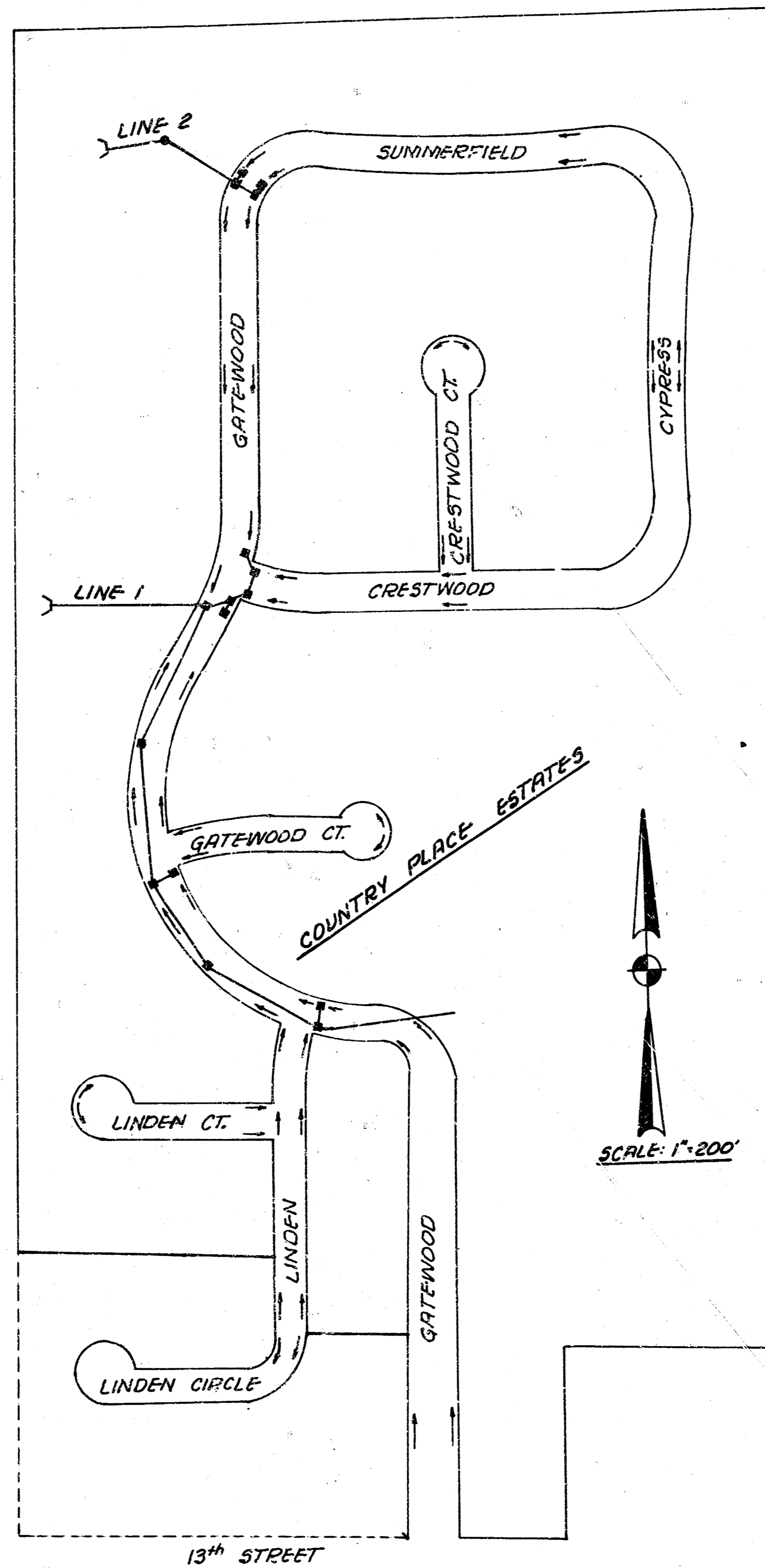


# STORM WATER SEWER NO. 153

**GENERAL NOTES**

1. CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY SEWER CONTRACTORS; AND CONTACT RELEVANT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THE FINE ARTS OF THIS PROJECT SITE DEVELOPMENTS.
2. FIELD ENGINEER SHALL TAKE TIES ON ALL IRONS AND THIMBLES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND THIMBLES DISTURBED DURING CONSTRUCTION.
3. THE CURB INLETS AS NOTED ON THE PLANS MAY VARY FROM PROPOSED PAVING PLANS. THE FIELD ENGINEER SHALL LOCATE CURB INLETS WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
4. ALL CORRUGATED METAL PIPE SHALL BE FULLY COATED (FC) BOTH INSIDE AND OUTSIDE WITH BITUMINOUS OR POLYESTER AS SPECIFIED IN AASHTO DESIGNATION M246-78, TYPE B. ALL SUCH PIPES FOR SIZES 21" AND LESS DIAMETER SHALL HAVE HELICALLY CORRUGATIONS. ALL SUCH PIPES FOR SIZES 24" AND LARGER DIAMETER SHALL HAVE FULLY PAVED (FP) SMOOTH FLOW INTERIORS.
5. ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.
6. PARTS WORK DOWNSTREAM FROM HEADWALLS AND FOR RIP-RAP SHALL BE PAID FOR IN ITEMS BID FOR HEADWALLS, PIPES AND/OR RIP-RAP.
7. TREES TO BE REMOVED ARE MARKED WITH ~~✗~~ EXCEPT THAT ANY TREE MARKED FOR REMOVAL WHICH IN THE OPINION OF THE ENGINEER CAN BE SAVED, SHALL BE SAVED.
8. HEADWALLS AT PIPE OUTFALL SHALL BE CONSTRUCTED TO ALIGN WITH THE SLOPE OF BANKS IN ORDER THAT WALL PROTRUSION IS MINIMUM. WHERE SUCH PROTRUSION CANNOT BE AVOIDED, FILL AROUND THE WALLS AT APPROXIMATELY 3:1 SIDE SLOPE SO HEADWALL APPEARS ENTIRELY RECESSED.
9. CONTRACTOR SHALL HAVE THE OPTION TO INSTALL PRE-CAST TYPE 1-A CURB INLET IN LIEU OF THE BRICK TYPE CONSTRUCTION, SEE STANDARD DETAIL PRE-CAST TYPE 1-A INLET DATED AUGUST, 1979.



DEAN SELLERS, ACTING CITY ENGINEER  
CITY OF WICHITA, KANSAS

PROJECT NO. 468-76-245-80716-000-000-001

DATE: \_\_\_\_\_

BM 186.09 R.R. Spk. NW face Orange hedge in hedge row N-3 near SE cor Crestwood & Gatewood.

SCALE 1" = 20'

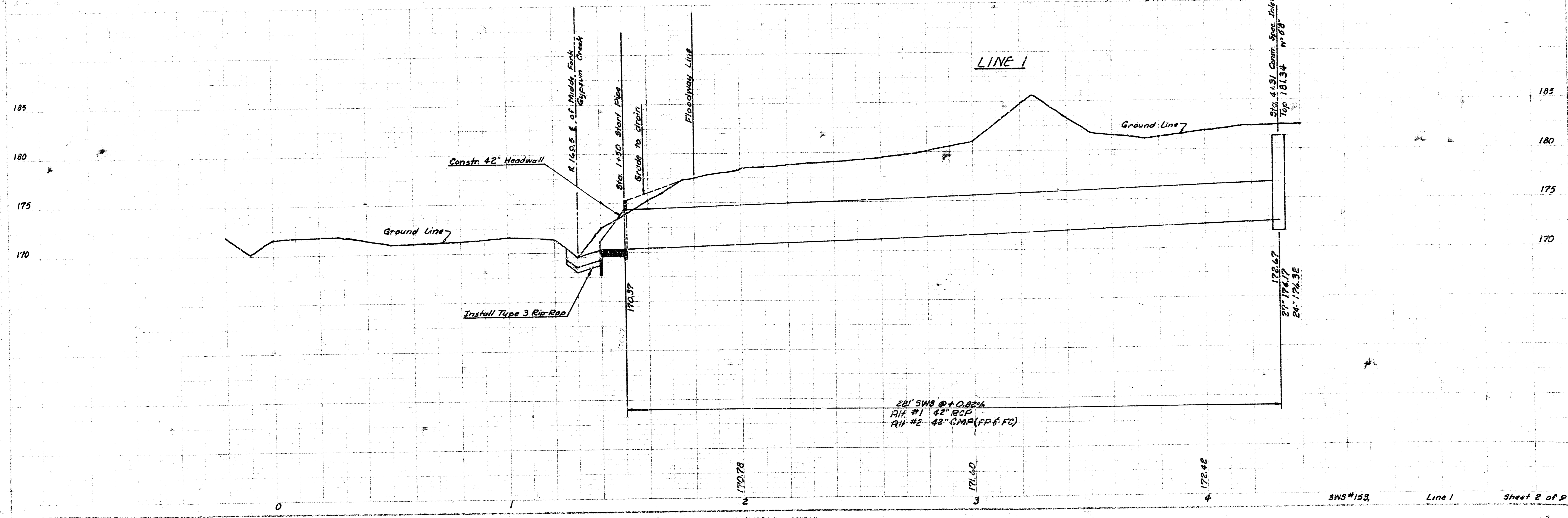
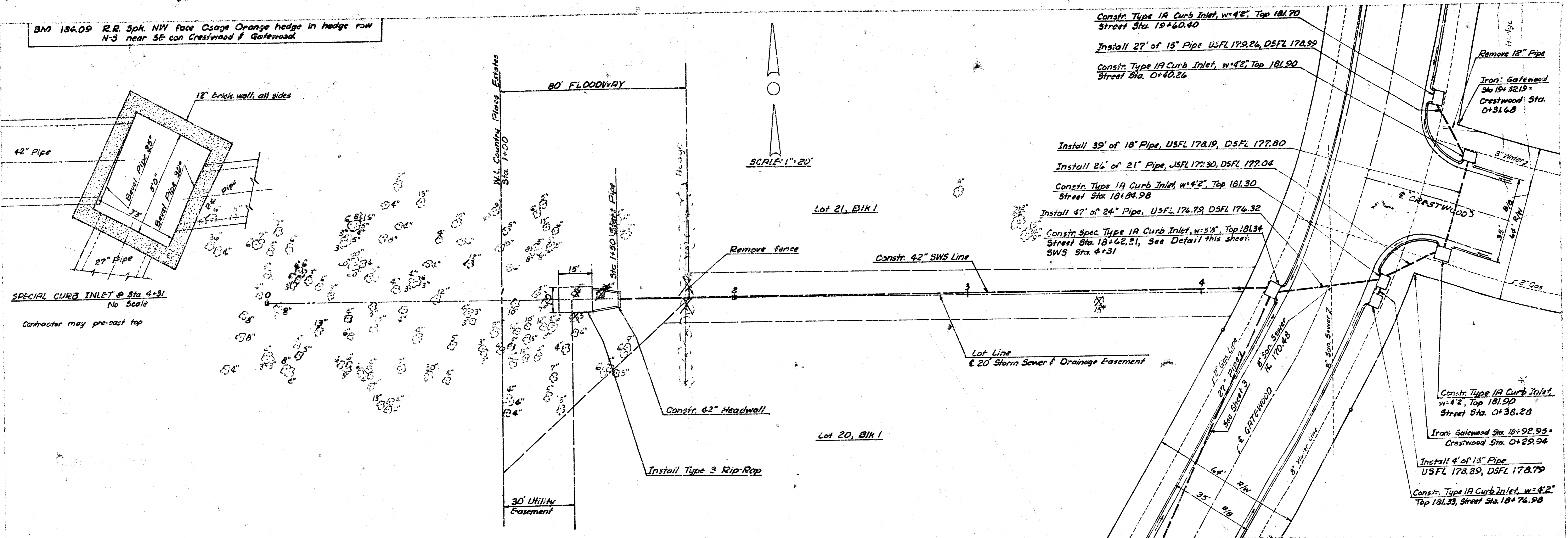
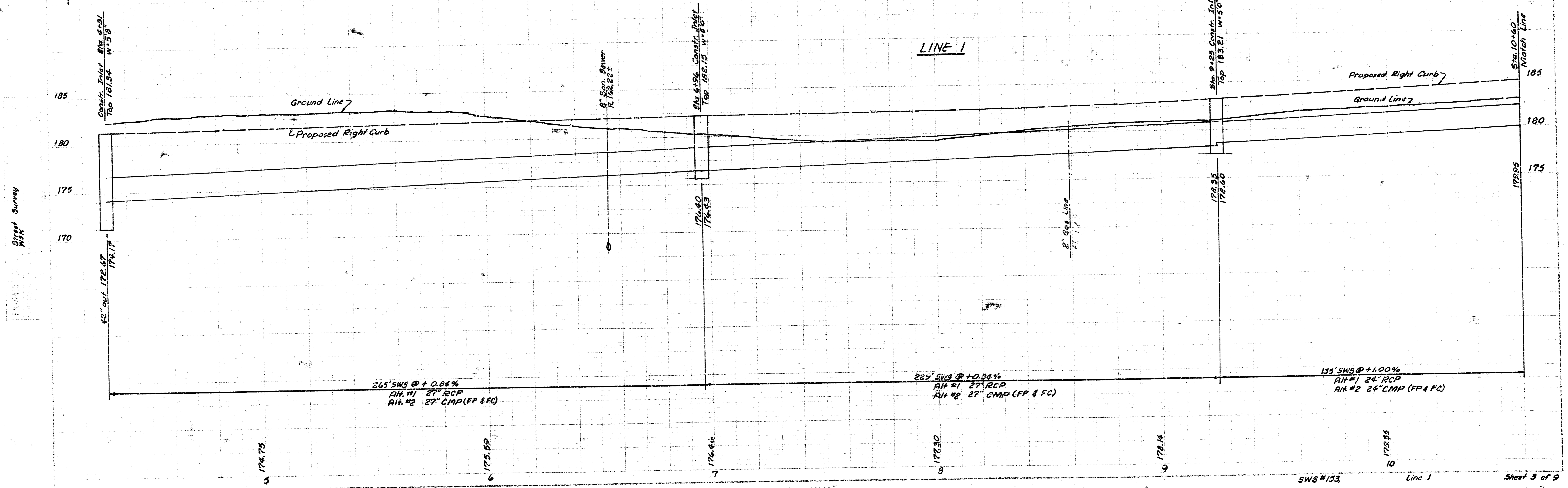
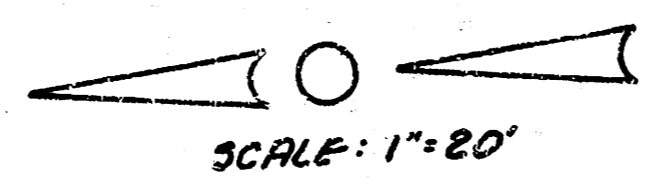
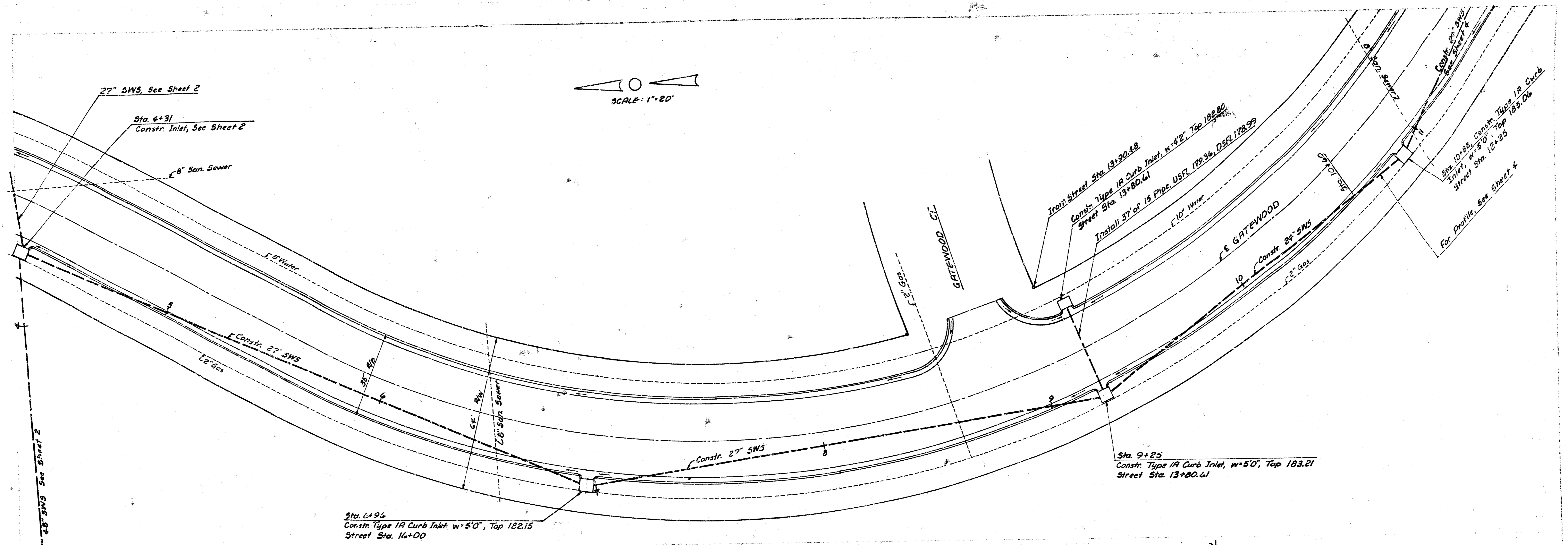


PLATE 1, FLOODWAY  
 SHEET 2 OF 2

FILMED FROM THE BEST AVAILABLE COPY.....

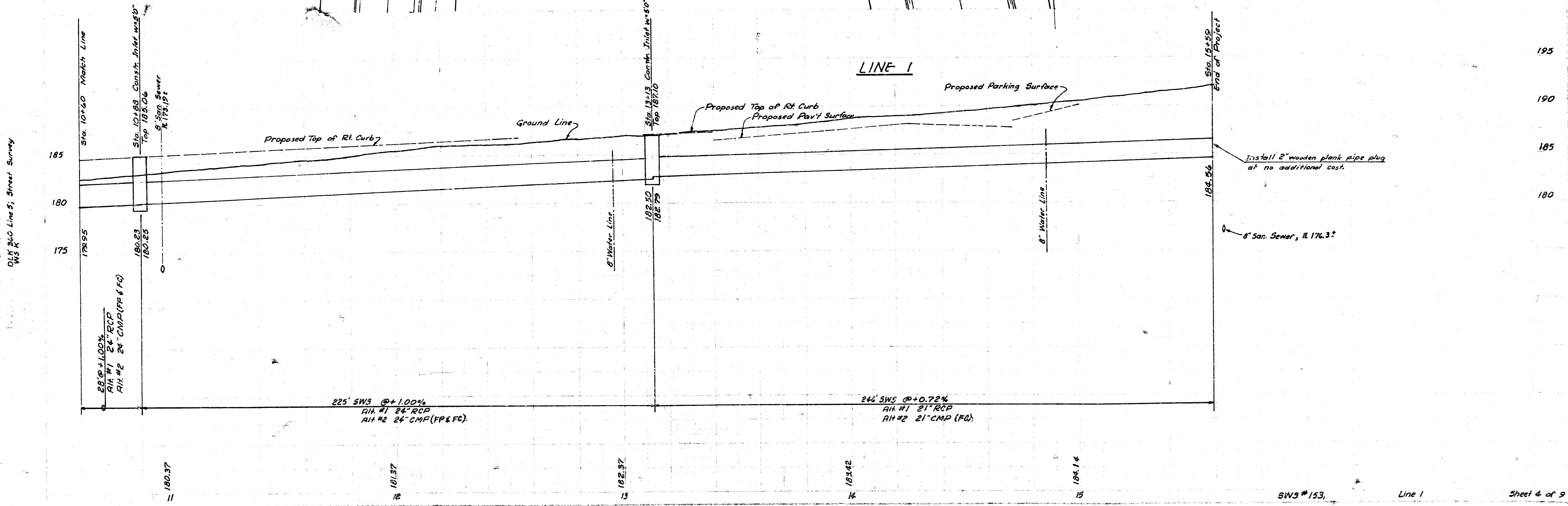
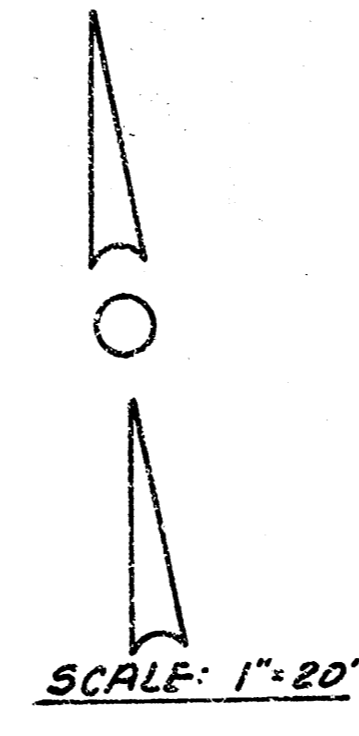
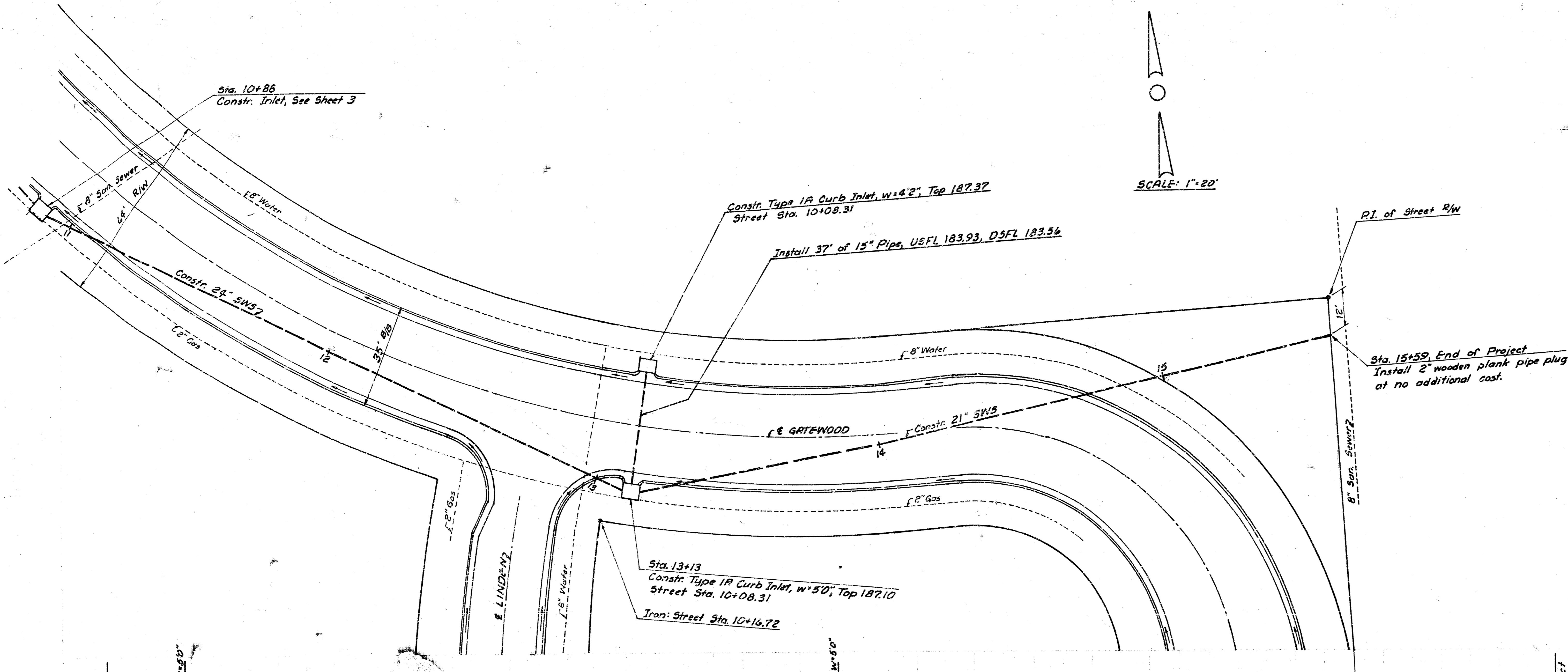


Street Survey  
M&M

PLANNED ENGINEERING  
PLANNING & SURVEYING  
12300 40th Ave N  
P.O. Box 10000  
Minneapolis, MN 55410

SWS #153 Line 1 Sheet 3 of 9

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DLX 360 Line 5, Street Survey  
 WS R

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BM 186.16 R.R. Spk N-face P.P. E-side Gatewood.  
30' ± S. of P.C. on W.L. Lot 1, Blk 2.

Lot 26, Blk 1

Constr. Type 1A Curb Inlet, w=4'2" Top 184.79  
Street Sta. 25+81.88

Install 4' of 15" Pipe, USFL 181.00, D3FL 180.90

Constr. Type A, 5' Manhole

Constr. 21" SWS

Remove fence  
20' Storm Sewer & Drainage Eas'tmt.

Constr. 21" SWS

Constr. Headwall

Install Type 3 Rip-Rap

Sta 3+03.14 Constr. Type 1A Curb Inlet, w=4'2"  
Top 184.73, Street Sta. 25+75

Constr. Type 1A Curb Inlet, w=4'2", Top 184.82  
Street Sta. 25+84.55

Install 4' of 15" Pipe, USFL 181.50, D3FL 181.40

Constr. Type 1A Curb Inlet, w=4'2", Top 184.74  
Street Sta. 25+75

Install 39' of 15" Pipe, USFL 181.30, D3FL 180.90

SCALE: 1"=20'

Lot 1, Blk 2

Lot 25, Blk 1

Lot 24, Blk 1

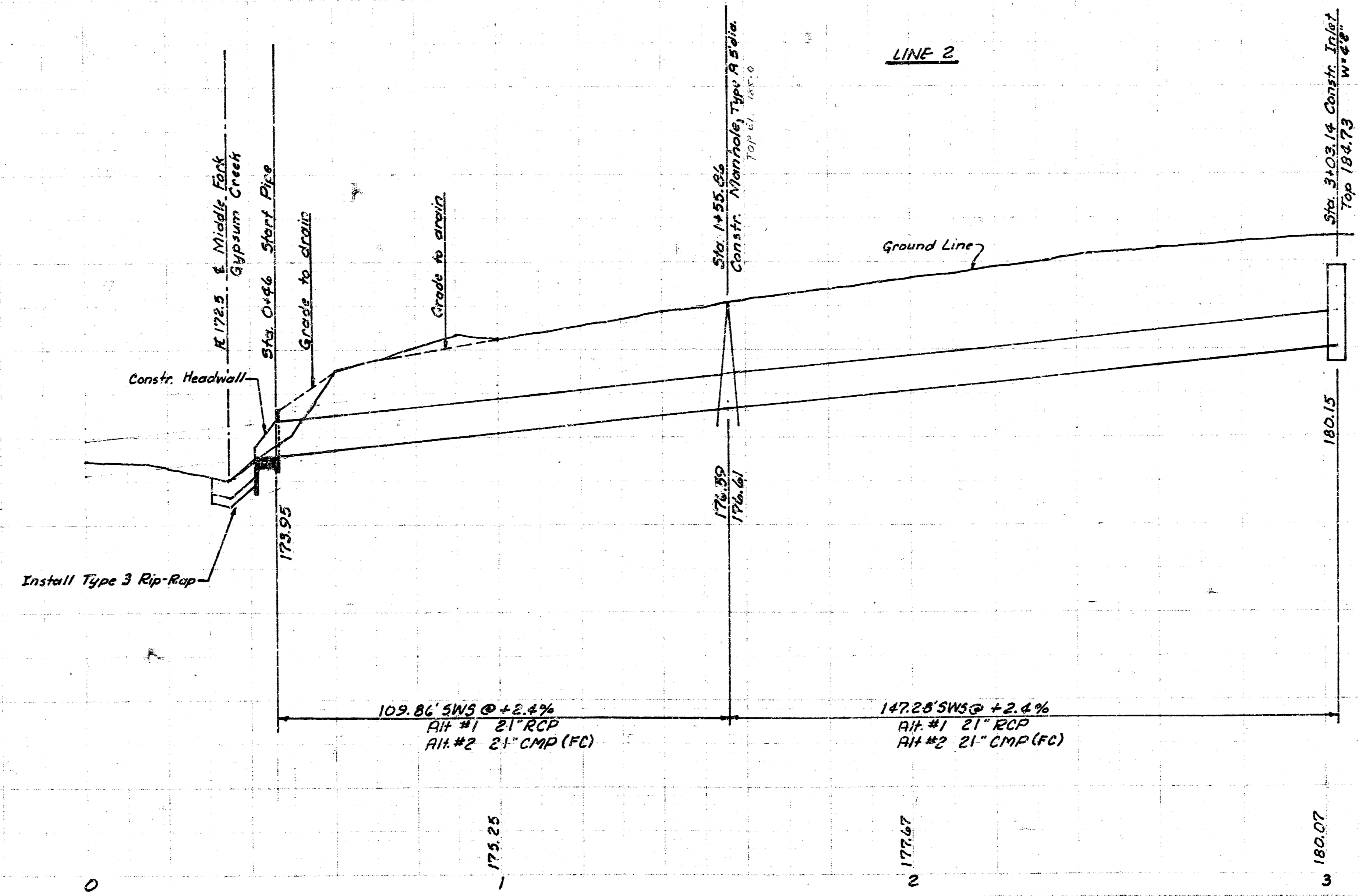
Lot 8, Blk 2

L.W.L. Country Place Estates

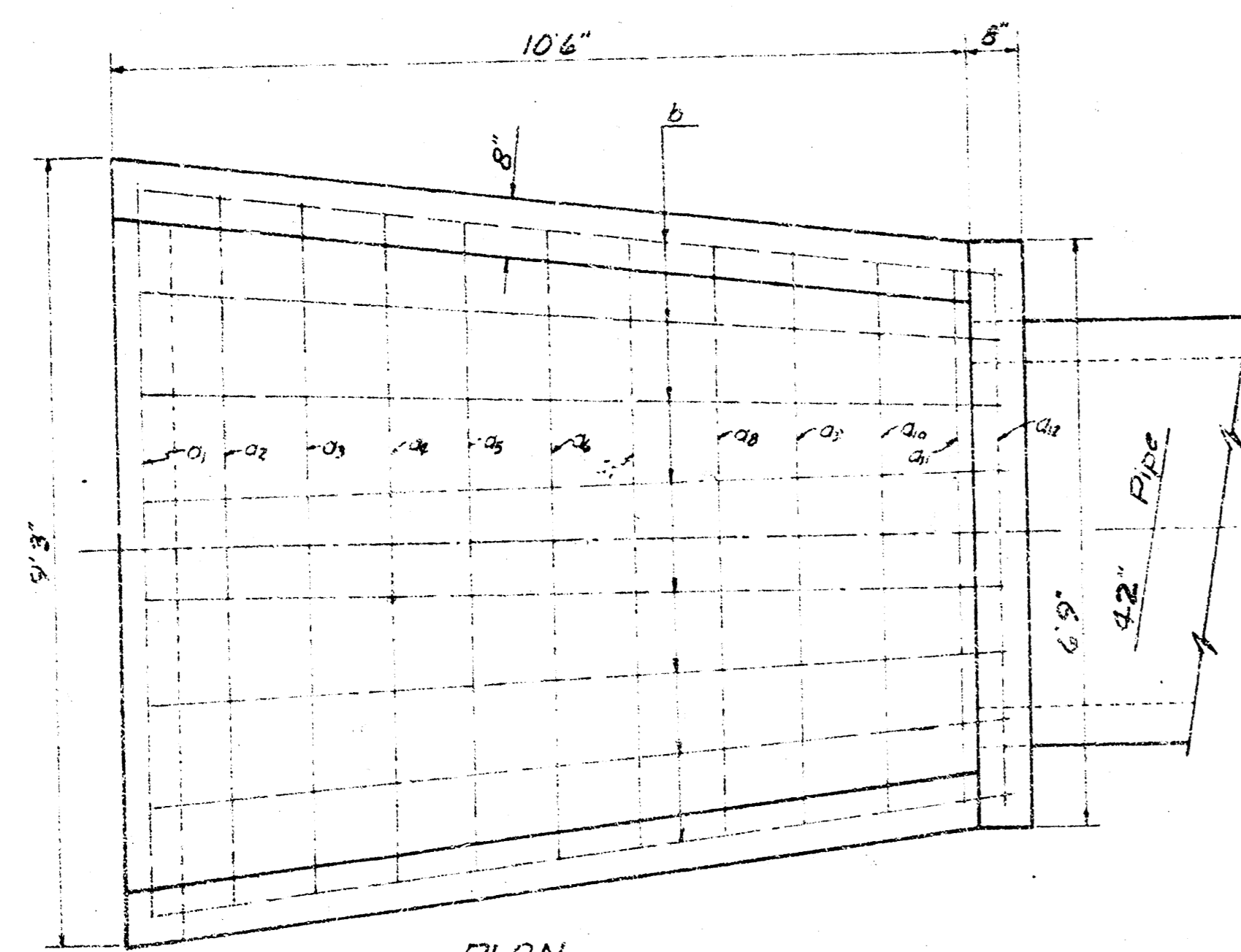
D&K, S&O Line 3

FLOODWAY

E-GATEWOOD



FILMED FROM THE BEST AVAILABLE COPY .....

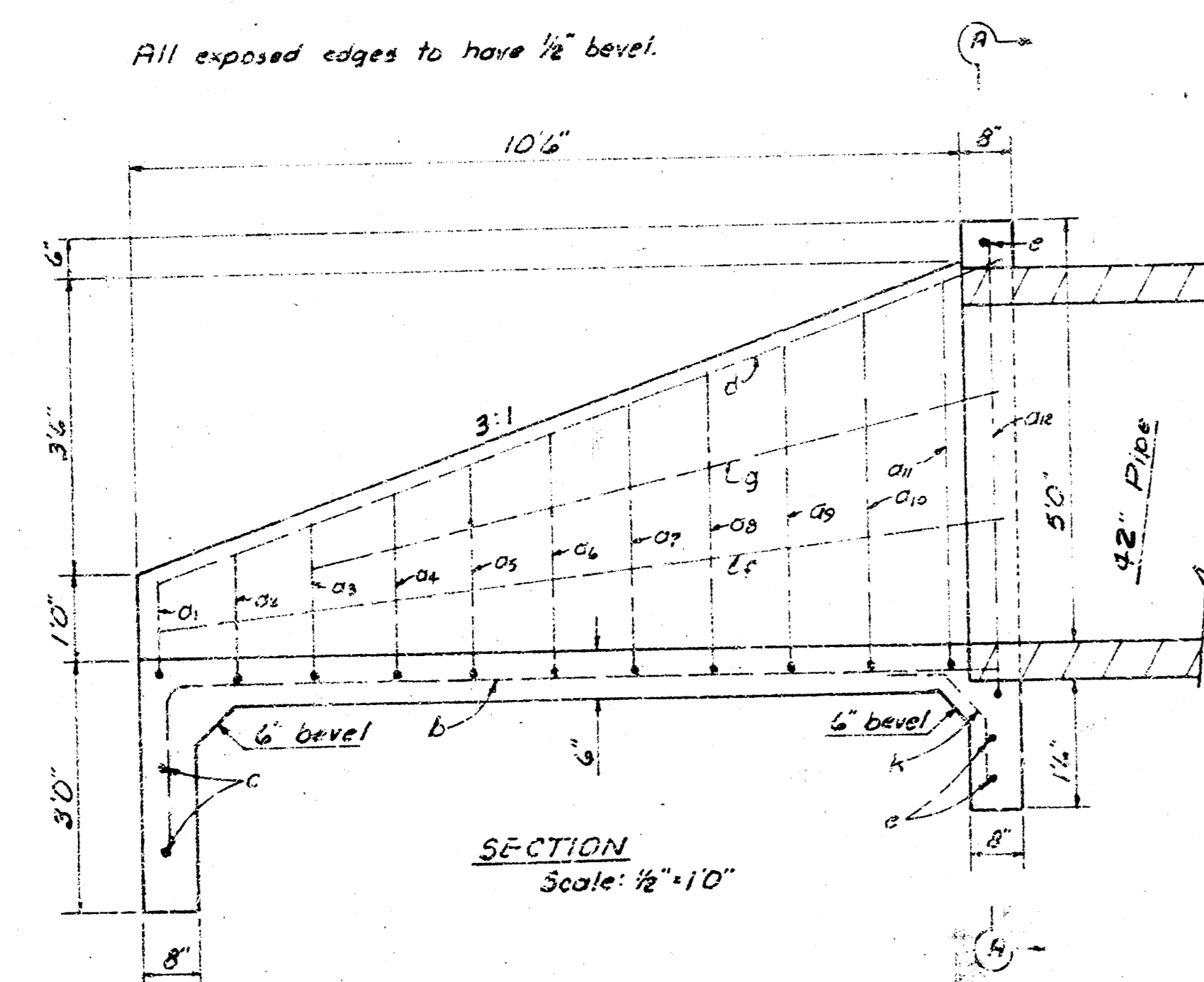


PLAN  
Scale: 1/2"=10'

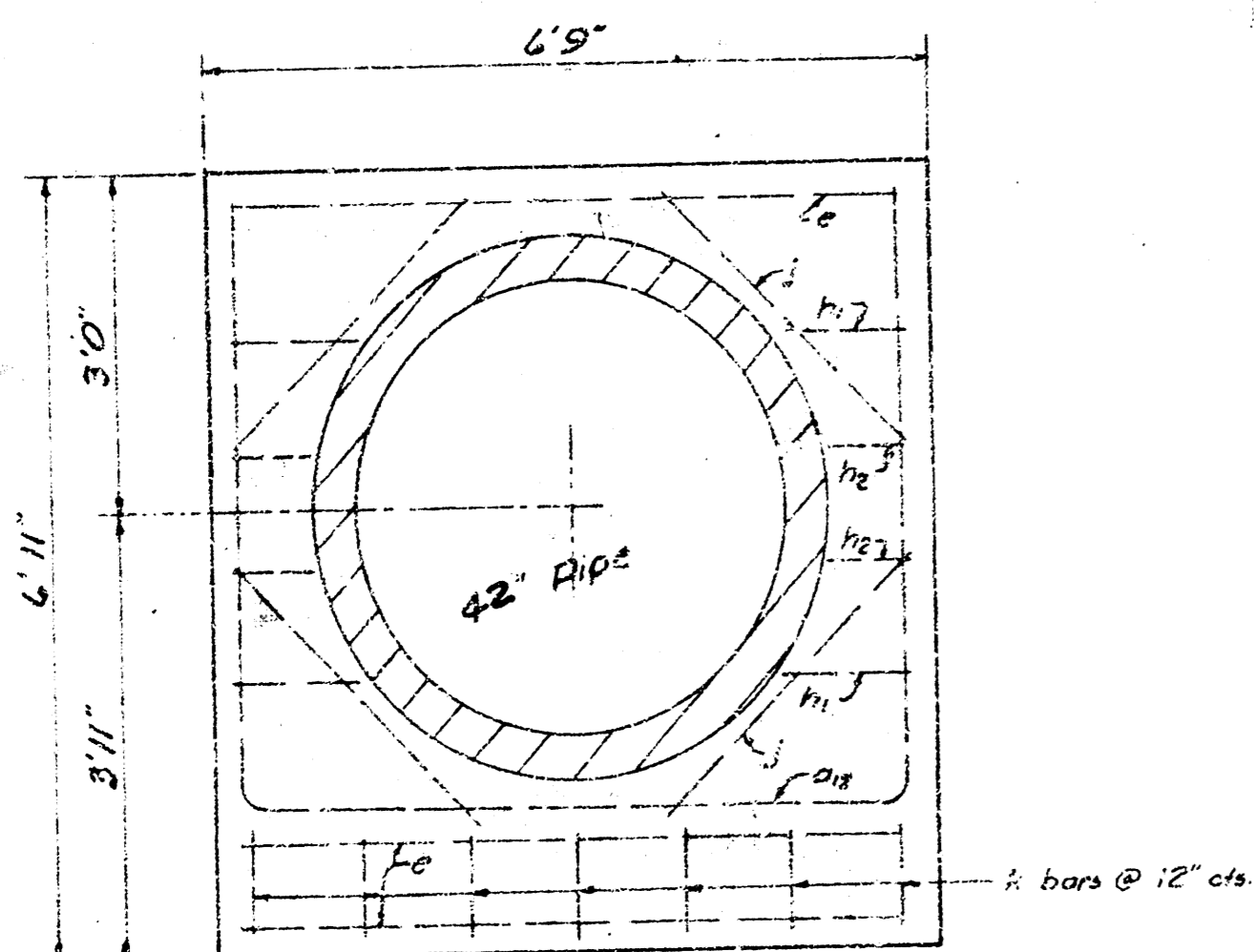
TABLE OF QUANTITIES				
BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a <sub>1</sub>	1	10'0"		7.24
a <sub>2</sub>	1	11'3"		7.52
a <sub>3</sub>	1	11'8"		7.58
a <sub>4</sub>	1	12'7"		8.07
a <sub>5</sub>	1	12'4"		8.35
a <sub>6</sub>	1	13'0"		8.48
a <sub>7</sub>	1	13'5"		8.56
a <sub>8</sub>	1	13'10"		9.24
a <sub>9</sub>	1	14'3"		9.52
a <sub>10</sub>	1	14'8"		9.80
a <sub>11</sub>	1	15'2"		10.13
a <sub>12</sub>	1	14'10"		11.24
b	8	12'7"		47.25
c	2	8'4"		11.36
d	2	11'4"		15.36
e	3	3'5"		12.91
f	2	10'9"		14.36
g	2	9'0"		12.02
h <sub>1</sub>	4	1'2"		3.12
h <sub>2</sub>	4	8"		1.78
j	4	3'3"		8.68
k	7	2'6"		11.69
Rebars (lbs)				265.07
Concrete (C.Y.)				4.75

All rebars to be #4

All exposed edges to have 1/2" bevel.

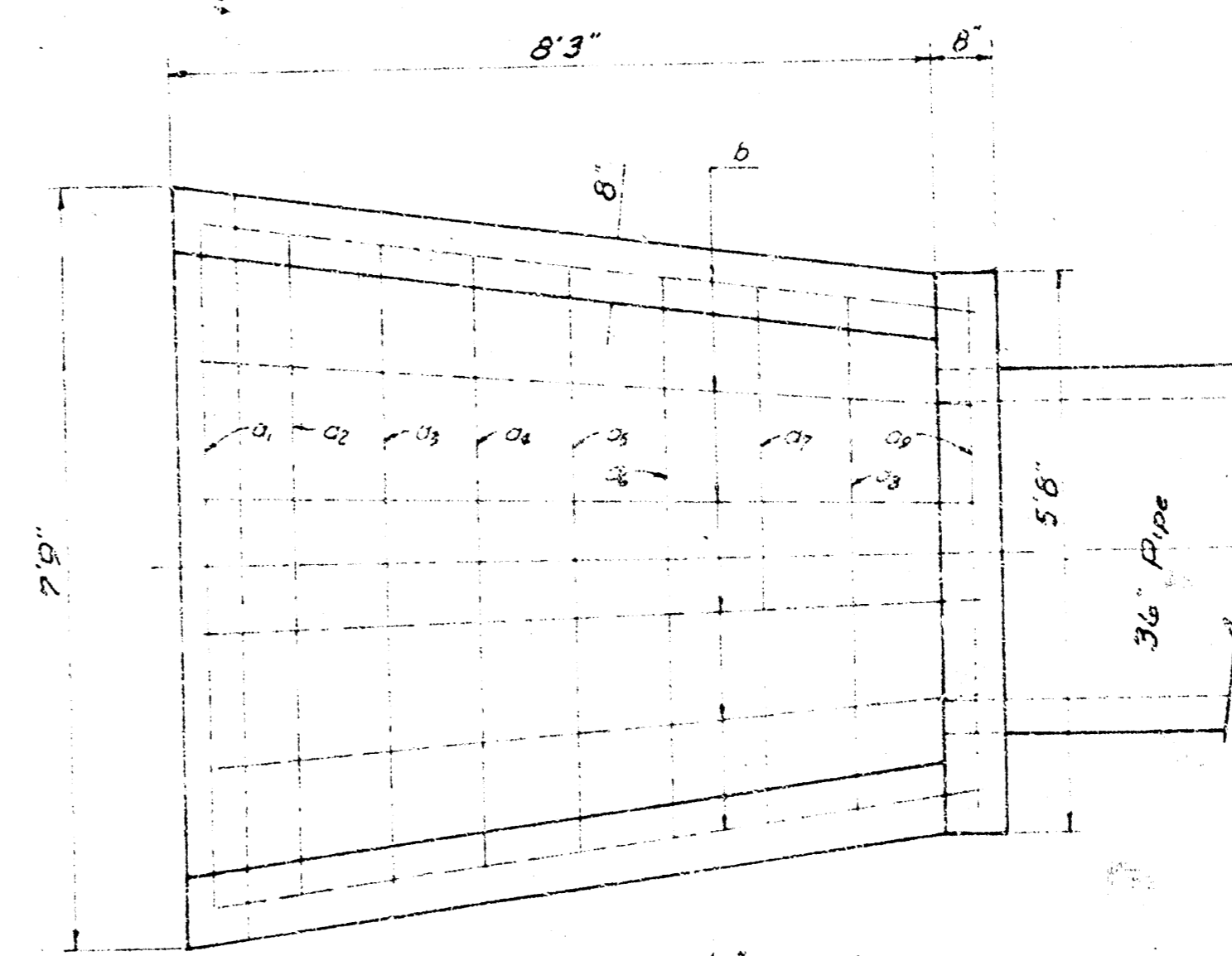
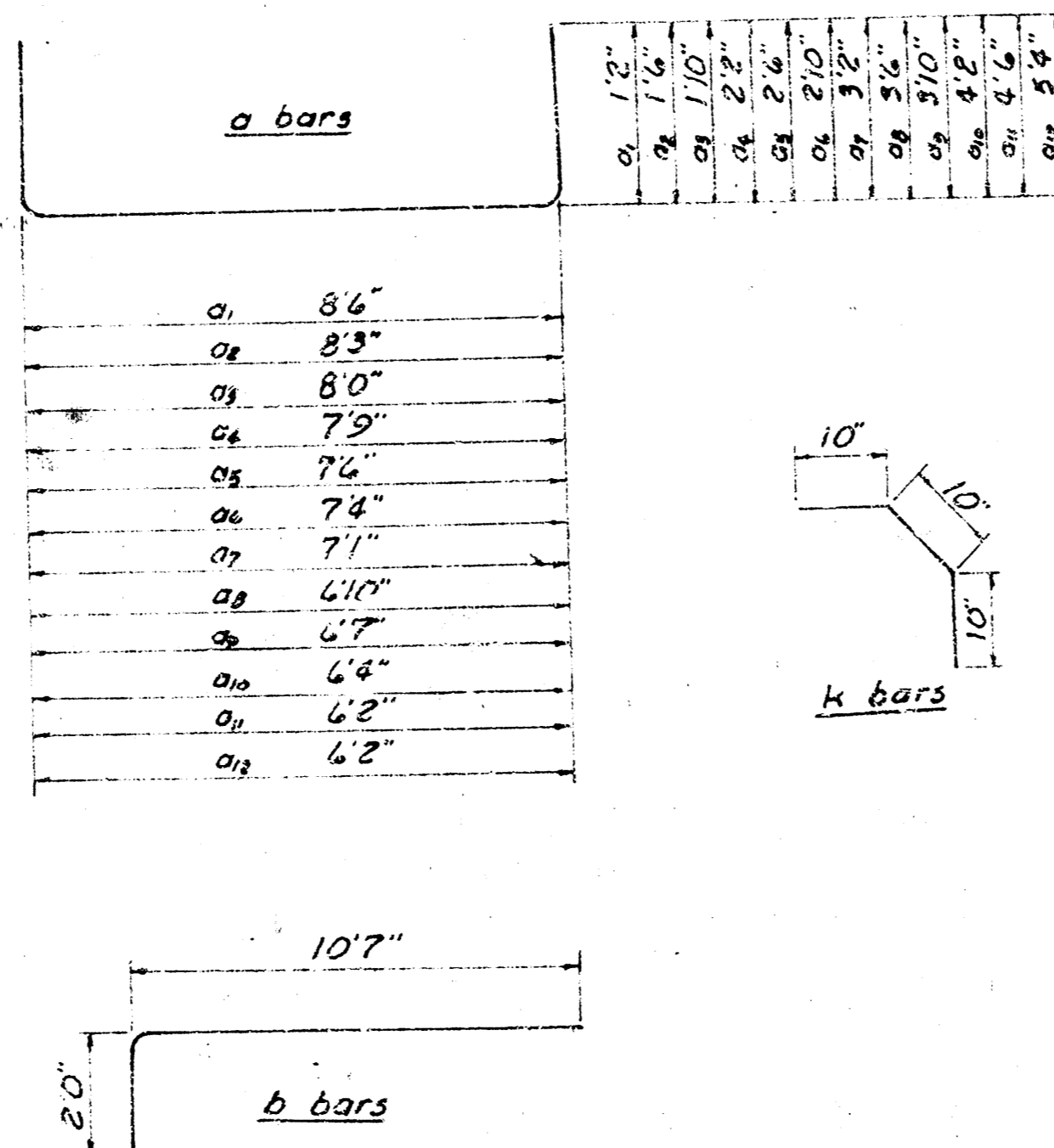


SECTION  
Scale: 1/2"=10'



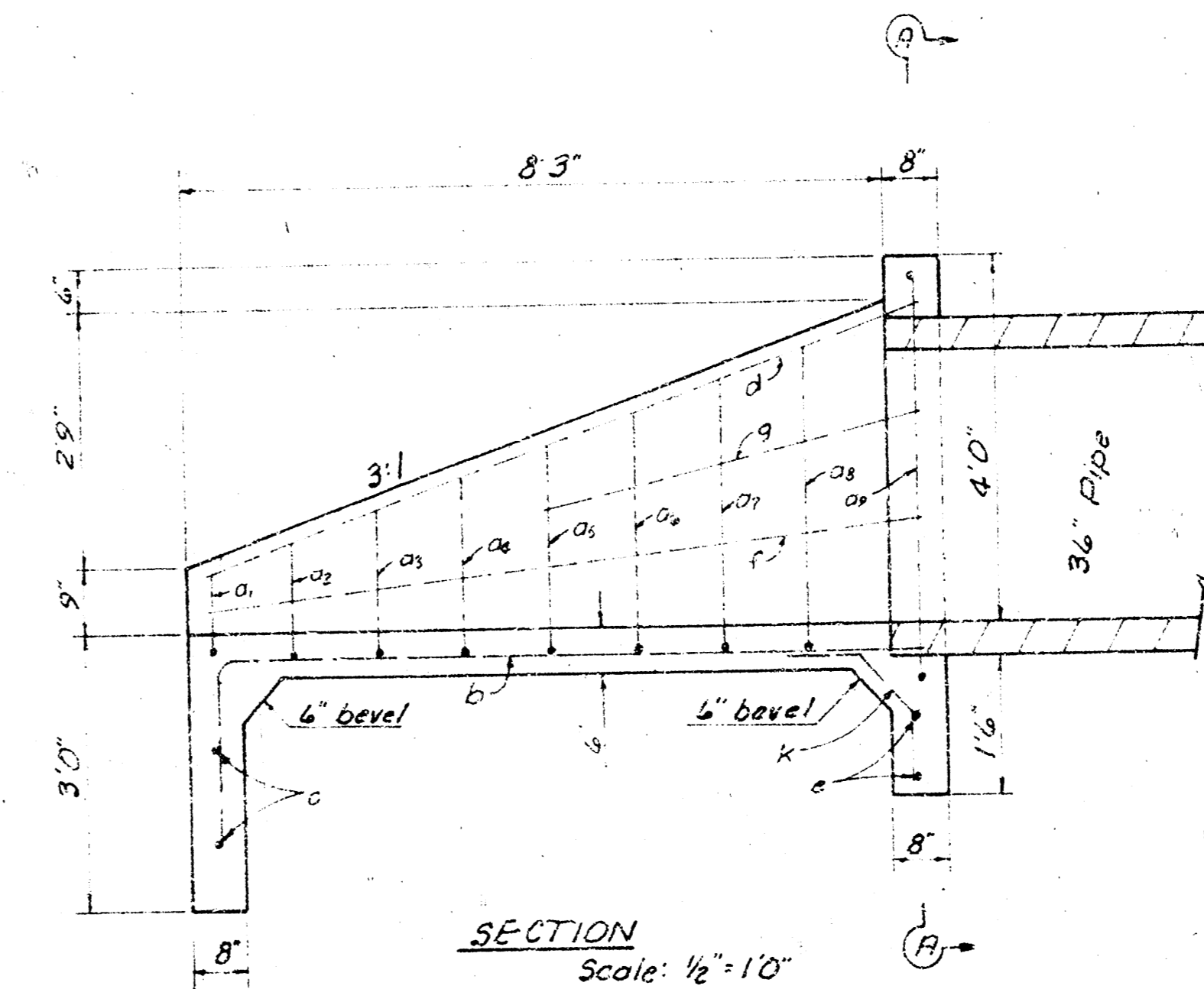
SECTION A-A  
Scale: 1/2"=10'

HEADWALL FOR 42" PIPE



PLAN  
Scale: 1/2"=10'

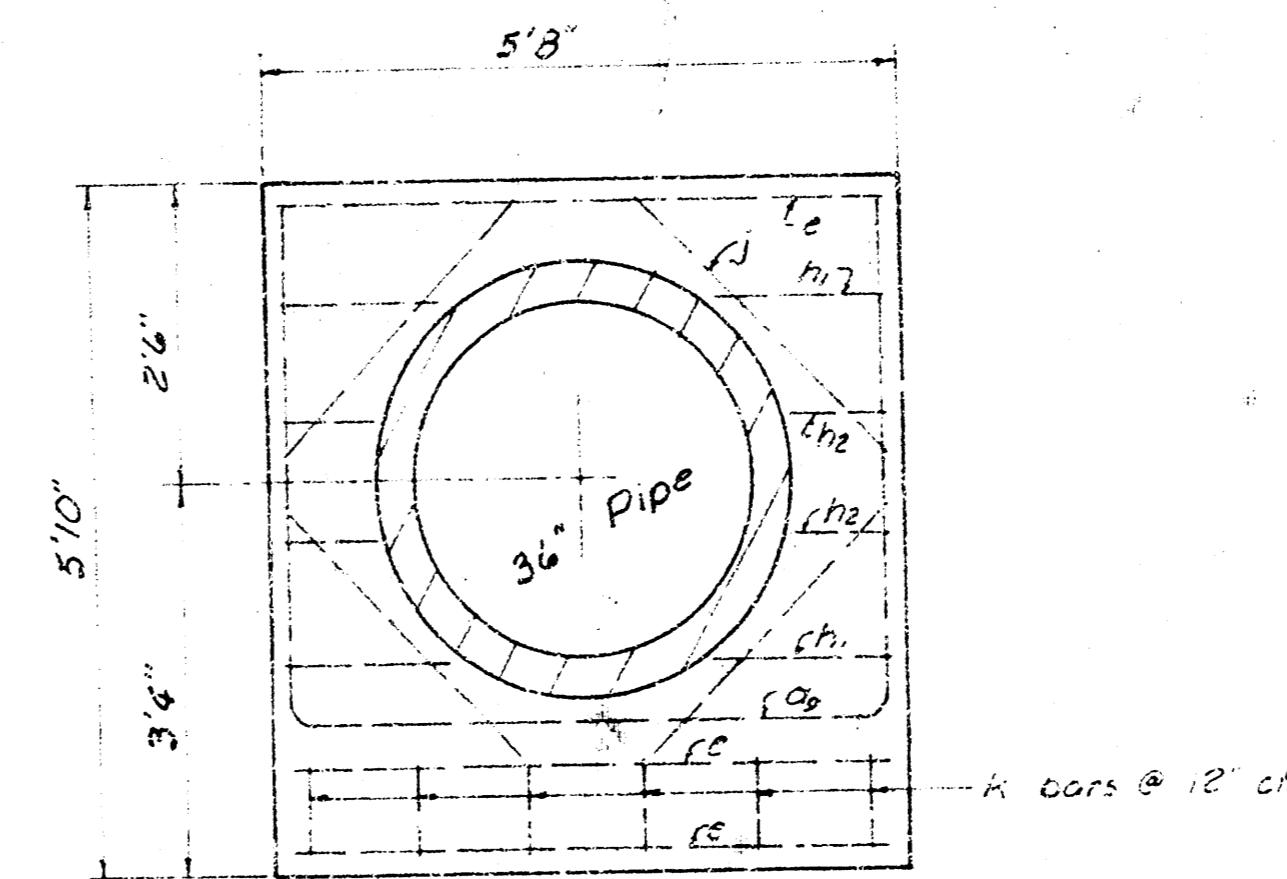
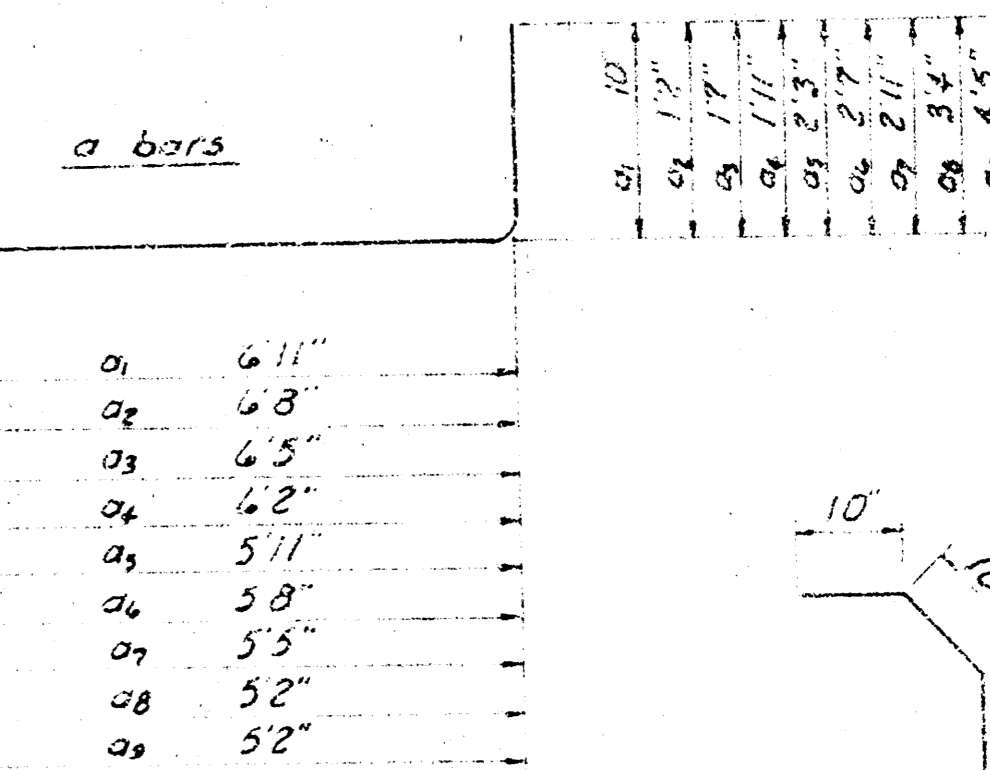
All exposed edges to have 1/2" bevel



SECTION  
Scale: 1/2"=10'

TABLE OF QUANTITIES				
BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a <sub>1</sub>	1	8'7"		5.73
a <sub>2</sub>	1	9'0"		6.01
a <sub>3</sub>	1	9'7"		6.40
a <sub>4</sub>	1	10'0"		6.68
a <sub>5</sub>	1	10'5"		6.96
a <sub>6</sub>	1	10'10"		7.24
a <sub>7</sub>	1	11'3"		7.52
a <sub>8</sub>	1	11'0"		7.90
a <sub>9</sub>	1	14'0"		23.35
b	6	10'4"		4.42
c	2	7'0"		9.35
d	2	9'0"		12.02
e	3	5'4"		12.69
f	2	8'5"		11.24
g	2	4'7"		4.12
h <sub>1</sub>	4	1'6"		4.01
h <sub>2</sub>	4	1'0"		2.23
j	4	3'0"		8.08
k	5	2'5"		10.02
Total Rebars, lbs				178.91
Conc. C.Y.				3.20

All Rebars to be #4



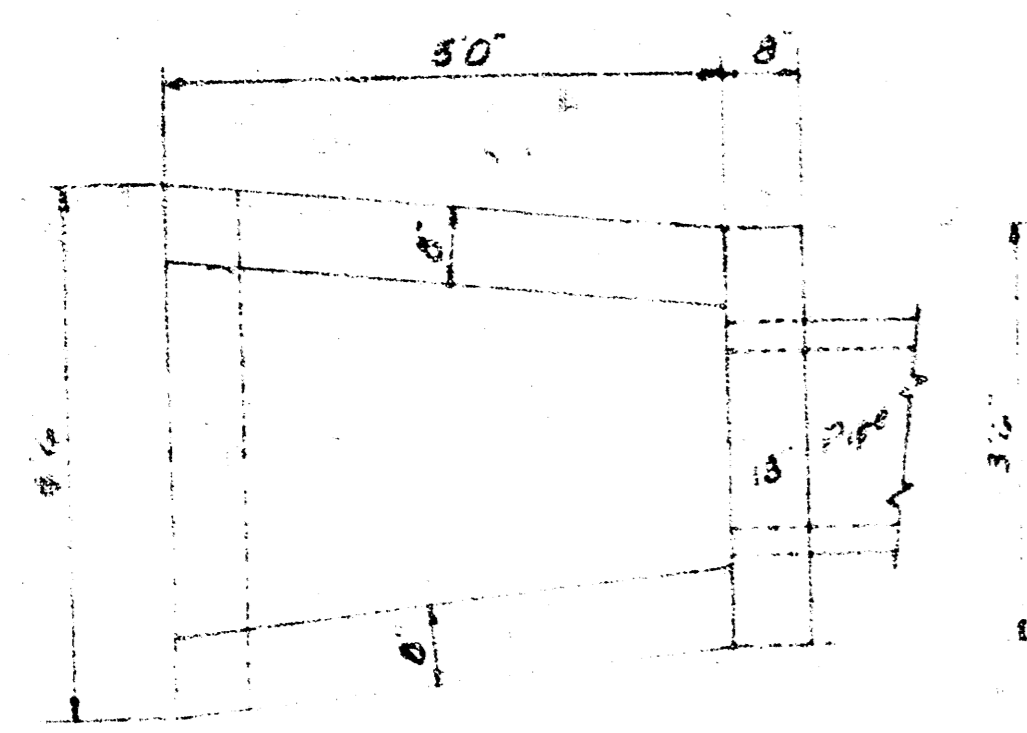
SECTION A-A  
Scale: 1/2"=10'

HEADWALL FOR 36" PIPE

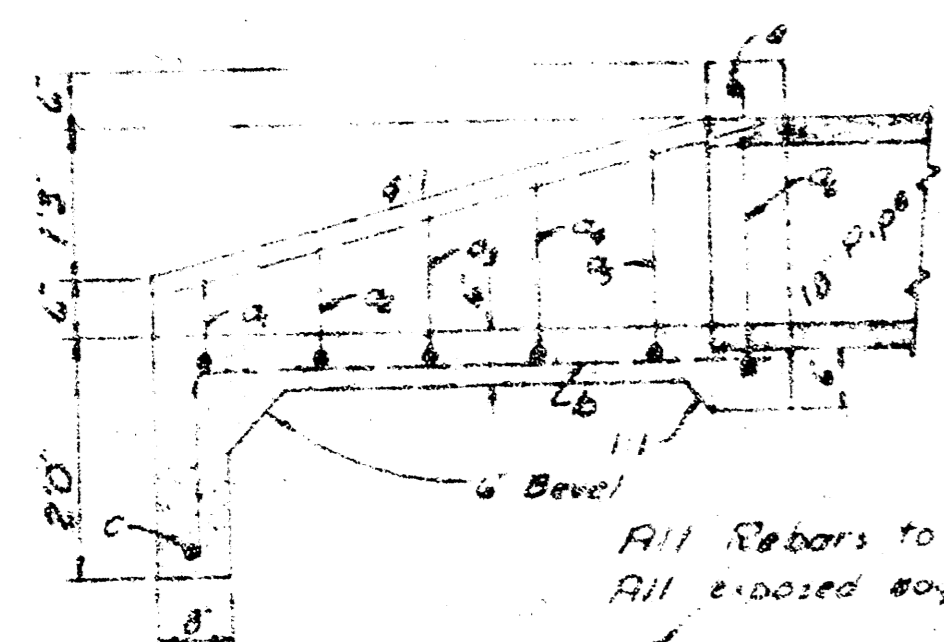
HEADWALL FOR 42" PIPE

SWS #153,

Sheet 6 of 9



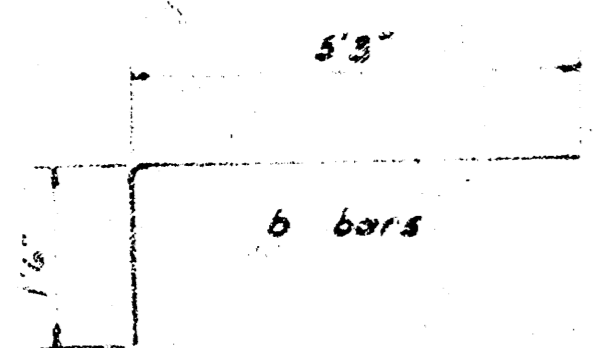
PLAN  
Scale 1/2" = 1'-0"



SECTION  
Scale 1/2" = 1'-0"

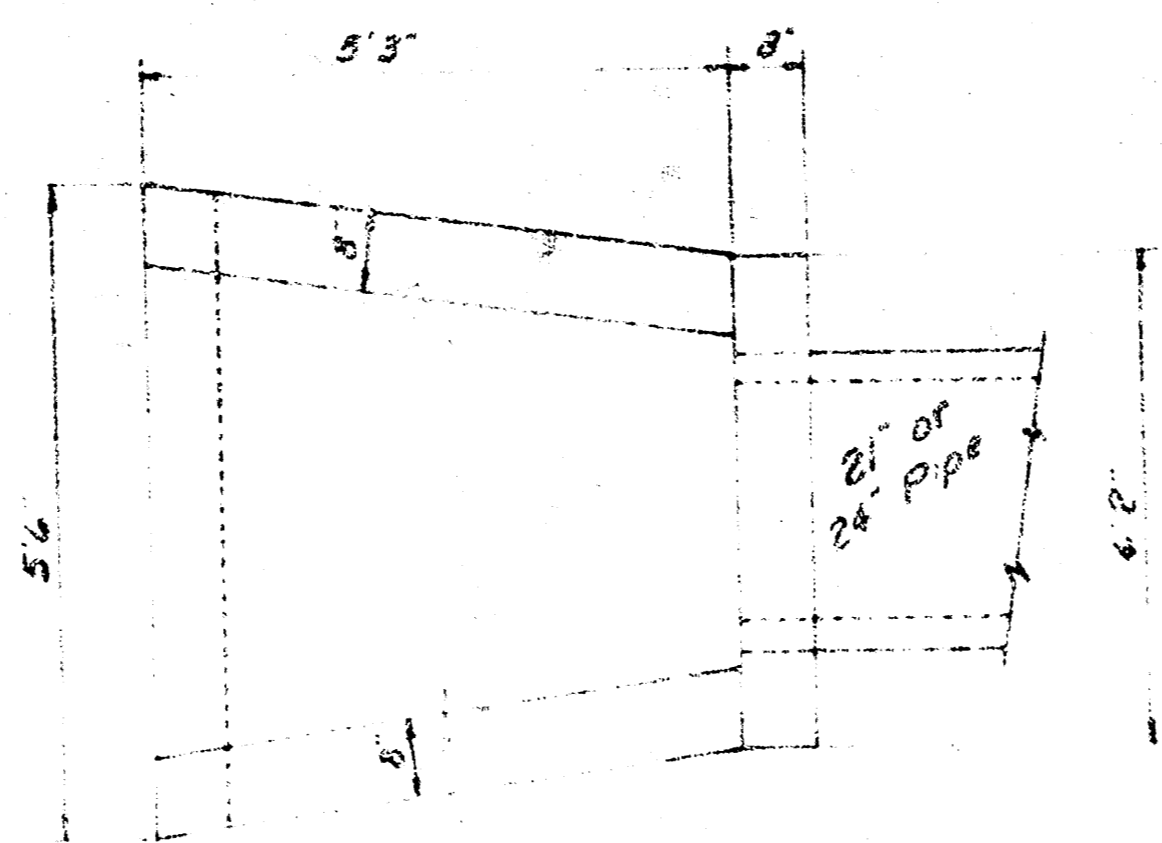
All Rebars to be #4.  
All exposed edges to have 1/2" bevel.

a bars	Length	Quantity	Weight
a <sub>1</sub>	3'8"	1	3.34
a <sub>2</sub>	3'5"	1	3.51
a <sub>3</sub>	3'4"	1	3.67
a <sub>4</sub>	3'1"	1	3.94
a <sub>5</sub>	2'11"	1	4.16
a <sub>6</sub>	2'8"	1	4.79

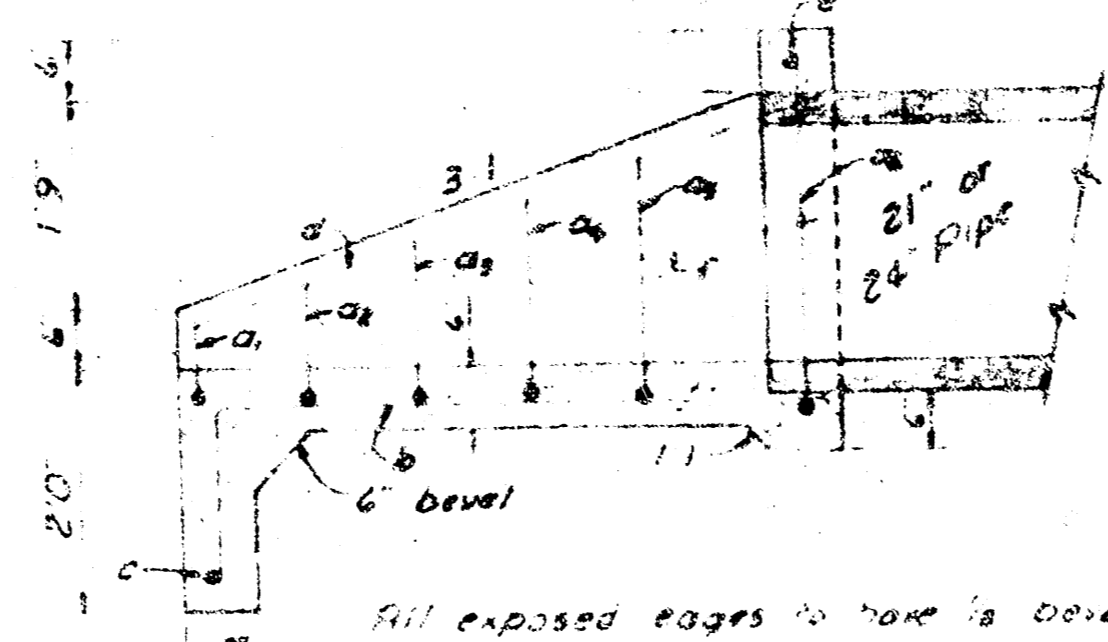


BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a <sub>1</sub>	1	50"		5.34
a <sub>2</sub>	1	53"		5.51
a <sub>3</sub>	1	54"		5.67
a <sub>4</sub>	1	59"		5.94
a <sub>5</sub>	1	63"		6.16
a <sub>6</sub>	1	72"		6.79
b	5	40"		22.54
c	1	40"		2.47
d	2	53"		7.01
e	1	32"		2.12
Total Rebars, lbs.				59.57
Concrete, C.Y.				1.08

HEADWALL FOR 18" PIPE



PLAN  
Scale 1/2" = 1'-0"



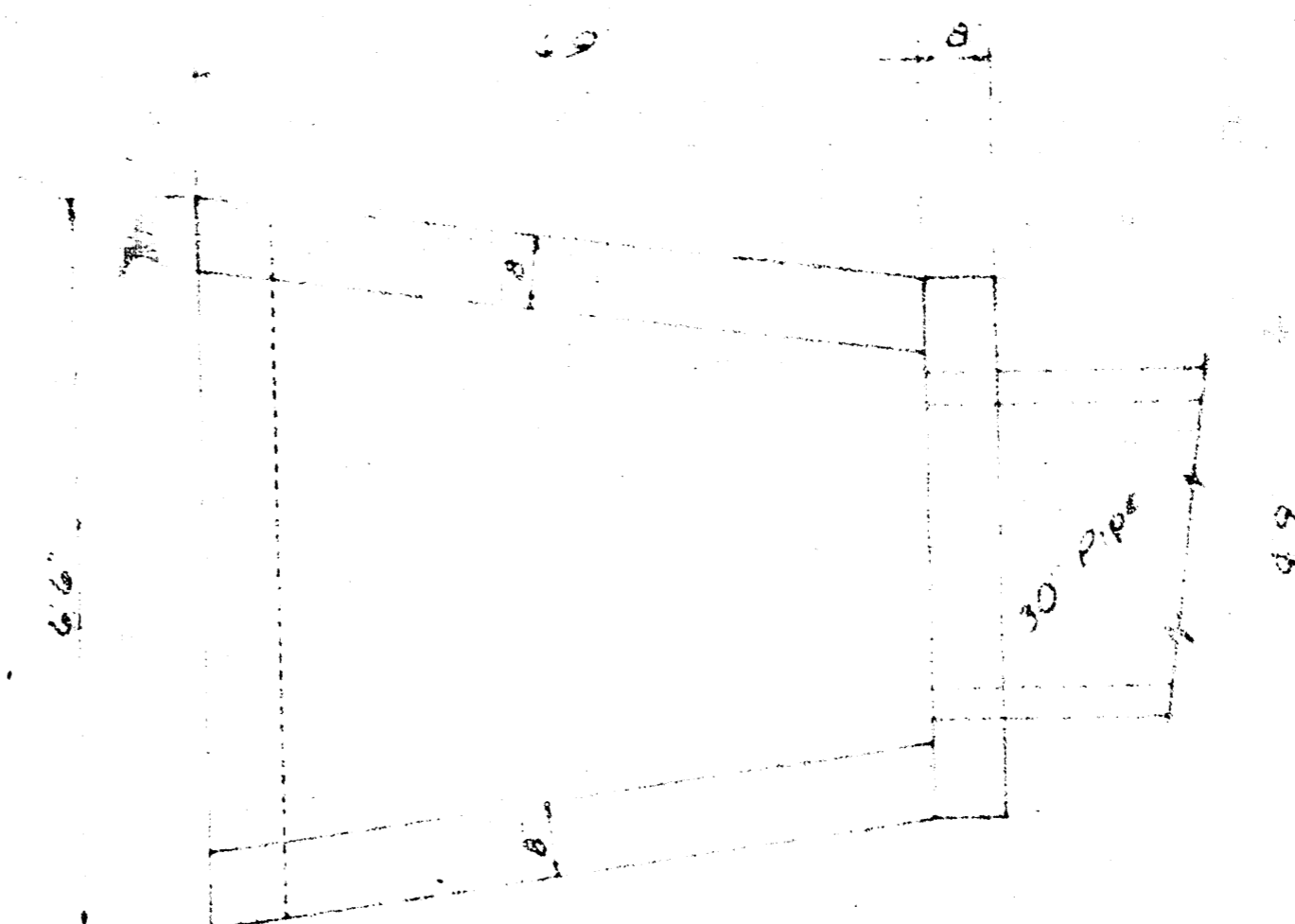
SECTION  
Scale 1/2" = 1'-0"

All exposed edges to have 1/2" bevel.

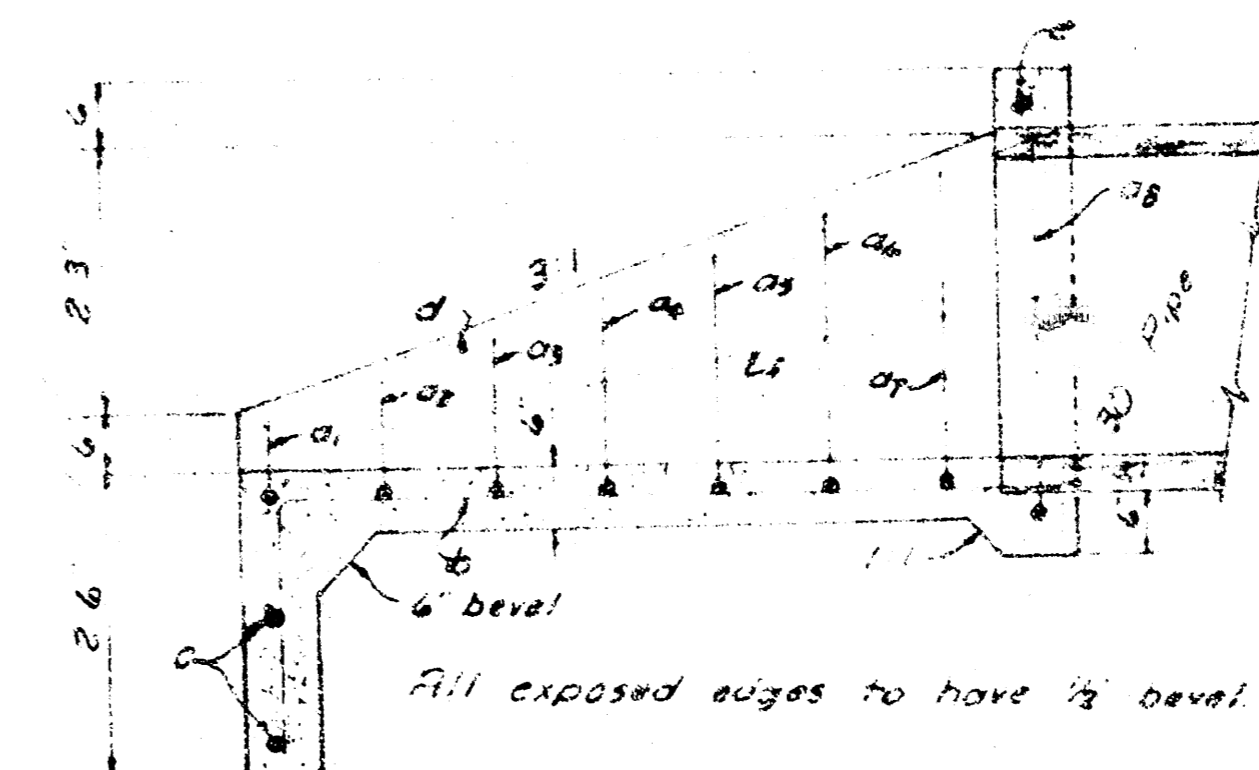
a bars	Length	Quantity	Weight
a <sub>1</sub>	49"	1	4.06
a <sub>2</sub>	46"	1	4.29
a <sub>3</sub>	43"	1	4.51
a <sub>4</sub>	40"	1	4.79
a <sub>5</sub>	39"	1	5.07
a <sub>6</sub>	35"	1	5.80

BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a <sub>1</sub>	1	47"		4.06
a <sub>2</sub>	1	44"		4.29
a <sub>3</sub>	1	43"		4.51
a <sub>4</sub>	1	42"		4.79
a <sub>5</sub>	1	41"		5.07
a <sub>6</sub>	1	37"		5.80
b	6	61"		29.78
c	1	50"		5.37
d	2	510"		7.79
e	1	310"		2.54
f	2	29"		3.42
Total Rebars, lbs.				94.03
Concrete, C.Y.				1.60

HEADWALL FOR 21" OR 24" PIPE



PLAN  
Scale 1/2" = 1'-0"



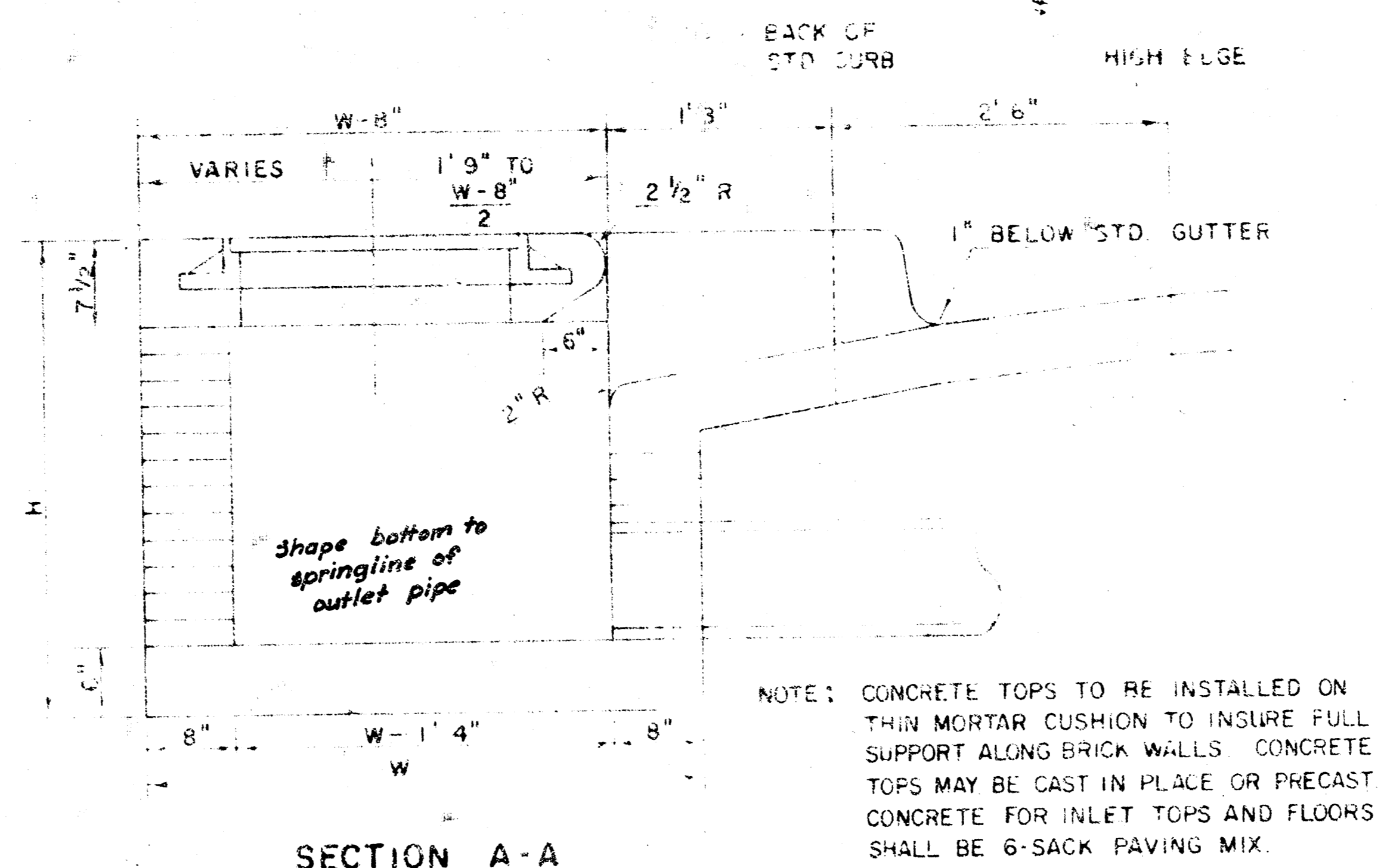
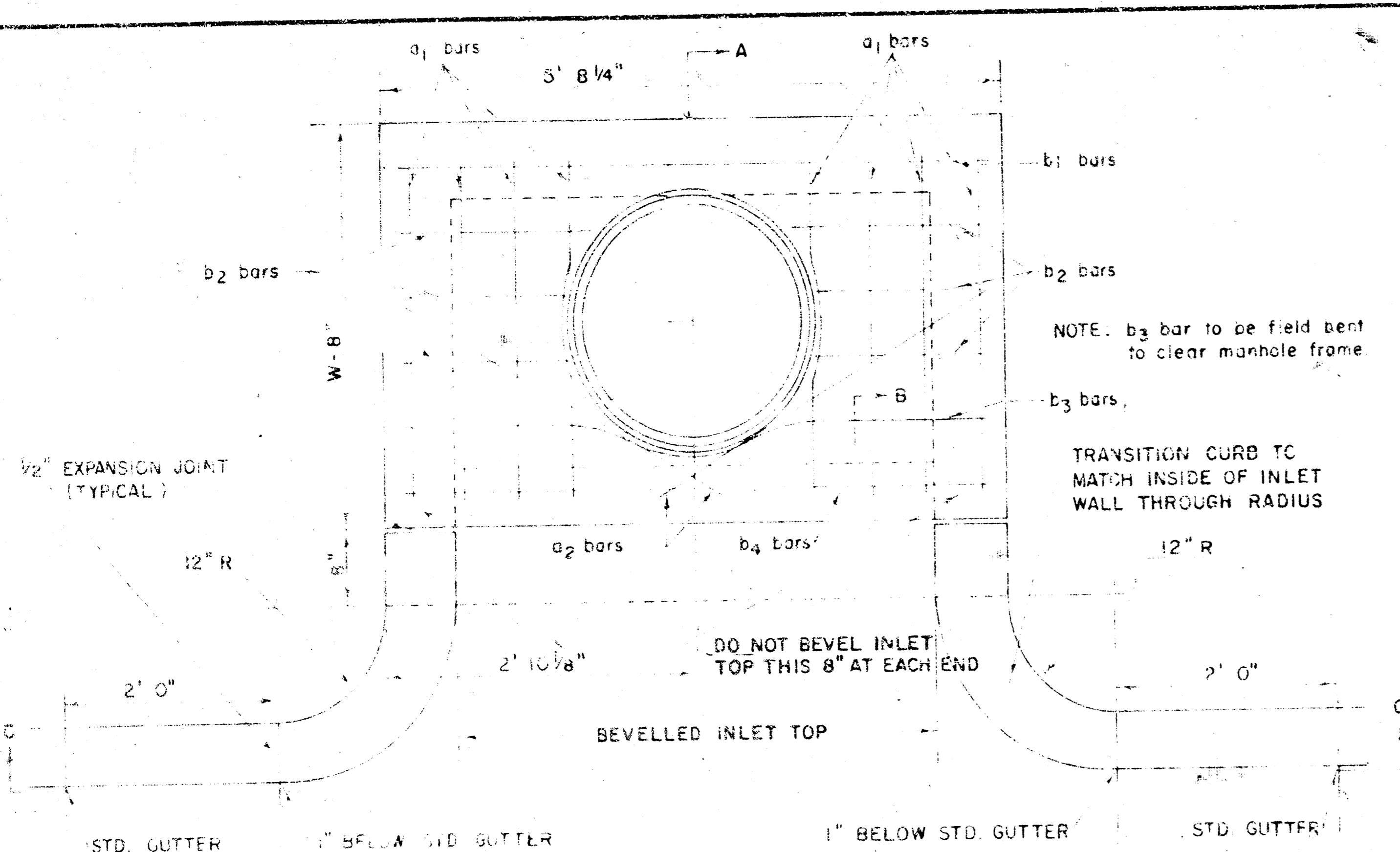
SECTION  
Scale 1/2" = 1'-0"

All exposed edges to have 1/2" bevel.

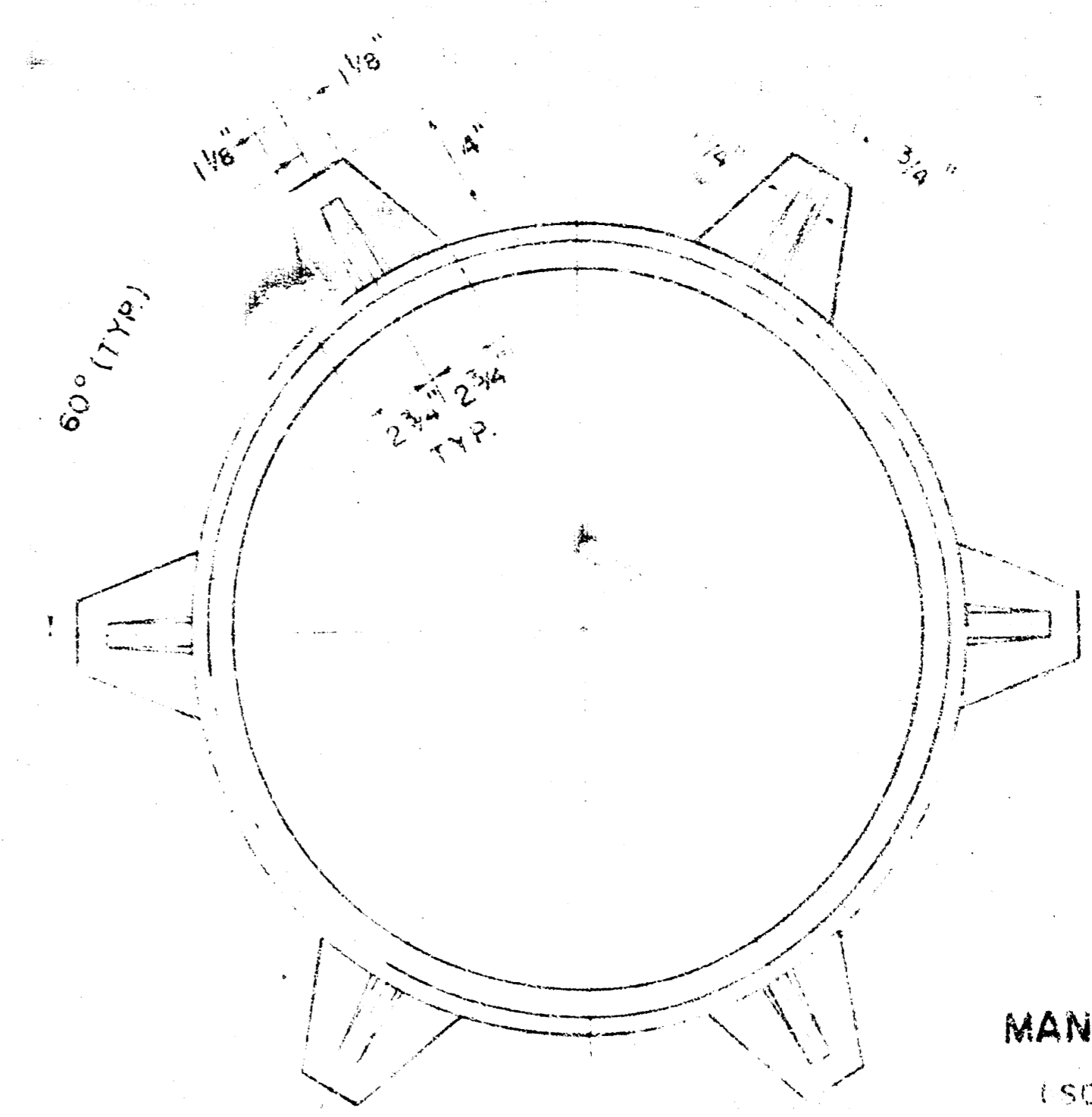
a bars	Length	Quantity	Weight
a <sub>1</sub>	58"	1	4.29
a <sub>2</sub>	55"	1	4.51
a <sub>3</sub>	50"	1	4.79
a <sub>4</sub>	48"	1	5.07
a <sub>5</sub>	43"	1	5.80
a <sub>6</sub>	41"	1	6.16

BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a <sub>1</sub>	1	70"		5.67
a <sub>2</sub>	1	74"		5.90
a <sub>3</sub>	1	79"		6.18
a <sub>4</sub>	1	82"		6.46
a <sub>5</sub>	1	86"		6.88
a <sub>6</sub>	1	90"		7.31
b	7	90"		37.13
c	2	40"		8.02
d	2	70"		10.02
e	1	45"		2.95
f	2	43"		5.69
Total Rebars, lbs.				109.40
Concrete, C.Y.				2.09

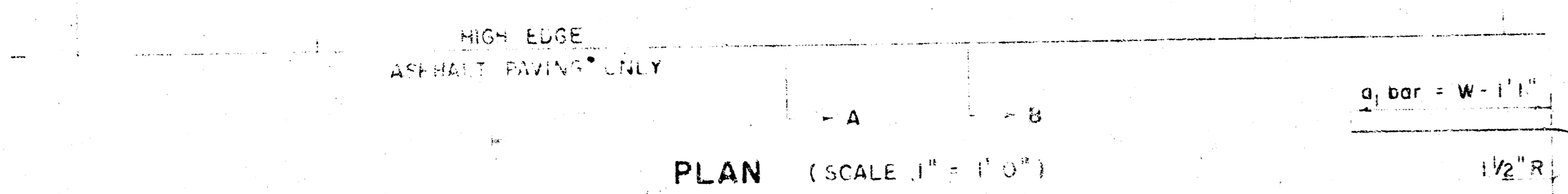
HEADWALL FOR 30" PIPE



SECTION A-A  
(SCALE 1" = 1' 0")



MANHOLE FRAME  
(SCALE 1" = 6")  
WEIGHT = 180 LBS.



PLAN (SCALE 1" = 1' 0")

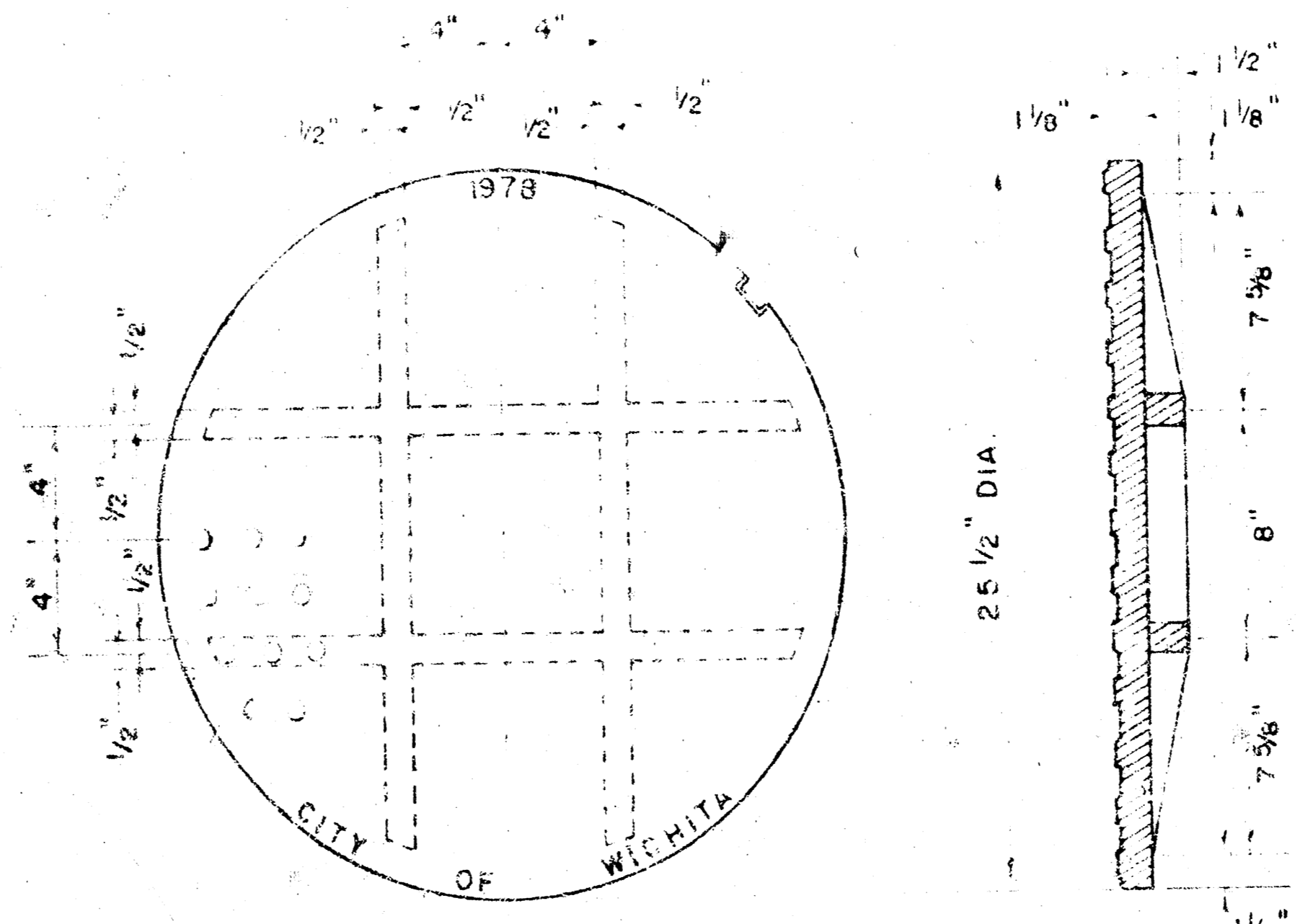
STEEL SCHEDULE

BAR NUMBER	SIZE	W-4' 2"	W-5' 0"	W-5' 8"	W-6' 6"	W-7' 4"	W-8' 2"	b1	b2	b3	b4	WT. LBS.
1	4"	2	1	1	1	1	1	1' 5"	5' 6"	5' 5"	60"	
2	4"	1	1	1	1	1	1	1' 5"	5' 6"	5' 5"	77"	
3	4"	1	1	1	1	1	1	1' 5"	5' 6"	5' 5"	111"	
4	4"	1	1	1	1	1	1	1' 5"	5' 6"	5' 5"	124"	

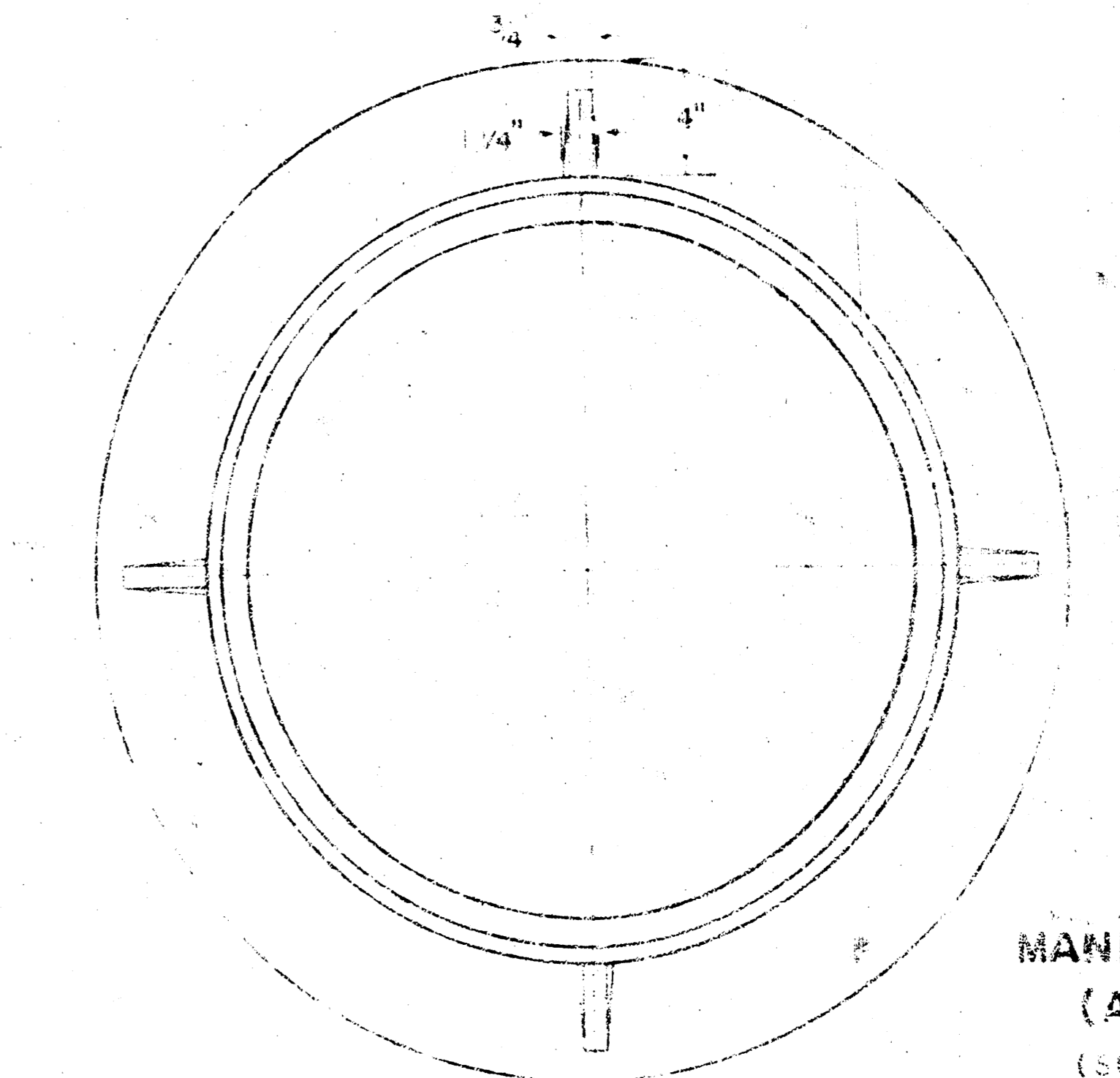
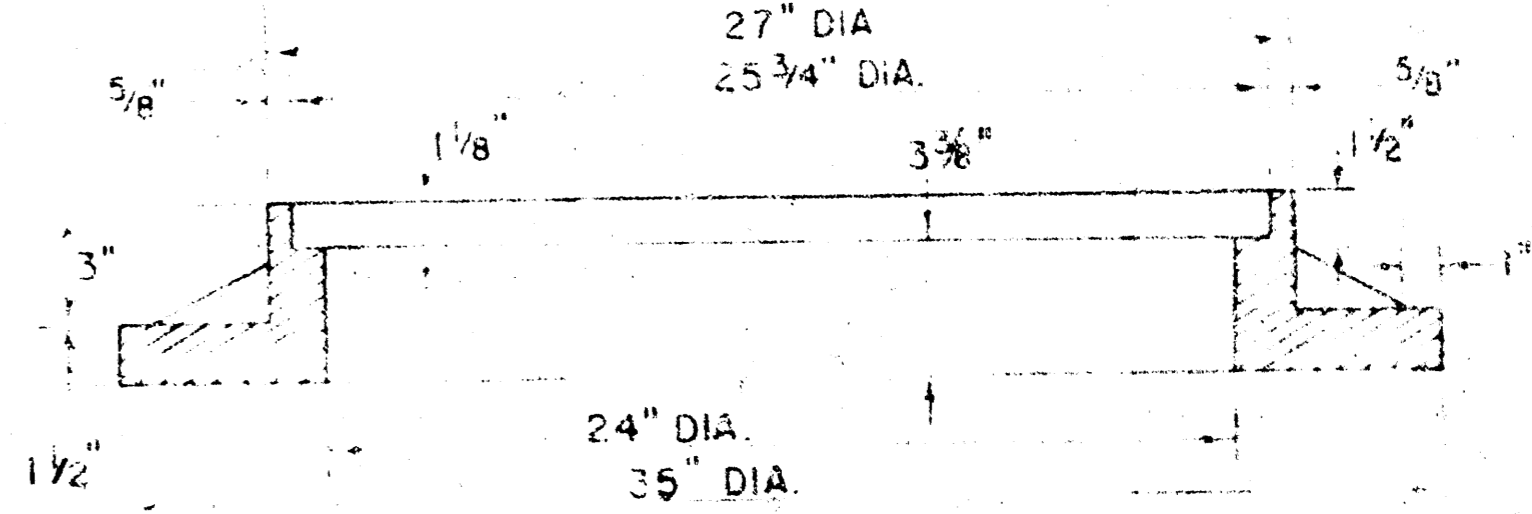
STANDARD CURB INLET PRECAST TOPS

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 2"	36" x 5' 8 1/4" x 7 1/2"	21" Ø SMALLER	0.46 *
5' 0"	44" x 5' 8 1/4" x 7 1/2"	24" Ø 30"	0.57 *
6' 0"	54" x 5' 8 1/4" x 7 1/2"	36" Ø 42"	0.71 *
7' 0"	64" x 5' 8 1/4" x 7 1/2"	48" Ø 54"	0.84 *
8' 0"	74" x 5' 8 1/4" x 7 1/2"	60" Ø 66"	0.97 *

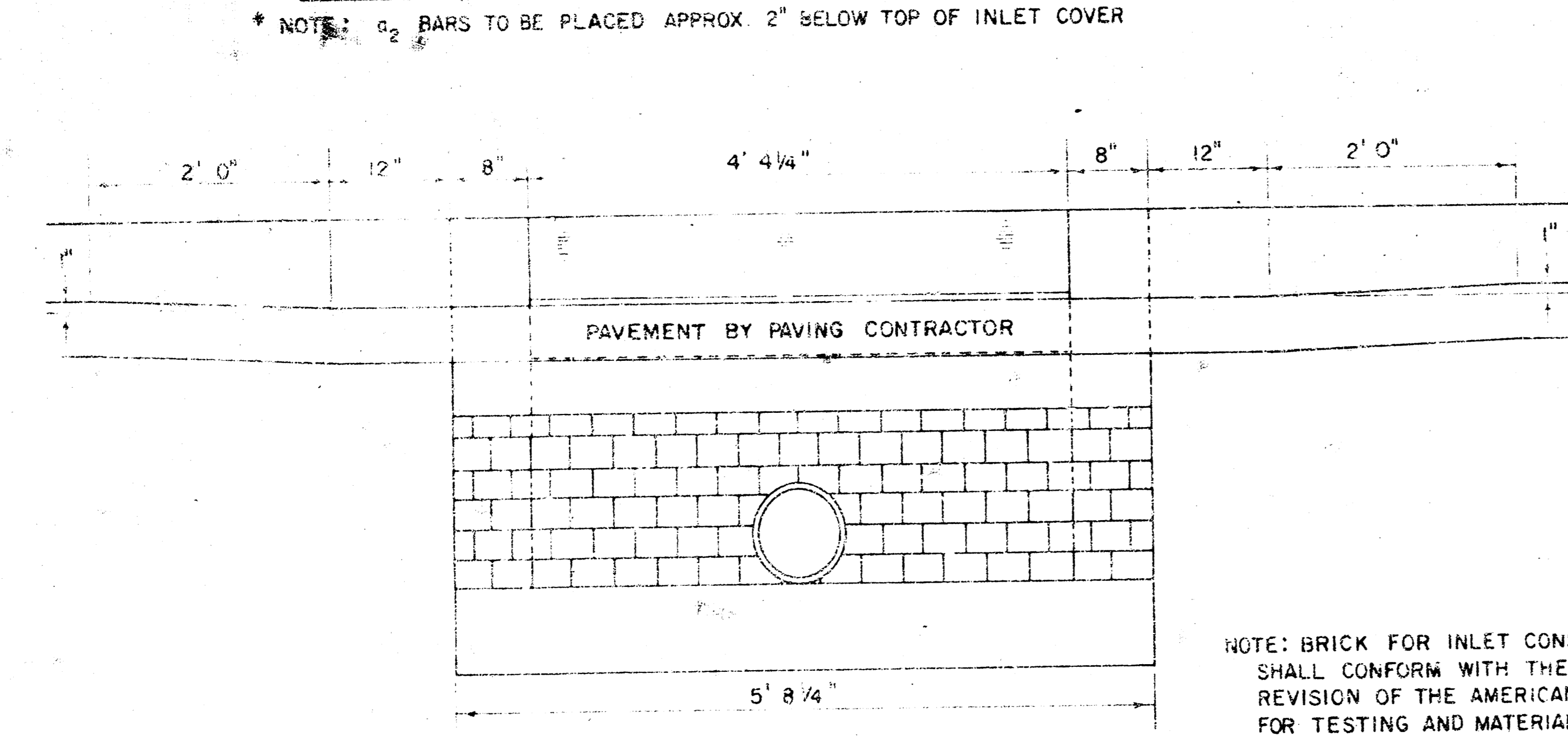
\* GROSS VOLUME



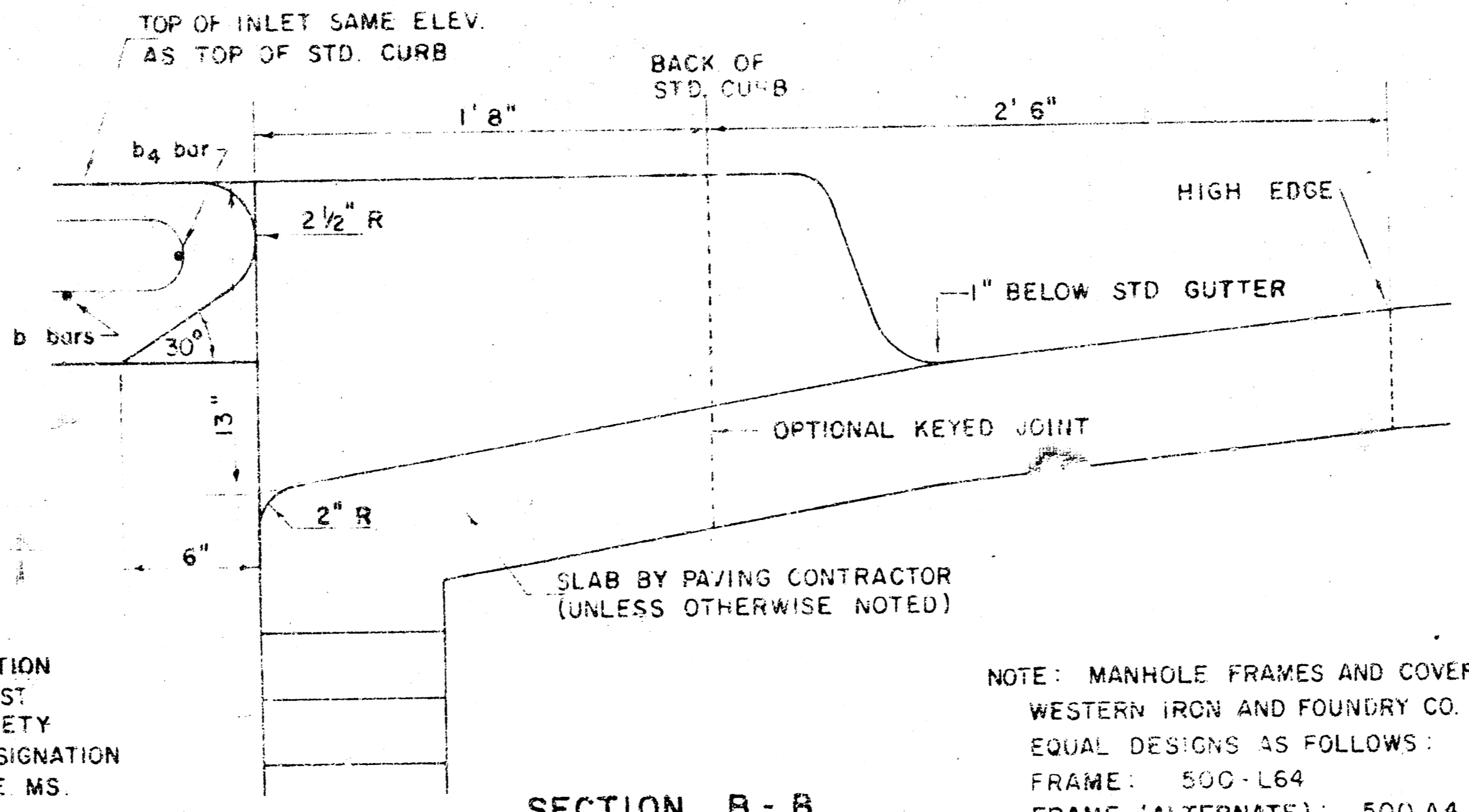
MANHOLE COVER  
(SCALE 1" = 6")  
WEIGHT = 170 LBS.



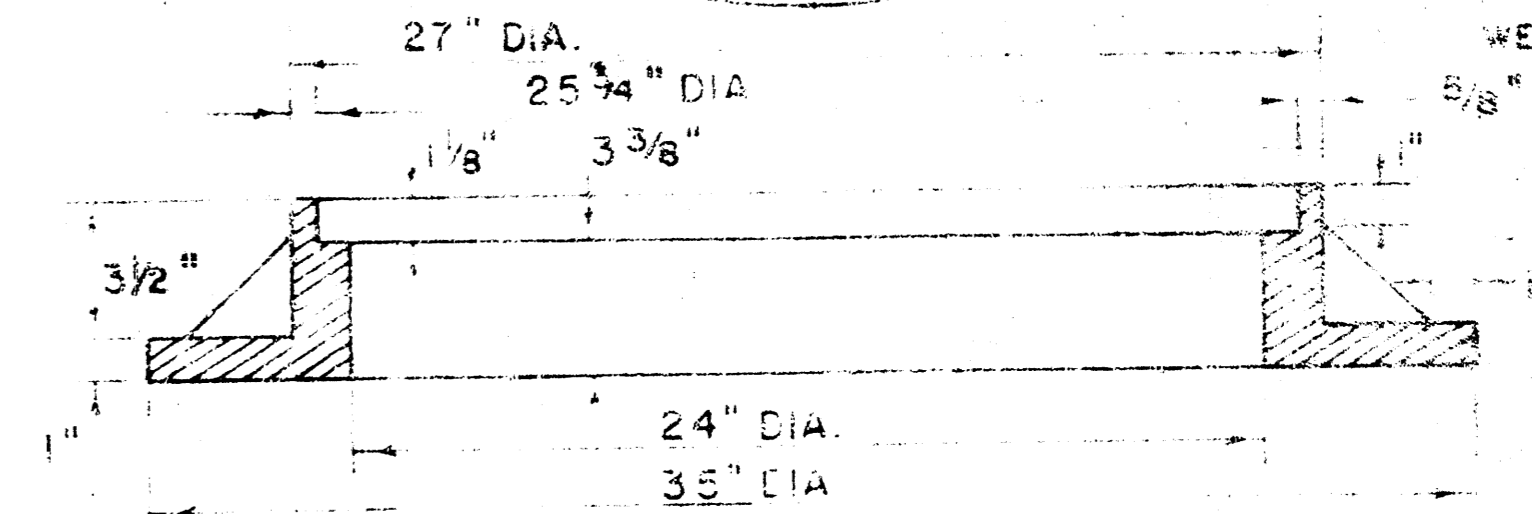
MANHOLE FRAME (ALTERNATE)  
(SCALE 1" = 6")  
WEIGHT = 180 LBS.



SECTION C-C  
(SCALE 1" = 1' 0")



SECTION B-B  
(SCALE 1" = 6")



NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL DESIGNS AS FOLLOWS:  
FRAME: 500-L64  
FRAME (ALTERNATE): 500 A4  
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET  
CITY OF WICHITA, KANSAS  
R. W. LINN - CITY ENGINEER  
OCTOBER 1978