

STORM WATER SEWER IMPROVEMENTS

TO SERVE

LOT 5, BLOCK 1, THE COLLECTIVE ADDITION

JOHNSTON'S CLOTHIERS

CITY OF WICHITA PRIVATE PROJECT NO. 1387 PPS (607861)

CITY OF WICHITA, KANSAS

JAMES ARMOUR, P.E.-CITY ENGINEER

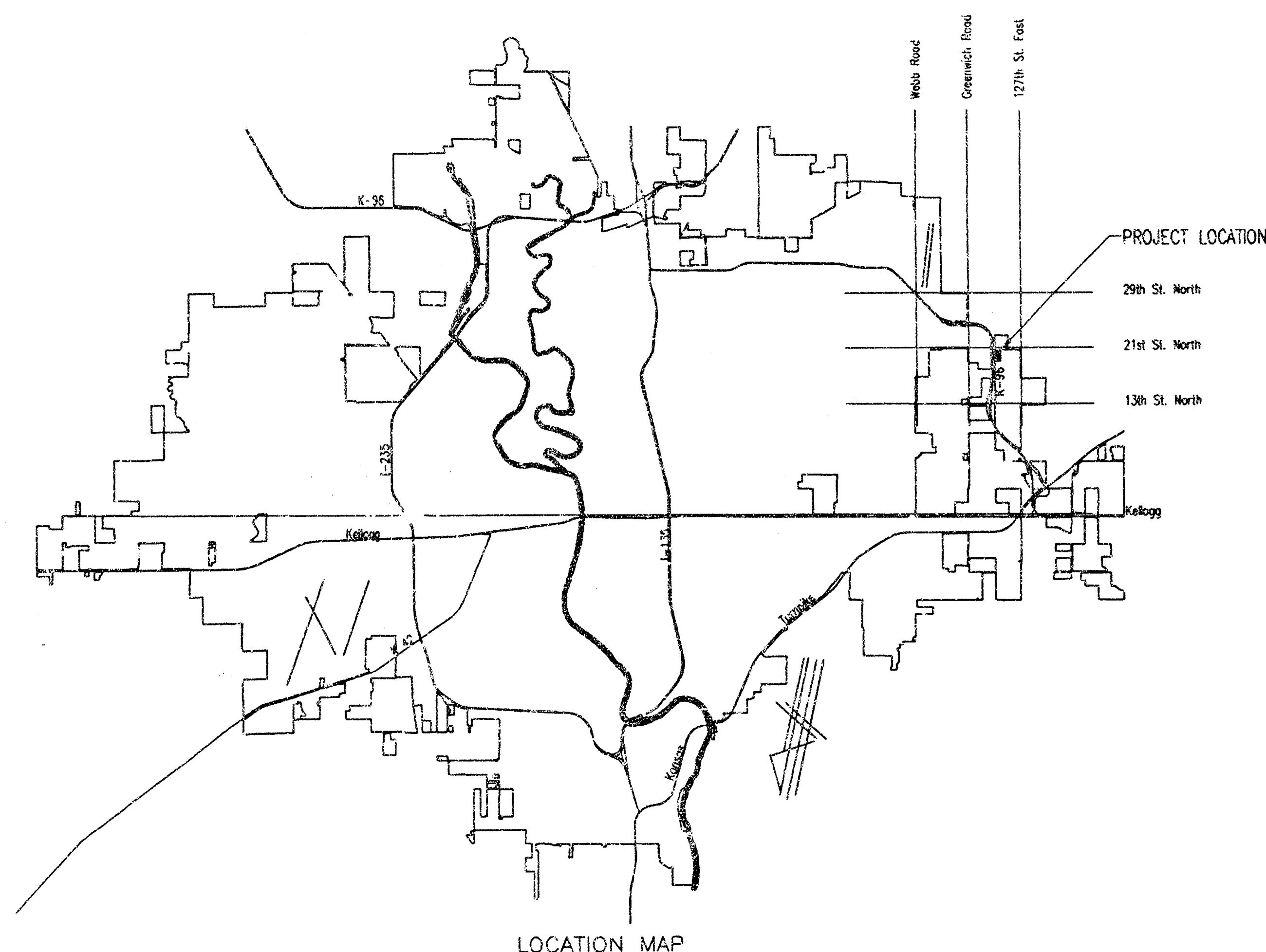
INDEX OF SHEETS

SU1.1	TITLE SHEET
SU1.2	SWS PLAN
SU1.3	R.C. MANHOLE
SU1.4	TYPE 1A CURB INLET
SU1.5	AREY INLET DETAILS
SG2.6	FLAT
SG2.1	SOIL EROSION BMP DETAILS COMMERCIAL
SG2.2	SOIL EROSION BMP DETAILS
SG2.3	SOIL EROSION BMP DETAILS
SG2.4	SOIL EROSION BMP DETAILS

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

SANITARY SEWERS _____
STORM SEWERS U.R.H. 9/23/04
DRIVEWAY APPROACHES _____
WATER MAINS _____
PAVING _____

*Note: replaces
set submitted
10/30/03 JOL*

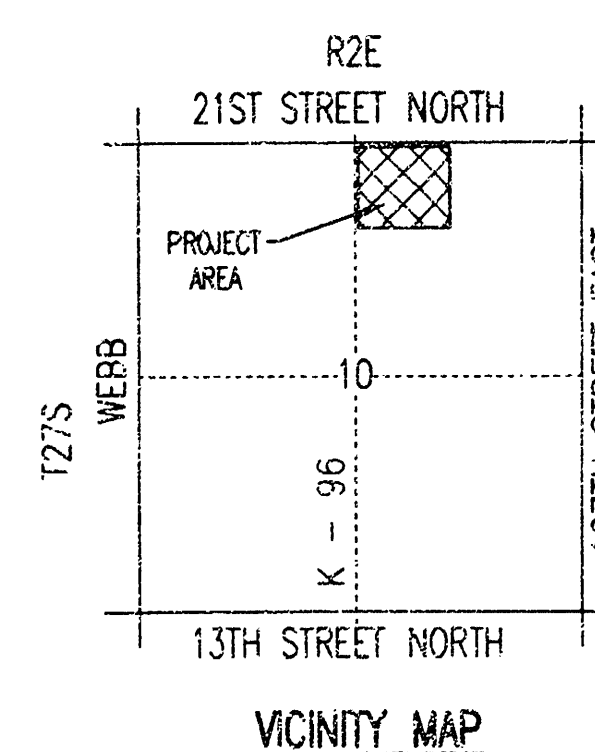


NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM CONTRACTED BY THE CONTRACTOR. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR UNTIL SUCH INSPECTION IS ARRANGED FOR AND REQUIRED BONDS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER. IMPROVEMENTS PERFORMED UNDER THIS PROJECT SHALL NOT BE ACCEPTED BY THE CITY UNTIL ALL APPLICABLE DOCUMENTATION HAS BEEN SUBMITTED TO THE CITY ENGINEER. THIS MAY INCLUDE: AS-BUILT DRAWINGS, INSPECTION LOGS, TEST DOCUMENTATION, TV TAPES, AND A CERTIFICATE OF COMPLETION.

AS-BUILT

11/10/05
Date
[Signature]
Signed



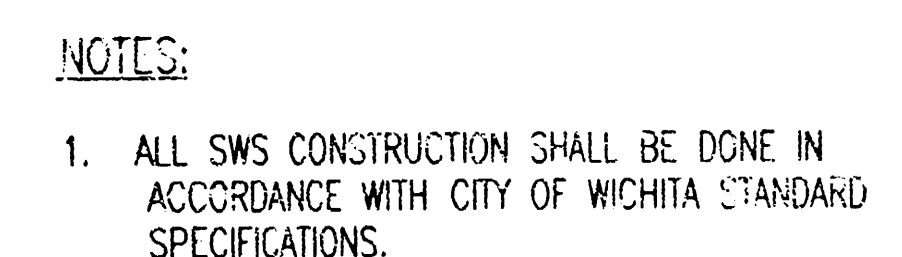
SEPTEMBER 2004

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS



①15 = COORDINATE POINT NO.
SEE SHEET NO. SU2.6 FOR PLAT COORDINATES

No.	Revision	By	Date
CITY OF WICHITA, KANSAS JAMES ARMOUR, P.E. - CITY ENGINEER JOHNSON'S CLOTHIERS			
SWS PLAN			
PRIVATE PROJECT NO. 1387 PPS			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-265-2691 • FAX 316-265-1003			
Designed by	DRC	Job No.	35-04527
Drawn by	DRC	Date	SEPTEMBER 2004
			Std. U2.1 et

DSMR: DAR OPER: DAR SCALE: 1=20.00
Q:\2004\0452\1\PAVE DRAIN GRADE\SWSPLAN 09--24--2004 09:31:42 am

THE COLLECTIVE

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

B.M. - STOPPED SPIKE IN NORTH SIDE OF POWER POLE ON SOUTHWEST CORNER OF 21ST STREET NORTH AND WAWONA. 779' EAST AND 48' SOUTH OF NORTH 1/4 CORNER, SECTION 10, T27S, R2E

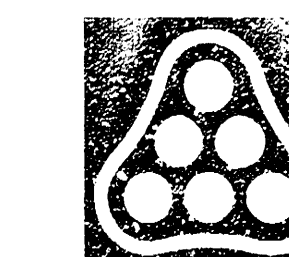
ELEV. = 1384.72 N.C.V.D.
ELEV. = 197.32 (CITY DATUM)

SCALE: 1" = 50'

• = 3/4" IRON PIPE W/PEC CAP UNLESS OTHERWISE NOTED

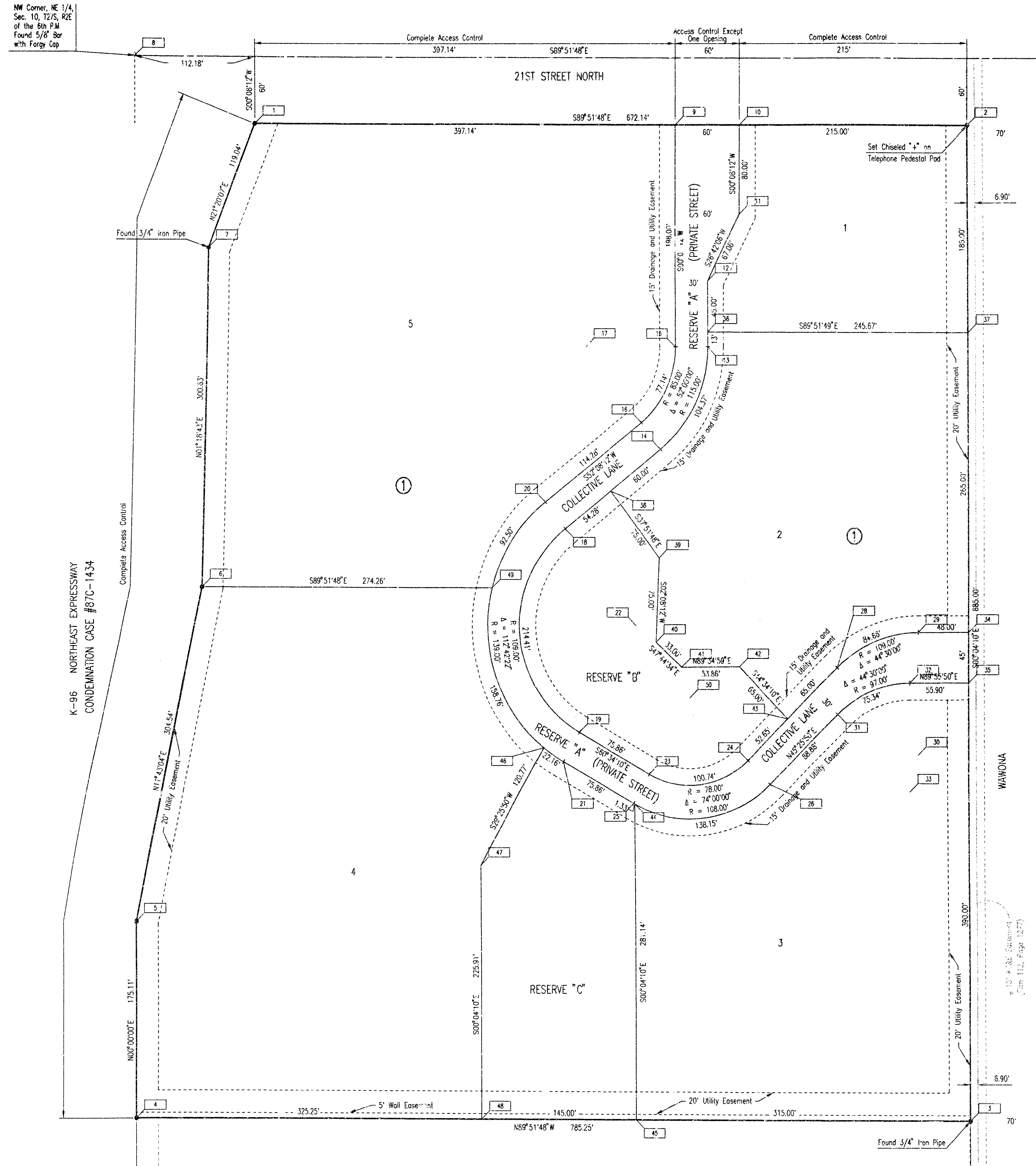
COORDINATE LIST		
POINT	NORTH	EAST
1	19,943.5236	17,461.4443
2	19,941.8203	18,133.5811
3	19,056.9178	18,134.6538
4	19,058.7906	17,349.4034
5	19,233.9008	17,349.4035
6	19,532.0921	17,411.2517
7	19,832.6417	17,418.1346
8	20,003.7910	17,349.4060
9	19,942.5783	17,858.5819
10	19,942.4332	17,918.5817
11	19,862.4334	17,918.3909
12	19,862.5051	17,888.2479
13	19,744.5053	17,888.1095
14	19,653.9896	17,843.6946
15	19,744.5769	17,858.1096
16	19,677.6741	17,825.2812
17	19,744.7796	17,773.1099
18	19,583.8478	17,753.4743
19	19,402.8611	17,766.872
20	19,607.5322	17,755.0609
21	19,376.7325	17,752.0761
22	19,497.7948	17,820.3763
23	19,365.5855	17,832.8883
24	19,377.9575	17,925.9534
25	19,339.4569	17,818.1473
26	19,356.5805	17,947.0066
27	19,433.5197	17,871.2151
28	19,460.5142	18,009.7654
29	19,491.8625	18,086.1266
30	19,382.8626	18,086.2587
31	19,418.9559	18,010.3266
32	19,446.6530	18,078.2810
33	19,349.8530	18,078.3986
34	19,491.9207	18,134.1265
35	19,446.9207	18,134.1811
36	19,757.5053	17,888.1405
37	19,756.9205	18,133.8053
38	19,617.1629	17,796.3259
39	19,557.9522	17,842.3595
40	19,463.0043	17,839.5632
41	19,460.8131	17,863.9876
42	19,461.2050	17,917.8441
43	19,414.8990	17,963.4594
44	19,338.8094	17,819.3117
45	19,057.6692	17,819.6525
46	19,389.1125	17,733.7210
47	19,283.9272	17,674.3782
48	19,058.0150	17,674.6520
49	19,531.4379	17,685.5092
50	19,433.5197	17,871.2151

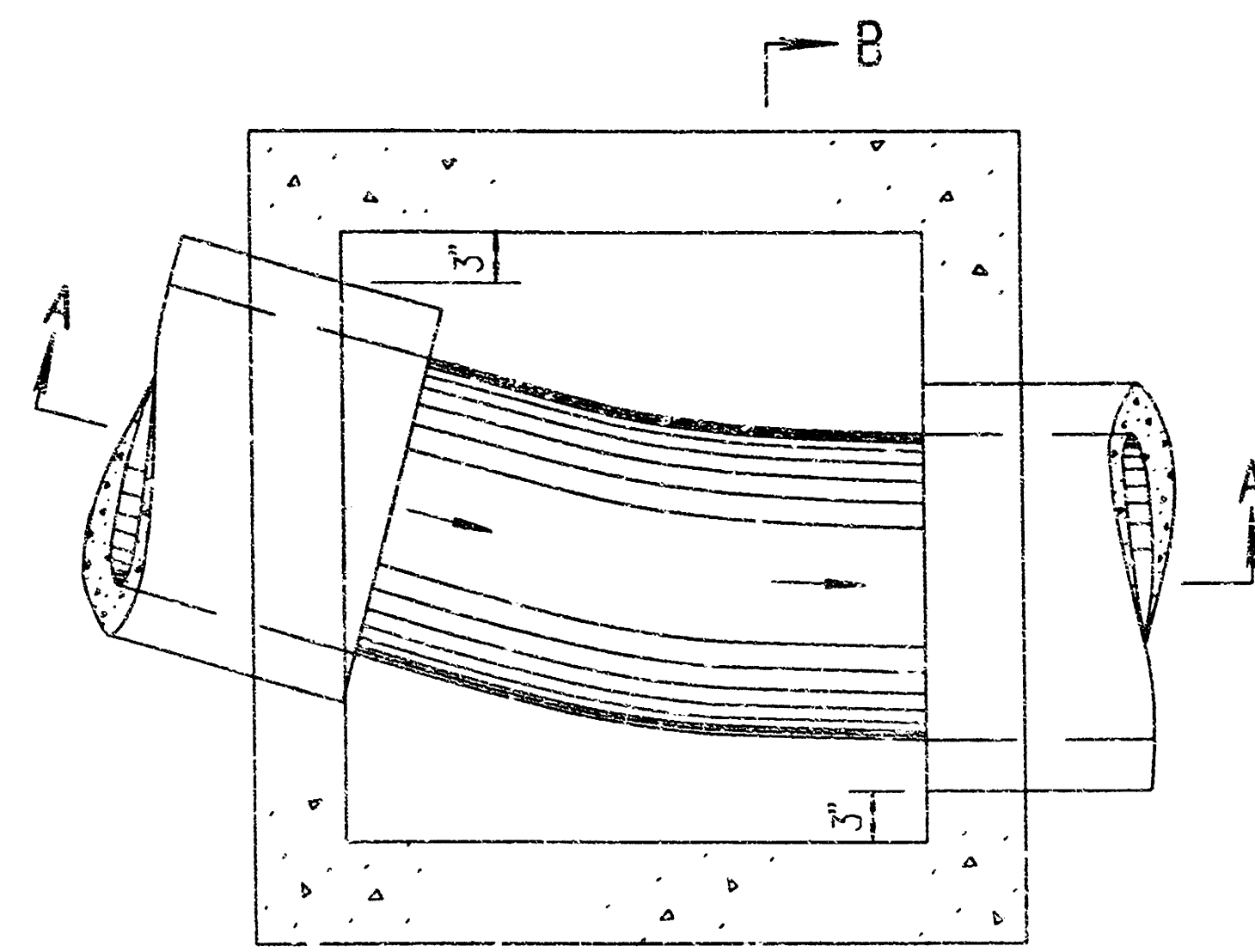
1 = COORDINATE POINT NO.



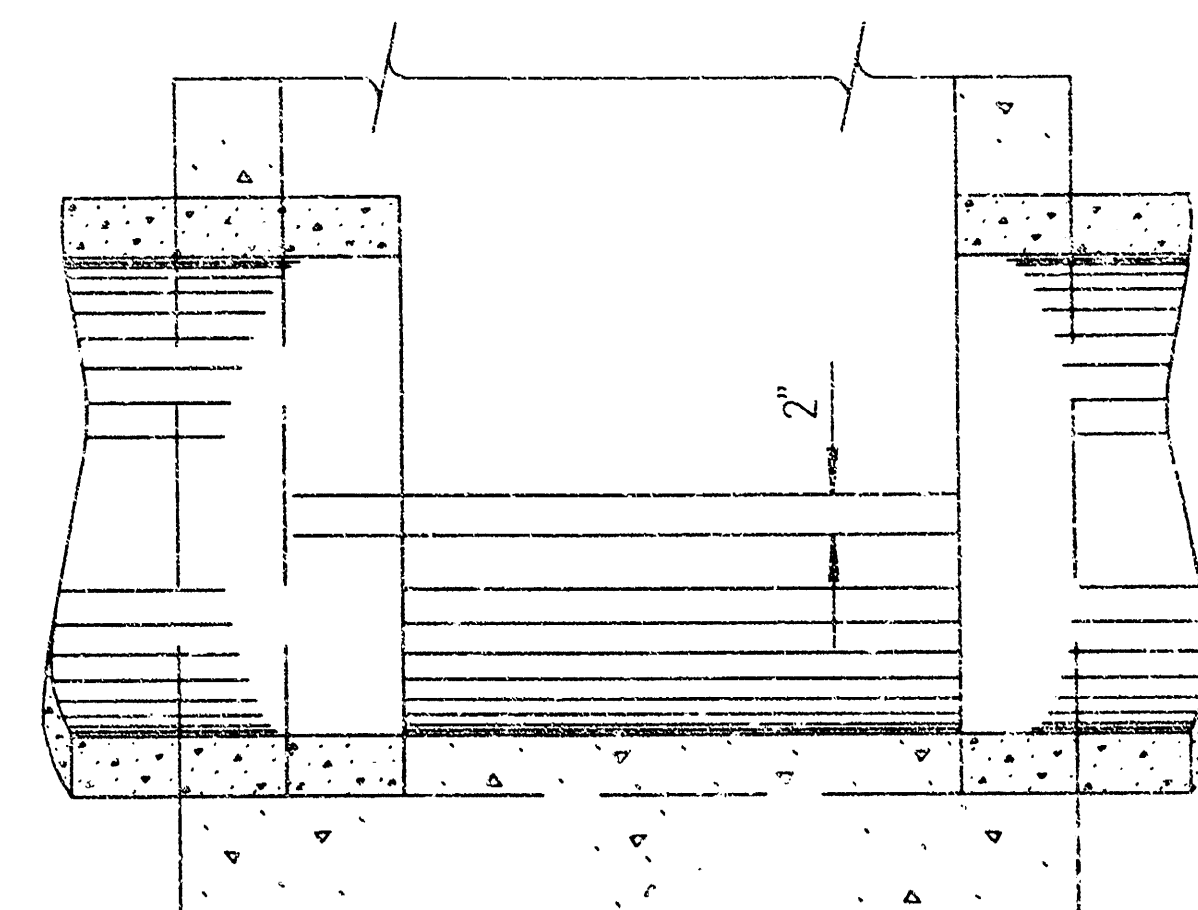
No.	Revision	By	Date
CITY OF WICHITA, KANSAS JAMES ARMOUR, P.E. - CITY ENGINEER JOHNSTON'S CLOTHIERS			
PLAT			
PRIVATE PROJECT NO. 1387 PPS			
Professional Engineering Consultants, P.A.			
303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	DRC	Job No.	35-04527
Drawn by	DRC	Date	SEPTEMBER 2004
			SH SU2.6 of

PSNR, DAR, OPER, DAR, SCALE: 1"=50.00
01/2004/04527/RAVE DRAIN GRADE/PLAT 09-24-2004 09:33:47 am

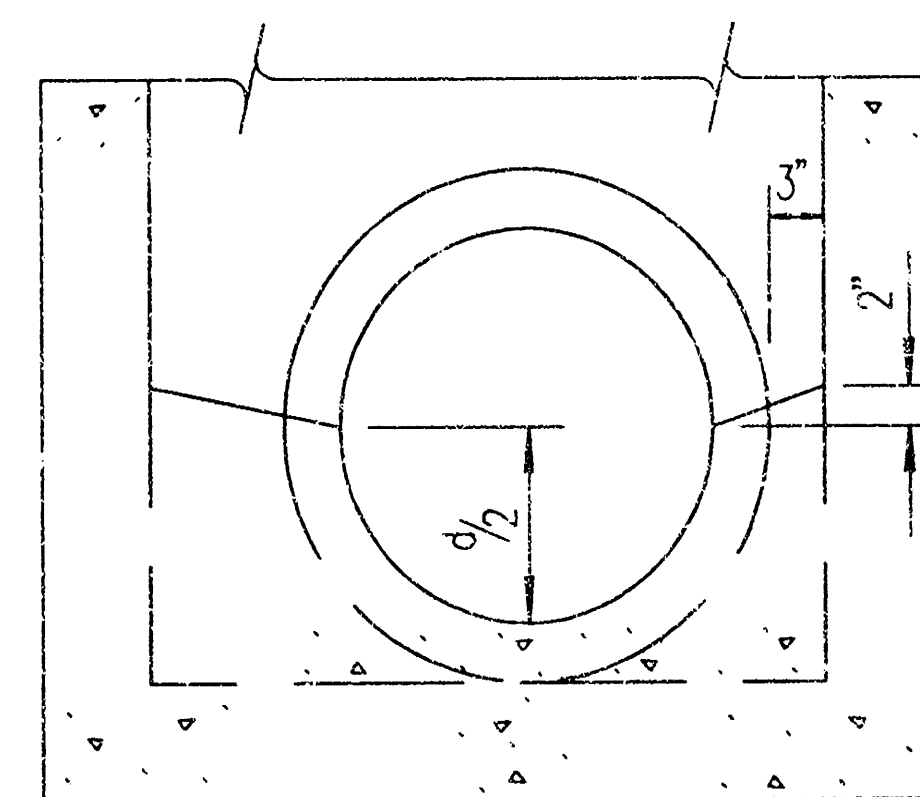




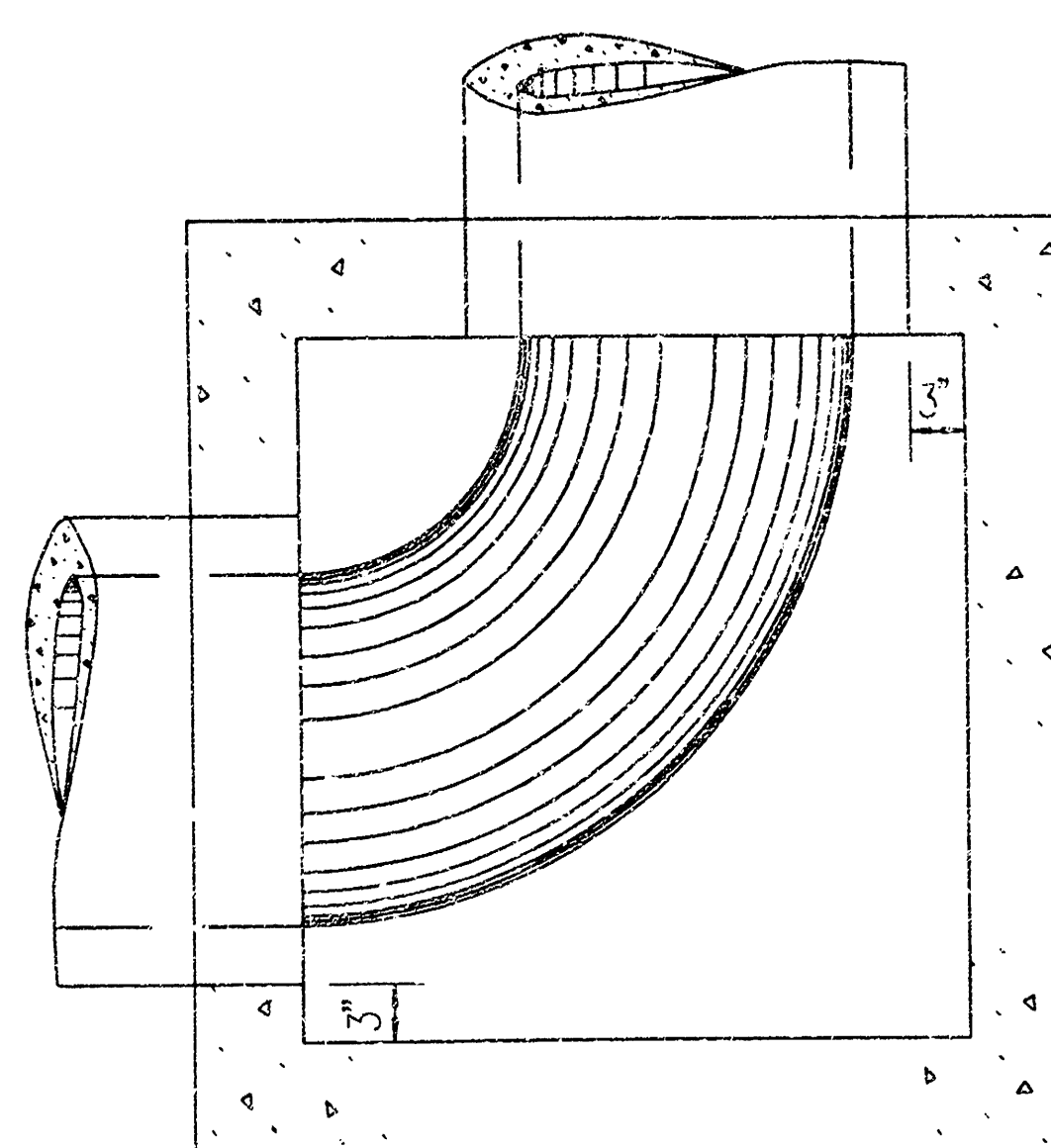
PLAN - FLOOR (Example I)



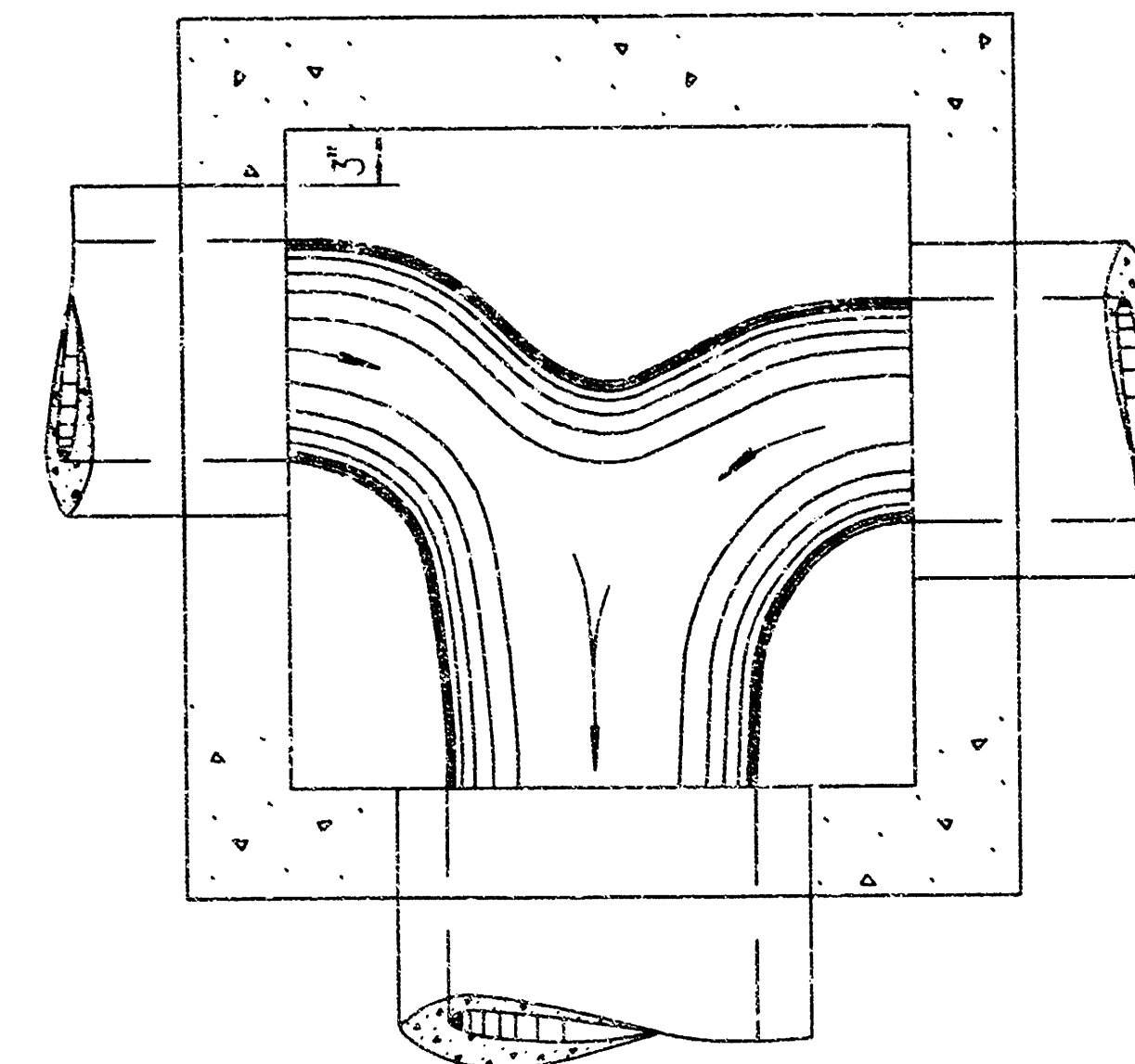
SECTION A-A (Example I)



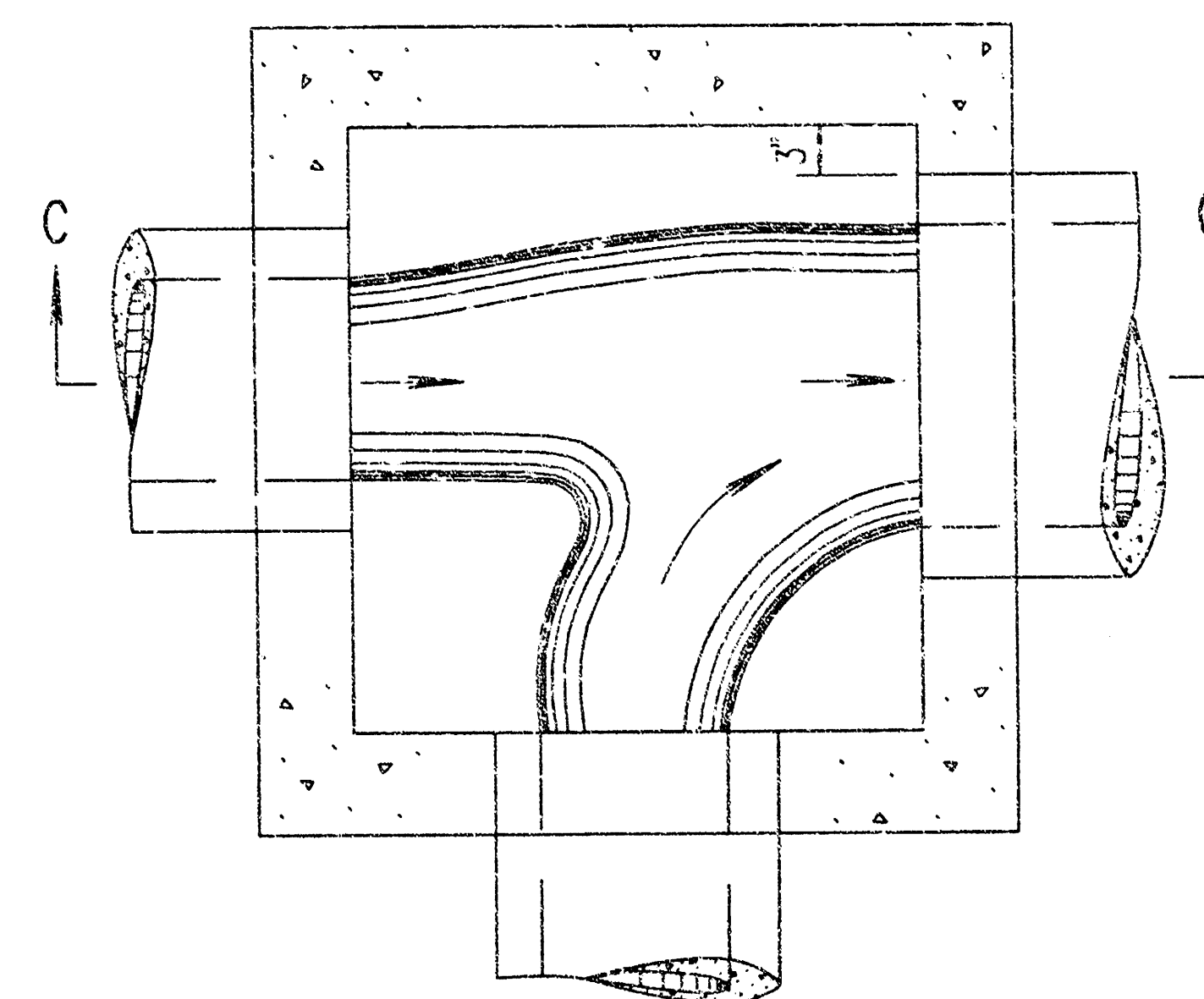
SECTION B-B (Example I)



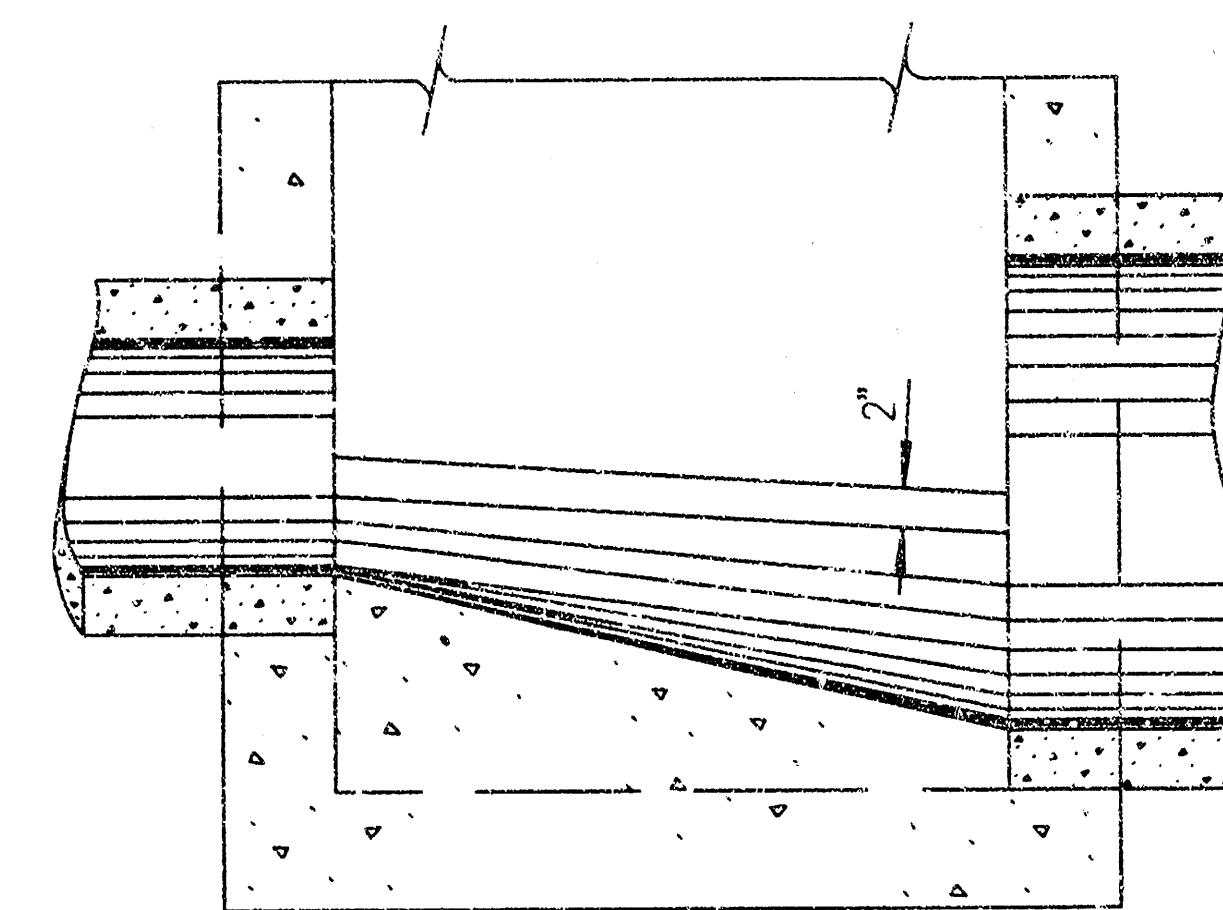
PLAN - FLOOR (Example II)



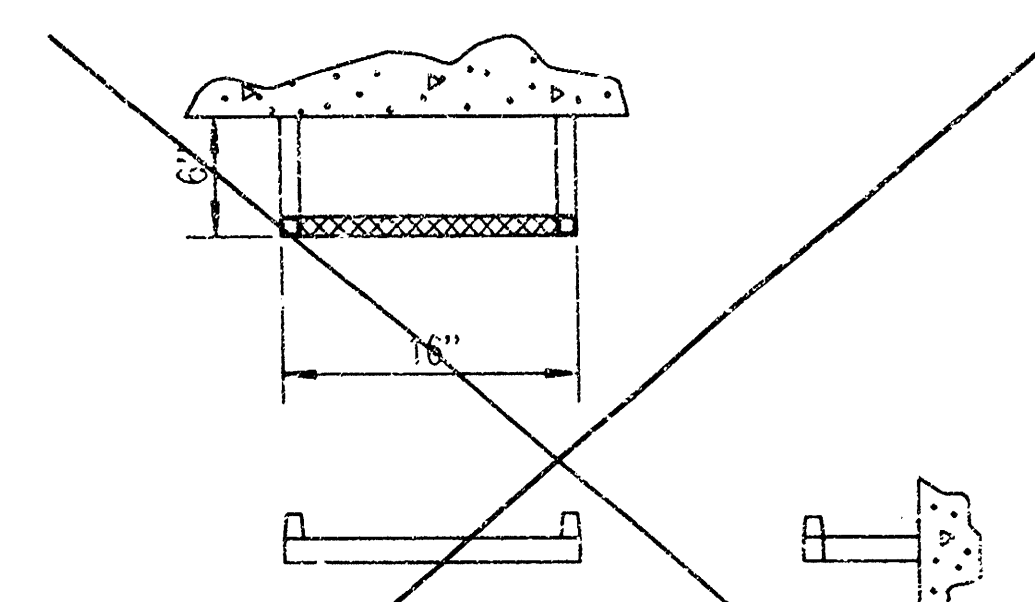
PLAN - FLOOR (Example III)



PLAN - FLOOR (Example IV)

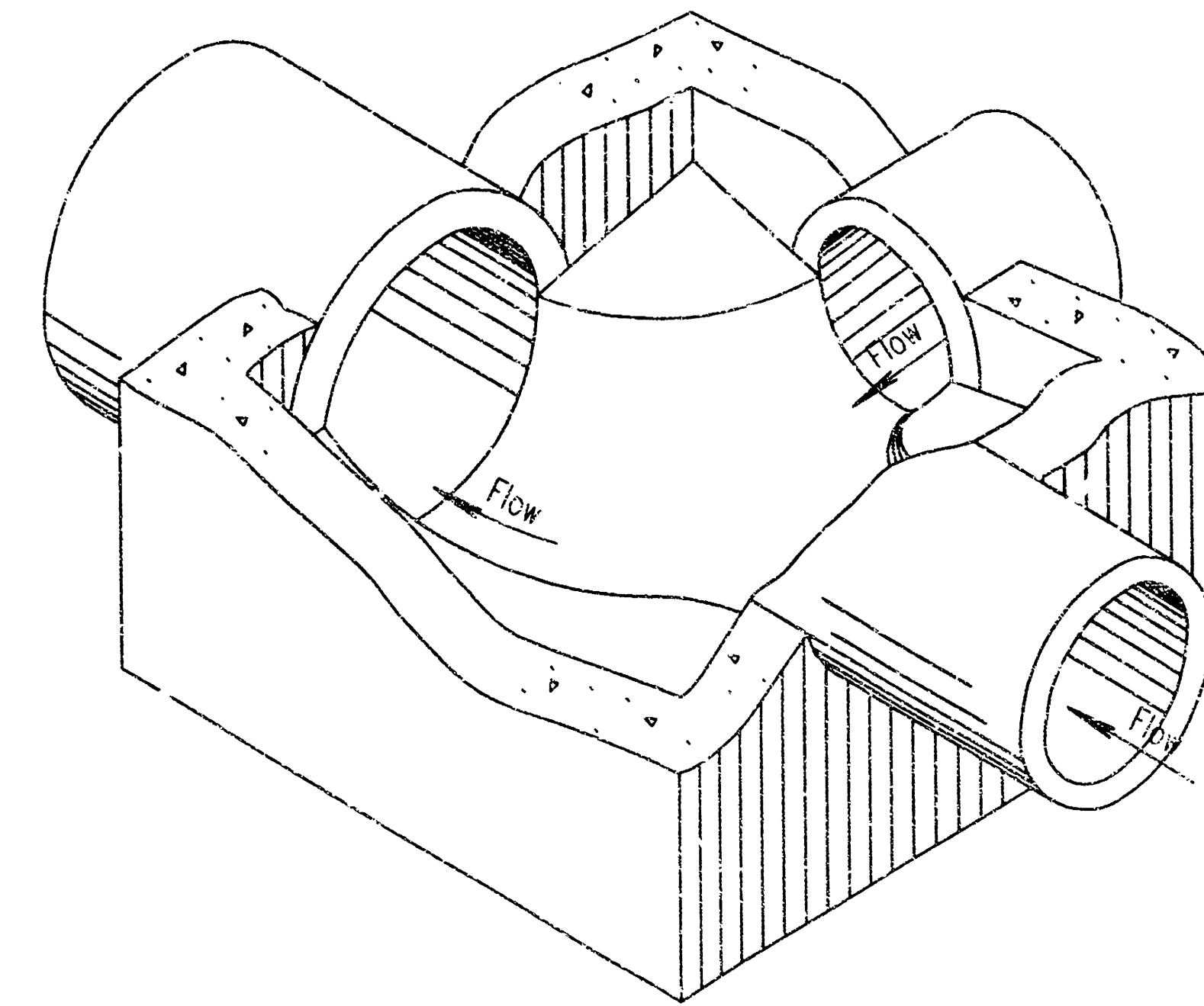


SECTION C-C (Example IV)



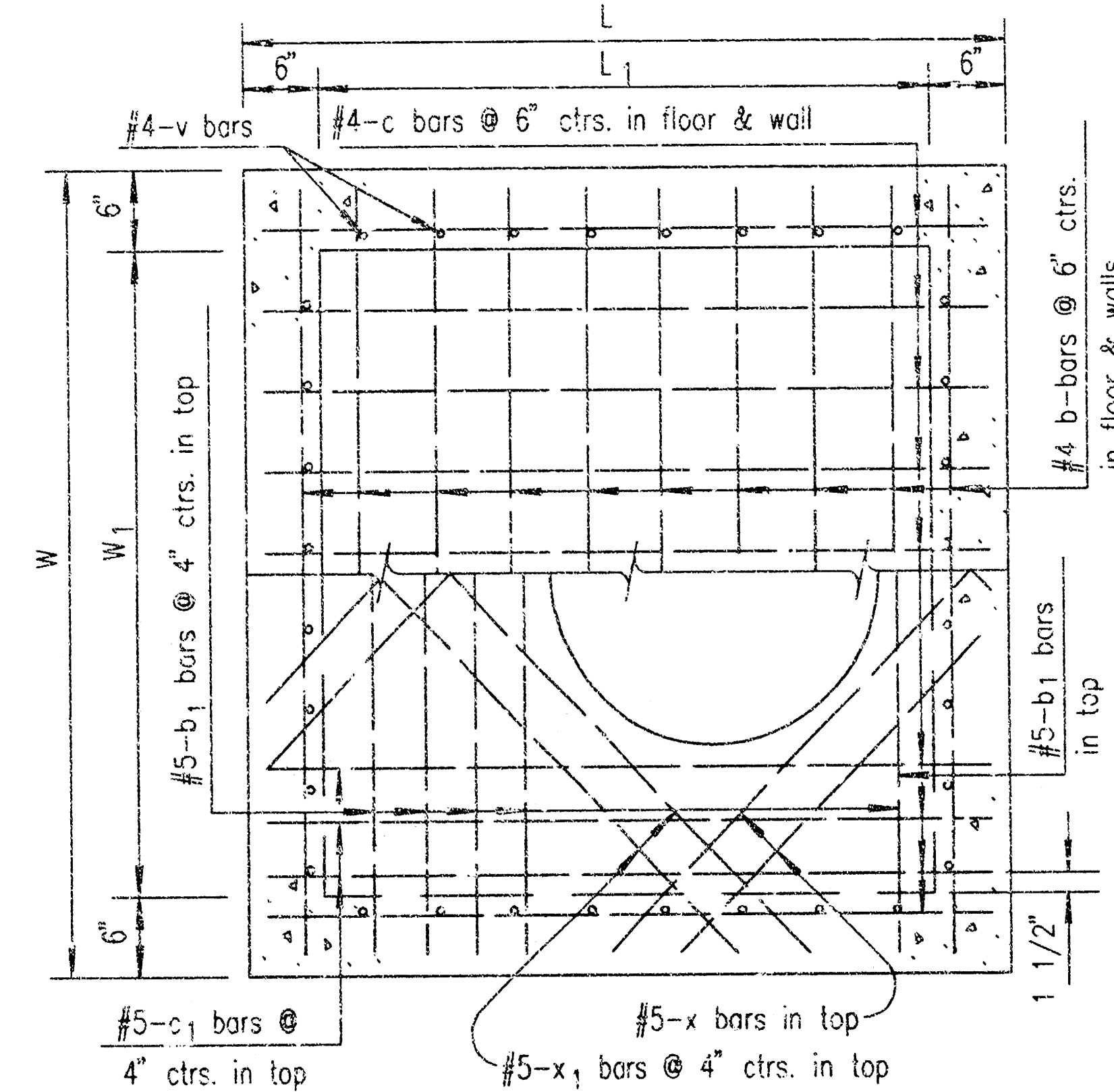
STEP DETAILS

** Steps shall be uniformly spaced. Spacing shall be 12" minimum and 16 1/2" maximum.

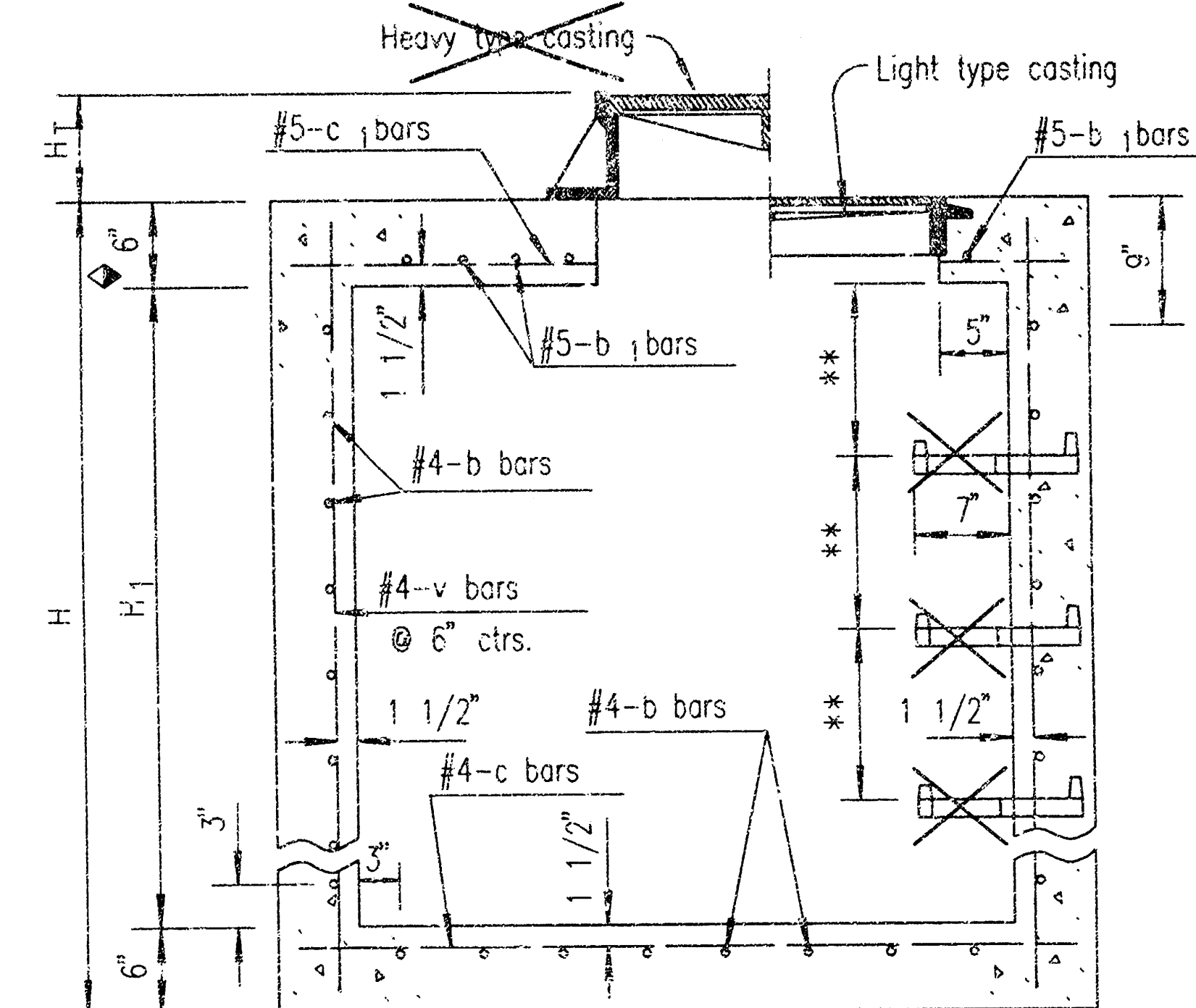


Floor of manhole shall be shaped as shown in the examples to increase hydraulic efficiency.

ISOMETRIC VIEW (Example IV)



PLAN (Showing top & floor reinf.)



Where dimension "L" or "W" is greater than 6'-0" use 8" slab thickness.

SECTION (Exclusive of floor shaping)

Note: Use 3000 p.s.i. Concrete throughout. All exposed edges shall be finished with an edging tool.

At the contractors option, the mix used in concrete pavement may be used throughout.

In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.

Floor of manhole shall be shaped as shown in various "EXAMPLES" with unreinforced 3000 p.s.i. Concrete. Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert.

Top reinforcing bars shall be adjusted accordingly.

All castings shall be gray iron and shall comply with the KDOT Standard Specifications.

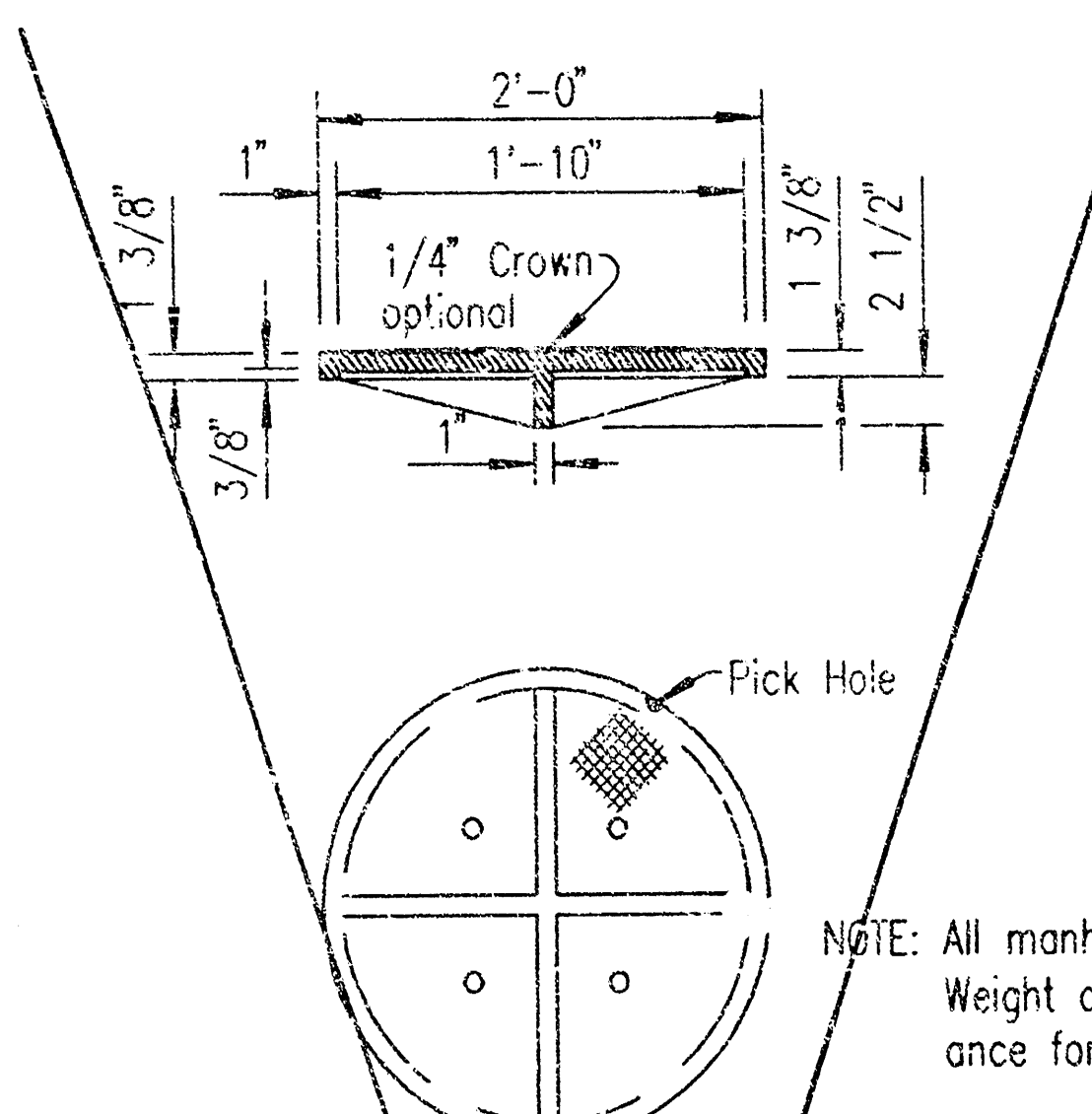
No deductions in concrete quantities shall be made for pipe openings or additions to concrete quantities shall be made for shaping floor of manholes.

The top of the manhole shall be sloped slightly to approximately fit the ground line or other condition as directed by the Engineer.

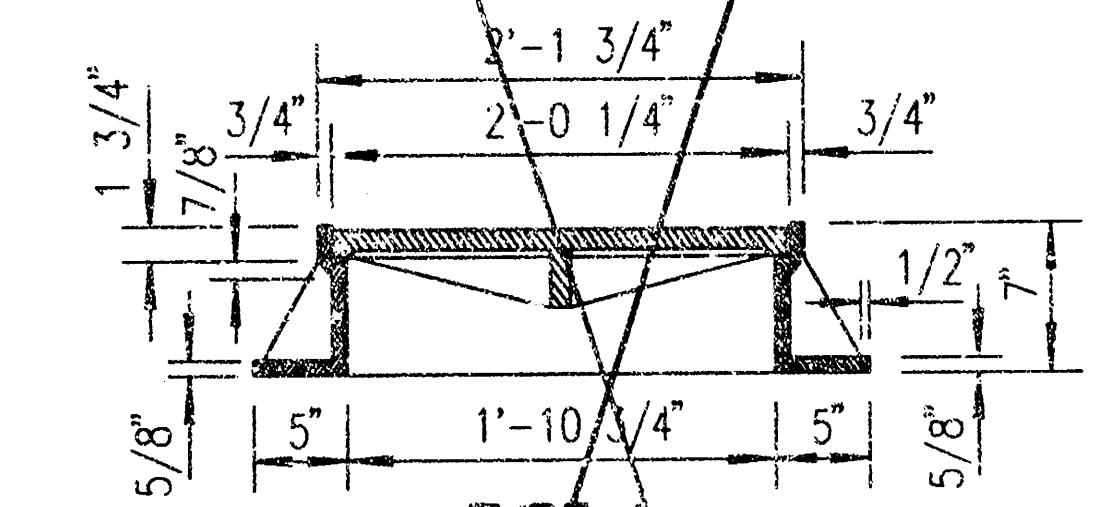
Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.

The Contractor has the option of using precast manholes, as approved by the Engineer.

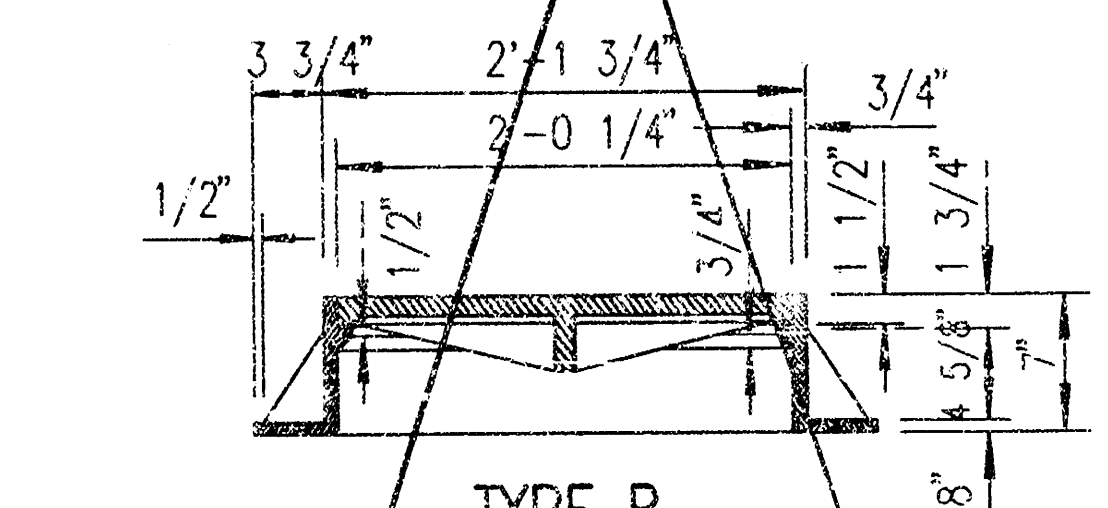
Steps shall be installed in all manholes when specified in the plans or when "H" is equal to or greater than six feet. Steps shall comply with the requirements of the KDOT Standard Specification.



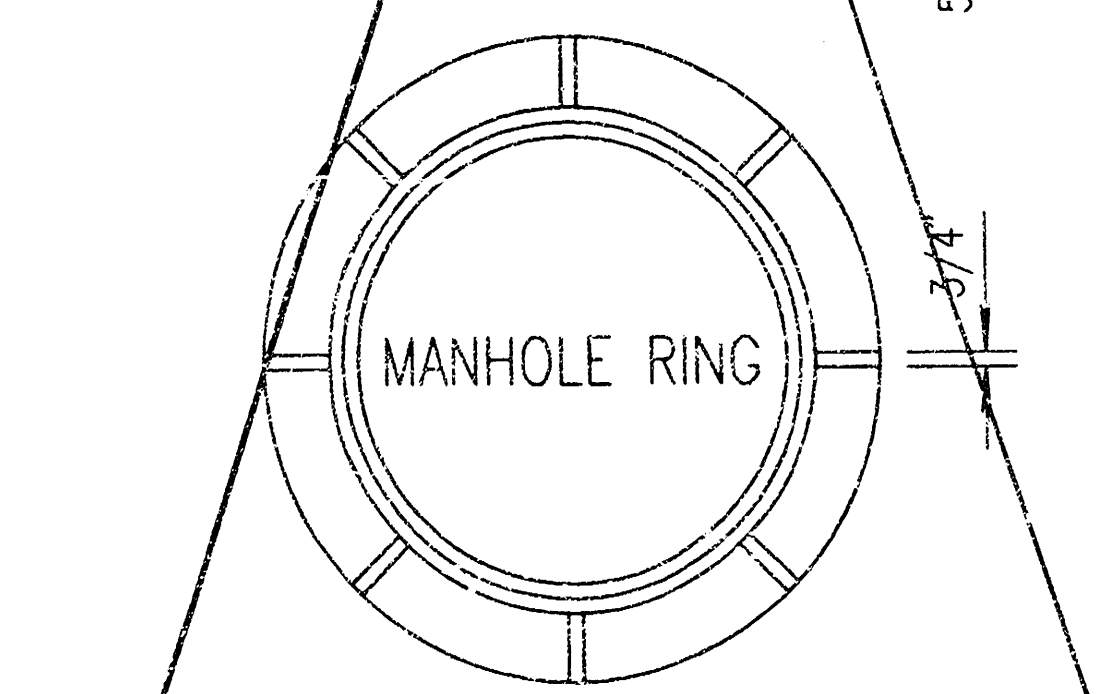
MANHOLE COVER TYPE A & B
(Weight=134 lbs.; without 1/4" Crown= 125 lbs.)



TYPE A



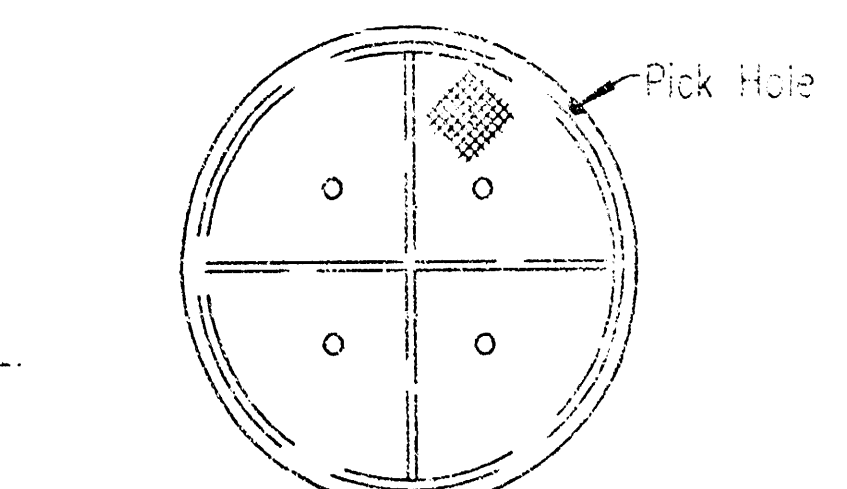
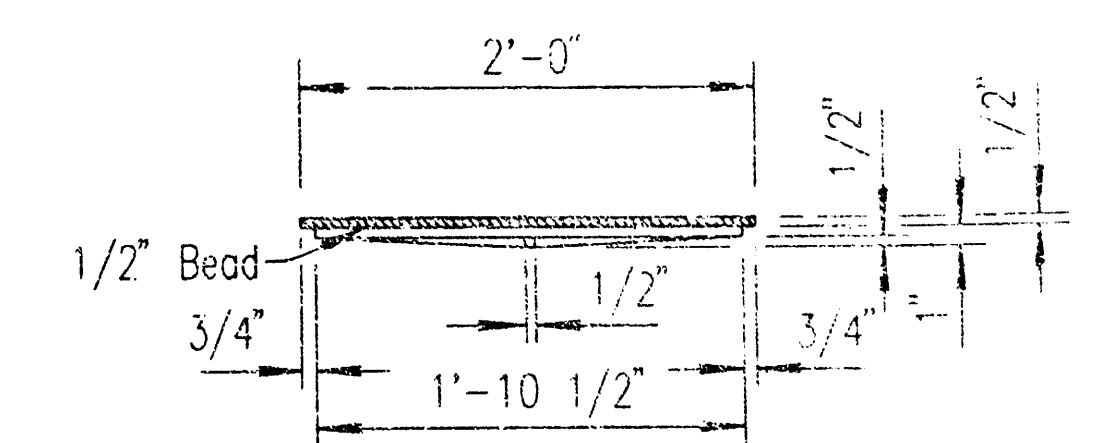
TYPE B



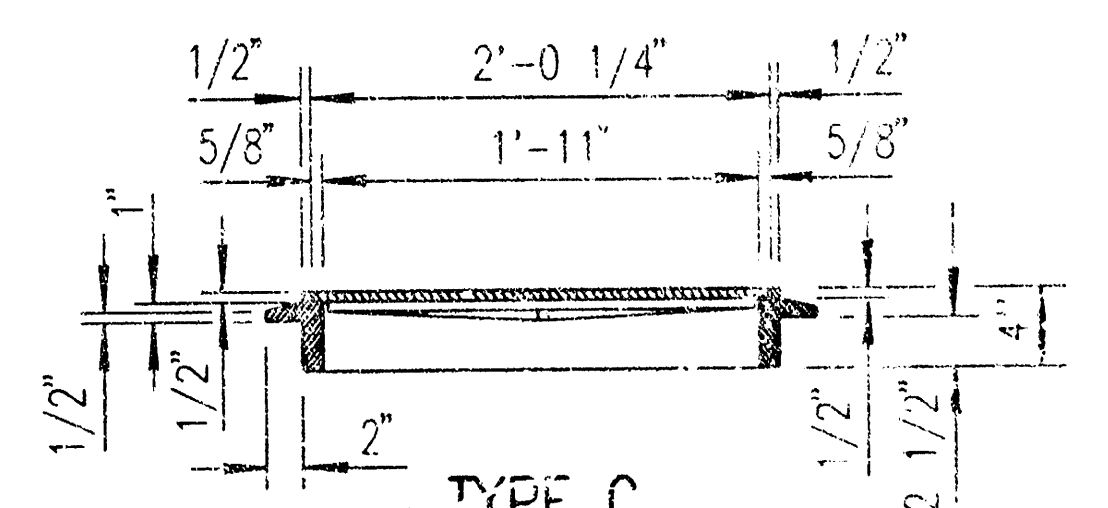
(Type A Ring= 192 lbs., Type B Ring= 198 lbs.)

HEAVY TYPE
MANHOLE COVER AND RING

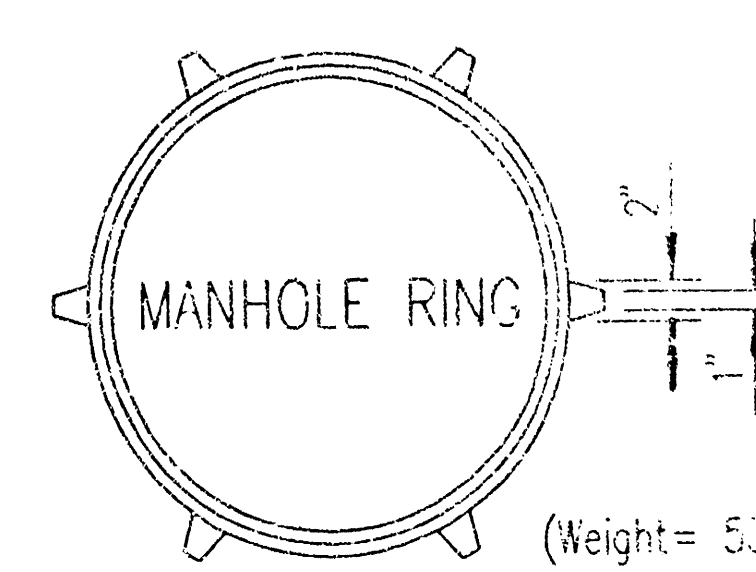
Note: Either Type A or Type B may be used.



MANHOLE COVER TYPE C
(Weight= 64 lbs.)



TYPE C



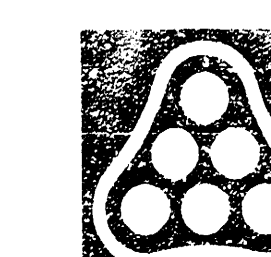
(Weight= 53 lbs.)

*LIGHT TYPE

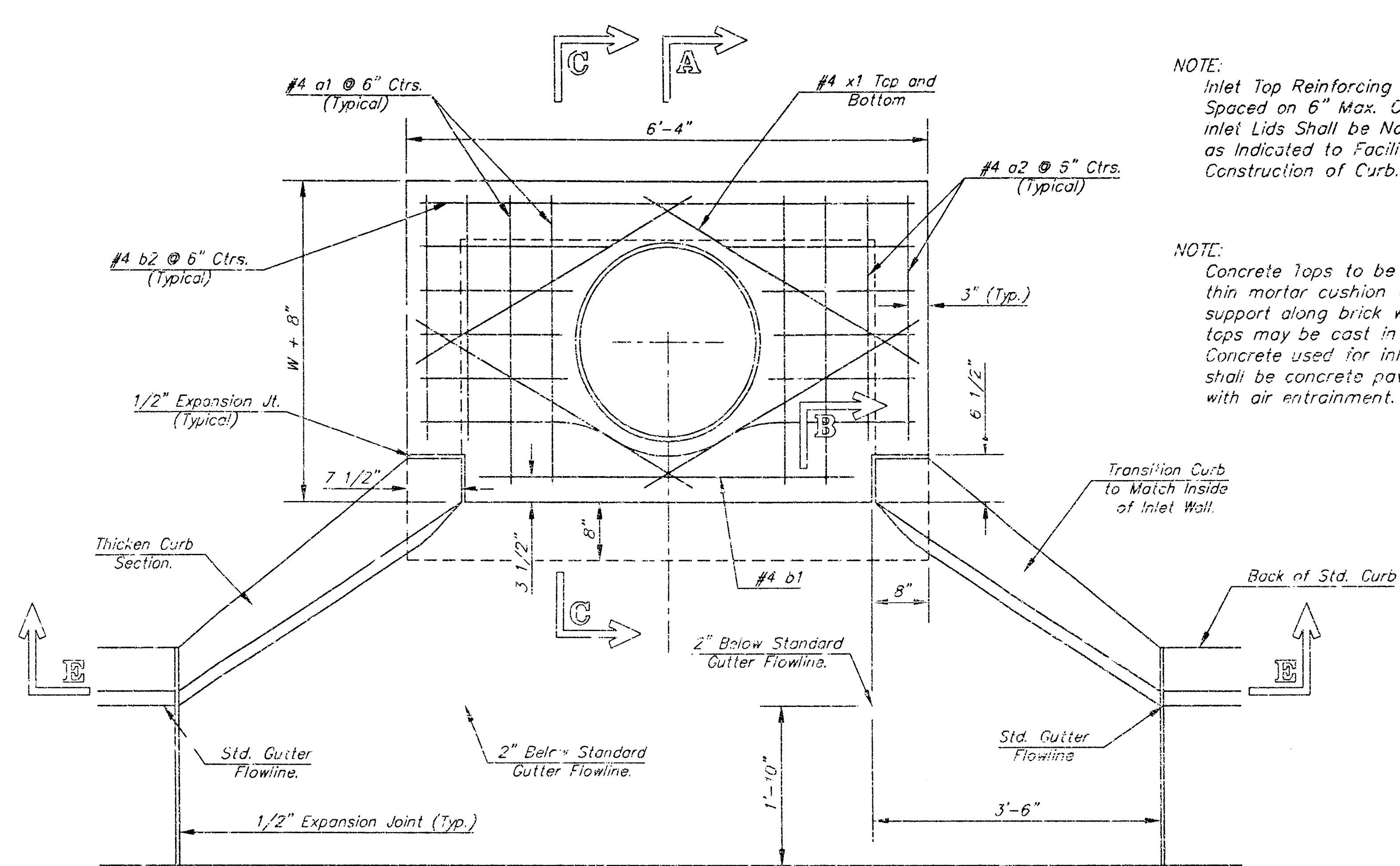
MANHOLE COVER & RING

*Rings with four equally spaced lugs will be permitted.

NOTE: DETAIL ADAPTED FROM KDOT STANDARD DETAIL

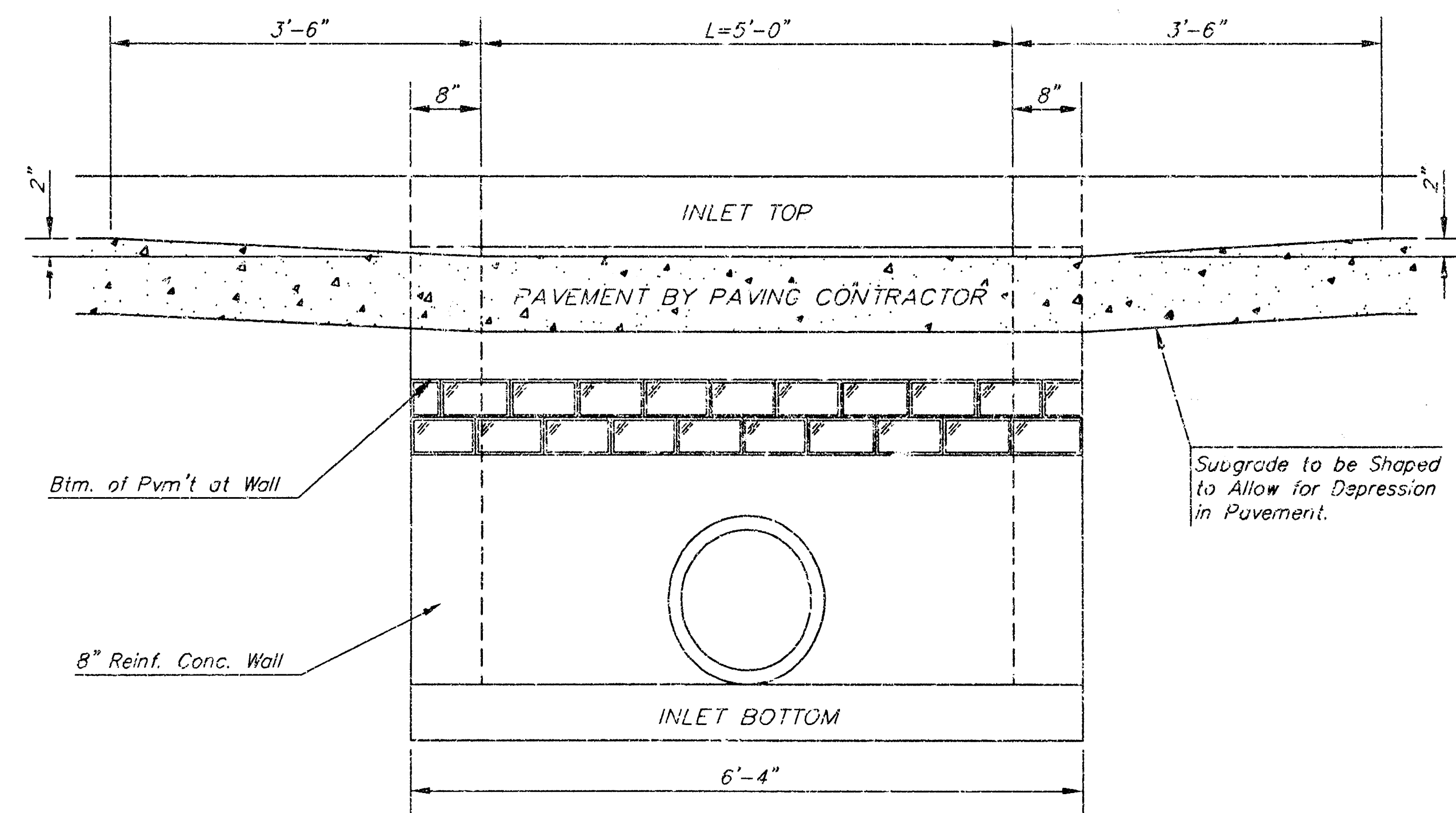


No.	Revision	By	Date
1			
CITY OF WICHITA, KANSAS JAMES ARMOUR, P.E. - CITY ENGINEER JOHNSTON'S CLOTHES			
REINFORCED CONCRETE MANHOLE			
PRIVATE PROJECT NO. 1387 PPS			
Professional Engineering Consultants, P.A.			
303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2591 • FAX 316-262-3003			
Designed by	DRC	Job No.	35-04527
Drawn by	DRC	Date	SEPTEMBER 2004
		Scale	SHU1.3x

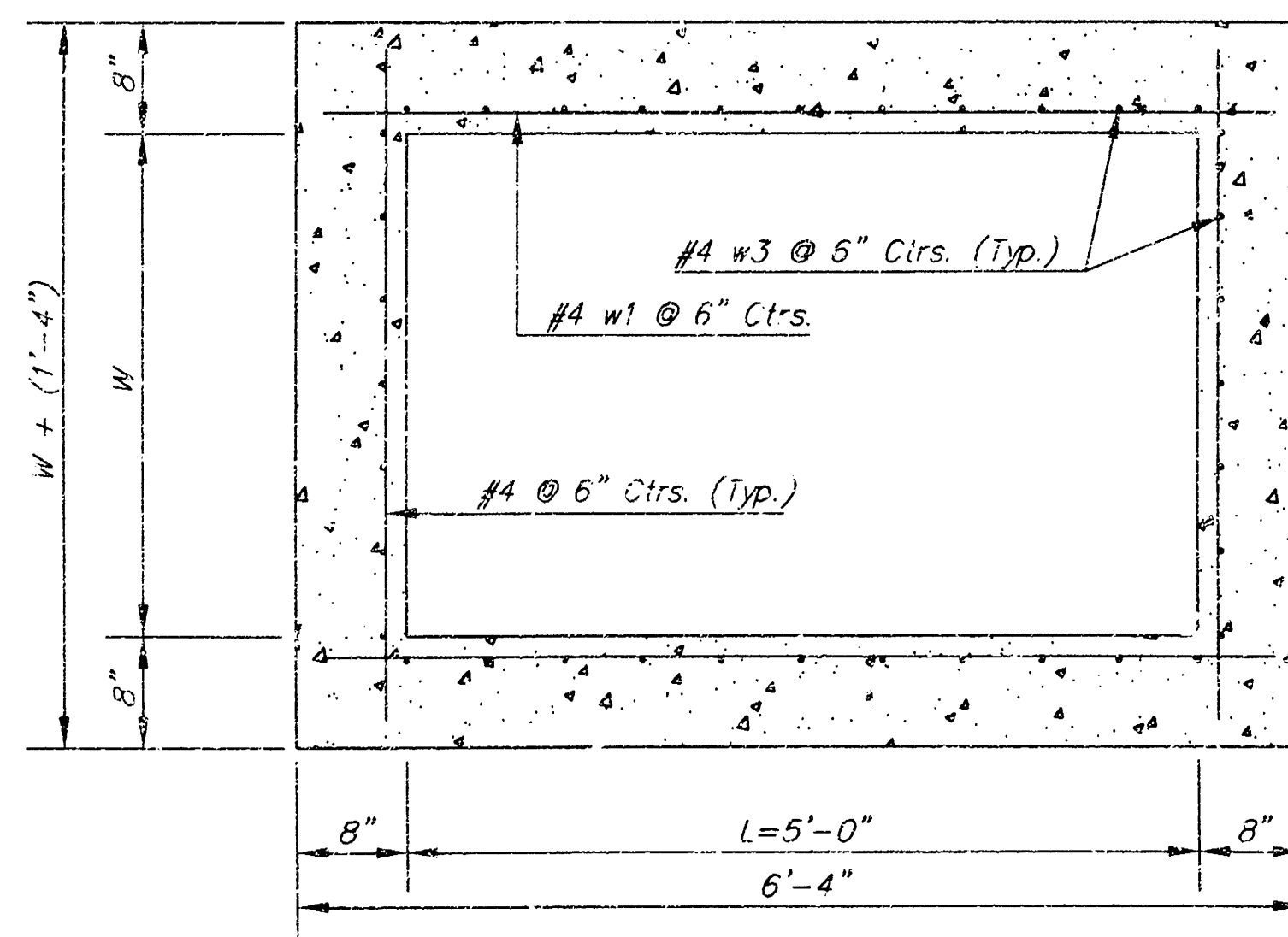


NOTE:
Expansion Joint Only in Curb
Area With Concrete Pavement.

PLAN



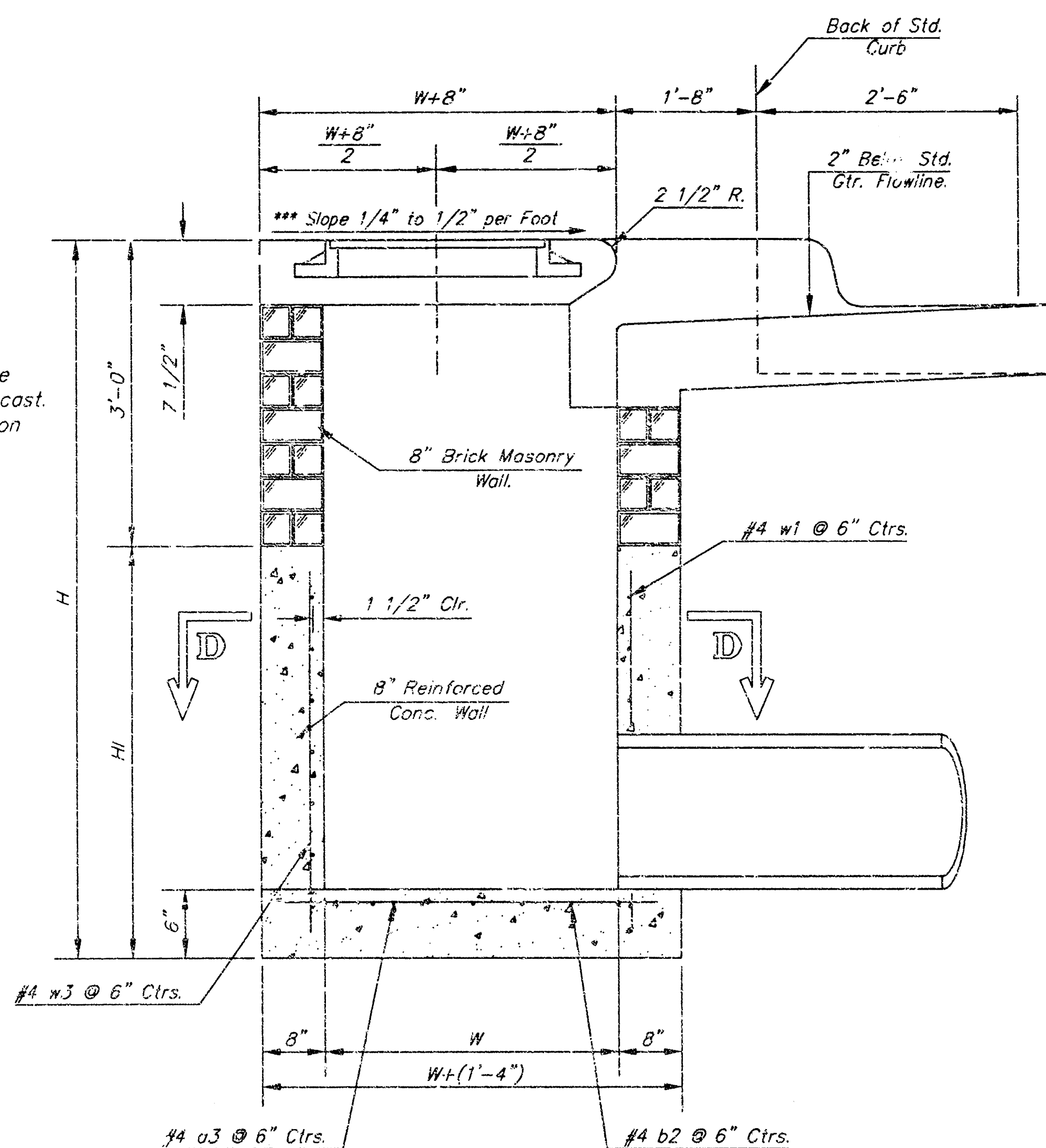
SECTION E-E



SECTION D-D

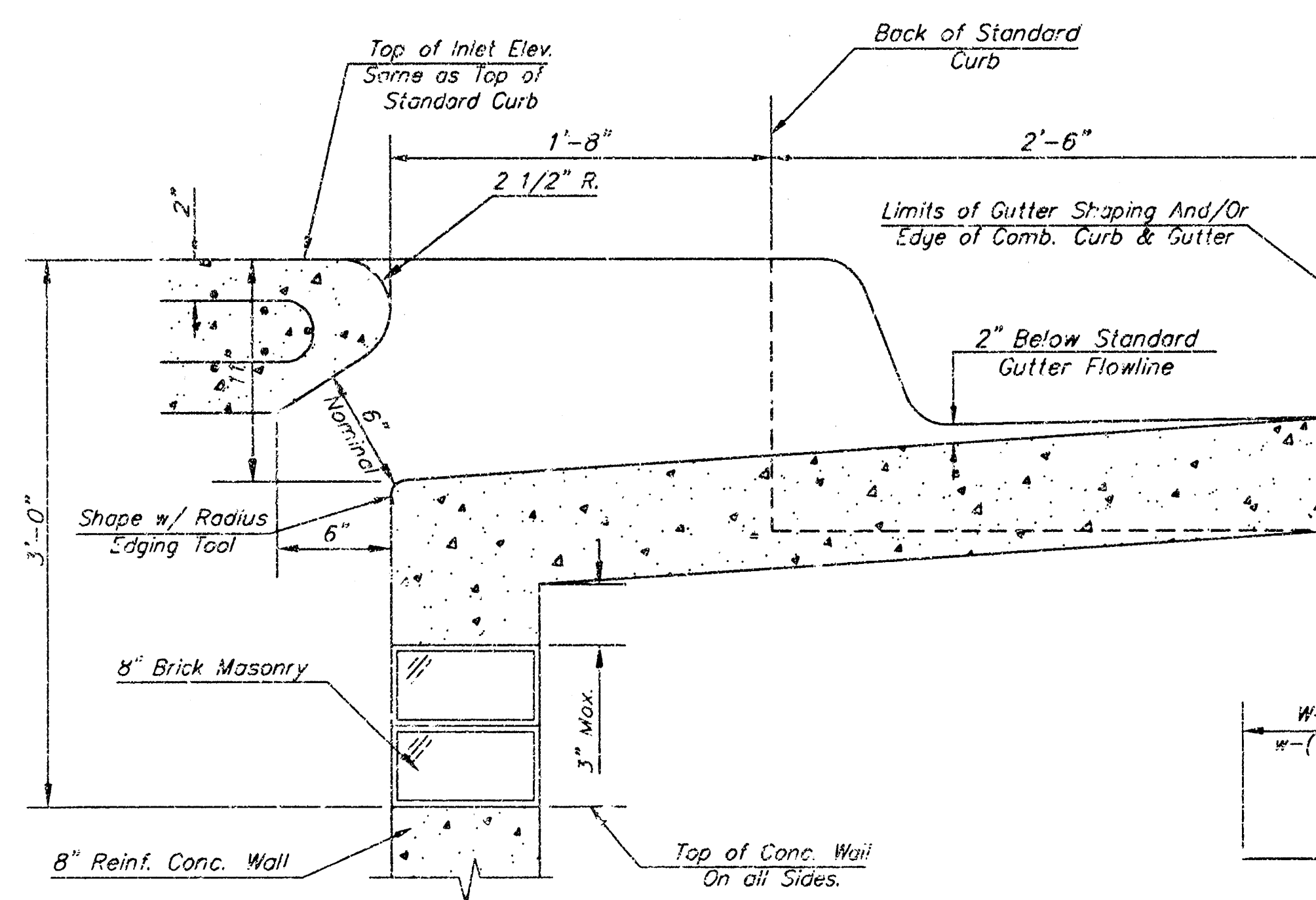
NOTE:
Inlet Top Reinforcing shall be
Spaced on 6" Max. Centers.
Inlet Lids Shall be Notched Out
as Indicated to Facilitate
Construction of Curb.

NOTE:
Concrete Taps to be installed ~
thin mortar cushion to insure
support along brick walls. Concrete
taps may be cast in place or precast.
Concrete used for inlet construction
shall be concrete pavement mix
with air entrainment.



SECTION A-A

***NOTE: Slope of Inlet tops to Match
Sidewalk or Parking Slopes within
Limits Indicated.

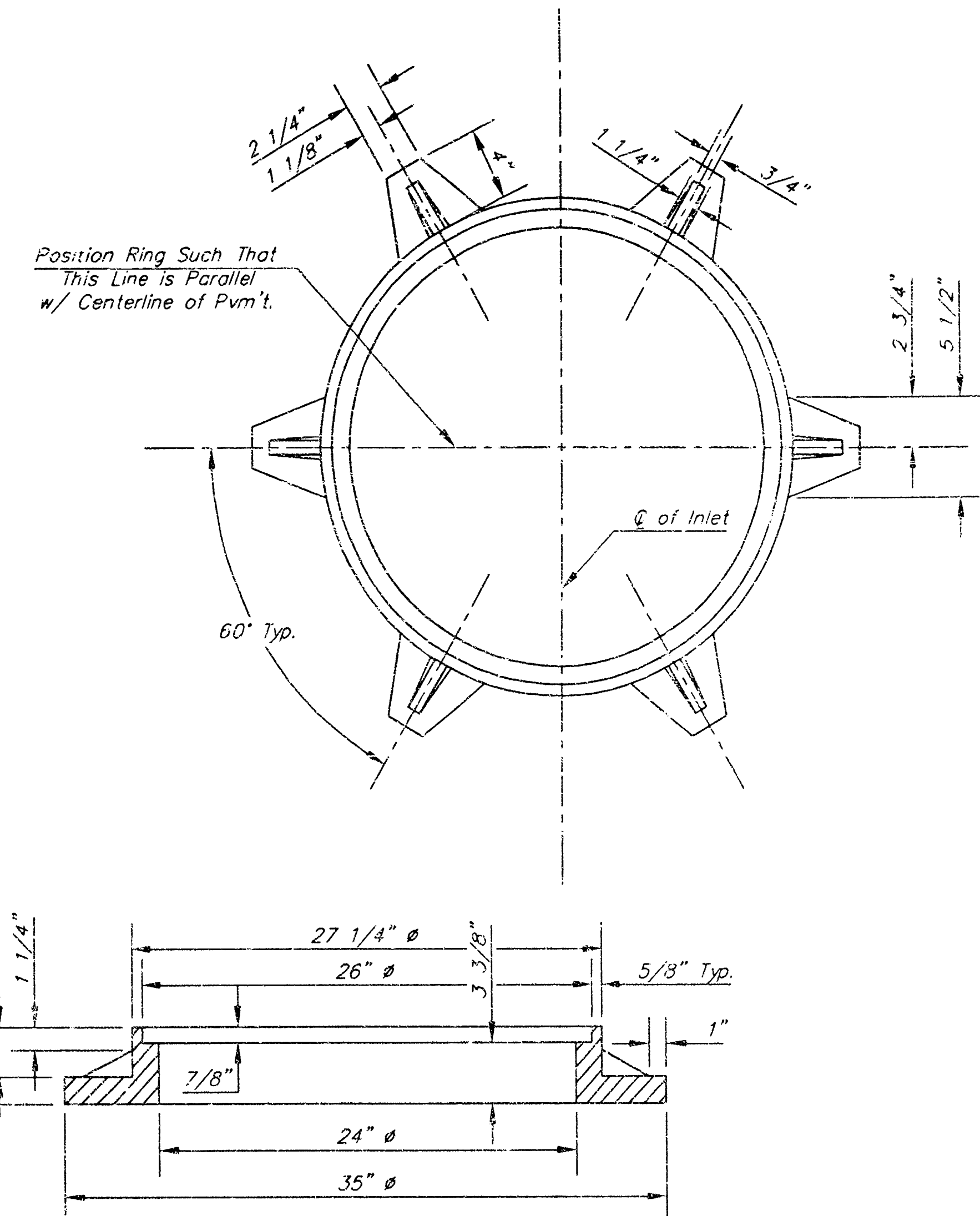


SECTION B-B

PRECAST SLAB AND FLOOR REINFORCING											
W = 3'-0"			W = 4'-0"			W = 5'-0"			W = 6'-0"		
MARK	SIZE	NO.	MARK	SIZE	NO.	MARK	SIZE	NO.	MARK	SIZE	NO.
a1	#4	6	a1	#4	6	a1	#4	6	a1	#4	6
a2	#4	4	a2	#4	4	a2	#4	4	a2	#4	4
a3	#4	13	a3	#4	13	a3	#4	13	a3	#4	13
b1	#4	1	b1	#4	1	b1	#4	1	b1	#4	1
b2	#4	23	b2	#4	23	b2	#4	23	b2	#4	23
x1	#4	8	x1	#4	8	x1	#4	8	x1	#4	8

* Field Bend or Cut Reinforcing as Required for Clearance.
① 4 (H - 12") (H - 21") Rounded down to nearest 0.5"
② H - 3"

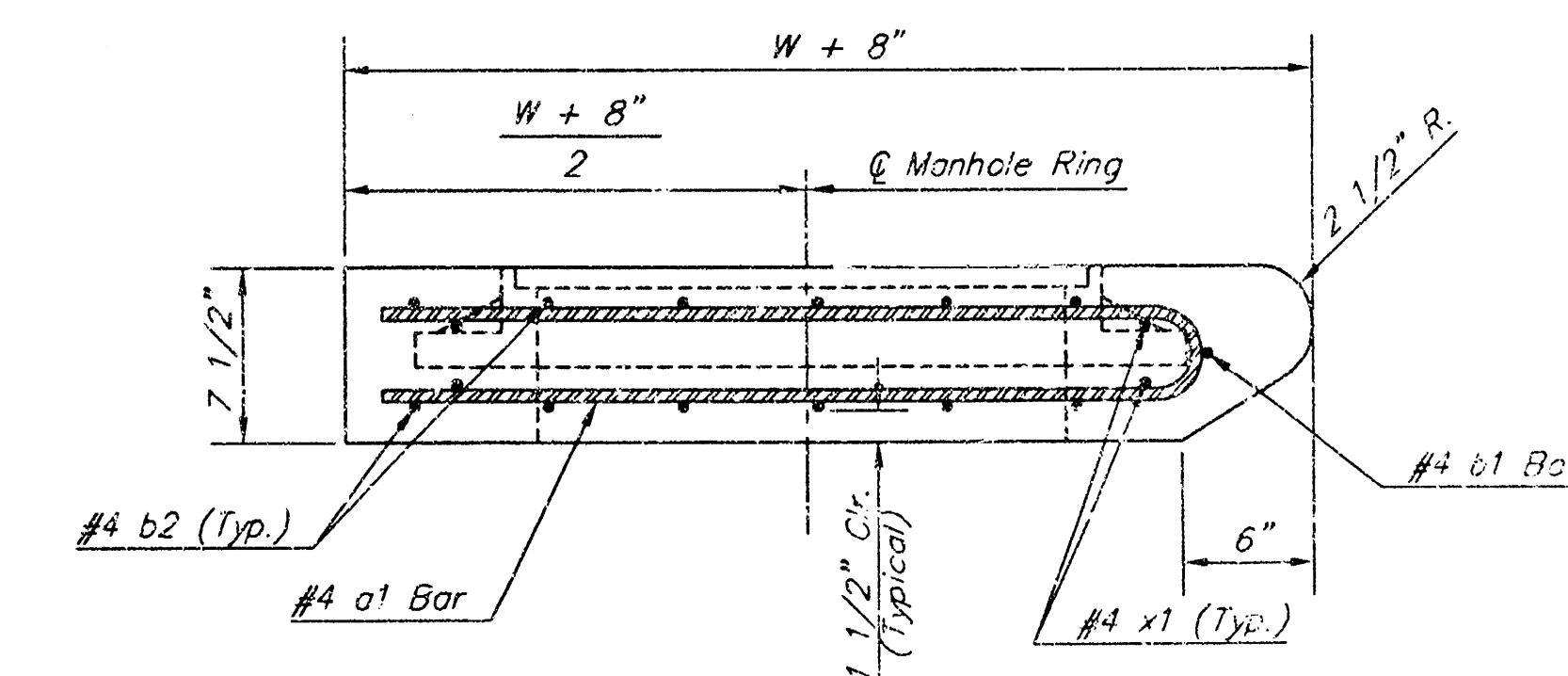
BENDING DIAGRAM



MANHOLE RING AND COVER

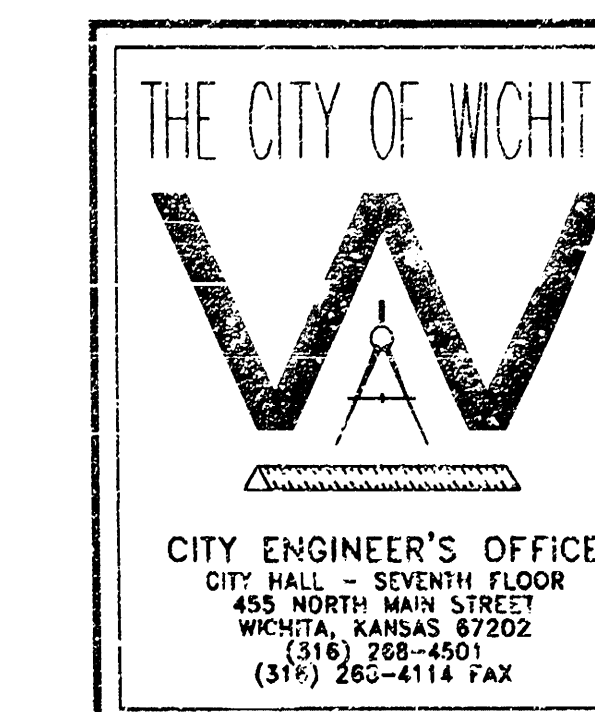
Weight = 180 Lbs.

*See City of Wichita Standard Manhole Ring
and Cover Detail Sheet for Cover Details to
Be Used With Inlet Frame.



SECTION C-C

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
3'-0"	3'-0" x 6'-4" x 7 1/2"	21" & SMALLER	0.38±
4'-0"	4'-0" x 6'-4" x 7 1/2"	24" & 30"	0.51±
5'-0"	5'-0" x 6'-4" x 7 1/2"	36" & 42"	0.64±
6'-0"	6'-0" x 6'-4" x 7 1/2"	48" & 54"	0.77±
7'-0"	7'-0" x 6'-4" x 7 1/2"	60" & 66"	0.90±



STANDARD TYPE 1-A
CURB INLET
OPENING = 6' x 5'-0"

NEIL D. CABLE, P.E. - CITY ENGINEER

PROJECT NUMBER
1387 PPS

DATE
MAR 96

SHEET SU1.4 OF



CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO WALLS.

REINFORCING STEEL SHALL BE GRADE 60, A.S.T.M. A615.
ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO THE
CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

INLET CASTINGS SHALL BE MANUFACTURED USING DUCTILE IRON CONFORMING TO ASTM A536-80 GRADE 65-45-12. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

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

PIPES ENTERING EXISTING STRUCTURE SHALL BE CENTERED ON INSIDE
FACE OF WALL.

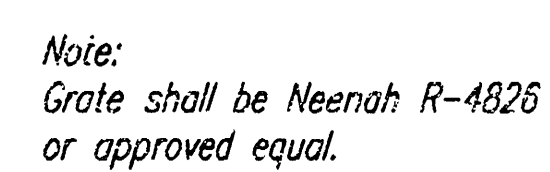
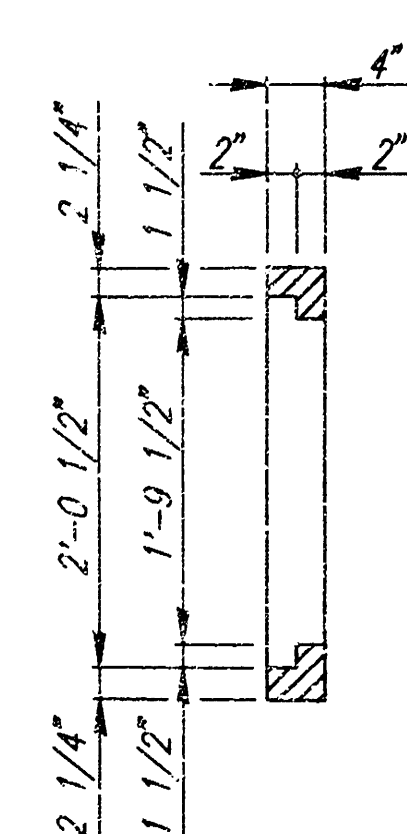
ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC PRIMER AND THEN WITH A TOP COAT OF OR A FIELD COAT OF ORGANIC ZINC, EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH A.S.T.M. A36. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE A.W.S. D1.1-89.



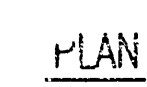
STANDARD AREA INLET



Note:
Frame to mate with 2 Neenah R-4826 Grates
or approved equal.



GRATE DETAIL
(Wt. = 190 lbs.)
(2 Required)



CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO WALLS.

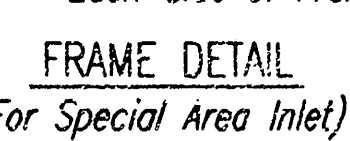
REINFORCING STEEL SHALL BE GRADE 60, A.S.T.M. A615.
ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO THE
CENTERLINE OF BARS UNLESS OTHERWISE NOTED.

INLET CASTINGS SHALL BE MANUFACTURED USING DUCTILE IRON
CONFORMING TO ASTM A536-80 GRADE 65-45-12.
DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE
CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE
DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED
CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES,
POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

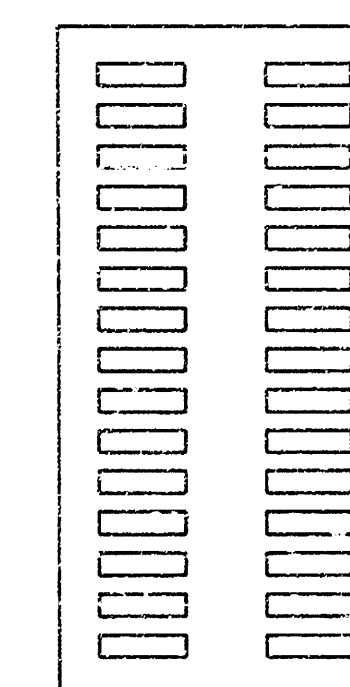
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FACE OF WALL.

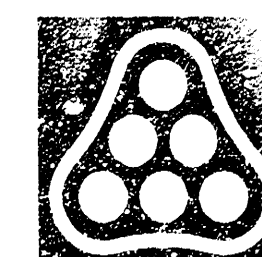
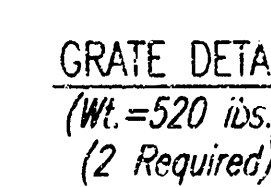
ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED WITH A COAT OF INORGANIC ZINC PRIMER AND THEN WITH A TOP COAT OF GR. A FIELD COAT OF ORGANIC ZINC. EACH COAT TO BE 3 TO 4 MILS. STRUCTURAL STEEL USED TO FABRICATE THE SPECIAL AREA INLET FRAME SHALL COMPLY WITH A.S.T.M. A76. WELDING SHALL CONFORM TO THE STRUCTURAL WELDING CODE A.W.S. D.1-88.



Note:
Frame to mate with 2 Neenah R-4853-A Grates
or approved equal.



*Note:
Grate shall be Neenah R-4853-A
or approved equal.*



No.	Revision	By	Date					
CITY OF WICHITA, KANSAS JAMES ARMOUR, P.E. - CITY ENGINEER JOHNSTON'S CLOTHIERS AREA INLET DETAILS PRIVATE PROJECT NO. 1387 PPS <u>Professional Engineering Consultants, P.A.</u> 303 S TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003 <table border="1"><tr><td>Designed by DRC</td><td>Job No. 35-04527</td><td rowspan="2">Sht. SU1 of 5</td></tr><tr><td>Drawn by DRC</td><td>Date SEPTEMBER 2004</td></tr></table>				Designed by DRC	Job No. 35-04527	Sht. SU1 of 5	Drawn by DRC	Date SEPTEMBER 2004
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