STORM SEWER PLANS FOR
COTTONWOOD VILLAGE EIGHTH
PHASE 2

S.W.S. NO. 358
PROJECT NO.
468·76·245·81814·000·000·001

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER
MARCH, 1989
INDEX NO. 607333

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
2. THE TOPS OF INLET AND MANHOLE 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.
3. ALL CONCRETE SHALL BE STANDARD PAVING MIX UNLESS OTHERWISE NOTED.
4. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT OF WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

NOTE: NOTIFY THE FOLLOWING COMPANIES PRIOR TO ANY EXCAVATION:

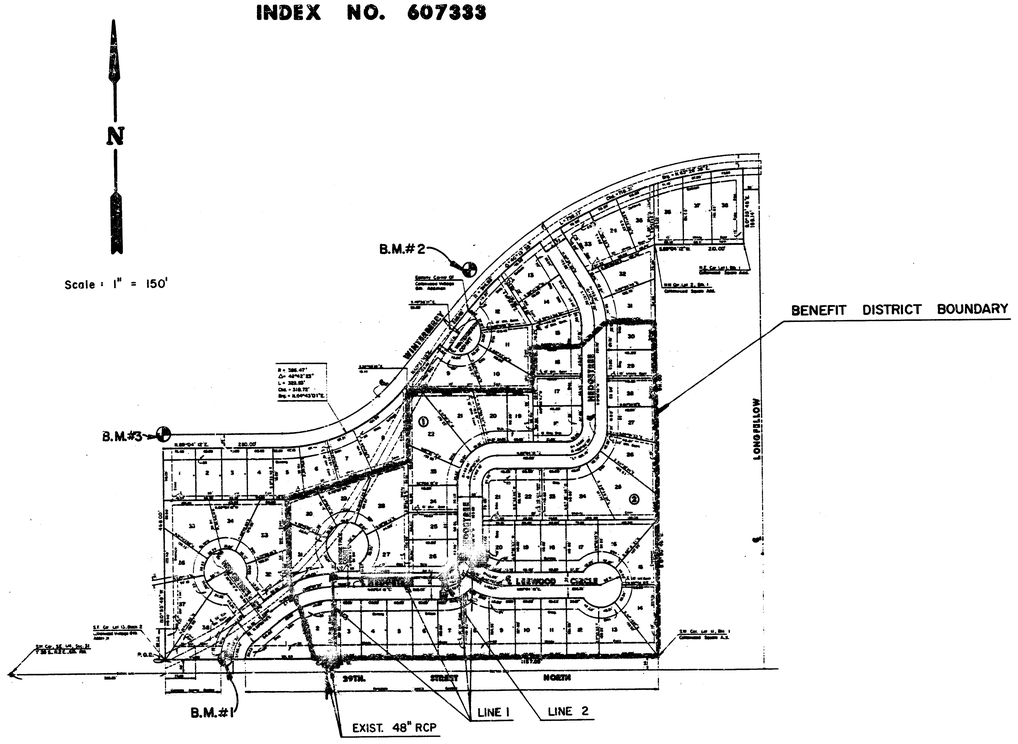
BELL TELEPHONE COMPANY	1-316-571-2115
CABLEVISION	262-4270 or 263-2061
KP&L COMPANY	263-7511
KANSAS GAS & ELECTRIC	264-1141
KANSAS ONE CALL	1-800-344-7233
CITY OF WICHITA WATER DEPT.	268-4908
CITY OF WICHITA SEWER DEPT.	268-4071

BENCH MARKS

B.M. #1 "□" Cut on top of curb on North end of Northwest return at Hedgetree and 29th Street North. Elev.=189.43

B.M. #2 "+" on top of curb and centerline of approach walk at 7500 Winterberry. Elev.=196.925

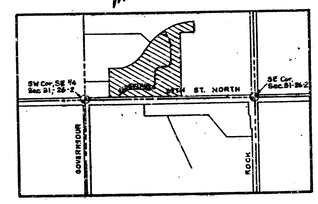
B.M. #3 "□" Cut on Southeast corner of curb inlet at Northwest corner of Cottonwood Village 8th Add. Elev.=188.85



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LINE 1
3	LINES 1 & 2
4	NEW TYPE 1-A CURB INLET DETAIL (5' OPENING)
5	NEW TYPE 1-A CURB INLET DETAIL (10' OPENING)
6	FINAL PLAT

Booked 7-89 MG



LOCATION MAP

5190

J. NEIL JEDNORALSKI LICENSED 7497 KANSAS PROFESSIONAL ENGINEER

COTTONWOOD VILLAGE EIGHTH (PHASE 2)
STORM SEWER PLANS

Design JNJ
Drawn by KSM
Checked by
Date MAR. 7, 1989
Job no.

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
636-5566

Sheet 1 of 6

MKEC Project No. 88-05-113-D

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COTTONWOOD VILLAGE EIGHTH PH. 2
STORM WATER SEWER NO. 358
PROJ. NO. 468-76-245-81814-000-000-001

N

SCALE : 1" = 20' HORIZ.
1" = 5' VERT.

Sta. 2 + 01.5, Line 1
Const. New Type I-A Curb Inlet
W = 6'-4", L = 6'-4"
Top of Inlet = 192.55
St. Sta. 3+52.79, 15.5' Lt. (Hedgetree)
(Exterior Front Wall)

Sta. 4+60.5, Line 1
Const. New Type I-A Curb Inlet (Sump)
W = 7'-4", L = 11'-4"
Top of Inlet = 192.11
St. Sta. 6 + 11.68, 15.5' Lt. (Hedgetree)
(Exterior Front Wall)

COTTONWOOD VILLAGE EIGHTH

℄ 29TH ST. NORTH

EXIST. 48"

Section Line

U/GT.

SIDEWALK

EXIST. 8" SAN. SWR.

Exist. KDOT Type 22 Curb Inlet
W = 7'-0", L = 6'-0"
Top of Inlet = 189.42
FL In = 182.09
FL Out = 181.99

Berm

EXIST. 48" RCP

Remove & Replace 4 L.F. of Exist. Sidewalk

ADDITIONAL DRNG. ESMT. (BY SEP. INST.)

36" RCP LINE 1

℄ 20' Drng. Esmt.

MH

Exist. San. Sewer MH
Top = 192.97
IE = 182.40

Old Sanitary Sewer (Abandoned) To be Removed (This Project)

Sta. 0+00, Line 1
Exist KDOT Type 22
Curb Inlet
W = 7'-0", L = 8'-0"
Top of Inlet = 189.44
W/ 8" 48° Stub
Plugged @ 70° 46' 34" (To be Removed*)
FL Out = 182.17

Util. Esmt.

30'

30'

30

15.5'

8" Water Line

HEDGETREE

36" RCP LINE 1

H.P.

℄ HEDGETREE COURT

4" Water Line

28' F-F

58' R/W

℄ 30' San. Swr. Esmt.

31

℄ HEDGETREE COURT

28' F-F

58' R/W

Water Line

4"

36" RCP LINE 1

℄ HEDGETREE

28' F-F

58' R/W

15.5'

24" RCP LINE 2

8" Water Line

ADD. DRNG. ESMT. (BY SEP. INST.)

36" RCP LINE 1

℄ 20' Drng. Esmt.

EIGHTH

ADD. DRNG. ESMT. (BY SEP. INST.)

30" RCP LINE 1

Util. Esmt.

20'

27

26

2 3 4 5 6 7

1 2

* NOTE: The removal of the exist. 48" RCP stub and the connecting of the new 36" RCP to exist. inlet shall be Subsidiary to this Project.

PLAN LINE 1

PROFILE LINE 1

ELEVATION IN FEET (WICHITA DATUM)

195
190
185
180
175

Sta. 0+00, Line 1
Exist. KDOT Type 22
Curb Inlet
W = 7'-0", L = 8'-0"
Top of Inlet = 189.44
Remove 48" RCP Stub
And Tie 36" RCP in.*

Exist. Sidewalk (Remove and Replace 4 L.F.)

Proposed Street Grade

Sta. 2+01.5, Line 1
Const. New Type 1-A
Curb Inlet
W = 6'-4", L = 6'-4"
Top of Inlet = 192.55
St. Sta. 3+52.79, 15.5' Lt.
(Exterior Front Wall)

Existing Ground

Sta. 4+60.5, Line 1 -
Sta. 0+00, Line 2
Const. New Type 1-A
Curb Inlet
W = 7'-4", L = 11'-4"
Top of Inlet = 192.11
St. Sta. 6+11.68, 15.5' Lt.
(Exterior Front Wall)

Prop. 8" Water
Top 188.98

Prop. 4" Water
Top 189.40

Exist. 8" San. Swr.
IE = 182.22 ±

201.5 L.F. 36" RCP @ 0.20 %

259.0 L.F. 36" RCP @ 0.62 %

20' Reinf. Conc. Cradle along Storm Sewer (Saddle Sanitary Sewer)

Exist Undg. Telephone

IE Out = 182.17 (48" RCP-W.)
IE In = 183.85 (36" RCP-N.)

IE = 184.05

IE Out = 184.25 (36" RCP-S.)
IE In = 184.35 (36" RCP-E.)

IE = 184.96

IE = 185.58

IE Out = 185.96 (36" RCP-W.)
IE In = 186.20 (30" RCP-NE)
IE In = 186.35 (24" RCP-S.)

0 1 2 3 4 5

2/6

M.K.E.C.

MKEC Project No. 88-05-113-D

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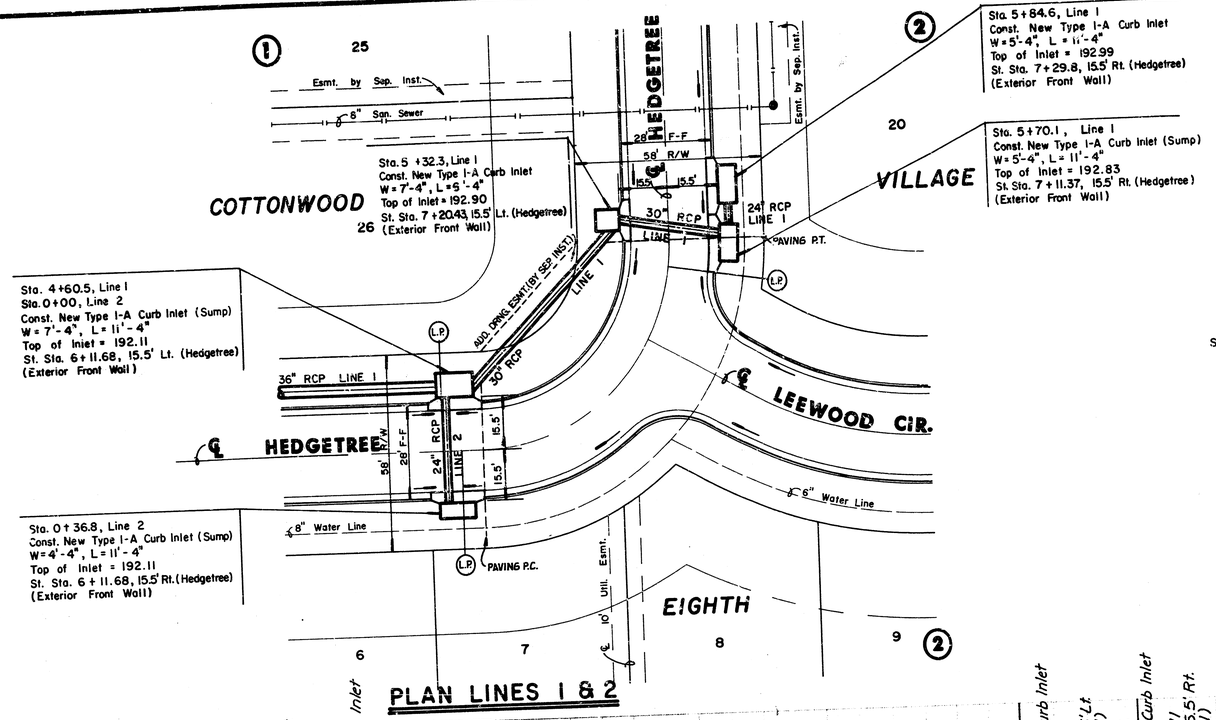
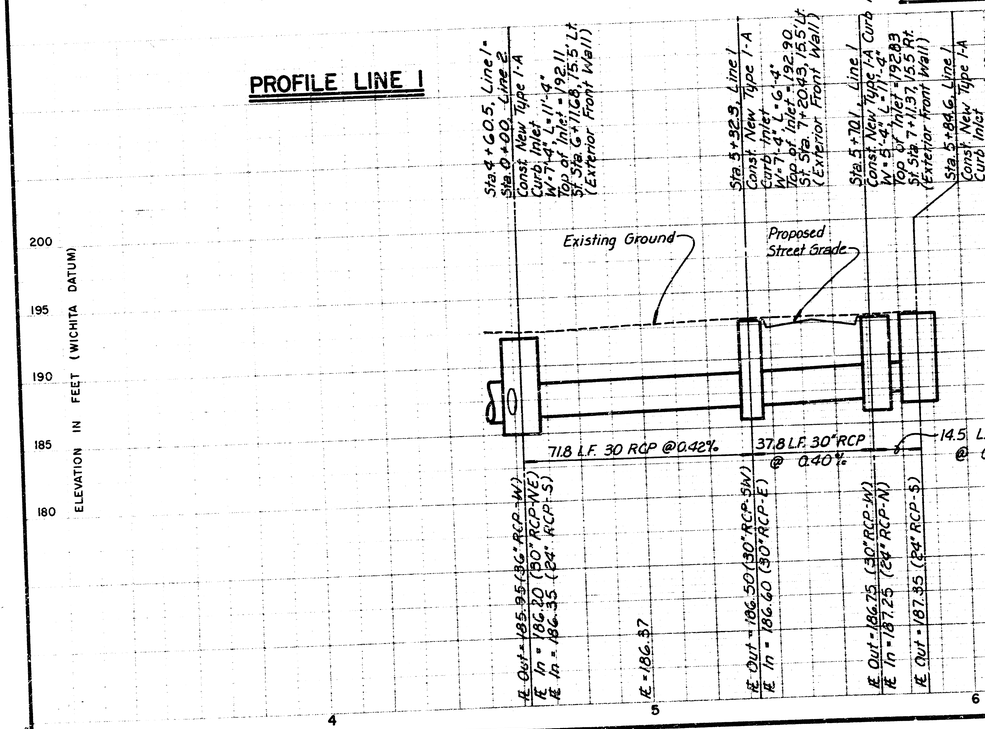
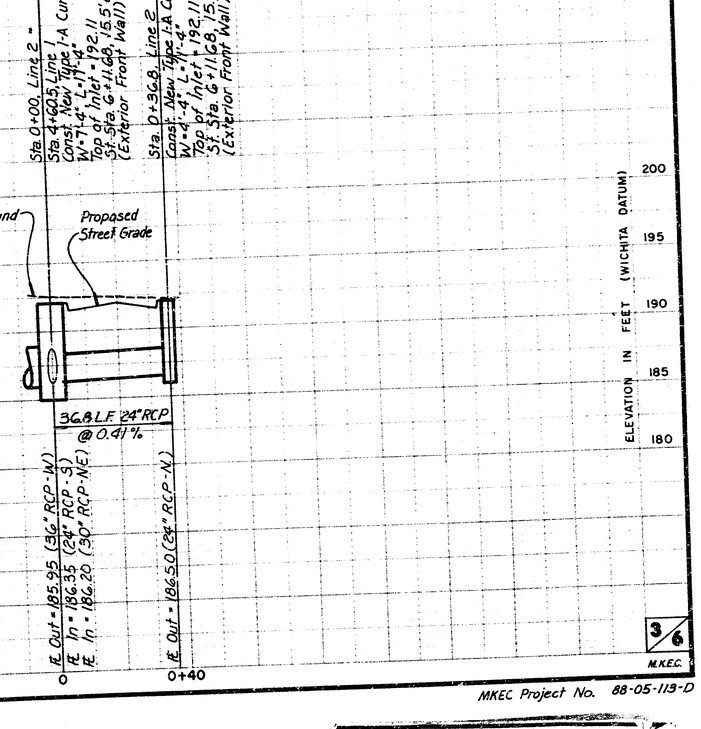
COTTONWOOD VILLAGE EIGHTH PH. 2
STORM WATER SEWER NO. 358
PROJ. NO. 468-76-245-81814-000-000-001



PROFILE LINE 1



PROFILE LINE 2



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MKEC

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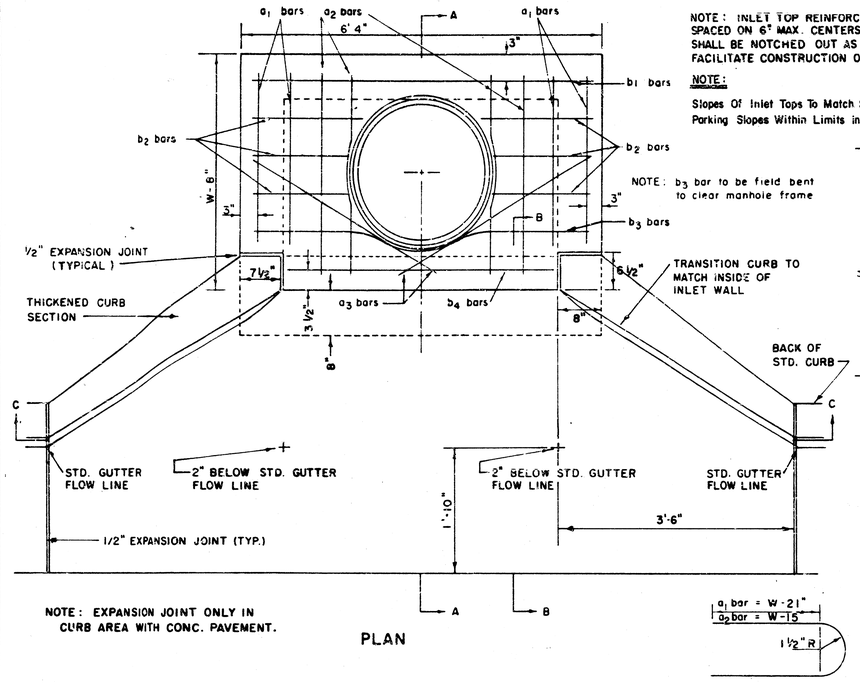


NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

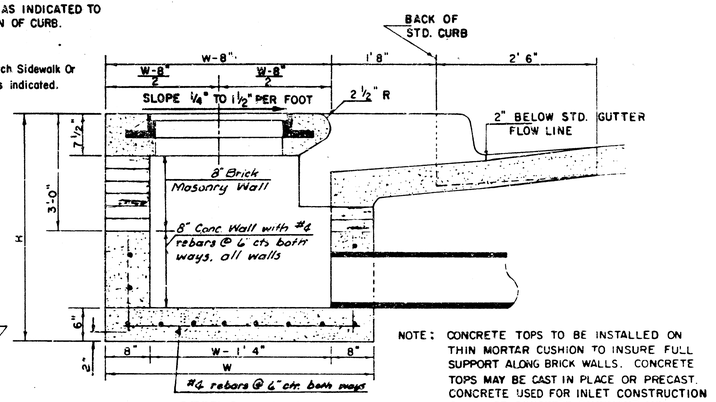
PLAN

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE:

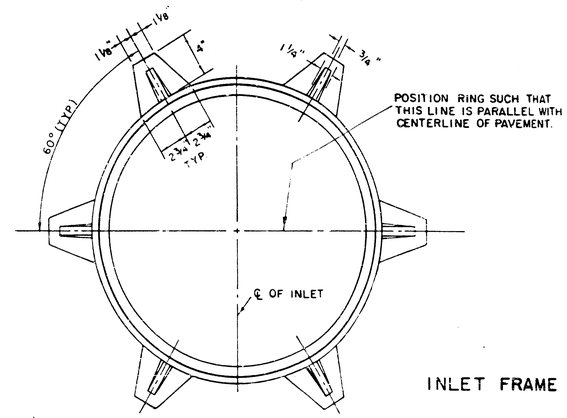
Slopes Of Inlet Tops To Match Sidewalk Or Parking Slopes Within Limits indicated.

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



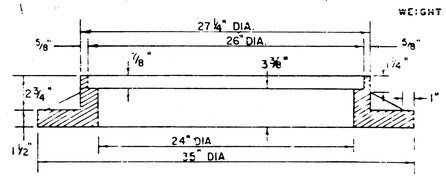
SECTION A-A

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 USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX WITH AIR ENTRAINMENT.



INLET FRAME

WEIGHT = 180 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

BENDING DIAGRAM

STEEL SCHEDULE

BAR		a_1	a_2	a_3*	b_1 W=4'4"	b_1 W=5'4"	b_1 W=6'4"	b_1 W=7'4"	b_1 W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'4"	5'7"	6'7"	4'0"	6' 1"	–	–	–	–	1' 9"	6'2"	4'8"	60±
	W=5'4"	7'7"	8'7"	5'0"	–	6' 1"	–	–	–	1' 9"	6'2"	4'8"	81 ±
	W=6'4"	9'7"	10'7"	6'0"	–	–	6' 1"	–	–	1' 9"	6'2"	4'8"	101±
	W=7'4"	11'7"	12'7"	7'0"	–	–	–	6' 1"	–	1' 9"	6'2"	4'8"	121 ±
	W=8'4"	13'7"	14'7"	8'0"	–	–	–	–	6' 1"	1' 9"	6'2"	4'8"	141 ±

* NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

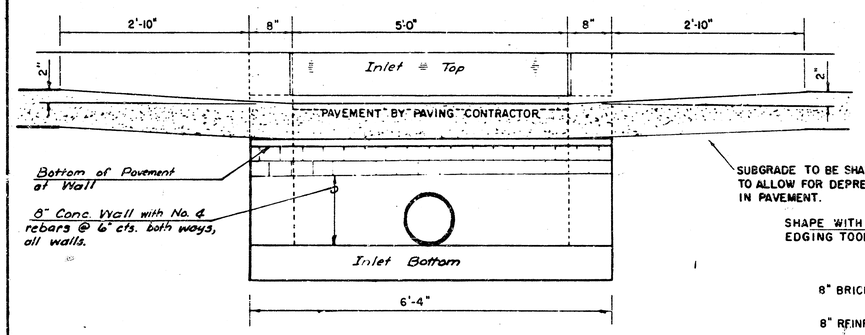
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'8"x 6'4" x7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8"x 6'4" x7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8"x 6'4" x7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8"x 6'4" x7 1/2"	48" & 54"	0.77±
8' 4"	7'8"x 6'4" x7 1/2"	60" & 66"	0.90±

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

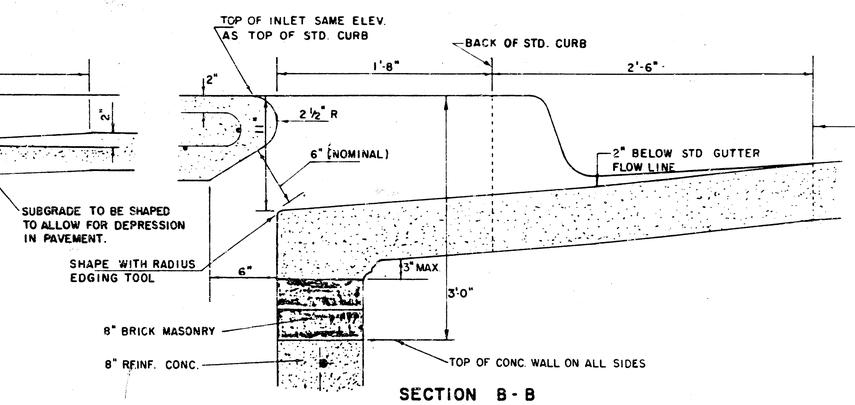
ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.



SECTION C-C



SECTION B-B

REVISED 11-30-1988

~~REVISED 12-21-1984~~

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 5' 0"

JUNE 1984

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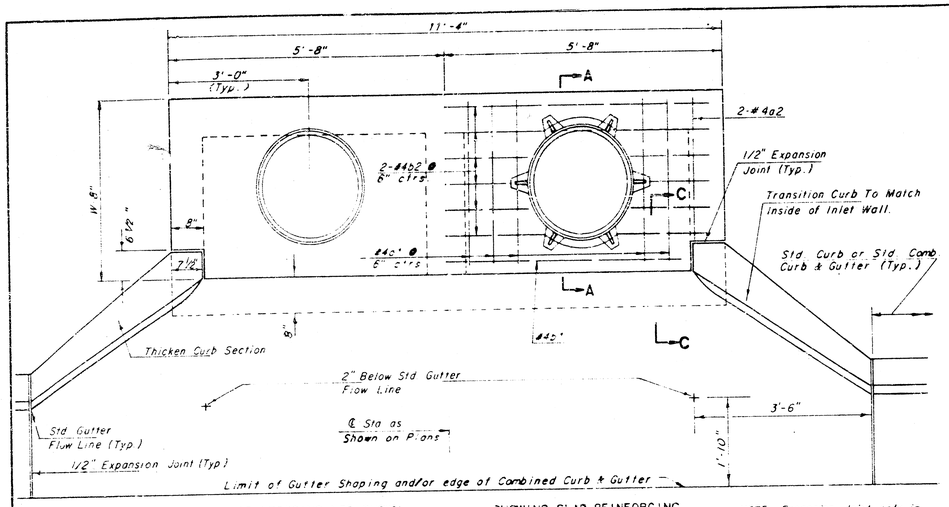
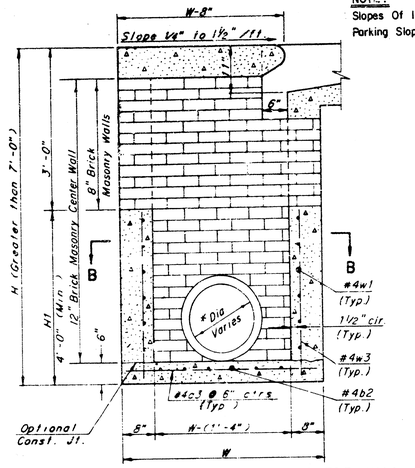


SLAB REINFORCING NOT SHOWN — SHOWING SLAB REINFORCING

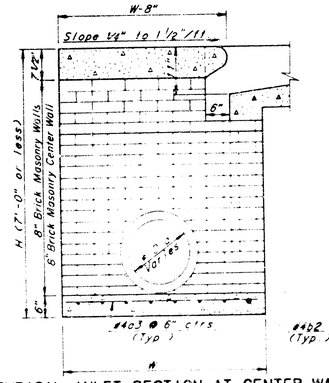
PLAN

NOTE Expansion Joint only in Curb Area with Conc. Pavement.



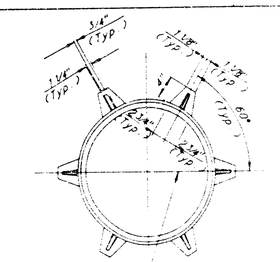
TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

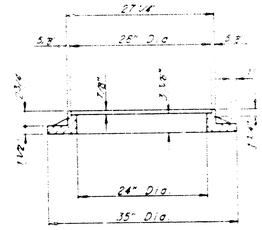
NOTE:
Slopes Of Inlet Tops To Match Sidewalk Or Parking Slopes Within Limits Indicated.



TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

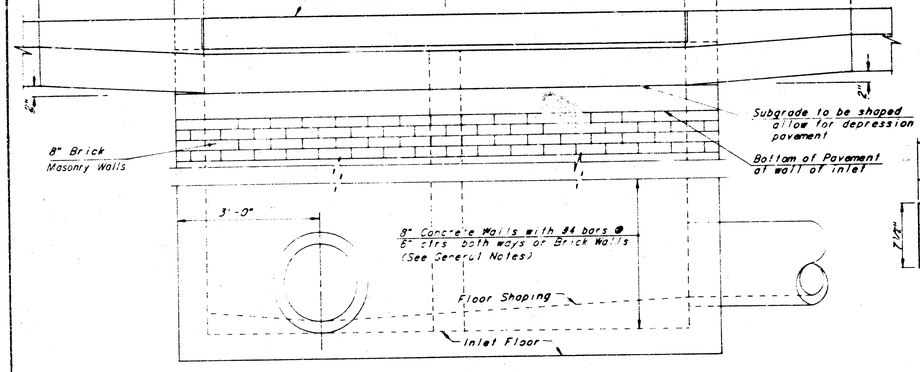
* A center wall opening shall be provided by means of a section of reinforced concrete pipe See Case I and Case II Below



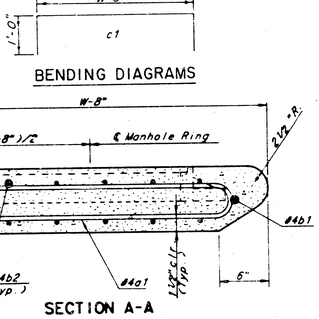


CAST IRON INLET RING
Wt. ≈180 lbs.

See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame

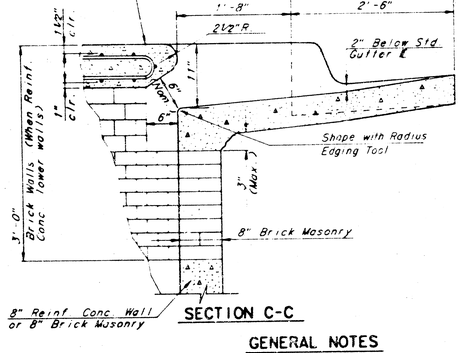


ELEVATION

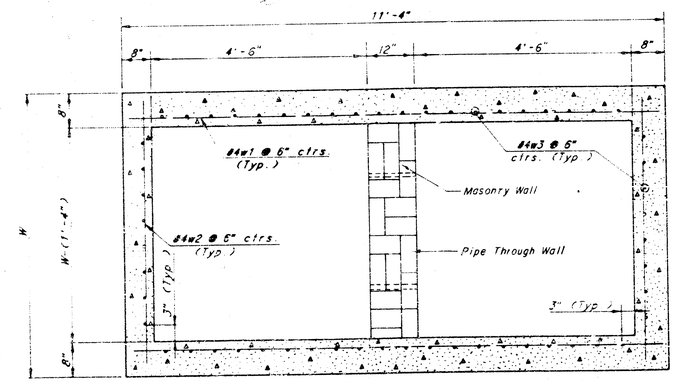


BENDING DIAGRAMS

SECTION A-A



SECTION C-C



SECTION B-B

SLAB AND FLOOR REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO	LENGTH	NO	LENGTH	NO.	LENGTH	NO.	LENGTH
a1	#4	13	6'-7 1/4"	13	8'-7 1/4"	13	10'-7 1/4"	13	12'-7 1/4"	13	14'-7 1/4"
a2	#4	2	6'-0"	2	8'-0"	2	10'-0"	2	12'-0"	2	14'-0"
a3	#4	20	4'-1"	20	5'-1"	20	6'-1"	20	7'-1"	20	8'-1"
b1	#4	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"	1	9'-8"
*b2	#4	18	11'-1"	24	11'-1"	30	11'-1"	36	11'-1"	42	11'-1"

WALL REINFORCING

		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	②	③	②	③	②	③	②	③	②	③

* Field bend or cut Reinforcing as required for clearance
① 4(H1-6")÷4 (H1-6") Rounded down to nearest 0.5'
② 40+4(W - 16") ③ H1+(9")

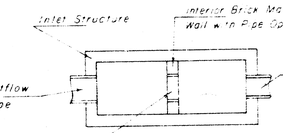
GENERAL NOTES

1. THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=8'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 8'-4" AND H IS LESS THAN 7'-0" THE OUTS DE INLET WALLS BELOW THE BRICK STACK SHALL BE RE NFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. 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 USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.
4. INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET SIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB BARS. IN INLET TOP TO BE FIELD BENT OR CUT TO CLEAR MANHOLE RING.
5. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

STANDARD CURB INLET PRECAST TOPS

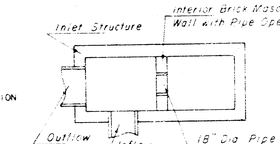
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC
4'-4"	3'-8"x 11'-4" x 7 1/2"	21" & SMALLER	0.83 ±
5'-4"	4'-8"x 11'-4" x 7 1/2"	24" & 30"	1.09 ±
6'-4"	5'-8"x 11'-4" x 7 1/2"	36" & 42"	1.35 ±
7'-4"	6'-8"x 11'-4" x 7 1/2"	48" & 54"	1.61 ±
8'-4"	7'-8"x 11'-4" x 7 1/2"	60" & 66"	1.87 ±

REVISED 12-5-88 ~~REVISED 12-21-84~~



Pipe Size to be the same as Outlet Pipe Size. Flowline Elev. to be Average of Lowest Inflow Pipe Elev. and Outflow Pipe Elev.

CASE I



CASE II

NOTE Center Wall Pipe Size shall be as Specified in Inlet Construction Note on the Plan/Profile Sheets for those Cases not shown here.

STANDARD TYPE 1A CURB INLET

INLET OPENING = 6" x10' -0"

WICHITA, KANSAS

5/6

Designed by	BER, KJS, MMB	Checked by	MMB
Drawn by	JDP	Date	Nov. 1984

MKEC Project No. 88-05-113-D

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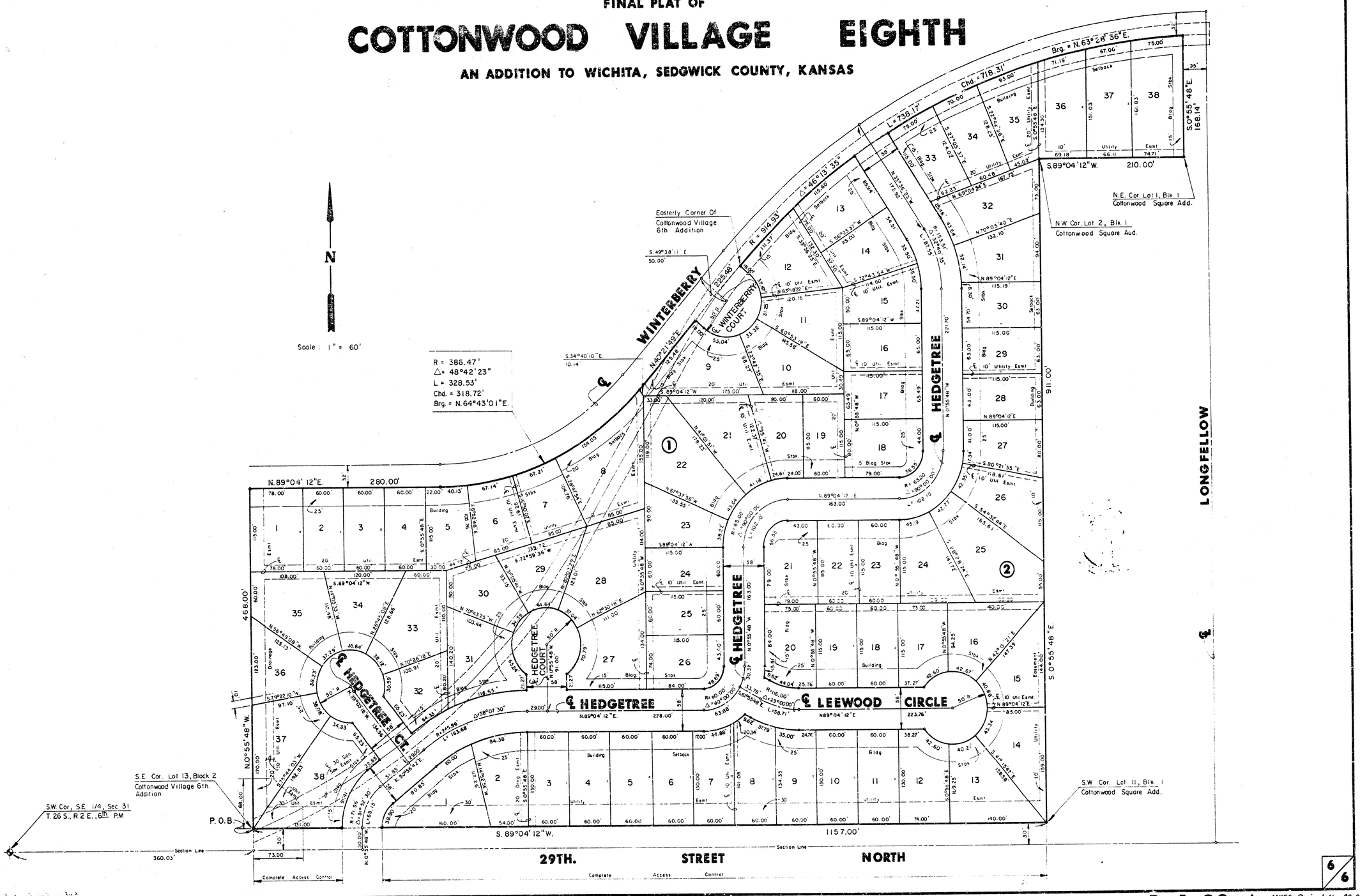
FINAL PLAT OF

COTTONWOOD VILLAGE EIGHTH

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



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