

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Daniels 12-12-95
 CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Aina Sriviranjani 12/21/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH MK DATE

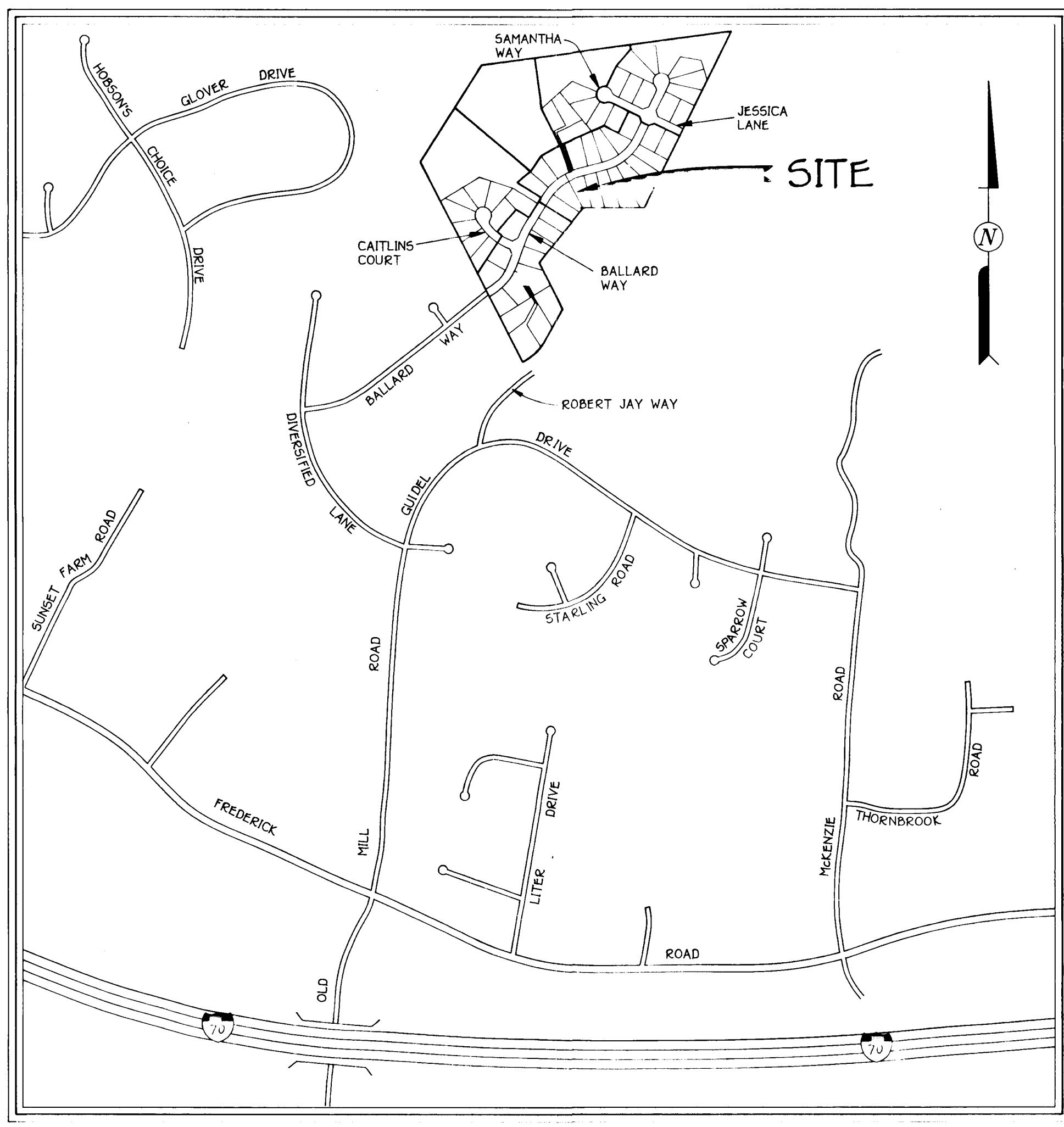
Michael J. ... 12/18/95
 CHIEF, TELECOMMUNICATIONS ENGINEERING DIVISION MK DATE

FINAL ROAD CONSTRUCTION GRADING AND BIO-RETENTION PLANS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	PLAN & PROFILE (BALLARD WAY & CAITLINS COURT)
3.	PLAN & PROFILE (BALLARD WAY, JESSICA LANE & SAMANTHA WAY)
4.	PLAN & PROFILE (CAITLINS COURT & SAMANTHA WAY)
5.	PLAN & PROFILE (JESSICA LANE)
6.	GRADING AND LANDSCAPING PLAN
7.	GRADING AND LANDSCAPING PLAN
8.	SEDIMENT AND EROSION CONTROL PLAN
9.	SEDIMENT AND EROSION CONTROL PLAN
10.	STORM DRAIN PROFILES AND STRUCTURE SCHEDULES
11.	STORM DRAIN PROFILES
12.	STORM DRAIN PROFILES
13.	DRAINAGE AREA MAP
14.	DRAINAGE AREA MAP
15.	BIO-RETENTION AREA GRADING & SEDIMENT CONTROL PLAN
16.	BIO-RETENTION AREA GRADING & SEDIMENT CONTROL PLAN
17.	BIO-RETENTION AREA GRADING & SEDIMENT CONTROL PLAN
18.	BIO-RETENTION AREA CROSS SECTIONS
19.	BIO-RETENTION AREA DETAILS AND NOTES
20.	SEDIMENT & EROSION CONTROL NOTES & DETAILS

CATEGORY	Adjacent to Roadways	Adjacent to Perimeter Properties							
		A	A	A	A	A	A	A	A
LANDSCAPE TYPE	B	A	A	A	A	A	A	A	A
LINEAR FEET OF PERIMETER	N/A	P-1= 165 LF.	P-3=940 LF.	P-5=1100 LF.	P-6=335 LF.	P-8=510 LF.	P-2=430 LF.	P-4=825 LF.	P-7=2900 LF.
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR) (DESCRIBE BELOW IF NEEDED)	N/A	NO	NO	NO	NO	NO	YES 430 LF.	YES 805 LF.	YES 2900 LF.
CREDIT FOR WALL, FENCE OR BERRY (YES, NO, LINEAR) (DESCRIBE IF NEEDED)	N/A	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	N/A	165x60= 2	940x60= 15	120x60= 2	335x60= 5	510x60= 8	-	-	-
NUMBER OF PLANTS PROVIDED	N/A	2 SHADE TREES	15 SHADE TREES	2 SHADE TREES	5 SHADE TREES	8 SHADE TREES	-	-	-
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (1:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	N/A								

* THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 12.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
 ** FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 3200.



VICINITY MAP
 SCALE: 1" = 800'

RIVERWALK AT PATAPSCO PARK LOTS 6-64 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
BALLARD WAY	15+78	17' LT.	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE
BALLARD WAY	20+22	16' LT.	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE
BALLARD WAY	24+25	16' RT.	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE
BALLARD WAY	27+60	18' RT.	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE
SAMANTHA WAY	LP 1+50	----	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE
CAITLINS COURT	LP 1+16	----	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON A 14-FOOT BLACK FIBERGLASS POLE

GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.
 - MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AS AMENDED.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR FOND CONSTRUCTION (CODE 37B).
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- TOPOGRAPHY SHOWN HEREON IS FROM FIELD RUN TOPO PERFORMED ON OCTOBER 11, 1993 BY FISHER, COLLINS AND CARTER, INC.
- THE BIO-RETENTION WILL BE USED FOR WATER QUANTITY AND QUALITY CONTROL. THE BIO RETENTION REPORT IS PROVIDED BY ENGINEERING TECHNOLOGIES ASSOCIATES, INC. ON JANUARY 6, 1995.
- THE HORIZONTAL AND VERTICAL DATUM SHOWN ARE BASED ON THE FOLLOWING NAD 83 HOWARD COUNTY MONUMENT STATIONS:
 - HOWARD COUNTY MONUMENT 176A
N 18160.5677
E 413772.7224
 - HOWARD COUNTY MONUMENT 176B
N 18099.8949
E 413227.8949
- THE WETLANDS STUDY WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. ON OCTOBER 4, 1993 AND APPROVED BY HOWARD COUNTY ON JANUARY 12, 1994.
- THE TRAFFIC STUDY WAS PREPARED BY STREET TRAFFIC STUDIES, LTD. ON AUGUST 26, 1993 AND APPROVED BY HOWARD COUNTY ON JANUARY 12, 1993.
- FOREST DELINEATION WAS PROVIDED BY ECO-SCIENCE PROFESSIONALS, INC.
- THE SOILS INVESTIGATION REPORT WAS PREPARED BY INVESTIGATIVE TESTING AND ENGINEERING, INC. ON JANUARY, 1995.
- THE 100 YEAR FLOODPLAIN AS SHOWN ON THESE PLANS ARE BASED ON THE FLOODPLAIN STUDY THAT WAS PROVIDED BY FISHER, COLLINS AND CARTER, INC.
- THIS PLAN IS SUBJECT TO WAIVER PETITION WP 95-68 TO WAIVE SECTION 1616(B)(1) AND (2) TO PERMIT CLEARING AND/OR GRADING WITHIN THE 25 FOOT WETLAND, AND 75 FOOT STREAM BUFFERS FOR CONSTRUCTION OF A STORM DRAIN OUTFALL AND 1616(B)(1) TO PERMIT CLEARING AND/OR GRADING ON A STEEP SLOPE AREA OF MORE THAN 20,000 SQUARE FEET IN CONTIGUOUS AREA FOR THE CONSTRUCTION OF A BIO-RETENTION S.W.M. FACILITY APPROVED ON MARCH 10, 1993.
- PREVIOUS FILE NUMBERS ARE F 79-39, VP 77-50, F 89-132, F 94-163 S 94-14, P 94-19 AND WP 95-68.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS AND STREAM BUFFERS OR FOREST CONSERVATION AREAS EXCEPT AS APPROVED UNDER WP 95-68.
- DENOTES FOREST CONSERVATION EASEMENT. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 161200 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

BENCH MARKS

- B.M. 2612
ELEVATION 417.02
- REBAR AND CAP SET FLUSH WITH GROUND CENTERLINE STATION 17+50 BALLARD WAY 105' RIGHT OF CENTERLINE
- B.M. 2313
ELEVATION 438.44
- REBAR AND CAP SET FLUSH WITH GROUND CENTERLINE STATION 2+18 JESSICA LANE 88' LEFT OF CENTERLINE.

STREET LIGHT NOTES

STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE 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)."
 A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

OWNER

MRS. JUANITA LEE SMALLWOOD
 c/o MR. JAMES LAWSON, SR.
 PERSONAL REPRESENTATIVE
 OF THE ESTATE OF CHARLES F. GROVO, JR.
 WEST FRIENDSHIP, MD. 21794

DEVELOPER/CONTRACT PURCHASER

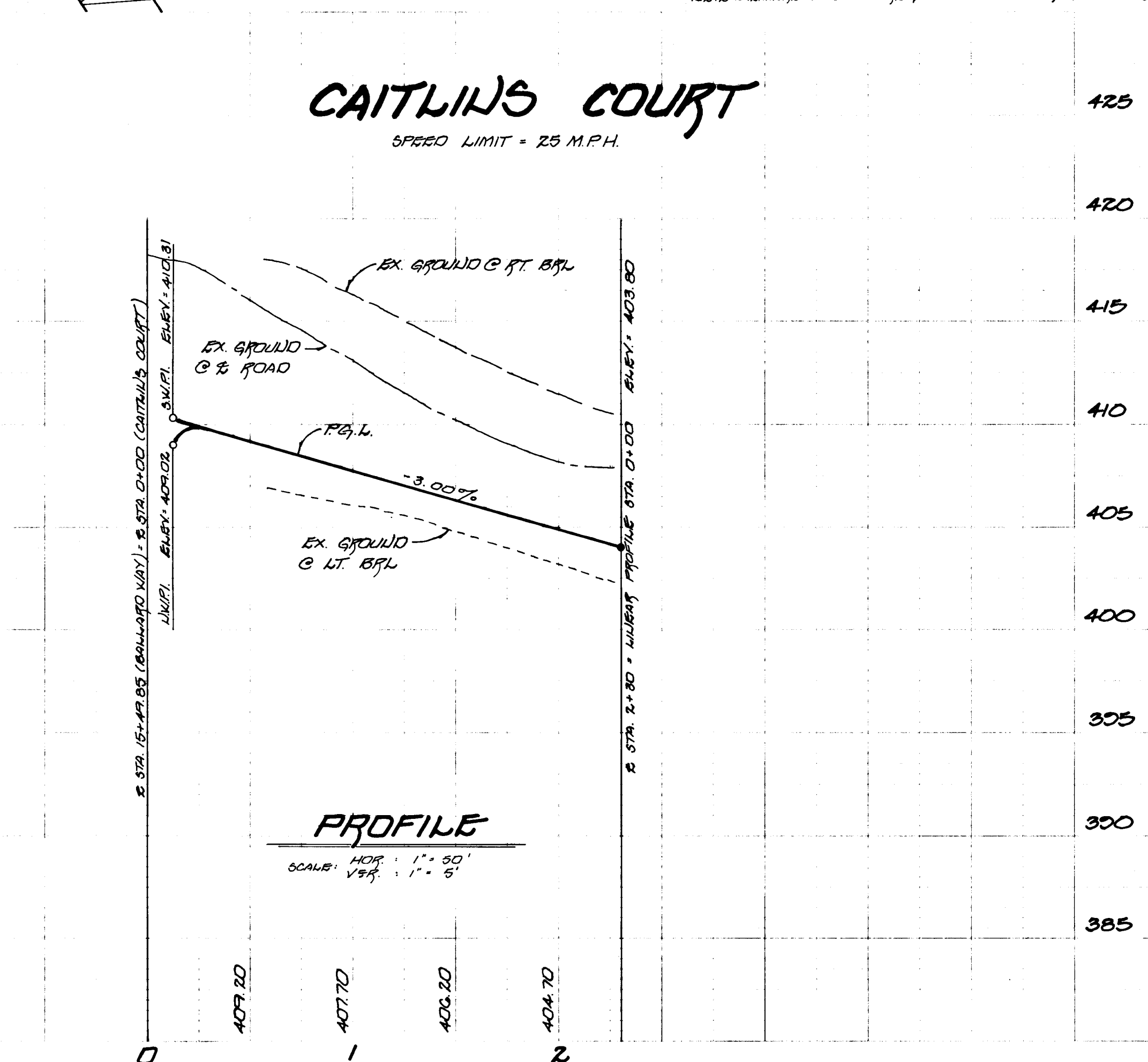
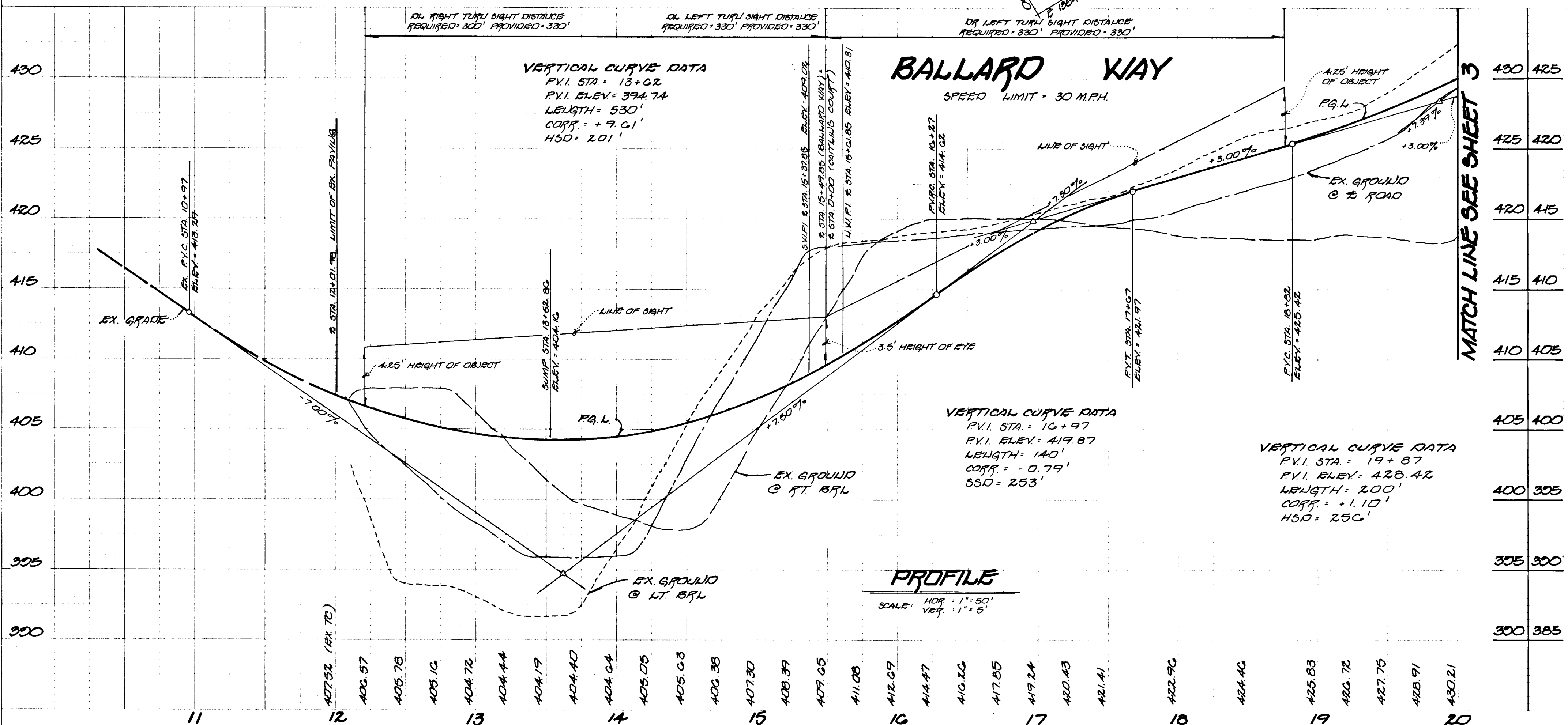
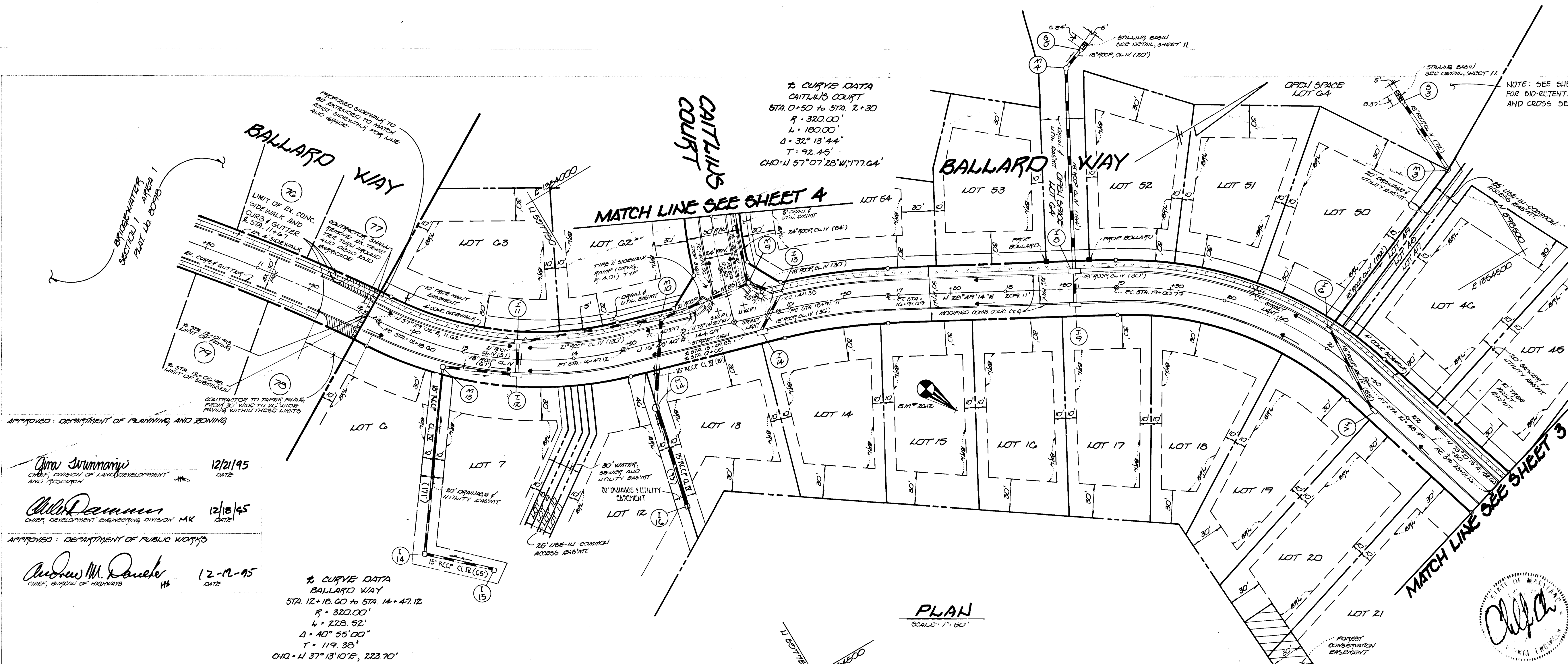
SMALLWOOD PROPERTY PARTNERSHIP
 c/o DUANE ZENTGRAF
 2701 WOODBRIDGE COURT
 WEST FRIENDSHIP, MD. 21794

Charles F. Grovo Sr.
 CHARLES F. GROVO SR. DATE

1777

1777

DATE: 12/21/95
BY: [Signature]
CHECKED: [Signature]
NO. 1777



1777

BY: _____
 DATE: _____
 CHECKED BY: _____
 DATE: _____
 PLAN NO. _____

DATE: _____
 CHECKED BY: _____
 DATE: _____
 PROFILE NO. _____

2. CURVE DATA
 BALLARDO WAY
 STA. 23+01.10 to STA. 25+80.47
 R = 320.00'
 L = 279.32'
 Δ = 50° 00' 41"
 T = 149.32'
 CHD = N 48° 09' 54" E, 270.53'

2. CURVE DATA
 BALLARDO WAY
 STA. 28+05.47 to STA. 29+55.39
 R = 100.37'
 L = 09.92'
 Δ = 37° 39' 45"
 T = 32.28'
 CHD = N 04° 19' 41" E, 68.07'

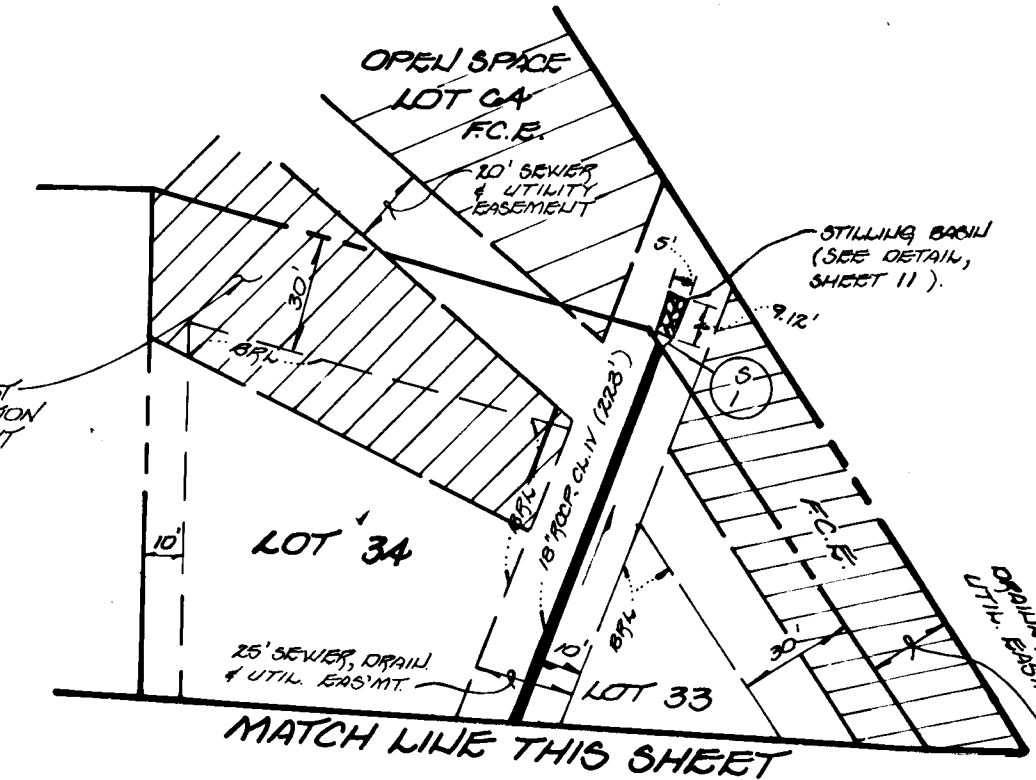
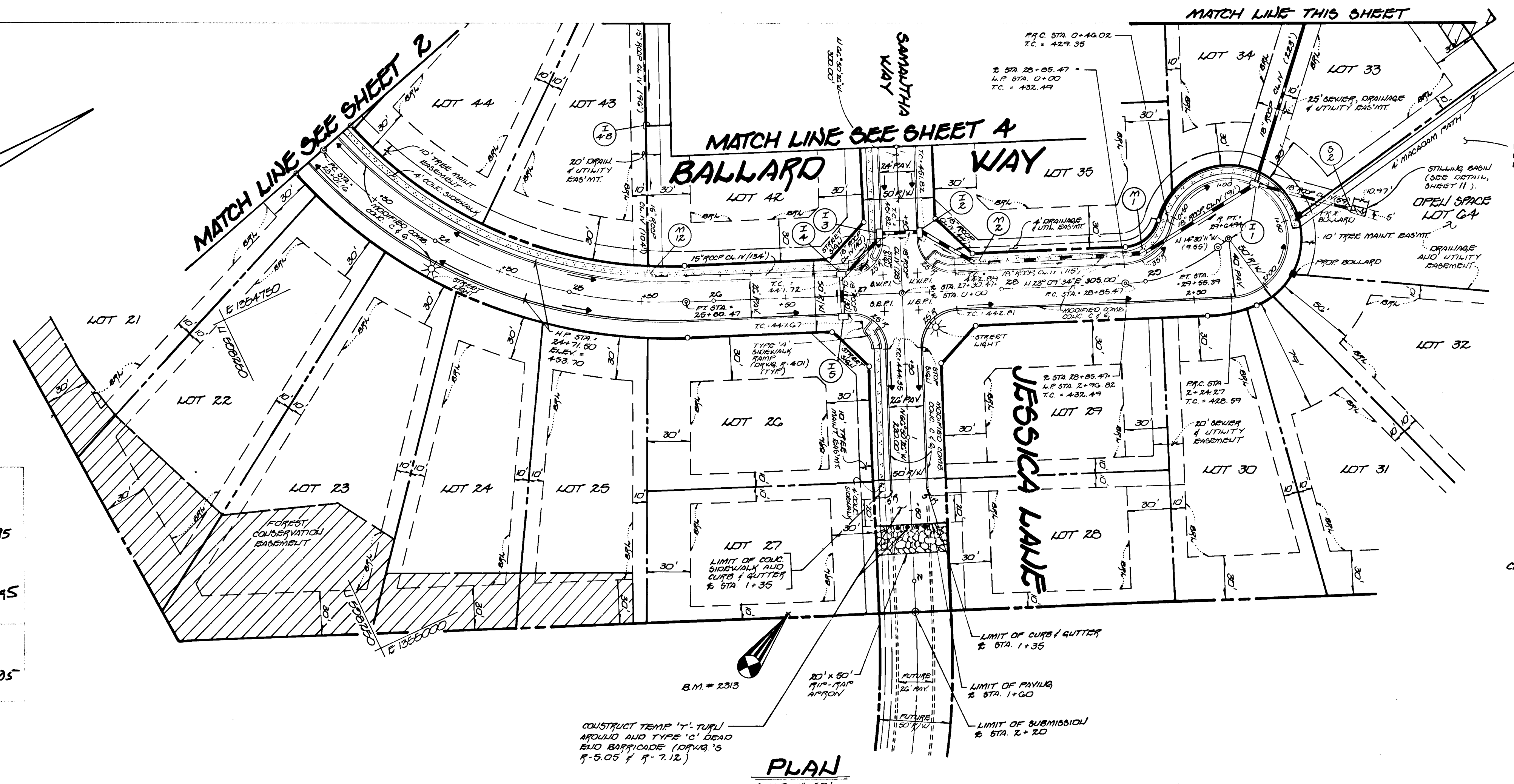
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Gina Summerville
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 12/21/95
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 Andrew M. Danek
 CHIEF, BUREAU OF HIGHWAYS
 12-12-95

RIVERWALK
 AT PATAPSCO PARK
 LOTS C THRU G
 SECOND ELECTION DISTRICT HANNOCK COUNTY, MD.

BALLARDO WAY PLAN & PROFILE
 JESSICA LAJIE PLAN
 SAMALUTHA WAY PLAN

OWNER: MRS. JUANITA LEE SMALLWOOD
 56 MR. DANIEL BOUTWELL, JR.
 FEDERAL REPRESENTATIVE
 2301 WOODHOLME COURT
 WEST FRIENDSHIP, MD. 21794

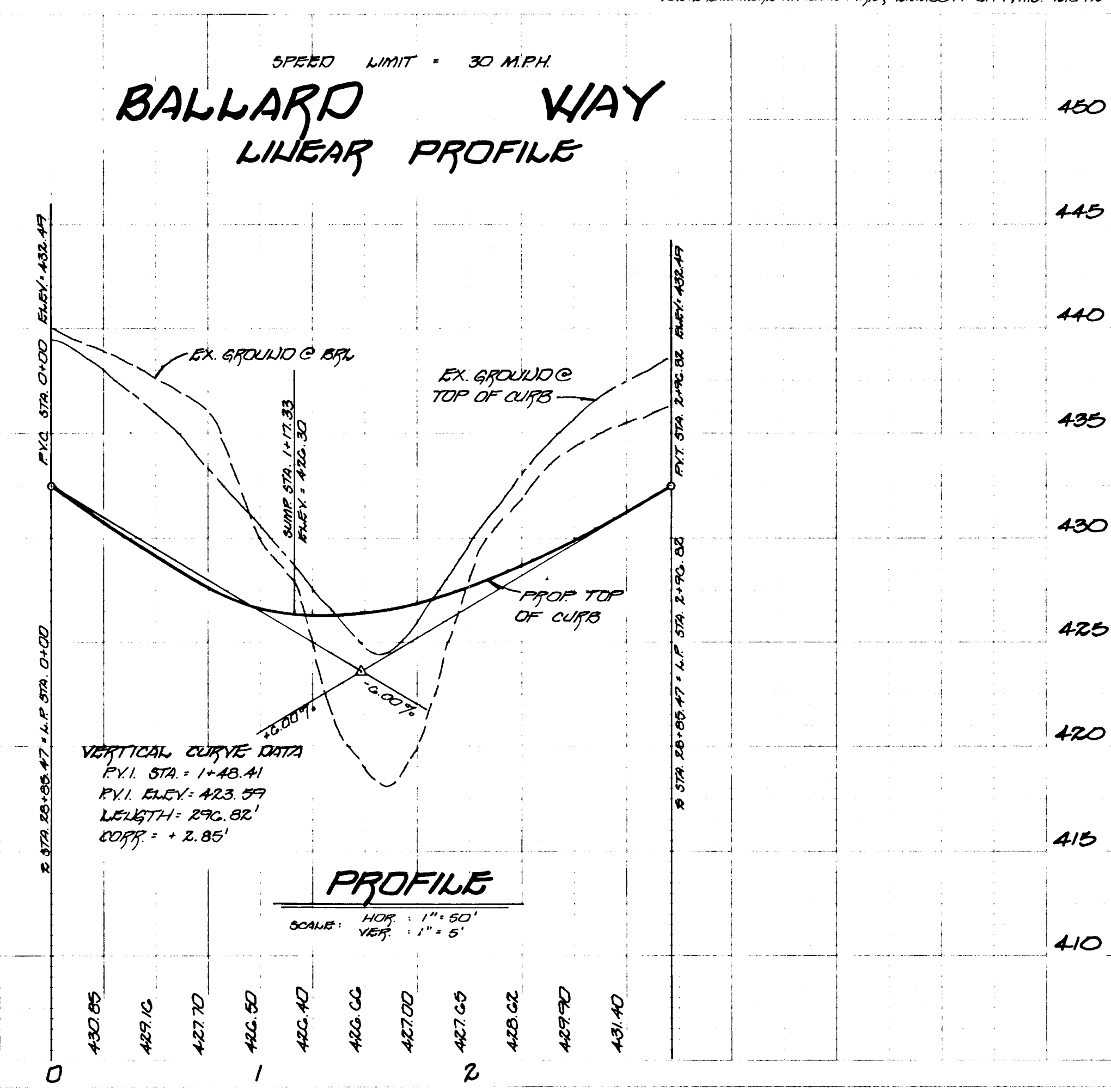
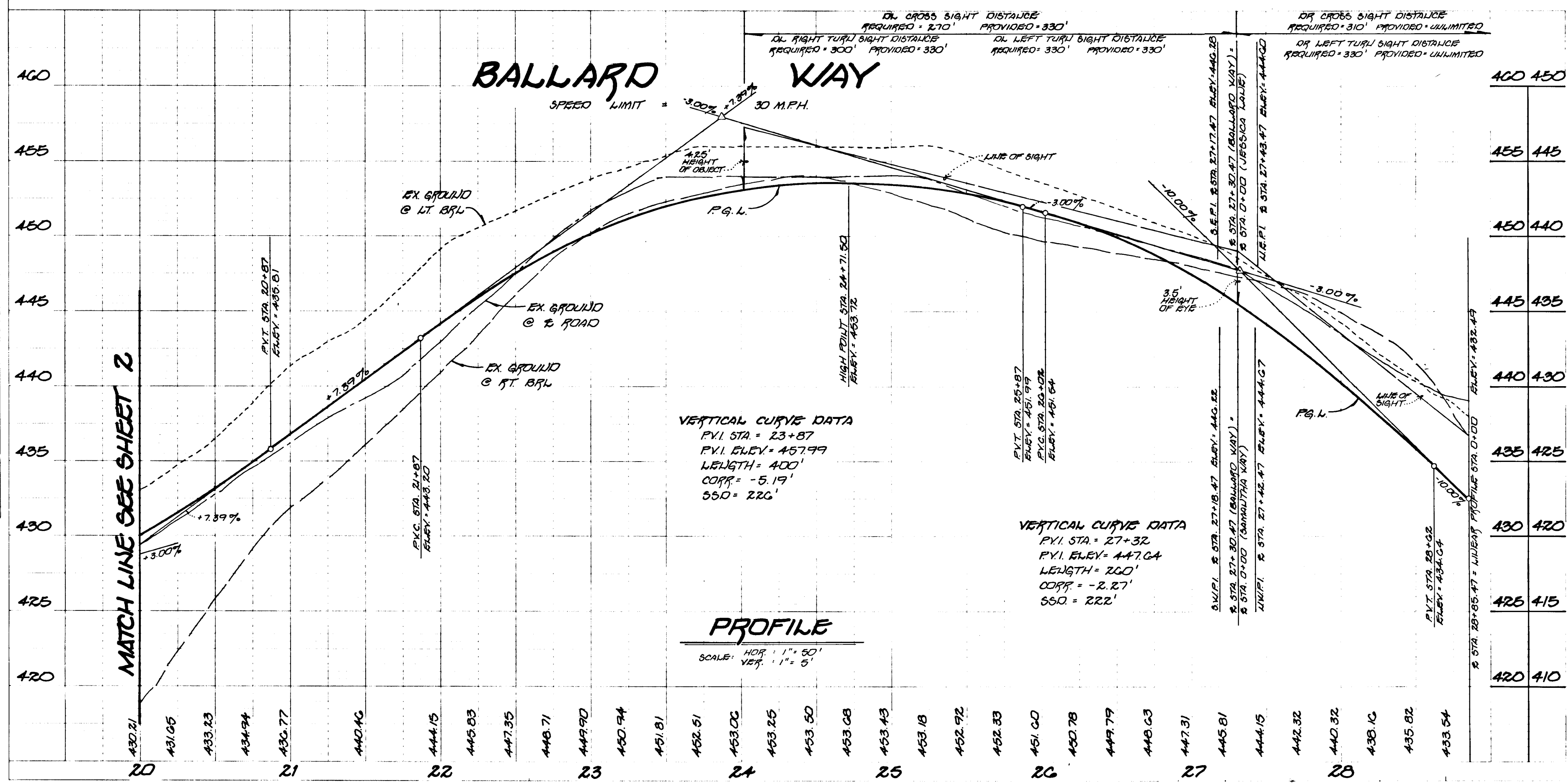
DEVELOPER: SMALLWOOD PROPERTY PARTNERSHIP
 56 MR. DANIEL BOUTWELL, JR.
 FEDERAL REPRESENTATIVE
 2301 WOODHOLME COURT
 WEST FRIENDSHIP, MD. 21794



CONSTRUCT TEMP. 'Y' TURN AROUND AND TYPE 'C' DEAD END BARRICADE (TOPIC'S 9-5.05 & 9-7.12)

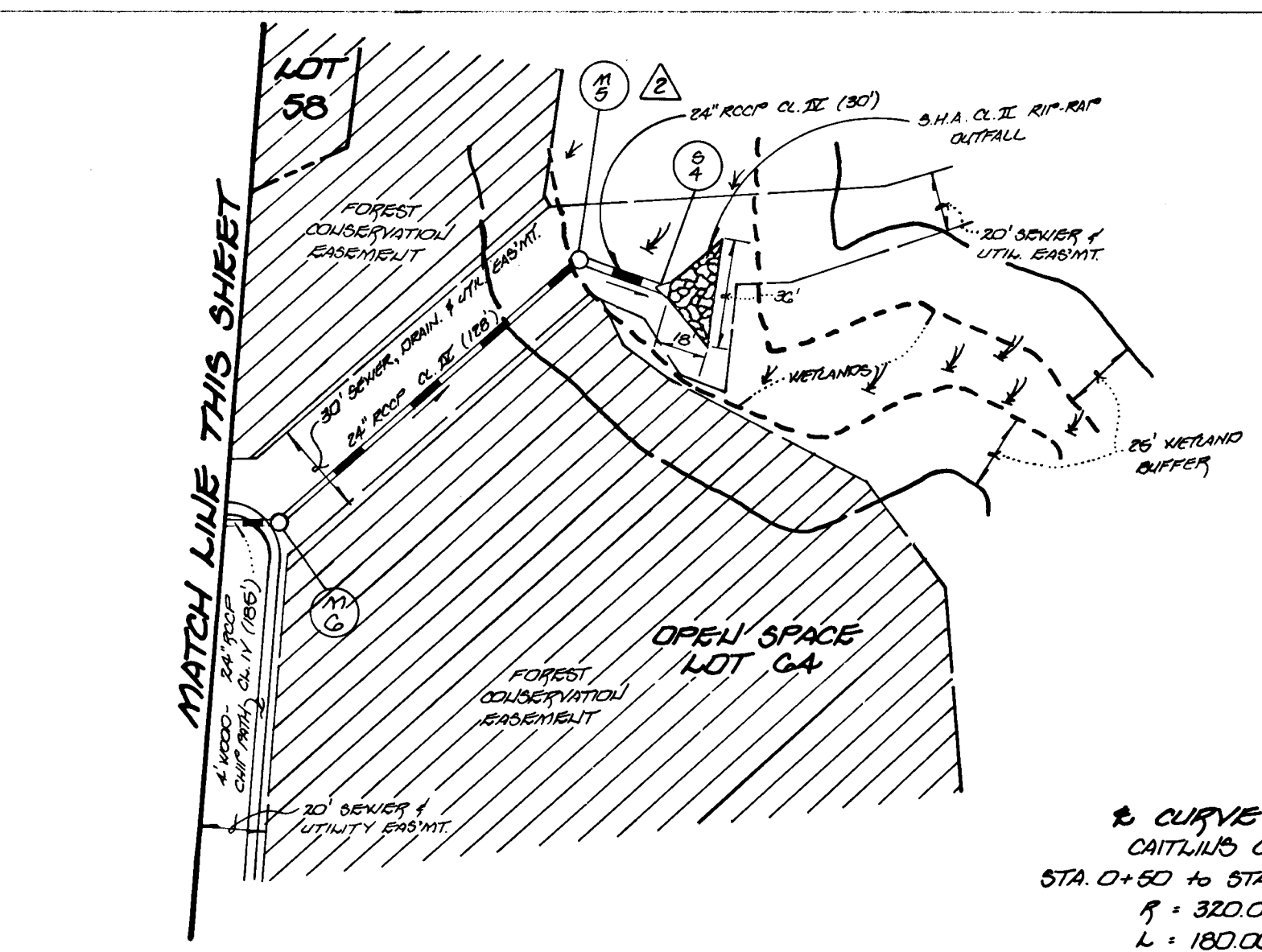
BALLARDO WAY
 SPEED LIMIT = 30 M.P.H.

BALLARDO WAY
 LINEAR PROFILE
 SPEED LIMIT = 30 M.P.H.



1777

PLAN
 REVISIONS
 NO. DESCRIPTION DATE
 1. STREETS
 2. UTILITIES
 3. GRADES CHECKED
 4. STRUCTURE NOTATIONS CHKD
 5. NOTE BOOK NO.

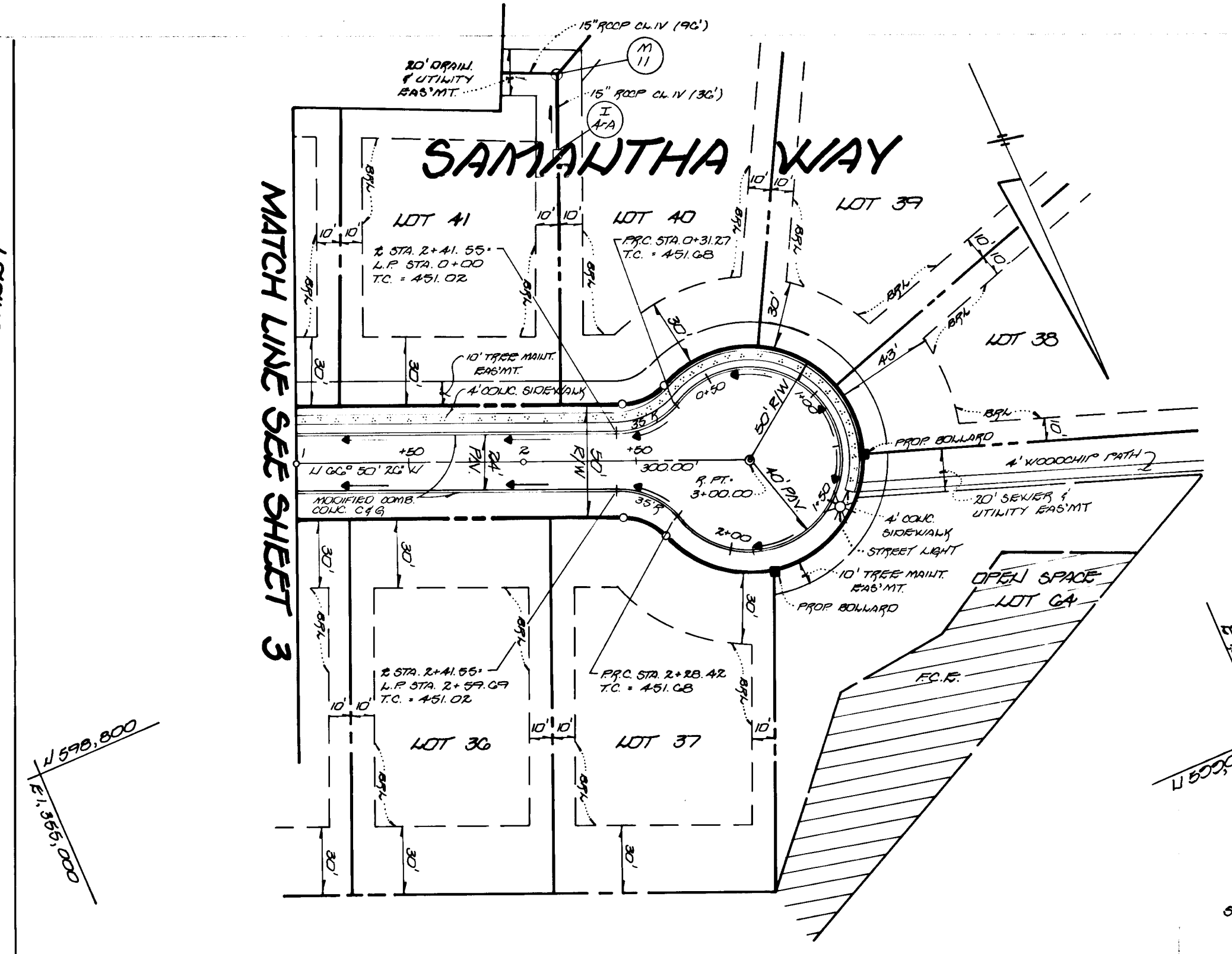
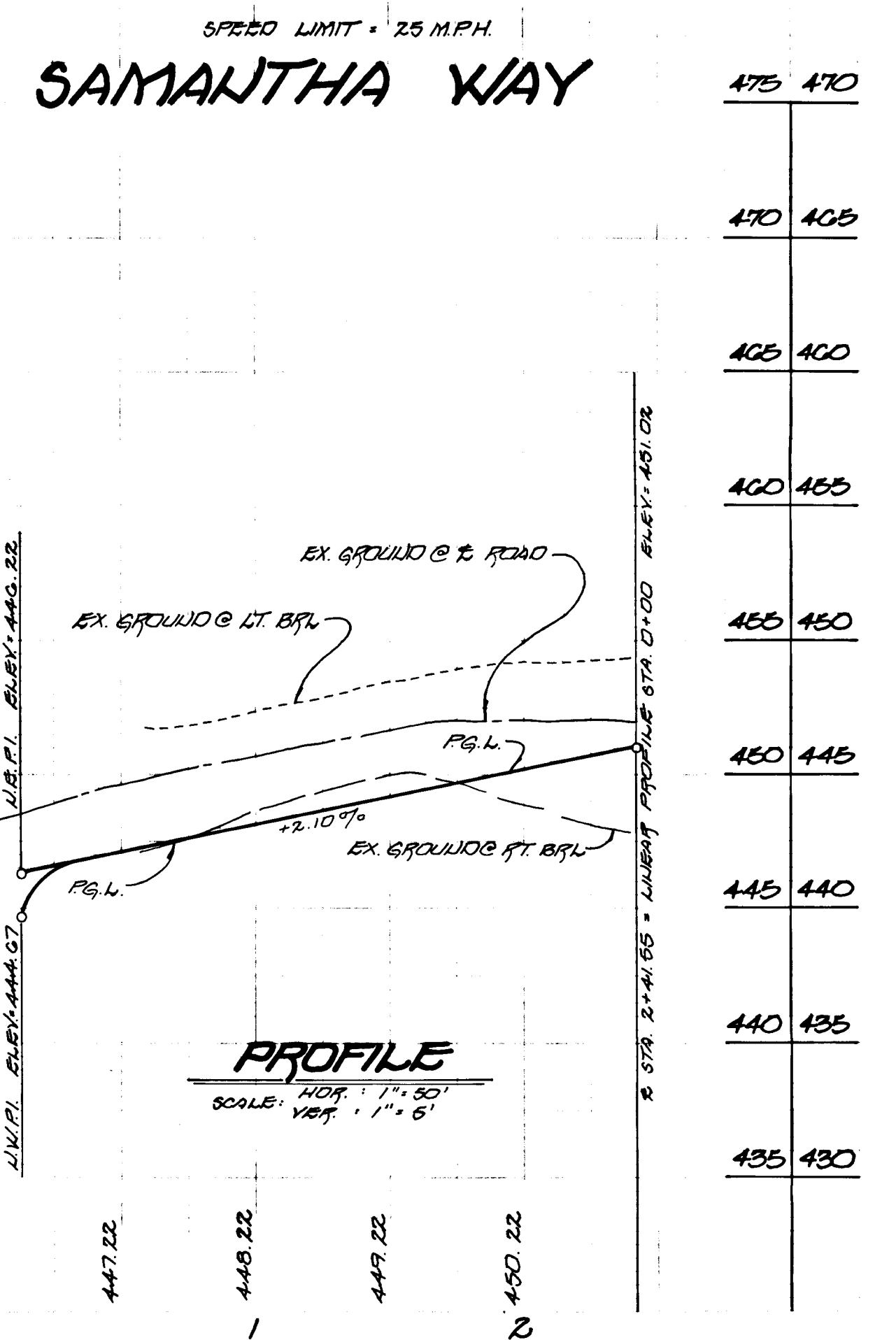
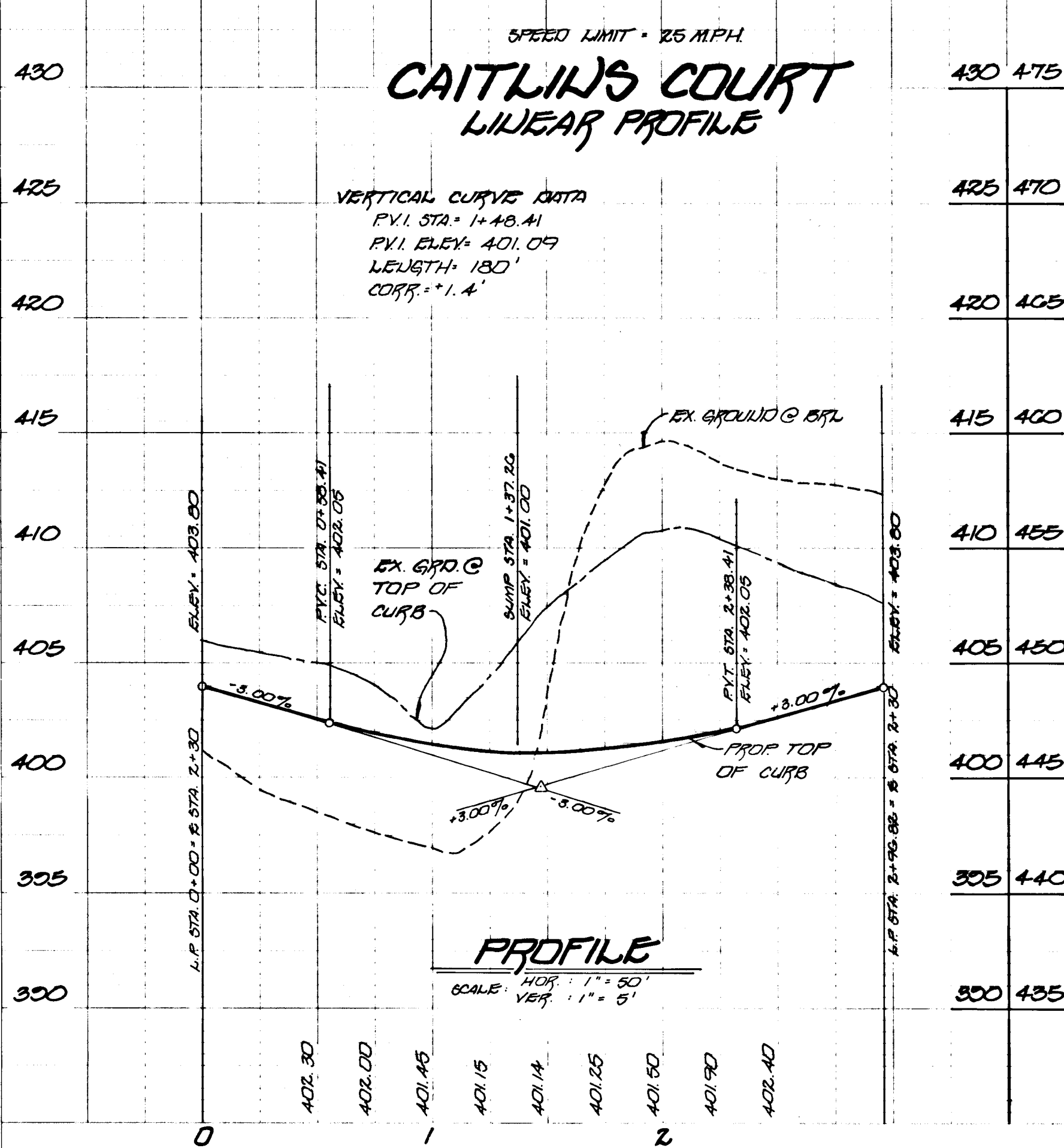


**2. CURVE DATA
 CAITLINS COURT
 STA. 0+50 TO STA. 2+30
 R = 320.00'
 L = 180.00'
 Δ = 32° 18' 44"
 T = 92.45'
 CHD = N 57° 07' 28" W, 177.64'**

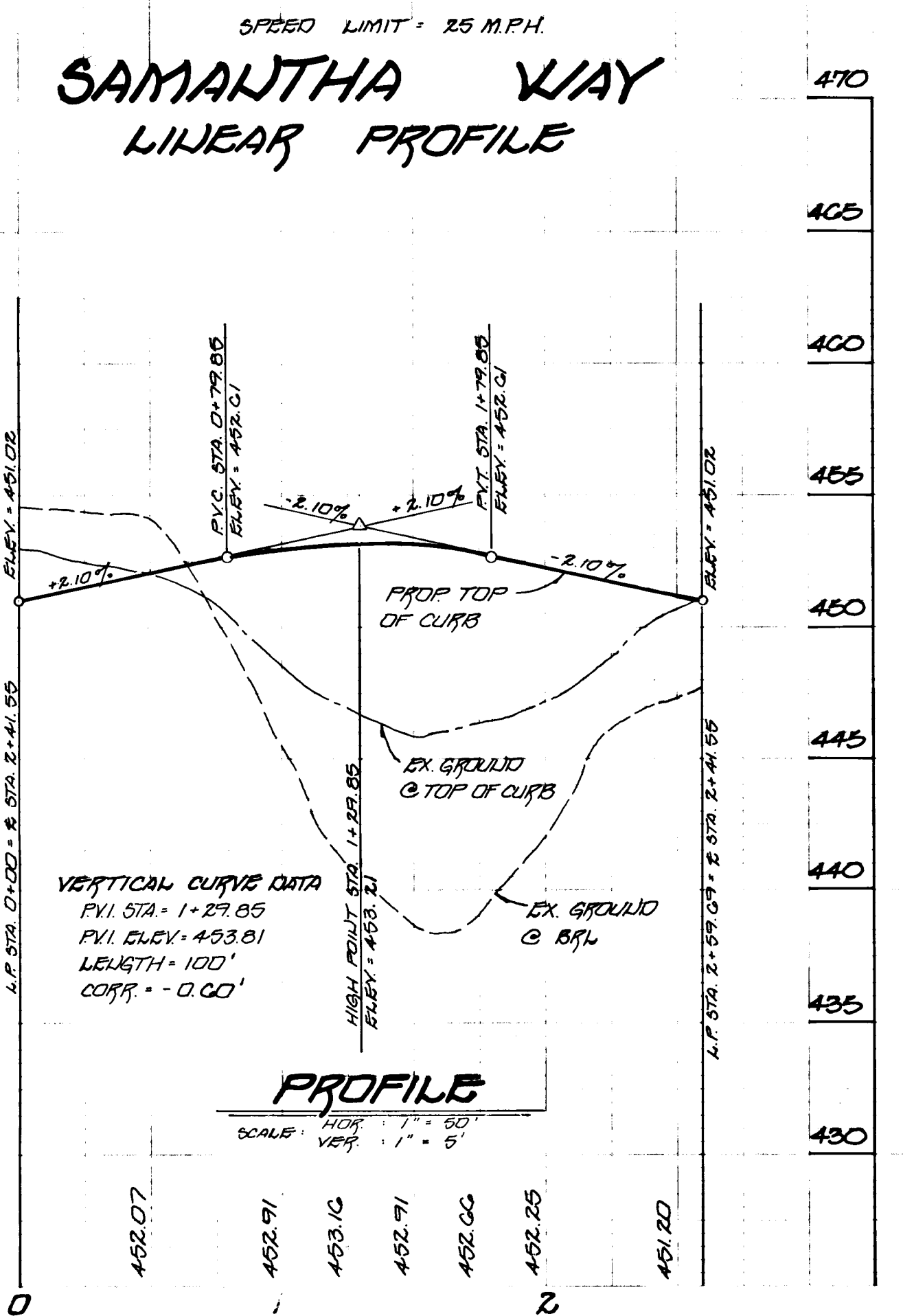
**2. CURVE DATA
 CAITLINS COURT
 STA. 2+30 TO STA. 2+99.92
 R = 100.37'
 L = 69.92'
 Δ = 37° 39' 45"
 T = 30.25'
 CHD = N 22° 10' 44" W, 68.67'**

PLAN
 SCALE: 1" = 50'

NO.	DESCRIPTION	DATE
1	STORM CHAIN ALIGNMENT FROM M-G TO S-4	0-24-70



PLAN
 SCALE: 1" = 50'



**RIVERWALK
 AT PATAPSCO PARK
 LOTS 6 THRU 6A**
 88000 ELECTRIC DISTRICT HOWARD COUNTY, MD.

**CAITLINS COURT
 PLAN & PROFILE**

**SAMANTHA WAY
 PLAN & PROFILE**

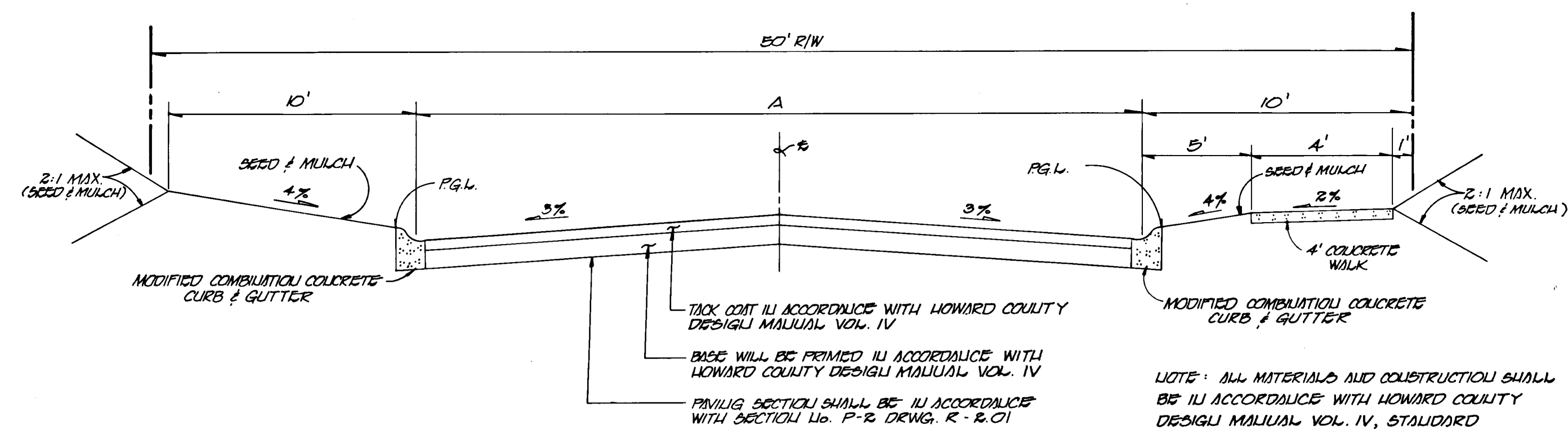
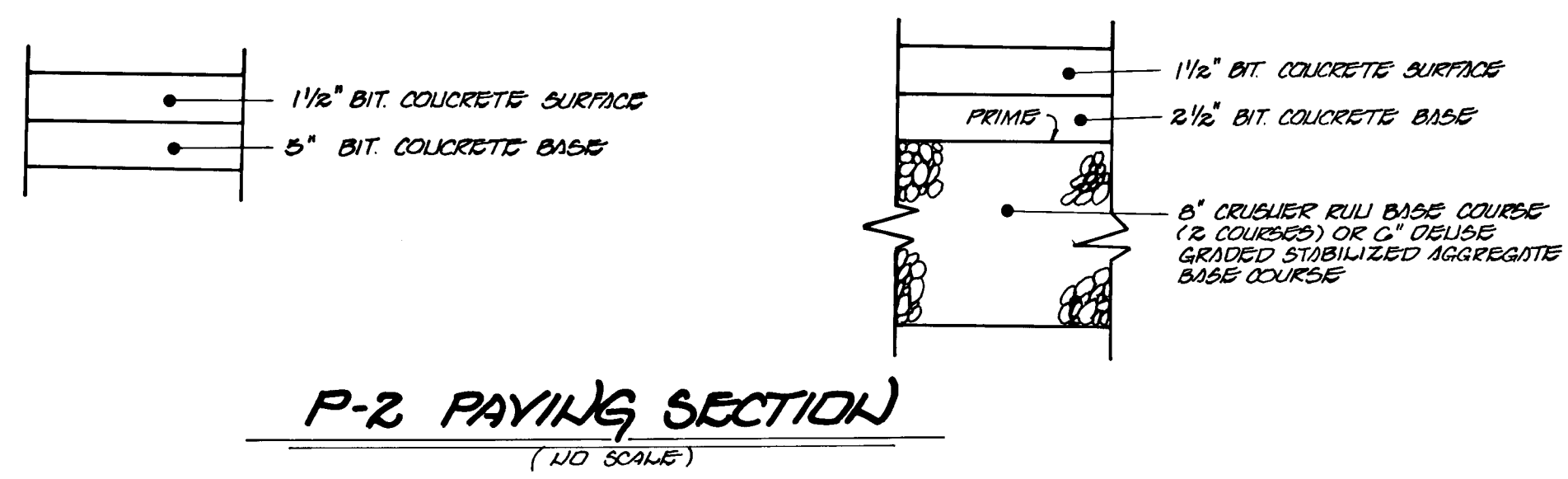
OWNER
 MRS. JUANITA LEE SMALLWOOD
 950 MR. JAMES LAWSON, SR.
 PERSONAL REPRESENTATIVE
 2701 WOODROSE COURT
 WEST PATAPSCO, MD 21794

DEVELOPER
 SMALLWOOD PROPERTY PARTNERSHIP
 950 MR. JAMES LAWSON, SR.
 2701 WOODROSE COURT
 WEST PATAPSCO, MARYLAND 21794

AS SHOWN JULY 1, 1995 DWG NO. A. OF 20
 B. J. H. DAN J. C. L. CH. C. J. C.

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 10272 BALTIMORE NATIONAL PIKE, ELLICOTT CITY, MARYLAND 21042





ROAD NAME	CLASSIFICATION	DESIGN SPEED	A	ZOLLING	STATION LIMITS
BALLWED WAY	CUL-DE-SAC	30 M.P.H.	20'	R-20	STA. 12+00.00 to STA. 20+04.04
CATLINS COURT	CUL-DE-SAC	25 M.P.H.	24'	R-20	STA. 0+00 to STA. 3+05.85
SAMANTHA WAY	CUL-DE-SAC	25 M.P.H.	24'	R-20	STA. 0+00 to STA. 3+00
JESSICA LANE	LOCAL ROAD	30 M.P.H.	20'	R-20	STA. 0+00 to STA. 2+02

APPROVED - DEPARTMENT OF PLANNING AND ZONING

Gina Summarij
CHIEF, DIVISION OF LAND DEVELOPMENT AND PRESERVATION
12/21/95
DATE

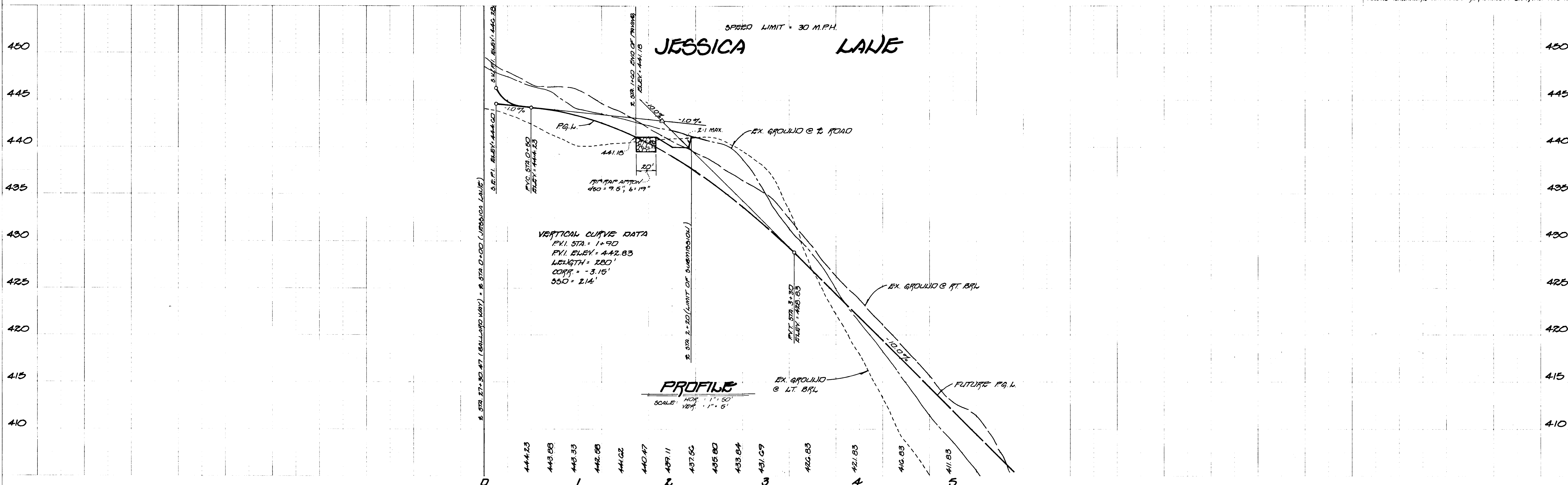
John Deane
CHIEF, DEPARTMENT OF ENGINEERING DIVISION
12/16/95
DATE

APPROVED - DEPARTMENT OF PUBLIC WORKS

Stephen M. Doncker
CHIEF, BUREAU OF HIGHWAYS
12-12-95
DATE

TYPICAL ROADWAY SECTION
(NO SCALE)

RIVERWALK AT PATAPSCO PARK
LOTS 6 THRU 8A
SECOND ELECTION DISTRICT HOWARD COUNTY, MD.
JESSICA LANE PROFILE
TYPICAL SECTIONS
OWNER: MRS. JUANITA LEE SMALLWOOD
DEVELOPER: SMALLWOOD PROPERTY PARTNERSHIP
196 THE JAMES LANEWAY, SR.
PISCATAWAY, MARYLAND 21794
1701 WOODBINE COURT
WEST PHEASANT, MD 21794
DATE: AS SHOWN JULY 1, 1995 DWG NO. 5 OF 20
DES. B.J.K. CHK. J.C.L. ENR. C.J.C.
FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
10272 BALTIMORE NATIONAL PIKE, BLOTT CITY, MD 21042



PLAN
DATE
NO.

PROFILE
DATE
NO.

1777

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES 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 ARE DEEMED NECESSARY.

Signature of Developer: *[Signature]* DATE: 11-16-95

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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Engineer: *[Signature]* DATE: 11/14/95

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: *[Signature]* DATE: 11/22/95
U.S.E.A. NATURAL RESOURCES CONSERVATION SERVICE

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

Signature: *[Signature]* DATE: 11/22/95
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* DATE: 12/21/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* DATE: 12/10/95
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature: *[Signature]* DATE: 12-12-95
CHIEF, BUREAU OF HIGHWAYS

DELETED FOREST (OBSERVATION) (P.C. 2)

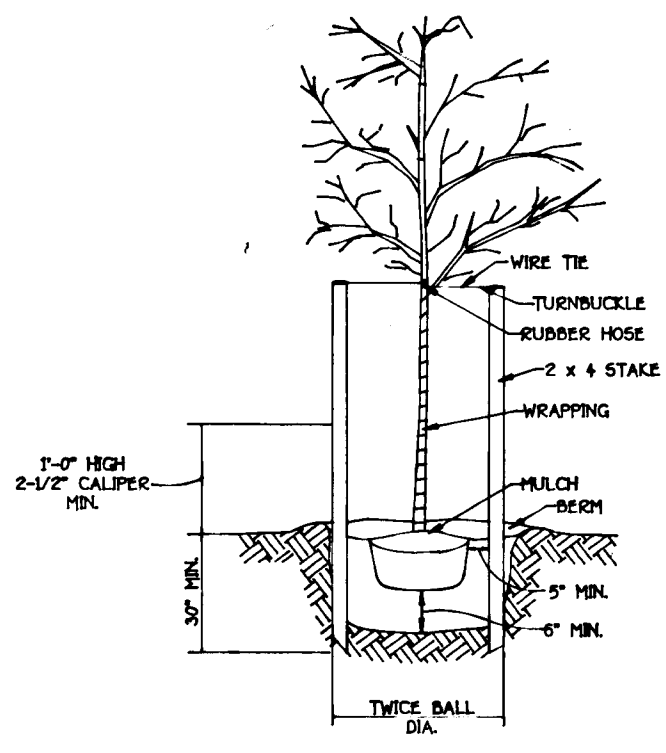
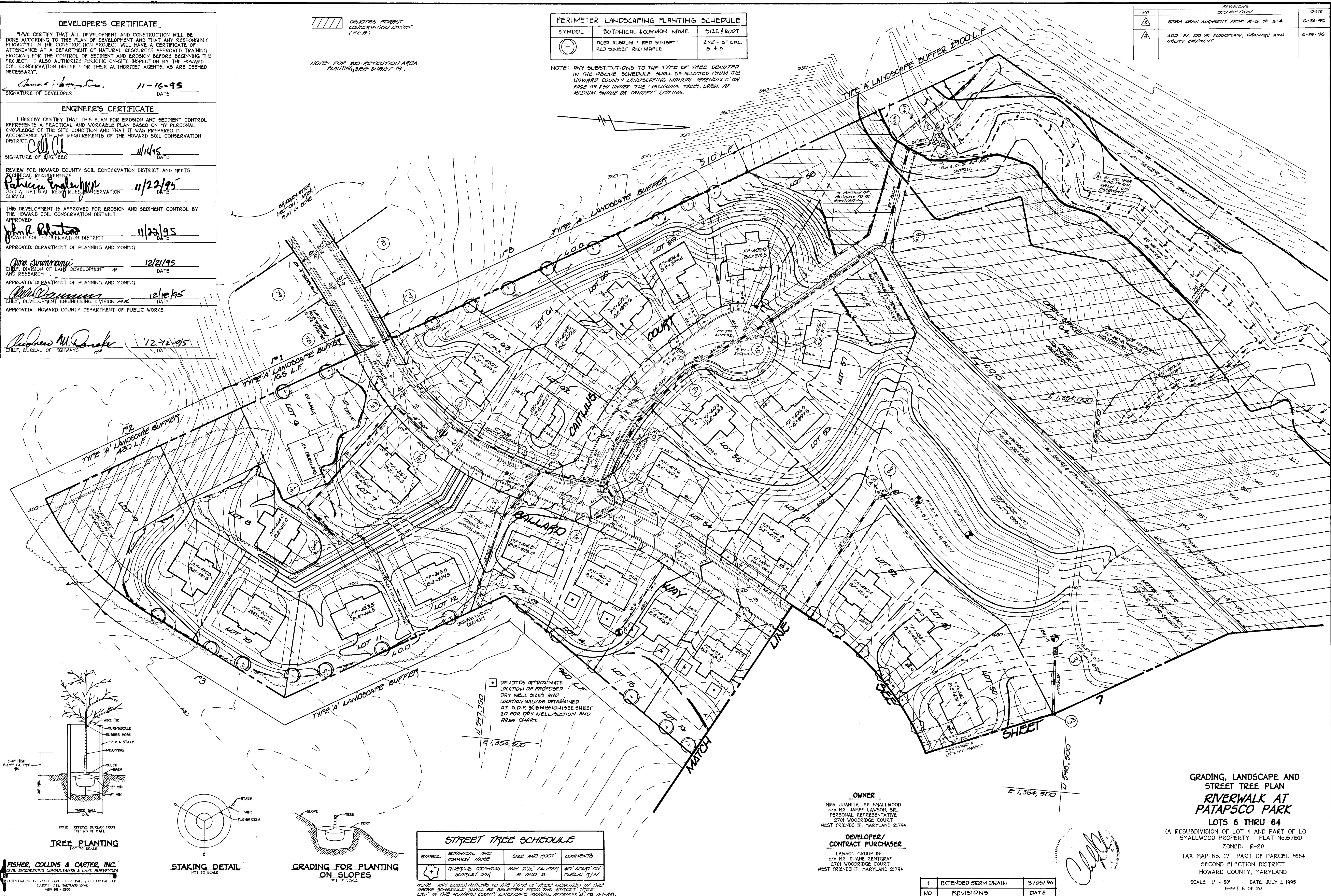
NOTE: FOR 80-RETENTION AREA PLANTING, SEE SHEET P1.

PERIMETER LANDSCAPING PLANTING SCHEDULE

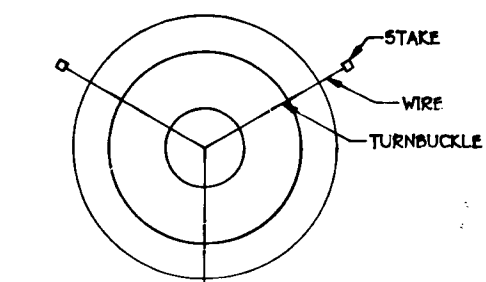
SYMBOL	BOTANICAL & COMMON NAME	SIZE & ROOT
(+)	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2" - 5" CAL. B & D

NOTE: ANY SUBSTITUTIONS TO THE TYPE OF TREE DENOTED IN THE ABOVE SCHEDULE SHALL BE SELECTED FROM THE HOWARD COUNTY LANDSCAPING MANUAL APPENDIX 'C' ON PAGE 49 150 UNDER THE "DECIDUOUS TREES, LARGE TO MEDIUM SHADE OR ORNAMENTAL" LISTING.

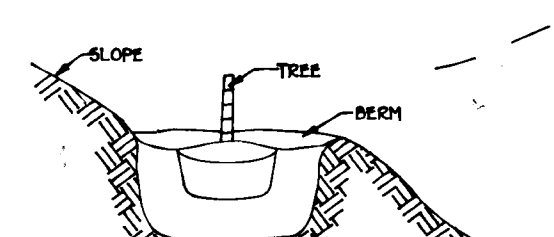
NO.	REVISIONS DESCRIPTION	DATE
1	STORM DRAIN ALIGNMENT FROM M-6 TO S-4	6-24-96
2	ADD EX. 100 YR FLOODPLAIN, DRAINAGE AND UTILITY BASEMENT	6-24-96



TREE PLANTING
NOT TO SCALE



STAKING DETAIL
NOT TO SCALE



GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

STREET TREE SCHEDULE

SYMBOL	BOTANICAL AND COMMON NAME	SIZE AND ROOT	COMMENTS
(+)	QUERCUS COCCINEA SCARLET OAK	MIN. 2 1/2" CALIPERS B AND D	40' APART ON PUBLIC HWY

NOTE: ANY SUBSTITUTIONS TO THE TYPE OF TREE DENOTED IN THE ABOVE SCHEDULE SHALL BE SELECTED FROM THE STREET TREE LIST IN THE HOWARD COUNTY LANDSCAPING MANUAL APPENDIX 'C', PG. 47-48.

OWNER
MRS. JUANITA LEE SMALLWOOD
c/o MR. JAMES LANSON, SR.
PERSONAL REPRESENTATIVE
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794

**DEVELOPER/
CONTRACT PURCHASER**
LAWSON GROUP INC.
c/o MR. DUANE ZENTGRAF
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794

NO.	EXTENDED STORM DRAIN	DATE
1	EXTENDED STORM DRAIN	3/05/96
	REVISIONS	DATE

**GRADING, LANDSCAPE AND STREET TREE PLAN
RIVERWALK AT PATAPSCO PARK
LOTS 6 THRU 64**
(A RESUBDIVISION OF LOT 4 AND PART OF LOT 5 SMALLWOOD PROPERTY - PLAT No. 8781)

ZONED: R-20
TAX MAP No. 17 PART OF PARCEL #664
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: JULY 1, 1995
SHEET 6 OF 20

1777

□ DENOTES FOREST CONSERVATION BASEMENT (F.C.B.)

NOTE: FOR BIO-RETENTION AREA LANDSCAPING, SEE SHEET 19

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES 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 ARE DEEMED NECESSARY.

Amelia S. 11-16-95
SIGNATURE OF DEVELOPER 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 CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Blanton 11/16/95
SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Patricia Engler/PM 11/22/95
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:
John R. Blanton 11/22/95
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Anna Strunovic 12/21/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
W. J. ... 12/18/95
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. ... 12-12-95
CHIEF, BUREAU OF HIGHWAYS DATE



□ DENOTES APPROXIMATE LOCATION OF PROPOSED DRY WELL SIZE AND LOCATION WILL BE DETERMINED AT S.D.P. SUBMISSION SEE SHEET 20 FOR DRY WELL SECTION AND AREA CHART

**GRADING, LANDSCAPE AND STREET TREE PLAN
RIVERWALK AT
PATAPSCO PARK
LOTS 6 THRU 64**

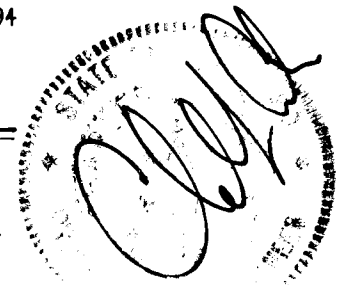
(A RESUBDIVISION OF LOT 4 AND PART OF LOT 5 SMALLWOOD PROPERTY - PLAT No. 8781)

ZONED: R-20
TAX MAP No. 17 PART OF PARCEL #664
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: JULY 1, 1995
SHEET 7 OF 20

OWNER
MRS. JUANITA LEE SMALLWOOD
C/O MR. JAMES LAWSON, SR.,
PERSONAL REPRESENTATIVE
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794

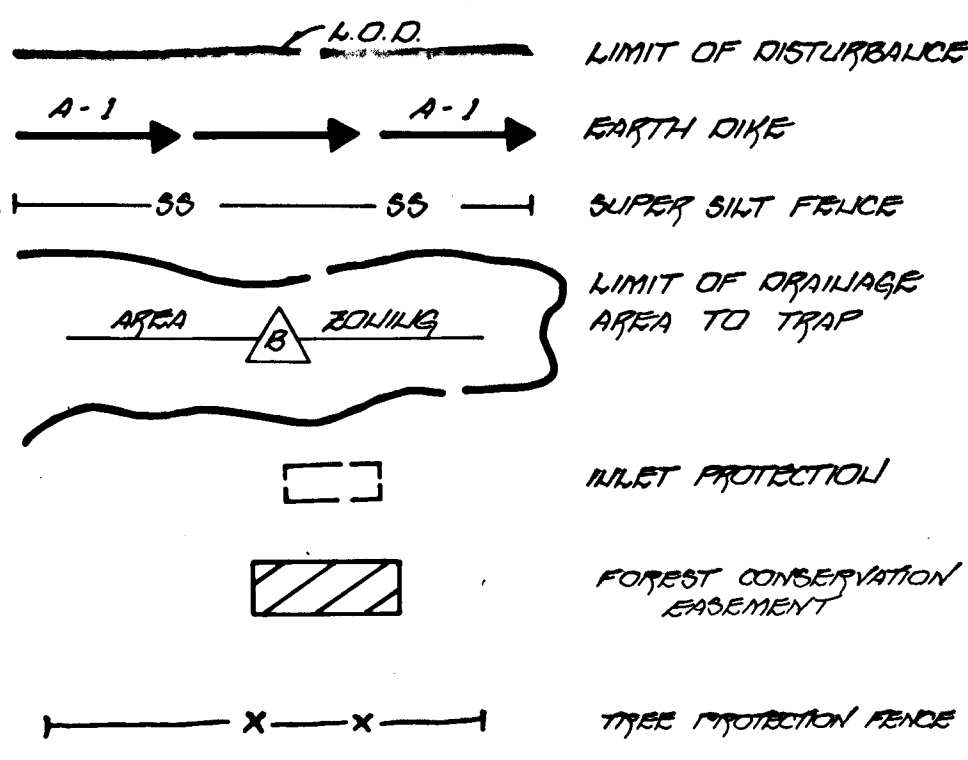
**DEVELOPER/
CONTRACT PURCHASER**
LAWSON GROUP INC.
C/O MR. DUANE ZENTGRAF
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
1000 W. WASHINGTON AVENUE - SUITE 100 - BALTIMORE, MARYLAND 21201
ELLCOTT CITY, MARYLAND 21114
4101 461 - 8955

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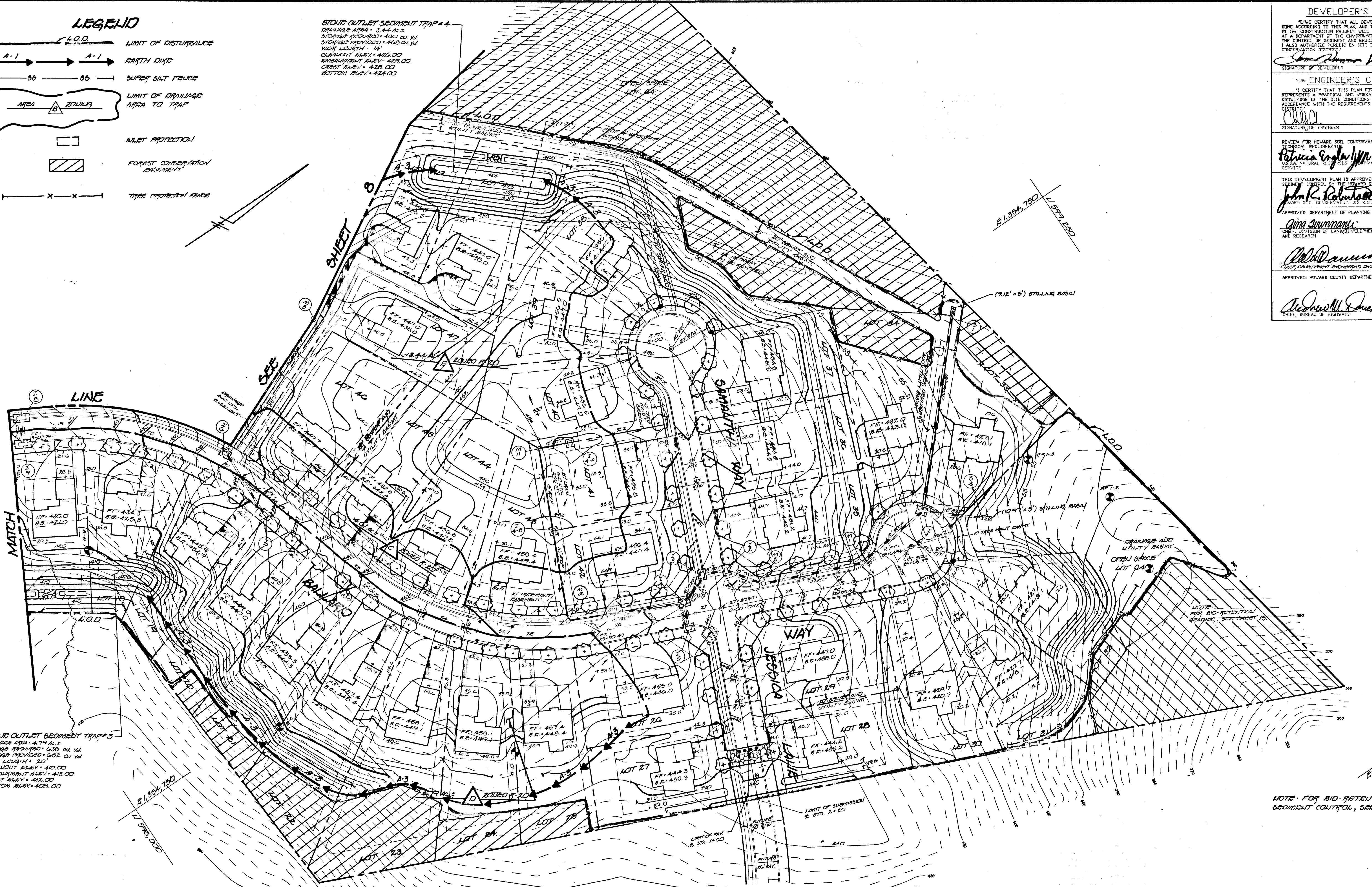
LEGEND



STONE OUTLET SEDIMENT TRAP #1
 DRAINAGE AREA = 3.44 AC.
 STORAGE REQUIRED = 400 CU YD
 STORAGE PROVIDED = 400 CU YD
 WIDTH LENGTH = 14'
 OUBSAHOUT ELEV = 420.00
 EMBANKMENT ELEV = 421.00
 CREST ELEV = 422.00
 BOTTOM ELEV = 414.00

STONE OUTLET SEDIMENT TRAP #3
 DRAINAGE AREA = 4.79 AC.
 STORAGE REQUIRED = 635 CU YD
 STORAGE PROVIDED = 632 CU YD
 WIDTH LENGTH = 20'
 OUBSAHOUT ELEV = 410.00
 EMBANKMENT ELEV = 413.00
 CREST ELEV = 412.00
 BOTTOM ELEV = 406.00

DEVELOPER'S CERTIFICATE	
I/VE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL 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 <i>John R. Robinson</i>	DATE 11/26/95
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 <i>John R. Robinson</i>	DATE 11/21/95
REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS	
SIGNATURE <i>Patricia Engle</i>	DATE 11/21/95
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
SIGNATURE <i>John R. Robinson</i>	DATE 11/22/95
APPROVED DEPARTMENT OF PLANNING AND ZONING	
SIGNATURE <i>Quinn Swannick</i>	DATE 12/21/95
APPROVED DEPARTMENT OF ENGINEERING DIVISION MLE	
SIGNATURE <i>John R. Robinson</i>	DATE 12/10/95
APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
SIGNATURE <i>Richard M. Duchs</i>	DATE 12/22/95



NOTE: FOR BIO-RETENTION AREA SEDIMENT CONTROL, SEE SHEET 15.

1777

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 23232 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 (301) 481-2855

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794

**DEVELOPER/
 CONTRACT PURCHASER**
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZENTGRAF
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794



SEDIMENT & EROSION CONTROL PLAN

**RIVERWALK
 AT PATAPSCO PARK**
 LOTS 6 thru 64

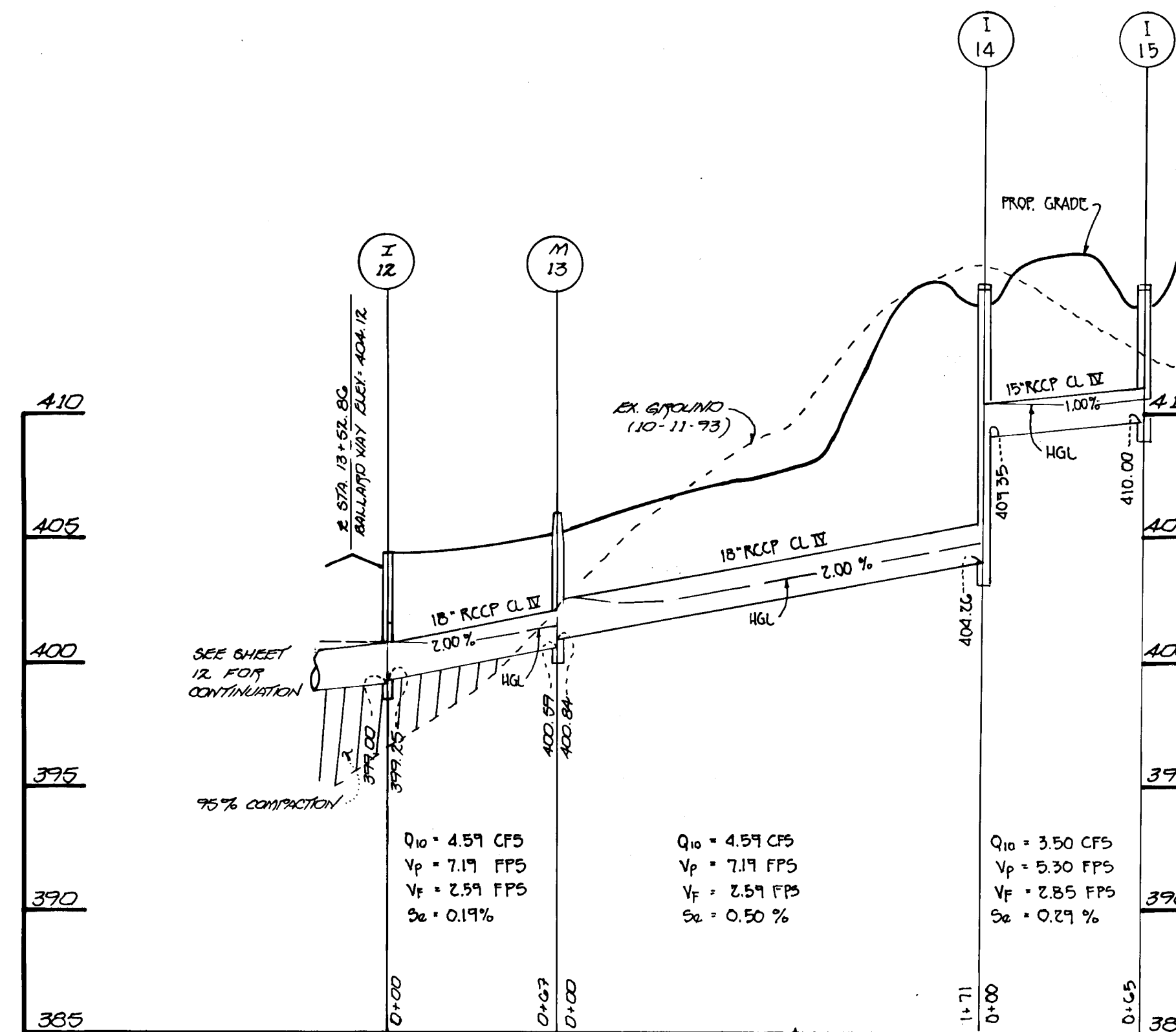
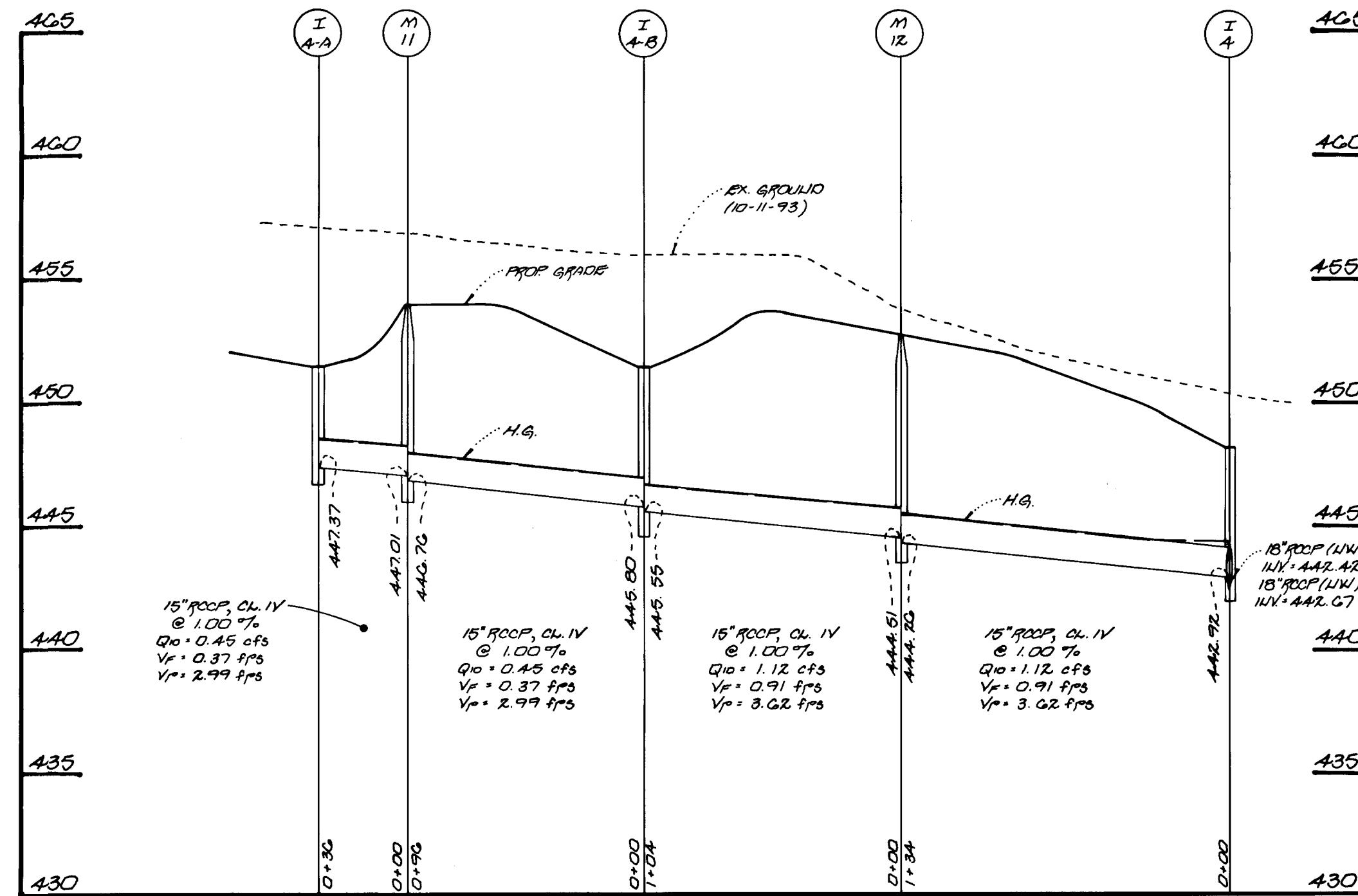
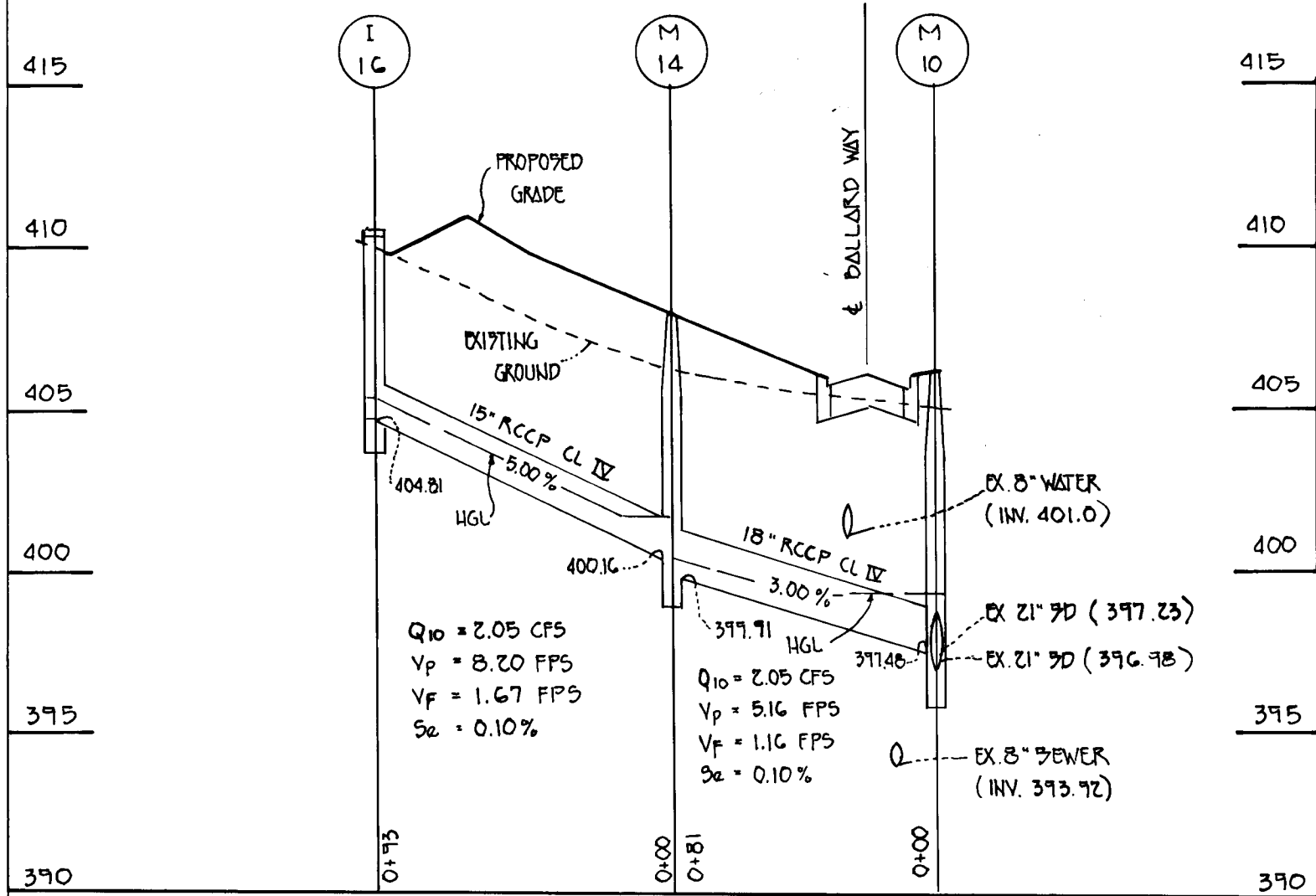
TAX MAP No. 17 PART OF PARCEL #664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 1, 1995
 SHEET 9 OF 20

F 96-04

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	426.30	421.30	421.05	BALLARD WAY	1+17.33	-----	A-5	S.D. 4.40
I-2	447.08	441.49	441.24	SAMANTHA WAY	0+42	12' RT.	A-5	S.D. 4.40
I-3	447.08	442.02	441.77	SAMANTHA WAY	0+42	12' LT.	A-5	S.D. 4.40
I-4	448.15	442.92	442.42	BALLARD WAY	26+84	13' LT.	A-5	S.D. 4.40
I-5	448.15	-----	442.97	BALLARD WAY	26+84	13' RT.	A-5	S.D. 4.40
I-6	436.39	431.39	431.14	BALLARD WAY	20+94.90	13' LT.	A-10	S.D. 4.41
I-7	442.31	-----	437.31	BALLARD WAY	21+75.49	13' RT.	A-5	S.D. 4.40
I-8	424.82	419.52	419.27	BALLARD WAY	18+62	13' LT.	A-10	S.D. 4.41
I-9	424.82	-----	419.82	BALLARD WAY	18+62	13' RT.	A-10	S.D. 4.41
I-10	405.26	392.52	392.27	CAITLINS COURT	1+37.26	-----	A-10	S.D. 4.41
I-11	404.33	398.78	398.78	BALLARD WAY	13+50	13' LT.	A-5	S.D. 4.40
I-12	404.33	399.25	394.08	BALLARD WAY	13+50	13' RT.	A-10	S.D. 4.41
I-13	412.03	405.31	405.06	BALLARD WAY	15+92.82	13' LT.	A-10	S.D. 4.41
I-14	410.67	-----	405.67	BALLARD WAY	15+70.12	13' RT.	A-10	S.D. 4.41
I-4A	451.30	-----	447.37	-----	-----	-----	MODIFIED 'D' INLET	S.D. 4.39
I-4B	451.50	445.80	445.55	-----	-----	-----	MODIFIED 'D' INLET	S.D. 4.39
I-12A	407.50	-----	402.78	-----	-----	-----	'D' INLET	S.D. 4.39
M-1	432.20	427.02	426.95	BALLARD WAY	28+97	19' LT.	STD. MANHOLE	G-5.01
M-2	442.37	437.37	437.12	BALLARD WAY	27+78	19' LT.	STD. MANHOLE	G-5.01
M-3	443.55	429.32	429.07	-----	-----	-----	STD. MANHOLE	G-5.01
M-4	420.30	417.43	417.18	-----	-----	-----	STD. MANHOLE	G-5.01
M-5	382.40	317.90	316.80	-----	-----	-----	STD. MANHOLE	G-5.01
M-6	367.10	361.00	343.50	-----	-----	-----	STD. MANHOLE	G-5.01
M-7	408.42	393.86	393.61	CAITLINS COURT	2+23	18' RT.	STD. MANHOLE	G-5.01
M-8	409.39	395.04	394.79	CAITLINS COURT	1+25	18' RT.	STD. MANHOLE	G-5.01
M-9	410.28	404.45	396.13	CAITLINS COURT	0+35	18' RT.	STD. MANHOLE	G-5.01
M-10	406.92	397.23	396.98	BALLARD WAY	14+85	19' RT.	STD. MANHOLE	G-5.01
M-11	454.00	477.01	446.76	-----	-----	-----	STD. MANHOLE	G-5.01
M-12	452.80	444.51	444.26	BALLARD WAY	25+54.03	18' LT.	STD. MANHOLE	G-5.01
M-13	* 402.00	400.84	400.59	BALLARD WAY	12+87.26	18' RT.	STD. MANHOLE	G-5.01
S-1	414.25	412.75	412.75	-----	-----	-----	CONC. END SECTION	S.D. 5.51
S-2	417.70	416.15	416.15	-----	-----	-----	CONC. END SECTION	S.D. 5.51
S-3	429.85	428.35	428.35	-----	-----	-----	CONC. END SECTION	S.D. 5.51
S-4	318.00	316.80	316.80	-----	-----	-----	CONC. END SECTION	S.D. 5.51
S-5	419.5	416.98	416.98	-----	-----	-----	CONC. END SECTION	S.D. 5.51
I-14	415.30	409.35	404.26	BALLARD WAY	13+03	18' RT.	D INLET	SD 4.11
I-15	415.50	-----	410.00	BALLARD WAY	13+43	19' RT.	D INLET	SD 4.11
I-16	410.50	-----	404.81	BALLARD WAY	14+67	15' RT.	D INLET	SD 4.11
M-14	418.00	400.16	399.91	BALLARD WAY	14+62	5' RT.	STD. MANHOLE	G. 5.01

* DENOTES TOP OF MANHOLE COVER



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Gina Swinomy 12/21/95
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Richard Danner 12/18/95
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.K.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 12/12/95
DATE
CHIEF, BUREAU OF HIGHWAYS

STORM DRAIN PROFILES & STRUCTURE SCHEDULE

RIVERWALK
AT PATAPSCO PARK
LOTS 6 THRU 64

TAX MAP No. 17 PART OF PARCEL #664
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 1, 1995
SHEET 10 OF 20

1	EXTENDED STORM DRAIN AND INLETS	3/05/96
NO.	REVISION	DATE

OWNER
MRS. JUANITA LEE SMALLWOOD
c/o MR. JAMES LAWSON, SR.
PERSONAL REPRESENTATIVE
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794

DEVELOPER/ CONTRACT PURCHASER
SMALLWOOD PROPERTY PARTNERSHIP
c/o MR. DUANE ZENTGRAF
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794



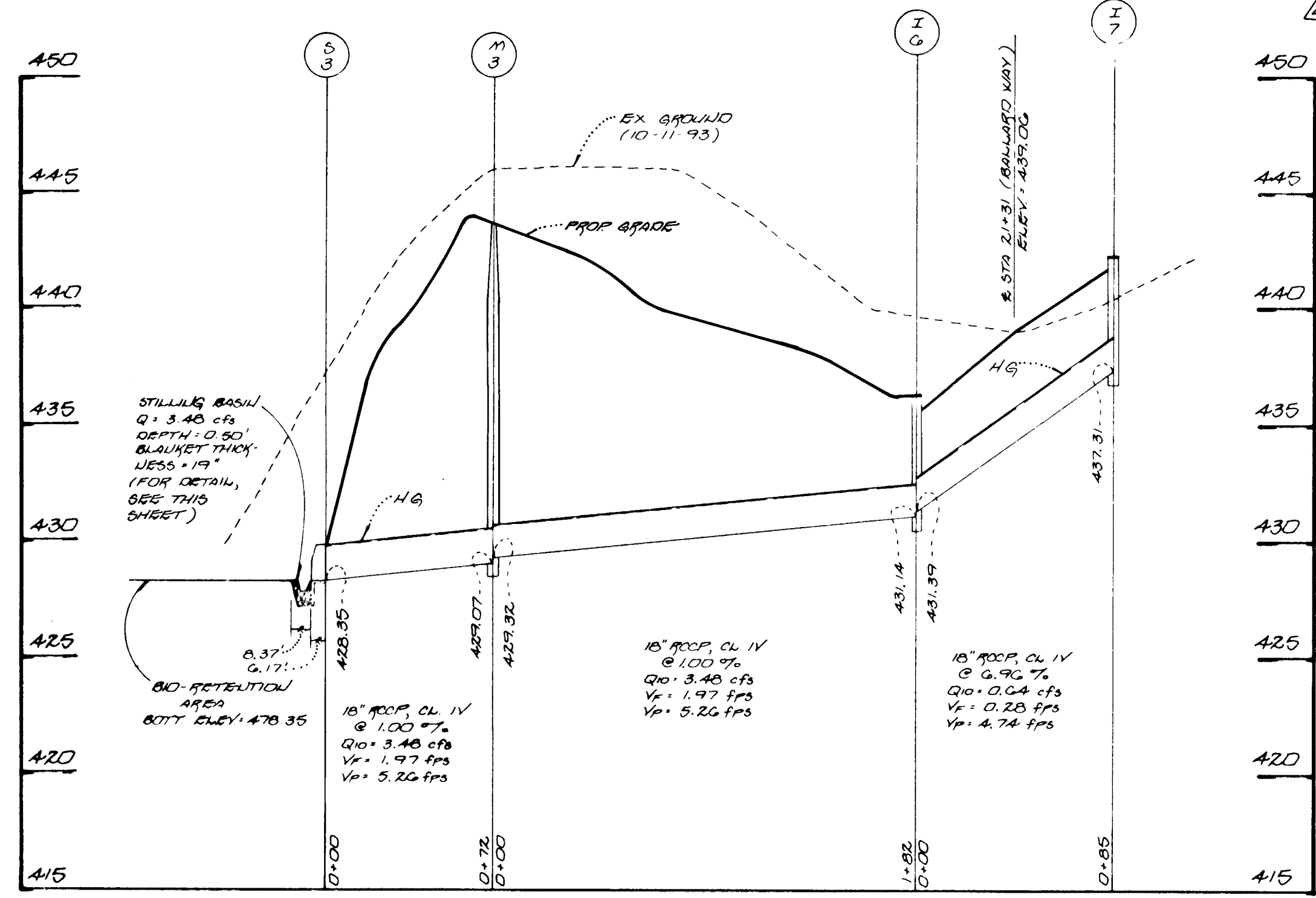
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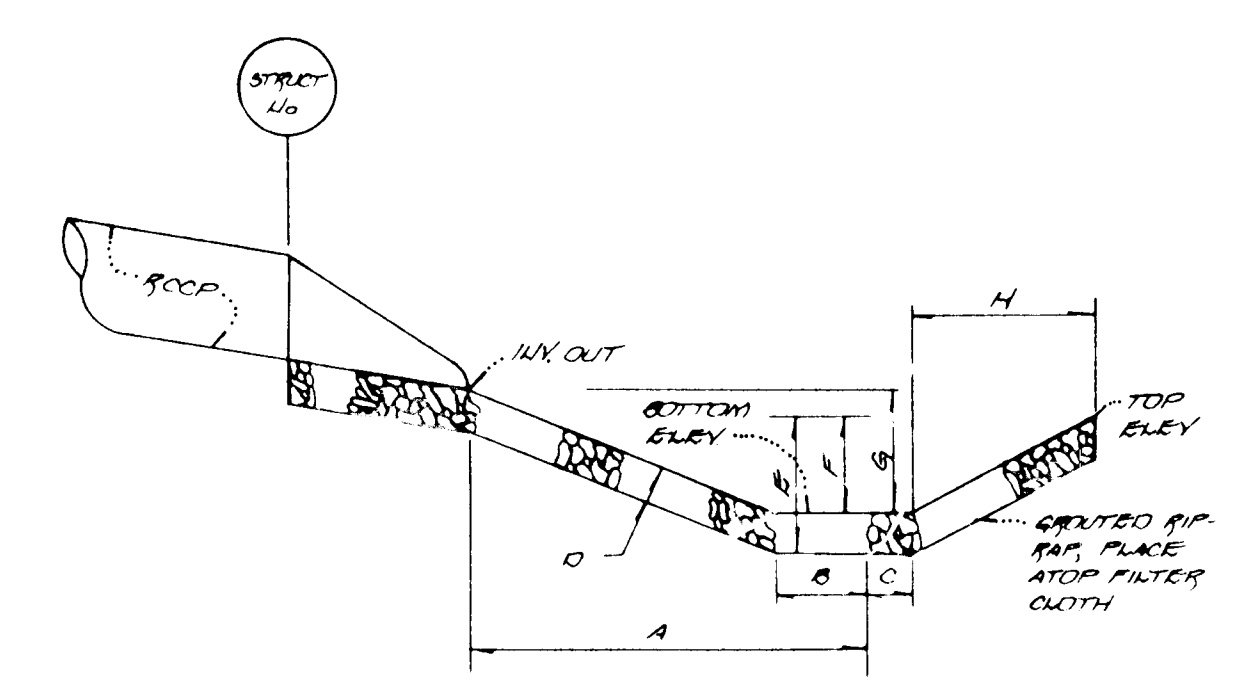
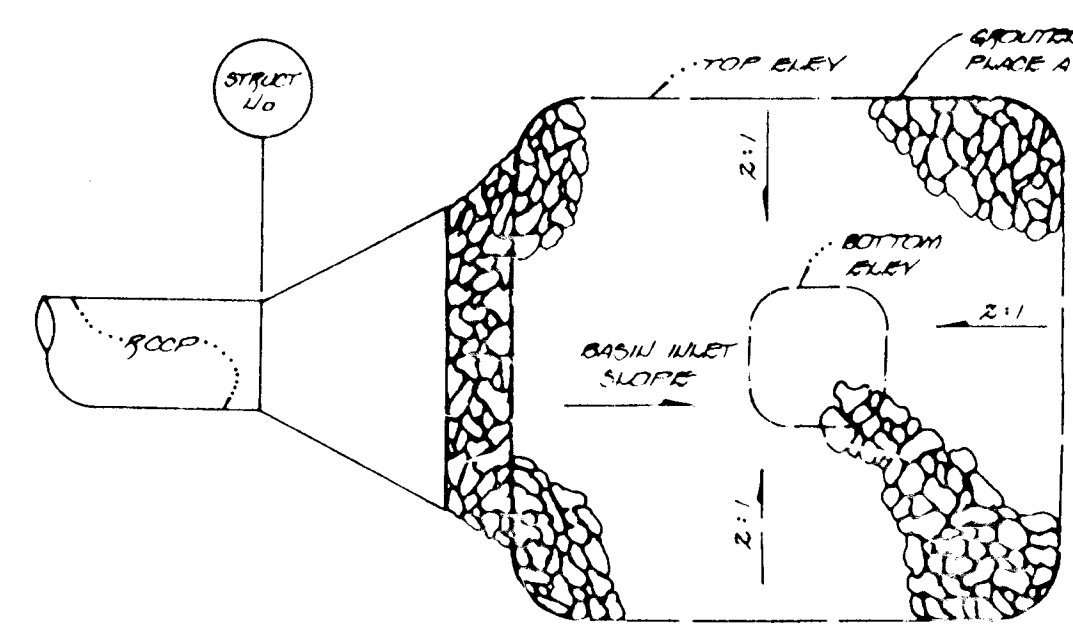
STILLING BASIN DESIGN DATA

STRUCTURE NO.	PIPE SIZE	BASIN INLET SLOPE	INLET	BOTTOM ELEV.	TOP ELEV.	A	B	C	D	E	F	G	H	Q (cfs)	DEPTH	MIN. BASINLET THICKNESS
5-1	18"	10.5 : 1	412.25	412.25	412.05	8.50	0.67	0.67	1.19	1.67	1.07	2.87	1.80	3.44	1.0'	19"
5-2	18"	8.5 : 1	415.35	415.05	420.25	2.15	0.33	0.17	1.19	2.77	1.65	1.8	1.75	3.45	0.50'	15"
5-3	18"	7 : 1	416.85	416.11	416.76	5.29	0.50	0.25	1.19	2.77	1.65	2.12	1.30	3.79	0.75'	15"

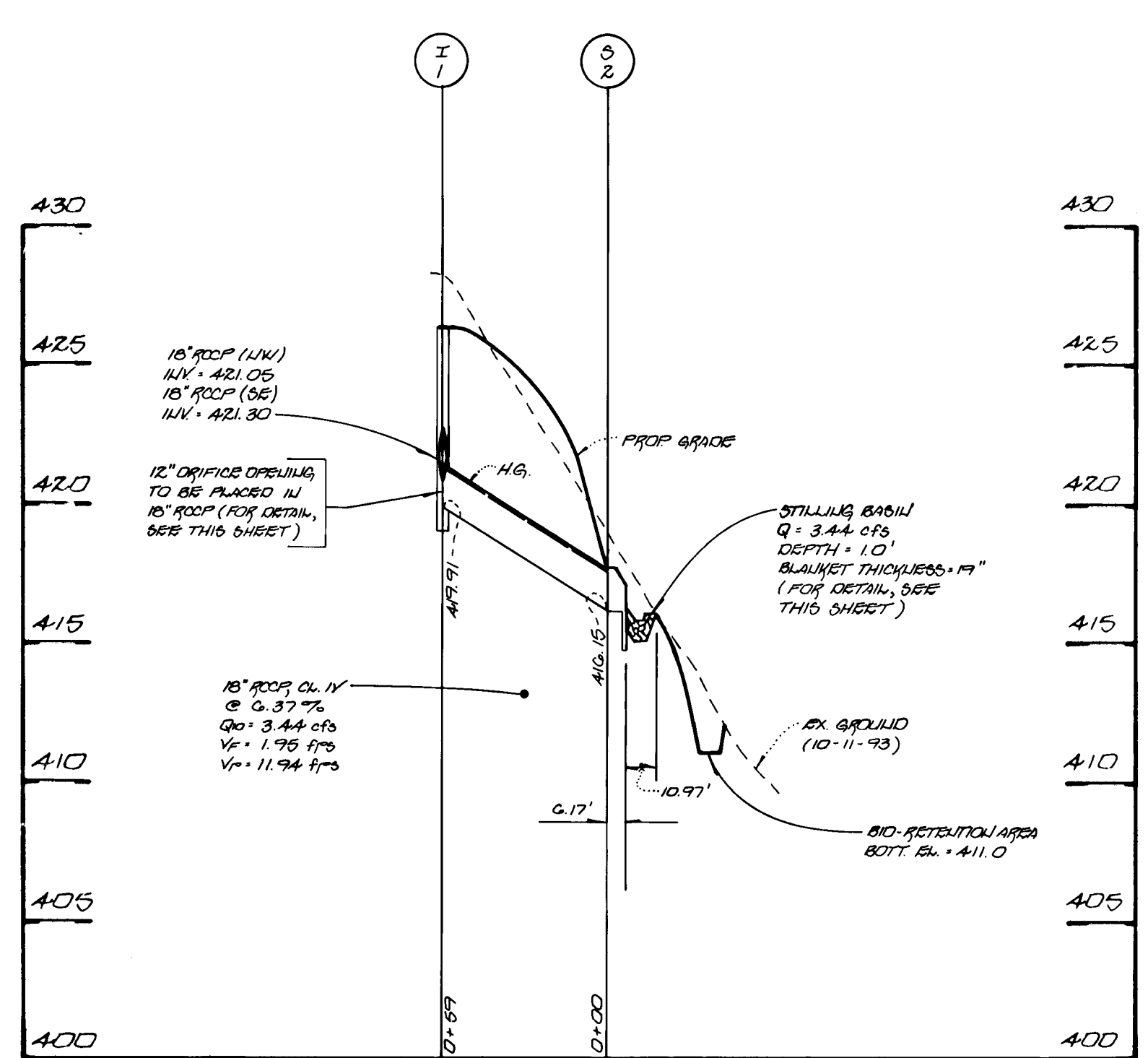
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Jim Jaramila 12/21/95
 CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH
John Deane 12/16/95
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Powell 12-12-95
 CHIEF, BUREAU OF HIGHWAYS



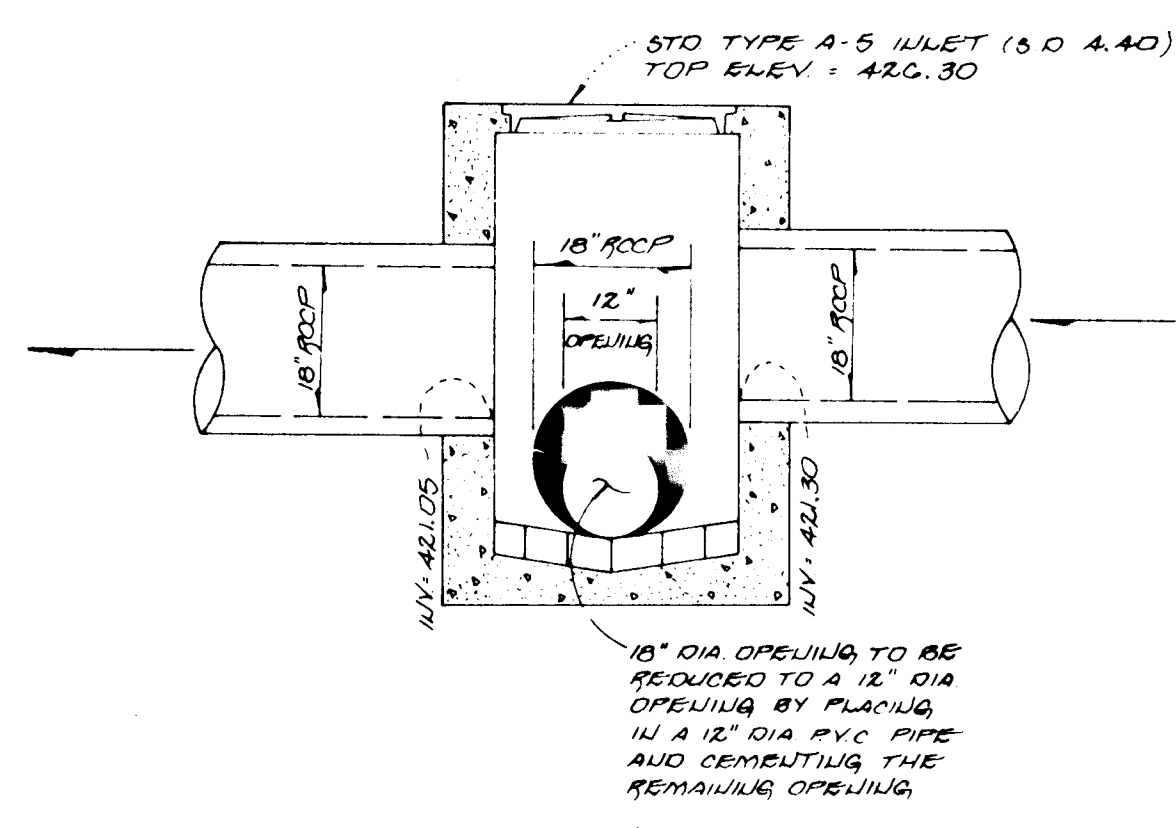
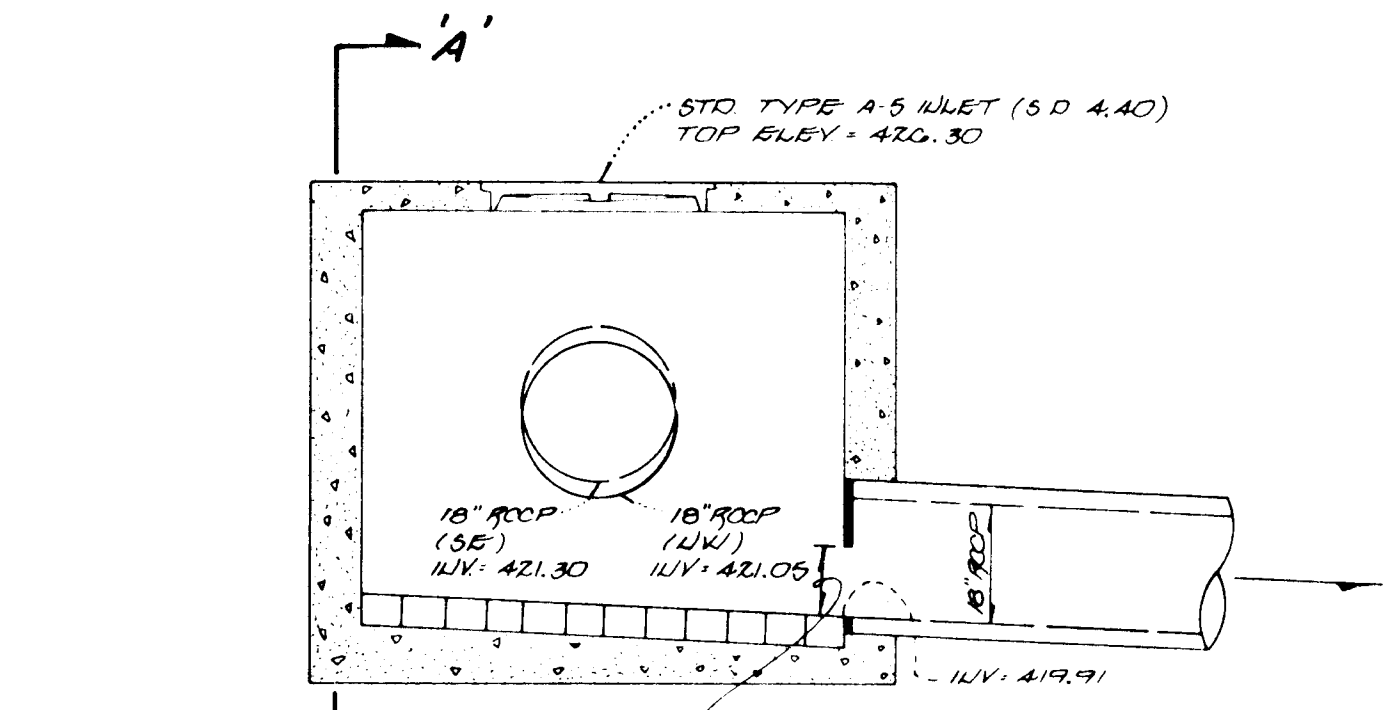
PROFILE
 SCALE: HORIZ 1" = 50"
 VERT 1" = 5'



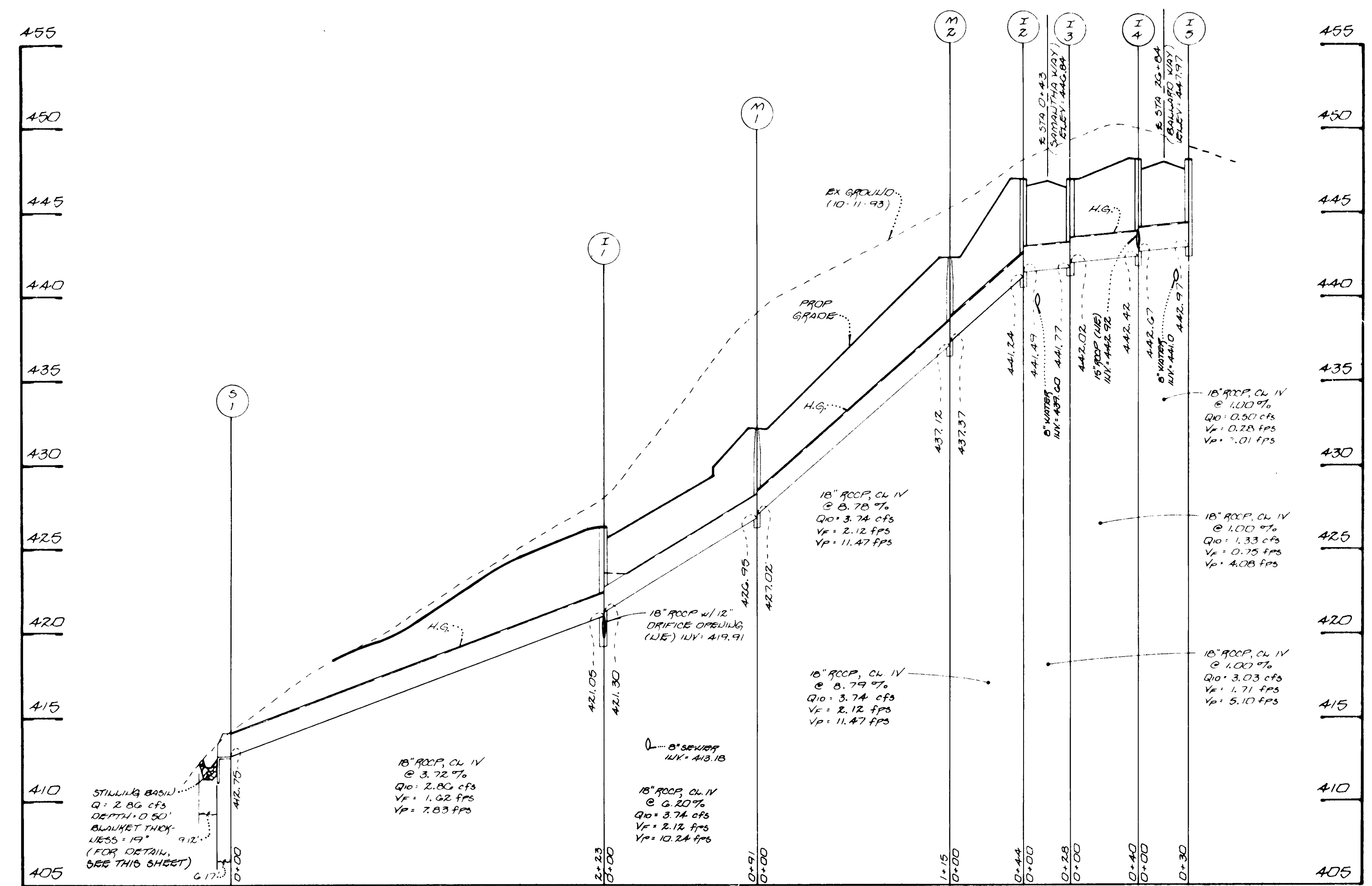
STILLING BASIN OUTFALL DETAIL
 (1/2" SCALE)



PROFILE
 SCALE: HORIZ 1" = 50"
 VERT 1" = 5'



SECTION 'A-A'
I-1 INLET DETAIL
 (1/2" SCALE)



PROFILE
 SCALE: HORIZ 1" = 50"
 VERT 1" = 5'

FISHER, COLLINS & CARTER, INC.
 10232 BALTIMORE NATIONAL PKWY, SUITE 100
 ELICOTT CITY, MARYLAND 21047
 (301) 481-2855

NO.	REVISION	DATE
4	DELETE 5-4 FROM STILLING BASIN DESIGN DATA	6-24-95

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODKIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794

**DEVELOPER/
 CONTRACT PURCHASER**
 SMALLWOOD PARTNERSHIP
 c/o Mr. DIANE ZENTGRAF
 2701 WOODKIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794



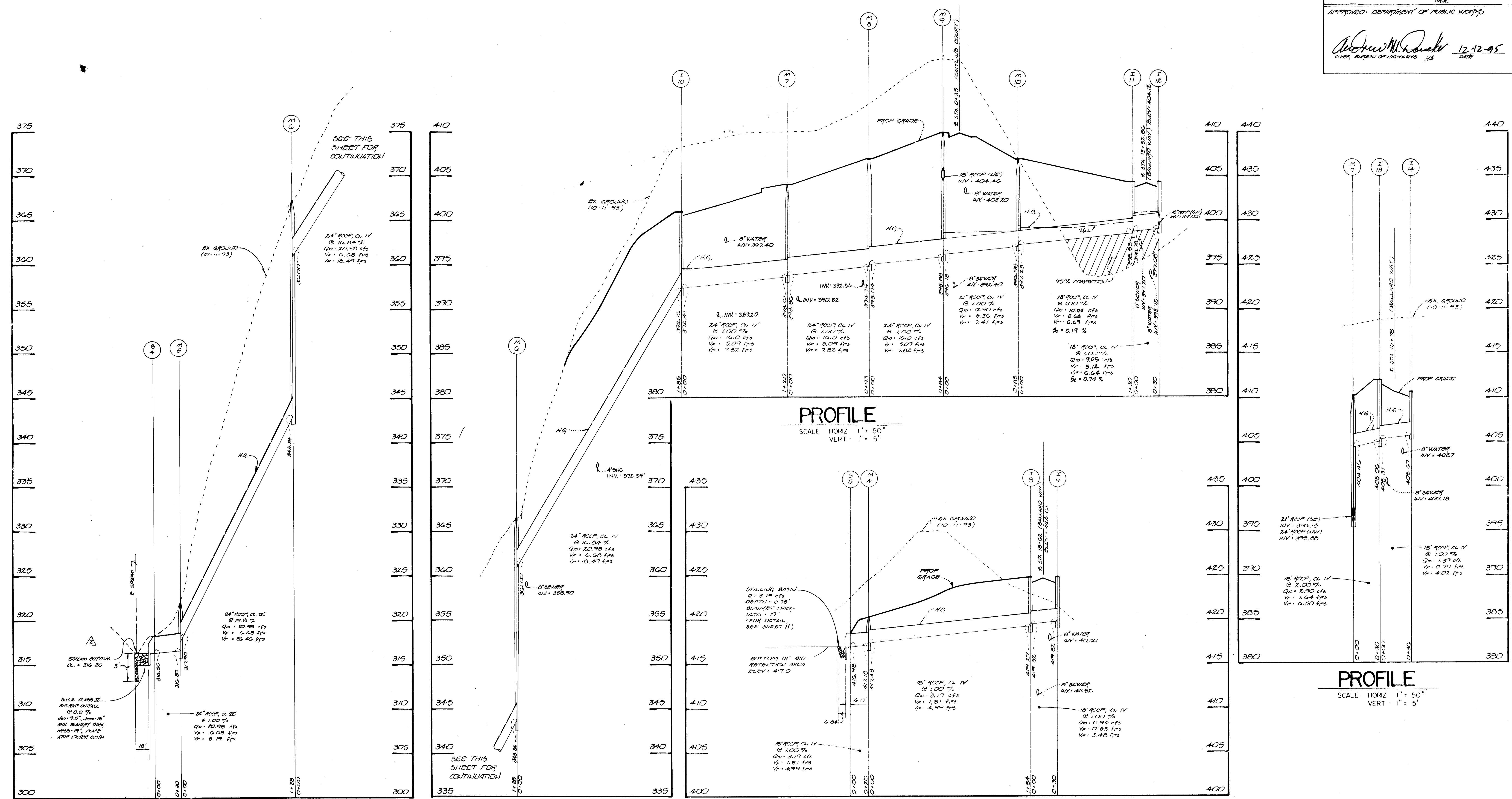
STORM DRAIN PROFILES
RIVERWALK
AT FATAPSCO PARK
 LOTS 6 thru 64
 TAX MAP No. 17 PART OF PARCEL 154
 SECOND ELECTION DISTRICT
 NEWARK COUNTY, MARYLAND
 SCALE: DATE: JULY 1, 1995
 SHEET 11 OF 20

Chris Summery 12/18/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RECREATION DATE

Mark Deumer 12/18/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Andrew M. Pank 12-12-95
 CHIEF, BUREAU OF HIGHWAYS DATE



1777

PROFILE
 SCALE: HORIZ. 1" = 50"
 VERT. 1" = 5'

PROFILE
 SCALE: HORIZ. 1" = 50"
 VERT. 1" = 5'

PROFILE
 SCALE: HORIZ. 1" = 50"
 VERT. 1" = 5'

PROFILE
 SCALE: HORIZ. 1" = 50"
 VERT. 1" = 5'

FISHER, COLLINS & CARTER, INC.
 ENGINEERS AND ARCHITECTS
 10272 BALTIMORE NATIONAL PIKE SUITE 100
 ELLICOTT CITY, MARYLAND 21112
 301-461-2855

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794

DEVELOPER/ CONTRACT PURCHASER
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZENTGRAF
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794

NO.	REVISIONS	DATE
1	EXTENDED STORM DRAIN	3/05/94



STORM DRAIN PROFILES
RIVERWALK AT PATAPSCO PARK
 LOTS 6 thru 64
 TAX MAP No. 17 PART OF PARCEL #664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 1, 1995
 SHEET 12 OF 20

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL 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 AUTHORIZED PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

James L. ... 11-16-95
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND Viable 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.

Clayton C. ... 7/15/95
 SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
Patricia Engle ... 11/22/95
 USDA NATURAL RESOURCES ADMINISTRATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. ... 11/22/95
 APPROVED DEPARTMENT OF PLANNING AND ZONING

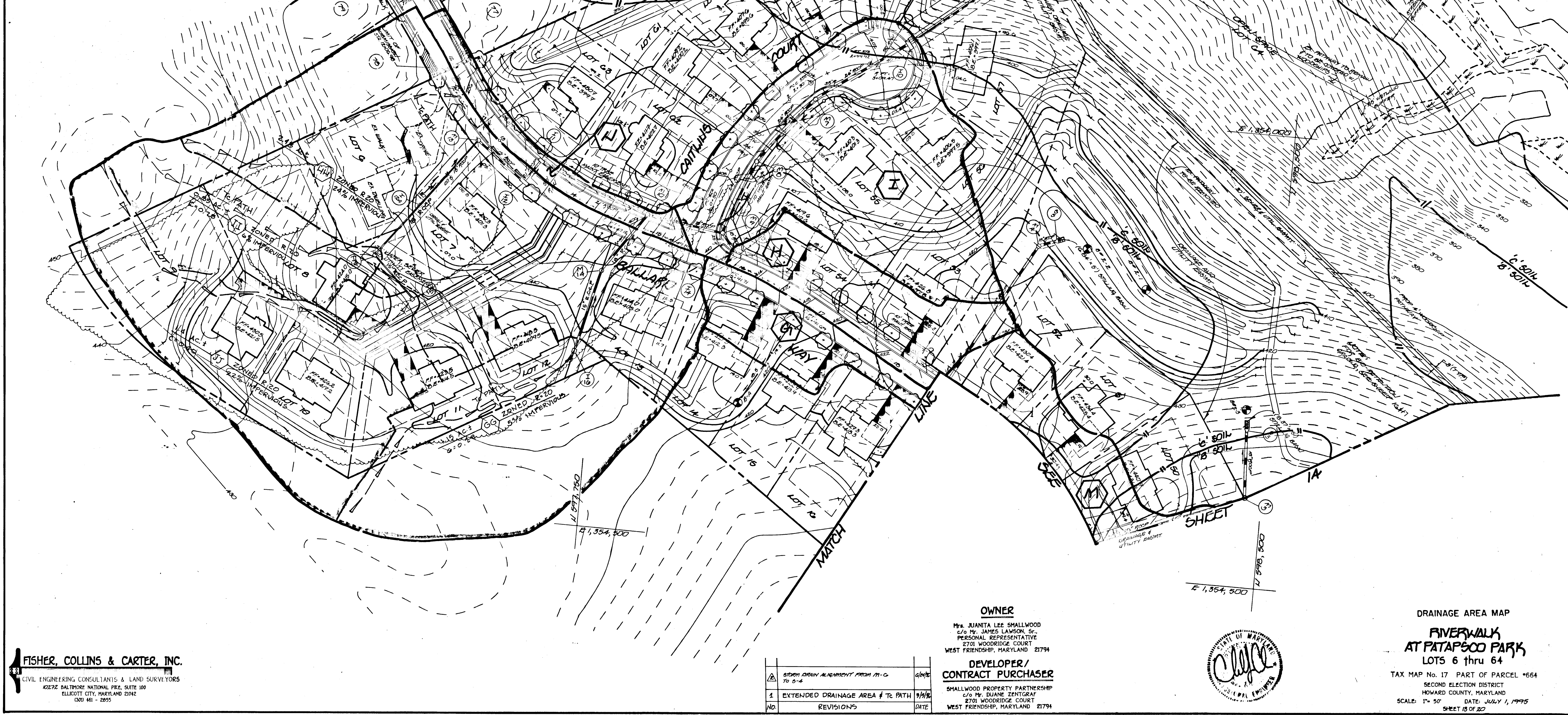
Anna ... 12/21/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Mike ... 12/10/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. ... 12-12-95
 CHIEF, BUREAU OF HIGHWAYS

DRAINAGE AREA DATA

DRAINAGE AREA	AREA (ACRES)	% IMPERVIOUS	C'	SOIL
A	0.13	25%	0.25	R-20
B	0.35	19%	0.47	
C	0.55	19%	0.47	
D	0.24	44%	0.25	
E	0.19	30%	0.47	
F	0.04	14%	0.34	
G	0.34	20%	0.45	
H	0.55	17%	0.44	
I	1.91	36%	0.62	R-20
J	0.15	30%	0.47	
K	0.75	36%	0.44	
L	0.19	28%	0.47	
M	0.24	30%	0.47	
N	0.22	30%	0.47	
OC	0.21	10%	0.33	
OB	0.25	17%	0.31	R-20
PA	1.47	17%	0.32	R-20



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FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10272 BALTIMORE NATIONAL PIKE, SUITE 100
 ELICOTT CITY, MARYLAND 21042
 (301) 461-2855

NO.	REVISIONS	DATE
1	EXTENDED DRAINAGE AREA # TR PATH	9/15/95

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794

DEVELOPER / CONTRACT PURCHASER
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZENTGRAF
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21794



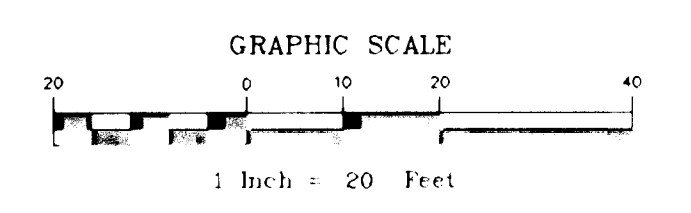
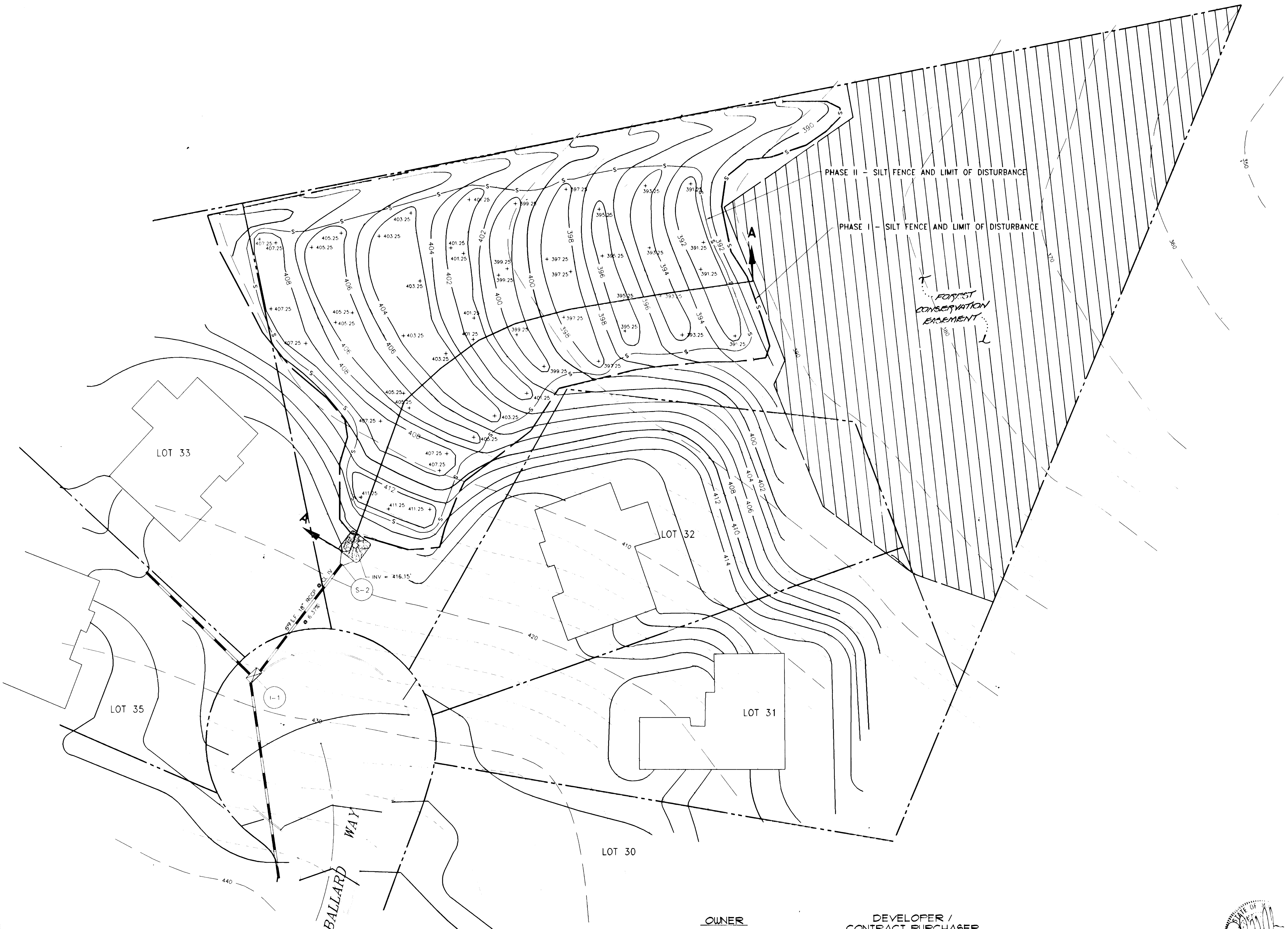
DRAINAGE AREA MAP
FIVERWALK AT PATAPSCO PARK
 LOTS 6 thru 64
 TAX MAP No. 17 PART OF PARCEL #664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: JULY 1, 1995
 SHEET 13 OF 20

F 96-04

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Jim Barry 12/17/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Deane 12/10/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

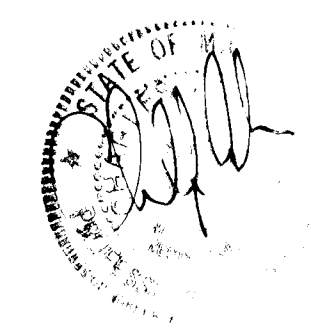
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Quake 12-12-95
 CHIEF, BUREAU OF HIGHWAYS DATE



Bioretention Area 1
 Grading & Sediment Control Plan

**FINGERWALK
 AT PATAPSCO PARK**
 LOTS 6 THRU 64

TAX MAP No. 17 PART OF PARCEL #664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 20' DATE: JULY 1, 1995
 SHEET 15 OF 20



OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21194

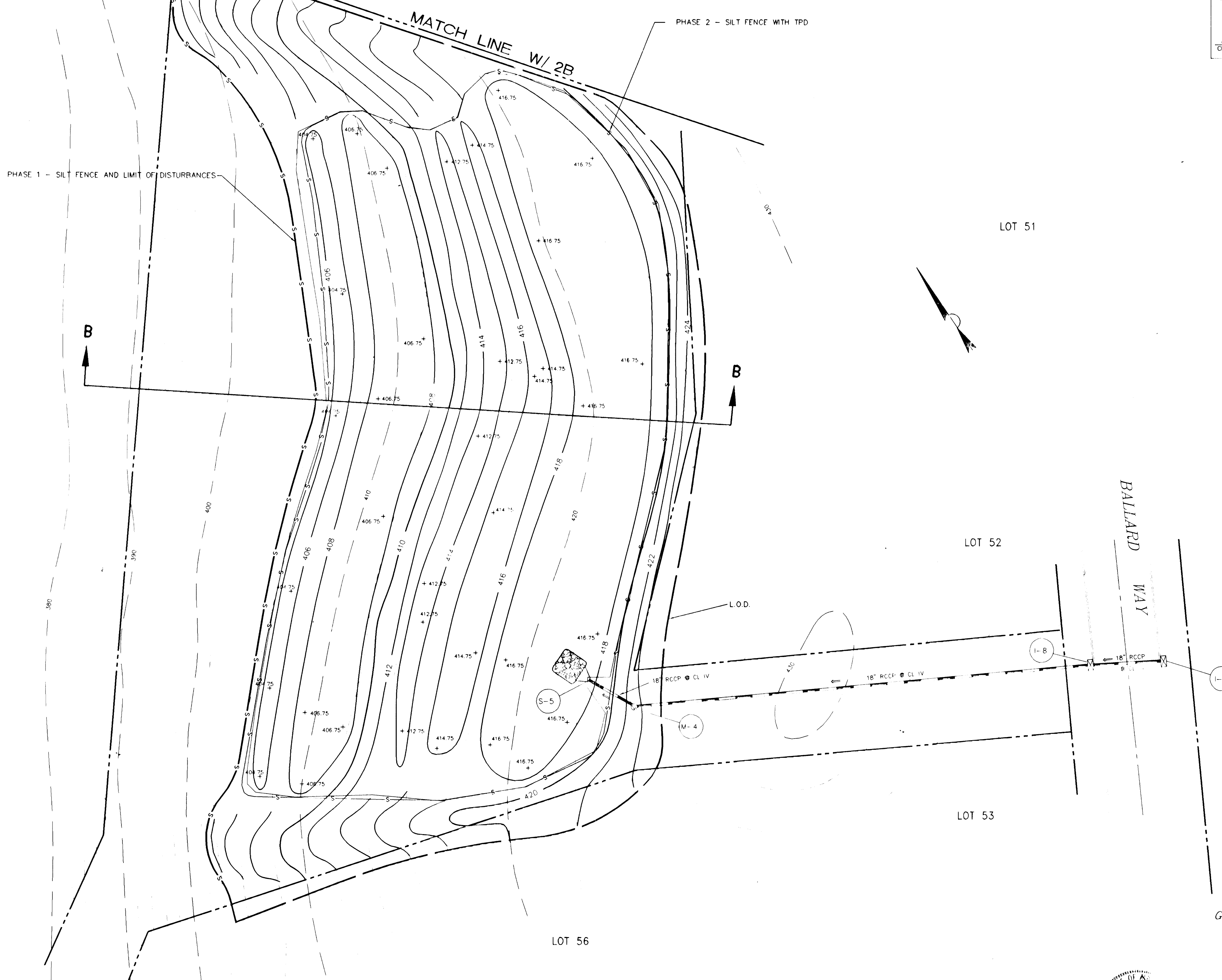
**DEVELOPER /
 CONTRACT PURCHASER**
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZETGRAF
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21194

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 21100 CITY PARKWAY, #200
 FORT WASHINGTON, PA 19041
 (610) 481-2955

1777

F 96-04

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Gina Stumm 12/21/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mark Dammann 12/18/95
 CHIEF, DEVELOPMENT & ENGINEERING DIVISION
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Douke 12-12-95
 CHIEF, BUREAU OF HIGHWAYS



1777

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING, SURVEYING & LAND SURVEYORS

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2101 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21194

DEVELOPER / CONTRACT PURCHASER
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZETGRAF
 2101 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21194



Bioretention Area 2a
 Grading & Sediment Control Plan

**RIVERWALK
 AT PATAPSCO PARK**
 LOTS 6 THRU 64

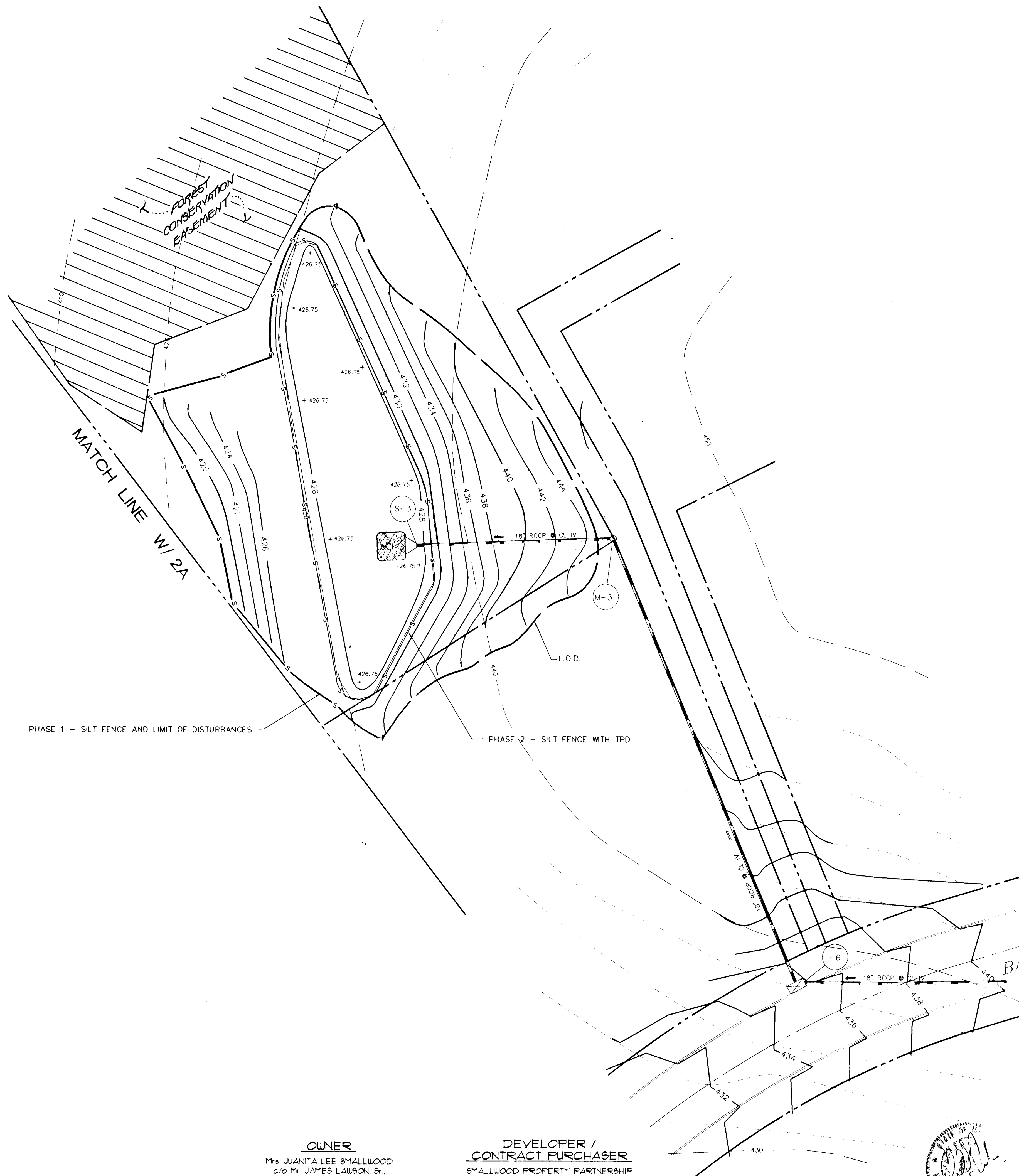
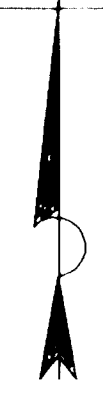
TAX MAP No. 17 PART OF PARCEL *664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 20'
 DATE: JULY 1, 1995
 SHEET 10 OF 20

F 96-04

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Gina Summery 12/18/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Robi Dammann 12/18/95
 CHIEF, DEPARTMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donato 12-12-95
 CHIEF, BUREAU OF HIGHWAYS DATE



MATCH LINE W/ 2A

PHASE 1 - SILT FENCE AND LIMIT OF DISTURBANCES

PHASE 2 - SILT FENCE WITH TPD

Bioretention Area 2b
 Grading & Sediment Control Plan

**RIVERWALK
 AT PATAPSCO PARK**
 LOTS 6 THRU 64

TAX MAP No. 17 PART OF PARCEL *664
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 20' DATE: JULY 1, 1995
 SHEET 17 OF 20

OWNER
 Mrs. JUANITA LEE SMALLWOOD
 c/o Mr. JAMES LAWSON, Sr.
 PERSONAL REPRESENTATIVE
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21184

**DEVELOPER /
 CONTRACT PURCHASER**
 SMALLWOOD PROPERTY PARTNERSHIP
 c/o Mr. DUANE ZETGRAF
 2701 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21184



FISHP, COLLINS & CARTER, INC.
 CIVIL ENGINEERING, CONSULTANTS, & LAND SURVEYORS
 1100 WOODRIDGE COURT
 WEST FRIENDSHIP, MARYLAND 21184

1777

F 96-04

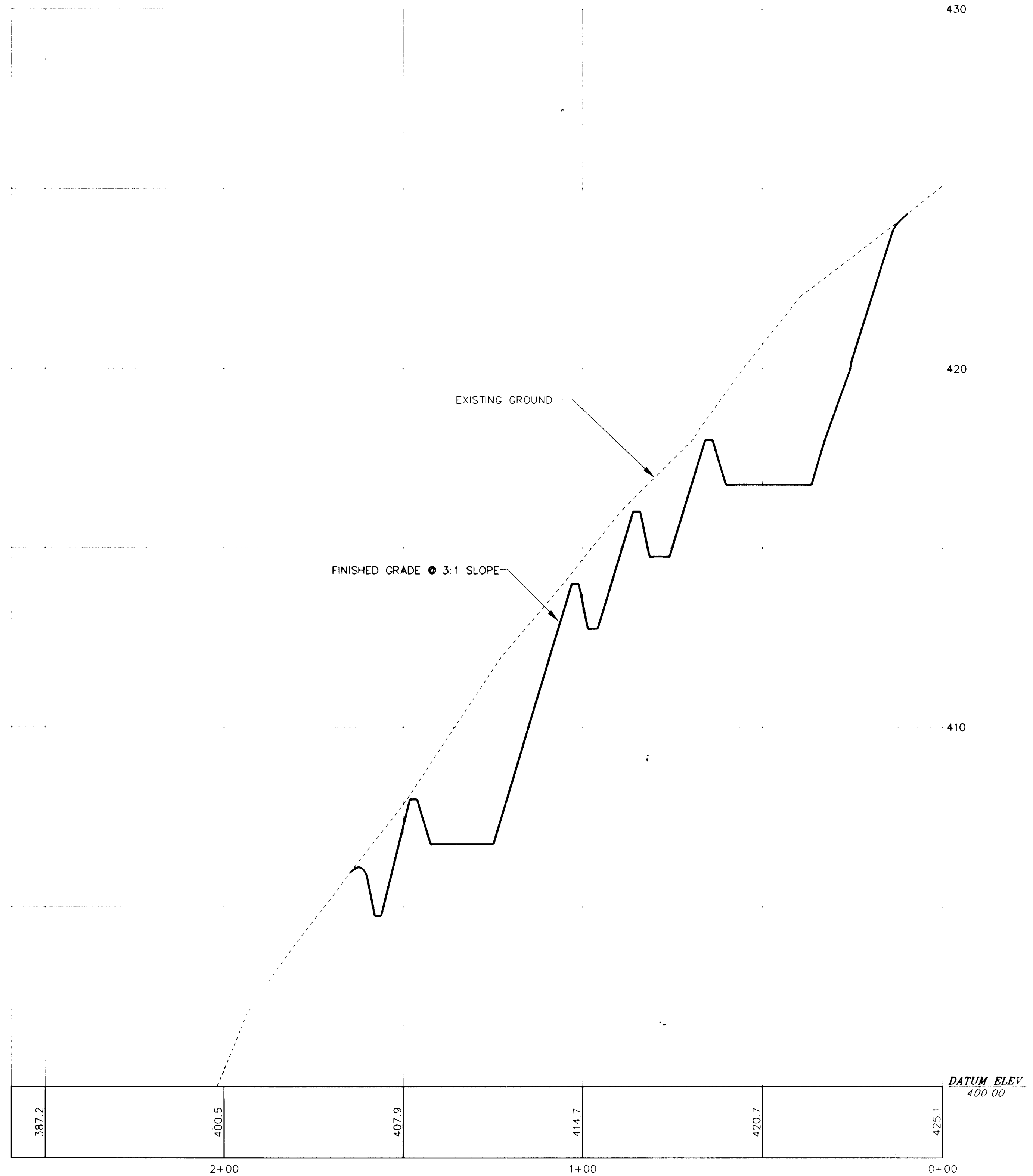
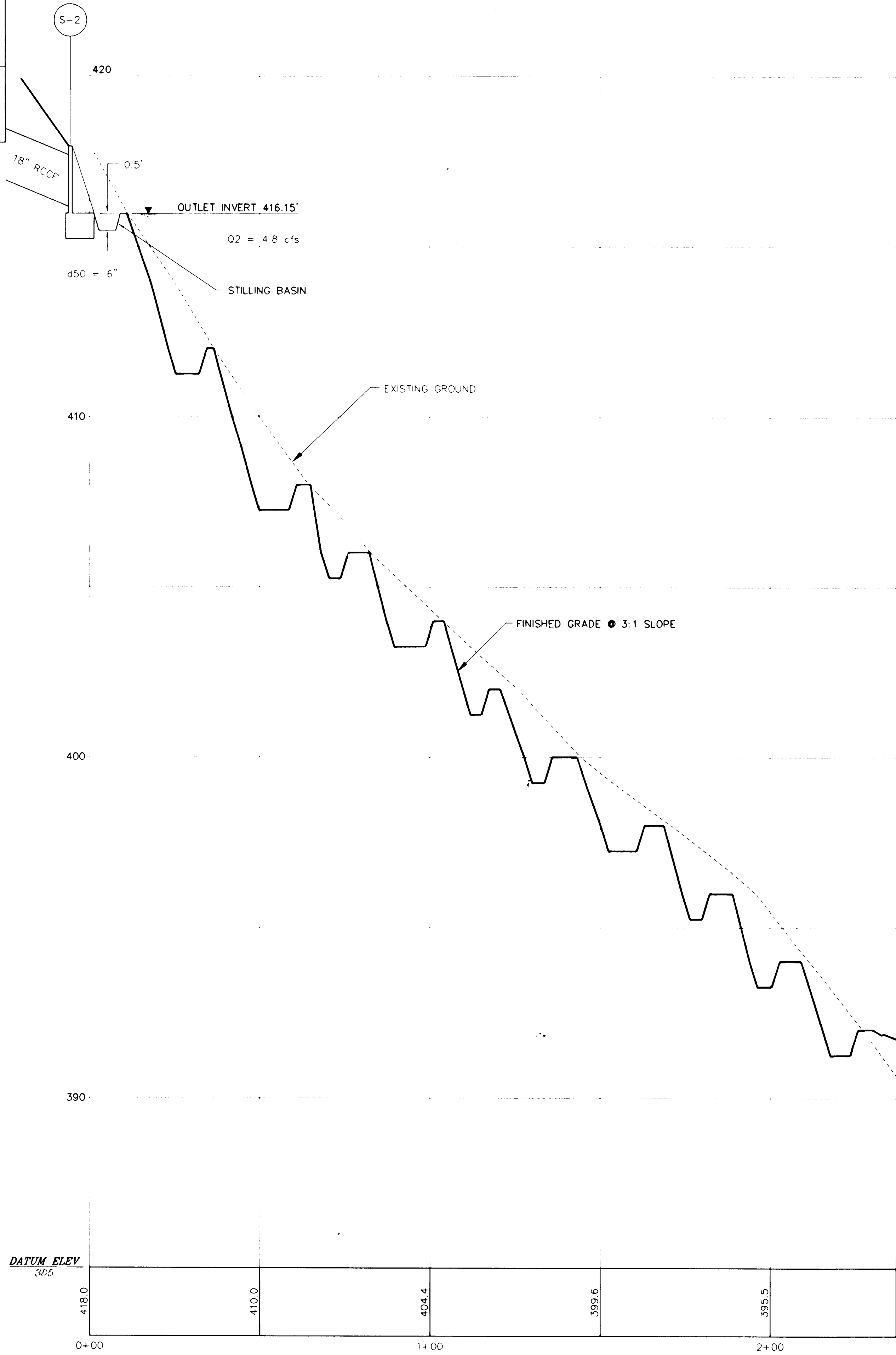
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chia Surinam
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
12/21/95
DATE

W. J. Summers
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.M.
12/18/95
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Stephen M. Donnell
CHIEF, BUREAU OF HIGHWAYS
12-12-95
DATE



Bioretention Areas Cross-Sections

RIVERWALK AT PATAPSCO PARK

LOTS 6 THRU 64

TAX MAP No. 17 PART OF PARCEL *664

SECOND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: JULY 1, 1995

SHIFET 18 OF 20

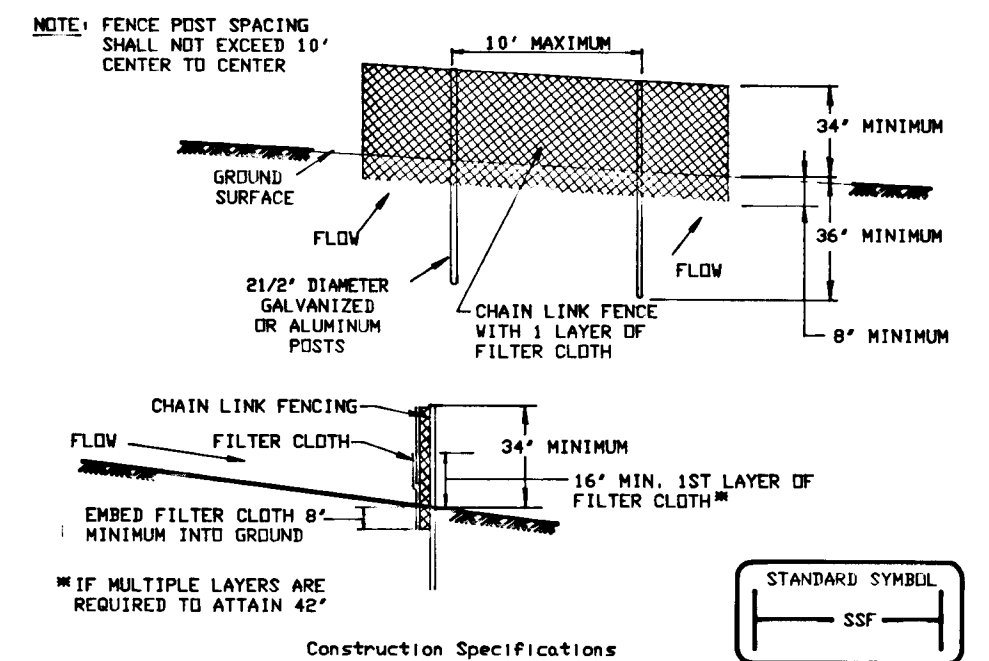
OWNER
Mrs. JUANITA LEE SMALLWOOD
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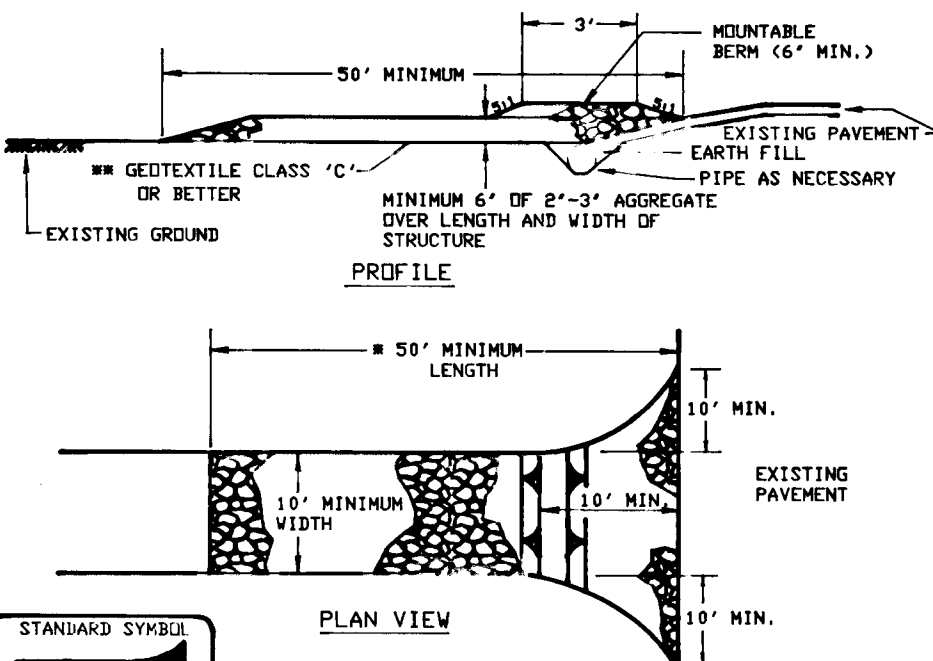
DETAIL 33 - SUPER SILT FENCE



- Construction Specifications
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildup removed when "buttes" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

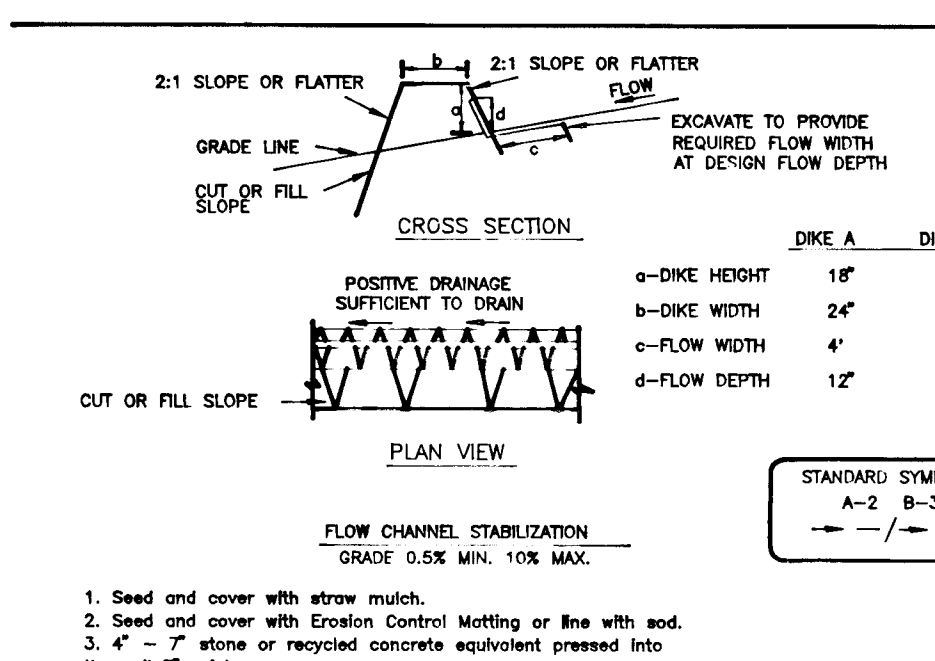
Tensile Strength	50 lbs/in (min.)	Test: HMT 509
Tensile Modulus	20 lbs/in (min.)	Test: HMT 509
Flow Rate	0.3 gal/PSF/minute (max.)	Test: HMT 302
Filtration Efficiency	70% (min.)	Test: HMT 302

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



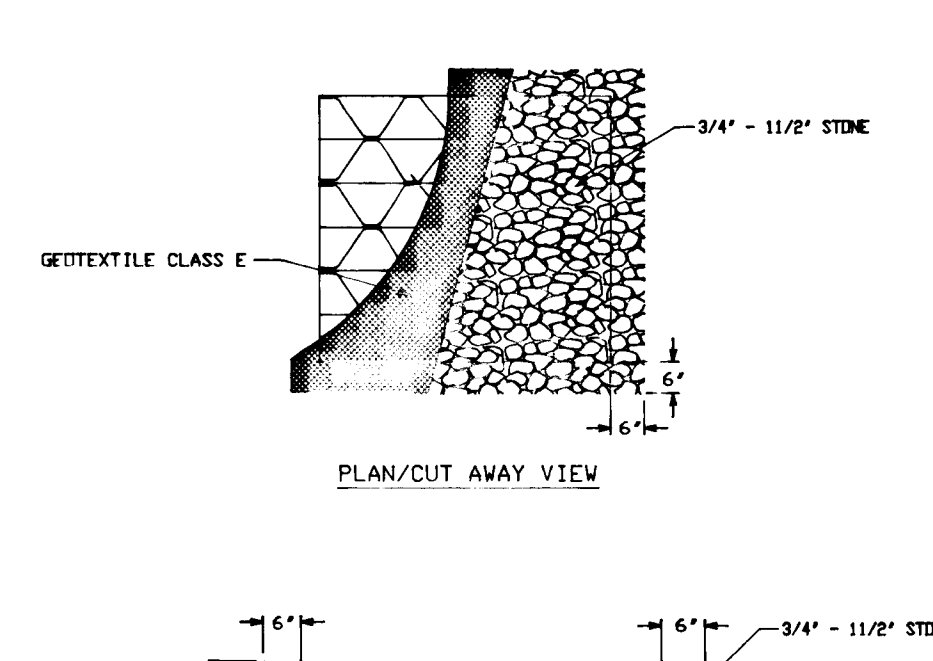
- Construction Specifications
- Length - minimum of 50' (30' for single residence lots).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. After plan approval authority may not require single family residences to use geotextile.
 - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6' deep over the length and width of the entrance.
 - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a roustable berm with 5:1 slopes and a minimum of 6' of stone over the pipe. Pipe has to be sized according to the drainage. When the SSE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6' minimum will be required.
 - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

DETAIL 1 - EARTH DIKE



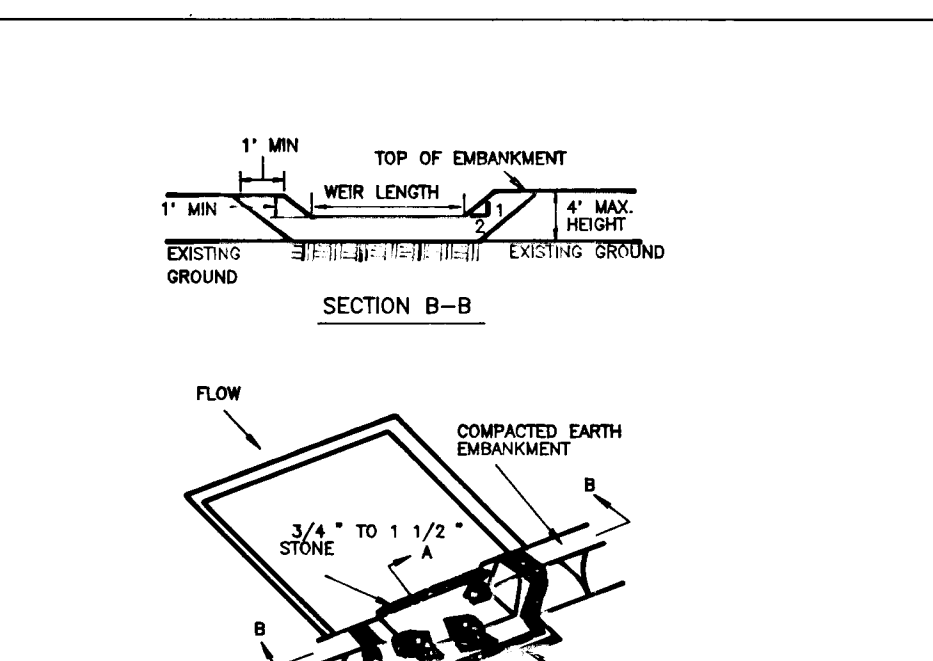
- Construction Specifications
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area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

DETAIL 23B - AT GRADE INLET PROTECTION



- Construction Specifications
- Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
 - Place 3/4" to 1 1/2" stone, 4" to 6" thick on the grate to secure the fabric and provide additional filtration.

STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV



- Construction Specifications
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically and after each rain and repairs made as needed.
 - Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
 - The structure shall be backfilled by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
 - Refer to Section for specifications concerning trap dewatering.
 - Minimum trap depth shall be measured from the weir elevation.
 - The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
 - Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at entrance of the outlet channel.
 - Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL 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: *James E. ...* DATE: 11-15-95

ENGINEER'S CERTIFICATE

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

Signature of Engineer: *Patricia Engle ...* DATE: 1/22/95

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Signature: *John R. ...* DATE: 1/22/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

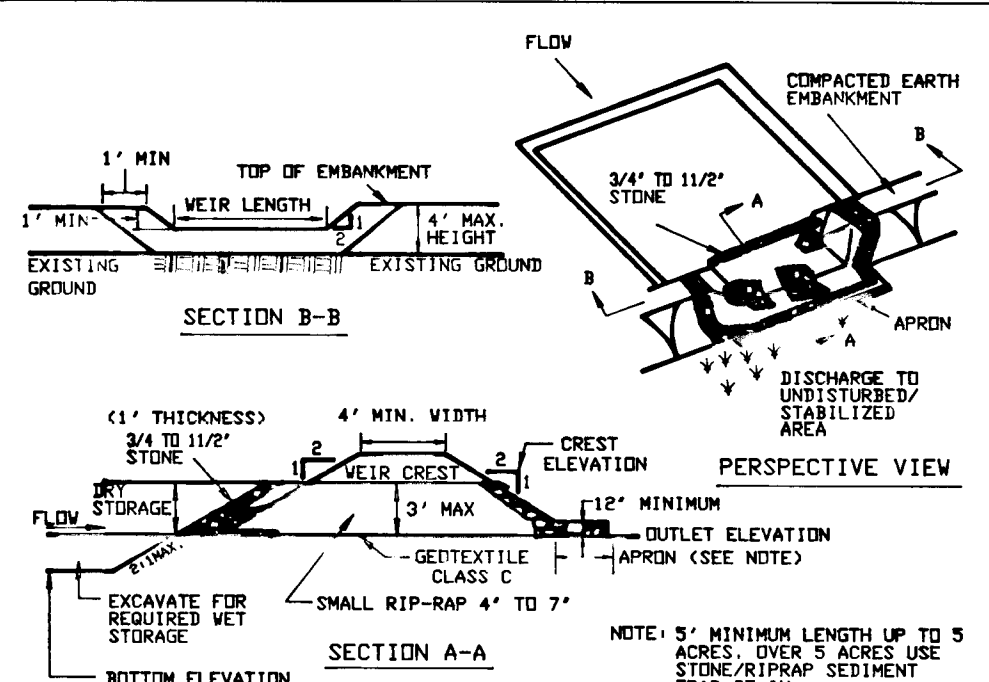
Signature: *Robert M. ...* DATE: 12-12-95

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *John ...* DATE: 12/18/95

Signature: *John ...* DATE: 12/21/95

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



- Construction Specifications
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically and after each rain and repairs made as needed.
 - Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
 - The structure shall be backfilled by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
 - Refer to Section for specifications concerning trap dewatering.
 - Minimum trap depth shall be measured from the weir elevation.
 - The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
 - Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at entrance of the outlet channel.
 - Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL GREATER THAN 31, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR PERMANENT SEEDINGS (SEC. 50) SOE (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	40.4 ACRES
AREA TO BE ROOFED OR PAVED	26.0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	24.0 ACRES
TOTAL CUT	38,000 CU.YDS.
TOTAL FILL	38,000 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	----- CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

- SEEDBED PREPARATION:**
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

- SOIL AMENDMENTS:**
APPLY TWO TONS PER ACRE DOLOMITE LIMESTONE (92 LBS./1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC. INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 100 LBS. PER ACRE 39-0-0 UREA/FORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

- SEEDING:**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEDING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING; OPTION (2) - USE 500; OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDING.

- MULCHING:**
APPLY 1 1/2 TO 2 TONS PER ACRE (10 TO 20 LBS./1,000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

- MAINTENANCE:**
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNWETCH AT 15

THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE AS

TEMPORARY SEEDING NOTES

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

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

- SOIL AMENDMENTS:**
APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (4 LBS./1,000 SQ. FT.)

- SEEDING:**
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 BUSHEL PER ANNUAL RYE (32 LBS./1,000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS./ACRE OF WEEDING LOVEGRASS (7 LBS./1,000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOE.

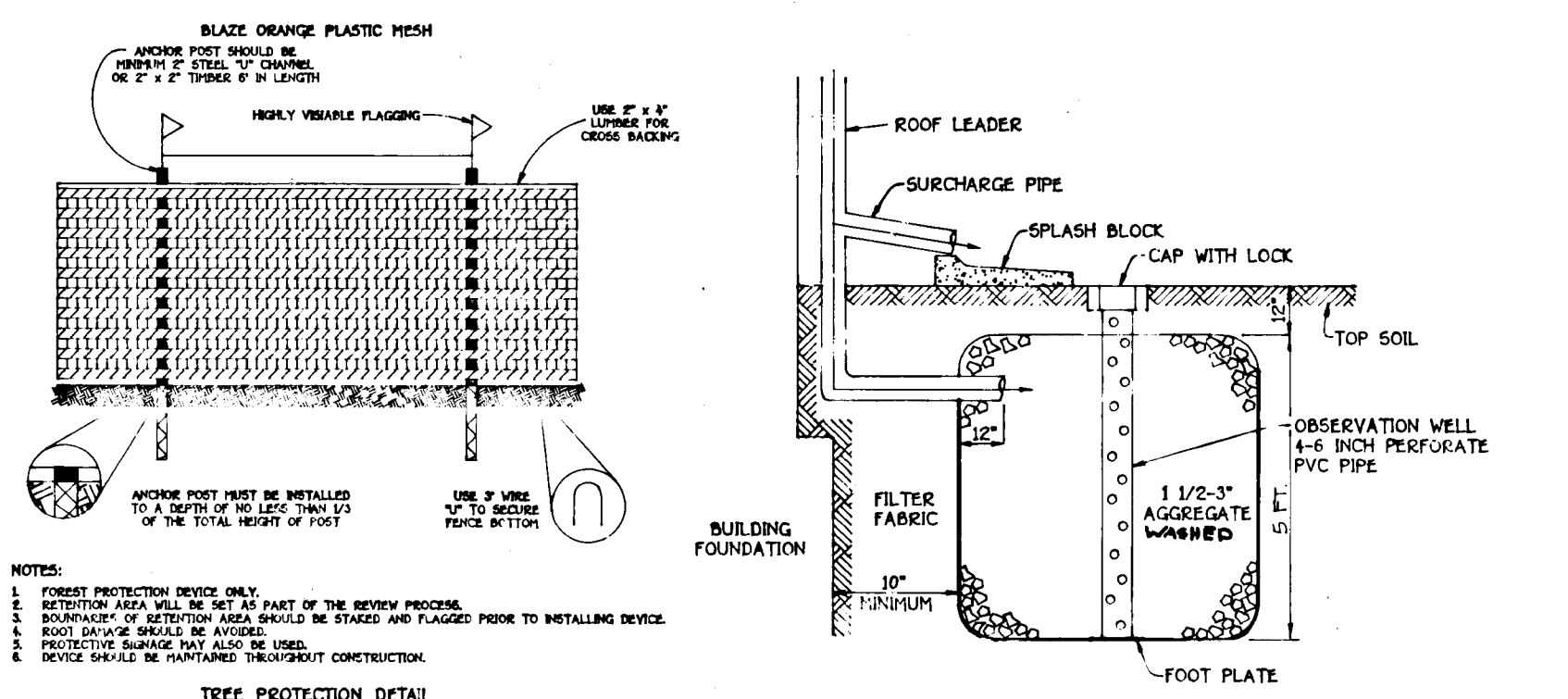
- MULCHING:**
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
- NOTIFY "MISS UTILITY" 48 HOURS BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT (410) 313-1890. 24 HOURS BEFORE STARTING ANY WORK. (3 DAYS)
- INSTALL STONE CONSTRUCTION ENTRANCE, SILT FENCE AND TREE PROTECTION FENCE. (3 DAYS)
- CONSTRUCT EARTH DIKES AND SEDIMENT TRAPS. STABILIZE TRAPS WITH TEMPORARY SEEDING. (5 DAYS)
- GRADE SITE TO SUBGRADE AND INSTALL STORM DRAIN SYSTEM. INSTALL INLET PROTECTION AROUND INLETS. (5 WEEKS)
- SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS ONCE THE CLEANOUT ELEVATIONS HAVE BEEN REACHED. (3 DAYS)
- INSTALL ROAD BASE COURSE. (4 DAYS)
- REMOVE SEDIMENT FROM ROADWAY AND DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED AND STABILIZE ALL DISTURBED AREAS. (2 DAYS)
- REMOVE INLET PROTECTION AND FLUSH STORM DRAIN SYSTEM TO REMOVE ANY TRAPPED SEDIMENT. (2 DAYS)
- APPLY TACK COAT TO SUBBASE AND LAY SURFACE COURSE. (4 DAYS)
- REMOVE ALL SEDIMENT CONTROL MEASURES UPON SEDIMENT CONTROL INSPECTORS APPROVAL. (5 DAYS)
- ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.

* BALLARD WAY SHALL BE GRADED FROM STA 12+00 TO 14+00 TO SUBGRADE BALLARD WAY WILL BE USED AS AN EMBANKMENT FOR THE RIP RAP OUTLET SEDIMENT TRAP #1.



TYPICAL DRY WELL CROSS SECTION
INFILTRATION MANUAL
N.T.S.

DRY WELL CHART

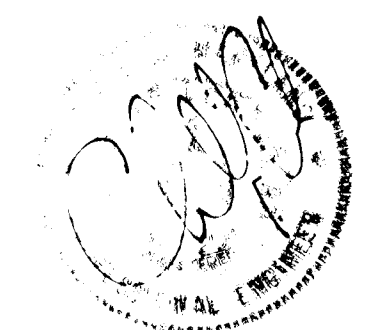
LOT No.	AREA REQUIRED	AREA PROVIDED
14 THRU 17	413 SQ. FT.	413
20 THRU 23	390 SQ. FT.	390
24 THRU 27	315 SQ. FT.	315

DEVELOPER/ CONTRACT PURCHASER

SMALLWOOD PROPERTY PARTNERSHIP
c/o MR. DUANE ZENTGRAF
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794

OWNER

MRS. JUANITA LEE SMALLWOOD
c/o MR. JAMES LAWSON, SR.,
PERSONAL REPRESENTATIVE
2701 WOODRIDGE COURT
WEST FRIENDSHIP, MARYLAND 21794



GRADING, LANDSCAPE AND STREET TREE PLAN
RIVERWALK AT PATAPSCO PARK
LOTS 6 THRU 64
(A RESUBDIVISION OF LOT 4 AND PART OF LO SMALLWOOD PROPERTY - PLAT No. 0781)
ZONED: R-20
TAX MAP No. 17 PART OF PARCEL #664
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 1, 1995
SHEET 20 OF 20

1777

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
2022 PATAPSCO AVENUE, SUITE 200
ELICOTT CITY, MARYLAND 21042
(410) 481-2855