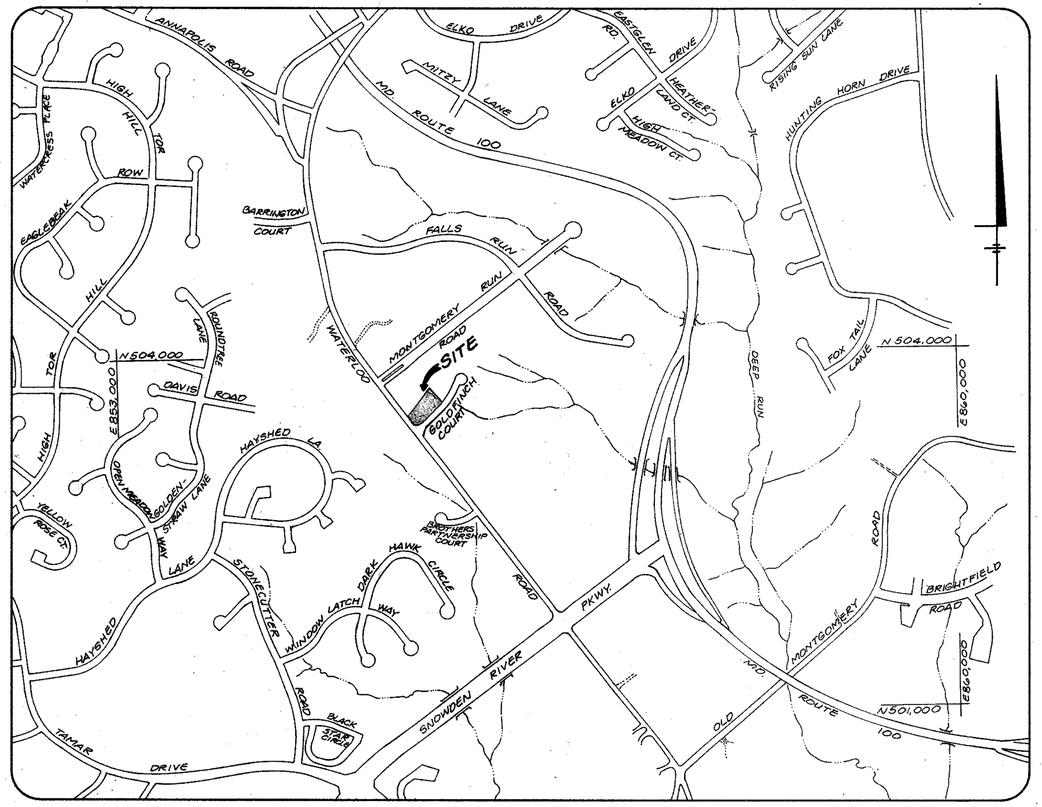
INDEX OF SHEETS

ABANDONMENT NOTE:

The existing private well and septic system located on the project shall be abandoned by the developer in accordance with approved procedures of the Howard County Health Department. The developer shall provide verification to the Health Department of the abandonment prior to signature approval of the Record Plat.

The monitoring wells located along the northern boundary line shall remain in place until such time as the Maryland Department of the Environment and/or the Environmental Protection Agency approves their removal or relocation.

PLEASE NOTE, INSPECTION BY THE HOWARD COUNTY HEALTH DEPARTMENT IS REQUESTED PRIOR TO THE INITIATION OF WORK



LOCATION MAP
Scale: 1" = 600'

FINAL CONSTRUCTION PLANS

MONTGOMERY TOWNSHIP II

LOTS 1 THRU 8

1st Election District – Howard County, Maryland

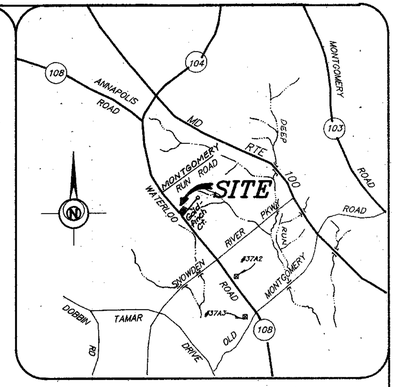
BENCHMARKS :

37A2 : ELEV. = 403.707

CONCRETE MONUMENT 0.1 FT. BELOW SURFACE AT TOP OF SLOPE NORTH SIDE OF WATERLOO ROAD NEAR # 5866

37A3 : ELEV. = 385.659

CONCRETE MONUMENT 0.3 FT. BELOW SURFACE AT TOE OF SLOPE SOUTHWEST QUADRANT OF WATERLOO ROAD AND OLD MONTGOMERY ROAD INTERSECTION



VICINITY MAP
Scale 1" = 2000'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County Design Manual Vol IV and MSHA standards & specifications.
2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection at (410) 313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work.
4. Project Background:
   Location: Ellicott City, Maryland
   Tax Map: 37
   Parcels: P/O 2
   Deed Reference: Liber 4150, Folio 60
   Zoning: RSA-8 (Residential – Single Attached) Per 10/18/93 Comprehensive Plan)
   Election District: 1 st
   Total Tract Area: 0.4885 Ac. plus/minus
   Previous Submittals: S94-04, WP94-10, SP94-94, F95-136 SP 99-02
5. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
6. Any damage caused by the contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractors expense.
7. The existing utilities shown hereon are located from field surveys and construction drawings of record. The approximate location of existing utilities are shown for the contractors information and convenience. The contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the contractor shall take all necessary precautions to protect all existing utilities and maintain uninterrupted service.
8. The topography shown hereon is compiled from field run topography prepared by LDE, Inc. March, 1995, November 1998, & January 1999; and construction drawings and As-Built surveys of public record.
9. Horizontal and vertical datums are related to the Maryland State Plane Coordinate System as projected from Howard County Geodetic Control station Nos. 37A2 and 37A3 (NAD 83).
10. The property shown hereon is based on a field run boundary survey performed by LDE, Inc. dated March, 1995.
11. The proposed Water and Sewer systems will be by House Connections From Contract # 14-3437-D. This property is located within the Metropolitan District.
12. There are no existing steep slopes within the boundaries of the site; as outlined in Section 16.108(b)(56) of the Subdivision and Land Development Regulations.
13. All hydraulic data is for the 10-year storm unless otherwise noted.
14. See sheet 2 for construction sequence.
15. 95% compaction in all fill areas shall be determined by AASHTO T-180.
16. The Geotechnical Report was compiled by Tech Earth and Enviromental, approved under F 95-136.
17. The Noise Study was compiled by LDE, Inc., dated January, 1999 and approved under SP 99-02.
18. The Wetland Delineation was compiled by M.A. Dircks & Company, July 1993. THERE ARE NO WETLANDS ON THE MONTGOMERY TOWNSHIP II SITE.
19. The Traffic Study was compiled by Robert L. Morris, Inc., dated July 1998 and approved under SP 99-02.
20. Stormwater management will be met in:
    Pond #1 by Quality: Retention
    Quantity: Detention
21. Street Lights are existing as shown on the approved F 95-136 Construction Drawings.
22. The purpose of the two monitoring wells located on open space lot 8 are part of the Maryland Department of the Environment's program to monitor the remediation activity on the adjacent property # 5451 Waterloo Road.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/13/99

APPROVED: Department of Public Works for Storm Systems and Roads

CHIEF, BUREAU OF HIGHWAYS — DATE 7/8/99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE 6/30/99

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/30/99

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 6/23/99

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 6/30/99

6/23/99

"AS-BUILT" SURVEY

5/18/00

NOTE: The "As-Built" Survey certification is limited to the expansion of the existing Stormwater Management located on Open Space Lot 8 (F99-141) and Open Space Lot 52 (F95-136). The "As-Built" Survey of the Stormwater Management structure, etc. (F95-136) was certified by the Tech Group, dated 10/28/97.

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED E.D.S	Cover Sheet MONTGOMERY TOWNSHIP II LOTS 1 THRU 8	SCALE AS SHOWN
DRAWN K.B.W.		SHEET 1 of 4
CHECKED B.D.B.	Tax Map # 37 BLOCK 1 P/O PARCEL NO 2 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 98-015
DATE 5/99	Previous Submittals: S94-04, WP94-10, SP94-94, F95-136, SP99-02 OWNER / DEVELOPER WINTHORPE DEVELOPERS P O BOX 223 HIGHLAND, MARYLAND 20777-0223	FILE NO. F99-141

F99-141

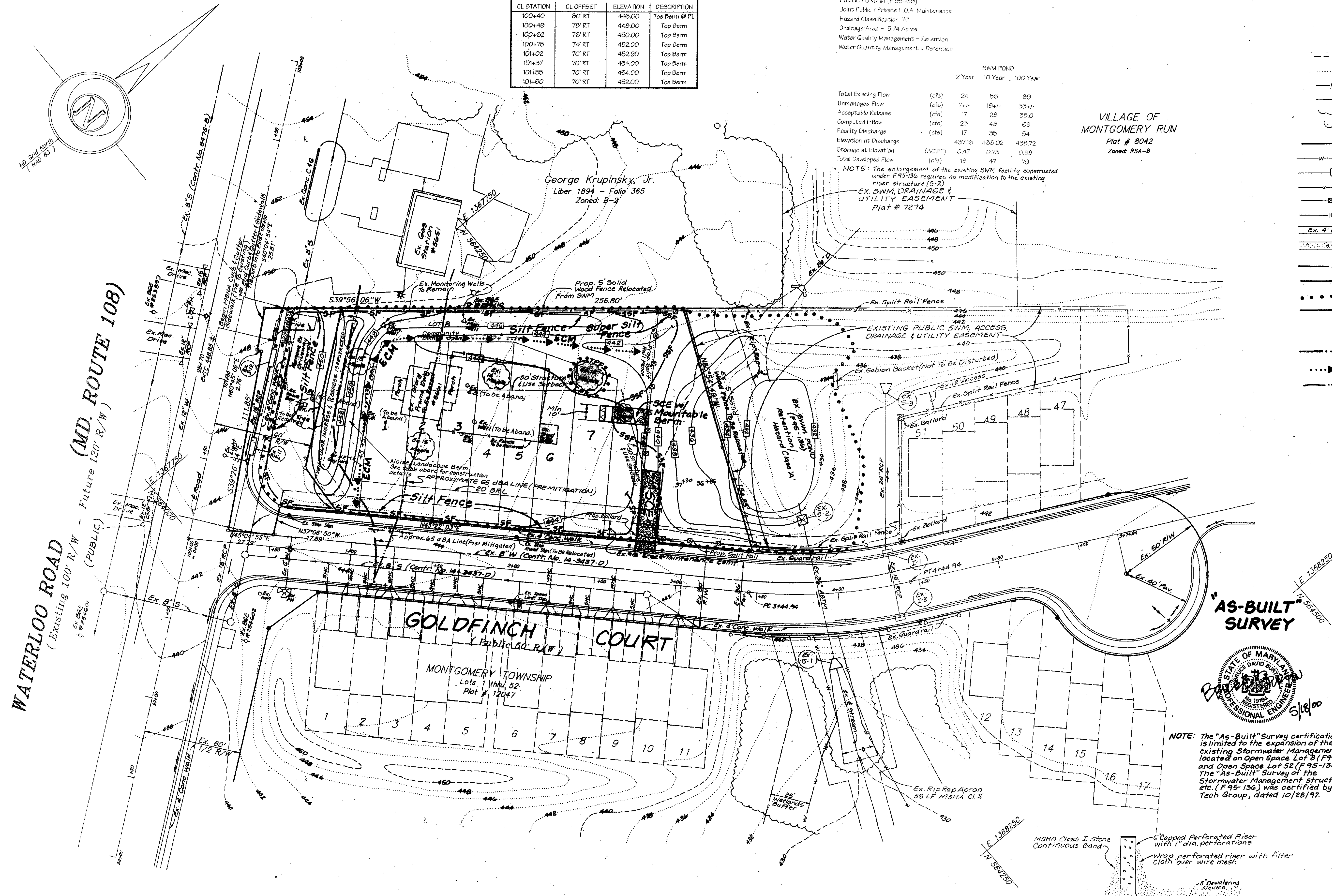
NOISE / LANDSCAPE BERM CONSTRUCTION TABLE			
CL STATION	CL OFFSET	ELEVATION	DESCRIPTION
100+40	80' RT	446.00	Toe Berm @ PL
100+49	78' RT	448.00	Top Berm
100+62	76' RT	450.00	Top Berm
100+75	74' RT	452.00	Top Berm
101+02	70' RT	452.90	Top Berm
101+37	70' RT	454.00	Top Berm
101+55	70' RT	454.00	Top Berm
101+60	70' RT	452.00	Toe Berm

SUMMARY TABLE

PUBLIC POND #1 (F 95-136)
Joint Public / Private H.O.A. Maintenance
Hazard Classification "A"
Drainage Area = 5.74 Acres
Water Quality Management = Retention
Water Quantity Management = Detention

		SWM POND		
		2 Year	10 Year	100 Year
Total Existing Flow	(cfs)	24	56	89
Unmanaged Flow	(cfs)	7+/-	19+/-	33+/-
Acceptable Release	(cfs)	17	28	38.0
Computed Inflow	(cfs)	23	48	69
Facility Discharge	(cfs)	17	35	54
Elevation at Discharge		437.16	438.02	438.72
Storage at Elevation	(AC\FT)	0.47	0.73	0.98
Total Developed Flow	(cfs)	18	47	79

NOTE: The enlargement of the existing SWM facility constructed under F95-136 requires no modification to the existing riser structure (S-2).



LEGEND

- - - 440 - - -	EX. GROUND (10 FT. INTERVAL)
.... 442	EX. GROUND (2 FT. INTERVAL)
—o— · ← —	EX. SEWER
— · — · —	EX. WATER
~~	EX. TREE LINE
~~	EX. TREES TO BE RETAINED
—— — ——	PROPERTY LINE
—w——w—	NON-TIDAL WETLANDS
—[442]—	PROPOSED GRADE
—x——x—	EX. SPLIT RAIL FENCE
—⊠——⊠—	PROP. SPLIT RAIL FENCE
—‖——‖—	5 FT. TALL SOLID WOOD FENCE
Ex. 4' Conc. Walk	EX. SIDEWALK
(stippled)	PROP. SIDEWALK
—— SSF ——	SUPER SILT FENCE
—— SF ——	SILT FENCE
• • • • • • •	LIMIT OF DISTURBANCE
—— TPF ——	TREE PROTECTION FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE
—— · —— · ——	APPROXIMATE 65 dBA LINE (POST MITIGATION)
····▶····▶····▶	EROSION CONTROL MATTING (ECM)
—— ··· —— ··· ——	APPROXIMATE 65 dBA LINE (PRE MITIGATION)

CONSTRUCTION SEQUENCE

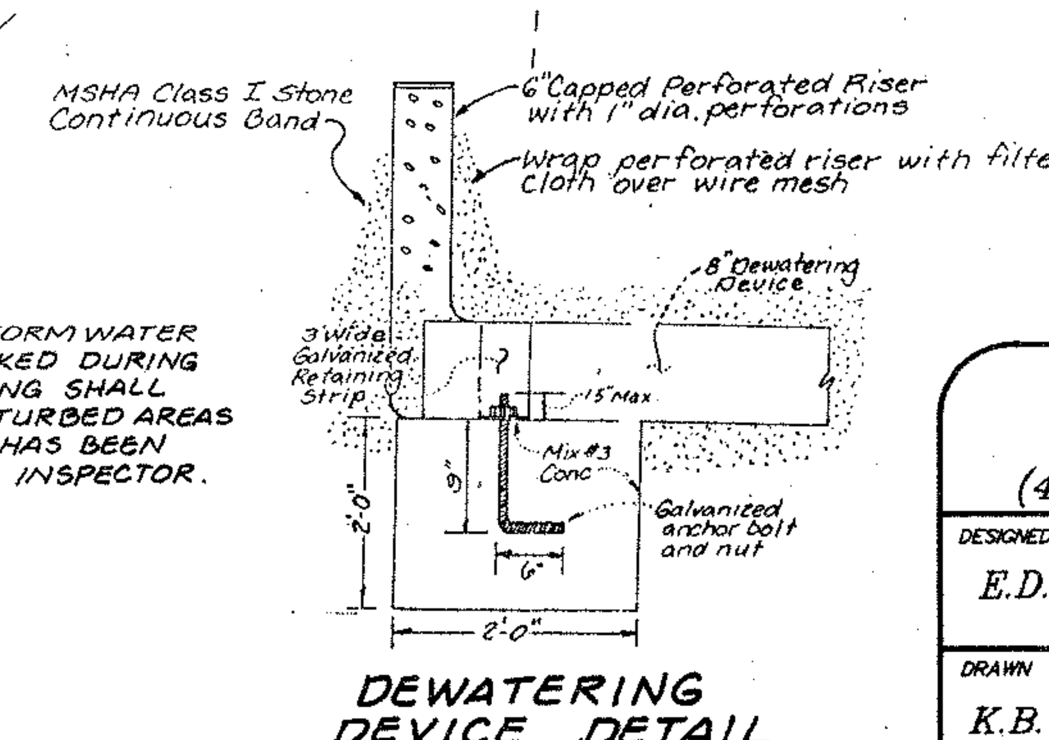
1. Obtain Grading Permit. - 1 day
2. Install Stabilized Construction Entrance (SCE). - 1 day
3. Stakeout limits of disturbance. - 1 day
4. Install Tree Protection Fence (TPF) where shown hereon. - 1 day
5. Install Silt Fence (SF) and Super Silt Fence (SSF) at the limit of disturbance where shown. - 2 days
6. Construct SCE w/ mountable berm as shown hereon. - 1 day
7. After permission has been given by Sediment Control Inspector, dewater the existing Stormwater Management Facility (F95-136) by opening the existing gate valve. - 1 day
8. Re-install the 6" perforated riser, filter cloth and stone per the details of the F 95-136 construction drawings, also shown hereon. The gate valve shall remain open during grading operations. - 1 day
9. Clear & grub and grade site, to include completing the pond excavation and grading associated with the construction of the noise / landscape berm. The pond grading shall be in conformance with MD 378 specifications. Immediately following the completion of the pond grading, stabilize the disturbed areas with permanent seeding mixture and straw mulch. Obtain permission from the sediment control inspector to proceed. - 2 weeks
10. The contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon after each rainfall and on a daily basis - 1 day
11. Install curb & gutter and sidewalk along MD Rte. 108, and repair any curb & gutter / sidewalk from the F95-136 plans. - 1 week
12. Complete any grading, add topsoil per the specifications per sheet 3, and stabilize disturbed areas with permanent seeding mixture and straw mulch - 1 week
13. After all upgrade areas from the pond have been stabilized and permission has been given by Sediment Control Inspector, remove silt fence, super silt fence, and remove the 6" perforated riser, filter cloth and stone. At this time close the gate valve, and stabilize the disturbed areas from the aforementioned disturbances with permanent seeding mixture and straw mulch - 2 days

Total : 30 Days

NOTE: The "As-Built" Survey certification is limited to the expansion of the existing Stormwater Management located on Open Space Lot 8 (F99-141) and Open Space Lot 52 (F95-136). The "As-Built" Survey of the Stormwater Management structure, etc. (F95-136) was certified by the Tech Group, dated 10/28/97.

5/18/00

NOTE: THE EXISTING (F95-136) STORMWATER MANAGEMENT RISER SHALL BE BLOCKED DURING GRADING OPERATIONS. THE BLOCKING SHALL NOT BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED AND PERMISSION HAS BEEN GIVEN BY THE SEDIMENT CONTROL INSPECTOR.



DEWATERING DEVICE DETAIL

No Scale

NOTE: Perforations to be spaced 6" horizontal and 6" vertical located in concave. Perforations must not be made any lower than 6" above the 8" dewatering device.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/13/99

APPROVED: Department of Public Works for Storm Systems and Roads

CHIEF, BUREAU OF HIGHWAYS — DATE 7/8/99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE 6/30/99

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/30/99

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 6/23/99

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 3/12/99

6/23/99

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED	GRADING and SOIL EROSION & SEDIMENT CONTROL PLAN	SCALE
E.D.S	**MONTGOMERY TOWNSHIP II** LOTS 1 THRU 8	1" = 30'
DRAWN K.B.W.	Tax Map # 37 BLOCK 1 P/O PARCEL NO 2 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SHEET 2 of 4
CHECKED B.D.B.	Previous Submittals: S94-04, WP94-10, SP94-94, F95-136, SP99-02	JOB NO. 98-015
DATE 5/99	OWNER / DEVELOPER WINTHORPE DEVELOPERS P O BOX 283 HIGHLAND, MARYLAND 20777-0283	FILE NO. F 99-141

HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction, (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
3. Following initial soil disturbance or redisturbance, 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 7, 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 (Section G) for permanent seeding, sod, temporary seeding, and mulching. 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	0.89	Acres
Area Disturbed	1.12	Acres
Area to be roofed or paved	—	Acres
Area to be vegetatively stabilized	1.12	Acres
Total Cut	1350	Cu. Yds.
Total Fill	1350	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 can be back filled and stabilized within one working day, whichever is shorter.

HOWARD SOIL CONSERVATION DISTRICT
PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived 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 acres dolomitic limestone (92 lbs/1000sq. 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/1000sq. ft.)

2) ACCEPTABLE — Apply 2 tons per acres dolomitic limestone (92 lbs/1000sq. 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 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru 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 sod. Option (3) – Seed with 60 lbs.per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING — Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. 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.

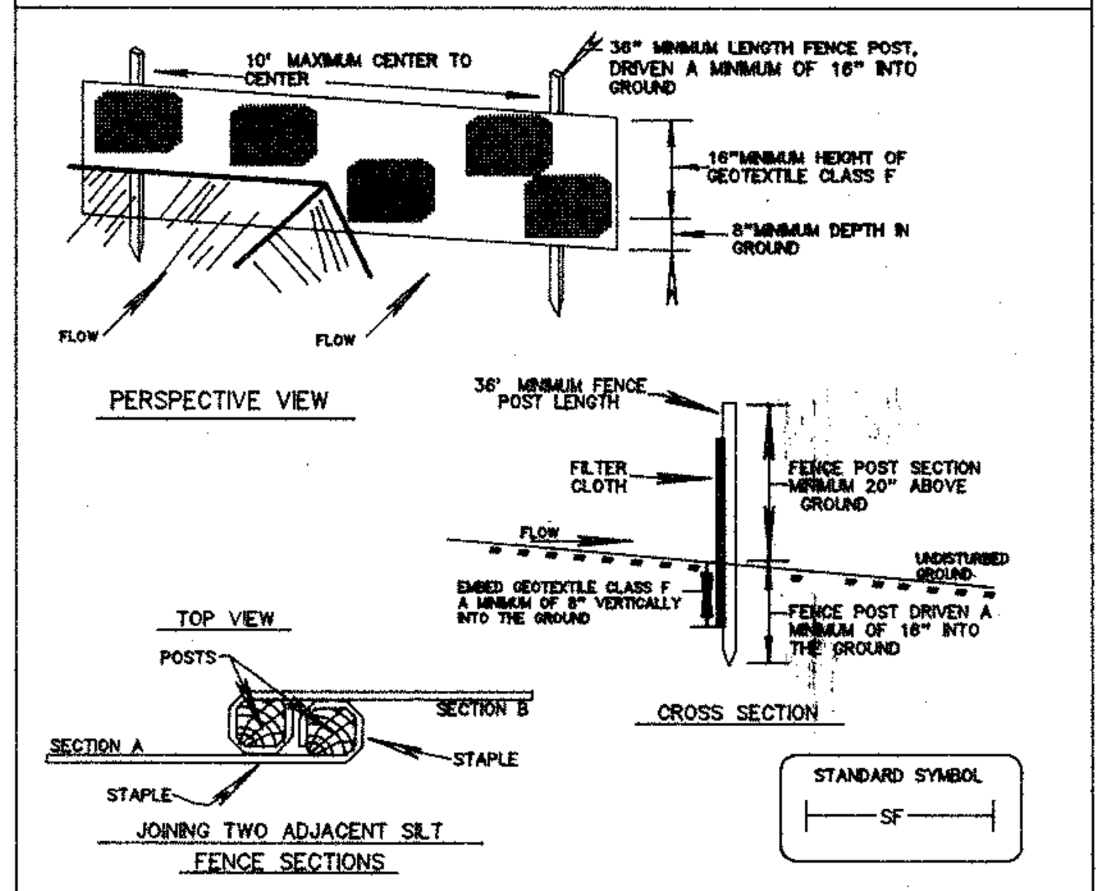
SOIL AMENDMENTS: — Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).

SEEDING — For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 thru February 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 sod.

MULCHING — Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DETAIL 22 – SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements

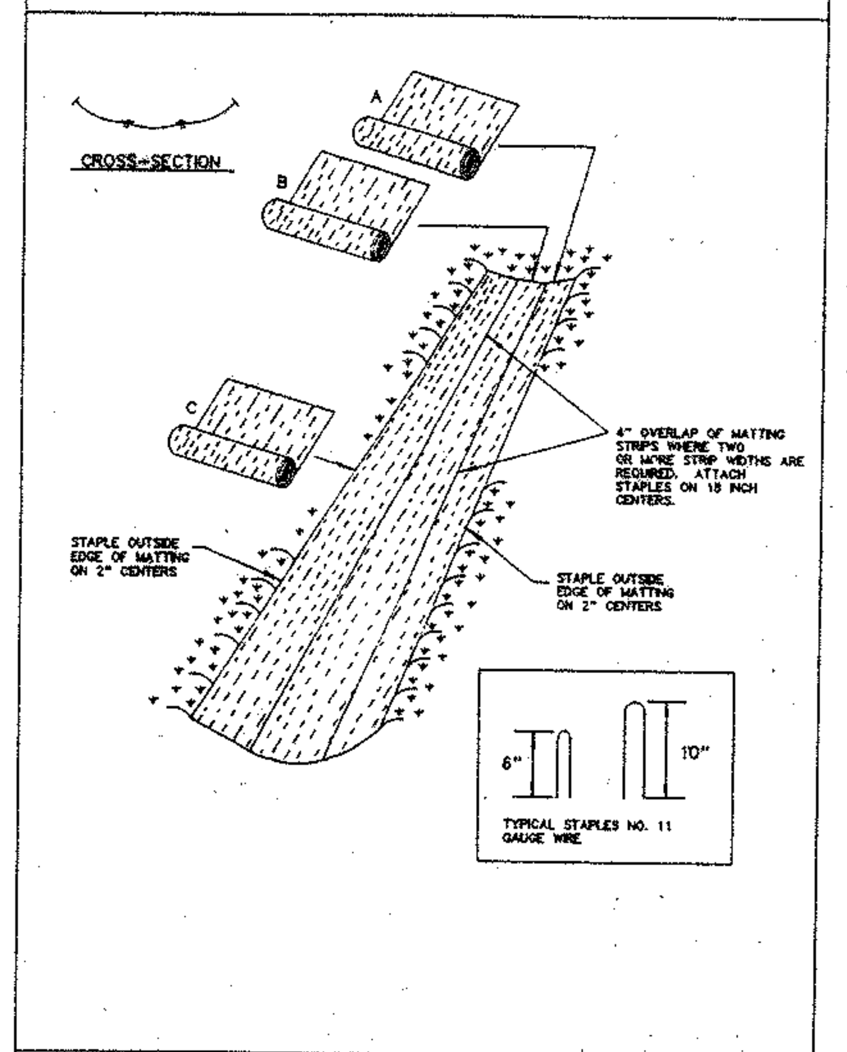
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 15 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 – EROSION CONTROL MATTING



U.S DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip. 2 outer rows, and 2 alternating rows down the center.

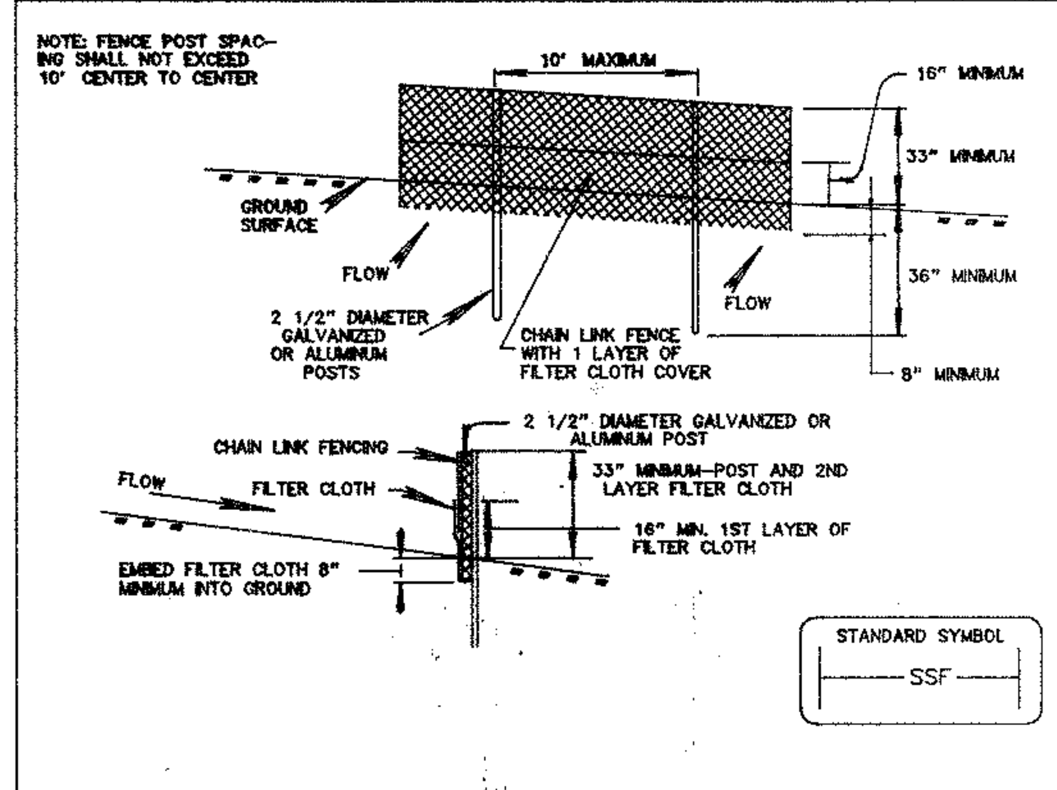
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced with 2 double rows of staples.

6. The discharge end of the matting liner should be similarly secured with a double row of staples.

NOTE: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

U.S DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 – SUPER SILT FENCE



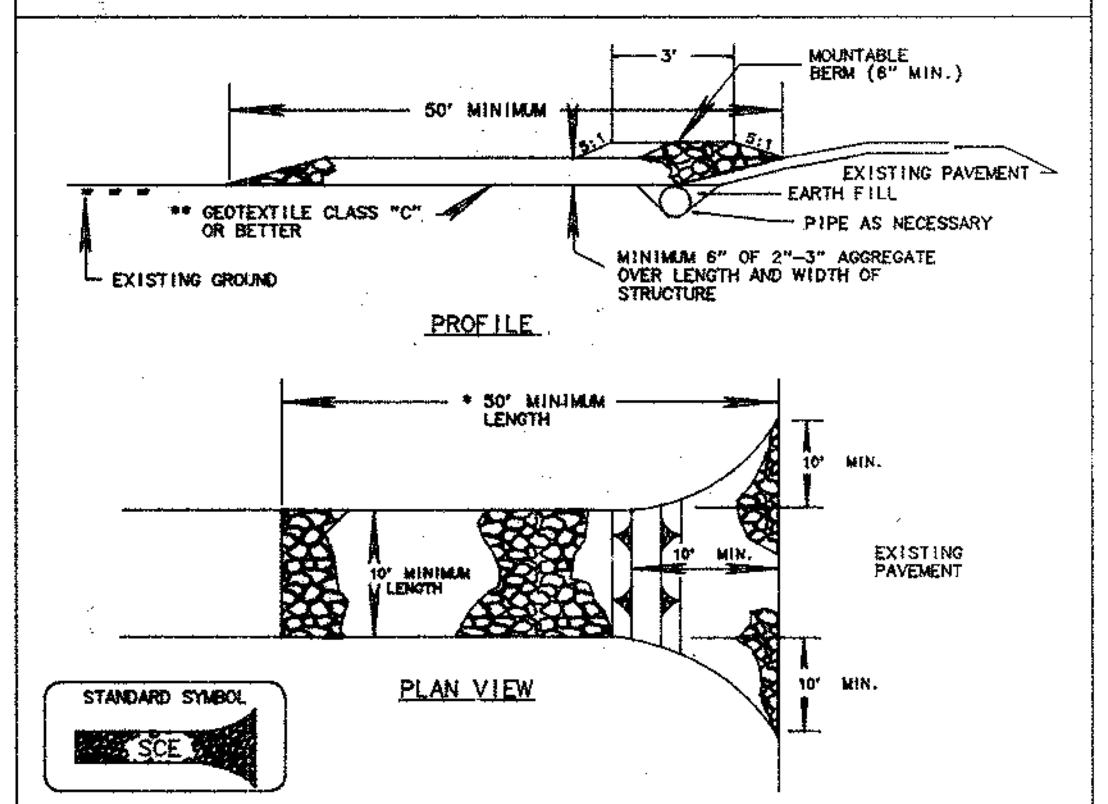
Construction Specifications

Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot 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 or staples.
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 8" 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H – 26 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

3. 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.

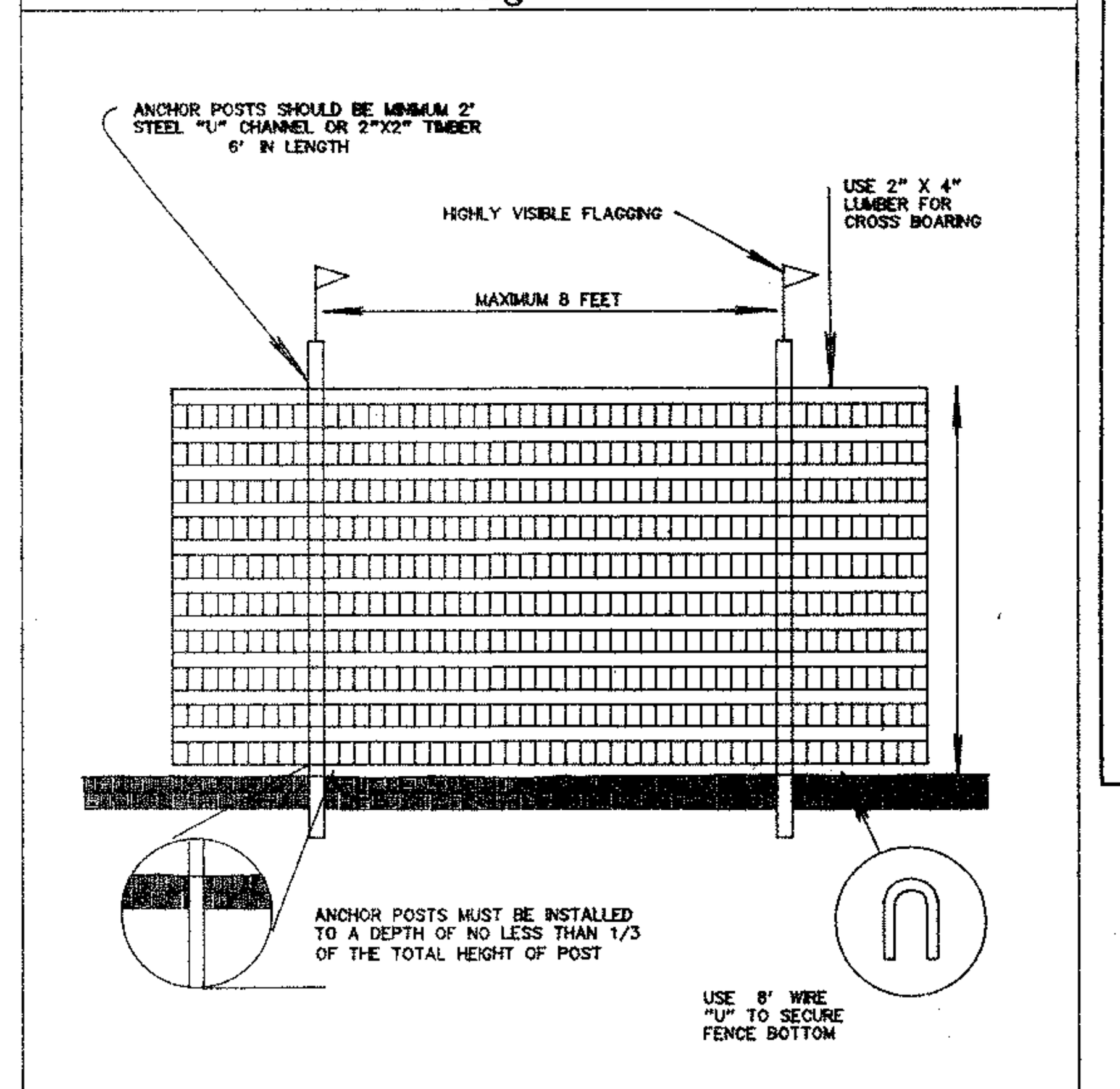
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. 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 amonut of runoff to be conveyed. A 6" minimum will be required.

6. 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.

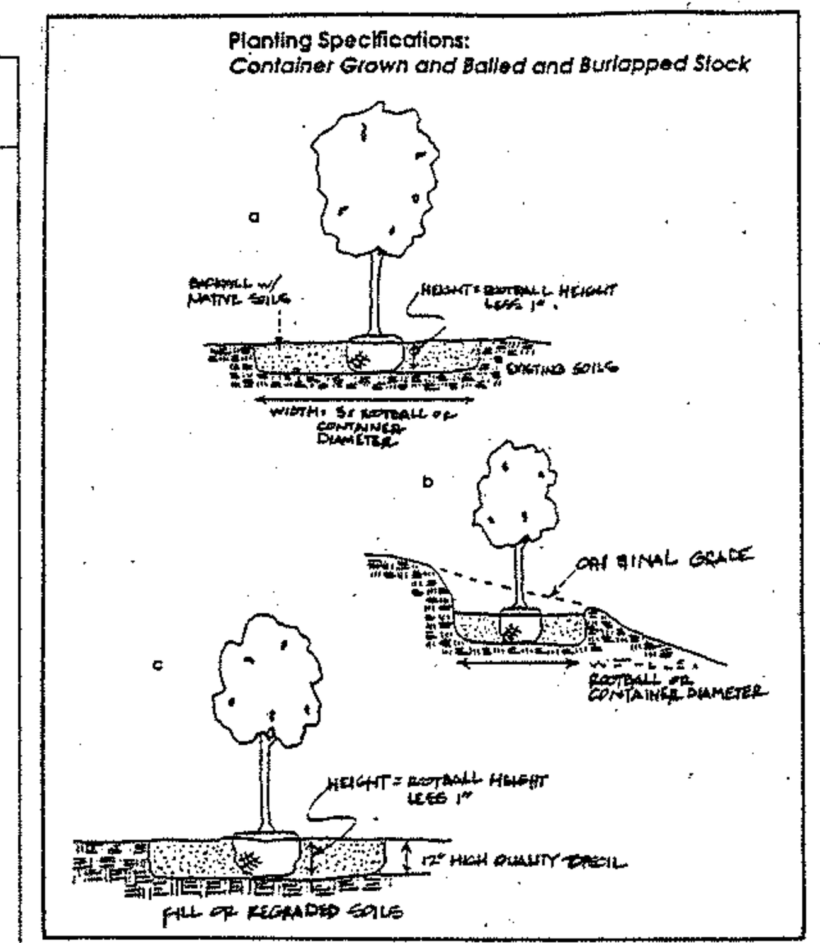
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

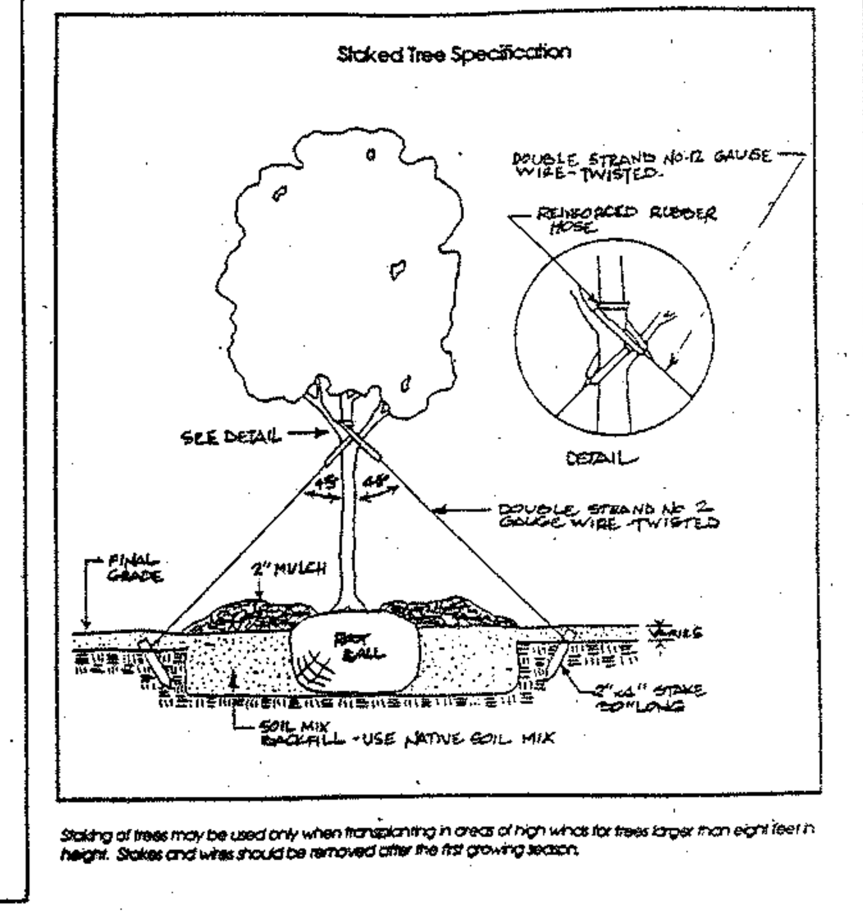
Tree Protection Fence / Blaze Orange Plastic Mesh



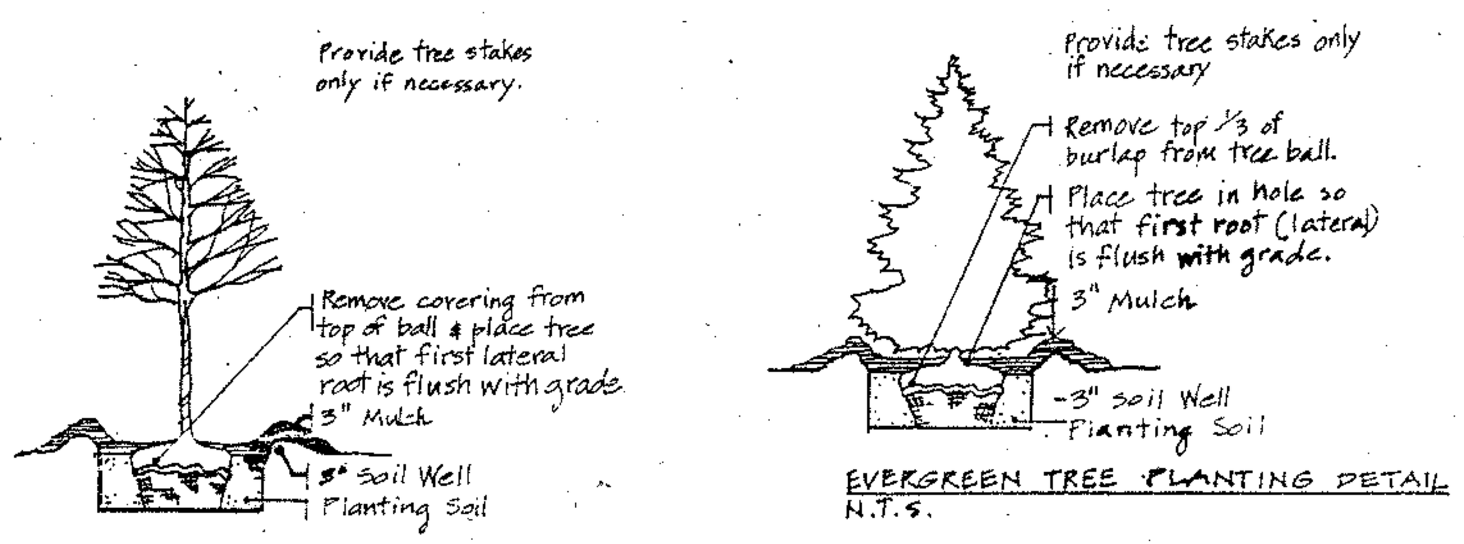
NOTES
1. Forest protection device only.
2. Retention Area will be set as part ofthe review process.
3. Boundaries of Retention Area should be staked and flagged prior to installing device
4. Root damage should be avoided.
5. Protective signage may also be used.
6. Device should be maintained throughout construction.

WOODLAND CONSERVATION MANUAL	EXHIBIT K – 8	PRINCE GEORGES COUNTY, MD





TREE PLANTING DETAILS



DECIDUOUS TREE PLANTING DETAIL
N.T.S.

EVERGREEN TREE PLANTING DETAIL
N.T.S.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

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 Experimental 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 11/2" in diameter.
ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, 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 20.0 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 phyto-toxic 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.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 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 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.
iv. 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,

ii. 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.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

"AS-BUILT" SURVEY

STATE OF MARYLAND · BRUCE DAVID BURTON · No 19184 · REGISTERED · PROFESSIONAL ENGINEER — 5/18/00

NOTE: The "As-Built" Survey certification is limited to the expansion of the existing Stormwater Management located on Open Space Lot 8 (F99-141) and Open Space Lot 52 (F95-136). The "As-Built" Survey of the Stormwater Management structure, etc. (F95-136) was certified by the Tech Group, dated 10/28/97.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/15/99

APPROVED: Department of Public Works for Storm Systems and Roads

CHIEF, BUREAU OF HIGHWAYS — DATE 7/8/99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE 6/30/99

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/30/99

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 6/23/99

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 3/12/99

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED E.D.S	Soil Erosion and Sediment Control Details and Landscape Plan Details	SCALE AS SHOWN
DRAWN K.B.W.	MONTGOMERY TOWNSHIP II LOTS 1 THRU 8	SHEET 3 of 4
CHECKED B.D.B.	Tax Map # 37 BLOCK 1 P/O PARCEL NO 2 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND Previous Submittals: S94-04, WP94-10, SP94-94, F95-136, SP99-02	JOB NO. 98-015
DATE 5/99	OWNER / DEVELOPER WINTHORPE DEVELOPERS P O BOX 223 HIGHLAND, MARYLAND 20777-0223	FILE NO. F99-141

F99-141

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
Number of Dwelling Units	7
Number of Trees Required (1DU SFA; 1:3 DU APTS)	7
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	6 Shade Credit 1 Ex. Maple (Lot 7)

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
Linear Feet of Perimeter	215 L.F.
Number of Trees Required Shade Trees (1:50) Evergreen Trees (1:40)	4 Shade 5 Evergreen
Credit for Existing Vegetation (Yes, No, and %)	No
Credit for Other Landscaping (Yes, No, and %)	No
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution)	3 Shade 15 Evergreen (*2)

SUBSTITUTION #2 - 2 Evergreens for 1 Shade

SCHEDULE A PERIMETER LANDSCAPE EDGE		
Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	C	C
Linear Feet of Roadway Frontage / Perimeter	130 LF	220 LF
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	Yes, Berm	Yes, Fence * 170 LF
Number of Plants Required Shade Trees (1:40) Evergreen Trees (1:20) Shrubs	3 Shade 7 Evergreen	6 Shade 11 Evergreen
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	3 Shade 70 (#1)	4 Shade * 11 Evergreen

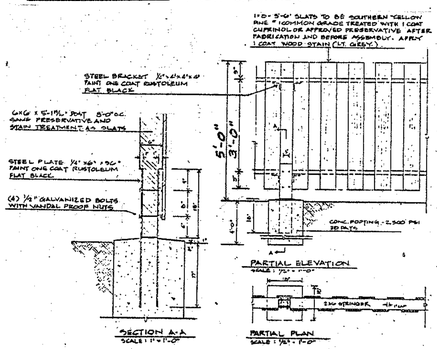
SUBSTITUTION #1 - 70 Shrubs + 10 * 7 Evergreens

* Relocate 150 L.F. of solid wood fence from 154.85' property line installed by F 95-136 at SWM Facility; add 20 L.F of proposed solid wood fence to match existing.

VILLAGE OF MONTGOMERY RUN
Plat # 8042
Zoned: RSA-8

LEGEND

- EX. GROUND (10 FT. INTERVAL)
- EX. GROUND (2 FT. INTERVAL)
- EX. SEWER
- EX. WATER
- EX. TREE LINE
- EX. TREES TO BE RETAINED
- PROPERTY LINE
- NON-TIDAL WETLANDS
- PROPOSED GRADE
- EX. SPLIT RAIL FENCE
- PROP. SPLIT RAIL FENCE
- 5 FT. TALL SOLID WOOD FENCE
- EX. SIDEWALK
- PROP. SIDEWALK



SOLID FENCE DETAILS
MONTGOMERY TOWNSHIP
Lots 1 thru 52
Plat # 12048

GENERAL NOTES

1. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.
2. The Developer is responsible for the planting of all plant material required to meet the standards established by the Howard County Landscape Manual.
3. Financial Surety for the required landscaping will be posted as part of the Grading Permit, in the amount of $10,250.00

NOTE: THIS SUBDIVISION IS EXEMPT FROM THE REQUIREMENTS OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM. THE GROSS ACREAGE OF THE PROJECT IS LESS THAN 40,000 SQUARE FEET AND IS DEVELOPED TO ITS MAXIMUM DENSITY.

PLANTING / STREET TREE NOTES

1. Notify "Miss Utility" 72 hours prior to installation of all plant material.
2. Plant installation must conform to the minimum standards cited in the latest edition of Landscape Specification Guidelines, published by the Landscape Contractors Association.
3. Plants to be located in the field by the owner or owner's representative. Notify owner 72 hours in advance of planting.
4. A Certification of Landscape Installation is required as per the Howard County Landscape Ordinance.
5. The number, size, location of plants shall not be changed without the approval of the Landscape Architect. Substitutions must be included in the recommended plant list in the Howard County Landscape Ordinance. Street tree locations may be adjusted for final location of driveways. The drive aprons may not allow the typical 1 per 40 foot requirement.
6. Trees to be located a minimum of 10 feet from driveways.
7. Street tree planting must conform to the Subdivision and Land Development Regulations and the Department of Public Works Design Manual of Howard County.
8. Balled and burlapped plant material shall not be accepted if ball is cracked or broken before or during planting. Protect all plants from drying by either sun or wind.
9. Tree pits shall be backfilled with 50% topsoil, 25% peat, 25% sand with one pound of 10-10-10 fertilizer per pit.
10. Top soil shall be sandy loam soil free from noxious weeds or grasses, roots, stumps, stones, sticks, etc. Peat moss shall be commercial with pH 4.5 to 5.5, free of woody material or harmful minerals.
11. All plants shall be watered at planting with weekly watering thereafter for the first 90 days. Watering shall continue bi-monthly or as necessary to maintain plants in a healthy condition during the guarantee period.
12. Maintain the site in an orderly manner. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
13. Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the Howard County Landscape Ordinance.
14. Maintenance shall begin immediately after planting and continue to the end of guarantee period.
15. Maintenance consist of pruning, watering, weeding, re-mulching, resetting plants to proper grades as needed and repairing guys and stakes as needed.
16. a. A Biological root inhibitor barrier or containment shall be installed for trees planted closer than 3' feet to sidewalk.
    b. Trees shall be placed 30 feet (min) from all signs and intersections when planting occurs between sidewalk & curb
    c. Street trees may not be planted within 5 feet of drain inlets, 5 feet of an open space access strip and 10 feet of a driveway.
    d. There shall be a minimum of 20 feet between street lights and street trees.

"AS-BUILT" SURVEY

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NOTE: REFER TO SHEET 3 OF 4 FOR LANDSCAPE PLAN DETAILS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/13/99

APPROVED: Department of Public Works for Storm Systems and Roads

CHIEF, BUREAU OF HIGHWAYS — DATE 7/9/99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE 6/30/99

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/30/99

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 6/23/99

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SIGNATURE OF DEVELOPER — DATE 6/28/99

PLANT LIST

No.	Key	Qty.	Plant Names	Size	Cond.	Remarks
1		50	Miscanthus sinensis 'Gracillimus Nana' Dwarf Maiden Grass	2'-3 1/2" Ht.	--	4'-5' o/c
2		20	Euonymus alatus 'Compacta' Dwarf Winged Euonymus	1 Gal. Container	--	12"-18" o/c

TREE LIST

1		7	Acer rubrum 'October Glory' October Glory Red Maple	2 1/2"-3" cal.	B & B	40' o/c or as shown
2		11	Cupressocyparis leylandi Leyland Cypress	5' - 6' ht.	B & B	12'-15' o/c
3		15	Pinus strobus Eastern White Pine	5' - 6' ht.	B & B	10'-12' o/c
4		3	Platanus x acerifolia 'Bloodgood' Bloodgood London Plane	2 1/2"-3" cal.	B & B	40' o/c or as shown
5		6	Acer Saccharum 'Green Mountain' Green Mountain Sugar Maple	5' - 6' ht.	B & B	As Shown

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED E.D.S	Landscape Planting Plan and Notes
DRAWN K.B.W.	MONTGOMERY TOWNSHIP II LOTS 1 THRU 8
CHECKED B.D.B.	Tax Map # 37 BLOCK 1 P/O PARCEL NO 2 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE 5/99	Previous Submittals: SDP-94, WP94-10, SDP-94, F95-136, SP99-02 OWNER / DEVELOPER WINTHORPE DEVELOPERS P O BOX 153 HIGHLAND, MARYLAND 20777-0153
SCALE	1" = 30'
SHEET	4 of 4
JOB NO.	98-015
FILE NO.	F 99-141

F99-141