

**APFO TRAFFIC STUDY EXEMPTION**

THE SUBJECT PROPERTY IS EXEMPT FROM AN APFO TRAFFIC STUDY FOR MINOR SUBDIVISIONS AS PER SECTION 4.7.4.F HOWARD COUNTY DMV III.

**FOREST CONSERVATION EXEMPTION**

THIS PLAN IS EXEMPT FROM SUBTITLE 12, 'FOREST CONSERVATION,' OF HOWARD COUNTY ORDINANCE IN ACCORDANCE TO SECTION 16.1202 B (1)(VIII). ANY FURTHER DISTURBANCE MAY REQUIRE THE LOT OWNER OR DEVELOPER TO ADDRESS THE REQUIREMENTS AND/OR PENALTIES CONTAINED THEREIN.

**NOISE STUDY EXEMPTION**

THE SUBJECT PROPERTY IS NOT LOCATED WITHIN 1000' OF A ROAD EXCEEDING ADT 10,000 VEHICLES OR WITHIN 500' OF A PRINCIPAL ARTERIAL HIGHWAY AS PER SECTION 5.2.9 HOWARD COUNTY DMV III, THEREFORE A NOISE STUDY IS NOT REQUIRED.

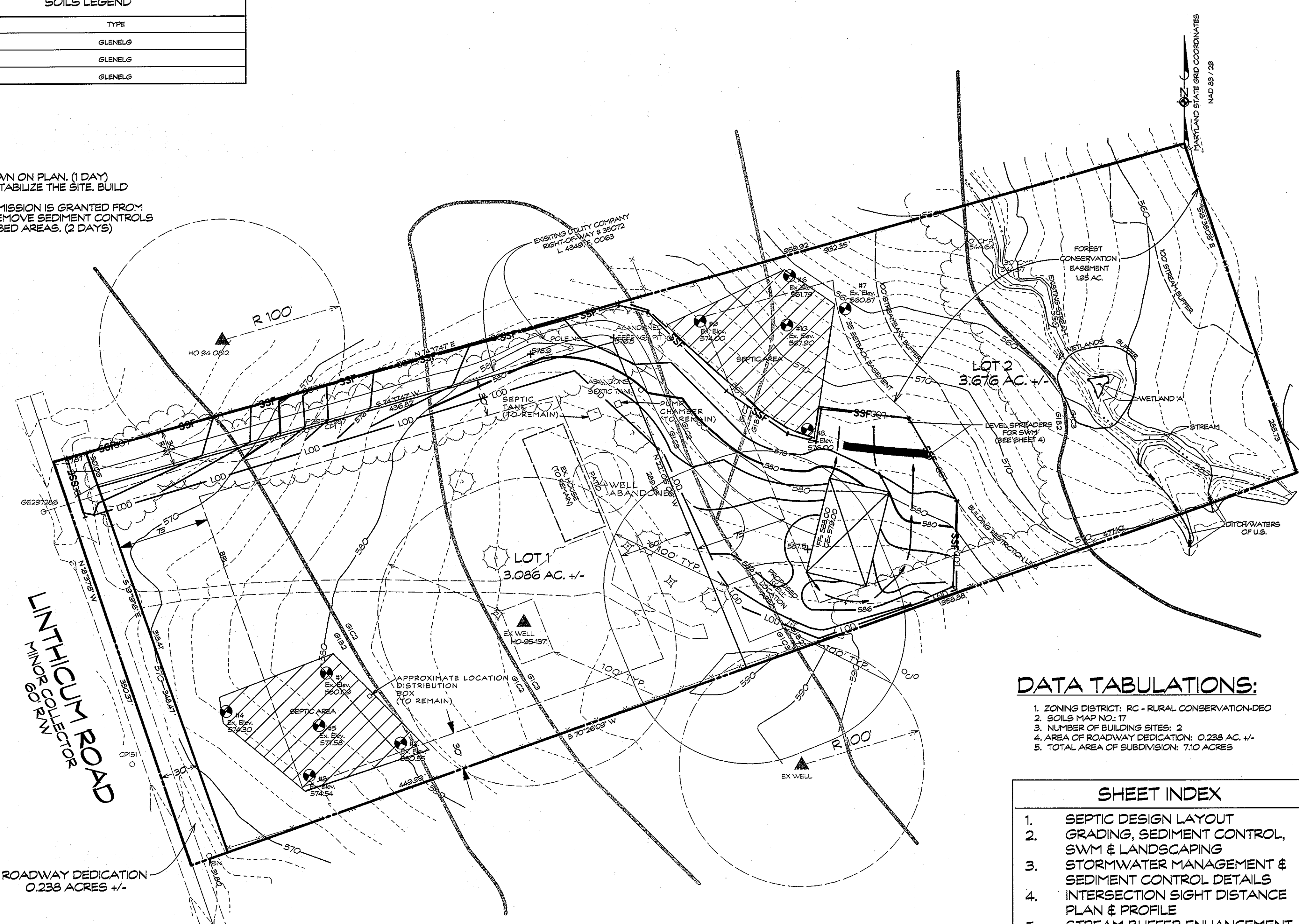
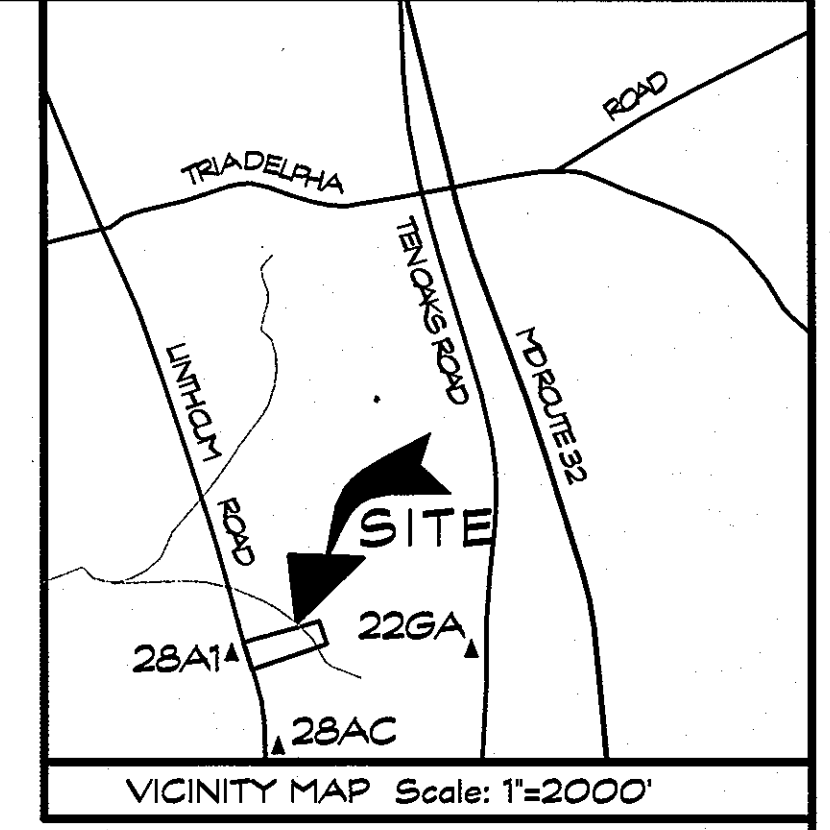
| SOILS LEGEND |         |
|--------------|---------|
| SOIL         | TYPE    |
| G82          | GLENELG |
| G12          | GLENELG |
| G13          | GLENELG |

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT.
2. INSTALL SEDIMENT CONTROLS AS SHOWN ON PLAN. (1 DAY)
3. PERFORM NECESSARY GRADING AND STABILIZE THE SITE. BUILD HOUSE (6 MOS.)
4. AFTER THE SITE IS STABILIZED AND PERMISSION IS GRANTED FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS. (2 DAYS)

**GENERAL NOTES**

1. CURRENT TITLE REFERENCE:  
OWNER: JON LEVINE  
DEED REFERENCE: LIBER 2167, FOLIO 487  
DATE: DECEMBER 30, 2004  
GRANTOR: DANIELLE H. COOK
2. THE PROPERTY SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT
3. ALL WELLS AND SEPTIC SYSTEMS WITHIN 100 FEET OF THE PROPERTY BOUNDARY HAVE BEEN SHOWN.
4. TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY.
5. THIS SURVEY HORIZONTALLY AND VERTICALLY IS TIED TO HOWARD COUNTY CONTROL MONUMENTS, (NAD 83 HORIZONTAL AND NGVD 29 VERTICAL DATUM).  
MONUMENT: 28 AC N 574679.3067, E 134971.7633, EL. 625.12  
MONUMENT: 22 GA N 576646.7555, E 134983.4827, EL. 589.376  
MONUMENT: 28 A1 N 576723.5447, E 134261.788, EL. 587.672
6. ALL WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT RECORDATION. IT IS THE DEVELOPER'S 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.
7. B.R.L. - DENOTES 'BUILDING RESTRICTION LINE'
8. EXISTING WELL ON LOT 1 HAS BEEN ABANDONED AND REPLACED.
9. EXISTING SEPTIC SYSTEM ON LOT 1 HAS BEEN ABANDONED AND REPLACED.
10. THE BOUNDARY INFORMATION SHOWN IS FIELD RUN BY CLSI (1/05).
11. ZONING- RR-DEO RURAL RESIDENTIAL.
12. ALL ADJACENT PROPERTIES ARE ZONED RR-DEO. PROPERTY OPPOSITE LINTHICUM ROAD ZONED RC-DEO.
13. DRIVEWAYS SHALL BE CONSTRUCTED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:  
A. WIDTH- 12 FEET (6 FEET SERVING MORE THAN ONE RESIDENCE)  
B. SURFACE- 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR & CHIP COATING (1-1/2" MIN DEPTH)  
C. GEOMETRY- MAXIMUM OF 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS.  
D. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)  
E. DRAINAGE ELEMENTS- CAPABLE OF PASSING 100-YEAR FLOOD WITH NO MORE THAN ONE FOOT DEPTH OVER DRIVEWAY.  
F. STRUCTURE CLEARANCES- MINIMUM 12 FEET  
G. MAINTENANCE- SUFFICIENT TO INSURE ALL WEATHER USE.
14. Waiver petition File Number WP-08-093 for the Levine Property was approved by the Director of the Department of Planning and Zoning on June 2, 2008. The specifications waived were Sections 16.120 (b)(4)(i)(b) and 16.144(x)(3) of the Subdivision and Land Development Regulations. Waiver approval is subject to the following conditions:  
a. The Final Plat shall place all environmental features on Lot 2.  
b. Final Plat shall comply with applicable regulations, unless waivers have been approved, and with Subdivision Review Committee agency comments.  
c. Final Plat shall provide a 35' environmental setback from the stream bank buffer on Lot 2.  
d. Final Plat shall enlarge the proposed stream buffer enhancement area to include the area between the existing forest and proposed level spreaders.  
e. Final Plat shall include a Forest Conservation Easement over the proposed stream buffer enhancement area. The area shall be appropriately planted and signage erected.  
f. Final Plat and Plat shall change the Lot 1 setback to 50', and to relocate the rear property boundary of Lot 1 and front setback of Lot 2 to the west in order to increase the area of the Lot 2 building envelope.  
g. Approval of this petition does not sanction any disturbance to the environmental features, or their restrictive buffers or setbacks.
15. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR BUFFERS, FLOODPLAINS, OR FOREST CONSERVATION EASEMENTS.



**DATA TABULATIONS:**

1. ZONING DISTRICT: RC - RURAL CONSERVATION-DEO
2. SOILS MAP NO: 17
3. NUMBER OF BUILDING SITES: 2
4. AREA OF ROADWAY DEDICATION: 0.238 AC +/-
5. TOTAL AREA OF SUBDIVISION: 7.10 ACRES

**SHEET INDEX**

1. SEPTIC DESIGN LAYOUT
2. GRADING, SEDIMENT CONTROL, SWM & LANDSCAPING
3. STORMWATER MANAGEMENT & SEDIMENT CONTROL DETAILS
4. INTERSECTION SIGHT DISTANCE PLAN & PROFILE
5. STREAM BUFFER ENHANCEMENT MITIGATION PLAN (WAIVER WP-08-096)

**PLAN**  
SCALE: 1"=50'

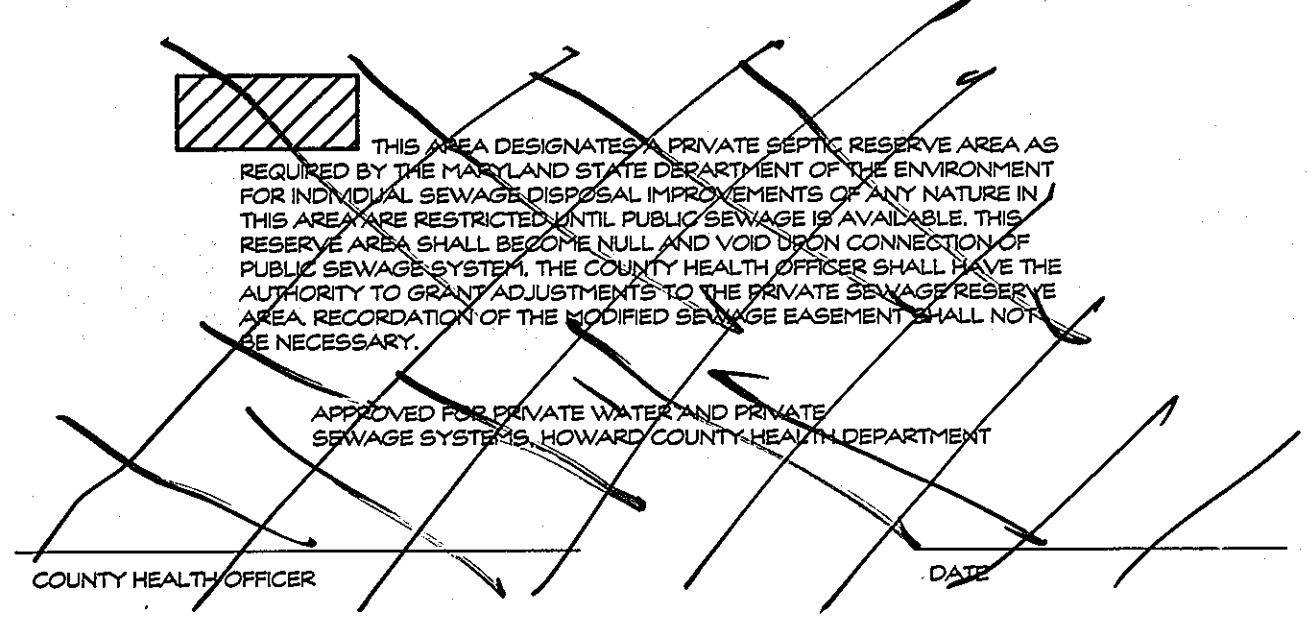
**PERCOLATION TEST RESULTS, A-526195**

**PERCOLATION CERTIFICATION PLAN**  
PARCEL #217  
#4255 LINTHICUM ROAD

**OWNER / DEVELOPER**  
JON LEVINE  
4305 PLEASANT PATH  
ELLCOTT CITY, MD 21043  
(410) 312-7970

**NOTE:**  
ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.

| LEGEND |                                       |
|--------|---------------------------------------|
|        | -DENOTES EXISTING SEPTIC RESERVE AREA |
|        | -DENOTES PROPOSED SEPTIC RESERVE AREA |
|        | -DENOTES FAILD PERC                   |
|        | -DENOTES APPROVED PERC                |
|        | -DENOTES EXISTING WELLS               |
|        | -DENOTES PROPOSED HOUSE BOX           |



**APPROVED:**  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Walter Z. McCall* 1-22-09  
CHIEF, BUREAU OF HIGHWAYS

**APPROVED:**  
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Carly Hanna* 2/5/09  
CHIEF, DIVISION OF LAND DEVELOPMENT

**APPROVED:**  
*Chad Edmond* 2-2-9  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**SEPTIC DESIGN LAYOUT**  
4255 LINTHICUM ROAD  
**LEVINE PROPERTY**  
TAX MAP 22 GRID 16 PARCEL 217 ZONING: RR-DEO  
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**STATE OF MARYLAND**  
DEPARTMENT OF THE ENVIRONMENT  
DIVISION OF PERMITS  
Professional Land Surveyor  
Registration No. 10788

**CLSI**  
www.clsi-civileng.com  
Professional Land Surveyor & Environmental Consultant  
Registration No. 10788

**FREDERICK OFFICE:**  
8425 Progress Drive, Suite B8  
Frederick, MD 21701-4879  
(410) 848-1799 FAX (410) 848-1790

**WESTMINSTER OFFICE:**  
4399 East Main Street  
Westminster, MD 21157-5539  
(410) 848-1790 FAX (410) 848-1791

| Date     | Revisions   | Drawn By:        |
|----------|---|------------------|
| 2/6/07   | Rev'd septic areas & added prop. well area per H.D. comments. tfr | Designed By:     |
| 2/9/07   | Add note & added prop. well area per H.D. comments. tfr           | Reviewed By:     |
| 4/10/07  | Add notes & address Health Dept. comments. tfr                    | Date: 7/9/08     |
| 7/9/08   | Address County Comments dated 3/8/08 ddd                          | Scale: 1" = 50'  |
| 7/03/08  | Address County Comments dated 6/25/08 TLR                         | Job No.: 2006208 |
| 11/18/08 | Address County Comments dated 11/10/08 ddd                        | Sheet: 1 OF 5    |

County File No. F-08-116

CAD Drawing File Name: G:\2006\2006208\CON57\SHEET\02\DA-MAP

COUNTY SHEET 111 (CON57) 1/18/2008 1:52:31 AM

**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 (919-1855).
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) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. 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.
7. Site Analysis:  
Total Area of Site: 6.66 Acres  
Area Disturbed: 1.60 Acres  
Area to be roofed or paved: 0.27 Acres  
Area to be vegetatively stabilized: 1.33 Acres  
Total Cut: 2046 Cu Yds.  
Total Fill: 95 Cu Yds.  
Offsite waste/borrow area location
8. Any sediment control practice, which is disturbed by grading activity for placement of utilities, must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. 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.
11. 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.

| LEGEND |  |
|--------|--|
|        | -DENOTES IMPERVIOUS DISCONNECT PATHS       |
|        | -DENOTES PROPOSED HOUSE BOX                |
|        | -DENOTES IMPERVIOUS AREA                   |
|        | -DENOTES AREA FOR NON ROOFTOP SWM          |
|        | -DENOTES AREA FOR SHEET FLOW TO BUFFER SWM |

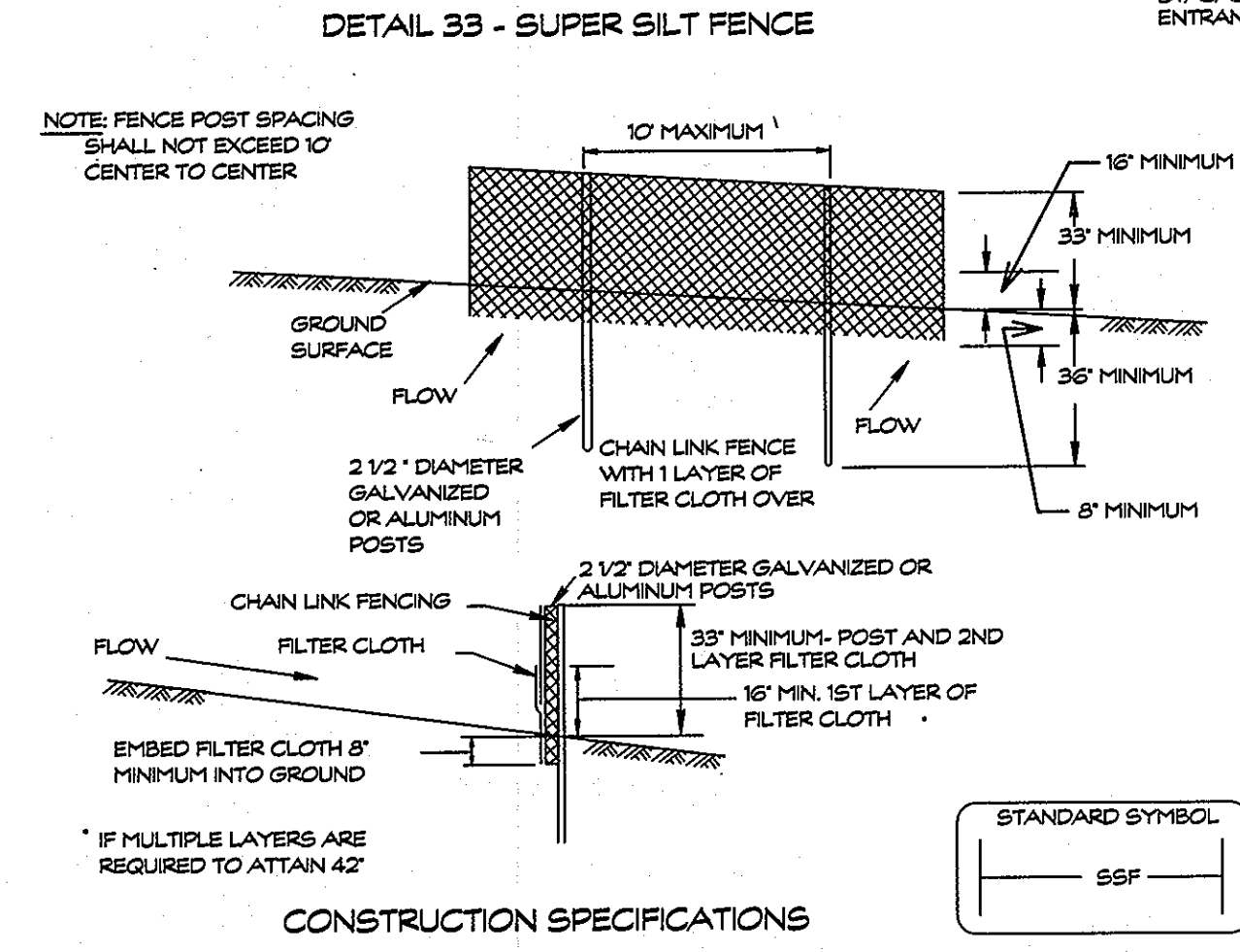
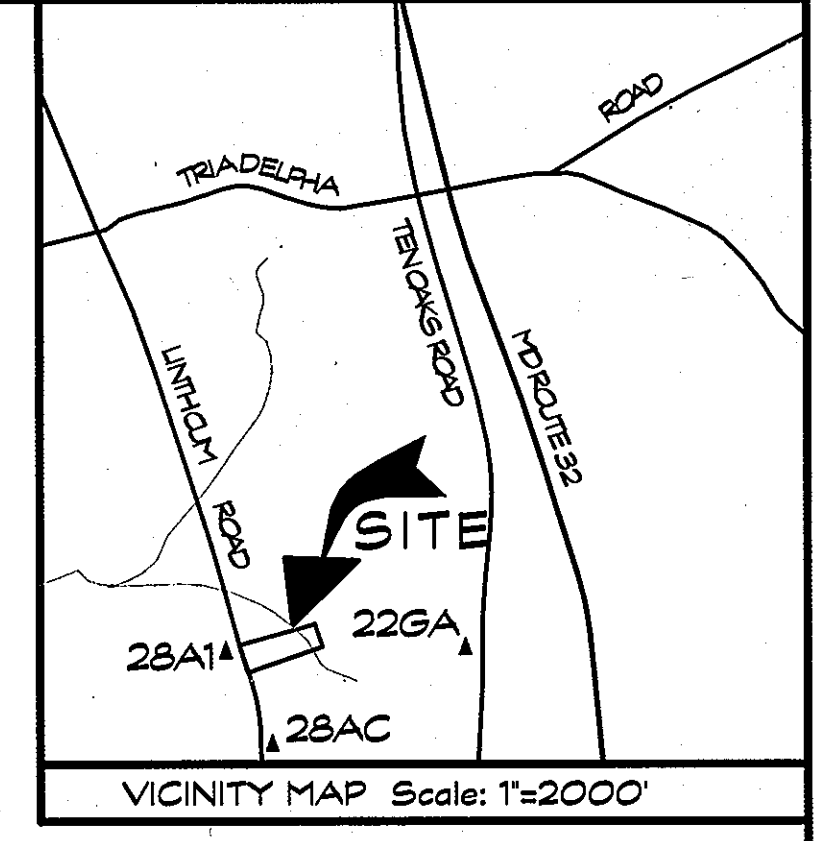
| SOILS LEGEND |         |
|--------------|---------|
| GB2          | GLENELG |
| GC2          | GLENELG |
| GC3          | GLENELG |

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN GRADING PERMIT.
  2. INSTALL SEDIMENT CONTROLS AS SHOWN ON PLAN. (1 DAY)
  3. PERFORM NECESSARY GRADING AND STABILIZE THE SITE. BUILD HOUSE (6 MOS.)
  4. AFTER THE SITE IS STABILIZED AND PERMISSION IS GRANTED FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS. (2 DAYS)

**FOREST CONSERVATION EXEMPTION**

THIS PLAN IS EXEMPT FROM SUBTITLE 12, 'FOREST CONSERVATION,' OF HOWARD COUNTY ORDINANCE IN ACCORDANCE TO SECTION 16.1202 B (1)(VII). ANY FURTHER DISTURBANCE MAY REQUIRE THE LOT OWNER OR DEVELOPER TO ADDRESS THE REQUIREMENTS AND/OR PENALTIES CONTAINED THEREIN.

**\* NOTE: AT BUILDING PERMIT STAGE, STORMWATER MANAGEMENT MEASURES TO BE REVISED AS APPROPRIATE**



- CONSTRUCTION SPECIFICATIONS**
- FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6" LENGTH POSTS.
1. THE POLES DO NOT NEED TO SET IN CONCRETE
  2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
  3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
  4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE GROUND.
  5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
  6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT
  7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

| DESIGN CRITERIA |                 |                        |                             |
|-----------------|-----------------|------------------------|-----------------------------|
| SLOPE           | SLOPE STEEPNESS | SLOPE LENGTH (MAXIMUM) | SILT FENCE LENGTH (MAXIMUM) |
| 0 - 10%         | 0 : 10:1        | UNLIMITED              | UNLIMITED                   |
| 10 - 20%        | 10:1 - 5:1      | 200 FEET               | 1,500 FEET                  |
| 20 - 33%        | 5:1 - 3:1       | 100 FEET               | 1,000 FEET                  |
| 33 - 50%        | 3:1 - 2:1       | 100 FEET               | 500 FEET                    |
| 50% +           | 2:1 +           | 50 FEET                | 250 FEET                    |

**LANDSCAPE NOTES**

THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERRIES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN WILL RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE BURETTS UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.1204 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. ALL EXISTING INDIVIDUALLY LABELED TREES ON PLAN ARE TO REMAIN.

**DEVELOPERS/BUILDERS CERTIFICATE**

I HAVE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.1204 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I HAVE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, AND A COPY OF THIS PLAN WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*John K. Baxter* 01-06-09

**SCHEDULE A PERIMETER LANDSCAPE EDGES FOR LOT 2**

| PERIMETERS:                              | 1   | 2             | 3    | 4            | 5    |
|--|-----|---------------|------|--------------|------|
| LANDSCAPE EDGE TYPE                      | N/A | A             | A    | A            | A    |
| LINEAR FT. OF ROADWAY FRONTAGE/PERIMETER | 30' | 740'          | 286' | 100'         | 280' |
| CREDIT FOR EXISTING VEGETATION           | N/A | Partial (200) | YES  | Partial (97) | N/A  |
| CREDIT FOR WALL, FENCE OR BERM           | N/A | N/A           | N/A  | N/A          | N/A  |
| # OF PLANTS REQ.                         |     |               |      |              |      |
| SHADE TREES                              | 0   | 12            | 0    | 2            | 5    |
| EVERGREENS                               | 0   | 0             | 0    | 0            | 0    |
| SHRUBS                                   | 0   | 0             | 0    | 0            | 0    |
| # OF PLANTS PROVIDED                     |     |               |      |              |      |
| SHADE TREES                              | 0   | 4             | 0    | 2            | 15   |
| EVERGREENS                               | 0   | 0             | 0    | 0            | 0    |
| SHRUBS                                   | 0   | 0             | 0    | 0            | 0    |
| OTHER TREES/21 SUBSTITUTION              | N/A | 45            | N/A  | N/A          | N/A  |

**TOTAL PLANTING OBLIGATIONS:**  
Shade Trees 19  
Evergreen Trees 0  
Shrubs 0

**TOTAL PLANTINGS PROVIDED:**  
Shade Trees 7  
Evergreen Trees 15 + (2 EX. TREES)  
Shrubs 45

**\* DENOTES PERIMETER LANDSCAPE EDGE**

| TO BE PLANTED   | QUANTITY |
|---|----------|
| <b>SHADE TREES</b><br>Acer rubrum, 'October Glory' / Red Maple<br>Size: 2 1/2" - 3"   | 2        |
| <b>EVERGREEN TREES</b><br>Cupressus parisi leylandi, Leyland Cypress<br>Size: 5' - 6'<br>Thuja occidentalis 'Nigra', Dark Green Arborvitae<br>Size: 5' - 6'                                 | 3        |
| <b>SHRUBS</b><br>Calycanthus florida, Common Sweetshrub<br>Size: 30"<br>Cornus stolonifera, Red Twig Dogwood<br>Size: 30"<br>Ilex x 'Nellie R. Stevens', Nellie Stevens Holly<br>Size: 5-6' | 15       |

**TO REMAIN**

Ex TREE All individually labeled existing trees shown on plan to remain

**DEVELOPERS CERTIFICATE**

I HAVE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*John K. Baxter* 01-06-09

**SURVEYORS CERTIFICATE**

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Cynthia K. Baxter* 01-06-09

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

*John K. Baxter* 1/19/09

APPROVED:  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Walter F. Mahoney* 1-22-09

APPROVED:  
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Harman* 2/5/09  
*Paul Edmund* 2-2-09

**GRADING, SEDIMENT CONTROL SWM & LANDSCAPING**

4255 LINTICUM ROAD

**LEVINE PROPERTY**

TAX MAP 22 GRID 18 PARCEL 217 ZONING: RR-DEO  
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**OWNER / DEVELOPER**  
JON LEVINE  
4305 PLEASANT PATH  
ELLCOTT CITY, MD 21043  
(410) 312-7970

**CLSI**  
Professional Land Surveyors & Environmental Consultants  
www.clsi-cvlleng.com

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**WESTMINSTER OFFICE**  
839 East High Street  
Westminster, MD 21157-5539  
(410) 844-1799 FAX (410) 844-1791

| Date     | Revisions                                 | Drawn By:    |
|----------|---|--------------|
| 7/9/08   | Address County Comments dated 3/8/08 DDD  | Designed By: |
| 10/03/08 | Address County Comments dated 8/25/08 TLR | Reviewed By: |
| 11/8/08  | Address County Comments dated 11/0/08 ddd | Date: 7/9/08 |

Scale: 1" = 50'  
Job No: 20080208  
Sheet: 2 OF 5

**STANDARDS AND SPECIFICATIONS FOR TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS**

I. Topsoil salvaged from the existing site may be used provided that 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-SCS in cooperation with Maryland Agricultural Experiment Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

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

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quack grass, Johnson grass, nutsedge, plant Ivy, trillite, or others as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a) pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b) Organic content of topsoil shall be not less than 1.5 percent by weight.

c) Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d) No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

Note: 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.

i. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil.

iv. preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

v. Topsoil shall not be placed while 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.

vi. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a) Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b) Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c) Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

i. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

**HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONGLIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1) PREFERRED - APPLY 2 TONS PER ACRE DOLICITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ. FT.)

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLICITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS. PER ACRE OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.5 LBS./1000 SQ. FT.) OF WEeping LOVEGRASS, DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOIL. OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TON/ACRE WELL-ANCHORED STRAW.

MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING A MULCH ANCHORING TOOL OR 2 1/2 GALLONS PER ACRE (6 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES OF 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

**TEMPORARY SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT TERM VEGETATIVE COVER IS NEEDED.

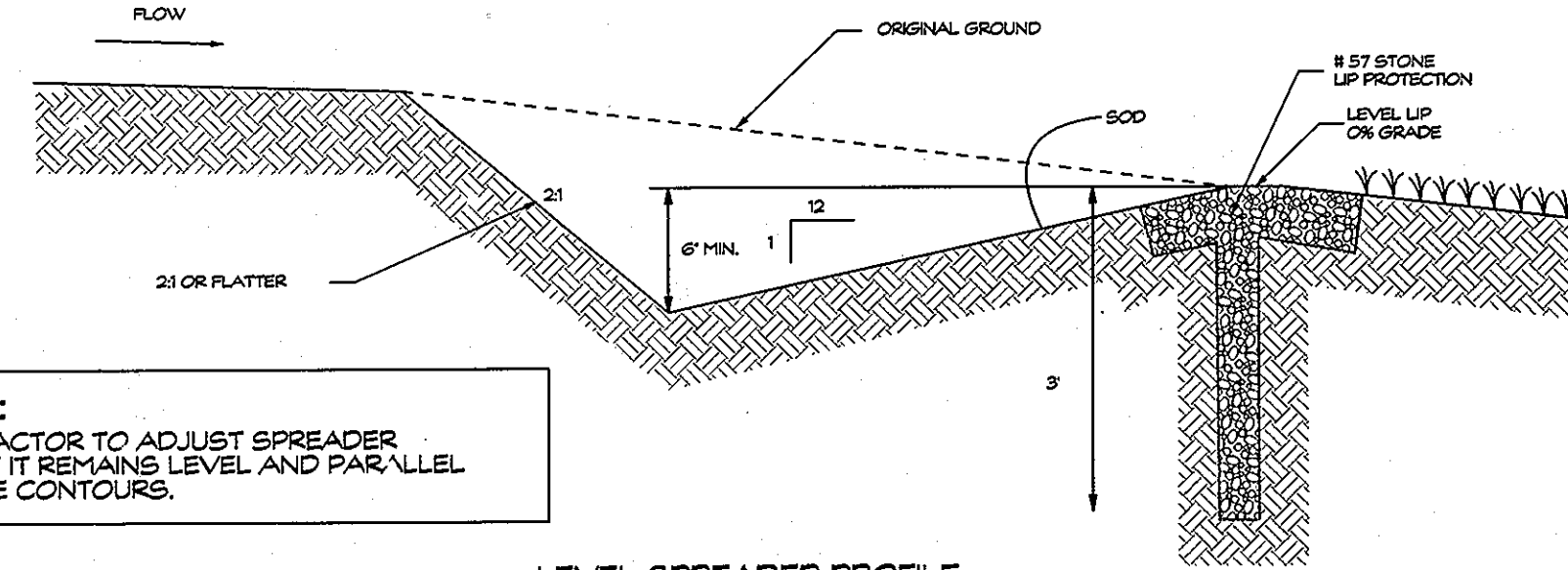
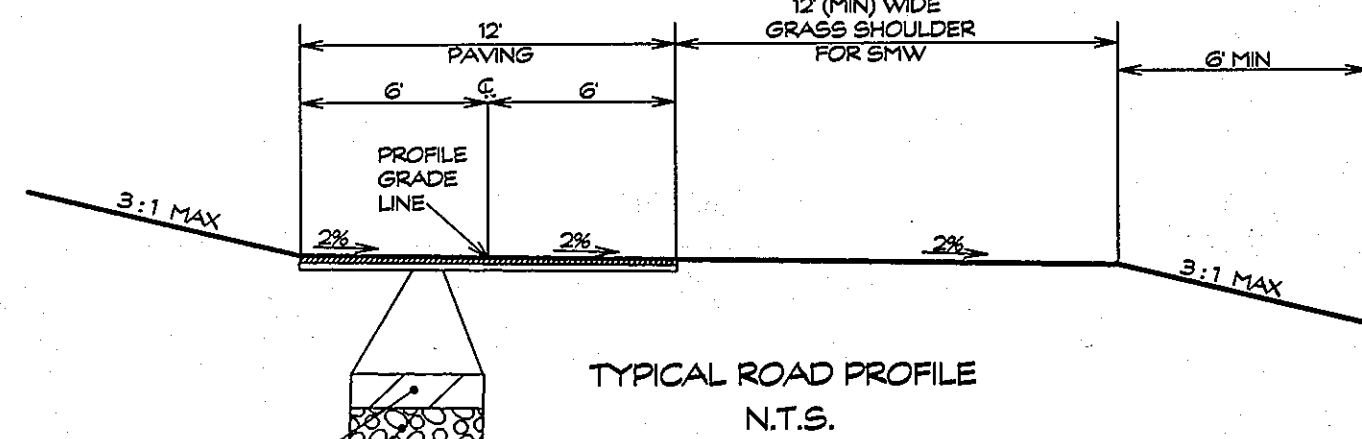
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.)

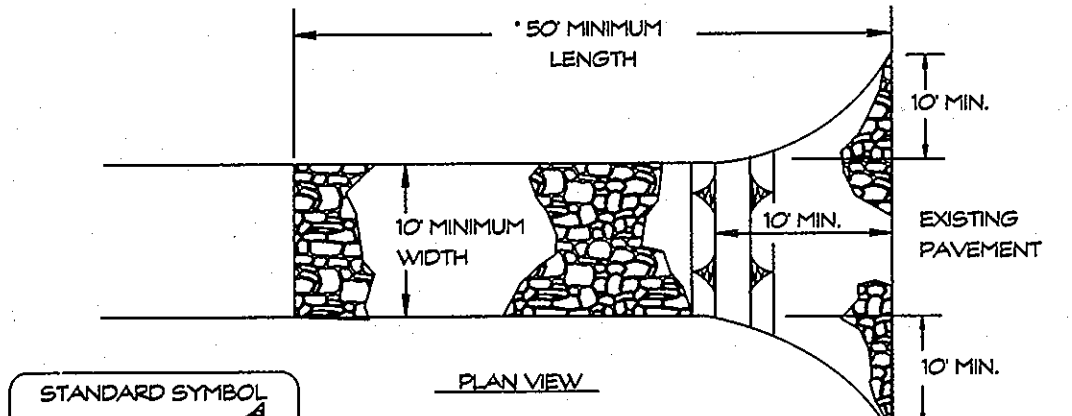
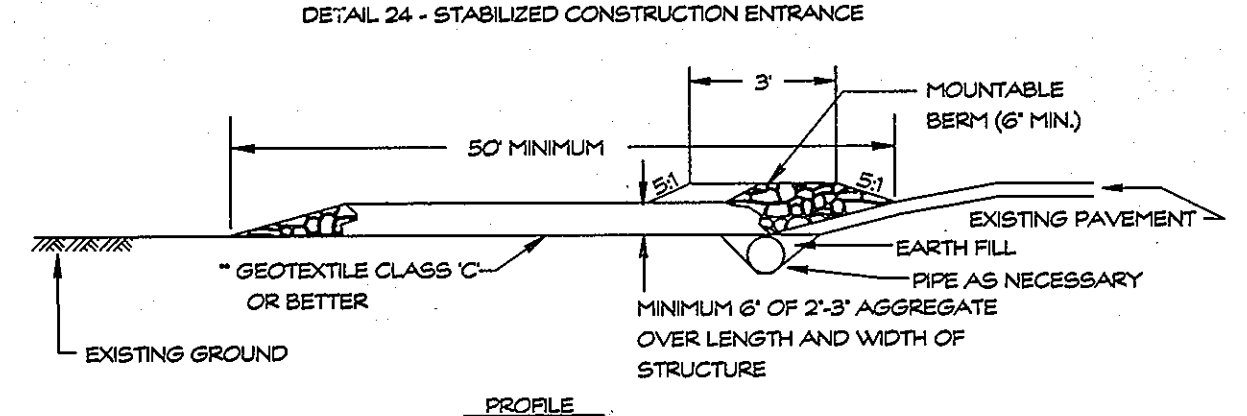
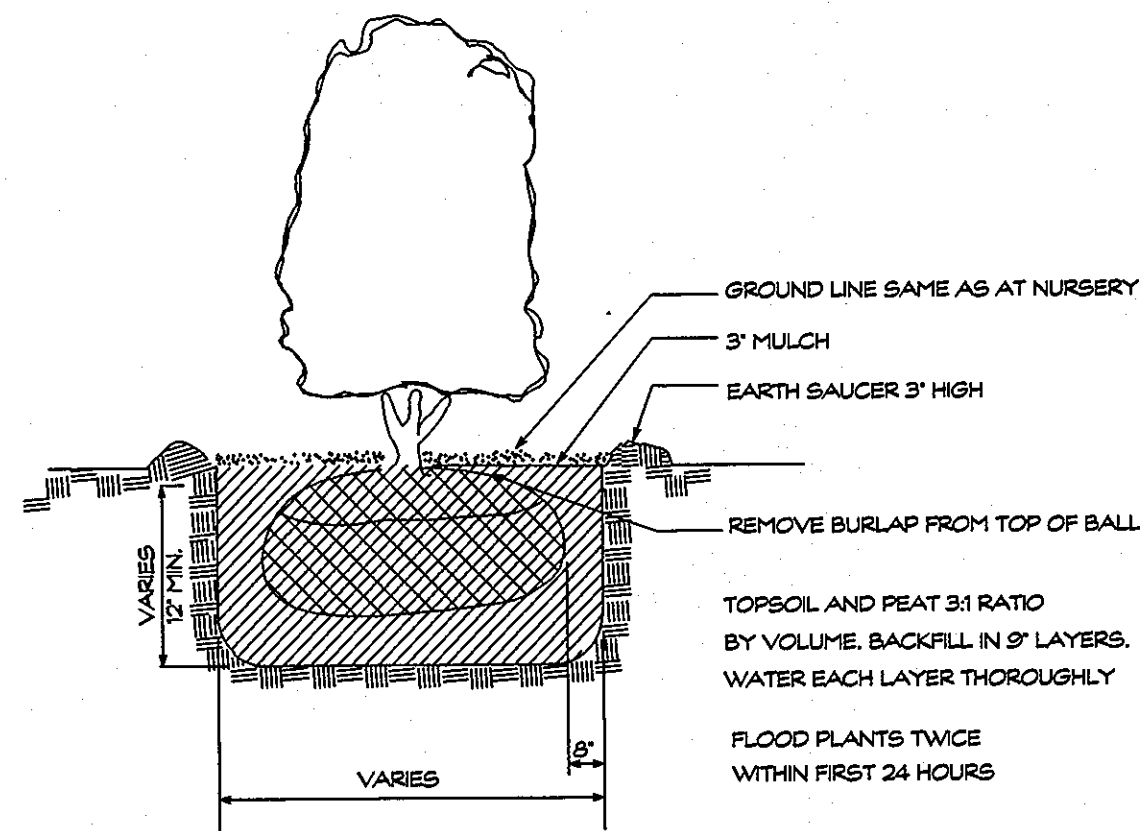
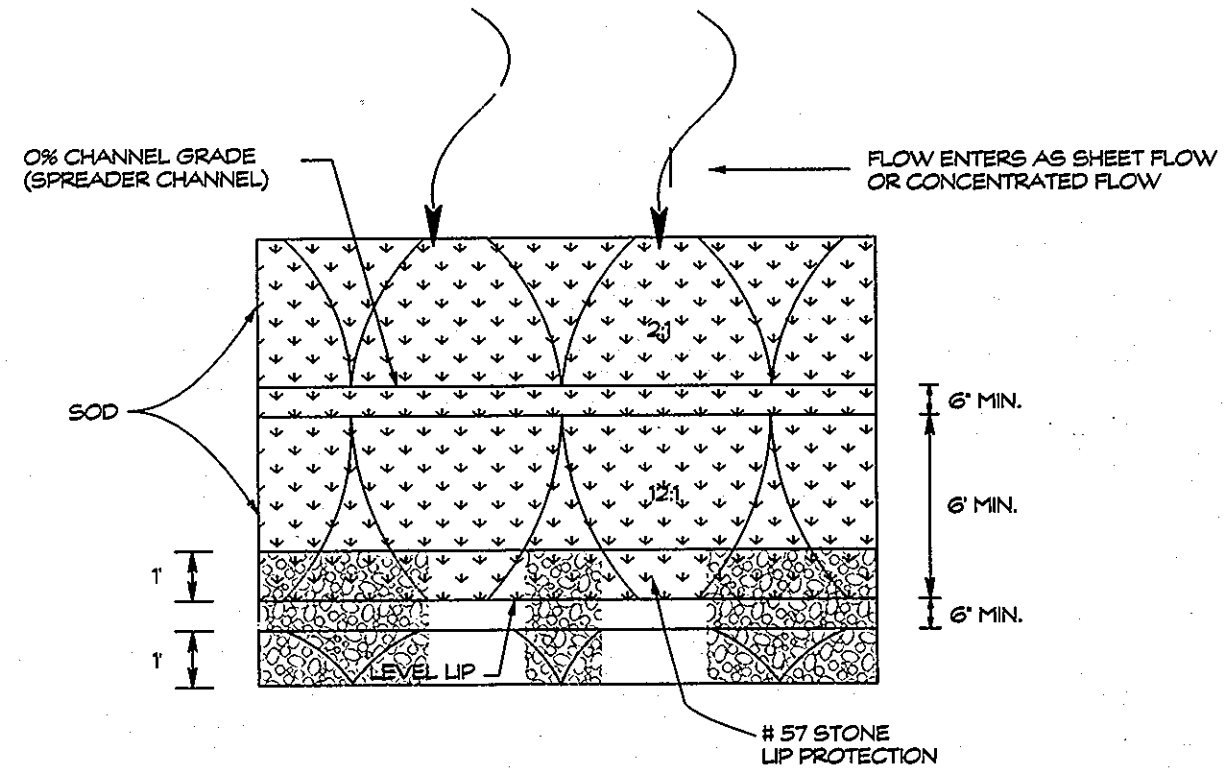
SEEDING - FOR PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ. FT.) FOR THE PERIOD OF MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEeping LOVEGRASS (0.7 LBS./1000 SQ. FT.) FOR THE PERIOD OF NOVEMBER 16 THROUGH NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/2 GAL. PER ACRE (6 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

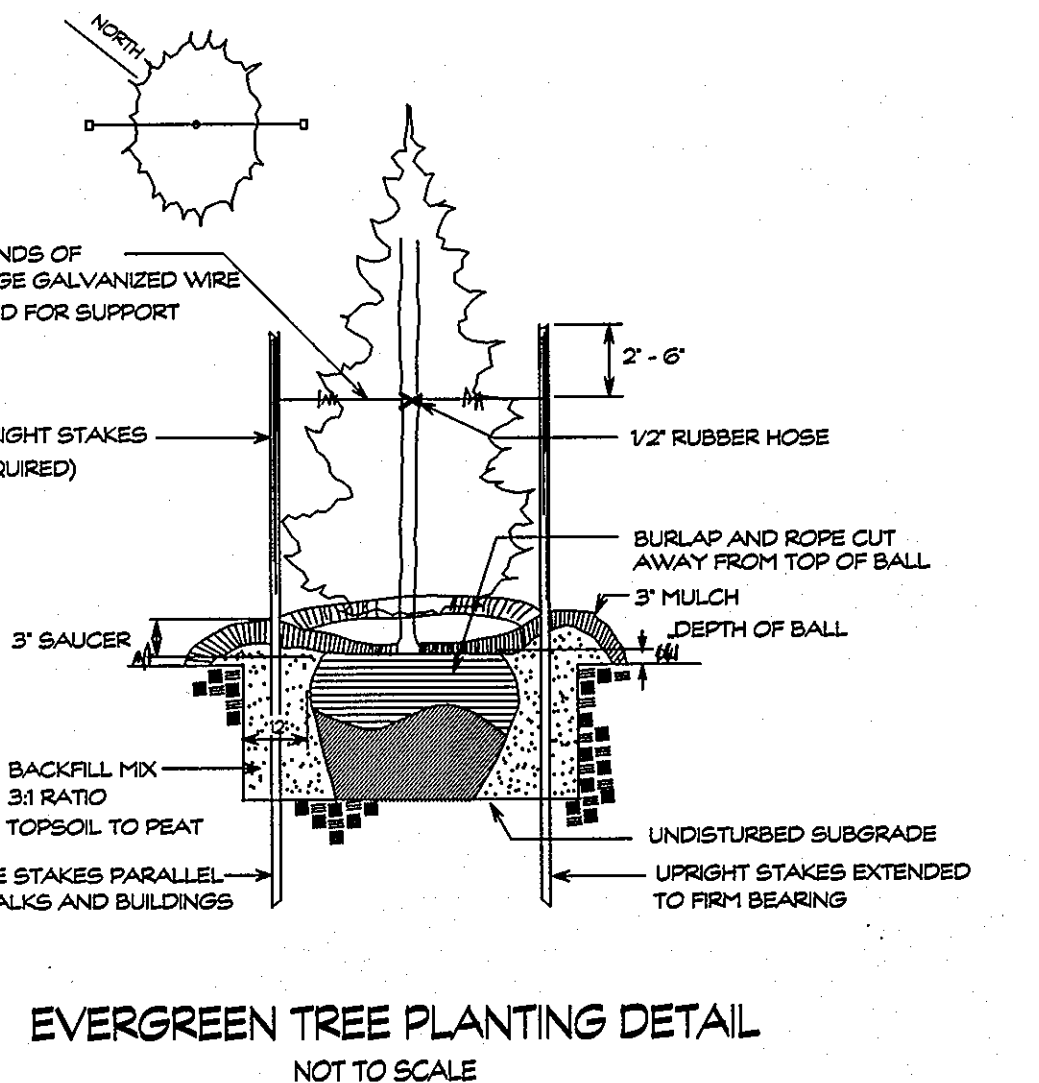
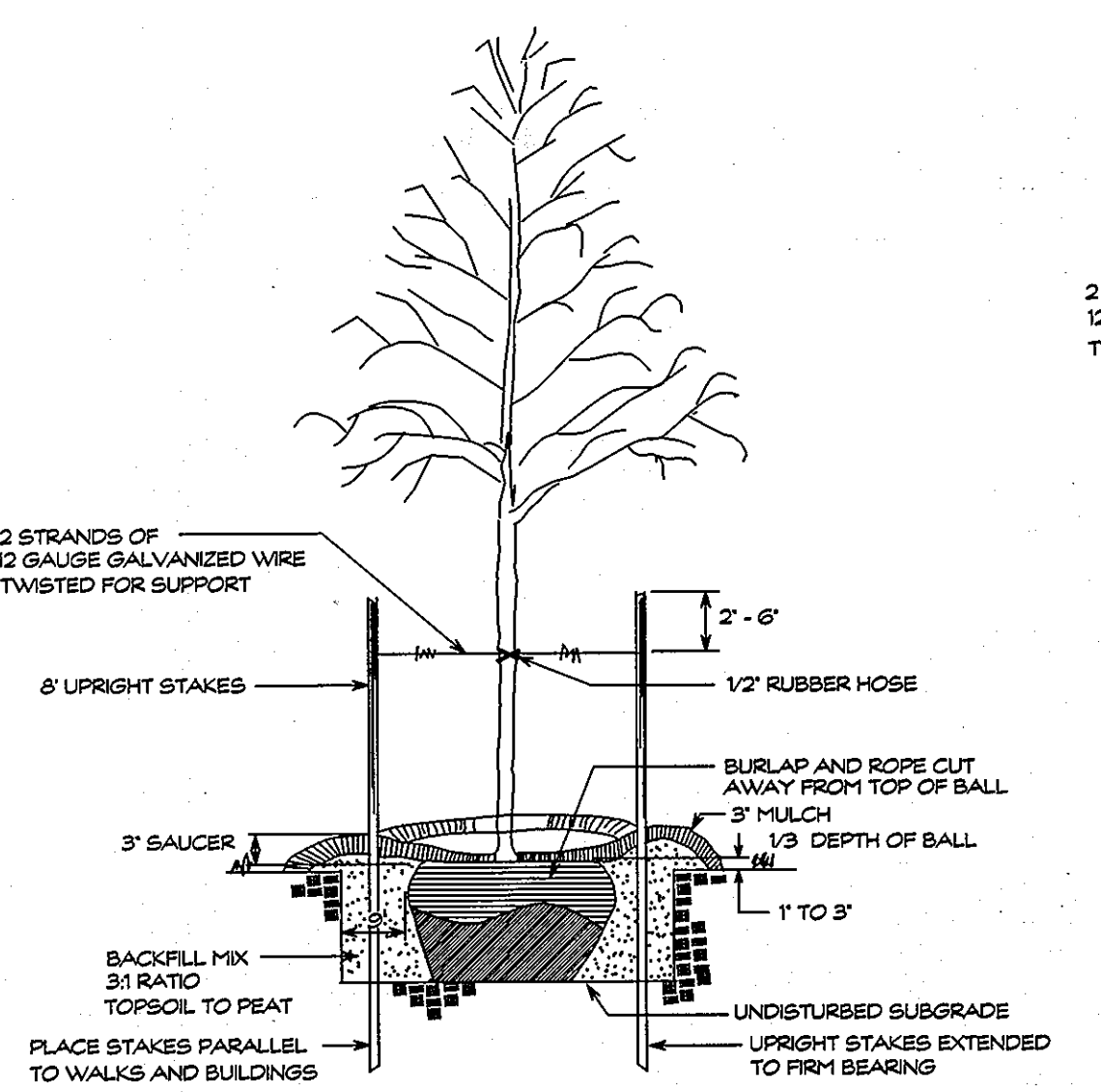
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.



**NOTE:**  
CONTRACTOR TO ADJUST SPREADER SO THAT IT REMAINS LEVEL AND PARALLEL WITH THE CONTOURS.



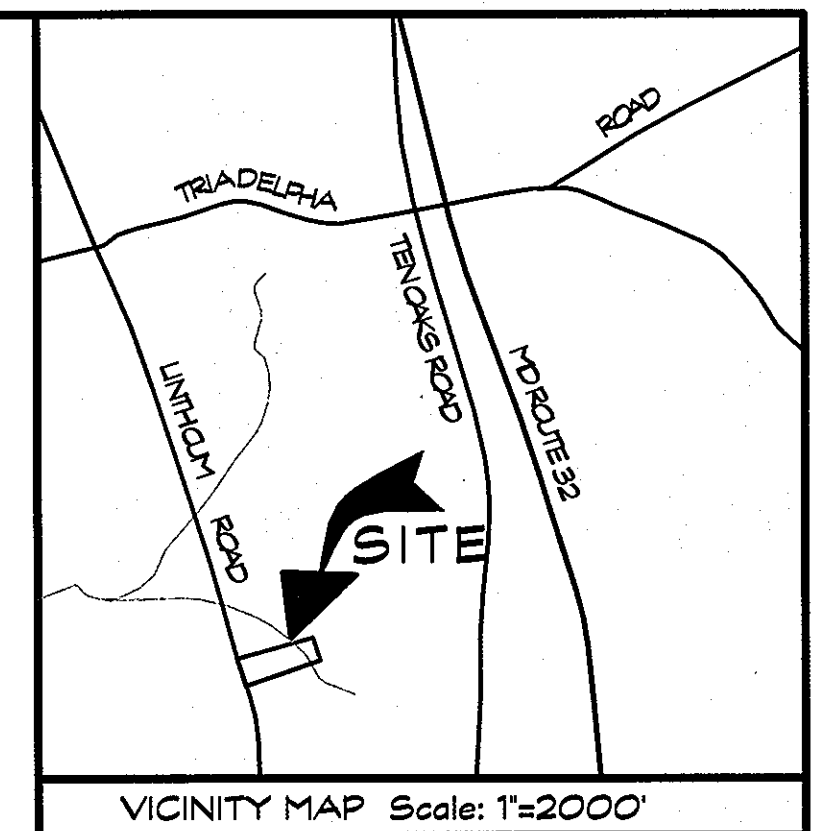
- LENGTH - MINIMUM OF 50' (30' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SCD  
*John K. Baxter* 1/15/09  
HOWARD SOIL CONSERVATION DISTRICT

**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John K. Baxter* 01-06-09  
DATE

**SURVEYOR'S CERTIFICATE**  
I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*Cynthia K. Baxter* 01-06-09  
DATE  
CYNTHIA K. BAXTER  
PROFESSIONAL LAND SURVEYOR REG NO. 10786

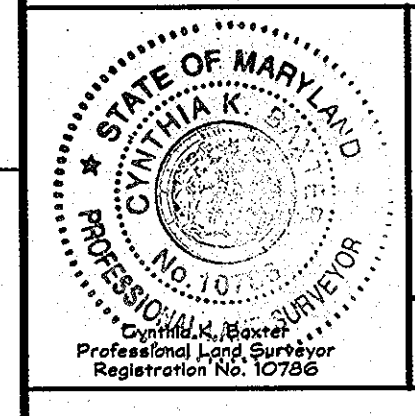


**OWNER / DEVELOPER**  
JON LEVINE  
4305 PLEASANT PATH  
ELLCOTT CITY, MD 21043  
(410) 312-7970

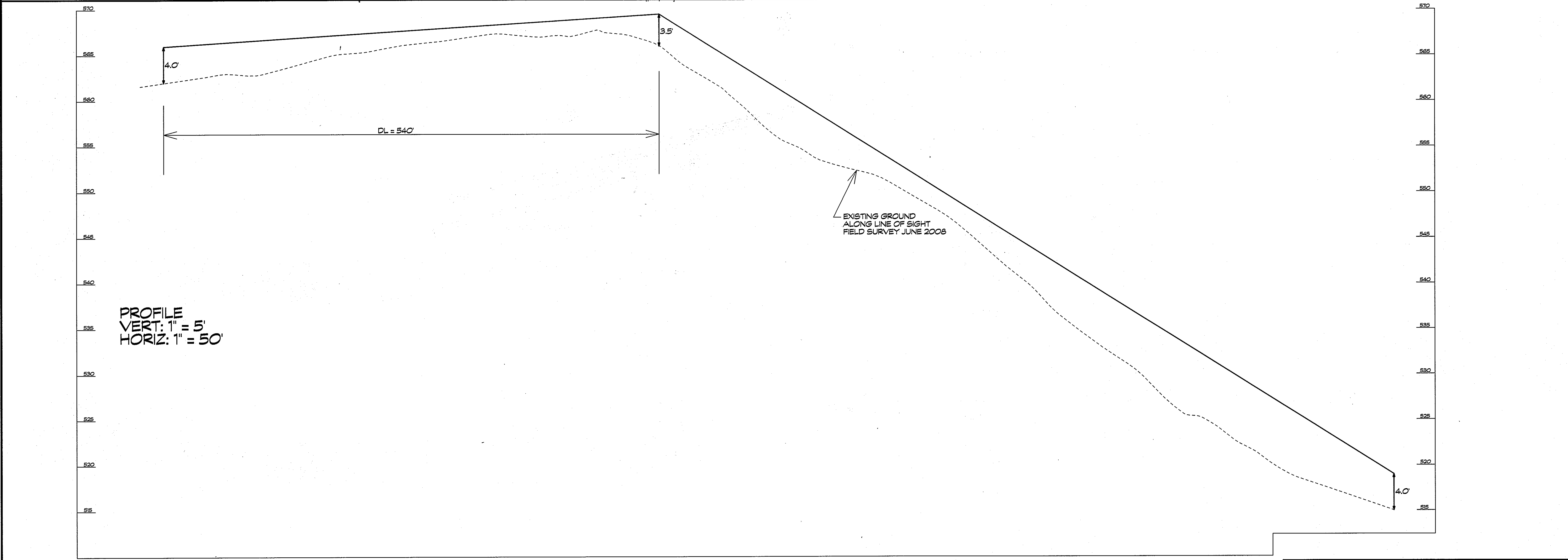
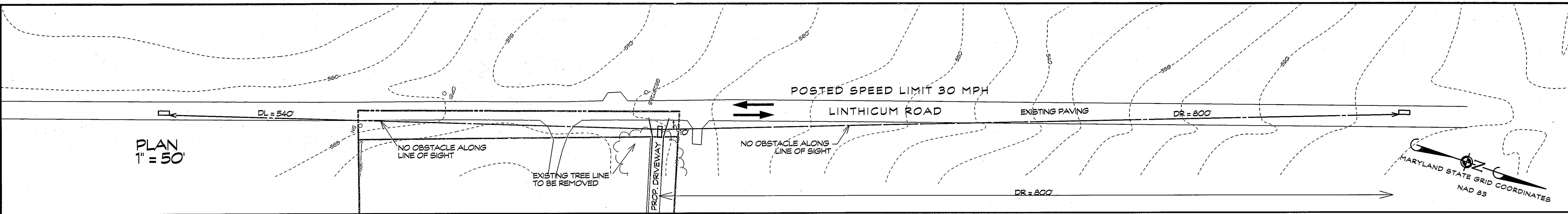
APPROVED:  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William J. M... 1-22-09*  
DATE

APPROVED:  
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Andy Horne 2/5/09*  
DATE  
*Paul ... 2-2-9*  
DATE

**STORM WATER MANAGEMENT & SEDIMENT CONTROL DETAILS**  
4255 LINTHICUM ROAD  
**LEVINE PROPERTY**  
TAX MAP 22 GRID 18 PARCEL 217 ZONING: RR-DEO  
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



| Date     | Revisions                                  | Drawn By:        |
|----------|--|------------------|
| 7/9/08   | Address County Comments dated 3/6/08 ddd   | Designed By:     |
| 10/3/08  | Address County Comments dated 8/25/08 TLR  | Reviewed By:     |
| 11/18/08 | Address County Comments dated 11/10/08 ddd | Date: 7/9/08     |
|          |  | Scale: varies    |
|          |  | Job No.: 2008208 |
|          |  | Sheet: 3 OF 5    |



POSTED SPEED LIMIT = 30 MPH  
 OPERATING SPEED = 45 MPH (85TH PERCENTILE TRAFFIC STUDY)  
 DESIGN SPEED = 50 MPH

BASED ON FIGURE 2.17 OF DESIGN MANUAL VOL. III

|            | DL   | DR   |
|------------|------|------|
| CROSS      | 460' | 520' |
| LEFT TURN  | 540' | 800' |
| RIGHT TURN | 770' | N/A  |

SINCE ROAD IS LOCATED NEAR HIGH POINT WITH VARIABLE GRADE OF 1% AND 6% ADJUSTMENT FACTORS MUST BE USED.

|            | DL                          | DR                          |
|------------|-----------------------------|-----------------------------|
| CROSS      | 460'                        | 520'                        |
| LEFT TURN  | 540' X 1.0 = 540' (control) | 800' X 1.0 = 800' (control) |
| RIGHT TURN | 770' X 0.5 = 385'           | N/A                         |

BASED ON THE HORIZONTAL AND VERTICAL ANALYSIS, THE PROPOSED DRIVEWAY FOR LEVINE PROPERTY MINOR SUBDIVISION HAS ADEQUATE SIGHT DISTANCE.

**NOTES**

Linthicum Road- Minor collector with 60' r/w

Road grades and elevations are based on a field survey conducted by CLSI, on 6/26/08.

85th Percentile Traffic Study Results  
 Northbound- 39.05 mph.  
 Southbound- 44.65 mph

**OWNER / DEVELOPER**

JON LEVINE  
 4305 PLEASANT PATH  
 ELLICOTT CITY, MD 21043  
 (410) 312-1970

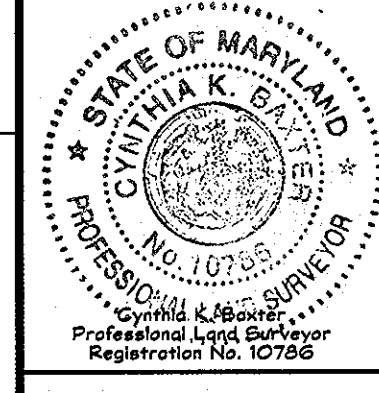
APPROVED:  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Walter Z. [Signature]*  
 CHIEF, BUREAU OF HIGHWAYS  
 1-22-09 DATE

**SURVEYOR'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN FOR INTERSECTION SIGHT DISTANCE IS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY DEPT. PLANNING AND ZONING.  
*Cynthia K. Baxter*  
 CYNTHIA K. BAXTER  
 PROFESSIONAL LAND SURVEYOR REG NO. 10786  
 01-06-09 DATE

APPROVED:  
 HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hanna*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 2/4/09 DATE  
*Paul Edwards*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 2-2-9 DATE

**INTERSECTION SIGHT DISTANCE PLAN AND PROFILE**  
 4255 LINTHICUM ROAD  
**LEVINE PROPERTY**

TAX MAP 22 GRID 18 PARCEL 217 ZONING: RR-DEO  
 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



**FREDERICK OFFICE:**  
 8445 Progress Drive, Suite B5  
 Frederick, MD 21701-4879  
 (301) 662-1799 FAX (301) 662-3004

**WESTMINSTER OFFICE:**  
 439 East Main Street  
 Westminster, MD 21157-5539  
 (410) 848-1790 FAX (410) 848-1791

| Date     | Revisions                                  | Drawn By:        |
|----------|--|------------------|
| 7/9/08   | Address County Comments dated 3/6/08 add   | Designed By:     |
| 11/18/08 | Address County Comments dated 11/10/08 add | Reviewed By:     |
|          |  | Date: 7/9/08     |
|          |  | Scale: VARIES    |
|          |  | Job No.: 2006208 |
|          |  | Sheet: 4 OF 5    |

CAD Drawing File Name: G:\2006\2006208\CONSET\SHEET\05\TRAFFIC\PROFILE

SHEET/ITEM/LOG/DATE: 1/6/2009 11:42:28 AM

**MITIGATION PLAN NOTES**

**NARRATIVE**  
The Stream Buffer Enhancement Plan provided in response to waiver # WP-08-096.

**PLAN NOTES**

- Attachment of signs or any other object, to trees is prohibited.
- No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed in conservation areas.
- All protective devices must be in place prior to any grading which includes Forest Protection Signs and fencing.
- Planting areas will be posted with reforestation signs every 100 feet and this area will be protected with plastic mesh protective fencing.
- Pre-Construction meeting: Before any disturbance, the developer, contractor or project manager and local inspector shall attend. Temporary parking, stockpile, staging and fueling area will be shown to all personnel.
- Any changes made to the Mitigation Plan due to on-site conditions shall be made in consultation with a representative of the Howard County Government.
- Reforestation and/or afforestation areas will be placed in a Forest Conservation Easement in perpetuity.
- No burial of discarded materials will occur on-site within the planting area.
- No open burning within 100 feet of a wooded area.

**STREAM BUFFER ENHANCEMENT**

| SITE         | ACRES             |
|--------------|-------------------|
| 1            | 0.96              |
| <b>TOTAL</b> | <b>0.96 ACRES</b> |

**PLANT MATERIAL:**  
Planting material will conform to the current issue of 'The American Standards for Nursery Stock', published by the 'American Association of Nurserymen'. Native Plants shall be locally grown, 1-3 gallon containerized with no less than 1/4" - 1/2" caliper and no less than 36" in height for ornamental species and no less than 18" in height for understory.

**SITE PREP:**  
Planting sites currently in dense grasses, forbs and exotic invasives prior to planting shall be removed and mechanically removed by hand. A post emergent herbicide can be spot sprayed at each plant location or applied in strips. Pre emergent herbicide applications may be made to prevent seed germination and stump sprouting of unwanted plant competition. (See Herbicide Management Details)

**PLANT INSTALLATION, MULCHING, SHELTERS AND WATERING:**  
Auger holes, loosen sides and install plant material, water and apply 2" of mulch over the root area, install tree shelters and water. The mulch will help retain moisture and reduce weed competition.

**PLANTING SCHEDULE:**  
Container Plants are best installed in Early Spring after frost between Feb 15th and May 1st but must be installed and inspected by June 30th to receive growing credit for the year. The optimal time to plant is just after the frost has left the ground. Planting material should be ordered several months in advance to insure quality and species selection.

**CLEAN UP:**  
All debris created from the planting activities shall be removed from the site upon completion of planting.

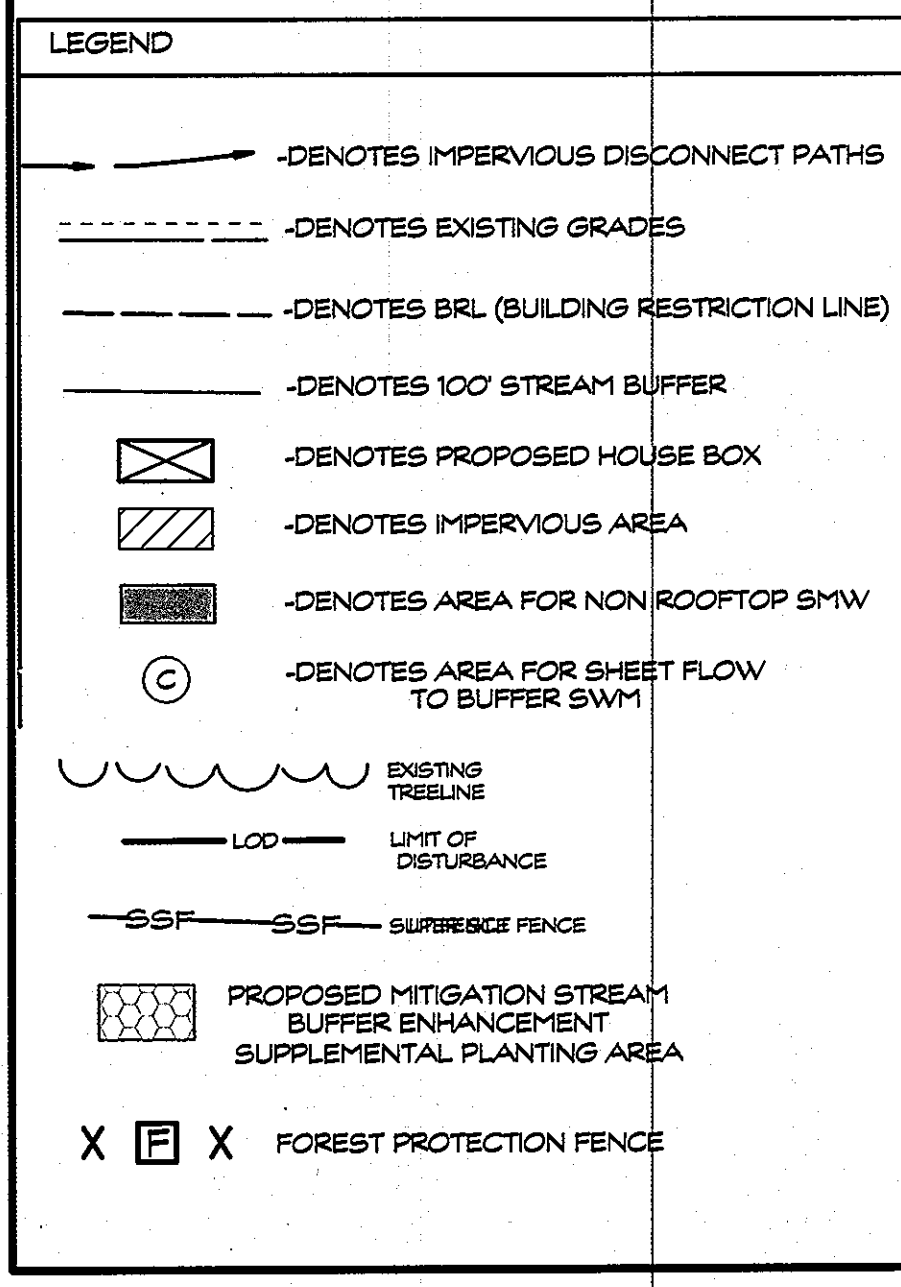
**PROTECTION DEVICES:**  
The planting site shall be protected with signs at approximately every 100' (see detail). This acreage will also be placed in a Forest Conservation Easement in perpetuity.

**SPECIES SELECTION 350 TREES/ACRE**

Planting Area #1 = 0.96 Acres (Mixed/Hybrid)  
336 trees required  
11' x 11' Spacing

| QTY | SPECIES                                 |
|-----|---|
| 68  | Liriodendron tulipifera - Yellow Poplar |
| 33  | Platanus occidentalis - Sycamore        |
| 34  | Acer Rubrum - Red Maple                 |
| 67  | Quercus bicolor - Swamp White Oak       |
| 67  | Cornus florida - Flowering Dogwood      |
| 34  | Aronia melanocarpa - Black Chokeberry   |
| 33  | Cercis canadensis - Redbud              |

\* Random distribution of stock



**MAINTENANCE AND MANAGEMENT PLAN**

**A. PLANTING REQUIREMENT: 336 TREES**  
**B. SURVIVAL REQUIREMENT: 75% = 252 TREES**  
**C. MAINTENANCE AND MANAGEMENT PERIOD: 24 MONTHS**  
**D. TREES WILL BE PLANTED AS SPECIFIED BELOW**

**MAINTENANCE AND MANAGEMENT:**

A. The landowner/developer will ensure the tree survival during the maintenance and management period. Within that period any trees dying or in a severely weakened condition will be replaced in the first available planting window; these plantings are reinforcement plantings.  
B. Watering and fertilizing will be performed on an as needed basis and be carried out by the landowner/developer to ensure the survival rate.  
C. Control of competing vegetation will be carried out at least twice annually, during this maintenance agreement. No mowing will occur between April 1 through July 31, due to the possibility of ground nesting wildlife species.  
D. Pest, disease, and mechanical injury will be addressed in the following manner: Pruning the trees will help protect the trees from mechanical damage as it provides some guidance to the person mowing. Pest and disease inspections will be performed annually throughout the maintenance agreement.

**INSPECTIONS:**  
Periodic inspections must meet the requirements of the Howard County Forest Conservation Manual.

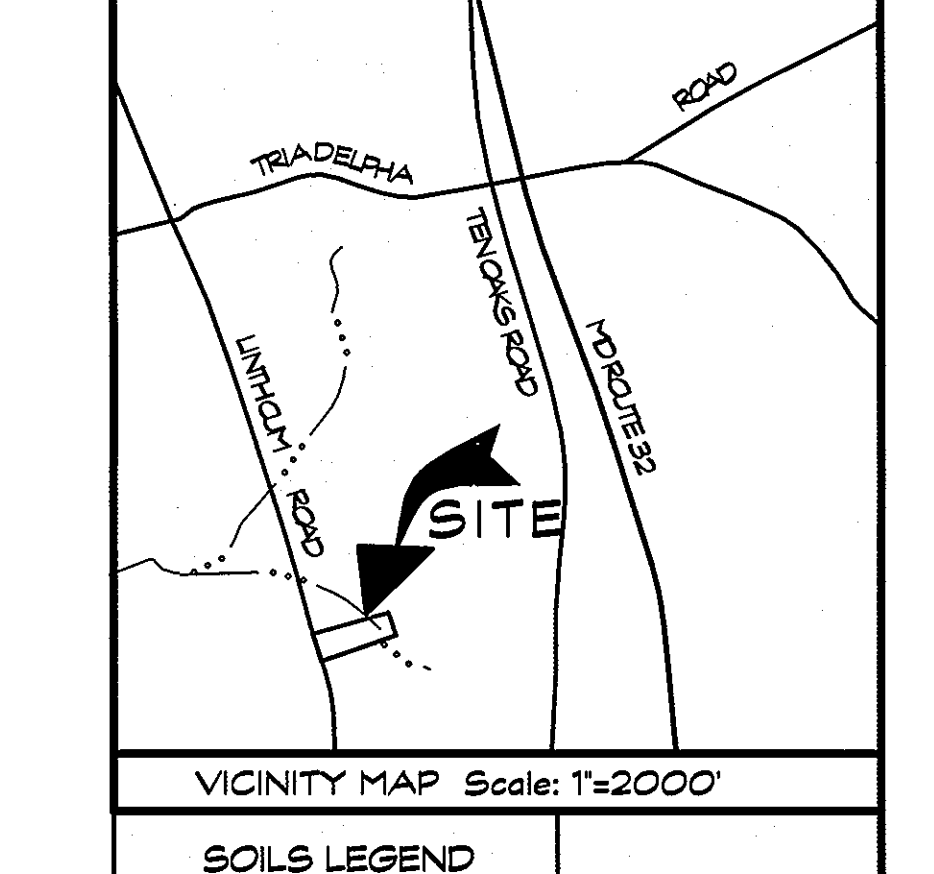
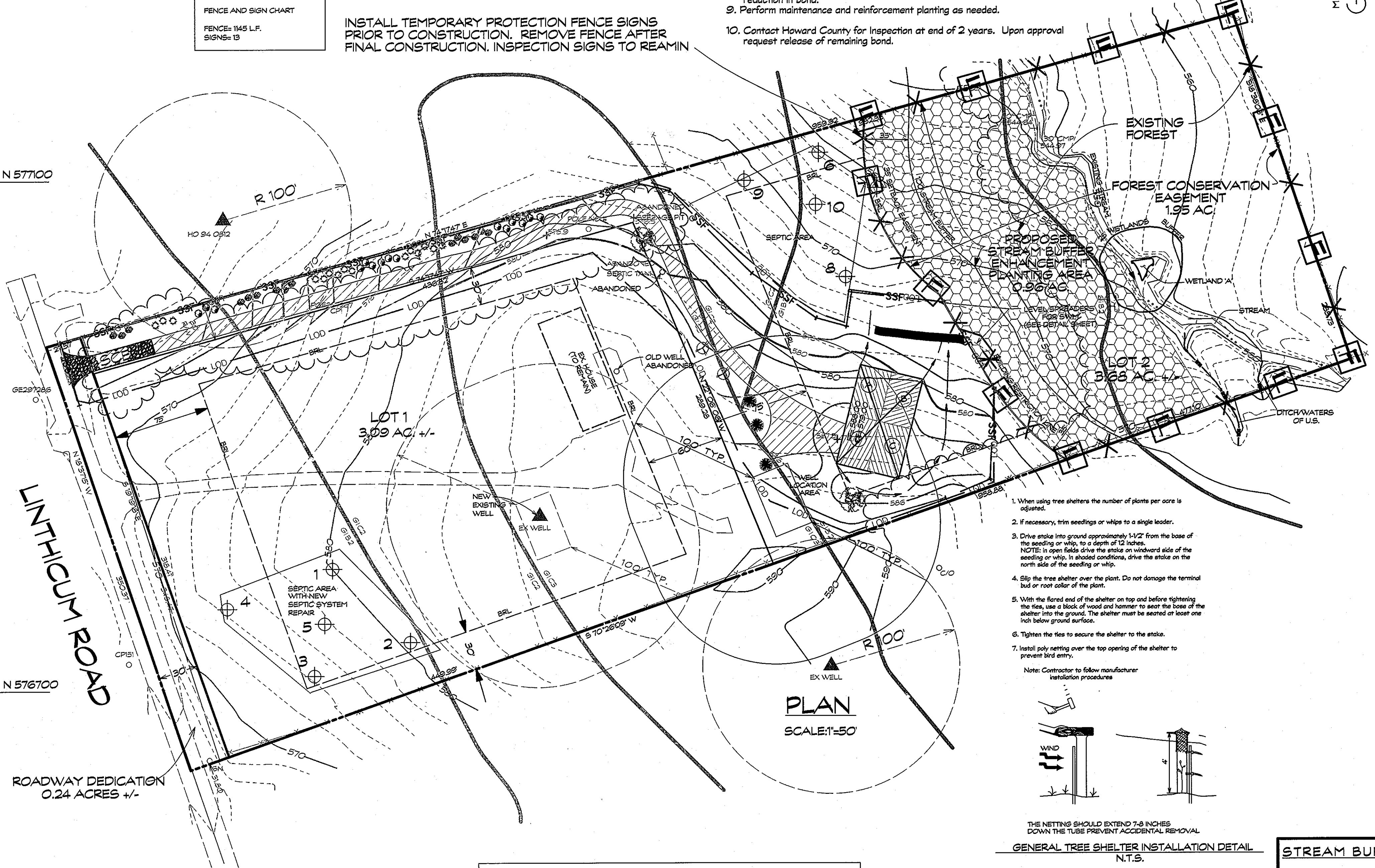
**A.** Within one month of the completed planting, a landowner representative and a county representative will perform an initial inspection.  
**B.** At the end of the first growing season, the landowner/developer will make another inspection to check survival rate; if the planting survival rate is below the survival requirement, the landowner/developer will re-plant the planting (see Inspection form to County).  
**C.** Planting inspections will be carried out for the entire maintenance agreement, during each growing season and continue until the final inspection, upon which time the survival requirement will be ensured. The same procedure for notification will be used to inform the County.  
**D.** At the end of the 12 & 24 month period, if the planting meets or exceeds the survival requirement, the remaining amount of the cash bond, letter of credit, surety bond, or other guarantee shall be returned or released upon written request of the person required to provide said guarantee.  
**E.** Responsible Party for planting: **JON LEVINE 4305 PLEASANT PATH ELLICOTT CITY, MD 21043 (410) 312-7970**

**PLANTING INSPECTION**

SITE NAME:  
INSPECTED BY:  
IS REINFORCEMENT PLANTING NEEDED? % SURVIVAL %  
CAUSE OF MORTALITY:

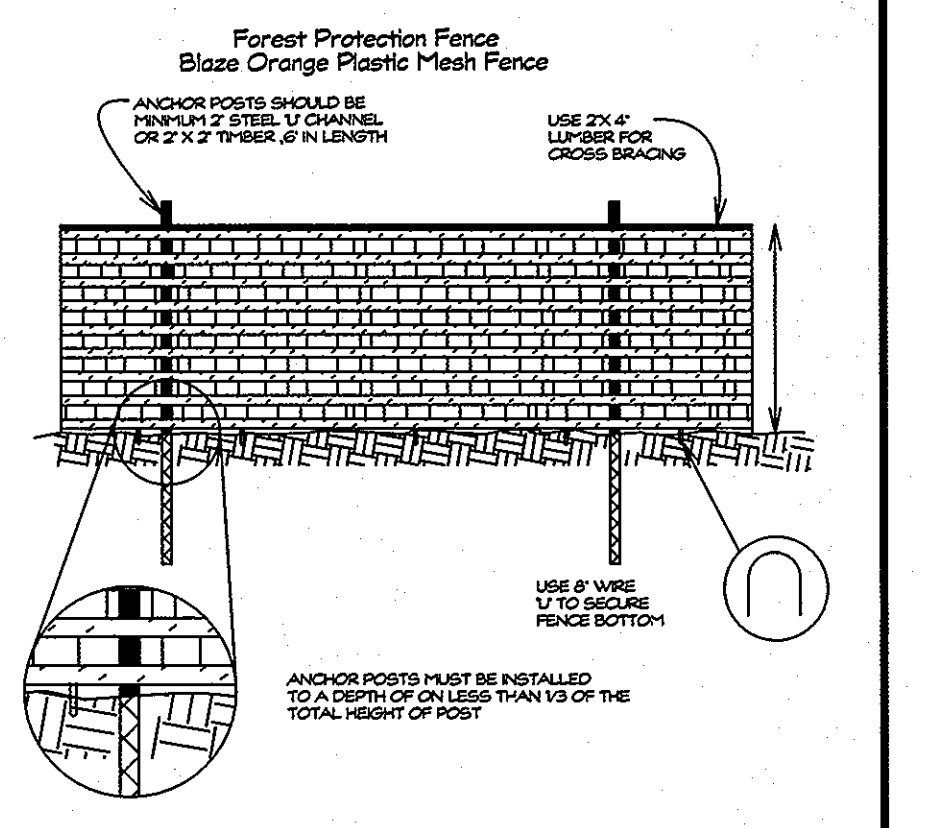
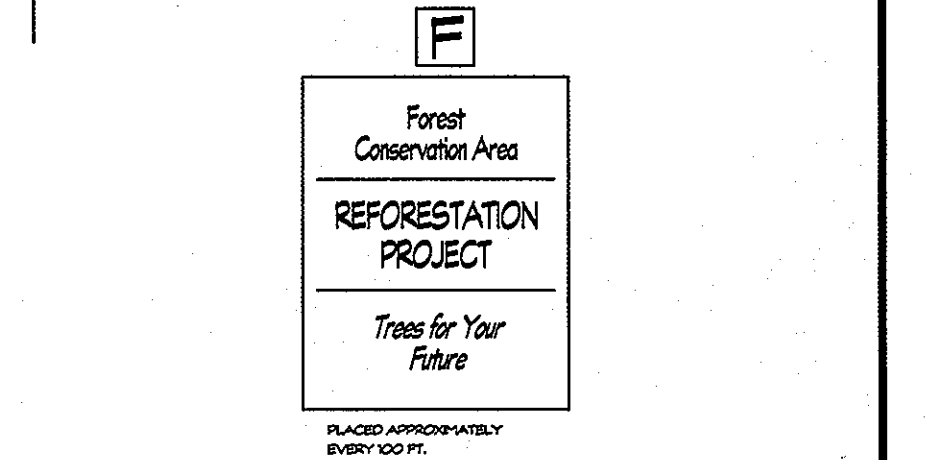
**COMMENTS:**  
Survival Requirement  
Trees Planted: 336 Survival Rate: 75% Required Plants: 252

- SEQUENCE OF CONSTRUCTION (PRIOR TO JUNE 30TH)**
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to sediment control installation, grading, construction, forest protection fence/sign and planting installation. (Phone No.301-313-1855)
  - Stakeout the Conservation Easement at the 35' setback easement.
  - Install Forest Protection Fence and Signs per plan.
  - Contact Howard County Department of Inspections, Licenses and Permits, Sediment Control Division for a Pre-Planting Inspection Meeting.
  - Perform Stream Buffer/Enhancement Site Preparation and Planting.
  - Call Howard County for Initial Planting Inspection. Signs are permanent. Temporary protection fence to remain through construction only.
  - Perform maintenance & reinforcement planting as needed.
  - Contact Howard County for 1 Year Inspection. Upon approval request
  - Perform maintenance and reinforcement planting as needed.
  - Contact Howard County for Inspection at end of 2 years. Upon approval request release of remaining bond.

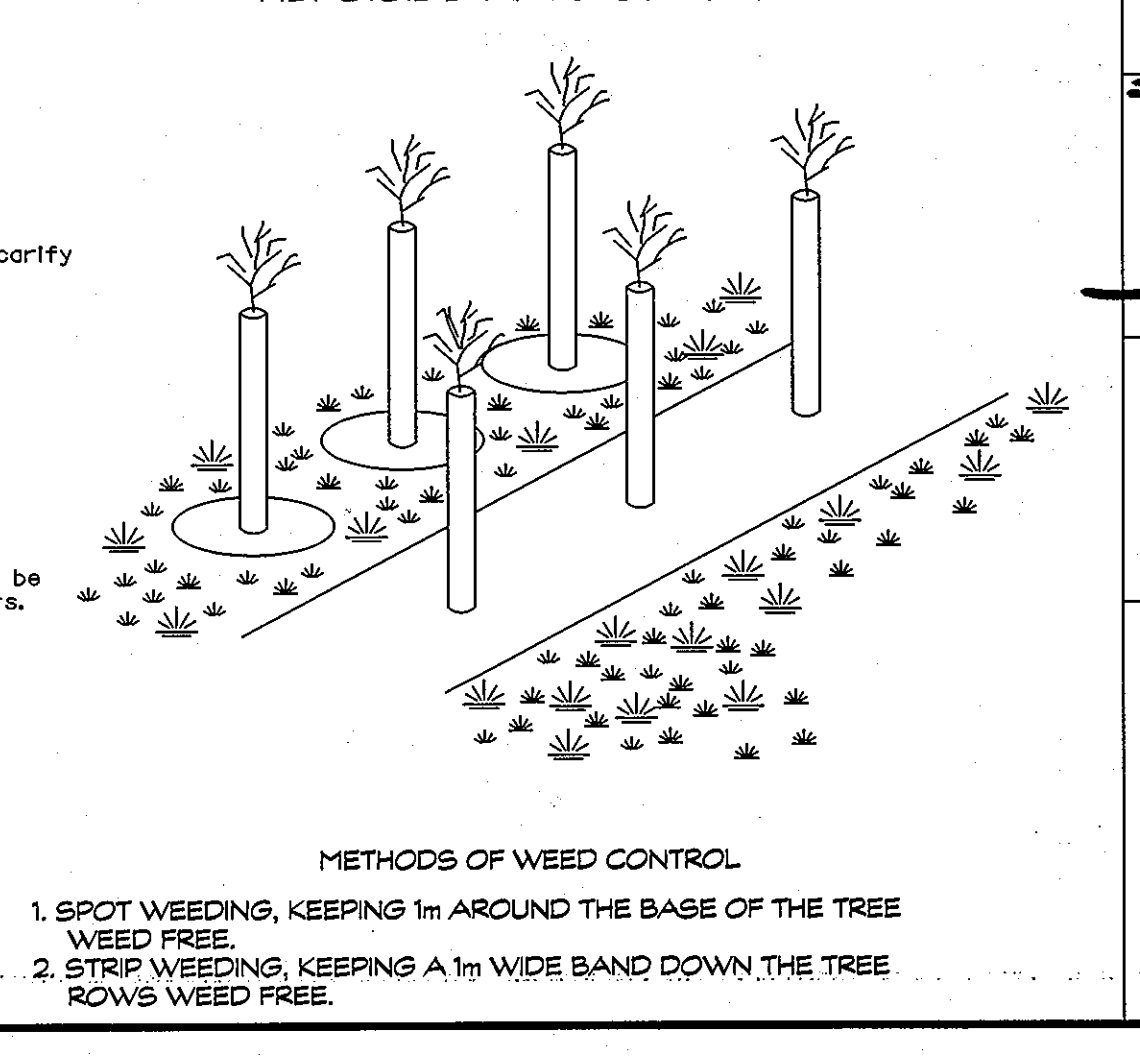
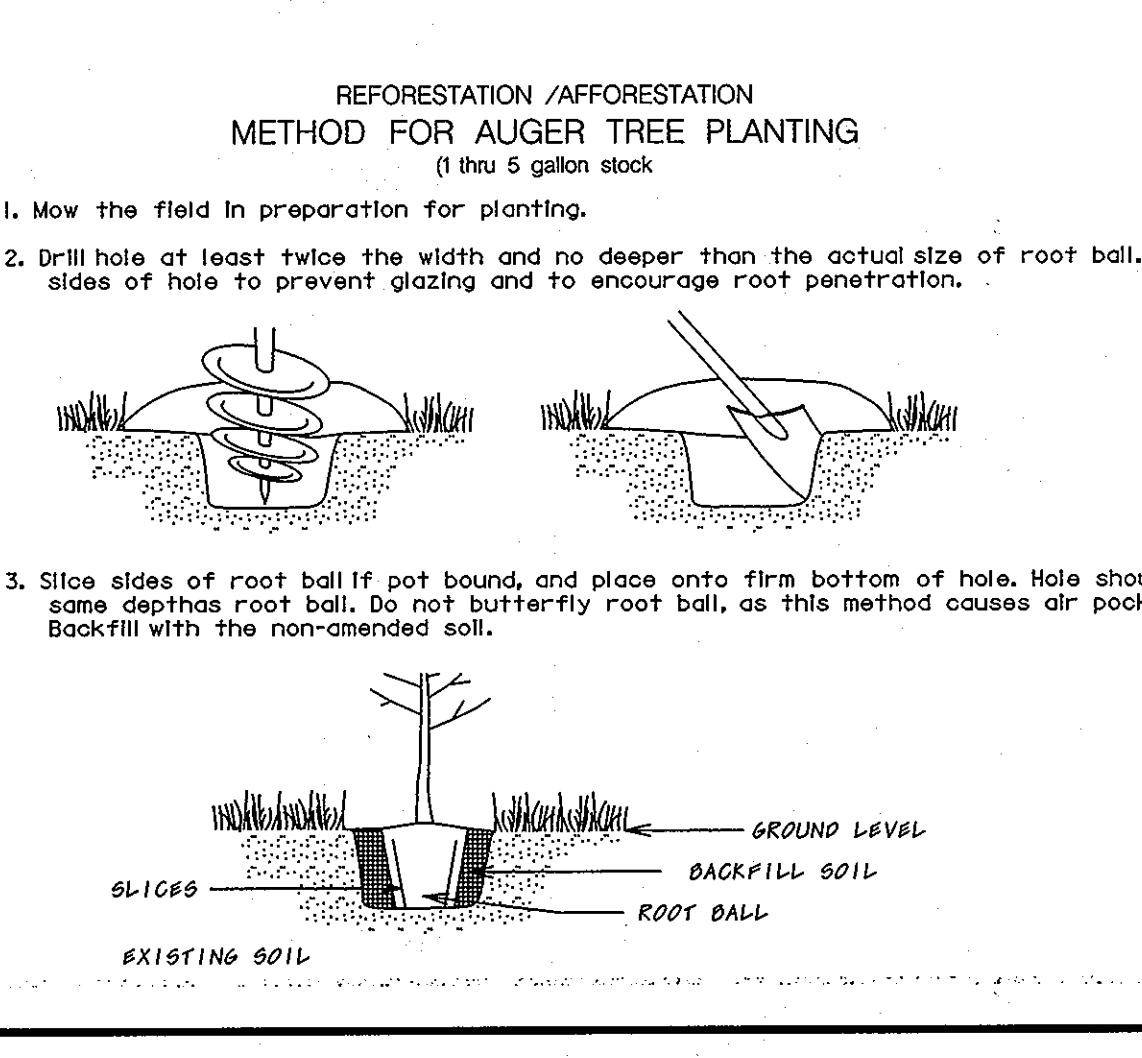
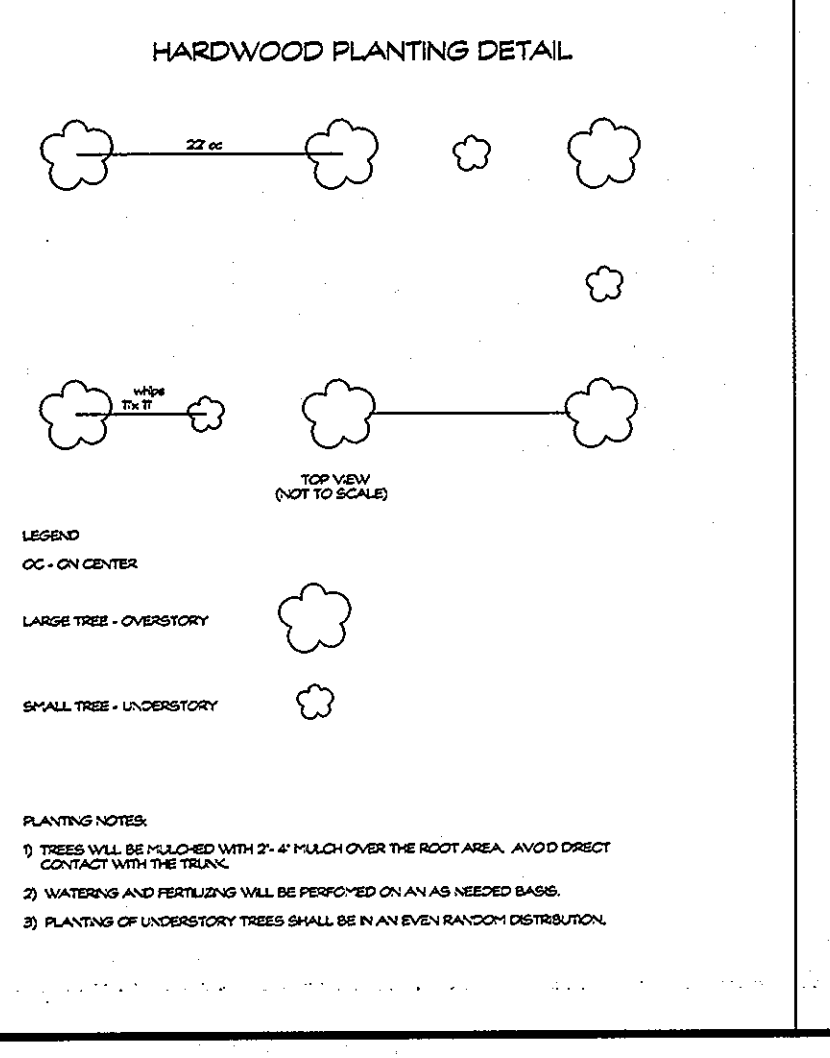


**SOILS LEGEND**

| SOIL | TYPE    |
|------|---------|
| GB2  | GLENELG |
| GC2  | GLENELG |
| GC3  | GLENELG |



- When using tree shelters the number of plants per acre is adjusted.
  - If necessary, trim seedlings or whips to a single leader.
  - Drive stakes into ground approximately 1/2" from the base of the seedling or whip, to a depth of 12 inches. NOTE: In open fields drive the stake on windward side of the seedling or whip. In shaded conditions, drive the stake on the north side of the seedling or whip.
  - Slip the tree shelter over the plant. Do not damage the terminal bud or root collar of the plant.
  - With the far end of the shelter on top and before tightening the ties, use a block of wood and hammer to seat the base of the shelter into the ground. The shelter must be seated at least one inch below ground surface.
  - Tighten the ties to secure the shelter to the stake.
  - Install poly setting over the top opening of the shelter to prevent bird entry.
- Note: Contractor to follow manufacturer installation procedures
- THE NETTING SHOULD EXTEND 7-8 INCHES DOWN THE TUBE PREVENT ACCIDENTAL REMOVAL
- GENERAL TREE SHELTER INSTALLATION DETAIL N.T.S.**



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY HOWARD SCD

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED:  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Michelle J. ...* 1-22-09  
CHIEF, BUREAU OF HIGHWAYS

APPROVED:  
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Candy ...* 2/4/09  
CHIEF, DIVISION OF LAND DEVELOPMENT

*Chad ...* 2-2-9  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**STREAM BUFFER ENHANCEMENT MITIGATION PLAN WAIVER # WP-08-096**

4255 LINTICUM ROAD

**LEVINE PROPERTY**

TAX MAP 22 GRID 18 PARCEL 217  
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER  
**JON LEVINE**  
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| Date     | Revisions   | Drawn By:       |
|----------|---|-----------------|
| 11/18/08 | Add mitigation plan to supplemental plan set. DDD | HWJ             |
| 12/17/08 | Address County comments dated 12/9/08. DDD        | GDE             |
|          |   | Date: 04/01/08  |
|          |   | Scale: 1" = 50' |
|          |   | Job No: 2008208 |
|          |   | Sheet: 5 OF 5   |