CITY OF WICHITA, KANSAS

STORM WATER SEWER NO. 173

PROJECT NO. 468-76-245-80884-000-000-001

BENCH MARKS

BM-City Brass Cap 25' N. & 30' E. of S. 1/4 Cor. Sec. 7, T 27S, R/W Elev.=1157.99

BM-RR Spike in N. Side Hedge Tree 20' S. P.I. Hedge rows S.& E. Near Center SW 1/4 Elev.=1160.08

BM-RR Spike W. Side 16" Hedge Tree in Hedge row 1300'± E. of W. 1/4 Cor. Elev.=1163.29

BM-RR Spike E. Side Hedge Tree in E-W Hedge row 60'± E. of W. 1/4 Cor. Elev.=1166.66

BM-RR Spike NE Side 10" Dia. Elm W. Side 119th 1300'± N. of SW Cor. Sec. 7 Elev.=1169.675

BM-City Brass Cap @ NE Cor. Int. 119th St. and 13th St. Elev.=1162.545

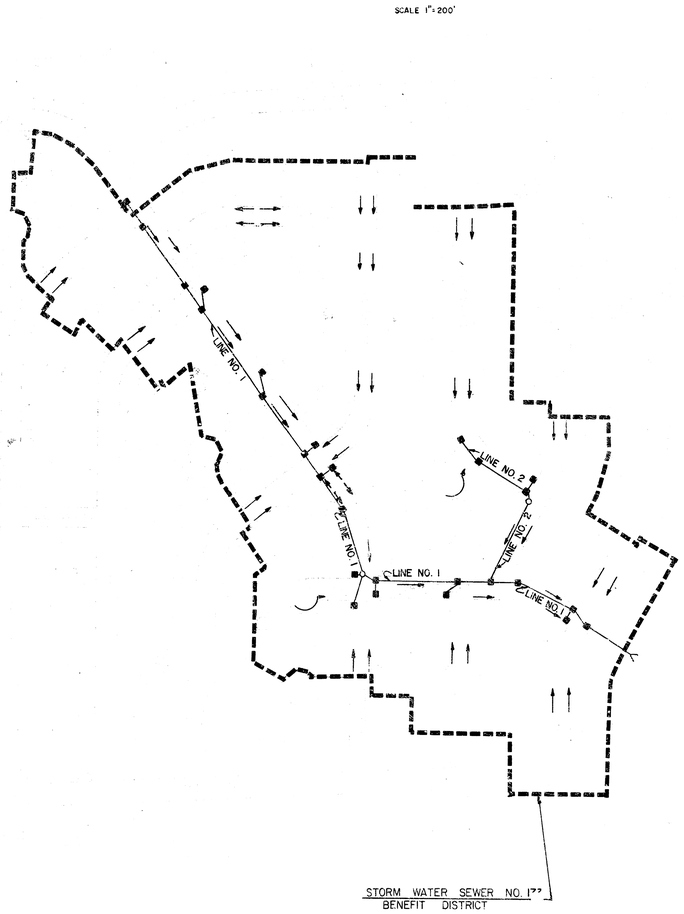
BM-RR Spike in 1st HLP W. of Jaax Prop. Elev.=1158.76

BM-RR Spike W. Side Hedge Tree 5'± E. of NE Cor. Blk. 3 Echo Hills Elev.=1154.595

LEGEND

- BENEFIT DISTRICT BOUNDARY
- DRAINAGE FLOW DIRECTION
- PROPOSED INLET
- PROPOSED MANHOLE

SCALE 1"=200'



MAY, 1980

INDEX OF SHEETS

1. TITLE SHEET
2-6. PLAN – PROFILE LINE NO. 1
7-8. PLAN – PROFILE LINE NO. 2
9. DETAIL CONCRETE HEADWALL
10. DETAIL STANDARD TYPE 1A CURB INLET
11. DETAIL PRECAST TYPE 1A CURB INLET
12. DETAIL REINFORCED CONCRETE MANHOLE

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY CONTRACTORS, AND CONTACT RELEVANT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THIS PROJECT SITE DEVELOPMENT.
2. FIELD ENGINEER SHALL TAKE TIES TO ALL IRONS AND THIMBLES IN THE PROJECT AREA BEFORE CONSTRUCTION BEGINS. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND THIMBLES DISTURBED DURING CONSTRUCTION.
3. THE TOPS OF INLETS AND MANHOLES AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
4. ALL METAL PIPES SHALL BE HELICALLY CORRUGATED PIPE, AND SHALL BE SMOOTH FLOW PIPES FOR SIZES 24" DIAMETER OR LARGER. ALL CONNECTIONS FOR THESE PIPES SHALL BE CONSTRUCTED USING HUGGER TYPE COUPLER OR EQUAL.
5. ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.
6. EARTHWORK FOR CHANNEL DOWNSTREAM FROM HEADWALL SHALL BE PAID FOR AS "EXCAVATION".
7. THE RIPRAP FOR THIS PROJECT SHALL BE TYPE 3. THE TYPE 3 RIPRAP SHALL BE 12" RIPRAP ON 8" SAND AND GRAVEL BEDDING. THE ROCK FOR RIPRAP AND GRAVEL PROJECTION SHALL BE HARD, DENSE, DURABLE, AND SHALL BE REASONABLY WELL GRADED. THE SIZE RANGE OF ROCK USED SHALL BE A MAXIMUM OF ONE CUBIC FOOT AND A MINIMUM OF 1 1/2". THE 6 INCH SAND AND GRAVEL BEDDING FOR RIPRAP SHALL BE A CONTINUOUS LAYER OF SAND AND GRAVEL OR SAND AND CRUSHED ROCK, REASONABLY WELL GRADED TO A MAXIMUM OF 1 1/2 INCHES IN SIZE.
8. CONTRACTOR SHALL AVOID UNCOVERING EXISTING WATERLINES UNLESS ABSOLUTELY NECESSARY. UNCOVERING SHALL BE DONE ONLY IN THE PRESENCE OF A WATER DEPT. ENGINEER.
9. FOR TYPE 1A CURB INLETS CONTRACTOR SHALL HAVE THE OPTION TO INSTALL PRE-CAST INLETS IN LIEU OF BRICK CONSTRUCTION FOR TYPE 1A CURB INLETS.
10. EXCESS TRENCH MATERIAL SHALL BE WASTED AS DIRECTED BY CITY ENGINEER. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

As built 11-3-81

CHARLES S. BROWN LICENSED 7589 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

TITLE SHEET

PHASE I

STORM WATER SEWER NO. 173

PROJ. NO. 468-76-245-80884-000-000-00

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

Designed by CSB	Job No. 80080-2	Sht. 1	1/1
Drawn by GH	Date May 7, 1980		

Install 444 S.Y. Type 3 Riprap

Sta. 2+02. = East Property Line Lots C24 & C25

Construct Standard Type 1A Curb Inlet W=4'-2" ✓
Install 38.3' L.F. 15" Pipe (NE)
Rt. Out = 151.07
Top Elev. = 155.30

℄ Street Curve Data
Δ = 30° 00' 00"
D = 17° 41' 46"
R = 160.53'
L = 88.77'
T = 45.43'

SCALE 1" = 20'

Exist Grd.

SECTION A-A

10 Bottom

Sta. 1+75.50 to Sta. 1+86
Const. Reinf. Concrete Headwall for 48" Pipe

Sta. 3+33.42
Construct Special Type 1A Curb Inlet W=4'-2", L=7'-0" ✓

Remove 30 L.F. Fence

Sta. 3+38.66
Construct Standard Type 1A Curb Inlet W=7'-0" ✓
Rt. In (15") = 150.50

Remove 30 L.F. Fence

Remove 20 L.F. Hedge Row

℄ Paving Sta 15+65.77 (P.T.)

Sta. 5+00.85
Construct Standard Type 1A Curb Inlet W=7'-0" ✓

℄ 30' Drainage & Storm Sewer Easement

℄ Proposed 14th Street

Pavement

℄ Shefford

Proposed

0.38%
0.32%
0.47%
1.10%
0.40%

32'
34' Fc-Fc.
80' R Fc-Fc (Typ.)
0.94'
484'

Existing 15" Storm Sewer
15" Utility Easement

Exist. Ground

Top Proposed N. Curb

Rt. In = 150.50 (15")

Special Type 1A Curb Inlet Top Elev. = 155.30

Sta. 3+38.66 Const. Special Type 1A Curb Inlet Top Elev. = 155.30

Sta. 3+91.66 Const. Std. Type 1A Curb Inlet Top Elev. = 155.30

Sta. 5+00.85 Const. Std. Type 1A Curb Inlet Top Elev. = 155.52

71.5 L.F. Channel @ 0.40%

197.42 L.F. 48" R.C.P. Alt. 48" CM.P. Fully Paved @ 0.40%

65.34 L.F. 45" R.C.P. Alt. 48" CM.P. Fully Paved @ 0.40%

192.19 L.F. 45" R.C.P. Alt. 48" CM.P. Fully Paved @ 0.67%

Rt. Out 148.37
Rt. In 148.17

Rt. Out 147.75
Rt. In 147.55

Rt. Out 147.26
Rt. In 147.06

Rt. Out 146.76
Rt. In 146.56

Rt. Out 146.26
Rt. In 146.06

Rt. Out 145.96

Rt. Out 145.37
Rt. In 145.17

160
155
150
145

1+00
2
3
4
5+00
6

CITY OF WICHITA, KANSAS

LINE NO. 1

STA. 3+33.42 TO STA. 5+90.85
STORM WATER SEWER NO. 173
PROJ. NO. 468-76-245-80884-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by DDCSB
Drawn by JPJS

Job No. 2000505
Date May 1980

Sheet 12 of

CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

SCALE 1" = 20'

℄ Paving Sta. 14+77.00 (P.C.)

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 45 L.F. 15" Pipe (NE)
R. Out = 152.42
Top Elev. = 156.61

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 33.3 L.F. 15" Pipe (N)
R. Out = 153.01
Top Elev. = 157.31

℄ 14th St. Ct.

℄ 20' Utility Easement

34' Fc-Fc.
32' 32'
20' R Fc-Co (Typ)
8.84'
36' Fc-Fc.
33' 33'
30' R Fc-Co (Typ)

Proposed 8" W

0.32%

℄ 14th Street

Proposed Pavement

℄ Parkridge

6'

32' 32' 34' Fc-Fc.

℄ 14th St Ct.

15" @ 1.50%

0.32%

6.72'

Sta. 5+90.85
Type 1A Curb Inlet

See Sht. No. 4

East Line
Lot 20 Extended

Line No. 2
See Sht. No. 7

Sta. 6+72.20
Construct Standard
Type 1A Curb Inlet
W=7'-0"

Sta. 7+83.50
Construct Standard
Type 1A Curb Inlet
W=6'-0"

Sta. 10+24.66
Construct Standard
Type 1A Curb Inlet
W=6'-0"

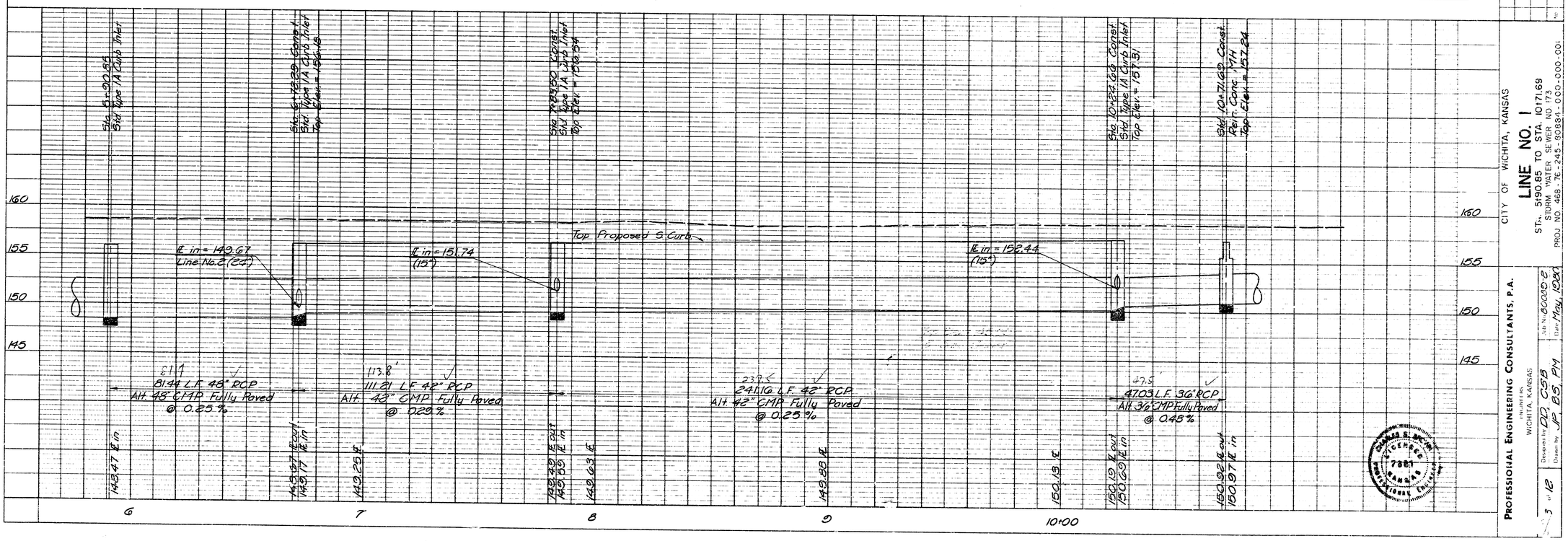
South Line
Lot 10 Extended

Sta. 10+71.60
Construct Rein. Conc. MH
L=6'-0", W=6'-0", H=6'-0", Stock: 0.08
See Detail, Sheet No. 12

℄ Covington

℄ 20' Utility Easement

Proposed



CHARLES E. SPURGIN
LICENSED
7881
KANSAS
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

Designed by CDC CSB
Drawn by JP BS PM
Job No. 6000.02
Date May 1981

CITY OF WICHITA, KANSAS
LINE NO. 1
STA. 5+90.85 TO STA. 10+71.69
STORM WATER SEWER NO. 173
PROJ NO. 468-76-245-90884-000-000-001

Sheet 3 of 12

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 93.5 L.F. 15" Pipe (NE)
Fl. Out = 153.80
Top Elev. = 157.57

34' Fc-Fc
32'
32'
13.84'
13.84'
0.32%
℄ 14th St.
15" @ 1.10%
0.32%
50' R. Fc-Gc (Typ.)
℄ 14th St.

Construct Standard
Type 1A Curb Inlet, W=3'-2"
Install 65.2 L.F. 15" Pipe (SE)
Fl. Out = 153.15
Top Elev. = 157.50

℄ Paving Sta. 25+64.10 (PT)
15' @ 1.50%
0.32%
0.32
Sta. 10+71.60
Rein. Conc. MH

℄ Street Curve Data
Δ = 37°40' 00"
D = 2° 50' 05"
R = 383.00'
L = 251.79'
T = 130.63'

℄ Parkridge
33'
36' Fc-Fc
33'
0.35%
0.32%

Sta 12+79.15
Construct Standard
Type 1A Curb Inlet, W=6'-0"

PEC
SCALE 1" = 20'

0.35%
0.54%
Proposed
Pavement
0.32%
0.54%
℄ Paving Sta. 27+19.30
℄ Paving Sta. (PC) 27+12.40

CHARLES S. BROWN
LICENSED
7581
KANSAS
PROFESSIONAL ENGINEER

Sta 10+71.60
Rein. Conc. MH
Sta 12+70.15 Const'd
Std. Type 1A Curb Inlet
Top Elev. = 157.67

Existing Ground
Top Proposed bl. Curb

Fl. In = 152.77
(15") (NW) & (SW)

208.5'
207.46 LF 36" R.C.P.
Alt 36" C.M.P. - Fully Paved
@ 0.35%

Fl. In
150.07
151.07
151.42
Fl. Out
151.70
Fl. In
151.80
151.97
152.05

160
155
150
10+00
11
12
13

CITY OF WICHITA, KANSAS

LINE NO. 1

STA. 10+71.69 TO STA. 13+50.00
STORM WATER SEWER NO. 173
PROJ. NO. 468-76-245-80884-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
TOPEKA
WICHITA, KANSAS

Designed by DC, CSB
Drawn by JPBS
Job No. 80089-2
Date May 1980

2 of 12

Sta. 13+84.00
Construct Standard
Type 1A Curb Inlet, W=6'-0"
R. In (15") = 153.97

Sta. 14+86.57
Construct Standard
Type 1A Curb Inlet, W=6'-0"
R. In (18") = 153.78

Sta. 16+87.83
Construct Standard
Type 1A Curb Inlet, W=5'-0"
R. In (15") = 154.83

SCALE 1" = 20'

34' Fc.-Fc.
32' 32'
18.84' 18.84'

North Line
Lot 41 Extended

0.54% 0.42% 0.42% 0.42%

15"@1.30%

18"@1.00%

15"@1.00%

33'
35'
36' Fc.-Fc.

℄ Parkridge
Proposed
Pavement

0.54% 0.42% 0.42% 0.42%

18.84'

90° R Fc.-Cr. (Typ.)

18.84'

℄ Chambers

North Line
Lot 15 Extended

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 40.3 L.F. 15" Pipe (SW)
R. Out = 154.49
Top Elev. = 158.27

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 40.3 L.F. 18" Pipe (SW)
R. Out = 154.18
Top Elev. = 158.22

Construct Standard
Type 1A Curb Inlet, W=4'-2"
Install 60.8 L.F. 15" Pipe (S)
R. Out = 155.53
Top Elev. = 159.30

CHARLES S. BROWN
7581
KANSAS
PROFESSIONAL ENGINEER

Sta. 13+84.00 Const. Std. Type 1A Curb Inlet Top Elev. = 158.27

Sta. 14+86.57 Const. Std. Type 1A Curb Inlet Top Elev. = 158.22

Sta. 16+87.83 Const. Std. Type 1A Curb Inlet Top Elev. = 159.06

160
155
150

Top Proposed W. Curb

R. In = 153.97 (15")

R. In = 153.78 (18")

Top Proposed W. Curb

R. In = 154.83 (15")

105.84 L.F. 36" RCP
Alt. 36" CMP Fully Paved
@ 0.35%

101.68 L.F. 36" RCP
Alt. 36" CMP Fully Paved
@ 0.25%

201.16 L.F. 30" RCP
Alt. 30" CMP Fully Paved
@ 0.35%

152.05 R.
+50

152.17 R. Out
152.22 R. In

152.26 R.

152.47 R. Out
152.57 R. In

153.02 R.

153.37 R.

153.67 R. Out
154.11 R. In

154.21 R.

154.51 R.

154.66 R.
+50

14 15+00 16 17 18

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
Engineers
WICHITA, KANSAS

CITY OF WICHITA, KANSAS

LINE NO. 1
STA. 13+50.00 TO STA. 18+50.00
STORM WATER SEWER NO. 173
PROJ. NO. 468-76-245-80884-000-000-001

Job No. 80892
Date Nov. 1980

Designed by DDCSB
Drawn by JPBS DD

12

Sta. 19+98.99
Construct Standard
Type 1A Curb Inlet, W=5'-0" ✓
FL In (15") = 155.85

Sta. 21+00.67
Construct Standard
Type 1A Curb Inlet, W=4'-2" ✓

Sta. 23+05.99
Construct Standard
Type 1A Curb Inlet, W=4'-2" ✓

Sta. 24+04.67
Construct Standard
Type 1A Curb Inlet, W=4'-2"

℄ Judith

34' Fc-Fc.
32' 32'
18.84'

℄ Pine Grove

34' Fc-Fc.
32' 32'
18.84'

SCALE 1"= 20'

0.62% 0.62% 0.62% 0.62% 0.92% 0.92%

15"@1.50%

0.62% 0.62%

36' Fc-Fc. 33' 33'

℄ Parkridge

Proposed Pavement

0.62% 0.92%

0.92%

18.84'

50' R Fc-Fc (Typ)

32' 32'
34' Fc-Fc.

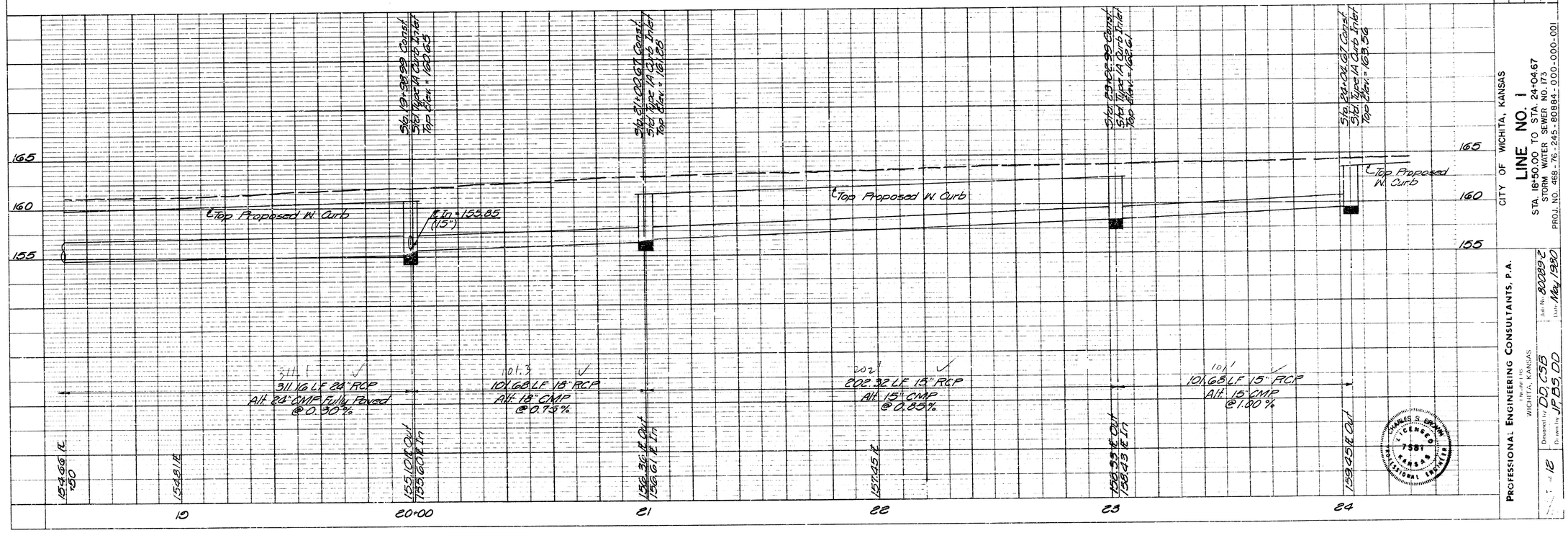
℄ Partridge Ct

6.24'

Construct Standard
Type 1A Curb Inlet, W=4'-2" ✓
Install 69.6 L.F. 15" Pipe (S)
Ft. Out = 156.89
Top Elev = 161.00

20' 20'
10' 14'
Fc-Fc.

℄ 16th St.



CITY OF WICHITA, KANSAS

LINE NO. 1

STA. 18+50.00 TO STA. 24+04.67

STORM WATER SEWER NO. 173

PROJ. NO. 468-76-245-80884-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
1 NORTH
WICHITA, KANSAS

Job No. 80239-2
Date May 1980

Designed by DD, CSS
Drawn by JP, BS, DD

Sheet 12 of 12

CHARLES S. CRAWL
LICENSED
7581
KANSAS
PROFESSIONAL ENGINEER

Sta. 10+00 Line No. 2 =
Sta. 6+72.20 Line No. 1

Sta. 12+88.24
Construct Standard
Type 1A Curb Inlet, W=5'-0" ✓
Rt. In (18")(NE) = 152.00

Sta. 12+60.47
Construct Reinf. Conc. M.H. ✓
L=5', W=6.5', H=5'
Stack = 1.79'
See Detail, Sheet No. 12

E. Covington Ct.

34' Fc-Fc.
32'
32'
18'@ 1.50%
2.83'
2.83'
6'

SCALE 1" = 20'

Construct Standard
Type 1A Curb Inlet, W=9'-2" ✓
Install 38.3 L.F. 18" Pipe (SW)
Rt. Out = 152.57
Top Elev. = 156.95

Storm Sewer Easement
by Separate Instrument

0.32%

32'
34' Fc-Fc.
32'

E. Covington Ct.
Proposed
Pavement

0.32%

E. 14th St.

20' R. Fc-Fc. Cb.
(Typ.)

Line No. 1
See Sh. No. 3

CHARLES S. BROWN
LICENSED
7581
KANSAS
PROFESSIONAL ENGINEER

Sta. 10+00 Line No. 2 =
Sta. 6+72.20 Line No. 1
Sta. Type 1A Curb Inlet

Sta. 12+69.47
Const. Reinf. Conc. M.H.
Top Elev. = 157.50

Sta. 12+88.24
Const. Std. Type 1A Curb Inlet
Top Elev. = 156.95

Existing Ground
Top Proposed W. Curb

Rt. In = 152.00
(18") (NE)

209.4' L.F. 24" R.C.P.
Alt. 24" C.M.P. Fully Paved
@ 0.60%

187.7 L.F. 24" R.C.P.
Alt. 24" C.M.P. Fully Paved
@ 0.60%

149.67 Rt. Out
149.61 Rt. In

150.27 Rt.

150.87 Rt.

151.29 Rt. Out
151.39 Rt. In

151.90 Rt. Out
152.00 Rt. In

160
155
150
145

10+00
11
12
18

CITY OF WICHITA, KANSAS
LINE NO. 2
STA. 10+00.00 TO STA. 12+88.24
STORM WATER SEWER NO. 173
PROJ. NO. 468-76-245-60384-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

Designed by DD, CSB
Drawn by JP, BS, TLB
Last Revised 8/00/00
Date May, 1990

7 of 12

Sta 12+88.24
Type 1A Curb Inlet

Sta 14+63.44
Construct Standard
Type 1A Curb Inlet, W=4'-2"

Sta 15+39.83
Construct Standard
Type 1A Curb Inlet, W=4'-2"

34' Fa-Fa.
33' 33'

34' Fa-Fa.
32' 32'

℄ Covington

℄ Cardington

Proposed Pavement

0.32%

32'

34' Fa-Fa.

20' R. Fc. Curb (Typ)

℄ Paving Sta. 11+03.04 (PC)

℄ Paving Sta. 12+13.44

℄ Paving Sta. 12+81.55

℄ Paving Sta. 13+58.50 (PT.)

SCALE 1"= 20'

℄ Street Curve Data
Δ=60° 00' 00"
D=37° 58' 20"
R=150.00'
L=165.96'
T=91.22'

CHARLES S. BROWN
LICENSED
7581
KANSAS
PROFESSIONAL ENGINEER

Sta 12+88.24
Start Type 1A Curb Inlet

Sta 14+63.44 Construct
Start Type 1A Curb Inlet
Top Elev.=157.51

Sta 15+39.83 Construct
Start Type 1A Curb Inlet
Top Elev.=157.75

Existing Ground

Top Proposed S. Curb

℄ Top Proposed W. Curb

Prop. L
175.20 L.F. 18" R.C.P.
Alt. 18" C.M.P.
@0.70%

Prop. L
76.39 L.F. 18" R.C.P.
Alt. 18" C.M.P.
@0.50%

151.50 ℄ out
152.00 ℄ in
152.28 ℄

152.78 ℄

153.23 ℄ out
153.33 ℄ in

153.51 ℄

153.71 ℄ out

160
155
150

13
14
15+00
16

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by DD, CSB
Drawn by JP BS TEB

Job No. 802892
Date May, 1980

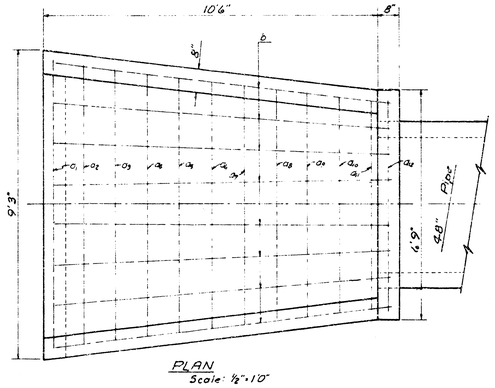
CITY OF WICHITA, KANSAS

LINE NO. 2

STA. 12+88.24 TO STA. 15+39.83
STORM WATER SEWER NO. 173

PROJ. NO. 468-76-245-80884-000-000-001

9 of 12

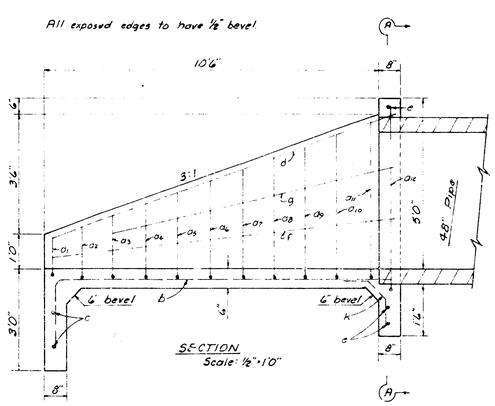


PLAN
Scale: 1/2"=1'0"

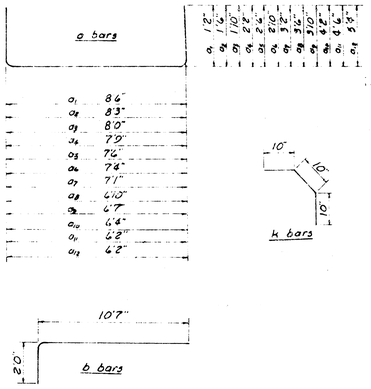
TABLE OF QUANTITIES				
BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a_1	1	10'10"		7.24
a_2	1	11'3"		7.52
a_3	1	11'8"		7.79
a_4	1	12'1"		8.07
a_5	1	12'6"		8.35
a_6	1	13'0"		8.68
a_7	1	13'5"		8.96
a_8	1	13'10"		9.24
a_9	1	14'3"		9.52
a_{10}	1	14'8"		9.80
a_{11}	1	15'2"		10.13
a_{12}	1	16'10"		11.24
b	8	12'7"		67.25
c	2	8'6"		11.34
d	2	11'6"		15.34
e	3	6'5"		12.91
f	2	10'9"		14.36
g	2	9'0"		12.02
h_1	4	1'2"		3.12
h_2	4	8"		1.78
j	4	3'3"		8.68
k	7	2'6"		11.69
Rebars (lbs)				245.07
Concrete (C.Y.)				6.75

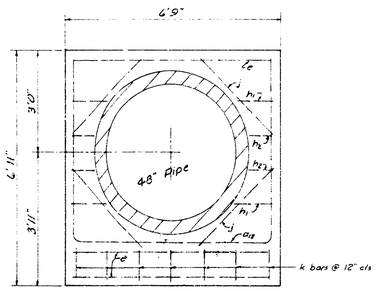
All rebars to be #4

All exposed edges to have 1/2" bevel



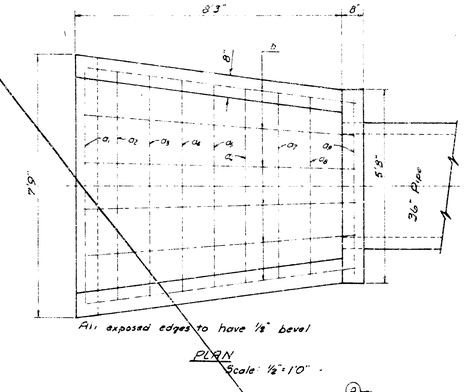
SECTION
Scale: 1/2"=1'0"





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

HEADWALL FOR 48" PIPE

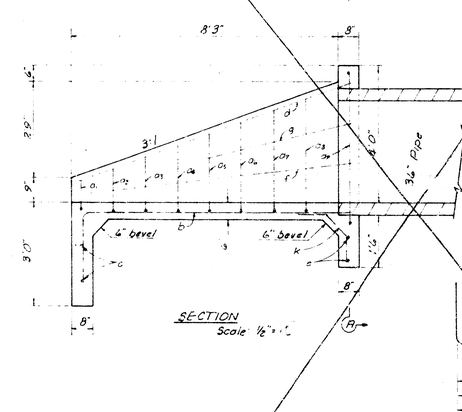


All exposed edges to have 1/2" bevel

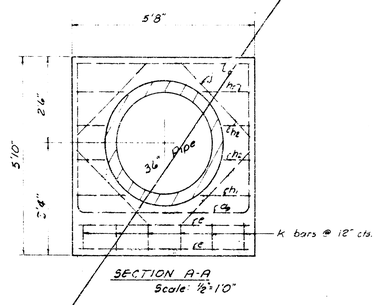
PLAN
Scale: 1/2"=1'0"

TABLE OF QUANTITIES				
BAR	NUMBER	LENGTH	SHAPE	WEIGHT
a_1	1	8'7"		5.73
a_2	1	9'0"		6.01
a_3	1	9'7"		6.40
a_4	1	10'0"		6.68
a_5	1	10'5"		6.96
a_6	1	10'10"		7.24
a_7	1	11'3"		7.52
a_8	1	11'10"		7.90
a_9	1	14'0"		9.35
b	6	10'6"		47.52
c	2	7'0"		9.35
d	2	9'0"		12.02
e	3	5'6"		10.69
f	2	8'5"		11.24
g	2	9'7"		6.12
h_1	4	1'6"		3.91
h_2	4	10"		2.23
j	4	3'0"		8.02
k	6	2'6"		10.02
Total Rebars, lbs				178.57
Conc. C.Y.				3.20

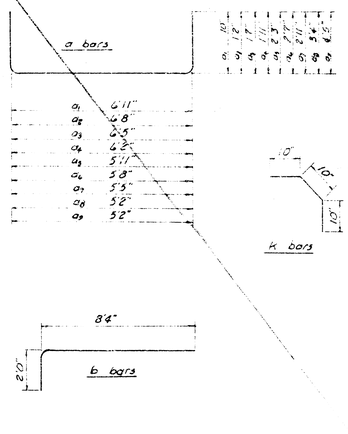
All rebars to be #4



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



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



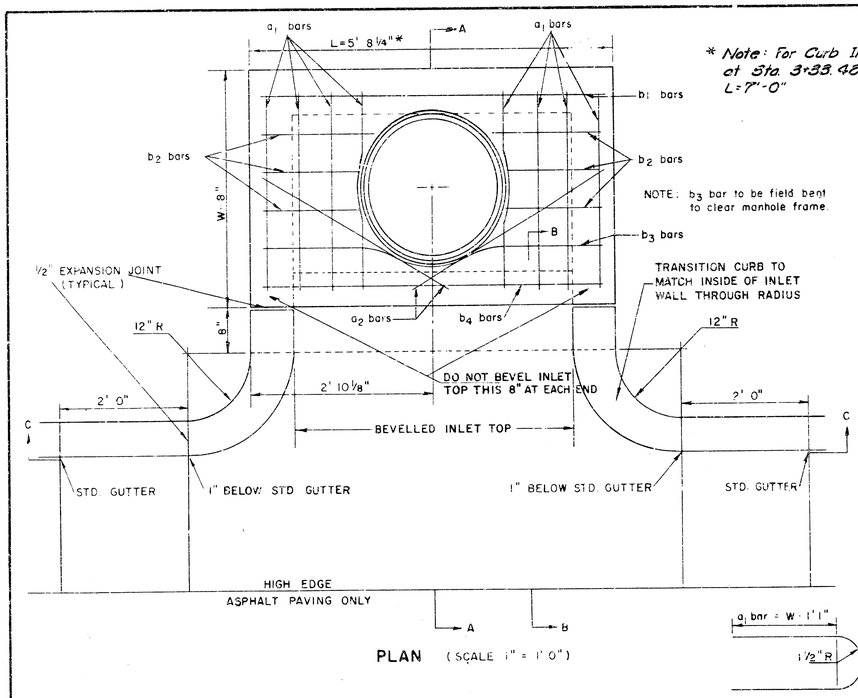
HEADWALL FOR 36" PIPE

DETAIL CONCRETE HEADWALL

CITY OF WICHITA, KANSAS

STORM WATER SEWER NO. 173

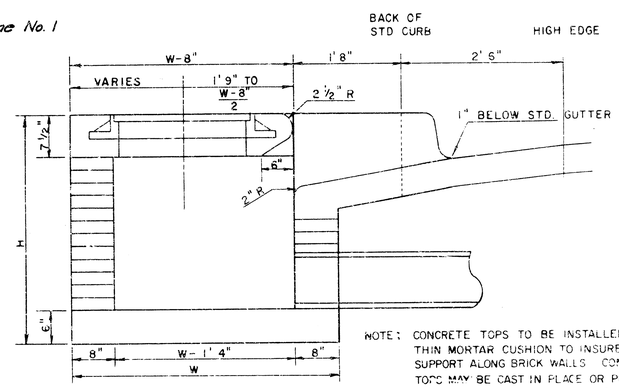
PROJ. NO. 468-76-245-80884-000-000-001



PLAN (SCALE 1" = 1'0")

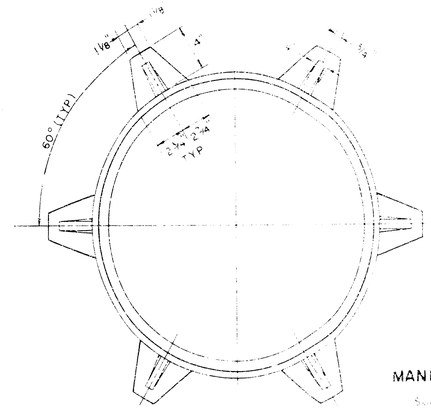
* Note: For Curb Inlet at Sta. 3+33.42, Line No. 1 L=7'-0"

NOTE: b_3 bar to be field bent to clear manhole frame.

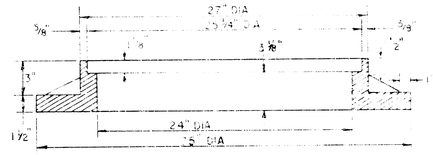


SECTION A-A
(SCALE 1" = 1'0")

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.



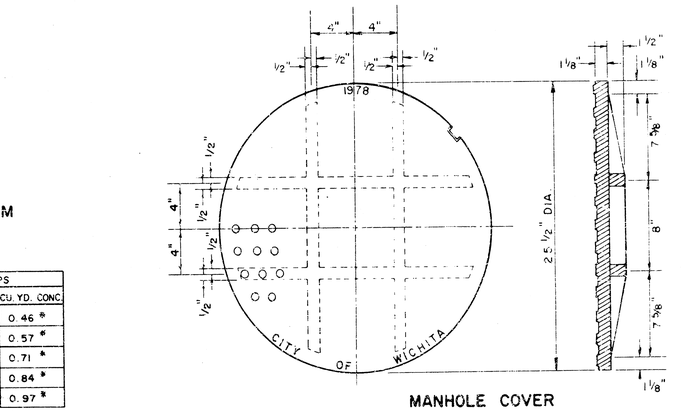
MANHOLE FRAME
SCALE 1" = 6"
WEIGHT = 180 LBS



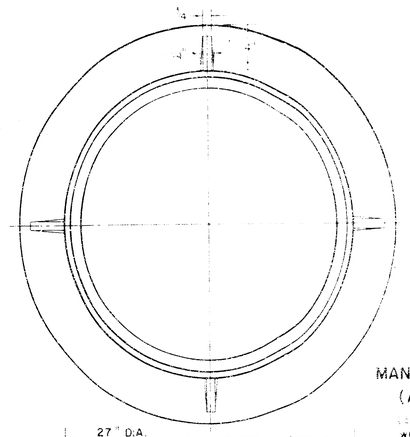
STEEL SCHEDULE

BAR	a_1	a_2*	b_1 W=4'2"	b_1 W=5'0"	b_1 W=6'0"	b_1 W=7'0"	b_1 W=8'0"	b_2	b_3	b_4	WT. LBS.
NUMBER	8	2	1	3	5	7	9	6	1	1	
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH W=4'2"	6'5"	5'4"	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=5'0"	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#

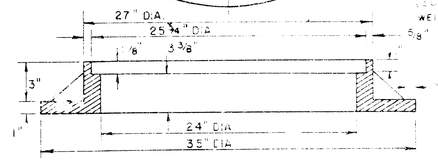
* NOTE: a_2 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER



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

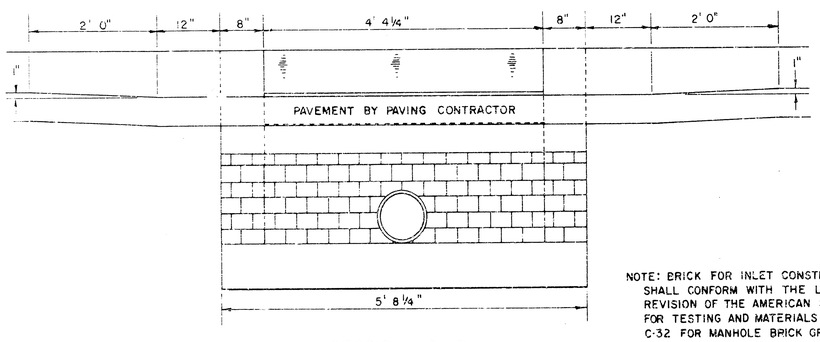


MANHOLE FRAME (ALTERNATE)
SCALE 1" = 6"
WEIGHT = 180 LBS



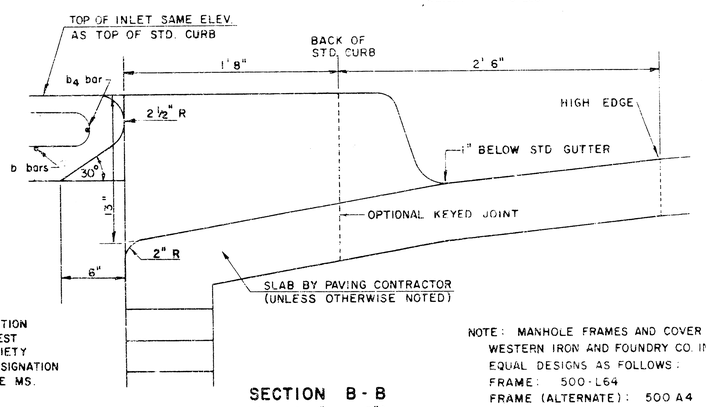
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 2"	36"x5'8 1/4"x7 1/2"	21" & SMALLER	0.46 *
5' 0"	44"x5'8 1/4"x7 1/2"	24" & 30"	0.57 *
6' 0"	54"x5'8 1/4"x7 1/2"	36" & 42"	0.71 *
7' 0"	64"x5'8 1/4"x7 1/2"	48" & 54"	0.84 *
8' 0"	74"x5'8 1/4"x7 1/2"	60" & 66"	0.97 *

* 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: 500-L64
FRAME (ALTERNATE): 500 A4
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET

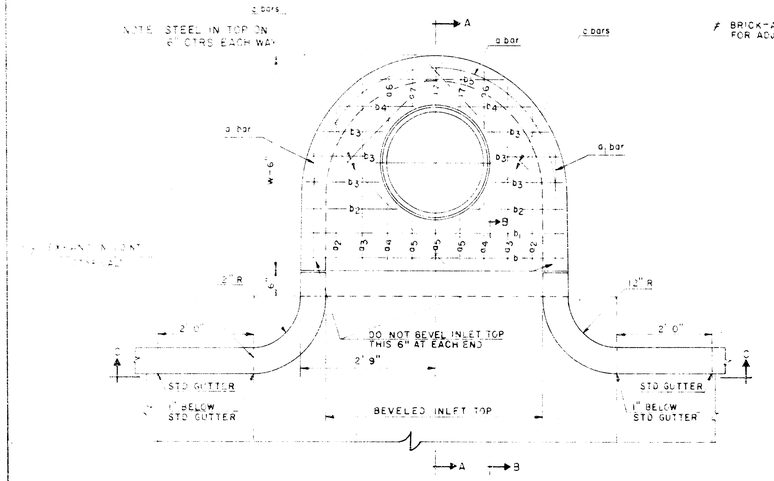
CITY OF WICHITA, KANSAS

DEAN S. SELLERS— CITY ENGINEER

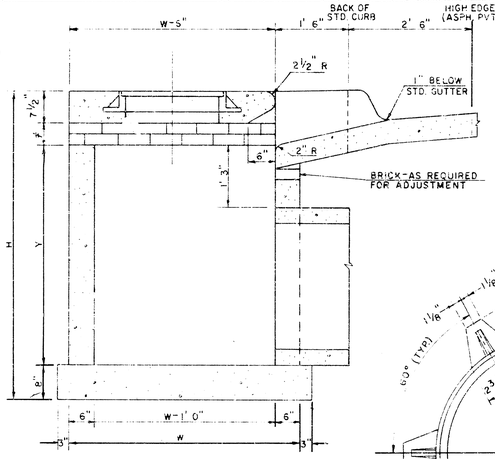
OCTOBER 1978

STORM WATER SEWER NO. 173 PROJ. NO. 468-76-245-80884-000-000-00

Sheet No. 10 of

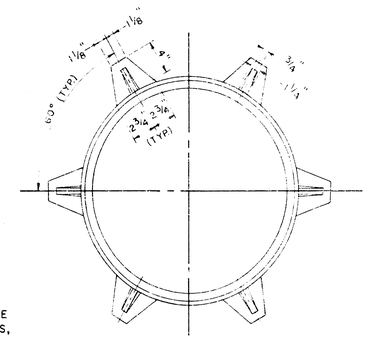


PLAN
SCALE: 3/4" = 1' 0"

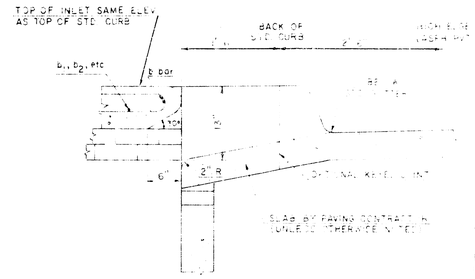


SECTION A-A
SCALE: 3/4" = 1' 0"

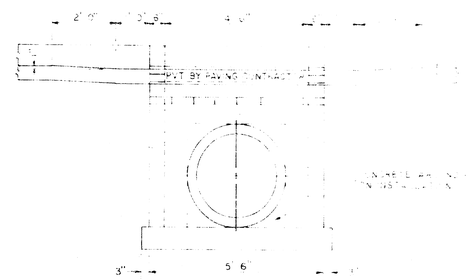
NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE FOR INLET TOPS, FLOORS, AND PRE-CAST BODY SHALL BE 6 SACK PAVING MIX.



MANHOLE FRAME
SCALE: 1½" = 1' 0"
WEIGHT = 350 LBS.

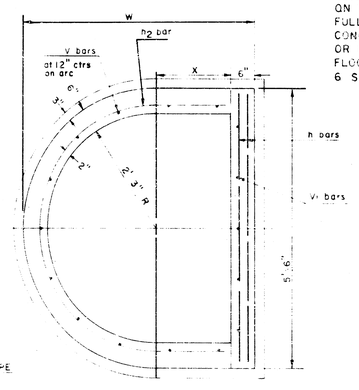


SECTION B-B
SCALE: 1" = 1' 0"

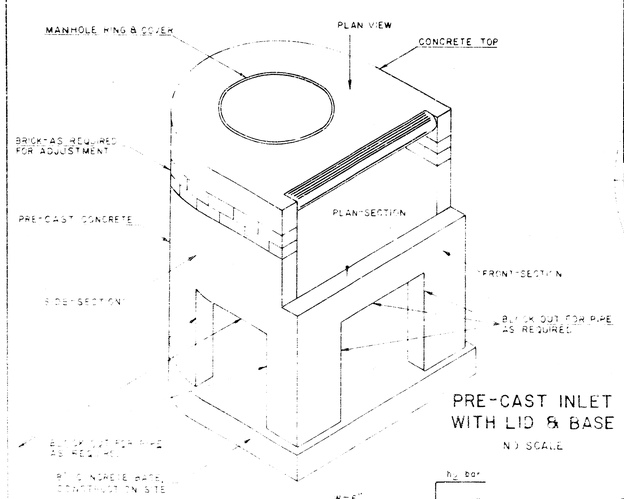


SECTION C-C
SCALE: 1/2" = 1' 0"

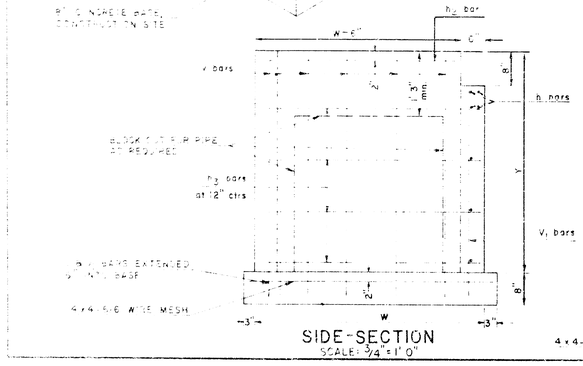
W	PIPE DIAM.
W=4' 3"	30" & LESS
W=5' 1"	36" & 42"
W=7' 1"	48" & 54"
W=8' 3"	60" & 66"



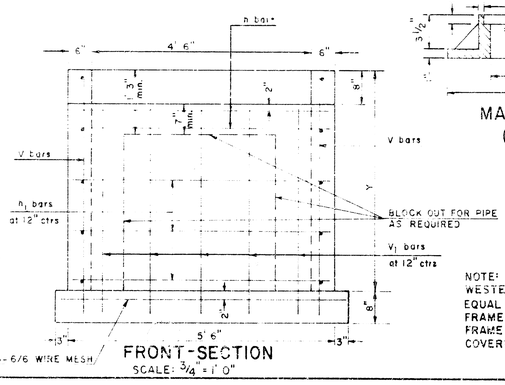
PLAN-SECTION
SCALE: 3/4" = 1' 0"



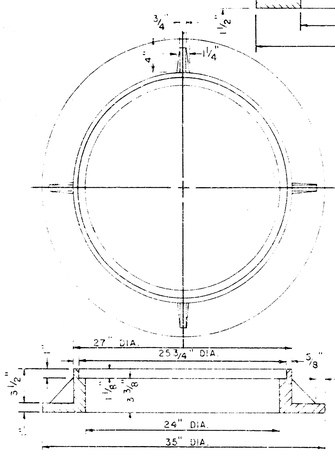
PRE-CAST INLET WITH LID & BASE
N.T. SCALE



SIDE-SECTION
SCALE: 3/4" = 1' 0"

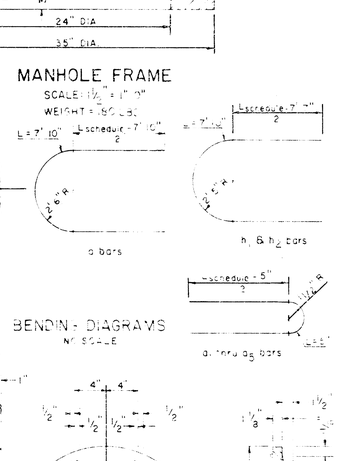


FRONT-SECTION
SCALE: 3/4" = 1' 0"

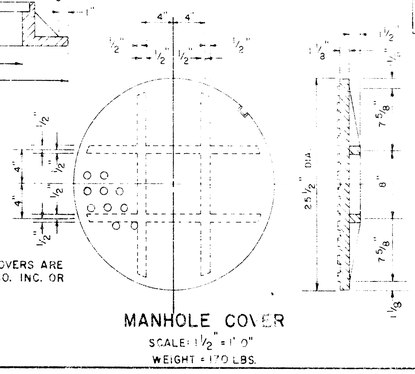


MANHOLE FRAME (ALTERNATE)
SCALE: 1½" = 1' 0"
WEIGHT = 180 LBS.

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



BENDING DIAGRAMS
N.T. SCALE



MANHOLE COVER
SCALE: 1½" = 1' 0"
WEIGHT = 170 LBS.

STEEL SCHEDULE

BAR	g	a1	a2	a3	a4	a5	b1	b2	b3	b4	b5
SIZE	#6	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
W=4' 3" NO.	1	2	6	2	4	5	3	5	11	2	6
W=4' 3" LENGTH	12' 6"	2' 5"	3' 5"	2' 11"	2' 8"	2' 2"	2' 10"	2' 5"	11' 7"	2' 8"	2' 3"
W=5' 1" NO.	1	2	6	2	4	5	3	5	11	2	6
W=5' 1" LENGTH	12' 6"	2' 5"	3' 5"	2' 11"	2' 8"	2' 2"	2' 10"	2' 5"	11' 7"	2' 8"	2' 3"
W=7' 1" NO.	1	2	6	2	4	5	3	5	11	2	6
W=7' 1" LENGTH	12' 6"	2' 5"	3' 5"	2' 11"	2' 8"	2' 2"	2' 10"	2' 5"	11' 7"	2' 8"	2' 3"
W=8' 3" NO.	1	2	6	2	4	5	3	5	11	2	6
W=8' 3" LENGTH	12' 6"	2' 5"	3' 5"	2' 11"	2' 8"	2' 2"	2' 10"	2' 5"	11' 7"	2' 8"	2' 3"

BAR	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15	b16
SIZE	#6	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
W=4' 3" NO.	5	3	1	5	3	2	8	6	4	2	4
W=4' 3" LENGTH	5' 3"	2' 6"	3' 2"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"
W=5' 1" NO.	5	3	1	5	3	2	8	6	4	2	4
W=5' 1" LENGTH	5' 3"	2' 6"	3' 2"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"
W=7' 1" NO.	5	3	1	5	3	2	8	6	4	2	4
W=7' 1" LENGTH	5' 3"	2' 6"	3' 2"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"
W=8' 3" NO.	5	3	1	5	3	2	8	6	4	2	4
W=8' 3" LENGTH	5' 3"	2' 6"	3' 2"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"	2' 10"	8' 6"	4' 2"

BAR	a6	a7	a8	a9	a10	a11	a12	a13	a14	a15	a16
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
W=4' 3" NO.	4	5	3	3	5	3	4	4	3	5	3
W=4' 3" LENGTH	4' 3"	4' 5"	3' 3"	2' 5"	3' 7"	2' 3"	5' 3"	3' 5"	2' 3"	3' 7"	2' 3"
W=5' 1" NO.	4	5	3	3	5	3	4	4	3	5	3
W=5' 1" LENGTH	4' 3"	4' 5"	3' 3"	2' 5"	3' 7"	2' 3"	5' 3"	3' 5"	2' 3"	3' 7"	2' 3"
W=7' 1" NO.	—	6	3	1	4	3	6	6	4	6	3
W=7' 1" LENGTH	—	6' 5"	3' 3"	1' 4"	3' 6"	2' 3"	7' 3"	6' 7"	3' 5"	5' 6"	2' 3"
W=8' 3" NO.	—	7	3	1	4	3	7	7	4	8	3
W=8' 3" LENGTH	—	7' 6"	3' 3"	1' 4"	3' 6"	2' 3"	8' 3"	7' 8"	3' 5"	6' 8"	2' 3"

NOTE: DIMENSIONS INDICATED ON PLAN ARE BASIC. SIZE OF INLETS REQUIRED FOR PIPE SIZES SHOWN ARE MINIMUM FOR PIPE CLEARANCE. WHEN PIPE ENTERS AT SLEEVATION WELL ABOVE FLOW LINE, INLET MAY BE ANY SIZE DIFFERENT FROM THOSE SHOWN.

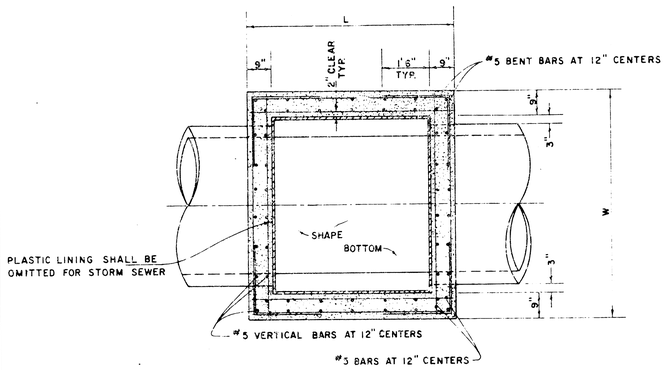
DETAIL PRE-CAST TYPE IA INLET

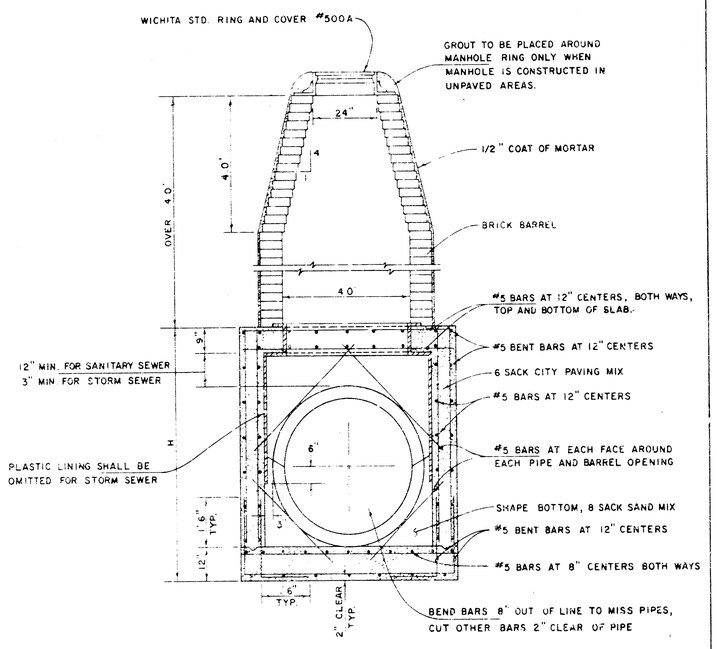
CITY OF WICHITA, KANSAS

R. W. LINN — CITY ENGINEER

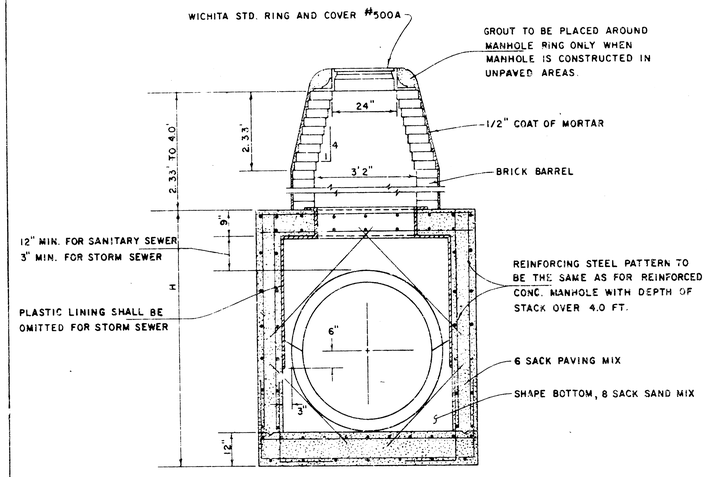
AUGUST 1979

STORM WATER SEWER NO. 173 PROJ. NO. 468-76-245-80884-000-000-101

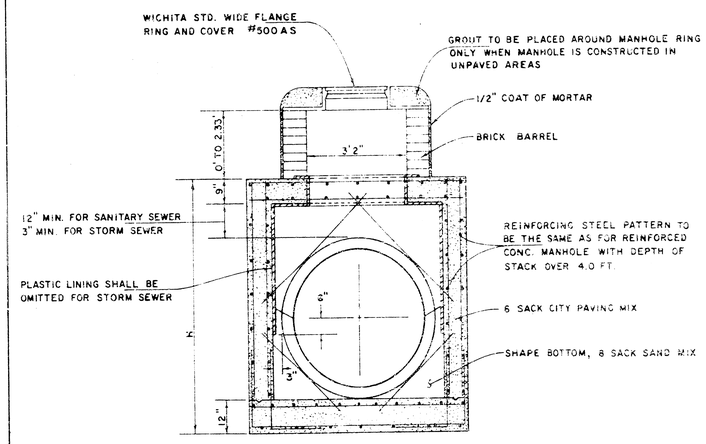




REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

STANDARD DETAILS
REINFORCED CONCRETE MANHOLES

CITY OF WICHITA
DEAN S. SELLERS -- CITY ENGINEER
APRIL 1978

STORM WATER SEWER NO. 173 PROJ. NO. 468-76-245-80884-000-000-001

Sheet No. 12 of