

SITE DEVELOPMENT PLAN



LOT/PARCEL #

PROPERTY OWNER INFORMATION Robert J. Jr. & Mary L. Lewis 2425 Daisy Road Woodbine,

ADDRESS CHART

ADDRESS

2425 Daisy Road Woodbine, Maryland 21797

Maryland (410)442-4696

UTILITY NOTIFICATION "Ecotone, Inc. makes no representation as to the existence or non-existence

of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at: 1-800-257-7777."

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS ALCONFERENCE WITH THE MASTER PLAN OF WATER & SEWERAGE FOR HOWARD COUNTY AND

COUNTY HEALTH OFFICER TOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 1.21.15 CHIEF, DEVELOPMENT ENGINEERING DIVISION

3-04-15 CHIEF, DIVISION OF LAND DEVELOPMENT

SITE DATA:

PARCEL ID: MAP 0014 / GRID 0007 / PARCEL 0174 TOTAL ACREAGE: 100.96 AC EXISTING USE - AGRICULTURAL

WATERSHED: PATUXENT RIVER SUBWATERSHED: BRIGHTON DAM (HUC: 02131108)

| GmB Glenville silt loam, 3-8% slopes, moderately | |
|---|----------|
| GgB Glenelg loam, 3-8% slopes GgC Glenelg loam, 8-15% slopes, moderately erc *GnB Glenville-Baile silt loams, 0-8% slopes GmB Glenville silt loam, 3-8% slopes, moderately *Ha Hatboro silt loam LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | |
| GgC Glenelg loam, 8-15% slopes, moderately erco *GnB Glenville-Baile silt loams, 0-8% slopes GmB Glenville silt loam, 3-8% slopes, moderately *Ha Hatboro silt loam LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | % slopes |
| *GnB Glenville-Baile silt loams, 0-8% slopes GmB Glenville silt loam, 3-8% slopes, moderately *Ha Hatboro silt loam LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | |
| GmB Glenville silt loam, 3-8% slopes, moderately *Ha Hatboro silt loam LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | oded |
| *Ha Hatboro silt loam LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | |
| LeB Legore silt loam, 3-8% slopes LeC Legore silt loam, 8-15% slopes | eroded |
| LeC Legore silt loam, 8-15% slopes | |
| | |
| LrD Legore-Relay gravelly loam, 15-25% slopes | |
| | |
| MaD Manor loam, 15-25% slopes | |
| McD Manor loam, 15-25% slopes, very rocky | |

A surety for the 9.67 acre forest mitigation bank must be posted in the amount of \$210,613.00, at the time of execution of the Developers Agreement.

GENERAL NOTES

1. Property consists of one parcel totaling 100.96 acres, recorded on tax map #14 grid #7 as parcel 174, referenced in the howard county land records at liber 4415, folio 182, and zoned RC-DEO.

2. Base map and boundary information provided HOWARD CO. GIS and C.F. KREUTER & ASSOCIATES, INC. 3. A stream and its associated nontidal wetlands were found on-site as determined by ECOTONE, INC. in July, 2013, and were field located by ECOTONE using gps

4. Forest stand delineation conducted by ECOTONE, INC. in August 2013. 5. The property does contain 100 year floodplain as shown on plan per FEMA DFIRM panel: 24027C0045D. 6. No rare, threatened, or endangered species were encountered on the site. a database review request has been sent to the maryland department of natural resources wildlife heritage service to determine if any rare, threatened,

or endangered species are known to occur on or near the site. 7. No known historic resources were observed on the site.

REVISION BY DATE WJV 2/26/14 PER 1/17/14 COMMENTS

PLAN REVISIONS

ECOTONE FORESTS · WETLANDS · RIVERS · WILDLIFE INC.

2120 HIGH POINT ROAD • FOREST HILL, MARYLAND 21050 (410) 420 2600 • FAX (410) 420 6983 • WWW.ECOTONEINC.COM

The proposed planting and enhancement areas totaling 9.67 ac. are proposed to

parcel include an existing home and out buildings in association with agricultural

be located along Cattail Creek on the Lewis Property. Current land uses on this

operations. The plantings will expand the forested buffer on the existing stream

and nontidal wetlands. Planting will utilize a variety of species as shown in the

Reforestation Planting Table on Sheet 4 of this plan set. Stock will be randomly

placed per the details on sheet 2. Trees planted within the proposed easement

INDEX OF SHEETS

. TITLE PLAN SHEET

SPECIFICATIONS

SITE DEVELOPMENT PLAN

FOREST MITIGATION BANK

CATTAIL CREEK

BUILDABLE PRESERVATION

1. Subject property zoned "RC-DEO" per the 10/6/2013 Comprehensive Zoning Plan. 2. The soils shown on this plan are derived from the Soil Survey Geographic (SSURGO) database For Howard County, Maryland. The data source for this product is the U.S.

6. FEMA Floodplain information obtained from FEMA DFIRM Panel 24027C0045D.

7. Forest Stand Delineation completed by Ecotone Inc. in September, 2013.

5. Wetland delineation and forest stand delineation prepared by Ecotone Inc. in September,

9. The project is in conformance with the latest Howard County Standards unless waivers

10. The coordinates shown hereon are based upon the Howard County Geodetic Control, which is based upon the Maryland State Plane Coordinate System. Howard County

11. As no development is proposed other than planting, no search was conducted for rare, threatened or endangered species or critical habitats for rare threatened or endangered species/ historic structures or other historic resources (including trees and cemeteries). 12. This project complies with the requirements of Section 16.1200 of the Howard County

13. Planting areas will be accessed without equipment encroaching into the environmental

areas on the project site. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the required wetlands, stream or their buffer, forest

conservation easements areas and 100-year floodplain, except for essential disturbances to

14. All construction shall be in accordance with the latest standards and specifications of

the Howard County plus MSHA standards and specifications if applicable. The contractor

shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection

Division at (410) 313-1880 at least five (5) workings days prior to the start of work. The

contractor shall notify "Miss Utility" at 1-800-257-777 at least 48 hours prior to any

Department of Agriculture, Natural Resources Conservation Service.

4. Topography shown hereon was prepared by Howard County GIS.

8. The project is not within the metropolitan district.

Monument Nos. 14AM1 and 14AM2 were used for this project.

SITE DEVELOPMENT PLAN . SITE DEVELOPMENT PLAN

. PLANTING DETAILS AND

GEODÈTIC BM: 14AM1

LEGEND

- wus --- vus --- Existing Streams

Property Boundary

Adjacent Property

Proposed Forest

Existing Contours

25' Wetland Buffer

100 Year Floodplain

Building Restriction Line

Steep Slopes 15 -25%

Steep Slopes +25%

GENERAL NOTES

have been approved.

Code for Forest Conservation.

excavation work being done.

A. Total area of site - 100.96 ac.±

D. Net area of site - 100.96 ac.±

PLANTING AREAS DESCRIPTION

areas will utilize tree shelters.

B. Area of 100 Year Floodplain - 33.8 ac. ±

E. Area of this submission - 100.96 ac.±

C. Present Zoning Designation, RC-DEO

C. Area of steep slopes (25% or greater) - 5.38 ac.±

Area of steep slopes not in floodplain - 5.18 ac.±

D. Proposed Uses for Site, Forest Conservation Easements

SITE ANALYSIS

establish the Forest Mitigation Bank.

3. Gross area of site 100.96 Ac.±

Stream Buffer

Conservation Easements

Boundary

GaC

Cattail Creek Forest Mitigation Bank

4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Site Development Plan

DRAWN BY: 12/11/14

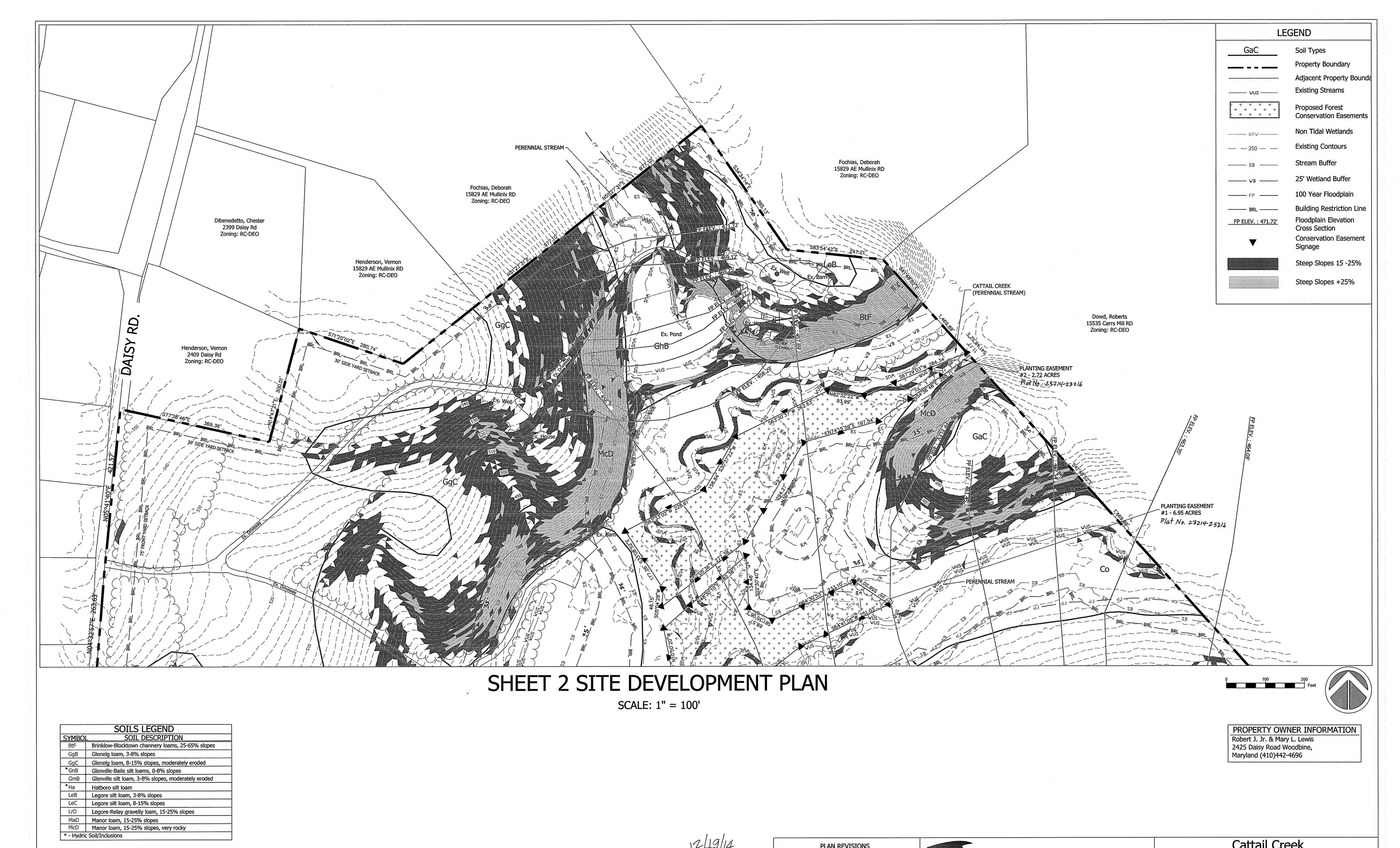
PROFESSIONAL CERTIFICATION hereby certify that these documents were prepared or approved by Robert Brian Bartell, and that I am a duly Licensed professional under the laws of the State of

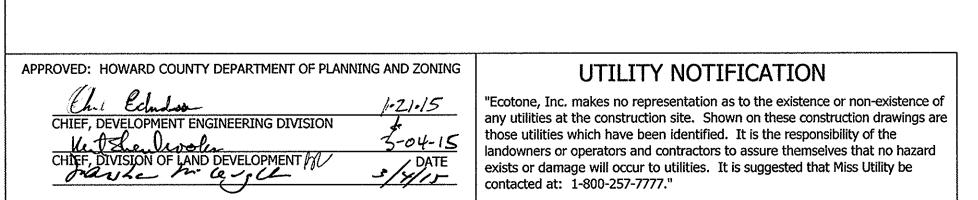
License No. 3085 Expiration Date, 03/15/2015 CERTIFICATION OF APPLICANT

hereby certify that the information supplied herewith is correct and complete and

uthorize such periodic on-site inspections by the Department of Planning and Zoning and the Subdivision Review Committee agencies as may be necessary to review this application and any waiver petitions filed in connection herewith and to enforce the Subdivision Regulations and other applicable laws. This right-of-entry shall continue until all administrative appeals pertaining to the property have been exhausted. *If the applicant is

TAX MAP-14 GRID 7 PARCEL 174





| THAT! | CAPE AR CAULT |
|--|---------------|
| THE STATE OF THE PARTY OF THE P | |
| | BRIAN BRIAN |
| | TROIAN BR. F. |
| Tim | MAR WILLIAM |

| | | | PLAN REVISIONS | |
|---|---|-----|----------------------|--------|
| | | BY | REVISION | DATE |
| | ECOTO112 FORESTS · WETLANDS · RIVERS · WILDLIFE TOC. | WJV | PER 1/17/14 COMMENTS | /26/14 |
| D | 2120 High Point Road • Forest Hill, Maryland 21050 | | | |

(410) 420 2600 FAX (410) 420 6983 WWW.ECOTONEINC.COM

Cattail Creek Forest Mitigation Bank TAX MAP-14 GRID 7 PARCEL 174 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Site Development Plan

2 OF 4 SDP-14-031



ROBERT J. JR. & MARY L. LEWIS 2425 DAISY ROAD WOODBINE, MARYLAND (410)442-4696

| SYMBOL | SOIL DESCRIPTION |
|------------|---|
| BtF | Brinklow-Blocktown channery loams, 25-65% slopes |
| GgB | Glenelg loam, 3-8% slopes |
| GgC | Glenelg loam, 8-15% slopes, moderately eroded |
| *GnB | Glenville-Baile silt loams, 0-8% slopes |
| GmB | Glenville silt loam, 3-8% slopes, moderately eroded |
| *Ha | Hatboro silt loam |
| LeB | Legore silt loam, 3-8% slopes |
| LeC | Legore silt loam, 8-15% slopes |
| LrD | Legore-Relay gravelly loam, 15-25% slopes |
| MaD | Manor loam, 15-25% slopes |
| McD | Manor loam, 15-25% slopes, very rocky |
| * - Hydric | Soil/Inclusions |

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 1.21-15

CHIEF, DEVELOPMENT ENGINEERING DIVISION

Ve 1 Sle Joseph Content of the Content o

UTILITY NOTIFICATION

any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at: 1-800-257-7777."



| | PLAN REVISIONS | | |
|--------|----------------------|-----|---|
| DATE | REVISION | BY | |
| /26/14 | PER 1/17/14 COMMENTS | VCW | |
| | | | |
| | | | |
| | | | FORESTS • WETLANDS • RIVERS • WILDLIFE |
| I | | | i e e e e e e e e e e e e e e e e e e e |

(410) 420 2600 FAX (410) 420 6983 WWW.ECOTONEINC.COM

2120 HIGH POINT ROAD • FOREST HILL, MARYLAND 21050 DRAWN BY: WJV

Cattail Creek
Forest Mitigation Bank
TAX MAP-14 GRID 7 PARCEL 174
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Site Development Plan

DATE: 12/11/2014 3 OF 4 SDP-14-031

Cattail Creek Forest Bank Utilization Table: 9.67 Acres Reforestation

| Receiving Project | Acres Purchased | Acres Remaining |
|--|--------------------|--------------------|
| BRANTWOOD LOT-31/3115 SEVELA CHEEF TRAIL | .2 | 9.47 |
| BRAUTWOODLOT - 32/3121 SENELA CHIEF TRAIL | .04 | 9.43 |
| MD FOOD Center AUTH PARCEL J SDP-16-012 | . 63 | 8.8 |
| WESTMOUNT, FIT-OOL | 1.00 | 7.8 |
| DORSEY GLEN F.16-027 | . 63 | 7.17 |
| . | 0.46 | 6.71 |
| Shipley's Grant Project F-06:014. Arbor Terrace Fulton SDP-17-019 | 1.08 | 5.63 |
| McIvin Property F-13-106 | 0.54 | 5.09 |
| Brightview Columbia SDP-19-032 | 2.30 | 2.79 |
| Gilford Rd. Assisted Living SDR-19-040 | 0.2 | 2.59 |
| Giant Food Exeter SDP-20-019 | 1.22 | 1.37 |
| Grove Angle Property SDP-F-20-084 | 0.30 | 1.07 |
| BWI Industrial Park SDP-73-094 Parcel 'B' Block 'A' | 0.30 | 0.77 |

PLANTING SPECIFICATIONS

GENERAL

1. The Contractor shall notify Ecotone, Inc. and the land owner's representative at least two (2) weeks prior to start of planting within the project area so that planting zones may be marked in the field and the land owner can make any necessary preparations related to the agricultural activities on the areas surrounding the project site.

2. The Contractor is responsible for the location of all underground utilities prior to the start of construction. Any damages to utilities as a result of planting or other activities will be the sole responsibility of the Contractor and shall be repaired at the Contractors expense.

STANDARDS

1. Planting material will conform to the current issue of the "American Standards for Nursery Stock", published by the American Association of Nurseryman.

2. The root system of container-grown plant material shall be white, well-developed, and well-distributed throughout the growing media, with the roots extending to the inside face of the container, and the container size must conform to the size specified. Plants not meeting these criteria will be rejected.

3. Foliage of non-dormant plants shall appear healthy, with no leaf spots, damage, discoloration, or wilting, and no evidence of insects on the plant. Plants not meeting these criteria will be rejected. 4. Planting materials may be substituted upon written approval from Howard County Department of Planning and Zoning Division of Land Development.

STORAGE AND DELIVERY

1. Seed shall be delivered in containers having labels reporting the origin, purity, and germination percentage of the seed, and the date of germination testing of the seed.

2. All container-grown plants shall be clearly and correctly labeled to allow confirmation of species and quantities. At least 25% of each species in every shipment shall have legible labels securely attached prior to delivery to the site.

3. All plants delivered to the project site must have thoroughly moist soil/root masses. Dry or light-weight plants shall be rejected.

4. All rejected material shall be immediately removed from the project site. 5. All plants delivered to the project site shall be stored in a cool, shaded location, and watered

regularly so that roots are kept moist until time of planting.

Association "Landscape Specification Guidelines" and as specified below.

1. Straw shall be from small grain species such as wheat or barley, and shall be free of rot, mildew, and noxious weed seeds.

PLANTING PROCEDURES 1. Planting shall be performed in accordance with the current edition of the Landscape Contractors

2. Plants shall be randomly installed within the planting area, using the plant spacing specified in the

3. Container-grown stock shall be planted during the periods of September 1 - November 15 or April 1 - June 15. Planting outside of these specified dates is not permissible without approval from

4. Planting shall not occur during periods of sub-freezing temperatures, when the ground is frozen or excessively wet or dry, or when other conditions not generally accepted as suitable for planting

5. For each plant to be installed, excavate a planting hole at least 12 inches wider than the width of the root ball and to a depth which leaves approximately 1/8 of the root ball above existing grade. 6. Remove the plant by cutting or inverting the container.

7. Using a knife or sharp blade, make 4 to 5 one-inch deep vertical cuts along the root ball. 8. Install plant in the center of the hole, with approximately 1/8 of the root ball above surrounding

9. Backfill planting hole with native soil. Any surplus soil remaining after planting shall be evenly scattered around plants.

10. Water each plant thoroughly after backfilling until the backfilled soil is saturated.

11. All woody material must be planted erect. Plants leaning greater than 10 degrees from perpendicular must be straightened or replanted by the Contractor.

12. A minimum of five species shall be planted within each Forest Conservation Easement to provide diverse forest habitat.

13. Density of whip plantings shall be 350 trees per acre at 11 foot spacing.

14. The Forest Conservation bank and Wetland mitigation bank will be planted at the same time. 15. Access to all easements and the wetland mitigation areas will be via the existing 20' public sewer and utility easement.

MAINTENANCE AND GUARANTEE

1. Plant material shall be maintained by the Contractor for a period of two growing seasons from the date of final inspection and acceptance by Ecotone, Inc. Maintenance shall include the removal of all dead or diseased woody vegetation.

2. The Contractor shall guarantee a 75% survival of all plants for the five year period stated above, except in the case of damage by fire, animal damage, vandalism, or other events beyond the Contractors ability to control.

3. Plants which are 25% dead or more shall be considered dead.

4. Replacement plants shall be of the same type, size, and variety as the plants specified herein, or substitutions approved in writing by the Howard County Department of Planning and Zoning Division of Land Development. Replacement plants shall be provided and installed subject to the requirements of these plans and specifications.

5. At the end of the two year period all tree stakes and shelters may be removed from plantings.

GENERAL REFORESTATION NOTES

1. This Reforestation Bank has been prepared to meet the requirements of the Maryland Forest Conservation Act and Howard County for off-site Forest Conservation Obligations. The project provides a total of 9.67 acres of reforestation credit for potential buyers in Howard County. This plan was prepared according to the requirements of the State of Maryland Forest Conservation Technical Manual (3rd Edition, 1997), and the Howard County Forest Conservation Manual (June 7, 1999). 2. Prior to final approval of the SDP, forest conservation easements are to be recorded on all areas

specified in the planting plan. 3. Site Selection - The plan representation for the reforestation site has been prepared by Ecotone, Inc. using Howard County mapping data. The topography of this site consists primarily riparian areas

adjacent to headwater streams and associated wetlands. 4. Current Land Use - The proposed reforestation sites are currently fallow fields. Completion of the reforestation will provide substantial buffering to the streams on site which feed into the Triadelphia Reservoir, and will add additional contiguous forest acreage to existing mature forest and to

previously planted areas. 5. The Owner/Developer has a written and signed agreement with Ecotone to utilize the proposed planting areas as forest conservation/planting areas and the owner agrees to the long term use restrictions on the reforestation areas.

SIGNAGE

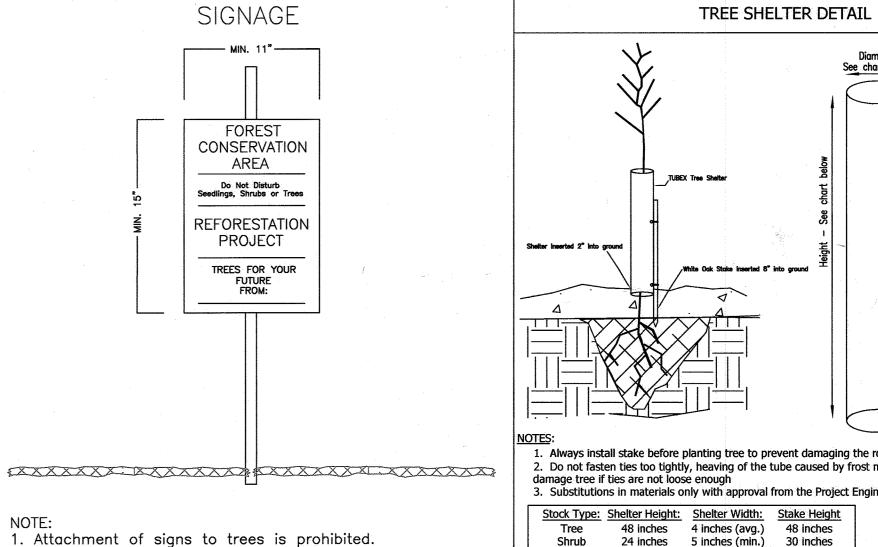
Appropriate Signage will be erected to mark the reforestation site and to warn the public of the requirements of the reforestation area. See detail.

SURETY FOR REFORESTATION

The developer shall post a surety (bond, letter of credit) for the amount of \$210,613.00 to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the county, the bond shall

Cattail Creek Forest Mitigation Bank Planting Table (+/ 9.67 acres)

| | Quantity | Scientific Name | Common Name | Size | Condition | Spacing |
|--------|----------|-------------------------|------------------|------|-----------|--------------------|
| Trees: | 1,000 | Platanus occidentalis | Sycamore | 2-4' | Bare-root | 11' Random Spacing |
| | 375 | Diosporus virginiana | Common persimmon | 2-4' | Bare-root | 11' Random Spacing |
| - | 375 | Quercus bicolor | Swamp White Oak | 2-4' | Bare-root | 11' Random Spacing |
| | 450 | Liriodendron tulipifera | Tulip Poplar | 2-4' | Bare-root | 11' Random Spacing |
| | 450 | Liquidambar styracflua | Sweet Gum | 2-4' | Bare-root | 11' Random Spacing |
| | 385 | Robinia psuedoacacia | Black locust | 2-4' | Bare-root | 11' Random Spacing |
| : | 350 | Amelanchiar canadensis | Serviceberry | 2-4' | Bare-root | 11' Random Spacing |
| Total: | 3,385 | | | 3 | | |



2. Signs should be properly maintained.

personnel from all directions.

3. Avoid injury to roots when placing posts for the signs.

4. Signs should be posted to be visible to all construction

HEIGHT=.9 x ROOTBALL HEIGHT Mattock Planting LINDISTURBED SOIL WIDTH=2 x ROOTBALL HEIGHT TREE AND SHRUB PLANTING DETAIL: Container Grown and Bailed and Burlapped Stock 1. Insert mattock, lift

/ White Oak Stake driven min. 8" 1. Always install stake before planting tree to prevent damaging the roots 2. Do not fasten ties too tightly, heaving of the tube caused by frost may 3. Substitutions in materials only with approval from the Project Engineer. Stock Type: Shelter Height: Shelter Width: Stake Height 48 inches 4 inches (avg.) 48 inches 24 inches 5 inches (min.) 30 inches INSTALLATION SEQUENCE 1. Drive wooden stake 8 inches into the ground on the windward side of proposed tree location. 2. Plant tree as shown in TREE PLANTING DETAIL. 3. Place the tree shelter tube over tree and insert it 2 inches into the ground. 4. Fasten the tree shelter tube to the stake with galvanized wire or plastic zip ties. Seedling and Whip Planting Correct and Incorrect Planting Depth

Diameter See chart below

Tree Shelter

handle and pull. side at correct depth. 4. Firm around seedling with feet 5. Finish filling in soil & firm with heel. Mulching newly planted seedlings helps the soil retain water and protects the seedling

Fill in & pack soil

Place seedling along straight

Incorrect TOO DEEP & ROOT

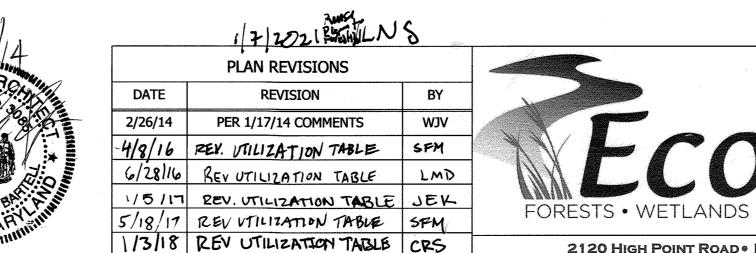
Correct AT SAME DEPTH

SEEDLING WAS GROWN

Source: Adapted from Forest Conservation Manual, 1991 Seedling and Whip Planting Techniques

from compaction and stem injuries.

Property Owner Information Robert J. JR. & Mary L. Lewis 2425 Daisy Road Woodbine, Maryland (410)442-4696 Cattail Creek



1/17/20 Revise Utilization Table LNS 2/21/19 REV. UTILIZATION TABLE

2120 HIGH POINT ROAD • FOREST HILL, MARYLAND 21050

(410) 420 2600 Fax (410) 420 6983 WWW.ECOTONEINC.COM

4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Forest Mitigation Bank

TAX MAP-14 GRID 7 PARCEL 174

Site Development Plan

DRAWN BY: 12/11/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 夏-04-15

CHIEF, DEVELORMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

manufe hilusy.

DIRECTOR

UTILITY NOTIFICATION

"Ecotone, Inc. makes no representation as to the existence or non-existence of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at: 1-800-257-7777."