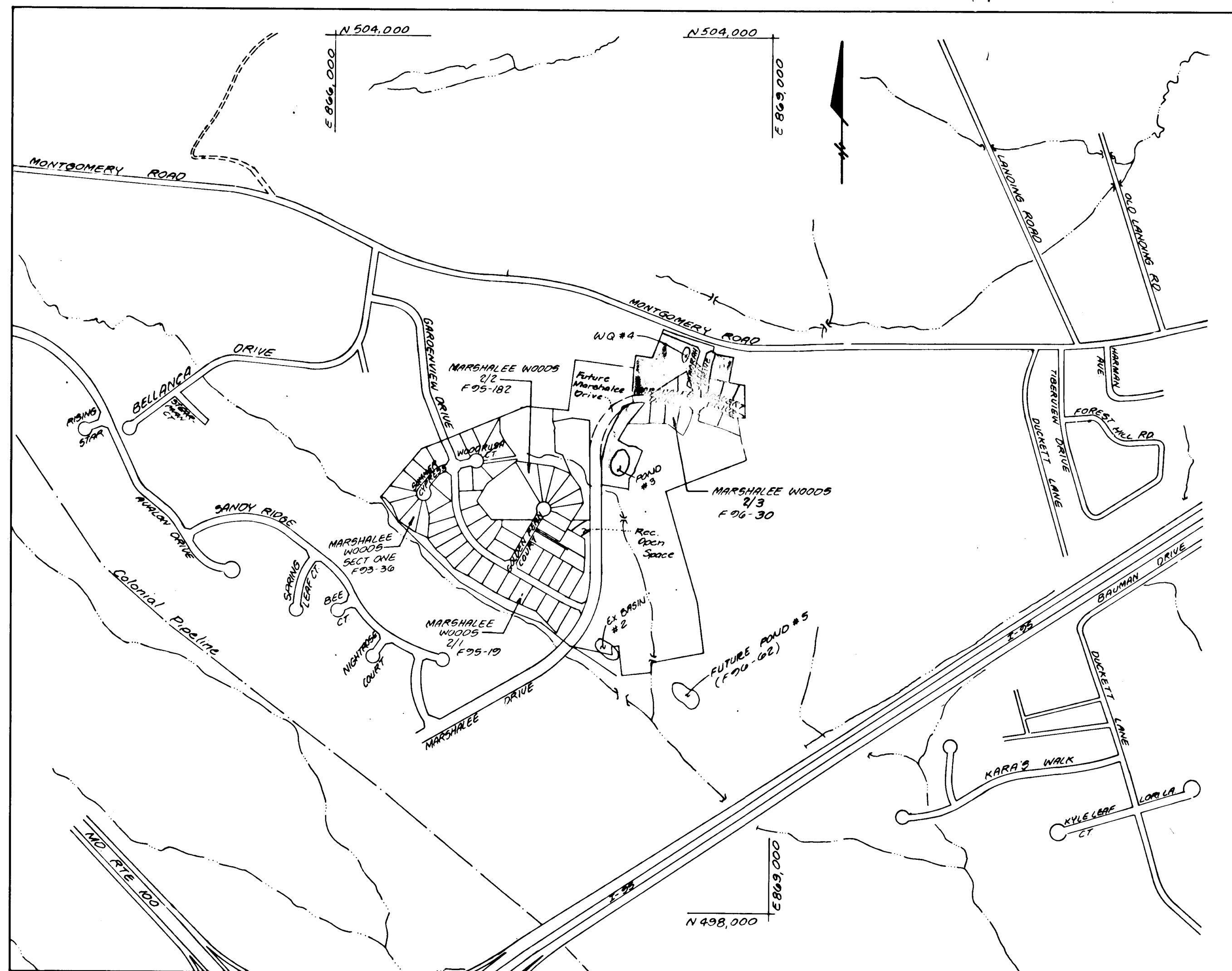
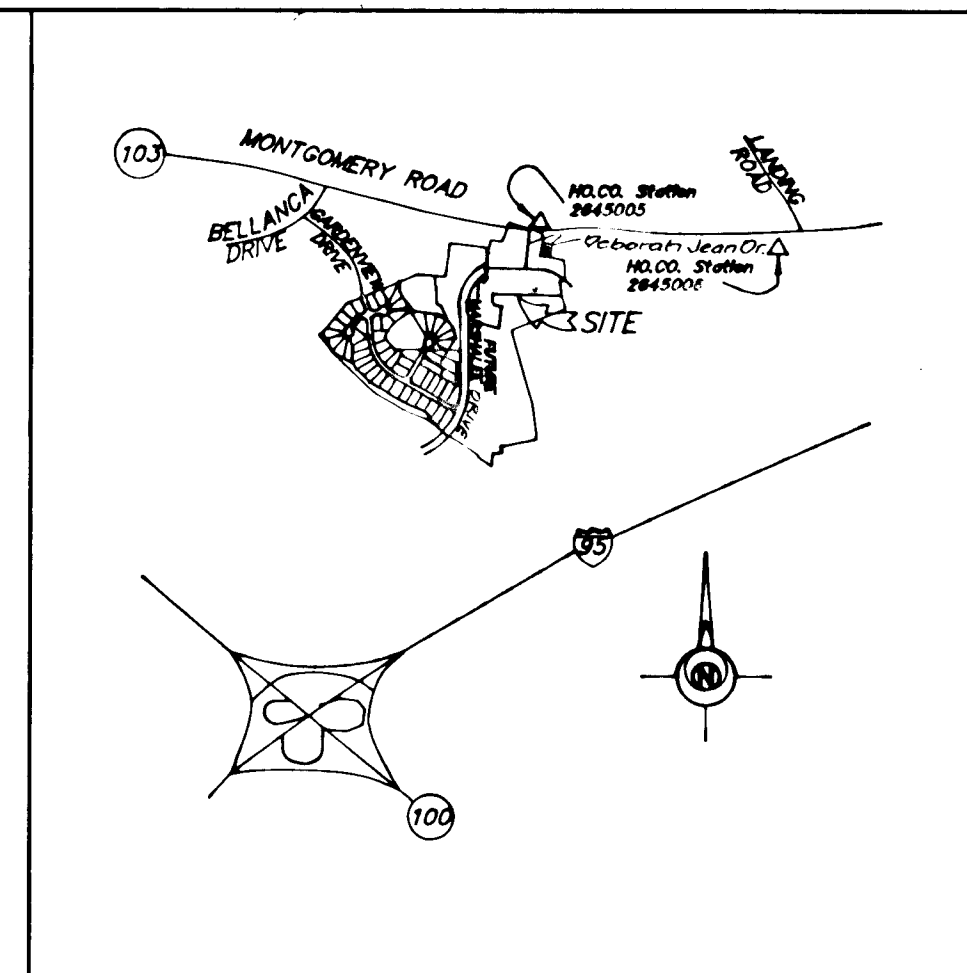


INDEX OF SHEETS	
SHEET NO.	TITLE
1	COVER SHEET
2	MONTGOMERY ROAD PLAN & PROFILE
3	DEBORAH JEAN DRIVE PLAN & PROFILE
4	CALVERT DRIVE / MARSHALEE DRIVE PLAN & PROFILE
5	ROAD DETAILS
6	STORM DRAIN PROFILES
7	GRADING & SEDIMENT AND EROSION CONTROL PLAN
8	GRADING & SEDIMENT AND EROSION CONTROL PLAN
9	GRADING & SEDIMENT AND EROSION CONTROL DETAILS
10	DRAINAGE AREA MAP
11	DRAINAGE AREA MAP
12	LANDSCAPE PLAN
13	LANDSCAPE PLAN
14	STORMWATER MANAGEMENT DETAILS



LOCATION MAP
Scale: 1" = 600'



VICINITY MAP
Scale: 1" = 2000'

BENCHMARKS:

Ho. Co. Monument # 2645005
ELEV. 291.929
Description: Concrete Monument 0.3 ft.
below surface at top of bank

Ho. Co. Monument # 2645006
ELEV. N/A
Description: Concrete Monument 0.2 ft.
below surface at top of bank

GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County, *Design Manual, Vol. IX*.
- 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.
- 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, Parcels: 593 & 656
Zoning: R-20
Section / Area, Lots: 2/3, Lots 74 - 88
Election District: 1st
Total Area: 115.7 Ac. plus/minus
Previous Submittals: S88-66, S89-90, P90-28, WP91-190, WP92-17, P93-36, P94-07, F95-19, F95-182
- 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.
- 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 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, compiled by Photogrammetric Services, Inc. (March 16, 1989); and post-graded conditions in accordance with F95-19 and F95-82, and Calvert Ridge (F94-64).
- Horizontal and vertical datums are related to the Maryland State Plane Coordinate System as projected from Howard County control stations No. 2645005 and No. 2645006 (NAD 27).
- All hydraulic data is for the 10-year storm unless otherwise noted.
- Sidewalks and ramps shall be in conformance with the current ADA requirements.
- See sheet 9 for construction sequence.
- 95% compaction in all fill areas shall be determined by AASHTO T-180.
- Stormwater management is provided in the Pond #3
Quantity Management is by Detention.
Quality Management is by Extended Detention.
- 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 1995)".
- Wetlands delineation by Exploration Research, Inc. July 1988 and February 1989.
- Noise Study compiled by Land Design Engineering, Inc. Approved as P92-17.
- Geotechnical Reports compiled by Willis Carnes Engineering Assoc., Inc. dated August 28, 1994.
- Open Space Lots 86 and 87 shall be dedicated to the Department of Public Works for the purpose of constructing future Marshalee Drive (Capital Project No. J-4136).
- Proposed Deborah Jean Drive between Montgomery Road and Calvert Drive shall be relocated once future Marshalee Drive is constructed (Capital Project No. J-4136).
- Proposed Marshalee Drive from Lot 84 (Sta. 106+06.03 to Sta. 108+00) to future Marshalee Drive will be abandoned once future Marshalee Drive is extended to Montgomery Road (Capital Project No. J-4136). The noise mitigation berm and permanent fee turn-around will be constructed to provide driveway access to Lot 84.
- The private roads "Marshalee Drive" and "Kynes Lane" shall remain open during all phases of construction. All parcels currently using the private road network shall be provided with relocated access to the proposed road system constructed under this approval or as provided by Capital Project No. J-4136.
- Driveways located adjacent to storm drain inlets shall meet Howard County Vol. IX Detail R 3.02 for concrete curb and gutter transition.
- The useable yard for Lot 88 shall not encroach within the mitigated 65 dBA line.
- Traffic study compiled by Lee Cunningham & Assoc., Inc. approved as P92-17.

ROAD & STORM DRAIN CONSTRUCTION PLANS

MARSHALEE WOODS

SECTION TWO AREA THREE

LOTS 74 THRU 88

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

1667 1997

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Aina Sumramany 5/14/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Robert W. Zuber 5/16/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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

Robert M. Daniels 5-1-96
CHIEF, BUREAU OF HIGHWAYS

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

J. H. Wank 4/23/96
NATURAL RESOURCE CONSERVATION SERVICE

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

Robert W. Zuber 4/23/96
HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE

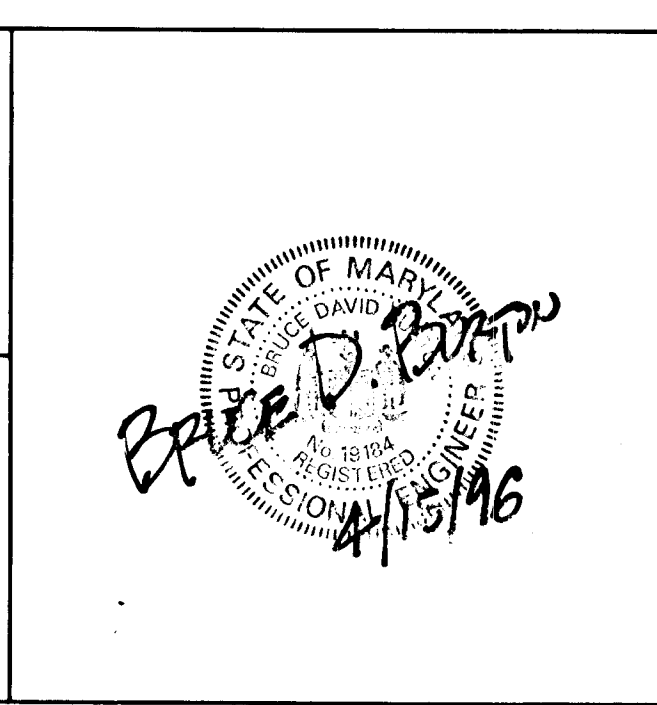
"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

BRUCE D. BRYAN 4/15/96
SIGNATURE OF 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS DEEMED NECESSARY."

BRUCE D. BRYAN 4/15/96
SIGNATURE OF DEVELOPER



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

DESIGNED T.D./E.D.S.	COVER SHEET	SCALE AS SHOWN
DRAWN W.J.	MARSHALEE WOODS Section 2 - Area 3 Lots 74 - 88	DRAWING 1 of 14
CHECKED B.D.B.	Tax Map 37 P/O Parcels 399, 42 and 93 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND Previous Submittals: WP91-190, WP92-17, P93-36, P94-07, F95-182	JOB NO. 95-022.2
DATE 3/96	Owner/Developer Marshalee Woods Limited Partnership 8835 Columbia 100 Parkway Unit P Columbia, Maryland 21045 (410) 730-0810	FILE NO. F96-30

F-96-30

CENTERLINE CURVE DATA						
NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
1+12.7 TO 2+87.65	600.00'	16°00'42"	167.67'	84.39'	167.13'	S 08°41'36" E
4+18.23 TO 4+26.28	450.00'	10°32'13"	82.75'	41.50'	82.64'	S 05°57'22" E

Revisions			
No.	By	Date	Description
1	LQE	9/18/96	Relocate I-6 & I-7 and Easement Over Utility Pole Conflict

Traffic Control Sign Legend					
Symbol	Street Name	Centerline Station	Offset	Type	
●	Deborah Jean Drive	0+60	22 RT	R1-1, "STOP" Sign, 30" x 30" Octagon	
●	Deborah Jean Drive	4+55	16 RT	R1-1, "STOP" Sign, 30" x 30" Octagon	
●	Marshalee Drive	11+15	16 RT	R1-1, "STOP" Sign, 30" x 30" Octagon	
●	Calvert Drive	11+78	16 RT	R1-1, "STOP" Sign, 30" x 30" Octagon	

Street Light Legend						
Street Name	Symbol	Centerline Station	Offset	Lamp Type	Fixture Type	Pole Type
Marshalee Drive	●	107+28	17 LT	150 Watt HPS	Pendant Fixture (Cutoff)	30' Galvanized Steel Pole
Deborah Jean Drive	●	4+52	20 RT	100 Watt HPS	Traditionaire Post	14' Black Fiberglass Embedded Pole
Montgomery Road	●	105+46	36 LT	150 Watt HPS	Pendant Fixture (Cutoff)	30' Galvanized Steel Pole
Montgomery Road	●	106+84	19 RT	150 Watt HPS	Pendant Fixture (Cutoff)	Existing BGE Pole #90651 / 15' Arm

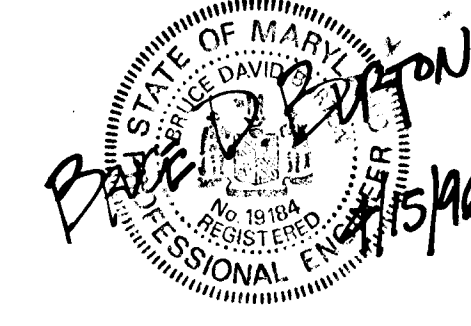
APPROVED Department of Planning and Zoning

Quina Summerville 5/12/96
 Chief, Division of Land Development and Research

Chief, Development Engineering Division

APPROVED Department of Public Works for Storm Drainage Systems and Roads

Richard M. Denecker 5-1-96
 Chief, Bureau of Highways



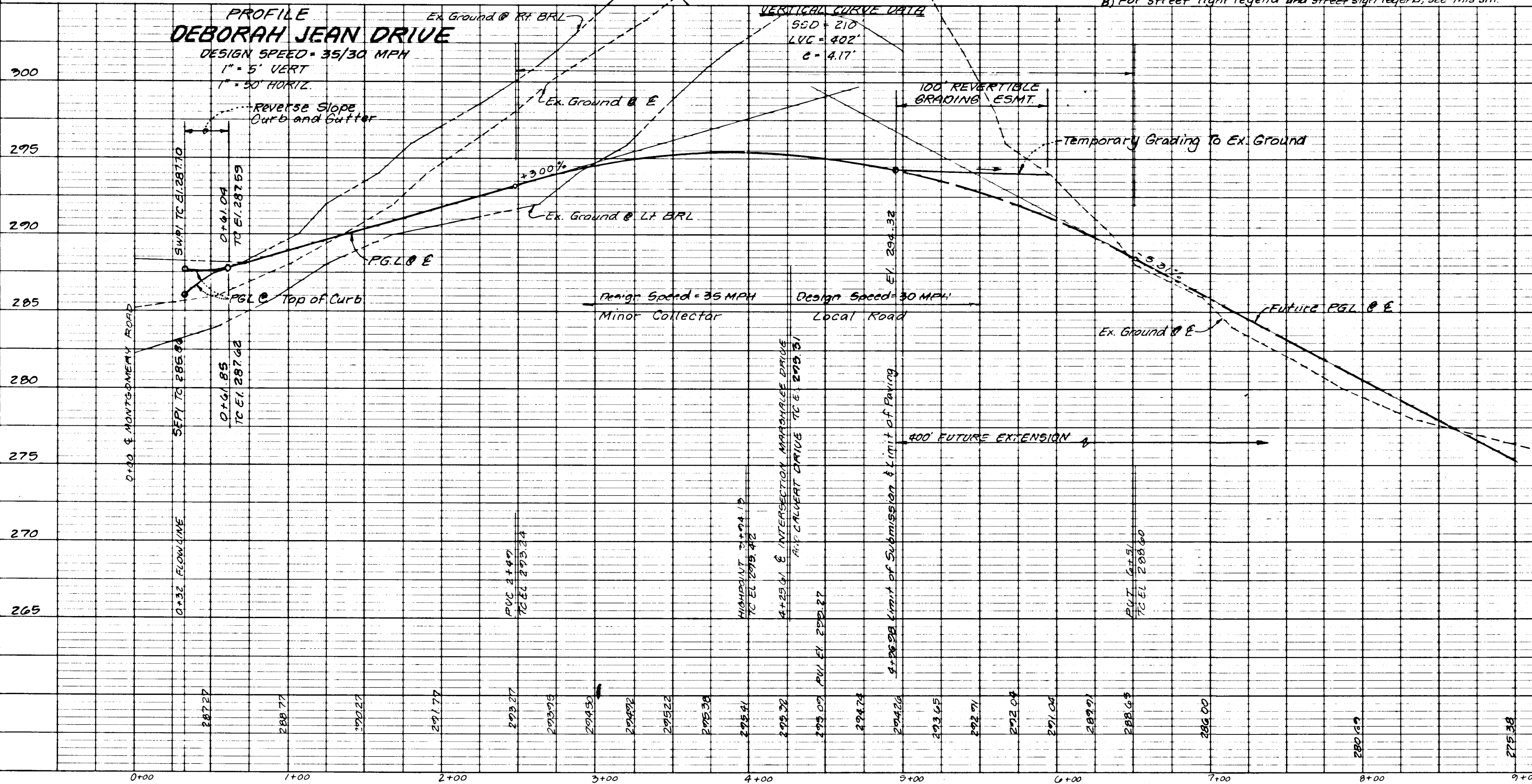
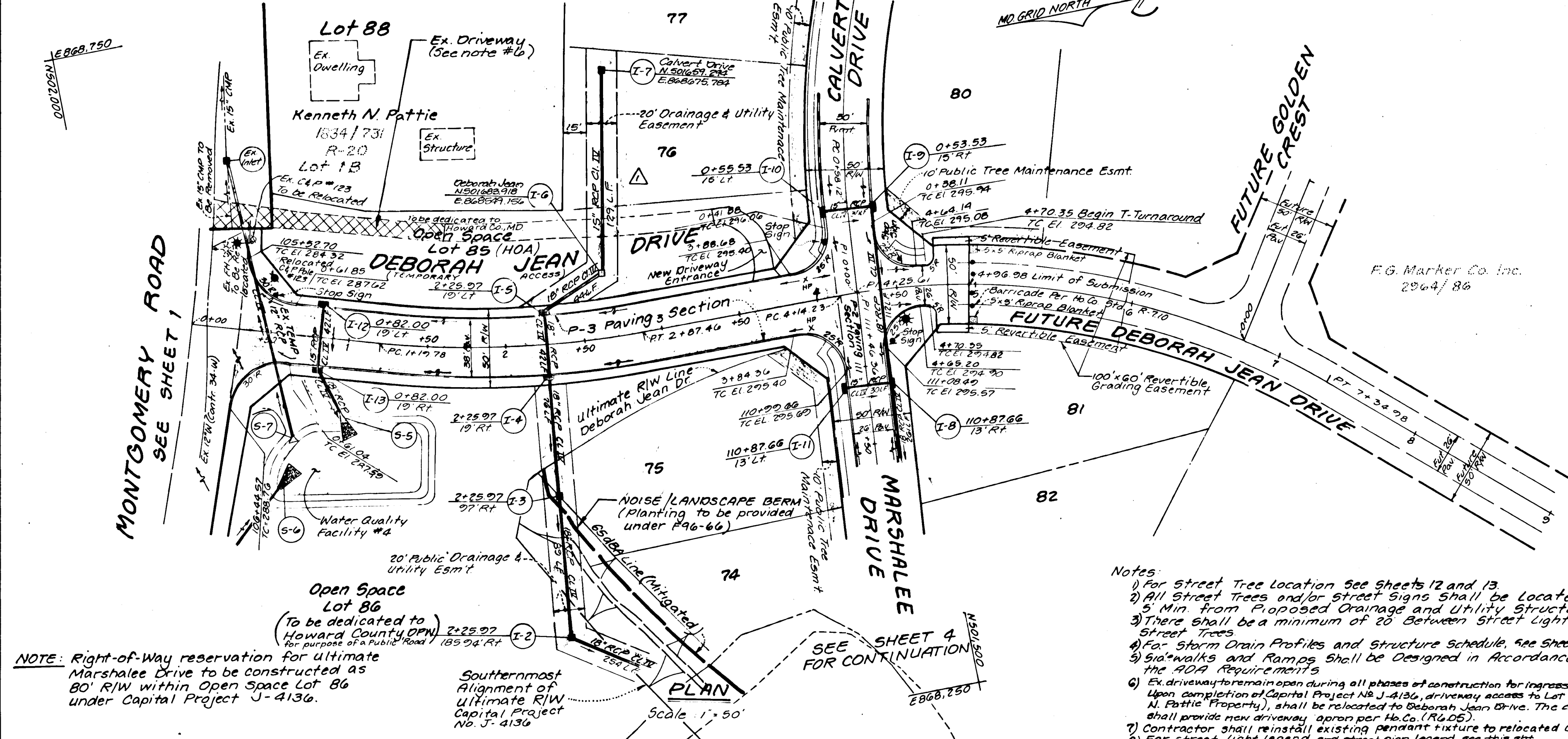
PAVING LEGEND

- P-3 Paving Section
- P-2 Paving Section

CURB LEGEND

- 7" Std Comb Curb and Gutter (Reverse Slope)
- 7" Std Comb Curb and Gutter
- 5" Std Bituminous Curb
- Modified Curb & Gutter

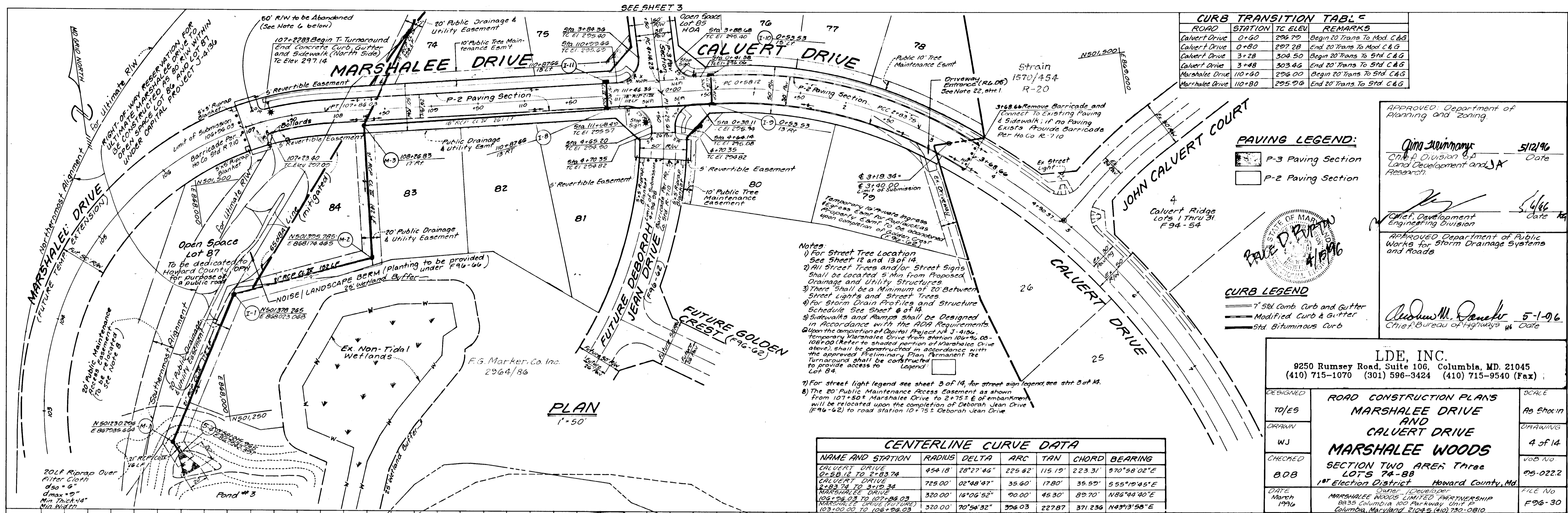
- Notes:
- For Street Tree Location See Sheets 12 and 13.
 - All Street Trees and/or Street Signs shall be located 5 Min from Proposed Drainage and Utility Structures.
 - There shall be a minimum of 20' Between Street Lights and Street Trees.
 - For Storm Drain Profiles and Structure Schedule, see Sheet 6 of 14.
 - Sidewalks and Ramps shall be designed in accordance with the ADA Requirements.
 - Ex. driveway to remain open during all phases of construction for ingress and egress. Upon completion of Capital Project No. J-4136, driveway access to Lot 88 (Kenneth N. Pattie Property) shall be relocated to Deborah Jean Drive. The developer shall provide new driveway apron per H.C. (R.4.05).
 - Contractor shall reinstall existing pendant fixture to relocated C&P Pole #123.
 - For Street Light Legend and Street Sign Legend, see this site.



1667

DATE: _____ BY: _____
 DIVISION: _____
 PLAN: _____
 NOTE BOOK: _____
 ALIGNMENT CHECKED: _____
 NO. OF WAY CHECKED: _____

DATE: _____ BY: _____
 SURVEYED: _____
 PROFILE: _____
 NOTE BOOK: _____
 GRADES CHECKED: _____
 STRUCTURE NOTATIONS CHECKED: _____



ROAD	STATION	IC ELEV	REMARKS
Calvert Drive	0+60	296.79	Begin 20' Trans To Mod. C&G
Calvert Drive	0+80	297.28	End 20' Trans To Mod. C&G
Calvert Drive	3+28	304.50	Begin 20' Trans To Std. C&G
Calvert Drive	3+48	303.46	End 20' Trans To Std. C&G
Marshalee Drive	10+60	296.00	Begin 20' Trans To Std. C&G
Marshalee Drive	10+80	295.96	End 20' Trans To Std. C&G

PAVING LEGEND:
 [Symbol] P-3 Paving Section
 [Symbol] P-2 Paving Section

CURB LEGEND
 [Symbol] Std. Comb. Curb and Gutter
 [Symbol] Modified Curb & Gutter
 [Symbol] Std. Bituminous Curb

- Notes**
- For Street Tree Location See Sheet 12 and 13 of 14.
 - All Street Trees and/or Street Signs shall be located 5' from Proposed Drainage and Utility Structures.
 - There shall be a Minimum of 20' Between Street Lights and Street Trees.
 - For Storm Drain Profiles and Structure Schedule See Sheet 8 of 14.
 - Sidewalks and Ramps shall be Designed in Accordance with the ADA Requirements.
 - Upon the completion of Capital Project No. J-4186, Temporary Marshalee Drive from Station 10+76.05 to 10+87.00 (After to shaded portion of Marshalee Drive above), shall be constructed in accordance with the approved Preliminary Plan. Permanent Tee Turnaround shall be constructed to provide access to Lot 84.
 - For street light legend see sheet 3 of 14, for street sign legend see sheet 3 of 14.
 - The 20' Public Maintenance Access Easement as shown from 107+58 to Marshalee Drive to 2+75 E of embankment will be relocated upon the completion of Deborah Jean Drive (F96-62) to road station 10+75 Deborah Jean Drive.

NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
CALVERT DRIVE 0+58.12 TO 2+53.74	454.18'	28°27'46"	225.62'	115.19'	223.31'	97°58'02"E
CALVERT DRIVE 2+53.74 TO 3+19.24	725.00'	02°48'47"	35.60'	17.80'	35.59'	555°19'45"E
MARSHALEE DRIVE 106+26.03 TO 107+26.03	320.00'	16°06'52"	90.00'	45.30'	89.70'	N86°44'40"E
MARSHALEE DRIVE (TURNED) 103+00.00 TO 106+26.03	320.00'	70°54'32"	306.03'	227.87'	371.236'	N43°13'50"E

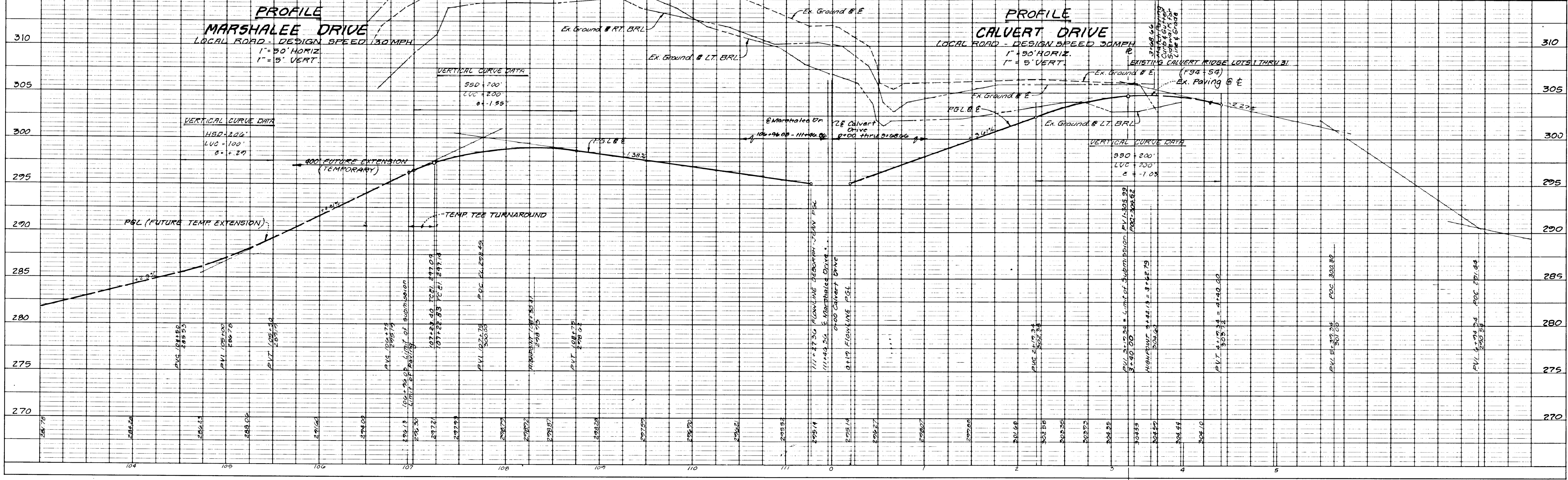
APPROVED: Department of Planning and Zoning
 Qing J. Williams 5/12/96 Date
 Chief, Division of Land Development and Research

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
 [Signature] 5/16/96 Date
 Chief, Bureau of Highways

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

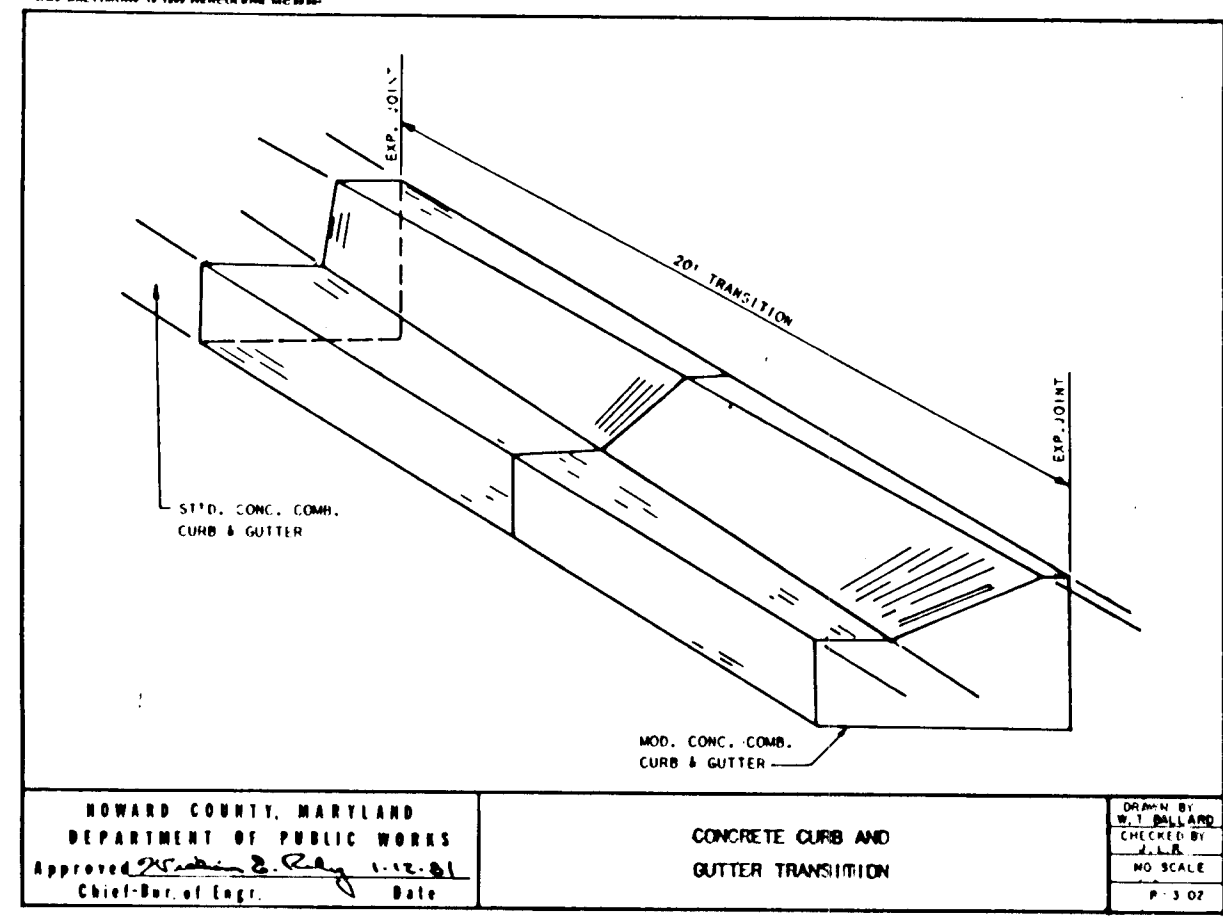
DESIGNED TO/ES	ROAD CONSTRUCTION PLANS MARSHALEE DRIVE AND CALVERT DRIVE	SCALE As Shown
DRAWN WJ	MARSHALEE WOODS	DRAWING 4 of 14
CHECKED BDB	SECTION TWO AREA Three LOTS 74-88	JOB No. 95-022.2
DATE March 1996	1st Election District Howard County, Md.	FILE No. F96-30

Owner/Developer: MARSHALEE WOODS LIMITED PARTNERSHIP
 833 Columbia 100 Parkway, Unit 2
 Columbia, Maryland 21045 (410) 782-0810

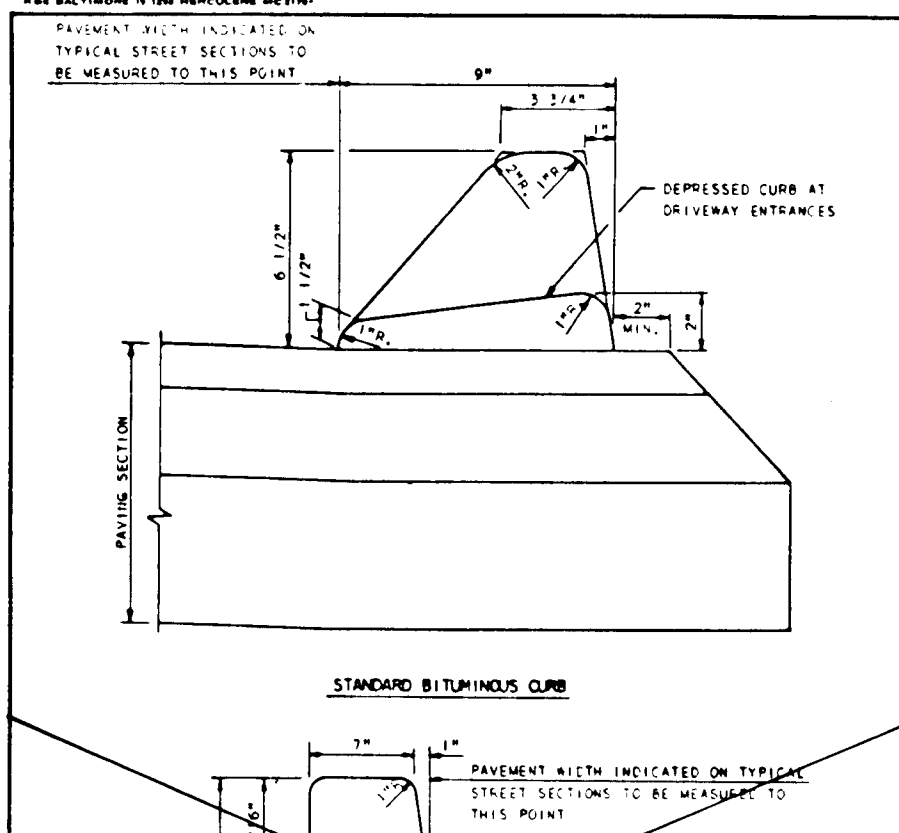


SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS	GRAVEL BASE ALTERNATIVES
P-2	RESIDENTIAL ZONES LOCAL COLLECTOR, TRAVELERS AND PRIVATE ROADS SERVING INDIVIDUAL TRAVELERS COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN 10 FEET TRUCKS PER DAY	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-3	RESIDENTIAL ZONES MEDIUM AND MAJOR COLLECTORS COMMERCIAL INDUSTRIAL ZONES LOCAL AND COLLECTOR STREETS TRAVELERS AND COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN 10 FEET TRUCKS PER DAY	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-5	COMMERCIAL INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES (MONTGOMERY ROAD)	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE

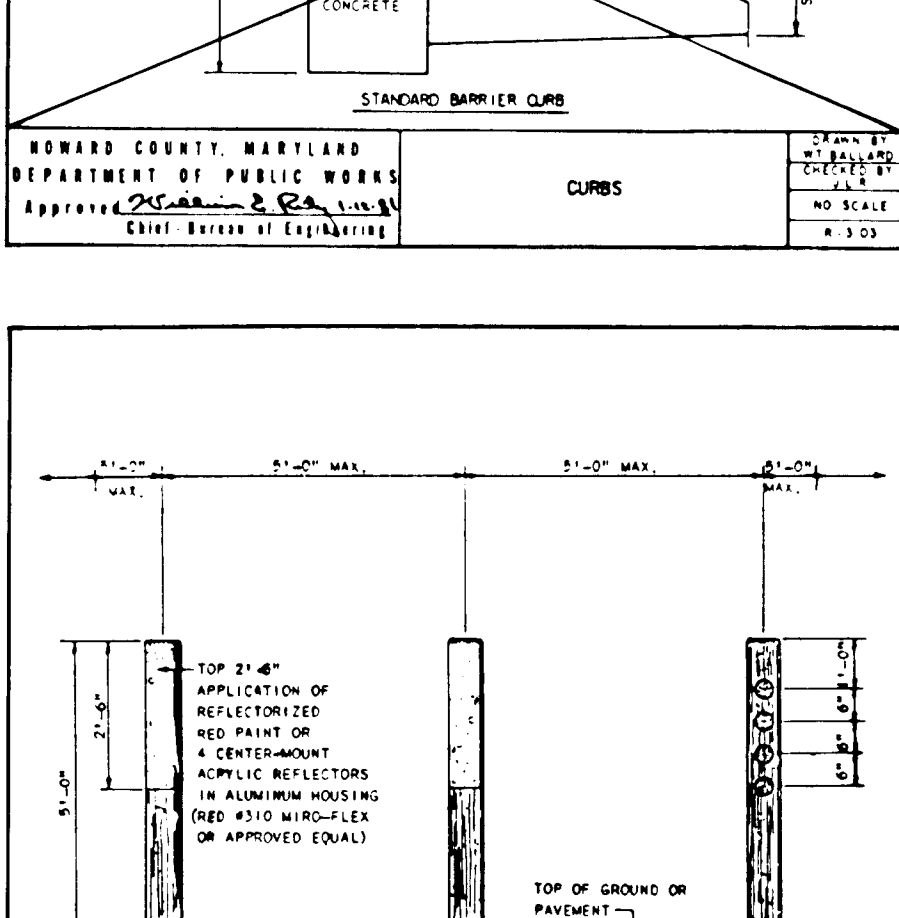
Note: Micaceous soil subgrade require the use of either of the Aggregate base pavement sections as shown in the pavement section fabric. The typical section should reflect the above requirements.



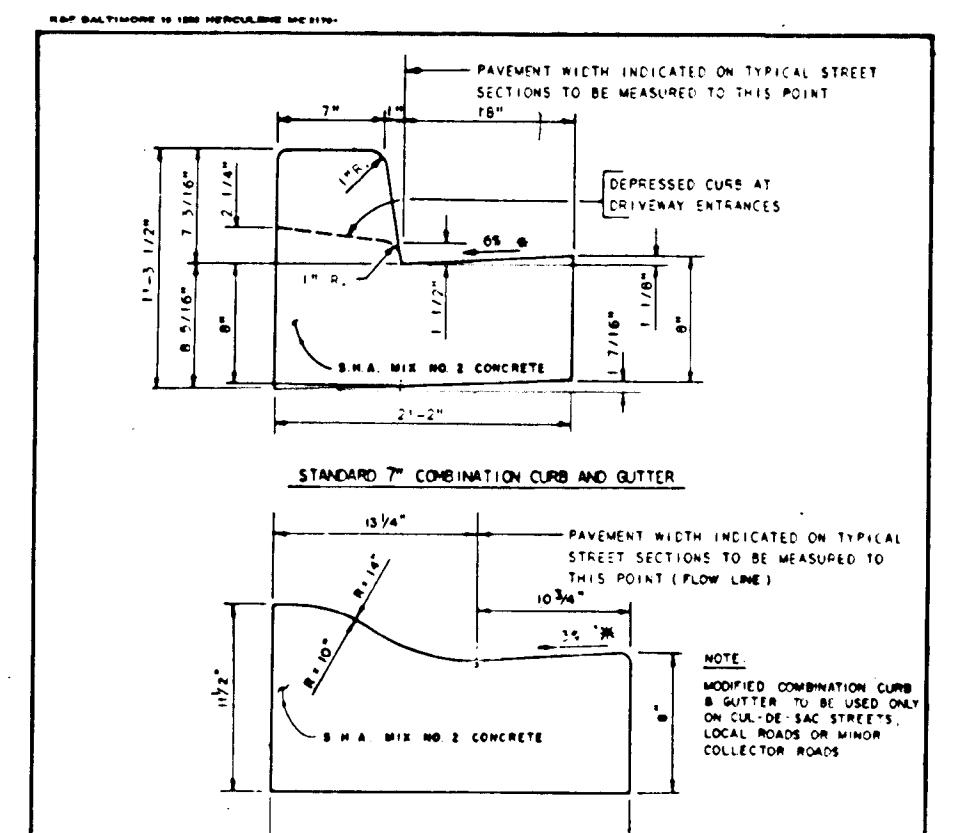
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



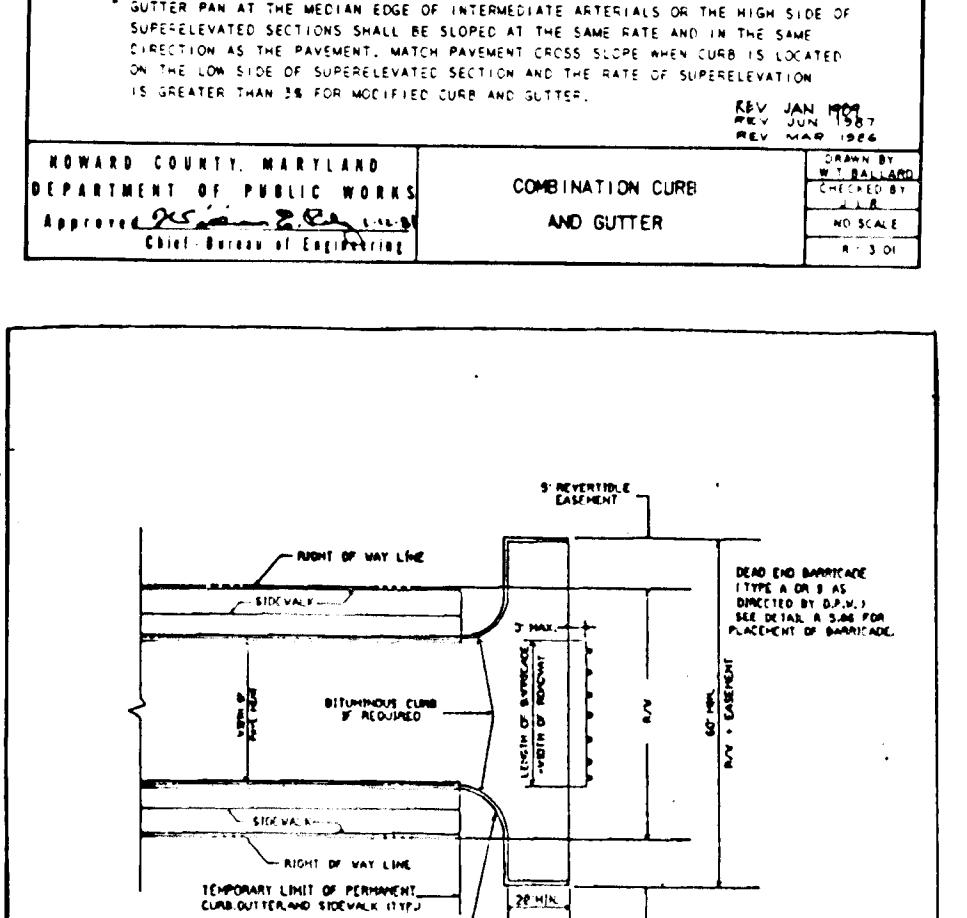
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



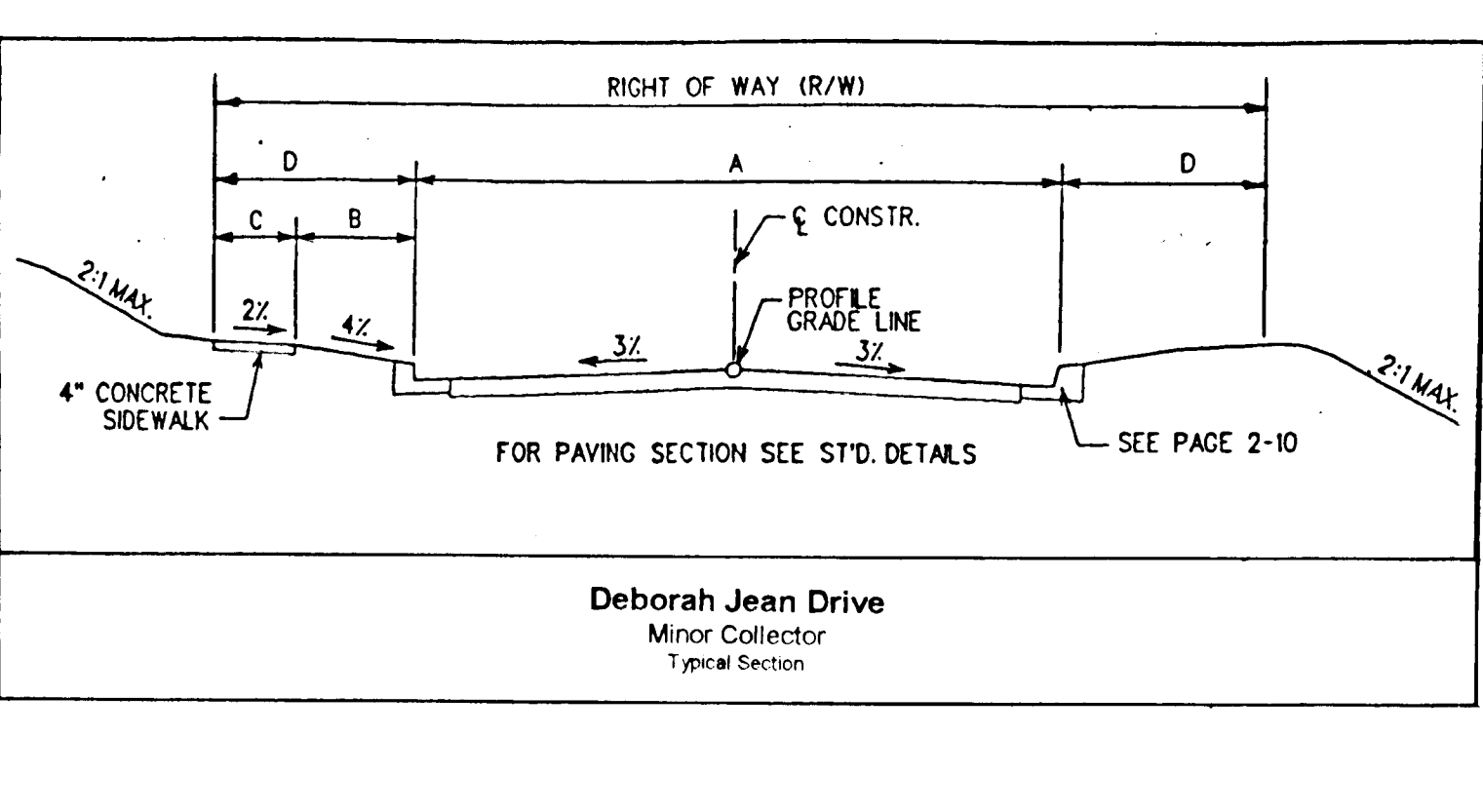
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering

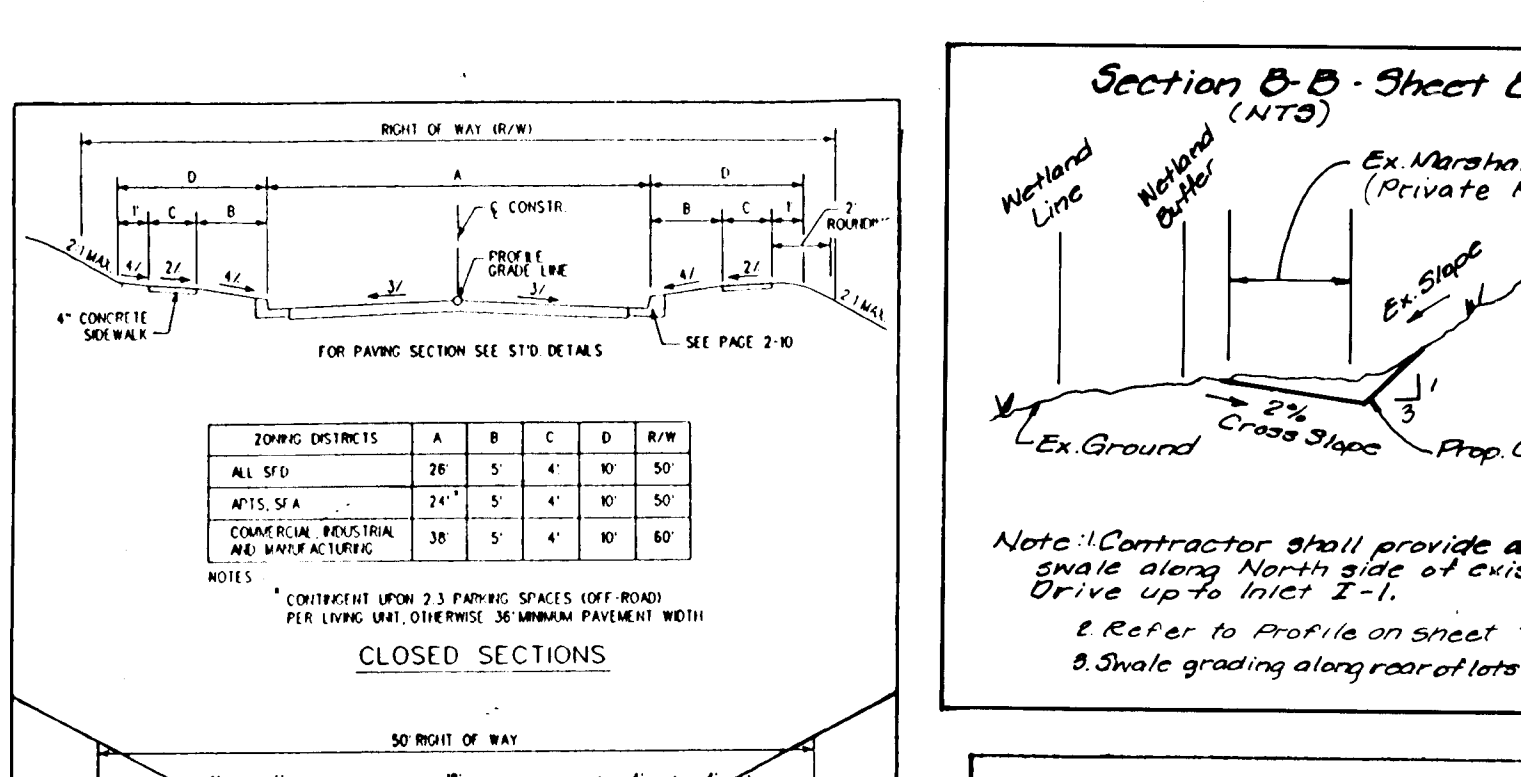


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering

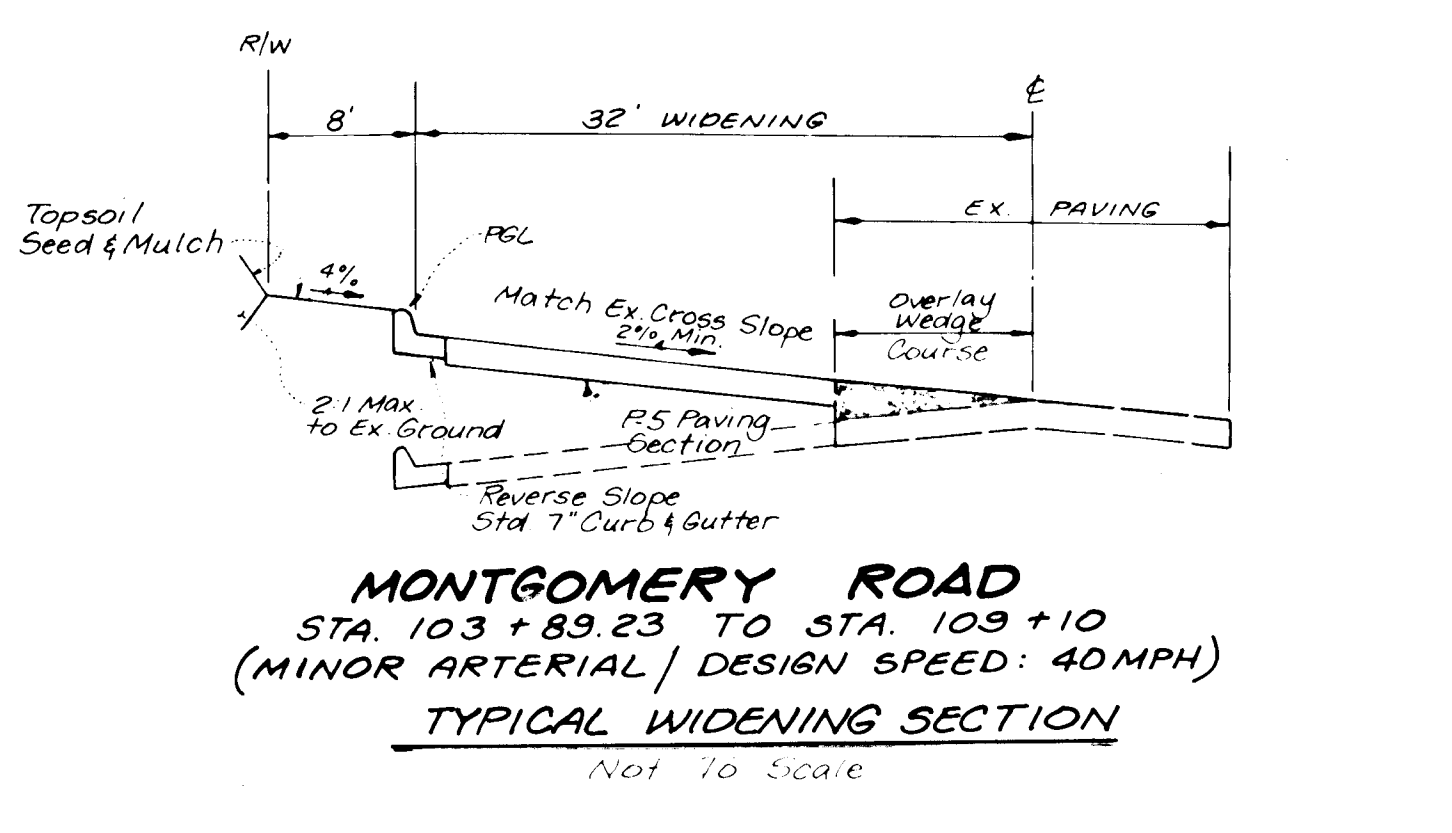


Deborah Jean Drive
Minor Collector
Typical Section

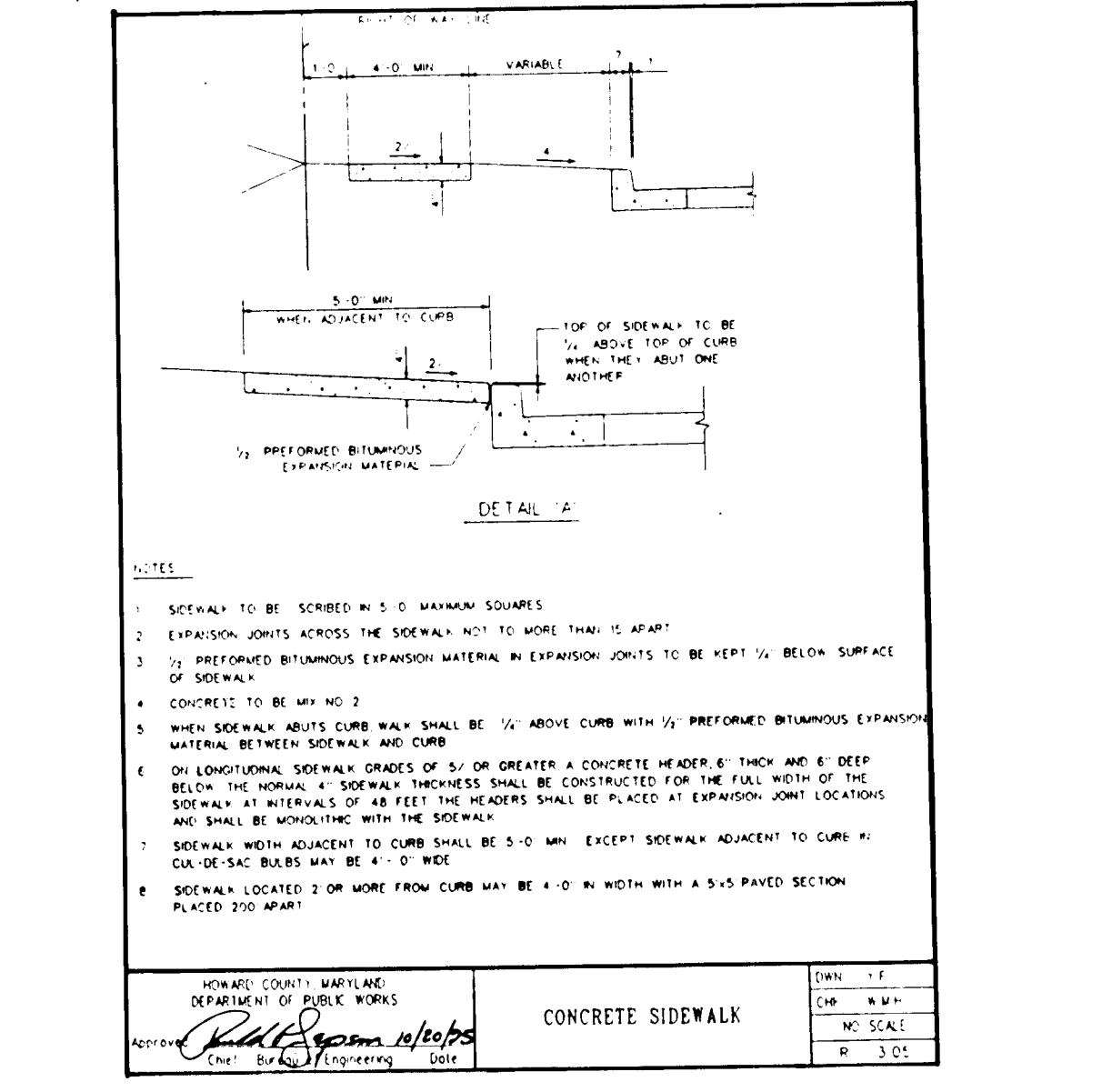
Road Name	Station to Station	Class.	R/W Speed	Prev. Sect. Zone	A	B	C	D
Deborah Jean Drive	0+00 - 4+25.61	Minor Collect	50 35	P-3	R-20	38	2	4 6
Calvert Drive	0+00 - 3+48	Local	50 30	P-2	R-20	26	5	4 10
Marshall Drive	106+96.03 - 111+46.36	Local	50 30	P-2	R-20	26	5	4 10
Montgomery Rd	103+89.23 - 109+10	Minor Arterial	60 40	P-5	R-20	64	8	4 14



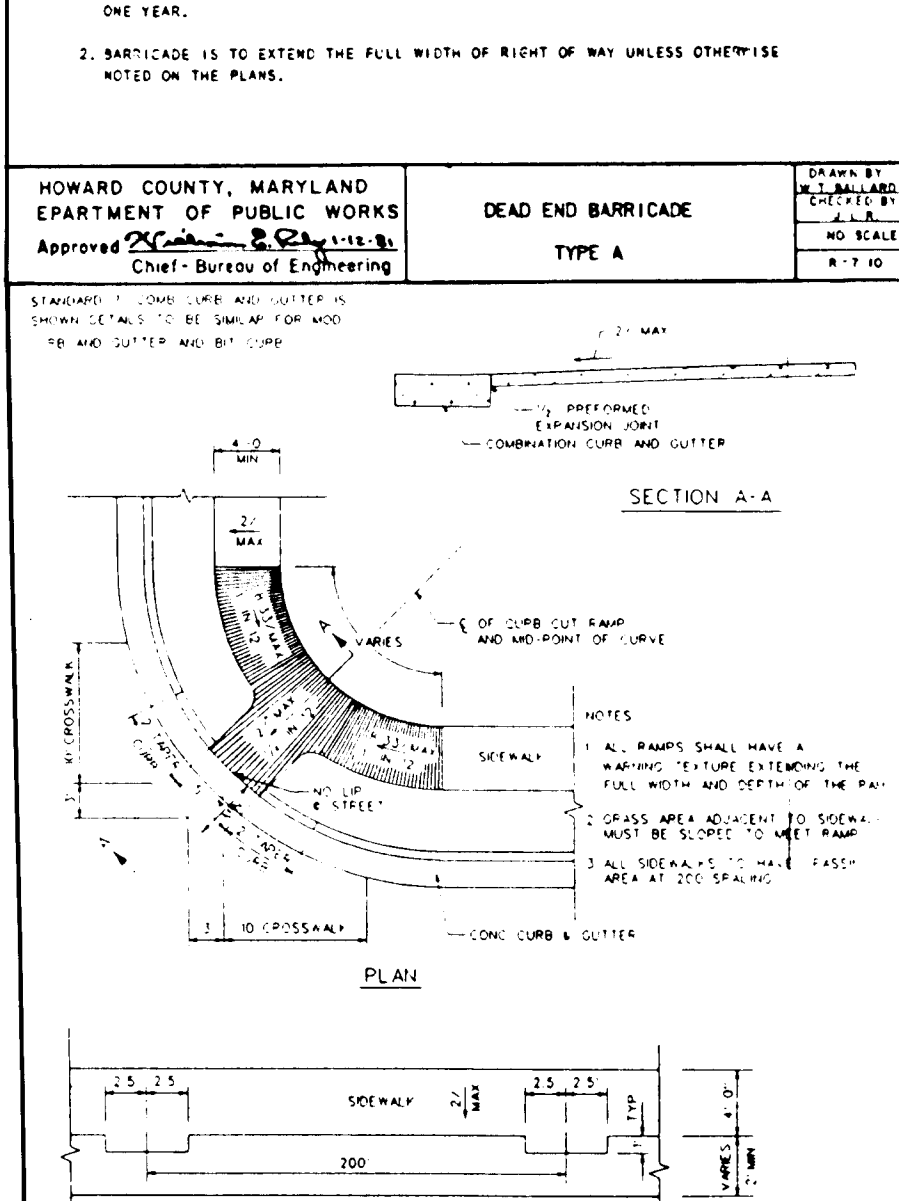
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



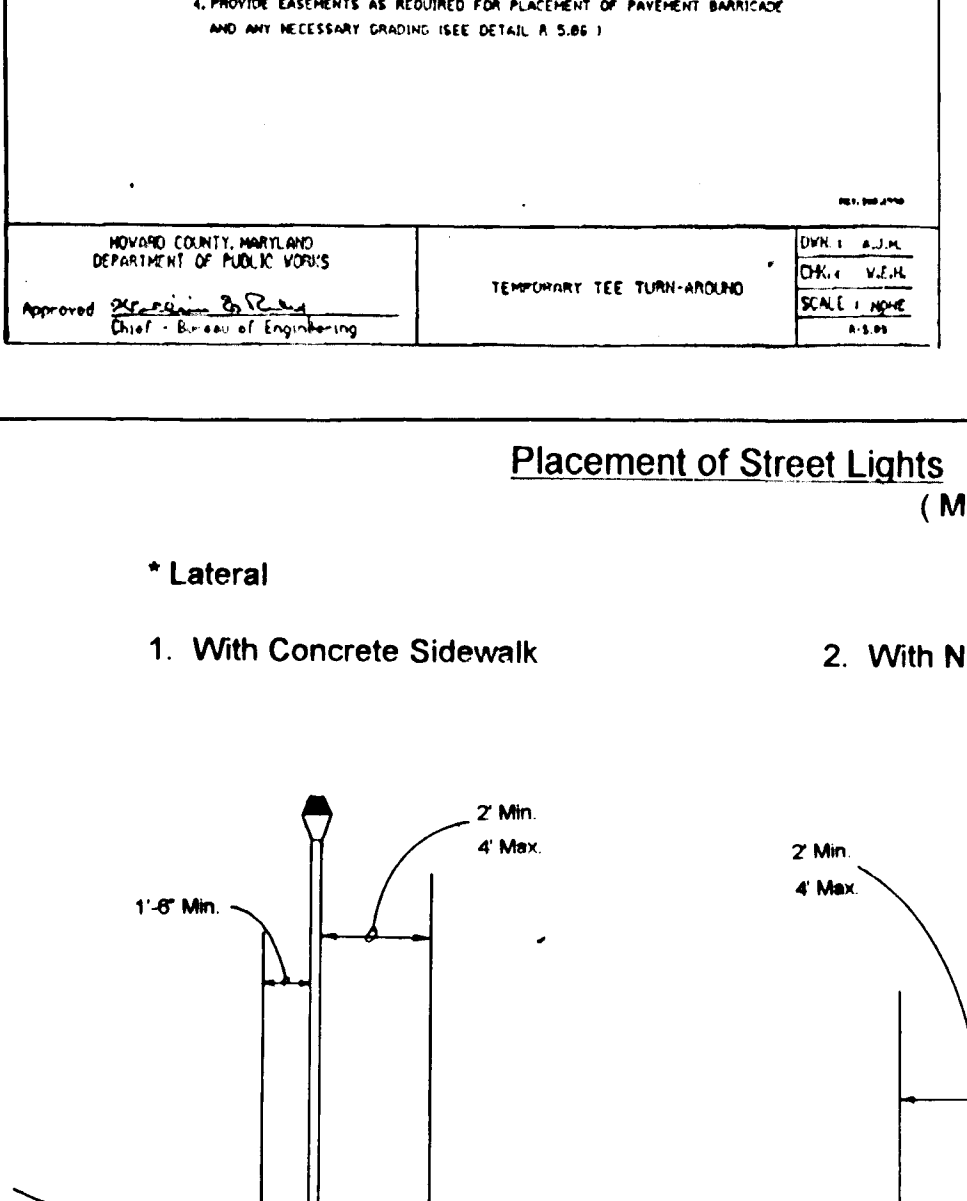
MONTGOMERY ROAD
STA. 103+89.23 TO STA. 109+10
(MINOR ARTERIAL) DESIGN SPEED: 40MPH
TYPICAL WIDENING SECTION
Not To Scale



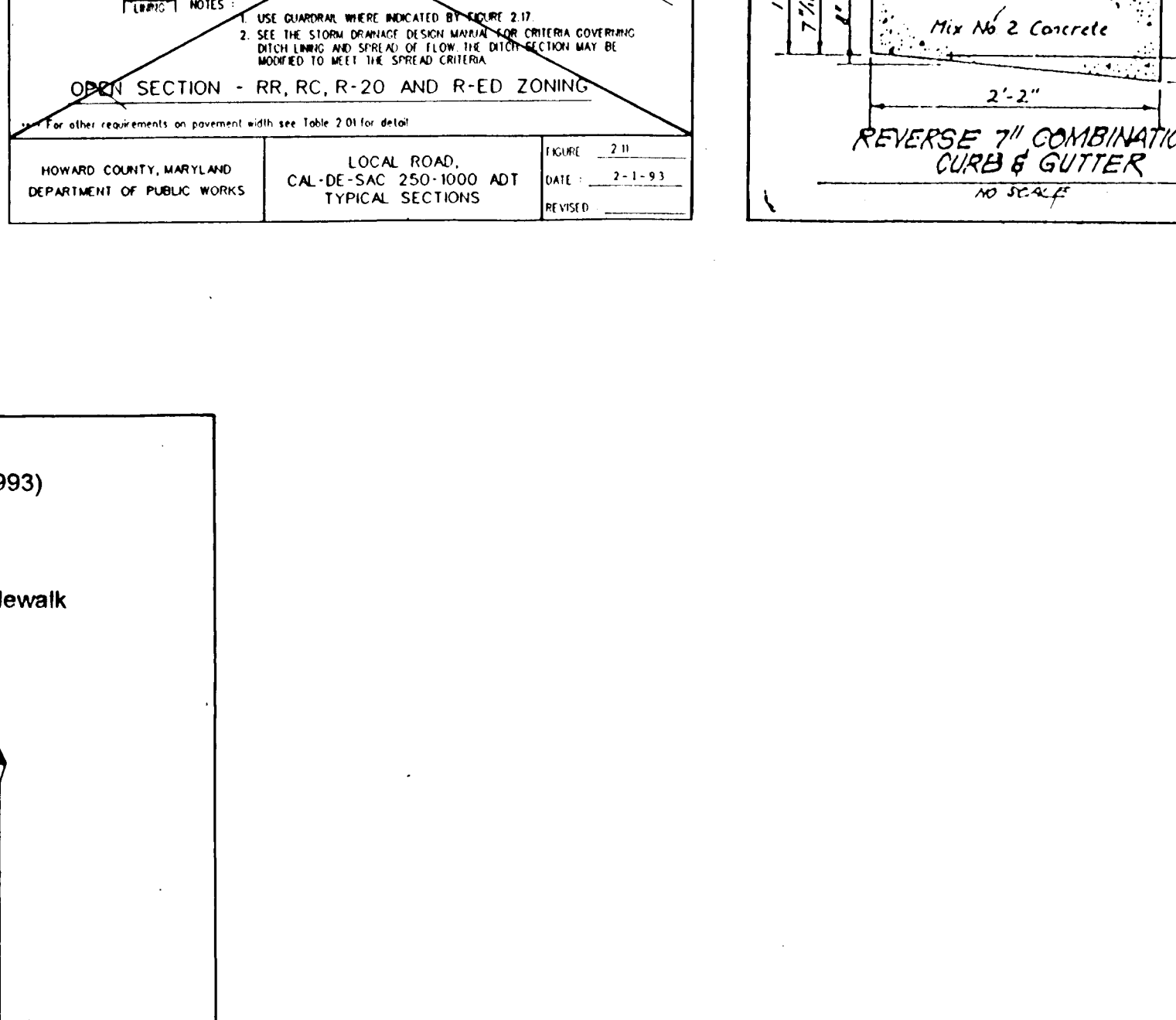
HOWARD COUNTY, MARYLAND
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Approved: [Signature] Chief Bureau of Engineering



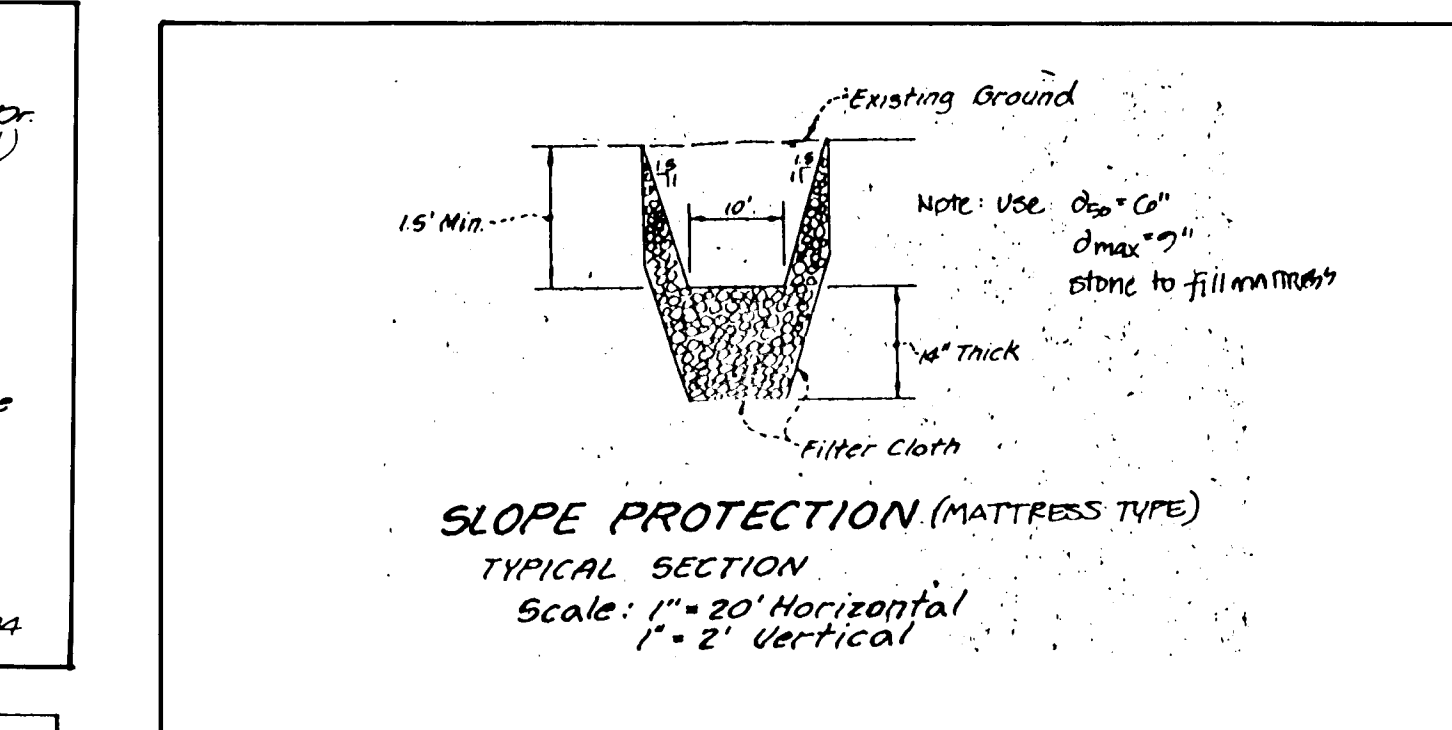
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



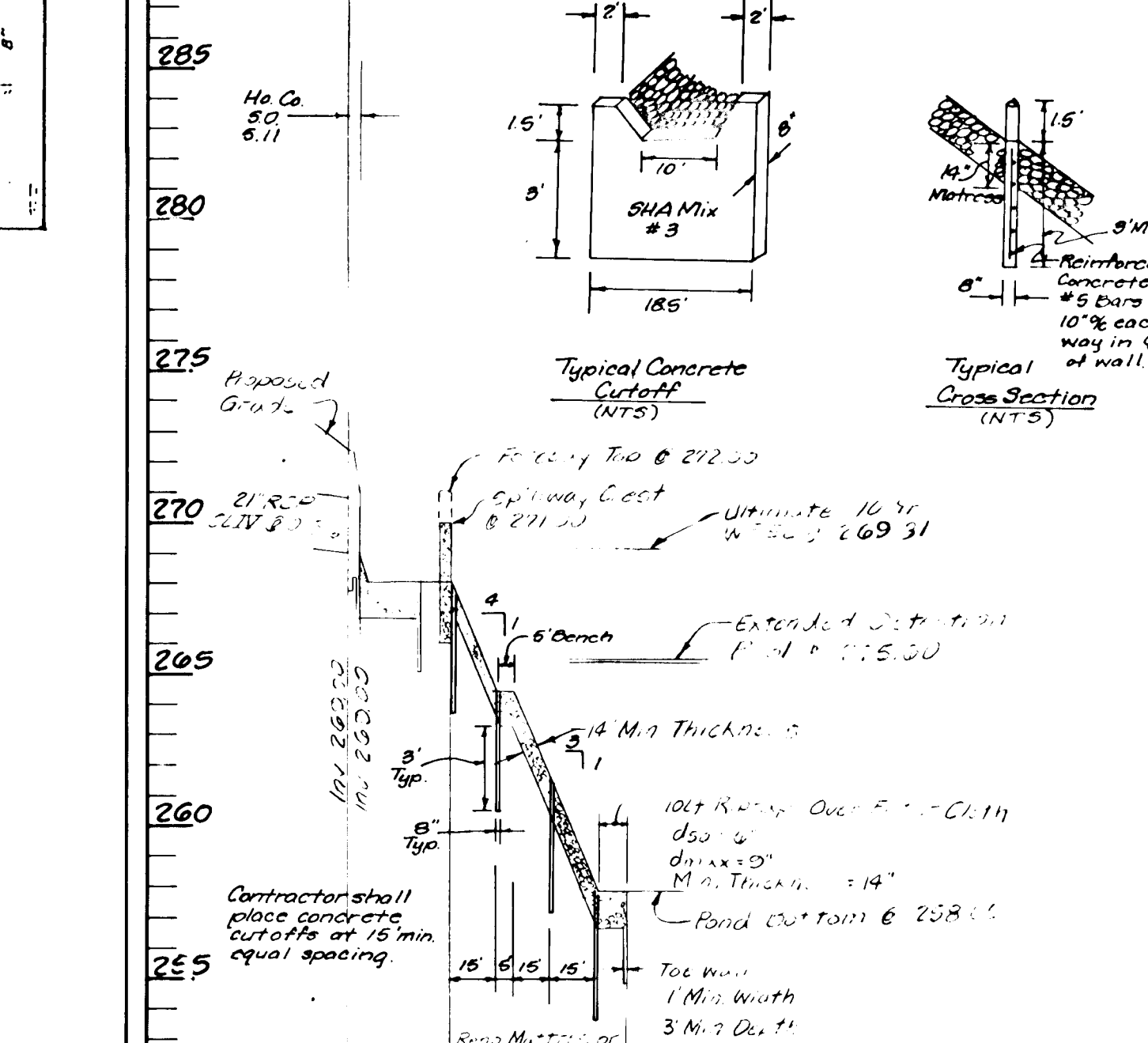
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
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HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering

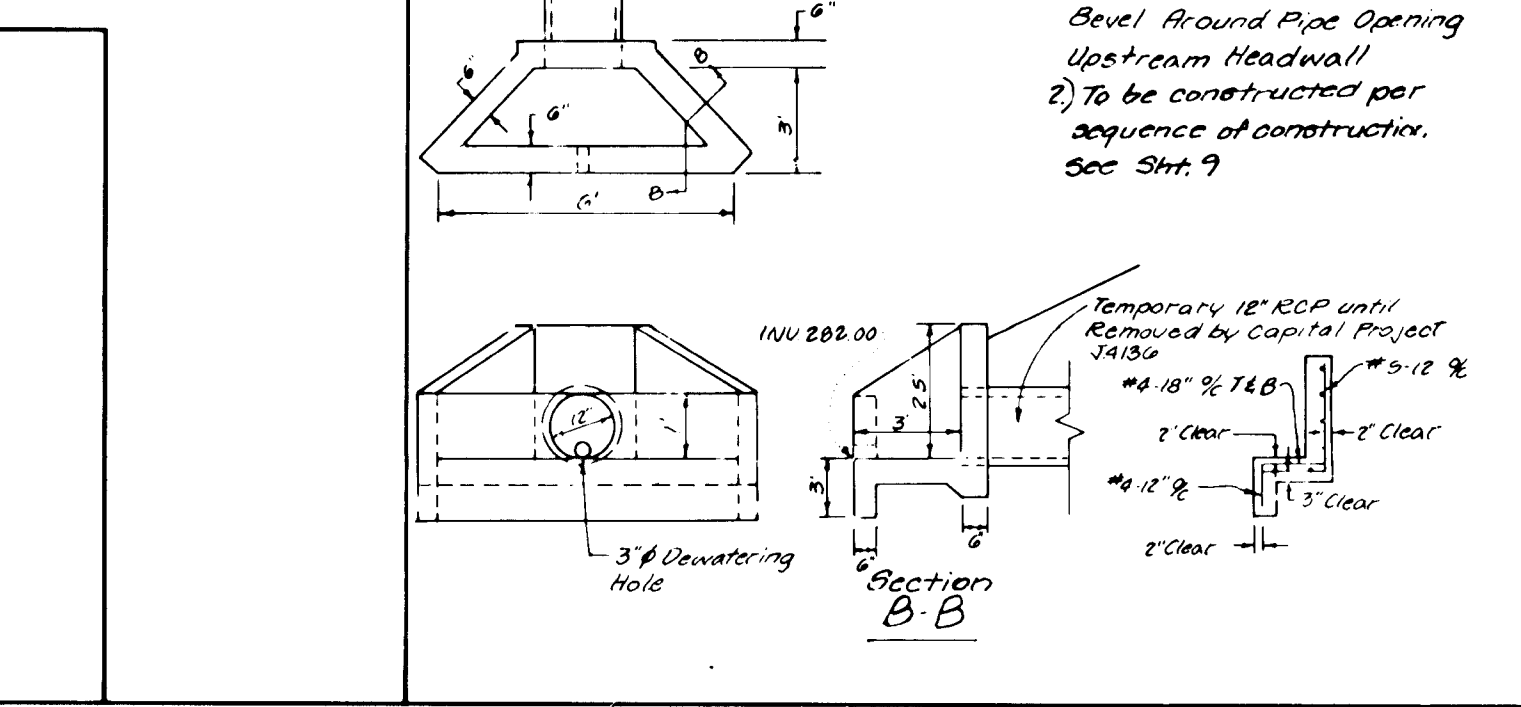


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 5/14/96 DATE
[Signature] 16/96 DATE
APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS
[Signature] 5-1-96 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
[Signature] 4/23/96 DATE
[Signature] 4/23/96 DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 4/23/96 DATE

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 4/15/96 DATE
DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORITY PERSON ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
[Signature] 4/15/96 DATE



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief Bureau of Engineering

DESIGNED: EDS
DRAWN: WJ
CHECKED: B.D.B.
DATE: March 1996
SCALE: AS SHOWN
DRAWING: 5 of 14
JOB NO.: 95-0222
FILE NO.: F96-30

1667

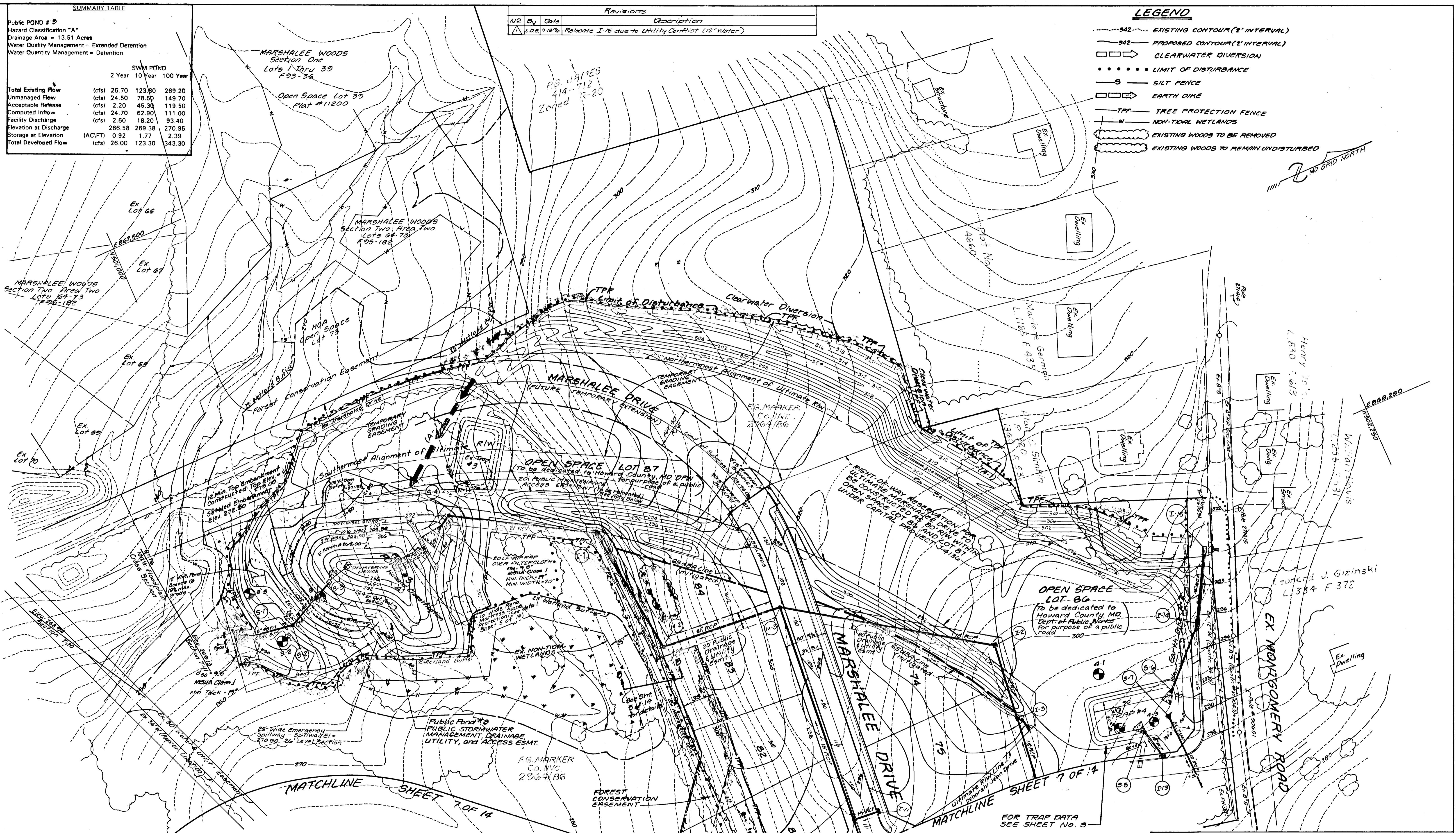
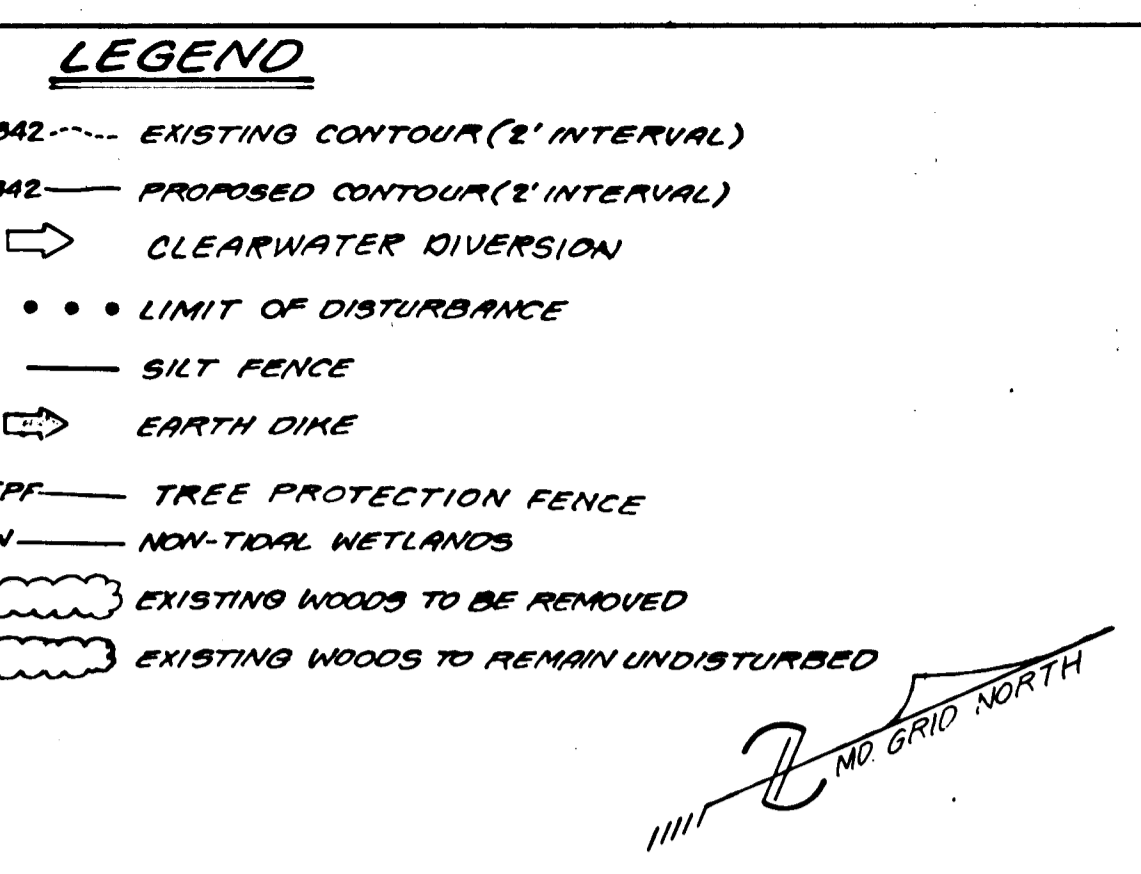
SUMMARY TABLE

Public Pond # 8
 Hazard Classification "A"
 Drainage Area = 13.51 Acres
 Water Quality Management = Extended Detention
 Water Quantity Management = Detention

	SWM POND		
	2 Year	10 Year	100 Year
Total Existing Flow (cfs)	26.70	123.80	269.20
Unmanaged Flow (cfs)	24.50	78.50	149.70
Accessible Release (cfs)	2.20	45.30	119.50
Computed Inflow (cfs)	24.70	62.90	111.00
Facility Discharge (cfs)	2.60	18.20	93.40
Elevation at Discharge	266.58	269.38	270.95
Storage at Elevation (AC/FT)	0.92	1.77	2.39
Total Developed Flow (cfs)	26.00	123.30	343.30

Revisions

NR	By	Date	Description
1	LDE	7/18/96	Relocate I-15 due to Utility Conflict (12" Water)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Quinn Swann
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 DATE: 5/14/96

Andrew M. Daniels
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 5/19/96

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

J. H. Wadsworth
 NATURAL RESOURCE CONSERVATION SERVICE
 DATE: 4/19/96

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

Phyllis W. Zim
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: 4/23/96

Note: The 20' Public Maintenance Access Easement as shown from 107+80 to Marshalee Drive to 2+75% E of Embankment will be Relocated Upon the Completion of Deborah Jean Drive (F90-02) to RD Station 10+75% Deborah Jean Drive.

Ernest D. Burton
 PROFESSIONAL ENGINEER
 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. 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.

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.

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

DESIGNED: GRADING & SEDIMENT AND EROSION CONTROL PLAN
 SCALE: 1" = 50'

DRAWN: WJ/BSI
 DRAWING: 8 OF 14

CHECKED: B.D.B.
 JOB NO.: 95 022.2

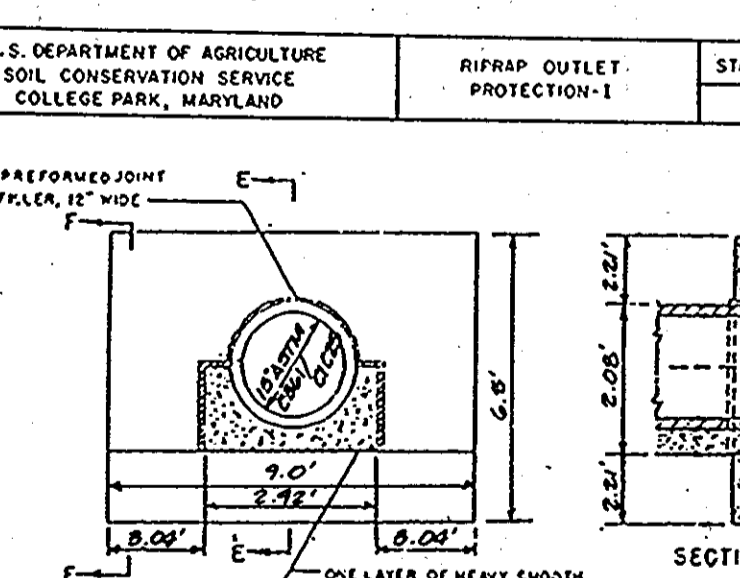
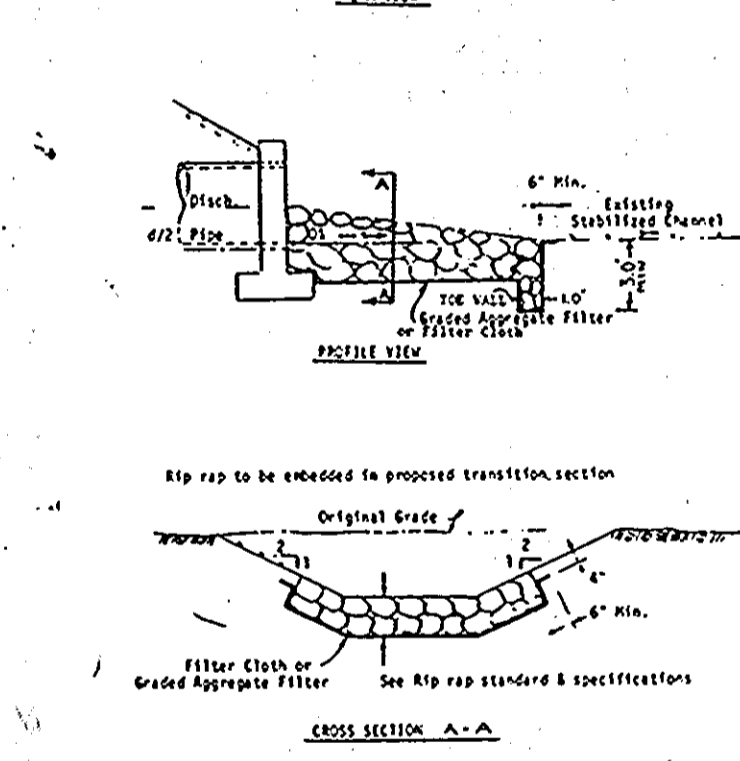
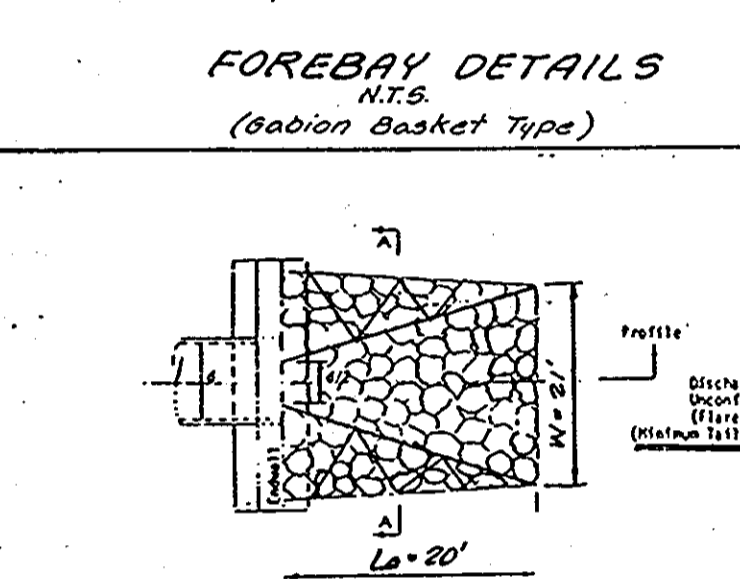
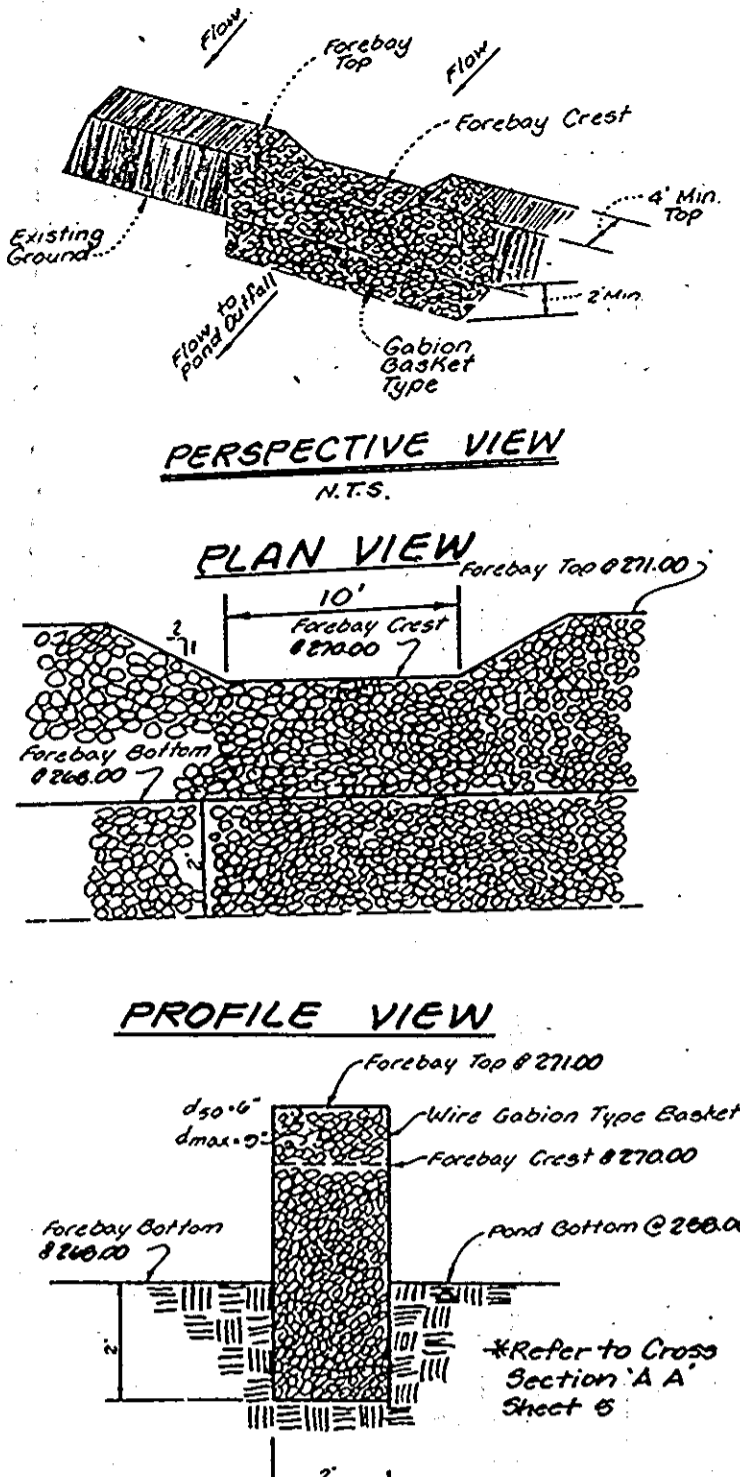
DATE: Aug. 1996
 FILE NO.: F96-30

MARSHALEE WOODS
 Section 2 - Area 3
 Lots 74 - 88

Tax Map 37 P10 Parcels 399, 92 and 93
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Owner/Developer: Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway Unit P
 Columbia, Maryland 21045
 (410) 730-0810

1667



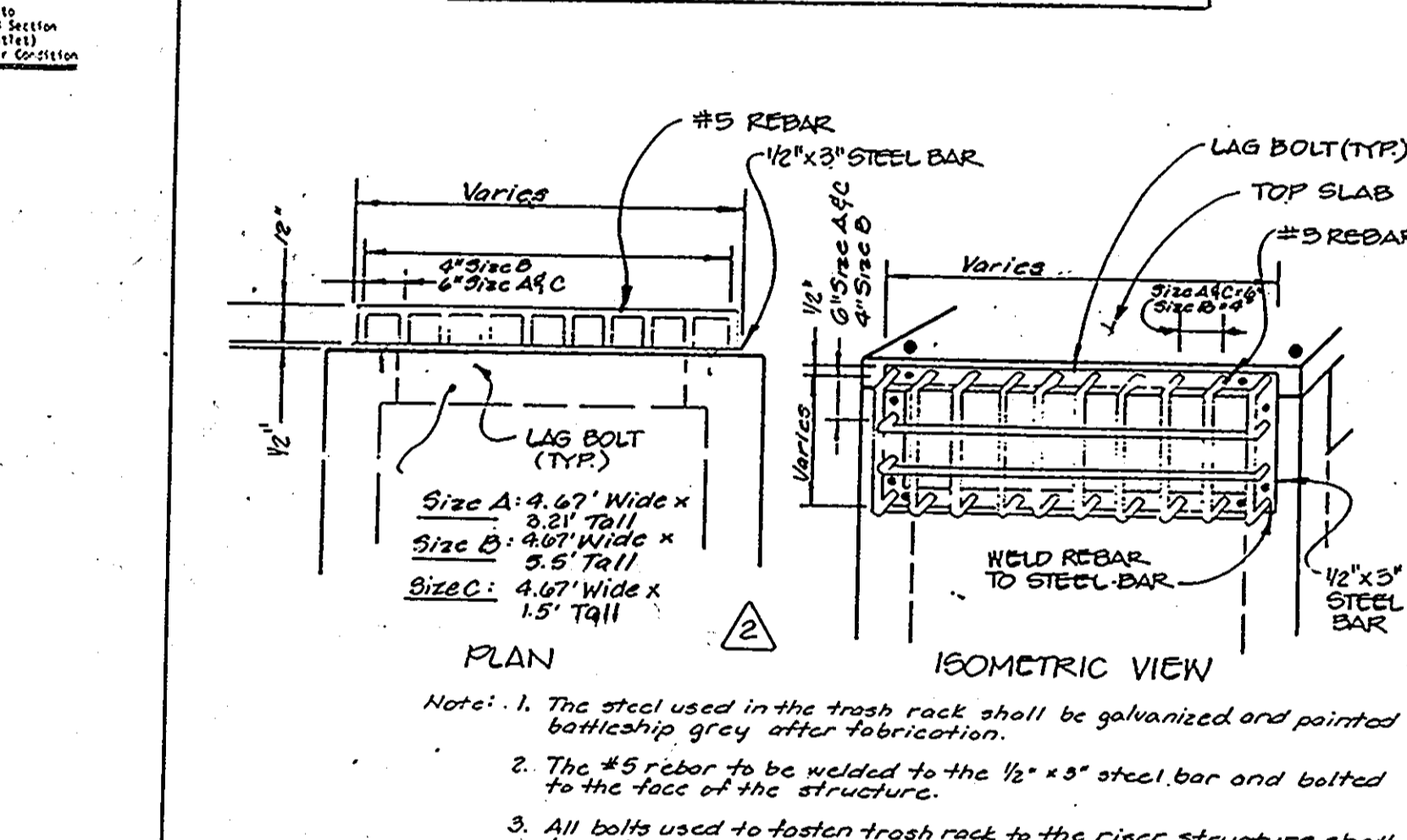
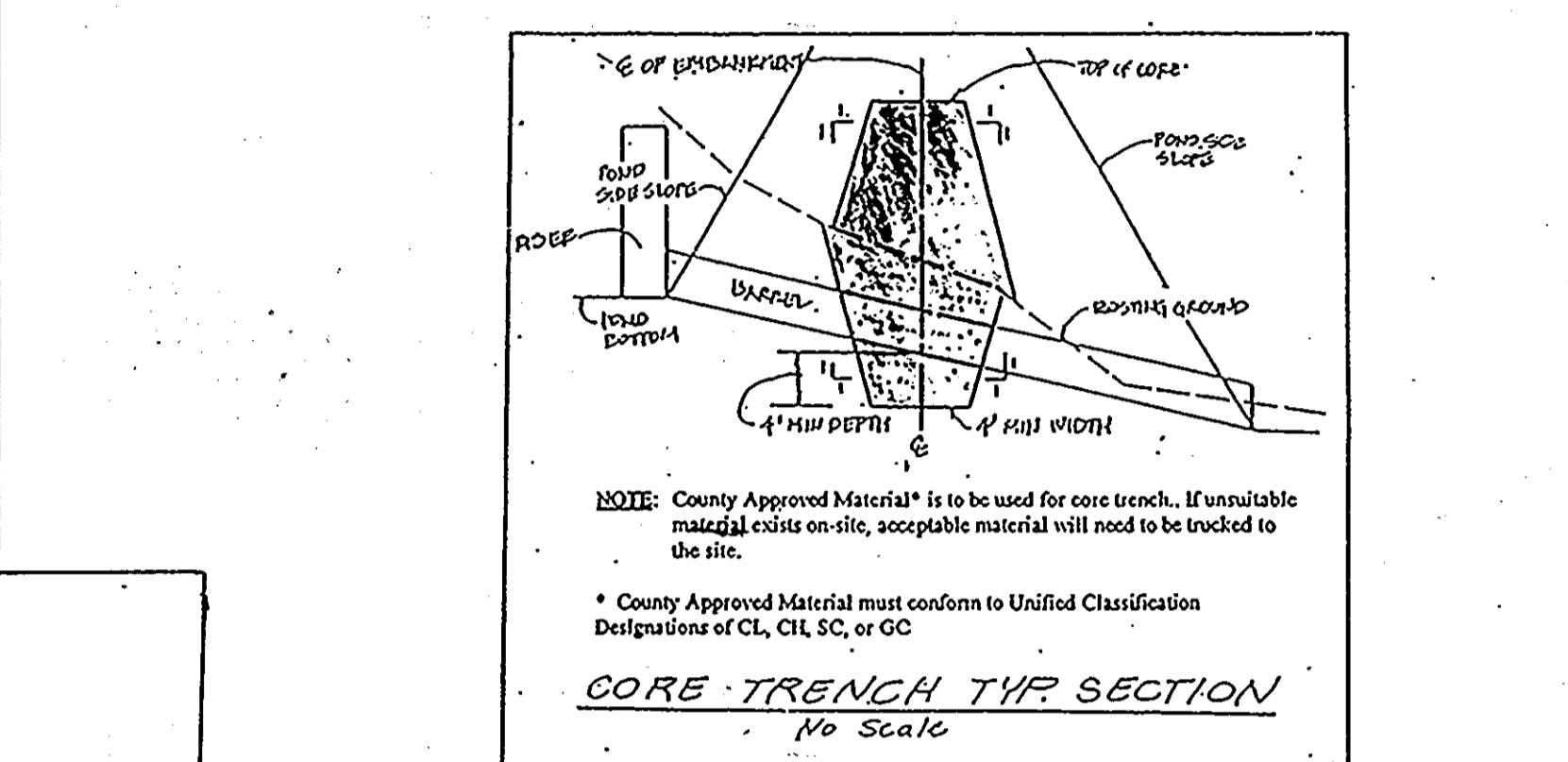
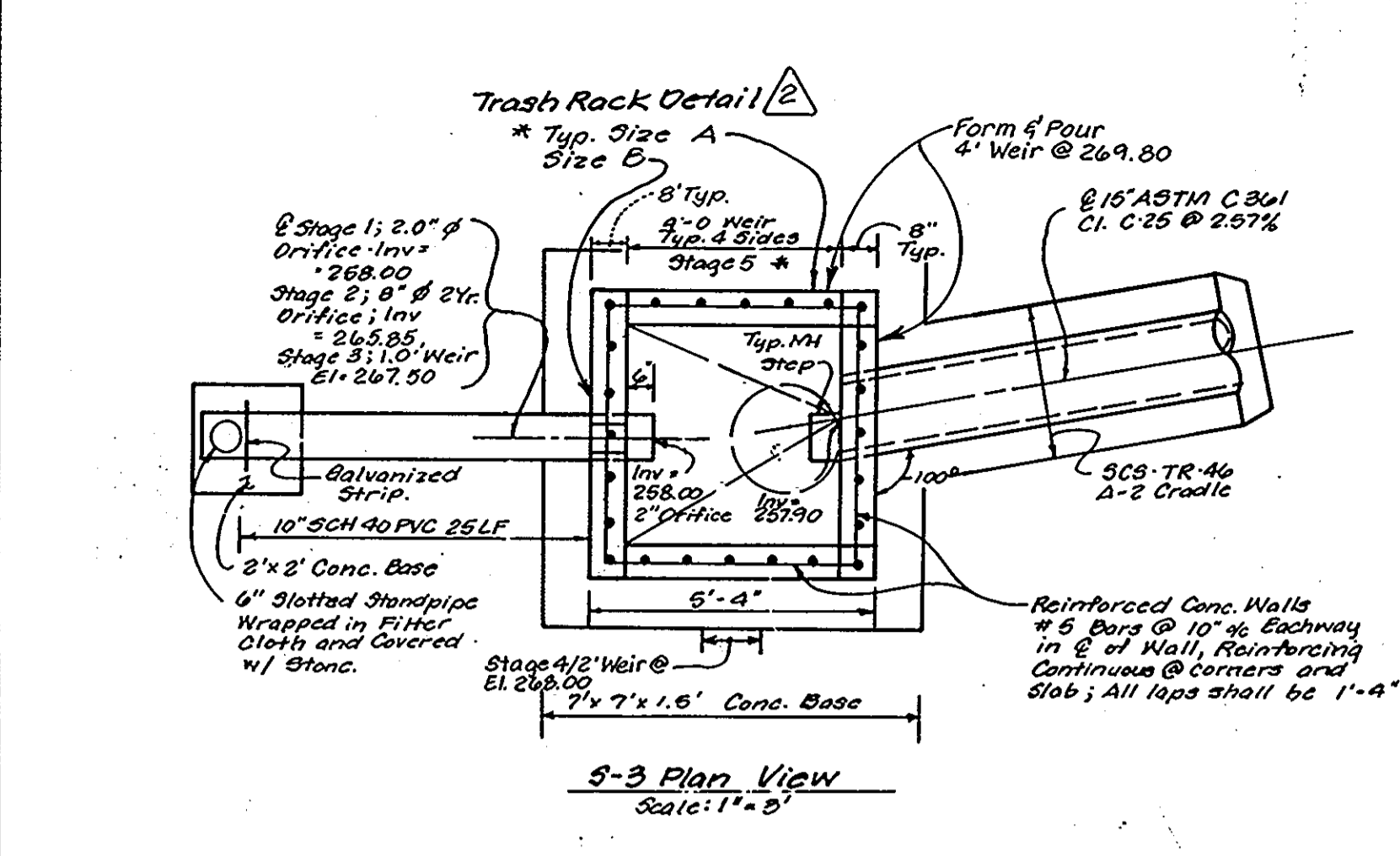
Approved: Howard County Department of Planning and Zoning

Quinn Zimmerman 5/14/96
Chief, Division of Land Development, Planning and Research

[Signature] 5/16/96
Chief, Development Engineering Division

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

Andrew M. Juecker 5-1-96
Chief, Bureau of Highways



Operation and Maintenance Schedule
Stormwater Management Facility
Extended Detention Pond

Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.

Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.

When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

OPERATION, MAINTENANCE, AND INSPECTION

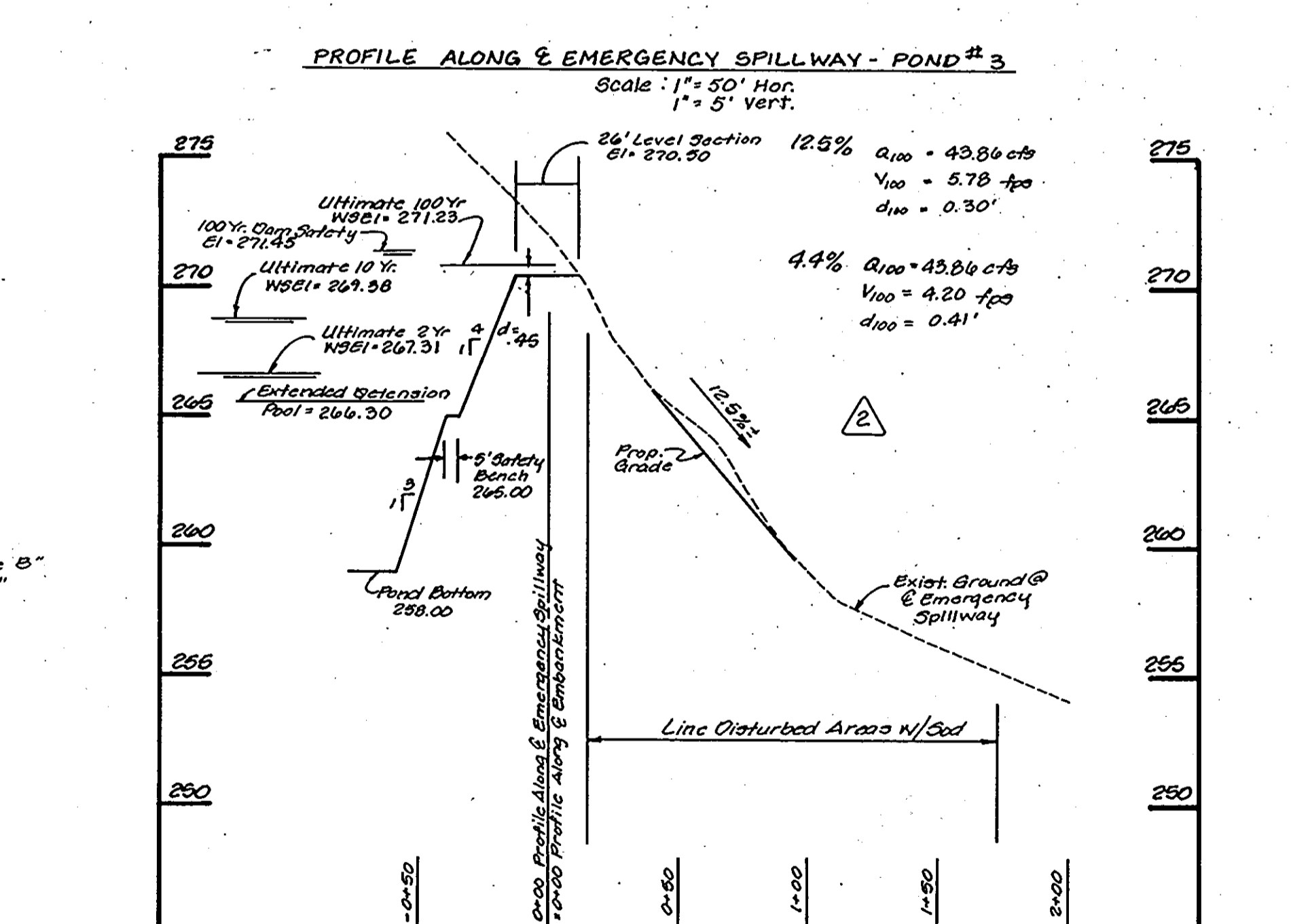
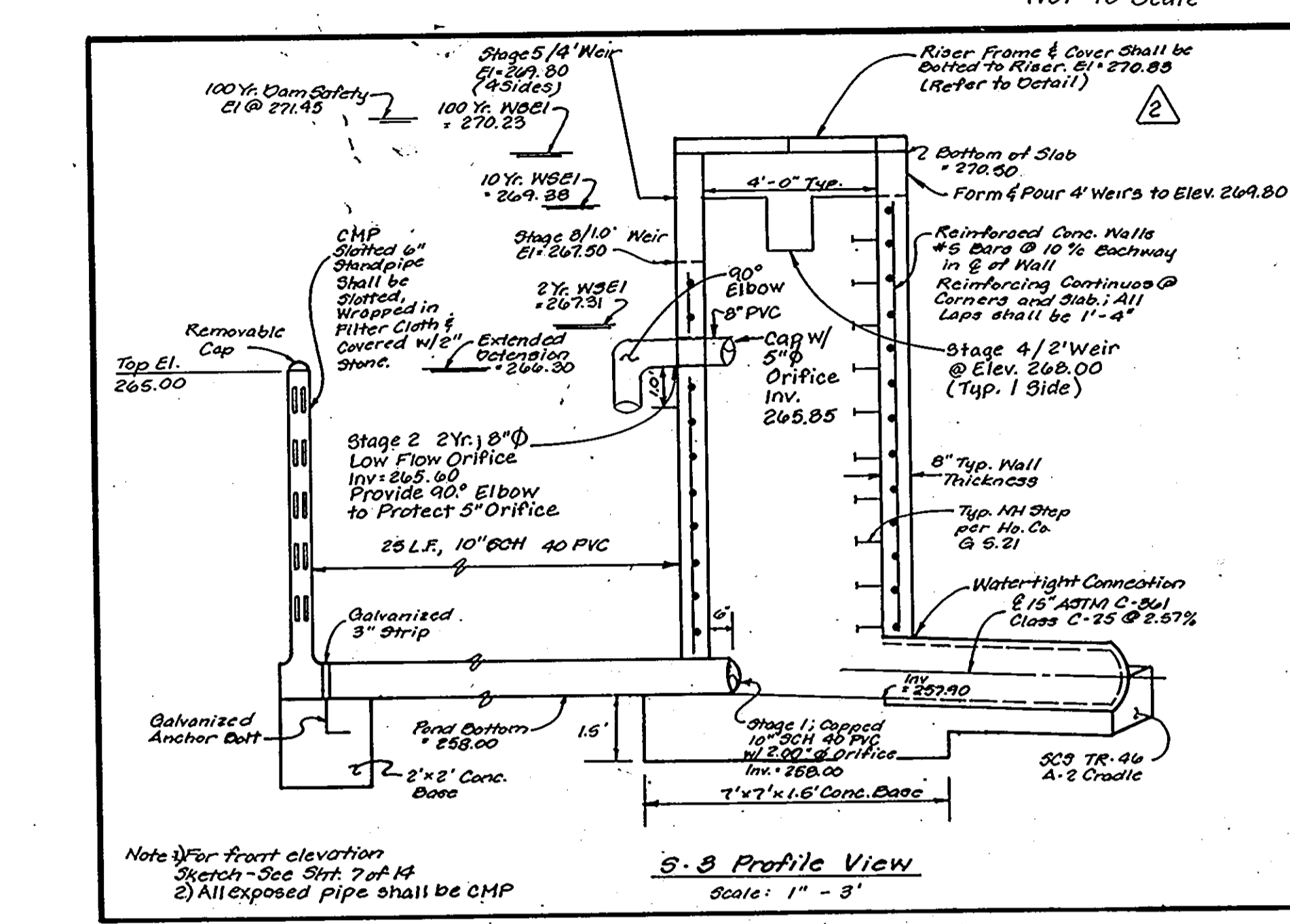
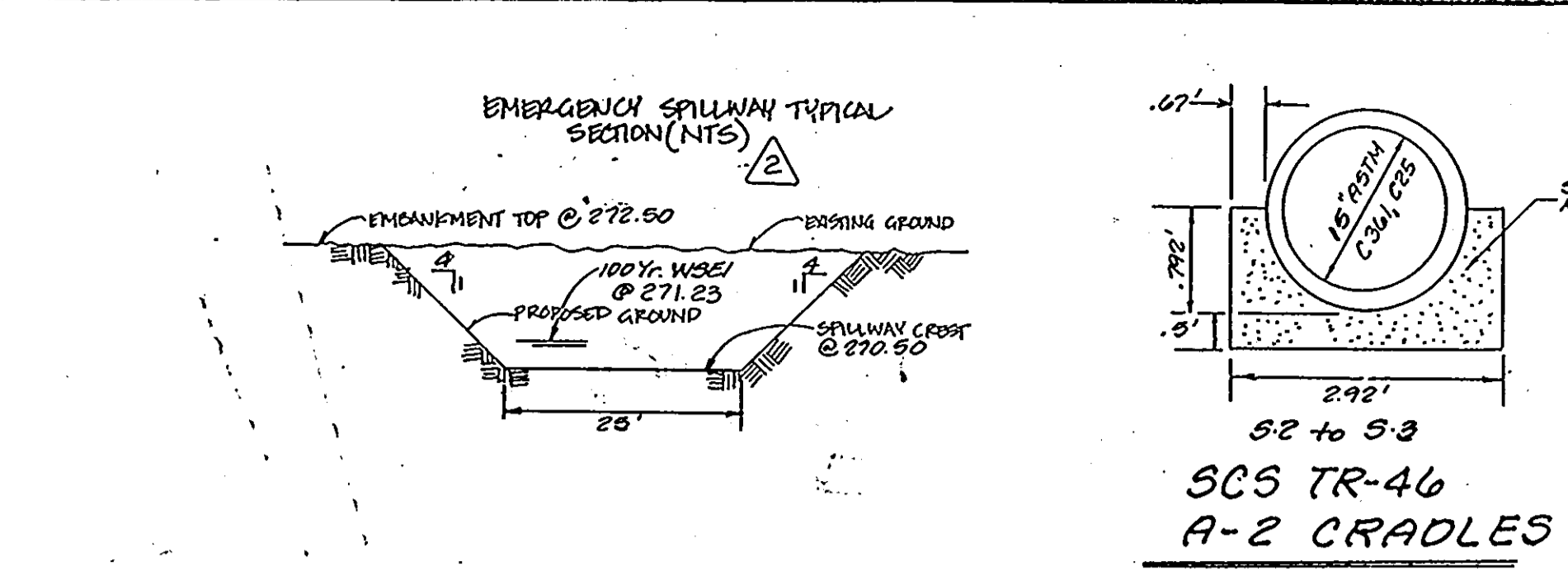
Inspection of the pond shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications for Ponds (MD 378). The pond owner(s) and their heirs, successors, or assigns shall be responsible for the safety of the 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.

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.

Robert W. Zilch 4/23/96
Howard Soil Conservation District

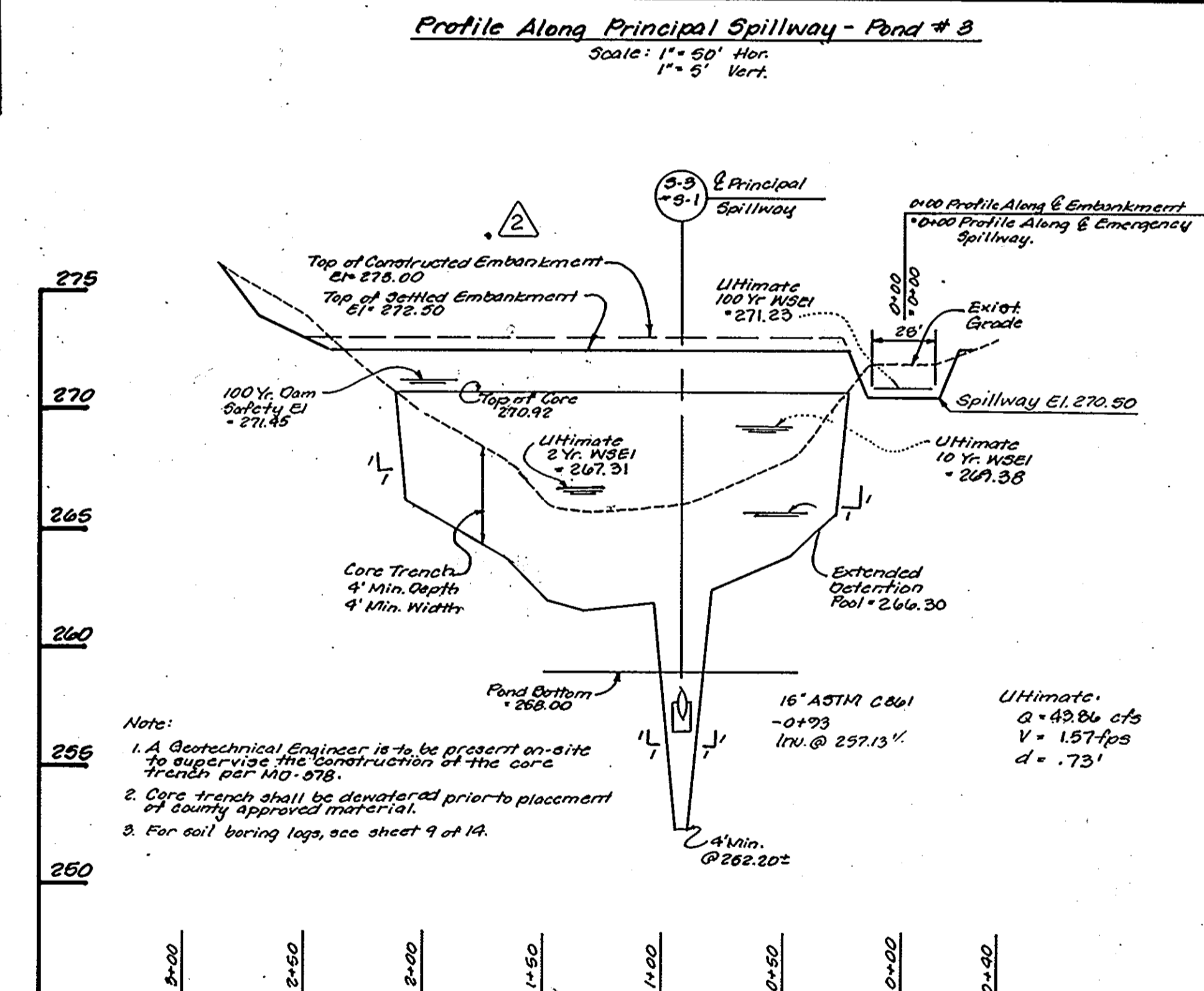
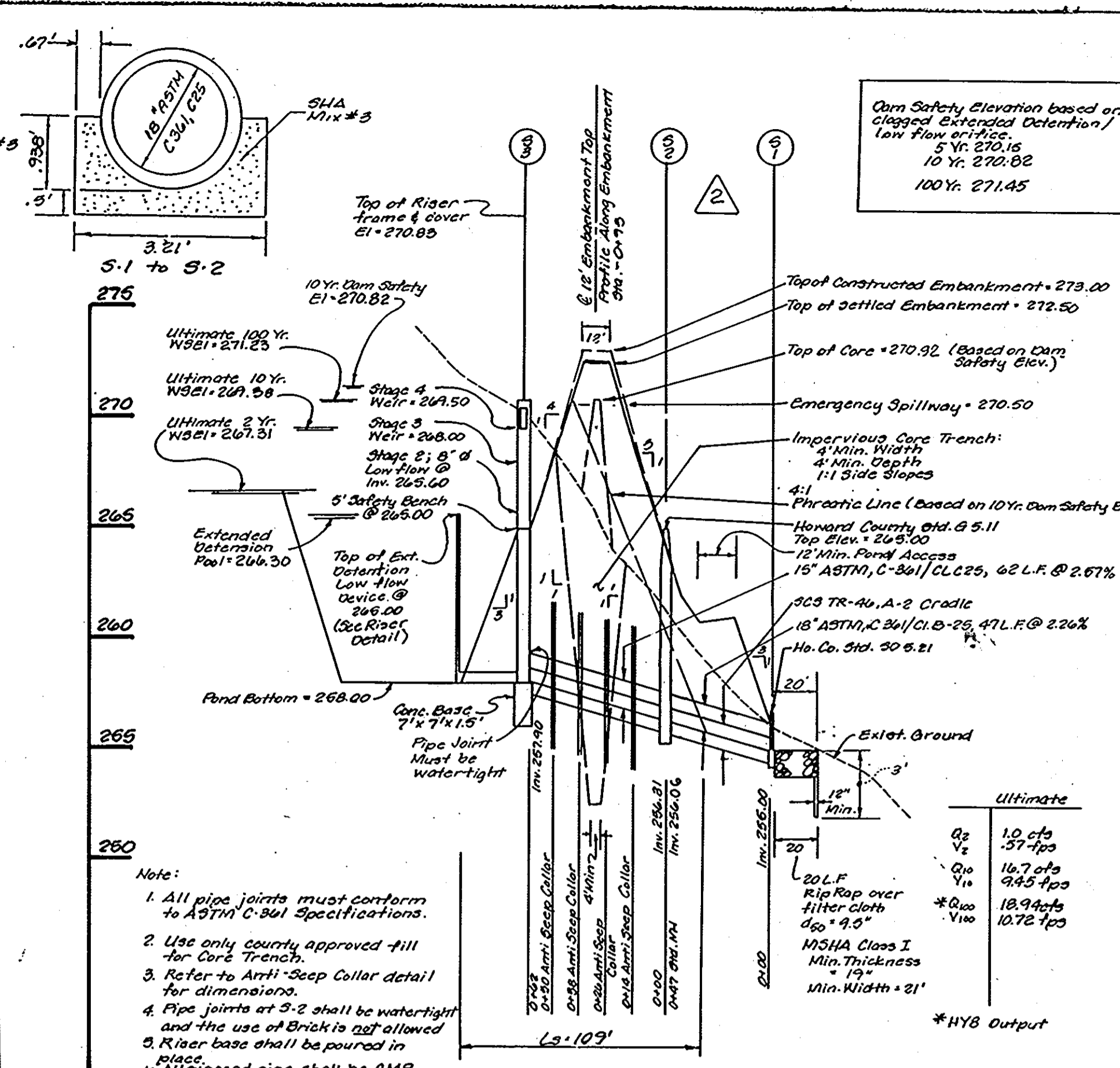
Erville D. Burt 4/15/96
Signature of Engineer



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] 4/13/96
Signature of Developer



OPERATION, MAINTENANCE, AND INSPECTION

1. A geotechnical engineer is to be present on-site to supervise the construction of the core.

2. Core trench shall be dewatered prior to placement of concrete.

3. For soil boring logs, see sheet 9 of 10.

DETAIL RISER FRAME & COVER
N.T.S.

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

DESIGNED E.D.S.
DRAWN BEI
CHECKED B.D.B.
DATE Mar. 1996

SCALE As Shown
DRAWING 19 of 19
JOB NO. 95-022.2
FILE NO. F96-20

STORMWATER MANAGEMENT DETAILS
MARSHALEE WOODS
Section Two - Area Three
Lots 74-88

Tax Map 37
1ST ELECTION DISTRICT

P/O Parcels 399, 92 and 93
HOWARD COUNTY, MARYLAND

Owner/Developer
Marshalee Woods Limited Partnership
8835 Columbia 100 Parkway, Unit 10
Columbia, Maryland 21045 (410) 730-0810

2667

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	1030 L.F.
Number of Trees Required	21
Shade Trees (1:50)	26
Evergreen Trees (1:42)	No.
Credit for Existing Vegetation (No, Yes and %)	No.
Credit for Other Landscaping (No, Yes and %)	No.
Number of Trees Provided	21
Shade Trees	26
Evergreen Trees	
Other Trees (2:1 substitution)	

Revisions			
Nº	By	Date	Description
1	L.D.E.	9-18-96	Relocate E-16 due to Utility Conflict (12" Water)
2	L.D.E.	6/04	Revise Pond Grades if WSEL's per J-4136-3A

- NOTES:**
- This plan has been prepared in accordance with provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
 - 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.
 - There shall be a minimum of 20' between street lights and street trees.
 - The Type 'B' Buffer surrounding the SWM Pond #3 shall be planted under Phase 4, Lots 127-137 (P-96-66) See schedule 'D' this sheet.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Summery 5/14/96
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH

[Signature] 7/6/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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

Andrew M. Daniels 5-1-96
CHIEF, BUREAU OF HIGHWAYS

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

NATURAL RESOURCE CONSERVATION SERVICE

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

HOWARD SOIL CONSERVATION DISTRICT

22 Hardwoods
1-2 Gal. Cont. Stock

31 Evergreen Seedlings

Note: Forest Conservation Easement to be planted upon completion of Phase 2, Lots 69-126, P-96-62

Remove existing roadbed and expand existing tree groups with planting stock 5875 s.f.t

173072300
E 868,500

LDE, INC.
9255 Rumsey Road, Suite 156, Columbia, MD. 21045
(410) 715-1070 (301) 596-3124 (410) 715-9543 (Fax)

DESIGNED	ES/TO	SCALE	1"=50'
DRAWN	WJ	DRAWN	13 of 14
CHECKED	B.L.B.	JOB NO.	09-022.2
DATE	Aug 1996	FILE NO.	F-96-30

MARSHALEE WOODS
Section 2 - Area 3
Lots 74 - 88

Tax Map 37 P10 Parcels 399, 92 and 93
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Owner, Developer: [Address: 8820 Columbia 100 Parkway, Suite F, Columbia, Maryland 21045 (410) 730-0210]

1667



Revision			
NO	By	Date	Description
1	LDE	9/18/96	Relocate I-15 due to Utility Conflict (12" Water)
2	LDE	6/04	Revise Pond Grades & WSEL's per J-4136-3A



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Ann Zimmerman
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 DATE: 5/14/96

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/16/96

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

Andrew M. Daniels
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 5-1-96

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

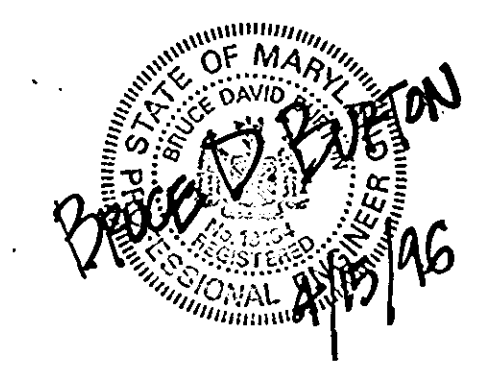
NATURAL RESOURCE CONSERVATION SERVICE
 DATE: _____

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

HOWARD SOIL CONSERVATION DISTRICT
 DATE: _____

LDE, INC. 9250 Rumsey Road, Suite 106, Columbia, MD. 21045 (410) 715-1070 (301) 596-3124 (410) 715-9540 (Fax)			
DESIGNED	DRAINAGE AREA MAP		SCALE
E9/70			1" = 50'
DRAWN	MARSHALEE WOODS Section 2 - Area 3 Lots 74 - 88		DRAWING
WJee1			11 of 14
CHECKED	Tax Map 37 P10 Parcels 399, 92 and 93		JOB NO.
B.D.B.	1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND		95-022.2
DATE	Owner/Developer	Marshalee Woods Limited Partnership 8835 Columbia 100 Parkway Unit F Columbia, Maryland 21045 (410) 730-081C	FILE NO.
Aug. 1996			F 96-30

1667



SUMMARY TABLE

Public PQND # 9
Hazard Classification "A"
Drainage Area = 16.16 Acres
Water Quality Management = Extended Detention
Water Quantity Management = Detention

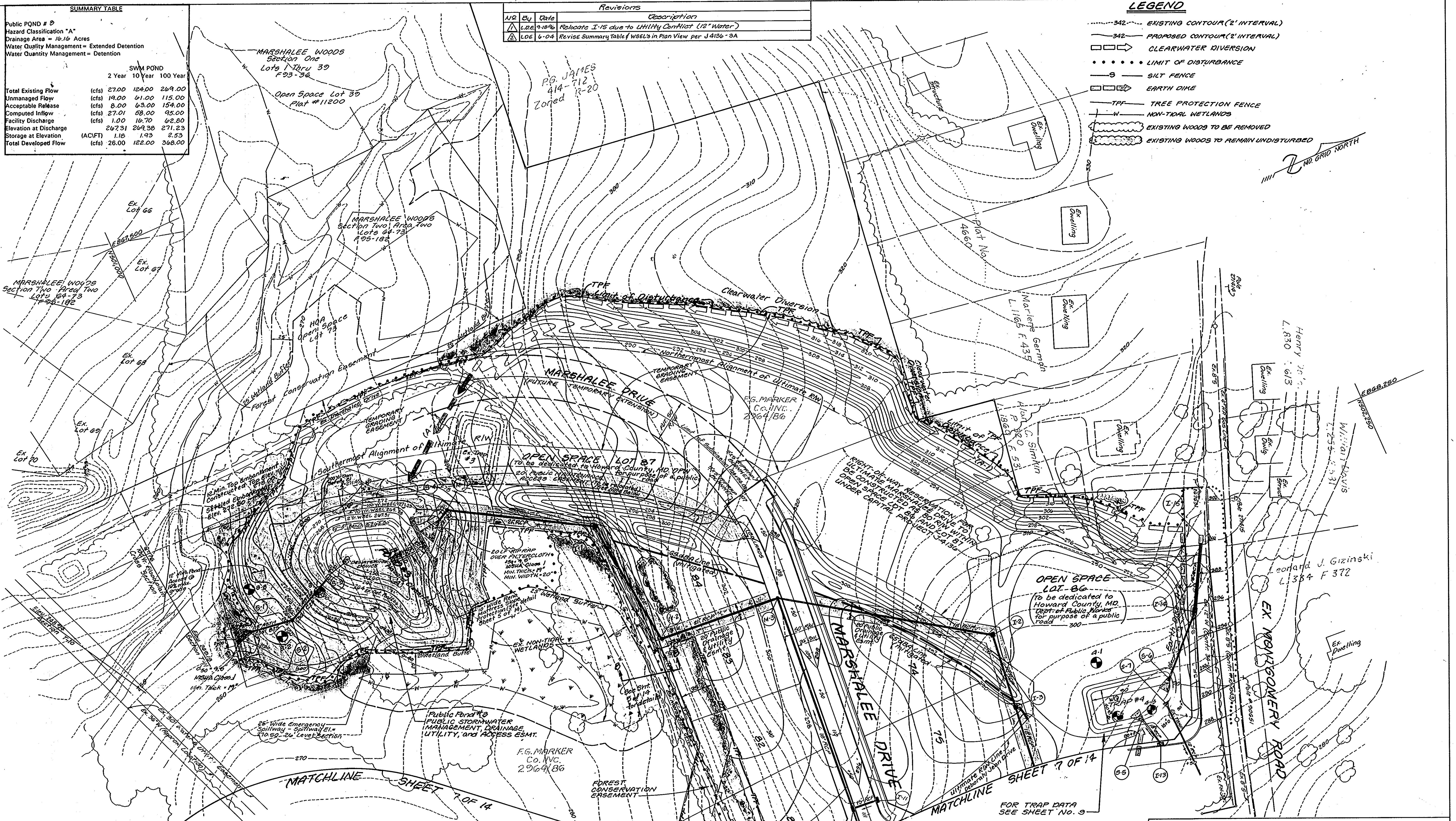
	SWM POND	2 Year			10 Year			100 Year		
		2 Year	10 Year	100 Year	2 Year	10 Year	100 Year	2 Year	10 Year	100 Year
Total Existing Flow	(cfs)	27.00	124.00	269.00						
Unmanaged Flow	(cfs)	14.00	61.00	115.00						
Acceptable Release	(cfs)	8.00	63.00	154.00						
Computed Inflow	(cfs)	27.01	68.00	95.00						
Facility Discharge	(cfs)	1.00	16.70	62.80						
Elevation at Discharge		207.31	209.38	271.23						
Storage at Elevation	(ACFT)	1.16	1.93	2.53						
Total Developed Flow	(cfs)	26.00	122.00	368.00						

Revisions

NO	By	Date	Description
1	LDE	9-18-96	Relocate I-15 due to Utility Conflict (12" Water)
2	LDE	6-04	Revise Summary Table WSEL's in Plan View per J4186-3A

LEGEND

- 342--- EXISTING CONTOUR (2' INTERVAL)
- 342--- PROPOSED CONTOUR (2' INTERVAL)
- □ □ CLEARWATER DIVERSION
- LIMIT OF DISTURBANCE
- S— SILT FENCE
- □ □ EARTH DIKE
- TPF--- TREE PROTECTION FENCE
- W--- NON-TIDAL WETLANDS
- EXISTING WOODS TO BE REMOVED
- EXISTING WOODS TO REMAIN UNDISTURBED



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Quia Summary
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
5/11/96
DATE

Andrew M. Daniels
CHIEF, BUREAU OF HIGHWAYS
5-11-96
DATE

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

J. M. Walden
NATURAL RESOURCE CONSERVATION SERVICE
5/19/96
DATE

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

Robert W. Zindler
HOWARD SOIL CONSERVATION DISTRICT
4/23/96
DATE

Notes: The 20' Public Maintenance Access Easement as shown from 107+80 to Marshalee Drive to 2+75% of Embankment will be Relocated Upon the Completion of Deborah Jean Drive (F20-62) to RD Station 10+75% Deborah Jean Drive.

ENGINEER'S CERTIFICATE

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Bruce D. Burton
REGISTERED PROFESSIONAL ENGINEER
4/15/96
DATE

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Michael J. ...
4/15/96
DATE

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

DESIGNED: GRADING & SEDIMENT AND EROSION CONTROL PLAN SCALE: 1" = 50'

DRAWN: WJ/bee DRAWING: 8 OF 14

CHECKED: B.D.B. JOB NO.: 95-022.2

DATE: Aug. 1996 FILE NO.: F96-30

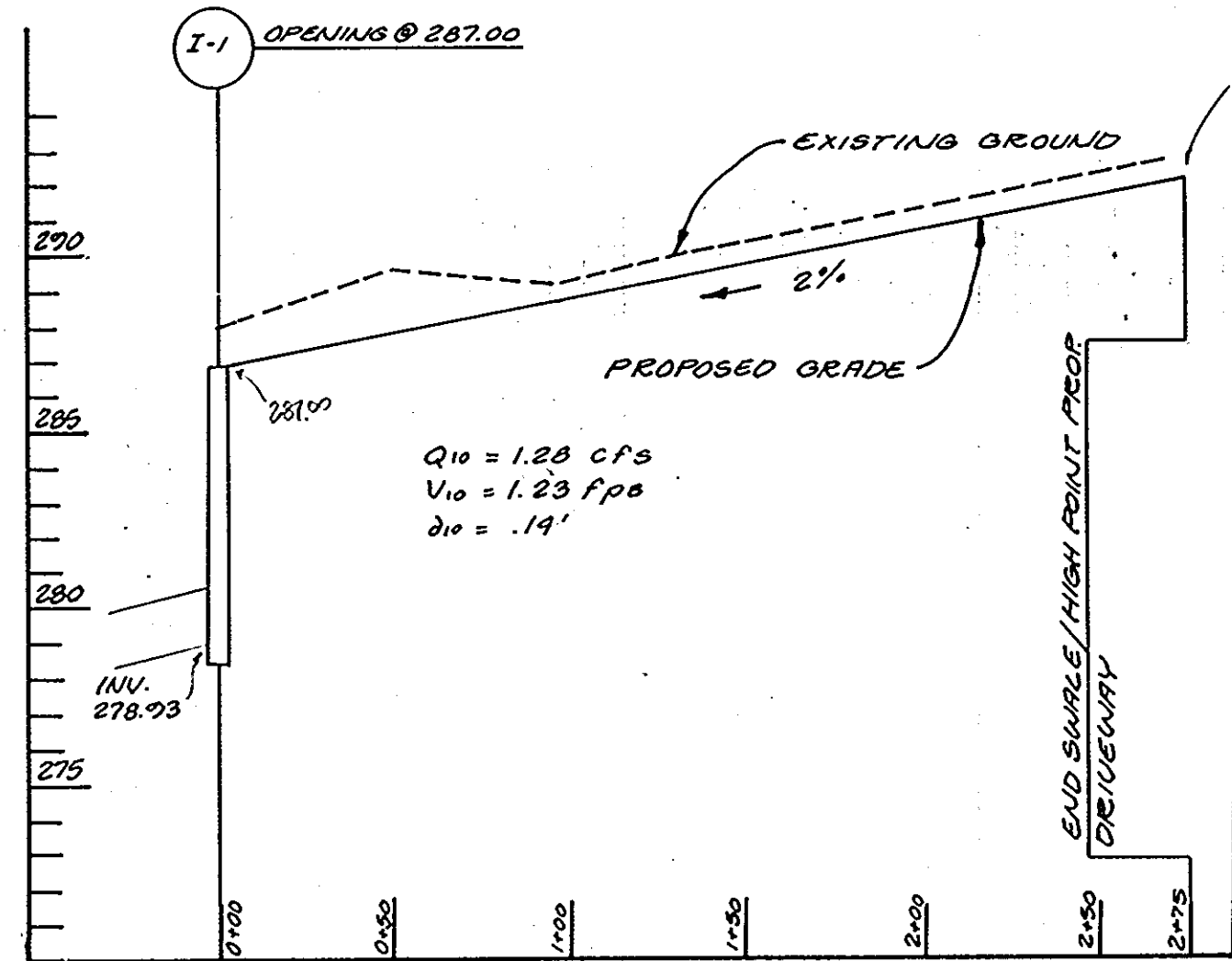
MARSHALEE WOODS
Section 2 - Area 3
Lots 74 - 88

Tax Map 37 P/O Parcels 399, 92 and 93
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

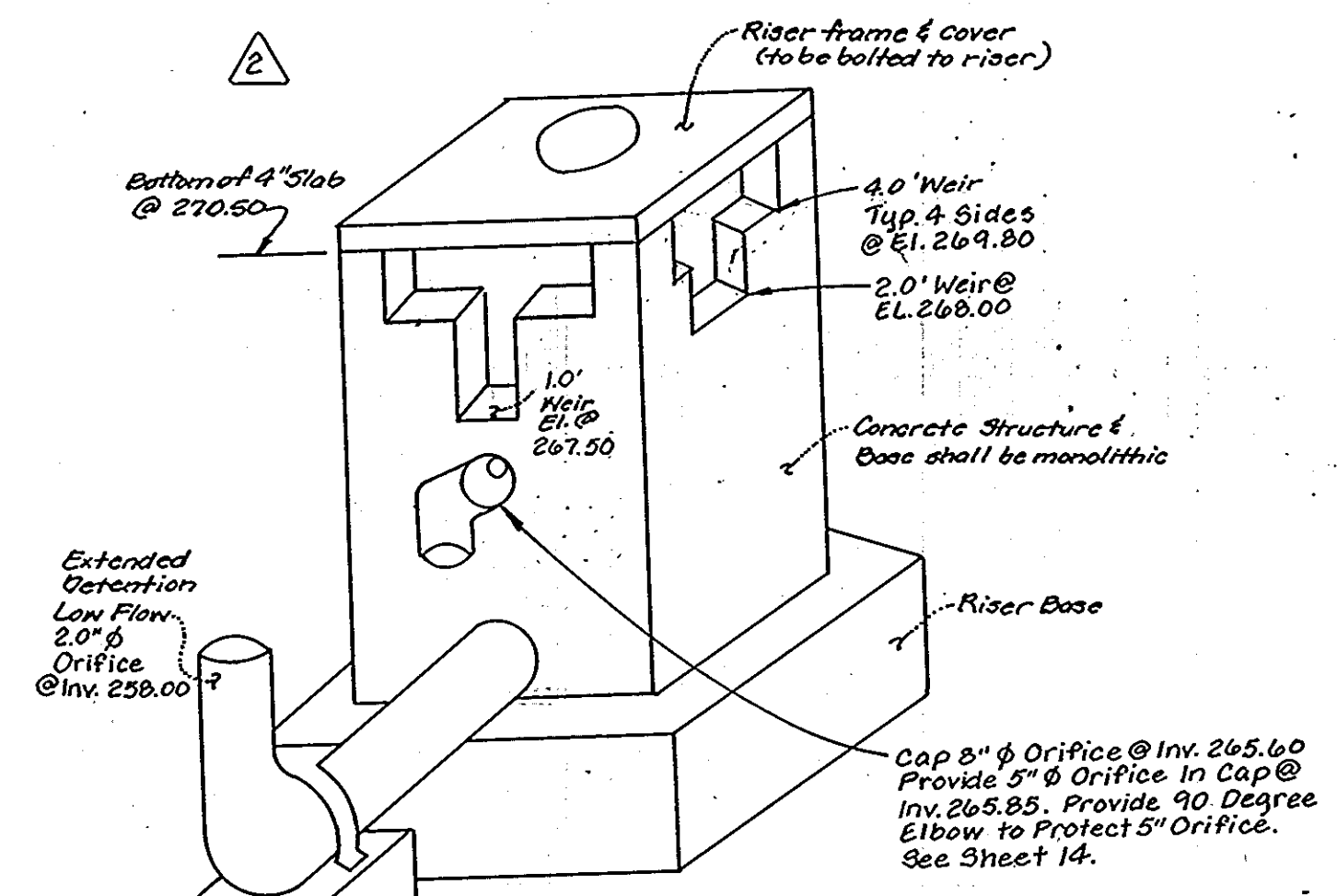
Owner/Developer: Marshalee Woods Limited Partnership
8835 Columbia 100 Parkway Unit P
Columbia, Maryland 21045
(410) 730-0810

1667

Revisions			
NR	By	Date	Description
1	LDE	7/18/94	Relocate I-1 Tard Esmt due to Utility Pole Conflict
2	LDE	6/04	Revise S-3 Riser Typical Detail per J 4136-3A

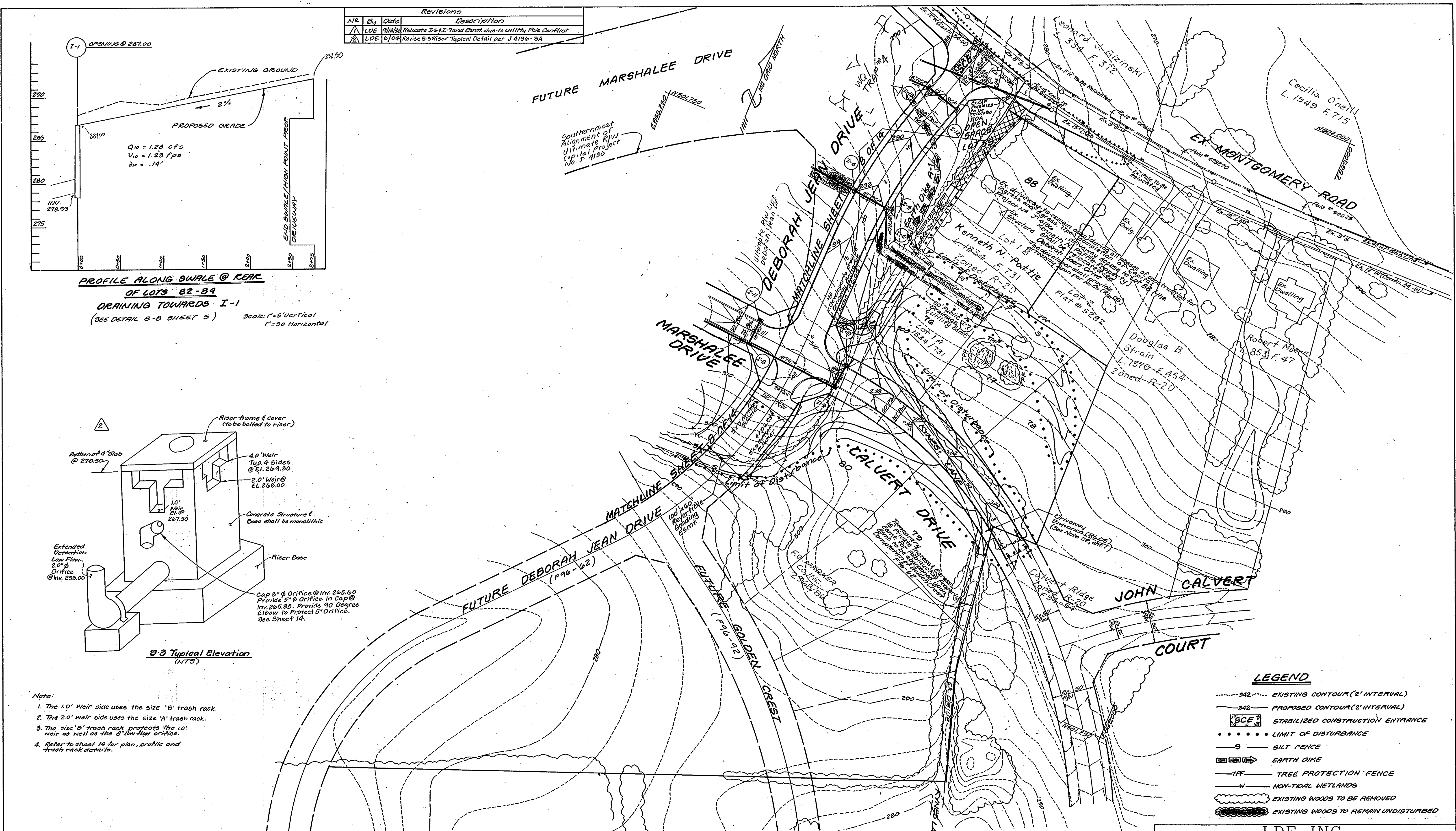


PROFILE ALONG SWALE @ REAR OF LOTS 82-84 DRAINING TOWARDS I-1
 (SEE DETAIL B-B SHEET 5) Scale: 1"=5' Vertical, 1"=50' Horizontal



B-B Typical Elevation (NTS)

- Note:
1. The 1.0' Weir side uses the size 'B' trash rack.
 2. The 2.0' weir side uses the size 'A' trash rack.
 3. The size 'B' trash rack protects the 1.0' weir as well as the 5" low flow orifice.
 4. Refer to sheet 14 for plan, profile and trash rack details.



LEGEND

- 342 --- EXISTING CONTOUR (2' INTERVAL)
- 342 --- PROPOSED CONTOUR (2' INTERVAL)
- [SCE] STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- S --- SILT FENCE
- [EARTH DIKE] EARTH DIKE
- [TREE PROTECTION FENCE] TREE PROTECTION FENCE
- W NON-TIDAL WETLANDS
- [WOODS TO BE REMOVED] EXISTING WOODS TO BE REMOVED
- [WOODS TO REMAIN UNDISTURBED] EXISTING WOODS TO REMAIN UNDISTURBED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Uma Jaramana
 CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH
 DATE: 5/14/96

Robert W. Zickler
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 5-1-96

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

J. A. W...
 NATURAL RESOURCE CONSERVATION SERVICE
 DATE: 4/23/96

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Robert W. Zickler
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: 4/23/96



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Bruce D. ...
 SIGNATURE OF ENGINEER
 DATE: 4/15/96

DEVELOPER'S CERTIFICATE

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...
 SIGNATURE OF DEVELOPER
 DATE: 4/15/96

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

DESIGNED: ES/TO
 DRAWN: WJ/BEI
 CHECKED: B.D.B.
 DATE: 4/15/96

SCALE: 1"=50'
 DRAWING: 7 of 14
 JOB NO.: 95-022.2
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MARSHALEE WOODS
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Owner/Developer: Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway, Unit P
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