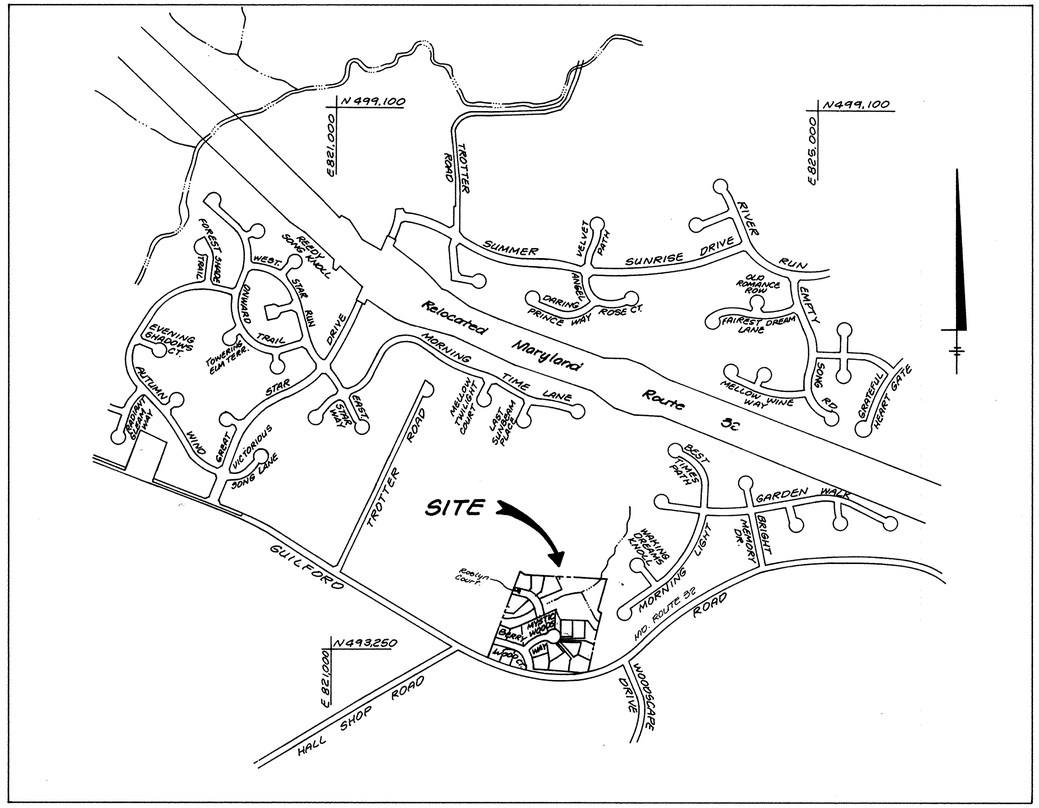
INDEX OF SHEETS

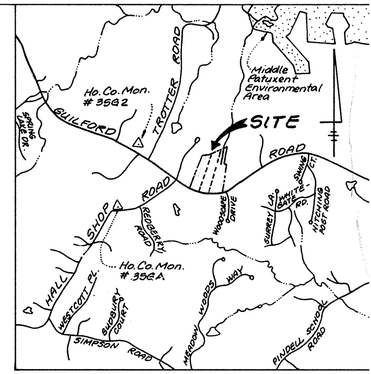


LOCATION MAP
Scale: 1" = 600'

Benchmarks:

Howard County Monument # 35G2
Type: Stamped Conc. Mon.
N W. corner of intersection of Guilford Rd & Trotter Rd.
Elev. 477.63

Howard County Monument # 35GA
Type: Stamped Conc. Mon.
1' N/side of Hall Shop Rd past Fort Berry Road.



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. plus MSHA Standards and 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: Clarksville, Tax Map: 35, P/O Parcels 353
   Zoning: R-20
   Lots 10 - 32
   Election District: 5th
   Total Tract Area: 14.1715 Ac. plus/minus
   Previous Submittals: F77-112, BA 80-08, BA 83-11E
   S95-12, P96-03, SP 94-164, WP 96-96
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 a field run survey, compiled by LDE, Inc. (December, 1995).
9. Horizontal and vertical datum's are related to the Maryland State Grid Coordinate System as projected from Howard County monument stations No. 35G2 and No. 35GA (NAD 83).
10. All hydraulic data is for the 10-year storm unless otherwise noted.
11. See sheet 10 for construction sequence.
12. 95% compaction in all fill areas shall be determined by AASHTO T-180.
13. Stormwater management is provided by:
    Quantity Management is by DETENTION & RETENTION
    Quality Management is by EXTENDED DETENTION & RETENTION
14. Street Light placement and the type of fixture and pole selected shall be in accordance with the Howard County Design Manual, Volume III (1993) and as modified by "Guidelines for street lights in Residential Developments (June 1993).
15. Wetlands delineation by Dennis J. LaBare, M.S., & Associates, Dated April, 1995.
16. Floodplain analyzed by LDE, Inc. approved as part of P96-03.
17. Geotechnical Reports compiled by Hillis Carnes Engineering Associates, Inc. dated June 27, 1995.
18. Noise Study compiled by LDE, Inc. and approved under P96-03.
19. All street lights shall be located 2 ft minimum to 4 ft. maximum behind the curb. No trees shall be located within 30' of any street light.
20. Lots 17, 18 and 19 will require private individual stormwater management systems (dry wells) to meet qualitative management requirements. See sht 5 for design computations and details.
21. The Recreation Open Space, Landscape Edges, the Noise Mitigation Berm and Sight Distance Easement will be maintained by the Homeowners Association.
22. This plan subject to WP 96-96, the Planning Director approved a waiver to Section 16.156 (a) which requires approval of a site development plan for mass grading subject to conditions.
23. The existing dwellings/structures located on Lots 11, 23-27 shall be removed. The Developer must submit verification from the Department of Inspections, Licenses and Permits that the structures have been razed prior to the Director's signature approval of the Final Plat.

ROAD & STORM DRAIN CONSTRUCTION PLANS

SCOTT ACRES

A RESUBDIVISION OF LOTS 5,6, and 7

LOTS 10 - 32

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

1829

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resources Conservation Service — Date 8/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard County Soil Conservation District.

Howard Soil Conservation District — Date 8/16/96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

STATE OF MARYLAND BRUCE DAVID BURTON 19180 REGISTERED PROFESSIONAL ENGINEER

Bruce D. Burton — Signature of Engineer — Date 8/5/96

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — Date 8/5/96

STATE OF MARYLAND BRUCE DAVID BURTON 19180 REGISTERED PROFESSIONAL ENGINEER

Bruce D. Burton 8/5/96

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

DESIGNED S.D.H.	COVER SHEET	SCALE AS SHOWN
DRAWN L.D.E.	SCOTT ACRES A Resubdivision of Lots 5, 6 and 7 Lots 10-32	DRAWING 1 of 12
CHECKED B.D.B.	Tax Map 35 P/O Parcel 353 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND Previous Submittals: F77-112, BA80-08, BA83-11E, S95-12, P96-03 WP 96-96	JOB NO. 94-161
DATE Jan. 1996	Owner/Developer Lot 1 Improvement Corporation 8835 P Columbia 100 Parkway. Columbia, MD 21045	FILE NO. F96-105

F96-105

Curb Legend:

- MSHA Type "A" Std. 8" Comb. Curb & Gutter
- Howard County Std. Comb. Curb & Gutter

Street Light Location Table

Symbol	Street Name	℄ Station	Offset	Type
☼	Guilford Road	53+45	49' left	250 Watt High Pressure Sodium Vapor Fixture (Gray) with cutoff optics mounted at 30' on a galvanized steel pole and aluminum break-away transformer base using 15' arm.

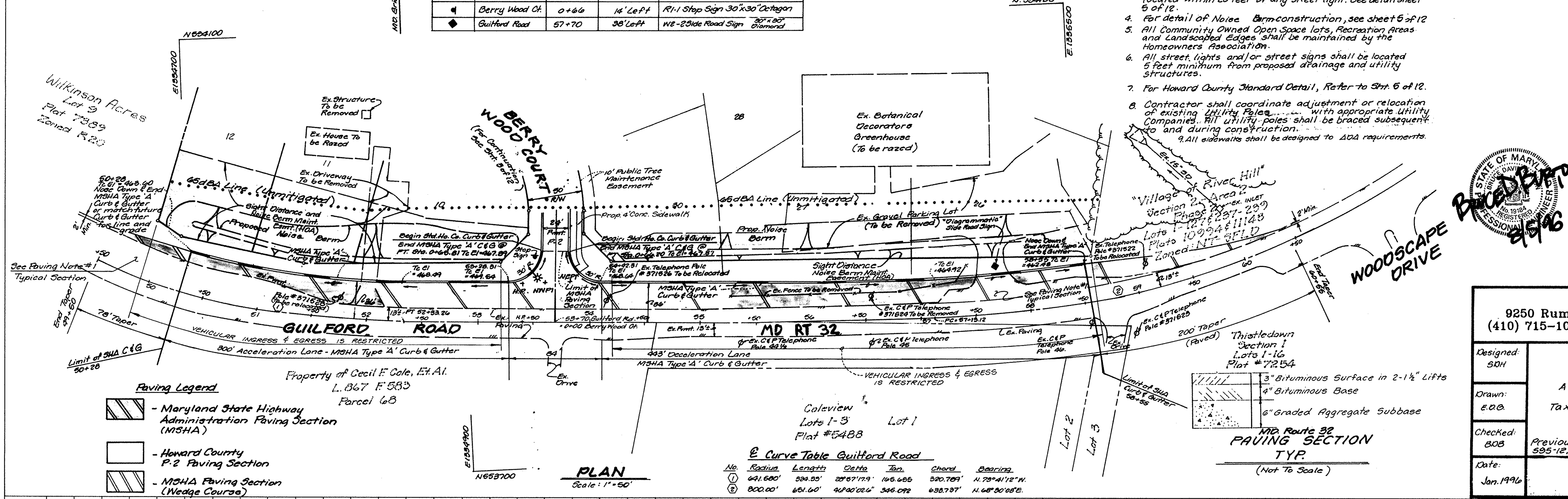
Street Sign Location Table

Symbol	Street Name	℄ Station	Offset	Type
◀	Berry Wood Ct.	0+66	14' Left	R1-1 Stop Sign 30"x30" Octagon
◆	Guilford Road	57+70	38' Left	W2-2 Side Road Sign 30"x30" Diamond

NOTES:

1. For Street tree locations, see sheet 12 of 12
2. For storm drain profiles and structure schedule, see sheet 6 of 12. See structure schedule for storm drain locations.
3. All street lights shall be located 2 feet minimum to 4 feet maximum behind the curb. No trees shall be located within 20 feet of any street light. See detail sheet 5 of 12.
4. For detail of Noise Berm construction, see sheet 5 of 12
5. All Community Owned Open Space lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
6. All street lights and/or street signs shall be located 5 feet minimum from proposed drainage and utility structures.
7. For Howard County Standard Detail, Refer to Sht. 5 of 12.
8. Contractor shall coordinate adjustment or relocation of existing Utility Poles with appropriate Utility Companies. All utility poles shall be braced subsequent to and during construction.
9. All sidewalks shall be designed to ADA requirements.

TYPE 'A' COMBINATION CURB & GUTTER
Guilford Road
SHA STANDARD NO. MD-620.02



MD. Route 32 PAVING SECTION TYP. (Not To Scale)

- 3" Bituminous Surface in 2-1½" Lifts
- 4" Bituminous Base
- 6" Graded Aggregate Subbase

℄ Curve Table Guilford Road

No.	Radius	Length	Delta	Tan.	Chord	Bearing
1	641.580'	324.33'	28°57'17.9"	165.685	320.789'	N.73°41'12"W.
2	800.00'	651.60'	46°40'02.6"	345.092	633.737'	N.68°30'08"E.

Approved: Howard County Department of Planning and Zoning

Chief, Division of Land Development and Research — Date 8/28/96

Chief, Development Engineering Division — Date 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Chief, Bureau of Highways — Date 8-27-96

State of Maryland — Bruce David Burton — Registered Professional Engineer No. 19184 — 8/5/96

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

Designed: SDH	MD ROUTE 32 Guilford Road Improvements **SCOTT ACRES** A Resubdivision of Lots 5, 6 and 7 Lots 10-32 Tax Map No. 35 P/O Parcel 353 5th Election District Howard County, Maryland	Scale: 1" = 50'
Drawn: E.O.B.		Sheet 2 of 12
Checked: BDB	Previous Submittals: F77-112, BA80-08, BA83-11E, S95-12, P96-03; WP96-96	LDE Job No. 94-161
Date: Jan. 1996	OWNER/DEVELOPER LOT 1 IMPROVEMENT CORP. 8835 P Columbia 100 Pkwy. Columbia, MD. 21045	File No. F96-105

Paving Note: Contractor shall provide Wedge Course Paving overlay if required from ℄ 49+50± to 51+76± and ℄ 57+10± to 59+00±. If existing paving does not conform to the full depth paving section, Contractor shall provide removal and/or replacement to conform to full depth paving section.

Note: Grades given @ ℄ Road are approximate based on surveyed data along the ℄ on Guilford Road. (MD RT 32)
This profile grade is to be used as the design PGL for top of curb calculations.

Scale: 1" = 50' (Hor.) 1" = 5' (Vert.)

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
NATIONAL PRINTFAST
PRINTED IN U.S.A.

1829

F96-105

Street Sign Location Table

Symbol	Street Name	℄ Station	Offset	Type
◀	Berry Wood Ct	0+46	14' Left	R1-1 Stop Sign 30"x30" Octagon
◀	Mystic Woods Way	0+24	14' Left	"
◀	Roslyn Ct.	0+27	15' Left	"
◆	Guilford Road	57+70	38' Left	W2-2 Side Road Sign Diagramatic 30"x30" Diamond
▲	Berry Wood Ct.	1+46	14' Left	W3-1a Stop Sign Ahead 30"x30" Diamond
■	Berry Wood Ct.	1+58	14' Right	R2-1 Speed Limit 24" x 30" Rectangle

Street Light Location Table

Symbol	Street Name	℄ Station	Offset	Type
☼	Guilford Road	53+40	49' left	250 Watt Sims Vapor Fixture (Granville cutoff) is mounted on 30' sm.a.30' Vanished steel pole Aluminum to be exact transfer has been using a 15" d
✱	~~Mystic Woods Way~~	~~0+28~~	~~24' left~~	~~100 Watt Traditionaire HPS Vapor Post Top Fixture~~
✱	Roslyn Court	0+18	14' right	On 14-ft. Black Fiberglass Pole.
✱	Berry Wood Court	2+38	18' right	100 Watt "Traditionaire" See above
✱	Roslyn Court	3+00	18' right	100 Watt Traditionaire" See above

℄ Curve Data Table

Street Name	Radius	Delta	Length	Tan.	Chord	Bearing
Berry Wood Court 1+08.23 to 2+59.98	125.00'	73°13'21"	159.75'	92.87'	149.10'	N34°27'52"E
Mystic Woods Court 0+52.45 to 2+34.98	200.00'	52°16'26"	182.47'	98.14'	176.21'	N63°35'56"E

Curb Legend:

- MSHA Curb & Gutter Type 'A'
- Std. 7" Comb. Curb & Gutter
- Bituminous Curb

NOTES:

1. For Street tree locations, see sheet 12 of 12
2. For Storm drain profiles and structure schedule, see Sheet 6 of 12. See Structure Schedule for Storm drain locations.
3. All street lights shall be located 2 feet minimum to 4 feet maximum behind the curb. No trees shall be located within 20 feet of any street light. See detail sheet 6 of 12.
4. For detail of Noise Berm construction, see sheet 6 of 12
5. All Community Owned Open Space lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
6. All street, lights and/or street signs shall be located 5 feet minimum from proposed drainage and utility structures.
7. For Howard County Standard Detail, Refer to Sht. 6 of 12.
8. Contractor shall coordinate adjustment or relocation of existing Utility Poles with appropriate Utility Companies. All utility poles shall be braced subsequent to and during construction
9. All sidewalks shall be designed to ADA Requirements.
10. See Sht. 2 of 12 for construction details of Maryland Route 32 widening.

Paving Legend

- Maryland State Highway Administration Paving Section (MSHA)
- Howard County P-2 Paving Section

Approved: Howard County Department of Planning and Zoning

Chief, Division of Land Development and Research — Date 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Chief, Bureau of Highways — Date 8-27-96

STATE OF MARYLAND — DAVID BURTON — No. 19196 — REGISTERED PROFESSIONAL ENGINEER — 8/5/96

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD 21045
(410) 715-1070 • (301) 596-3424 • (410) 715-0681 (fax)

Designed: SDH | Drawn: E.R.B. | Checked: BDB | Date: Jan 1996

Berry Wood Court & Mystic Woods Way
Plan & Profile

SCOTT ACRES

A Resubdivision of Lots 5, 6 and 7
Lots 10-32
Tax Map No. 35 P/O Parcel 353
5th Election District
Howard County, Maryland

Previous Submittals: F 77-112, BA80-08, BA83-116, 595-12, P90-09, WP90-94

OWNER/DEVELOPER
LOT 1 IMPROVEMENT CORP.
8835 P Columbia 100 Pkwy.
Columbia, MD. 21045

Scale: 1" = 50' | Sheet 8 of 12 | LDE Job No. 94-161 | File No. F 96-105

PLAN: SURVEYED, PLOTTED, GRADES CHECKED, R/W OR EASEMENT CHECKED, NOTE BOOK, No., DATE, BY

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, R. & L.'s NOTED, STRUCTURE NOTATIONS CHECKED, NOTE BOOK, No., DATE, BY

11829

F96-105

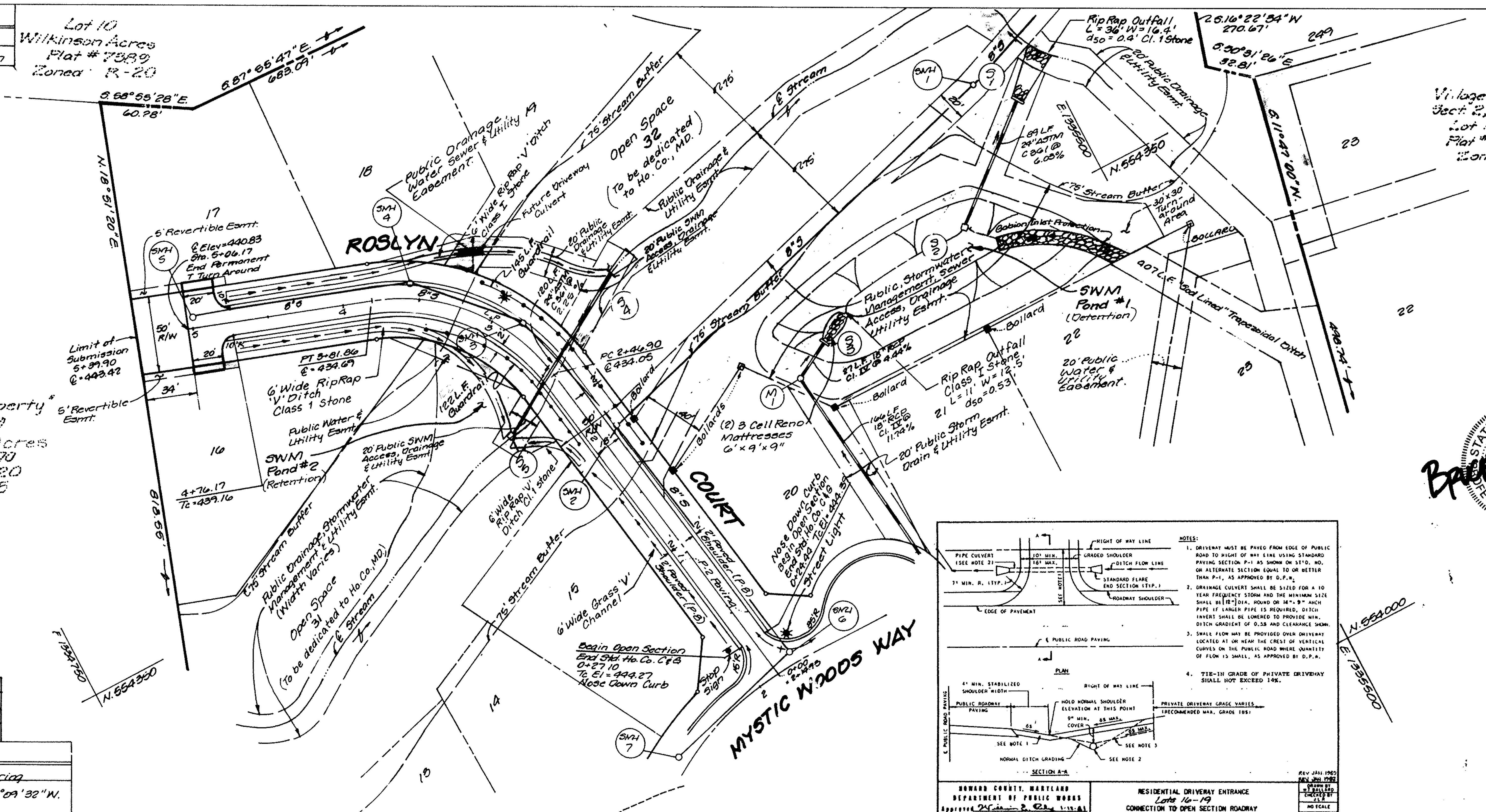
HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
NATIONAL PRINTFAST
PRINTED IN U.S.A.

Street Sign Location Table

Symbol	Street Name	℄ Station	Offset	Type
◀	Roslyn Court	0+27	13' left	R1-1 Stop Sign 30" x 30" Octagon

NOTES:

1. For street tree locations, see sheet 12 of 12.
2. For storm drain profiles and structure schedule, see sheet 6 of 12. See structure schedule for storm drain locations.
3. All street lights shall be located 2 feet minimum to 4 feet maximum behind the curb. No trees shall be located within 20 feet of any street light. See detail sheet 5 of 12.
4. All Community Owned Open Space lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
5. All street lights and/or street signs shall be located 5 feet minimum from proposed drainage and utility structures.
6. For Howard County Standard Details, refer to sheet 5 of 12.
7. Contractor shall construct Type 1 Guard Rail with beam sta. 1+78 ± Rt. to Sta. 3+12 ± Rt. and sta. 2+00 ± Lt. to sta. 2+92 ± Lt.
8. Contractor shall construct grass lined 'V' Channel sta. 0+27.10 Lt. to Sta. 1+85 ± Lt. Contractor shall construct rip rap lined 'V' Channel sta. 1+85 ± Lt. to sta. 2+30 ± Lt., sta. 2+30 ± Lt. to Sta. 4+76.17 Lt. and Sta. 2+65 ± Rt. to Sta. 4+76.17 Rt.
9. For Channel Details see sheet 6 of 12.
10. The future culvert proposed for the driveway of Lot 19 shall be submitted and approved as part of the site development plan approval.



Street Light Location Table

Symbol	Street Name	℄ Station	Offset	Type
✱	Roslyn Court	0+18	14' Rt.	100 Watt "Traditionaire" HPS Vapor Post top Fixture on a 14ft. Block Fiberglass Pole.
✱	Roslyn Court	3+00	18' Rt.	

RIP RAP LINED CHANNEL

Location	Offset to ℄ Ditch
1+85 ±	20' Left
2+15 ±	32' Left
2+30 ±	48' Left @ S-5
2+50 ±	42' Left
2+62 ±	55' Right @ S-4
2+75 ±	38' Left, 43' Right
3+00 ±	32' Left, 30' Right
3+25 ±	26' Left, 24' Right
3+50 ±	20' Left and Right
3+81.86	17' Left and Right
4+76.17	17' Left and Right

GRASS LINED CHANNEL

Location	Offset to ℄ Ditch
0+27.10 to 1+65	17' Left
1+85 ±	20' Left

℄ Curve Data Table

Roslyn Court	Radius	Delta	Length	Tan.	Chord	Bearing
Sta. 2+46.90 to 3+81.80	126'	61°50'01"	134.90'	74.86'	128.45'	N.40°09'32"W.

Approved: Howard County Department of Planning and Zoning

Richard Blood 8/30/96
Chief, Division of Land Development and Research JA — Date

[signature] 8/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. [signature] 8-27-96
Chief, Bureau of Highways — Date

STATE OF MARYLAND — BRUCE DAVID BURTON — No. 19184 — REGISTERED PROFESSIONAL ENGINEER — 8/5/96

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD 21045
(410) 715-1070 • (301) 596-3424 • (410) 715-0681 (fax)

Designed: SDH	ROSLYN COURT Plan & Profile **SCOTT ACRES** A Resubdivision of Lots 5, 6 and 7 Lots 10-32 Tax Map No. 35 P/O Parcel 353 5th Election District Howard County, Maryland	Scale: 1" = 50'
Drawn: E.D.B.		Sheet 4 of 12
Checked: BDB	Previous Submittals: F77-112, BA80-08, BA83-11E, S95-12, P96-03, WP96-96	LDE Job No. 94-161
Date: Jan. 1996	OWNER/DEVELOPER LOT 1 IMPROVEMENT CORP. 8835 P Columbia 100 Pkwy. Columbia, MD 21045	File No. F96-105

PROFILE — NOTE BOOK — No. — SURVEYED — PLOTTED — GRADES CHECKED — B. M.'s NOTED — STRUCTURE NOTATIONS CHECKED — BY — DATE

PLAN — NOTE BOOK — No. — SURVEYED — PLOTTED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — BY — DATE

1829

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS: FULL DEPTH BIT. CONC. ALTERNATE	PAVEMENT MATERIALS: GRANULAR BASE ALTERNATES
P-1	FREEWAYS, MAJOR ARTERIALS, APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS TRAVELWAYS FOR APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1" BIT. CONC. SURFACE 2" BIT. CONC. BASE PRIME 6" STRIPPED NON-FINE SOILS STABILIZED OR 4" CRUSHED STONE STABILIZED WITH ALL BASE COURSE
P-2	RESIDENTIAL ZONES LOCAL COLLECTOR SIDE STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS TRAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCK PER DAY	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2" BIT. CONC. BASE PRIME 6" Graded Aggregate Base Course (GAB)
P-3	RESIDENTIAL ZONES INTERIOR SUBDIVISION COLLECTORS COMMERCIAL-INDUSTRIAL LOCAL AND COLLECTOR STREETS ALLEYS TRAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH MORE THAN 10 BUT NO MORE THAN 75 HEAVY TRUCKS PER DAY	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 6" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE PRIME 6" STRIPPED NON-FINE SOILS STABILIZED OR 4" CRUSHED STONE STABILIZED WITH ALL BASE COURSE
P-4	COMMERCIAL-INDUSTRIAL ZONES MINOR COLLECTOR	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 4" BIT. CONC. BASE PRIME 6" STRIPPED NON-FINE SOILS STABILIZED WITH ALL BASE COURSE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 4" BIT. CONC. BASE PRIME 6" STRIPPED NON-FINE SOILS STABILIZED WITH ALL BASE COURSE
P-8	PAVED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS SIDEWALKS & PARKING AREAS (PRIVATE) (NOTE: THIS SECTION MAY BE USED IN LIEU OF STANDARD CONCRETE SIDEWALK IN OFF SITE, PRIVATELY MAINTAINED AREAS ONLY)	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE	3" BIT. CONC. SURFACE PRIME 6" Graded Aggregate Base Course (GAB)

▲ TRAVELWAYS ARE DEFINED AS THE ROADWAYS LEADING TO THE PARKING BAYS
■ HEAVY TRUCKS ARE DEFINED AS THOSE WITH 6 WHEEL OR MORE INCLUDING GARBAGE TRUCKS

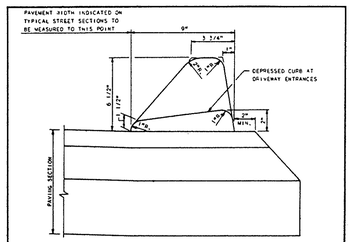
REV JAN 1996

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____ 11-15-81
Chief-Bur. of Engr. Date

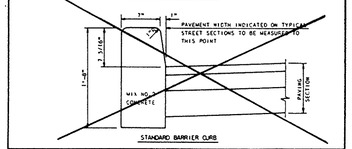
PAVING SECTIONS
P-1 THROUGH P-4 & P-8

DRAWN BY: MT
CHECKED BY: [illegible]
NO SCALE
R-3.02

PAVEMENT WIDTH INDICATED ON TYPICAL STREET SECTIONS TO BE MEASURED TO THIS POINT



STANDARD BITUMINOUS CURB

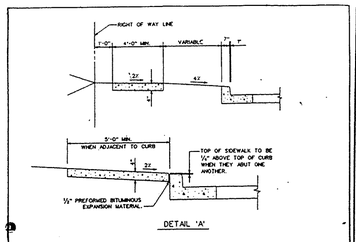


STANDARD BARRIER CURB

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief-Bureau of Engineering

CURBS

DRAWN BY: MT
CHECKED BY: [illegible]
NO SCALE
R-3.03



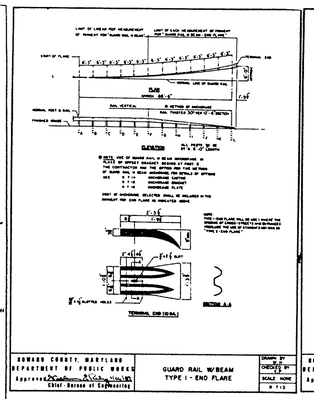
DETAIL 'A'

NOTES:
1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO MORE THAN 15' APART.
3. ½" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT ¼" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NO. 2
5. WHEN SIDEWALK ABUTS CURB, WALK SHALL BE ½" ABOVE CURB WITH ½" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 8" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF NO MORE THAN 15 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.
7. SIDEWALK WIDTH ADJACENT TO CURB SHALL BE 5'-0" MIN.
8. SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 5'x5' PAVED SECTION PLACED 200' APART.

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering Date

CONCRETE SIDEWALK

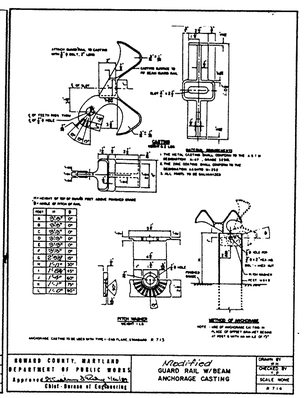
DWN: YP
CK'L: MWH
NO SCALE
R - 3.05



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering

GUARD RAIL W/BEAM
TYPE I - END FLARE

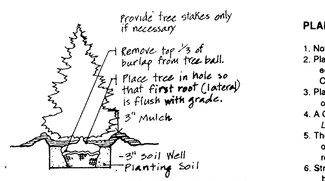
DRAWN BY:
CHECKED BY:
SCALE: NONE
R-7.13



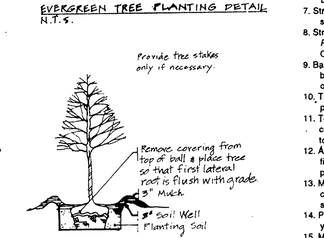
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering

Modified
GUARD RAIL W/BEAM
ANCHORAGE CASTING

DRAWN BY:
CHECKED BY:
SCALE: NONE
R-7.14



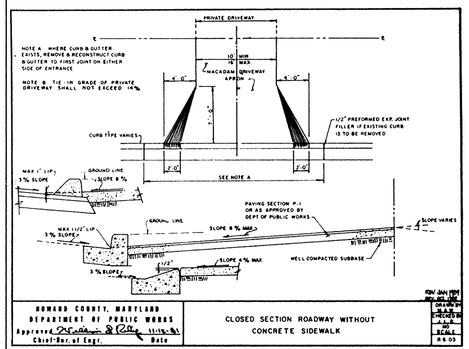
EVERGREEN TREE PLANTING DETAIL
N.T.S.



DECIDUOUS TREE PLANTING DETAIL
N.T.S.

PLANTING NOTES - street trees

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*.
6. Street tree locations may be adjusted for final location of driveways. Trees to be located a minimum of 10 feet from driveways.
7. 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.
8. Street Tree planting must conform to the *Subdivision and Land Development Regulations* and the Department of Public Works Design Manual of Howard County
9. 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.
10. Tree pits shall be backfilled with 50% topsoil, 25% peat, 25% sand with one pound of 10-10-10 fertilizer per pit.
11. Top soil shall be sandy loam soil free from noxious weeds or grasses, roots, clay clumps, stones, sticks, etc. Peat moss shall be commercial with pi 4.5 to 5.5, free of woody material or harmful minerals.
12. All plants shall be watered at planting with weekly watering thereafter for the first 80 days. Watering shall continue bi-monthly or as necessary to maintain plants in a healthy condition during the guarantee period.
13. 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.
14. Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the *Howard County Landscape Ordinance*.
15. Maintenance shall begin immediately after planting and continue to the end of guarantee period.
16. Maintenance consist of pruning, watering, weeding, re-mulching, resetting plants to proper grades as needed and repairing guys and stakes as needed.

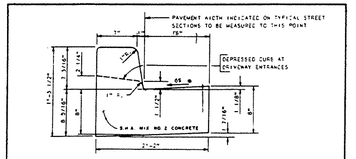


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____ 11-15-81
Chief-Bur. of Engr. Date

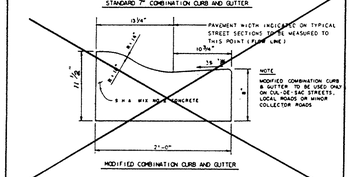
CLOSED SECTION ROADWAY WITHOUT CONCRETE SIDEWALK

REV JAN 1996
DRAWN BY: MT
CHECKED BY: [illegible]
NO SCALE
R-6.03

PAVEMENT WIDTH INDICATED ON TYPICAL STREET SECTIONS TO BE MEASURED TO THIS POINT



STANDARD 7" COMBINATION CURB AND GUTTER



MODIFIED COMBINATION CURB AND GUTTER

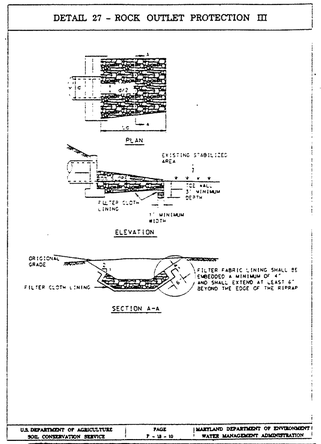
* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. WATER PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

REV JAN 1996
DRAWN BY: MT
CHECKED BY: [illegible]
NO SCALE
R-3.04

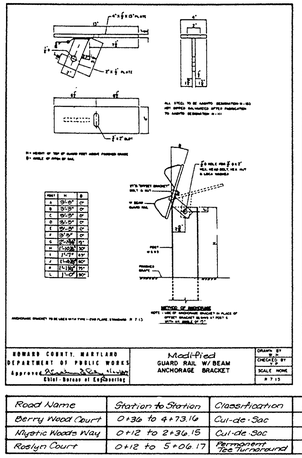
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering

COMBINATION CURB AND GUTTER

DETAIL 27 - ROCK OUTLET PROTECTION III



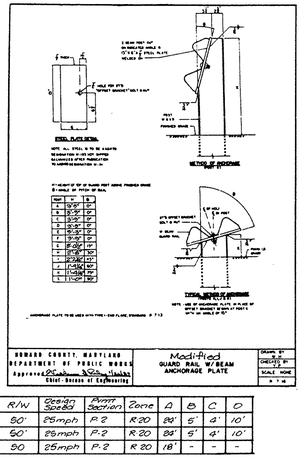
Road Name	Station to Station	Classification	R/W	Design Speed	Pvmt Section	Zone	D	B	C	D
Berry Wood Court	0+36 to 4+73.14	Cul-de-Sac	50'	25mph	P-2	R-20	88'	5'	4'	10'
Mystic Woods Way	0+12 to 2+36.15	Cul-de-Sac	50'	25mph	P-2	R-20	88'	5'	4'	10'
Roslyn Court	0+12 to 5+06.17	Permanent Tee Turnaround	50	25mph	P-2	R-20	18'	-	-	-



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering

Modified
GUARD RAIL W/BEAM
ANCHORAGE BRACKET

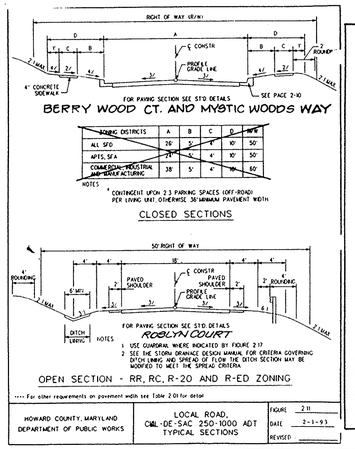
DRAWN BY:
CHECKED BY:
SCALE: NONE
R-7.15



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved _____
Chief - Bureau of Engineering

Modified
GUARD RAIL W/BEAM
ANCHORAGE PLATE

DRAWN BY:
CHECKED BY:
SCALE: NONE
R-7.16



FOR PAVING SECTION SEE STD DETAILS

BERRY WOOD CT. AND MYSTIC WOODS WAY

ZONING DISTRICTS	A	B	C	D	R/W
ALL SFD	26'	5'	4'	10'	50'
APTS, SFA	26'	5'	4'	10'	50'
COMMERCIAL-INDUSTRIAL and OFFICE/RESEARCH	38'	5'	4'	10'	60'

NOTES
* CONTINGENT UPON 2.3 PARKING SPACES (OFF-ROAD) PER LIVING UNIT, OTHERWISE 36' MINIMUM PAVEMENT WIDTH

CLOSED SECTIONS

FOR PAVING SECTION SEE STD DETAILS

ROSLYN COURT

NOTES
1. USE GUARDRAIL WHERE INDICATED BY FIGURE 2-17
2. SEE THE STORM DRAINAGE DESIGN MANUAL FOR CRITERIA GOVERNING DITCH LINING AND SPREAD OF FLOW. THE DITCH SECTION MAY BE MODIFIED TO MEET THE SPREAD CRITERIA

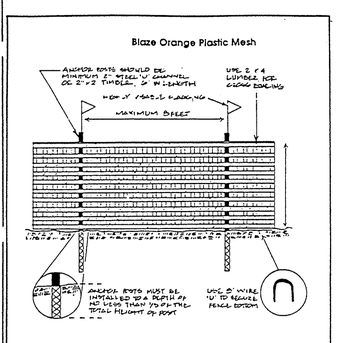
OPEN SECTION - RR, RC, R-20 AND R-ED ZONING

*** For other requirements on pavement width see Table 2.01 for detail

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

LOCAL ROAD, CUL-DE-SAC 250-1000 ADT TYPICAL SECTIONS

FIGURE: 2-11
DATE: 2-1-93
REVISED

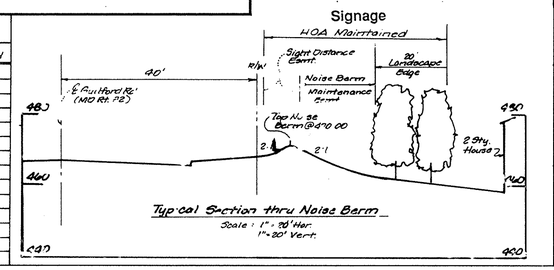


Notes
1. Forest protection device only.
2. Retention Area will be set in field prior to the review process.
3. Boundaries of Retention Area should be staked and flagged prior to initiating device placement.
4. Root damage should be avoided.
5. Protective signage may also be used.
6. Device should be maintained throughout construction.

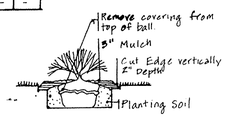
Source: Howard County, Maryland
Maryland Conservation Manual

NOISE BERM CONSTRUCTION TABULATION

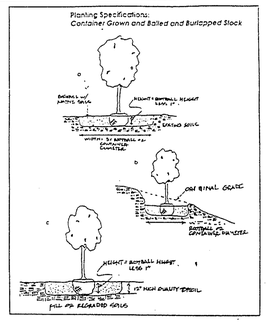
CENTERLINE STA.	OFFSET	TOP ELEV.	TOP WIDTH
49+95	60' Left	462.0 Toe	—
50+20	60' Left	468.0 Top	5'
51+00	58' Left	468.0 Top	5'
52+00	52' Left	468.0 Top	5'
53+00	52' Left	468.0 Top	5'
53+20	52' Left	468.0 Toe	—
54+25	60' Left	470.0 Toe	—
55+00	60' Left	470.0 Top	5'
56+00	62' Left	470.0 Top	5'
57+00	62' Left	470.0 Top	5'
58+00	64' Left	470.0 Top	6'
58+20	64' Left	470.0 Top	8'
58+60	60' Left	462.0 Toe	—

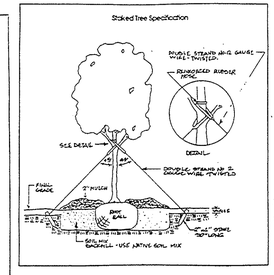


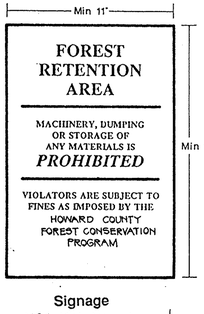
Typical Section thru Noise Berm
Scale: 1"=20' Hor.
1"=20' Vert.



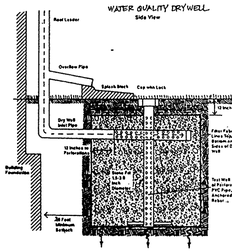
SHRUB PLANTING DETAIL
N.T.S.







WATER QUALITY DRYWELL



TYPICAL DRY WELL DESIGN
LOTS 17, 18 & 19

SINGLE FAMILY DETACHED AVERAGE HOUSE SIZE = 40'x 60' = 2400 FT²
SINGLE FAMILY DETACHED AVERAGE DRIVEWAY SIZE = 20'x 30' = 600 FT²
3000 FT²

3000 FT² x 0.5"/12 = 125 FT³

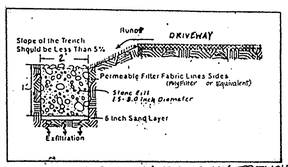
USE A 40% VOID RATIO = 125 FT³/0.40
= 312.5 FT³

USING A 4.0' DEEP DRY WELL: USE 1 DRY WELL = 9.0'x 9.0'x 4'
= 324 FT³

USE 2 DRY WELLS = 6.5'x 6.5'x 4'
= 338 FT³

DRIVEWAY TRENCH DATA

LOT #	DRIVEWAY AREA	x 0.5"(REQ. STORAGE) ÷ 0.40	DIMENSIONS (1'DEEP x L x W) L	W
17	70' x 12'	87.5 FT³	43.75	2'
18	90' x 12'	112.5 FT³	56.25	2'
19	130' x 12'	162.5 FT³	81.25	2'



WATER QUALITY DRIVEWAY TRENCH
NO SCALE

NOTES:
1. See Grading and Sediment and Erosion Control Plan for exact height, location and stabilization of Noise Berm. See sheet 9 of 12.
2. Noise berm, sight distance easmt and Landscape edge to be maintained by HOA.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

J. A. Wakefield Jr. 8/16/96
Natural Resources Conservation Service Date

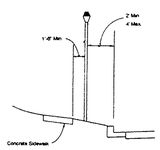
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

John R. Robertson 8/16/96
Howard Soil Conservation District Date

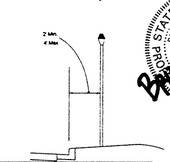
Placement of Street Lights
(May 1993)

* Lateral

1. With Concrete Sidewalk



2. With No Sidewalk



STATE OF MARYLAND
BRUCE D. BARTON
No. 19198
REGISTERED PROFESSIONAL ENGINEER
8/5/96

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Bruce D. Barton — 8/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

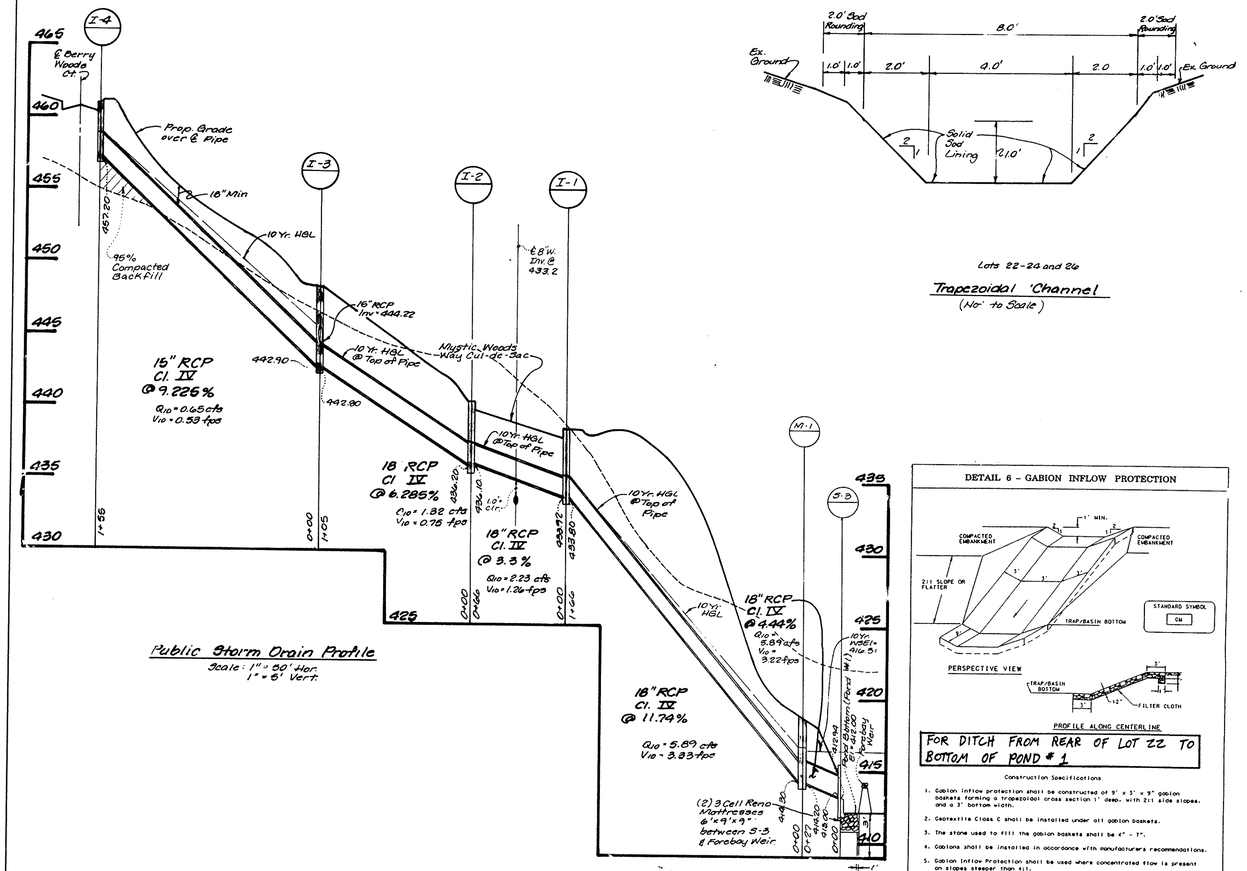
John L. Linn — 4/13/96
Signature of Developer — Date

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

DESIGNED S.D.H.	ROAD DETAILS AND LANDSCAPE DETAILS	SCALE As Shown
DRAWN E.D.B.	SCOTT ACRES	DRAWING 5 of 12
CHECKED B.D.B.	A Resubdivision of Lots 5, 6 and 7 Lots 10-32	JOB NO. 94-167
DATE Jan. 1996	Previous Submittals: F-77-112; SP-90-08; SDP-95-112; 396-12; Tax Map 35 P/O Parcel 353 F-96-03 Plat No. 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	FILE NO. F96-105
	Owner/Developer LOT 1 IMPROVEMENT CORP. 8836 F Columbia 100 Pkwy. Columbia, MD 21045	

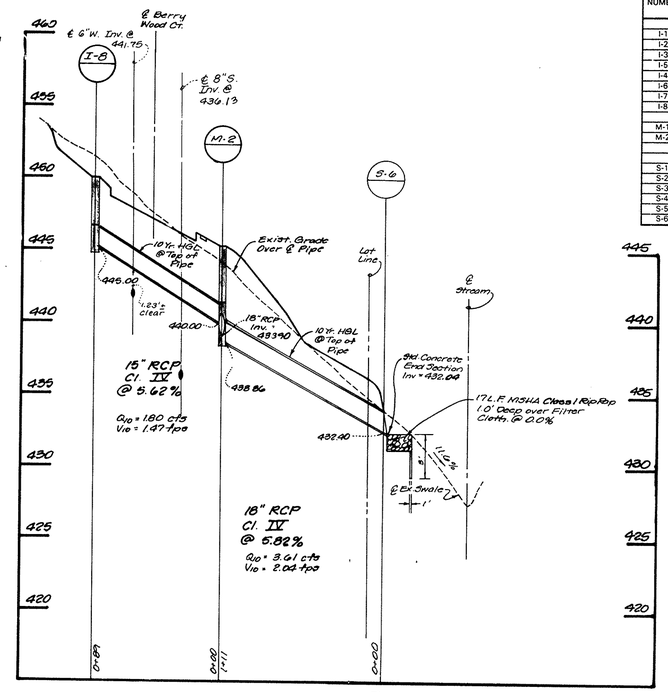
1829

F96-105



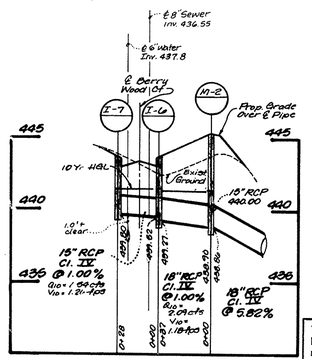
Lots 22-24 and 26

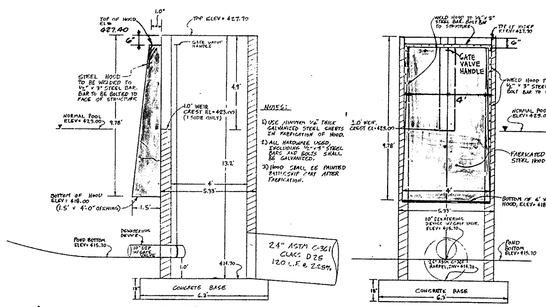
Trapezoidal 'Channel
(No Scale)

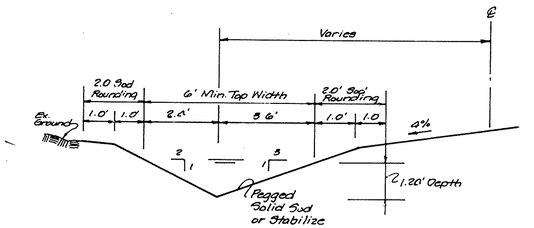


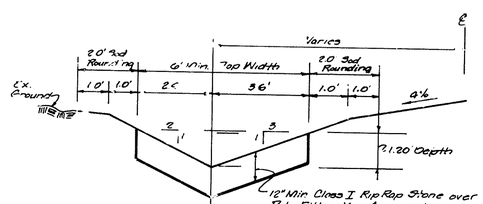
STRUCTURE SCHEDULE							
NUMBER	TYPE	INV. IN	INV. OUT	UPPER	LOWER	DETAIL	LOCATION
I-1	A-10	434.0:433.92	433.80	438.55		SD 4.02	Mystic Woods Cul-de-Sac, LP STA 1 + 29.85
I-2	A-10	436.20	436.10	440.88	440.32	SD 4.02	Mystic Woods Cul-de-Sac, LP STA 0 + 58.25
I-3	A-5	444.22:442.9	442.80	448.28	447.57	SD 4.01	Mystic Woods, STA 1 + 78.00, 12' Right
I-5	A-5	-----	444.50	448.22	447.39	SD 4.01	Mystic Woods, STA 1 + 78.00, 12' Left
I-4	A-5	-----	457.20	461.21	460.46	SD 4.01	Berry Wood Ct. STA 1 + 79.00, 12' Right
I-6	A-5	439.52	439.27	443.63	443.40	SD 4.01	Berry Wood Ct. STA 4 + 33.67, 12' Right
I-7	A-10	-----	439.80	443.84	443.42	SD 4.02	Berry Wood Ct. STA 4 + 33.67, 12' Left
I-8	A-10	-----	445.00	450.35	449.56	SD 4.02	Berry Wood Ct. STA 3 + 14.67, 12' Left
M-1	SHALLOW MANHOLE	414.30	414.20		418.70	G. 5.12	N. 554317.08 E. 1335288.96
M-2	STD MANHOLE	440.0:438.90	438.86		445.40	G. 5.12	Berry Wood Ct. STA 3 + 97.00, 19' Right
S-1	TYPE 'C' ENDWALL	406.63	406.63		409.38	SD 5.21	N. 554410.864 E. 1335466.112
S-2	SEE DETAIL	412.00	412.00		417.33	Sheet 7	N. 554455.507 E. 1335400.06
S-3	TYPE 'C' ENDWALL	413.00	412.94		415.18	SD 5.21	N. 554331.64 E. 1335233.94
S-4	TYPE 'C' ENDWALL	412.06	412.00		414.25	SD 5.21	N. 554439.90 E. 1335175.21
S-5	SEE DETAIL	415.70	414.70		427.90	Sheet 7	N. 554378.806 E. 1335074.865
S-6	CONCRETE END SEC	432.40	432.04		433.98	SD 5.51	N. 554230.32 E. 1334842.07

NOTE: LOCATIONS GIVEN ARE TO THE CENTERPOINT OF EACH STRUCTURE.









These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resource Conservation Service — Date 4/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District

Howard Soil Conservation District — Date 4/16/96

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

STATE OF MARYLAND — BRUCE DAVID BUTTON — No. 19768 — REGISTERED PROFESSIONAL ENGINEER

Bruce D. Button — Signature of Engineer — 4/5/96 Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — 4/15/96 Date

STATE OF MARYLAND — BRUCE D. BUTTON — 19768 — PROFESSIONAL ENGINEER

DESIGNED	S.D.H.
DRAWN	BEI
CHECKED	B.D.B.
DATE	Jan. 1996

STORM DRAIN PROFILES

SCOTT ACRES

A Resubdivision of Lots 5, 6 and 7
Lots 10-32

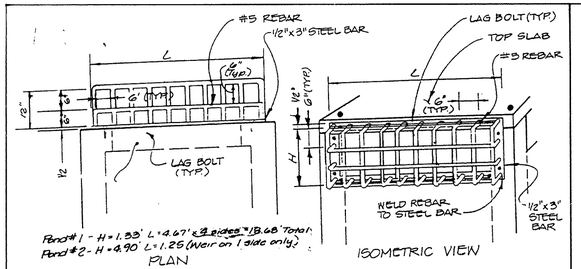
Previous Submittals: F 77-112; BA 80-08, BA 83-116, SDP-95-12, PFP-95-08
Tax Map 35 P/O Parcel 353 WP94-94
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Owner/Developer
Lot 1 Improvement Corp.
8836 Columbia 100 Pkwy Unit P
Columbia, Maryland 21045

SCALE	As Shown
DRAWING	6 of 12
JOB NO.	94-161
FILE NO.	F96-105

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

1829

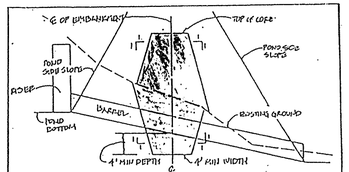


Pond #1 - H = 1.33' L = 4.67' (2 sides) = 13.68' Total
Pond #2 - H = 4.90' L = 1.26 (Weir on 1 side only)

Note: 1. The steel used in the trash rack shall be galvanized and painted battleship grey after fabrication.
2. The #5 rebar to be welded to the 1½"x3" steel bar and bolted to the face of the structure.
3. All bolts used to fasten trash rack to the riser structure shall be galvanized.

TRASH RACK DETAILS (Weir Opening)

SCALE: ½"=1'

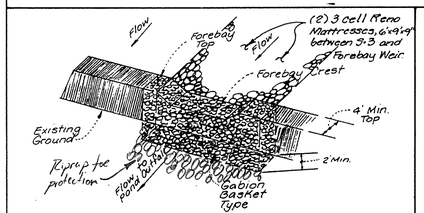


NOTE: County Approved Material* is to be used for core trench. If unsuitable material exists on-site, acceptable material will need to be trucked to the site.

* County Approved Material must conform to Unified Classification Designations of CL, CH, SC, or GC

CORE TRENCH TYP. SECTION

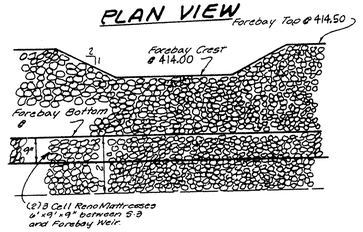
No Scale



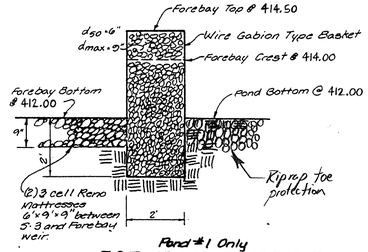
PERSPECTIVE VIEW

N.T.S.

PLAN VIEW



PROFILE VIEW

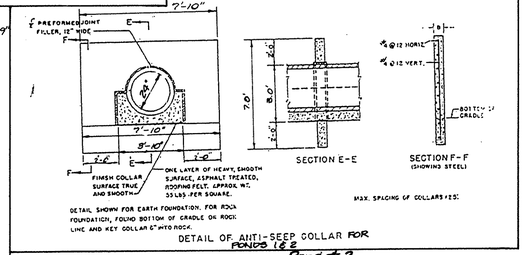


Pond #1 Only

FOREBAY DETAILS

N.T.S.

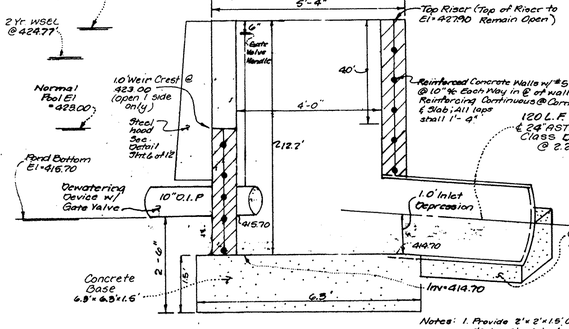
(Gabion Basket Type)



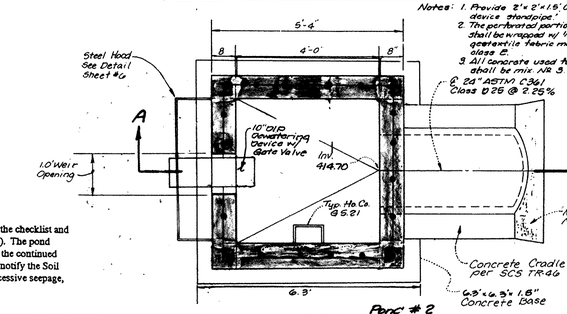
DETAIL OF ANTI-SEEP COLLAR FOR PONDS 1 & 2

Pond #2 S-5 PROFILE VIEW

Scale: 1"=2'



Notes: 1. Provide 2'x2'x1.6' Conc. base for dewatering device standpipe.
2. The perforated portion of the dewatering device shall be wrapped w/ ½" hardware cloth & geotextile fabric matching specifications for class E.
3. All concrete used for riser construction shall be mix No. 3.
4. 24" ASTM C361 Class B25 @ 2.25%

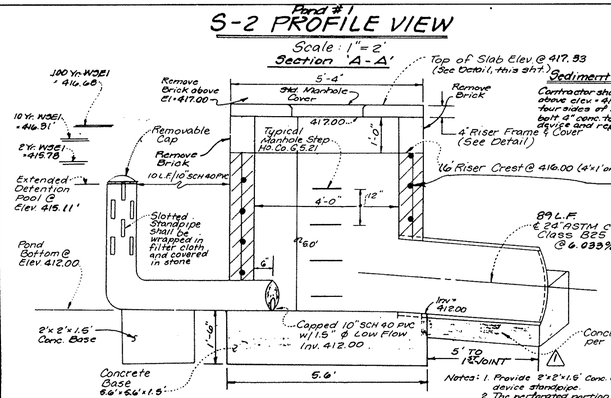


Pond #2 S-5 PLAN VIEW

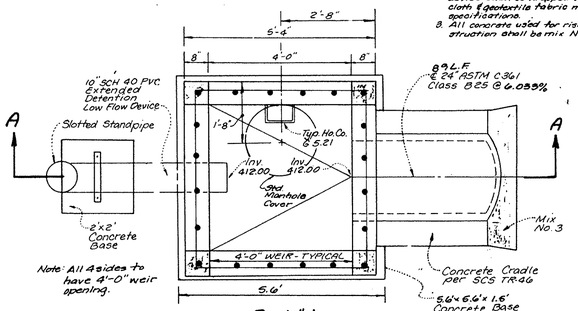
Hor: Scale: 1" = 2'; No Vert

Pond #1 S-2 PROFILE VIEW

Scale: 1"=2'



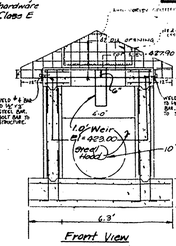
Notes: 1. Provide 8'x2'x1.6' Conc. base for dewatering device standpipe.
2. The perforated portion of the dewatering device shall be wrapped with ½" hardware cloth & geotextile fabric matching Class E specifications.
3. All concrete used for riser construction shall be mix No. 3.



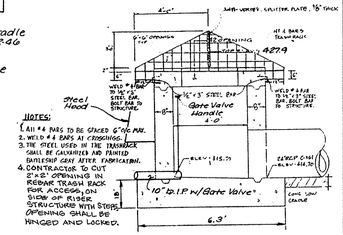
Note: All 4 sides to have 4'-0" weir opening.

Pond #1 S-2 PLAN VIEW

Scale: 1" = 2'

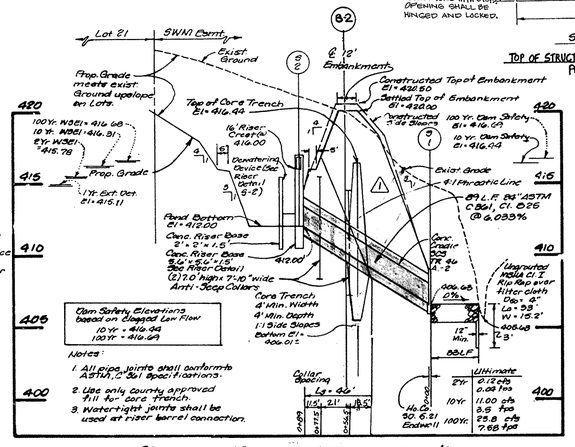


Front View



NOTES:
1. All #4 BARS TO BE SPACED 6" c/c MAX.
2. WELD #4 BARS AT CROSSINGS.
3. THE STEEL USED IN THE TRASHRACK SHALL BE GALVANIZED AND PAINTED BATTLESHIP GREY AFTER FABRICATING.
4. CONTRACTOR TO CUT 2'x2' OPENING IN REBAR TRASH RACK FOR ACCESS, ON SIDE OF RISER STRUCTURE WITH STEPS. OPENING SHALL BE HINGED AND LOCKED.

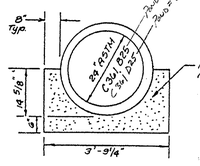
TOP OF STRUCTURE TRASHRACK DETAILS
POND #2 (S-5)



Stormwater Management Extended Detention
Pond #1 Hazard Class 'A'

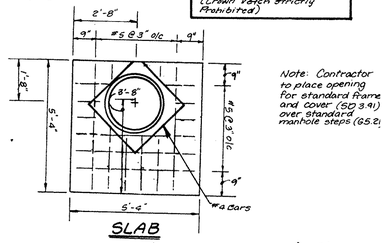
PROFILE ALONG ℄ PRINCIPAL SPILLWAY

Scale: 1"=50' Hor.
1"=5' Vert



SCS TR-46
A-2 CRADLE

Not To Scale



Note: Contractor to place opening for standard frame and cover (SD 3.91) over standard manhole steps (GS.2)

SLAB

RISER FRAME & COVER DETAIL (S-2)

N.T.S.

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards And Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resource Conservation Service — Date 8/16/96

These plans for small pond construct, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 8/16/96

STATE OF MARYLAND — BRUCE D. BURTON — No. 15181 — REGISTERED PROFESSIONAL ENGINEER — 8/15/96

BY	NO	REVISION DESCRIPTION	DATE
LDE	1	REVISE SPILLWAY & S-2 PROFILE VIEWS	6-24-97

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

BRUCE D. BURTON — SIGNATURE OF ENGINEER — 8/15/96 DATE

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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER — 4/18/96 DATE

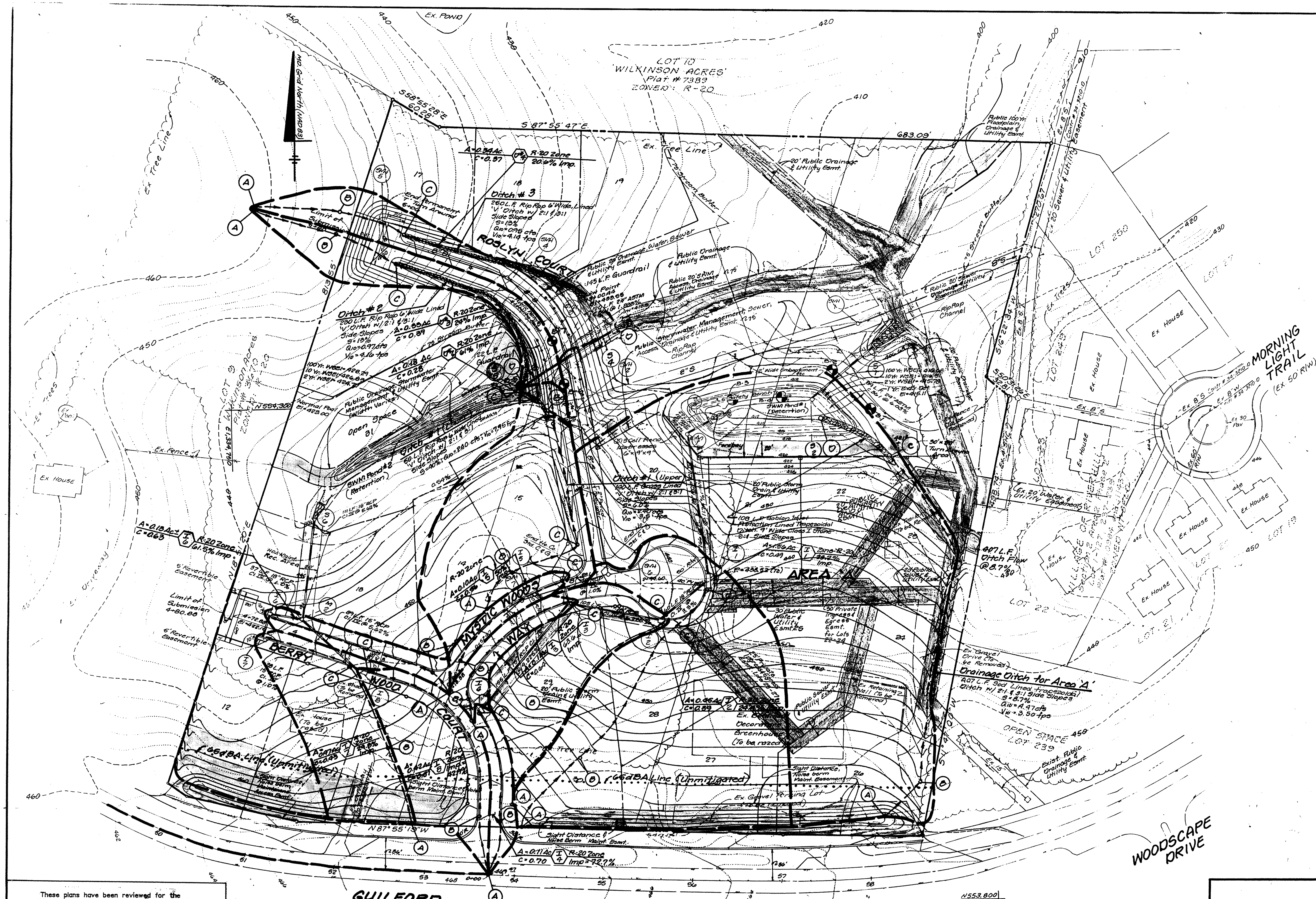
LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED S.D.H.	STORMWATER MANAGEMENT DETAILS	SCALE As Shown
DRAWN E.D.B.	SCOTT ACRES	DRAWING 7 of 12
CHECKED B.D.B.	A Resubdivision of Lots 6, 6 and 7 Lots 10-82	JOB NO. 94-161
DATE Jan. 1996	Previous Submittals: F 77-112, 8480 DB, 8483 IE, 895-12. Tax Map 35 P/O Parcel 353 Zone RA-22 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	FILE NO. F96-105
	Owner/Developer LOT 1 IMPROVEMENT CORP. 8836 P Columbia 100 Pkwy. Columbia, MD 21045	

Planting Note: Plant embankment slopes w/ SCS permanent seeding mix. # 3 (for low maintenance areas). Refer to Table 2.5, pg. 2-30-18 in "1994 MD Std. & Specs for Soil Erosion and Sediment Control" (Crown Vetch strictly Prohibited).

1829

F96-105



TIME OF CONCENTRATION FLOW PATH TABLE

AREA OR TO INLET	SEGMENT A-B	SEGMENT B-C	SEGMENT C-D
I-1	100' @ 9%	200' @ 10%	40' @ 2.4% (G)
I-2	100' @ 10.5%	155' @ 10.3%	
I-3	25' @ 3%		165' @ 7% (G)
I-4	55' @ 2%		130' @ 6.2% (G)
I-5	30' @ 3%		145' @ 7% (G)
I-6	30' @ 3%		190' @ 6.3% (G)
I-7	100' @ 10%	100' @ 10%	100' @ 6.3% (G)
I-8	60' @ 2%		235' @ 7.6% (G)
AREA 'A'	55' @ 27.3%		515' @ 8.7% (D)
DITCH #1	50' @ 8%	80' @ 10%	140' @ 6% (D)
DITCH #2	100' @ 7%	75' @ 23%	230' @ 13% (D)
DITCH #3	100' @ 7%	75' @ 23%	230' @ 13% (D)

SEGMENT A-B - OVERLAND FLOW
SEGMENT B-C - SHALLOW CONCENTRATED FLOW
SEGMENT C-D - GUTTER(G) OR DITCH(D) FLOW

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resource Conservation Service — Date 8/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard County Soil Conservation District.

Howard Soil Conservation District — Date 8/16/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

BRUCE D. BURTON 8/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — Date 4/15/96

Approved: Howard County Department of Planning and Zoning.

Chief, Division of Land Development & Research — Date 8/30/96 JA

Chief, Development Engineering Division — Date 8/30/96

STATE OF MARYLAND — BRUCE DAVID BURTON — No. 19184 — REGISTERED PROFESSIONAL ENGINEER
BRUCE D. BURTON 8/5/96

LDE, INC.

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

Designed: SDH
Drawn: E.D.B.
Checked: BDB
Date: Jan. 1996

Drainage Area Map
SCOTT ACRES
A Resubdivision of Lots 5, 6 and 7
Lots 10-32
Tax Map No. 35 P/O Parcel 353
5th Election District
Howard County, Maryland
Previous Submittals: F77-112, BA80-08, BA83-11F, S95-12, F96-03, WP 96-96

OWNER/DEVELOPER
LOT 1 IMPROVEMENT CORP.
8835 P Columbia 100 Pkwy.
Columbia, MD 21045

Scale 1" = 50'
Sheet 8 of 12
LDE Job No. 94-161
File No. F96-105

F96-105

1829

Legend:

- SCE — Stabilized Construction Entrance
- Sign — Tree Protection Fence w/ Signage
- Earthdikes
- Ex. Treeline
- Prop. Treeline
- Ex. Topography
- Prop. Contours
- SF — Silt Fence
- 66 d BA Line (Unmitigated)
- SSF — Super Silt Fence
- Exist Structure Constructed Under GP 90-124.

Sediment Trap Schedule

Trap No.	Max. D.A. Acres	Stor. Reqd. ft^3	Stor. Prov. ft^3	Stor. Elev.	Stor. Depth ft.	Weir Length ft.	Bottom Elev.	Clean. Elev.	Crest Elev.	Top Elev.	Trap Size **	Type
1	2.98	29397	31608	436	6	6	430	433	436.5	438	104 x 33'	ST-IV
2	0.45	1620	1697	436	4	4	432	434	437	438	5' x 23'	ST-III

** Bottom Dimensions

Excavator Note: Contours shown on this plan as existing may be different than those encountered at the time Roadway grading / construction commences. Refer to approved Grading Plan GP 90-124 for interim contours. Contours shown as proposed on the approved Grading Plan reflect the proposed contours shown on this Grading and Sediment Control Plan.

Note: See Sediment Basin Plan & Details, sht. 11 of 12 for temporary sediment basin construction details

LOT 10 WILKINSON ACRES Plat # 7389 ZONED: R-20

Tree Protection Fence

Sign

Forest Conservation Easmt.

Open Space Lot 32 To be dedicated to Ho. Co. H.O.

Stone Outlet Structure Max. D.A.= 0.47Ac ±

Limit of Disturbance

Proposed Treeline

Ex. Treeline

Ex. Topography

Prop. Contours

Stream Buffer

Public 20' Drainage & Utility Easmt.

Public 80' Drainage Easmt. & Utility Easmt.

Public 60' Drainage & Utility Easmt.

Public 16' Sewer & Utility Easmt.

Ex. 8" S

Ex. 30" Pav

Ex. 60" RCP

Ex. House

Ex. Fence

Ex. Trees

Ex. Pond

Ex. Inlet

Ex. Gravel Drive to be Removed

Ex. Retaining Wall (To be Removed)

Ex. Botanical Decorators Greenhouse (To be razed)

Ex. Gravel Parking Lot (To be removed)

Ex. Trailer (To be removed)

Ex. Shed (To be removed)

Ex. Utility Pole

Ex. Guy Wire

Ex. Water Valve

Ex. Gas Valve

Ex. Sign

Ex. Mailbox

Ex. Light Standard

Ex. Hydrant

Ex. Tank

Ex. Pump

Ex. Well

Ex. Septic Tank

Ex. Septic Field

Ex. Septic Reserve Area

Ex. Sewer Manhole

Ex. Water Meter

Ex. Water Line

Ex. Sewer Line

Ex. Gas Line

Ex. Electric Line

Ex. Telephone Line

Ex. Cable Line

Ex. Overhead Utility Line

Ex. Underground Utility Line

Ex. Drainage Line

Ex. Culvert

Ex. Inlet

Ex. Manhole

Ex. Headwall

Ex. Endwall

Ex. Flared End Section

Ex. Rip Rap

Ex. Concrete

Ex. Asphalt

Ex. Gravel

Ex. Curb & Gutter

Ex. Sidewalk

Ex. Driveway

Ex. Entrance

Ex. Road

Ex. Right-of-Way

Ex. Property Line

Ex. Lot Line

Ex. Easement

Ex. Building Restriction Line

Ex. Setback Line

Ex. Zoning Line

Ex. Boundary Line

Ex. Survey Control

Ex. Benchmark

Ex. Spot Elevation

Ex. Contour

Ex. Index Contour

Ex. Intermediate Contour

Ex. Supplementary Contour

Ex. Depression Contour

Ex. Hachure

Ex. Shading

Ex. Cross Section

Ex. Profile

Ex. Detail

Ex. Schedule

Ex. Table

Ex. Note

Ex. Legend

Ex. Key Map

Ex. Vicinity Map

Ex. Location Map

Ex. Title Block

Ex. Signature Block

Ex. Certificate

Ex. Approval Block

Ex. Seal

Ex. Stamp

Ex. Logo

Ex. Graphic

Ex. Photograph

Ex. Drawing

Ex. Figure

Ex. Table

Ex. Schedule

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 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: 14.2 Acres
   - Area Disturbed: 10.4 Acres
   - Area to be roofed or paved: 1.5 Acres
   - Area to be vegetatively stabilized: 8.9 Acres
   - Total Cut: 20,068 Cu. Yds.
   - Total Fill: 40,000 Cu. Yds.
   - Offsite borrow area location: 19,942 (Warshalee Woods GP96-76)
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.

GEOTECHNICAL ENGINEER RECOMMENDATIONS
STORMWATER MANAGEMENT PONDS # 1 & 2

1.) The site should be stripped of topsoil and other unsuitable materials, such as existing unsuitable fill material.

2.) After stripping the exposed subgrade materials should be proofrolled with a loaded dump truck or similar equipment in the presence of a Geotechnical Engineer or his representative.

3.) For areas not accessible to a dump truck, the exposed materials should be observed and tested by a Geotechnical Engineer utilizing a Dynamic Cone Penetrometer.

4.) Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitably firm soil, and then grades re-established by backfilling with suitable soil.

5.) A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut off trench.

6.) Per MD 378 Specifications material for the core trench shall conform to Unified Soil Classification GC, SC, CH, or CL. *These materials were not identified onsite.* In the opinion of the geotechnical engineer a fine grained soil, including Silt (ML) with a plastic index of 10 or more can be utilized for the center of embankment and core trench, if done under the supervision of the Geotechnical Engineer. The ML material is likely available onsite based on knowledge of subsurface conditions on adjacent sites.

7.) Concrete riser structure foundations should be designed for a maximum allowable bearing pressure of 2000 lbs per square foot (psf). Water should not be allowed to pond or collect within the foundation excavations, as this can cause a reduction in the bearing capacity of the soils. A Geotechnical Engineer should observe foundation excavations and conduct Dynamic Cone Penetrometer testing (DCP) of the bearing surfaces to depths of three feet.

8.) **POND # 1 ONLY:** Subsurface testing in the area proposed for riser construction indicates that the riser foundation and principle spillway may encounter existing uncontrolled fill materials. This uncontrolled fill material should be evaluated by a Geotechnical Engineer during pond contruction. Unsuitable fill materials should be overexcavated and controlled compacted fill placed. Fill materials should be compacted to 95% as defined by ASTM D698 as verified by compaction testing.

9.) **POND # 2 ONLY:** Based on the groundwater encountered during the investigation, dewatering will likely be required during construction of the cutoff and core trench. Rock may also be encountered in the core trench excavation. Blasting is not recommended to achieve proposed trench elevations. Should dense, unfractured rock materials be encountered, further excavation via ripping or other rock excavation methods will not be required. This recommendation is predicated on the Geotechnical Engineer's field inspection of this condition, if present.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 8/30/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE

[signature] 8/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

[signature] 8-27-96
CHIEF, BUREAU OF HIGHWAYS — DATE

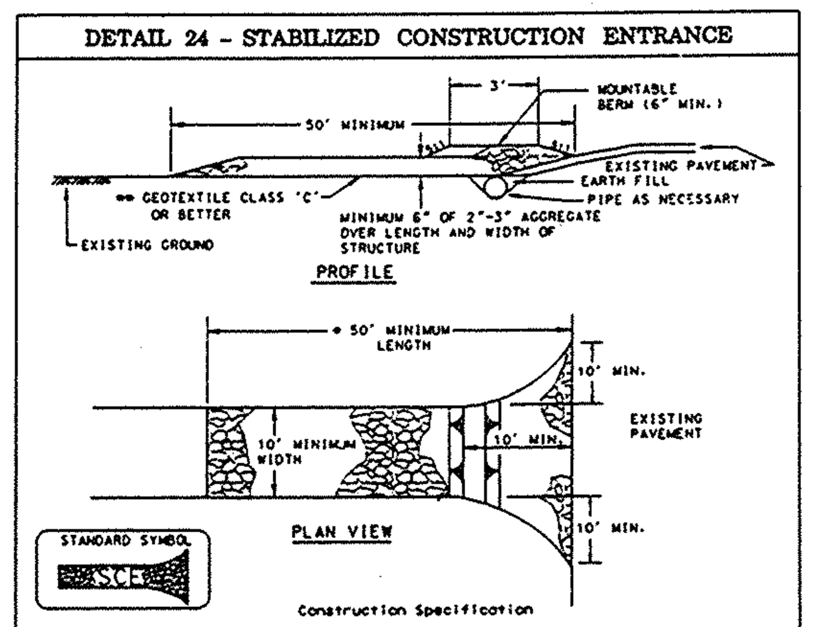
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[signature] 8/16/96
NATURAL RESOURCE CONSERVATION Service — DATE

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[signature] 8/16/96
HOWARD SOIL CONSERVATION DISTRICT — DATE

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 amount 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.

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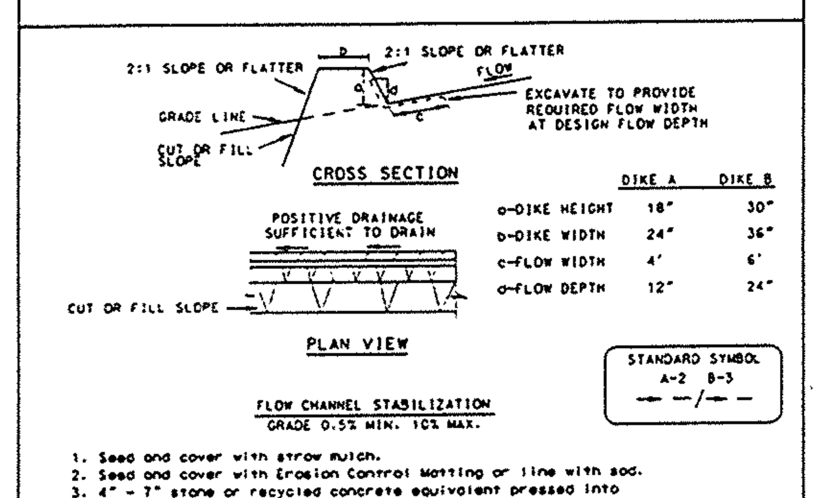
DETAIL 1 - EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" – 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

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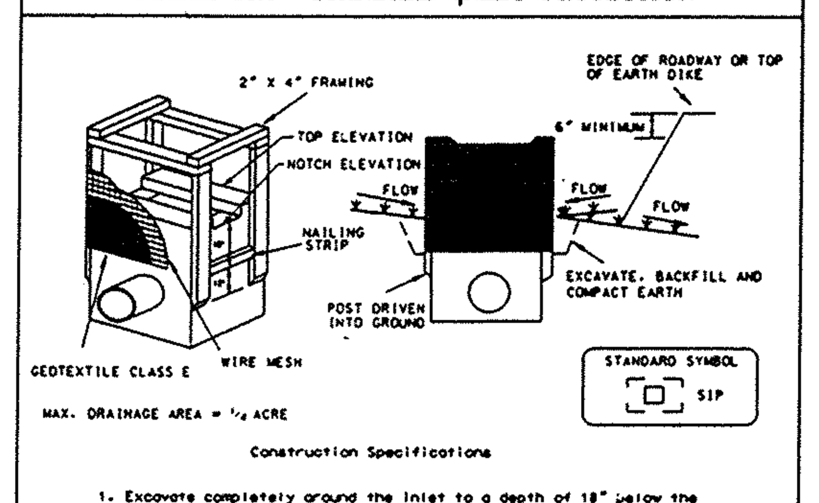
DETAIL 23A - STANDARD INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

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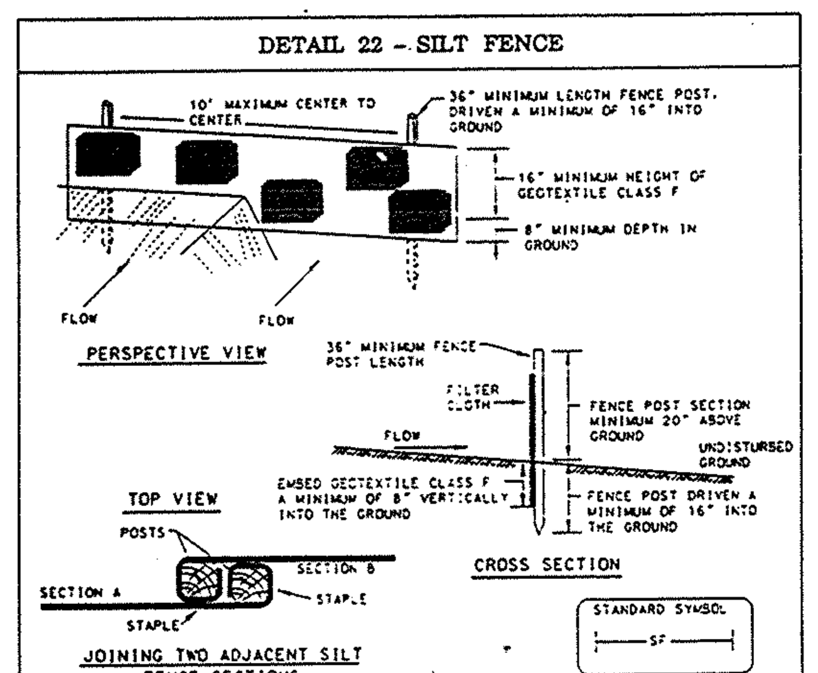
DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pond 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 for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ 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.

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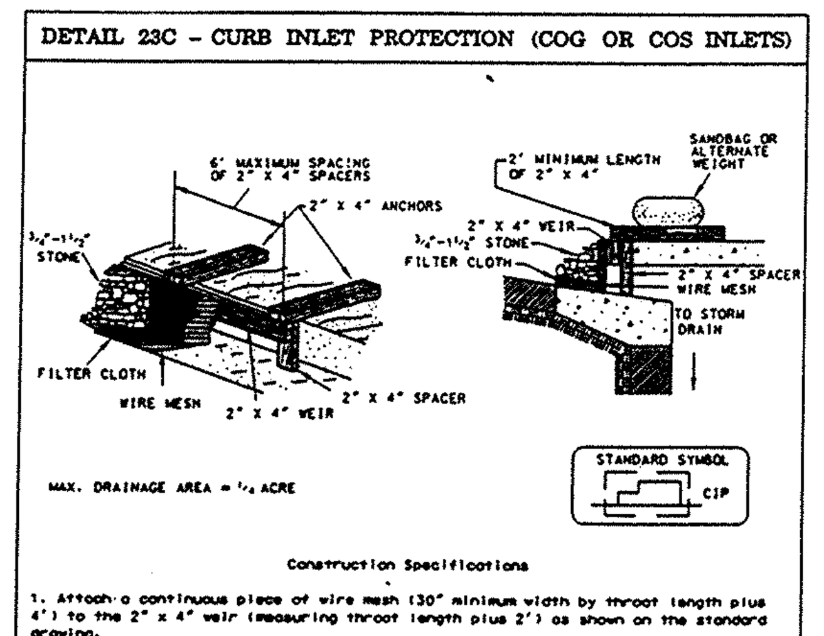
DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the ½" x ½" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean ¾" x 1½" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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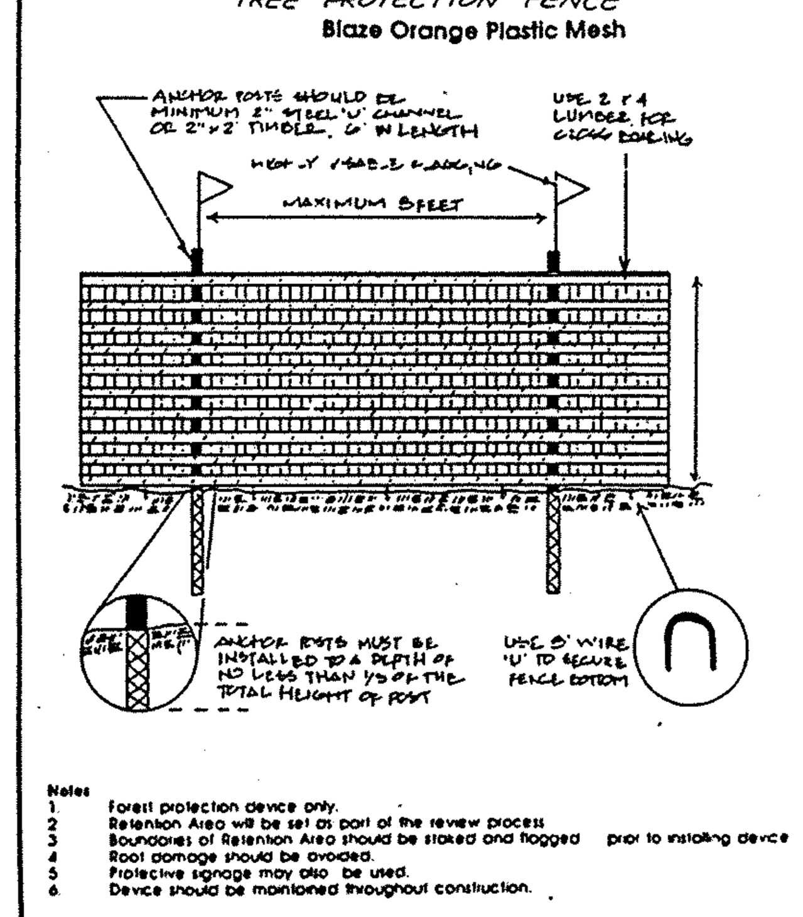
TREE PROTECTION FENCE
Blaze Orange Plastic Mesh



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

Source: Prince Georges County, Maryland Woodland Conservation Manual

SOIL BORINGS

RECORD OF SOIL EXPLORATION — Boring #1

Project Name Scotts Acres; Location 32 at Hall Shop Road; Boring # SWM-1; Job # 95139A
Datum; Surf. Elev. 414.25; Date Started 6-14-95
SAMPLER: Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 8"; Rock Core Dia; Boring Method HSA
Foreman D. Deckman; Inspector; Date Completed 6-14-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	BLOWS 6"	NO	REC.	BORING & SAMPLING NOTES
	SURFACE		0.0					0" Topsoil
	Brown, moist, micaceous, medium dense to dense, fine sandy silt, some decomposed rock fragments							Groundwater encountered at 18.0' while drilling; Bag samples from 0.0' to 10.0'; Caved at 17.2'; Auger Probe to 5.0'
			10	1	5-5-6	1	12"	
			15	L	16-18-23	2	0"	
	Brown, moist, micaceous, medium dense to dense, fine sandy silt, some decomposed rock fragments	21.5	20	1	4-5-9	3	13"	
	Bottom of Hole at 21.5'; No apparent fill		25.0					

Ground water depth: At completion 14.7 ft; After 24 Hrs. 14.0 ft.

RECORD OF SOIL EXPLORATION — Boring #2

Project Name Scotts Acres; Location 32 at Hall Shop Road, 32 SWM2 - SWM1 due to berm and rubble; Boring # SWM-2; Job # 95139A
Surf. Elev. 412.67; Date Started 6-14-95
SAMPLER: Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Boring Method HSA
Foreman D. Deckman; Date Completed 6-14-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	BLOWS 6"	NO	REC.	BORING & SAMPLING NOTES
	SURFACE		0.0					0" Topsoil
Fill	Grey, moist, micaceous, fine sandy silt, some decomposed rock fragments, wood, roots, etc.	6.0						Groundwater encountered at 19.0' while drilling; Bag samples from 0.0' to 7.0'; Caved at 17.8'; Auger Probe to 7.0'
	Brown to gray, moist, micaceous medium dense, fine sandy silt, some decomposed rock fragments		5	1	6-7-7	1	10"	
			10	1	6-8-10	2	6"	
			15	1	6-6-9	3	16"	
	SURFACE — Brown to gray, moist, micaceous medium dense, fine sandy silt, some decomposed rock fragments	21.5	20.0	1	6-10-12	4	18"	
			25.0					

Ground water depth: At completion Dry; After 24 Hrs. 15.0 ft.

RECORD OF SOIL EXPLORATION — Boring #4

Project Name Scotts Acres; Location 32 at Hall Shop Road; Boring # SWM-4; Job # 95139A
Surf. Elev. 415.50; Date Started 6-14-95
SAMPLER: Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 8"; Boring Method HSA
Foreman D. Deckman; Date Completed 6-14-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	BLOWS 6"	NO	REC.	BORING & SAMPLING NOTES
	SURFACE		0.0					0" Topsoil
Fill	Brown, moist, micaceous, fine sandy silt, some decomposed rock fragments, brick, concrete, etc. fill	5.0	5					Groundwater encountered at 16.0' while drilling; Bag samples from 0.0' to 5.0'; Caved at 16.3'
	Brown, moist, micaceous medium dense, fine sandy silt to silty fine sand, some weathered and decomposed rock fragments		10	1	3-3-4	1	15"	
			15	1	7-7-9	2	14"	
	Brown, moist, micaceous medium dense, fine sandy silt to silty fine sand, some weathered and decomposed rock fragments	21.5	20	1	8-10-14	3	17"	
	Bottom of Hole at 21.5'		25.0					

Ground water depth: At completion 15.9 ft; After 24 Hrs. 9.5 ft.

RECORD OF SOIL EXPLORATION — Boring #3

Project Name Scotts Acres; Location 32 at Hall Shop Road, 20' SWM3 - SWM4; Boring # SWM-3; Job # 95139A
Surf. Elev. 415.95; Date Started 6-15-95
SAMPLER: Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 8"; Boring Method HSA
Foreman D. Deckman; Date Completed 6-15-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE		0.0					0" Topsoil
Fill	Brown/red, moist, micaceous, silty sandy, rope, roots, etc.	7.0	5					Groundwater encountered at 16.0' while drilling; Caved at 13.0'
	Tan to brown, moist, micaceous medium dense to dense, fine sandy silt, some weathered & decomposed rock fragments			1	5-5-7	1	16"	
			10	1	4-5-5	2	14"	
			15	1	5-7-9	3	13"	
	Tan to brown, moist, micaceous medium dense to dense, fine sandy silt, some weathered & decomposed rock fragments	21.5	20	1	6-21-22	4	8"	
	Bottom of Hole at 21.5'		25.0					

Ground water depth: At completion 10.9 ft; After 24 Hrs.

SAMPLER TYPE: Driven split spoon unless otherwise noted; PT-Pressed Shelby Tube; CA-Continuous Flight Auger; RC-Rock Core. SAMPLE CONDITIONS: D-Disintegrated; I-Intact; U-Undisturbed; L-Lost. BORING METHOD: HSA-Hollow Stem Augers; CFA-Cont. Flight Augers; DC-Driving Casing; MD-Mud Drilling.
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

TEST PIT EXPLORATION — Hills-Carnes Engineering Associates, Inc
BORING #5
Job Name Scott Acres; Job # 01596A; Date 23 January 1996; Test Pit # 1; Water Encountered 9; Surface Elevation 423.5'; Inspector Schestag; Equipment 416 B Cat Backhoe

DEPTH	DESCRIPTION	COMMENTS
		6" Topsoil
	Brown, moist, micaceous, silty Sand (SM) (Sandy Loam)	
5		
		Dense, decomposed rock @ 7 - 8'
10	BOH 12'	Refusal - Rock

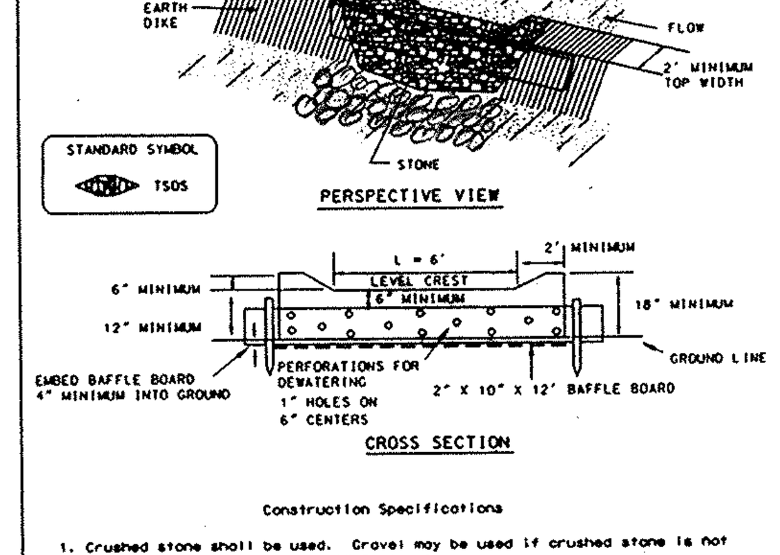
TEST PIT EXPLORATION — Hills-Carnes Engineering Associates, Inc
BORING #6
Job Name Scott Acres; Job # 01596A; Date 23 January 1996; Test Pit # 3; Water Encountered 7; Surface Elevation 421; Inspector Schestag; Equipment 416 B Cat Backhoe

DEPTH	DESCRIPTION	COMMENTS
		6" Topsoil
	Brown, moist, micaceous, silty Sand (SM) (Sandy Loam)	
5		
10	BOH 12	Refusal - Rock

BORING #7 — Hills-Carnes Engineering Associates, Inc
Job Name Scott Acres; Job # 01596A; Date 23 January 1996; Test Pit # 2; Water Encountered 7; Surface Elevation 410'; Inspector Schestag; Equipment 416 B Cat Backhoe

DEPTH	DESCRIPTION	COMMENTS
		6" Topsoil
	Brown, moist, micaceous, silty Sand (SM) (Sandy loam)	
5		
	BOH 10'	Refusal - Rock

DETAIL 19 - STONE OUTLET STRUCTURE



Construction Specifications

1. Crushed stone shall be used. Gravel may be used if crushed stone is not available. The stone shall be 2"-3" in size.
2. The crest of the stone dike shall be at least 6" lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of 4".
4. The minimum length of the crest of the stone outlet structure shall be 6'.
5. The stone outlet structure shall be inspected after each rain. Stone shall be replaced when the structure ceases to function and ponding results.
6. The baffle board shall be extended one foot into the dike, staked and embedded 4" into the existing ground.
7. The drainage area to this structure shall be less than 1/2 acre.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 11 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1	Obtain grading permit	1 Day
2	Notify the Howard County Department of Inspections, Licenses and Permits (313-1855) at least 48 hours prior to the commencement of construction	1 Day
3	Install stabilized construction entrance. Install tree protection fence and signage	1 Day
4	Clear and grub site for perimeter sediment control devices	3 Days
5	Install perimeter sediment control devices including earth dikes, swales and silt fence, and sediment trap.	2 Days
6	Construct sediment basin per plan specifications (See MD 378 Specifications)	4 Days
	a. Grade basin access. Excavate and construct core trench; b. Install cove trench and concrete cradle, principal spillway, anti-seep collars, endwall and outfall apron; c. Excavate basin per grading plan; d. Construct concrete riser and dewatering device and concrete bases (sht. 11); e. Construct embankment; f. Stabilize all disturbed areas and insure perimeter controls remain functional	5 Days; 1 Day
7	Install stone outlet structures and associated earth dikes	1 Day
8	Clear and grub for Roslyn Ct.	3 Days
9	Construct core trench	1 Day
10	Install culvert/principal spillway with concrete cradle, endwall and outfall apron. Construct concrete riser and base	2 Days
11	Construct Roslyn Ct. embankment per grading plan. Install utilities within embankment while constructing embankment	2 Days
12	Install stone outlet structures 2, 3, and 4	1 Day
13	Clear and grub remaining area to be graded	3 Days
14	Grade remainder of site as per grading plan	2 Weeks
15	Stabilize all disturbed areas not to be paved	1 Day
16	Construct utilities, including water, sewer and storm drain system, with the exception of M-2 to S-6. Immediately block all inlets	2 Weeks
17	Fine grade for roadways	4 Days
18	Install curb and gutter	1 Week
19	Install gravel base for roadways	1 Week
20	Install bituminous base and surface for roadways	1 Week
21	Construct sidewalks and handicapped ramps	3 Days
22	Stabilize all remaining disturbed areas in accordance with the permanent seeding notes	1 Day
23	With permission from the sediment control inspector, remove all sediment control devices except those around the sediment basin. Construct M-2 to S-6 storm drain.	4 Days
24	Convert the sediment basin to permanent stormwater management pond	4 Days
	a. Dewater the basin completely; b. Remove all accumulated sediment and insure pond bottom is at final design elevation; c. Remove the dewatering device and install 10" PVC standpipe in accordance with the stormwater management plan specifications; d. Unblock weir openings on riser (Sht. 7); e. Grade 5' safety bench in accordance with stormwater management pond grading plan; f. Insure all pond side slopes are in accordance with SWM details and specifications; g. Install forebay area and gabion weir per details and specs.; h. Permanently stabilize the inside of pond and embankment area (Insure Pond meets all MD 378 Stds & Specs)	
25	With permission of the sediment control inspector, remove all remaining control devices	1 Day
26	Install street lights and landscaping per plan	2 Days

Pond Construction Notes:

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

   Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

   Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

   Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill."

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
4. Backfilling shall conform to "Structure Backfill."
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill."
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

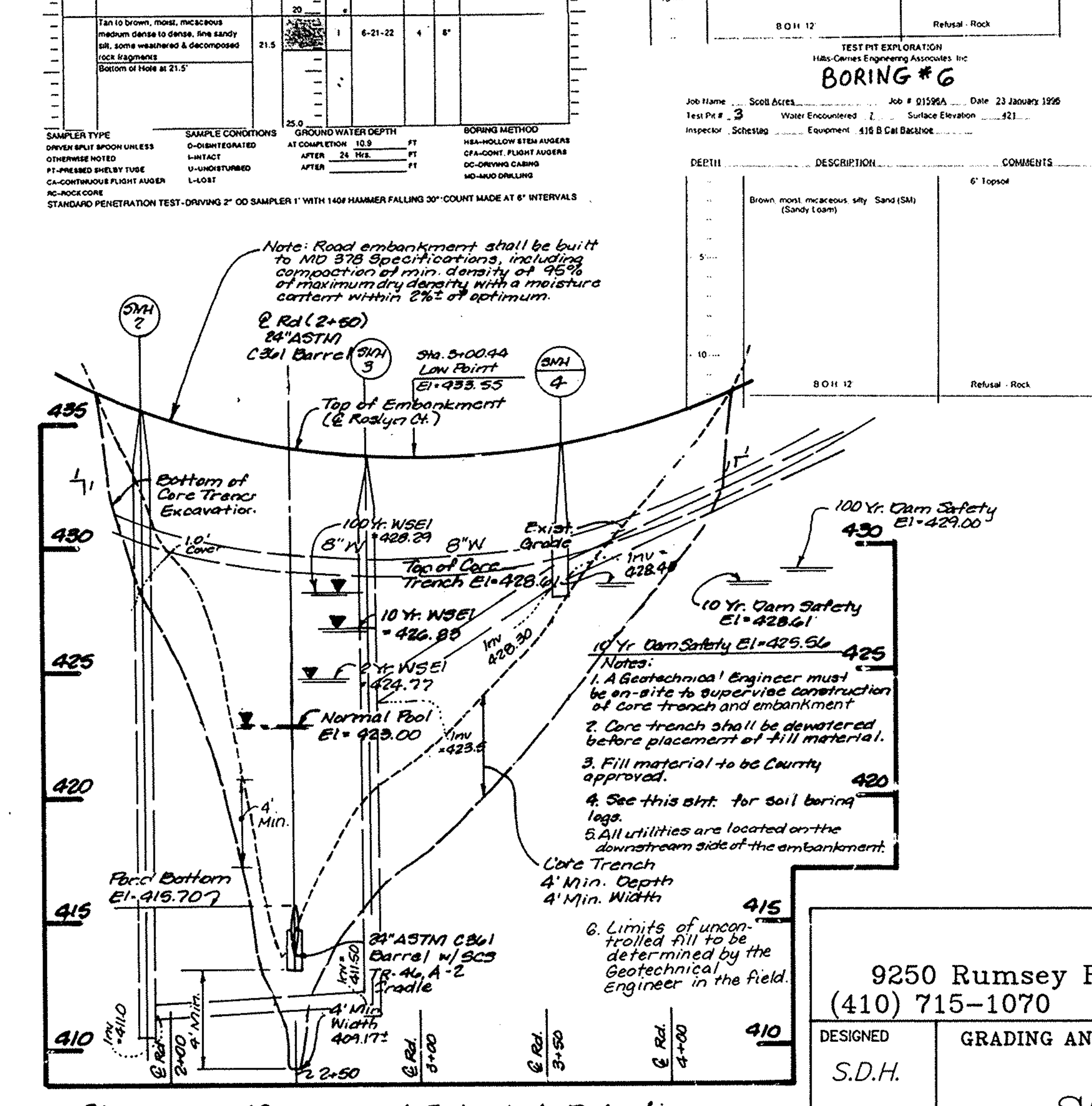
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



Stormwater Management Extended Detention Pond # 2, Hazard Class 'A', PROFILE ALONG ℄ EMBANKMENT
Scale: 1" = 50' Hor. 1" = 5' Vert.

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

BRUCE D. BURTON 8/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

[signature] 9/15/96
Signature of Developer — Date

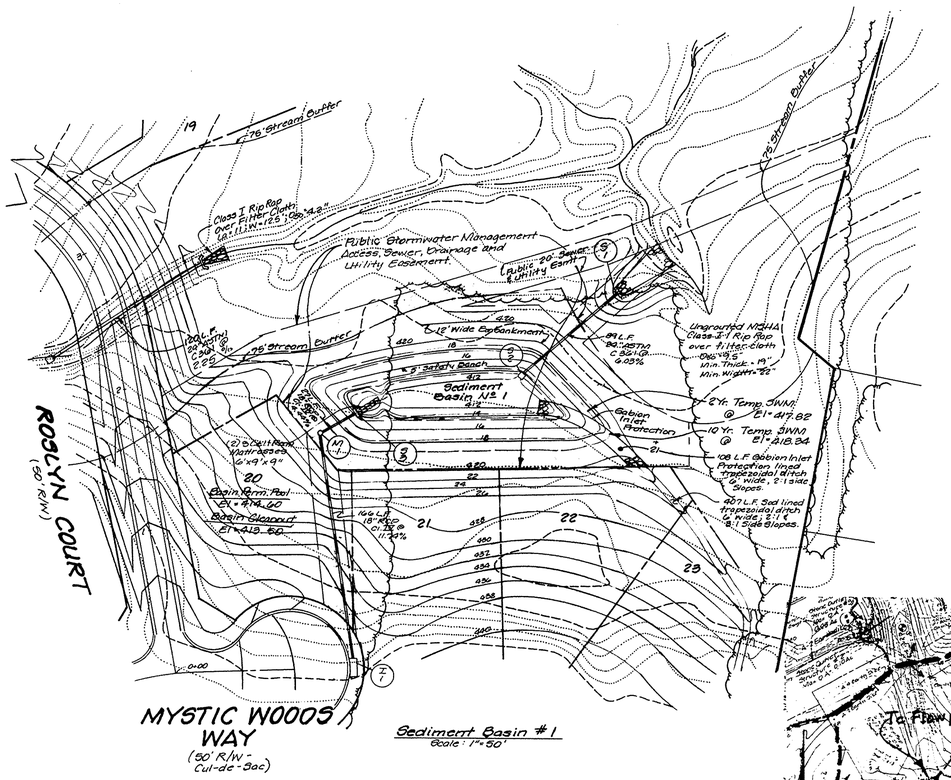
Seal: State of Maryland, Bruce David Burton, No. 19184, Registered Professional Engineer — [signature] 8/5/96

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

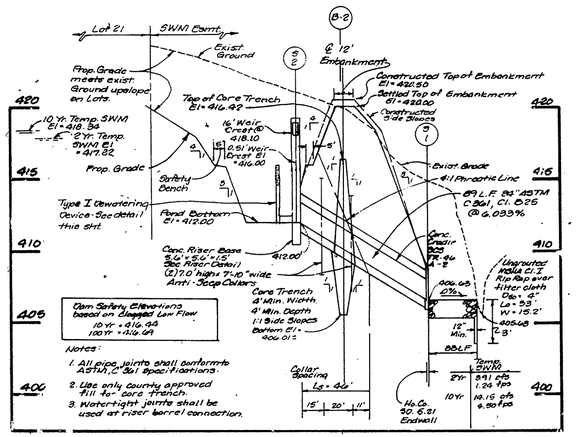
DESIGNED S.D.H.	GRADING AND SEDIMENT & EROSION CONTROL DETAILS	SCALE As Shown
DRAWN E.D.B.	SCOTT ACRES — A Resubdivision of Lots 5, 6 and 7, Lots 10-32	DRAWING 10 of 12
CHECKED B.D.B.	Previous Submittals: F77-112; BA80-08, BA83-11E, S 95-12, P96-03, WP96-96. Tax Map 35 P/O Parcel 353. 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 94-16
DATE Jan. 1996	Owner/Developer: LOT 1 IMPROVEMENT CORP. 8856 P Columbia 100 Pkwy Columbia, MD. 21045	FILE NO. F96-105

F96-105

1829



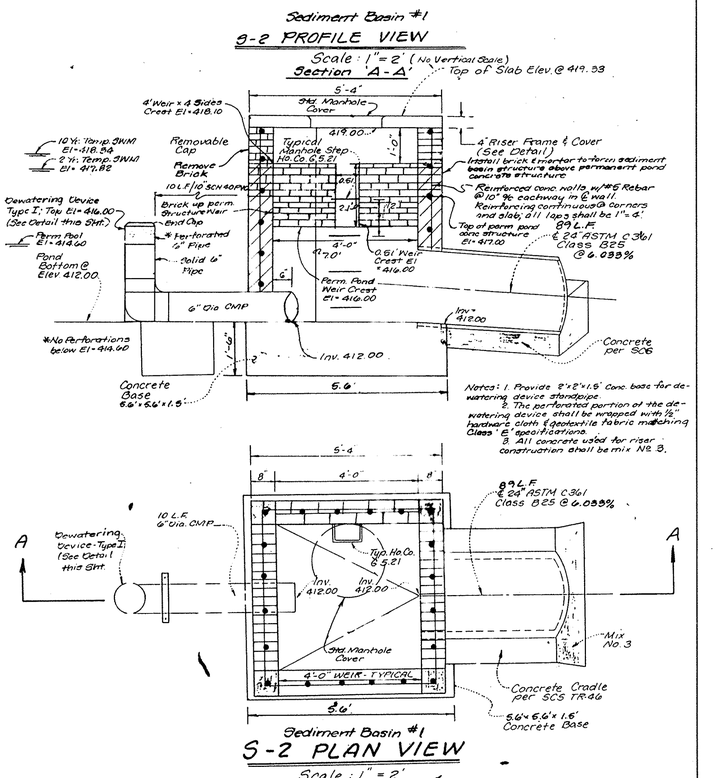
Sediment Basin #1
Scale: 1"=50'

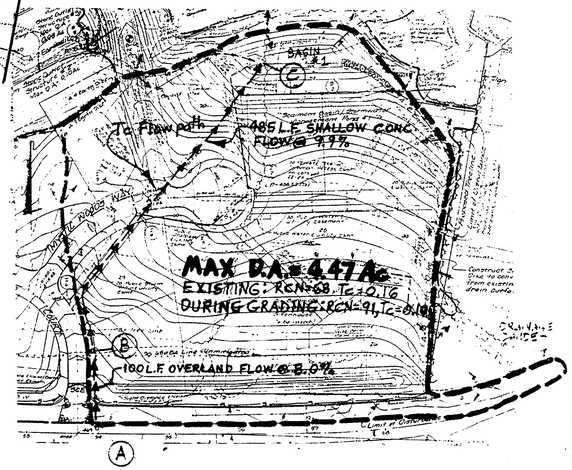


Stormwater Management Extended Detention Pond #1 Hazard Class 'A'

PROFILE ALONG ℄ PRINCIPAL SPILLWAY

Scale: 1"=50' Hor. 1"=5' Vert

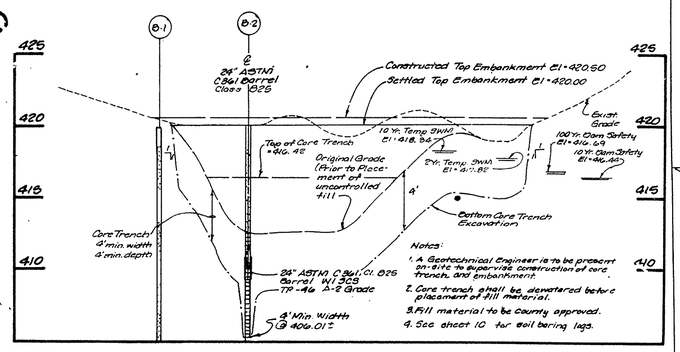




SEDIMENT BASIN DRAINAGE AREA MAP

1" = 100'

Note: This plan to be used for temporary Basin only - not for permanetrt pond construction.



Sediment Basin #1
Hazard Class 'A'

PROFILE ALONG ℄ OF EMBANKMENT

Scale 1"=50' Hor.
1"=5' Vert.

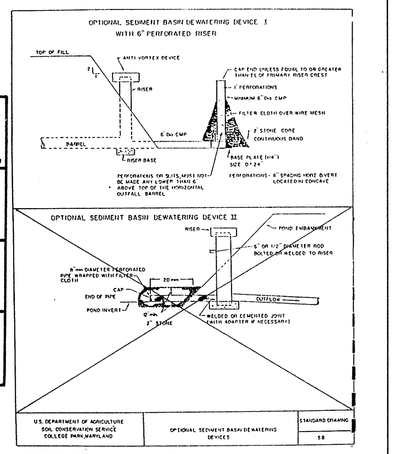


Figure 2 Temporary Sediment Basin Design Data Sheet

Computed by SDH Date 5/30/96 Checked by BDB Date May 96'
Project name Scott Acres Basin # 1
Location Clarksville, Howard County, Maryland

Total area draining to basin 4.47 acres (ac)

Basin Volume Design

Note 1 Also see Surface Area Design #30, this form
2 To convert ft³ to yd³, divide ft³ by 27 To convert ft³ to yd³, divide ft³ by 9

1 Min required vol = 3600 ft³/ac x 4.47 ac drainage = 16,092 ft³
2 Actual Volume of basin = 38,317 ft³ (@ el. el = 418.00)
3 Excavate ——— ft³ + ——— yd³ to obtain required capacity (EXISTING VOLUME IS ADEQUATE)
4 Vol. at dewatering elev. = 1800 ft³/ac x 4.47 ac = 8046 ft³
5 Vol. of basin at clean-out = 900 ft³/ac x 4.47 ac = 4023 ft³
6 Elevation corresponding to min. required volume of basin (riser crest elevation) = 416.00 ft
7 Permanent Pool elevation = 414.6 ft
8 Distance from riser crest elevation to principal spwd elevation = 1.4 ft (RISER CREST= 416.00)
9 Basin floor elevation = 412.5 ft
10 Distance from riser crest elevation to floor elevation = 2.5 ft

Spillway Design

11 Q_{100} = 29 cfs (peak discharge from 100 yr 24 hr storm event - attach computations)

Principal Spillway (Ps) (See Detail 11)

12 Design Principal Spillway Runoff Discharge, Design Q_d = 29 cfs (min. 50% of 10 year peak or 3" Diameter Pipe) (NO EMERGENCY SPILLWAY)
13 H = 9.37 ft Barrel length = 89 ft
14 Barrel Diam = 2.0 in Note: Q_d shall not exceed Design Q_s
Q_d = Q (from Table 11-6 or 11-7) 31.6 x (depth correction factor) 0.95 = 30 cfs
*15 Riser Diameter 48" in Riser Height 5 ft Riser Head (h) — ft
**16 Trash Rack Diam 4'-8" in Trash Rack Height 1'-4" in

NOTE: A table showing design data shall be included on the plan for each basin.

* SQUARE CONCRETE RISER - INSIDE DIM. 4'x 4'; OUTSIDE DIM. 5.33'x 5.33'
** REBAR TRASHRACK FOR WEIR OPENINGS. 4 - 1'x 4' OPENINGS.

Emergency Spillway (Es)
NO E/S

17 Emergency spillway type ——— Qe ——— cfs
18 Width ——— ft Hp ——— ft
19 Entrance channel slope ——— %
20 Exit channel slope ——— %

Anti Seep Collar Design (If Required)

21 s = 5 ft/ft z = 4 ft/ft pipe slope 6.03 % Lc = 46 ft
22 Use 2 collars 7 ft x 7' 10 in square, projection 2 ft

Design Elevations

23 Riser Crest 416.00 ft 34 Design High Water 418.39 ft
25 Emergency Spillway Crest N/A ft 26 Min. settled top of dam 420.0 ft
27 Permanent pool 414.60 ft 28 Bottom of Basin 412.0 ft
29 Dam downstream crest 412.00 ft

Surface Area Design

30 Min basin surface area, SA = 43560 x Q_d = 43560 x 29 cfs = 0.10 - ACTUAL SURFACE AREA = 0.20 Ac

Dewatering Device

TYPE I DEWATERING DEVICE FROM "1983 STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL"

31 Dewatering device outlet diameter 6" in (From Table 11)
32 A. Total area of perforations ≥ 4A
A = (# of perforations)x(perforation area ft²)(perforation size from Table 11) = ——— ft²
A = ——— ft²
A. Internal surface area (From Table 11 or computed)

Approved: Howard County Department of Planning and Zoning

Chief, Division of Land Development and Research — Date 8/30/96

Chief, Development Engineering Division — Date 8/30/96

Approved: Department of Public Works for Storm Drainage Systems and Roads

Chief, Bureau of Highways — Date 8-27-96

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for pond construction, soil erosion and sediment control.

Natural Resources Conservation Service — Date 8/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 8/16/96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I also notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

STATE OF MARYLAND — BRUCE D. BURRELL — No. 19984 — REGISTERED PROFESSIONAL ENGINEER

BRUCE D. BURRELL — 8/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — Date 7/15/96

STATE OF MARYLAND — BRUCE D. BURRELL — No. 19984 — REGISTERED PROFESSIONAL ENGINEER — 8/5/96

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

DESIGNED S.D.H.	SEDIMENT BASIN PLAN AND DETAILS	SCALE As Shown
DRAWN E.D.B.	SCOTT ACRES A Resubdivision of Lots 5, 6, and 7 Lots 10 - 32	DRAWING 11 of 12
CHECKED B.D.B.	Previous Submittals: F-77-112, B-80-08, B-83-112, 396-12, P96-03, WP96-96 Tax Map 35 P/O Parcel 353 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 94-161
DATE Jan. 1996	Owner/Developer LOT 1 IMPROVEMENT CORP. 8835 P. Columbia 100 Pkwy. Columbia, Maryland 21045 (410) 730-0810	FILE NO. F96-105

1829

F 96-105

PLANTING NOTES - afforestation planting

1. Forest Stand Delineation and the Preliminary Forest Conservation Plan prepared by Dennis J. LaBare, M.S. & Assoc.
2. Written Documentation including afforestation location, construction protection and management, cost estimate, plant densities, etc. prepared by Dennis J. LaBare, M.S. & Assoc.
   A) Construction Protection and Management Upon completion of the rough grading of the afforestation areas, a protective fence and signs will be installed. Adjacent landowners will be informed about the existence and importance of these areas.

   B) Post Construction Protection After completion and approval of planting, the protective fence shall remain only if construction endangers the viability of the newly planted area. Signs will be removed after the two year maintenance period as directed by the Howard County Forest Conservation Manual.
3. All planting to meet the implementation techniques and practices as described in the Howard County Forest Conservation Manual.
4. There are no existing trees on the site.
5. The hardwood container grown stock should be planted randomly at an average of eleven feet on center in a naturalized pattern. Species should be mixed with no less than three trees of one species in a group. Edge species should be planted on the perimeter of the afforestation area (Amelanchier, Cercis, and Viburnum).
6. Evergreen seedlings should be planted randomly at an average of eight feet on center in a naturalized pattern.
7. The Landscape Contractor will be responsible for general site preparation of the rough graded afforestation areas. The planting areas should be treated by incorporating natural mulch into the top twelve inches of soil. The Contractor will provide needed soil amendments as determined by a soil analysis. Amendments should be natural materials such as organic mulch or leaf mold compost.
8. All disturbed areas within the afforestation area to be seeded with K-31 Tall Fescue (March 1 - April 30 and August 1 - Oct. 15, seed with 60 lbs/acre; May 1 - July 31 use 60 lbs/acre K-31 and 2 lbs/acre of weeping lovegrass; Oct. 16 - Feb. 28 use 60 lbs/acre k-31 and mulch with 2 tons/acre well anchored straw or mulch and seed in the spring.
9. Seeded areas to be hand mulched with 1 1/2 to 2 tons per acre of unrotted small grain straw and non-asphaltic tackifier and left unmowed. All areas between the Site Line Easement and the ROW of Guilford Road shall be seeded with K-31 Fescue and mowed once a year.
10. The Landscape Architect will inspect the planting at the end of the construction period and provide to the County a certification that all plantings have been installed and that all protection devices are in place.
11. The Landscape Contractor shall be responsible for management of afforestation areas for a period of two years, including needed watering, removal of dead or damaged material and control of undesirable species, fertilizing if necessary and control of pests and replacement of plant material as described in the Howard County Forest Conservation Manual.
12. All inspections as required by the Forest Conservation Manual shall be performed by the Landscape Architect.
13. For signage locations and protective tree fence locations, see sheet 9.

Notes:
1. This plan has been prepared in accordance with the provisions of Sect. 16.124 of the Howard County Code and the Landscape Manual.
2. Financial Surety for the required Landscaping has been posted as part of the DPW Developers Agreement in the amount of $ 8400.
3. All street lights shall be located 2ft minimum to 4'maximum behind the curb. No trees shall be located within 20' of any street light.
4. The recreation open space, Landscape edges, sight distance and noise berm easement shall be maintained by the homeowners association.

Forest conservation technique	area / sq. ft.	plant density	plants req.	plants shown
Landscape option (20%)	1500	40 trees/10,000sf	5 trees	6 trees
Afforestation w/ 1-2 gal. cont. stock (50%)	3260	350 trees/ac.	24 trees	26 trees
Afforestation w/evgn seedlings (50%)	1950 / 6500	700 trees/ac.	31 trees	31 trees

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	964 L.F.
Number of Trees Required Shade Trees 1:50 Evergreen Trees 1:40	612 L.F. 12 15
Credit for Existing Vegetation (No, Yes and %)	Yes 230 L.F.
Credit for Other Landscaping (No, Yes and %)	Yes 122 L.F.*
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution)	10 13 Shrubs (10:1) : 40 ÷ 10 = 4

* Reforestation Planting

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B	A
Linear Feet of Roadway Frontage/Perimeter	849 L.F.	2344 L.F.
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	450 L.F. Yes
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs	(1:50) 17 (1:40) 21	(1:60) 19
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	17 22	19

Comments * Credit for existing vegetation 380 L.F. Edge ① 210 L.F. Edge ② and 520 L.F. Edge ③

Note: Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

PERIMETER AND STORMWATER MANAGEMENT PLANTING SCHEDULE:

Deciduous Trees

NO.	KEY	BOTANICAL / COMMON NAME	SIZE	COMMENT
17	◯	Acer rubrum Red Maple	2-21/2" - 3" cal.	B&B
6	◯	Liquidambar styraciflua Sweetgum	2-21/2" - 3" cal.	B&B
17	◯	Quercus rubra Red Oak	2-21/2" - 3" cal.	B&B
2	△	Quercus phellos Willow Oak	21/2"-3" cal	B&B
4	□	Fagus grandifolia American Beech	21/2"-3" cal	B&B

Evergreen Trees

30	✳	Pinus strobus Eastern White Pine	6'-8'	B&B
5	✳	Pinus thunbergiana Japanese Black Pine	6'-8'	B&B

Shrubs

11	⊕	Cornus stolonifera Red-Osier Dogwood	21/2"-3" cal	B&B or container
6		Ilex verticillata Winterberry Holly	3'-4'	container
12		Forsythia intermedia Showy Border Forsythia	2'-21/2'	container
11		Nandina domestica Harbour Dwarf Nadina	18"-24" sp.	container

afforestation planting

LANDSCAPE OPTION (20%) 1300 SF

5	◯	Acer rubrum Red Maple	2-1/2" - 3" cal. B&B

ONE TO TWO GALLON CONTAINERS 3250 SF

4		Acer rubrum Red Maple	2 gal. cont. avg spacing - 11'
4		Amelanchier canadensis Downy shadblow	1 gal. cont. "
3		Carya ovata Shagbark Hickory	2 gal. cont. "
3		Cercis canadensis American Redbud	1 gal. cont. "
3		Ilex opaca American Holly	1 gal. cont. "
3		Liquidambar styraciflua Sweetgum	2 gal. cont. "
2		Quercus coccinea Scarlett Oak	2 gal. cont. "
2		Quercus borealis Northern Red Oak	2 gal. cont. "
2		Viburnum prunifolium Blackhaw	1 gal. cont "

EVERGREEN SEEDLINGS 1950 SF

31		Pinus strobus White pine	6" ht. min. 1/8 - 1/4" cal.

GROUND COVERS:

Amount	Key	Botanical/Common	Rate	Comment
165 lbs		Coronilla varia Crown Vetch	9.2 lbs/1000 S.F.	Noise Berm/ Landscape Edge along Guilford Rd only
20lbs (Tall Fescue) 4 lbs. (others)		1. Tall Fescue (85%) Flat Pea (15%) or 2. Perennial Rye Grass (50%) Flat Pea (50%)	2 lbs/1000 s.f. 2 lbs/1000 s.f. 0.5 lbs/1000 s.f.	embankment stabilization along Roselyn Court

STREET TREE TABLE

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY	SIZE	REMARKS
⊙	Sargent Cherry	Prunus sargentii	15	2"-21/2" CAL.	B & B
⊗	Redspire Pear	Pyrus calleryana	42	2"-21/2" CAL.	B & B

These plans have been reviewed for the Howard County Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

J. A. Wafle 5/16/96
Natural Resource Conservation Service — Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard County Soil Conservation District.

Roland W. Jackson 5/16/96
Howard Soil Conservation District — Date

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/We certify that a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — 4/15/96 Date

ENGINEER'S CERTIFICATE

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Bruce D. Burton 8/5/96
Signature of Engineer — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — 8/30/96 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/30/96 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — 8-27-96 DATE

Property of Cecil F. Cole, Et Al.
L. 867 F. 588
Parcel 63

Coleview
Lots 1-3
Plat # 5408
Lot 1

STATE OF MARYLAND — BRUCE D. BURTON — No. 10788 — REGISTERED PROFESSIONAL ENGINEER — 8/5/96

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

Designed SDH | Drawn E.N.B. | Checked BDB | Date Jan. 1996

Landscape Plan
SCOTT ACRES
A Resubdivision of Lots 5, 6 and 7
Lots 10-32
Tax Map No. 35 P/O Parcel 353
5th Election District
Howard County, Maryland
Previous Submittals: F77-112, BA80-08, BA83-11E, 595-12, F96-83, WP96-96

OWNER/DEVELOPER
LOT 1 IMPROVEMENT CORP.
8835 P Columbia 100 Pkwy.
Columbia, MD 21045

Scale 1" = 50' | Sheet 12 of 12 | LDE Job No 94-161 | File No F96-105

1829

F96-105

Street Sign Location Table

Symbol	Street Name	℄ Station	Offset	Type
◀	Roslyn Court	0+27	13' left	R1-1 Stop Sign 30" x 30" Octagon

NOTES:

1. For street tree locations, see sheet 12 of 12.
2. For storm drain profiles and structure schedule, see sheet 6 of 12. See structure schedule for storm drain locations.
3. All street lights shall be located 2 feet minimum to 4 feet maximum behind the curb. No trees shall be located within 20 feet of any street light. See detail sheet 5 of 12.
4. All Community Owned Open Space lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
5. All street lights and/or street signs shall be located 5 feet minimum from proposed drainage and utility structures.
6. For Howard County Standard Details, refer to sheet 5 of 12.
7. Contractor shall construct Type 1 Guard Rail with beam sta. 1+78 ± Rt. to Sta. 3+12 ± Rt. and sta. 2+00 ± Lt. to sta. 2+92 ± Lt.
8. Contractor shall construct grass lined 'V' Channel sta. 0+27.10 Lt. to Sta. 1+85 ± Lt. Contractor shall construct rip rap lined 'V' Channel sta. 1+85 ± Lt. to Sta. 3+10 ± Lt. and Sta. 2+65 ± Rt. to Sta. 3+75.17 Rt.
9. For Channel Details see sheet 6 of 12.
10. The future culvert proposed for the driveway of Lot 19 shall be submitted and approved as part of the site development plan approval.

RIP RAP LINED CHANNEL ⚠

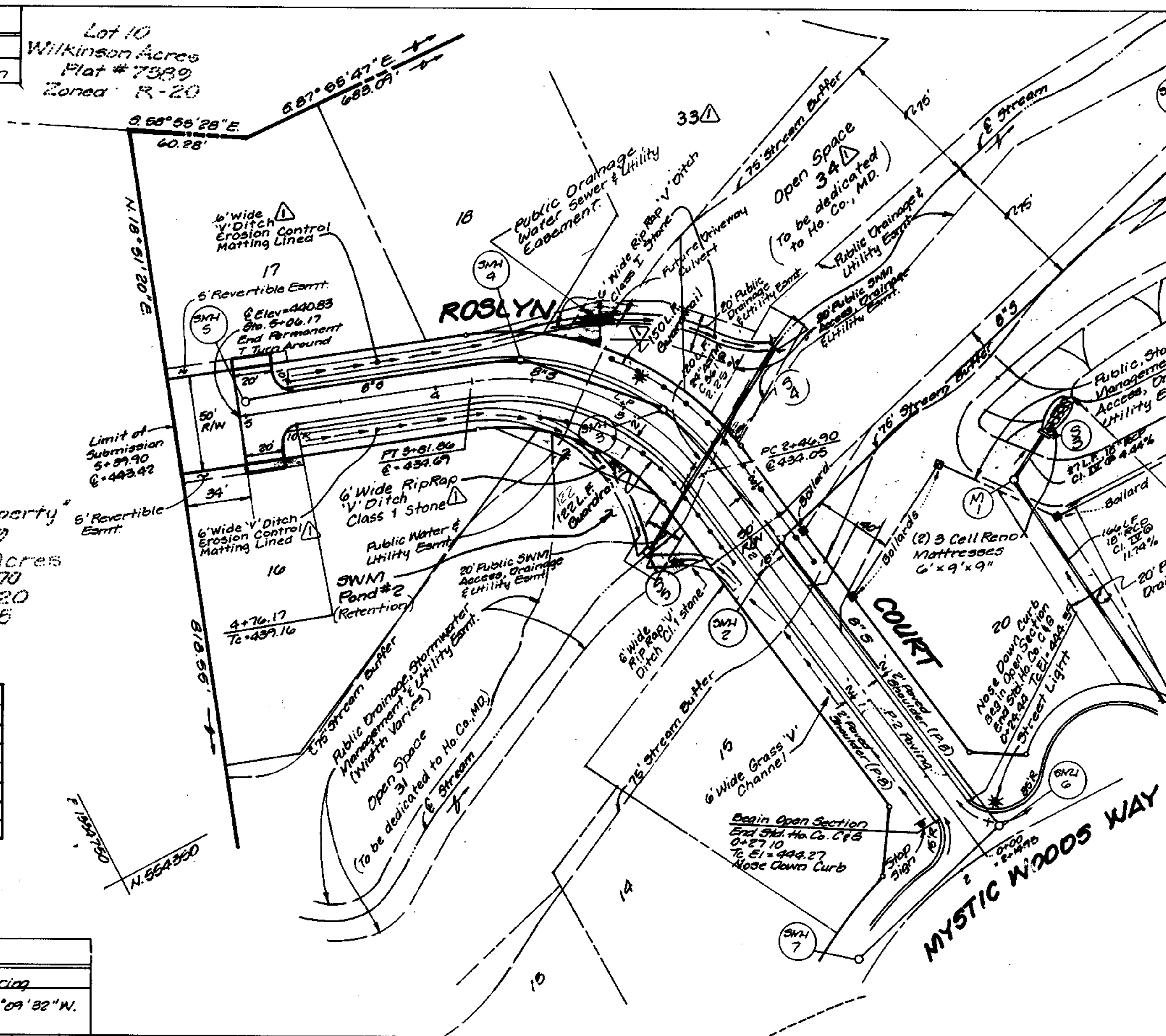
Location	Offset to ℄ Ditch
1+85 ±	20' Left
3+10	28' Left
2+65	70' Right
3+75	18' Right

GRASS LINED CHANNEL ⚠

Location	Offset To ℄ Ditch
0+27.10	17' Left
1+65	17' Left
3+10	28' Left
4+82	18' Left
3+75	18' Right
4+85	18' Right

℄ Curve Data Table

Roslyn Court	Radius	Delta	Length	Tan.	Chord	Bearing
Sta. 2+46.90 to 3+81.80	126'	61°30'01"	134.90'	74.86'	128.45'	N.40°09'32"W.

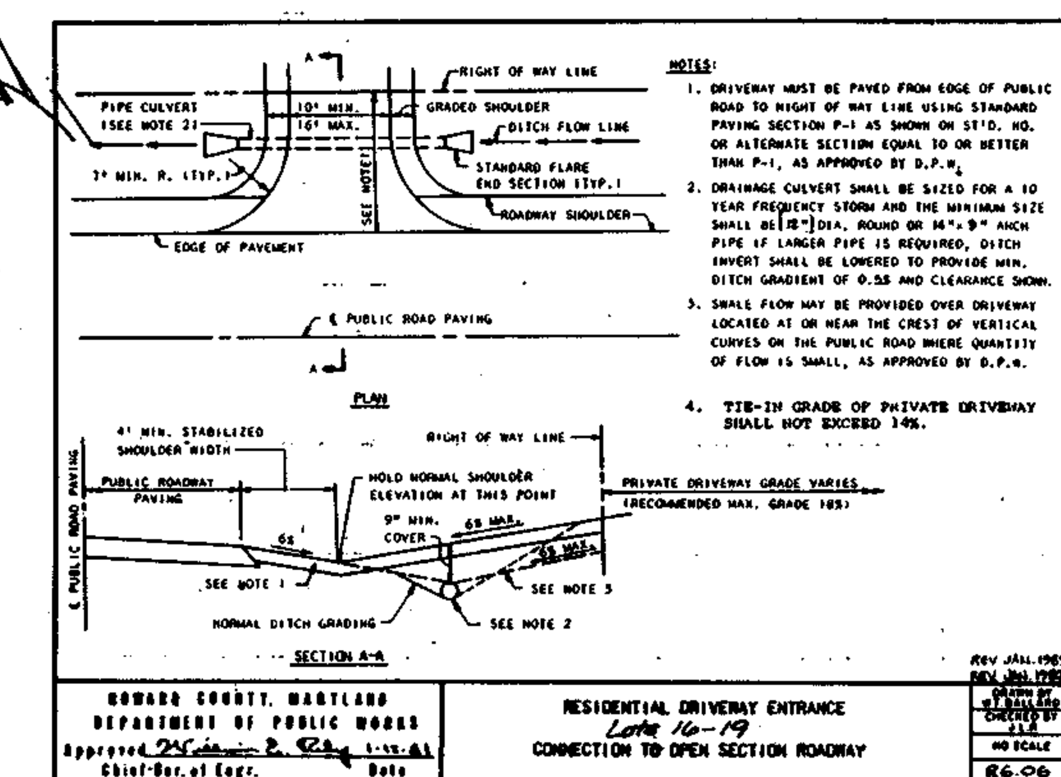


Curb Legend:

- Std. 7" Comb. Curb & Gutter
- Bituminous Curb

Street Light Location Table

Symbol	Street Name	℄ Station	Offset	Type
✱	Roslyn Court	0+18	14' Rt.	100 Watt "Traditionaire" HPS Vapor Post-top Fixture on a 14ft. Black Fiberglass Pole.
✱	Roslyn Court	3+00	18' Rt.	



Approved: Howard County Department of Planning and Zoning

Chief, Division of Land Development and Research — Date 8/30/96

Chief, Development Engineering Division — Date 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

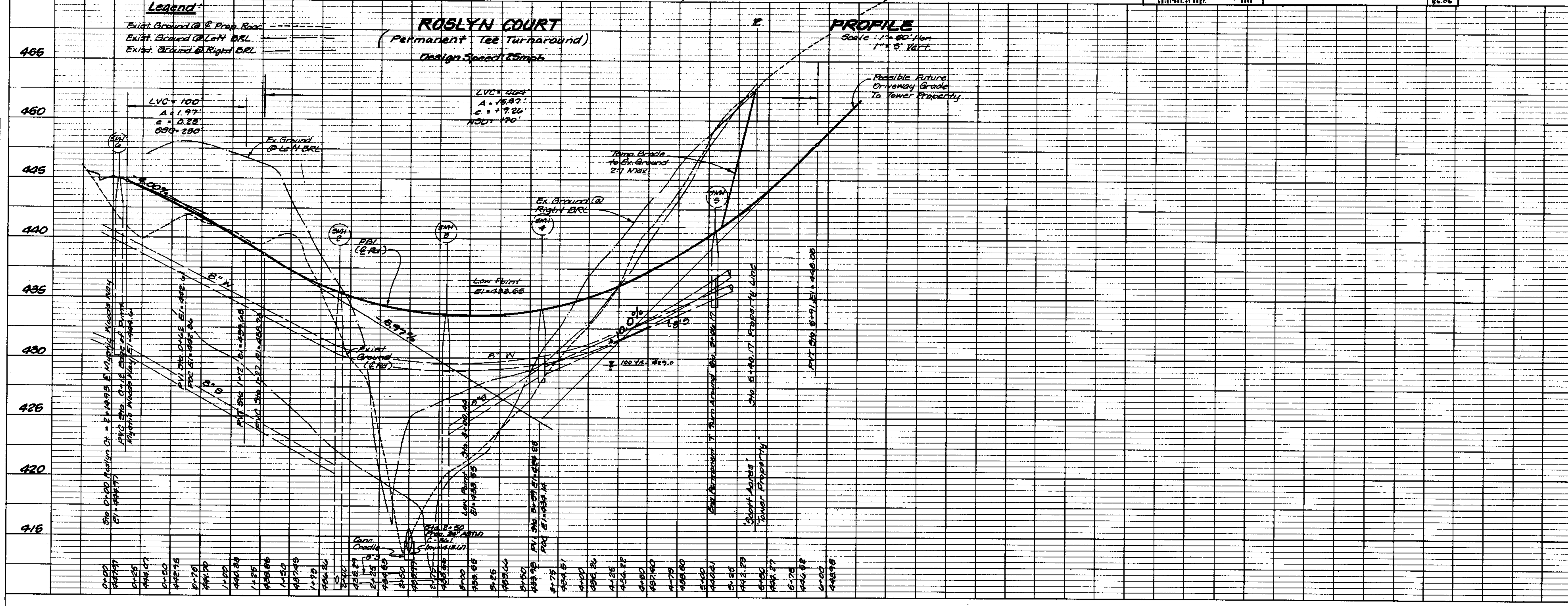
Chief, Bureau of Highways — Date 8-27-96

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD 21045
(410) 715-1070 • (301) 596-3424 • (410) 715-0681 (fax)

Designed: SDH	ROSLYN COURT Plan & Profile **SCOTT ACRES** A Resubdivision of Lots 5, 6 and 7 Lots 10-32 Tax Map No. 35 P/O Parcel 353 5th Election District Howard County, Maryland Previous Submittals: F77-112, BA80-08, BA83-11E, S95-12, F96-03, WP96-96	Scale: 1" = 50'
Drawn: E.D.B.		Sheet 4 of 12
Checked: BDB		LDE Job No 94-161
Date: Jan. 1996	OWNER/DEVELOPER LOT 1 IMPROVEMENT CORP. 8835 P Columbia 100 Pkwy. Columbia, MD. 21045	File No. F96-105

REVISIONS

By	Date	No.	Description
STB	2/01	⚠	Revised Ditch Linings along Roslyn Court. Revised Lot Numbers and Revised Rip Rap Inflow into Pond #1.



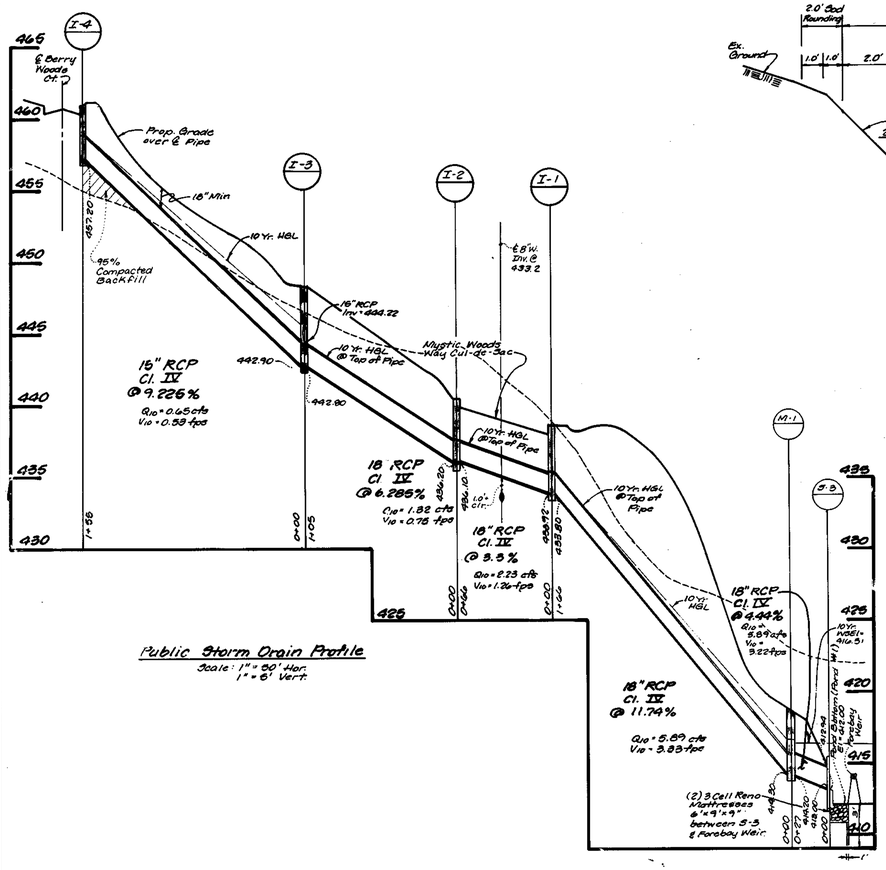
PLAN — NOTE BOOK — No. — SURVEYED — PLOTTED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — BY — DATE

PROFILE — NOTE BOOK — No. — SURVEYED — PLOTTED — GRADES CHECKED — B. M.'s NOTED — STRUCTURE NOTATIONS CHECKED — BY — DATE

1829

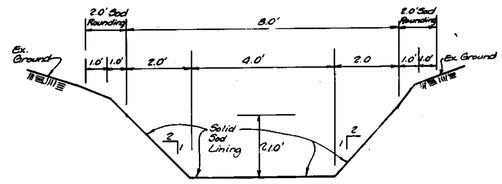
HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
NATIONAL PRINTFAST
PRINTED IN U.S.A.

F96-105



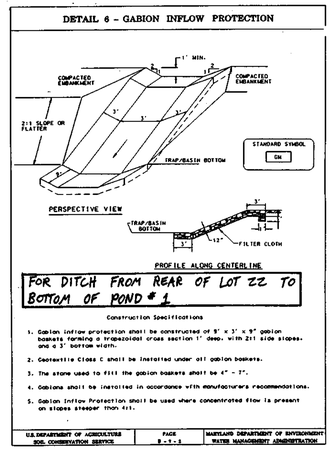
Public Storm Drain Profile
Scale: 1"=50' Hor.
1"=5' Vert.

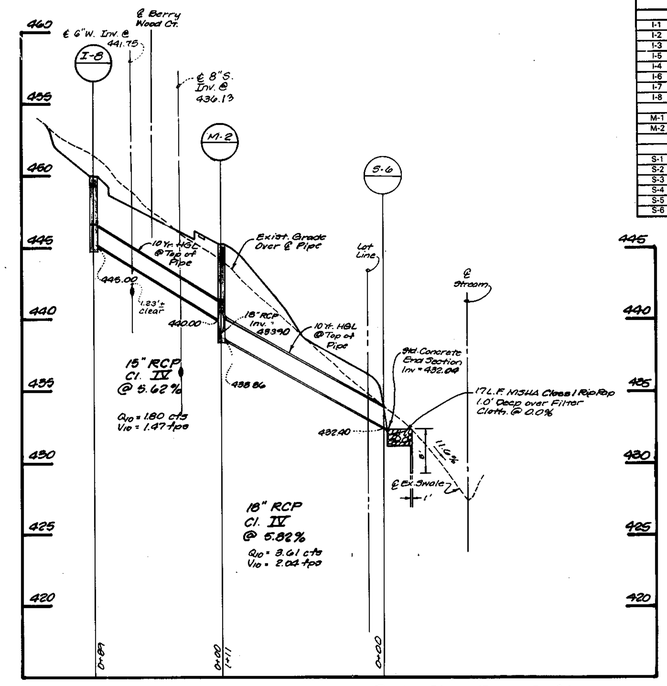
Public Storm Drain Profile
Scale: 1"=50' Hor.
1"=5' Vert.



Lots 22-24 and 26

Trapezoidal 'Channel'
(No' to Scale)

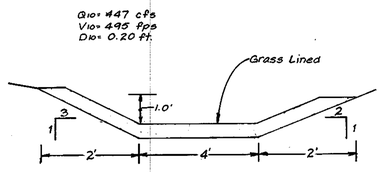




Public Storm Drain Profile
Scale: 1"=50' Hor.
1"=5' Vert.

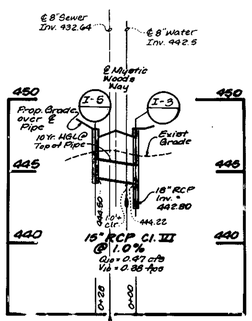
STRUCTURE SCHEDULE							
NUMBER	TYPE	INV. IN	INV. OUT	UPPER	LOWER	DETAIL	LOCATION
I-1	A-10	434.0;433.92	433.80		438.55	SD 4.02	Mystic Woods Cul-de-Sac, LP STA 1 + 29.85
I-2	A-10	436.20	436.10	440.88	440.32	SD 4.02	Mystic Woods Cul-de-Sac, LP STA 0 + 58.25
I-3	A-5	444.22;442.9	442.80	446.28	447.57	SD 4.01	Mystic Woods, STA 1 + 78.00, 12' Right
I-5	A-5	-----	444.50	448.22	447.39	SD 4.01	Mystic Woods, STA 1 + 78.00, 12' Left
I-4	A-5	-----	457.20	461.21	460.46	SD 4.01	Berry Wood Ct. STA 1 + 79.00, 12' Right
I-6	A-5	439.52	439.27	443.63	443.40	SD 4.01	Berry Wood Ct. STA 4 + 33.67, 12' Right
I-7	A-10	-----	439.80	443.84	443.42	SD 4.02	Berry Wood Ct. STA 4 + 33.67, 12' Left
I-8	A-10	-----	445.00	450.35	449.56	SD 4.02	Berry Wood Ct. STA 3 + 14.67, 12' Left
M-1	SHALLOW MANHOLE	414.30	414.20		418.70	G. 5.12	N. 554317.08 E. 1335258.86
M-2	STD MANHOLE	440.0;438.90	438.86		445.40	G. 5.12	Berry Wood Ct. STA 3 + 97.00, 19' Right
S-1	TYPE 'C' ENDWALL	406.63	406.63	409.38		SD 5.21	N. 554410.864 E. 1335466.112
S-2	SEE DETAIL	412.00	412.00	417.33		Sheet 7	N. 554355.507 E. 1335400.09
S-3	TYPE 'C' ENDWALL	413.00	412.94	415.19		SD 5.21	N. 554331.64 E. 1335283.84
S-4	TYPE 'C' ENDWALL	412.06	412.00	414.25		SD 5.21	N. 554438.90 E. 1335175.41
S-5	SEE DETAIL	415.70	414.70	427.90		Sheet 7	N. 554573.865 E. 1335074.865
S-6	CONCRETE END SEC	432.40	432.04	433.98		SD 5.51	N. 554230.32 E. 1334842.07

NOTE: LOCATIONS GIVEN ARE TO THE CENTERPOINT OF EACH STRUCTURE.

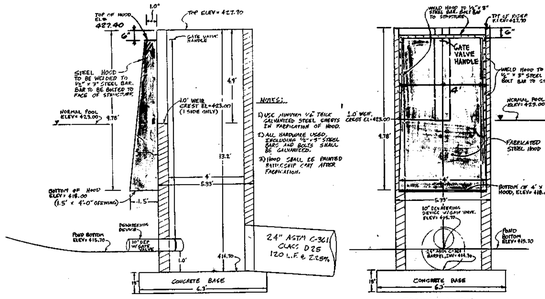


CROSS SECTION

UPSLOPE OF RIP-RAP INFLOW PROTECTION
SOUTHEAST SIDE OF POND # 1
Not to Scale

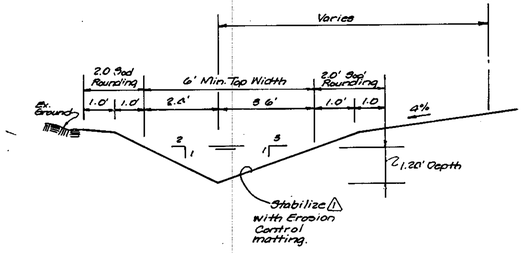


Public Storm Drain Profile
Scale: 1"=50' Hor.
1"=5' Vert.



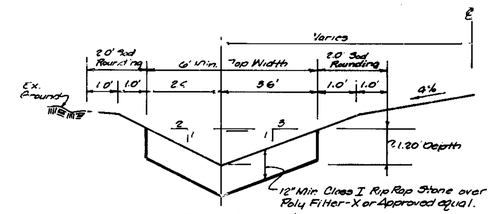
S-5 RISER DETAIL - HOOD
N.T.S.

S-5 RISER DETAIL - HOOD
N.T.S.



Roslyn Court - Sta. 3+10 to 4+82 (Left)
Sta. 3+25 to 4+83 (Right)

Grass 'V' Side Ditch
Not To Scale



Roslyn Court - Sta. 1+85± to 2+30± Left, Sta. 2+80± to 4+76.17 Left,
Sta. 2+62± to 4+76.17 Right

Rip Rap 'V' Channel
Not to Scale

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

J. E. Wadsworth — 5/16/96
Natural Resource Conservation Service — Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District

Robert W. Zielinski — 5/16/96
Howard Soil Conservation District — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Bloom — 8/30/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE

Al Dammann — 8/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Zoretic — 8-27-96
CHIEF, BUREAU OF HIGHWAYS — DATE

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Bruce D. Burton — 5/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — 4/15/96 Date

STATE OF MARYLAND — BRUCE DAVID BURTON — No. 19184 — PROFESSIONAL ENGINEER — 5/5/96

BTB	2/01	⚠	Revised Stationing & Stabilization on Roslyn Court Ditch Profile.
By	Date	No.	Description

REVISIONS

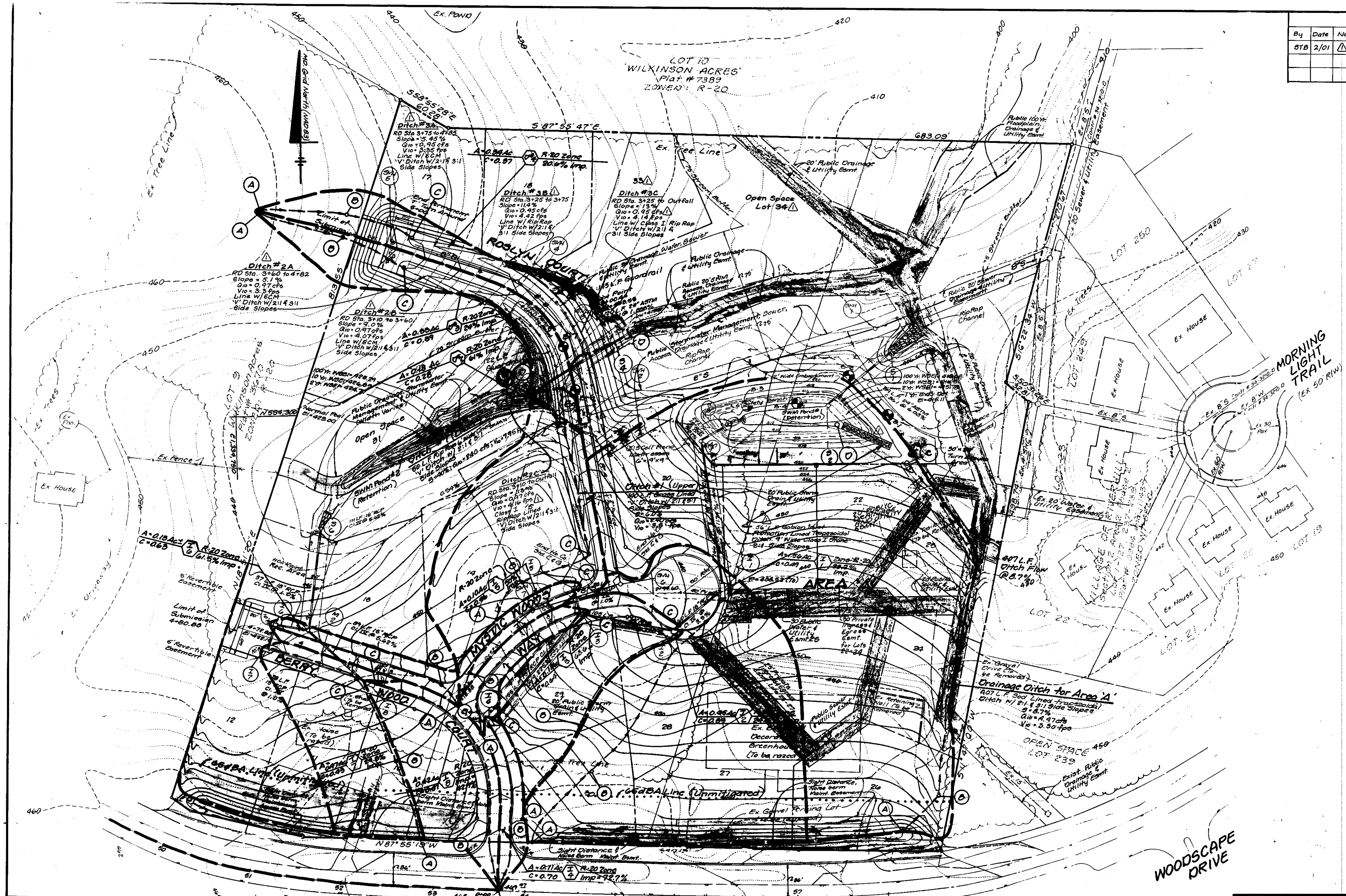
LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED	S.D.H.	STORM DRAIN PROFILES	SCALE: As Shown
DRAWN	B.E.I.	SCOTT ACRES — A Resubdivision of Lots 5, 6 and 7 Lots 10-32	DRAWING: 6 of 12
CHECKED	B.D.B.	Previous Submittals: F 77-112; BA 80-08, BA 83-112, 396-12, 896-08; Tax Map 35 P/O Parcel 353 WPM-94; 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 94-161
DATE	Jan. 1996	Owner/Developer: Lot 1 Improvement Corp. 6336 Columbia 100 Pkwy Unit F Columbia, Maryland 21046	FILE NO. F96-106

1829

F96-105

REVISIONS			
By	Date	No.	Description
STB	2/01	⚠	Revise Side Ditch Information on Roslyn Court. Revise Pond #1 Rip-Rap Inflow Apron.



TIME OF CONCENTRATION FLOW PATH TABLE			
AREA OR TO INLET	SEGMENT A-B	SEGMENT B-C	SEGMENT C-D
I-1	100' @ 9%	200' @ 10%	40' @ 2.4% (G)
I-2	100' @ 10.5%	155' @ 10.3%	
I-3	25' @ 3%		165' @ 7% (G)
I-4	55' @ 2%		130' @ 6.2% (G)
I-5	30' @ 3%		145' @ 7% (G)
I-6	30' @ 3%		190' @ 6.3% (G)
I-7	100' @ 10%	100' @ 10%	100' @ 6.3% (G)
I-8	60' @ 2%		235' @ 7.6% (G)
AREA 'A'	55' @ 27.3%		515' @ 8.7% (D)
DITCH # 1	50' @ 8%	80' @ 10%	140' @ 6% (D)
DITCH #2	100' @ 7%	75' @ 23%	230' @ 13% (D)
DITCH #3	100' @ 7%	75' @ 23%	230' @ 13% (D)

SEGMENT A-B - OVERLAND FLOW
SEGMENT B-C - SHALLOW CONCENTRATED FLOW
SEGMENT C-D - GUTTER(G) OR DITCH(D) FLOW

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[signature] 8/16/96
Natural Resource Conservation Service — Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard County Soil Conservation District.

Robert W. Zichus [signature] 8/16/96
Howard Soil Conservation District — Date

~~APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.~~

~~CHIEF, BUREAU OF HIGHWAYS — DATE~~

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Daniels [signature] 8-27-96
CHIEF, BUREAU OF HIGHWAYS — DATE

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Bruce D. Burton 8/5/96
Signature of Engineer — Date

STATE OF MARYLAND BRUCE DAVID BURTON No. 19184 REGISTERED PROFESSIONAL ENGINEER

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

[signature] 8/15/96
Signature of Developer — Date

Approved: Howard County Department of Planning and Zoning.

Richard Blood JA 8/30/96
Chief, Division of Land Development & Research — Date

[signature] 8/30/96
Chief, Development Engineering Division — Date

Bruce D. Burton 8/5/96

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

Designed: SDH	Drainage Area Map **SCOTT ACRES** A Resubdivision of Lots 5, 6 and 7 Lots 10-32 Tax Map No. 35 P/O Parcel 353 5th Election District Howard County, Maryland Previous Submittals: F77-112, BA80-08, BA83-11E, S95-12, F96-03, WP 96-96	Scale 1" = 50'
Drawn: E.D.B.		Sheet 8 of 12
Checked: BDB		LDE Job No. 94-161
Date: Jan. 1996	OWNER/DEVELOPER LOT 1 IMPROVEMENT CORP. 8835 P Columbia 100 Pkwy. Columbia, MD 21045	File No. F96-105

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F96-105

Legend:

- SCE — Stabilized Construction Entrance
- Sign — Tree Protection Fence w/ Signage
- Earthdikes
- Ex. Treeline
- Prop. Treeline
- Ex. Topography
- Prop. Contours
- —SF— Silt Fence
- 66 d BA Line (Unmitigated)
- —SSF— Super Silt Fence
- Exist. Structure Constructed Under GP 90-124.

Sediment Trap Schedule

Trap No.	Max. D.A. Acres	Stor. Reqd. ft^3	Stor. Prov. ft^3	Stor. Elev.	Stor. Depth ft.	Weir Length ft.	Bottom Elev.	Clean. Elev.	Crest Elev.	Top Elev.	Trap Size **	Type
1	2.98	29397	31608	436	6	6	430	433	436.5	438	104 x 33	ST-III
2	0.45	1820	1697	436	4	4	432	434	437	438	5' x 23'	ST-III

** Bottom Dimensions

Excavator Note: Contours shown on this plan as existing may be different than those encountered at the time Roadway grading / construction commences. Refer to approved Grading Plan GP 90-124 for interim contours. Contours shown as proposed on the approved Grading Plan reflect the proposed contours shown on this Grading and Sediment Control Plan.

Note: See Sediment Basin Plan & Details, sht. 11 of 12 for temporary sediment basin construction details

SUMMARY TABLE

POND # 1 (EXTENDED DETENTION/ DETENTION POND)

HAZARD CLASSIFICATION "A"

DRAINAGE AREA = 4.02 Acres

		SWM POND 2 YEAR	10 YEAR	100 YEAR
Total Existing Flow @ S.P. 'A'	(cfs)	19	65	127
Unmanaged Flow **	(cfs)	18	54	103
Allowable Release	(cfs)	2	11	---
Computed Inflow	(cfs)	7.9	16.3	25.9
Facility Discharge	(cfs)	0.12	11	23.8
Elevation at Discharge		415.78	416.31	416.68
Storage at Elevation	ac. ft.	.32	.41	.46
Total Developed Flow @ S.P. 'A'	(cfs)	13	53	125

** This flow is either unmanaged altogether or managed by another onsite facility.

SUMMARY TABLE

POND # 2 (RETENTION POND)

HAZARD CLASSIFICATION "A"

DRAINAGE AREA = 15.91 Acres

		SWM POND 2 YEAR	10 YEAR	100 YEAR
Total Existing Flow @ S.P. 'A'	(cfs)	19	65	127
Unmanaged Flow **	(cfs)	11.7	41.8	76.2
Allowable Release	(cfs)	8	27	---
Computed Inflow	(cfs)	10.8	32	59.5
Facility Discharge	(cfs)	7.3	23.2	50.8
Elevation at Discharge		424.77	426.83	428.29
Storage at Elevation	ac. ft.	.15	.41	.70
Total Developed Flow @ S.P. 'A'	(cfs)	13	53	125

** This flow is either unmanaged altogether or managed by another onsite facility.

DEVELOPER'S CERTIFICATE

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Signature of Developer — Date 4/15/96

Approved: Howard County Department of Planning and Zoning

(Chief, Division of Land Development and Research) — Date 8/30/96

Chief, Development Engineering Division — Date 8/30/96

These plans have been reviewed for the Howard County Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resource Conservation Service — Date 4/16/96

These plans for small pond construction, soil erosion, and sediment control meet the requirements of the Howard County Soil Conservation District.

Howard Soil Conservation District — Date 4/16/96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction, provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Bruce D. Burton — Signature of Engineer — 8/5/96 Date

APP'D: D. P. W. for Storm Drainage System & Roads

8-27-96 Date

CO., BUR. OF HWYS.

By	Date	No.	Description
STB	2/01	1	Revised Ditch Linings along Roslyn Court. Revised Rip-Rap inflow - Pond #1.

REVISION

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

Designed: SDH | Drawn: E.D.B. | Checked: BDB | Date: Jan. 1996

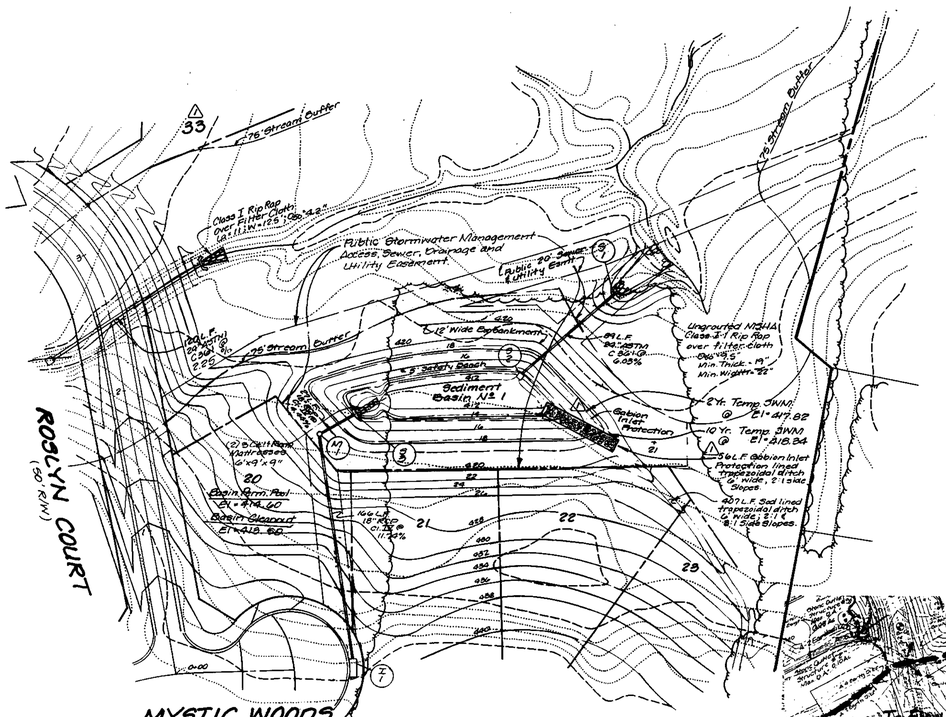
Grading & Sediment Control Plan
SCOTT ACRES
A Resubdivision of Lots 5, 6 and 7
Lots 10-32
Tax Map No. 35 P/O Parcel 353
5th Election District
Howard County, Maryland
Previous Submittals: F77-112, SA80-08, SA83-115, 595-12, F96-03, WP94-90

OWNER / DEVELOPER
LOT 1 IMPROVEMENT CORP.
8285 Columbia 100 Pkwy.
Columbia, MD 21045

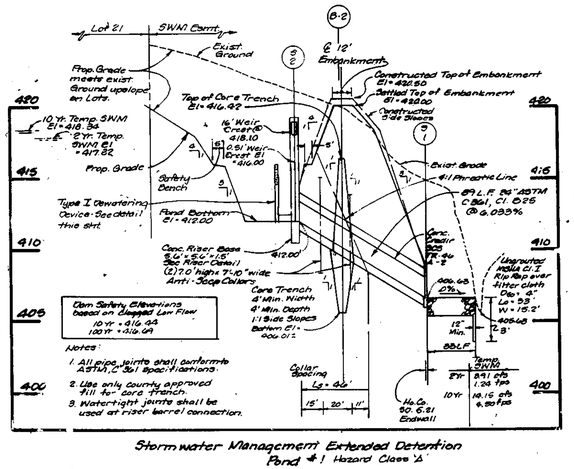
Scale 1" = 50' | Sheet 9 of 12 | LDE Job No. 94-161 | File No. F96-106

1829

F96-106



Sediment Basin #1
Scale: 1"=50'



Storm water Management Extended Detention Pond #1 Hazard Class 'A'

PROFILE ALONG ℄ PRINCIPAL SPILLWAY

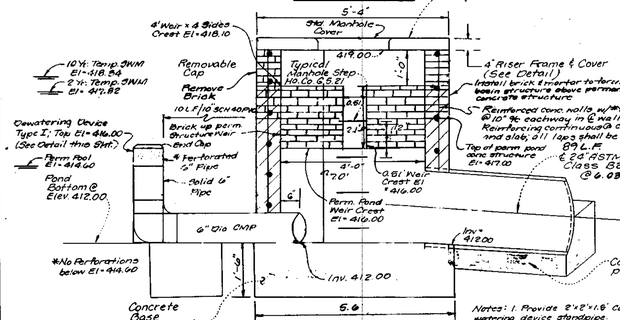
Scale: 1"=50' Hor. 1"=5' Vert

Sediment Basin #1

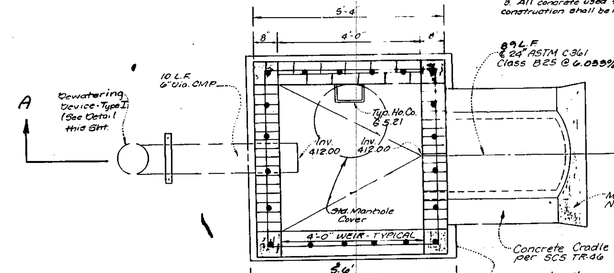
B-2 PROFILE VIEW

Scale: 1"=2' (No Vertical Scale)

Section 'A-A'



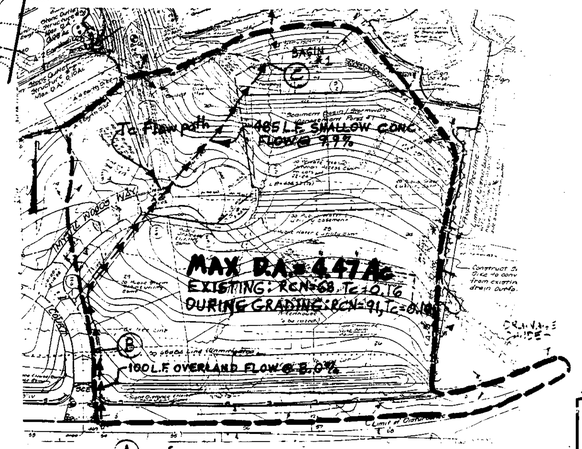
Notes: 1. Provide 8'-2"x1.6' Conc. base for de watering device standpipe.
2. The perforated portion of the de-watering device shall be wrapped with ½" hardware cloth & geotextile fabric matching Class 'E' specifications.
3. All concrete used for riser construction shall be mix NO. 3.



Sediment Basin #1

S-2 PLAN VIEW

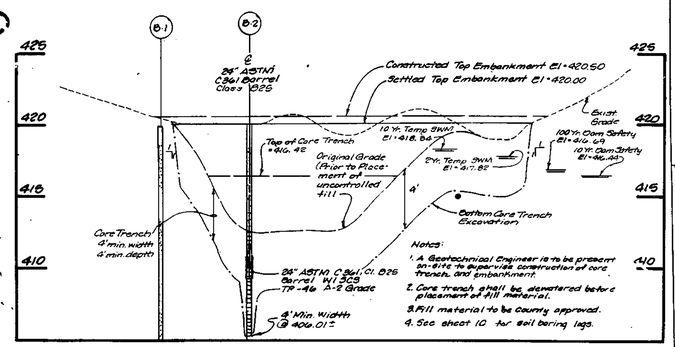
Scale: 1" = 2'



SEDIMENT BASIN DRAINAGE AREA MAP

1" = 100'

Note: This plan to be used for temporary Basin only - not for permanent pond construction.



Sediment Basin #1
Hazard Class 'A'

PROFILE ALONG ℄ OF EMBANKMENT

Scale 1"=50' Hor.
1"=5' Vert.

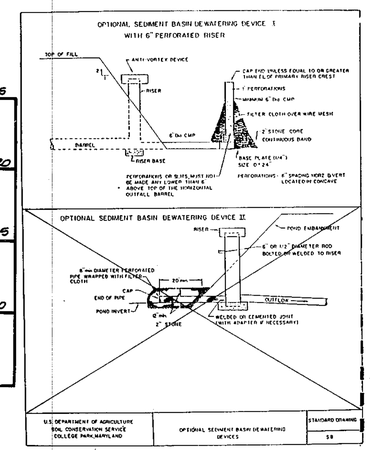


Figure 2 Temporary Sediment Basin Design Data Sheet

Computed by SDH Date 5/30/96 Checked by BDB Date May 96'
Project name Scott Acres Item # 5
Location Clarksville, Howard County, Maryland

Total area draining to basin 4.47 acres (ac)

Basin Volume Design

Note: 1 Also see Surface Area Design #10, this form
2 To convert ft³/ac/ft, divide ft³ by 27. To convert ft³ to yd³, divide ft³ by 9

1 Min required vol. = 3600 ft³/ac × 4.47 = drainage 16,092 ft³
2 Actual Volume of basin 38,317 ft³ (@ El. 414.00)
3 Excavate — ft³ — yd³ to obtain required capacity. (EXISTING VOLUME IS ADEQUATE)
4 Vol. at dewatering dev. 1000 ft³/ac × 4.47 ac = 9046 ft³
5 Vol. of basin at clean-out 900 ft³/ac × 4.47 ac = 4023 ft³
6 Elevation corresponding to sum required volume of basin (elev. riser crest elevation) 416.00 ft
7 Permanent pool elevation 416.6 ft
8 Distance from riser crest elevation to permanent pool elevation 1.4 ft (RISER CREST= 416.00)
9 Basin clean-out elevation 413.5 ft
10 Distance from riser crest elevation to clean-out elevation ___ ft = 2.5

Spillway Design

11 Q_{10} = 29 cfs (peak discharge from 10 yr., 24 hr storm event - attach computations)

Principal Spillway (PS) (See Detail H)

12 Design Principal Spillway Peak Discharge, Design Q_p = 29 cfs (sum 10% of 10 year peak or 8" Diameter Pipe) (NO EMERGENCY SPILLWAY)
13 H 9.37 ft Barrel Length 89 ft
14 Barrel Diam. 24 in Size Q_p as Q_{full} equal or exceed Design Q_p
Q_p Q from Table 4-11 or 4-111 31.6 cfs length correction factor 0.95 30 cfs
15 Riser Diameter 48" in Perf. Diam. 5 ft Riser Head (h) — ft
16 Trash Rack Diam. 4'-8" in Trash Rack Height 1'-6" in

NOTE: A table showing design data shall be included on the plan for each basin.

* SQUARE CONCRETE RISER - INSIDE DIM. 4'x 4'; OUTSIDE DIM. 5.33'x 5.33'
** REBAR TRASHRACK FOR WEIR OPENINGS. 4 - 1'x 4' OPENINGS.

Emergency Spillway (Spw)

NO E/S

17 Emergency spillway cap Q_e = Q_{10} − Q_p = cfs
18 Width ft Hp ft
19 Interior channel slope %
20 Exit channel slope %

Anti Seep Collar Design (If Required)

21 k_y = 5 ft, k_z = 4 ft, pipe slope 6.03 %, L_f = 46 ft
22 Use 2 collars, 7 ft × 7' 10 in square, projection 2 ft

Design Elevations

23 Riser Crest 416.00 ft 24 Design High Water 418.34 ft
25 Emergency Spillway Crest N/A ft 26 Min. settled top of dam 420.0 ft
27 Permanent pool 414.60 ft 28 Bottom of Basin 412.0 ft
29 Dam shown on the plan 420.0 ft

Surface Area Design

30 Min basin surface area, $SA \geq 43{,}560 \text{ ft}^2/\text{ac} \times Q_{10}$ = 43,560 × 29 cfs = 0.10 ac
ACTUAL SURFACE AREA = 0.50 Ac

Dewatering Device

TYPE I DEWATERING DEVICE FROM "1983 STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL"

31 Dewatering device orifice diameter in (From Table H)
32 A. Total area of perforations ≥ 4A
A. (# of perforations/bottle)(perforation area ft²)(perforated row length ft)
ft²
A. Internal surface area (From Table H or computed)

Approved: Howard County Department of Planning and Zoning

Chief, Division of Land Development and Research — Date 5/30/96

Chief, Development Engineering Division — Date 8/20/96

Approved: Department of Public Works for Storm Drainage Systems and Roads

Chief, Bureau of Highways — Date 8-27-96

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for pond construction, soil erosion and sediment control

Natural Resource Conservation Service — Date 8/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 8/16/96

By	Date	No.	Description
STB	2/01	△	Revised Rip-Rap inflow into Pond #1. Revised Lot Number.

REVISIONS

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I also notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

BRUCE D. BUTTON — 8/5/96
Signature of Engineer — Date

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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by Howard Soil Conservation District.

Signature of Developer — Date 4/29/96

STATE OF MARYLAND — BRUCE D. BUTTON — No. 19184 — REGISTERED PROFESSIONAL ENGINEER — 8/5/96

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

DESIGNED S.D.H.	SEDIMENT BASIN PLAN AND DETAILS	SCALE As Shown
DRAWN E.D.B.	SCOTT ACRES A Resubdivision of Lots 5, 6, and 7 Lots 10 - 32	DRAWING 11 of 12
CHECKED B.D.B.	Previous Submittals: F-77-112, SDP-80-08, SDP-88-112, SDP-92-02, WP-96-96 Tax Map 35 P/O Parcel 353 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 94-16
DATE Jan. 1996	Owner/Developer LOT 1 IMPROVEMENT CORP. 8835 P. Columbia 100 Pkwy. Columbia, Maryland 21045 (410) 730-0810	FILE NO. F96-105

1829

F96-105

PLANTING NOTES - afforestation planting

1. Forest Stand Delineation and the Preliminary Forest Conservation Plan prepared by Dennis J. LaBare, M.S. & Assoc.
2. Written Documentation including afforestation location, construction protection and management, cost estimate, plant densities, etc. prepared by Dennis J. LaBare, M.S. & Assoc.
   A) Construction Protection and Management Upon completion of the rough grading of the afforestation areas, a protective fence and signs will be installed. Adjacent landowners will be informed about the existence and importance of these areas.

   B) Post Construction Protection After completion and approval of planting, the protective fence shall remain only if construction endangers the viability of the newly planted area. Signs will be removed after the two year maintenance period as directed by the Howard County Forest Conservation Manual.
3. All planting to meet the implementation techniques and practices as described in the Howard County Forest Conservation Manual.
4. There are no existing trees on the site.
5. The hardwood container grown stock should be planted randomly at an average of eleven feet on center in a naturalized pattern. Species should be mixed with no less than three trees of one species in a group. Edge species should be planted on the perimeter of the afforestation area (Amelanchier, Cercis, and Viburnum).
6. Evergreen seedlings should be planted randomly at an average of eight feet on center in a naturalized pattern.
7. The Landscape Contractor will be responsible for general site preparation of the rough graded afforestation areas. The planting areas should be treated by incorporating natural mulch into the top twelve inches of soil. The Contractor will provide needed soil amendments as determined by a soil analysis. Amendments should be natural materials such as organic mulch or leaf mold compost.
8. All disturbed areas within the afforestation area to be seeded with K-31 Tall Fescue (March 1 - April 30 and August 1 - Oct. 15, seed with 60 lbs/acre; May 1 - July 31 use 60 lbs/acre K-31 and 2 lbs/acre of weeping lovegrass; Oct. 16 - Feb. 28 use 60 lbs/acre k-31 and mulch with 2 tons/acre well anchored straw or mulch and seed in the spring.
9. Seeded areas to be hand mulched with 1 1/2 to 2 tons per acre of unrotted small grain straw and non-asphaltic tackifier and left unmowed. All areas between the Site Line Easement and the ROW of Guilford Road shall be seeded with K-31 Fescue and mowed once a year.
10. The Landscape Architect will inspect the planting at the end of the construction period and provide to the County a certification that all plantings have been installed and that all protection devices are in place.
11. The Landscape Contractor shall be responsible for management of afforestation areas for a period of two years, including needed watering, removal of dead or damaged material and control of undesirable species, fertilizing if necessary and control of pests, and replacement of plant material as described in the Howard County Forest Conservation Manual.
12. All inspections as required by the Forest Conservation Manual shall be performed by the Landscape Architect.
13. For signage locations and protective tree fence locations, see sheet 9.

Notes: 1. This plan has been prepared in accordance with the provisions of Sect. No. 124 of the Howard County Code and the Landscape Manual.
2. Financial Surety for the required Landscaping has been posted as part of the DPW Developers Agreement in the amount of $ 8400.
3. All street lights shall be located 2 ft. minimum to 6' maximum behind the curb. No trees shall be located within 20' of any street light.
4. The recreation open space, landscape edges, right of entrance and noise berm easement shall be maintained by the homeowners association.

Forest conservation technique	area / sq. ft.	plant density	plants req.	plants shown
Landscape option (20%)	1500	40 trees/10,000sf	5 trees	6 trees
Afforestation w/ 1-2 gal. cont. stock (80%)	6260	350 trees/ac.	24 trees	26 trees
Afforestation w/evgn seedlings (80%)	1950 / 6800	700 trees/ac.	31 trees	31 trees

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	964 L.F.
Number of Trees Required Shade Trees 1:50 Evergreen Trees 1:40	612 L.F. 12 15
Credit for Existing Vegetation (No, Yes and %)	Yes 230 L.F.
Credit for Other Landscaping (No, Yes and %)	Yes 122 L.F.*
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution)	10 13 Shrubs (10:1) : 40 ÷ 10 = 4

* Reforestation Planting

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Accomack Roadway	Accomack Perimeter Properties
Landscape Type	B	A
Linear Feet of Roadway Frontage/Perimeter	849 L.F.	2344 L.F.
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	1150 L.F. Yes
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs	(1:50) 17 (1:40) 21	(1:60) 19
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	17 22	19

Comments * Credit for existing vegetation 380 L.F. Edge (1), 210 L.F. Edge (2) and 560 L.F. Edge (3)

Note: Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

PERIMETER AND STORMWATER MANAGEMENT PLANTING SCHEDULE

Deciduous Trees

NO.	KEY	BOTANICAL / COMMON NAME	SIZE	COMMENT
17		Acer rubrum Red Maple	2-2½" - 3" cal.	B&B
6		Liquidambar styraciflua Sweetgum	2-2½" - 3" cal.	B&B
17		Quercus rubra Red Oak	2-2½" - 3" cal.	B&B
2		Quercus phellos Willow Oak	2½"-3" cal	B&B
4		Fagus grandifolia American Beech	2½"-3" cal	B&B

Evergreen Trees

30		Pinus strobus Eastern White Pine	6'-8'	B&B
5		Pinus thunbergiana Japanese Black Pine	6'-8'	B&B

Shrubs

11		Cornus stolonifera Red-Osier Dogwood	2½"-3" cal	B&B or container
6		Ilex verticillata Winterberry Holly	3'-4'	container
12		Forsythia intermedia Showy Border Forsythia	2'-2½'	container
11		Nandina domestica Harbour Chart Nadina	18"-24" sp.	container

afforestation planting

LANDSCAPE OPTION (20%) 1300 SF

5		Acer rubrum Red Maple	2-1/2" - 3" cal. B&B

ONE TO TWO GALLON CONTAINERS 3250 SF

4		Acer rubrum Red Maple	2 gal. cont. avg spacing - 11'
4		Amelanchier canadensis Downy shadblow	1 gal. cont. "
3		Carya ovata Shagbark Hickory	2 gal. cont. "
3		Cercis canadensis American Redbud	1 gal. cont. "
3		Ilex opaca American Holly	1 gal. cont. "
3		Liquidambar styraciflua Sweetgum	2 gal. cont. "
2		Quercus coccinea Scarlett Oak	2 gal. cont. "
2		Quercus borealis Northern Red Oak	2 gal. cont. "
2		Viburnum prunifolium Blackhaw	1 gal. cont "

EVERGREEN SEEDLINGS 1950 SF

31		Pinus strobus White pine	6" ht. min. 1/8 - 1/4" cal.

GROUND COVERS:

Amount	Key	Botanical/Common	Rate	Comment
165 lbs		Coronilla varia Crown Vetch	9.2 lbs/1000 S.F.	Noise Berm/ Landscape Edge along Guilford Rd only
20lbs (Tall Fescue) 9 lbs. (others)		1. Tall Fescue (85%) Flat Pea (15%) or 2. Perennial Ryegrass (50%) Flat Pea (50%)	2 lbs/1000 SF 2 lbs/1000 SF	Embankment stabilization along Rosalyn Court

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY	SIZE	REMARKS
STREET TREE TABLE					
⊙	Sargent Cherry	Prunus sargentii	15	2"-21/2" CAL.	B & B
⊗	Redspire Pear	Pyrus calleryana	42	2"-21/2" CAL.	B & B

These plans have been reviewed for the Howard County Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Natural Resource Conservation Service — Date 5/16/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard County Soil Conservation District.

Howard Soil Conservation District — Date 5/16/96

DEVELOPER'S CERTIFICATE

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Signature of Developer — Date 4/15/96

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District and I will supervise the development that he/she must obtain certification from the Howard Soil Conservation District within 30 days of completion of the pond within 30 days of completion.

Signature of Engineer — Date 5/5/96

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/30/96

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

CHIEF, BUREAU OF HIGHWAYS — DATE 8-27-96

By	Date	No.	Description
STB	2/01	1	Revised Lot Numbers, Pond #1 Rip-Rap Inflow Protection, Lot Lines

REVISIONS

Property of Cecil F. Cole, Et Al.
L. 867 F. 588
Parcel 63

Coleview Lots 1-3 Plat # 5488

Lot 1

STATE OF MARYLAND — BRUCE D. BARRON — No. 19198 — REGISTERED PROFESSIONAL ENGINEER — 5/5/96

1829

F96-105

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

Designed SDH
Drawn E.R.B.
Checked BDB
Date Jan. 1996

Landscape Plan
SCOTT ACRES
A Resubdivision of Lots 5, 6 and 7
Lots 10-32
Tax Map No. 35 P/O Parcel 353
5th Election District
Howard County, Maryland
Previous Submittals: F77-112, BA80-08, BA83-11E, 595-12, F96-83, WP96-96

Owner/Developer: LOT 1 IMPROVEMENT CORP. 8835 F Columbia 100 Pkwy. Columbia, MD 21045

Scale 1" = 50'
Sheet 12 of 12
LDE Job No 94-161
File No F96-105