



FOR CONTINUATION SEE SHEET 3

INTERSTATE 95  
STATE OF MARYLAND

MATCH LINE B-B

SEE SHEET No. 2

MATCH LINE B-B  
SEE SHEET No. 3

BOW COURT DRIVE

MOCCASIN DRIVE

ARROW WAY COURT

CROSSING

MOCCASIN WAY

LANE

BLDG #9

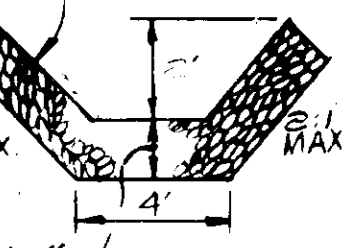
BLACK POWDER COURT

MATCH LINE A-A  
SEE SHEET No. 1

ARROW WAY DRIVE

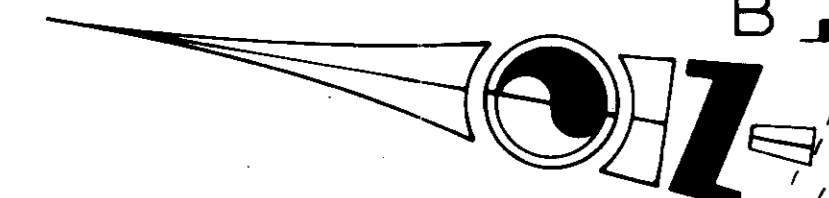
Property of  
ROBERT'S HART ET UX

Property of  
HOWARD COUNTY BOARD OF EDUCATION



NOTE:  
ALL CURB FILLET  
RADIUS TO BE 5'  
UNLESS NOTED  
OTHERWISE.

FOR CONTINUATION SEE SHEET 1



N. 483.500  
E. 861.500

ARWAY ZONE

Property of  
NORTH AMERICAN MOBILE HOMES, INC.

N. 483.500  
E. 861.000

Property of  
WATERLOO HEIGHTS LIMITED PARTNERSHIP

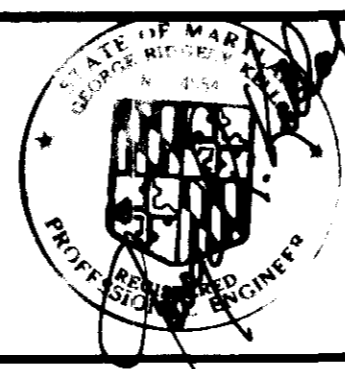
RAI ZONING

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
DATE 4-21-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
DATE 4-22-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DATE 4-22-86

APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85

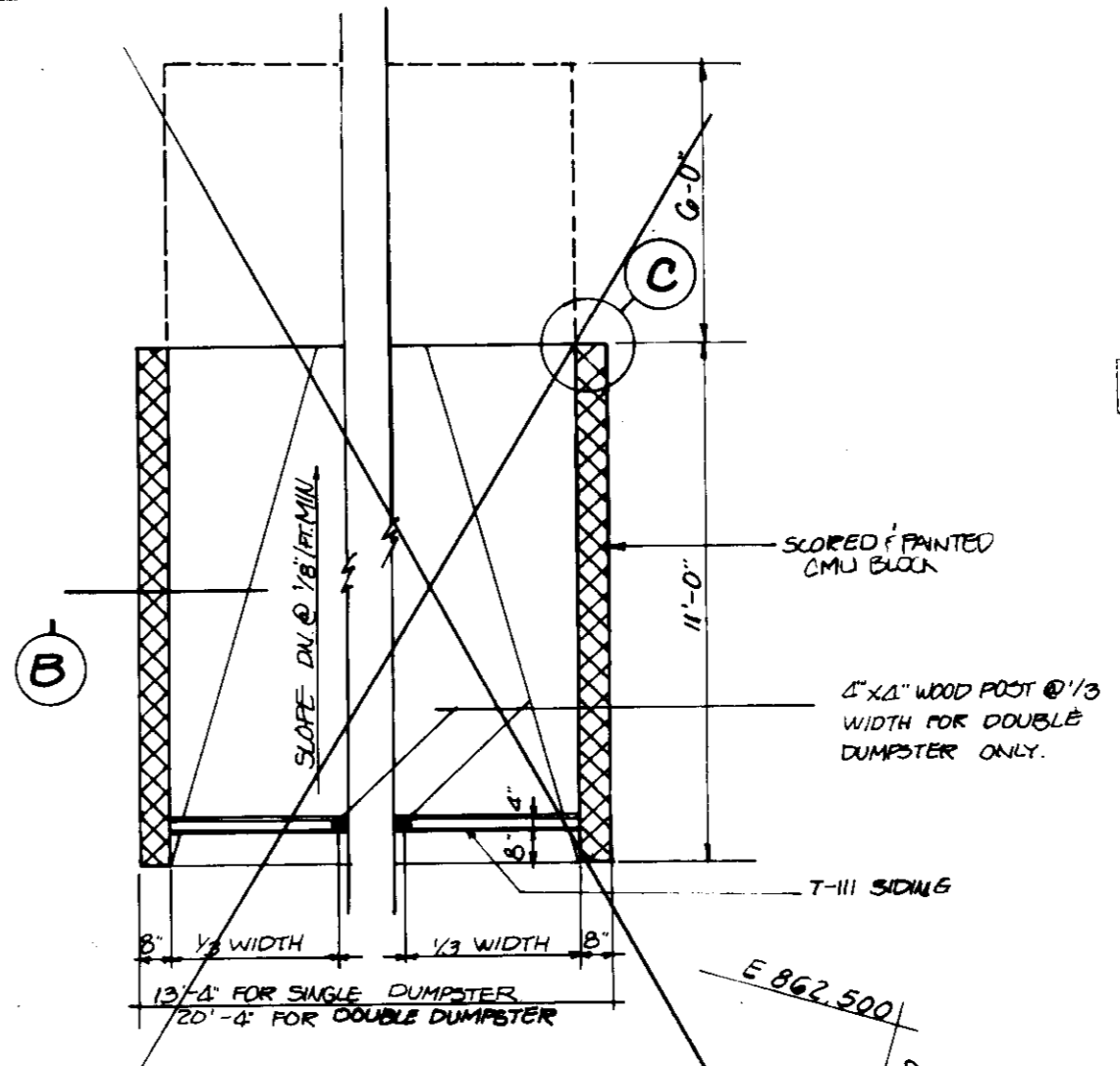
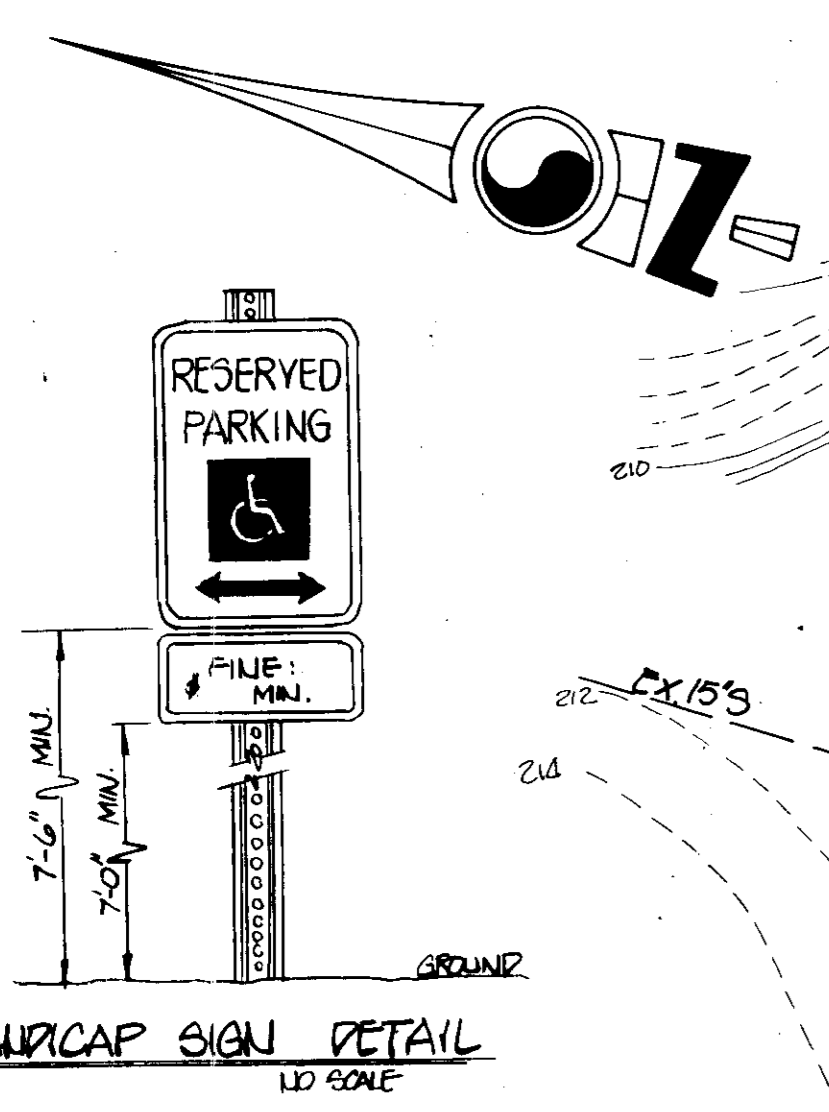


**KMMW CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

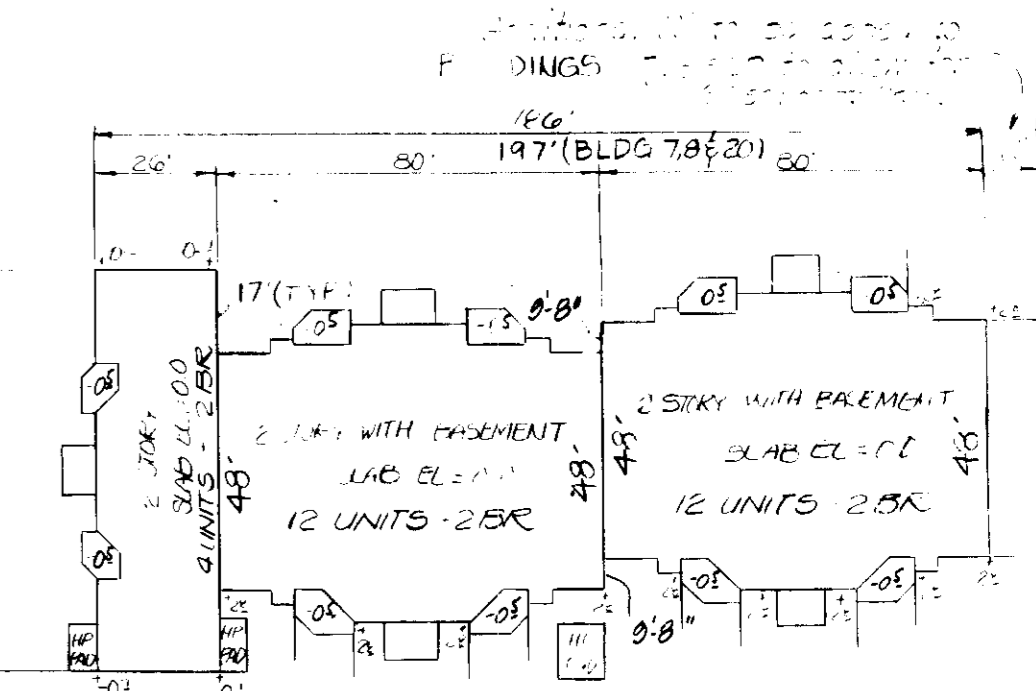
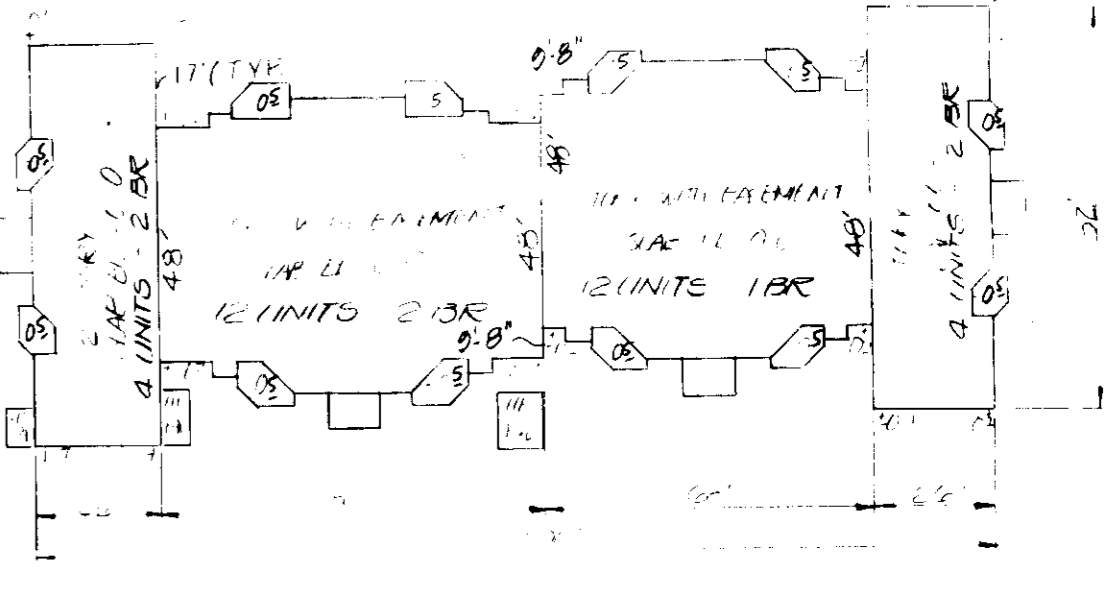
SITE DEVELOPMENT PLAN  
PARCEL 'A' TAX MAP NO. 37  
SHERWOOD CROSSING  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
% BURROW REAL ESTATE DEVELOPMENT COMPANY  
750 BERING DRIVE HOUSTON, TX 77097  
Design: TLR Sheet 2 of 21  
Draft: TLR Date: MARCH 85 Job: 84-017  
Approved: J.C. Scale: 1" = 60' File: SDP-85-262

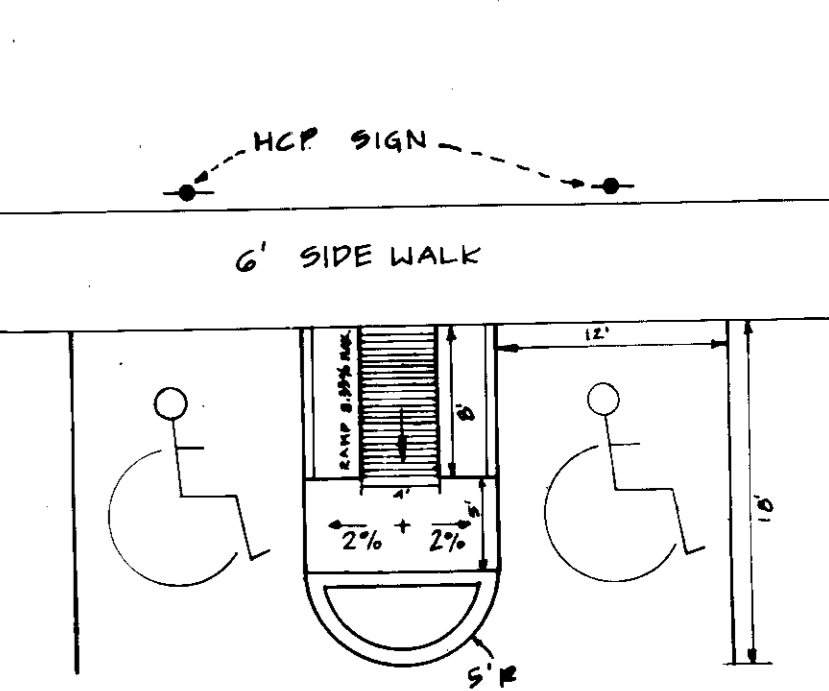
SDP-85-262



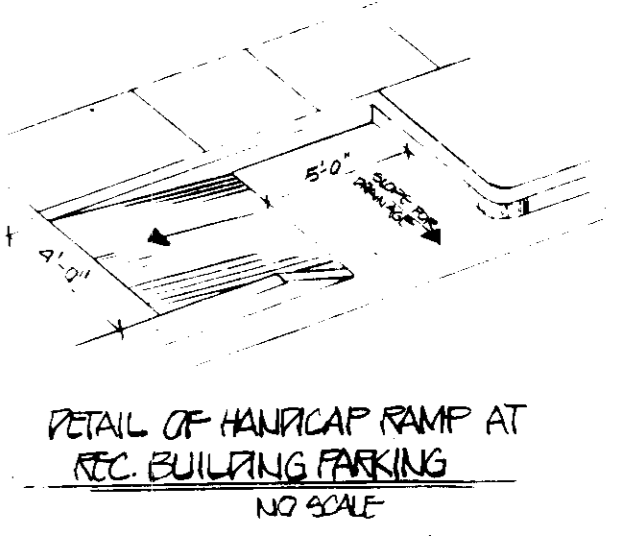
**TYPICAL BUILDING**  
BLDG. NO. 1, 2, 3, 4, 6, 11, 12, 13, 14, 15, 16, 17, 18, 21



**TYPICAL HANDICAPPED SPACES AND RAMP**



**TYPICAL HANDICAPPED SPACES AND RAMP**



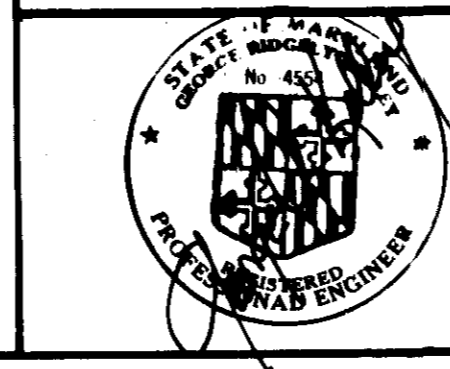
**APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT**  
DATE: 4-21-86

**APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING**  
DATE: 4-22-86

**APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
DATE: 4-15-86

**APPROVED DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION HOWARD COUNTY, MARYLAND**  
DATE: 10-28-85

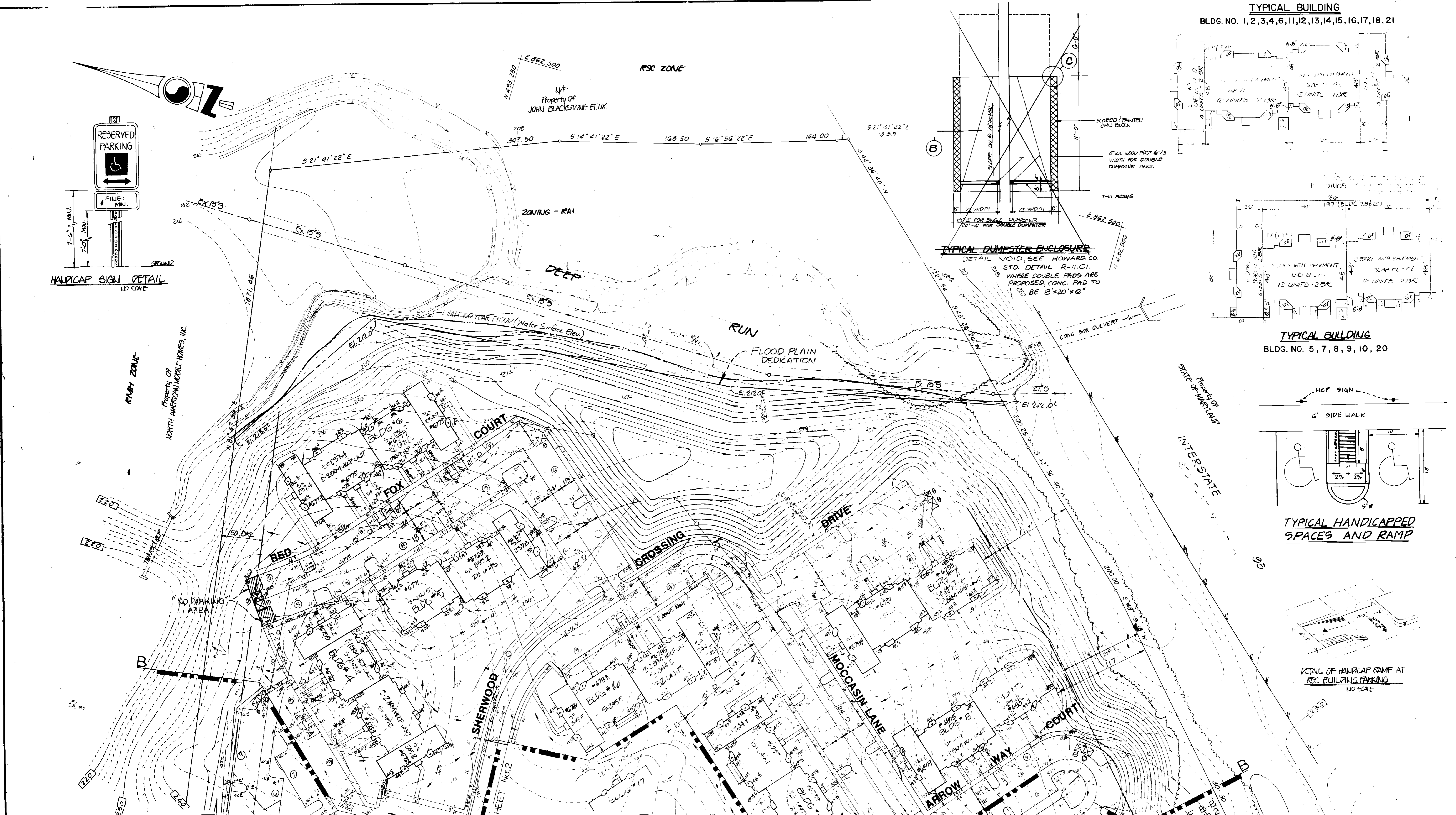
**APPROVED DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION HOWARD COUNTY, MARYLAND**  
DATE: 10-28-85

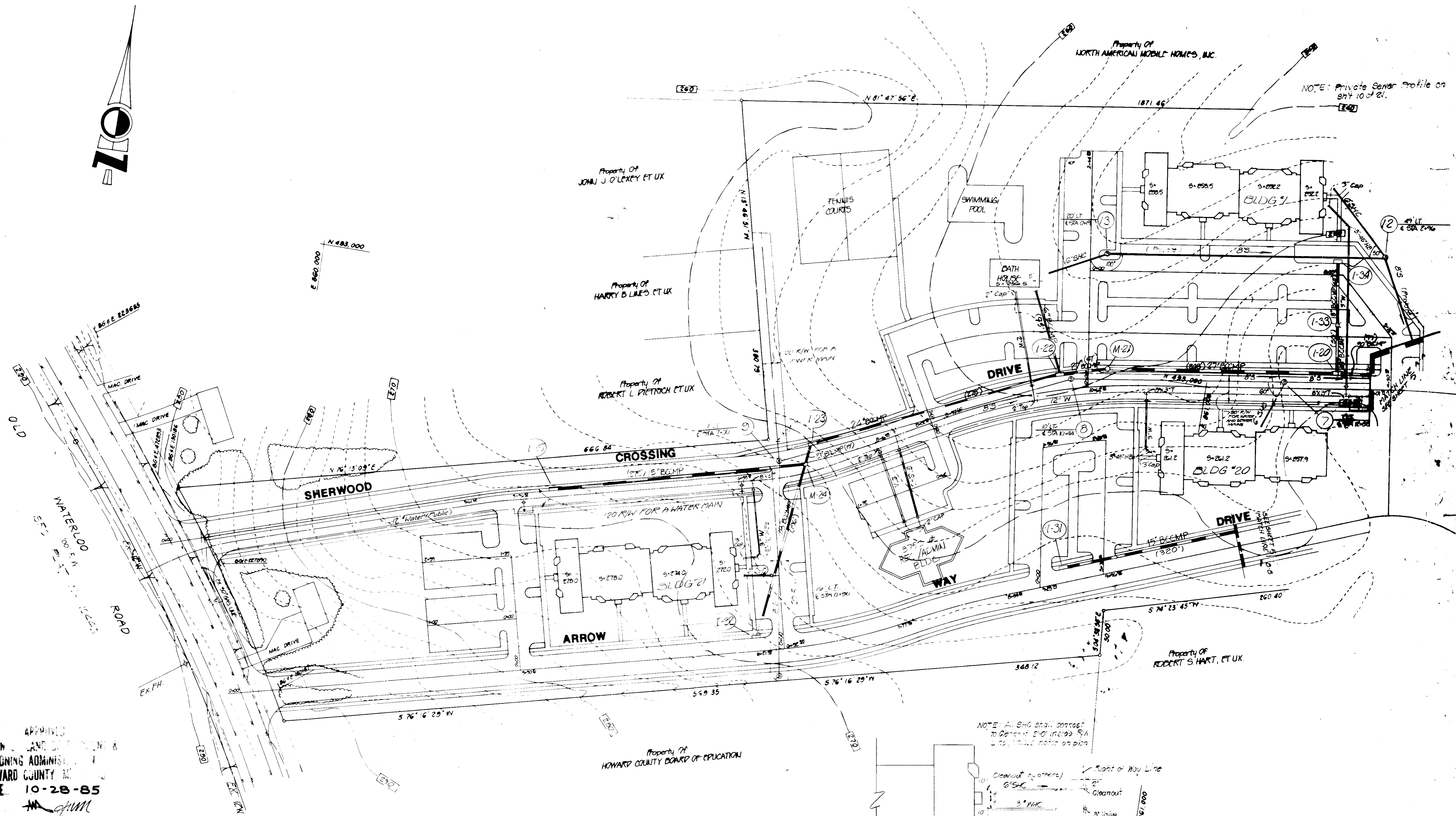
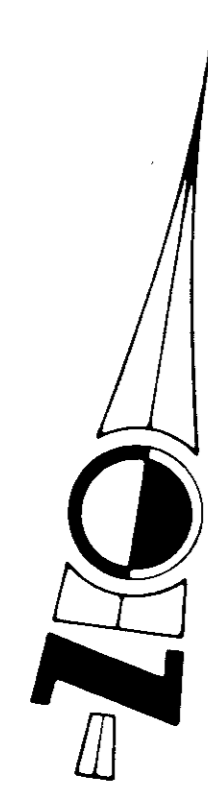


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Silver Spring, Maryland • 20904 • 301-384-4300

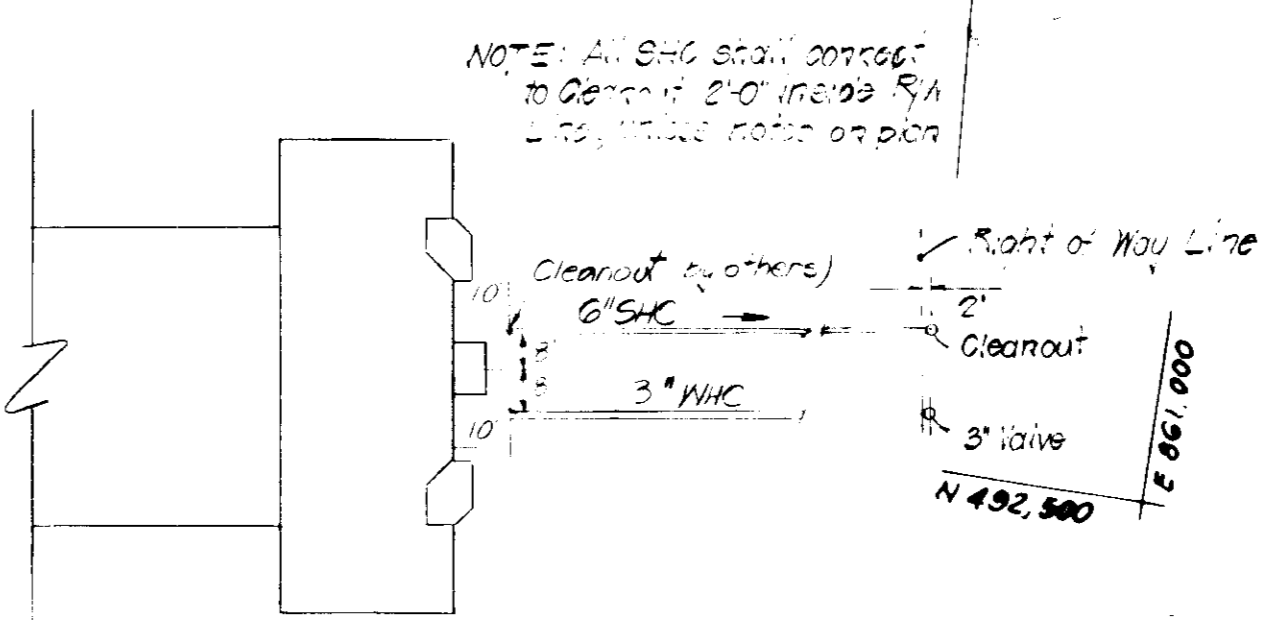
**SITE DEVELOPMENT PLAN**  
PARCEL 'A' TAX MAP NO. 37  
SHERWOOD CROSSING  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
% BURROW REAL ESTATE DEVELOPMENT COMPANY  
750 BERING DRIVE HOUSTON TX 77057  
Design: RSB Sheet 3 of 4  
Draft: TUR Date: MARCH 85 Job: 84-07  
Approved: JAC Scale: 1"=50' File: SDP-85-202





APPROVED  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY  
 DATE 10-28-85  
*[Signature]*

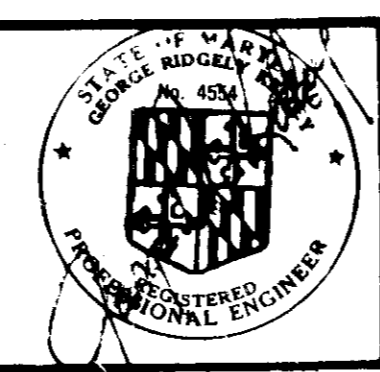


APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER  
 DATE 4-21-86

APPROVED FOR HOWARD COUNTY OFFICE OF PLANNING & ZONING ADMINISTRATION  
 PLANNING DIRECTOR  
 DATE 4-22-86

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR  
 DATE 4-17-86

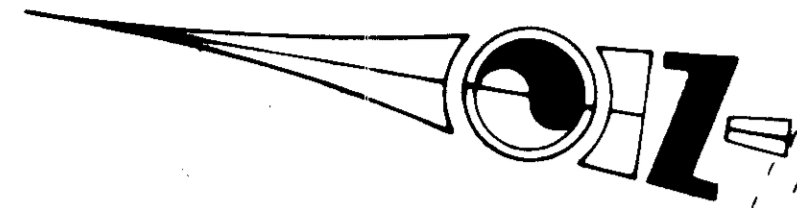
CHIEF BUREAU OF ENGINEERING  
 DATE



**KMM** CORPORATION  
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 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
 54 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 BERING DRIVE HOUSTON, TX 77058  
 Design: JAC Sheet 4 of 21  
 Draft: TLR Date: MAR 85  
 Approved: JAC Date: 1-20-86

SDP-85-262



APPROVED  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 DATE 10-28-85  
*[Signature]*

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* 4-21-86  
 COUNTY HEALTH OFFICER DATE

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*[Signature]* 4-22-86  
 PLANNING DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 4-18-86  
 DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 4-17-86  
 CHIEF, BUREAU OF ENGINEERING DATE

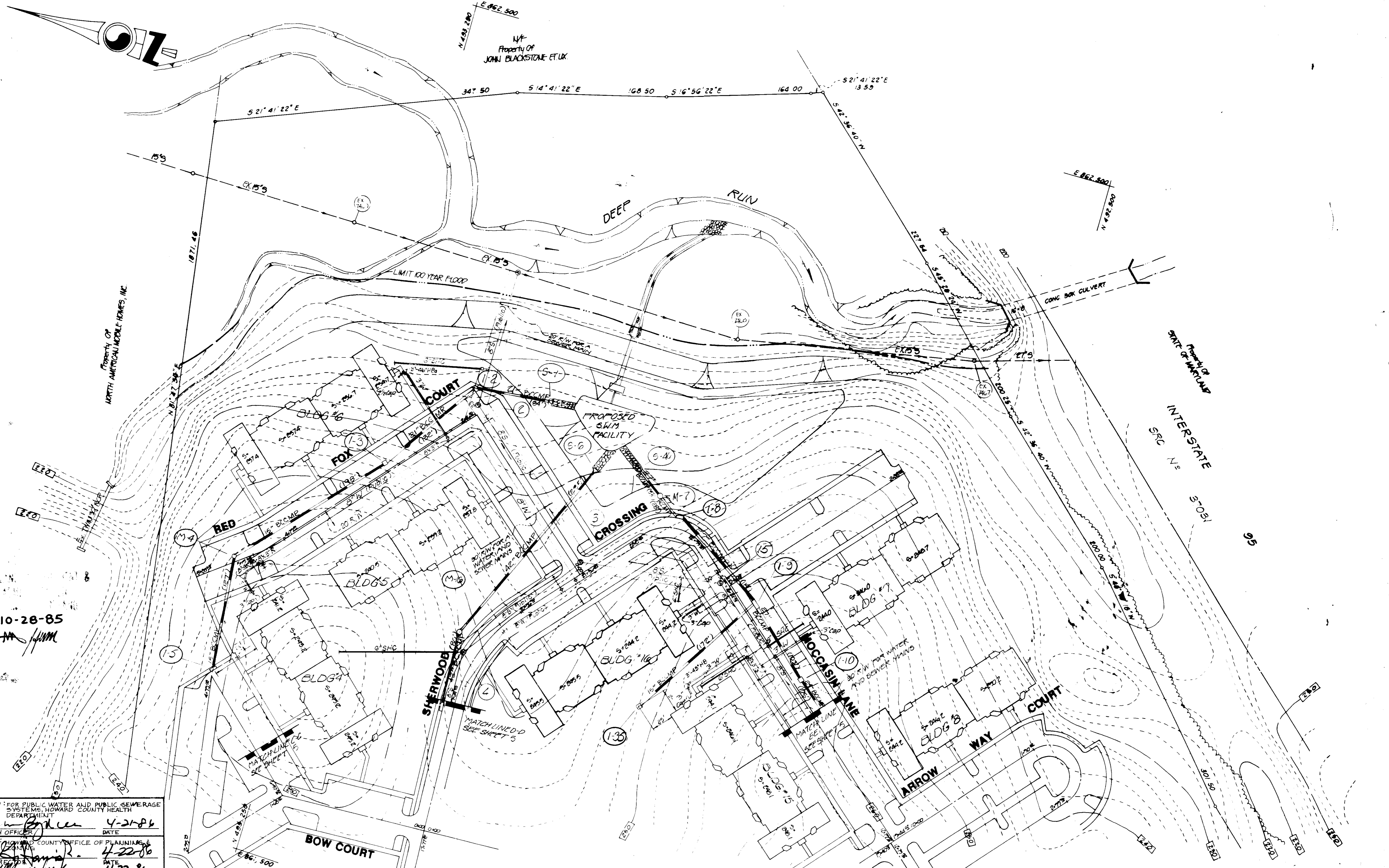


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HOUSE CONNECTIONS & STORM DRAIN PLAN  
 PARCEL 'A' TAX MAP N° 37  
**SHERWOOD CROSSING**  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

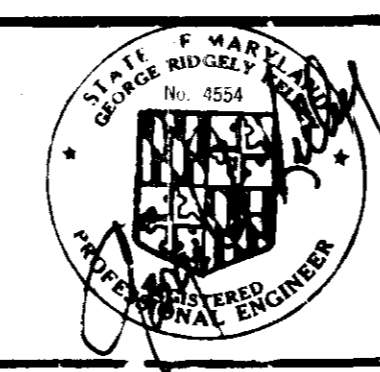
OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
 57 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 BERING DRIVE, HOUSTON, TX 77057

Design: JMC Sheet 5 of 8  
 Drawn: JMC Date: 1/17/85 Job: 85-207  
 Approved: JMC Date: 1/30/85 File: 85-207



DIVISION OF ZONING  
 HOWARD COUNTY  
 DATE 10-28-85  
*MM*

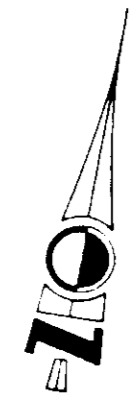
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*John W. Williams* 4-27-86  
 COUNTY HEALTH OFFICER DATE  
 APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*John W. Williams* 4-22-86  
 PLANNING DIRECTOR DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John W. Williams* 4-22-86  
 CHIEF DIVISION OF LAND AND DEVELOPMENT AND ZONING ADMINISTRATION DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John W. Williams* 4-17-86  
 DIRECTOR DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John W. Williams* 4-17-86  
 CHIEF BUREAU OF ENGINEERING DATE



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 Silver Spring, Maryland • 20904 • 301-384-4300

HOUSE CONNECTIONS & STORM DRAIN PLAN  
 PARCEL 'A' TAX MAP N° 37  
**SHERWOOD CROSSING**  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: CROSSING LIMITED PARTNERSHIP  
 1/4 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 BERKING DRIVE HOUSTON, TX 77057  
 Design: JAC Sheet 6 of 7  
 Draft: TLR Date: APR 27, 1986  
 Approved: JAC Scale: 1"=50' Plot: 61  
 SDF-85-202



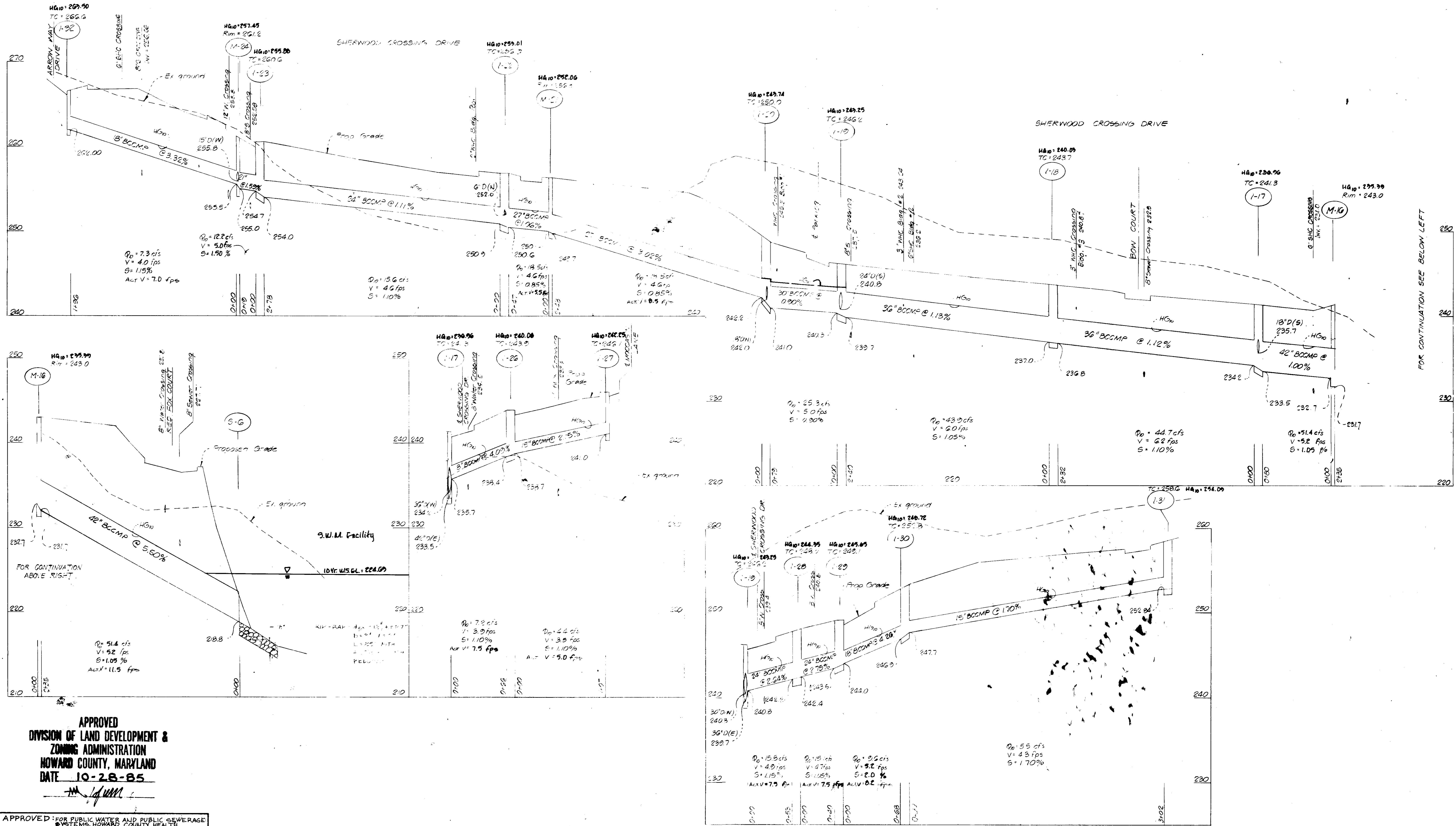
\* RUNOFF COMPUTED BY SIMPLIFIED DESIGN METHOD  
 \* ALL PROPOSED PIPES ARE BCCMP

LOCATION FROM TO	AREA	ACRES	C'	CA	CA	ECA	TIME CONC. MIN.	CONC. INLET	CONC. DRAIN	MIN. I	PIPE SIZE	PIPE SLOPE	PIPE LENGTH	REMARKS
I-32 M-24	AE	2.0	0.58	1.16			11.3	11.3	6.3	7.9	18"	1.15	40	190
I-25 M-24	AF	1.5	0.58	0.87			11.3	11.3	6.3	28	15"	1.76	44	270
M-24 I-23	AE AF	3.5			2.03		11.3	11.3	6.0	12.2	21"	1.50	50	20
I-23 I-22	AD	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-23 I-22	AD	4.5	0.58	2.61			12.4	12.4	6.0	18.8	24"	1.1	49	290
I-22 I-20	AD	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-22 I-20	AD	6.5	0.58	3.77			12.4	12.4	5.8	18.5	27"	0.85	46	290
I-34 I-33	Z	1.4	0.68	0.81			11.3	11.3	6.3	5.1	18"	0.56	28	65
I-33 I-30	Y	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-33 I-20	Z Y	1.8			1.04		11.3	11.3	6.3	6.5	18"	0.90	34	50
I-20 I-19	X	0.5	0.58	0.29			11.3	11.3	6.3	1.8				
I-20 I-19	X	7.8			4.52		12.4	12.4	5.6	25.3	30"	0.80	50	85
I-19 I-18	W	0.8	0.58	0.46			11.3	11.3	6.3	2.9	18"	1.20	43	50
I-19 I-18	W	1.8	0.58	1.04			11.3	11.3	6.3	5.5	18"	1.20	43	50
I-19 I-18	W	1.3	0.58	0.76			11.3	11.3	6.3	4.8				
I-30 I-29	AB	2.8			1.62		11.3	11.3	5.9	9.6	18"	2.00	52	60
I-29 I-28	U	1.7	0.58	0.99			11.3	11.3	6.3	6.2				
I-29 I-28	U	4.5			2.61		12.4	12.4	5.8	15.1	24"	1.05	47	49
I-28 I-27	T	0.2	0.58	0.12			11.3	11.3	6.3	0.7				
I-28 I-19	AD	0.7			0.41		11.3	11.3	6.3	2.9	24"	1.16	49	50
I-28 I-19	AD	13.3			7.71		12.4	12.4	5.7	43.9	36"	1.05	60	240
I-18 I-17	S	0.7	0.58	0.41			11.3	11.3	6.3	2.6				
I-18 I-17	S	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-17 I-17	P	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-27 I-26	R	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-26 I-26	Q	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-26 I-26	Q	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-17 I-17	QR	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-17 I-17	QR	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-17 I-17	P	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-27 I-26	R	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-26 I-26	Q	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-26 I-26	Q	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-17 I-17	QR	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-17 I-17	QR	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-5 I-3	C	1.5	0.58	0.87			11.3	11.3	6.3	5.5	15"	1.75	43	320
I-3 I-3	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-3 I-2	B C	2.5			1.45		11.3	11.3	6.0	8.7	21"	0.75	35	135
I-2 I-2	A	1.3	0.58	0.76			11.3	11.3	6.3	4.7				
I-2 I-1	A B C	3.8			2.20		12.4	12.4	5.9	13.0	21"	1.20	46	180
I-15 I-13	L	1.1	0.58	0.64			11.3	11.3	6.3	4.0	15"	0.92	32	130
I-13 I-13	K	1.3	0.58	0.76			11.3	11.3	6.3	4.7				
I-13 I-12	K L	2.4			1.39		11.3	11.3	6.0	8.3	18"	1.05	40	50
I-12 I-12	J	0.7	0.58	0.41			11.3	11.3	6.3	2.6				
I-12 I-11	J K L	3.1			1.80		12.4	12.4	6.0	10.8	21"	1.10	43	65
I-11 I-11	I	1.4	0.58	0.81			11.3	11.3	6.3	5.7				
I-11 I-10	I J K L	0.6			0.31		12.4	12.4	6.0	9.7	20"	1.20	49	180
I-10 I-9	G	1.2	0.58	0.70			11.3	11.3	6.3	4.4				
I-9 I-9	G H K L	5.7			3.31		12.4	12.4	5.9	10.2	27"	1.00	47	100
I-9 I-9	H	1.1	0.58	0.64			11.3	11.3	6.3	4.0	15"	0.92	32	130
I-9 I-9	F	0.9	0.58	0.52			11.3	11.3	6.3	4.1				

THIS PLAN IS APPROVED FOR SOIL PROVISION AND SEWAGE TREATMENT CONTROL BY THE HOWARD COUNTY SCP  
 HOWARD COUNTY SCP  
 DATE: 4-9-86

APPROVED FOR HOWARD COUNTY SCP AND MEETS FEDERAL REQUIREMENTS  
 HOWARD COUNTY SCP  
 DATE: 4-9-86

LOCATION FROM TO	AREA	ACRES	C'	CA	CA	ECA	TIME CONC. MIN.	CONC. INLET	CONC. DRAIN	MIN. I	PIPE SIZE	PIPE SLOPE	PIPE LENGTH	REMARKS
I-8 I-8	B	2.0	0.58	1.16			11.3	11.3	6.3	7.9	18"	1.15	40	190
I-8 I-8	B	1.5	0.58	0.87			11.3	11.3	6.3	28	15"	1.76	44	270
I-8 I-8	B	3.5			2.03		11.3	11.3	6.0	12.2	21"	1.50	50	20
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	4.5	0.58	2.61			12.4	12.4	6.0	18.8	24"	1.1	49	290
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	6.5	0.58	3.77			12.4	12.4	5.8	18.5	27"	0.85	46	290
I-8 I-8	B	1.4	0.68	0.81			11.3	11.3	6.3	5.1	18"	0.56	28	65
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.8			1.04		11.3	11.3	6.3	6.5	18"	0.90	34	50
I-8 I-8	B	0.5	0.58	0.29			11.3	11.3	6.3	1.8				
I-8 I-8	B	7.8			4.52		12.4	12.4	5.6	25.3	30"	0.80	50	85
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9	18"	1.20	43	50
I-8 I-8	B	1.8	0.58	1.04			11.3	11.3	6.3	5.5	18"	1.20	43	50
I-8 I-8	B	1.3	0.58	0.76			11.3	11.3	6.3	4.8				
I-8 I-8	B	2.8			1.62		11.3	11.3	5.9	9.6	18"	2.00	52	60
I-8 I-8	B	1.7	0.58	0.99			11.3	11.3	6.3	6.2				
I-8 I-8	B	4.5			2.61		12.4	12.4	5.8	15.1	24"	1.05	47	49
I-8 I-8	B	0.2	0.58	0.12			11.3	11.3	6.3	0.7				
I-8 I-8	B	0.7			0.41		11.3	11.3	6.3	2.9	24"	1.16	49	50
I-8 I-8	B	13.3			7.71		12.4	12.4	5.7	43.9	36"	1.05	60	240
I-8 I-8	B	0.7	0.58	0.41			11.3	11.3	6.3	2.6				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-8 I-8	B	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-8 I-8	B	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-8 I-8	B	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-8 I-8	B	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23			11.3	11.3	6.3	1.5				
I-8 I-8	B	1.2	0.58	0.70			11.3	11.3	6.3	4.4	15"	1.10	36	119
I-8 I-8	B	0.8	0.58	0.46			11.3	11.3	6.3	2.9				
I-8 I-8	B	2.0			1.16		11.3	11.3	6.3	7.2	18"	1.07	39	60
I-8 I-8	B	1.0	0.58	0.58			11.3	11.3	6.3	3.7				
I-8 I-8	B	10.0			5.82		12.4	12.4	5.6	44.7	36"	1.10	62	230
I-8 I-8	B	0.4	0.58	0.23										



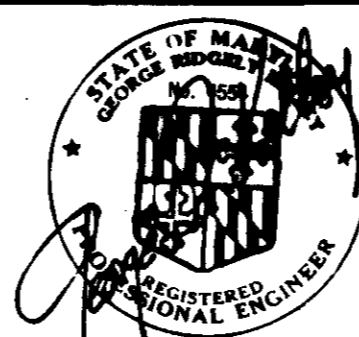
APPROVED  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 DATE 10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: [Signature] DATE: 4-21-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 PLANNING DIRECTOR: [Signature] DATE: 4-22-86

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: [Signature] DATE: 4-17-86

1	Revised Hydraulic Gradient	Approved	8-19-86
NO.	Revision	Approved	Date



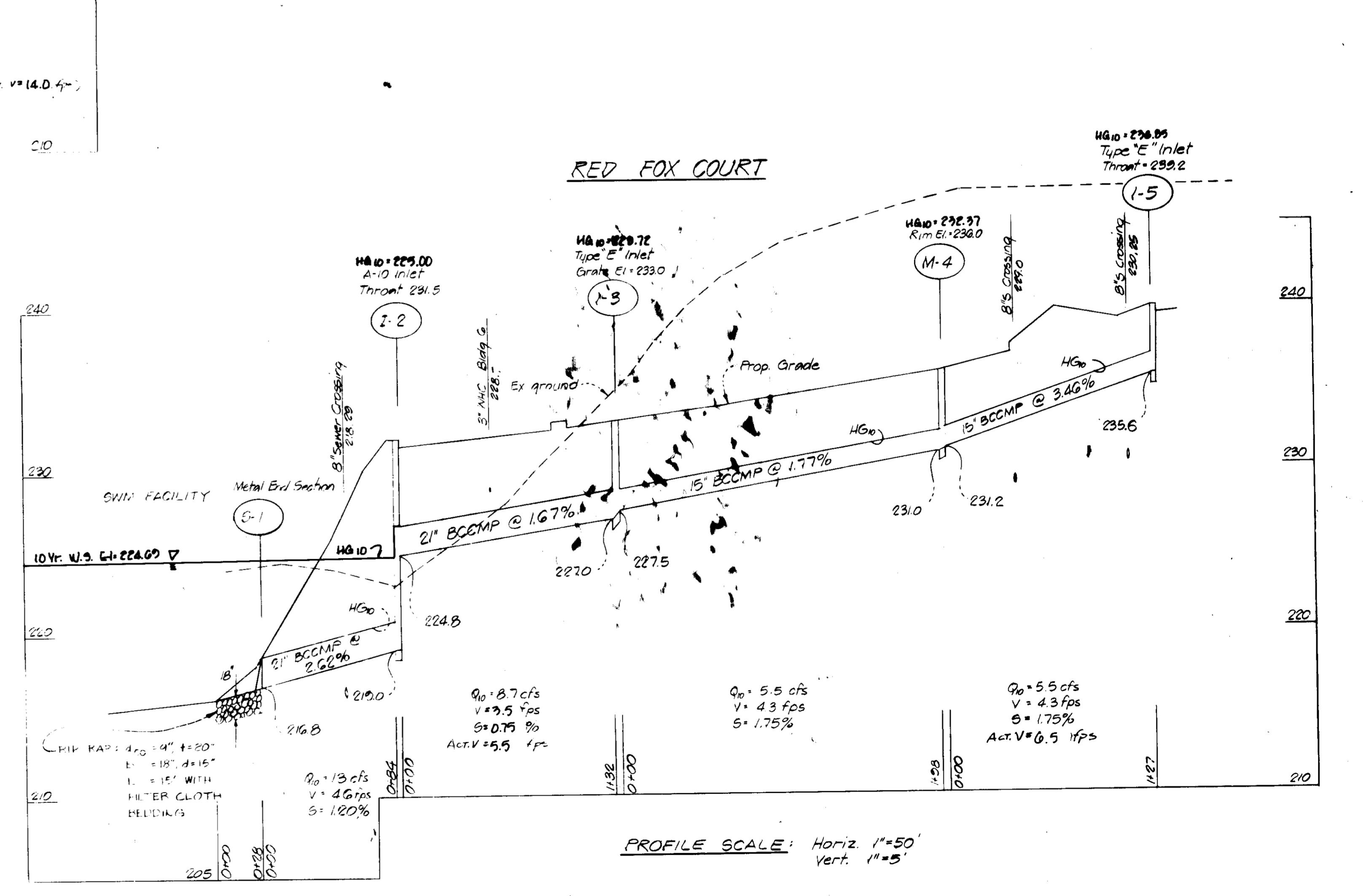
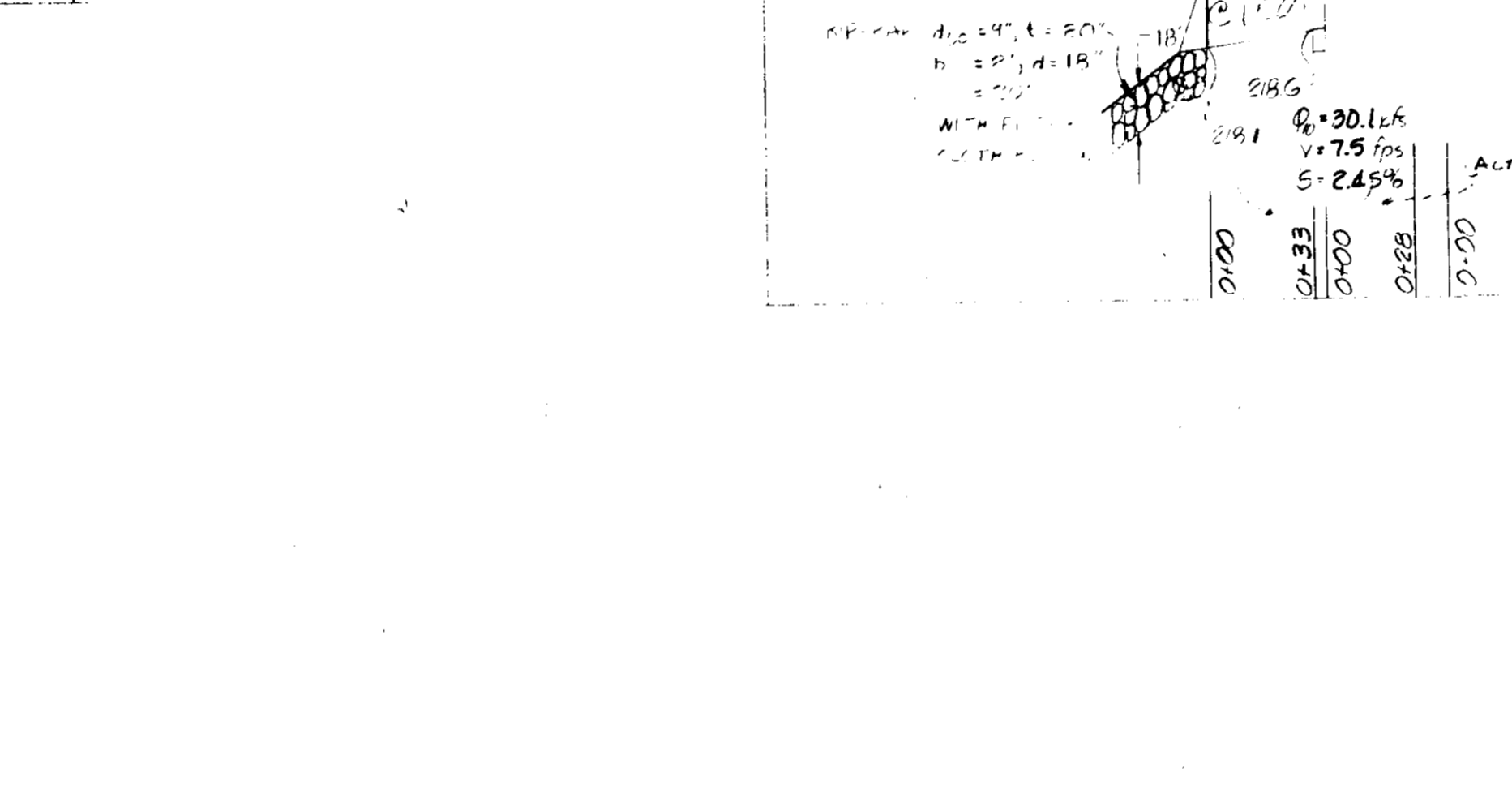
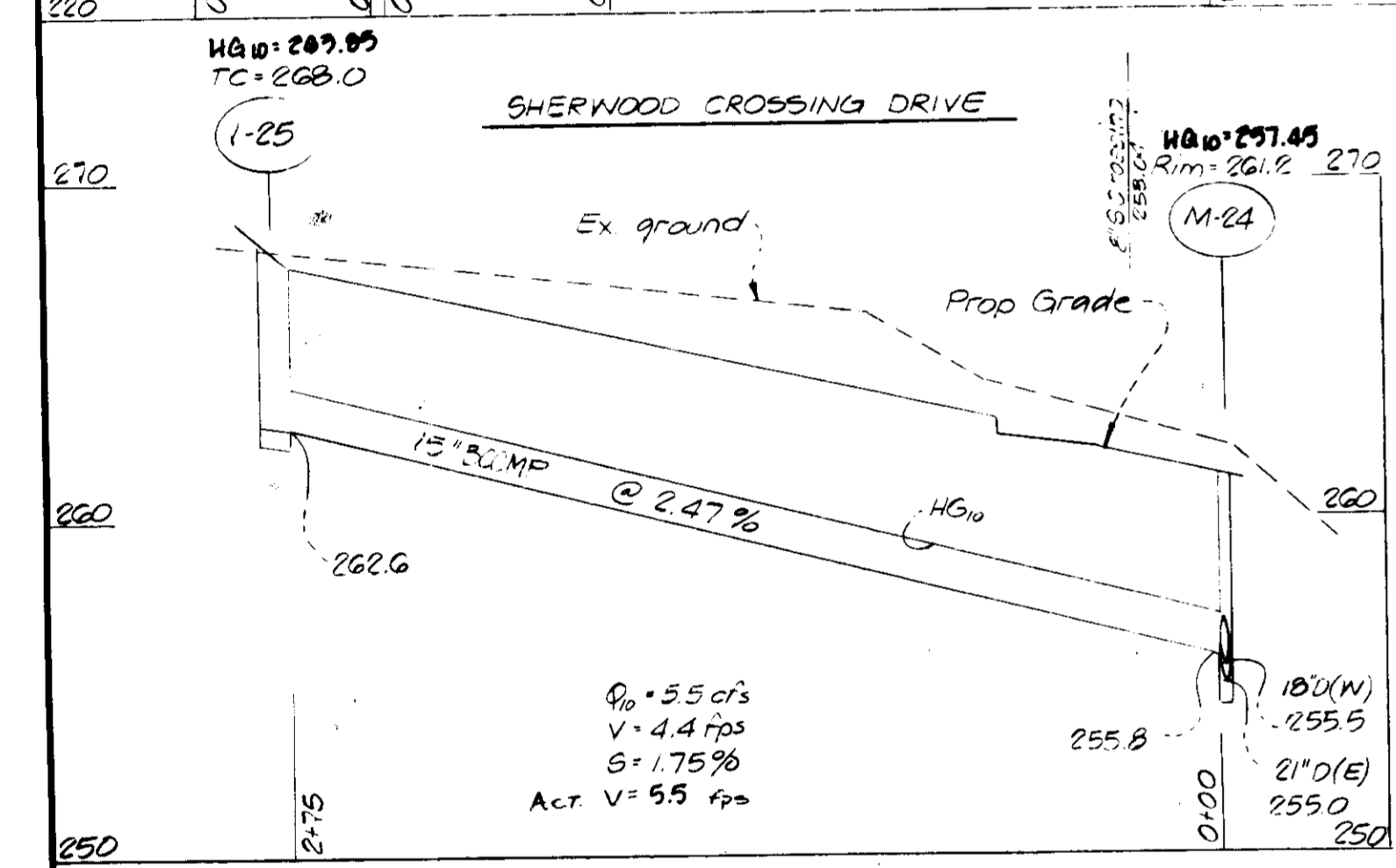
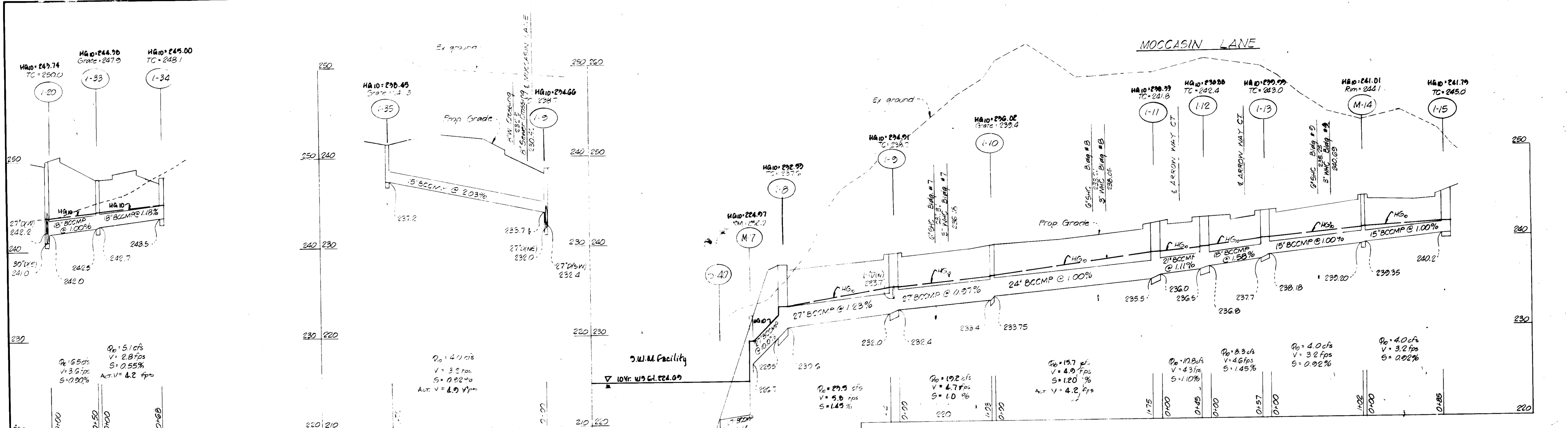
**KMM CORPORATION**  
 ENGINEERS • PLANNERS • SURVEYORS  
 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

STORM DRAIN PROFILES  
 PARCEL A TAX MAP N# 37  
 SHERWOOD CROSSING  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
 54 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 BERING DRIVE HOUSTON, TX 77057

Design: [Blank] Sheet 8 of 21  
 Draft: [Blank] Date: Mar 86 Job: 84-07  
 Approved: [Blank] Scale: AS SHOWN File: 84-07

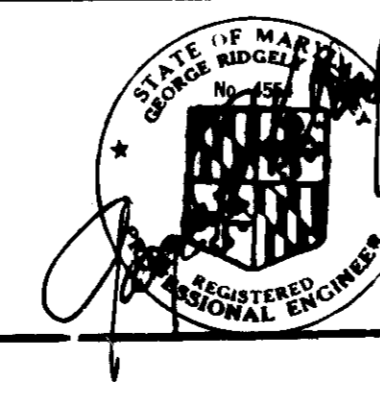




APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER DATE 4-21-86  
 APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 PLANNING DIRECTOR DATE 4-22-86  
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR DATE 4-11-86  
 CHIEF BUREAU OF ENGINEERING DATE 4-17-86

NO.	Revision	Approved	Date
1	Revised Hydraulic gradient		8-19-86
2	Revision		



**KMM CORPORATION**  
 ENGINEERS • PLANNERS • SURVEYORS  
 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

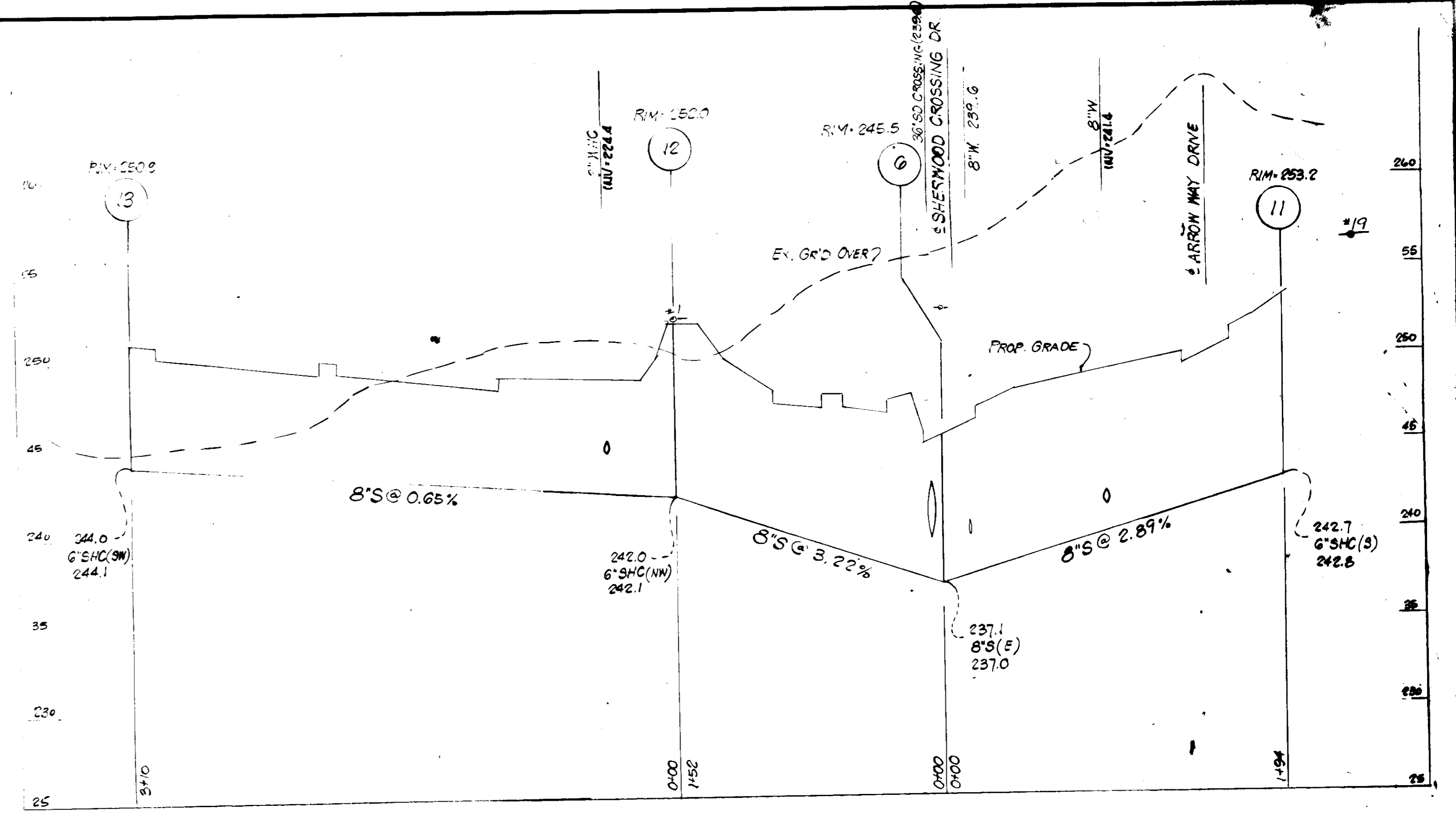
STORM DRAIN PROFILES  
 PARCEL "A" TAX MAP NO 37  
 SHERWOOD CROSSING  
 FIRST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
 SHERWOOD REAL ESTATE DEVELOPMENT COMPANY  
 750 BERING DRIVE HOUSTON, TX 77061  
 Design: JAC Sheet 9 of 21  
 Draft: JAC Date: Mar '86 Job: 84-017  
 Approved: Scale: As shown File: 84-017

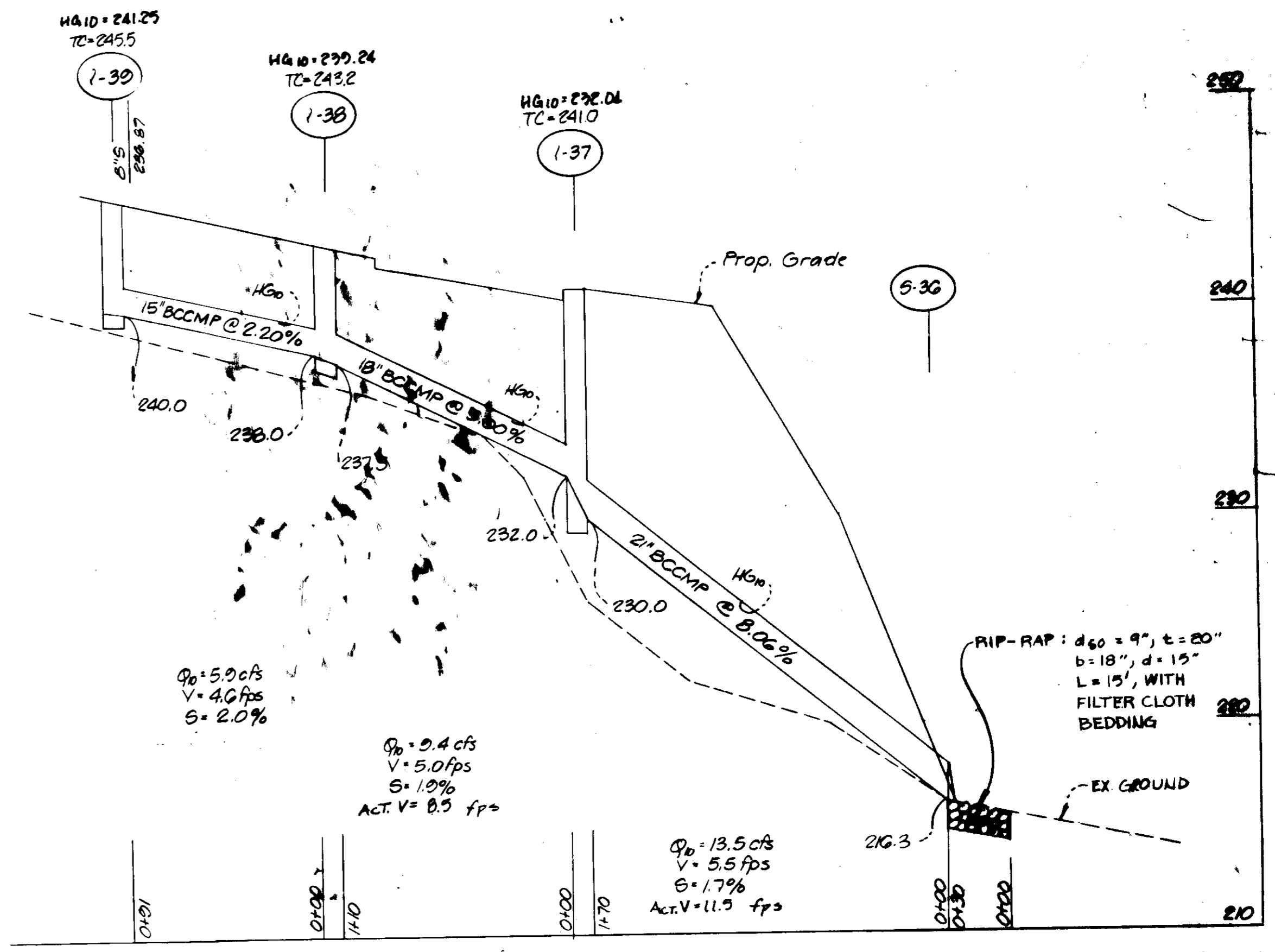
NO	TYPE	STATION	OFFSET	INV. IN	INV. OUT	REMARKS
S-1	HO. CO. METAL END SECTION	1+54	00' RT	214.8		
I-2	HO. CO. STD. A-10 INLET	SEE PLAN	SEE PLAN	221.0	219.0	THREAT = 231.5
I-3	HO. CO. STD. A-10 INLET	3+34	11' RT	227.0	227.0	GRATE = 233.0
M-4	STD. PRECAST MANHOLE	5+36	0' RT	231.2	231.0	RIM = 236.0
I-5	HO. CO. STD. A-10 INLET	SEE PLAN	SEE PLAN	235.6	235.6	THREAT = 237.2
S-6	HO. CO. METAL END SECTION	0+70	79' RT	213.8		
M-7	STD. PRECAST MANHOLE	22+45	37' LT	224.7	213.4	RIM = 232.0
I-8	HO. CO. STD. A-10 INLET	22+45	12' LT	220.6	227.5	TC = 230.7
I-9	HO. CO. STD. A-10 INLET	15+71	12' RT	222.1	232.0	TC = 230.7
I-10	HO. CO. STD. A-10 INLET	14+70	11' RT	223.8	225.4	GRATE = 237.4
I-11	HO. CO. STD. A-10 INLET	19+06	12' RT	224.0	225.5	TC = 241.8
I-12	HO. CO. STD. A-10 INLET	12+44	12' RT	224.8	226.5	TC = 242.4
I-13	HO. CO. STD. A-10 INLET	11+86	12' RT	226.2	227.7	TC = 243.0
M-14	STD. PRECAST MANHOLE	10+77	02' RT	229.4	229.2	RIM = 244.1
I-15	HO. CO. STD. A-10 INLET	9+44	12' RT	240.2	240.2	TC = 245.0
M-16	STD. PRECAST MANHOLE	19+97	31' LT	232.4	227.8	RIM = 245.0
I-17	HO. CO. STD. A-10 INLET	17+20	12' LT	233.7	228.5	TC = 241.3
I-18	HO. CO. STD. A-10 INLET	16+77	12' LT	237.0	236.8	TC = 243.7
I-19	HO. CO. STD. A-10 INLET	14+28	12' LT	240.8	239.7	TC = 246.2
I-20	HO. CO. STD. A-10 INLET	13+42	15' LT	242.8	241.0	TC = 250.0
M-21	STD. PRECAST MANHOLE	12+84	02' LT	250.1	249.7	RIM = 256.5
I-22	HO. CO. STD. A-10 INLET	10+32	15' LT	250.9	250.6	TC = 256.9
I-23	HO. CO. STD. A-10 INLET	7+46	17' LT	254.7	254.0	TC = 260.6
M-24	STD. PRECAST MANHOLE	7+35	17' RT	255.3	255.0	RIM = 261.2
I-25	HO. CO. STD. A-10 INLET	4+46	3' RT	262.6	262.6	TC = 264.0
I-26	HO. CO. STD. A-10 INLET	0+55	11' LT	258.4	258.4	TC = 243.9
I-27	HO. CO. STD. A-10 INLET	0+55	12' LT	241.0	241.0	TC = 246.1
I-28	HO. CO. STD. A-10 INLET	0+47	15' LT	242.4	242.2	TC = 248.0
I-29	HO. CO. STD. A-10 INLET	0+77	15' LT	244.0	243.5	TC = 247.1
I-30	HO. CO. STD. A-10 INLET	12+78	15' LT	246.9	246.9	TC = 252.8
I-31	HO. CO. STD. A-10 INLET	7+54	15' LT	242.0	242.0	TC = 258.6
I-32	HO. CO. STD. A-10 INLET	4+01	15' LT	246.0	246.0	TC = 266.6
I-33	HO. CO. TYPE 'S' INLET	5+32	19' RT	242.7	242.5	GRATE = 247.7
I-34	HO. CO. STD. A-10 INLET	2+78	15' LT	243.5	243.5	TC = 248.1
I-35	HO. CO. STD. A-10 INLET	SEE PLAN	SEE PLAN	257.2	257.2	GRATE = 241.5
S-36	HO. CO. METAL END SECTION	SEE PLAN	SEE PLAN	216.3		
I-37	HO. CO. STD. A-10 INLET	2+22	30' RT	232.0	230.0	TC = 241.0
I-38	HO. CO. STD. A-10 INLET	3+81	30' RT	238.0	237.5	TC = 243.2
I-39	HO. CO. STD. A-10 INLET	4+80	30' RT	240.0	240.0	TC = 245.5
S-40	HO. CO. METAL END SECTION	22+57	70' LT	218.1		

SIZE	TYPE	LENGTH
15"	BCCMP	1497'
18"	BCCMP	615'
21"	BCCMP	450'
24"	BCCMP	546'
27"	BCCMP	573'
30"	BCCMP	77'
36"	BCCMP	472'
42"	BCCMP	315'

All BCCMP TO BE 16 Ga.



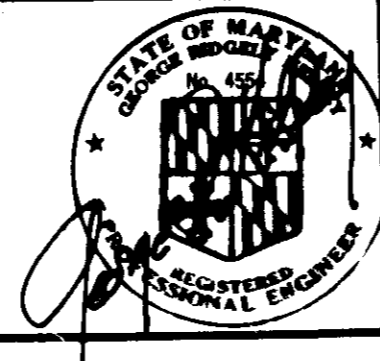
PRIVATE SEWER PROFILE



APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85  
*[Signature]*

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
DATE 4-21-86  
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
DATE 4-22-86  
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DATE 4-14-86  
CHIEF BUREAU OF ENGINEERING  
DATE 4-17-86

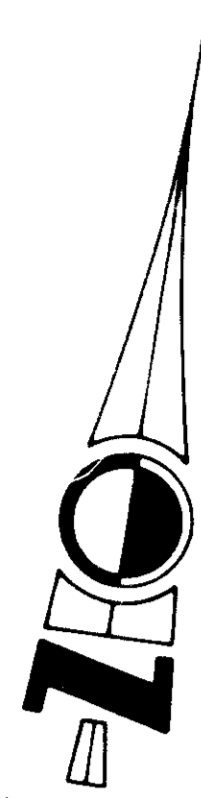
1	Added Hydraulic Gradient - 8' W/Crossing	8-17-86
2	Revision	Approved Date



**KMM** CORPORATION  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

STORM DRAIN PROFILES  
PARCEL 'A' TAX MAP #237  
SHERWOOD CROSSING  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
26 BARRON REAL ESTATE DEVELOPMENT CORPORATION  
750 BELMONT BLVD., #200  
DESIGN: Sheet 10 of 5  
DATE: July 1987  
APPROVED: Scale: 1" = 10'



INSTALL A-2 EARTH DIKE PRIOR TO REMOVAL OF B-2 EARTH DIKE BELOW

Property of NORTH AMERICAN MOBILE HOMES, INC.

Property of JOHN J. O'LEARY ET UX

Property of HARRY B. LINES ET UX

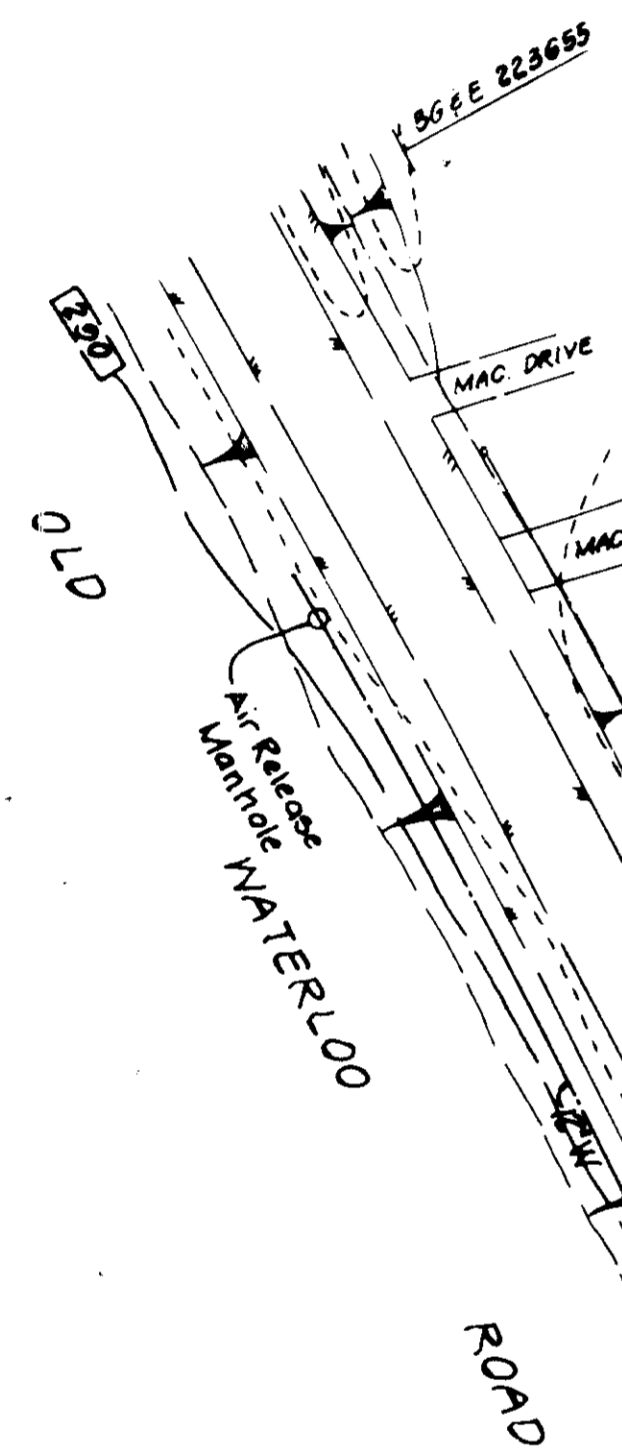
B-2 EARTH DIKE TO BE REMOVED WHEN STORM DRAIN IS INSTALLED AND FUNCTIONAL

Property of ROBERT L. PIETRICH ET UX

LIMITS OF DISTURBED AREA

Property of ROBERT S. HART, ET UX

Property of HOWARD COUNTY BOARD OF EDUCATION

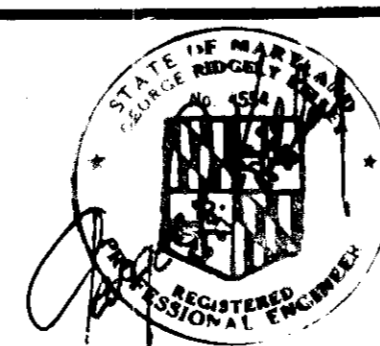


APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
JOHN J. O'LEARY 4-21-86  
COUNTY HEALTH OFFICER DATE

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
PLANNING DIRECTOR DATE 4-22-86  
DATE 4-22-86

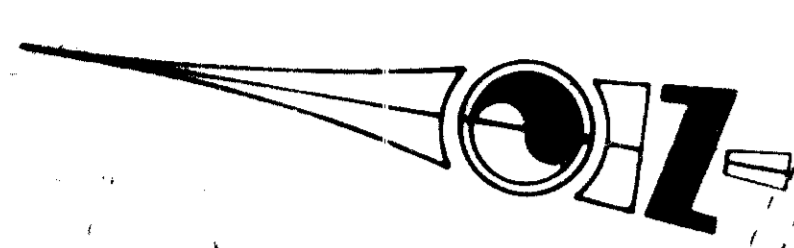
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DIRECTOR DATE 4-17-86  
CHIEF BUREAU OF ENGINEERING DATE



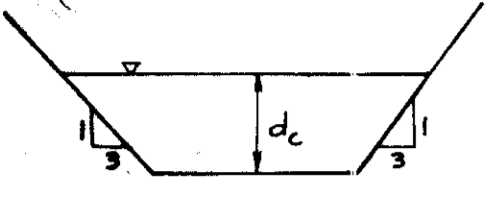
**KMMW CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

**SEDIMENT & EROSION CONTROL**  
**SHERWOOD CROSSING**  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

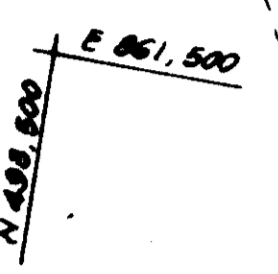
OWNER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
DEVELOPER: BURROW REAL ESTATE DEVELOPMENT COMPANY



**SECTION B-B**



Q=28.0 CFS  
V=3.5 FPS  
S=0.033 FT/FT  
n=0.06  
d=1.1'



**#1 RIP RAP OUTLET SEDIMENT TRAP ST-VI**

DRAINAGE AREA = 15 Ac  
STORAGE REQUIRED = 1,005 CY  
STORAGE PROVIDED = 1,002 CY  
BOTTOM DIMENSIONS = AS SHOWN  
BOTTOM ELEVATION = 232.0  
WEIR ELEVATION = 236.5  
MAX. DEPTH OF FLOW = 2'  
LENGTH OF WEIR = 18'

PROPERTY OF  
NORTH AMERICAN MOBILE HOMES, INC.

LIMITS OF DISTURBED  
AREA

#2 STONE  
PROTECTION

APPROVED  
OFFICE OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

FOR CONTINUATION  
SEE SHEET 14

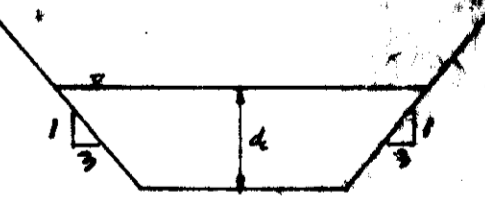
FOR CONTINUATION  
SEE SHEET 12

**#2 RIP RAP OUTLET SEDIMENT TRAP ST-VII**

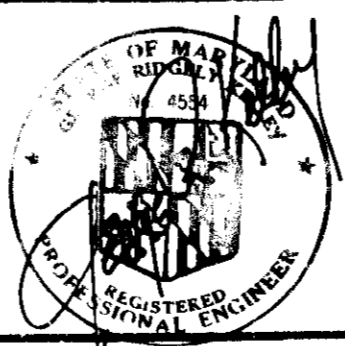
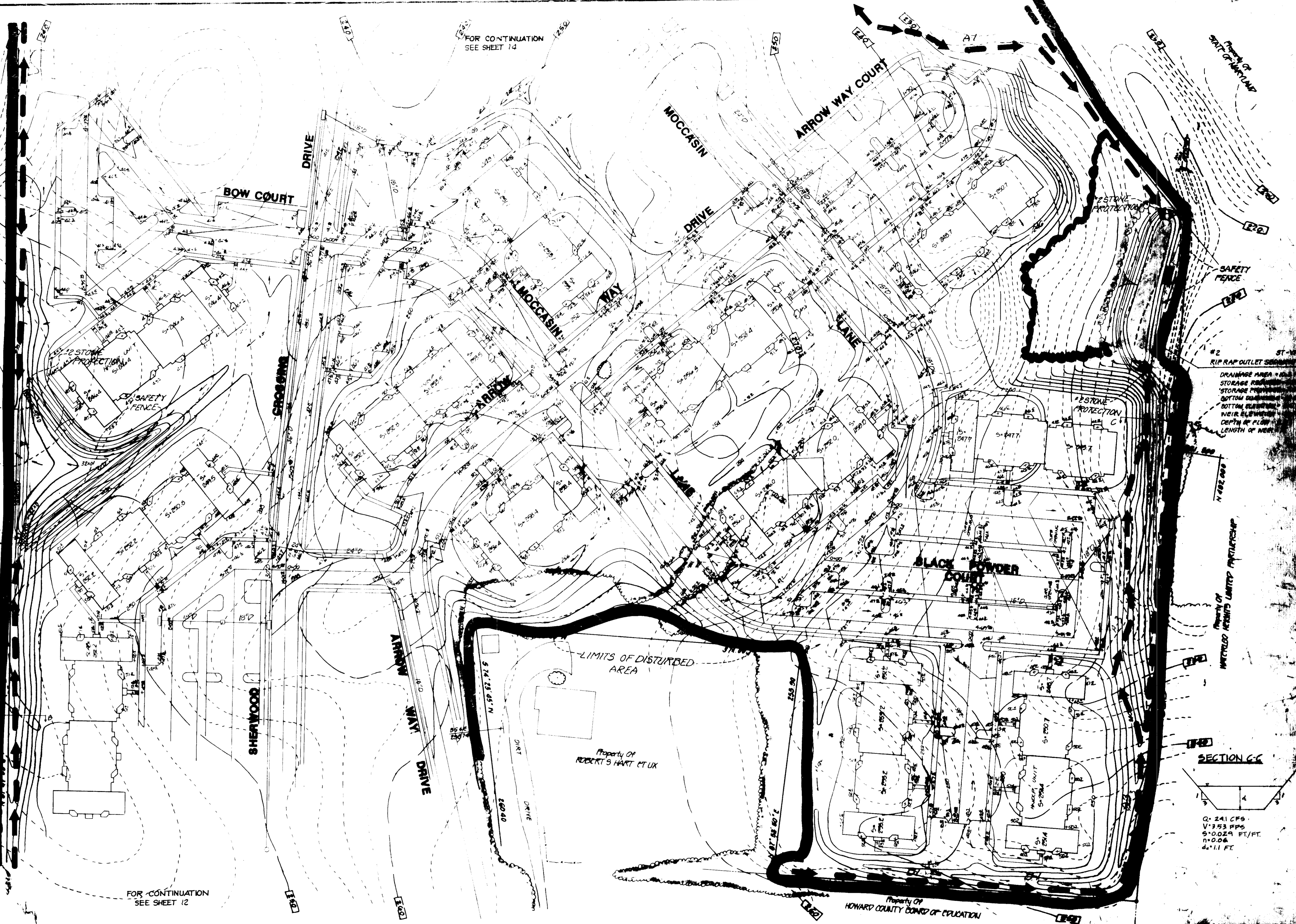
DRAINAGE AREA = 15 Ac  
STORAGE REQUIRED = 1,005 CY  
STORAGE PROVIDED = 1,002 CY  
BOTTOM DIMENSIONS = AS SHOWN  
BOTTOM ELEVATION = 232.0  
WEIR ELEVATION = 236.5  
MAX. DEPTH OF FLOW = 2'  
LENGTH OF WEIR = 18'

PROPERTY OF  
INTERCO LIMITED PARTNERSHIP

**SECTION C-C**



Q=241 CFS  
V=3.5 FPS  
S=0.029 FT/FT  
n=0.06  
d=1.1 FT

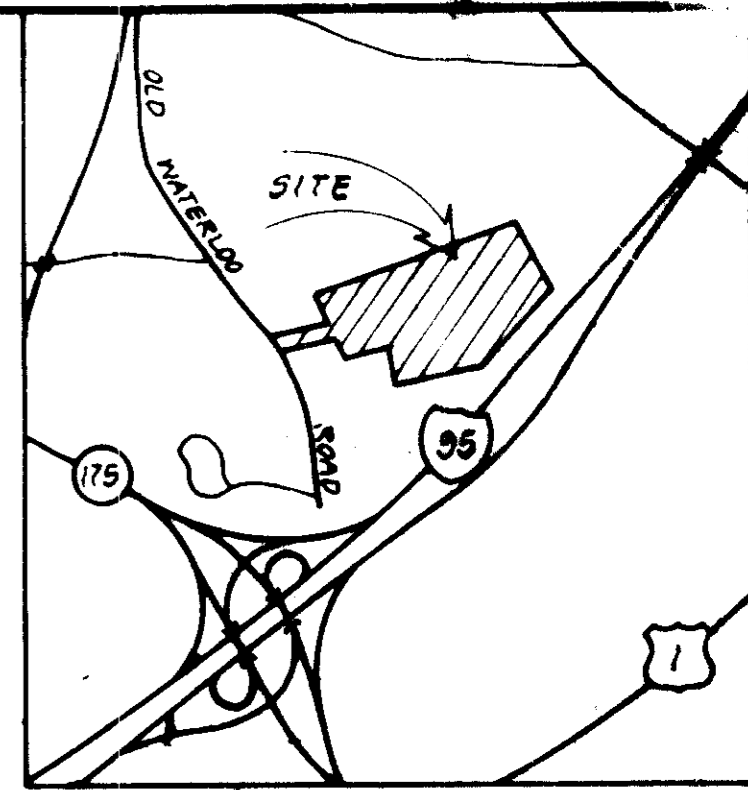


**KMM CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

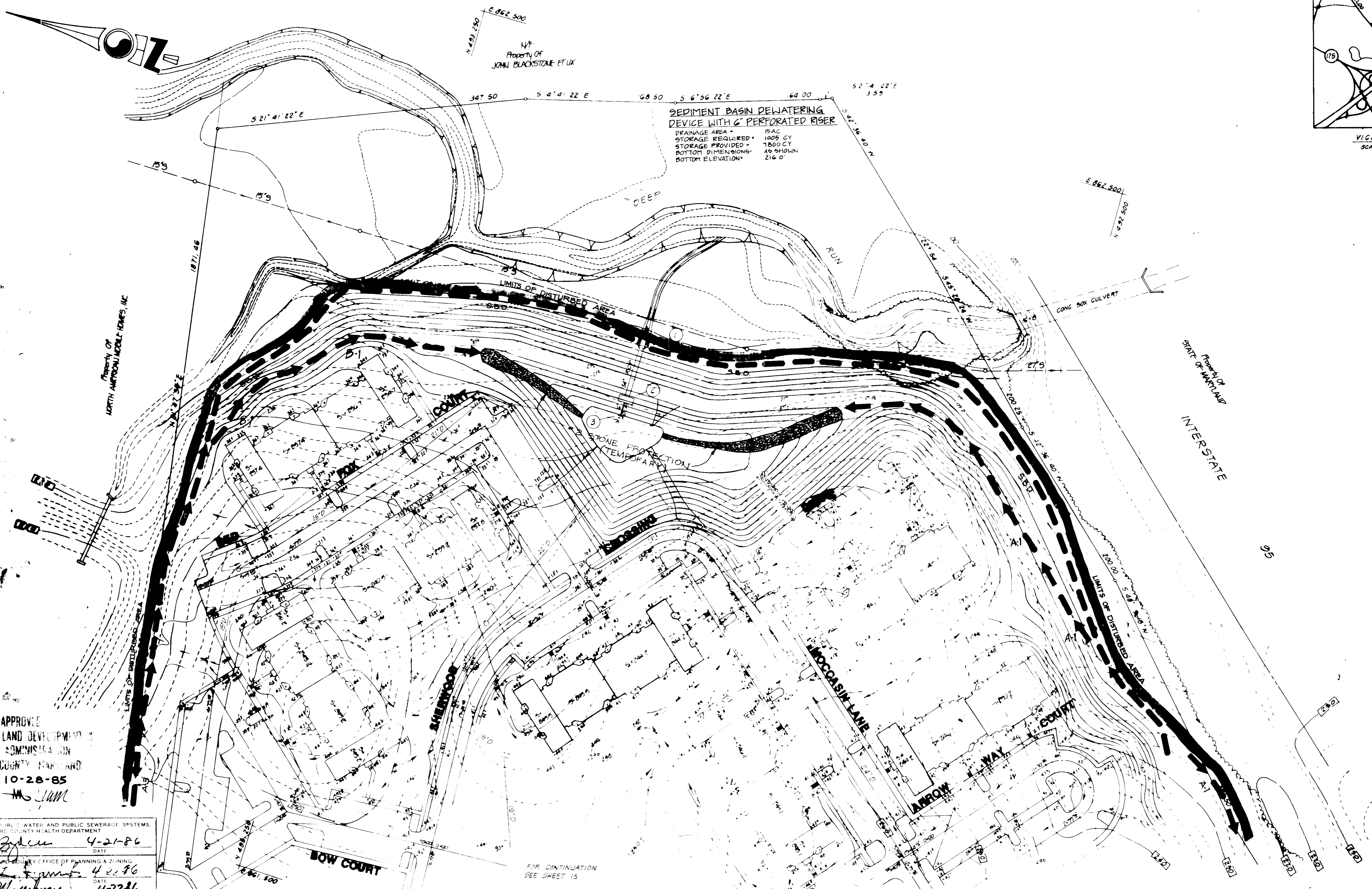
**SEDIMENT & EROSION CONTROL PLAN**  
**SHERWOOD CROSSING**  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER  
CROSSING LIMITED PARTNERSHIP  
2 BURROW REAL ESTATE  
DEVELOPMENT COMPANY  
260 BERING DRIVE HOUSTON TX 77051

501-85-262



VIGNITY MAP  
SCALE: 1" = 2000'



**SEDIMENT BASIN DEWATERING  
DEVICE WITH 6" PERFORATED RISER**  
 DRAINAGE AREA = 15 AC  
 STORAGE REQUIRED = 1005 CY  
 STORAGE PROVIDED = 1800 CY  
 BOTTOM DIMENSIONS = AS SHOWN  
 BOTTOM ELEVATION = 216.0'

APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 10-28-85  
 MS LMM

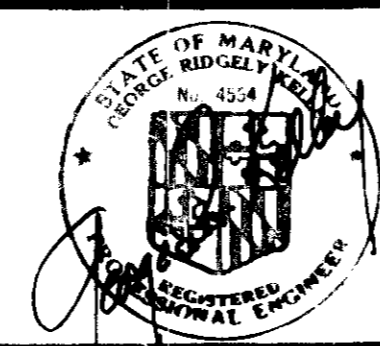
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT  
 DATE 4-21-86

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 DATE 4-21-86

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE 4-22-86

DIRECTOR  
 DATE  
 CHIEF BUREAU OF ENGINEERING

FOR CONTINUATION  
 SEE SHEET 13



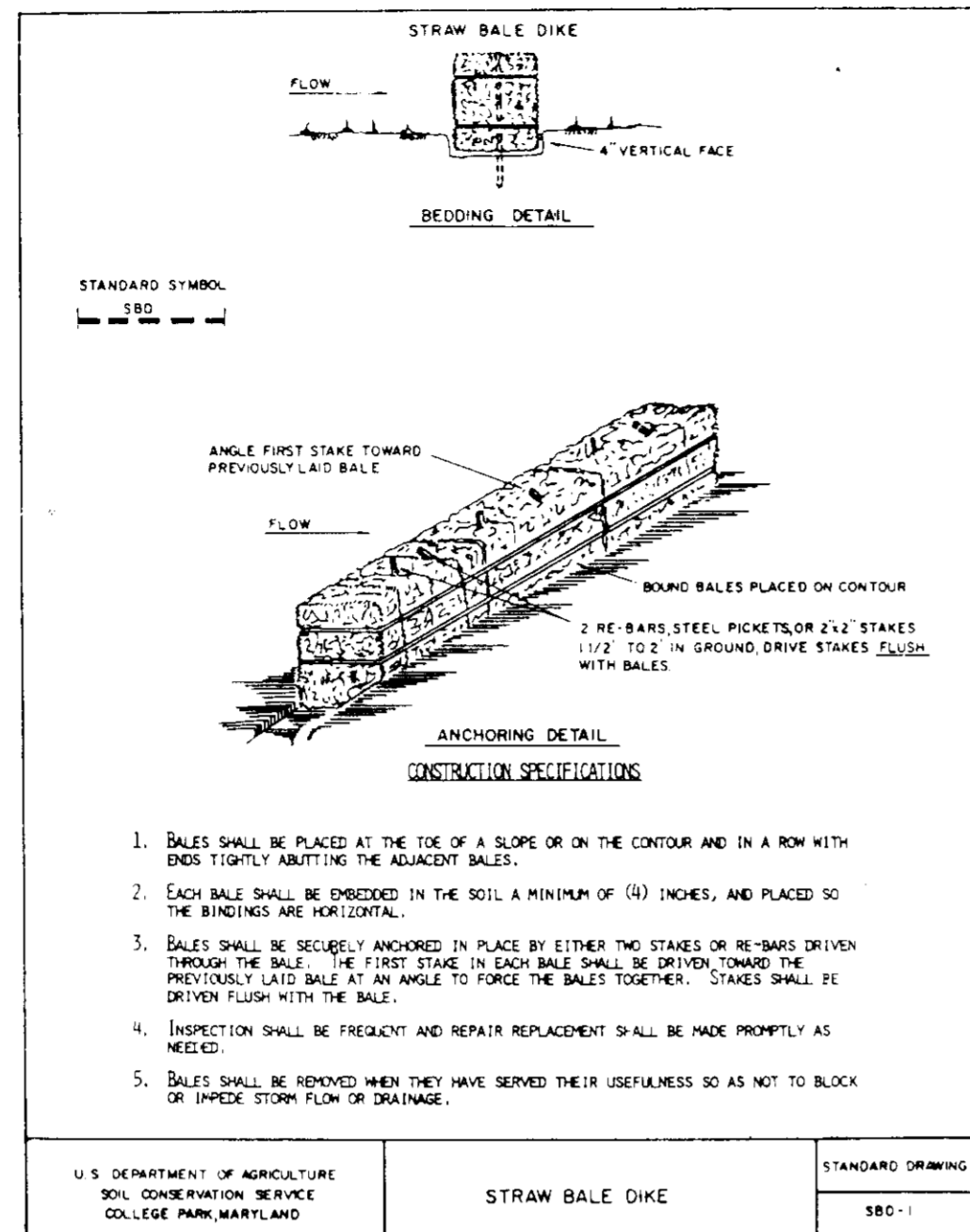
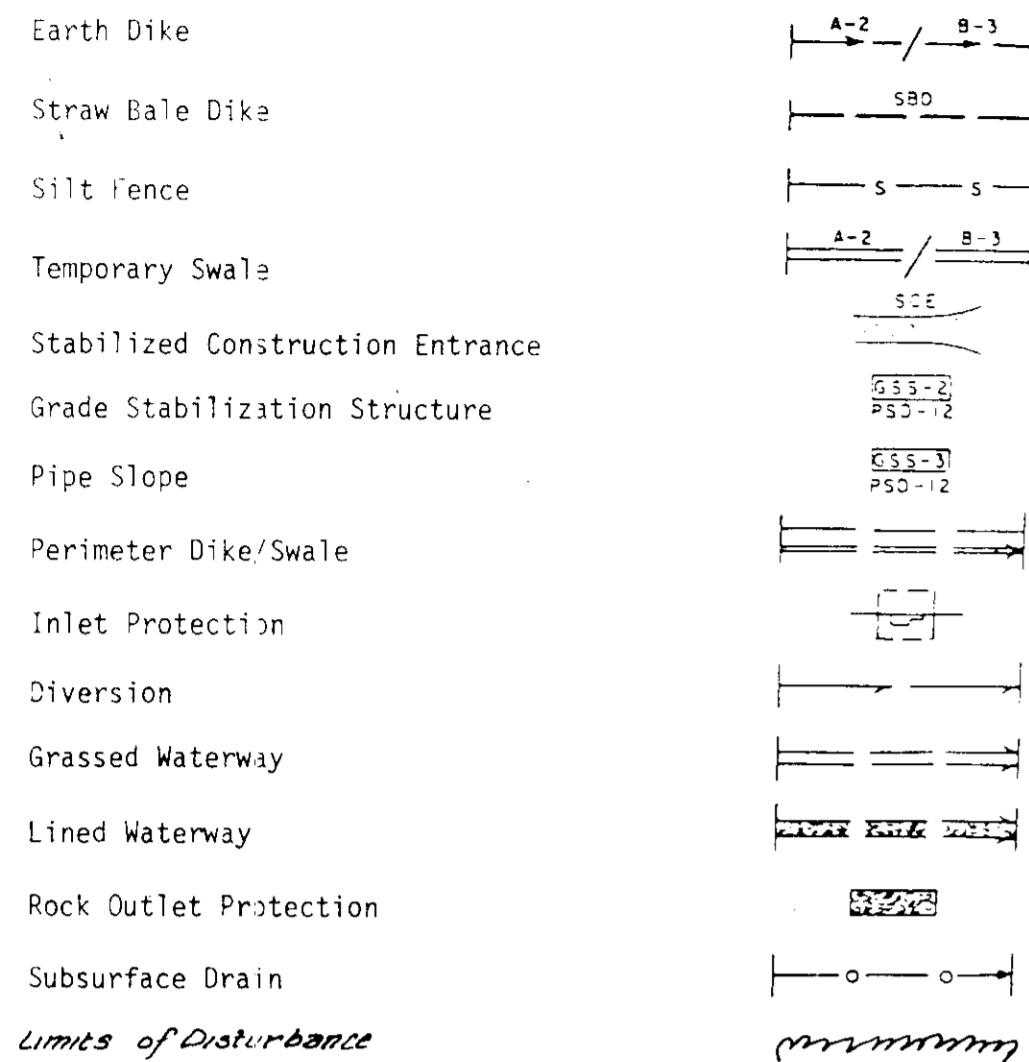
**KMM** CORPORATION  
 ENGINEERS • PLANNERS • SURVEYORS  
 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

**SEDIMENT & EROSION CONTROL PLAN**  
**SHERWOOD CROSSING**  
 PARCEL "A"  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD  
 CROSSING LIMITED PARTNERSHIP  
 64 BURROW REAL ESTATE  
 DEVELOPMENT COMPANY  
 750 BERING DRIVE HOUSTON, TX 77057  
 Design: JCK Sheet 13 of 21  
 Draft: JDM Date: 3/85 Job: 84-017  
 Approved Scale: 1" = 80' File: 84-017-825

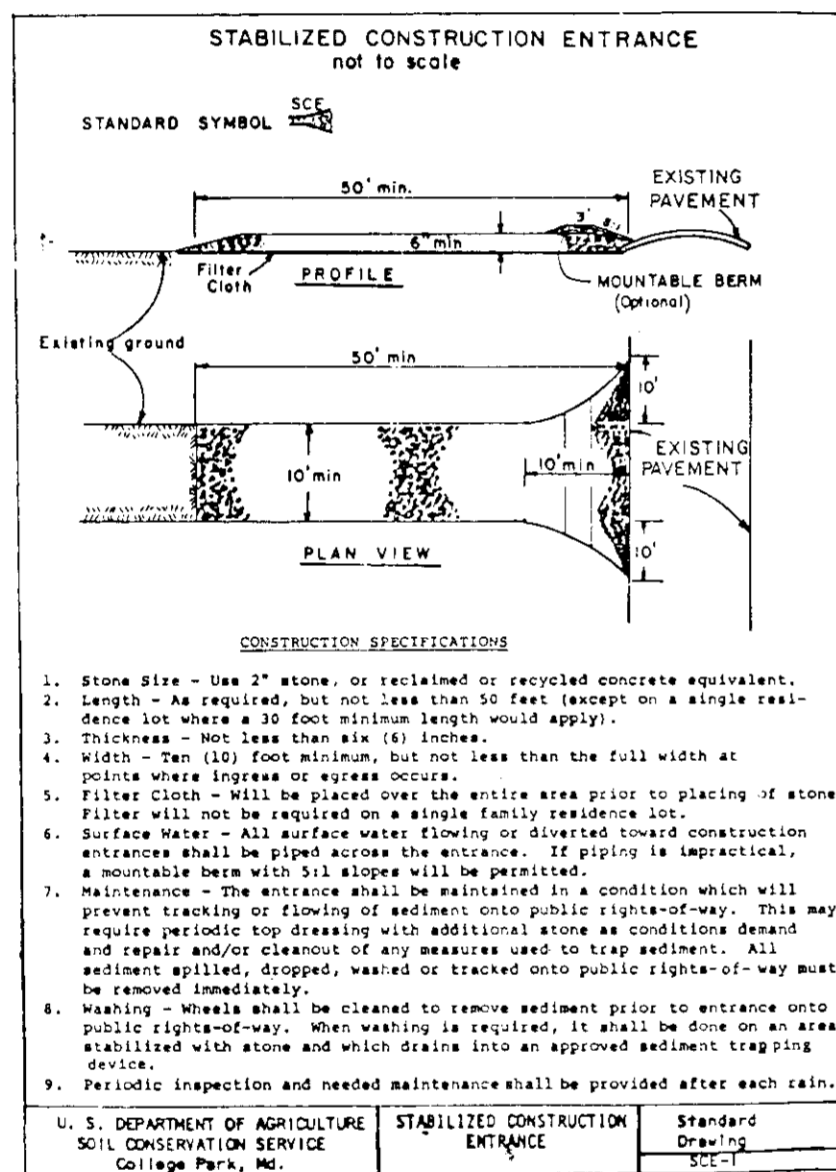
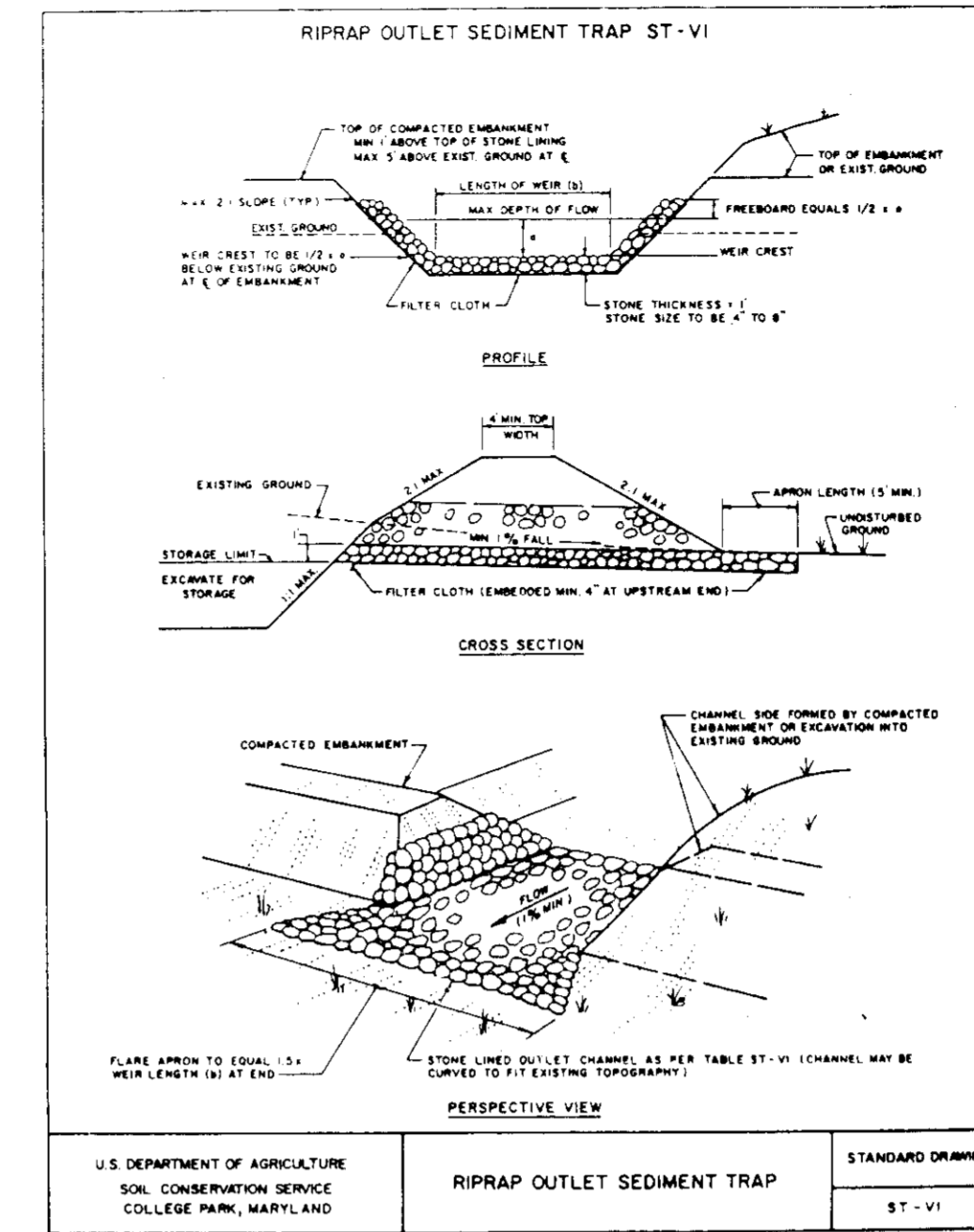
SDP-85-202

LIST OF STANDARD SYMBOLS



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 redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 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. 51) sod (Sec. 54), temporary seedings (Sec. 53) and mulching (Sec. 52). Temporary seedings 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: 458 acres  
 Area Disturbed: 400 acres  
 Area to be roofed or paved: 17.5 acres  
 Area to be vegetatively stabilized: 22.0 acres  
 Total Cut: \_\_\_\_\_ Cu. Yds  
 Total Fill: \_\_\_\_\_ Cu. Yds  
 u:f:ate waste/borrow area location: \_\_\_\_\_
- 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 DPM sediment control inspector.



PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

**Soilbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

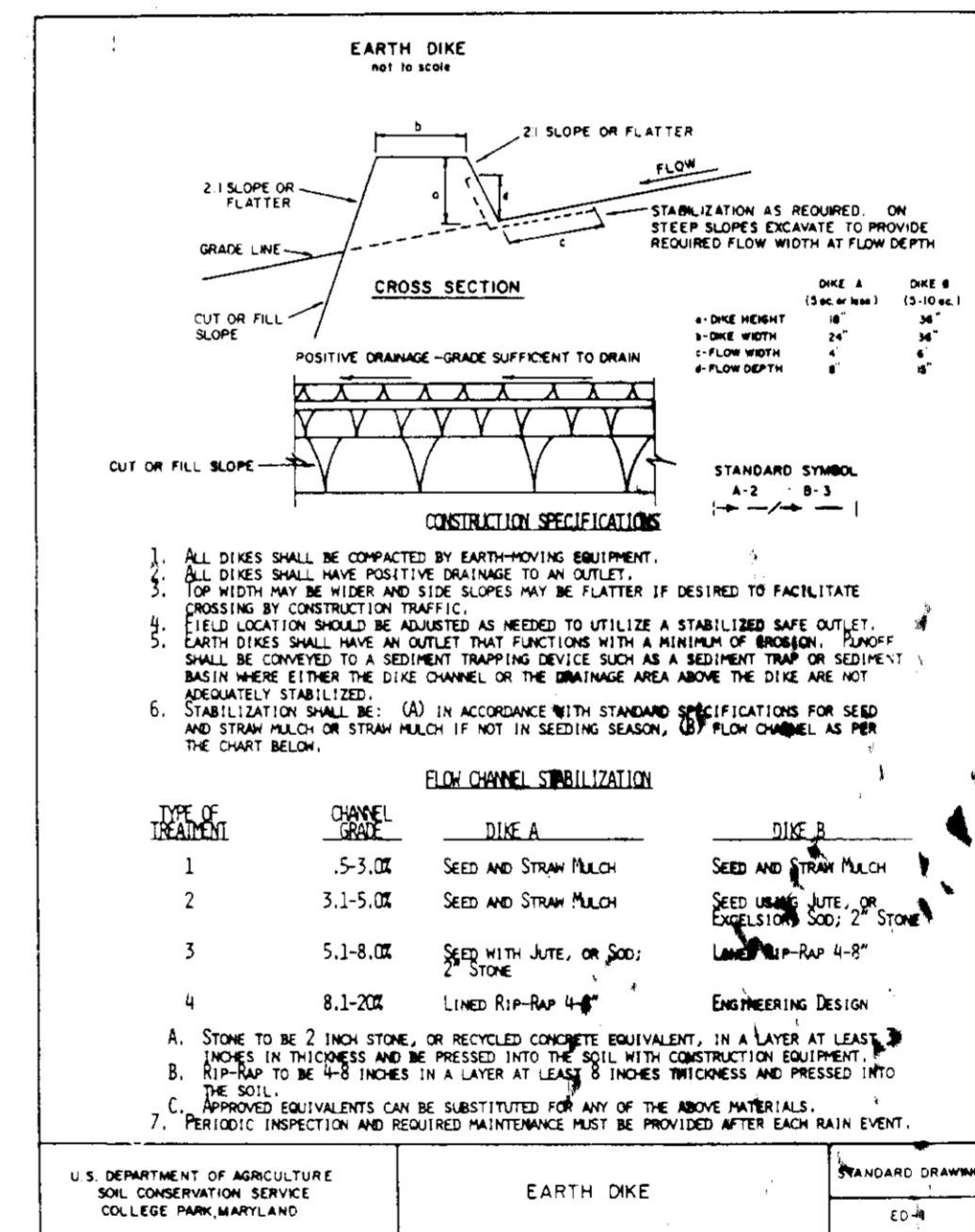
**Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/100 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 100 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

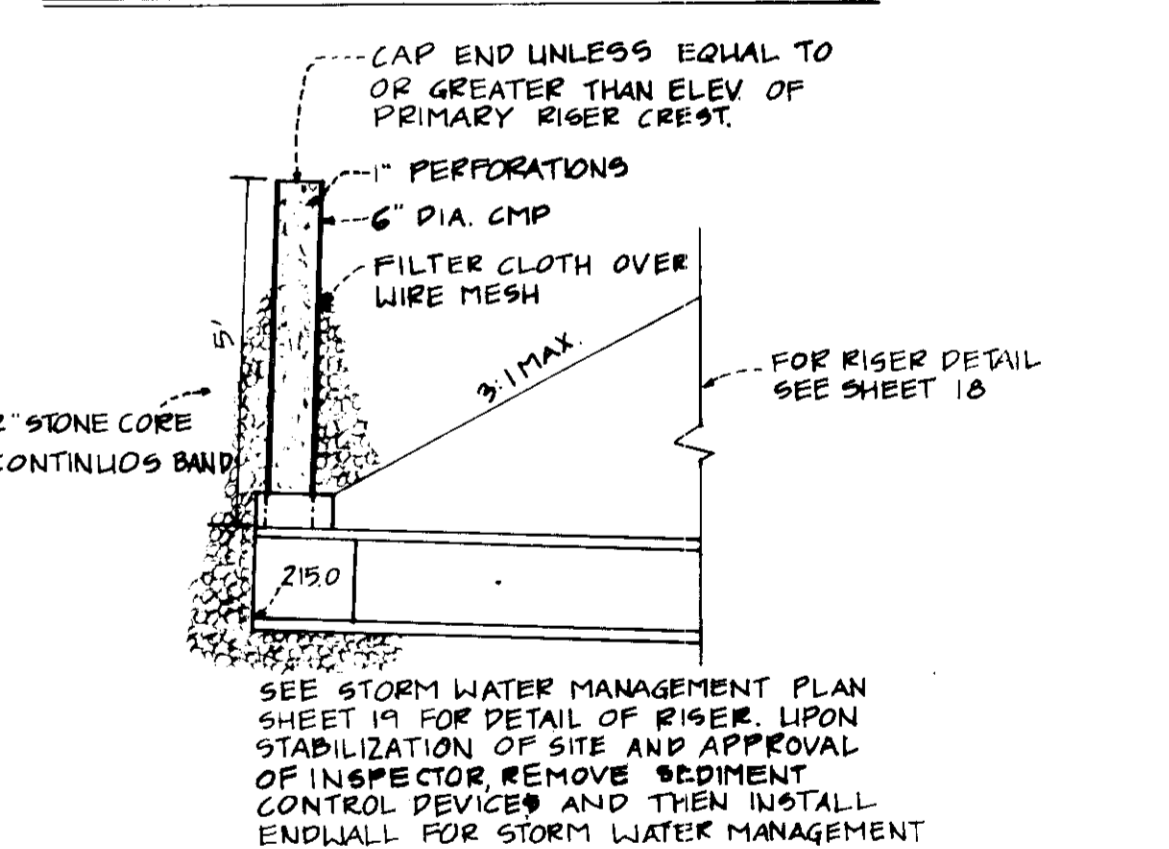
**Seeding** - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/100 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**Mulching** - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/100 sq ft) of unfrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

**Maintenance** - Inspect all seeded areas and make needed repairs, replacements and reseedings.



SEDIMENT BASIN DEWATERING DEVICE NOT TO SCALE



APR 11 1985  
 DIVISION OF ZONING AND PLANNING  
 HOWARD COUNTY, MARYLAND  
 DATE 10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.  
 HOWARD COUNTY HEALTH DEPARTMENT  
 DATE 4-28-86

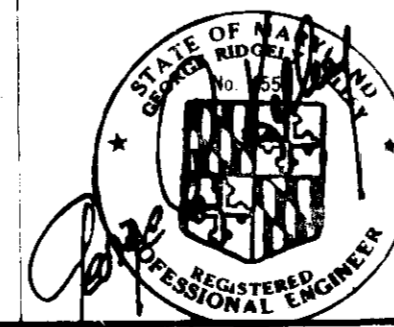
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 DATE 4-22-86

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE 4-22-86

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE 4-27-86

THIS PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 DATE 4/9/86

Reviewed for Howard County Soil Conservation District and Meets Technical Requirements  
 DATE 4-9-86



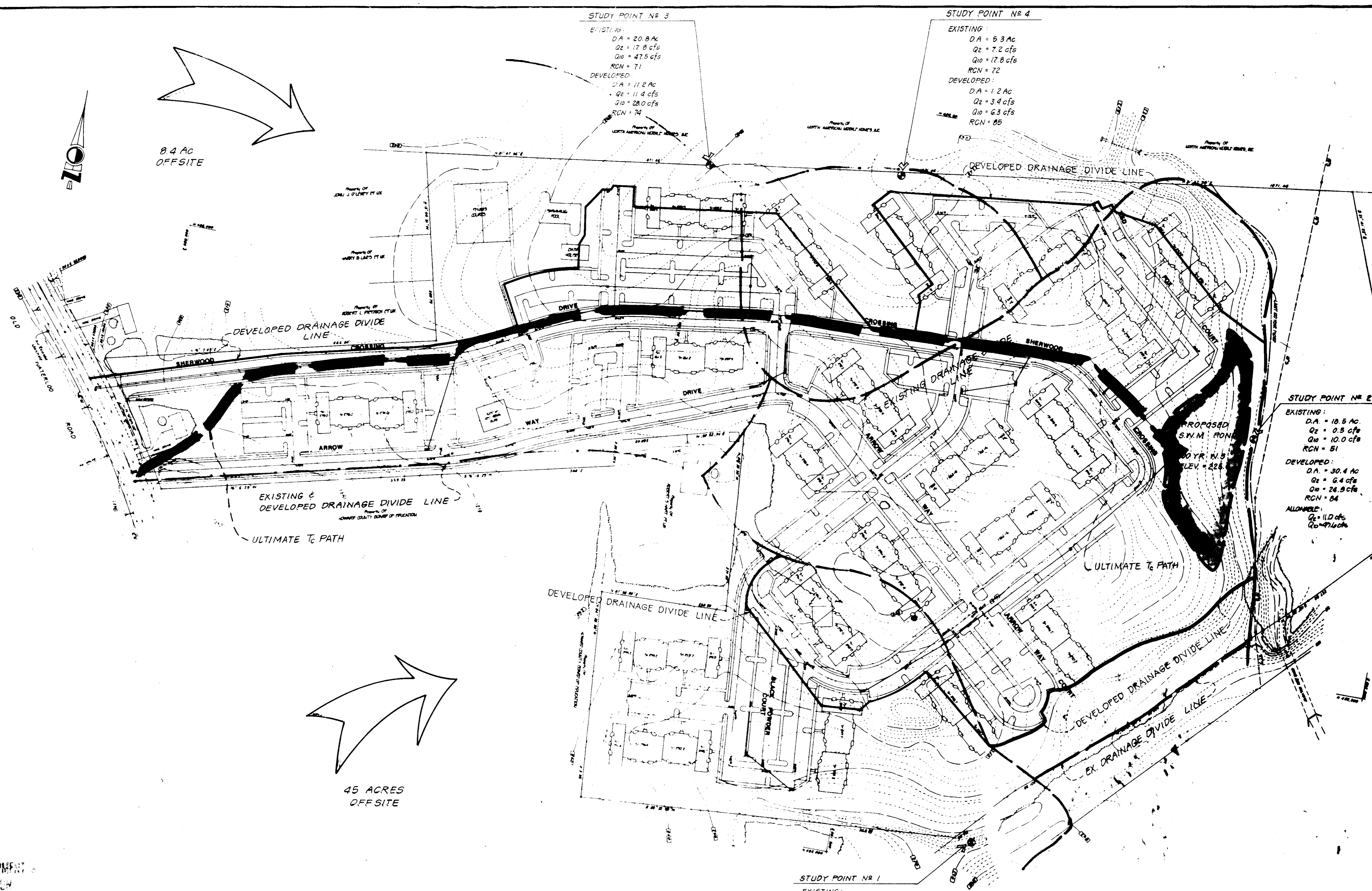
**KAWA CORPORATION**  
 ENGINEERS • PLANNERS • SURVEYORS  
 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

**SEDIMENT & EROSION CONTROL PLAN**  
**SHERWOOD CROSSING**  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
 64 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 BERLING DRIVE HOUSTON, TX 77057

Design: JCA Sheet: 2 of 21  
 Draft: WDT Date: 3/2/85 Job: 84-077  
 Approved: S:ale 1/50 File: 84-017-225

SDP-85-262



8.4 AC  
OFFSITE

45 ACRES  
OFFSITE

STUDY POINT NO 3  
EXISTING:  
D.A. = 20.8 AC  
Q2 = 17.8 cfs  
Q10 = 47.5 cfs  
RCN = 71  
DEVELOPED:  
D.A. = 11.2 AC  
Q2 = 11.4 cfs  
Q10 = 28.0 cfs  
RCN = 74

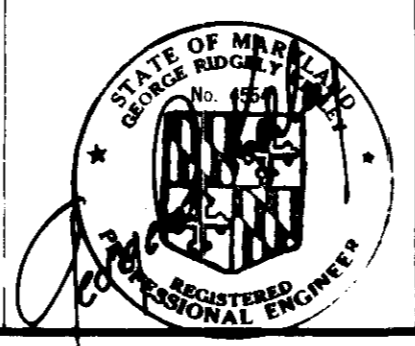
STUDY POINT NO 4  
EXISTING:  
D.A. = 5.3 AC  
Q2 = 7.2 cfs  
Q10 = 17.8 cfs  
RCN = 72  
DEVELOPED:  
D.A. = 1.2 AC  
Q2 = 3.4 cfs  
Q10 = 6.3 cfs  
RCN = 85

STUDY POINT NO 2  
EXISTING:  
D.A. = 18.5 AC  
Q2 = 0.5 cfs  
Q10 = 10.0 cfs  
RCN = 51  
DEVELOPED:  
D.A. = 30.4 AC  
Q2 = 6.4 cfs  
Q10 = 24.9 cfs  
RCN = 84  
ALLOWABLE:  
Q2 = 11.0 cfs  
Q10 = 47.6 cfs

STUDY POINT NO 1  
EXISTING:  
D.A. = 53.0 AC  
Q2 = 65.0 cfs  
Q10 = 144.0 cfs  
RCN = 71  
DEVELOPED:  
D.A. = 51.0 AC  
Q2 = 24.7 cfs  
Q10 = 126.2 cfs  
RCN = 73

APPROVED  
DIVISION OF LAND DEVELOPMENT  
ZONING ADMINISTRATION  
HOWARD COUNTY MARYLAND  
DATE 10-28-85  
*M. J. Miller*

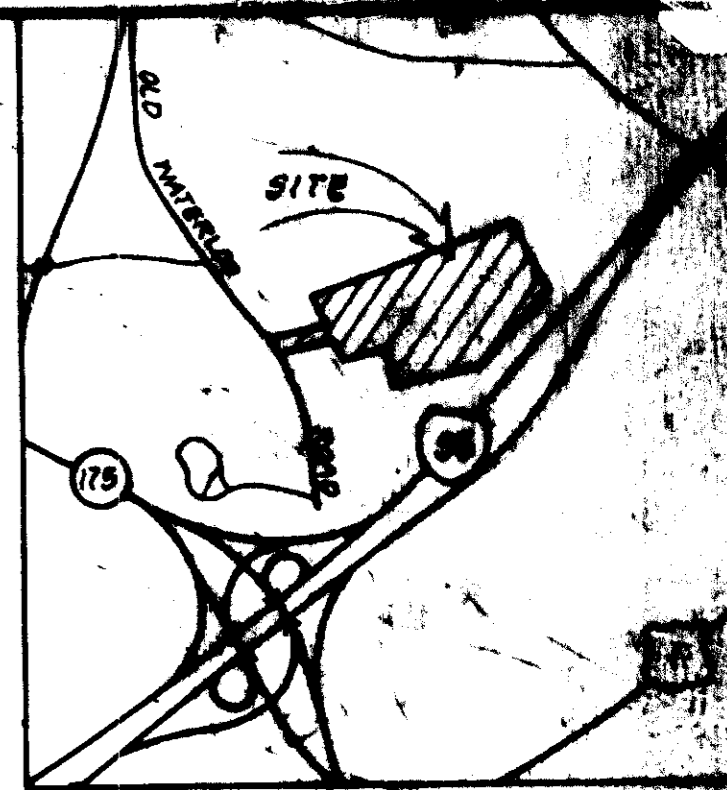
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*John E. Gillen* 4-21-86  
DATE  
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*John W. Muddiman* 4-22-86  
DATE  
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John E. Nunn* 4-17-86  
DATE  
DIRECTOR  
*John E. Nunn* 4-17-86  
DATE  
CHIEF BUREAU OF ENGINEERING



**KWMM CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

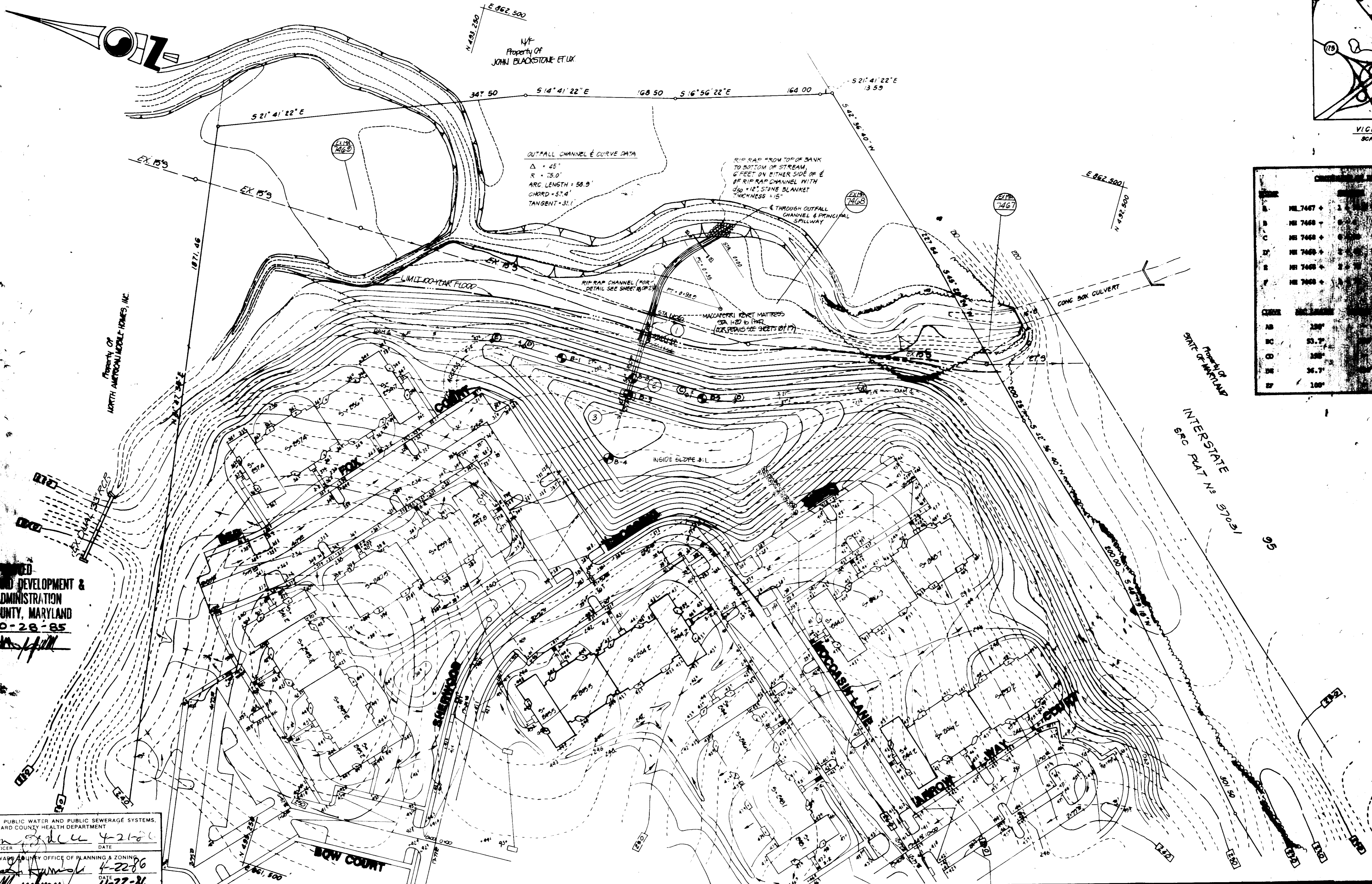
STORMWATER MANAGEMENT  
DRAINAGE AREA MAP  
**SHERWOOD CROSSING**  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER  
SHERWOOD CROSSING LIMITED PARTNERSHIP  
BURNOW REAL ESTATE DEVELOPMENT COMPANY



VICINITY MAP  
SCALE: 1" = 200'

GRID	ELEVATION
AA	250'
BB	53.7'
CC	250'
DD	36.7'
EE	100'

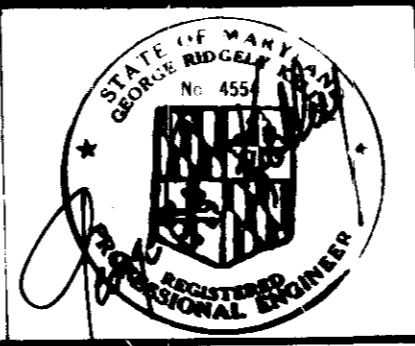


APPROVED  
 LAND DEVELOPMENT &  
 ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 70-26-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: [Signature] DATE: 4-21-86

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 PLANNING DIRECTOR: [Signature] DATE: 4-22-86  
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: [Signature] DATE: 4-17-86  
 CHIEF BUREAU OF ENGINEERING



**KMM CORPORATION**  
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 13321 New Hampshire Avenue Suite 300  
 Silver Spring, Maryland • 20904 • 301-384-4300

**STORM WATER MANAGEMENT PLAN**  
**SHERWOOD CROSSING**  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

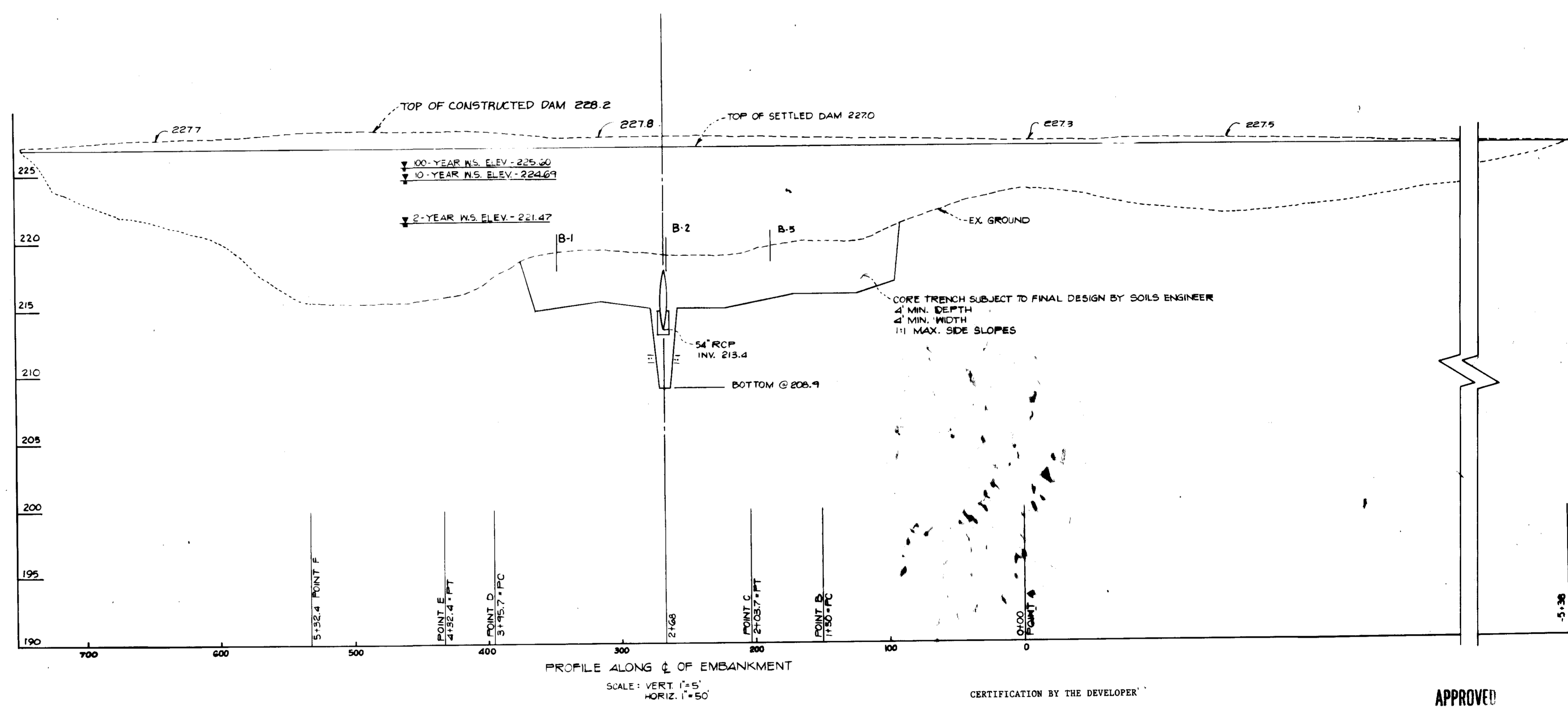
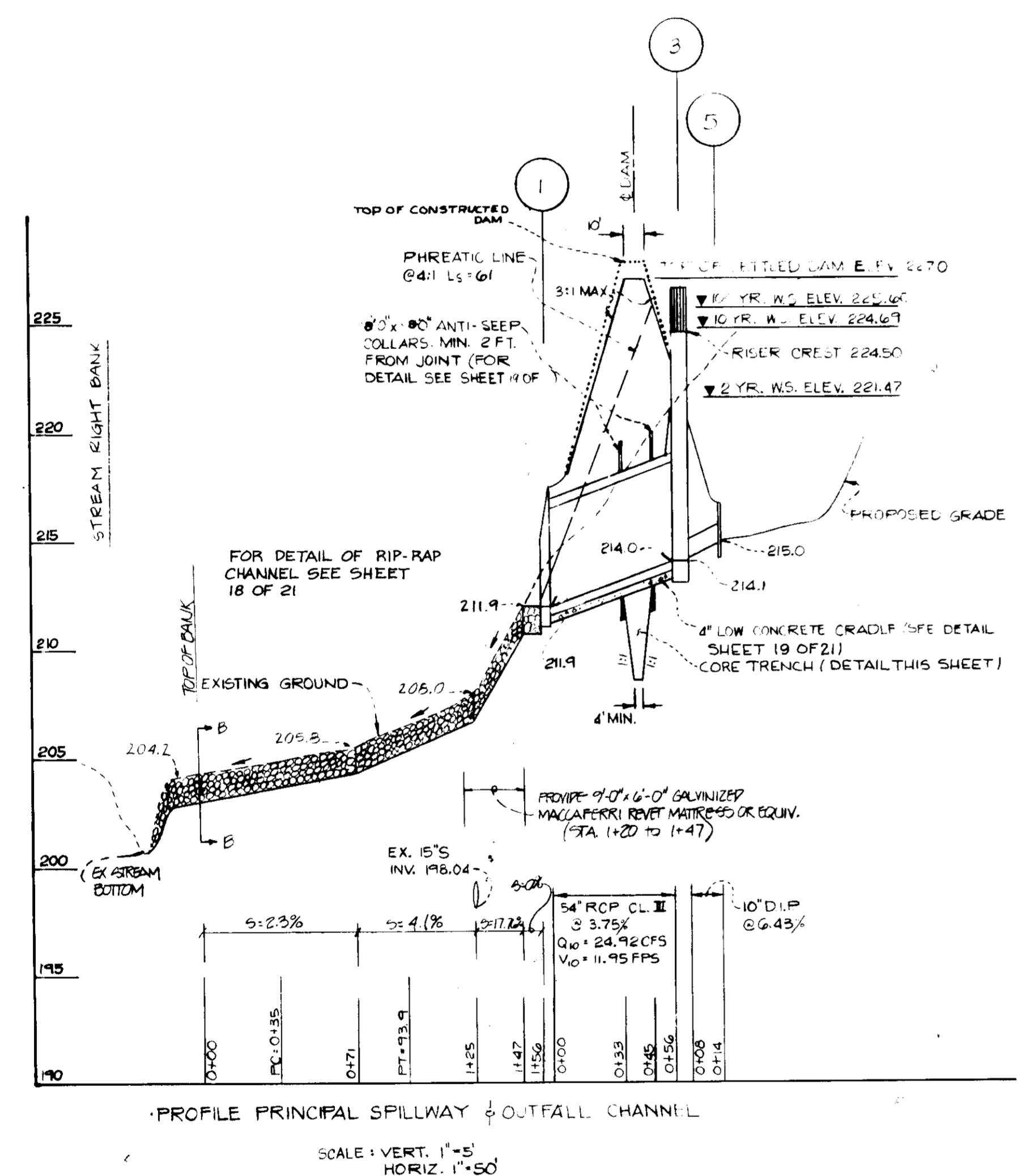
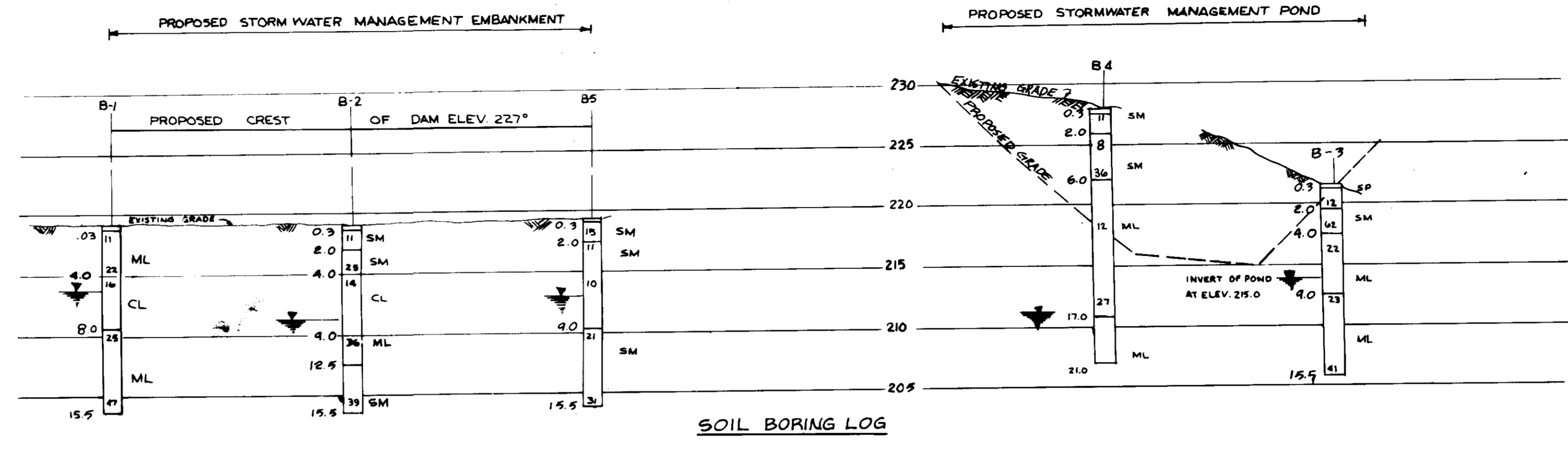
OWNER/DEVELOPER  
 CROSSING LIMITED PARTNERSHIP  
 A BURROW REAL ESTATE  
 DEVELOPMENT COMPANY  
 730 BERING DRIVE HOUSTON, TX 77057

Draft: JMK Date: 3/85 Job: 85-07  
 Approved: CO Scale: 1"=80' File: 85-07



NO.	TYPE	STATION	OFFSET	TOP ELEVATION		REMARKS
				UPPER	LOWER	
1	B-54 HEADWALL	AS PER PLAN				M.S.H.A. STANDARD 352.01
9	15'x5' RISER	AS PER PLAN				SEE PLAN
5	TYPE-C ENDWALL	AS PER PLAN				M.S.H.A. STANDARD 354.01

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
54"	R.C.P. CL. II	56 FT.
10"	V.P.	14 FT.



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*James S. ...* 4-21-86  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*James S. ...* 4-22-86  
PLANNING DIRECTOR DATE

APPROVED: DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
*John ...* 4-22-86  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*...* 4-17-86  
DIRECTOR DATE

CHIEF BUREAU OF ENGINEERING  
*...* 4-17-86  
DATE

**CERTIFICATION BY THE ENGINEER**

"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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINE "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION."

*George R. Kelley* 4/4/86  
GEORGE R. KELLEY P.E. #4554 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*James M. ...* 4-9-86  
J.S. SOIL CONSERVATION DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert W. Ziem* 4/9/86  
HOWARD S.C.D. DATE

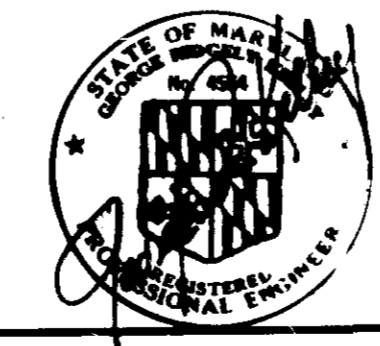
PLAN NUMBER

**CERTIFICATION BY THE DEVELOPER**

"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined "As-Built" of the pond within 30 days of completion."

*...* 4/10/86  
Date

APPROVED  
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85



**KMMW CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

**STORM WATER MANAGEMENT PLAN**  
**SHERWOOD CROSSING**  
PARCEL "A"  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
54 BURROW REAL ESTATE DEVELOPMENT COMPANY  
750 BERING DRIVE HOUSTON, TX 77057

Design: G.C. Sheet 7 of 27  
Date: 5-85 Job: 84-007-000  
Approved: Scale: AS File: 84-007-000

SDP-85-202

# STORM WATER MANAGEMENT CONSTRUCTION SPECIFICATIONS

**A. Site Preparation**  
Areas under the embankment, structural works, and stream direction shall be cleared, grubbed and the top soil stripped. All trees, vegetation, roots, or other objectionable material shall also be removed. To facilitate clean out and restoration, the permanent pool or impounding area should be cleared of all brush, trees, rubbish and other objectionable material.

**B. Embankment**  
Embankment fill shall conform to SHM specification Section 206 and these specifications:

**1. Material**  
The fill material shall be taken from an approved borrow area. The first two feet of excavation under the embankment is to be wasted at the designated spoil area. The final decision as to the suitability of the exposed soil shall be made by the Soil Engineer at the time of construction. All material shall be free from roots, stumps, wood, rubbish, oversized stones, frozen or other objectionable materials. The dam embankment should be formed of material conforming to the Unified Soil Classification CL and ML. SC can be used if controlled compaction is used. As a minimum criteria, the fill material for the dam embankment (except as noted below) will have a maximum density not less than 100 pcf as determined by ASTM D 1557 Method A. The liquid limit shall not exceed 40 and the Plasticity Index must be between 12 and 25. All material shall contain no stone larger than three inches in the greatest dimension. Such stones shall not be more than 25 percent by volume of the fill material. For dam core trenches, the material used can include clean and organic-free CH and MH material in addition to CL and ML. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least ten percent above the design elevation (including freeboard) unless otherwise shown on the plans.

**2. Placement**  
Areas on which fill is to be placed shall be scarified prior to placement of fill. The material shall be placed in eight-inch maximum thickness (before compaction) layers and shall be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

**3. Compaction**  
(To be used when soil testing is required)  
The movement of hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be compacted to a minimum of 95 percent of the maximum dry density obtained in compaction tests of the fill materials performed in accordance with the requirements of the ASTM D 1557 Method A, prior to next lift being spread and the fill density shall meet minimum specified densities of the compaction method used. The moisture content of the embankment material shall be maintained such that the upper and lower limits of the optimum moisture content. Limits of moisture content may be modified by the Soil Engineer at the time of construction depending on material encountered. Fill placed at densities lower than the specified minimum shall be reworked to meet the specifications shall be reworked to meet the requirements or removed and replaced by acceptable fill.

**4. Core Trench/Cutoff Trench/Key Trench**  
Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be one-to-one. The backfill material for the core trench shall be approved prior to use and shall be free of all organic material.

(To be used when soil testing is required)  
The fill for the trench shall be compacted with equipment of density to assure that a minimum of 95 percent of the maximum dry density and minimum permeability is achieved.

**5. Backfill**  
The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

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

**D. Rip-Rap and Slips Protection**  
All pipe denoted as "CMP" may be either corrugated aluminum pipe or corrugated steel pipe. The barrel, riser, trash rack, end section, and anti-seep collars must all be made of the same material (either steel or aluminum).

**1. Corrugated Metal Pipe (for pipes larger than 48 inches only)**  
**a. Materials - (Steel Pipe)** - This pipe and its appurtenances shall be galvanized and have full bituminous coating and shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber plastic insulating materials at least 1/4 inch in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soil shall be less than 9) and greater than four (4). Helically corrugated pipe, in addition to the requirements above, shall have either continuous welded seams or have lock seams which are caulked with a neoprene bead.

**b. Connections** - All connections with pipe must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around and shall be at the proper angle to provide a watertight connection. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

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

**d. Laying pipe** - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the slope.

**e. Backfilling** shall conform to structure backfill as described above.

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

**2. Reinforced Concrete Pipe (all pipes 48 inches and smaller inclusions)**

**a. Materials** - This pipe shall conform to SHM specification Section 908. Class IV pipe shall be used unless otherwise specified. Reinforced concrete pipe shall have a watertight gasket joint and shall equal or exceed ASTM Specification C-391. Approved equivalents are ASTM Specifications C-390, -391, and -392.

**b. Bedding** - all reinforced concrete pipe shall be laid in concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe (inside 4 inch) and up the sides of the pipe at least ten percent of the diameter with a minimum thickness of three inches. WSSC low cradle bedding is an approved equivalent.

**c. Laying pipe** - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

**d. All concrete pipe joints** will be sealed with mortar inside and outside.

**e. Backfilling** shall conform to structural backfill as described above.

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

**3. Concrete**  
Concrete shall meet minimum requirements set forth in SHM Specification Section 910 (Portland Cement Concrete Mixtures), for Mix No. 10(1) or 2(1) concrete and Section 911 for reinforced concrete construction shall conform to SHM Specifications, Section 401 and Section 905.

**4. Rip-Rap and Slips Protection**  
Rock for rip rap shall conform to SHM Specification, Section 816. Plastic filter cloth shall be placed under all rip rap. Filter cloth shall be "poly filter X" or approved substitute. All filter clothes shall be resistant to deterioration.

**5. Fencing**  
When required, chainlink fence fabric, fence posts, top rails, braces, gates, and accessories shall conform to the requirements of SHM Specification Section 912. Materials shall be as follows, except as otherwise specified:

**Fabric:** Type 1, 2-inch mesh, 9-gauge, minimum weight of zinc coating-1.8 ounces per square foot.  
**Barbed Wire:** zinc-coated steel.  
**Posts:** Type 1, Class 1, zinc-coated.  
**Top Rails:** type 1, zinc-coated.  
**Braces:** zinc-coated steel.  
**Gates:** type 1, zinc-coated steel.

**6. Stabilization**  
Dorrow areas, spoil areas, and all graded areas of the dam and road shall be graded to provide proper drainage and left to a suitable condition. All exposed surfaces of the embankment, spillway, and borrow areas shall be stabilized by seeding and applying lime which in accordance with these specifications and SHM Specifications, Sections 910 and 701.

**1. Soil Amendments**  
Apply two tons of dolomitic limestone and 600 pounds of 0-20-20 fertilizer, or equivalent, per acre before seeding. Broadcast lime and fertilizer uniformly into the soil to a minimum depth of three inches on slopes flatter than three to one. On slopes greater than three to one, the lime and fertilizer shall be worked in on the contour to a minimum thickness of three inches. No attempt shall be made to dig any disced area to make the soil surface very smooth after disking at time of seeding, apply 400 pounds of 10-0-0 fertilizer, and 500 pounds of 10-20-20, or equivalent, fertilizer per acre.

**2. Seeding**  
**a. Embankment and sloping areas (slopes steeper than 4:1)**  
During seeding prior March 1 through May 31, apply 3.10 pounds per 1,000 square yards of Kentucky 31 Ryegrass and 2.1 pounds of Annual Ryegrass per 1,000 square yards. During seeding period June 1 through October 15, apply 1.00 pounds of Kentucky 31 Tall Fescue and 2.1 pounds Annual Ryegrass per 1,000 square yards and hold 1.5 pounds of Crownvetch plus sufficient amount per 1,000 square yards of area to be seeded with Crownvetch for the next seeding season.

**b. Pond excavation area and flat surfaces during seeding**  
period March 1 through October 15, apply 45.50 pounds per 1,000 square yards of SHM Seed Mix No. 1 on flat areas.

At the direction of the engineer, up to 20 percent of any seed mixture can be replaced with Annual Ryegrass.

**3. Mowing**  
Immediately after seeding, uniformly mow the specified areas at the minimum rate of two tons per acre of 50 pounds per 1,000 square feet with Green Bright mowers. The mow should be crimped into the ground or otherwise secured.

**4. Revegetation**  
Seedlings or trees may be planted above the two-year storm pool. Varieties and spacing shall be in accordance with the State Forester, Maryland Forestry Service. The State Forestry Service should be contacted to establish details of revegetation plan.

**5. Construction Inspection by Designated Engineer**  
The construction of the pond and embankment shall be under the supervision of a registered engineer. The engineer must certify that the pond and embankment have been built in accordance with the plans and submit such a written certification and a record of construction to the Department of Environmental Protection and the Montgomery Soil Conservation District immediately following the completion of the project. The engineer shall have the responsibility and authority to make minor changes in the plans in order to compensate for unusual soil conditions encountered during construction so long as changes do not adversely affect the integrity of the dam. Major changes to the design which may result from site conditions encountered during construction must be reviewed and approved by the Design Engineer, DEP and the MDC prior to initiation of construction.

**K. Care of Water During Construction**

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream works, and to furnish, install, operate, and maintain all necessary equipment and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective work shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. The diversion and care of the stream and bottom of required excavations and will accomplish satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at which locations, which may require draining the water to pumps from which the water shall be pumped.

**1. Materials** - This pipe shall conform to SHM specification Section 908. Class IV pipe shall be used unless otherwise specified. Reinforced concrete pipe shall have a watertight gasket joint and shall equal or exceed ASTM Specification C-391. Approved equivalents are ASTM Specifications C-390, -391, and -392.

**2. Bedding** - all reinforced concrete pipe shall be laid in concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe (inside 4 inch) and up the sides of the pipe at least ten percent of the diameter with a minimum thickness of three inches. WSSC low cradle bedding is an approved equivalent.

**3. Laying pipe** - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

**4. All concrete pipe joints** will be sealed with mortar inside and outside.

**5. Backfilling** shall conform to structural backfill as described above.

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

**7. Concrete**  
Concrete shall meet minimum requirements set forth in SHM Specification Section 910 (Portland Cement Concrete Mixtures), for Mix No. 10(1) or 2(1) concrete and Section 911 for reinforced concrete construction shall conform to SHM Specifications, Section 401 and Section 905.

**8. Rip-Rap and Slips Protection**  
Rock for rip rap shall conform to SHM Specification, Section 816. Plastic filter cloth shall be placed under all rip rap. Filter cloth shall be "poly filter X" or approved substitute. All filter clothes shall be resistant to deterioration.

**9. Fencing**  
When required, chainlink fence fabric, fence posts, top rails, braces, gates, and accessories shall conform to the requirements of SHM Specification Section 912. Materials shall be as follows, except as otherwise specified:

**Fabric:** Type 1, 2-inch mesh, 9-gauge, minimum weight of zinc coating-1.8 ounces per square foot.  
**Barbed Wire:** zinc-coated steel.  
**Posts:** Type 1, Class 1, zinc-coated.  
**Top Rails:** type 1, zinc-coated.  
**Braces:** zinc-coated steel.  
**Gates:** type 1, zinc-coated steel.

**10. Stabilization**  
Dorrow areas, spoil areas, and all graded areas of the dam and road shall be graded to provide proper drainage and left to a suitable condition. All exposed surfaces of the embankment, spillway, and borrow areas shall be stabilized by seeding and applying lime which in accordance with these specifications and SHM Specifications, Sections 910 and 701.

**11. Soil Amendments**  
Apply two tons of dolomitic limestone and 600 pounds of 0-20-20 fertilizer, or equivalent, per acre before seeding. Broadcast lime and fertilizer uniformly into the soil to a minimum depth of three inches on slopes flatter than three to one. On slopes greater than three to one, the lime and fertilizer shall be worked in on the contour to a minimum thickness of three inches. No attempt shall be made to dig any disced area to make the soil surface very smooth after disking at time of seeding, apply 400 pounds of 10-0-0 fertilizer, and 500 pounds of 10-20-20, or equivalent, fertilizer per acre.

**12. Seeding**  
**a. Embankment and sloping areas (slopes steeper than 4:1)**  
During seeding prior March 1 through May 31, apply 3.10 pounds per 1,000 square yards of Kentucky 31 Ryegrass and 2.1 pounds of Annual Ryegrass per 1,000 square yards. During seeding period June 1 through October 15, apply 1.00 pounds of Kentucky 31 Tall Fescue and 2.1 pounds Annual Ryegrass per 1,000 square yards and hold 1.5 pounds of Crownvetch plus sufficient amount per 1,000 square yards of area to be seeded with Crownvetch for the next seeding season.

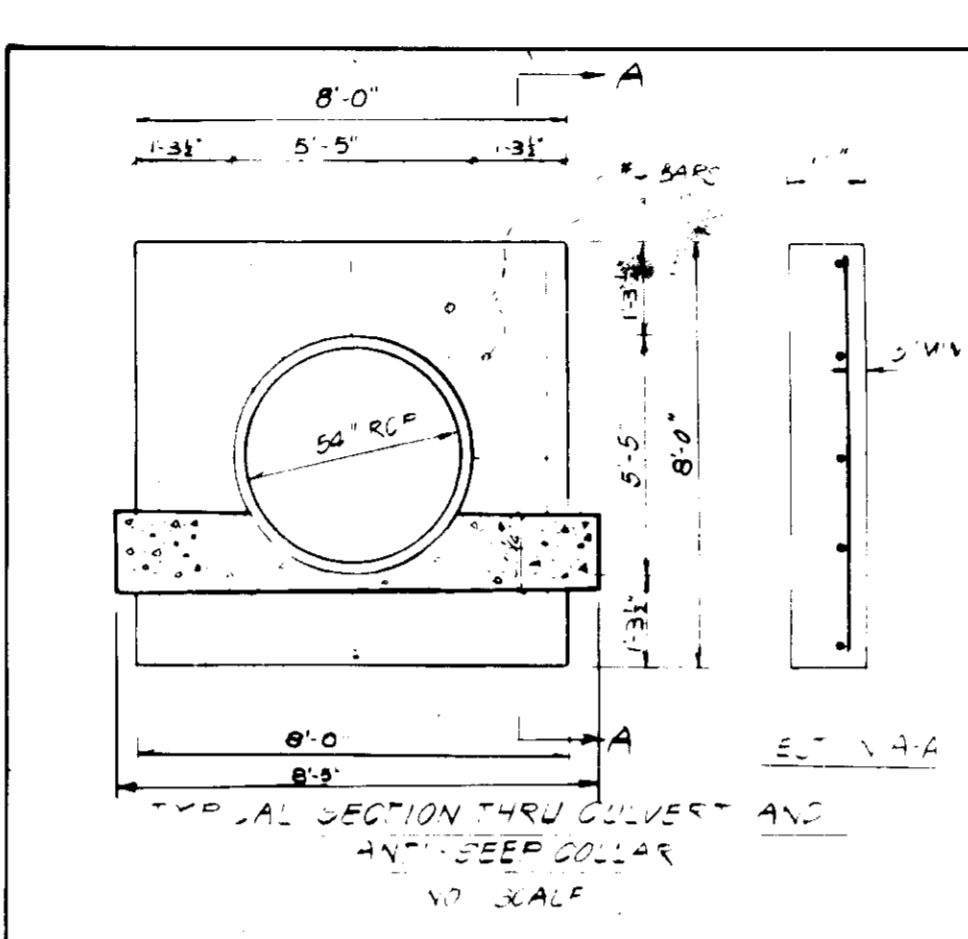
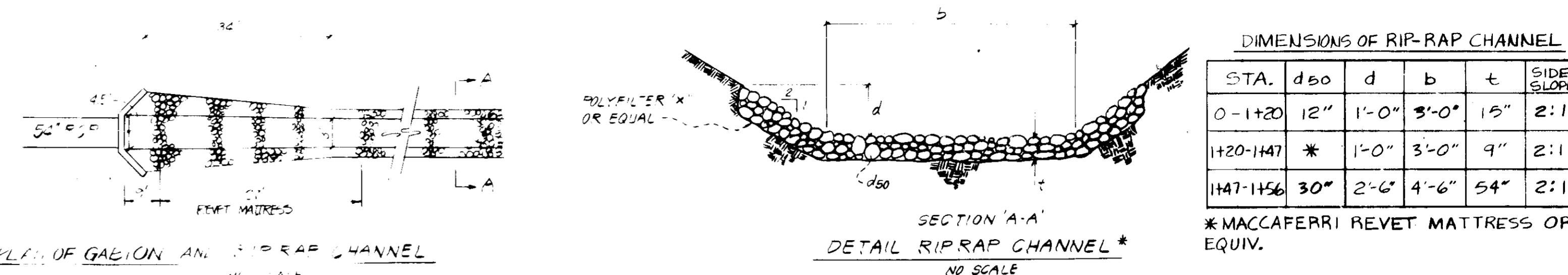
**b. Pond excavation area and flat surfaces during seeding**  
period March 1 through October 15, apply 45.50 pounds per 1,000 square yards of SHM Seed Mix No. 1 on flat areas.

At the direction of the engineer, up to 20 percent of any seed mixture can be replaced with Annual Ryegrass.

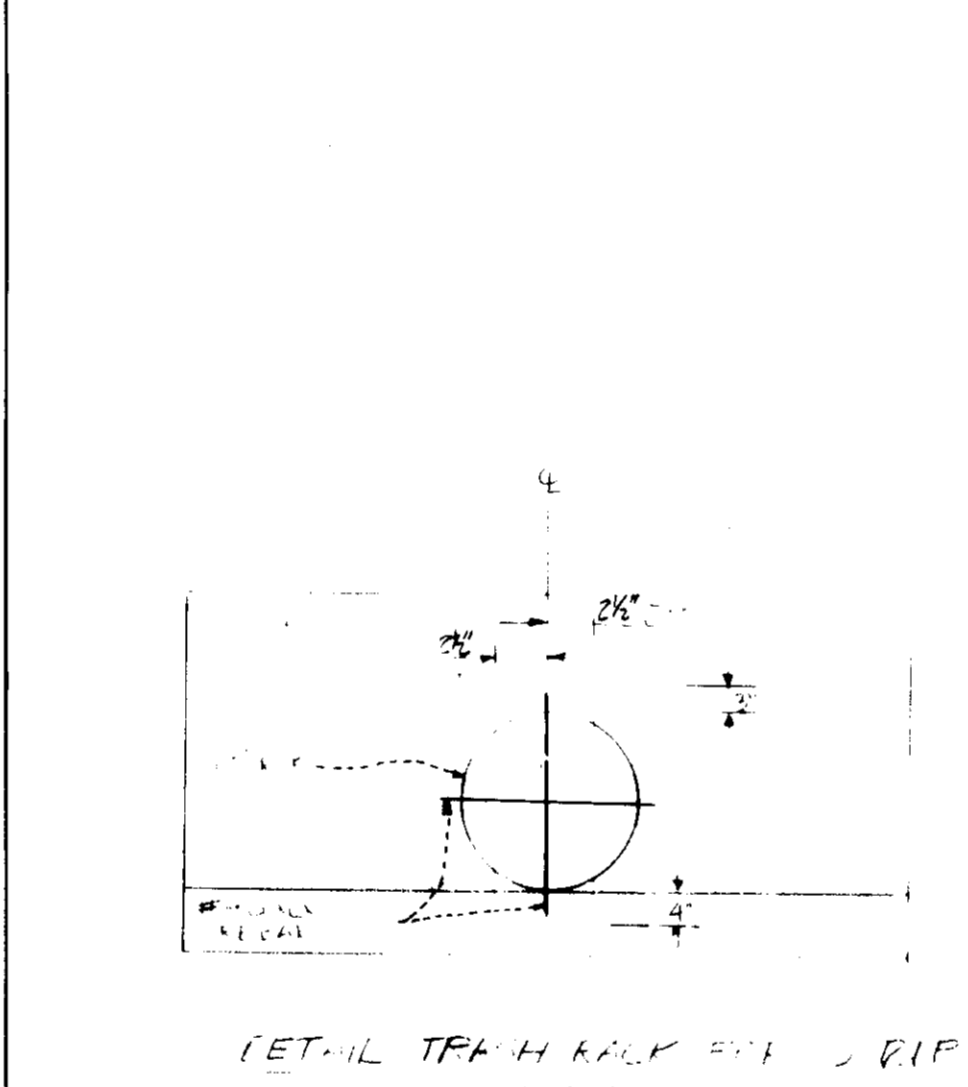
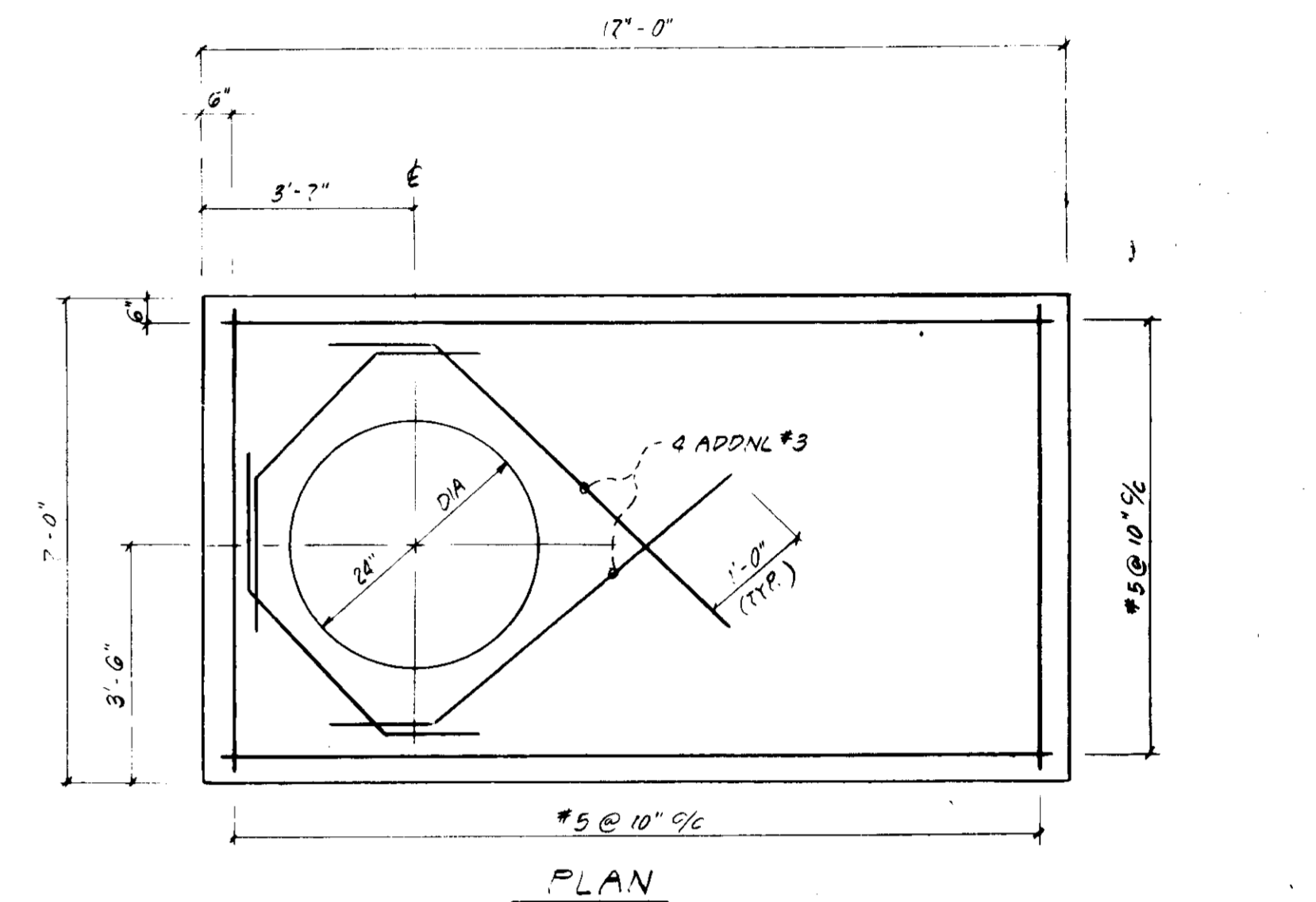
**13. Mowing**  
Immediately after seeding, uniformly mow the specified areas at the minimum rate of two tons per acre of 50 pounds per 1,000 square feet with Green Bright mowers. The mow should be crimped into the ground or otherwise secured.

**14. Revegetation**  
Seedlings or trees may be planted above the two-year storm pool. Varieties and spacing shall be in accordance with the State Forester, Maryland Forestry Service. The State Forestry Service should be contacted to establish details of revegetation plan.

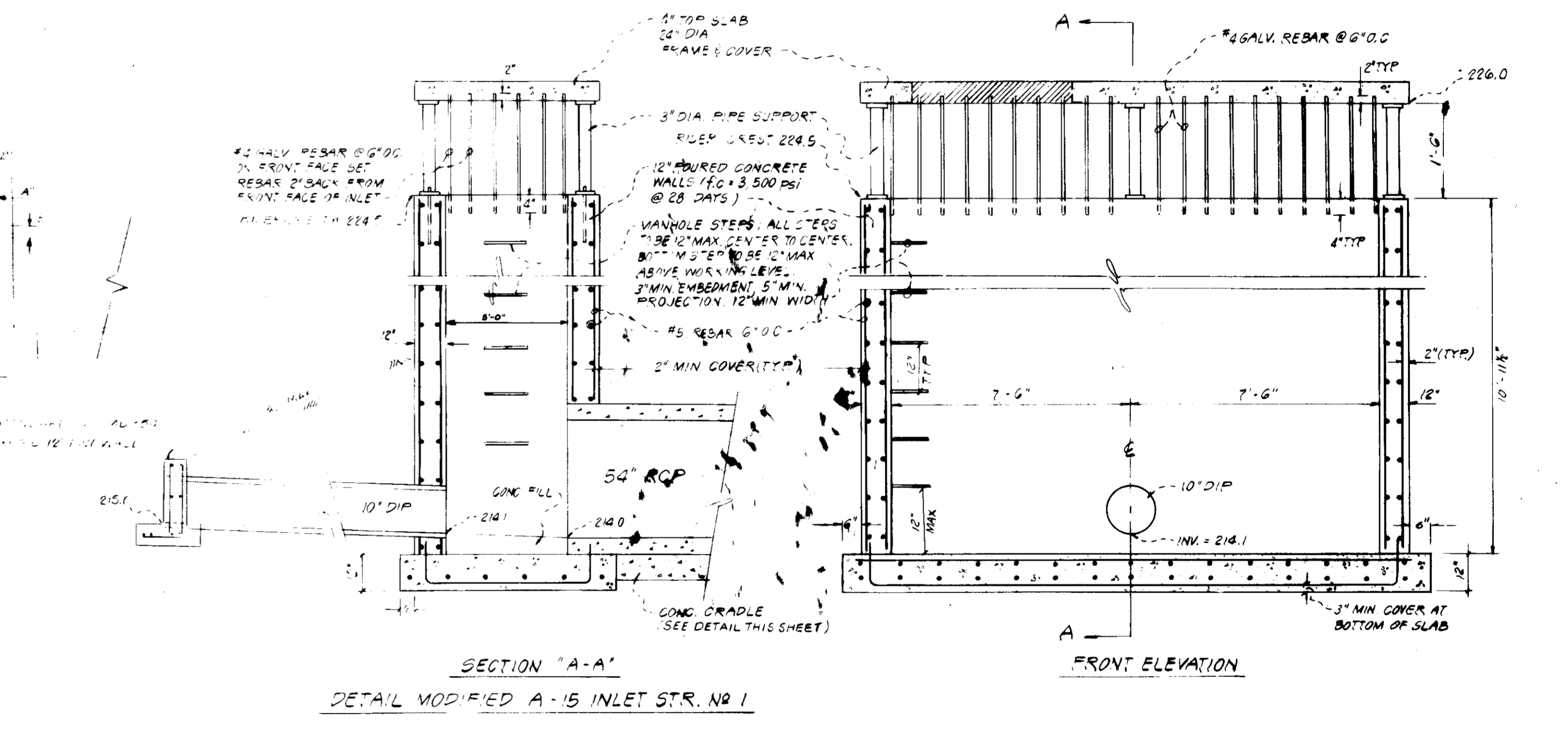
**15. Construction Inspection by Designated Engineer**  
The construction of the pond and embankment shall be under the supervision of a registered engineer. The engineer must certify that the pond and embankment have been built in accordance with the plans and submit such a written certification and a record of construction to the Department of Environmental Protection and the Montgomery Soil Conservation District immediately following the completion of the project. The engineer shall have the responsibility and authority to make minor changes in the plans in order to compensate for unusual soil conditions encountered during construction so long as changes do not adversely affect the integrity of the dam. Major changes to the design which may result from site conditions encountered during construction must be reviewed and approved by the Design Engineer, DEP and the MDC prior to initiation of construction.



**CERTIFICATION BY THE DEVELOPER**  
"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined "As-Built" of the pond within 30 days of completion."  
Sherwood Crossing Limited Partnership  
4/11/86



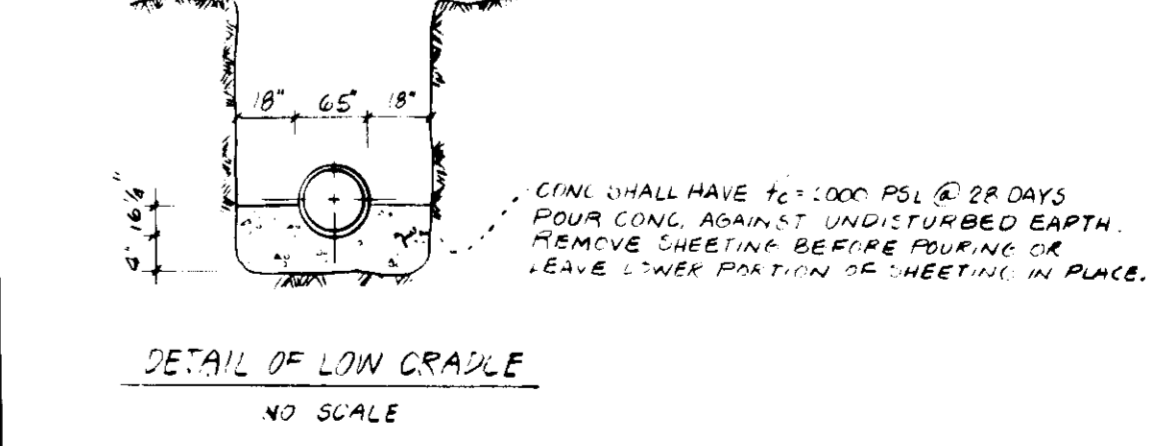
**APPROVED**  
**DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION**  
**HOWARD COUNTY, MARYLAND**  
**DATE 10-28-85**



**CERTIFICATION BY THE ENGINEER**  
"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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINE "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION."  
4/11/86

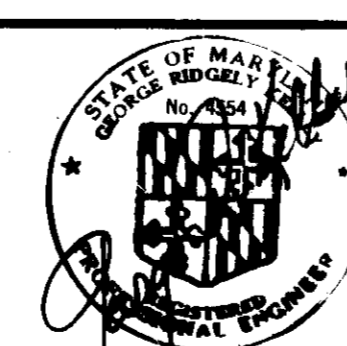
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
APPROVED: Robert W. Zilm 4/9/86  
HOWARD SOIL CONSERVATION DISTRICT

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED: Robert W. Zilm 4/9/86  
HOWARD SOIL CONSERVATION DISTRICT



**APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT**  
4-24-86  
**APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING**  
4-22-86  
**APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC WORKS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
4-17-86

**STORM WATER MANAGEMENT PLAN**  
**SHERWOOD CROSSING**  
1st ELECTION DISTRICT  
**HOWARD COUNTY, MARYLAND**  
OWNER/DEVELOPER: SHERWOOD CROSSING LIMITED PARTNERSHIP  
750 BERING DRIVE HOUSTON, TX 77057  
Design: JCK Sheet 5 of 21  
Draft: JM Date: MAR 85 Job: M-017  
Approved: CO Scale: N.T.S. File: M-117-228

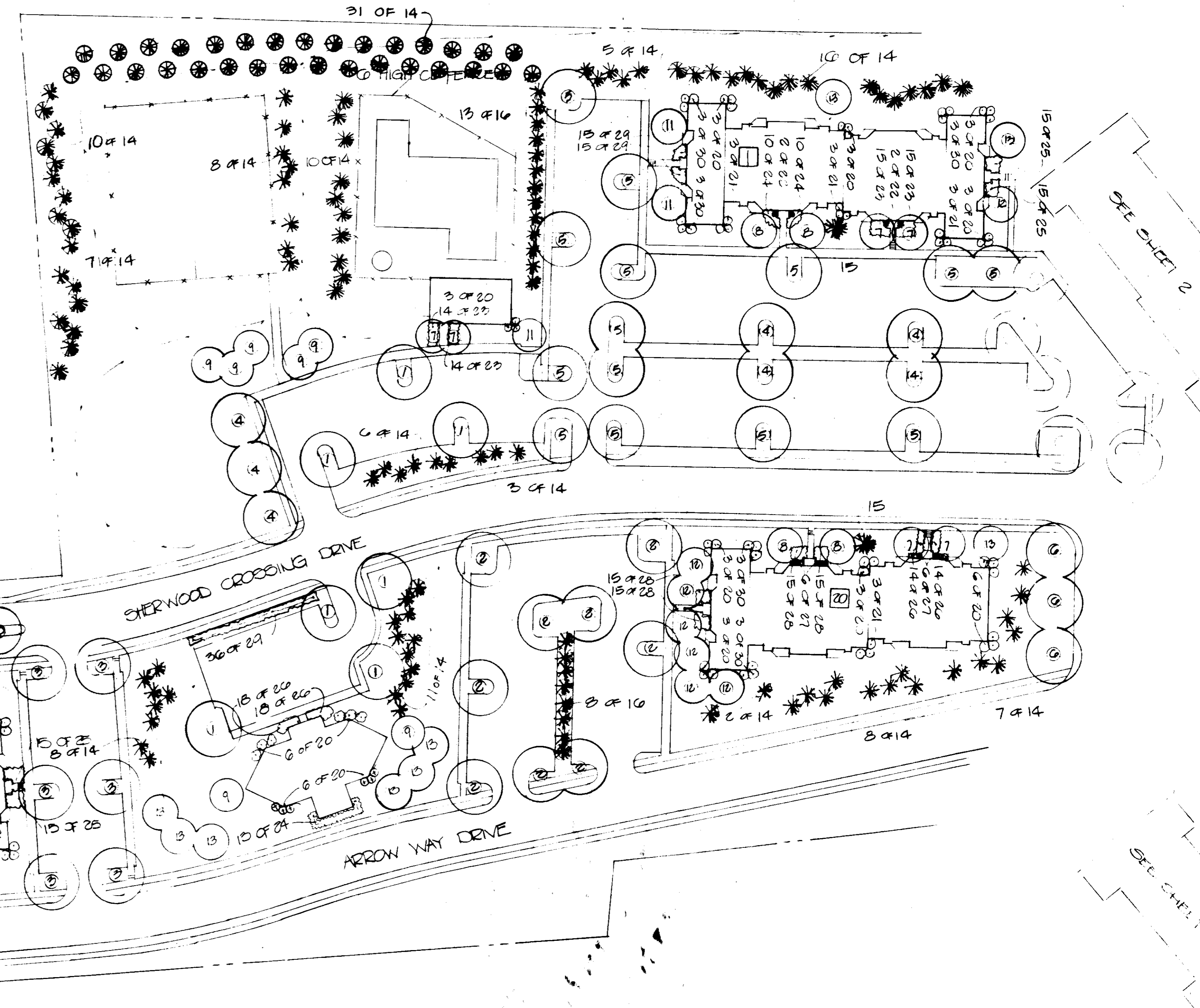


**KAMA CORPORATION**  
ENGINEERS • PLANNERS • SURVEYORS  
13321 New Hampshire Avenue Suite 300  
Silver Spring, Maryland • 20904 • 301-384-4300

REV 9/30/85  
REV 9/11/85  
REV 8/16/85

PLANT MATERIAL LIST

QUANTITY	KEY BOTANICAL - COMMON NAME	SIZE	ROOT REMARKS
25	1 ACER PURSHII OCTOBER ENERGY - OCTOBER ENERGY MAPLE	2-2 1/2' CAL.	CONT.
36	2 ACER SACCHARIN SPEEDY MOUNTAIN - SPEEDY MOUNTAIN MAPLE	2-2 1/2' CAL.	
40	3 FRAXINUS PENSYLVANICA MACHANUS SPECIOSE - ASH	2-2 1/2' CAL.	
28	9 QUERCUS SCALINIA - SCARLET OAK	2-2 1/2' CAL.	
35	5 QUERCUS FALCATA - PIN OAK	2-2 1/2' CAL.	
23	4 TILIA CORDATA - LITTLELEAF LINDEN	2-2 1/2' CAL.	
31	8 BETULA NERA - RIVER BIRCH	7-8' HT.	
38	8 CORNUS FLORIDA - FLOWERING DOGWOOD	7-8' HT.	
37	9 PRUNUS MEDONENSIS - YUENING CHERRY	7-8' HT.	
19	4 PEARUS CALLIFLORA BILURATA - BRADFORD PEAR	2-2 1/2' CAL.	
26	10 PEARUS CALLIFLORA BILURATA - BRADFORD PEAR	7-8' HT.	
70	12 MALUS FLORIBUNDA - FLOWERING CRABAPPLE	7-8' HT.	
31	16 CRATAEGUS PHAENODORUM - WASHINGTON HANDBLIND	7-8' HT.	
248	14 PINUS STROBUS - WHITE PINE	7-8' HT.	
21	7 PINUS STROBUS - WHITE PINE	10-12' HT.	
52	2 PINUS NIGRA - AUSTRIAN PINE	7-8' HT.	
289	20 EUONYMUS SERRULATA - SEEDING EUONYMUS	2-2 1/2' HT.	
96	9 FORSYTHIA SUSPENSAL - WEEPING FORSYTHIA	3-4' HT.	
22	8 ILEX NELLIE STEVENS - NELLIE STEVENS HOLLY	2 1/2-3' HT.	
222	44 JUNIPERUS OBLONGA PAUCIFLORA - BLUE RUIFS JUNIPER	15-24' SPD.	
420	24 JUNIPERUS OBLONGA PAUCIFLORA - BLUE RUIFS JUNIPER	2-2 1/2' SPD.	
480	20 ILEX COMPACTA - COMPACTA HOLLY	15-24' SPD.	
833	20 PALMONTIA LUNATA - LOOPY PALMONTIA	15-24' SPD.	
104	20 THUJA TECHNY - TECHNY ARBORVITAE	3-2 1/2' HT.	
464	20 TAXUS QUERULASTA DENSAL - DENSAL YEW	10-24' SPD.	
201	24 EUONYMUS ALATUS COMPACTA - BURNING BUSH	2-2 1/2' HT.	
123	30 VIBURNUM T. MARISSI MARISSI VIBURNUM	3-3 1/2' HT.	



APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 10-28-85  
*[Signature]*

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* 4-21-86  
DATE

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*[Signature]* 4-22-86  
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 4-11-86  
DATE

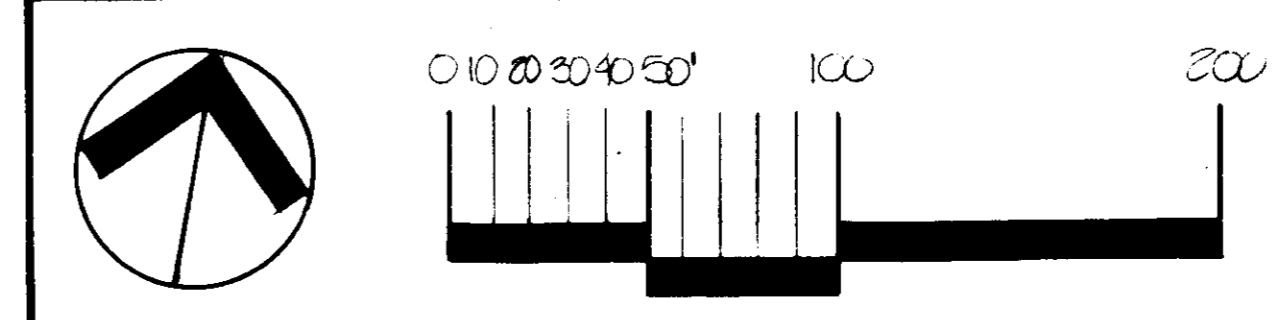
*[Signature]* 4-17-86  
DATE



PLANTING ADDED REC./ADM BUILDING 9/17/85  
PINES ADDED 8/20/85 PINES ADDED (31) 9/30/85 BY KMMW  
LANDSCAPE DEVELOPMENT PLAN 3/19/85

LANDSCAPE DEVELOPMENT PLAN  
PARCELS TAX MAP # 27  
SHERWOOD CROSSING  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER:  
SHERWOOD CROSSING LIMITED PARTNERSHIP  
910 P. URBON REAL ESTATE DEVELOPMENT COMPANY  
700 EERING DRIVE HOUSTON, TEXAS 77057



LAWRENCE READER ASSOCIATES INC.  
2410 Parallel Lane Silver Spring, Maryland 20904  
Telephone: 301-3026

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OF  
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APPROVED  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 DATE 10-28-85  
*[Signature]*

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 SYSTEMS: HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* DATE 4-27-86  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
*[Signature]* DATE 4-22-86  
 APPROVED: DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
*[Signature]* DATE 4-22-86  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* DATE 4-11-86  
 DESIGNED BY: *[Signature]* DATE 4-17-86  
 CHECKED BY: *[Signature]* DATE 4-17-86

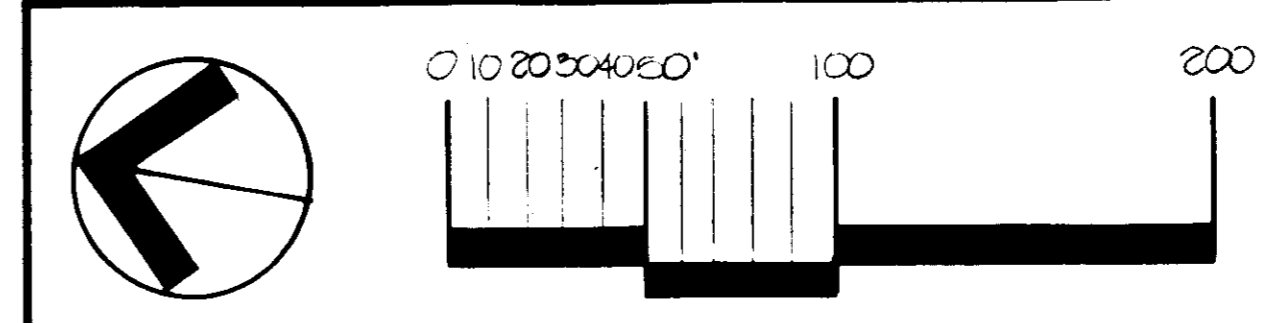
NOTE: SEE PLANT LIST SHEET 1 OF 3

PLANS ADDED 8/20/85  
 LANDSCAPE DEVELOPMENT PLAN 3/19/85



LANDSCAPE DEVELOPMENT PLAN  
 PARCEL "A" TAX MAP # 37  
**SHERWOOD CROSSING**  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER:  
 SHERWOOD CROSSING LIMITED PARTNERSHIP  
 40 BURROW REAL ESTATE DEVELOPMENT COMPANY  
 750 PERING DRIVE HOUSTON, TEXAS 77057



**LAWRENCE READER STATES INC.**  
 landscape architects/planners  
 2429 Parallel Lane Silver Spring, Maryland 20994  
 Telephone: 384-3126

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APPROVED  
 DIVISION OF LAND DEVELOPMENT &  
 ZONING ADMINISTRATION  
 HOWARD COUNTY, MARYLAND  
 DATE 10-28-85

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER  
 DATE 1-21-86  
 APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 PLANNING DIRECTOR  
 DATE 4-22-86  
 APPROVED DIVISION OF LAND DEVELOPMENT  
 AND ZONING ADMINISTRATION  
 DATE 11-22-86  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR  
 DATE 8-14-86  
 CHIEF CLERK OF ENGINEERING  
 DATE 4-12-86



LANDSCAPE DEVELOPMENT PLAN  
 PARCEL "A" TAX MAP # 37  
**SHERWOOD CROSSING**  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER:  
 SHERWOOD CROSSING LIMITED PARTNERSHIP  
 910 BURBON REAL ESTATE DEVELOPMENT COMPANY  
 760 PERING DRIVE HOUSTON, TEXAS 77057

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