CITY OF WICHITA, KANSAS

STORM WATER SEWER NO. 204

(NORTHWEST VILLAGE)

PROJECT NO. 468-76-245-81040-000-000-001

BENCH MARKS

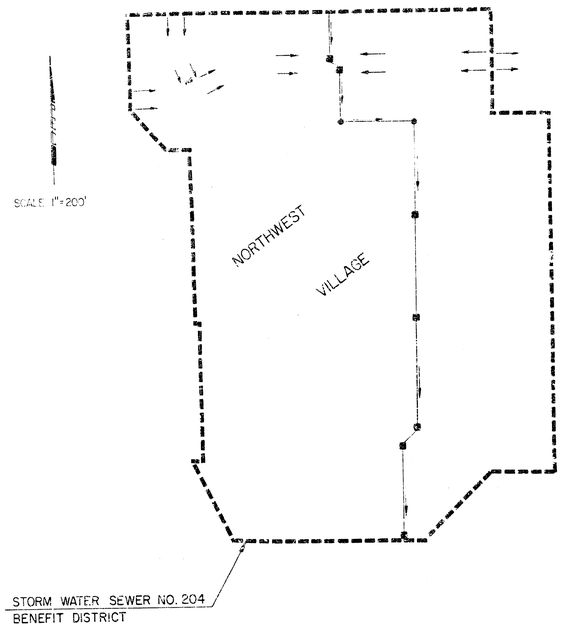
B.M. - C.O.W. standard disc located 31' south and 36' east of W¼ corner Sec. 9, T27S, R1W, 6th P.M. Elev. = 172.48

B.M. - Chis "I" in SW corner headwall @ concrete box approx. 50' N/of S¼ corner Sec. 9, 27S/1W Elev. = 156.60

B.M. - Chis "I" NE corner storm drain box N/side of 13th St. approx. 12.40'± east of SW corner Sec. 9, 27S/1W Elev. = 161.52

B.M. - Chis "I" SW corner concrete box which lies approx. 840'± E/of SW corner Sec. 9, 27S/1W (N. side 13th St.) Elev. = 162.48

B.M. - NW corner 4'x4' concrete pad with C.O.W. M.H. behind curb on NW corner of intersection Tyler & 13th St. N. Elev. = 167.55



INDEX OF SHEETS

1. TITLE SHEET
2-5. PLAN & PROFILE SHEETS
6. R.C.B.C. EXTENSION
7. SPECIAL AREA DRAIN
8. DETAIL STANDARD TYPE IA CURB INLET
9. DETAIL PRE-CAST TYPE IA INLET
10. STANDARD DETAILS REINFORCED CONCRETE MANHOLES

LEGEND

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

NOVEMBER , 1980

CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

TITLE SHEET

STORM WATER SEWER NO. 204

PROJ. NO. 468-76-245-81040-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

Designed by DD, CSB | Job No. 80305 | Sht. 1

Drawn by G.R.H | Date Nov. 1980

FILMED FROM THE BEST AVAILABLE COPY

Sta. 10+00 S.W.S. No. 204 =
℄ 13th Street

Sta. 10+72.08 BEGIN
Storm Water Sewer No. 204
Pipe Construction

Sta. 10+50.75 to Sta. 10+72.75
Remove Existing Soil Saver
& Extend existing 7'x5' RCBC
See Sheet No. 6 for Details.

Sta. 13+37.36 Const.
Special Area Drain
Top Elev. = 1602.01
L = 10'-0½"
See Sheet No. 7

Sta. 13+37.36 =
℄ P.I

Sta. 14+01.00 Const.
Special Area Drain
Top Elev. = 1602.16
L = 10'-0½"
See Sheet No. 7

Sta. 14+01.00 =
℄ P.I

Existing pavement

℄ 5'-6" BK Cb

RIM 160.8

10'-0" Min

Future Fill (By Others)

Existing Ground

12" (Typ)

Storm Sewer

6" Compaction 95% AASHTO T-99

Compaction to 95% AASHTO T-99

MINIMUM STORM SEWER COVER DETAIL

Note: Contractor to provide minimum Cover over Storm Water Sewer as shown in Detail above.

PLAN

SCALE 1"=20'

Existing Ground

Exist. 7'x5' RCB

205.28 L.F. 42" RCP
Alt. 48" CMP Fully Paved
@ 0.19%

63.04 L.F. 48" RCP
Alt. 48" CMP Fully Paved
@ 0.17%

320.00 L.F. 42" RCP
Alt. 42" CMP Fully Paved
@ 0.18%

Sta. 13+37.36 Const. Special Area Drain Top Elev. = 1602.01

Sta. 14+01.00 Const. Special Area Drain Top Elev. = 1602.16

E. Inv. = 1255.00

E. = 1259.05

E. = 1259.14

E. = 1256.83

E. Inv. = 1256.90

E. Inv. = 1256.57

E. = 1256.60

E. = 1256.67

10+00 11 12 13 14 15+00 16

165 160 155 150 145

CHARLES S. BROWN
LICENSED
7591
KANSAS
PROFESSIONAL ENGINEER

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

Designed by DDC
Drawn by GRH

Job No. 82305
Date Nov. 1980

CITY OF WICHITA, KANSAS

STA. 10+72.08 TO STA. 16+00.00
STORM WATER SEWER NO. 204

Proj. No. 468-76-745 (84 04 / 760-00-00)

Sheet 10 of

Sta 17+27.75 Const.
Special Area Drain
Top Elev. = 162.80
L = 5'-0"

Sta 20+27.75 Const.
Special Area Drain
Top Elev. = 163.41
L = 5'-0"

Existing Shelter Belt

Remove 20 L.F.
B.W. Fence & Replace

Note: Between Sta. 17+05 and Sta. 18+17 Remove 8 Small Trees and 1 Large Tree.

Note: Contractor to provide minimum Cover over Storm Water Sewer as shown on Sheet No. 9.

SCALE 1"= 20'

Existing Ground

See Sheet No. 8

300.00 L.F. 42" RCP
Alt. 42" CMP Fully Paved
@ 0.20%

282.54 L.F. 39" RCP
Alt. 39" CMP Fully Paved
@ 0.21%

E = 157.37
E = 157.05
E In = 156.90
E = 157.24
E = 157.54
E In = 157.70
E = 157.84
E = 157.85
E = 157.90

16 17 18 19 20+00 21

170 165 160 155 150

CITY OF WICHITA, KANSAS
STA. 16+00.00 TO STA. 21+50.00
STORM WATER SEWER NO. 204

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

Job No. 240365
Date Nov. 1990
Designed by DD CSB
Drawn by GRH

CHARLES S. BROWN
7581
REGISTERED
KANSAS
NATIONAL ENGINEER

Sheet 5 of 10

SCALE 1"=20'

Sta. 23+10.60 Const.
Std. Reinf. Conc. Manhole
W/wide Flange MH Ring
Top Elev. = 164.00
H = 5'-0", Stack = 0.32'
L = 5'-6", W = 5'-6"

Sta. 23+10.60
℄ P.I.

Const. MH on
℄ Extended

Sta. 25+41.73
℄ P.I.

Sta. 25+41.73 Const.
Std. Reinf. Conc. Manhole
W/wide Flange MH Ring
Top Elev. = 164.50
H = 5'-0", Stack = 0.61'
L = 5'-6", W = 5'-6"

10' 10'
80°01'06"
7'-6"
17'-6"
17'-6"
7'-6"
90°00'00"

Existing Ground

Sta. 23+10.60 Const.
Std. Reinf. Conc. Manhole
Top Elev. = 164.00

Sta. 25+41.73 Const.
Std. Reinf. Conc. Manhole
Top Elev. = 164.50

See Sheet No. 3

231.08 L.F. 36" RCP
Alt. 36" CMP Fully Paved
@ 0.22%

See Sheet No. 5

E = 157.06
+50
E = 158.06
E = 158.27
E Inv. Out = 158.27
E = 158.49
E = 158.71
E Inv. Out = 158.71

170
165
160
155
150

22
23
24
25+00

CITY OF WICHITA, KANSAS

STA. 21+50.00 TO STA. 25+41.73

STORM WATER SEWER NO. 224

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

Drawn by: DC
Checked by: CSS
Drawn by: GRH

Job No. 83505
Date: Nov. 1980

CHARLES S. BROWN
7581
KANSAS
REGISTERED PROFESSIONAL ENGINEER

of 10

Sta 25+41.73
Std. Reinf. Conc Manhole

Sta 26+30.23 Const.
Std. Type IA Curb Inlet
W=5'-0" Top Elev = 1648.1

Normal Gutter E. = 1643.8

33' 33'
36' Fc-Fc

Proposed 2' Pavement

0.85%

0.85%

0.35%

Sta 27+44.40 Const.
Std. Type 1.4 Curb Inlet
W=5'-0" Top Elev = 1648.0

Normal Gutter E. = 1641.7

10'x10' Permanent
Drainage Easement

Sta 28+40.48 END
Storm Water Sewer No. 204
Plug (See Detail Sheet No. 10)

Const. Inlets on
E. Extended

20'x20' Temp.
Const Easement

Rd Thurman

SCALE 1"=20'

Existing Ground

Plug

148.59 L.F. 30" RCP
Alt. 36" CMP Fully Paved
@ 0.20%

94.26 L.F. 30" RCP
Alt 30" CMP Fully
Paved @ 0.37%

136.00 L.F. 30" RCP
Alt. 30" CMP Fully Paved
@ 0.23%

E. Inv. Out = 1592.40

E. Inv. Out = 1593.10

E. Inv. Out = 1593.30

E. Inv. In = 1594.20

E = 1598.25

E = 1599.15

E = 1599.45

E = 1600.61

1704

165

160

155

150

24

25+00

26

27

28

29

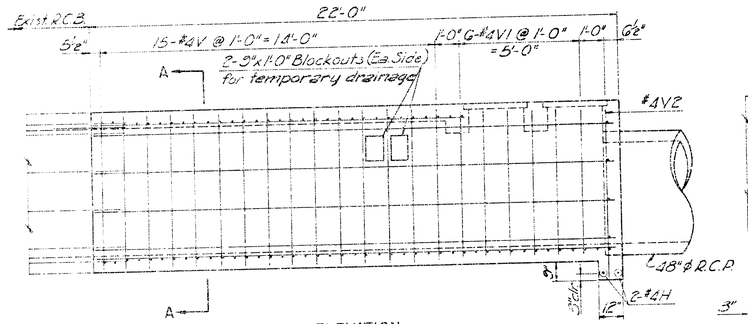
CITY OF WICHITA, KANSAS
STA. 25+41.73 TO STA. 28+75.68
STORM WATER SEWER NO. 204

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

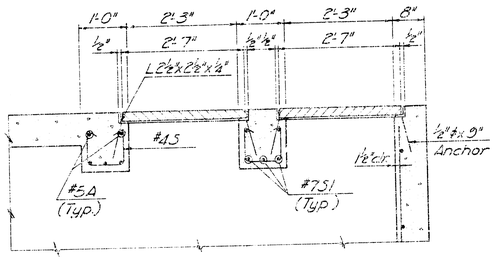
Designed by: DLD, CSB
Drawn by: GAH

Job No. 85-23-025
Date: Nov. 1985

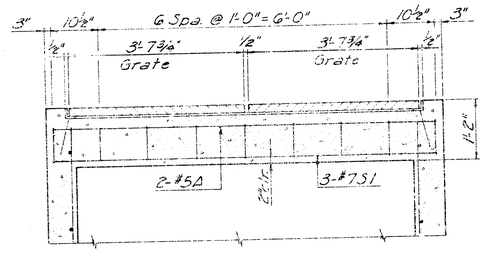
CHARLES S. BROWN
No. 7581
LICENSED PROFESSIONAL ENGINEER
STATE OF KANSAS



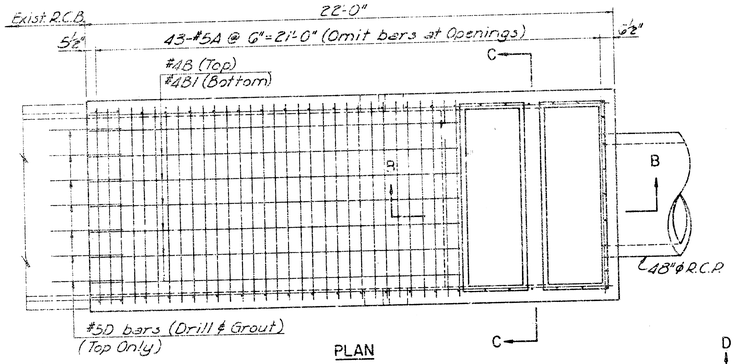
ELEVATION



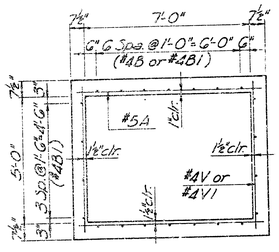
SECTION B-B



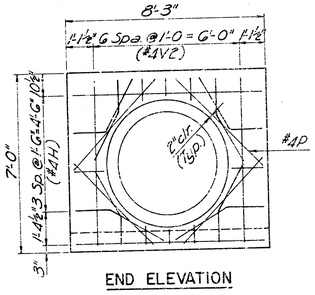
SECTION C-C



PLAN

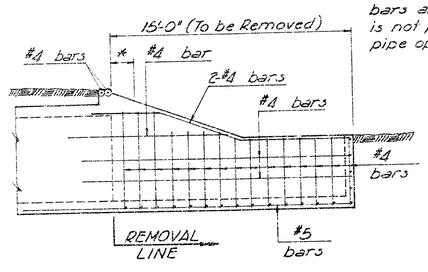


SECTION A-A



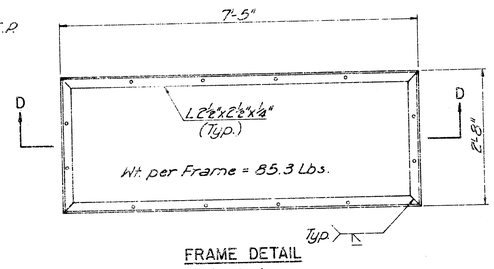
END ELEVATION

Whenever possible, bend reinforcing bars around pipe opening. Where it is not possible to bend bars around pipe opening, bars are to be field cut.

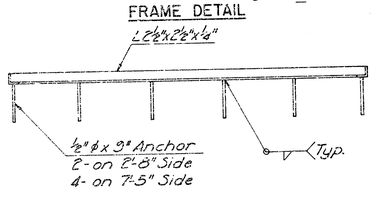


*1'-6" (Min.) of horizontal steel to remain.

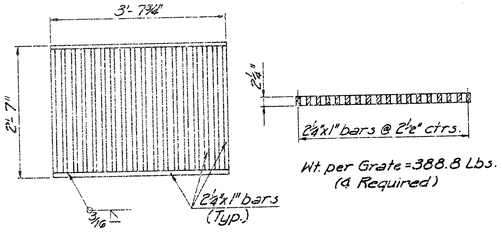
DEMOLITION DETAIL



FRAME DETAIL

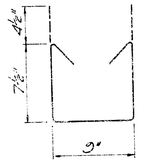


SECTION D-D



Wt. per Grate = 388.8 Lbs. (4 Required)

GRATE DETAIL



S

BENDING DIAGRAM

REINFORCING STEEL

STRAIGHT BARS				BENT BARS			
Mark	No.	Size	Length	Mark	No.	Size	Length
S1	6	#7	7'-11"				
A	78	#5	7'-11"				
D	7	#5	3'-0"				
B	7	#4	15-8"	S	18	#4	2'-3"
B1	15	#4	21'-9"				
H	6	#4	7'-11"				
P	4	#4	5'-0"				
V	30	#4	6'-0"				
V1	12	#4	5'-9"				
V2	7	#4	6'-8"				

SUMMARY OF QUANTITIES

Class A(AE) Concrete	14.0	Cu Yds
Reinforcing Steel	1330	Lbs
Structural Steel	1726	Lbs

For Information Only
NOTE: No deduction in concrete quantity made for pipe opening or blockouts

(MINIMUM OF 2")

B. ONE COAT OF SHOP APPLIED RED LEAD PRIMER

CITY OF WICHITA, KANSAS

R.C.B.C. EXTENSION

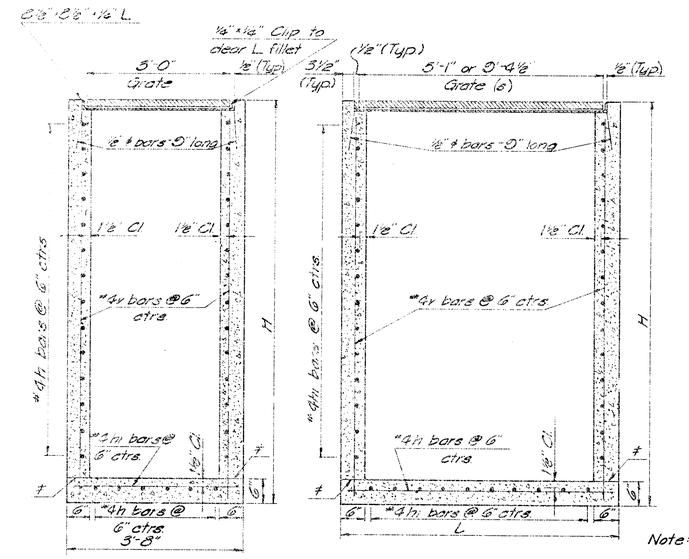
STORM WATER SEWER NO. 204

PROJ. NO. 468-76-245-81040-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
WICHITA, KANSAS

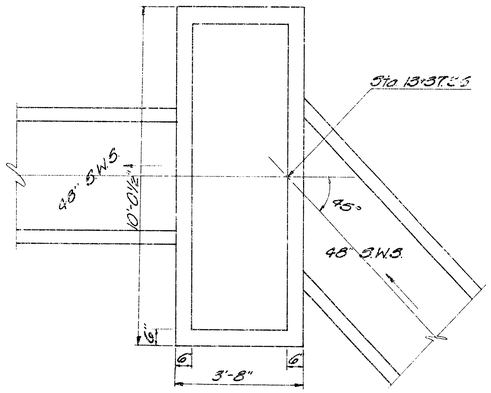
Designed	A.G.L.	Drawn	A.G.L. & V.J.K.
Checked	W.L.L.	Date	Nov 1980

† Roughened Construction Joint

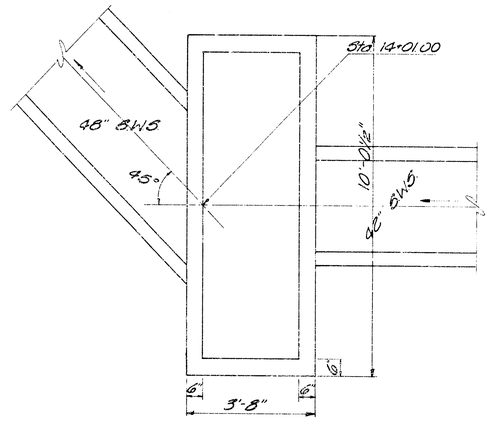


SECTION C-C

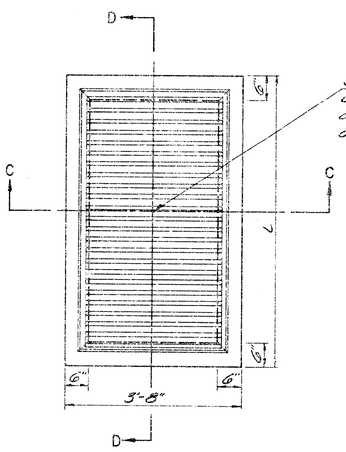
SECTION D-D



SPECIAL AREA DRAIN LOCATION DIAGRAM
Sta. 13+37.36

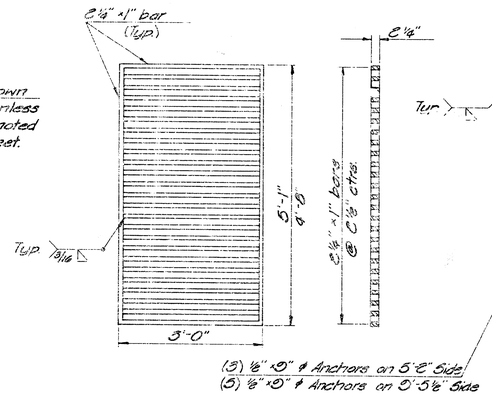


SPECIAL AREA DRAIN LOCATION DIAGRAM
Sta. 14+01.00



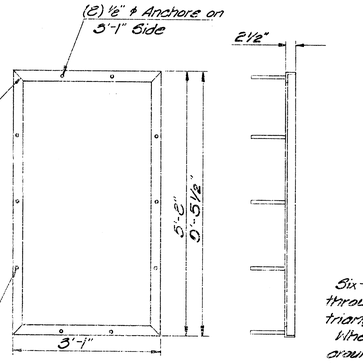
PLAN

Plan shown is for L=5'-9"
Install two (2) 3'-1" x 4'-8" Grates where L=10'-0½"



GRATE DETAIL

Wt 620 lbs. (3'-0" x 5'-1") (2 Required)
Wt 586 lbs. (3'-0" x 4'-8") (4 Required)



FRAME DETAIL

Wt 660 lbs. (3'-1" x 5'-8") (2 Required)
Wt 110 lbs. (3'-1" x 0'-5½") (2 Required)

GENERAL NOTES

Six-sack paving mix concrete shall be used throughout. Bevel all exposed edges with a ¾" triangular moulding or an edging tool.

Whenever possible, bend reinforcing bars around pipe opening. Where it is not possible to bend bars around pipe openings bars are to be field cut. No deduction has been made for pipe opening or grate unit depression.

When so ordered by the Engineer, the top of the inlet shall be sloped slightly to approximately fit the ground line or other conditions.

Unless otherwise noted, all dimensions relative to reinforcement are to centerline of bar.

All reinforcing steel shall conform to A.A.S.H.T.O Specification M-31 Grade 40 or 60.

Concrete used for shaping floor of inlet shall be unreinforced 8-sack sand mix. No addition in concrete quantities shall be made for shaping floor of inlets.

All structural steel shall conform to A.S.T.M. A-36 Structural steel and shall be shop primed with one coat of red lead paint & receive two (2) coats of aluminum paint applied in the field.

JAMES S. ERICSON CENSED 7581 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

SPECIAL AREA DRAIN

STORM WATER SEWER NO. 204

PROJ. NO. 468-76-245-81040-000-000-001

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

Designed by	Checked by	
DD, CSB		
Drawn by	Date	Job No.
BB	Nov. 1980	80305

Sheet 7 of 10