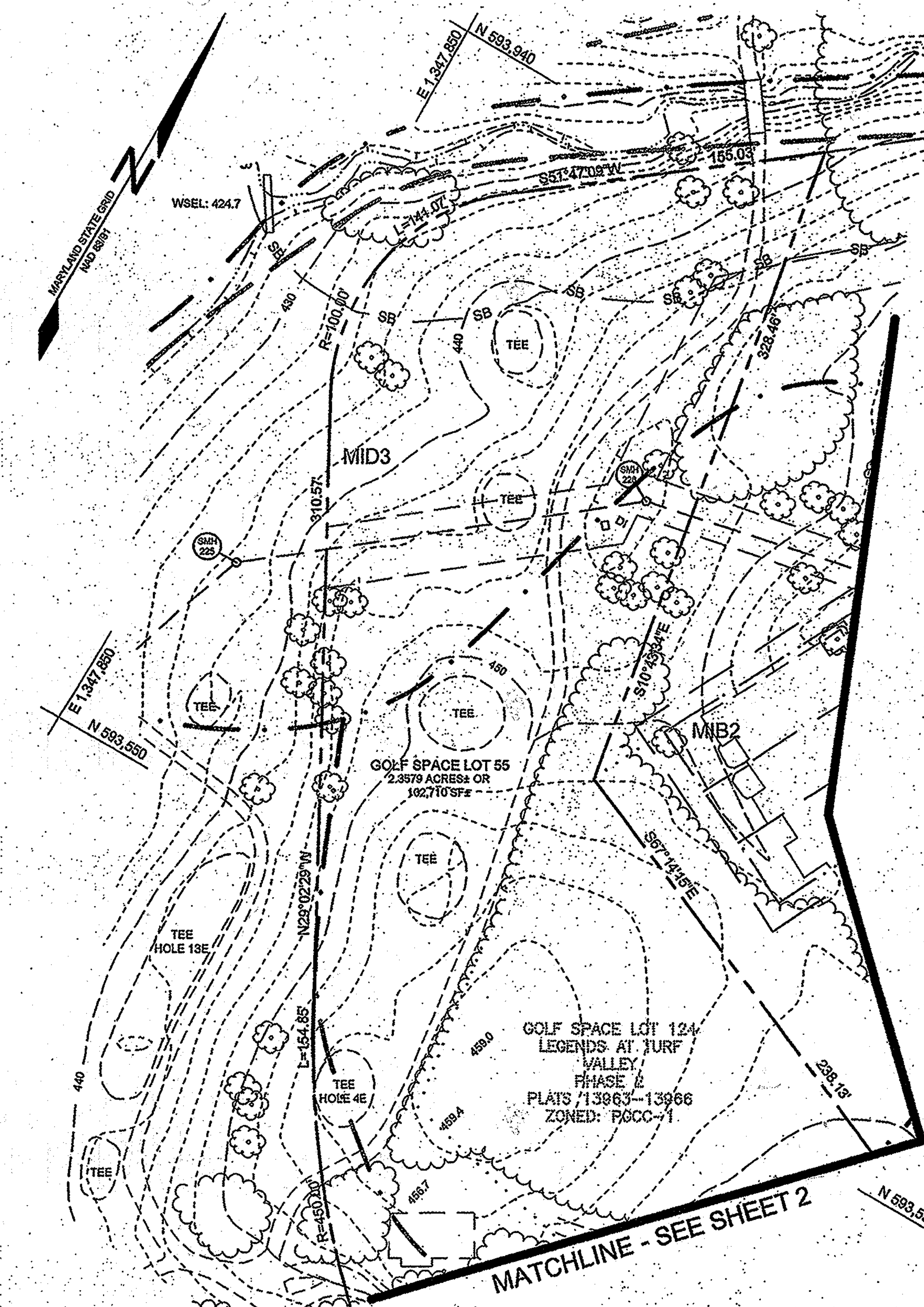
The developer will provide appropriate materials to property owners informing them of the location and purpose of the forest conservation easement. Materials may include site plans and information explaining the intent of the forest conservation law.

D. Final Inspection

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

FOREST CONSERVATION EASEMENTS

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention areas the subject property. Submission of the easements for recordation will occur prior to commencement of construction activities.



PLAN VIEW

SCALE: 1"=50'

PLAN VIEW

SCALE: 1"=50'

N 594,200 E 1,349,200

FOREST CONSERVATION WORKSHEET
Version 1.0

Project: Fairways at Turf Valley
Date: January 12, 2010

NET TRACT AREA		Acres
A. Total tract area		93.3
B. Area within 100 year floodplain - future phases of development		80.5
C. Area within limits of previous site plan - SDP-89-47		4.6
D. Net Tract Area		8.2
LAND USE CATEGORY: (from table 3.2.1, page 40, Manual) ARA MDR IDA HDR MPD CIA — X (MPD)		
E. Afforestation Threshold (percentage)	0.15	1.2
F. Conservation Threshold (percentage)	0.15	1.2
EXISTING FOREST COVER:		
G. Existing forest cover (excluding floodplain)		5.2
H. Area of forest above afforestation threshold		4.0
I. Area of forest above conservation threshold		4.0
BREAK EVEN POINT:		
J. Forest retention above threshold with no mitigation		0.8
Break-Even Point		2.0
K. Clearing permitted without mitigation		3.2
PROPOSED FOREST CLEARING		
L. Total area of forest to be Cleared or Retained Outside FCE		4.9
M. Total area of forest to be Retained in FCE		0.3
PLANTING REQUIREMENTS		
N. Reforestation for clearing above Conservation Threshold		1.0
P. Reforestation for clearing below Conservation Threshold		1.8
Q. Credit for retention above conservation threshold		0
R. Total reforestation required		2.8
S. Total afforestation required		0
T. Total reforestation and afforestation required		2.8

FCP NOTES

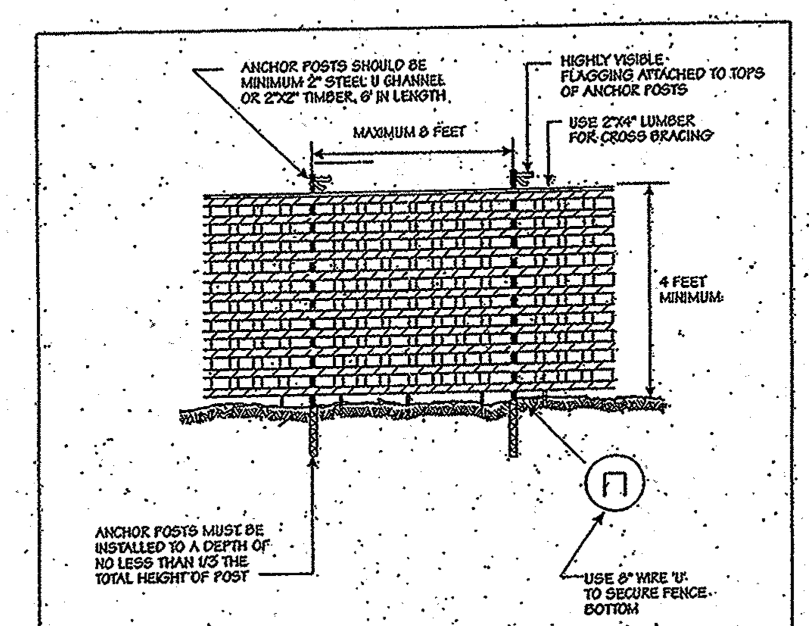
1. The forest resources have been reported in the forest stand delineation for the Fairways at Turf Valley, Phase III (SP-08-005)
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance (LOD) shown on this plan represent the limits of this phase of the project. Future phases of the project will be addressed as they are proposed.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
5. Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along the approved limits of disturbance occurring within 50 feet of the approved FCE limits.
6. Permanent signage will be posted a at 50-100 foot intervals along all approved FCE limits.
7. The Forest Conservation Act requirements for this project will be met through a combination of onsite retention of 0.3 acres and offsite reforestation of 2.8 acres. The reforestation obligation will be met with 1.75 acres of "offsite" forest retention on exempt portions of Turf Valley and 1.9 acres of offsite reforestation. The "offsite" retention is credited at a 0.5:1 ratio. The Forest Conservation Easements have been defined on the Plat of Revision for Turf Valley Parcel D FCE # 1-5. These easements define a total of 3.51 acres of forest conservation credit. The surplus of 0.72 acres of reforestation credit will be attributed to a future phase of the Fairways at Turf Valley development.

FCA Exemption Note

The proposed development of Fairways of Turf Valley will occur on portions of Parcels 8 and 706 (tax map 16). The development occurring on Parcel 8 is exempt from the Forest Conservation Act regulations. Portions of Parcel 706 that occur outside the limits of disturbance for this phase of the project are not included as part of the project for the purpose of the Forest Conservation Act.

FCA Waiver Petition Note

A waiver petition (WP-09-048) was approved November 24, 2008 to Section 16.1202(a)(1) of the Howard County Code to allow for the temporary deferral of the on- and off-site Forest Conservation Easement for the development of Turf Valley 4th Amended CSP, Parcel 706. The entire FCA obligation for Parcel 706 must be provided with the processing and recording of the last phase of development located on Parcel 706. The project must meet all applicable deadline and milestone dates in accordance with section 16.144 and 16.156 of the Howard County Code.



Notes:
1. Blaze orange or blue plastic mesh fence for forest protection device, only.
2. Boundaries of Retention Area will be established as part of the forest conservation plan review process.
3. Boundaries of Retention Area should be staked and flagged prior to installing device.
4. Avoid damage to critical root zone. Do not damage or sever large roots when installing posts.
5. Protection signs are required, See Figure C-4.
6. Device should be maintained throughout construction.

Source: Adapted from Prince George's County, Maryland: Woodland Conservation Manual and Forest Conservation Manual, 1991

Plastic Mesh Tree Protection Fence — Figure C-5

11" × 15"

Forest Conservation Easement

Unauthorized disturbances of vegetation is prohibited. Violators are subject to fines as imposed by the Howard County Forest Conservation Act of 1992.

Trees for Your Future

Legend

LOD	Limits of Subject Phase
///	Limits of Previous Development - SDP 89-47
— — —	Existing Contours
———	Proposed Contours
⌒⌒⌒	Existing Forest Limits
(hexagon pattern)	Proposed Forest Limits/FCE
—W—	Wetlands
—WB—	Wetland/Stream Buffer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kent Sheubrooks 5-31-16
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

Chad Edmondson 5-27-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

~~APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.~~

~~CHIEF, BUREAU OF HIGHWAYS — DATE~~

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B2
John R. Canoles 4/28/16

OWNER/DEVELOPER

MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

FOREST CONSERVATION PLAN
FAIRWAYS AT TURF VALLEY

PHASE I, SECTION 1:
RESORT ROAD AND GOLF SPACE LOT 50 & 51
PODS 'F' AND PART OF 'H' SECTION IV : RESIDENTIAL PHASE IV D
A SUBDIVISION OF P/O PARCELS 8 & 706

TAX MAP 16 GRID 16
2ND ELECTION DISTRICT

PART OF PARCELS 8 AND 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saaland.com

DESIGN BY:	PS/MRM
DRAWN BY:	PS/MRM
CHECKED BY:	PS
SCALE:	AS SHOWN
DATE:	
PROJECT #:	08-025
SHEET #:	1 of 4

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. 32025, EXPIRATION DATE: JUNE 20, 2011

F-16-087

FOREST CONSERVATION WORKSHEET
Version 1.0

Project: Fairways at Turf Valley
Date: January 12, 2010

NET TRACT AREA		Acres
A. Total tract area		93.3
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T. Total reforestation and afforestation required		2.8

Legend

- LOD — Limits of Subject Phase
- /// — Limits of Previous Development - SDP 89-47
- Existing Contours
- Proposed Contours
- Existing Forest Limits
- Proposed Forest Limits/FCE
- —W— Wetlands
- —WB— Wetland/Stream Buffer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 5-31-16 — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 5-27-16 — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B2
John P. Canoles 4/28/16

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1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

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FAIRWAYS AT TURF VALLEY

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A SUBDIVISION OF P/O PARCELS 8 & 706

TAX MAP 16 GRID 16
2ND ELECTION DISTRICT

PART OF PARCELS 8 AND 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saaland.com

DESIGN BY: PS/MRM
DRAWN BY: PS/MRM
CHECKED BY: PS
SCALE: 1" = 50'
DATE:
PROJECT #: 08-025
SHEET #: 2 of 4

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. 32025, EXPIRATION DATE: JUNE 20, 2011

F-16-087

FCA Exemption Note

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	Proposed Forest Limits/FCE
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5-31-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

5-27-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS DATE

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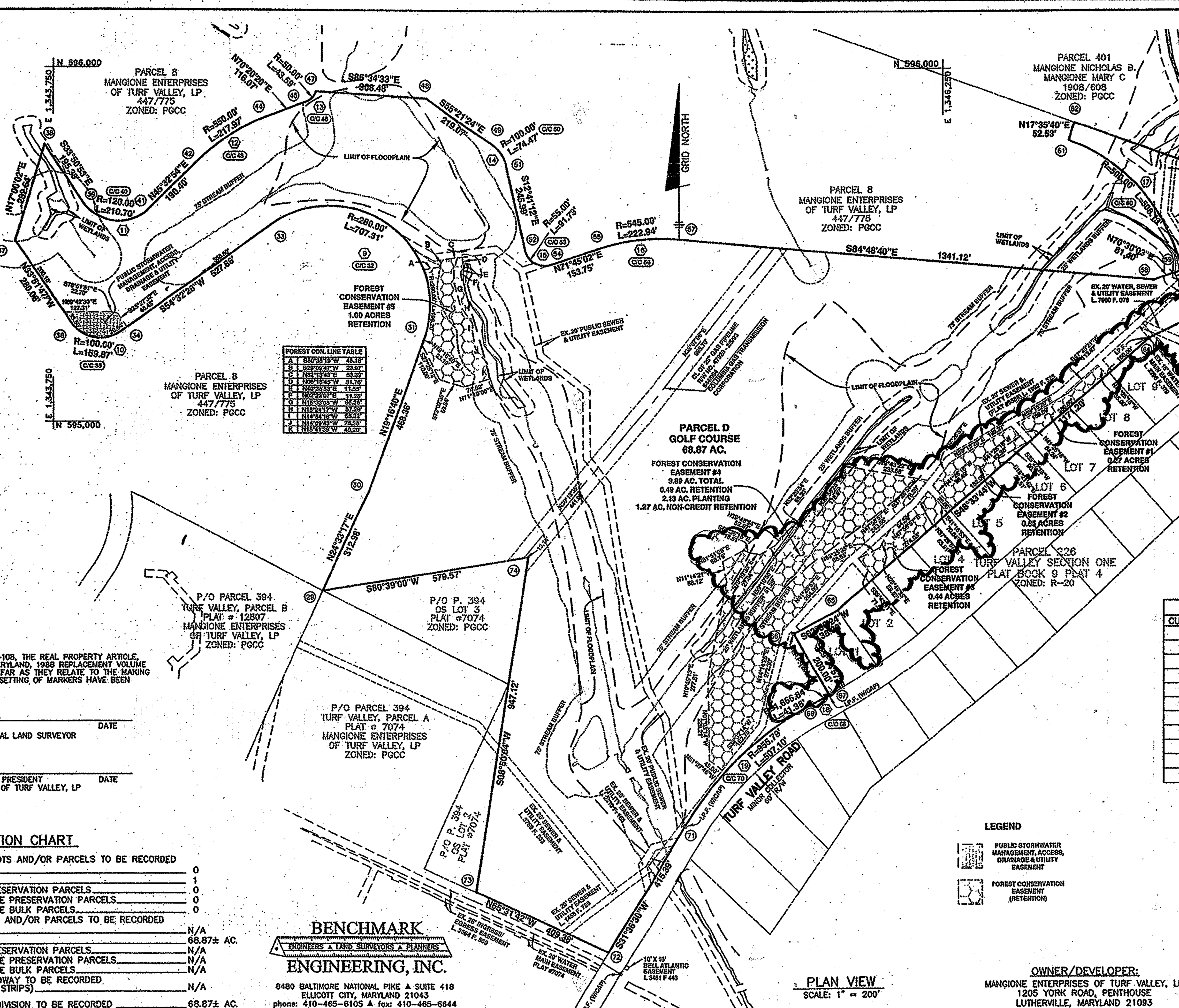
DESIGN BY:	PS/MRM
DRAWN BY:	PS/MRM
CHECKED BY:	PS
SCALE:	1" = 50'
DATE:	
PROJECT #:	06-025
SHEET #:	3 of 4

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. 32025, EXPIRATION DATE: JUNE 20, 2011

F-16-087



THE REQUIREMENTS § 3-108, THE REAL PROPERTY ARTICLE, ANNOTATED CODE OF MARYLAND, 1988 REPLACEMENT VOLUME (AS SUPPLEMENTED) AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT AND THE SETTING OF MARKERS HAVE BEEN COMPLIED WITH.

DONALD A. MASON — DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
MARYLAND NO. 21320

NICHOLAS B. MANGIONE, PRESIDENT — DATE
MANGIONE ENTERPRISES OF TURF VALLEY, LP

AREA TABULATION CHART

TOTAL NUMBER OF LOTS AND/OR PARCELS TO BE RECORDED	
BUILDABLE	0
OPEN SPACE	1
BUILDABLE PRESERVATION PARCELS	0
NON-BUILDABLE PRESERVATION PARCELS	0
NON-BUILDABLE BULK PARCELS	0
TOTAL AREA OF LOTS AND/OR PARCELS TO BE RECORDED	
BUILDABLE	N/A
OPEN SPACE	68.87± AC.
BUILDABLE PRESERVATION PARCELS	N/A
NON-BUILDABLE PRESERVATION PARCELS	N/A
NON-BUILDABLE BULK PARCELS	N/A
TOTAL AREA OF ROADWAY TO BE RECORDED (INCLUDING WIDENING STRIPS)	N/A
TOTAL AREA OF SUBDIVISION TO BE RECORDED	68.87± AC.

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418
ELLICOTT CITY, MARYLAND 21043
phone: 410-465-6105 ▲ fax: 410-465-6644
www.bei-civilengineering.com

PLAN VIEW
SCALE: 1" = 200'

LEGEND

PUBLIC STORMWATER MANAGEMENT, ACCESS, DRAINAGE & UTILITY EASEMENT

FOREST CONSERVATION EASEMENT (RETENTION)

OWNER/DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

CURVE DATA TABLE

CURVE	RADIUS	ARC	DELTA	TANGENT	CHORD	
9	280.00'	707.31'	144°44'04"	880.93'	N53°05'26"W	533.69'
10	100.00'	159.87'	91°35'54"	102.83'	N79°39'40"W	143.38'
11	120.00'	210.70'	100°36'11"	144.55'	S84°09'00"E	184.66'
12	550.00'	237.97'	24°47'26"	120.88'	N57°56'37"E	236.12'
13	50.00'	43.59'	49°56'50"	23.29'	N45°21'59"E	42.22'
14	100.00'	74.47'	42°40'03"	39.06'	S34°01'18"E	72.76'
15	55.00'	91.73'	95°33'21"	60.61'	S60°28'05"E	81.46'
16	545.00'	222.94'	23°26'16"	113.05'	N83°28'11"E	221.39'
17	500.00'	508.13'	58°13'37"	278.45'	N40°52'28"W	486.54'
18	1,666.84'	41.38'	01°25'21"	20.69'	S61°17'44"W	41.38'
19	955.79'	507.10'	30°23'54"	259.67'	S46°48'27"W	501.17'

PURPOSE STATEMENT:
THE PURPOSES OF THIS PLAT OF REVISION ARE: TO ADD A PUBLIC STORMWATER MANAGEMENT, ACCESS, DRAINAGE & UTILITY EASEMENT; TO ADD FOREST CONSERVATION EASEMENTS 1 thru 5 FOR THE FAIRWAYS AT TURF VALLEY, PHASE 1 (F-07-158) FOREST CONSERVATION OBLIGATION; AND TO ACCURATELY REFLECT THE EXISTING EASEMENT CONNECTION FROM THE EXISTING LOTS ALONG TURF VALLEY ROAD TO THE 20' SEWER & UTILITY EASEMENT (PLAT #8583).

RECORDED AS PLAT NO. ______ ON ______ AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER. HOWARD COUNTY HEALTH DEPARTMENT.

HOWARD COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DIRECTOR — DATE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE INFORMATION SHOWN HEREON IS CORRECT, THAT IT IS PART OF LAND ACQUIRED BY MANGIONE ENTERPRISES OF TURF VALLEY, A MARYLAND LIMITED PARTNERSHIP FROM TURF VALLEY ASSOCIATES, A MARYLAND LIMITED PARTNERSHIP BY DEED DATED DECEMBER 20, 1978 AND RECORDED IN LIBER 0920 AT FOLIO 250 AND THAT ALL MONUMENTS ARE IN PLACE OR WILL BE IN PLACE PRIOR TO ACCEPTANCE OF THE ROADS BY HOWARD COUNTY, IN ACCORDANCE WITH THE ANNOTATED CODE OF MARYLAND, AS AMENDED.

DONALD A. MASON — DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
MARYLAND No. 21320

OWNER'S CERTIFICATE

"MANGIONE ENTERPRISES OF TURF VALLEY, OWNER OF THE PROPERTY SHOWN HEREON, HEREBY ADOPTS THIS PLAN OF SUBDIVISION, AND IN CONSIDERATION OF APPROVAL OF THIS FINAL PLAT BY THE DEPARTMENT OF PLANNING AND ZONING, ESTABLISHES THE MINIMUM BUILDING RESTRICTION LINES AND GRANTS UNTO HOWARD COUNTY, MARYLAND, ITS SUCCESSORS AND ASSIGNS, (1)THE RIGHT TO LAY, CONSTRUCT AND MAINTAIN SEWERS, DRAINS, WATER PIPES, AND OTHER MUNICIPAL UTILITIES AND SERVICES, IN AND UNDER ALL ROADS AND STREET RIGHTS-OF-WAY, AND THE SPECIFIC EASEMENT AREAS SHOWN HEREON, (2) THE RIGHT TO REQUIRE DEDICATION FOR PUBLIC USE THE BEDS OF THE STREETS AND/OR ROADS, FLOODPLAINS AND OPEN SPACE WHERE APPLICABLE, AND FOR GOOD AND OTHER VALUABLE CONSIDERATION, HEREBY GRANTS THE RIGHT AND OPTION TO HOWARD COUNTY TO ACQUIRE THE FEE SIMPLE TITLE TO THE BEDS OF THE STREETS AND/OR ROADS AND FLOODPLAINS, STORM DRAINAGE FACILITIES AND OPEN SPACE WHERE APPLICABLE, (3) THE RIGHT TO REQUIRE DEDICATION OF WATERWAYS AND DRAINAGE EASEMENTS FOR THE SPECIFIC PURPOSE OF THEIR CONSTRUCTION, REPAIR AND MAINTENANCE, AND (4) THAT NO BUILDING OR SIMILAR STRUCTURE OF ANY KIND SHALL BE ERECTED ON OR OVER THE SAID EASEMENTS AND RIGHTS-OF-WAY, WITNESS OUR HANDS THIS DAY OF AUGUST, 2008."

NICHOLAS B. MANGIONE, PRESIDENT — DATE
MANGIONE ENTERPRISES OF TURF VALLEY, LP

WITNESS — DATE

PLAT OF REVISION
TURF VALLEY
PARCEL D
PGCC DISTRICT, MULTI-USE SUBDISTRICT
TURF VALLEY GOLF COURSE
PREVIOUSLY RECORDED AS PLAT NO. 12808
AND PLAT NOS. 19700-19701
F-97-069 F-08-089

THIRD ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
TAX MAP: 16 — SCALE: 1" = 200'
GRID: 17
PARCEL: P/O 394 — DATE: SEPTEMBER, 2008
ZONED: PGCC — SHEET: 2 OF 2

Forest Conservation Summary Table

Plat of Revision Turf Valley Parcel D

Easement #	Total Easement (acres)	Reforestation Acreage	Retention Acreage	Retention Credit (acres)	Non credited Retention (acres)	Total FCE Credit (acres)	Priority Areas (acres)
1	0.27	0	0.27	0.135	0	0.135	0.27
2	0.55	0	0.55	0.275	0	0.275	0.55
3	0.44	0	0.44	0.22	0	0.22	0.44
4	3.89	2.13	0.49	0.245	1.27	2.38	3.89
5	1.00	0	1.00	0.5	0	0.5	1.0
TOTALS	6.15	2.13	2.75	1.375	1.27	3.51	6.15

Fairways at Turf Valley
Forest Conservation Credit Calculations

Phase	Proposed onsite Retention	Reforestation/ Afforestation Required	Reforestation/ Afforestation Credit Provided Offsite*	FCE Credit Recorded but not Utilized by Phase and location of FCE easement**
Phase 1	0.3 acres	2.8 acres	3.52 acres	0.22 acres reforestation 1.0 acres retained forest Plat of Revision Parcel D - F-09-22
Total FCE credit not yet utilized for project				0.72 acres

* this credit may be obtained through 1:1 planting or 2:1 offsite retention
** Retention acreage reflects actual easement area and not 0.5 retention credit

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5-31-16
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

5-27-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE

OFFSITE PLANTING SCHEDULE

FCE # 4 Offsite Reforestation Area - 2.13 acres
Planting units Required: 1491
Planting units Provided: 1492

Qty	Species	Size	Spacing	Total FCA Units
40	Acer rubrum - Red maple	1" cal.	15' o.c.	
30	Acer saccharinum - Silver maple	1" cal.	15' o.c.	
30	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.	
30	Platanus occidentalis - Sycamore	1" cal.	15' o.c.	
30	Quercus alba - White oak	1" cal.	15' o.c.	
120	Total 1" caliper trees x 3.5 units/tree= FCA unit credit			420
100	Acer rubrum - Red maple	2-3' whip	11' o.c.	
80	Acer saccharinum - Silver maple	2-3' whip	11' o.c.	
100	Liriodendron tulipifera - Tulip poplar	2-3' whip	11' o.c.	
80	Platanus occidentalis - Sycamore	2-3' whip	11' o.c.	
60	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
60	Quercus alba - White oak	2-3' whip	11' o.c.	
56	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
536	Total whip plantings x 2 units /tree = FCA unit credit			1072
			Total Unit Credit	1492

Planting Notes:

Three planting options are provided so allow flexibility for the property owner. Only one planting option schedule needs to be followed.

Planting density based spacing requirements:1" caliper trees @ 15' on center, whips with shelter @ 11' on center.

1" caliper trees should be staggered along the perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.

Planting may be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance

Multiflora rose/heavy brush removal/control may be required prior to installation of planting.

All whips are required to be installed with tree shelters per Howard County FCA requirements.

Planting units defined by the spacing requirements established in the FCA Manual. One plant unit is defined as 1 seedling or whip without shelter. The Manual states that 700 seedlings/whips without shelters are required per acre, or 350 whips w/shelters, or 200 1" caliper trees, or 100 2" caliper trees. By conversion it has been determined that a seeding or whip without shelter = 1 unit, whip with shelter = 2 units, 1"caliper tree = 3.5 units and 2" caliper tree =7 units. The use of plant units simplifies the plant density calculations when mixing stock size.

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. Cleaning 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.
2. Hold pre-construction meeting between developer, contractor and County inspector.
3. Grade site and construct improvements. Stabilize all disturbed areas in accordance with grading plan.
4. Remove sediment control. Replace any forest retention signage in poor condition.
5. Hold post-construction meeting with County inspectors to assure compliance with FCP.

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 arrange 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.

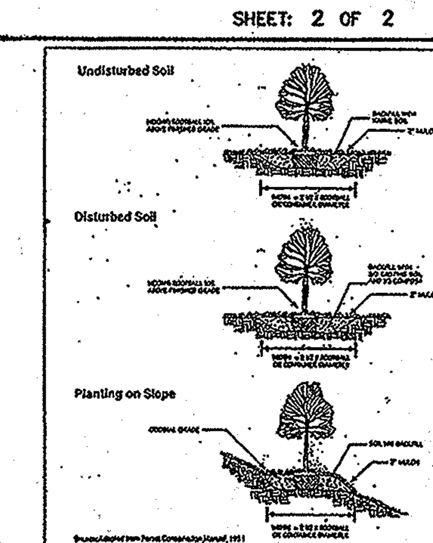
POST-CONSTRUCTION MANAGEMENT PLAN

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.



Container Grown and B&B Planting Techniques — Figure C-16

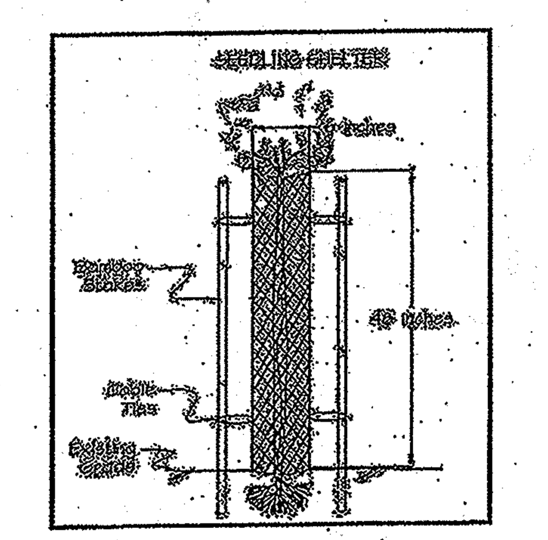


Diagram of a Mesh Seedling Protector

Project Notes -

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
5. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
6. Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
7. The Forest Conservation Act requirements for this project will be met through a combination of onsite retention of 0.3 acres and offsite reforestation of 2.8 acres. The reforestation obligation will be met with 1.75 acres of "offsite" forest retention on exempt portions of Turf Valley and 1.9 acres of offsite reforestation. The "offsite" retention is credited at a 0.5:1 ratio. The Forest Conservation Easements have been defined on the Plat of Revision for Turf Valley Parcel D FCE # 1-5. These easements define a total of 3.51 acres of forest conservation credit. The surplus of 0.72 acres of reforestation credit will be attributed to a future phase of the Fairways at Turf Valley development.

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MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B2
John P. Canoles 4/8/16

OWNER/DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410.825.8400

FOREST CONSERVATION PLAN
FAIRWAYS AT TURF VALLEY
PHASE I, SECTION 1:
RESORT ROAD AND GOLF SPACE LOT 50 & 51
PODS 'F' AND PART OF 'H' SECTION IV : RESIDENTIAL PHASE IV D
A SUBDIVISION OF P/O PARCELS 8 & 706

TAX MAP 16 GRID 18 — PART OF PARCELS 8 AND 706
2ND ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: PS
SCALE: 1"=80'
DATE:
PROJECT #: 06-025
SHEET #: 4 of 4

F-16-087