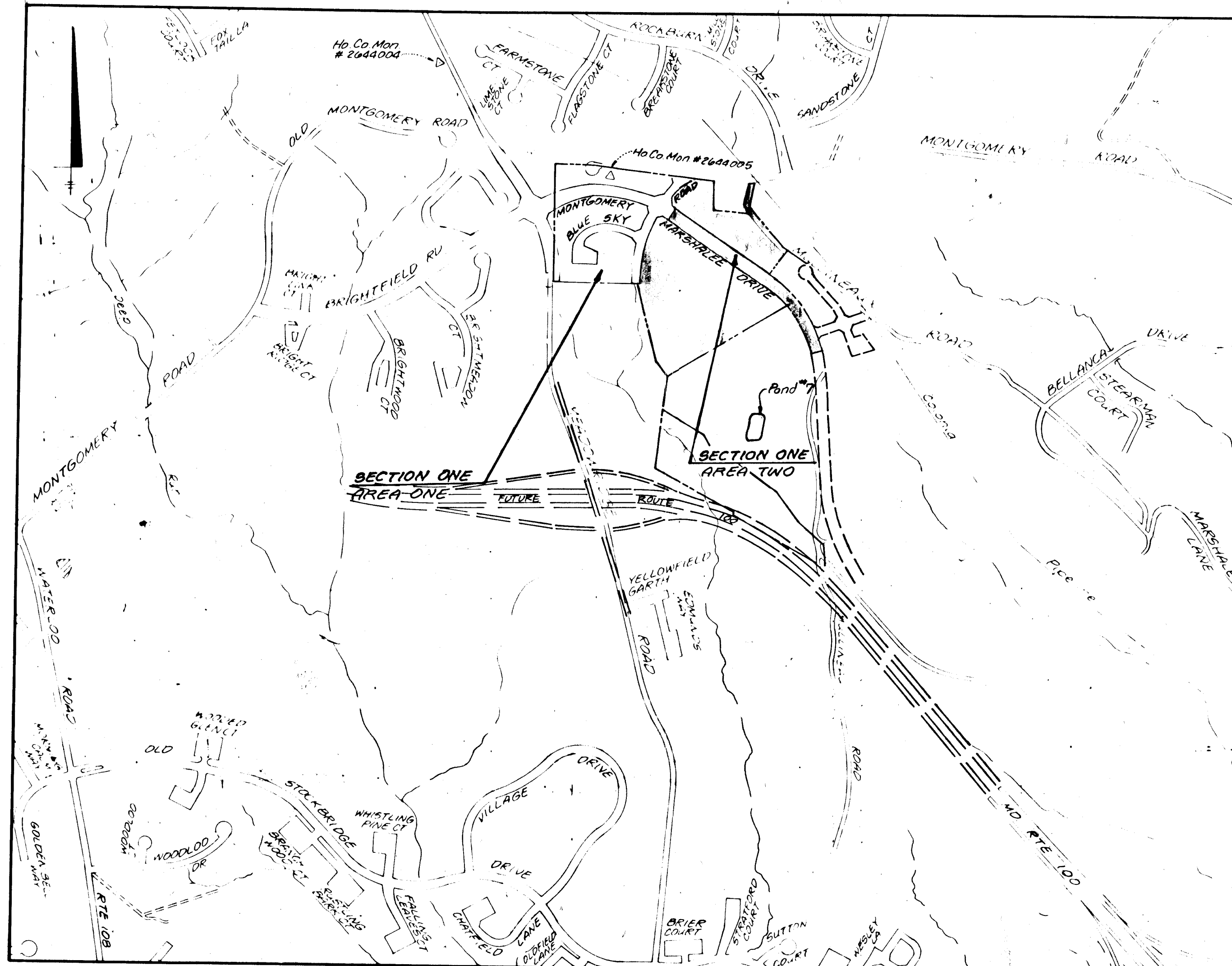


INDEX OF SHEETS	
SHEET No.	TITLE
1	TITLE SHEET
2	PLAN AND PROFILE - MARSHALEE DRIVE
3	PLAN AND PROFILE - MARSHALEE DRIVE
4	GRADING, SEDIMENT AND EROSION CONTROL
5	GRADING, SEDIMENT AND EROSION CONTROL
6	GRADING, SEDIMENT AND EROSION CONTROL
7	DRAINAGE AREA MAP
8	DRAINAGE AREA MAP
9	ROAD DETAILS
10	SEDIMENT CONTROL DETAIL SHEET
11	LANDSCAPE PLAN
12	LANDSCAPE PLAN
13	STORM DRAIN PROFILES
14	STORMWATER MANAGEMENT DETAILS



LOCATION MAP  
Scale 1" = 600'

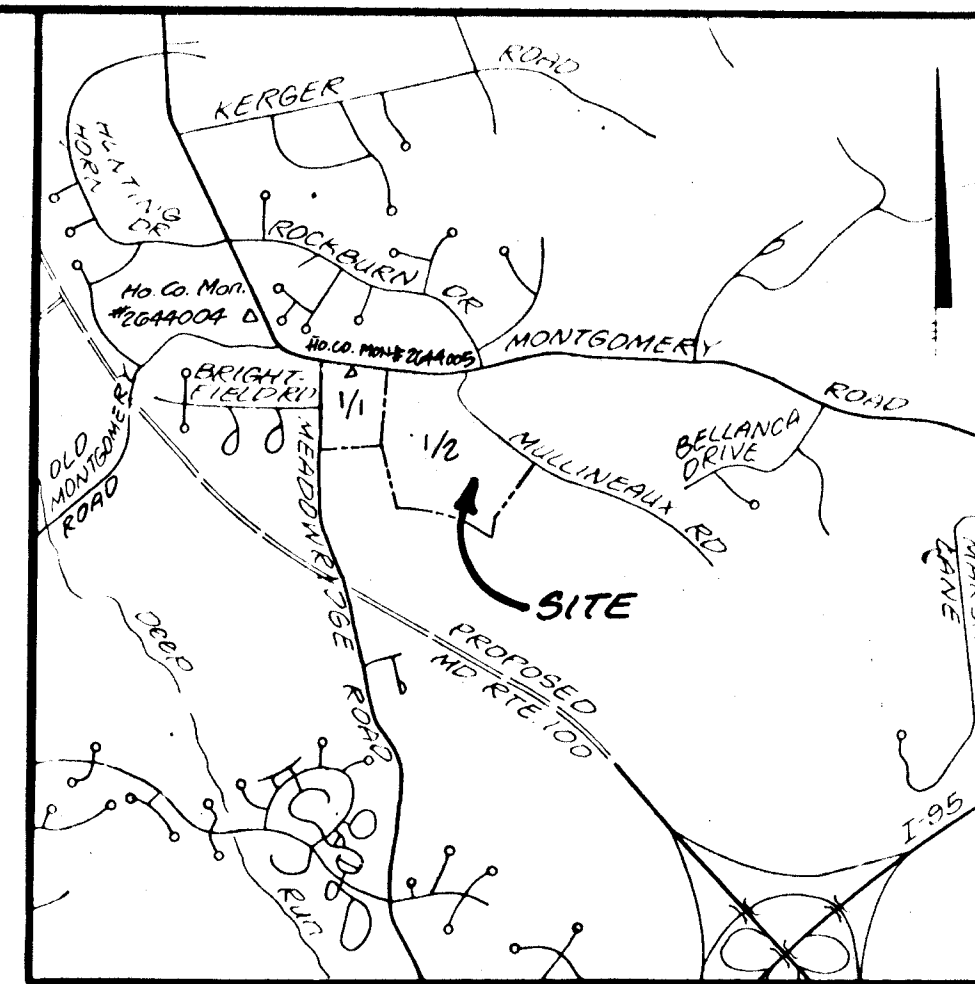
**BENCHMARK**

Ho. Co. Mon # 2644004 El. 402.135  
Ho. Co. Mon. # 2644005 El. 410.981

**DESCRIPTION**

Ho. Co. Mon. # 2644005 El. 410.981  
Concrete Monument .2' Below Surface  
South side Montgomery Road East  
of Meadow Ridge Road.

Ho. Co. Mon. # 2644004 El. 402.135  
Concrete Monument .1' Below Surface  
SW corner of Intersection RTE 103 and  
Old Montgomery Road.



VICINITY MAP  
Scale 1" = 2000'

**NOTES:**

- All construction shall be in accordance with the latest standards and specifications of Howard County Volume IX.
- The contractor shall notify the Department of Public Works/Bureau of Construction Inspection Division at (410) 262-1800 at least 24 hours prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work.
- Project Background:  
Location: Elkridge, Tax Map: 37, Parcel: 643,640  
Zoning: RSC (Residential: Single Cluster)  
ZB/BA Ref: ZB 877 R & M, PB 284, RES 188  
Election District: 1st  
Section/Area: One/Two  
Total Tract Area: 34.89 Ac. plus/minus  
Section/Area: 21.94 Ac. plus/minus  
Number of Proposed Lots: 2 (1 SFA, 1 OS)  
Previous Submittals: WP91-33, F91-125, S93-02, P93-11, SDP93-105
- 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.
- Light poles and fixtures for street lights shall be in accordance with the latest Howard County Design Manual, Volume III, Roads and Bridges.
- Storm drain trenches within the public road right-of-way shall be backfilled and compacted in accordance with the Howard County Standard Specifications and Details - Design Manual Volume IV.
- Any damage to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractor's expense.
- 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 contractor's 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.
- The topography shown hereon is compiled from photogrammetric aerial survey, supplemented with field run data prepared by Land Design Engineering, Inc. June, 1992.
- Horizontal and vertical datums are related to the Maryland State Plane Coordinate System as projected from Howard county control stations No. 2644004 and No. 2644005 (NAD 27).
- Public water and public sewer will be available to the site by means of extensions.  
Water: Contract No. 14-9330-D  
Sewer: Contract No. 14-9330-D
- Stormwater management is by Extended Detention, For SDP 94-92 water quality is the Retention facility to be privately maintained by the Commercial Property Owners Association.
- Wetlands delineation by Exploration Research, Inc. dated 1992, approved by U.S.A.C.E. June, 1992.
- Noise study compiled by Land Design Engineering, Inc. approved 12/31/92 P93-11
- Floodplain analyzed by Land Design Engineering, Inc. based on field run data from 1992 (P93-11) approved 12/31/92
- Traffic study compiled by Lee Cunningham & Associates, Inc. dated November, 1992 as part of S93-02 approval
- Geotechnical report compiled by GeoTechnology Associates, Inc. dated December 30, 1992 and May 3, 1993, as part of P93-11 and SDP 93-105. Additional Borings Dated June 8, 1994, and report for Pond# 7 compiled by Hillis Carnes Dated April 30, 1994.
- 401 Permit # 8991-00429-7 exp 8/1/95  
WA permit # 92-102-019 exp 12/31/95  
Waiver Petition WP 93-20 for roads to exceed 1200' section 16.113(c)(10) approved 12-23-92. Waiver request WP 93-26 to waive section 16.115 B2 to provide 20' minimum frontage for lot areas under 40,000 square feet; waive section 16.115B to front lots on a public or private road not exceeding 200' section 16.115C, that no more than 2 pipestem lots may have adjoining driveways section 16.116C, avoiding adjacent to Wetlands shall not be permitted, approved March 18, 1993.

# ROAD & STORM DRAIN CONSTRUCTION PLANS

## SHADY OAKS

### SECTION ONE AREA TWO

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

- WP-94-110 To waive Section 16.119(f)(2) to permit a shared residential driveway that will serve two existing SFD dwellings on Parcels 32 and 33 to have direct access to a minor arterial highway (Marshalee Drive) for a limited duration, denied August 17, 1994.
- Private drainage easement may not be abandoned until road construction plans for the Marshalee Drive extension are approved and the replacement conveyance system is in place.

24 95% compaction in fill areas shall be determined by AEGH0 T-100.

25 Sidewalks and sidewalk ramps shall be designed in accordance with current ADA requirements.

23 WP-94-112 To waive Section 16.123(a)(2) to permit grading to be performed under a valid permit without an approved site development plan and 16.165(a)(2) to permit the issuance of a grading permit prior to the approval of a site development plan for residential development, denied July 28, 1994.

BEI	Rev. Strt. Index and General Note #13	7-11-96
By	Revision	Date

**DEVELOPER'S CERTIFICATE**

We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the Project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer \_\_\_\_\_ Date \_\_\_\_\_

**ENGINEER'S CERTIFICATE**

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer \_\_\_\_\_ Date \_\_\_\_\_

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

U.S. Soil Conservation Service Date \_\_\_\_\_

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District Date \_\_\_\_\_

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

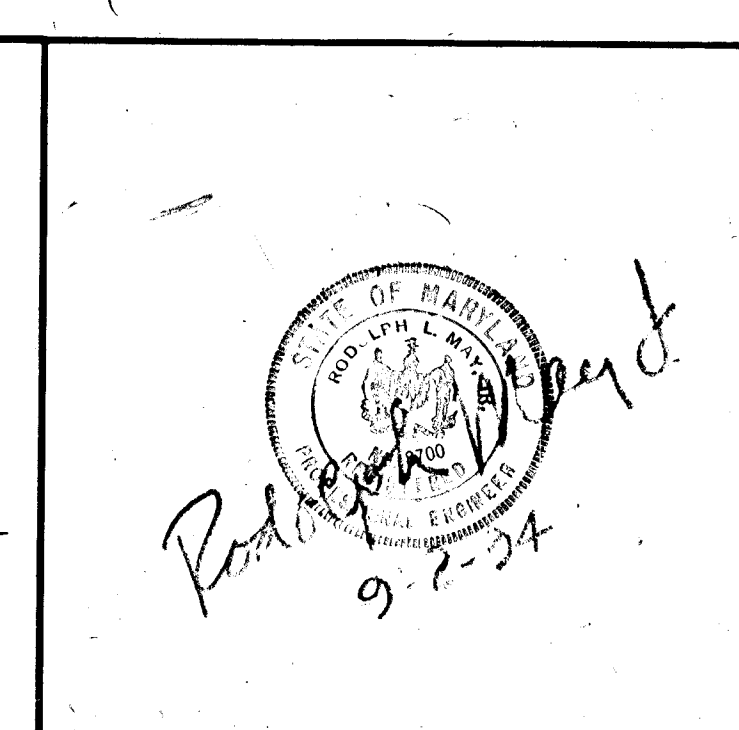
Chief Land Development Division \_\_\_\_\_ Date 1/14/94

C. E. Ertter Chief, Bureau of Engineering Date 9/24/94

Andrew M. Danek Chief, Bureau of Highways Date 9-15-94

APPROVED: Department of Planning and Zoning

Oliver J. Juranovic Chief, Department of Planning and Research Date 9/23/94



**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
(410) 715-1070 (Balko), (301) 596-3424 (Wash.), (410) 715-0681 (Fax)

Designed TO	TITLE SHEET	Scale: As Shown
Drawn: GL	<b>SHADY OAKS</b>	Sheet 1 of 14
Checked: RM	SECTION ONE AREA TWO	LOE Job No. 02-176.2
Date: 7-94	LOT 57 AND PARCEL A	File No. F94-20
	Tax Map 37 Part of Parcel 643 640	
	1st Election District Howard County, MD	
	Previous Submittals: ZB877 R&M, WP91-33, F04-125, S0P93-15, RES 188, S93-02, PB284, P93-11, SDP 93-105	
	Owner/Developer	
	100 INVESTMENT LIMITED PARTNERSHIP	
	8835 Columbia 100 Parkway	
	Columbia, Maryland 21045	

1707

1707

PLAN SURVEYED BY DATE  
 NOTED BY CHECKED BY  
 NOTE BOOK NO. 11/11/94  
 11/11/94  
 11/11/94  
 11/11/94

PROFILE SURVEYED BY DATE  
 NOTED BY CHECKED BY  
 NOTE BOOK NO. 11/11/94  
 11/11/94  
 11/11/94  
 11/11/94

NAME AND PC TO PT	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
MARSHALEE DRIVE 17+68.80 TO 24+00	850.00	42°32'40"	631.20'	330.95'	676.80'	S34°54'04"E
FUTURE MARSHALEE DRIVE 24+00 TO 25+61.10	850.00	40°51'34"	161.10'	80.79'	160.86'	S08°11'52"E

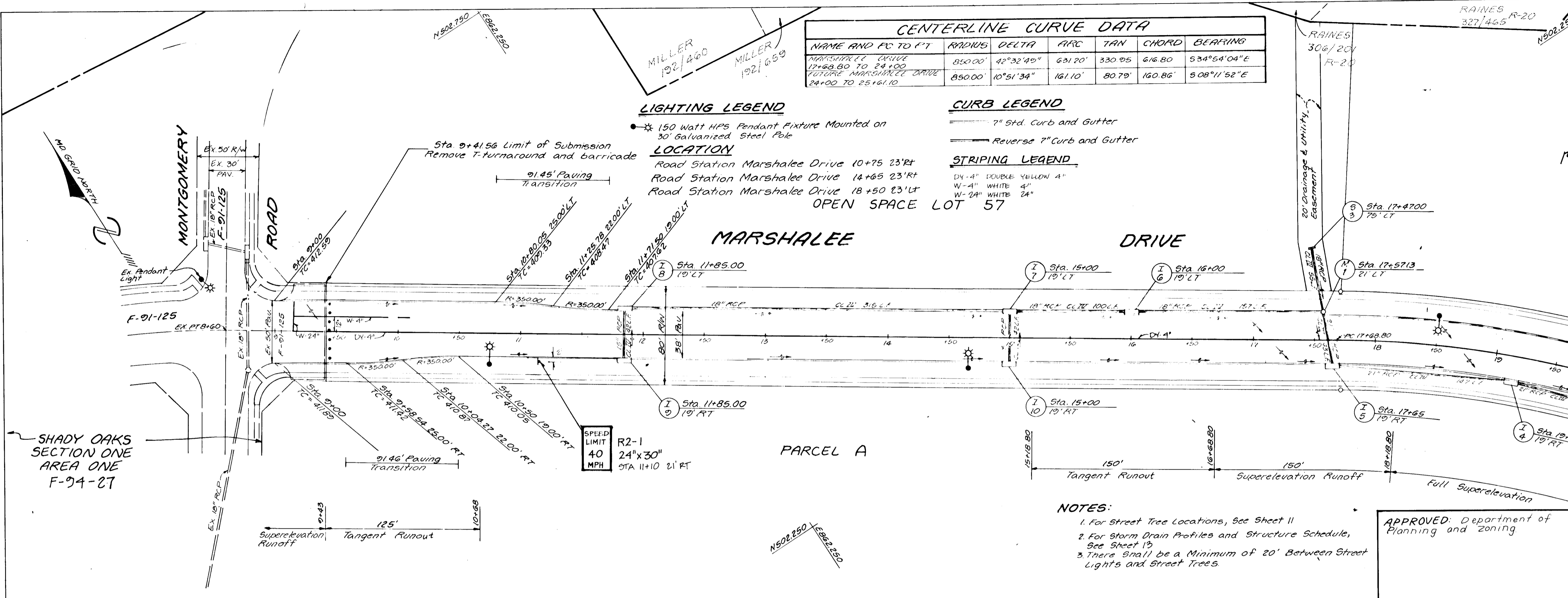
Station	CL. Elev	T.C. E1	T.C. E2
9+25	411.70	412.35	411.74
9+33	411.55	412.15	411.59
9+40	411.48	411.96	411.52
9+47	411.18	411.56	411.23
10+00	410.82	411.12	410.91
10+25	410.38	410.58	410.52
10+50	409.89	410.00	410.05
10+68	409.53	409.57	409.69
15+18.80	400.51	400.67	400.67
15+25	400.39	400.56	400.55
15+50	399.89	400.12	400.05
15+75	399.39	399.68	399.55
16+00	398.89	399.23	399.05
16+25	398.39	398.80	398.55
16+50	397.89	398.37	398.06
16+68.80	397.53	398.13	398.69
16+75	397.39	398.00	397.55
17+00	396.89	397.57	397.05
17+25	396.39	397.13	396.59
17+50	395.89	396.69	396.05
17+75	395.39	396.26	395.55
18+00	394.89	395.82	395.06
18+18.80	394.51	395.49	394.67

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.  
 Chief, Land Development 9/24/94 Date  
 C.E. Eubank, Chief, Bureau of Engineering 9/24/94 Date  
 Chief, Bureau of Highways 9-15-94 Date

**LIGHTING LEGEND**  
 \* 150 Watt HPS Pendant Fixture Mounted on 30' Galvanized Steel Pole  
**LOCATION**  
 Road Station Marshalee Drive 10+75 23'RT  
 Road Station Marshalee Drive 14+65 23'RT  
 Road Station Marshalee Drive 18+50 23'RT  
 OPEN SPACE LOT 57

**CURB LEGEND**  
 7" Std. Curb and Gutter  
 Reverse 7" Curb and Gutter

**STRIPING LEGEND**  
 D4-A" DOUBLE YELLOW A"  
 W-4" WHITE 4"  
 W-24" WHITE 24"

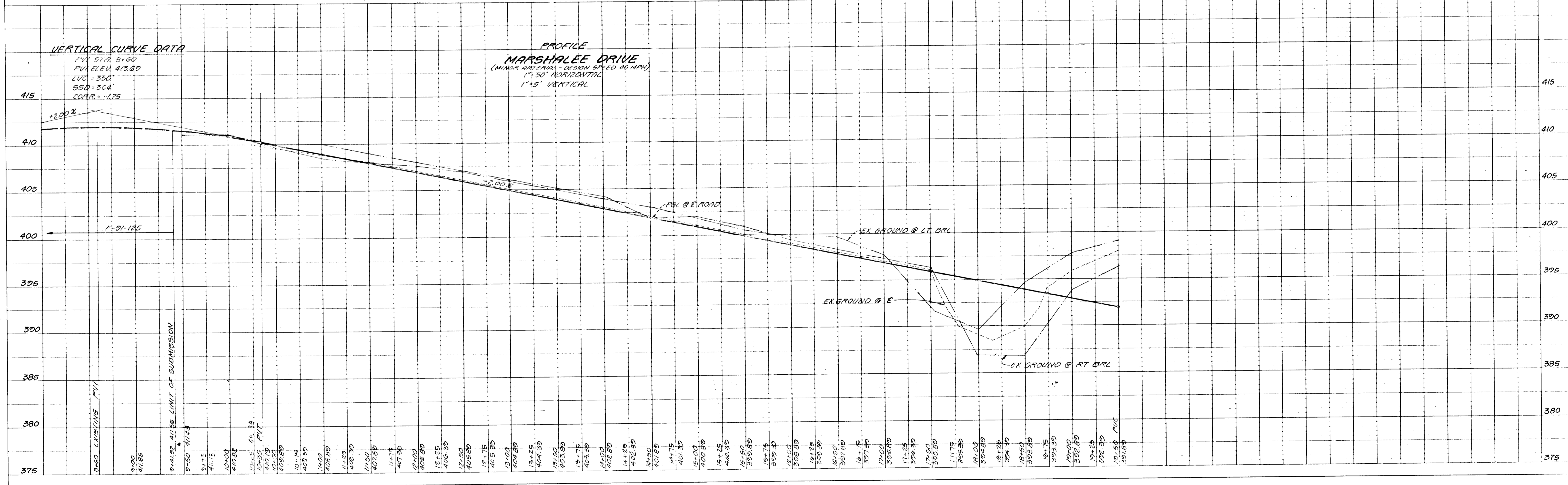


**NOTES:**  
 1. For Street Tree Locations, See Sheet 11  
 2. For Storm Drain Profiles and Structure Schedule, See Sheet 13  
 3. There shall be a Minimum of 20' Between Street Lights and Street Trees.

APPROVED: Department of Planning and Zoning  
 Chief, Division of Land Development and Research  
 9/23/94 Date

**LAND DESIGN ENGINEERING, INC.**  
 8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED TO	ROAD CONSTRUCTION PLANS MARSHALEE DRIVE	SCALE AS SHOWN
DRAWN BY	SHADY OAKS SECTION 1 AREA 2	DRAWING NO. 2 OF 14
CHECKED BY		JOB NO. 92-176.2
DATE	5-23-92, P23-11	FILE NO. F04-28



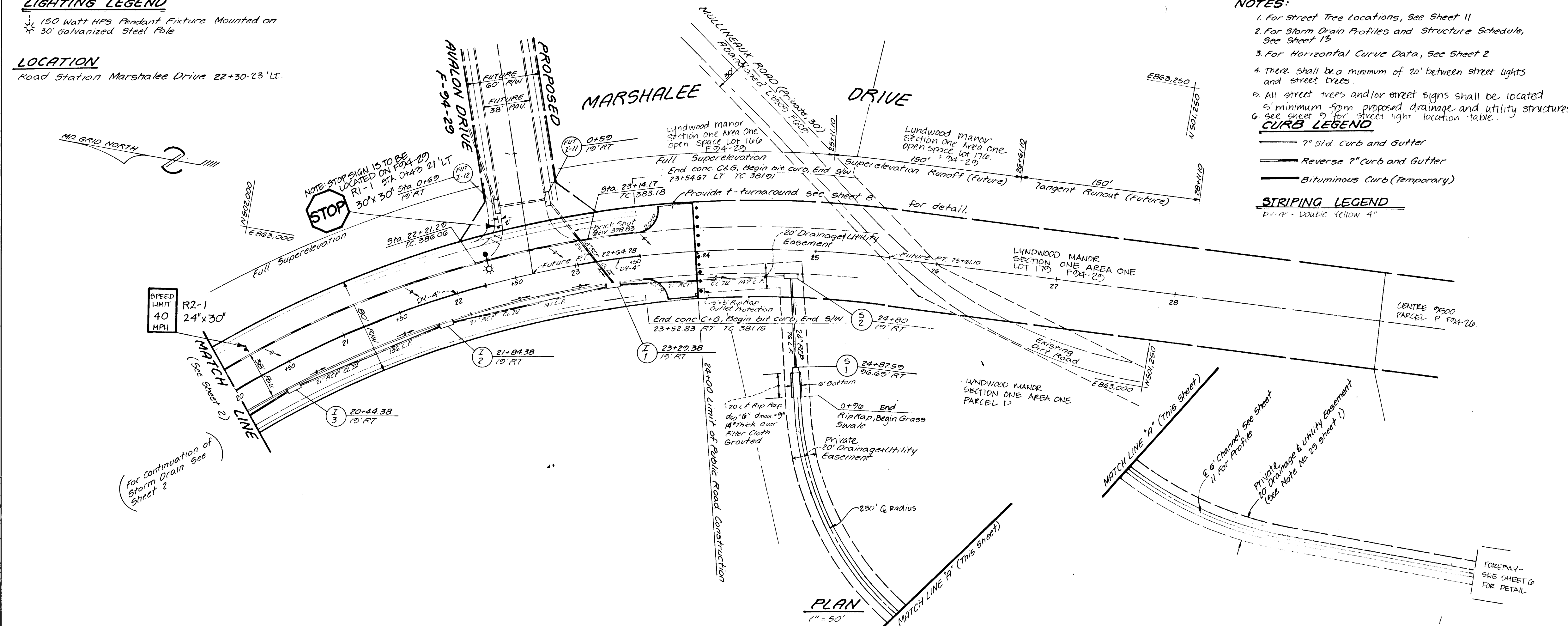
**LIGHTING LEGEND**

150 Watt HPS Pendant Fixture Mounted on 30' Galvanized Steel Pole

**LOCATION**

Road Station Marshalee Drive 22+30-23' LT

PLAN SURVEYED, PLOTTED, CHECKED, & NOTED BY: [Signature] DATE: [Date]  
 NOTE BOOK NO. [Number]  
 NO. OF SHEETS [Number]  
 NO. OF THIS SHEET [Number]



**NOTES:**

1. For Street Tree Locations, See Sheet 11
2. For Storm Drain Profiles and Structure Schedule, See Sheet 13
3. For Horizontal Curve Data, See Sheet 2
4. There shall be a minimum of 20' between street lights and street trees.
5. All street trees and/or street signs shall be located a minimum from proposed drainage and utility structures.
6. See sheet 9 for street light location table.

**CURB LEGEND**

- 7" Std. Curb and Gutter
- Reverse 7" Curb and Gutter
- Bituminous Curb (Temporary)

**STRIPING LEGEND**

- 1'-4" - Double Yellow A

**NOISE BERM SCHEDULE**

ROAD	STATION	OFFSET TOP WIDTH	ELEV.
BERM 2	MARSHALEE DRIVE	125' RT	410
	MARSHALEE DRIVE	825' RT	414
	MARSHALEE DRIVE	90' RT	414
	MARSHALEE DRIVE	925' RT	416
	MARSHALEE DRIVE	10' RT	416
	MARSHALEE DRIVE	10' RT	416
	MARSHALEE DRIVE	10' RT	416
	MARSHALEE DRIVE	10' RT	416
	MARSHALEE DRIVE	10' RT	416
	MARSHALEE DRIVE	10' RT	416
BERM 3	MARSHALEE DRIVE	1745	406
	MARSHALEE DRIVE	1800	406
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
	MARSHALEE DRIVE	1803	404
BERM 4	MARSHALEE DRIVE	25-20	392.5
	MARSHALEE DRIVE	23-11	392.5
	MARSHALEE DRIVE	24-31	387
	MARSHALEE DRIVE	24-31	387

APPROVED: Department of Planning and Zoning

[Signature] 9/23/94  
 Chief, Division of Land Development and Research

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

[Signature] 9/24/94  
 Chief, Land Development Division

[Signature] 9/26/94  
 Chief, Bureau of Engineering

[Signature] 9-15-94  
 Chief, Bureau of Highways

**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED TO	ROAD CONSTRUCTION PLANS MARSHALEE DRIVE	SCALE AS SHOWN
DRAWN BY	WJ	DRAWING 3 of 14
CHECKED BY	RM	JOB NO. 92-176.2
DATE	7-24	FILE NO. FDA-28

PROFILE SURVEYED, PLOTTED, CHECKED, & NOTED BY: [Signature] DATE: [Date]  
 NOTE BOOK NO. [Number]  
 NO. OF SHEETS [Number]  
 NO. OF THIS SHEET [Number]

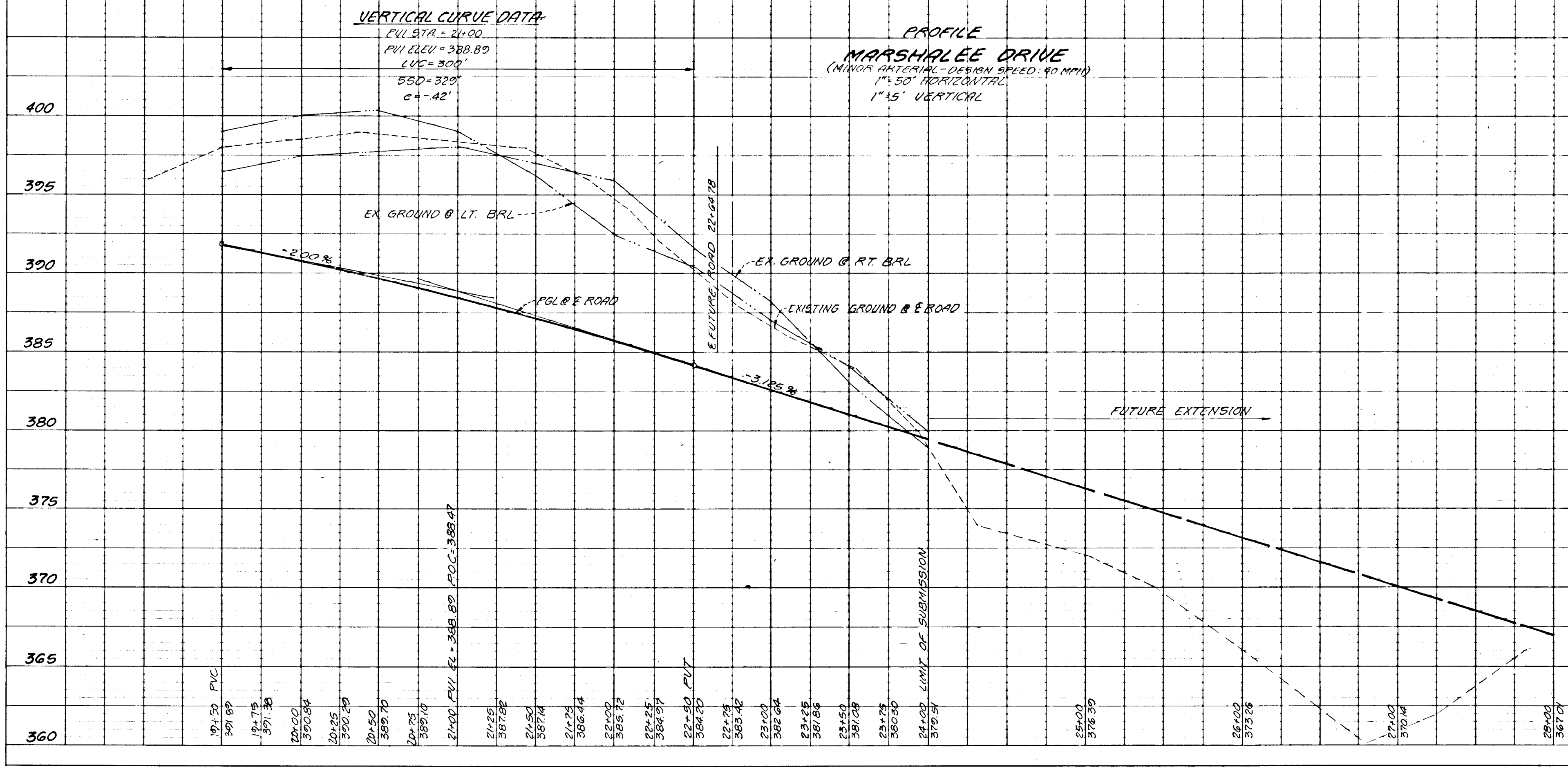
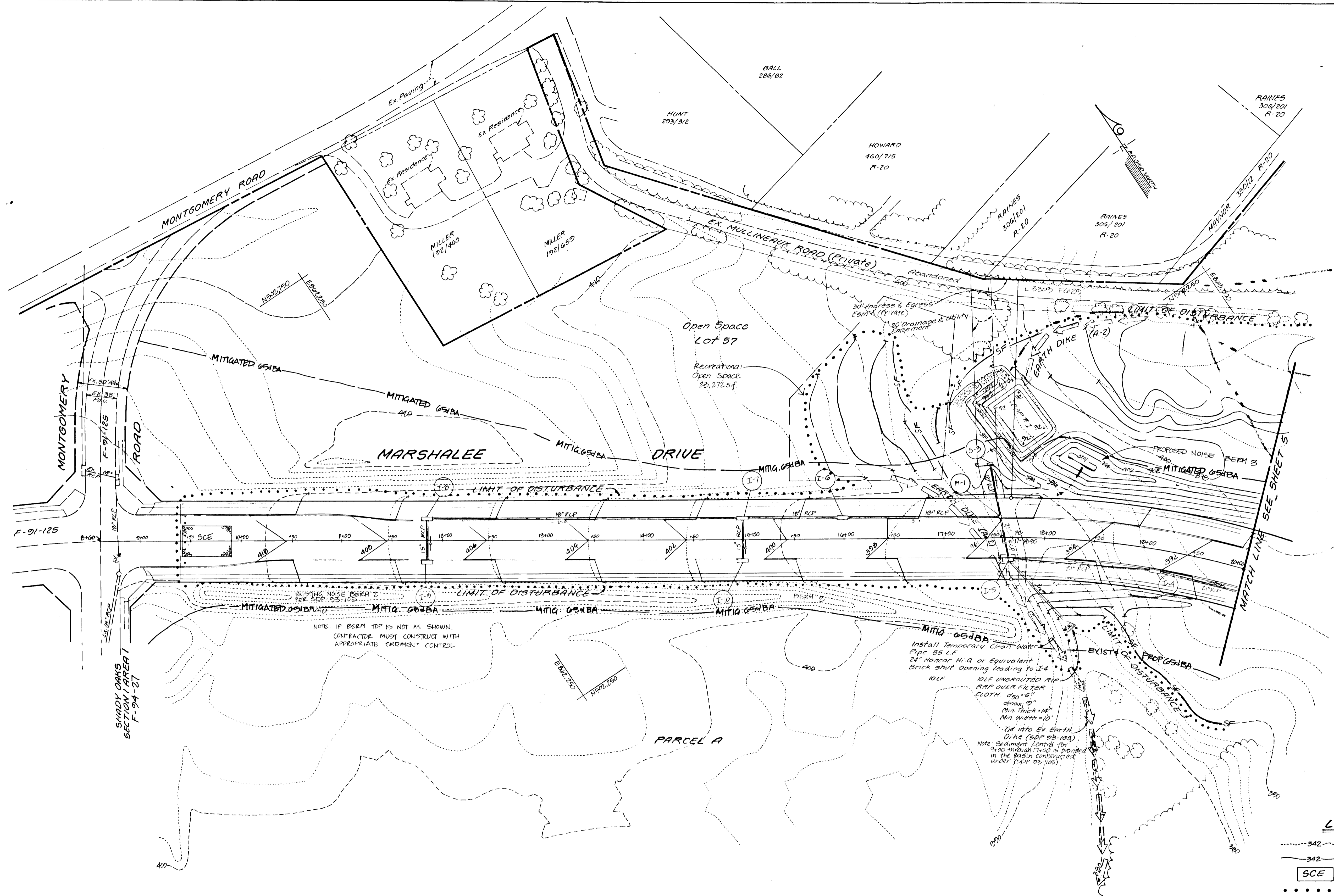


PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE  
 PRINTED IN U.S.A.

7011



**LEGEND**

- 342--- EXISTING CONTOUR (2' INTERVAL)
- 342--- PROPOSED CONTOUR (2' INTERVAL)
- SCE STABILIZED CONSTRUCTION ENTRANCE
- ..... LIMIT OF DISTURBANCE
- SF--- SILT FENCE
- EARTH DIKE
- EXISTING WOODS TO BE REMOVED
- EXISTING WOODS TO REMAIN UNDISTURBED
- D--- DRAINAGE GUIDE

Note: For Details of Sediment Trap See Sheet 10

**ENGINEER'S CERTIFICATE**

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

*Rodolph Mayt* 9-2-94  
Signature of Engineer Date

**DEVELOPER'S CERTIFICATE**

I/we certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*W.L. W* 9/6/94  
Signature of Developer Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements

*Patricia Egle* 9/8/94  
Chief, Soil Conservation Service Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

*John L. Roberts* 9/8/94  
Howard Soil Conservation District Date

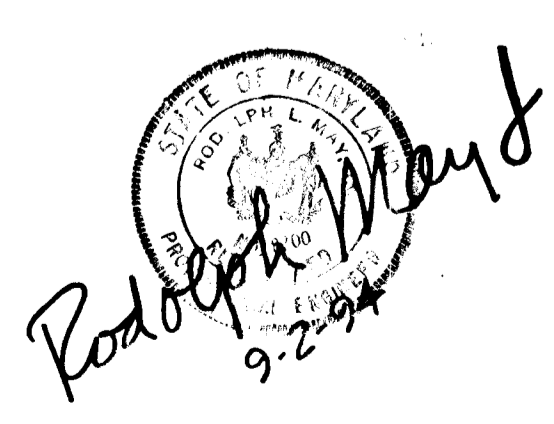
APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

*[Signature]* 9/16/94  
Chief, Land Development Division Date

*[Signature]* 9/22/94  
Chief, Bureau of Engineering Date

APPROVED: Department of Planning and Zoning

*[Signature]* 9/23/94  
Chief, Division of Land Development and Research Date



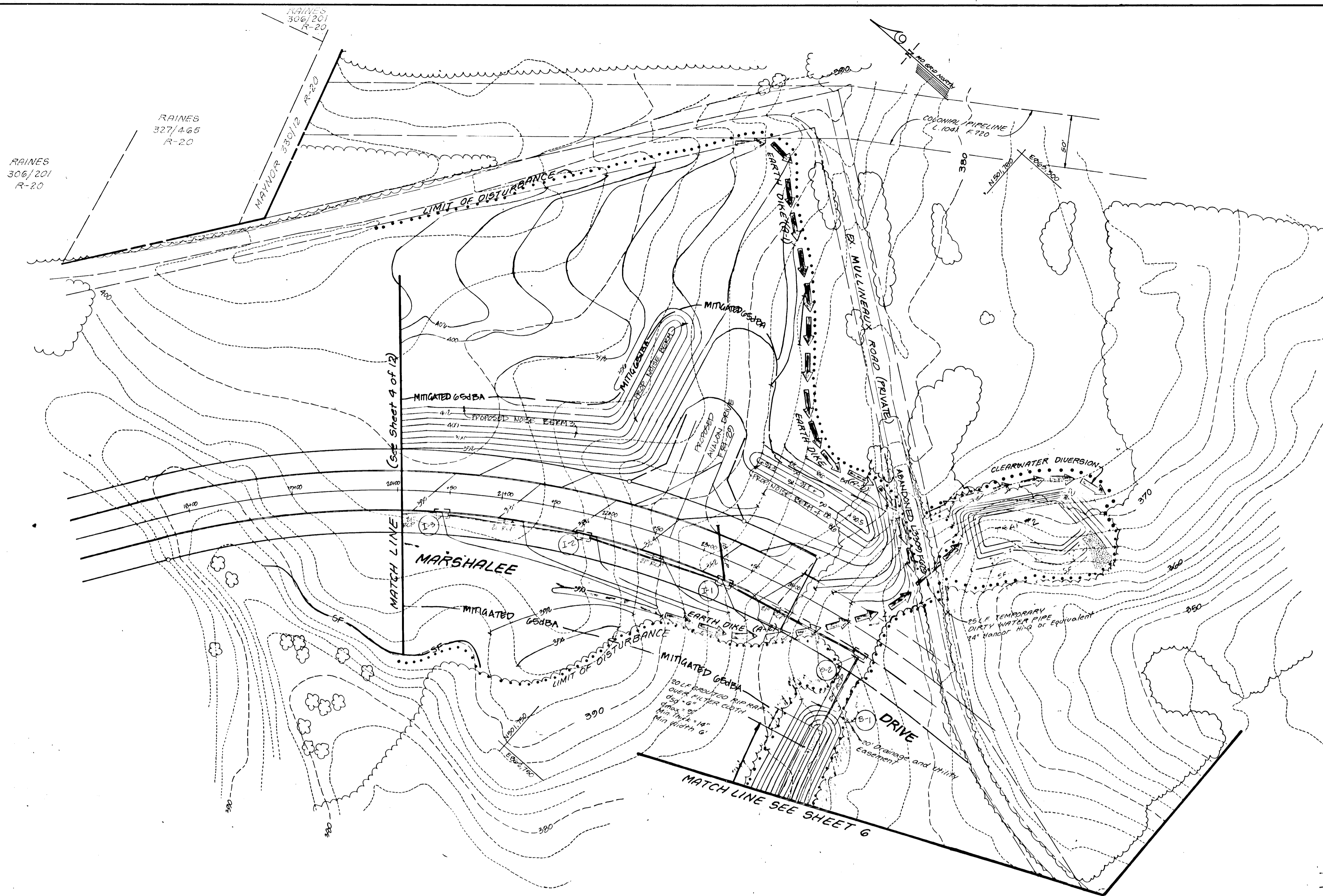
**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
(410) 715-1070 (Balt.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

Designed GL/ES	GRADING & SEDIMENT AND EROSION CONTROL PLAN	Scale: 1"=50'
Drawn GL/WS		Drawing 4 of 14
Checked RM	SHADY OAKS SECTION 1 AREA 2	Job No. 92-176-Z
Date: 7-94		File No. F-94-28

Owner/Developer:  
100 INVESTMENT LIMITED PARTNERSHIP  
8835 Columbia 100 Parkway  
Columbia Maryland 21045 (410) 730-0810

1707



- LEGEND**
- DRAINAGE DIVIDE
  - 342 EXISTING CONTOUR (2' INTERVAL)
  - 342 PROPOSED CONTOUR (2' INTERVAL)
  - [SCE] STABILIZED CONSTRUCTION ENTRANCE
  - ..... LIMIT OF DISTURBANCE
  - SF SILT FENCE
  - [EARTH DIKE] EARTH DIKE
  - [Wavy Line] EXISTING WOODS TO BE REMOVED
  - [Dotted Line] EXISTING WOODS TO REMAIN UNDISTURBED
  - RP RP-SELECTIVE ROOT PRUNING

Scale: 1"=50'

Note:  
For Details of Sediment Trap See Sheet 10.

1701

**ENGINEER'S CERTIFICATE**  
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

*Rodolph Mayt* 9-2-94  
Signature of Engineer Date

**DEVELOPER'S CERTIFICATE**  
I/we certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*W.E.W.* 9/6/94  
Signature of Developer Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

*Patricia Eyles* 9/6/94  
Chief, Land Development Division Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

*John P. Blanton* 9/1/94  
Howard Soil Conservation District Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

*[Signature]* 9/6/94  
Chief, Land Development Division Date

*C.E. Patton* 9/22/94  
Chief, Bureau of Engineering Date

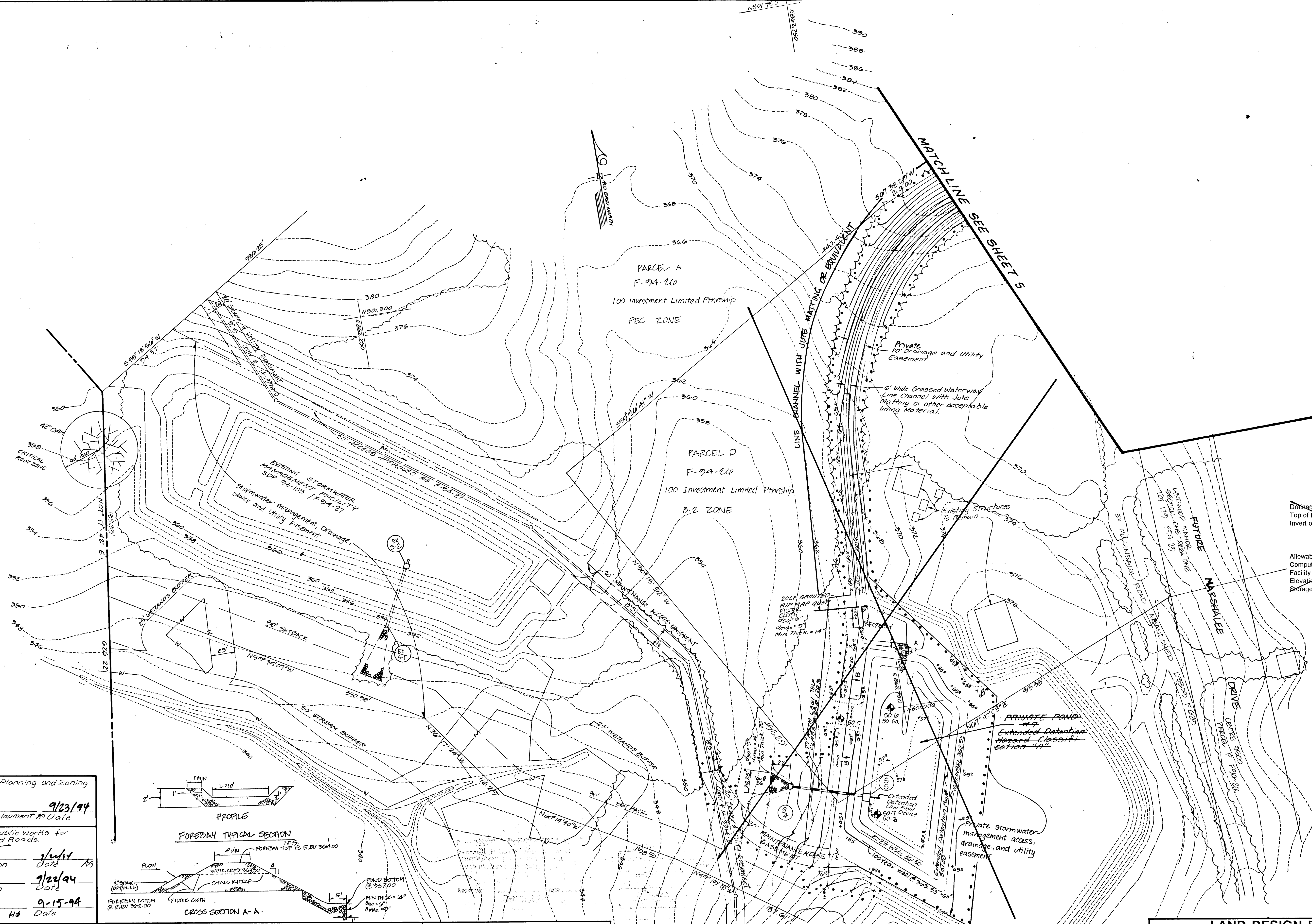
*Andrew M. Daniels* 9-15-94  
Chief, Bureau of Highways Date

APPROVED: Department of Planning and Zoning

*Quinn J. Jurney* 9/29/94  
Chief, Division of Land Development and Research Date

*Rodolph Mayt* 9-2-94  
Professional Engineer Seal

<b>LAND DESIGN ENGINEERING, INC.</b>		
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)		
DESIGNED 10/6/93	<b>GRADING &amp; SEDIMENT AND EROSION CONTROL PLAN</b>  <b>SHADY OAKS</b> SECTION 1 AREA 2	SCALE 1"=50'
DRAWN GL/WS		DRAWING 5 of 14
CHECKED R M		JOB NO. 02-176.2
DATE 7-94		FILE NO. FO4-28
100 INVESTMENT LIMITED PARTNERSHIP 8835 P. Columbia 100 Parkway Columbia Maryland 21045 (410) 715-0681		



**SUMMARY TABLE**

Drainage Area = 25.67 Acres  
 Top of Facility @ Elev. 365.00  
 Invert of Facility @ Elev. 357.00

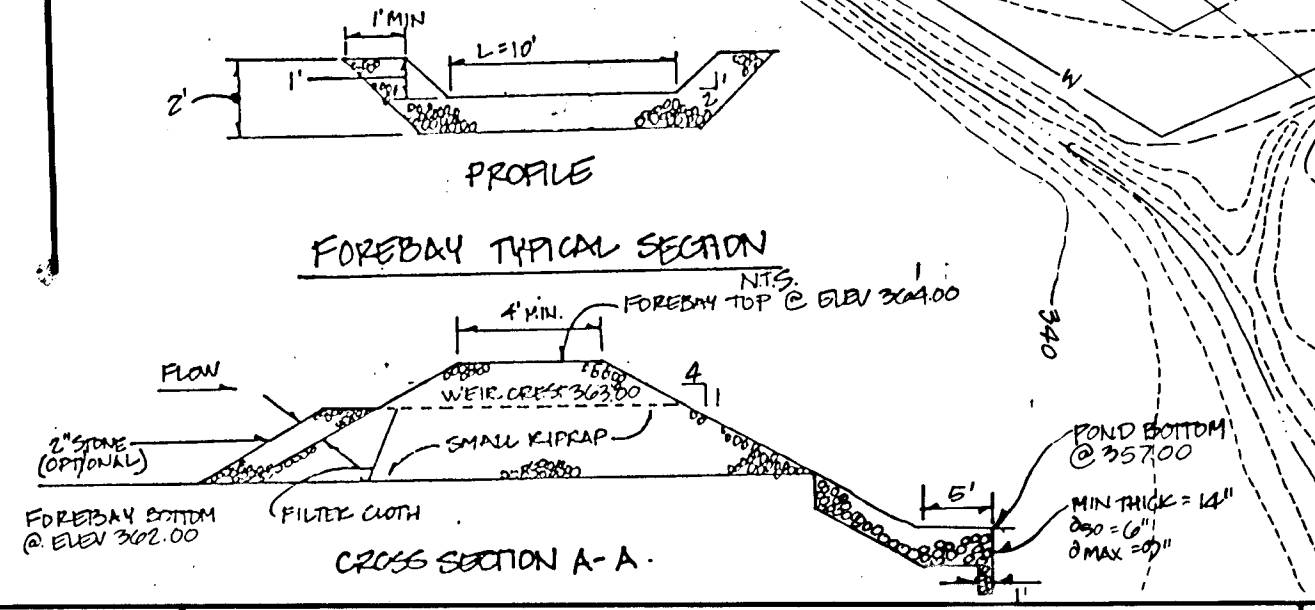
	2 YEAR	10 YEAR	100 YEAR
Allowable Release (cfs)	27.70	59.50	86.20
Computed Inflow (cfs)	32.80	73.20	121.9
Facility Discharge (cfs)	3.70	46.10	102.10
Elevation at Discharge	361.49	362.94	363.84
Storage at Elevation (ACFT)	1.39	2.06	2.58

APPROVED: Department of Planning and Zoning  
*Dina Jaramani* 9/23/94  
 Chief, Division of Land Development & Date and Research

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.  
*Eric F. Land Development Division* 9/15/94  
 Chief, Bureau of Engineering

*C. E. S. S. S. S.* 9/22/94  
 Chief, Bureau of Engineering

*Cherrie M. Daulton* 9-15-94  
 Chief, Bureau of Highways



*Rodolph Mayd*  
 9-2-94

1707

**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 before 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.

*Rodolph Mayd* 9-2-94  
 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.

*W. L. W.* 9/16/94  
 Signature of Developer Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

*Patricia Ely*  
 U.S. Soil Conservation Service Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

*John P. Blanton* 9/16/94  
 Howard Soil Conservation District Date

BE1	Remove Private Pond #7	7-11-94
By	Revisions	Date

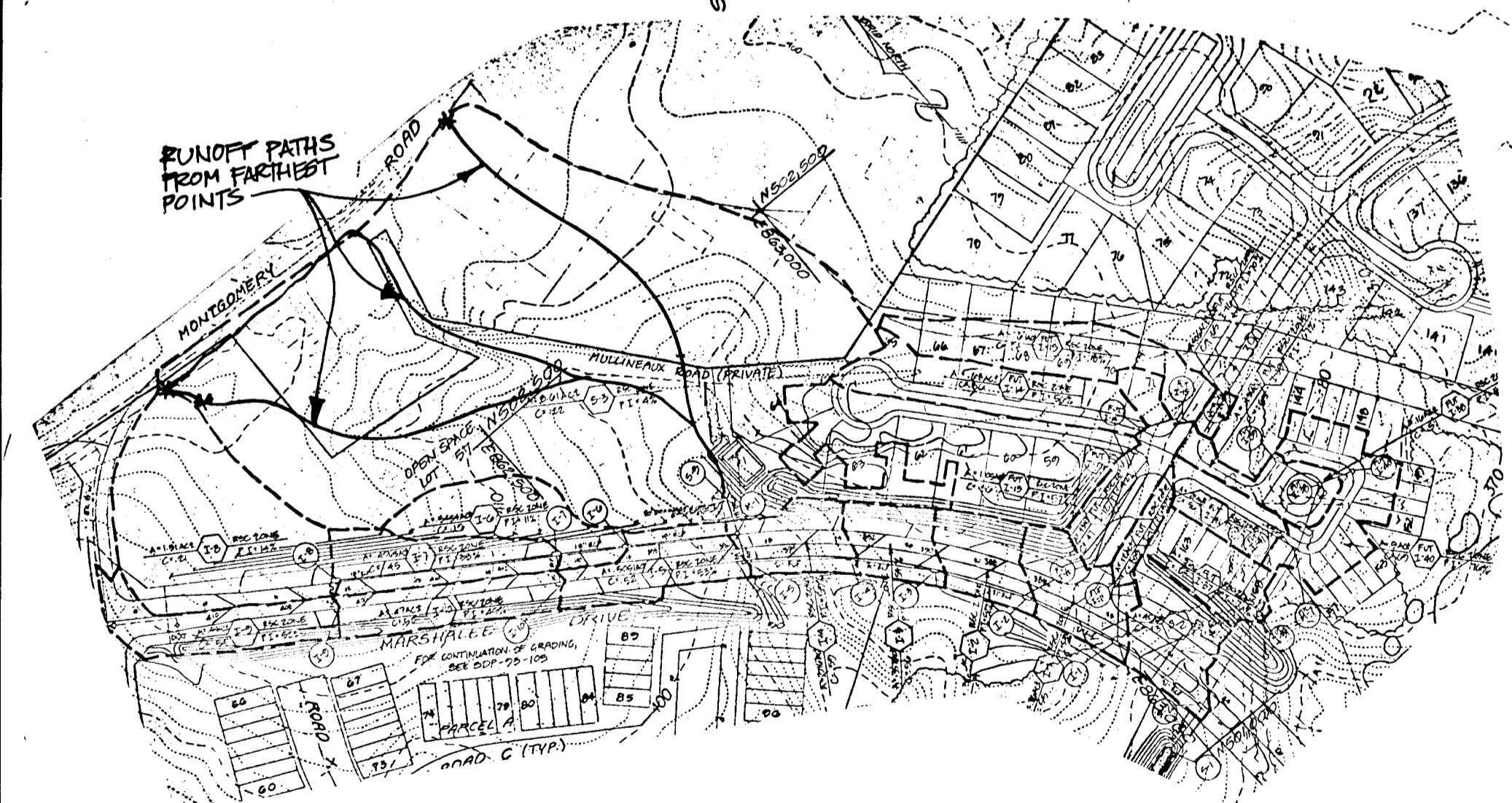
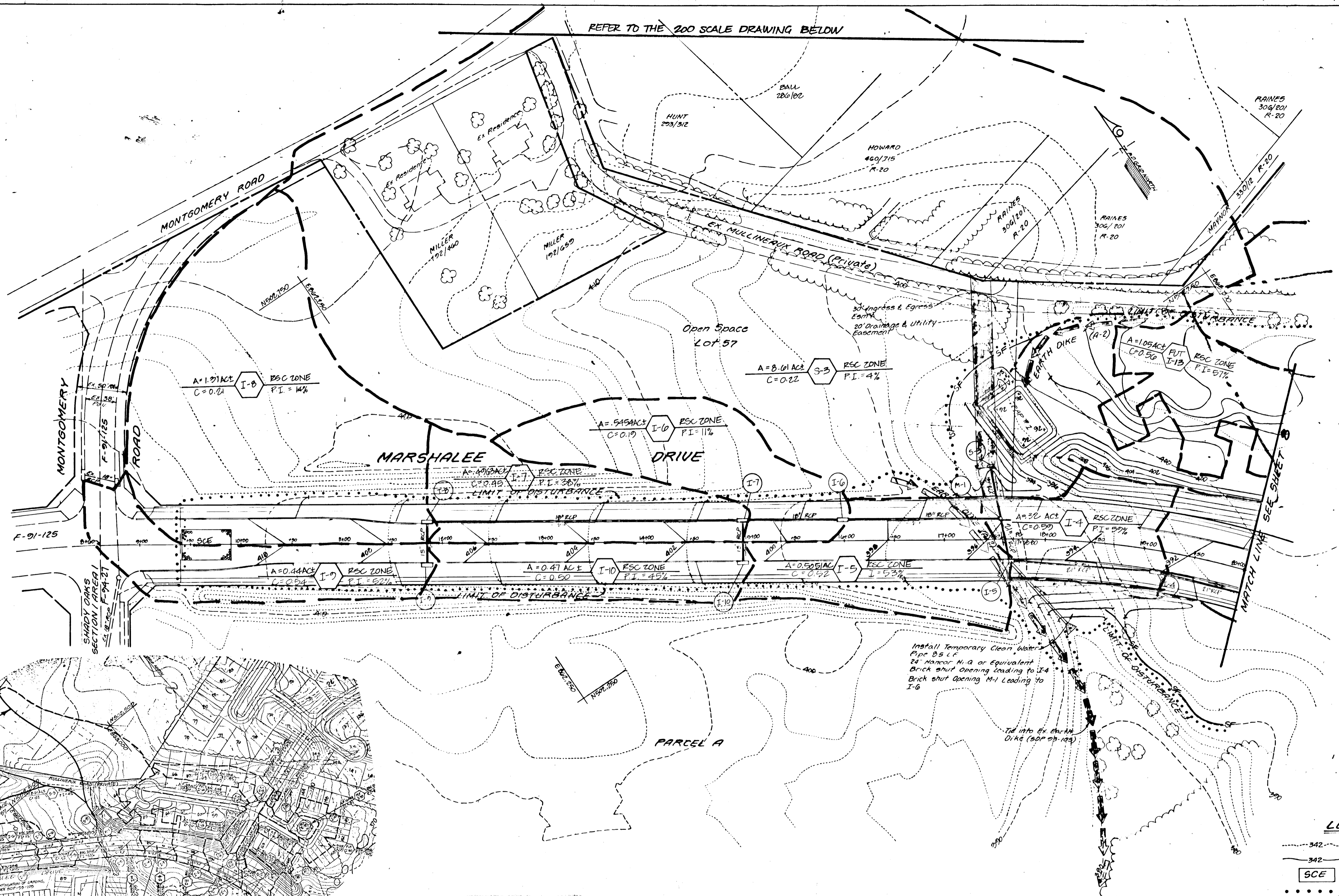
**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED	<b>GRADING &amp; SEDIMENT AND EROSION CONTROL &amp; SWM PLAN</b>  <b>SHADY OAKS</b> SECTION 1 AREA 2	SCALE
ES		1" = 50'
DRAWN		DRAWING
WJ		6 of 14
CHECKED		JOB No.
RM	92-176.2	
DATE	Owner / Developer	FILE No.
7-94	100 INVESTMENT LIMITED PARTNERSHIP 8035+4 Columbia 100 Parkway Columbia, Maryland 21045 (410) 730-0810	F94-28

F-94-28

REFER TO THE 200 SCALE DRAWING BELOW



**LEGEND**

- 342 --- EXISTING CONTOUR (2' INTERVAL)
- 342 — PROPOSED CONTOUR (2' INTERVAL)
- [SCE] STABILIZED CONSTRUCTION ENTRANCE
- ..... LIMIT OF DISTURBANCE
- SF — SILT FENCE
- [EARTH DIKE] EARTH DIKE
- [WOODS TO BE REMOVED] EXISTING WOODS TO BE REMOVED
- [WOODS TO REMAIN UNDISTURBED] EXISTING WOODS TO REMAIN UNDISTURBED
- [DRAINAGE GUIDE] DRAINAGE GUIDE

Note: For Details of Sediment Trap See Sheet 10

THIS PLAN IS SUBJECT TO THE REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Approved: *[Signature]* 9/15/94  
 Director, B.S.C.D.

Reviewed for HOWARD S.C.D. and meets Technical Requirements  
*[Signature]* Date 9/15/94  
 Signature  
 U.S. Soil Conservation Service

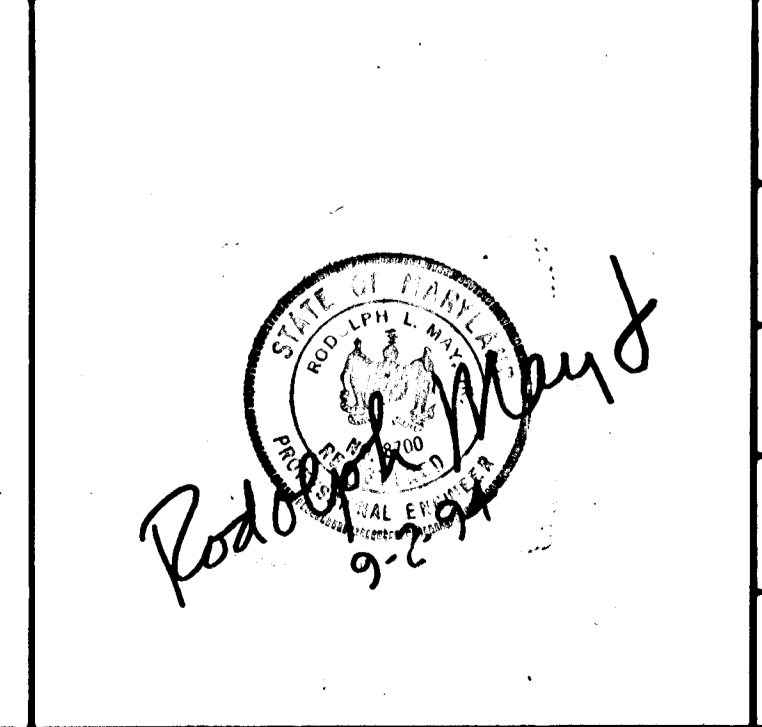
**ENGINEER'S CERTIFICATE**  
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer \_\_\_\_\_ Date \_\_\_\_\_

**DEVELOPER'S CERTIFICATE**  
 I/we certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer \_\_\_\_\_ Date \_\_\_\_\_

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.  
 U.S. Soil Conservation Service Date \_\_\_\_\_  
 This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
 Howard Soil Conservation District Date \_\_\_\_\_

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.  
 Chief Land Development Division *[Signature]* 9/15/94  
 Chief, Bureau of Engineering *[Signature]* 9/22/94  
 Chief, Bureau of Highways *[Signature]* 9-15-94

APPROVED: Department of Planning and Zoning  
 Jim Summary 9/23/94  
 Chief, Division of Land Development and Research



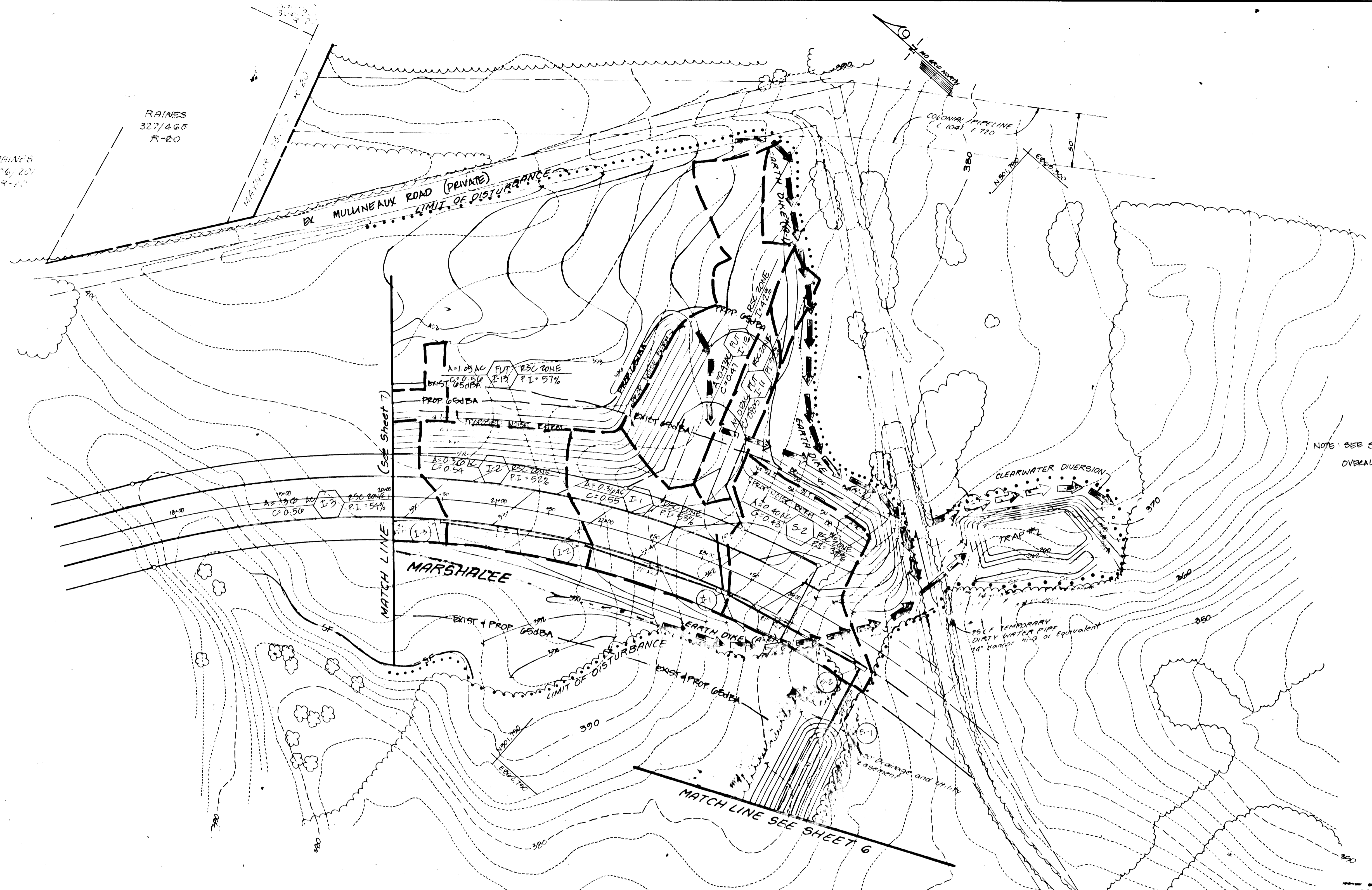
**LAND DESIGN ENGINEERING, INC.**  
 8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

Designed GL/ES	<b>DRAINAGE AREA MAP</b>  <b>SHADY OAKS</b> SECTION 1 AREA 2	Scale: 1"=50'
Drawn GL/WS		Drawing 7 of 14
Checked: RM		Job No. 92-176-C
Date: 7-94		File No. F94-28
Owner/Developer 100 INVESTMENT LIMITED PARTNERSHIP 8835 Columbia 100 Parkway Columbia Maryland 21045 (410) 730-0810		

1707

RAINES  
327/465  
R-20

RAINES  
306, 207  
R-20



NOTE: SEE SHEET 7 OF 14 FOR OVERALL DRAINAGE AREA MAP.

- LEGEND**
- DRAINAGE DIVIDE
  - EXISTING CONTOUR (2' INTERVAL)
  - PROPOSED CONTOUR (2' INTERVAL)
  - SCE STABILIZED CONSTRUCTION ENTRANCE
  - LIMIT OF DISTURBANCE
  - SF SILT FENCE
  - EARTH DIKE
  - EXISTING WOODS TO BE REMOVED
  - EXISTING WOODS TO REMAIN UNDISTURBED
  - RP RP SELECTIVE ROOT PRUNING

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

Approved: *[Signature]* 9/15/94  
Howard S.C.R.

Reviewed for HOWARD S.U.D. and State Technical Requirements

*[Signature]* Date 9/15/94  
Signature  
U.S. Soil Conservation Service

Note: For Details of Sediment Trap See Sheet 10

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*[Signature]*  
Signature of Engineer Date

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Signature of Developer Date

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U.S. Soil Conservation Service Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District Date

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

*[Signature]* 9/22/94  
Chief, Land Development Division

*[Signature]* 9/22/94  
Chief, Bureau of Engineering

*[Signature]* 9-15-94  
Chief, Bureau of Highways

APPROVED: Department of Planning and Zoning

*[Signature]* 9/22/94  
Chief, Division of Land Development and Research

*[Signature]* 9-2-94

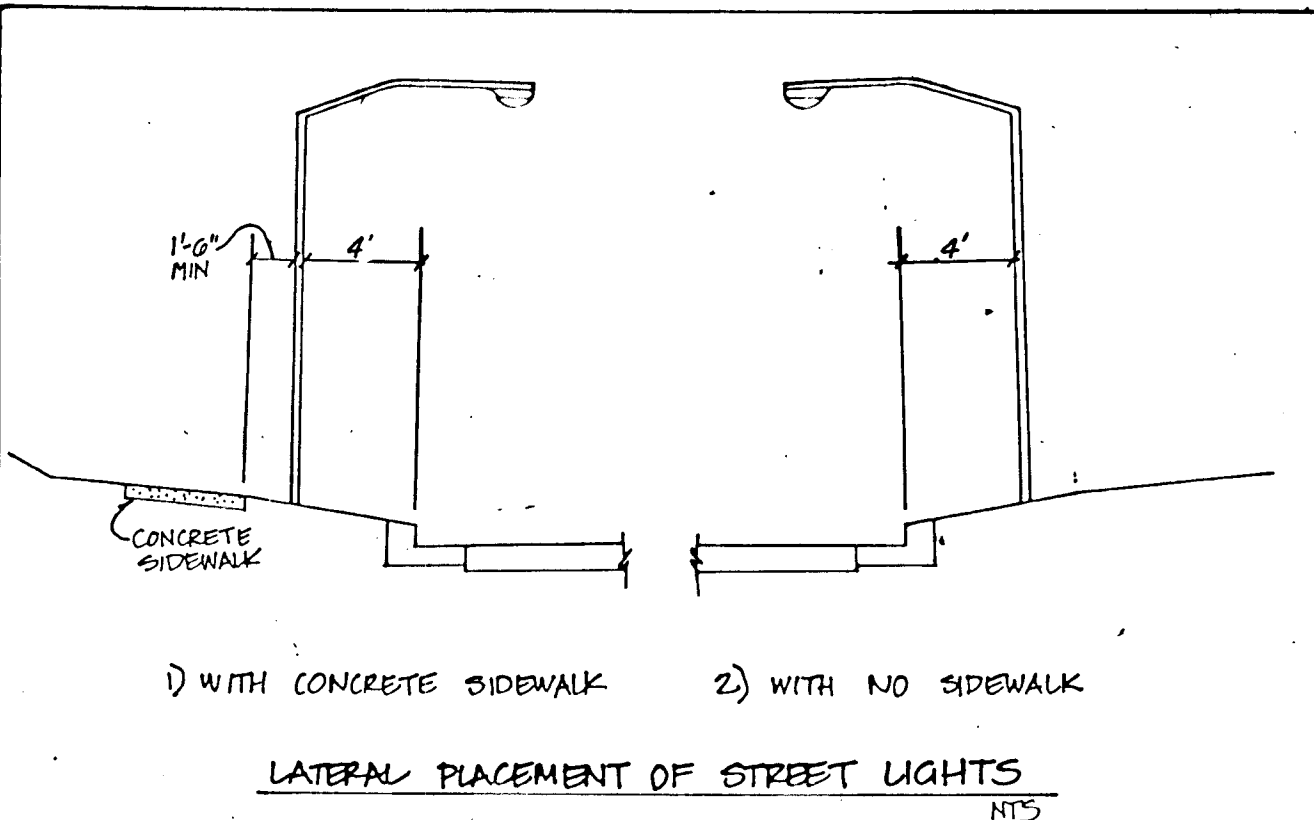
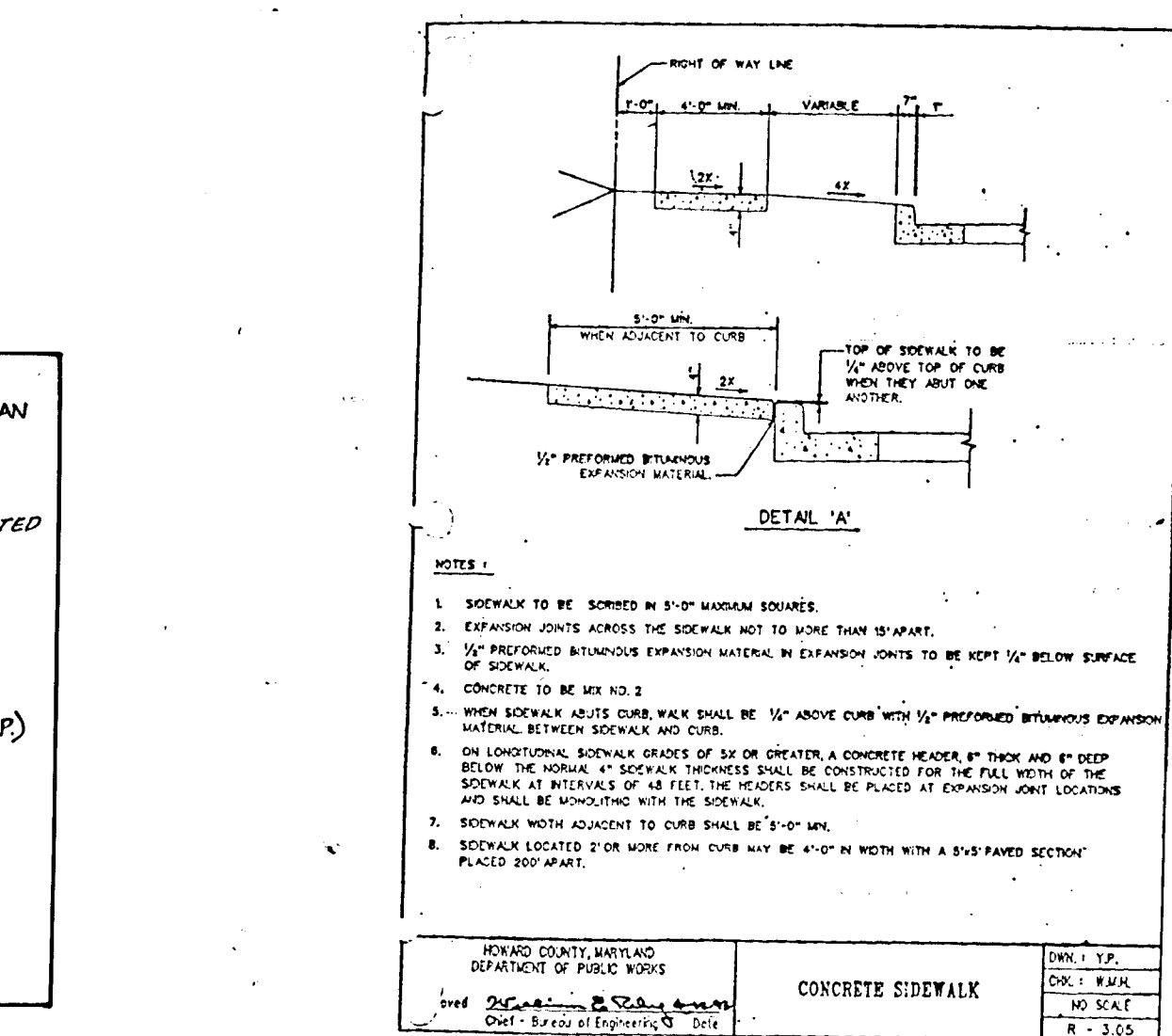
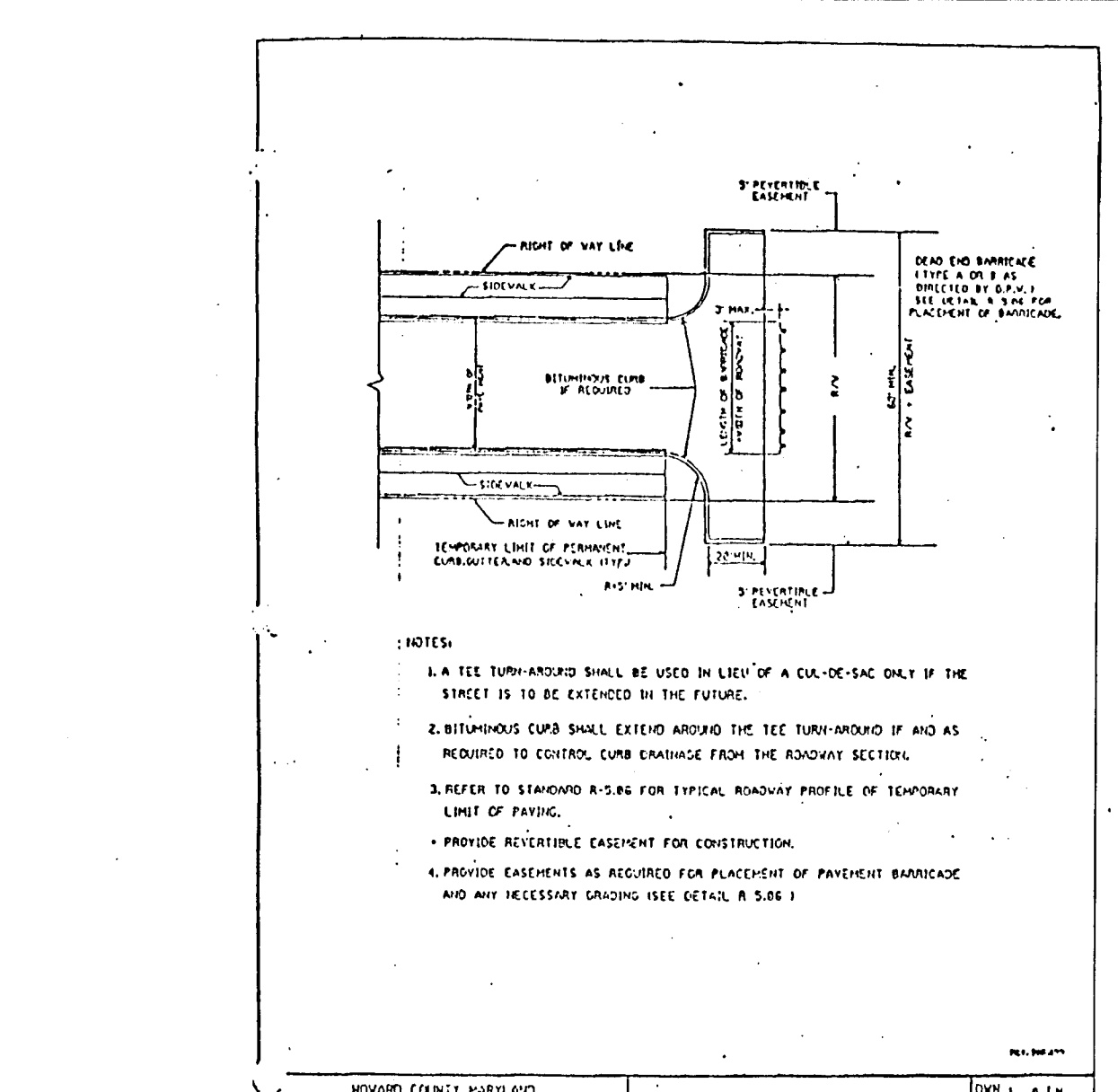
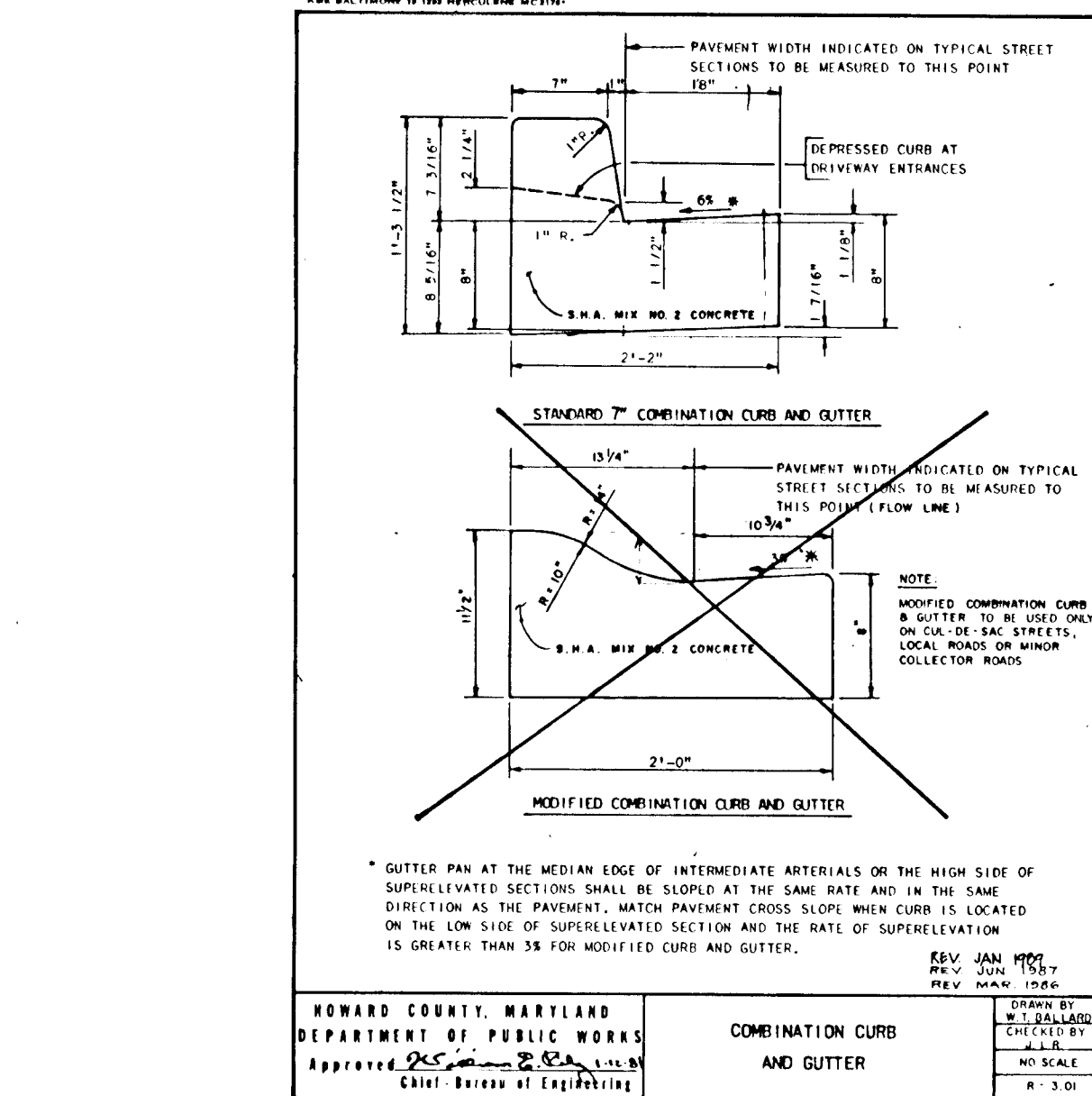
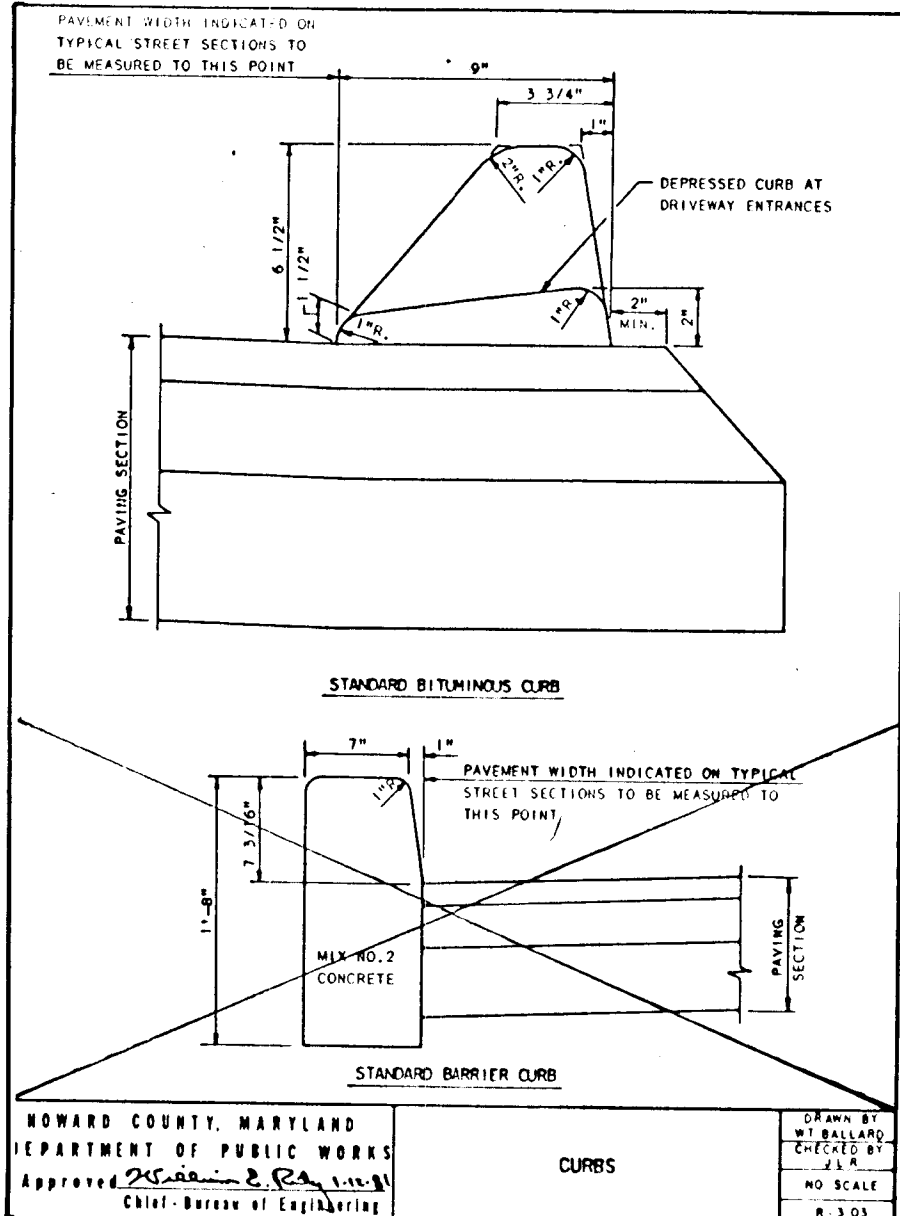
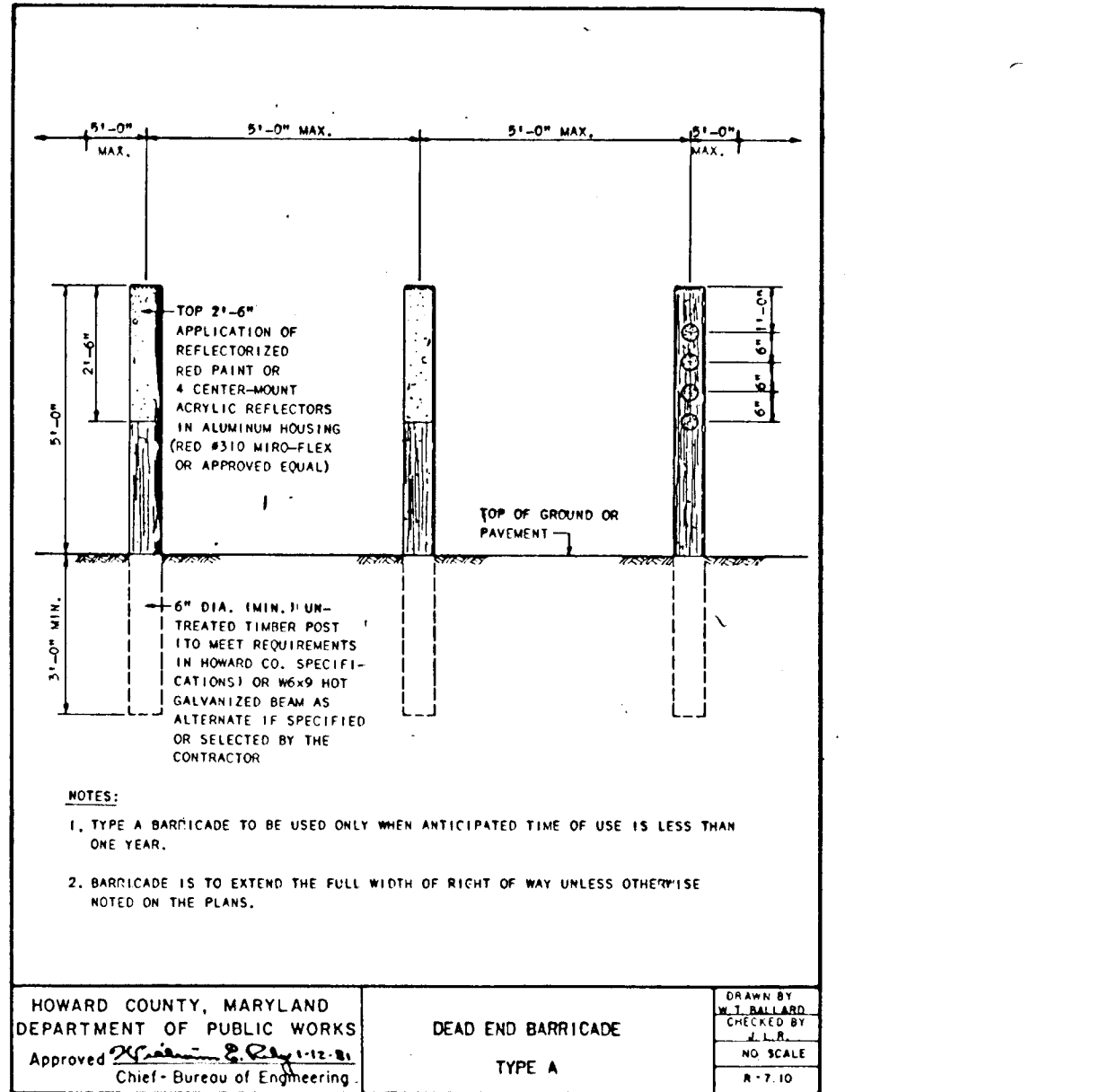
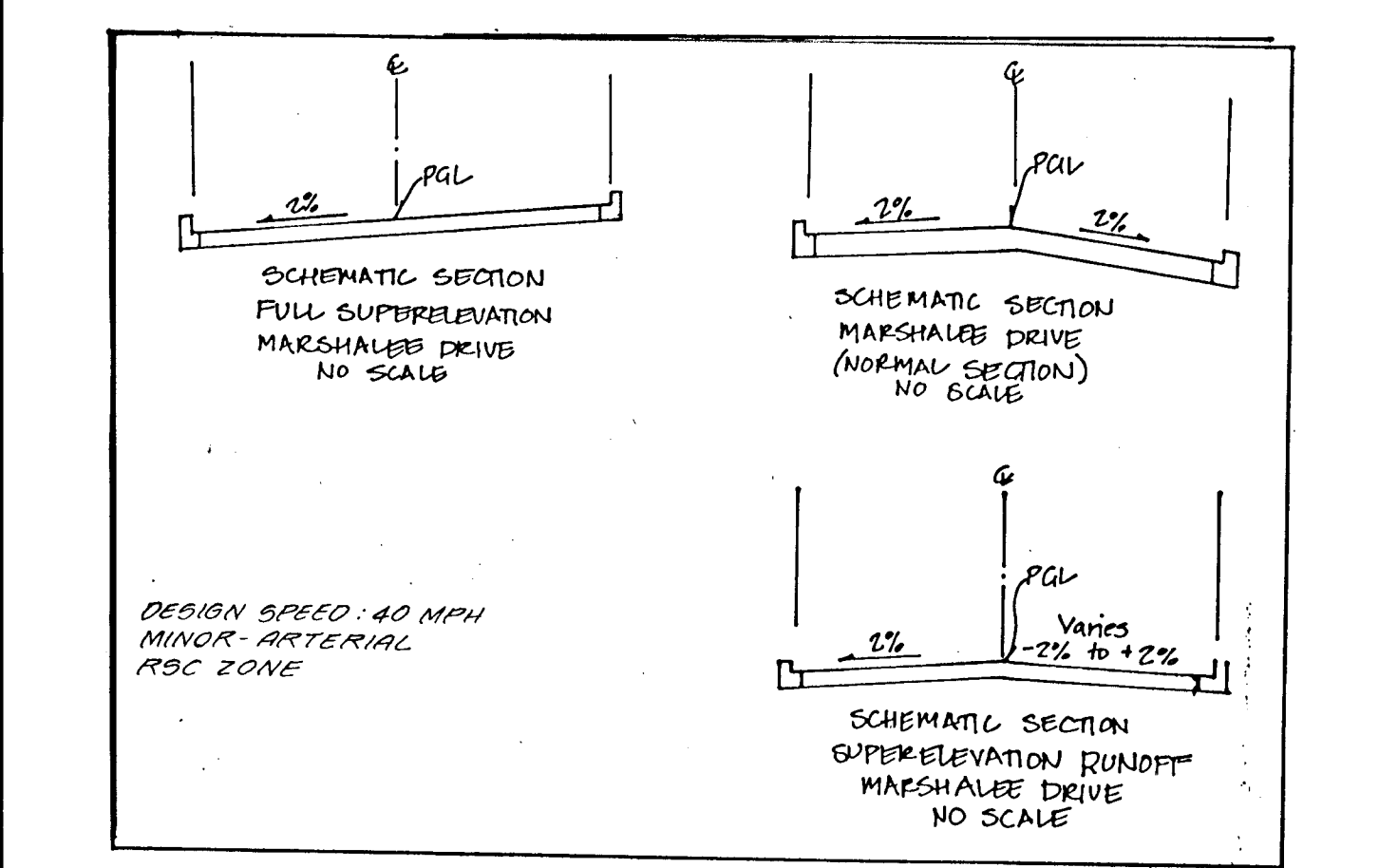
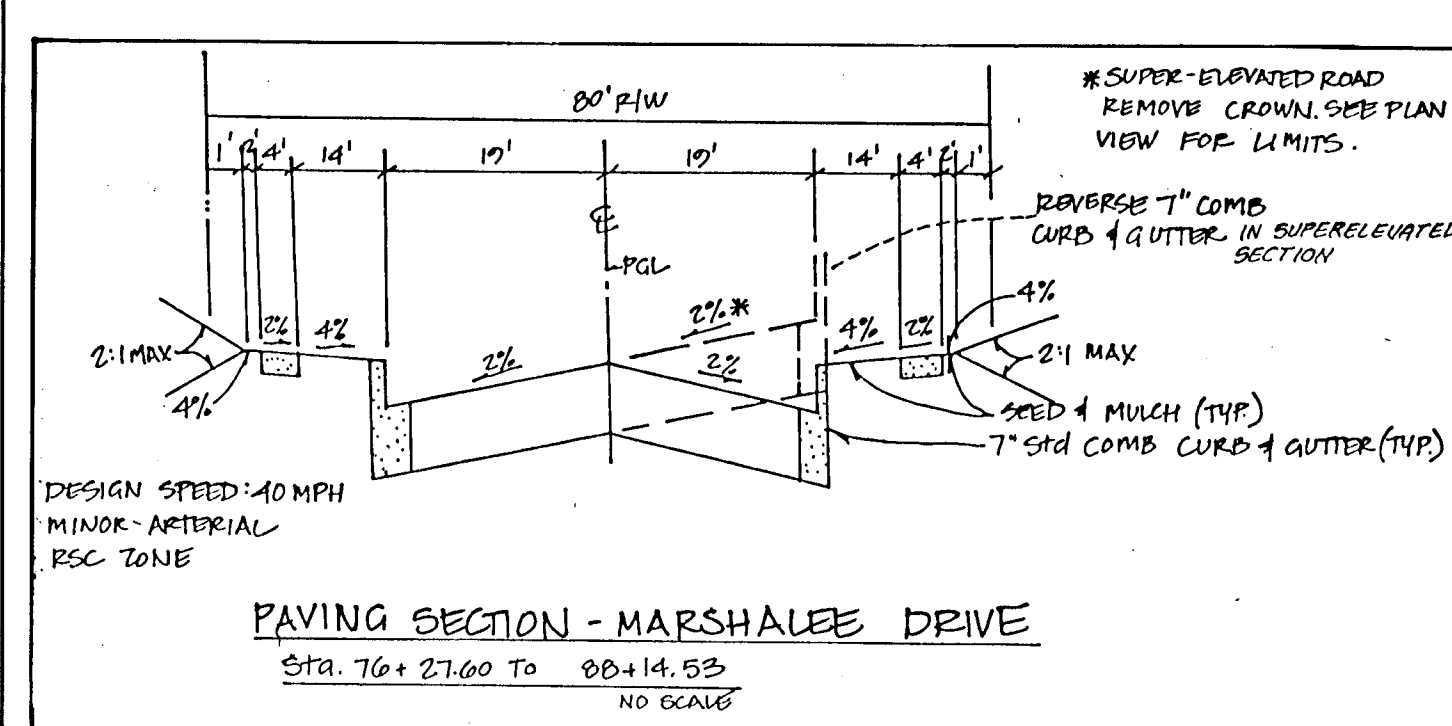
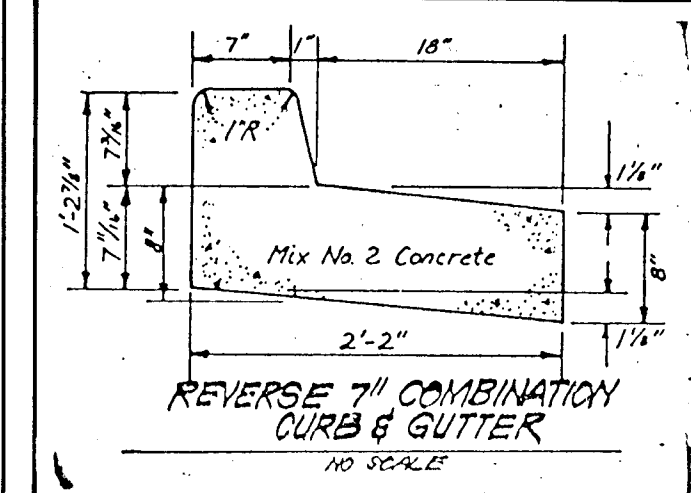
<b>LAND DESIGN ENGINEERING, INC.</b>		
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)		
DESIGNED TGL/ES	DRAINAGE AREA MAP	SCALE 1"=50'
DRAWN GL/WS	<b>SHADY OAKS</b> SECTION 1 AREA 2	DRAWING 8 of 14
CHECKED R.M.		JOB NO. 72-170-2
DATE 7-94	OWNER / DEVELOPER 100 INVESTMENT LIMITED PARTNERSHIP 8835 Columbia 100 Parkway Columbia, Maryland 21045 (410) 330-0000	FILE NO. FD4-28
F-94-28		

1707

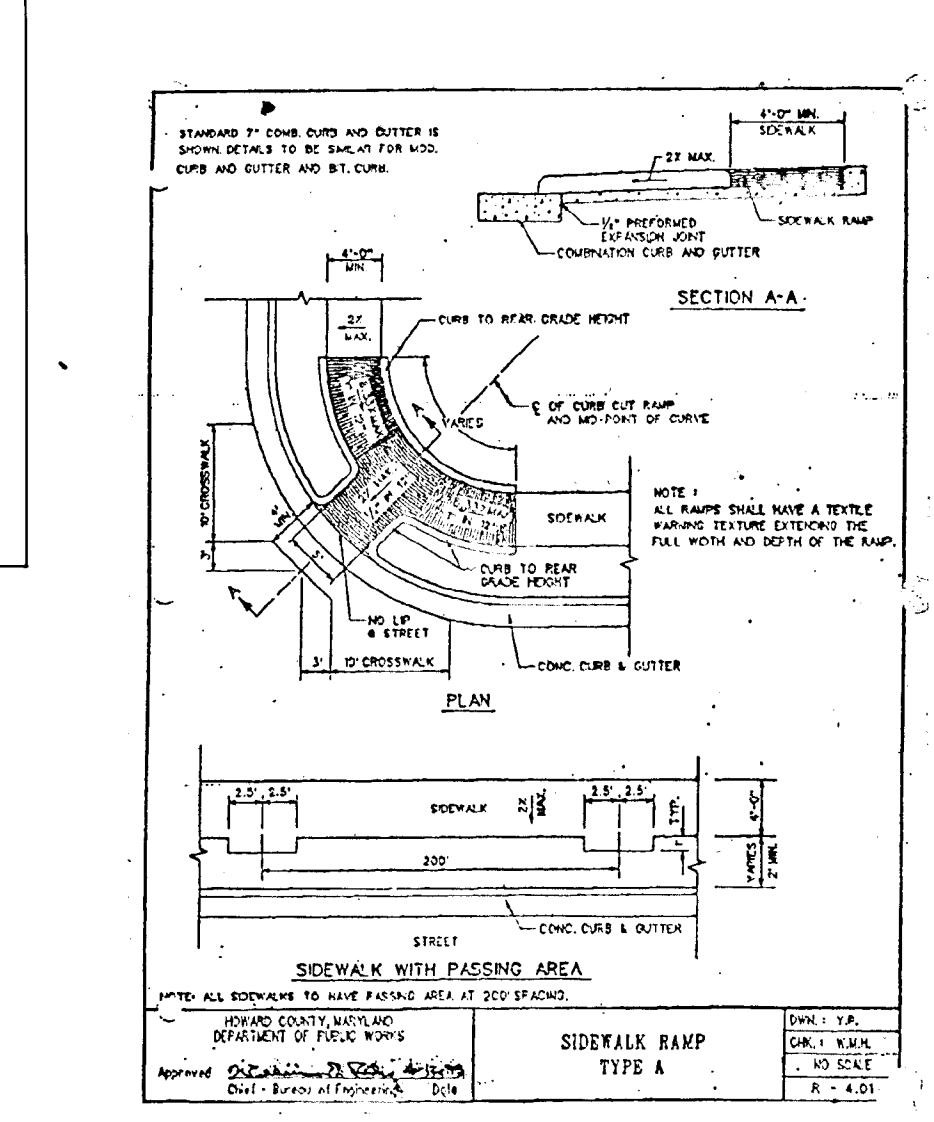
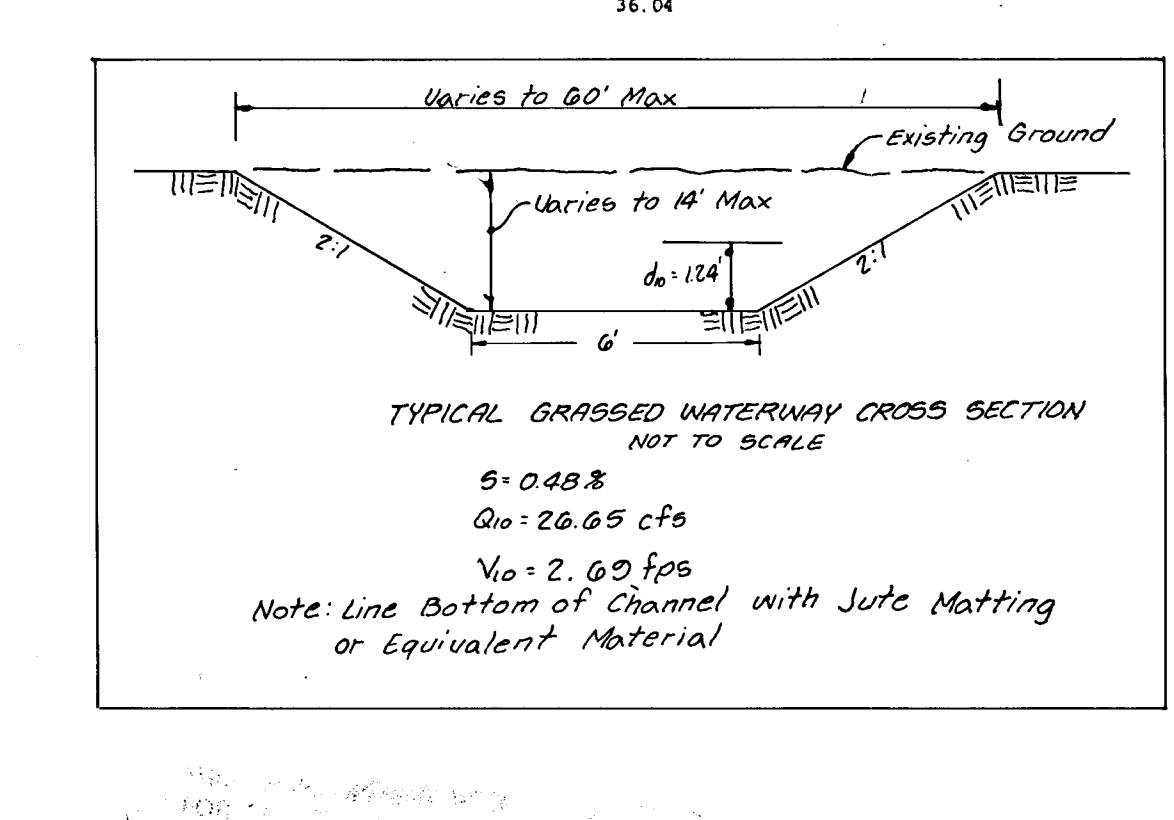
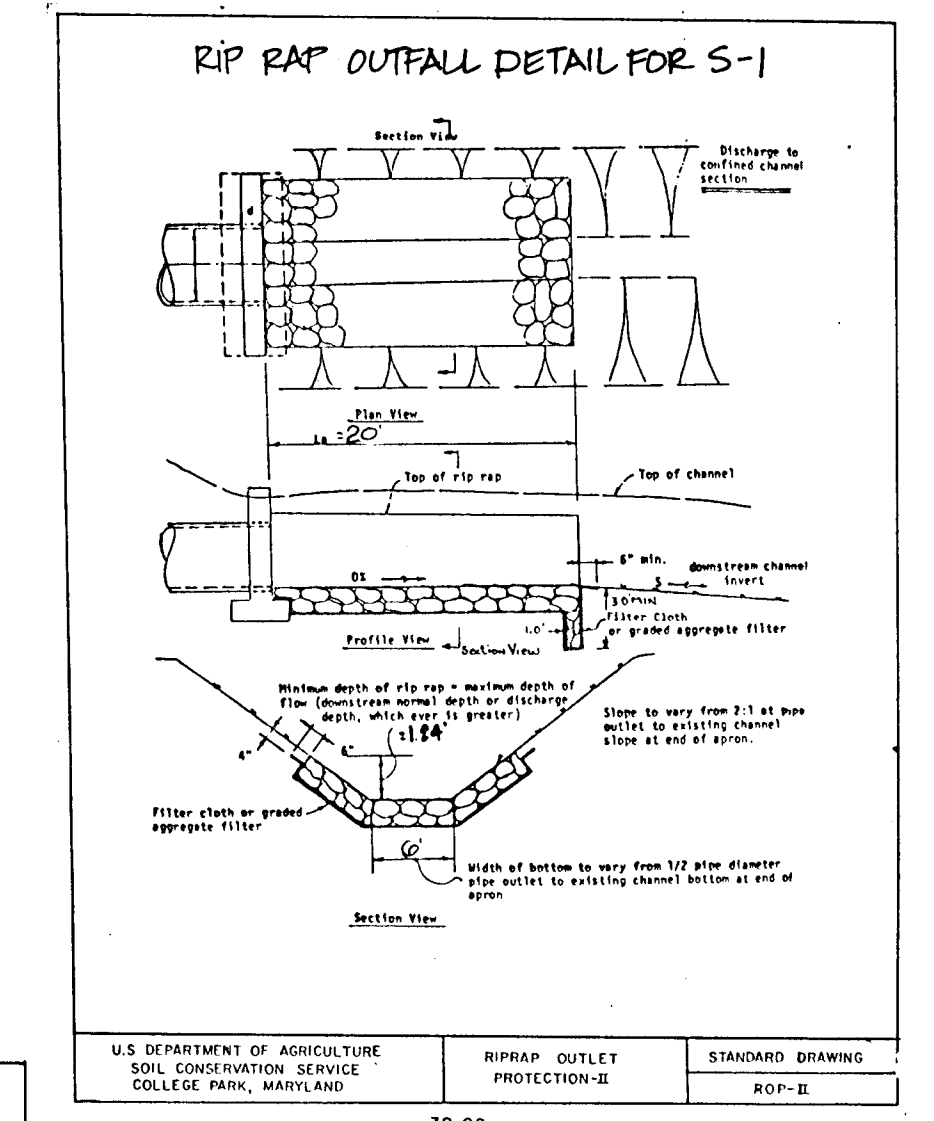
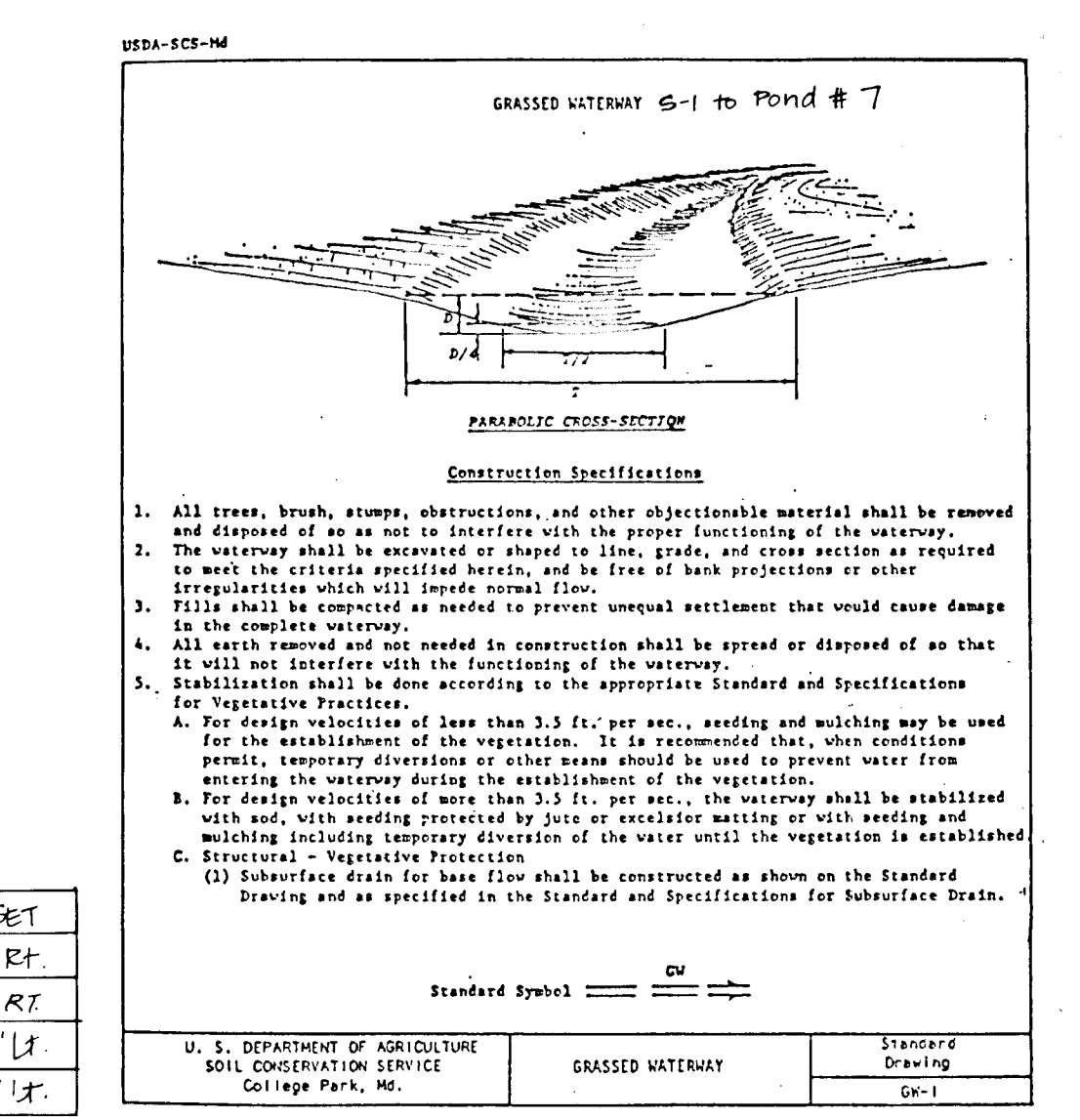


SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	GRANULAR BASE ALTERNATES
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	FULL DEPTH BIT. CONC. ALTERNATE 1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE 6" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" HOUSE GRADED SPRINKLED AGGREGATE BASE COURSE
P-6	ALL ZONES INTERMEDIATE ARTERIAL	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE 4" BIT. CONC. BASE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE 4" BIT. CONC. BASE 6" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" HOUSE GRADED SPRINKLED AGGREGATE BASE COURSE
P-7	STABILIZED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS	DOUBLE BIT. SURFACE STABILIZER 6" CRUSHER RUN BASE COURSE OR 4 1/2" HOUSE GRADED STABILIZED AGGREGATE BASE COURSE	DOUBLE BIT. SURFACE STABILIZER 6" CRUSHER RUN BASE COURSE OR 4 1/2" HOUSE GRADED STABILIZED AGGREGATE BASE COURSE
P-8	PAVED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS SPECIALIZED (PARKING AREAS) (NOTE: THIS SECTION MAY BE USED IN A STANDARD CONCRETE SHOULDER IN OFF SITE, PRIVATELY MAINTAINED AREAS ONLY)	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE	3" BIT. CONC. SURFACE 6" CRUSHER RUN BASE COURSE OR 3" HOUSE GRADED STABILIZED AGGREGATE BASE COURSE

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Eng'g  
P.S. APPROVED P-8  
MISCELLANEOUS SOILS SUBGRADE REQUIRES USE OF EITHER OF THE AGGREGATE PAVEMENT SECTION AS SHOWN ON THE PAVEMENT SECTION TABLES



ROAD NAME	STA.	LAMP TYPE	POST TYPE	POLE TYPE	OFFSET
MARSHALEE DRIVE	10+75 TO 14+00	150 WHPS	PENDANT FIXTURE	30' GALVANIZED STEEL-POLE	23' RT.
MARSHALEE DRIVE	14+00 TO 18+50	"	"	"	23' LT.
MARSHALEE DRIVE	18+50 TO 22+30	"	"	"	23' LT.



**ENGINEER'S CERTIFICATE**  
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature of Engineer \_\_\_\_\_ Date \_\_\_\_\_

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Signature of Developer \_\_\_\_\_ Date \_\_\_\_\_

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.  
U.S. Soil Conservation Service Date \_\_\_\_\_  
This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
Howard Soil Conservation District Date \_\_\_\_\_

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.  
*[Signature]* 9/15/94  
Chief, Land Development Division  
C.E. [Signature] 9/20/94  
Chief, Bureau of Engineering Date

APPROVED: Department of Planning and Zoning.  
*[Signature]* 9/23/94  
Chief, Division of Land Development and Research  
Jim [Signature] 9/23/94  
Date

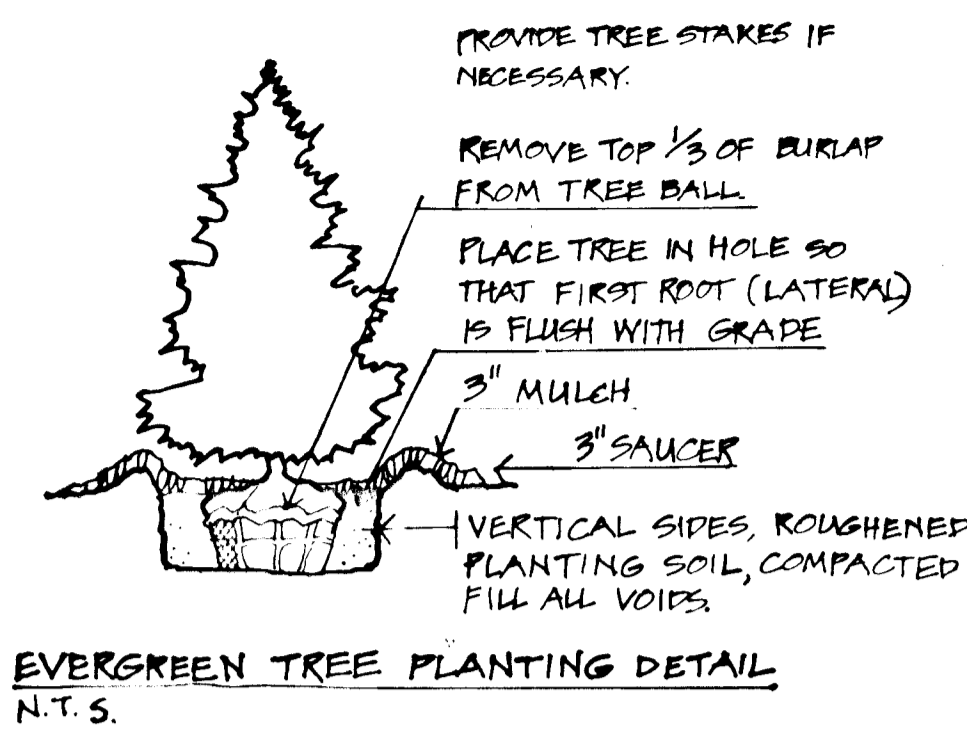
**LAND DESIGN ENGINEERING, INC.**  
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
(410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

Designed: TD/ES	ROAD DETAILS	Scale: As Shown
Drawn: WJ	SHADY OAKS SECTION ONE AREA TWO	Drawing 9 of 14
Checked: RM		Job No. 92-T10-Z
Date: 7-94	100 INVESTMENT LIMITED PARTNERSHIP 8835 Columbia 100 Parkway Columbia Maryland 21045 (410) 730-0810	File No. P94-28

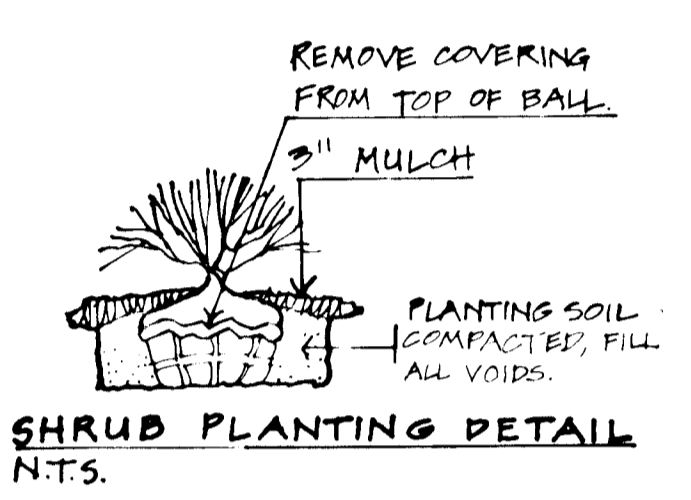
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1707





EVERGREEN TREE PLANTING DETAIL N.T.S.



SHRUB PLANTING DETAIL N.T.S.

STREET TREES APPROVED IN EARLIER SUBMISSION

(SHADY OAKS DEV.) ZONED RSC

GUY TREES W/ 2 PER TREE

NEVER CUT LEADER OUT OF TREE

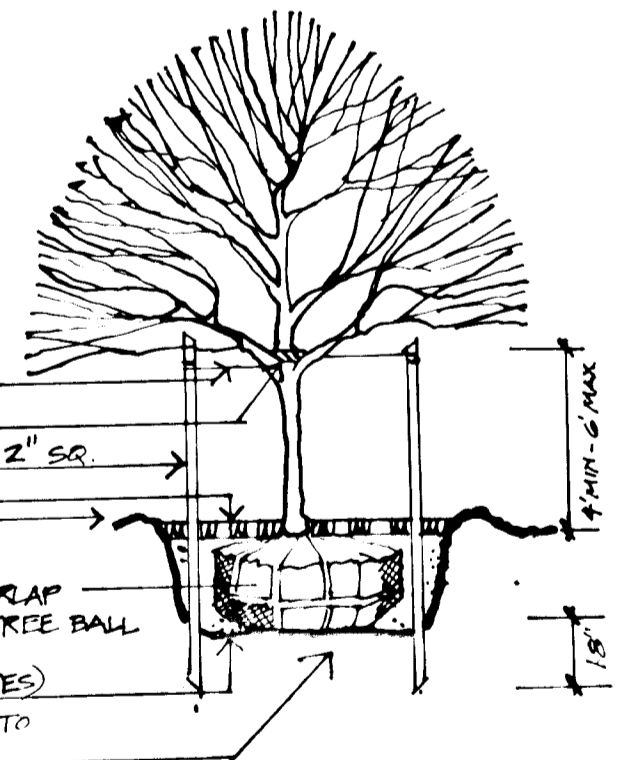
GUY Wires w/ TURNBUCKLE

RUBBER HOSE HARDWOOD STAKE 2\"/>

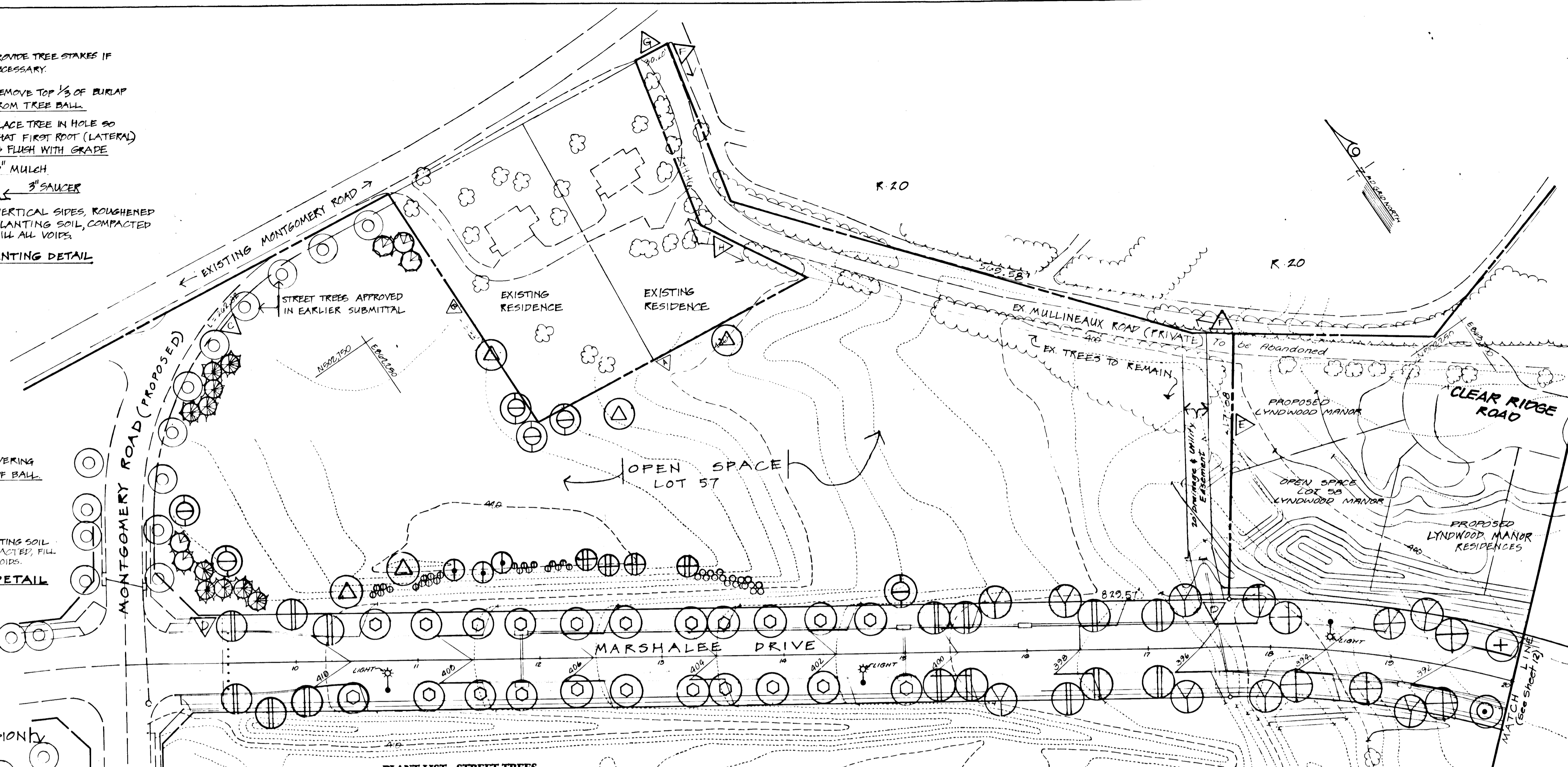
CUT AND REMOVE BURLAP FROM TOP 1/3 OF TREE BALL

SOIL MIX (SEE NOTES) SCARIFY SUBSOIL TO 8\"/>

DECIDUOUS TREE PLANTING DETAIL N.T.S.



1707



SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Linear Feet of Roadway Frontage/Perimeter	1092.29	424.4 LE
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NO	NO
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	NO	NO
Number of Plants Required	18	7
Number of Plants Provided	5 (1) 14 (5) 39	6 (1) 2 (1)

Comments 39 Shrubs substituted for 3 trees

NOTE: SCHEDULES B, C, & D NOT REQ'D AT THIS TIME.

SCHEDULE A PERIMETER LANDSCAPE EDGE

PROPERTY LINE	LENGTH	LANDSCAPE TYPE
A	111.04'	A
B	212.23'	A
C	262.82'	A
D	822.51'	A
E	217.08'	NONE INTERNAL LOT
F	169.58'	NONE, SEE BELOW
G	30.20'	NONE, "
H	244.46'	NONE, "

\* 1/2" ALONG EX. PRIVATE ROAD.

PLANTING NOTES

- GENERAL:
- Notify "Miss Utility" 72 hours prior to the installation of all plant material.
  - Plant installation must conform to the minimum standards cited in the latest edition of *Landscape Specification Guidelines*, published by the Landscape Contractors Association.
  - Plants to be located in the field by the owner or the owner's representative. Notify owner 72 hrs. in advance of planting.
  - A *Certification of Landscape Installation* is required as per the Howard County Landscape Ordinance.
  - Contact Landscape Architect regarding the substitution of plant material.
  - The number, size and location of plants shall not be changed. Substitutions must be included in the recommended plant list as per Howard County Landscape Ordinance.
  - Street tree locations have been shown wherever possible. Drive aprons of proposed units may not allow a traditional placement of trees.
- STREET TREE NOTES:
- Biologic root inhibitor barrier or containment shall be installed for trees planted closer than 3 feet to sidewalk.
  - Trees shall be placed 30 feet (min.) from all sign and intersections when planting occurs between sidewalk and curb.
  - Street trees may not be planted within 5 feet of a drain inlet, 5 feet of an open space access strip or 10 feet of a driveway.
  - Street tree planting must conform to the *Subdivision and Land Development Regulations* and the Department of Public Works' Design Manual of Howard County.
- PLANTING:
- 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.
  - Tree pits shall be backfilled with 60% topsoil, 25% peat and 15% sand with one pound of 10-10-10 fertilizer per pit.
  - Topsoil shall be sandy loam soil, free from noxious weeds or grasses, roots, clay lumps, stones, sticks, etc. Peat moss shall be commercial with pH 4.5 to 5.5, free of woody material or harmful minerals.
  - 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. Fertilizer shall be applied with watering to insure a healthy plant.
  - 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.
- MAINTENANCE AND GUARANTEES:
- Plant material to be alive and healthy at the time of the guarantee period specified as per the Howard County Landscape Ordinance.
  - Maintenance shall begin immediately after planting and continue to the end of the guarantee period.
  - Maintenance consists of pruning, watering, weeding, re-mulching, resetting plants to proper grades as needed and repairing guys and stakes as needed.

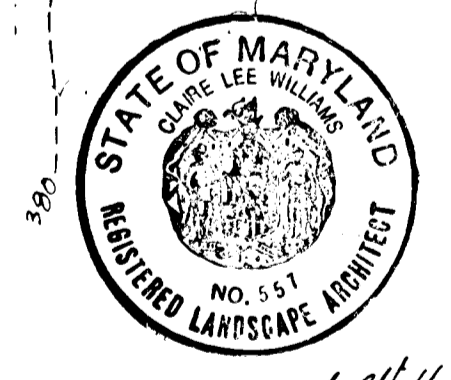
PLANT LIST STREET TREES

NO.	KEY	QUAN.	PLANT NAME	SIZE	COND.	REMARKS
1	⊕	15	Acer rubrum 'Red Sunset' Red Sunset Red Maple	2.5-3" CAL.	B&B	FULL 40' O. C.
2	⊕		Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	2.5-3" CAL.	B&B	FULL 40' O. C.
3	⊕	8	Cladrasia lutea American Yellowwood	2.5-3" CAL.	B&B	FULL 35-40'
4	⊕	7	Fraxinus pennsylvanica 'Marshall's Seedless' Marshall's Seedless Green Ash	2.5-3" CAL.	B&B	FULL 40' O. C.
5	⊕		Ginkgo biloba 'Autumn Gold' Autumn Gold Ginkgo	2.5-3" CAL.	B&B	FULL Male only
6	⊕	14	Gleditsia tricanthos inermis Imperial Thornless Honey Locust	2.5-3" CAL.	B&B	FULL
7	⊕	22	Platanus x acerifolia 'Columbia' Columbia London Plane	2.5-3" CAL.	B&B	FULL
8	⊕		Prunus serotina Sargent Cherry	2.5-3" CAL.	B&B	30' O. C. MAX
9	⊕	4	Quercus rubra Northern Red Oak	2.5-3" CAL.	B&B	FULL

PLANT LIST PERIMETER LANDSCAPE

NO.	KEY	QUAN.	PLANT NAME	SIZE	COND.	REMARKS
1	⊕	4	Cyatococcus vitidis 'Winter King' Winter King Hawthorn	1.5-2" CAL.	B&B	FULL 20' O. C.
2	⊕	5	Cedrus deodara Deodar Cedar	6-8" HT	B&B	12-15' O. C.
3	⊕	5	Fraxinus americana 'Autumn Purple' Autumn Purple White Ash	2.5-3" CAL.	B&B	FULL
4	⊕		Magnolia Stellata Star Magnolia	6-8" HT	B&B	12-15' O. C.
5	⊕	10	Pinus strobus White Pine	6-8" HT	B&B	12-15' O. C.
6	⊕	6	Quercus palustris 'Sovereign' Sovereign Pin Oak	2.5-3" CAL.	B&B	FULL
7	⊕	5	Prunus yedoensis Yoshino Cherry	1.5-2" CAL.	B&B	FULL
8	⊕	17	Forsythia suspensa var 'sieboldii' Siebold Weeping Forsythia	2-2.5" HT	B&B	4' O. C.
9	⊕	22	Rhus copallina Flameleaf Sumac	18-24" HT	CONT.	4' O. C.

General Notes:  
 1. The owner/developer is responsible for the planting of all street trees and plant material required to meet the standards established by the Howard County Landscape Manual.  
 2. There shall be a minimum of 20' between street trees and street trees.  
 3. This plan has been prepared in accordance with the provision of section 10-120 of the Howard County Code and Landscape Manual.  
 4. Final site survey for the required landscaping has been posted as part of the DPW Developers Agreement in the amount of \$2500.00.



ENGINEER'S CERTIFICATE  
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer \_\_\_\_\_ Date \_\_\_\_\_

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Signature of Developer \_\_\_\_\_ Date \_\_\_\_\_

These plans have been reviewed by the Howard Soil Conservation District and meet the technical requirements.

U.S. Soil Conservation Service Date \_\_\_\_\_

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District Date \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: 9/22/94

C.E. Zetter acting Chief, Bureau of Engineering Date

Signature: Andrew M. Donaher Date: 9-15-94

Chief, Bureau of Highways HS Date

APPROVED: Department of Planning and Zoning

Signature: \_\_\_\_\_ Date: 9/23/94

Chia Jurnomy Chief, Division of Land Development and Research

STATE OF MARYLAND REGISTERED LANDSCAPE ARCHITECT

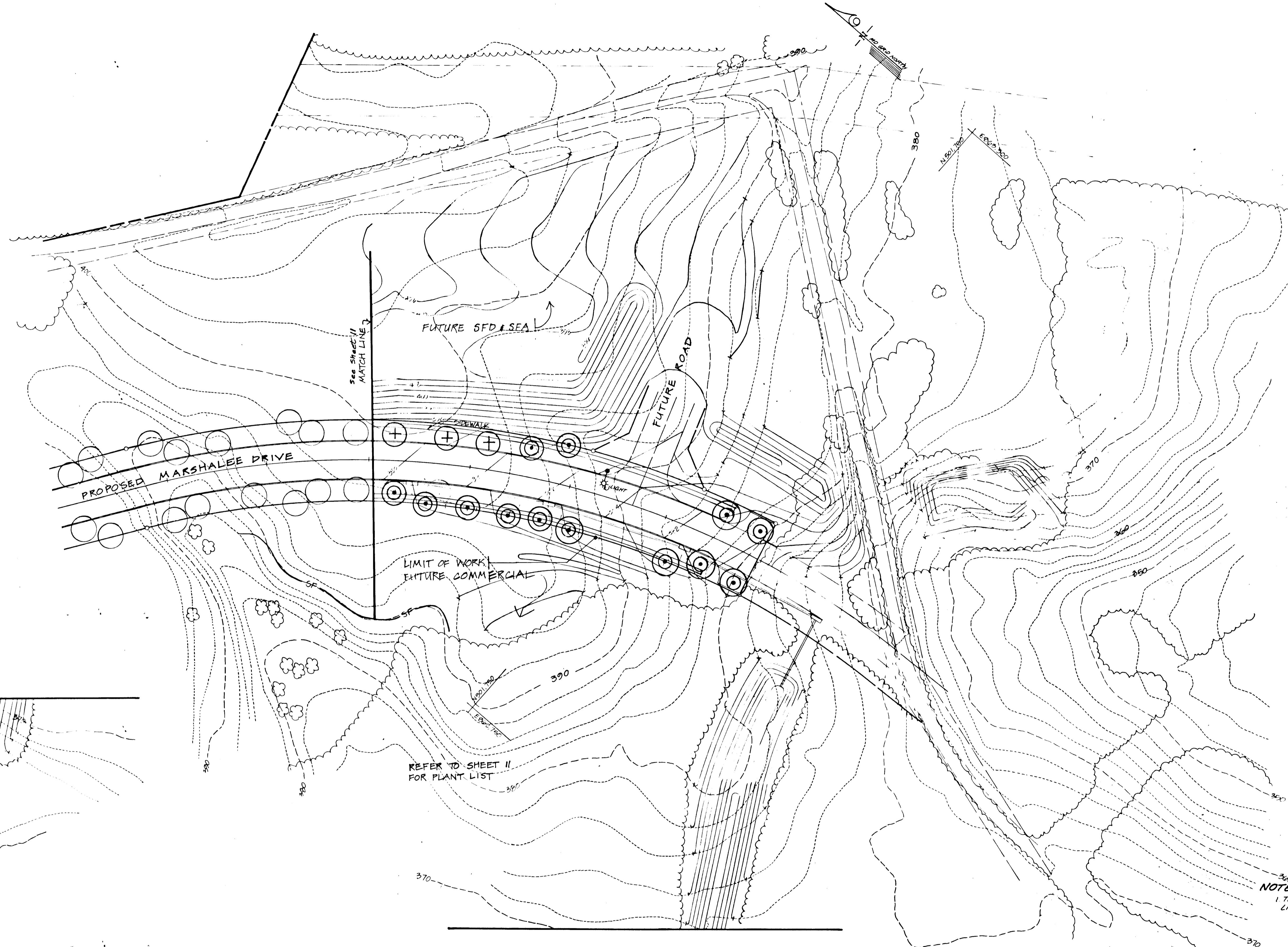
Signature: Claire K. Williams Date: 9-2-94

LAND DESIGN ENGINEERING, INC.

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
 (410) 715-1070 (Balt.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

Designed CLW	LANDSCAPE PLAN <b>SHADY OAKS</b> SECTION ONE AREA TWO LOT 57 AND PARCEL A Tax Map 37 Part of Parcel 643 640 1st Election District Howard County, MD	Scale 1" = 50'
Drawn CLW		Drawing 5/Sheet 11 of 14
Checked 7-93		Job No 072-170-2
Date 7-94	100 INVESTMENT LIMITED PARTNERSHIP Columbia, Maryland 21045 (410) 730-0810	File No F94-28

F-94-28



Chaire L. Williams  
1.2.14

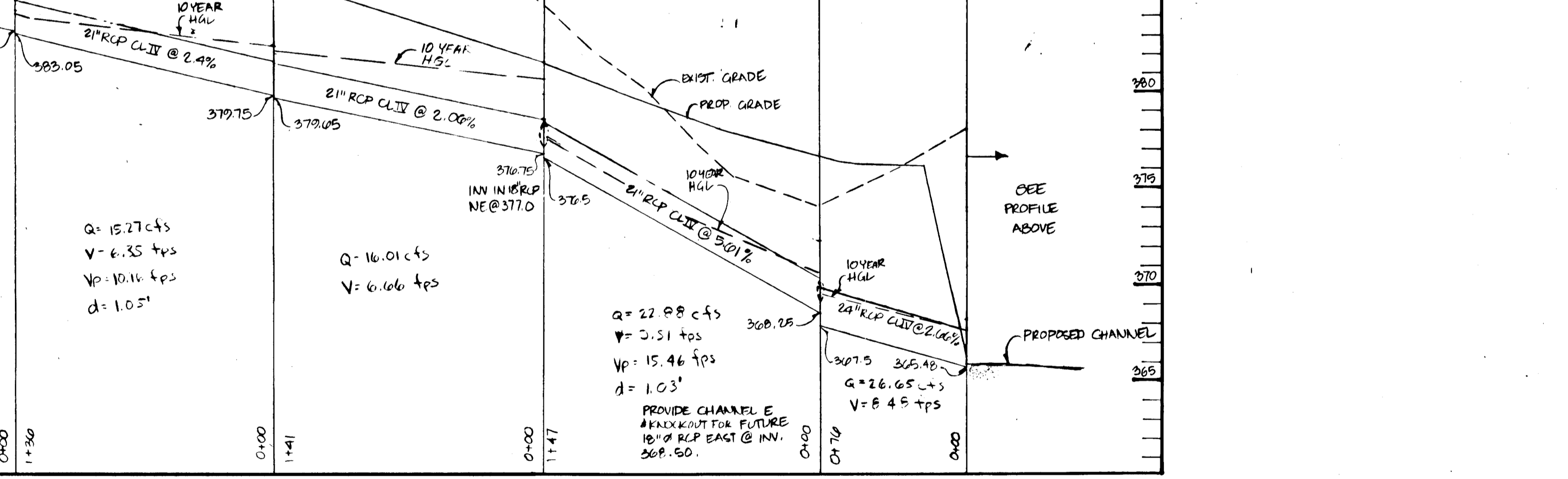
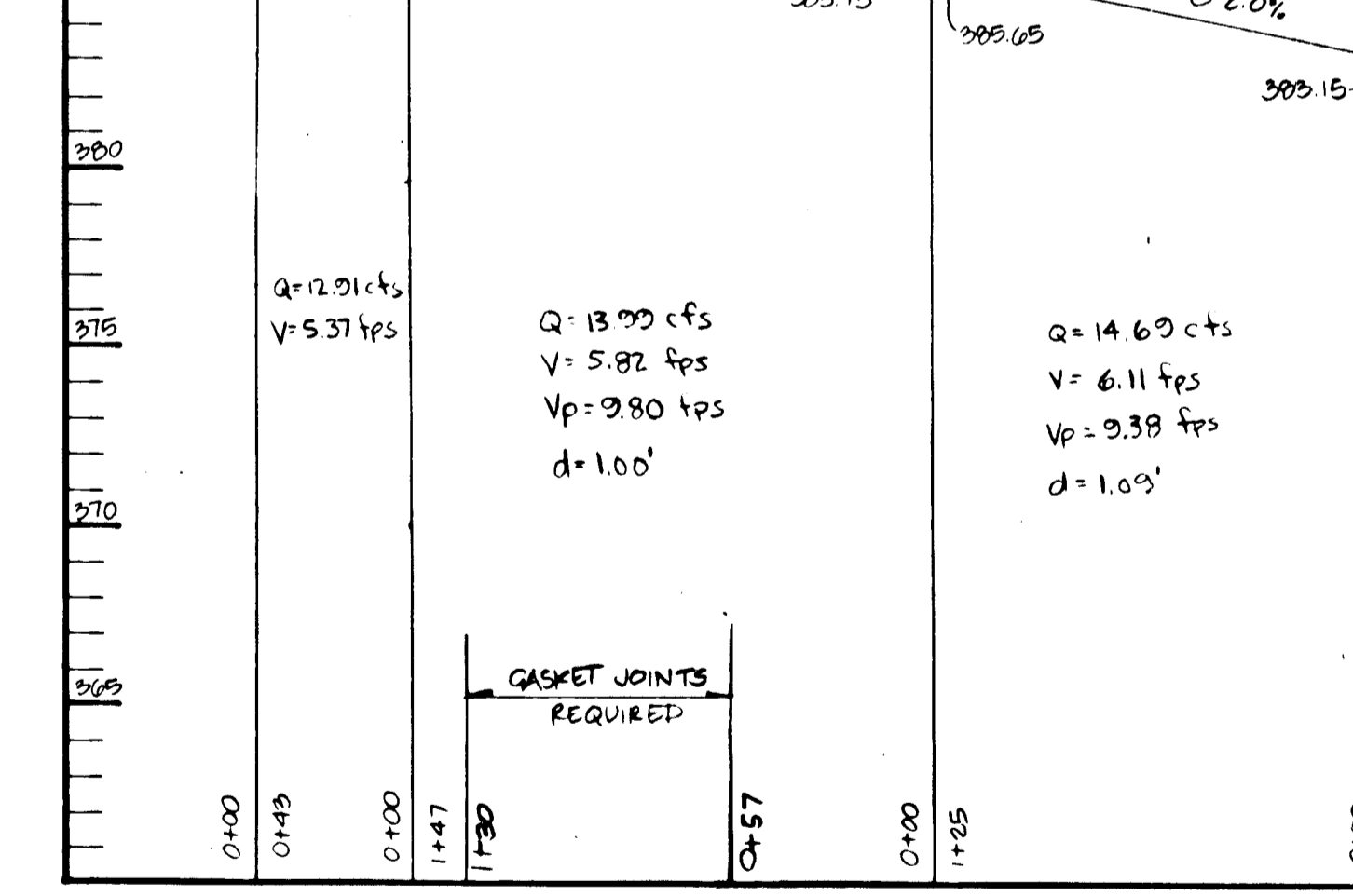
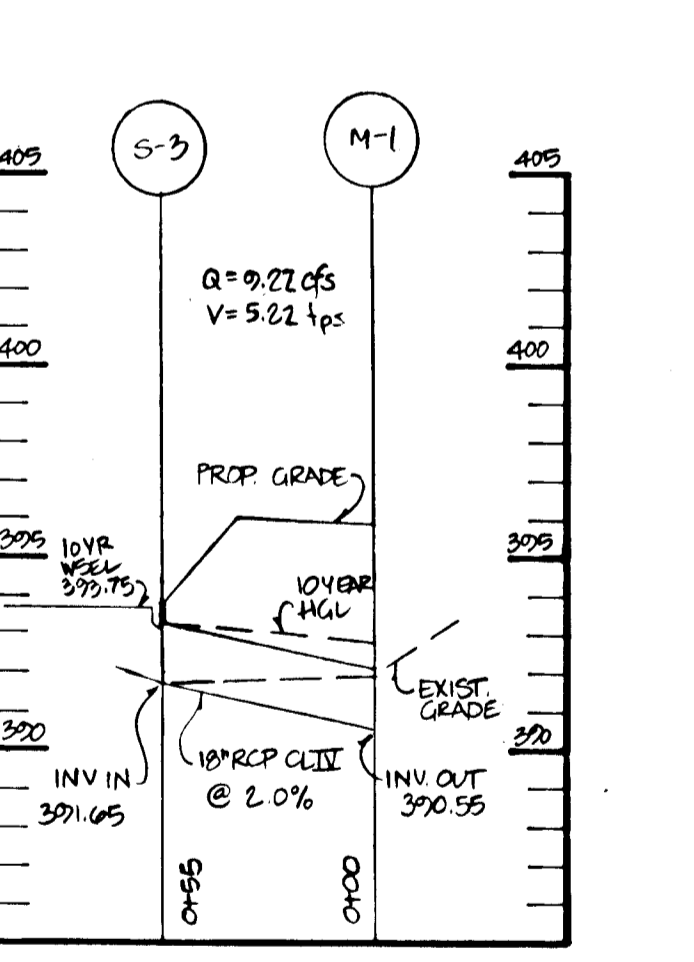
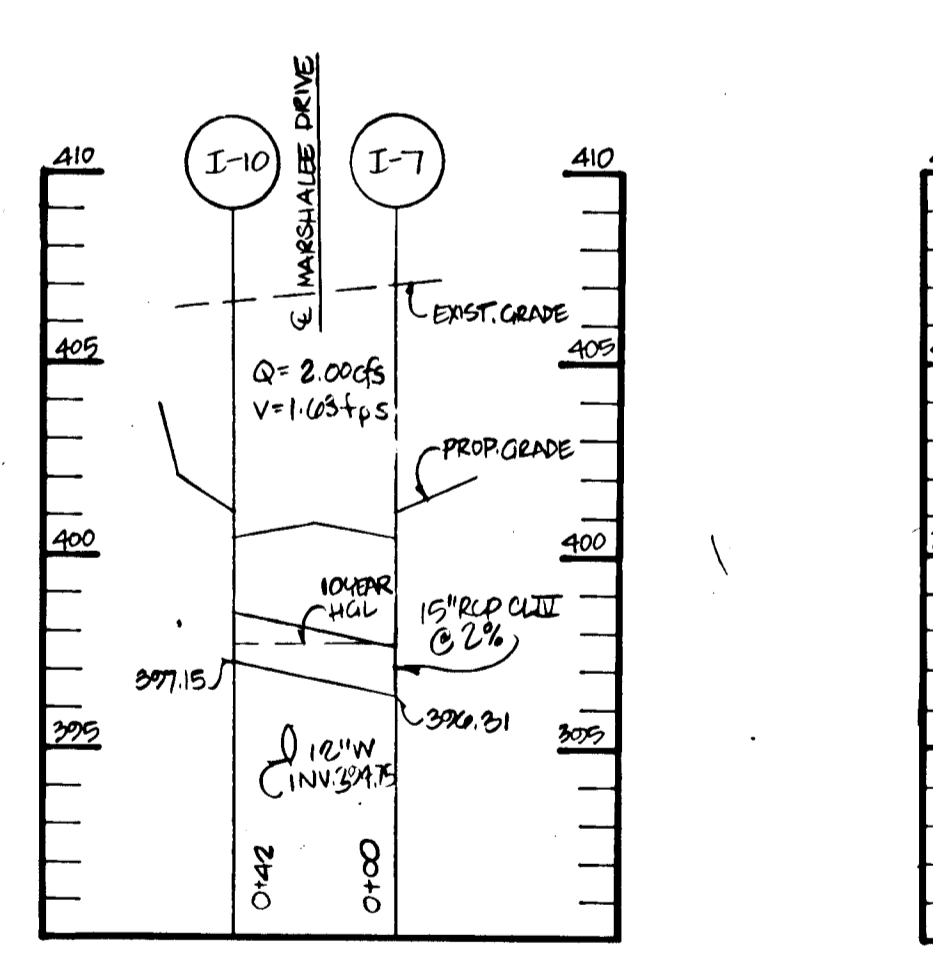
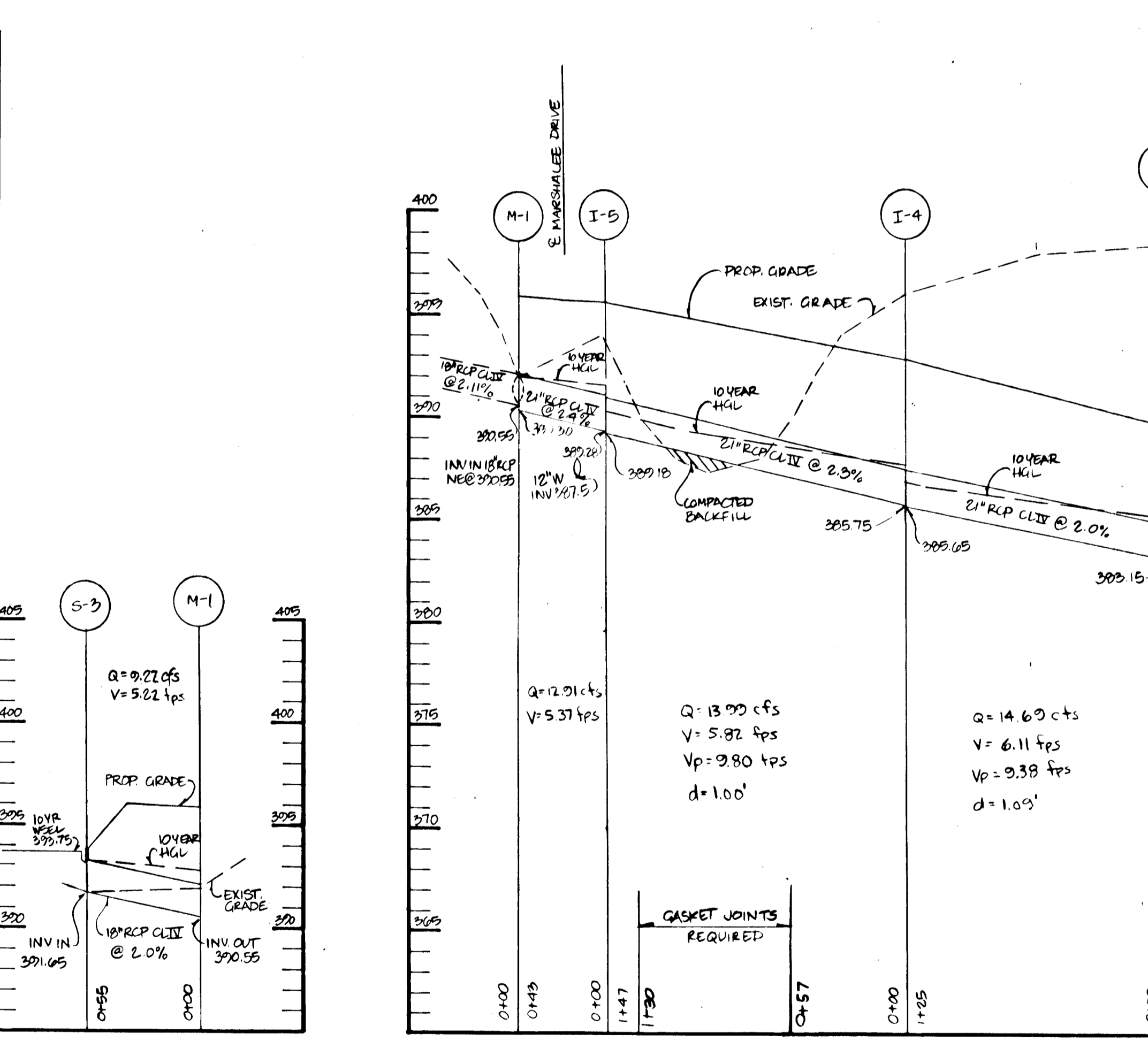
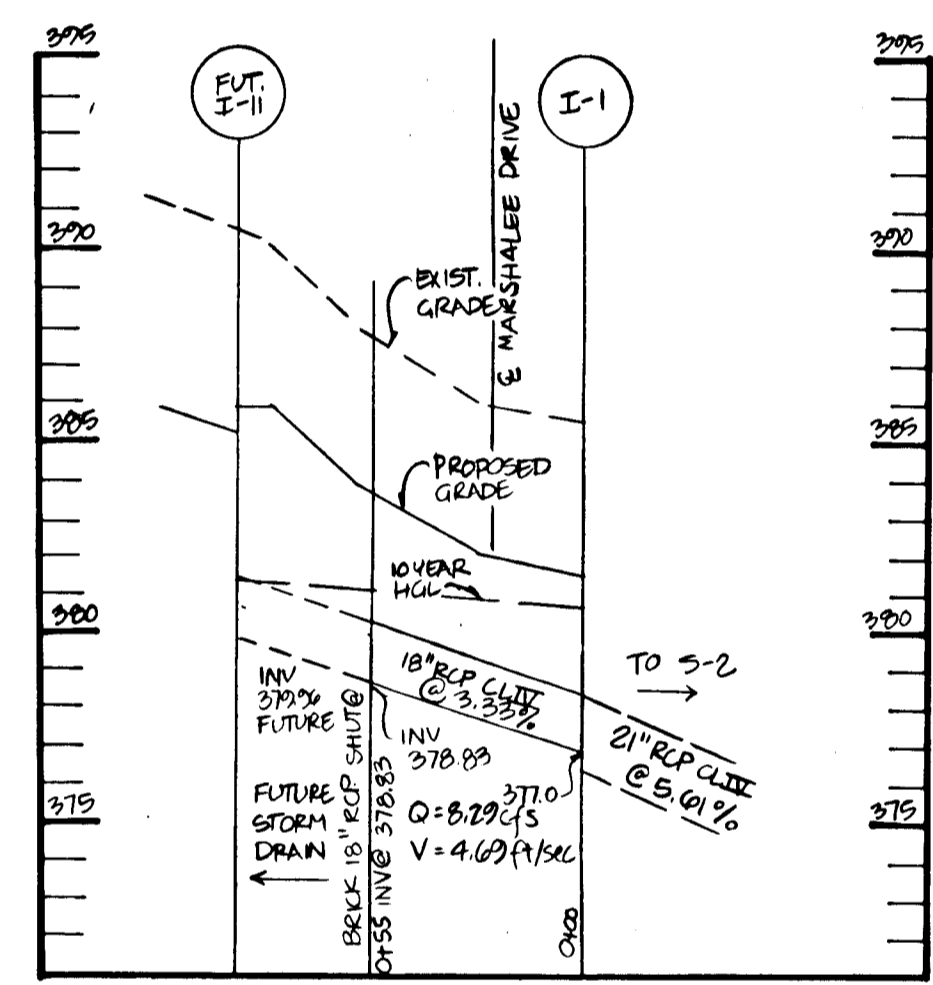
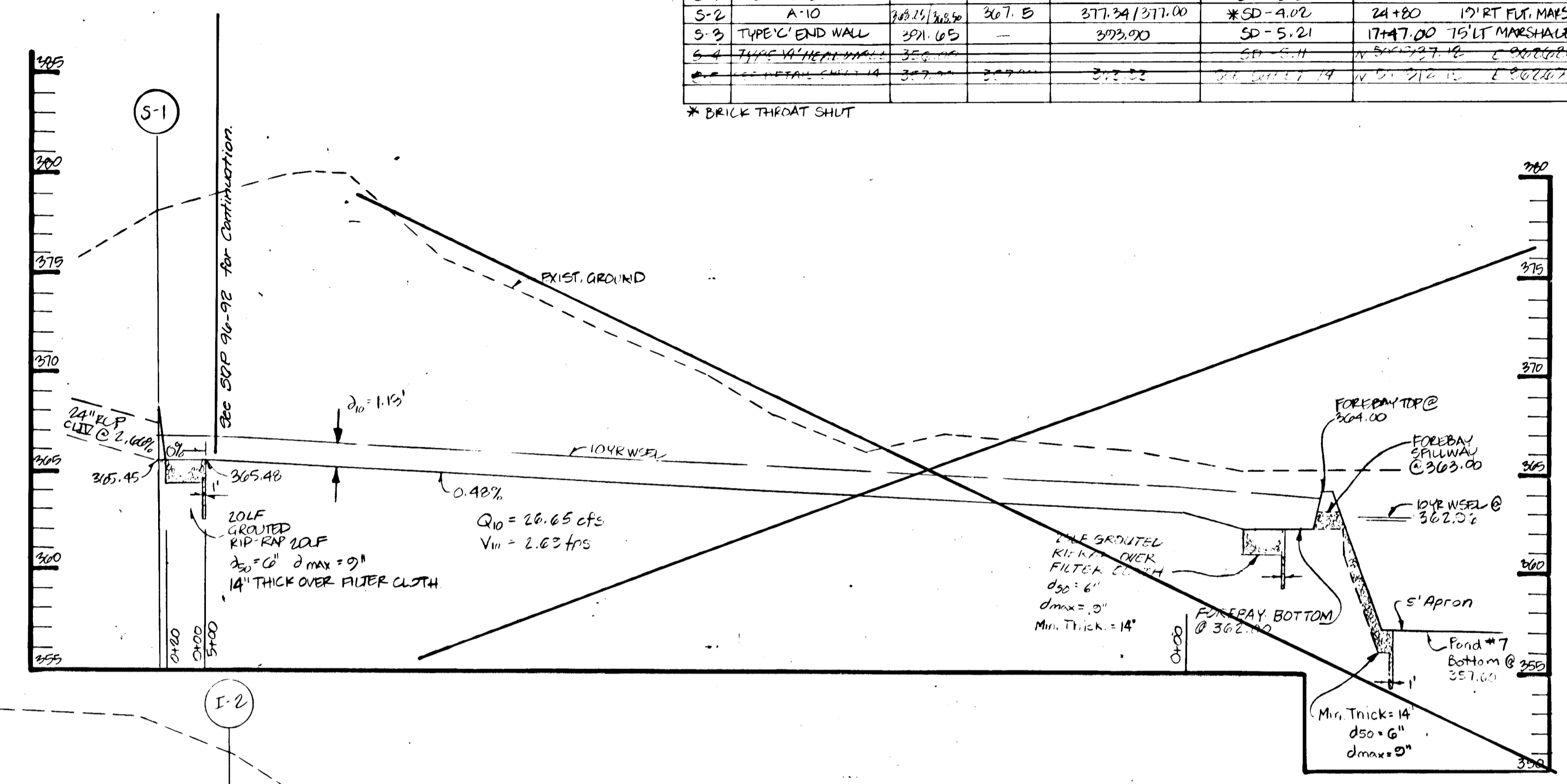
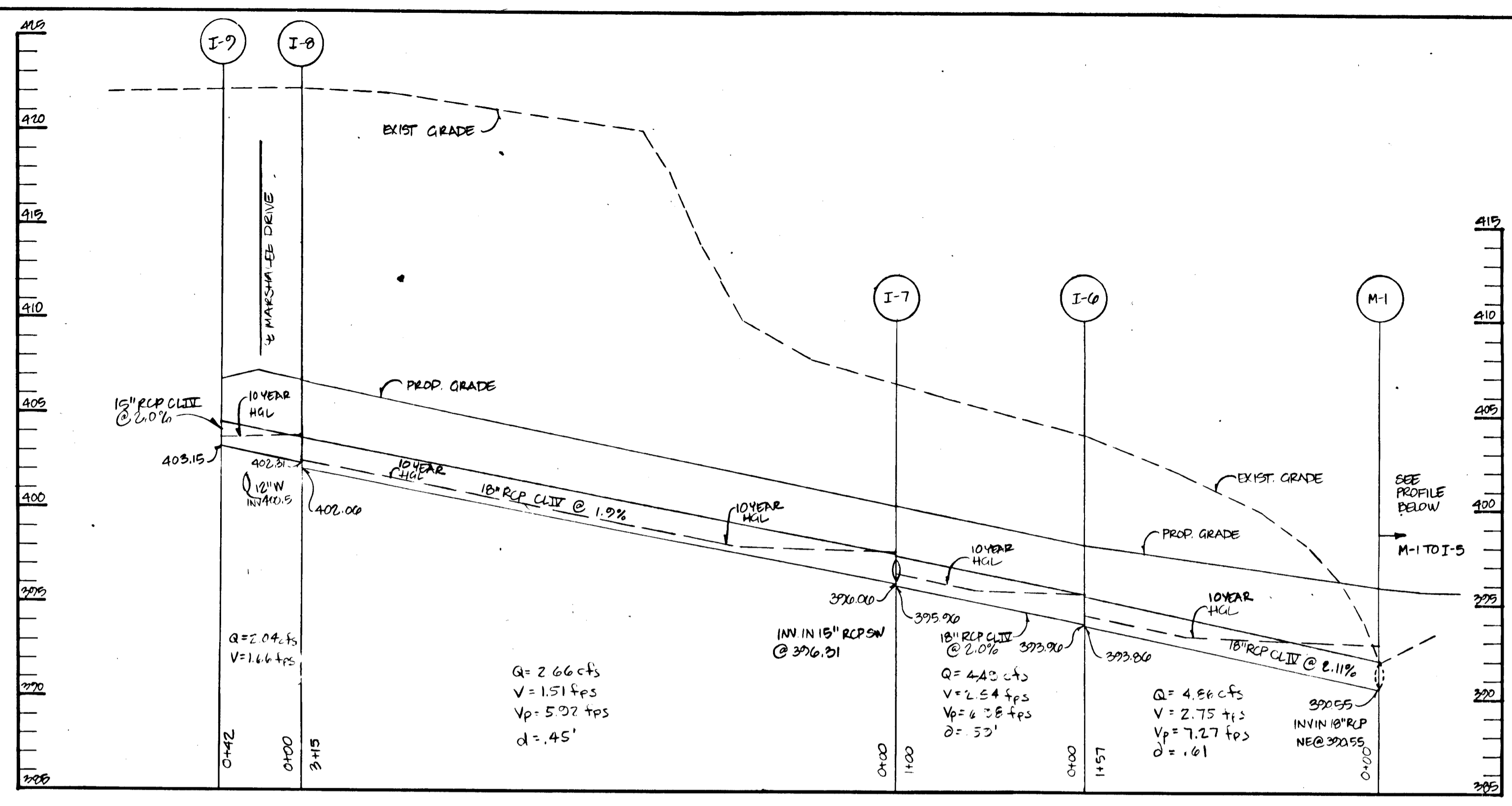
NOTE:  
There shall be a Minimum of 20' Between Street Lights and Street Trees.

1707

<p><b>ENGINEER'S CERTIFICATE</b></p> <p>I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.</p> <p>Signature of Engineer _____ Date _____</p>		<p><b>DEVELOPER'S CERTIFICATE</b></p> <p>I will certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.</p> <p>Signature of Developer _____ Date _____</p>		<p>APPROVED: Department of Public Works for Storm Drainage Systems and Roads</p> <p><i>[Signature]</i> 9/24/14 Chief, Land Development Division</p>		<p>APPROVED: Department of Planning and Zoning</p> <p><i>[Signature]</i> 9/23/14 Chief, Division of Land Development and Research</p>		<p><b>LAND DESIGN ENGINEERING, INC.</b></p> <p>8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)</p>	
<p>U.S. Soil Conservation Service Date _____</p> <p>This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.</p> <p>Howard Soil Conservation District Date _____</p>		<p>APPROVED: Department of Public Works for Storm Drainage Systems and Roads</p> <p><i>[Signature]</i> 7/23/14 Chief, Bureau of Engineering</p>		<p>APPROVED: Department of Planning and Zoning</p> <p><i>[Signature]</i> 7-24 Date</p>		<p><b>LANDSCAPE PLAN</b> <b>SHADY OAKS</b> <b>SECTION ONE AREA TWO</b> <b>LOT 57 AND PARCEL A</b> Tax Map 37 Part of Parcel G43 640 1st Election District Howard County, MD</p> <p>DESIGNED: CLW DRAWN: CLW CHECKED: _____ DATE: 7-24</p> <p>SCALE: 1" = 50' DRAWING: 12 of 14 JOB NO: 072-1702 FILE NO: F04-28</p>			

F-94-28

STRUCTURE SCHEDULE						
NO.	TYPE	INV. IN	INV. OUT	TOP ELEVATION UPPER LOWER	REMARKS	LOCATION
I-1	A-10	316.13/317.00	370.05	382.00 381.71	SD-4.02	23+29.30 10' RT MARSHALLEE DRIVE
I-2	A-10	379.75	379.05	386.49 386.17	SD-4.02	21+84.38 10' RT MARSHALLEE DRIVE
I-3	A-10	385.15	385.05	390.13 389.80	SD-4.02	20+44.38 10' RT MARSHALLEE DRIVE
I-4	A-10	385.75	385.05	392.85 392.65	SD-4.02	19+15.05 10' RT MARSHALLEE DRIVE
I-5	A-10	389.28	389.18	395.86 395.04	SD-4.02	17+05 10' RT MARSHALLEE DRIVE
I-6	A-10	393.90	393.80	399.16 399.14	SD-4.02	16+00 10' RT MARSHALLEE DRIVE
I-7	A-10	396.00/396.31	395.90	401.16 400.94	SD-4.02	15+00 10' RT MARSHALLEE DRIVE
I-8	A-10	402.21	402.06	407.46 407.24	SD-4.02	11+85 10' RT MARSHALLEE DRIVE
I-9	A-10	-	403.15	407.46 407.24	SD-4.02	11+85 10' RT MARSHALLEE DRIVE
I-10	A-10	-	397.15	399.34 400.94	SD-4.02	15+00 10' RT MARSHALLEE DRIVE
M-1	STD MANHOLE	390.55	390.30	390.69	G-1.12	17+57.2 2' RT MARSHALLEE DRIVE
S-1	RAYONCEL END SECTION	315.48	305.49	315.50	SD-5.51	24+87.59 90.00 FT MARSHALLEE DR
S-2	A-10	315.15/315.4	315.15	377.34/377.00	SD-4.02	24+80 10' RT MARSHALLEE DR
S-3	TYPE 'C' END WALL	391.65	-	393.90	SD-5.21	17+47.00 15' LT MARSHALLEE DR
G-1	TYPE 'C' END WALL	391.65	-	393.90	SD-5.21	17+47.00 15' LT MARSHALLEE DR



BEI Deleted 54 & 55 & 56 & 57	7-11-96
By	Revision
	Date

**ENGINEER'S CERTIFICATE**

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer \_\_\_\_\_ Date \_\_\_\_\_

**DEVELOPER'S CERTIFICATE**

I/we certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a certificate of Attendance of a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize a periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer \_\_\_\_\_ Date \_\_\_\_\_

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

U.S. Soil Conservation Service Date \_\_\_\_\_

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District Date \_\_\_\_\_

APPROVED: Department of Public Works for storm Drainage systems and Roads

*[Signature]* 9/2/94 Date

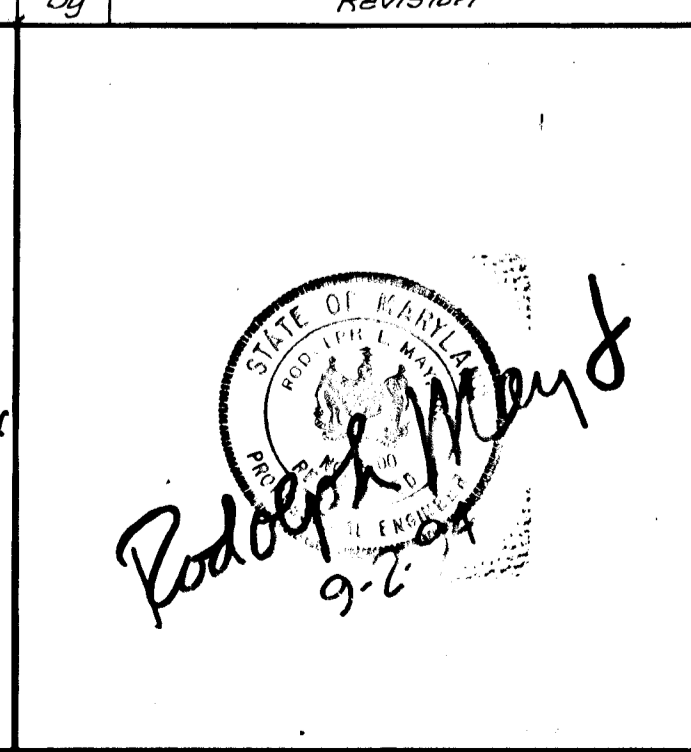
Chief, Land Development Division

*[Signature]* 9/22/94 Date

Chief, Bureau of Engineering

*[Signature]* 9-15-94 Date

Chief, Bureau of Highways



APPROVED: Department of Planning and Zoning

*[Signature]* 9/25/94 Date

Chief, Division of Land Development and Research

**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
(410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED: EDS  
DRAWN: GL  
CHECKED: RM  
DATE: 7-94

**STORM DRAIN PROFILES**

**SHADY OAKS SECTION ONE AREA TWO**

SCALE: 1"=5' Vert. 1"=50' Horiz.  
DRAWING: 13 OF 14  
JOB NO.: 92-176-2  
FILE NO.: F09A-28

OWNER / Developer: 100 INVESTMENT LIMITED PARTNERSHIP  
8835-P Columbia 100 Parkway  
Columbia Maryland 21045 410/730-0810

1707

**SPECIFICATIONS**

These specifications apply to all work under this contract. All work shall conform to the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Area Designated for Borrow Area, Embankment and Structure Work** shall be cleared, graded and prepared in accordance with the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Area to be Covered by the Structure** shall be cleared, graded and prepared in accordance with the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Excavation**

Excavation shall be done in accordance with the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Concrete**

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Reinforcing Steel**

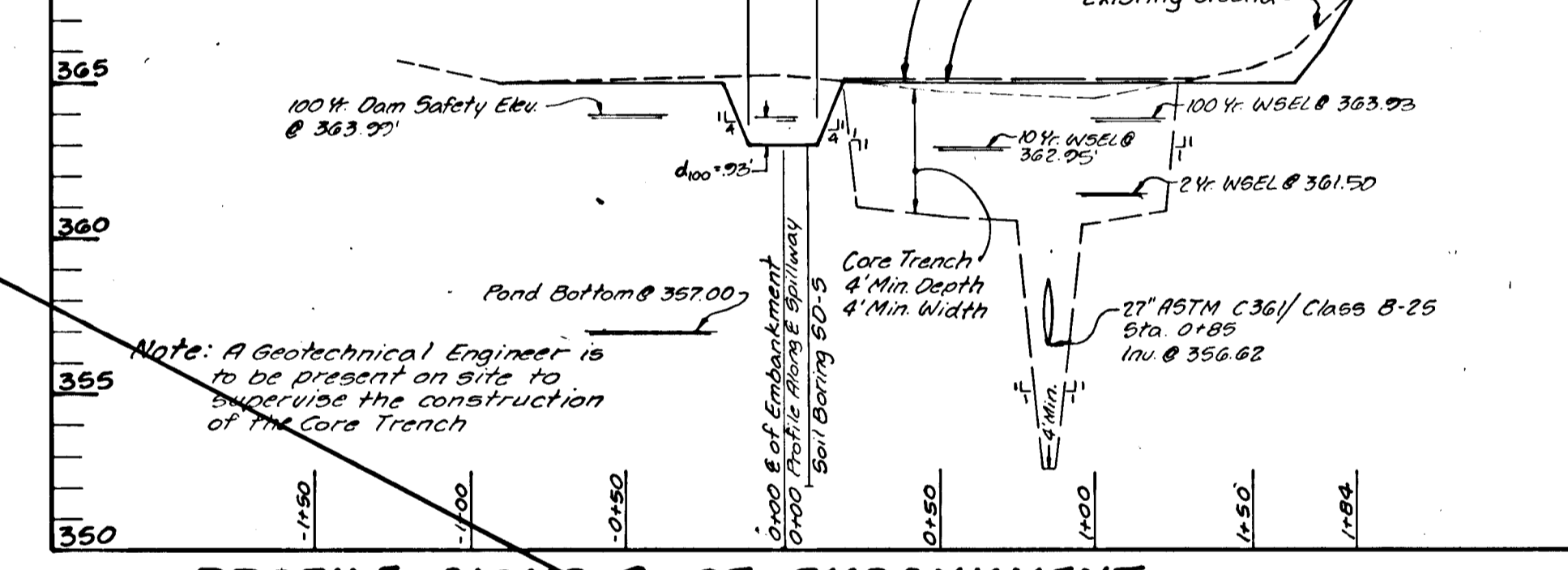
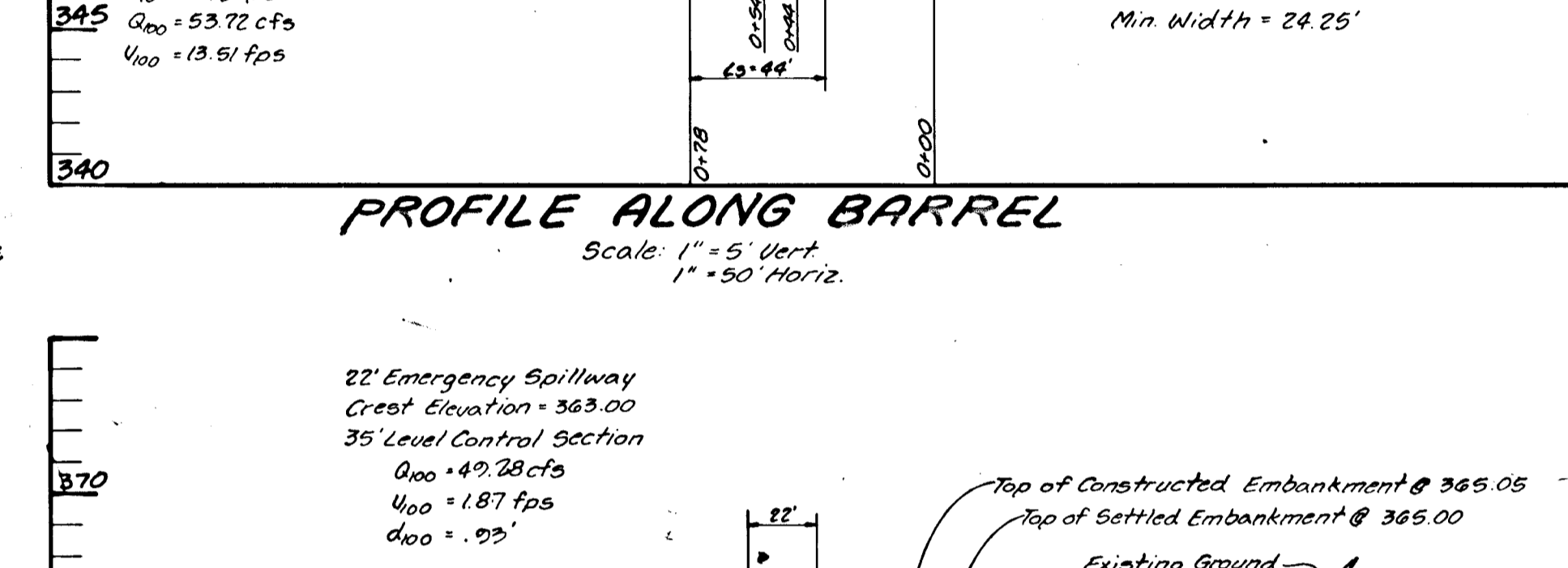
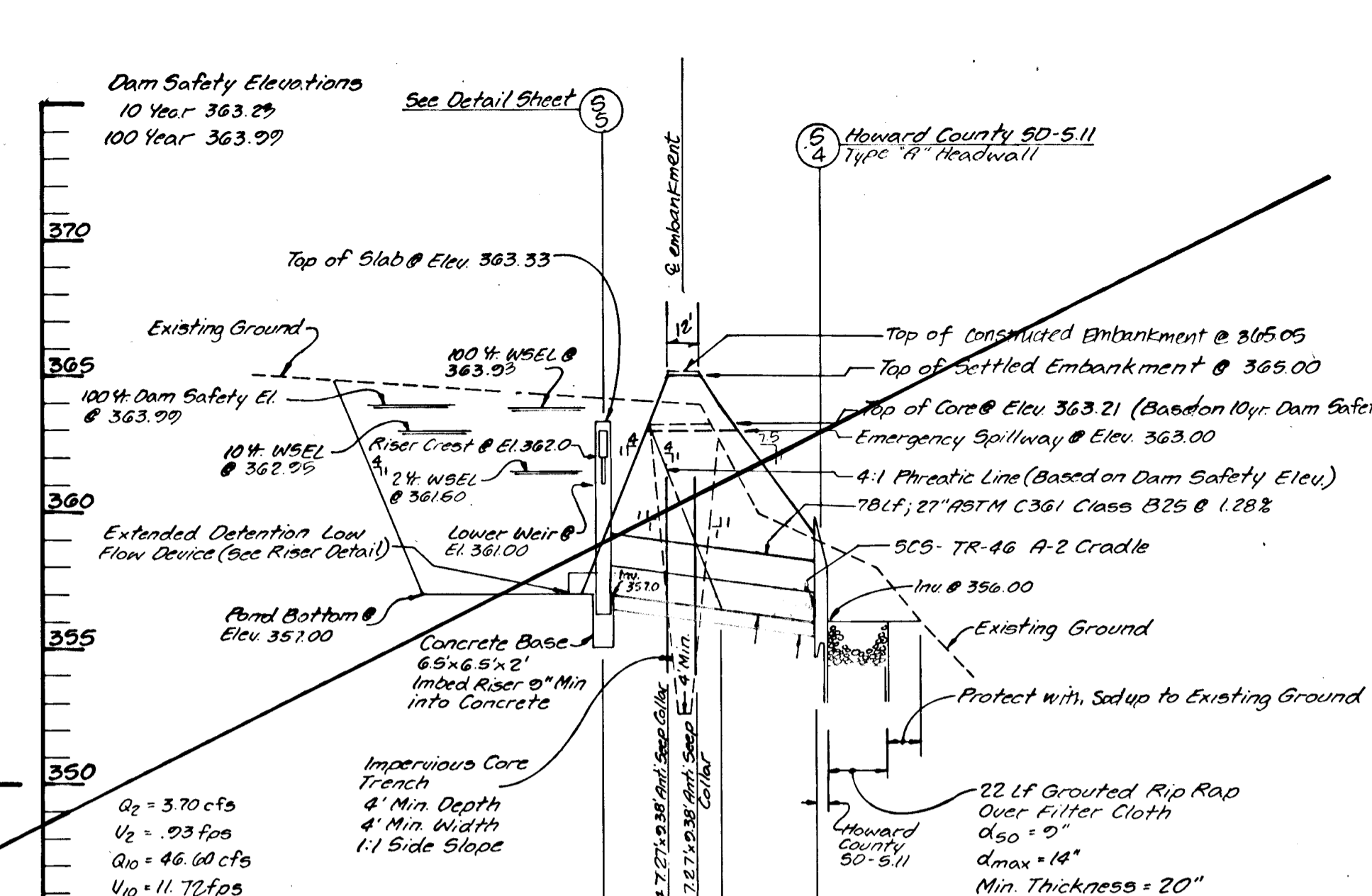
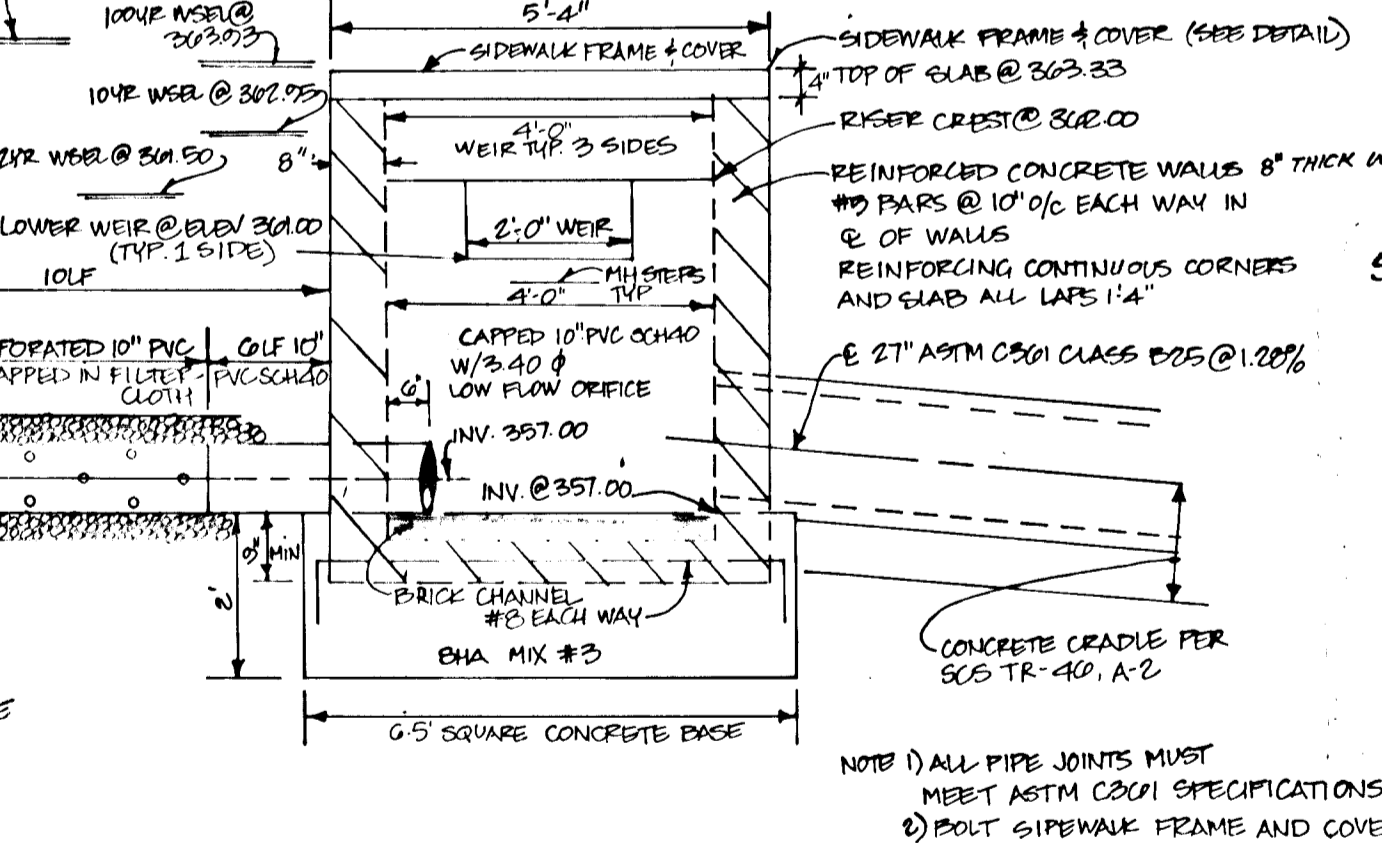
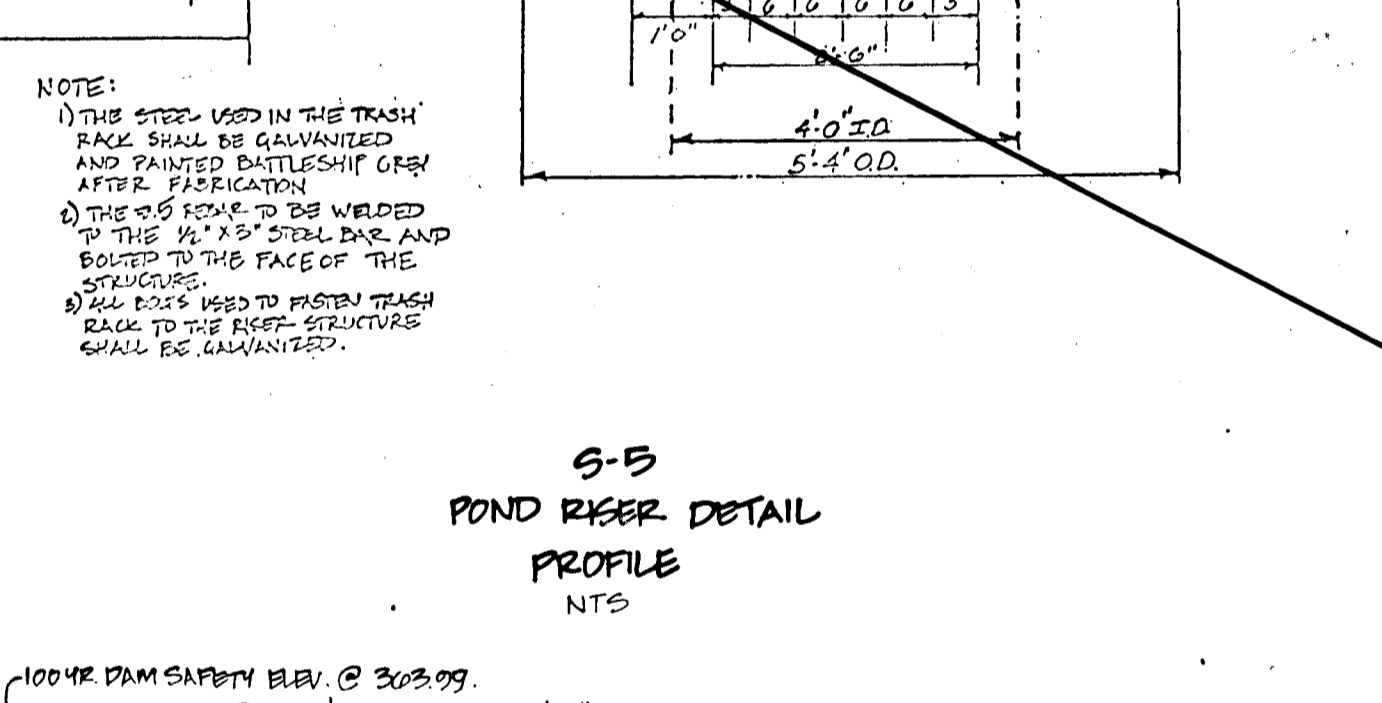
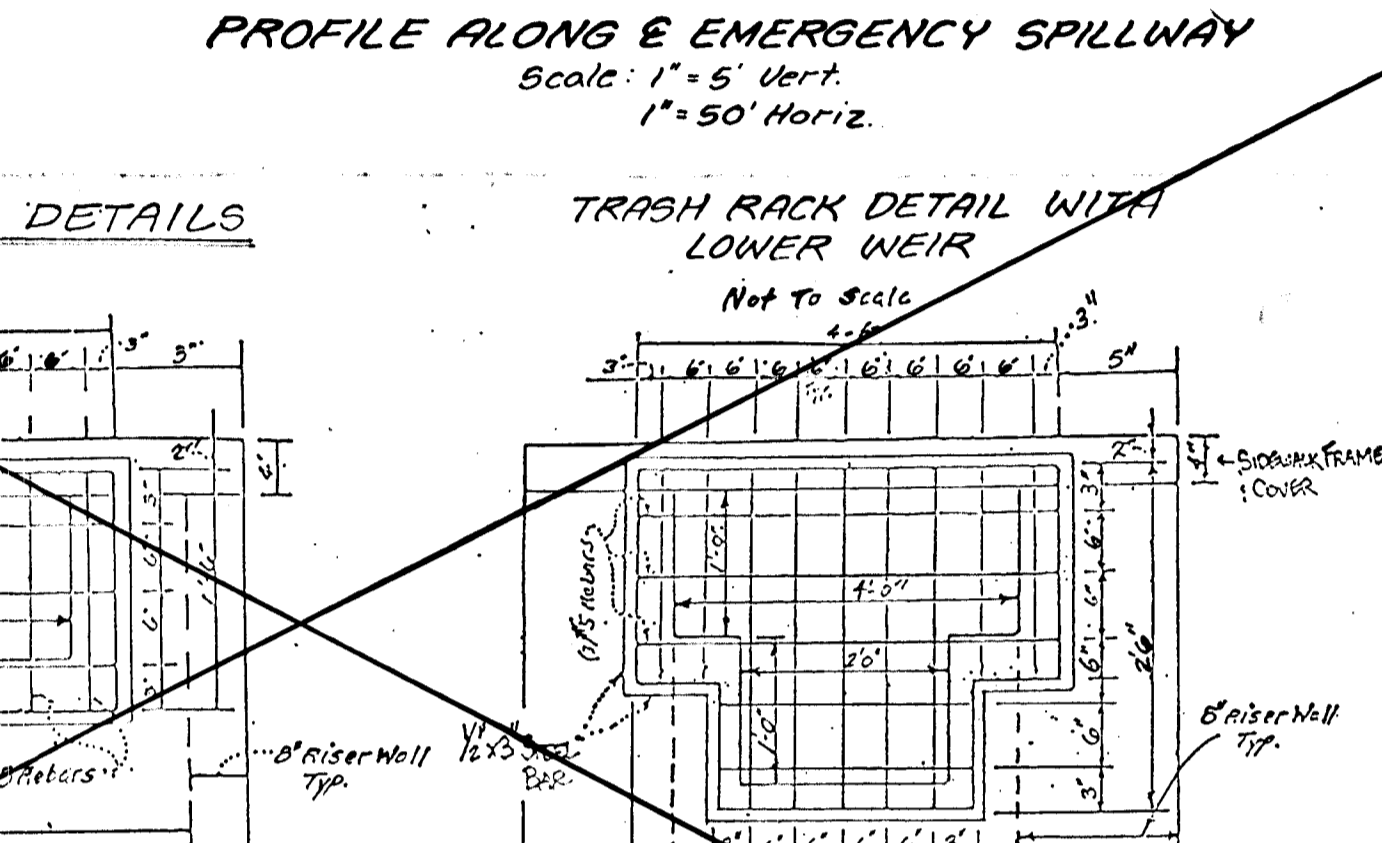
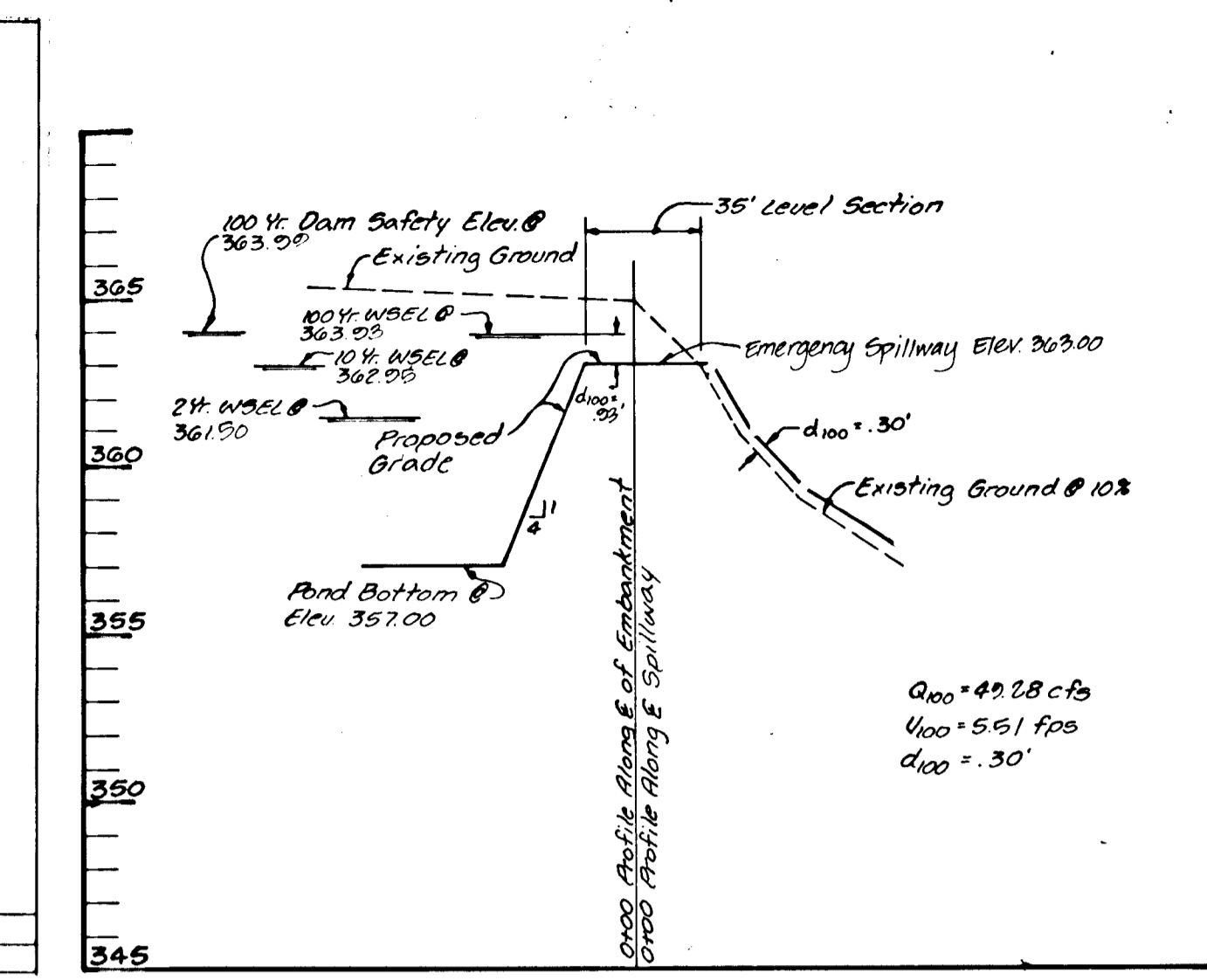
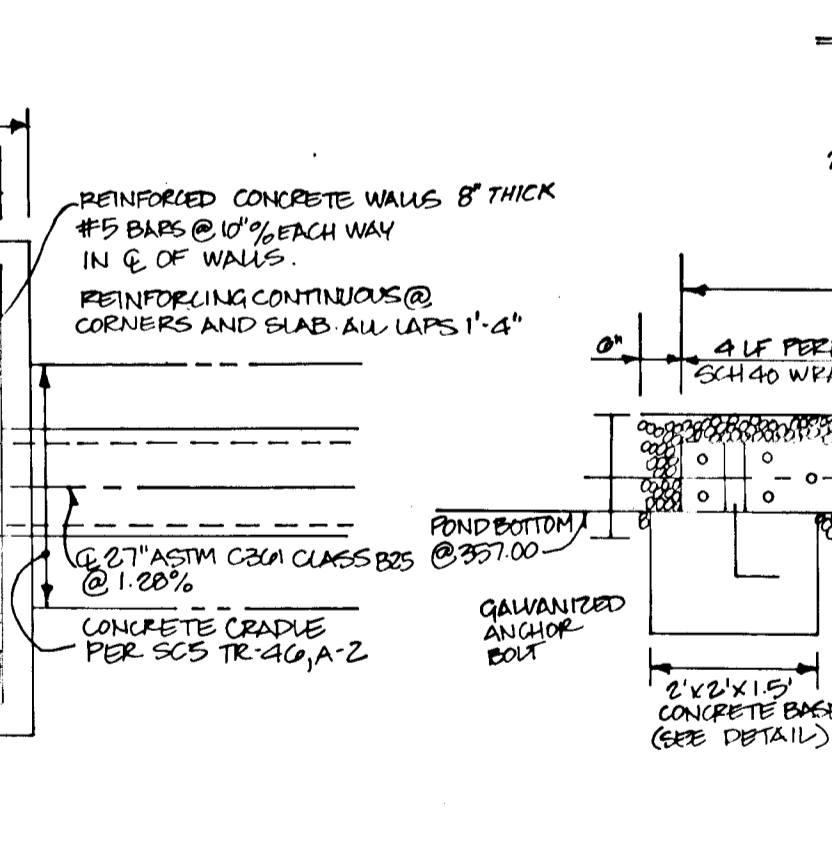
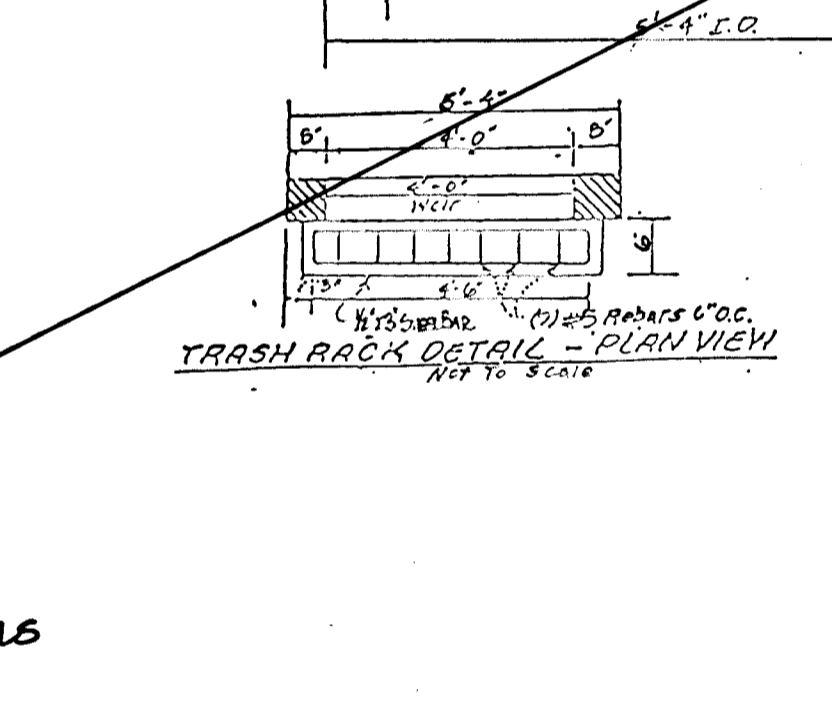
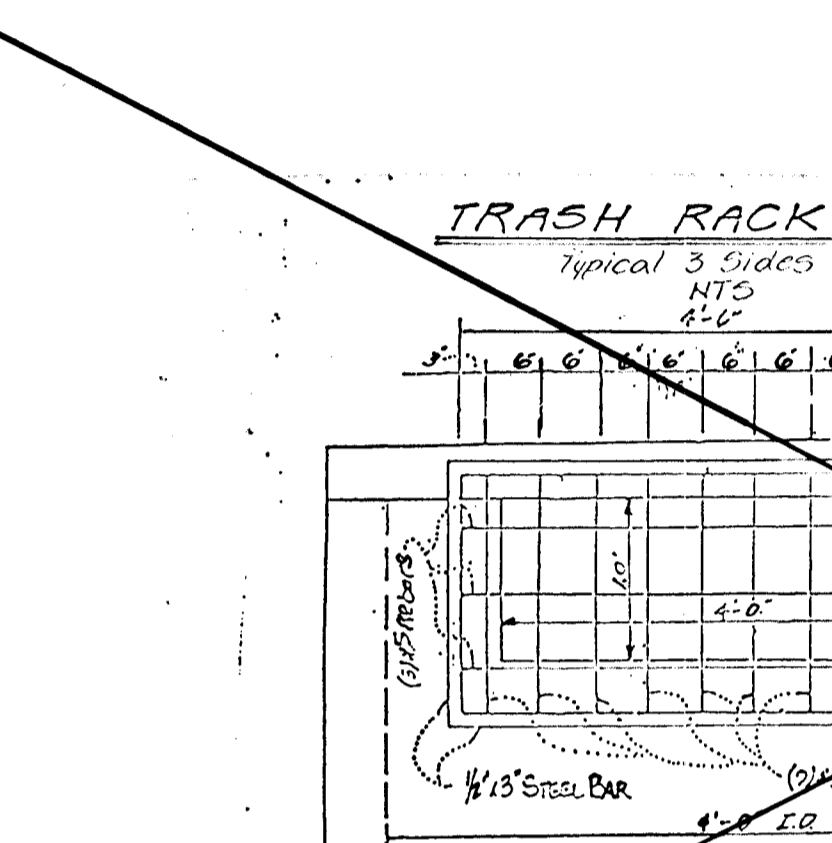
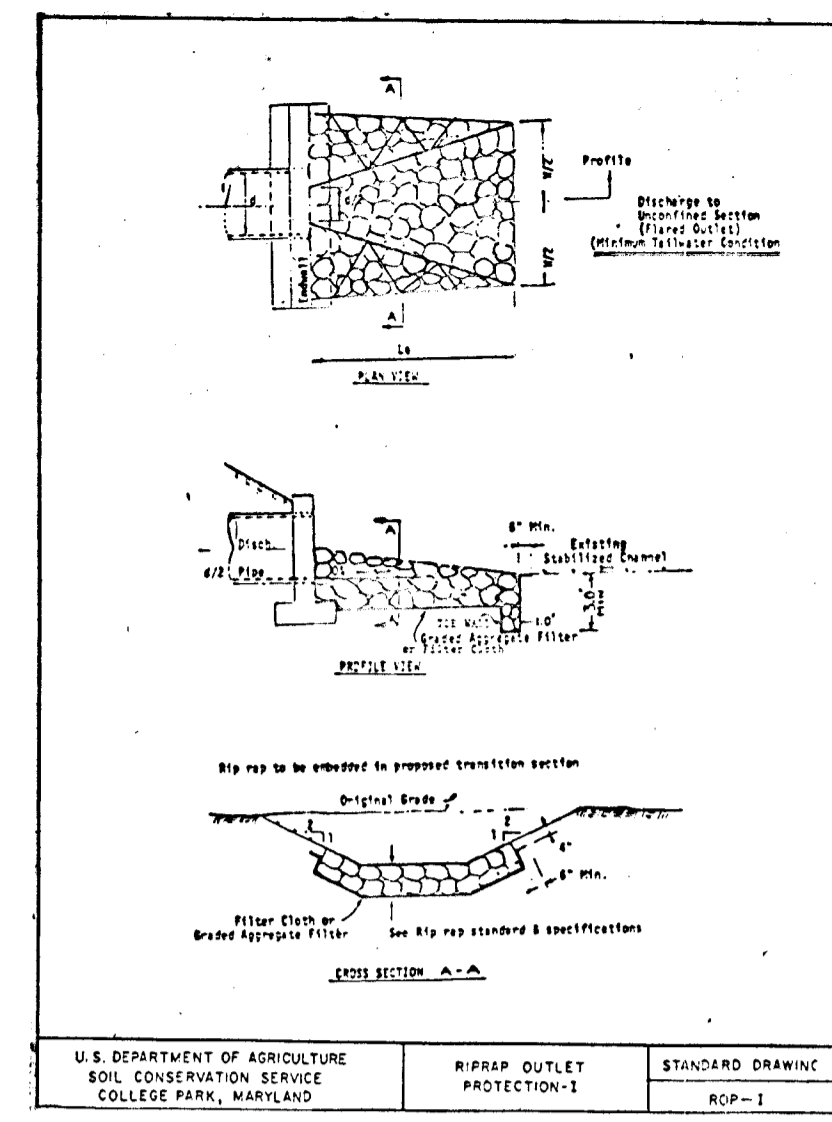
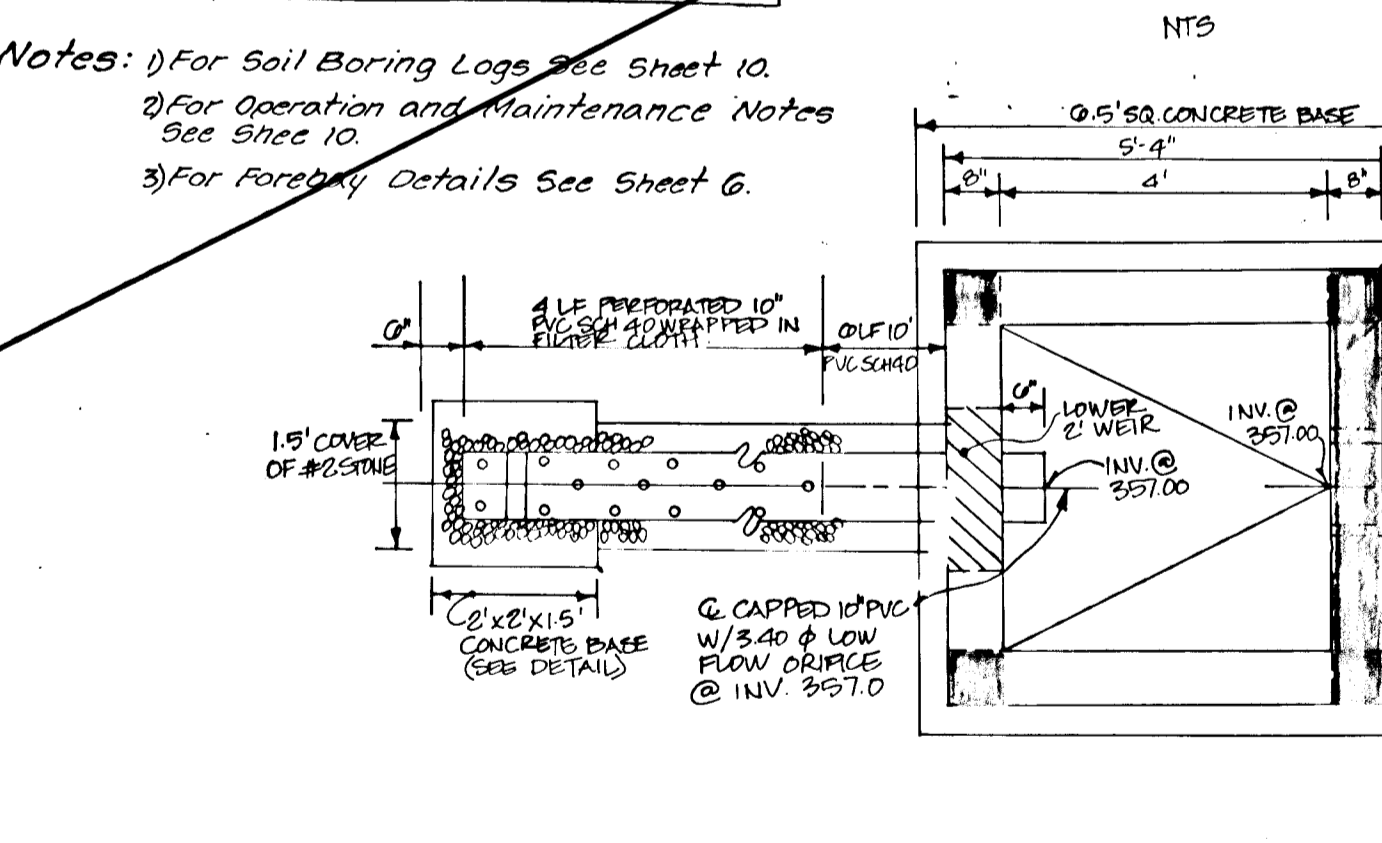
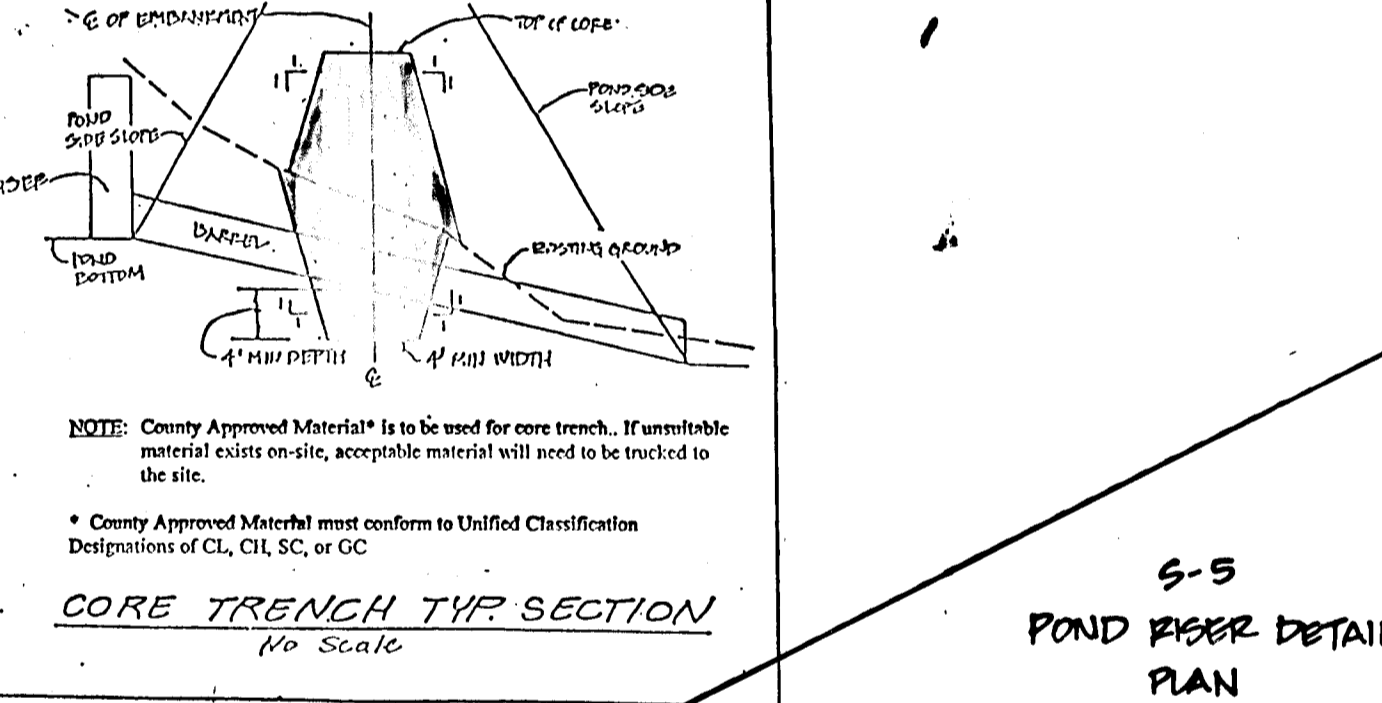
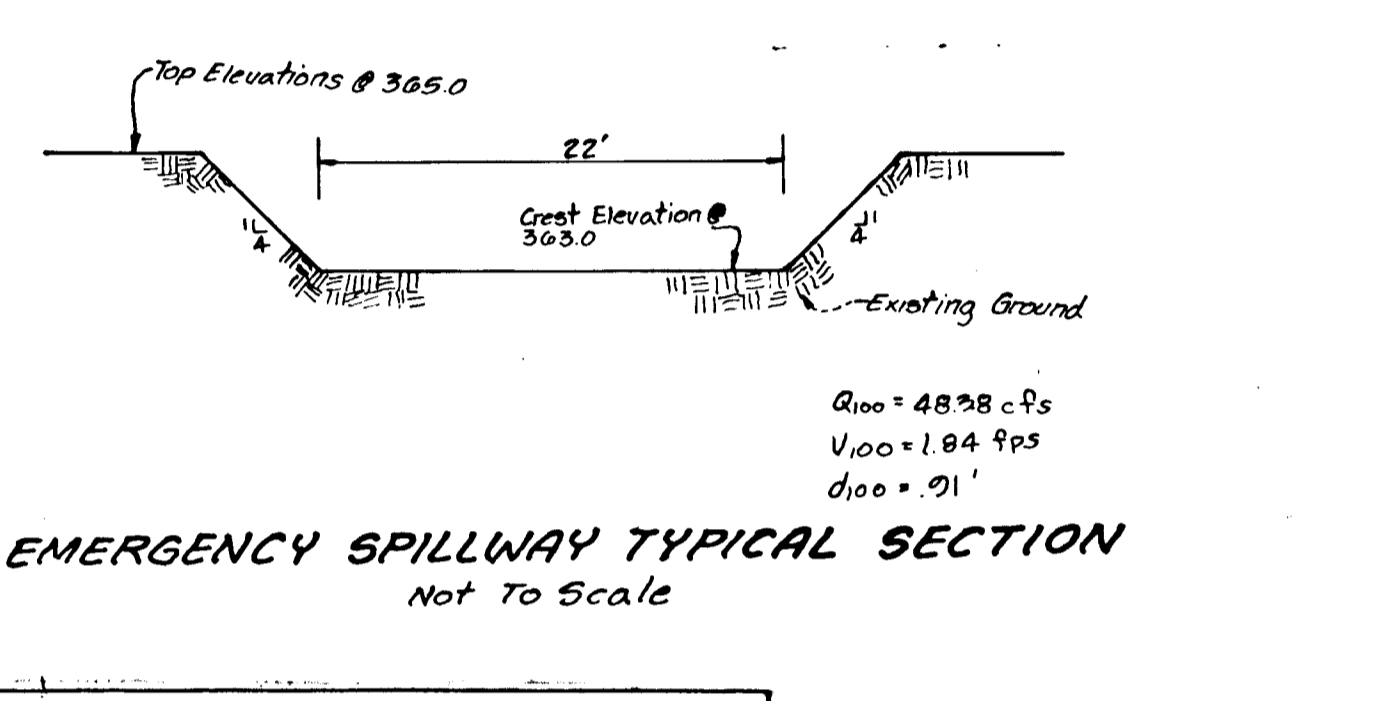
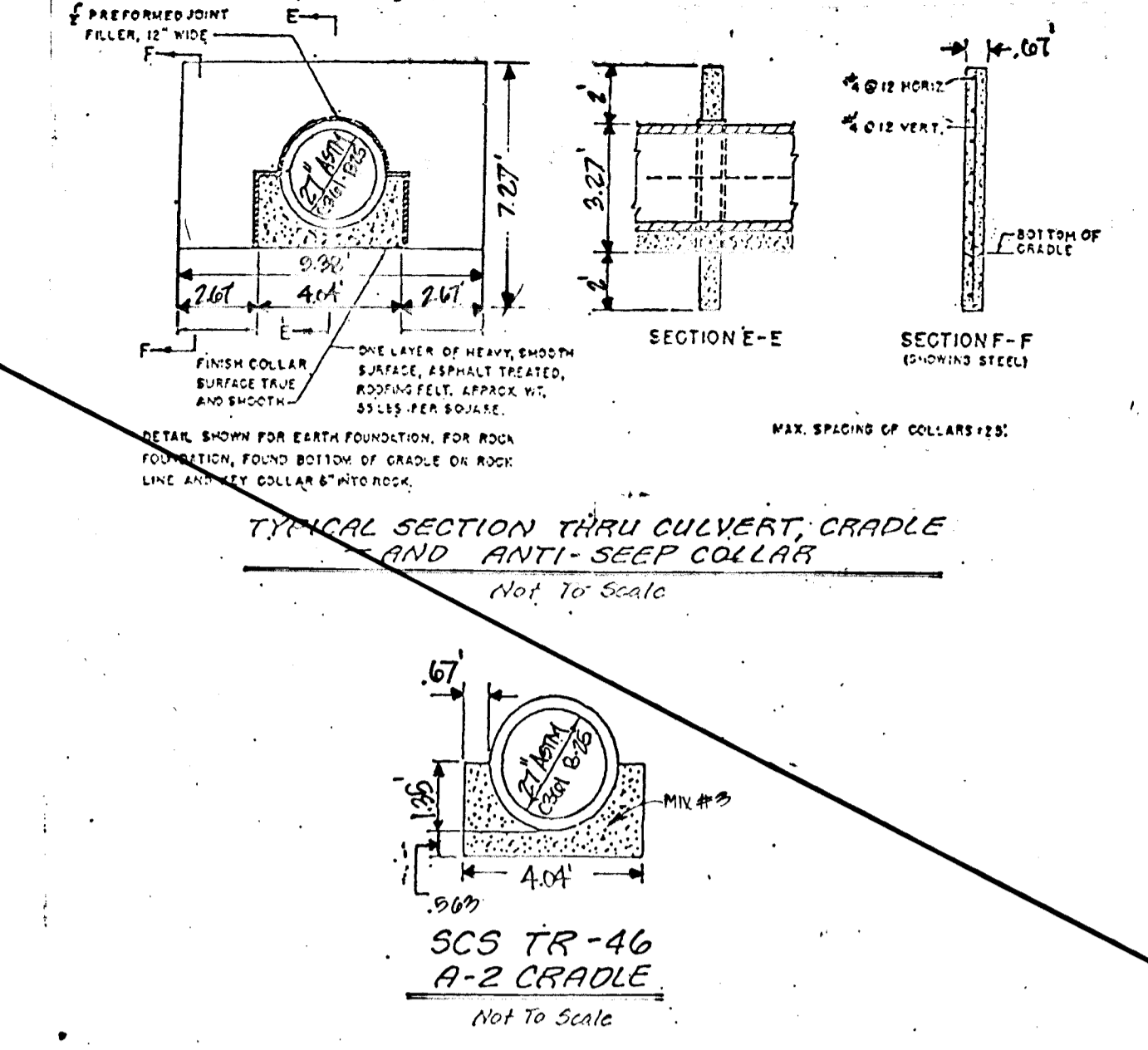
Reinforcing steel shall meet the requirements of Maryland Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Backfill**

Backfill shall be done in accordance with the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.

**Final Inspection**

Final inspection shall be done in accordance with the specifications of the State of Maryland, Department of Transportation, State Highway Administration, Standard Specifications for Construction and Materials, Section 600, No. 3.



REV	Describe Details & Notes	Date
1	Complete Details & Notes	7-11-94
By	Revision	

**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.

*Rodolph May Jr.*  
Signature of Engineer  
9-2-94  
Date

**DEVELOPER'S CERTIFICATE**

I/We certify that all development and/or construction shall 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.

*U. J. W.*  
Signature of Developer  
9/16/94  
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.

*John P. Roberts*  
Signature  
9/16/94  
Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

*Andrew M. Daniels*  
Signature  
9-15-94  
Date

APPROVED: Department of Planning and Zoning.

*Anna J. J. J.*  
Signature  
9/23/94  
Date

**LAND DESIGN ENGINEERING, INC.**

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045  
(410) 715-1070 (Balt.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED	STORMWATER MANAGEMENT DETAILS	SCALE
ES		AS SHOWN
DRAWN		DRAWING
WJ		14 OF 14
CHECKED		JOB NO.
RM		92-176-2
DATE		FILE NO.
8/94		F-04-28

**SHADY OAKS SECTION 1 AREA 2**

Owner/Developer  
100 INVESTMENT LIMITED PARTNERSHIP  
8835 Columbia 100 Parkway  
Columbia, Maryland 21045 (410) 730-0810

**F-94-28**

17071