STORM WATER SEWER 143

Galyardts 5th Addition

NOTES

1) CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY SEWER CONTRACTORS AND CONTACT REVELENT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THIS PROJECT SITE DEVELOPMENT.

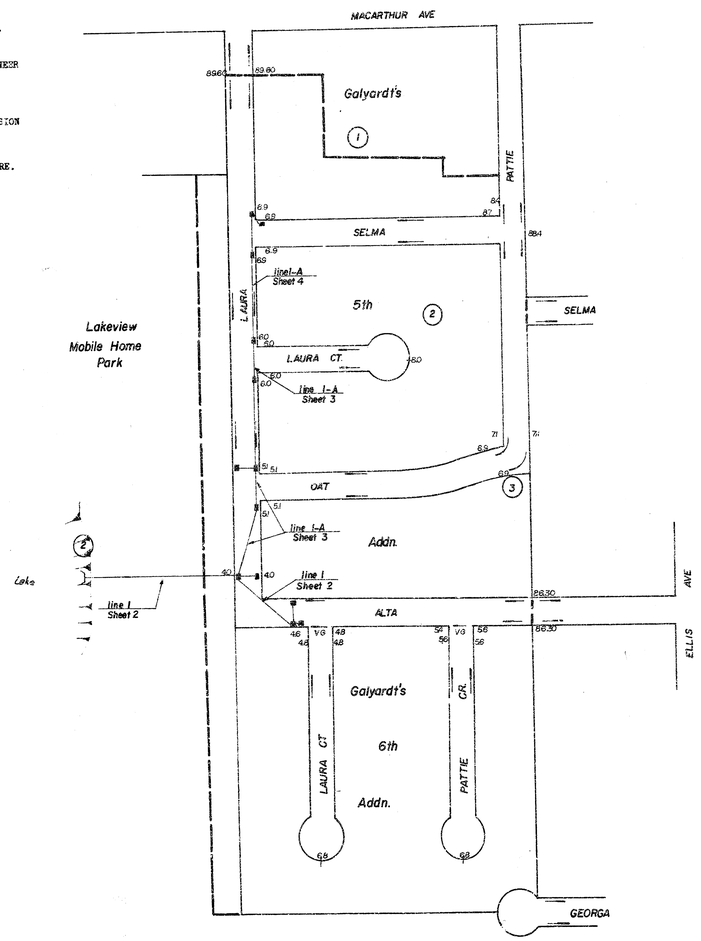
2) FIELD ENGINEER SHALL TAKE TIES ON ALL IRON AND THIMBLES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND THIMBLES DISTURBED DURING CONSTRUCTION.

3) ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.

4) HEADWALL AT PIPE OUTFALL SHALL BE CONSTRUCTED TO ALIGN WITH THE SLOPE OF THE BANKS IN ORDER THAT WALL PROTRUSION IS MINIMUM. WHERE SUCH PROTRUSION CANNOT BE AVOIDED, FILL AROUND WALLS AT APPROXIMATELY 5:1 SIDE SLOPE SO HEADWALL APPEARS ENTIRELY RECESSED.

5) CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING PRE-CAST TYPE IA CURB INLET IN LIEU OF THE BRICK TYPE STRUCTURE. SEE STANDARD DETAIL PRE-CAST TYPE IA CURB INLET DATED AUGUST, 1979.

VICINITY MAP
Scale 1"= 2000'



Lakeview Mobile Home Park

Scale 1"= 50'

Table of Contents

Page	1	Title Sheet
	2-4	Plan and Profile
	5	Detail Type IA Curb Inlet
	6	Detail Type 22 Curb Inlet
	7	Sewer Appurtenances
	8	Headwall Detail

City of Wichita, Kansas
Dean Sellers, Acting City Engineer
Proj. no. 468-76-245-80659-000-000-001
Date _____

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N
SCALE : 1"=20'

Gas line
Gas line
Gas line
Gas line
St. Drainage Esmt.
St. Drainage Esmt.
℄ 36' Drainage Easement
Remove & Replace Asph. Pvmt.
Remove & Replace Walk
Remove & Replace Walk
Remove & Replace Fence
Remove & Replace Fence
Remove & Replace Roll Curb & Gutter
Remove and Replace Roll Curb & Gutter
Remove and Replace Asph. Pvmt.
Install Type 3 Rip-Rap
Install Headwall
Existing Lakeshore line
Install 350' of 38"x60" HERCP
Alt. 350' of 65"x40" CMPA (Fully Paved)
Remove & Replace 8" San. V.C.P. w/ 8" Ductile Iron Pipe, a distance of 10' from San. Sewer Manhole, South.
6" Water
6" Water
8" Water
20'
10'
28.5
3.5
30'
1
2
3
Laura
Line 1-A
Line 1
Const Type 2Z Curb Inlet, w= 5.0 L=17.0
Top = 84.0, Street Sta. 0+78.25
Install 42' of 15" pipe
USFL = 80.56 DSFL = 80.05
Equation 3+59 this sheet = 0+00 Sheet 3
Const Type IA Curb Inlet w=4'-2"
Top = 84.0, Street Sta. 0+78.25
Install 157' of 24" pipe
USFL = 80.35 DSFL = 79.24
Const Type IA Curb Inlet, w=4'-2"
Top 84.6
Install 38' of 15" pipe
USFL = 81.16 DSFL = 81.05
Install 4' of 15" pipe
USFL = 81.16 DSFL = 81.14
Const Type IA Curb Inlet, w=4'-2"
Top = 84.6
Const Type IA Curb Inlet, w=5.0"
Top = 84.6
Const Type IA Curb Inlet
Top = 84.6
Sta. 5+24 Const. Curb Inlet
Top 84.60
Sta. 5+24 Const. Curb Inlet
Top 84.60
15"
18.25
35' bit - blk
64' R/W
60' R/W
35' bit - blk
0.32%
0.32%
0.32%
0.32%
0.32%
6.00
8.55
10
9
8
11
12
13
Block 3
Galyardi's
5th
Addn.
Alta
Lot 1
Galyardi's 6th Addn

BM 87.68 N.W. cor. of conc. slab at side door of House at 1402 Alta approx. 15' E of EL Galyardis 5th Addn.

BM 86.01 "+" cut on top E cb of Shady Grove at SL Parklawn

Sta 0+00 Const. Special Rip-Rap Headwall
Start Pipe
Existing Grade
Prop. Street Grade
6" Gas
6" Water, FL= 82.1
6" Water FL=82.1
8" San. Sewer, FL = 81.25
6" Water, FL=82.1
8" San. Sewer FL=79.84
Type 3 Rip-Rap
Install - Special Headwall
350' of 38"x60" HERCP @ ±0.50%
Alt. 350' of 65"x40" CMPA (Fully Paved) @ ±0.50%
157' of 24" RCP @ ±0.71%
Alt. 157' of 24" CMP (Fully Paved) @ ±0.71%
4' of 15" RCP @ ±0.30 %
Alt. 4' of 15" CMP @ ±0.30 % @ ±0.30 %
85
80
75
85
80
75
79.24
78.05
80.35
81.16
1+00
76.67
2+00
77.04
3+00
77.40
4+00
79.52
5+00
80.23
SWS 143, Line 1
Galyardis 5th Addn

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N

See Street 2-C

See Sheet 2

Const type IA Curb Inlet, w=4'-6"
Top: 88.9 Street Sta. 2+64.5

Install 43' of 15" pipe
USFL=81.46 DSFL = 80.7

Laura

Install 197' of 30" pipe.
USFL=79.12 DSFL= 78.35

Install 78' of 30" pipe
USFL=79.35 DSFL=79.12

Const. Type IA Curb Inlet w=5'-0"
Top 85.1 Street Sta. 3+48.85

Const Type IA Curb Inlet, w=5'-0"
Top=84.9 Street Sta. 2+71.15

Const. Type IA Curb Inlet, w=5'0"
Top=85.8, Street Sta. 5+15.15

Install 78 of 24" pipe
USFL=81.38 DSFL=81.11

Const. type IA Curb Inlet w=5'-0"
Top-86.0 Street Sta 6+28.85

line 1-A

Install 203 of 24" pipe
USFL=81.11 DSFL=79.89

64' R/W

85' Bk to Bk

8.85'

0.45%

0.35%

0.23%

31' Bk to Bk

60' R/W

Oak

Laura Ct.

Equation:
0+00 This Sheet = 31+59 Sheet 2

For bench mark, see pg. 2

Sta 0+00 Const. Curb Inlet
Top: 84.00 See Sheet 2

Sta 1+96.85 Const Curb Inlet
Top: 84.9

Sta 2+71.55 Const. Curb Inlet
Top: 85.1

Sta 4+72.55 Const. Curb Inlet
Top 85.8

Sta 5+64.95 Const. Curb Inlet
Top 86.00

Existing Grade

Proposed Street Grade

85
80
75

78.45

79.12
79.12

79.35
79.89

81.11

81.38

199 of 30" RCP @ +0.39%
Alt. 197 of 30" CMP (fully paved) @ +0.39%

78' of 30" RCP @ +0.30%
Alt. 78' of 30" CMP (fully Paved) @ +0.30%

203' of 24" RCP @ +0.60%
Alt. 203' of 24" CMP (fully paved) @ +0.60%

78' of 24" RCP @ +0.35%
Alt 78' of 24" CMP (fully Paved) @ +0.35%

1+00
78.74

2+00
79.13

3+00
80.04

4+00
80.64

5+00
81.19

SWS 143 Line 1-A
Calyard's 5th Addn.

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N

8" Water

0.23%

0.63%

Install 27' of 15" pipe
USFL = 83.46 DSFL = 83.26

Laura

See Sheet 3

Const. Type IA Curb Inlet, w = 4'-2"
Top = 86.7 street sta. 8+31.15

Install 61' of 18" pipe
USFL = 82.99 DSFL = 82.70

Const. Type IA Curb Inlet, w = 4'-2"
Top = 86.9 street sta. 9+08.85

0.30%

0.32%

1.1%

Line 1-A

Install 203 of 21" pipe,
USFL = 83.03 DSFL = 81.65

8.85

8.85

8.85

9.05

8.55

3' Bk to Bk

60' R/W

0.41%

0.41%

0.32%

0.63%

Laura Ct.

Selma

Const. Type IA Curb Inlet, w = 4'-2"
Top = 86.9 street sta.

For bench mark, see pg. 2

Sta. 5+69.92 Const. Curb Inlet See Sheet 3 Top 86.0

Sta. 7+67.65 Const. Curb Inlet Top = 86.7

Sta. 8+18.65 Const. Curb Inlet Top 86.9

Sta. 8+45.85 Const. Curb Inlet Top 86.9

Existing Grade

Prop. Street Grade

85

80

75

81.38
81.65

82.53
82.90

82.99
83.26

83.36

203' of 21" RCP @ + 0.38 %
Alt. 203' of 21" CMP @ + 0.38%

61' of 18" RCP @ + 0.37 %
Alt. 61' of 18" CMP @ + 0.37%

27' of 15"
RCP @ + 0.63%
Alt. 27' of 15"
CMP @ + 0.63%

5+00

6+00

7+00

8+00

80.23

81.82

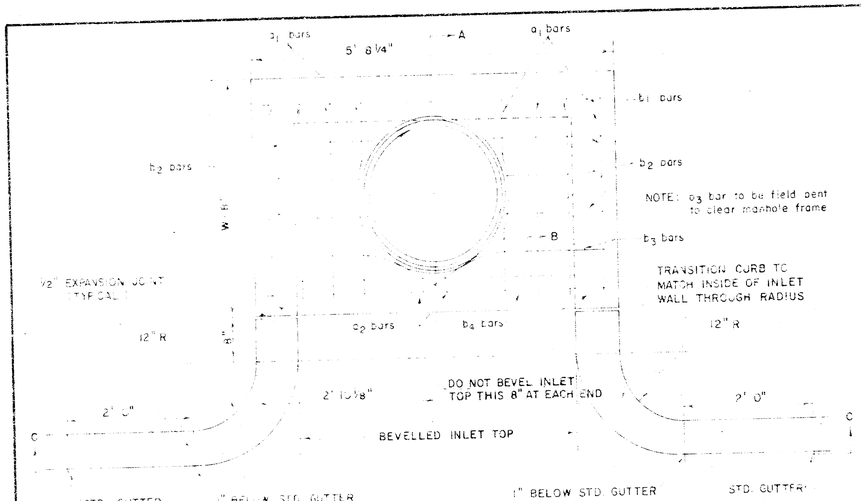
82.20

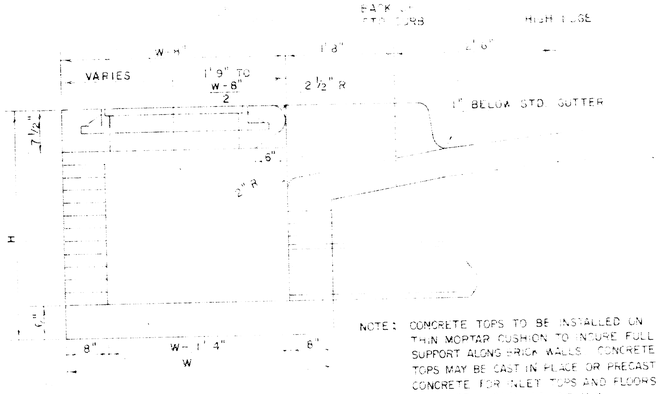
82.39

4/7

SWS 1143 Line 1A
Gaylord's 5th Addn.

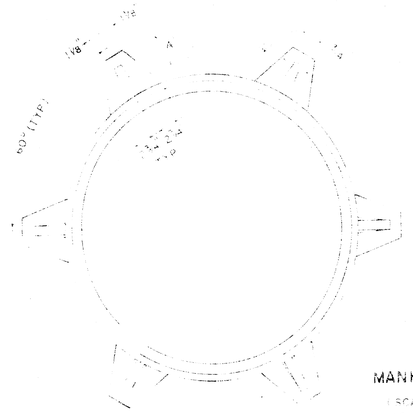
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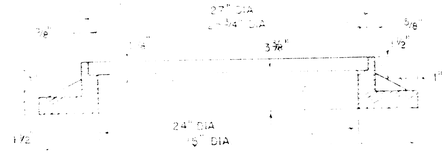


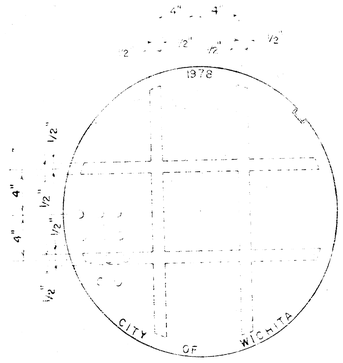
SECTION A-A
(SCALE 1" = 1'0")

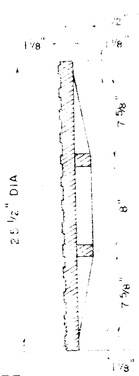
NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST CONCRETE FOR INLET TOPS AND FLOORS SHALL BE 6-SACK PAVING MIX



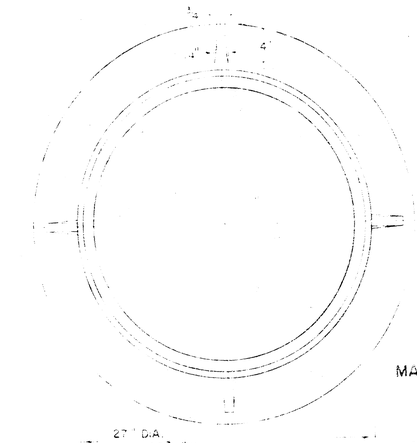
MANHOLE FRAME
(SCALE 1" = 6")
WEIGHT = 180 LBS.







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

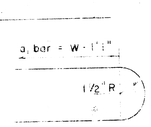


MANHOLE FRAME (ALTERNATE)
(SCALE 1" = 6")
WEIGHT = 160 LBS.

HIGH EDGE
ASPHALT PAVING ONLY

A B

PLAN (SCALE 1" = 1'0")



BENDING DIAGRAM

STEEL SCHEDULE

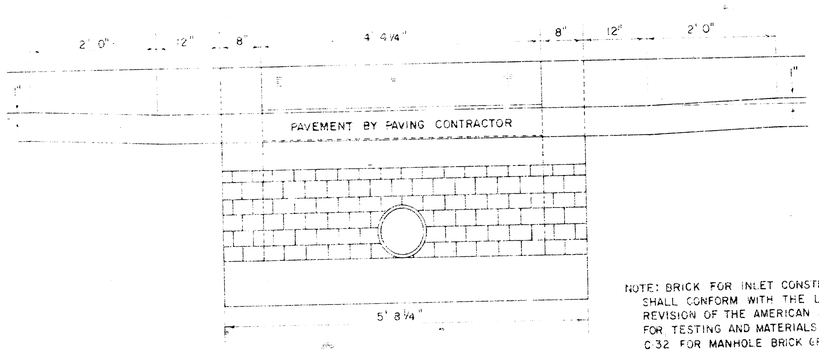
BAR		b_1 W=4'2"	W=5'0"	W=6'0"	W=7'0"	W=8'0"	b_2	b_3	b_4	WT. LBS.
NUMBER	8	2	3	5	7	9	6	1	1	
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH W=4'2"	6'3"	3'4"	5'5"	–	–	–	1'5"	5'6"	5'5"	60#
LENGTH W=5'0"	8'1"	4'4"	–	5'5"	–	–	1'5"	5'6"	5'5"	77#
LENGTH W=6'0"	10'1"	5'4"	–	–	5'5"	–	1'5"	5'6"	5'5"	97#
LENGTH W=7'0"	11'1"	6'4"	–	–	–	5'5"	1'5"	5'6"	5'5"	111#
LENGTH W=8'0"	12'1"	7'4"	–	–	–	5'5"	1'5"	5'6"	5'5"	124#

* NOTE: a_2 BARS TO BE PLACED APPROX 2" BELOW TOP OF INLET COVER

STANDARD CURB INLET PRECAST TOPS

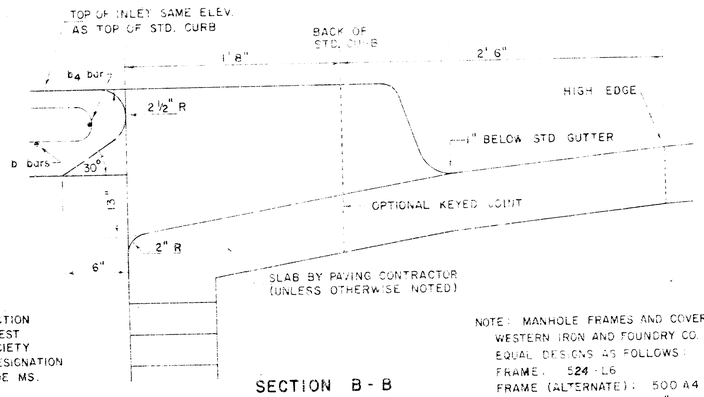
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 2"	36"x5'8¼"x7½"	21" & SMALLER	0.46 *
5' 0"	44"x5'8¼"x7½"	24" & 30"	0.57 *
6' 0"	54"x5'8¼"x7½"	36" & 42"	0.71 *
7' 0"	64"x5'8¼"x7½"	48" & 54"	0.84 *
8' 0"	74"x5'8¼"x7½"	60" & 66"	0.97 *

* GROSS VOLUME



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

NOTE: BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C-32 FOR MANHOLE BRICK GRADE MS.



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

NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL DESIGNS AS FOLLOWS:
FRAME: 524-L6
FRAME (ALTERNATE): 500 A4
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET

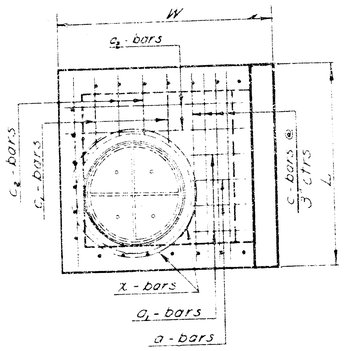
CITY OF WICHITA, KANSAS

R. W. LINN – CITY ENGINEER

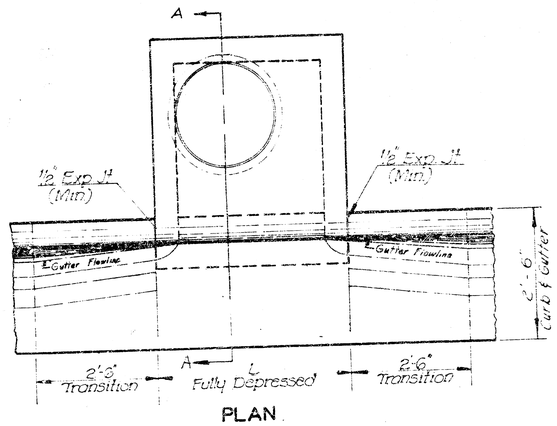
OCTOBER 1978

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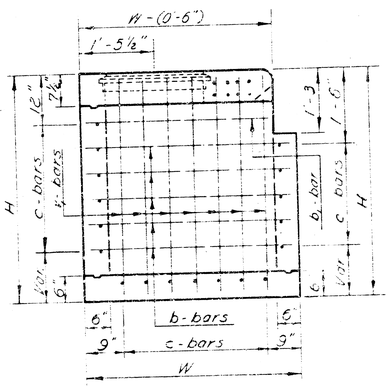
FHWA NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS		197		



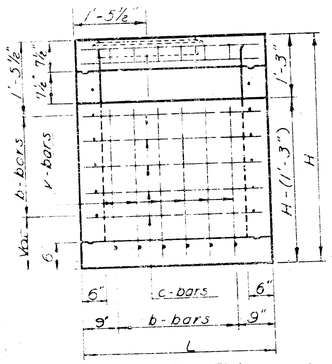
TOP VIEW



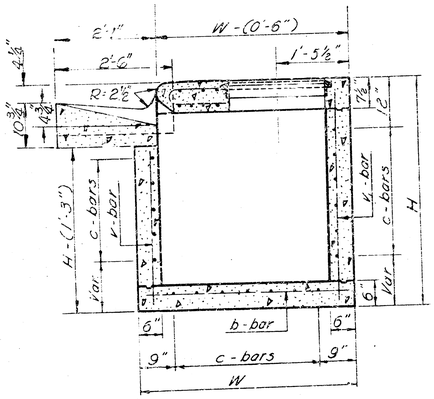
PLAN



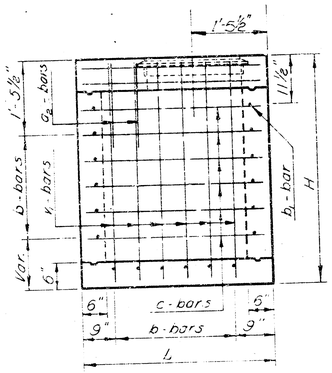
SIDE VIEW



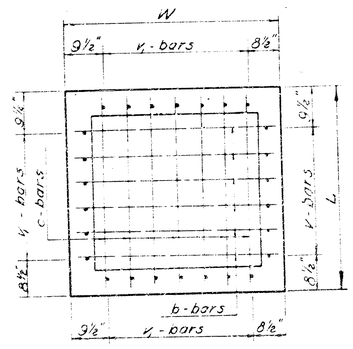
FRONT VIEW



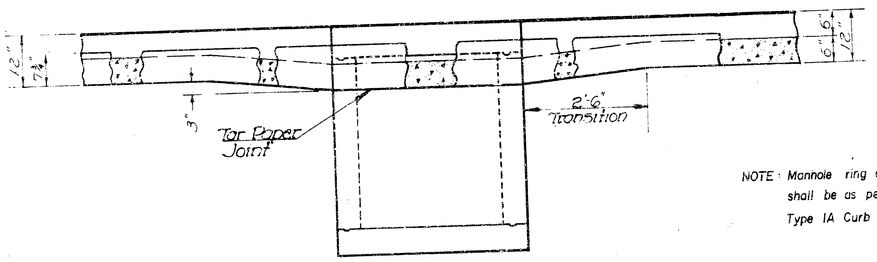
SECTION A-A



REAR VIEW



BOTTOM VIEW



NOTE: Manhole ring and cover to inlet tops shall be as per City of Wichita Standard Type IA Curb Inlet Precast Top.

GENERAL NOTE

CONCRETE

Storm Sewer Inlets shall be constructed of either Class A Concrete or Class A Concrete (A.E.) at the Contractor's option. However, payment shall be made for cubic yards of Class A concrete (Miscellaneous).

Bevel all exposed 90° concrete edges with a 3/4" triangular bevel.

CAST IRON

All exposed cast iron surfaces not subject to traffic shall receive one coat of a zinc dust paint applied either in the shop or in the field and two coats of aluminum paint applied in the field.

REINFORCING STEEL

All dimensions relative to reinforcing steel are to the center of bars unless otherwise noted on the plans.

Reinforcing steel shall be spaced at 6" centers and shall be 1-1/2" clear distance from slab surfaces unless otherwise shown on the plans.

All reinforcing steel shall be placed within ± 1/4" of plan dimension unless waived by the Engineer.

Reinforcing steel shall be bent around all pipes unless otherwise directed by the Engineer.

See plan sheet entitled REINFORCING STEEL FOR INLETS AND JUNCTIONS for reinforcing steel quantities and fabrication details.

MISCELLANEOUS

When directed by the Engineer, the top of the inlet shall be sloped in order to match the longitudinal roadway grade, ground line, and/or other conditions.

When directed by the Engineer, small openings may be required in the back of the inlet in order to drain a low area. No deductions in concrete quantities will be made for these openings.

Expansion joint material shall be either poured joint sealing compound (hot or cold) or pre-molded joint filler (non-extruding Type B) unless otherwise noted on the plans.

Inlet floors shall be shaped as shown on the plan sheet entitled TYPICAL FLOOR SHAPING FOR INLETS AND JUNCTIONS. No concrete quantities shall be computed for this work.

Gutter shaping shall be accomplished as shown and payment shall be subsidiary to the adjacent type of curb and gutter.

6/8

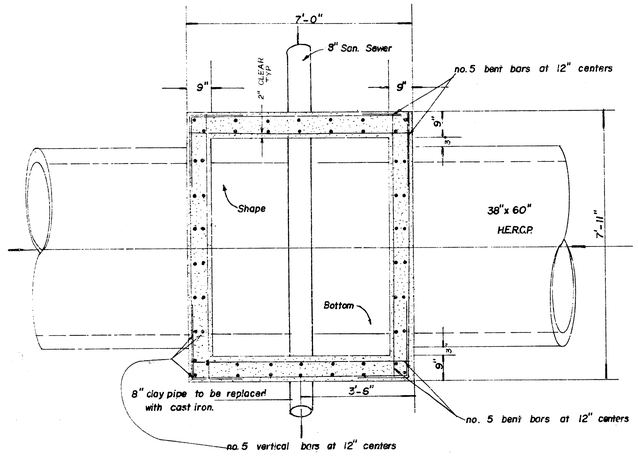
NO.	DATE	REVISIONS	BY	APP'D
3				
2				

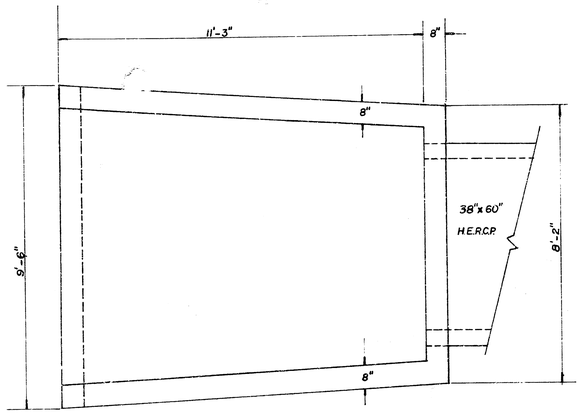
STATE HIGHWAY COMMISSION OF KANSAS

TYPE 22
CURB INLET

SHEET NO. OF	SCALE	APP'D	
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

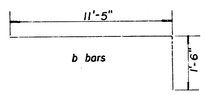
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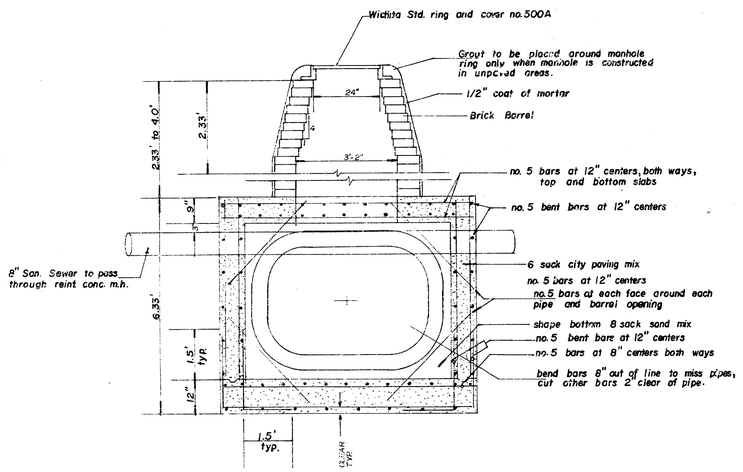




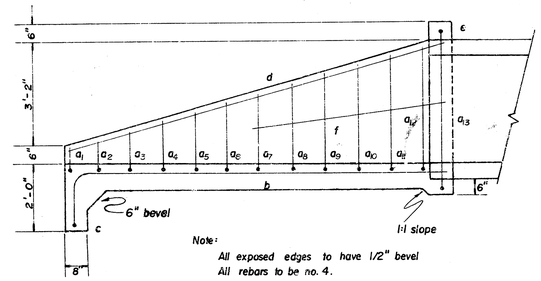
Plan

a bars	a_1 8"	a_2 11"	a_3 1'-1"	a_4 1'-5"	a_5 1'-8"	a_6 2'-0"	a_7 2'-3"	a_8 2'-6"	a_9 2'-9"	a_{10} 3'-0"	a_{11} 3'-3"	a_{12} 3'-7"	a_{13} 4'-1"
a_1	8'-10"												
a_2	8'-8"												
a_3	8'-7"												
a_4	8'-6"												
a_5	8'-5"												
a_6	8'-3"												
a_7	8'-2"												
a_8	8'-0"												
a_9	7'-11"												
a_{10}	7'-9"												
a_{11}	7'-8"												
a_{12}	7'-7"												
a_{13}	7'-6"												





Special Reinforced Conc. Manhole Detail
Scale: 1/2"= 1'-0"



Note:
All exposed edges to have 1/2" bevel
All rebars to be no. 4.

Section

Special Headwall Detail
Scale 1/2"= 1'-0"

Table of Quantities				
Bars	Number	Length	Shape	Weight
a_1	1	8'-6"		5.678
a_2	1	8'-7"		5.734
a_3	1	9'-8"		6.457
a_4	1	9'-11"		6.624
a_5	1	10'-1"		6.736
a_6	1	10'-3		6.847
a_7	1	10'-5"		6.958
a_8	1	10'-6"		7.014
a_9	1	10'-8"		7.125
a_{10}	1	10'-9"		7.181
a_{11}	1	10'-11"		7.292
a_{12}	1	11'-2"		7.459
a_{13}	1	12'-1"		8.072
b	10	12'-11		86.283
c	1	8'-10"		5.901
d	2	12'-0"		16.032
e	1	7'-6"		5.010
f	2	6'-0"		8.016
Total Rebars, lb				210.42
Concrete, cy				5.9

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