

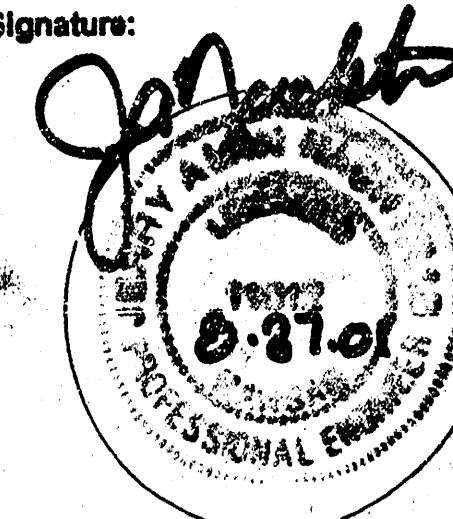
DATE _____

WALTER MOORE
CIVIL ENGINEERS

to serve
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FACILITY
9790 E. Orme
St.

Drawing prepared by

Seal and Signature



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Issue Date: 8-27-01

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Project Number:	Drawn By:
28-01022-00	M.M.

Designed By:	Checked
A.B.	J.A.N.

Sheet Title:

MANHOLE DETAILS

Sheet Number: _____

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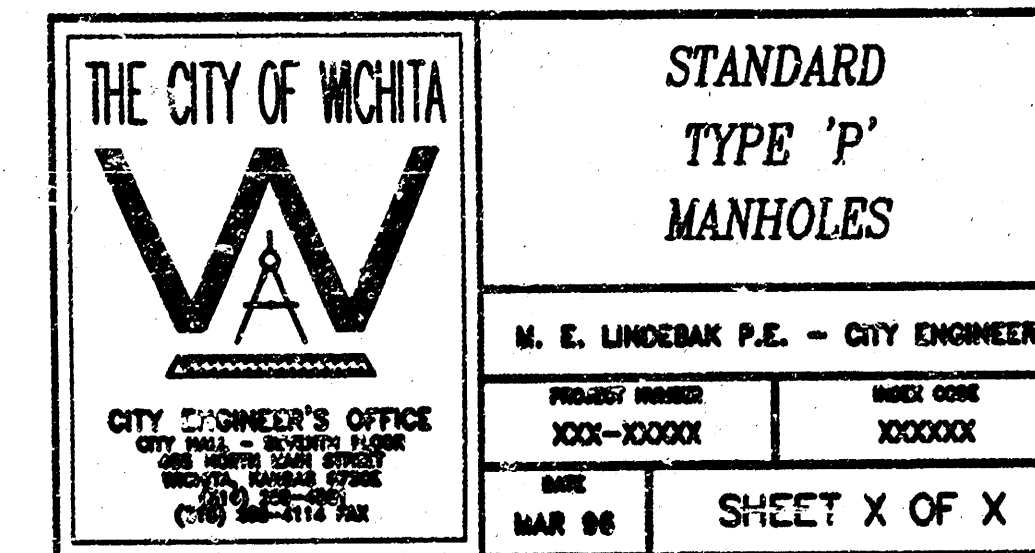
GENERAL NOTES

PRECAST HANDBOOK NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR POLYETHYLENE PIPE IS USED. THE TYPES OF PIPE THE SEWER SHALL BE GROUDED IN PLACE WITH NON-SHRINK GROUT. THE SEWER SHALL BE GROUDED TO THE MANHOLE WALL TO THE MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR W.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE IN CONTACT WITH SEWER GAS SHALL BE COATED WITH 2 COATS OF THE THICKED SERIES 90-14-BUILD EPOXYGLAZE DRY THICKNESS OF 8 MILS (MIN).
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MEGAMORNA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE IDENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT TO THE INVERT SURFACE COATING AS SPECIFIED.
10. WORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF PORTLAND CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE SPECIFICATIONS. PLACING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADJUTANT. WORTAR SHALL BE PLACED AROUND THE MANHOLE BASE TO THE BRIM OF THE MANHOLE WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL BE SET IN WORTAR. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND

- [illegible]

15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DRAWINGS.
16. THE VERTICAL DROP IN RISE OF MANHOLE SHALL NOT EXCEED 2" FOR PIPE 12" OR SMALLER AND 3" FOR FOLLOWING PIPES LARGER THAN 12". THE CROWNS OF FOLLOWING PIPE SHALL BE AT THE SAME ELEVATION WITHIN THE SAME PIPE.
17. STANDARD MANHOLES AND STANDARD THESE DROP MANHOLES SHALL BE 36" STANDARD MANHOLES PER THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE 48" AS STANDARD OUTSIDE DROP MANHOLES PER THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4" UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE EAST FROM FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 6" WALLS AND A 12" HIGH RISE. THE COLLAR SHALL BE SET IN A 4" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPECIFICATIONS FOR MANHOLE TOP ADJUSTMENT IS REQUIRED.
19. CRUSHED ROCK CONCRETE TO ASTM C-33 WITH A GRAVITATION OF 10. 67. SHALL BE INSTALLED AT THE BASE OF THE MANHOLE TO A DEPTH OF NO LESS THAN 6" AND SHALL EXTEND NO LESS THAN 6" OUTSIDE THE DIAMETER OF THE MANHOLE.



STANDARD
TYPE 'P'
MANHOLES

M. E. LINDERAK P.E. - CITY ENGINEER

REG-707 REPORT	INDEX CODE
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XXXX-XXXXX	XXXXXX
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DATE **SHEET Y OF Y**

FMH.DWG

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102222 | CAPP | Plans | Sanitary | 1022--son--def

SANITARY AND STORM SEWER EXTENSIONS

WALTER MOORE
CIVIL ENGINEERS

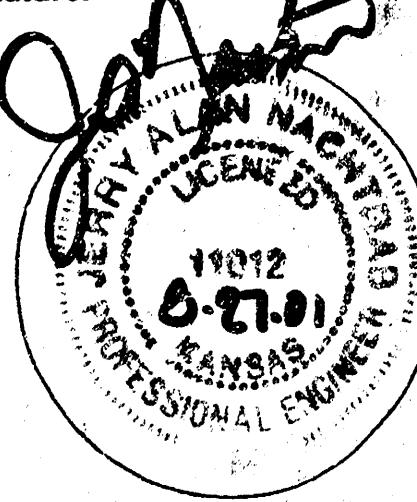
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Seal and Signature:



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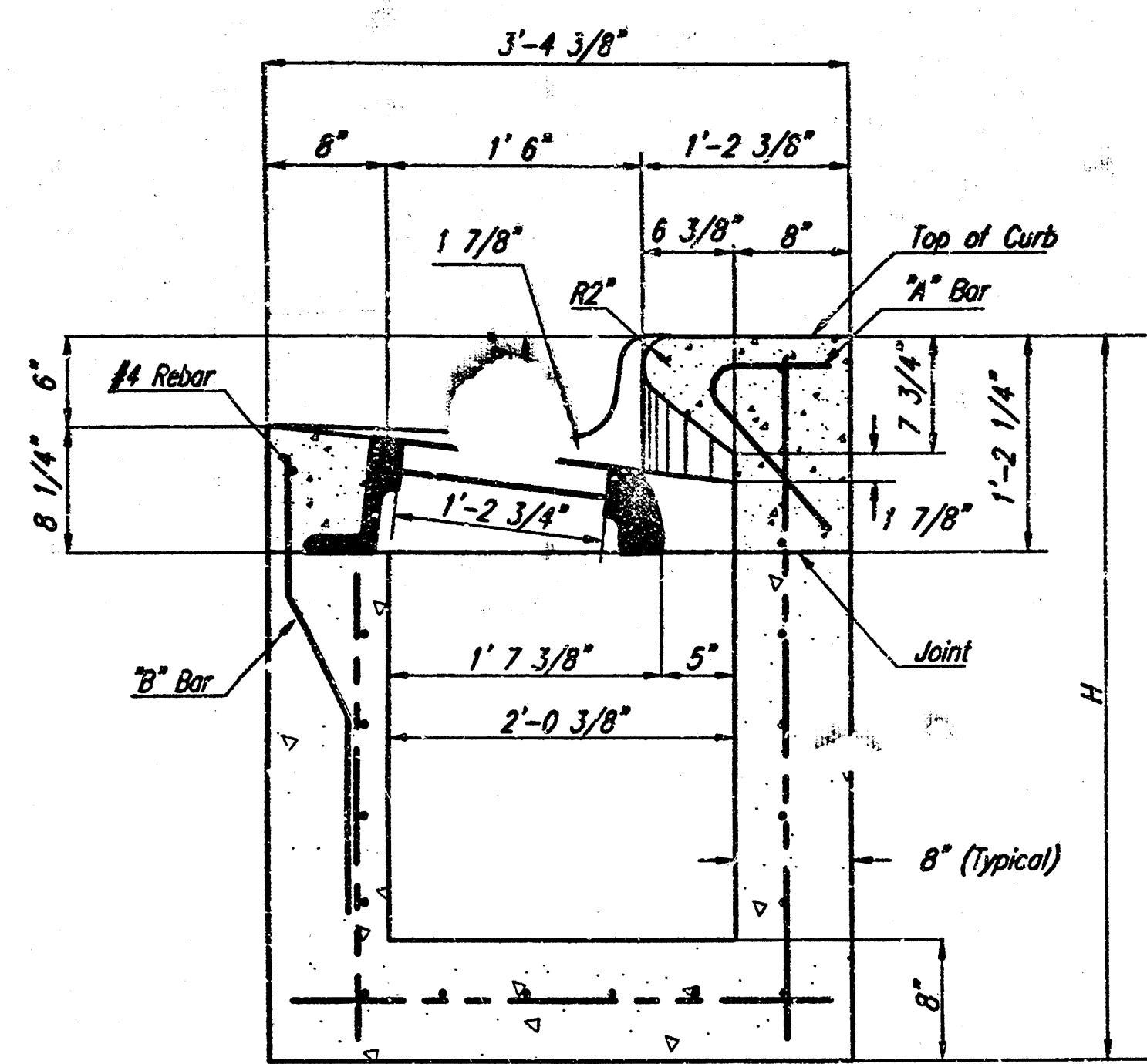
Issue Date: 8-27-01

No.	Date	Revisions

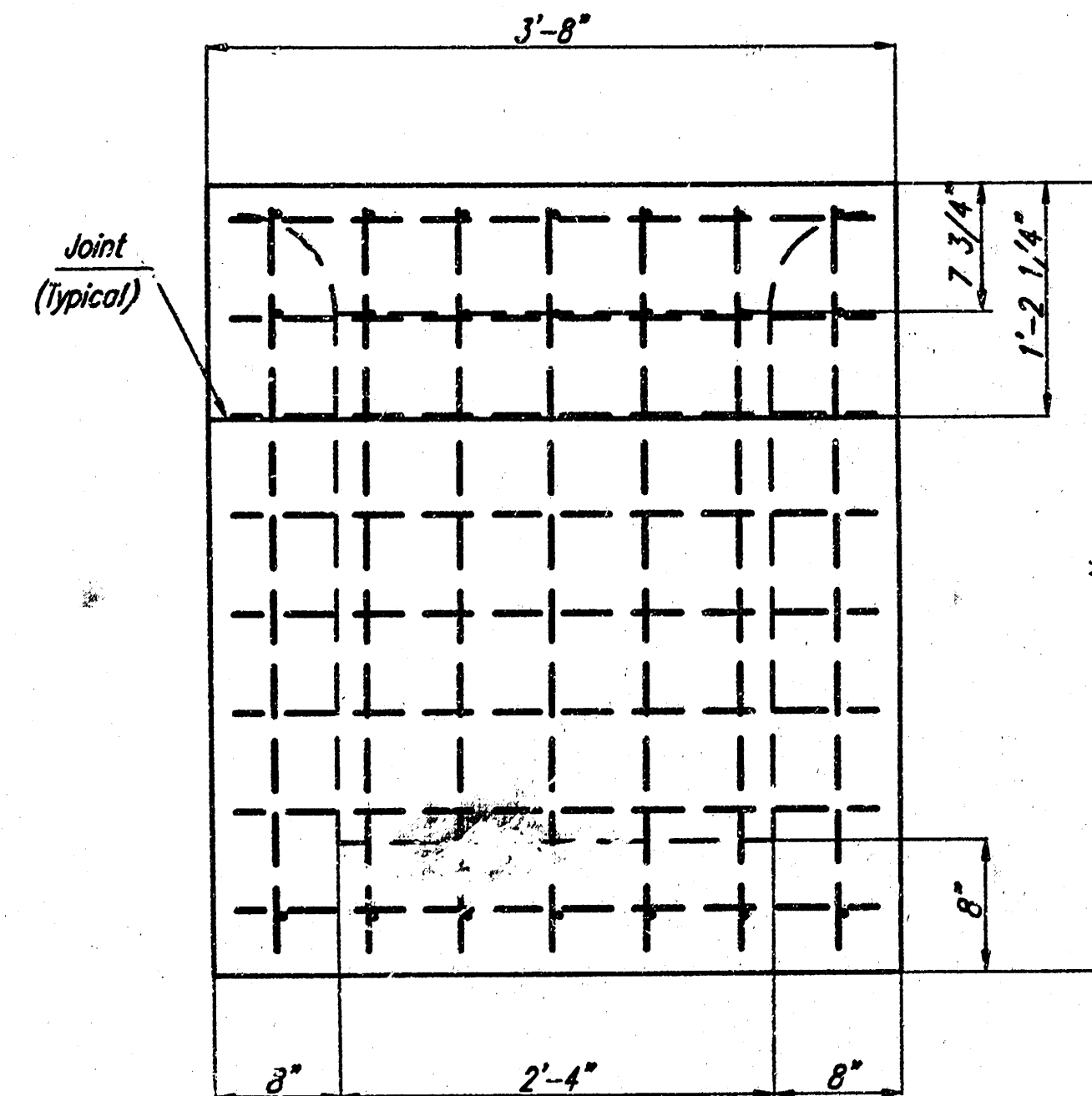
Project Number: 28-01022-00
Designed By: A.B.
Sheet Title: **STORM SEWER
DETAILS**

Drawn By: M.M.
Checked By: J.A.N.
Sheet Number: **5**

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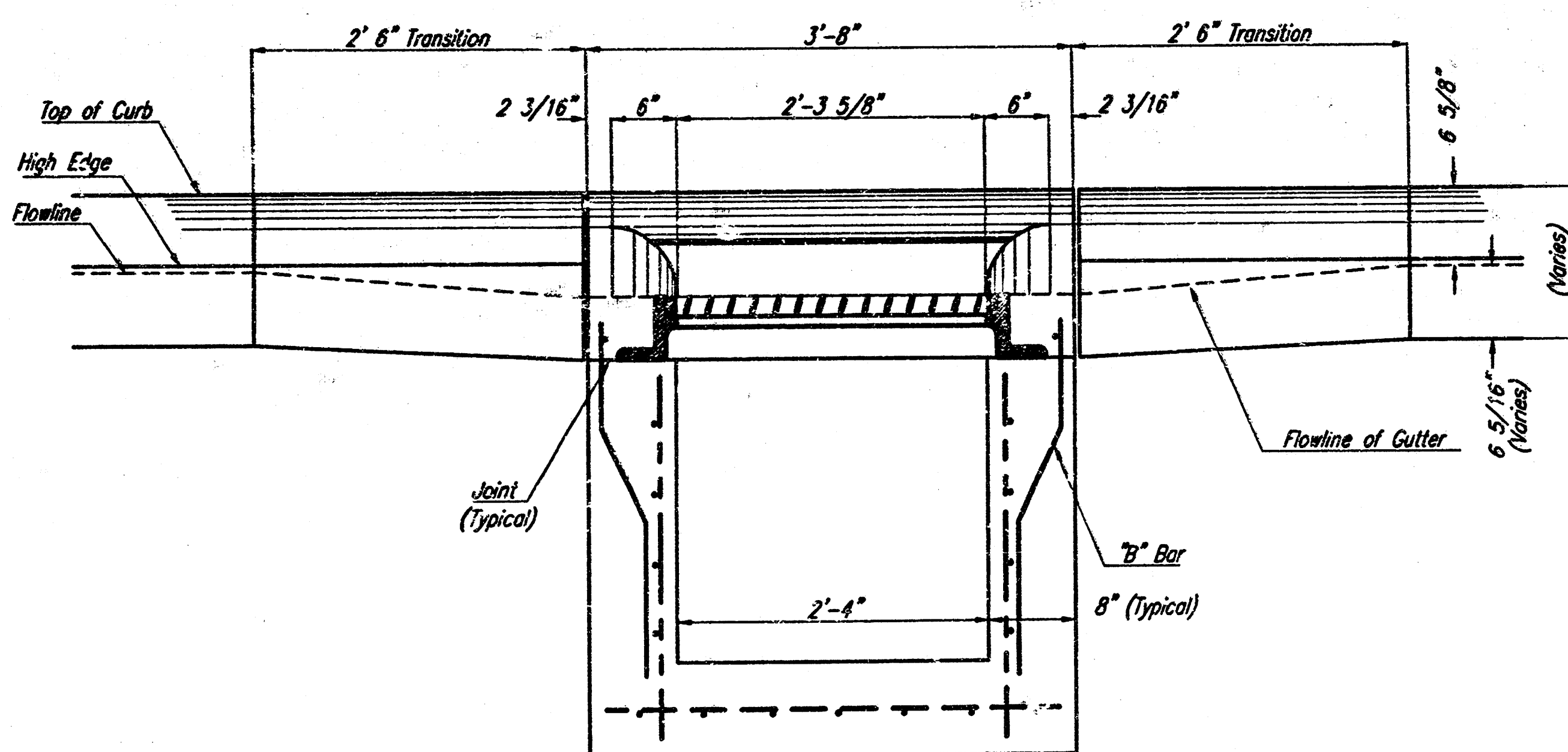


SECTION 1
Scale: 1" = 1'-0"

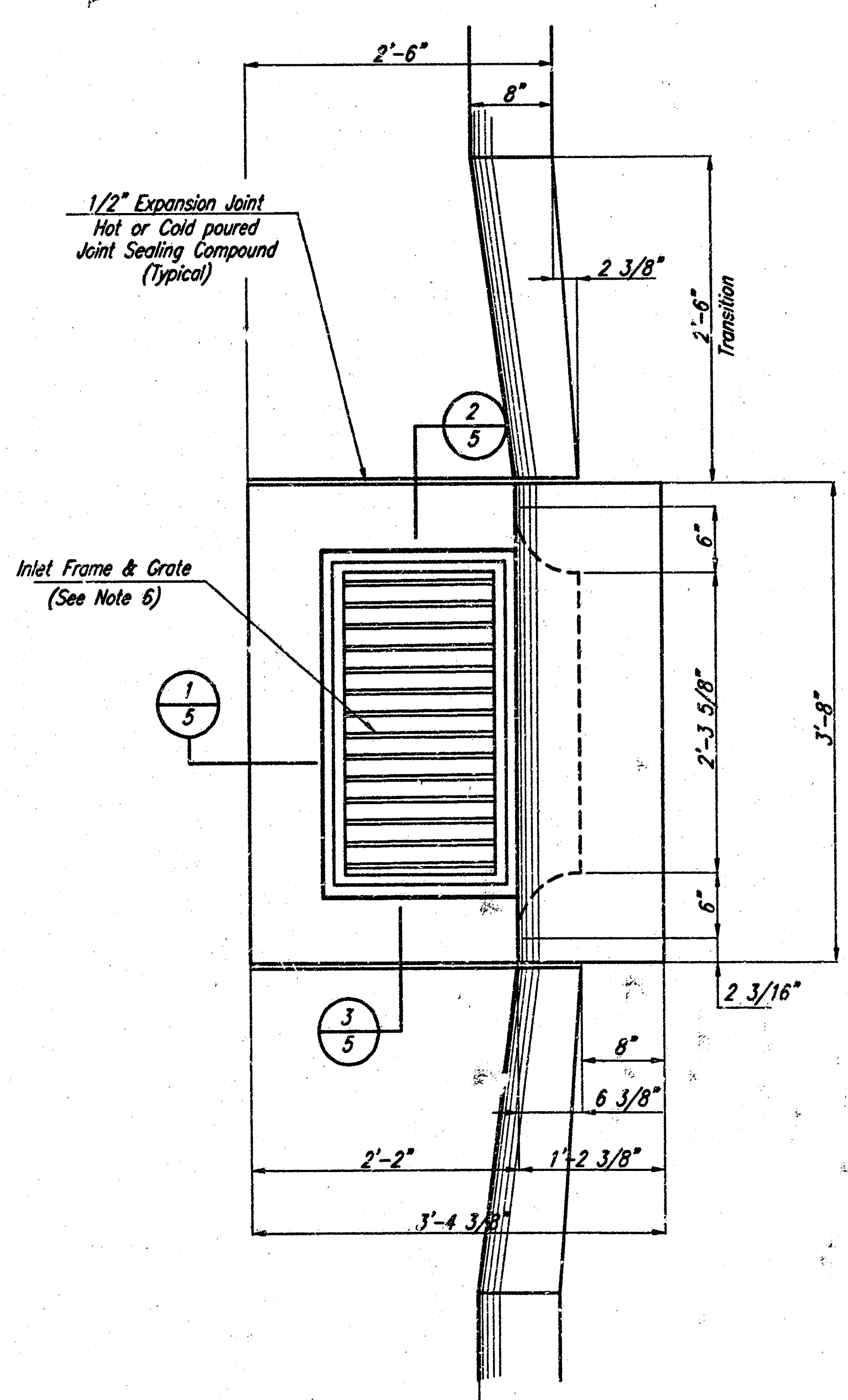


REAR WALL
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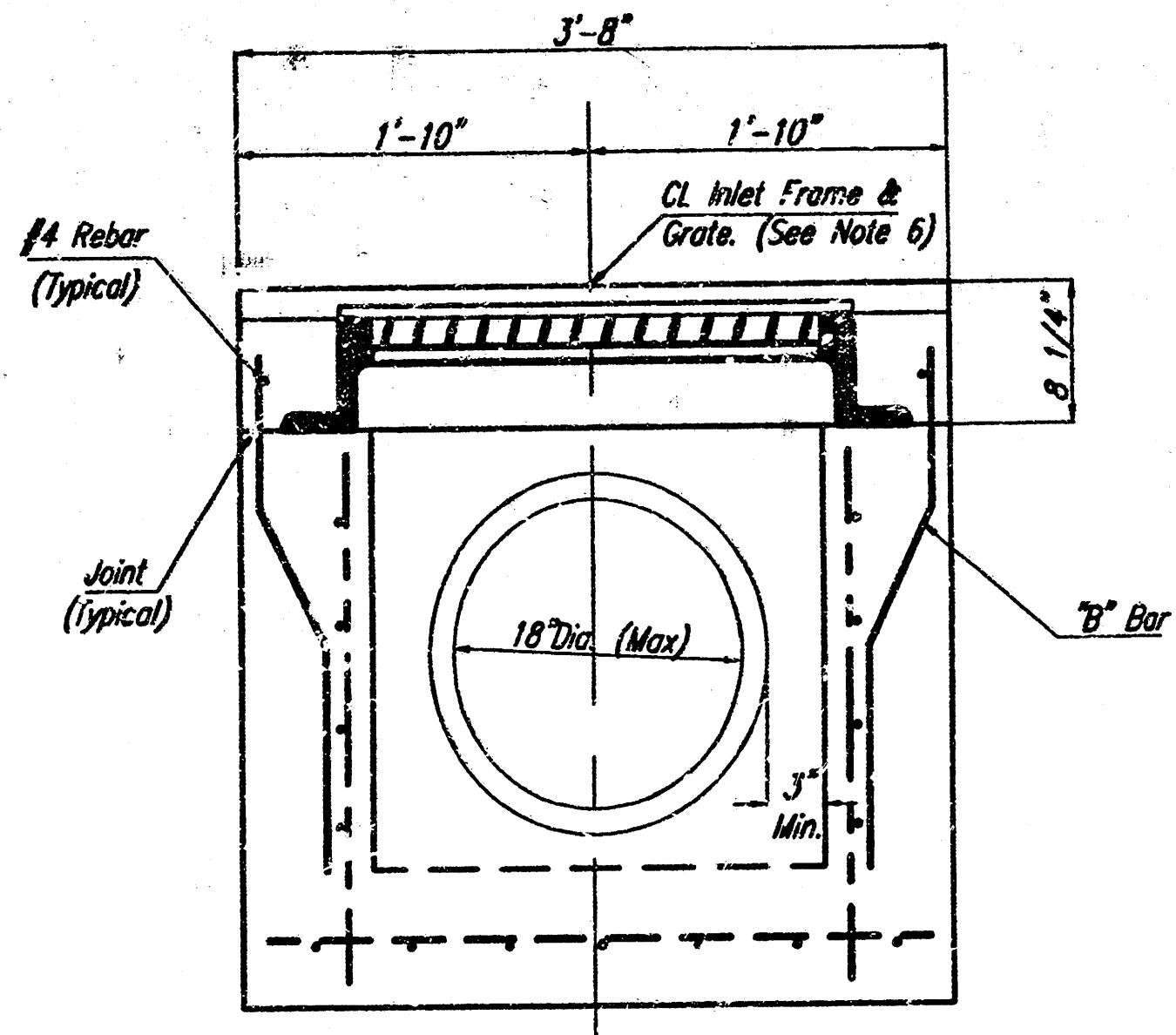
- General Notes
1. Use the concrete mix specified for the City of Wichita concrete pavement throughout. All exposed edges shall be finished with an edging tool. Reinforcing bars shall be bent around pipe.
 2. Inlet invert shall be shaped with 8 sack mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will self cleaning between all inlet and/or outlet pipes.
 3. All bars are #4 with 6" spacing and shall have a minimum clearance of 1 1/2" inches unless otherwise noted on the plans.
 4. When directed by the Engineer, a small opening may be required in the back of the inlet in order to drain a few area. Reinforcing bars will extend through the openings. No deductions in concrete quantities will be made for these openings.
 5. No deductions will be made in pay length of curb, gutter, or curb and gutter through the inlet area.
 6. Use Neenah R-3289 HW Single Inlet Frame and Grate or approved equal. Inlet frame to be proof load tested to 40,000 lbs. on unsupported side.
 7. Reinforcing bars shall be cut or bent around pipes. No deduction in concrete quantities shall be made for pipe openings.
 8. The vanes of the grate shall be oriented with respect to the flow arrows shown on the plans.



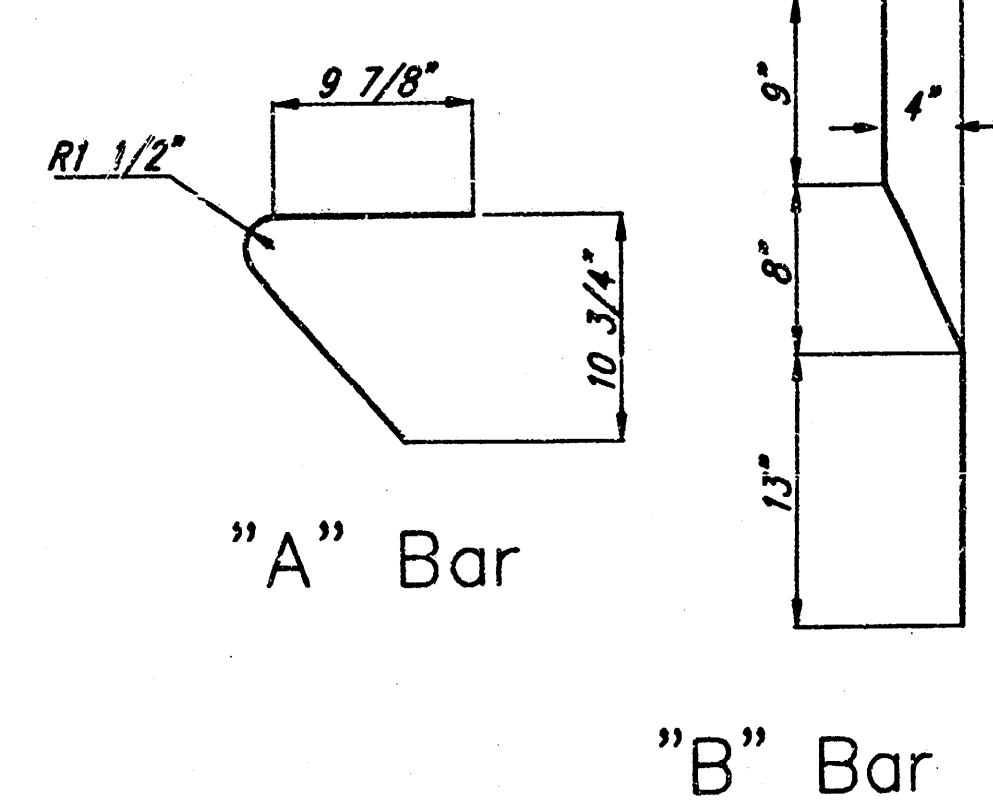
SECTION 2
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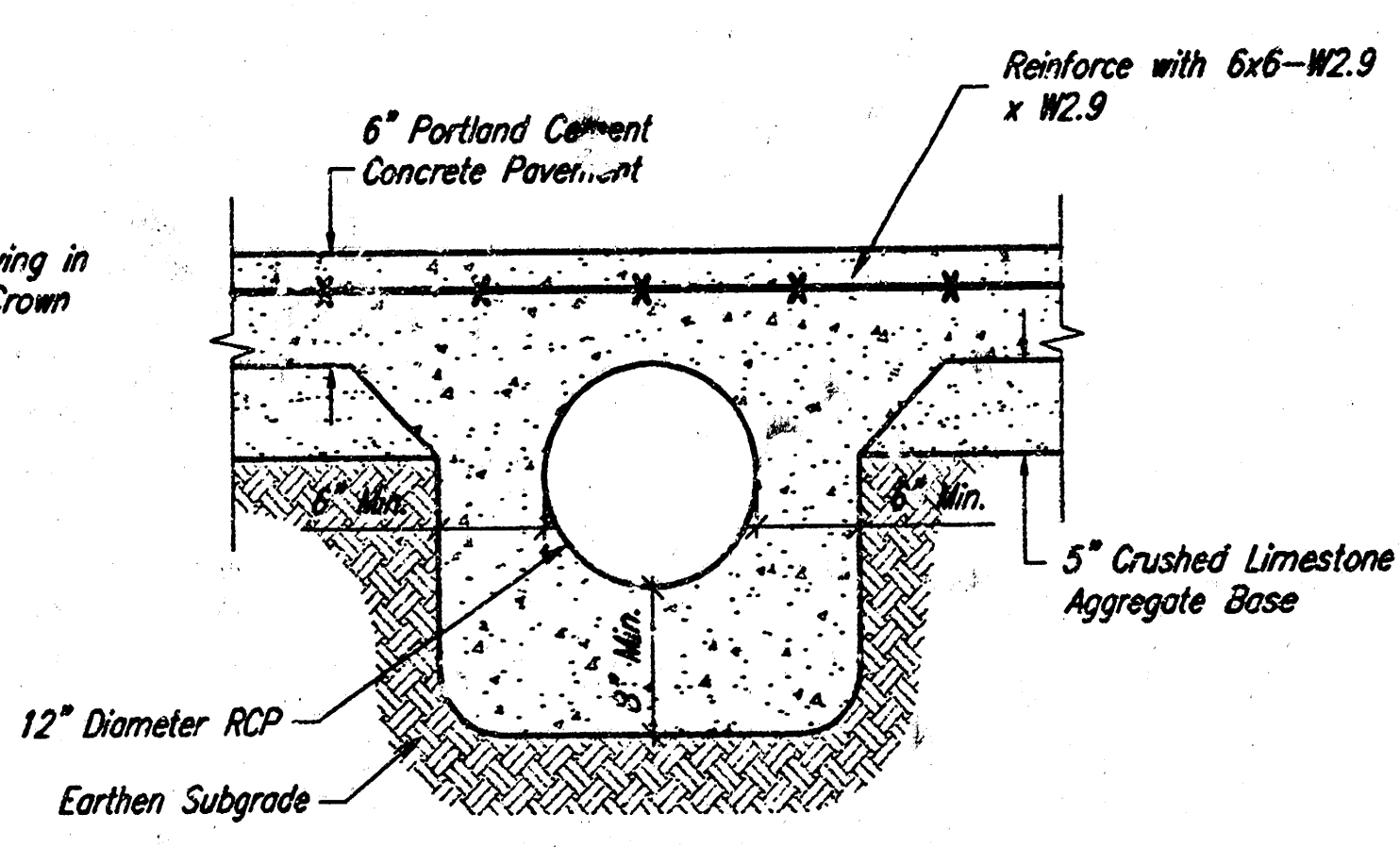
CURB INLET PLAN
Scale: 1" = 1'-0"



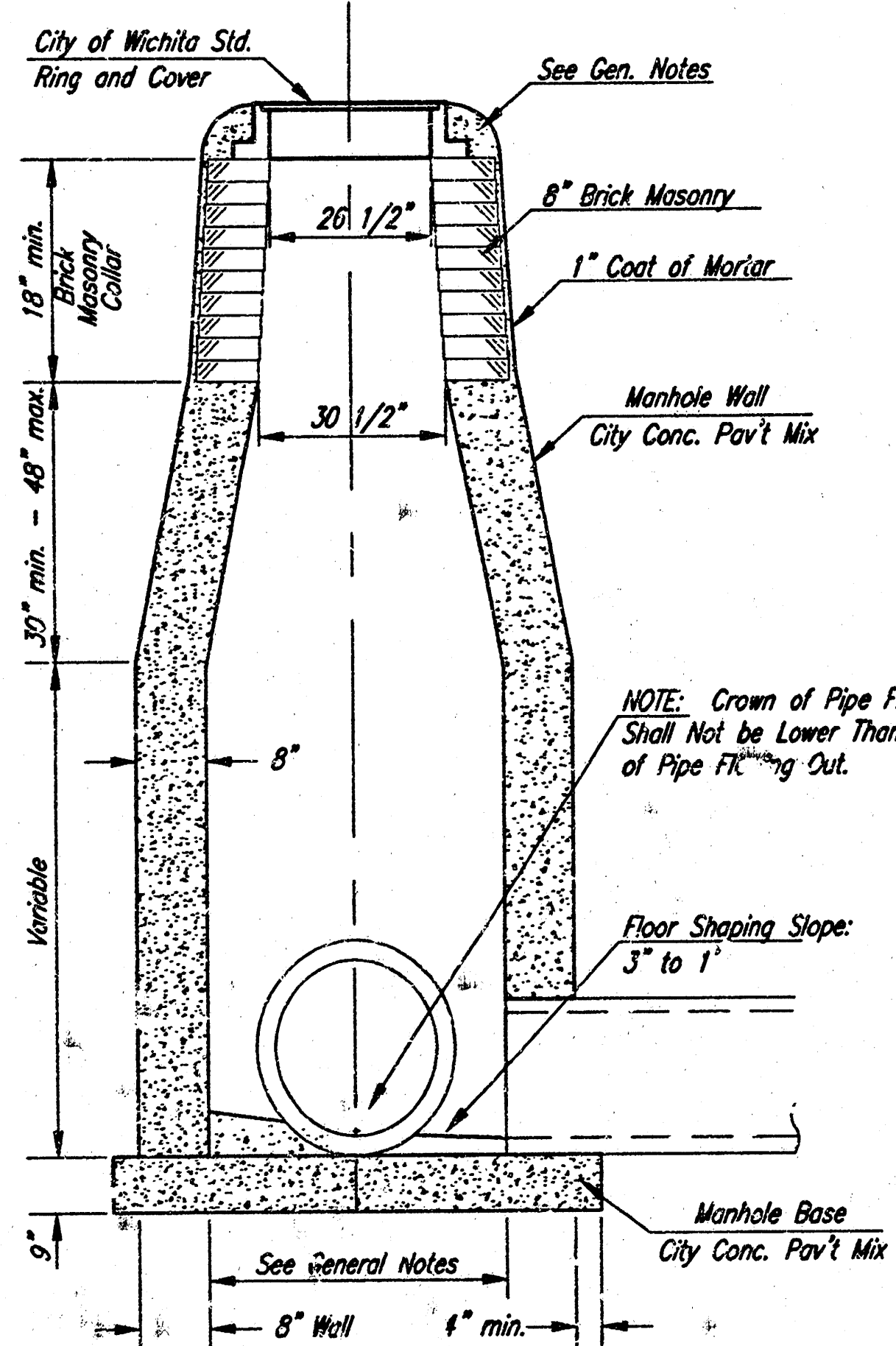
SECTION 3
Scale: 1" = 1'-0"



REBAR DETAILS
No Scale



PIPE ENCASEMENT
Scale: 1" = 1'-0"



TYPE "C" MANHOLE
No Scale

- GENERAL NOTES
1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADJUTANT. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 6" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
 2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
 3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUDED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.