

Street Improvements For **BROADMOOR**

From the North Line of Bayley to and Including the Cul-De-Sac

Project Number

472-76-245-81952-000-000-001

Index Code

760173

CITY OF WICHITA, KANSAS

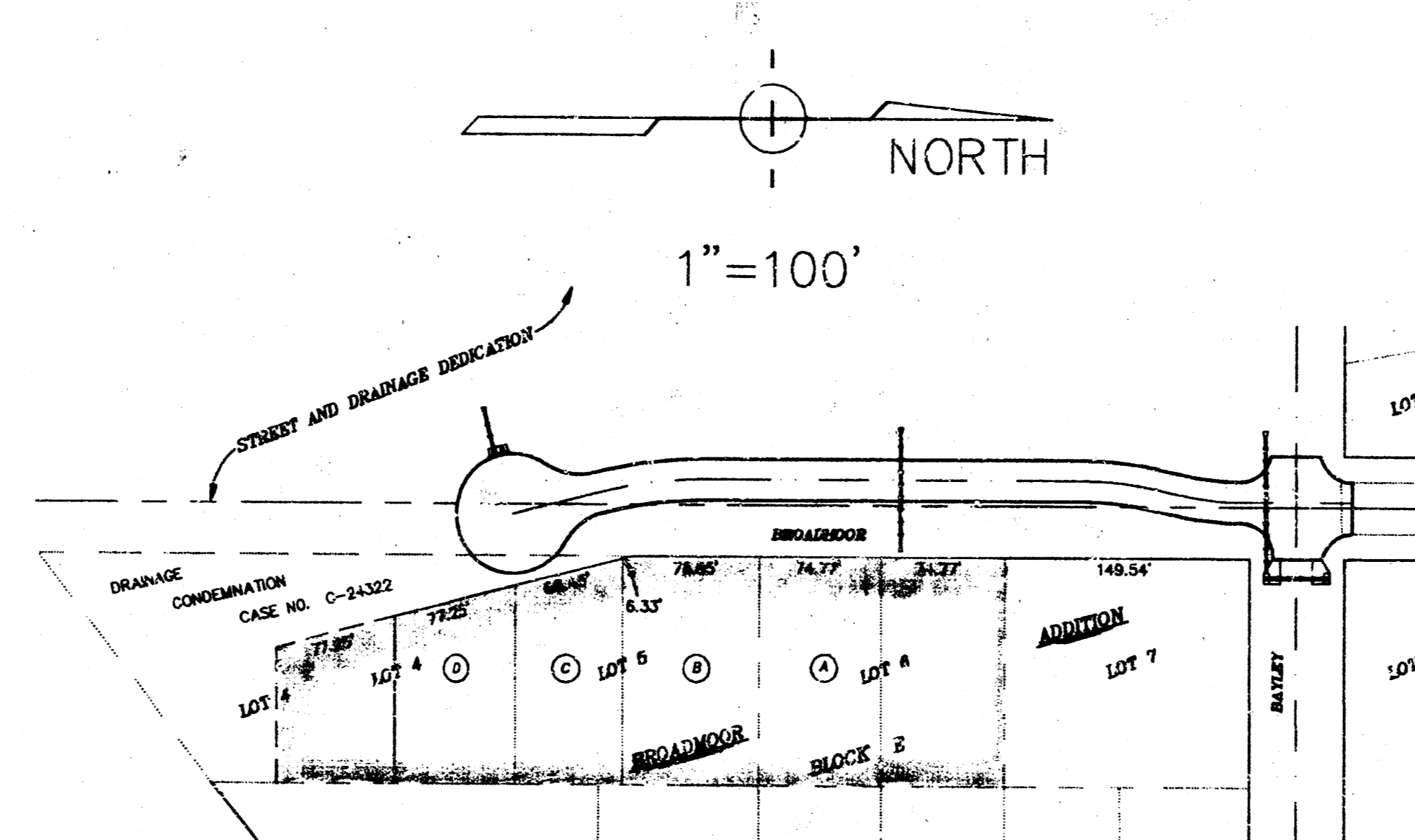
Michael E. Lindebak — City Engineer

GENERAL NOTES

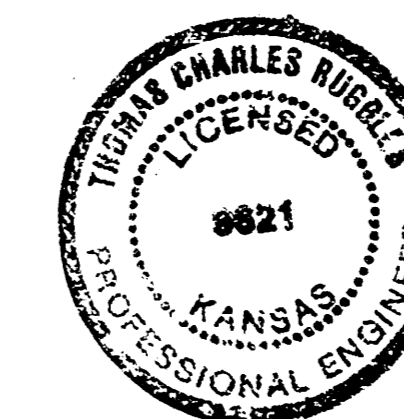
1. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
2. A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.
3. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.
4. This project does not include any provisions for construction of driveways.
5. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
6. All entrance and cross road pipe within the project limits shall be removed by the Contractor unless otherwise noted on the plans. Removal of such pipes shall conform to the applicable section of the Standard Specifications.
7. The Contractor shall be responsible for preserving property irons. The Contractor will 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.
8. Construction of this project shall be coordinated with water main extension project no. 448-76-245-88400-000-001. Water main construction will not begin until fill has been placed for this project.

INDEX

- 1 TITLE AND IMPROVEMENT DISTRICT
- 2 TYPICAL SECTION
- 3 PAVEMENT PLAN
- 4-5 INCIDENTAL DRAINAGE
- 6-7 INLET DETAILS
- 8-11 EARTHWORK SECTIONS



IMPROVEMENT DISTRICT



October 24, 1989

89-08-E956
MISC BROADCOV

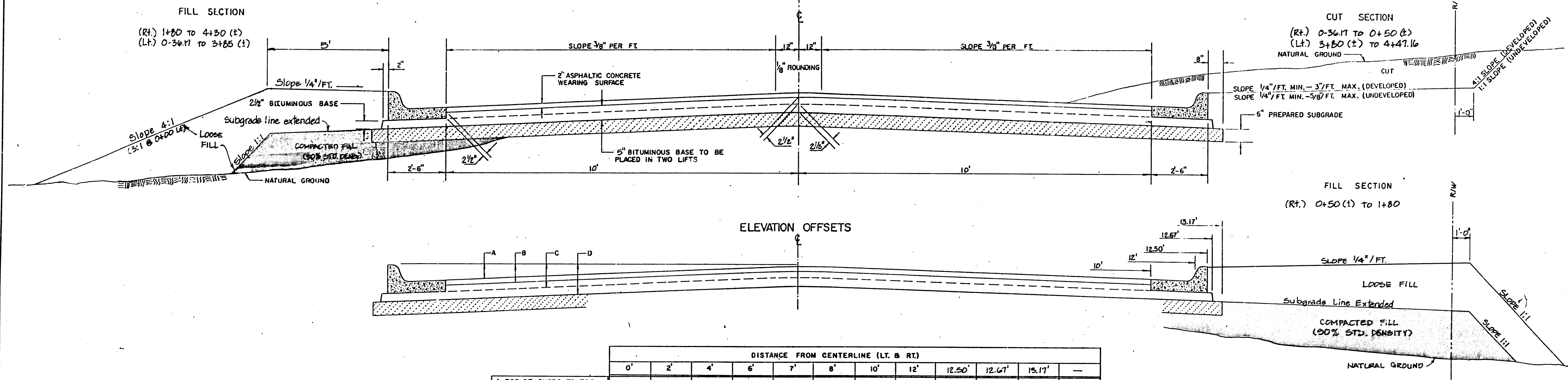
*Incidental Drainage
Book: B-22-90
M.C.G.*

BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211		REV.
		SHEET 1
PROJECT NUMBER		OF 11
472-76-245-81952-000-001		
DESIGN	DRAWN	APPROVED
TCR	MGC	
DATE		SCALE
9-25-89		NOTED

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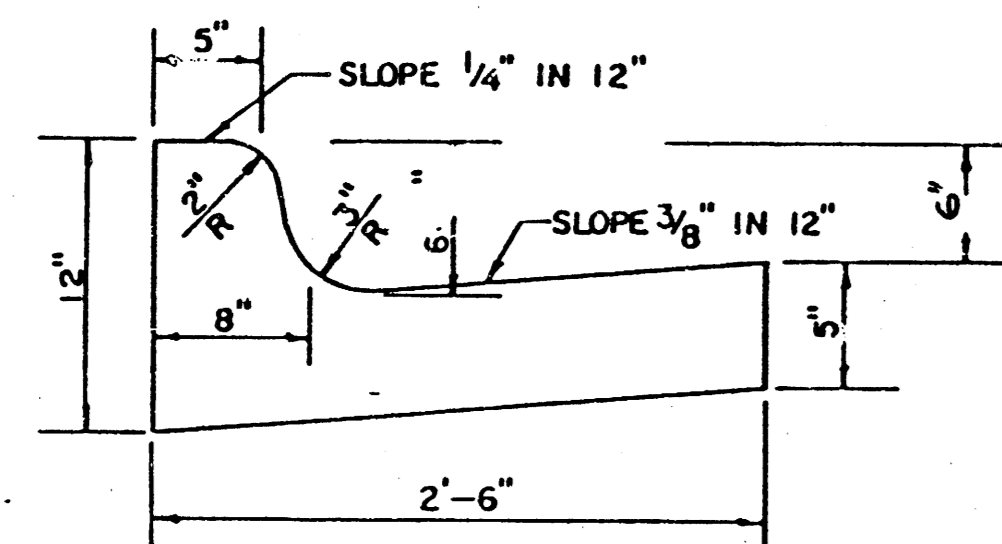
TYPICAL 25' PAVEMENT DETAILS

TRANSVERSE SECTION



	DISTANCE FROM CENTERLINE (LT. & RT.)											
	0'	2'	4'	6'	7'	8'	10'	12'	12.50'	12.67'	15.17'	—
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.17	0.24	0.30	0.37	0.37	0.40	0.49	—	—	—	—	—
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.34	0.41	0.47	0.54	0.57	0.60	0.66	—	—	—	—	—
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.55	0.62	0.68	0.75	0.78	0.81	0.86	0.92	0.94	0.94	—	—
D: TOP OF CURBS TO TOP OF SUBGRADE	0.76	0.83	0.89	0.96	0.99	1.02	1.07	1.13	1.15	1.15	1.17	—

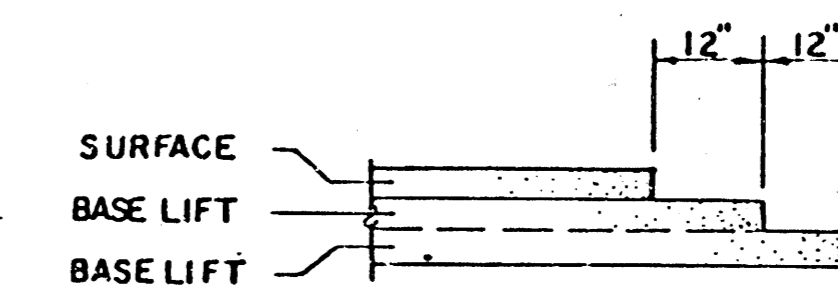
COMBINED CURB & GUTTER



GENERAL NOTES

- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).
- 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 2 1/2" BITUMINOUS BASE.
- 3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.
- 4) BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.
- 5) CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.
- 6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

TRANSVERSE CONSTRUCTION JOINTS

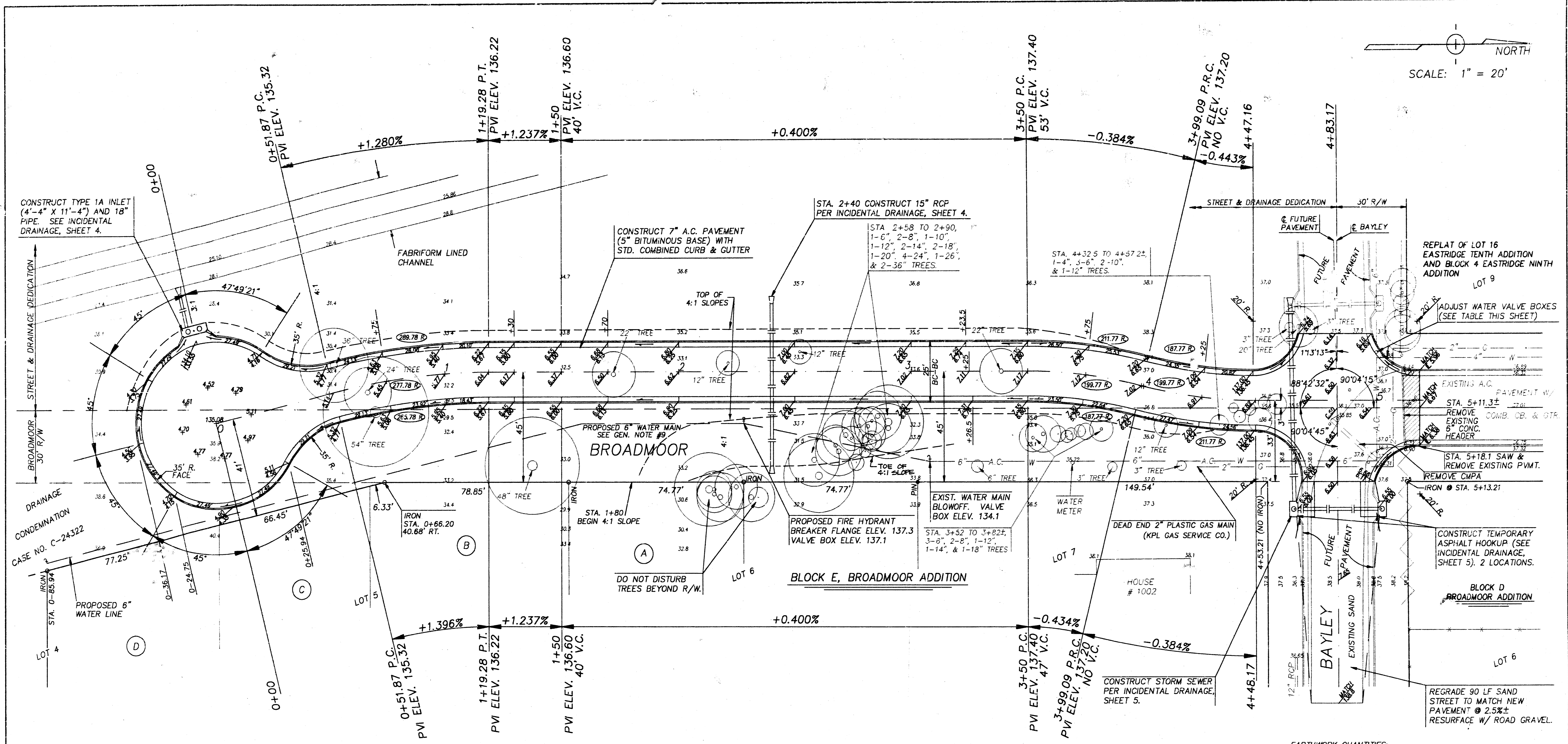
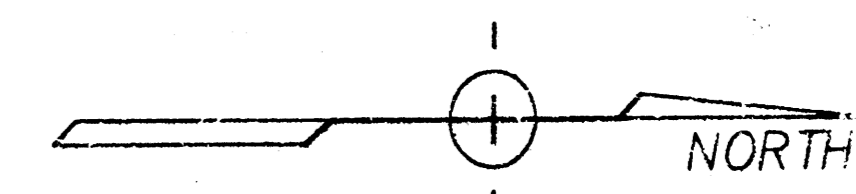


TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINTS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

7 INCH RESIDENTIAL ASPHALTIC CONCRETE
PAVEMENT WITH 1/2 INCH BITUMINOUS BASE
CITY OF WICHITA, KANSAS
PROJECT NUMBER
472-76-245-81952-000-000-001 2/11

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SCALE: 1" = 20'



CURVE #1

CURVE DATA BASED ON CENTERLINE

R = 277.78' DELTA = 135°41'0" T = 33.87'
 L = 67.41' 1/2 DELTA = 67°20'5" DEFL = 6.187262 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC. 8' RT. PC.		
0+51.87 P.C.	-	-	0"	0"
0+75	23.13'	4.79'	2'23.07"	2'23.07"
1+00	25'	26.79'	2'34.41"	4'57.48"
1+19.28 P.T.	19.28'	20.66'	1'59.17"	6'57.05"

CURVE #2

CURVE DATA BASED ON CENTERLINE

R = 199.77' DELTA = 14°04'40" T = 24.67'
 L = 49.09' 1/2 DELTA = 7°02'20" DEFL = 8.603246 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC. 8' RT. PC.		
3+50 P.C.	-	-	0"	0"
3+75	25'	27.48'	22.48"	3'35.05"
3+99.09 P.R.C.	24.09'	26.48'	21.66"	3'27.15"

CURVE #3

CURVE DATA BASED ON CENTERLINE

R = 199.77' DELTA = 14°04'40" T = 24.67'
 L = 49.08' 1/2 DELTA = 7°02'20" DEFL = 8.604999 MIN./FT.

STATION	ARC	CHORD LENGTHS	DEFL.	TOTAL DEFL.
		8' LT. PC. 8' RT. PC.		
3+99.09 P.R.C.	-	-	0"	0"
4+25	25.91'	23.30'	28.49"	3'42.57"
4+48.17 P.T.	23.17'	20.84'	25.48"	3'79.23"

EARTHWORK QUANTITIES:

EXCAVATION	2516.8 CU. YDS.
+10%	2768.5 CU. YDS.
COMPACTED FILL	1361.7 CU. YDS.
+10%	1497.9 CU. YDS.
BORROW	539.4 CU. YDS.
SUBGRADE MANIPULATION	2024.0 SQ. YDS.

WATER VALVE BOX ADJUSTMENT TABLE

STATION	LOCATION	EXIST. ELEV.	FIN. ELEV.
3+08	24.7' RT.	134.09	134.1
5+00.2	19.5' LT.	137.01	135.82
5+04.2	17.2' LT.	136.85	136.35

(BY OTHERS)

BROADMOOR

FROM N. L. BAYLEY TO & INCLUDING CUL-DE-SAC

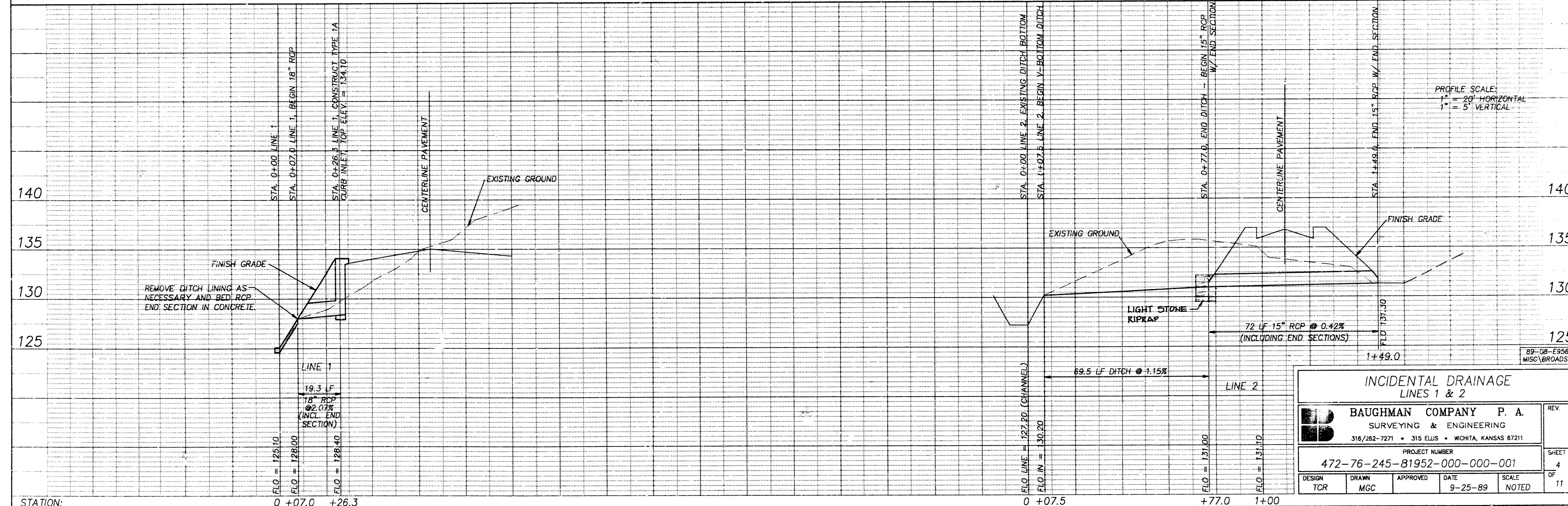
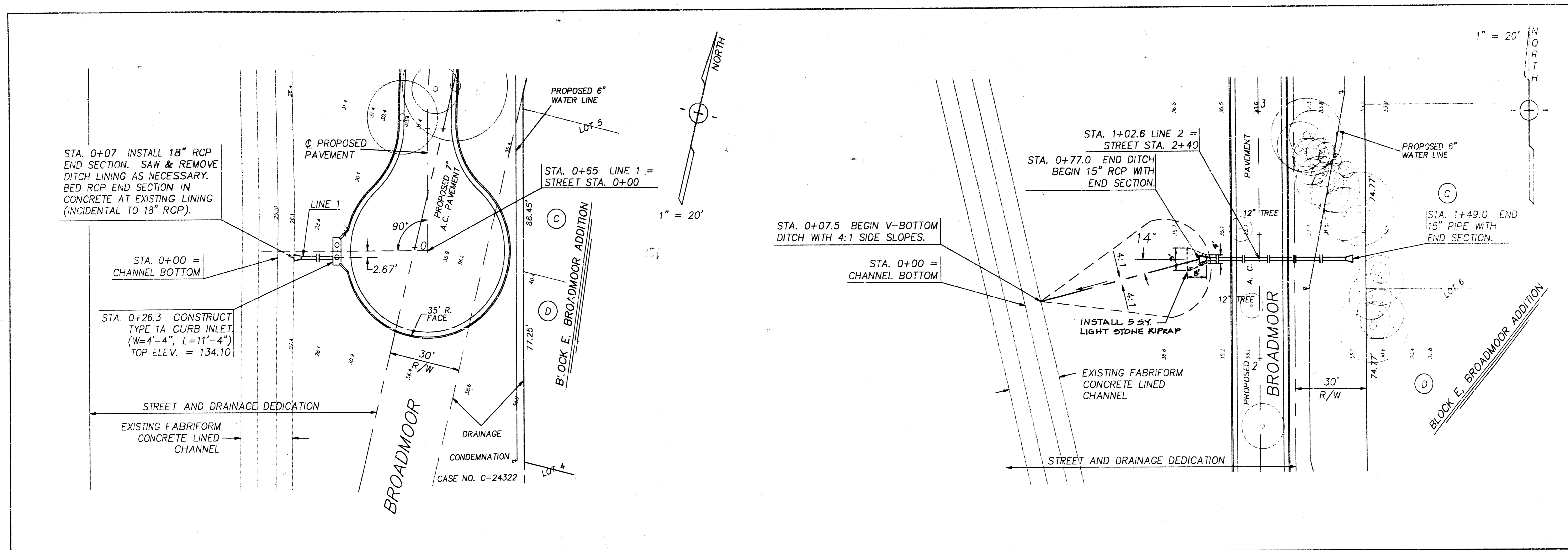
BAUGHMAN COMPANY P. A.
 SURVEYING & ENGINEERING
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
 472-76-245-81952-000-000-001

DESIGN	DRAWN	APPROVED	DATE	SCALE
TCR	MCC		9-25-89	NOTED

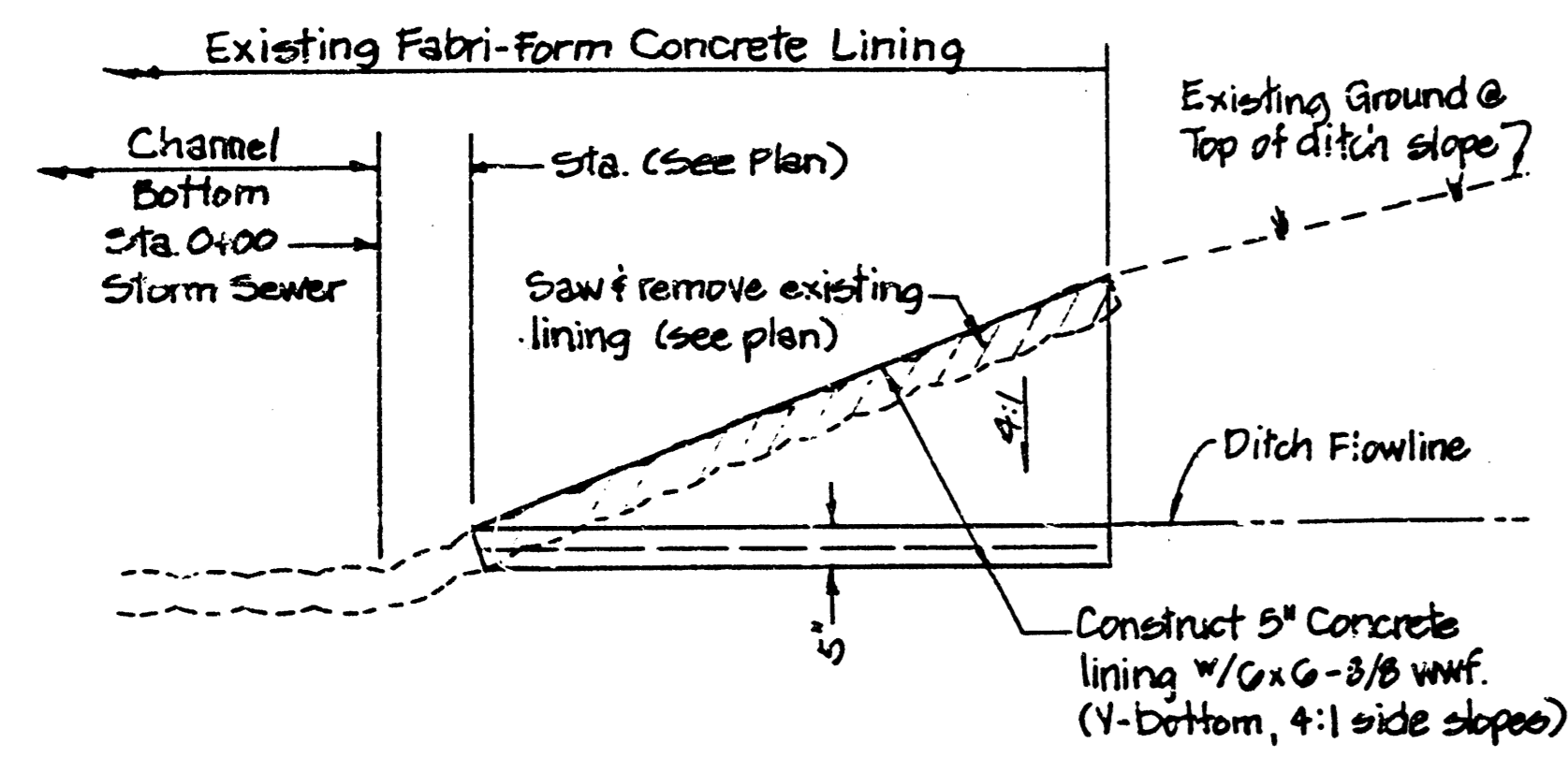
SHEET 3 OF 11

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INCIDENTAL DRAINAGE LINES 1 & 2					
BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 318/282-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
PROJECT NUMBER 472-76-245-81952-000-000-001					
DESIGN TCR	DRAWN MGC	APPROVED	DATE 9-25-89	SCALE NOTED	REV. SHEET 4 OF 11

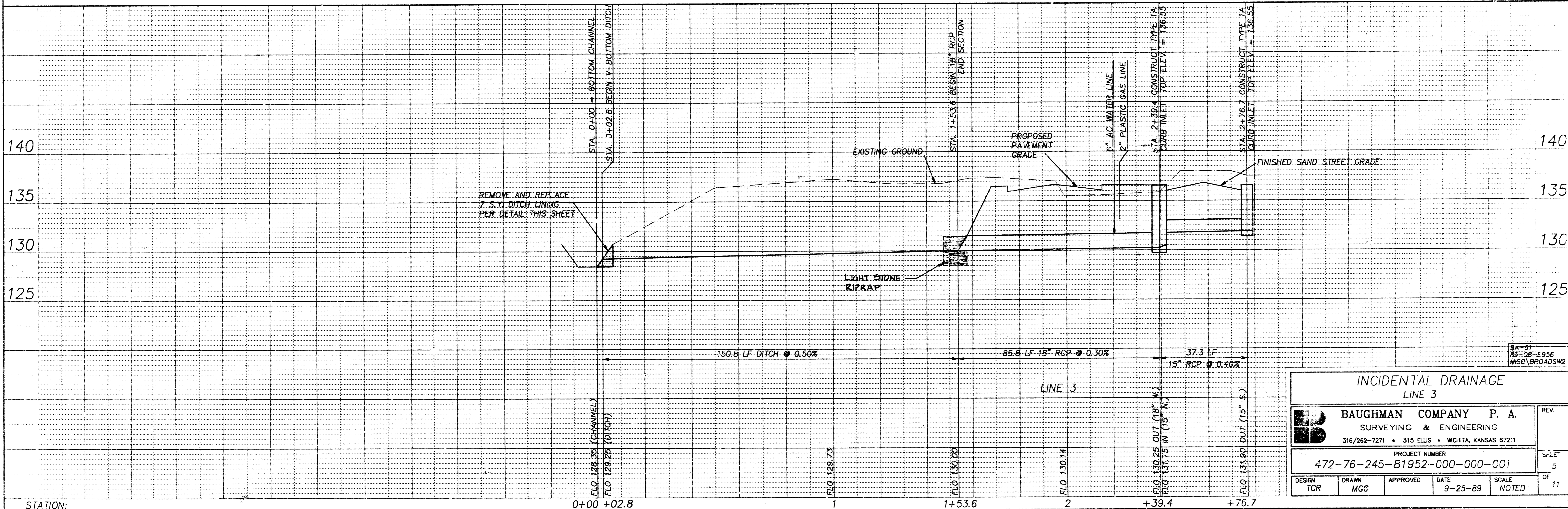
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LINING REPLACEMENT DETAIL

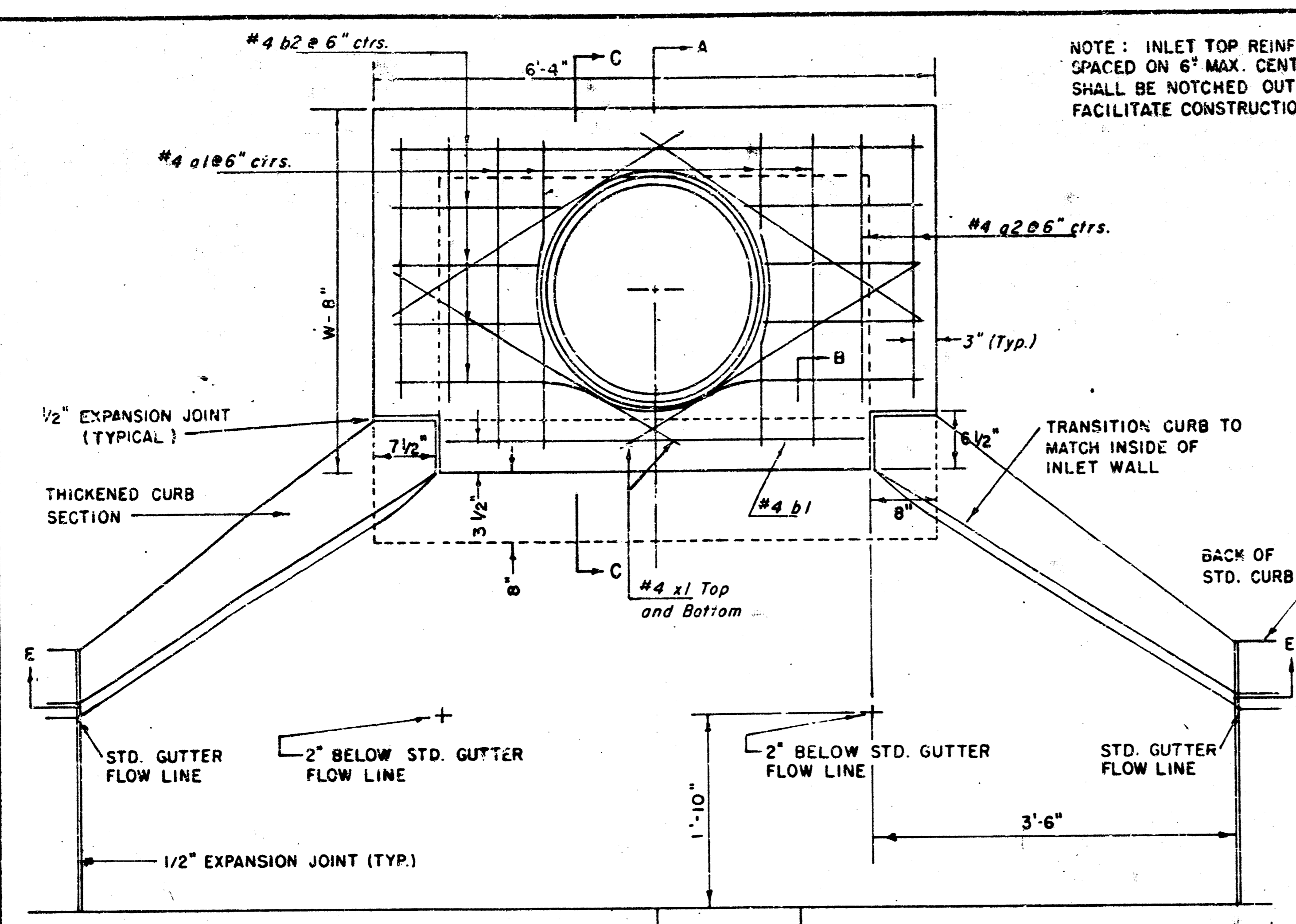
STA. 0+02.8 BEGIN V-BOTTOM DITCH W/ 4:1 SIDE SLOPES. SAW & REMOVE CONCRETE DITCH LINING AS NECESSARY. REPLACE WITH 5" CONCRETE PER DETAIL THIS SHEET.

STA. 1+53.6 LINE 3, END DITCH. BEGIN 18" RCP END SECTION. INSTALL 7' 6" LIGHT STONE RIPRAP.

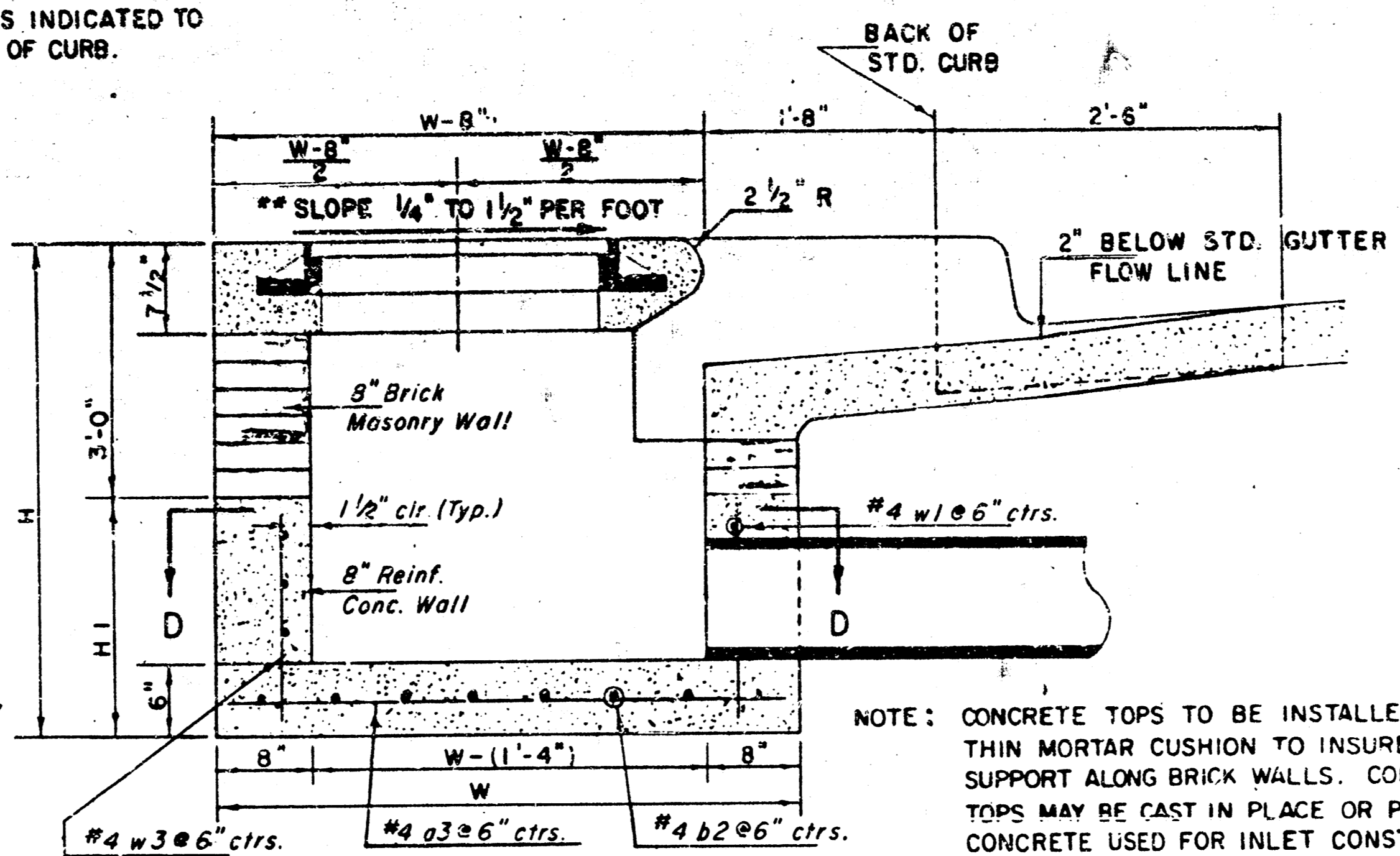


INCIDENTAL DRAINAGE LINE 3				
BAUGHMAN COMPANY P. A. SURVEYING & ENGINEERING 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				
PROJECT NUMBER 472-76-245-81952-000-000-001				
DESIGN TCR	DRAWN MCC	APPROVED	DATE 9-25-89	SCALE NOTED
				REV. 5 OF 11

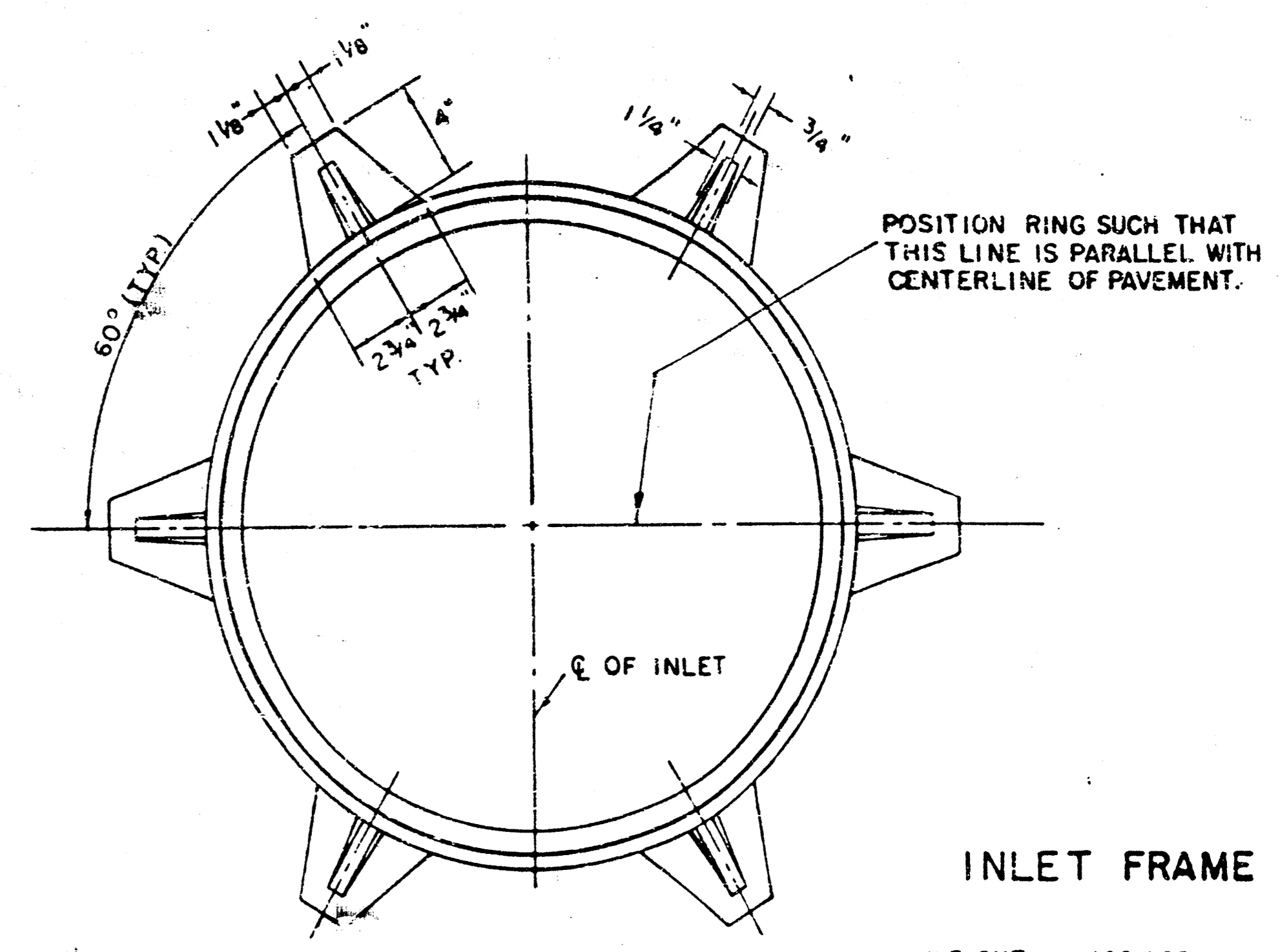
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NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

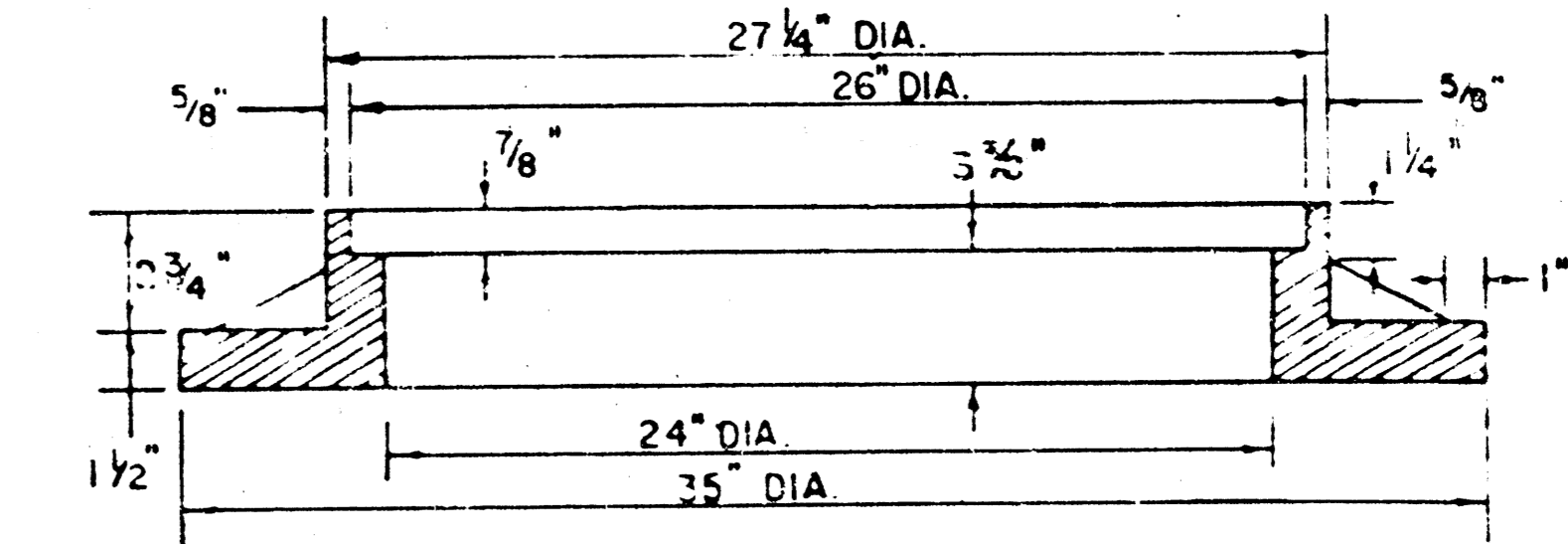


NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX WITH AIR ENTRAINMENT.



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.

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN H = 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.

** NOTE: Slope of Inlet Tops to match Sidewalk or Parking Slopes within Limits indicated.

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

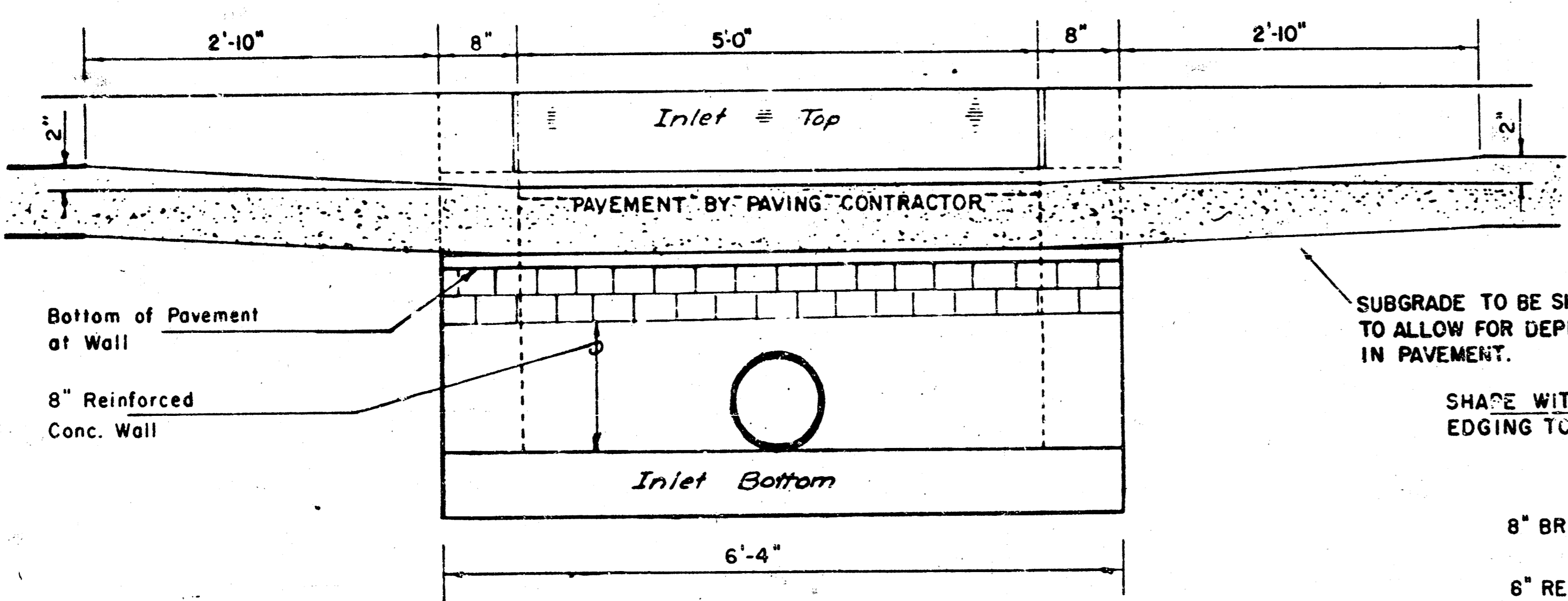
PLAN

BENDING DIAGRAM

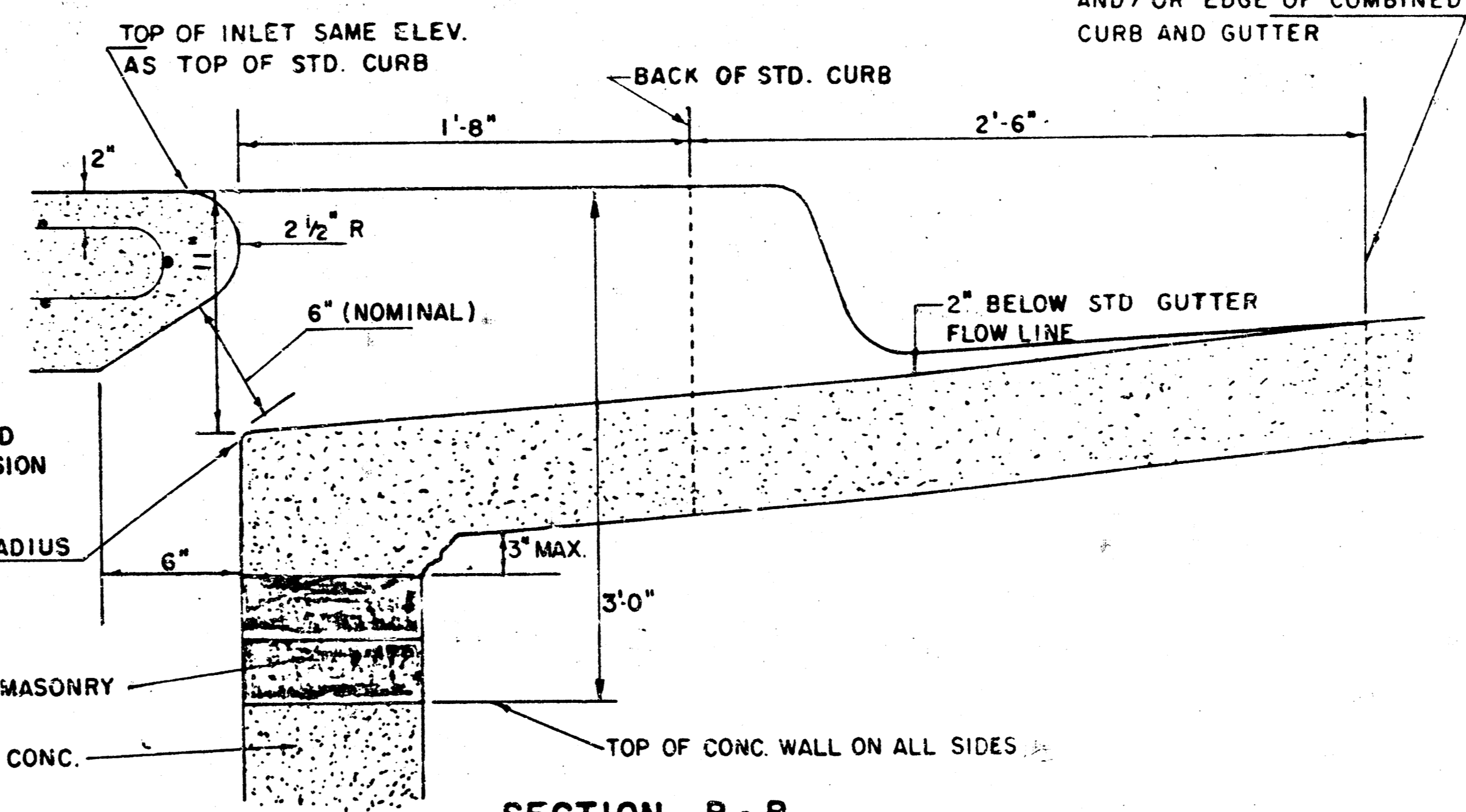
PRECAST SLAB AND FLOOR REINFORCING											
Mark	Size	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
a1	#4	6	6'-7"	6	8'-7"	6	10'-7"	5	12'-7"	6	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	7'-1"	13	8'-1"
b1	#4	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"	1	4'-9"
b2	#4	23	6'-1"	29	6'-1"	35	6'-1"	41	6'-1"	47	6'-1"
x1	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"	8	5'-2"

WALL REINFORCING											
Mark	Size	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
w1	#4	1	6'-1"	1	6'-1"	1	6'-1"	1	6'-1"	1	6'-1"
w2	#4	1	5'-1"	1	5'-1"	1	6'-1"	1	7'-1"	1	8'-1"
w3	#4	32	2"	36	2"	40	2"	44	2"	48	2"

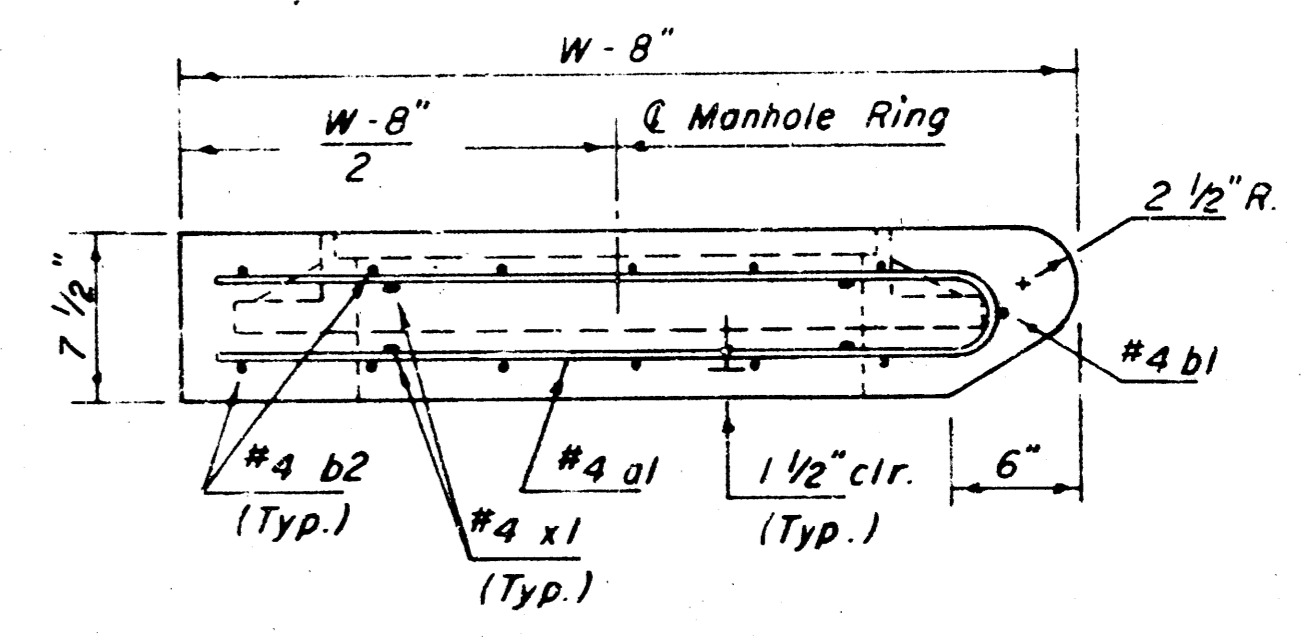
* Field bend or cut Reinforcing as required for clearance.
 ① 4(HI-12"): (HI-12") Round down to nearest 0.5"
 ② HI-3"



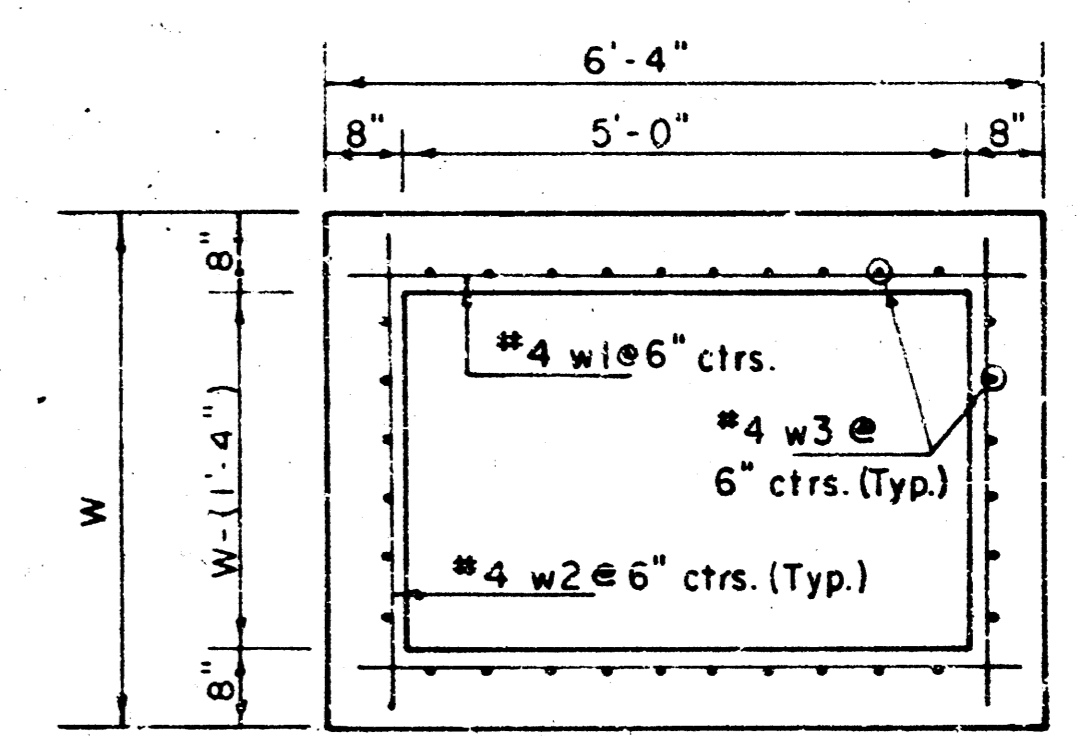
SECTION E-E



SECTION B-B



SECTION C-C

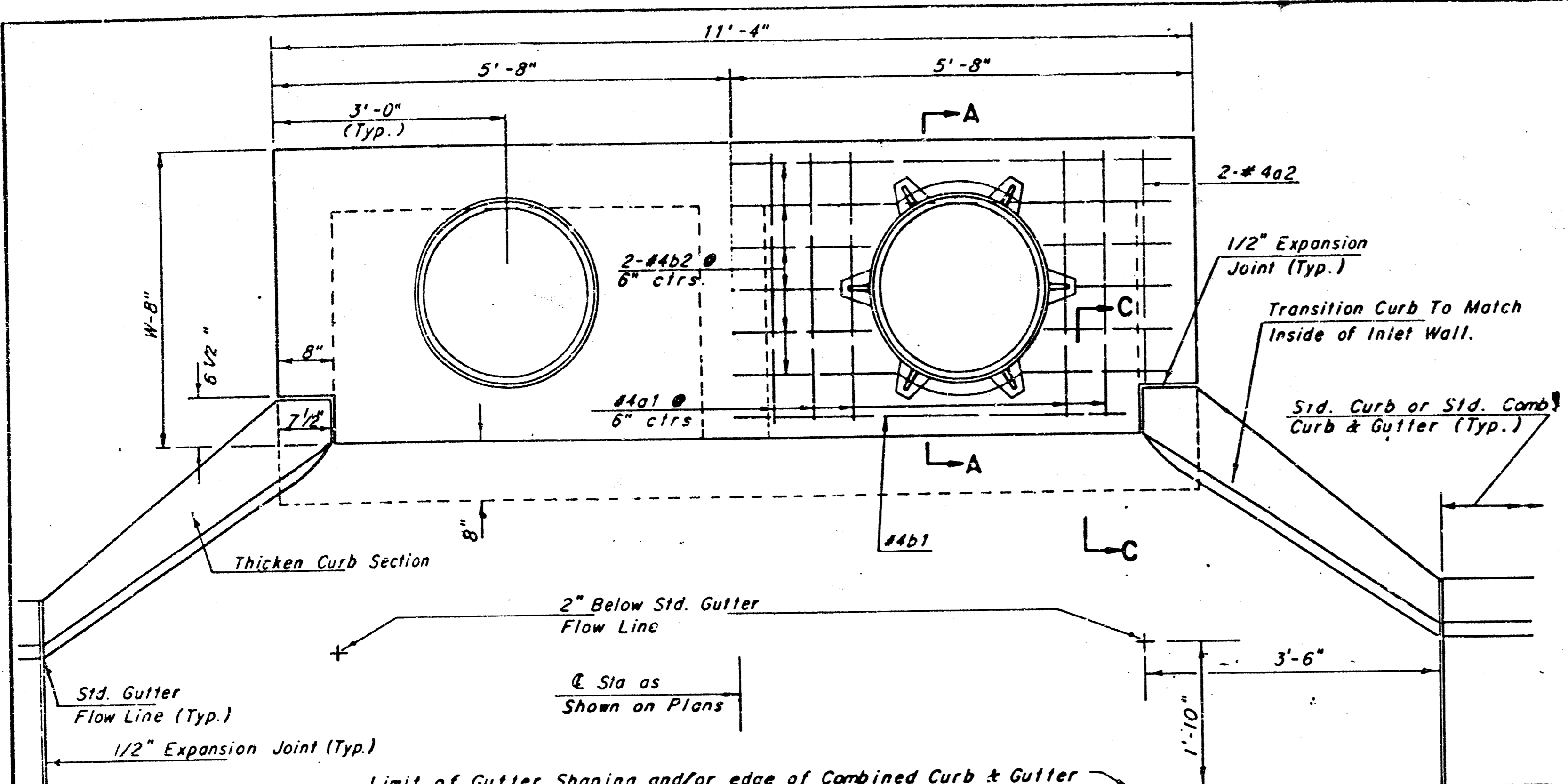


SECTION D-D

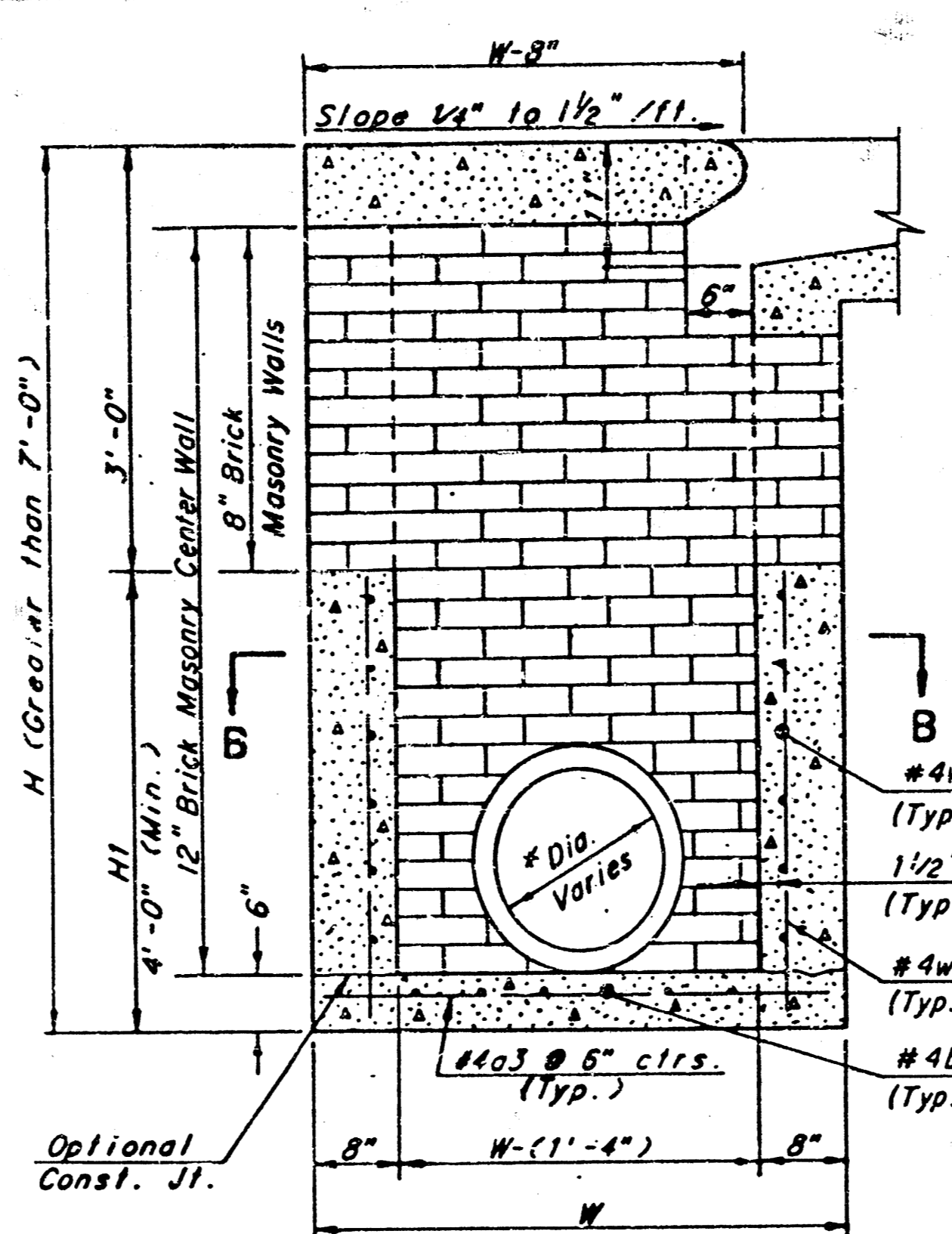
REVISED 11-30-1988
 REVISED 12-21-1984
 Revised 2-16-1989

DETAIL STANDARD TYPE IA CURB INLET
 CITY OF WICHITA, KANSAS
 INLET OPENING = 6" x 5' 0"
 472-76-245-81952-000-000-001
 JUNE 1984

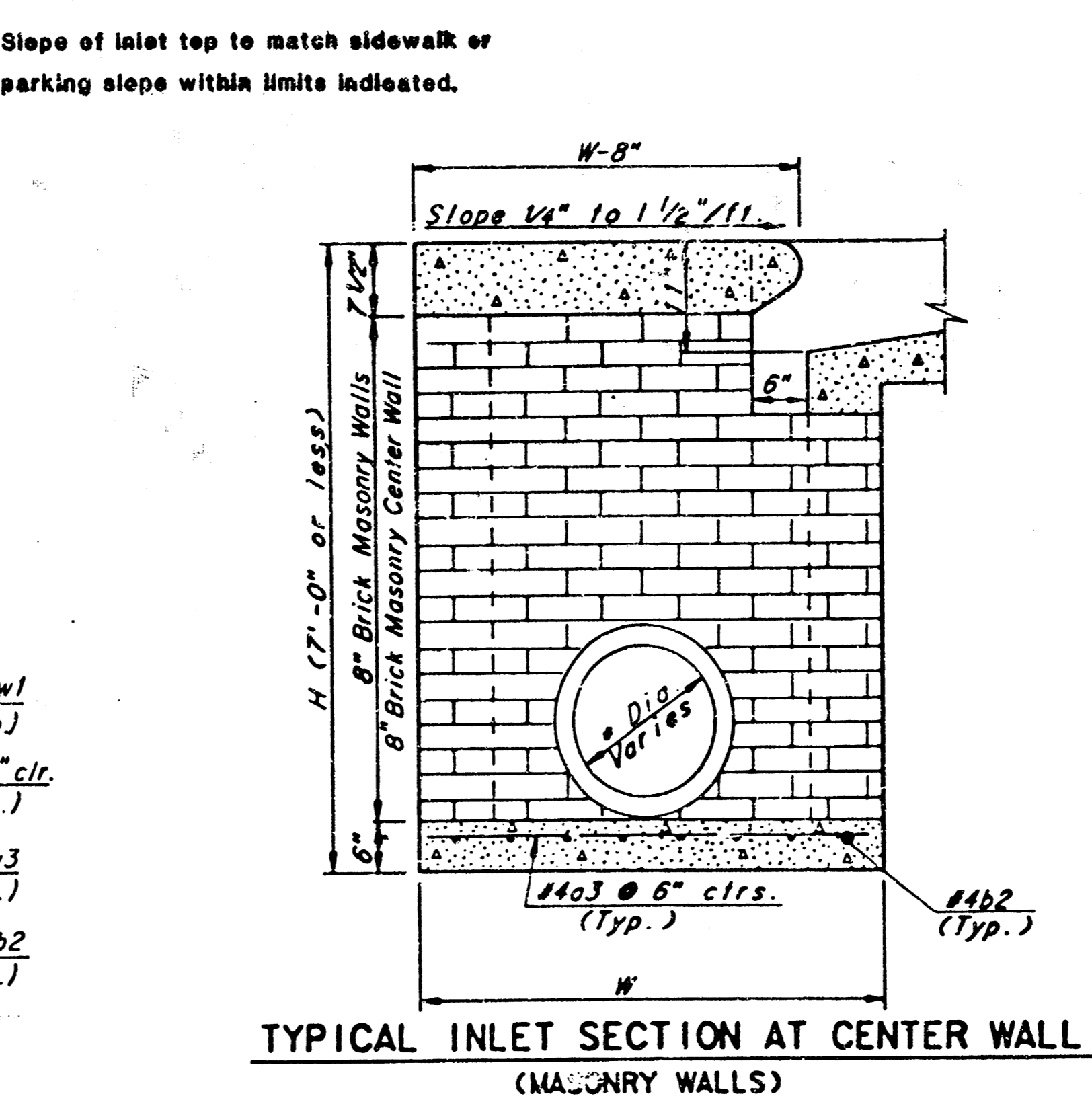
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PLAN
SLAB REINFORCING NOT SHOWN
SHOWING SLAB REINFORCING
NOTE Expansion Joint only in Curb Area with Conc. Pavement.

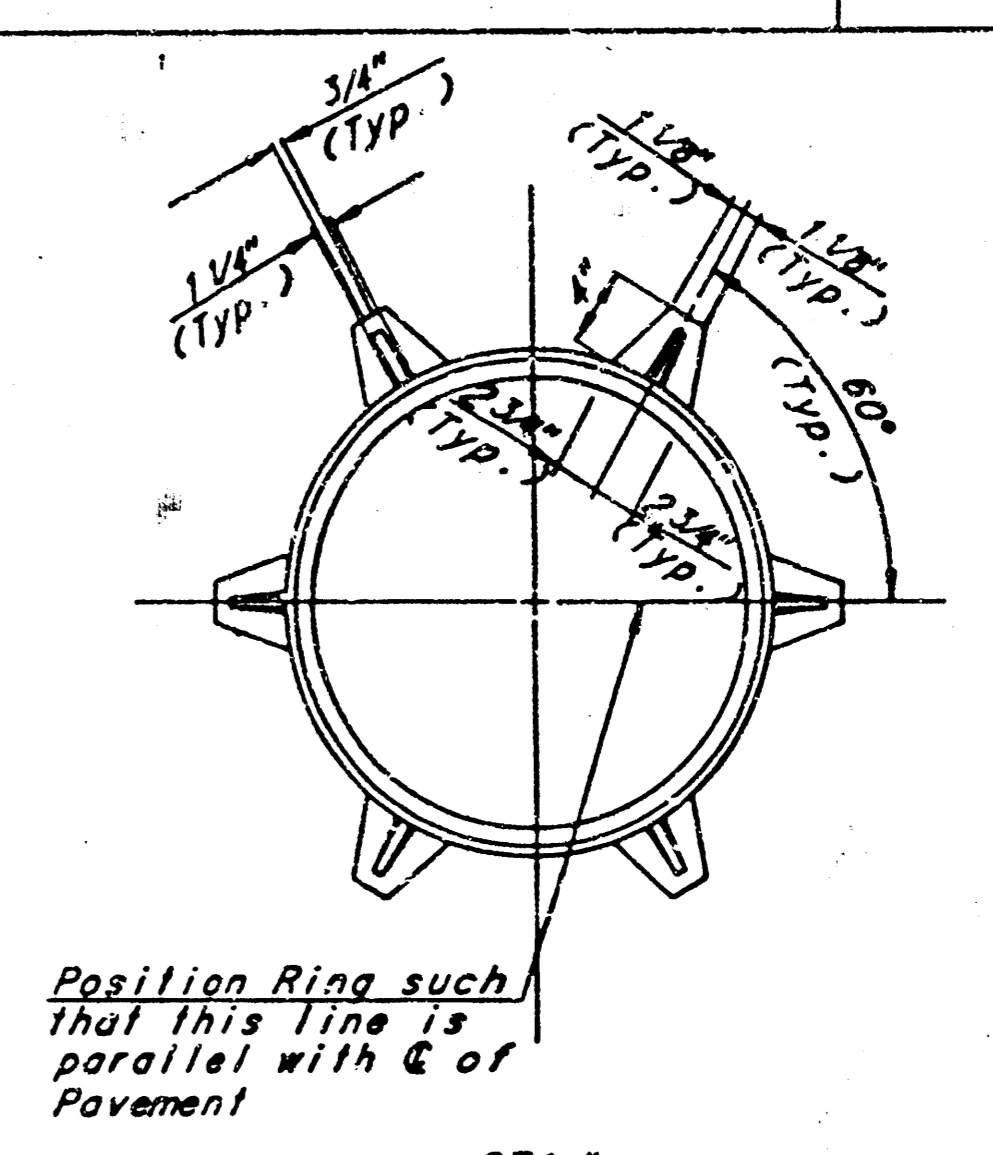


TYPICAL INLET SECTION AT CENTER WALL
(REINFORCED CONCRETE WALLS)

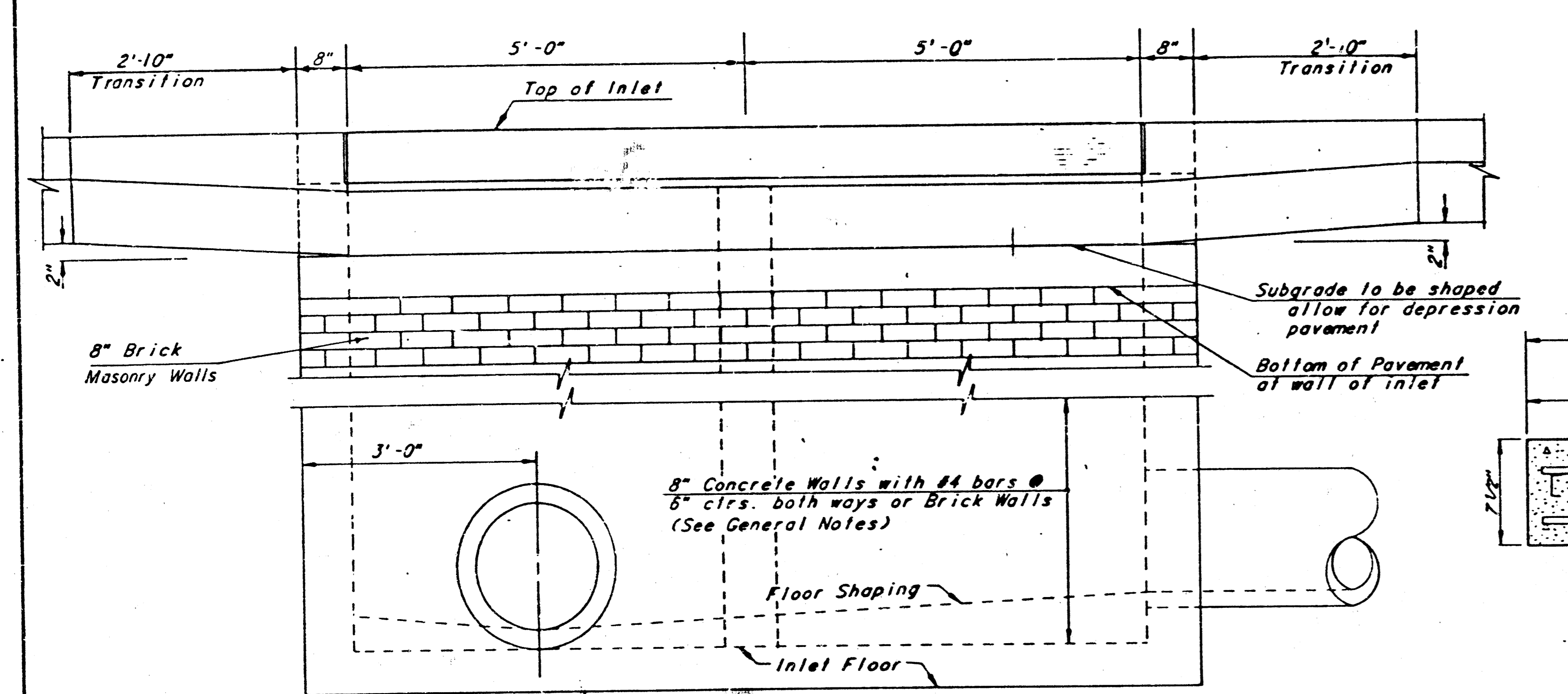


TYPICAL INLET SECTION AT CENTER WALL
(MASONRY WALLS)

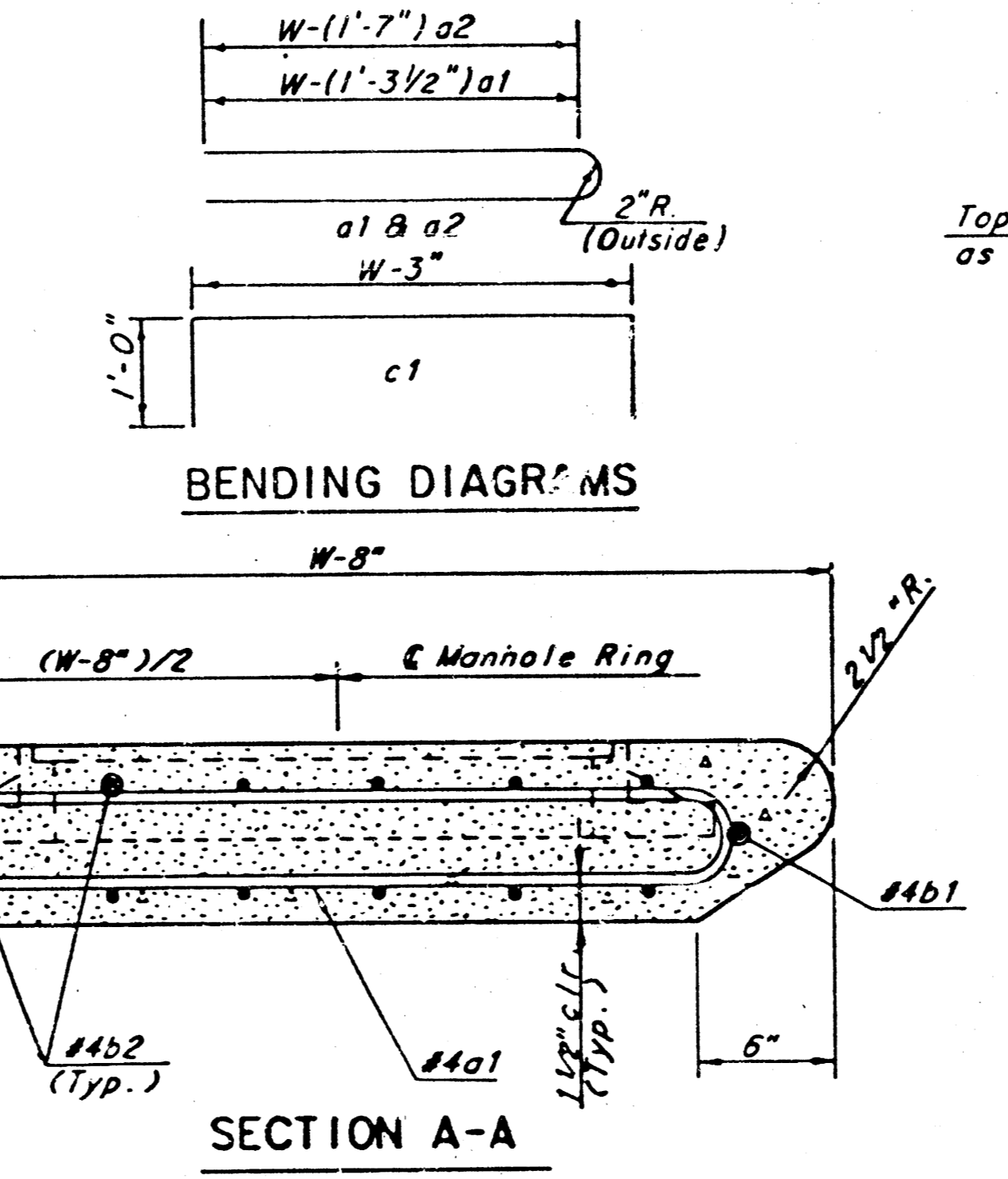
A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II Below.



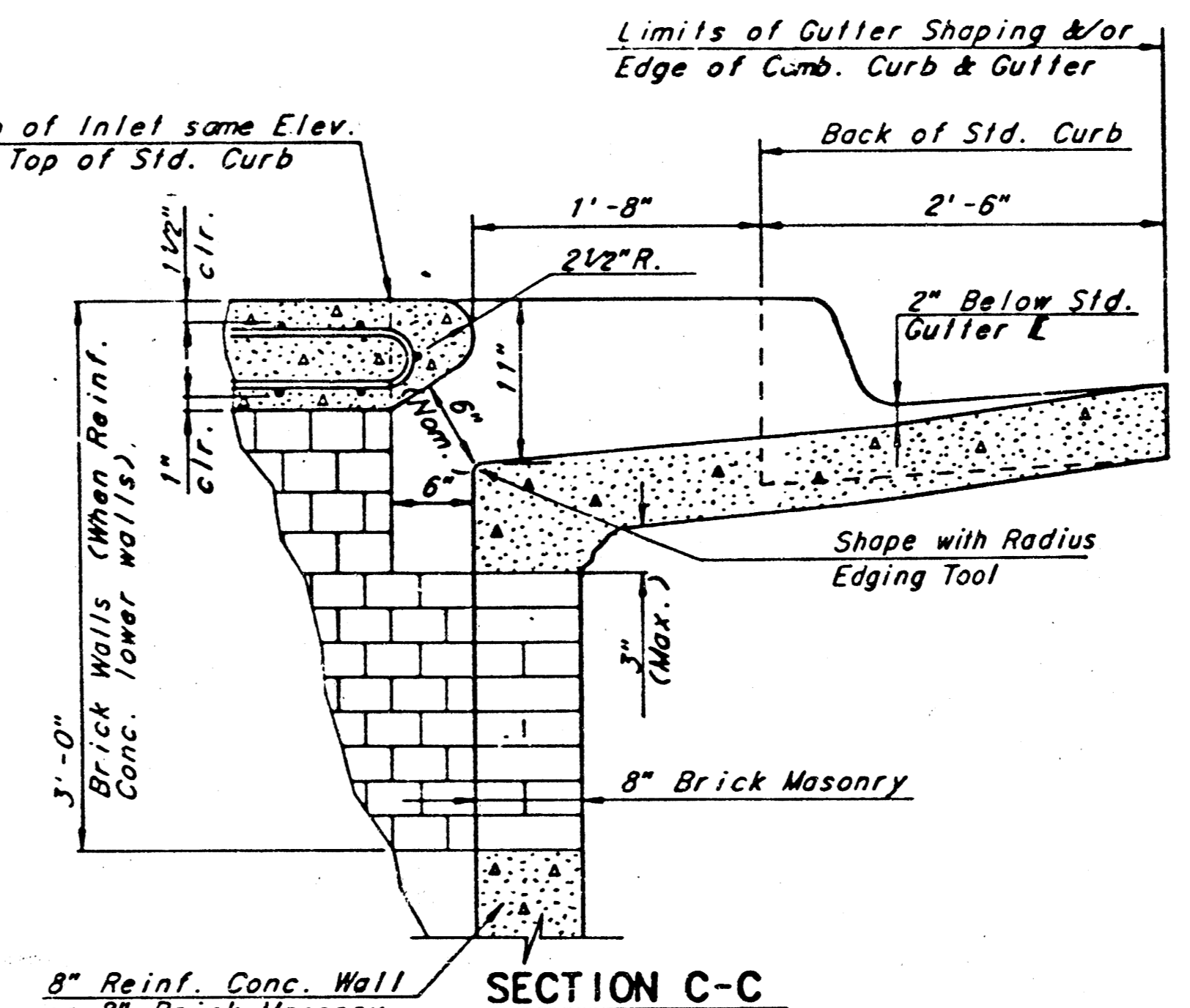
CAST IRON INLET RING
Wt. - 180 lbs.
See City of Wichita Standard Manhole Frame and Cover Detail Sheet for Cover Details to be used with Inlet Frame.



ELEVATION



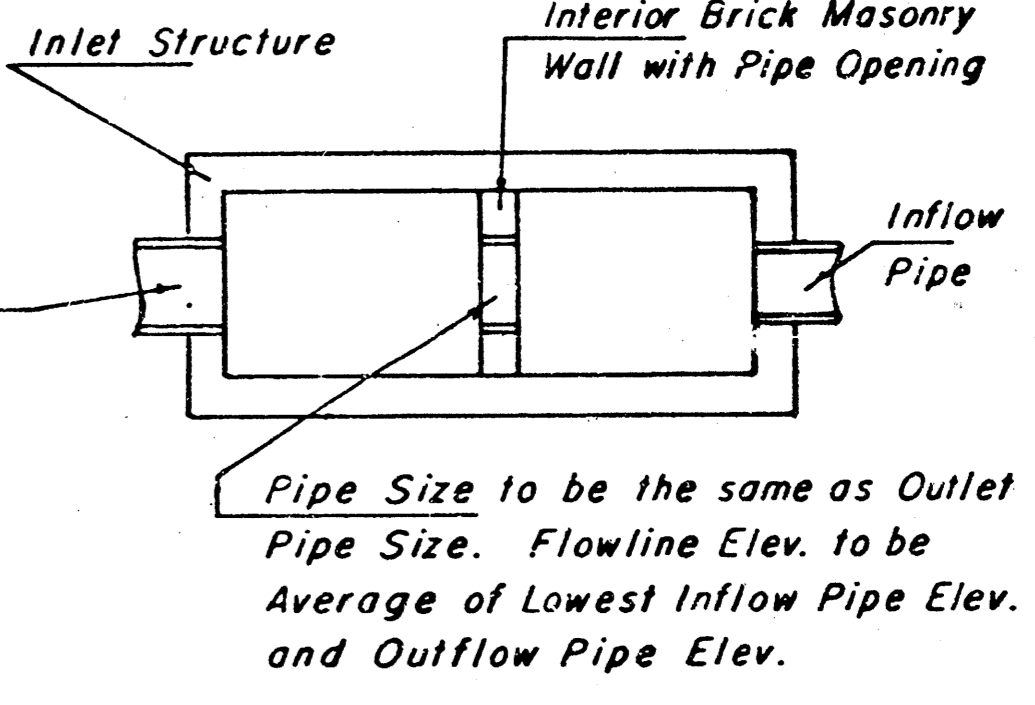
BENDING DIAGRAMS



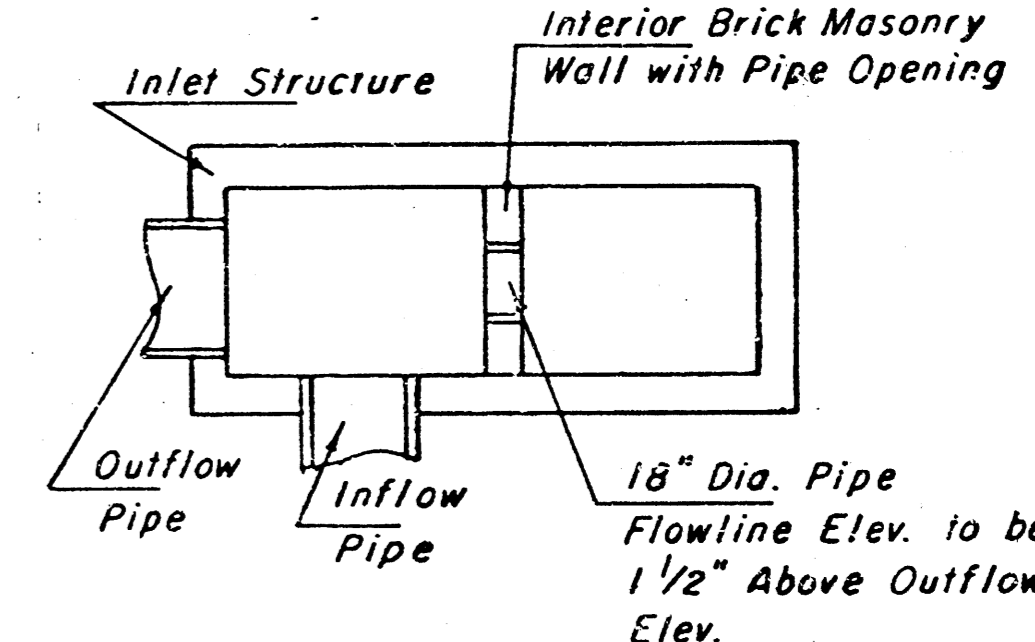
SECTION C-C

GENERAL NOTES

- THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W=4'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0". THE OUTSIDE INLET WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION AND THE CENTER WALL SHALL BE OF MASONRY CONSTRUCTION AS SHOWN FOR THE MASONRY WALL OPTION.
- INLET INVERT SHALL BE SHAPED WITH A 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.
- 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.
- INLET TOP REINFORCING SHALL BE SPACED ON 6" MAX. CENTERS. INLET LIDS 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.
- THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.



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.

SLAB AND FLOOR REINFORCING											
MARK	SIZE	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		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"

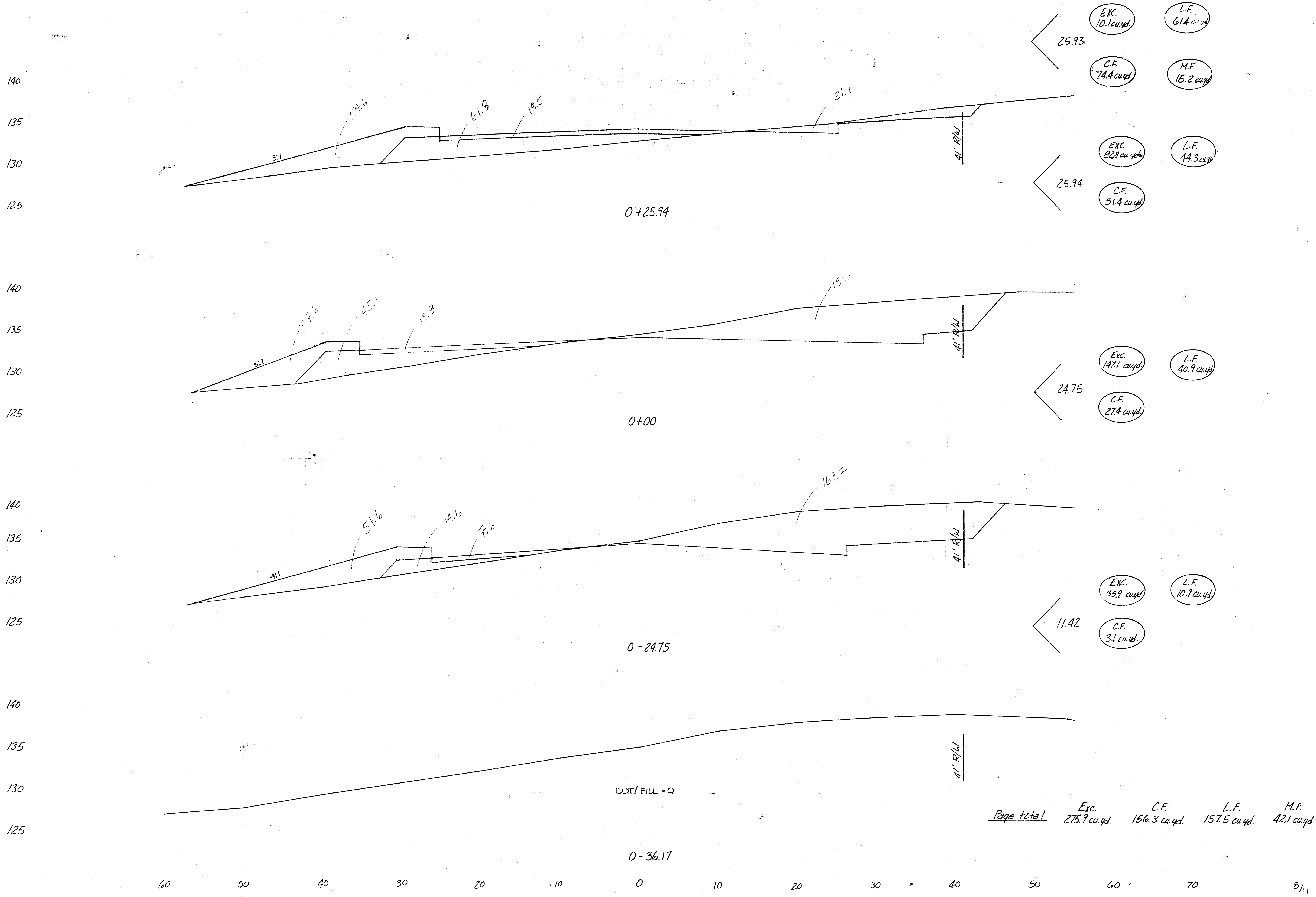
WALL REINFORCING											
MARK	SIZE	W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	②	②	②	②	②	②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

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

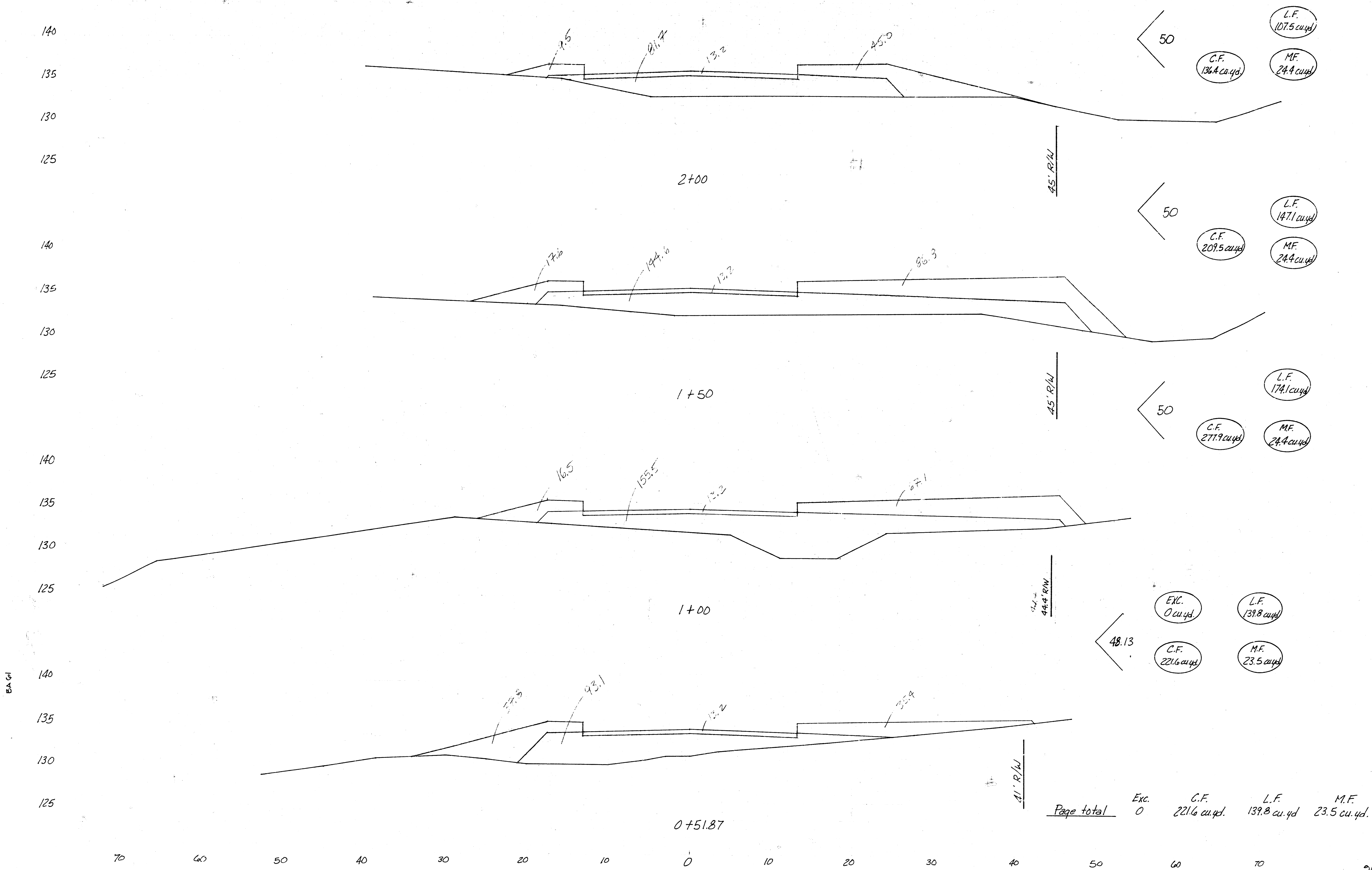
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC.
4'-4"	3'6" x 11'-4" x 7 1/2"	21" B SMALLER	0.83 ±
5'-4"	4'8" x 11'-4" x 7 1/2"	24" B #30"	1.09 ±
6'-4"	5'8" x 11'-4" x 7 1/2"	36" B #42"	1.35 ±
7'-4"	6'8" x 11'-4" x 7 1/2"	48" B #54"	1.61 ±
8'-4"	7'8"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

STANDARD TYPE 1A CURB INLET
 INLET OPENING = 6" x 10'-0"
472-76-245-81952-000-001
 WICHITA, KANSAS
 Designed by BER, KJS, LMB
 Checked by LMB
 Drawn by JGP
 Date Nov., 1984 Job No.

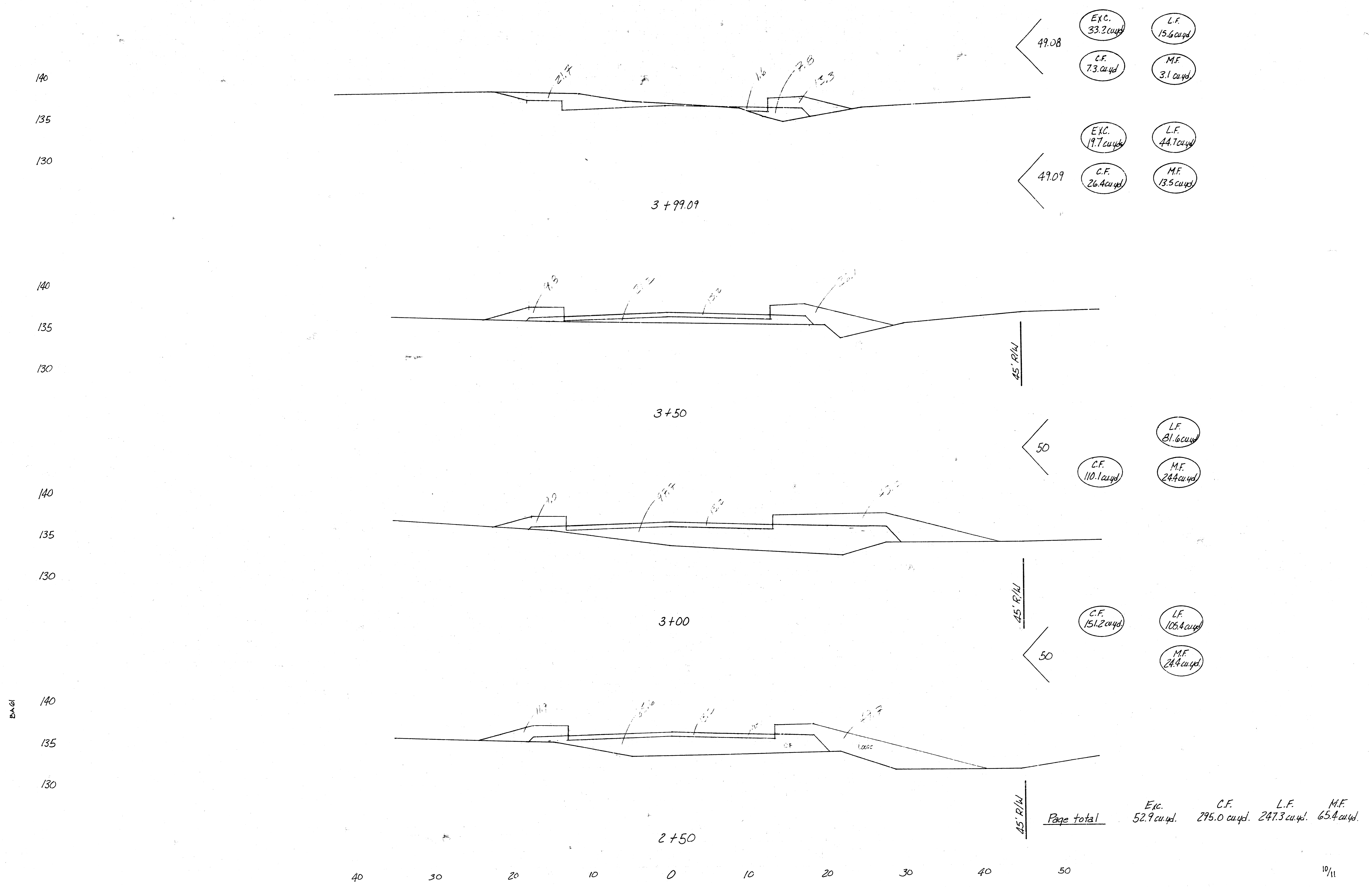
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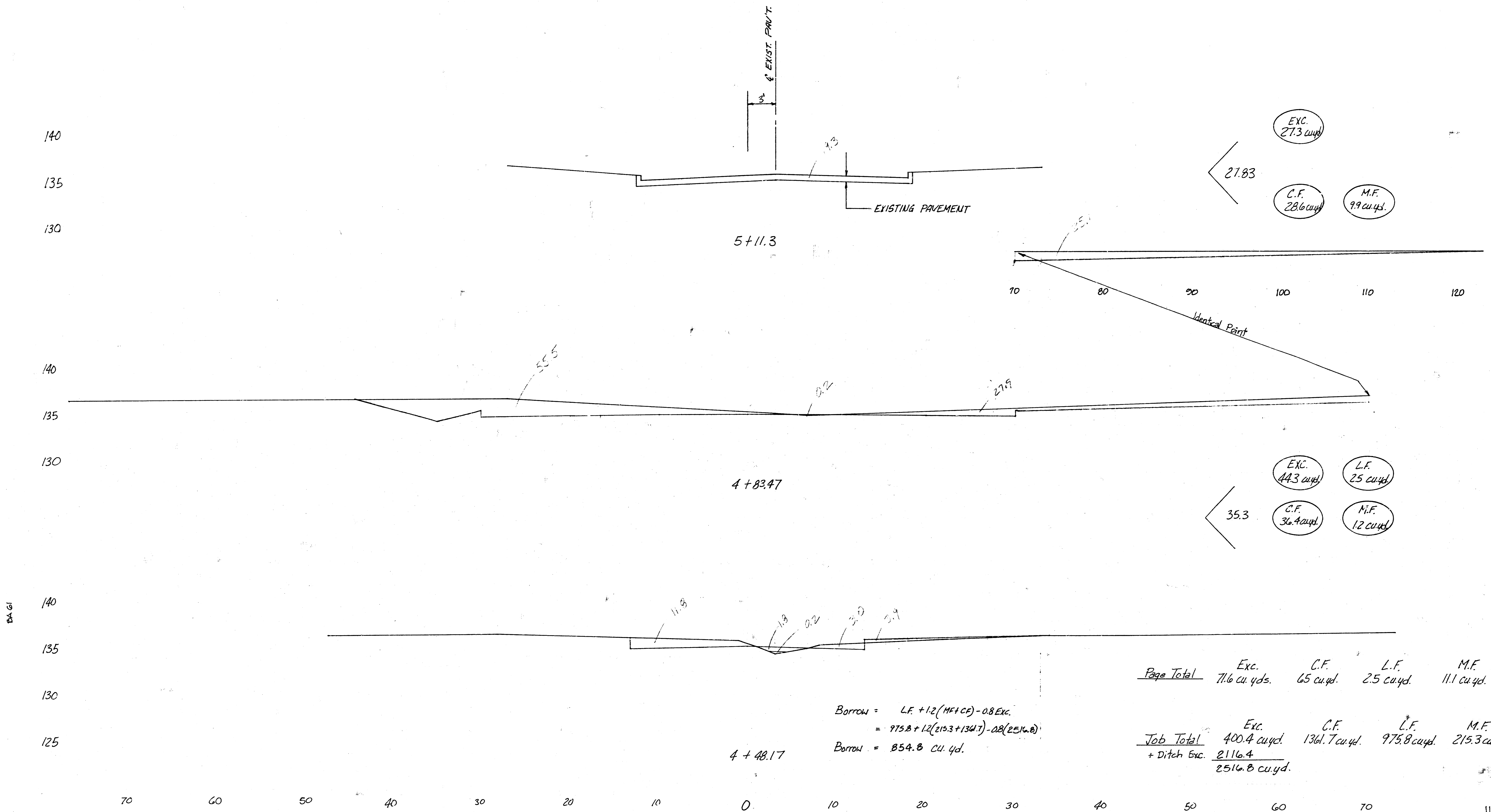
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EXC.
27.3 cu yd.

21.83

C.F.
28.6 cu yd.

M.F.
9.9 cu yd.

EXC.
44.3 cu yd.

35.3

C.F.
36.4 cu yd.

L.F.
2.5 cu yd.

M.F.
1.2 cu yd.

Page Total	Exc.	C.F.	L.F.	M.F.
	71.6 cu yds.	65 cu yd.	2.5 cu yd.	11.1 cu yd.

$$\text{Borrow} = \text{L.F.} + 1.2(\text{M.F.} + \text{C.F.}) - 0.8 \text{Exc.}$$

$$= 975.8 + 1.2(215.3 + 134.7) - 0.8(2516.8)$$

$$\text{Borrow} = 854.8 \text{ cu. yd.}$$

Job Total	Exc.	C.F.	L.F.	M.F.
	400.4 cu yd.	136.7 cu yd.	975.8 cu yd.	215.3 cu yd.
+ Ditch Exc.	2116.4			
	2516.8 cu yd.			

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