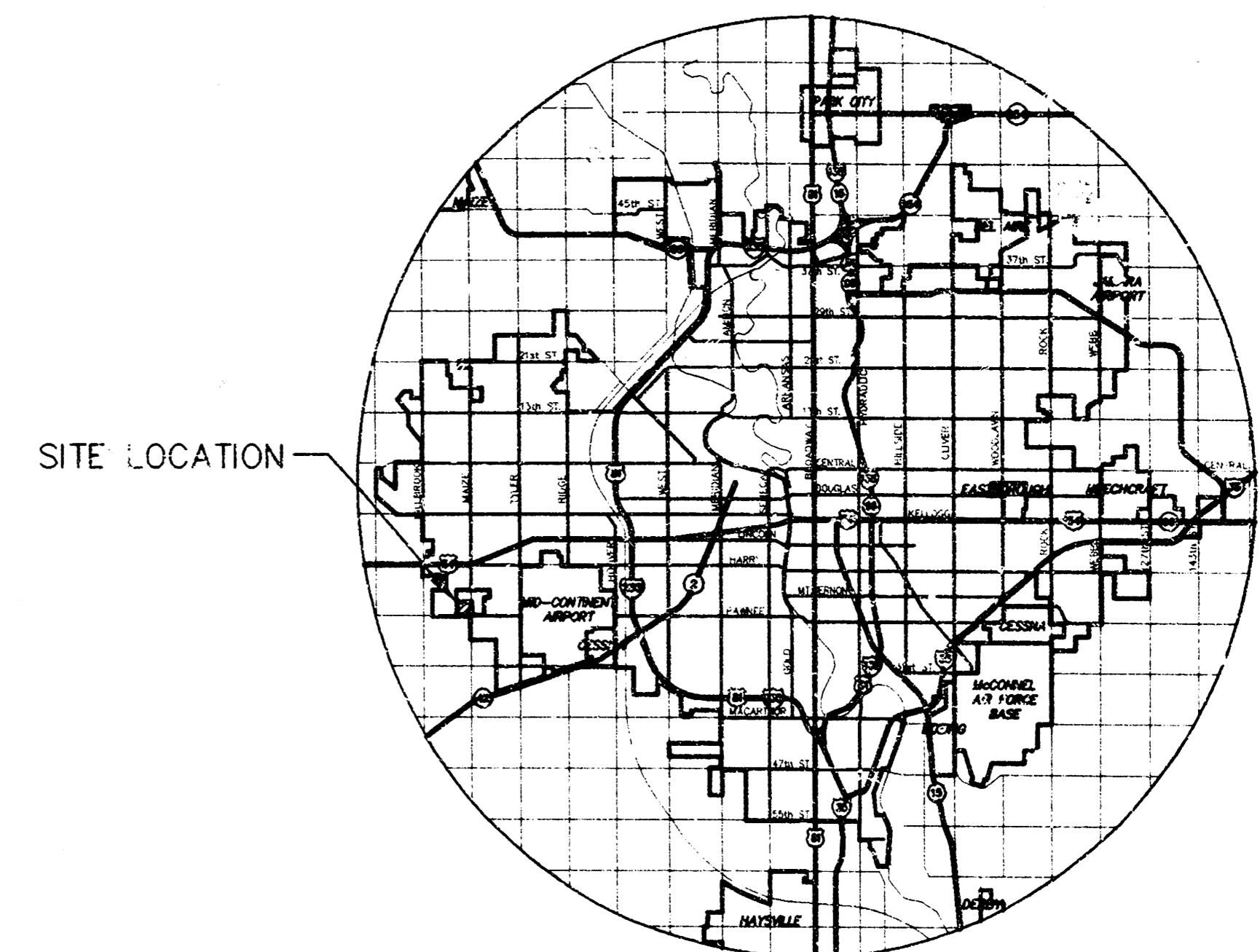


STORM WATER SEWER PHASE 2 PLANS FOR

PRAIRIE WOODS SECOND ADDITION

SWS # 501
PROJECT NO. 468-82824
CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER
INDEX CODE 751273
APRIL, 1999



LOCATION MAP

GENERAL NOTES

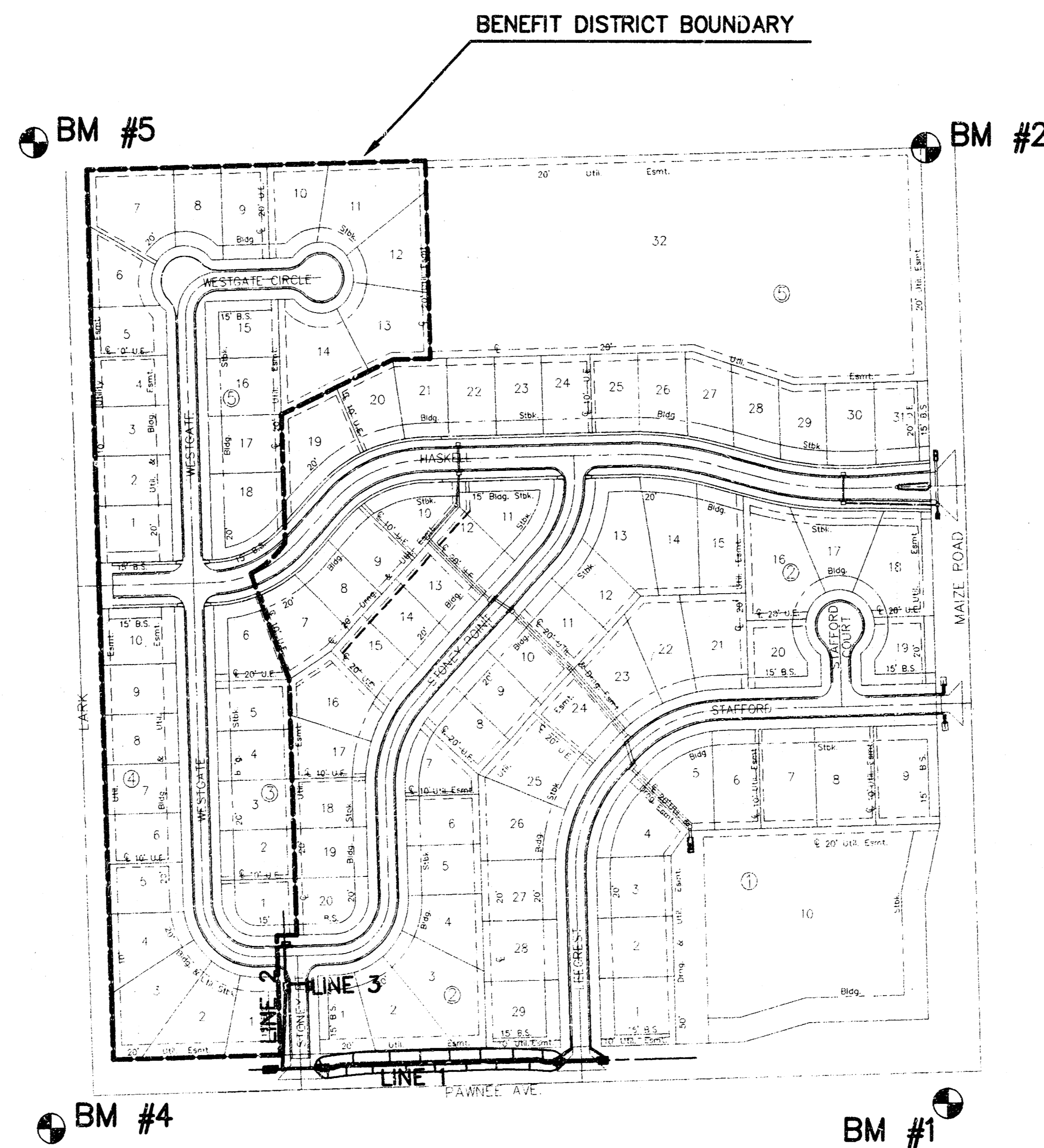
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
2. EXISTING UTILITIES AND THEIR LOCATIONS, 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 PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
3. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE-CALL 1-800-344-7233
or 687-2470 (LOCAL WICHITA)

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

SOUTHWESTERN BELL TELEPHONE COMPANY 1-800-734-7590
CABLEVISION 262-0661
KANSAS GAS & ELECTRIC (ELECTRIC) 264-1141
KANSAS GAS & ELECTRIC (GAS) 832-3180 OR 832-3169
CITY OF WICHITA SEWER MAINTENANCE 268-4908
CITY OF WICHITA WATER DEPARTMENT 268-4908

4. 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. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FIELD PLAN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
5. COST OF EXCAVATION, HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.
6. 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.
7. ALL DISTURBED AREAS TO BE SEEDED WITH RYE GRASS AT A RATE OF 200 LBS./ACRE WITHIN 10 DAYS OF CONSTRUCTION. COST SHALL BE SUBSIDIARY TO PROJECT.
8. REVERSE CURB INLET TOPS. PAVEMENT IN THIS AREA WILL BE BUILT AT FUTURE DATE. COST OF REVERSING INLET TOPS SHALL BE SUBSIDIARY TO THE INLET CONSTRUCTION.
9. CONTRACTOR SHALL LEAVE EXCESS MATERIAL ON SITE IN A LOCATION DESIGNATED BY THE OWNER. LOCATION WILL BE WITHIN THE BENEFIT DISTRICT BOUNDARY. MATERIAL SHALL BE PLACED ADJACENT TO ROAD RIGHT-OF-WAYS WITHIN LOTS. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THEN 9" AND SHALL BE SMOOTH SO GRASS MAY BE PLANTED.
9. THE REMOVAL OF THE HEDGE ALONG THE NORTH SIDE OF PAWNEE FROM THE WEST OF STONEY POINT TO 60± WEST SIDE OF LEECREST WILL BE BY OTHERS.



BM #3

BM #5

BM #2

BM #4

BM #1

SCALE: 1" = 150'



BOOKED
7-9-99
MCG
D-427

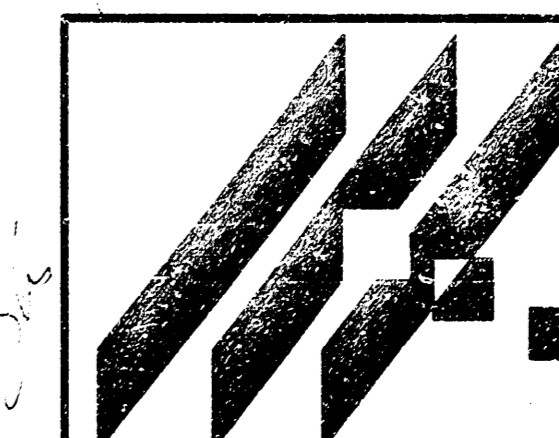
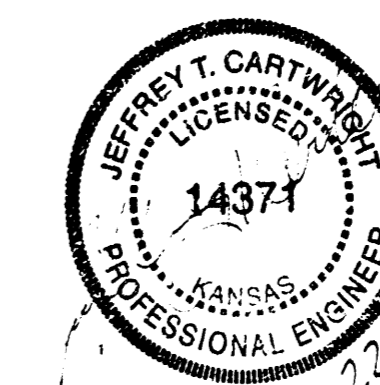
INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LINE 1
3	LINE 2
4	DITCH CROSS SECTIONS
5	INLET DETAILS
6	MANHOLE DETAILS
7	FINAL PLAT

BENCHMARKS

- BM #1 COW BENCHMARK 44' SOUTH & 49.8' WEST OF CL PAWNEE & MAIZE ROAD. ELEV. = 135.12
- BM #2 "□" CUT ON TOP OF WEST END OF SOUTH RCP, 1300' ± NORTH OF CL PAWNEE. ELEV. = 138.945
- BM #3 COW BENCHMARK 31.5' SOUTH & 38' EAST OF CL MAIZE ROAD & MAY. ELEV. = 137.69
- BM #4 STEPPED SPIKE IN P.P., SW COR. LARK LANE & PAWNEE. ELEV. = 143.48
- BM #5 "□" CUT ON SW COR. CURB INLET ON WEST SIDE LARK LANE, 1340' M. OF CL PAWNEE. ELEV. = 141.755

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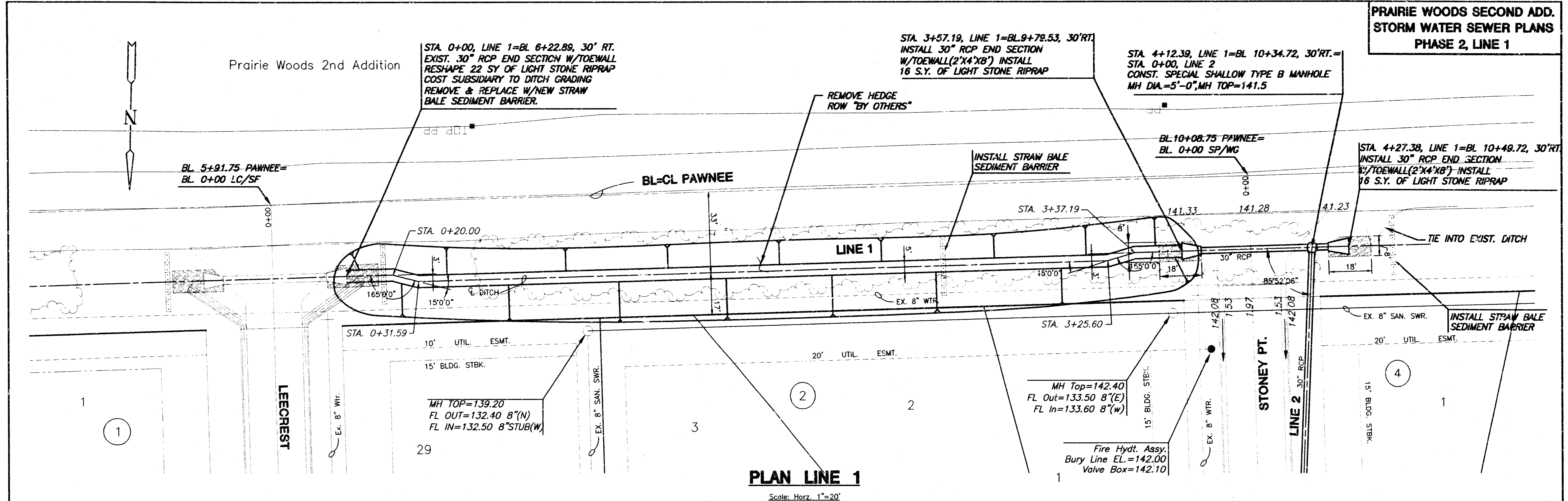
MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N WEBB ROAD
WICHITA, KS. 67206
316-684-9600

PRAIRIE WOODS SECOND ADDITION
PROJECT NAME

STORM WATER SEWER PLANS - PHASE 2
SHEET TITLE

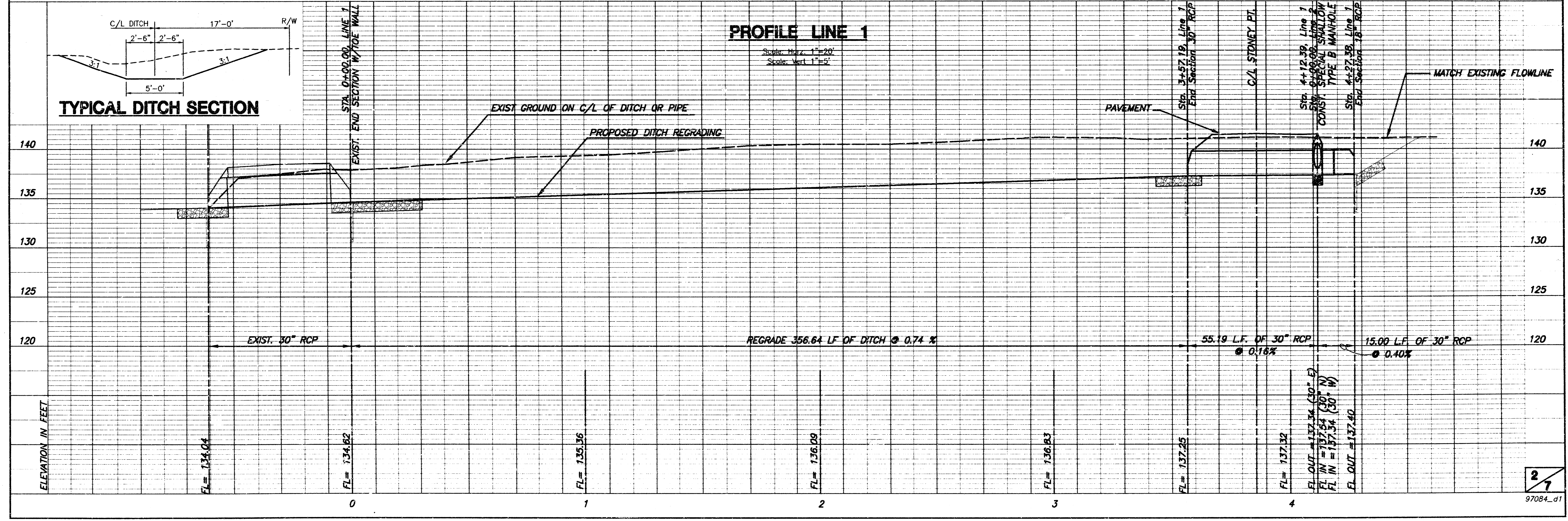
JTC DESIGN BY:	ASE/BWT DRAWN BY:	G/A CHECKED BY:
APRIL 1999 DATE	97084_DT JOB NO.	1 / 7 SHEET / OF

**PRAIRIE WOODS SECOND ADD.
STORM WATER SEWER PLANS
PHASE 2, LINE 1**



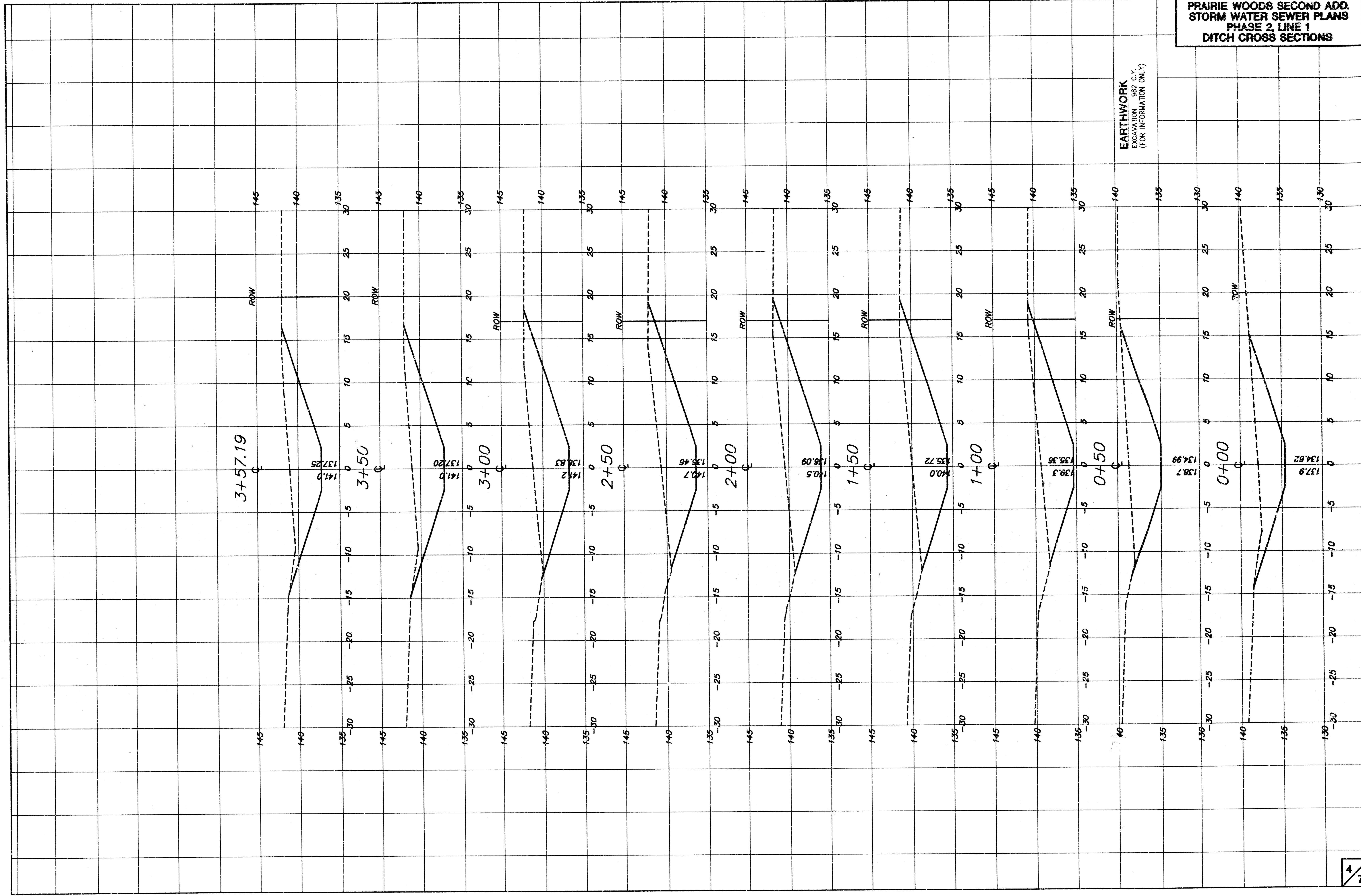
PLAN LINE 1

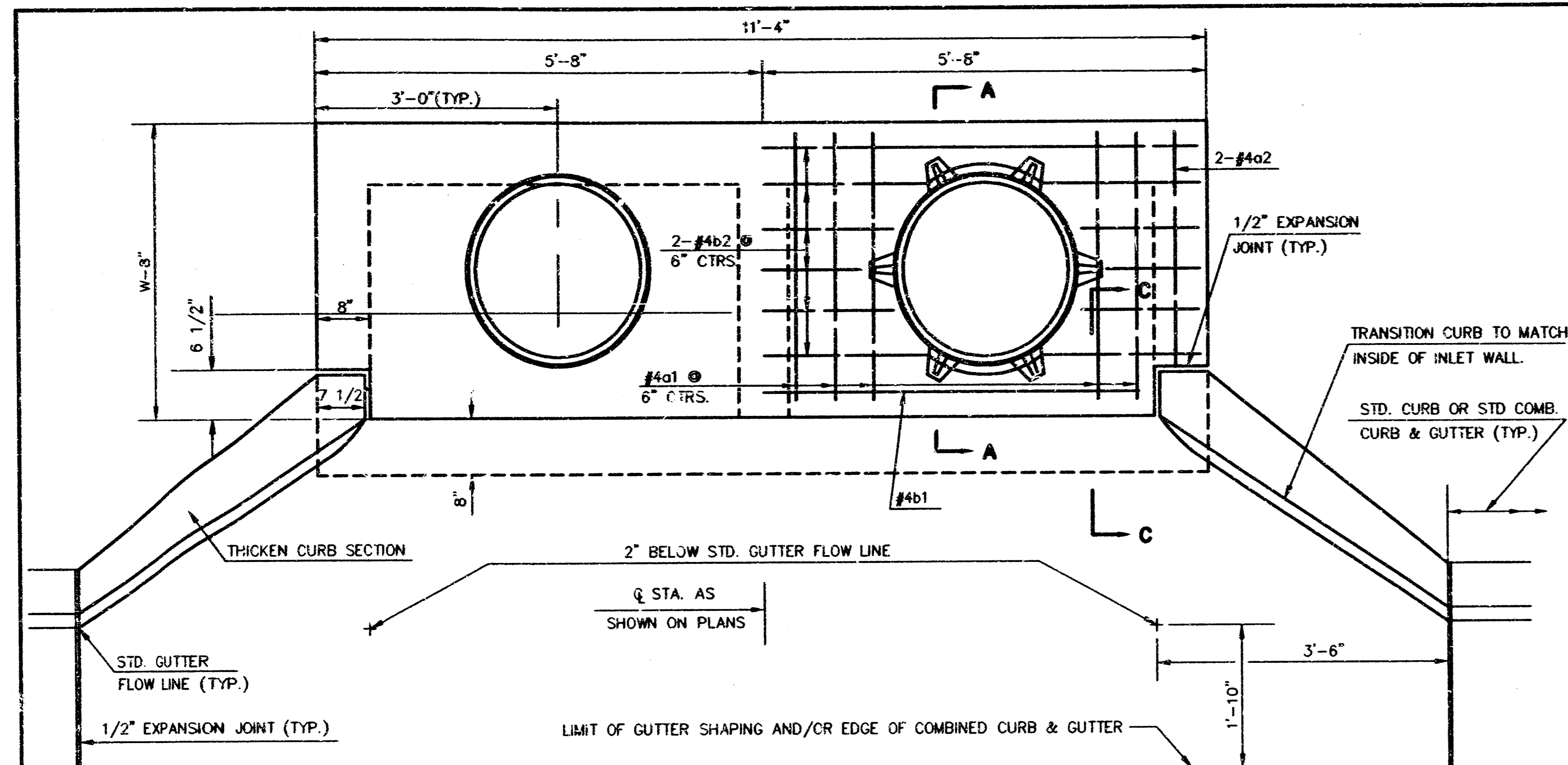
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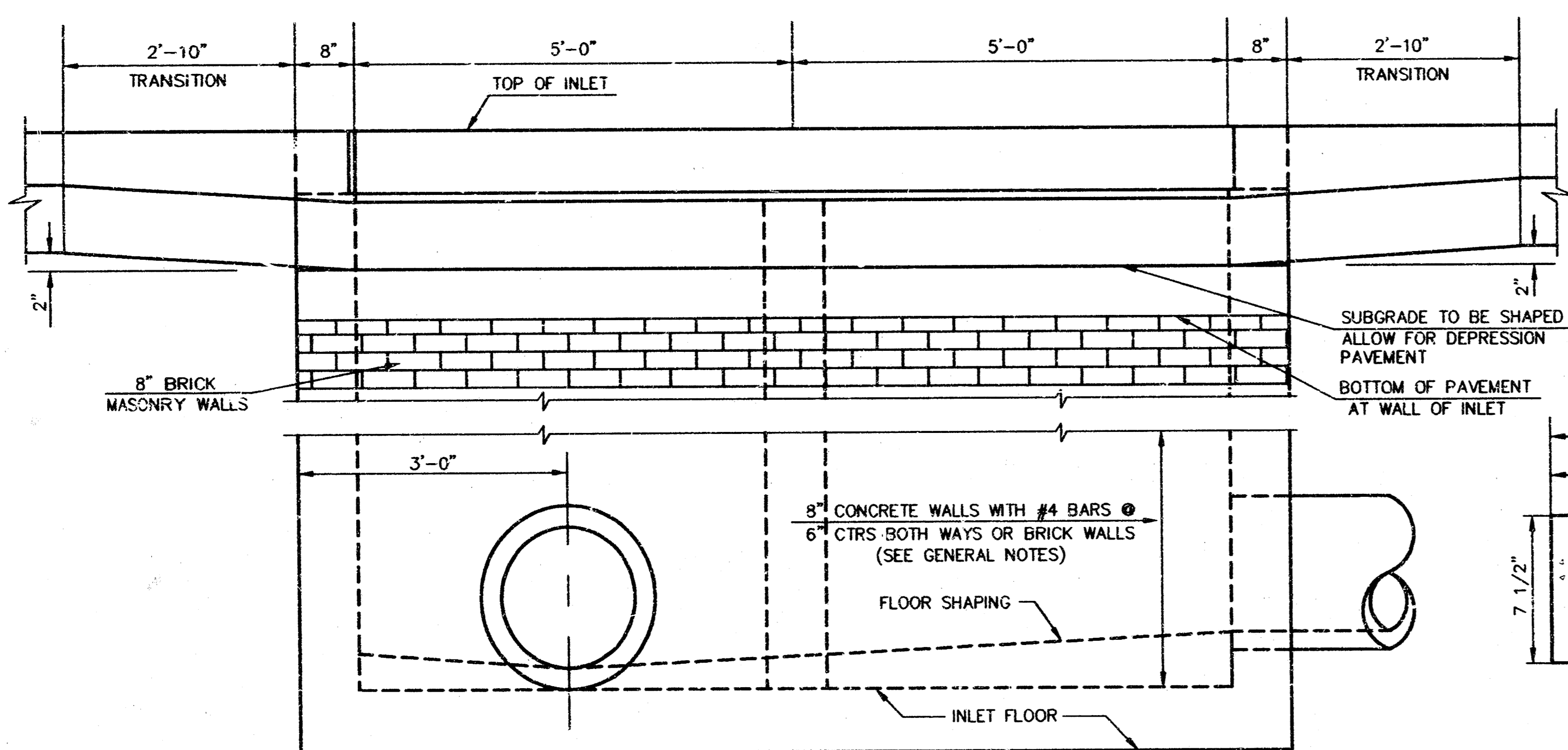
PROFILE LINE 1

Scale: Horz. 1"=20'
Scale: Vert. 1"=5'

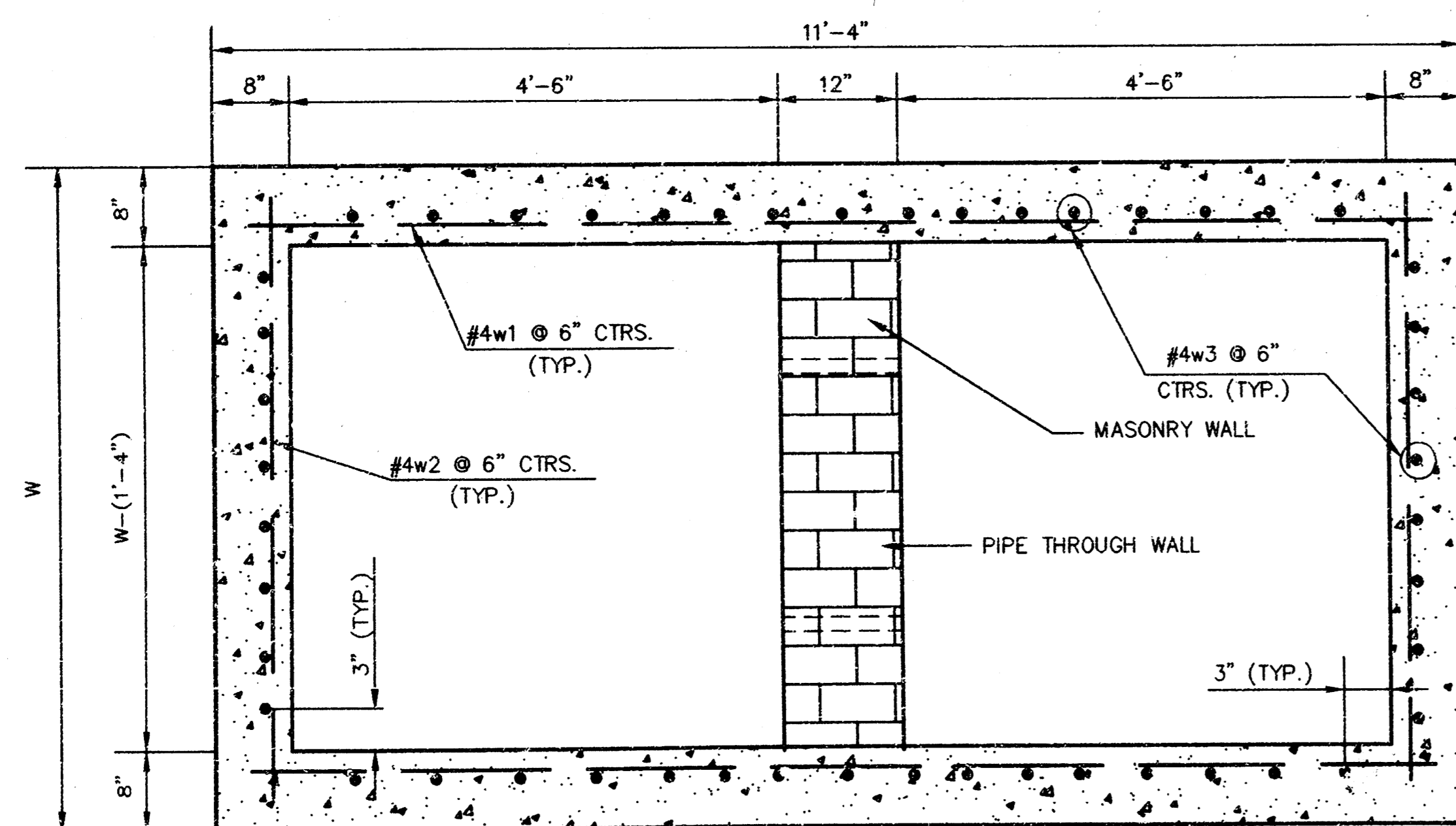




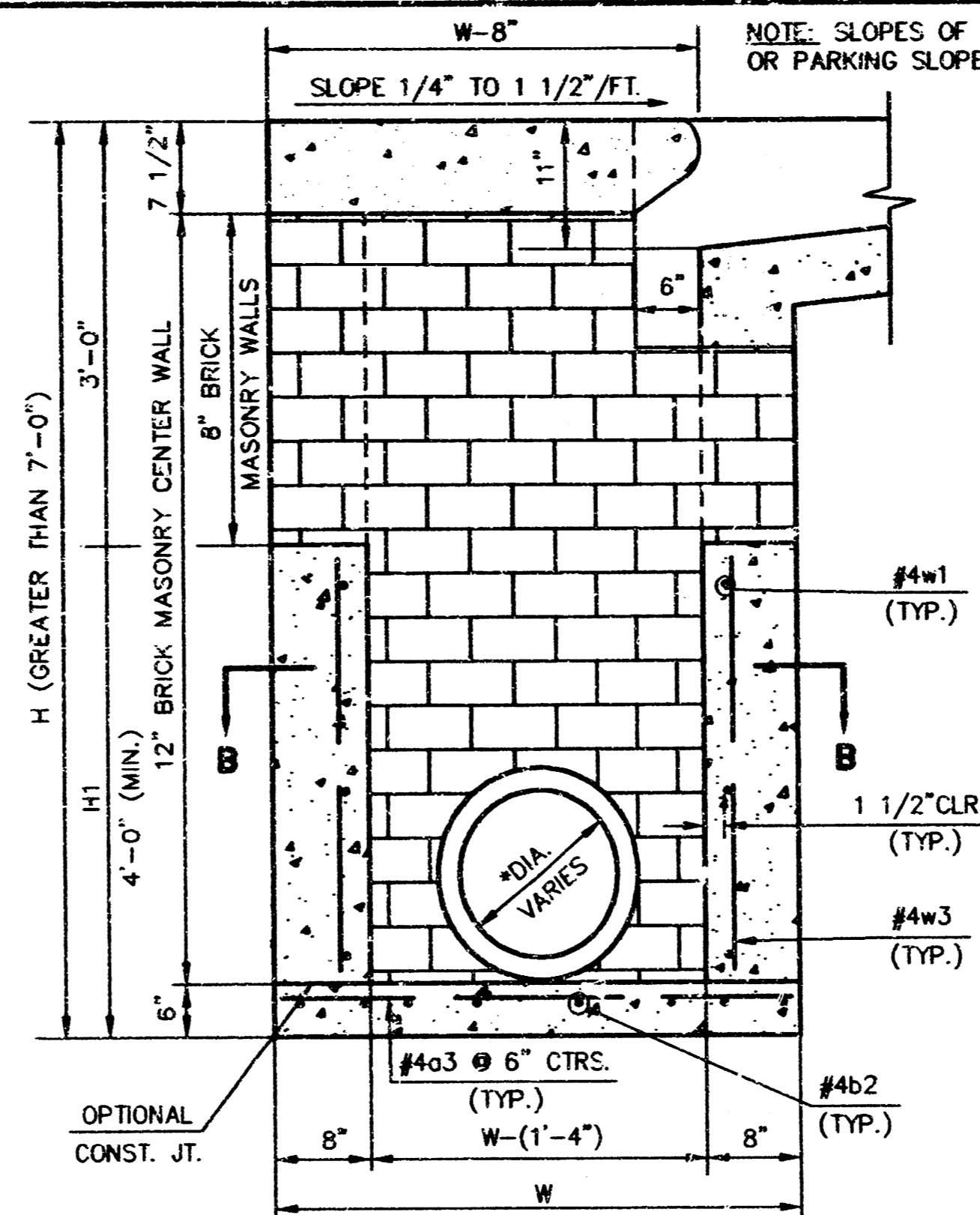
SLAB REINFORCING NOT SHOWN **PLAN** SHOWING SLAB REINFORCING. NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONCRETE PAVEMENT.



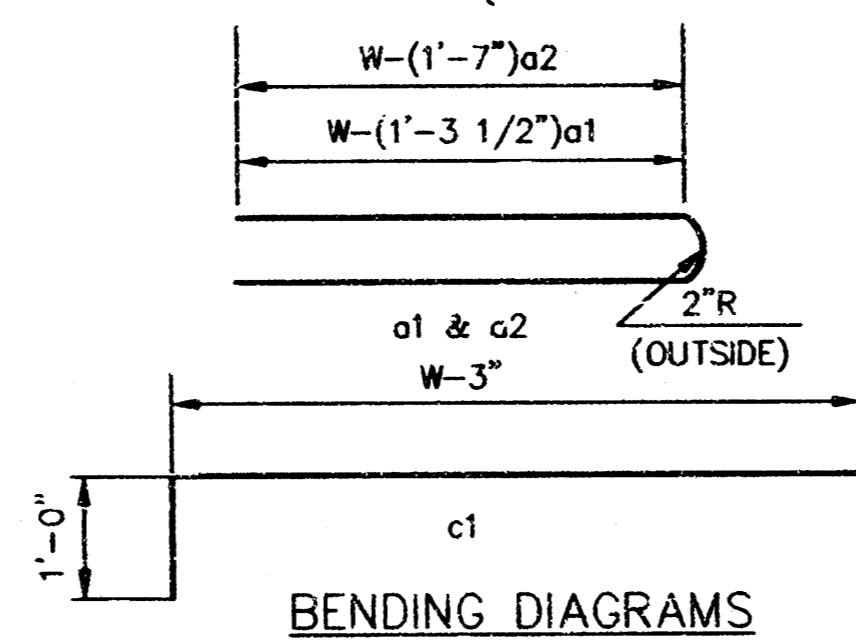
ELEVATION



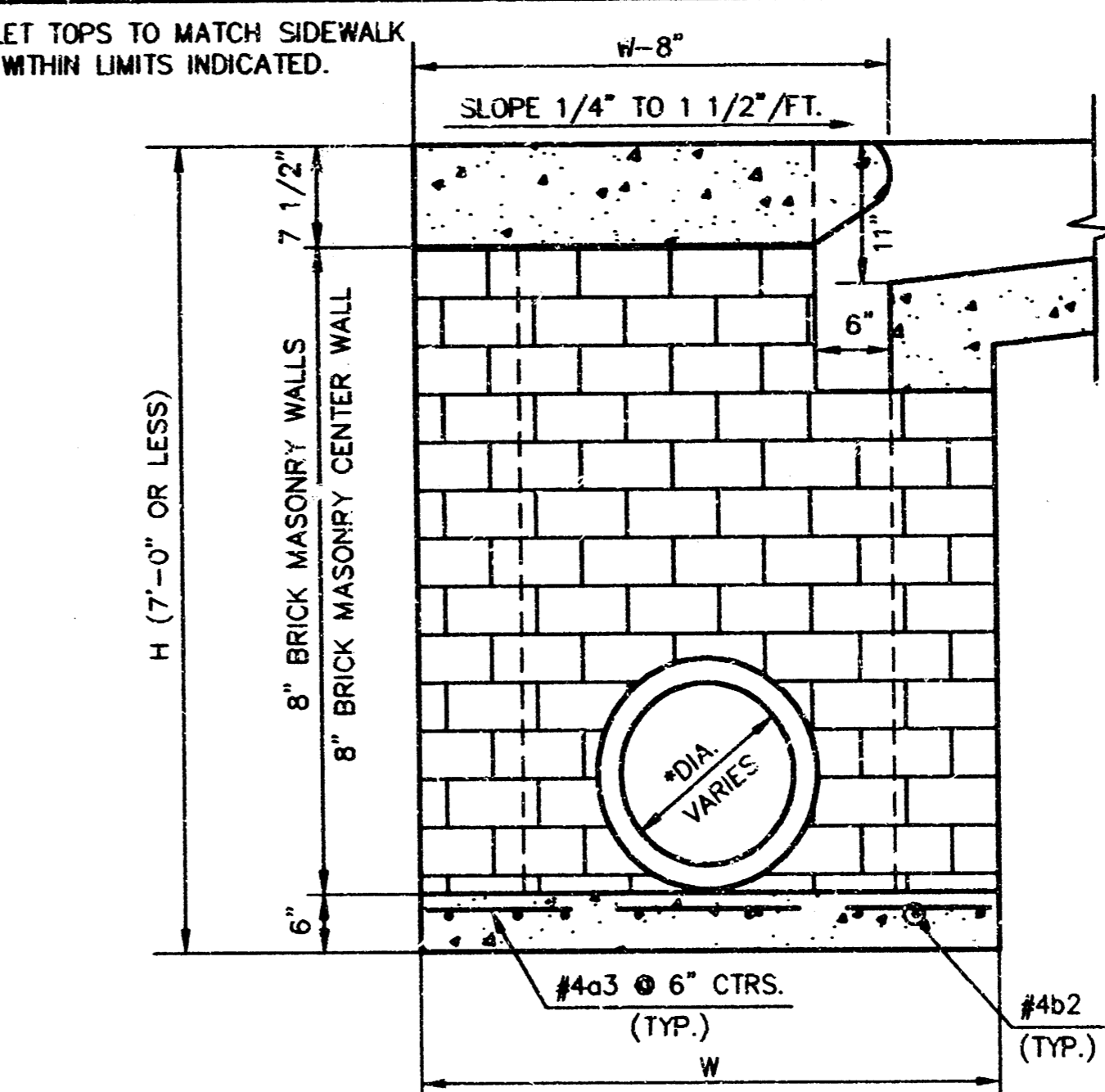
SECTION B-B



TYPICAL INLET SECTION AT CENTER WALL (REINFORCED CONCRETE WALLS)

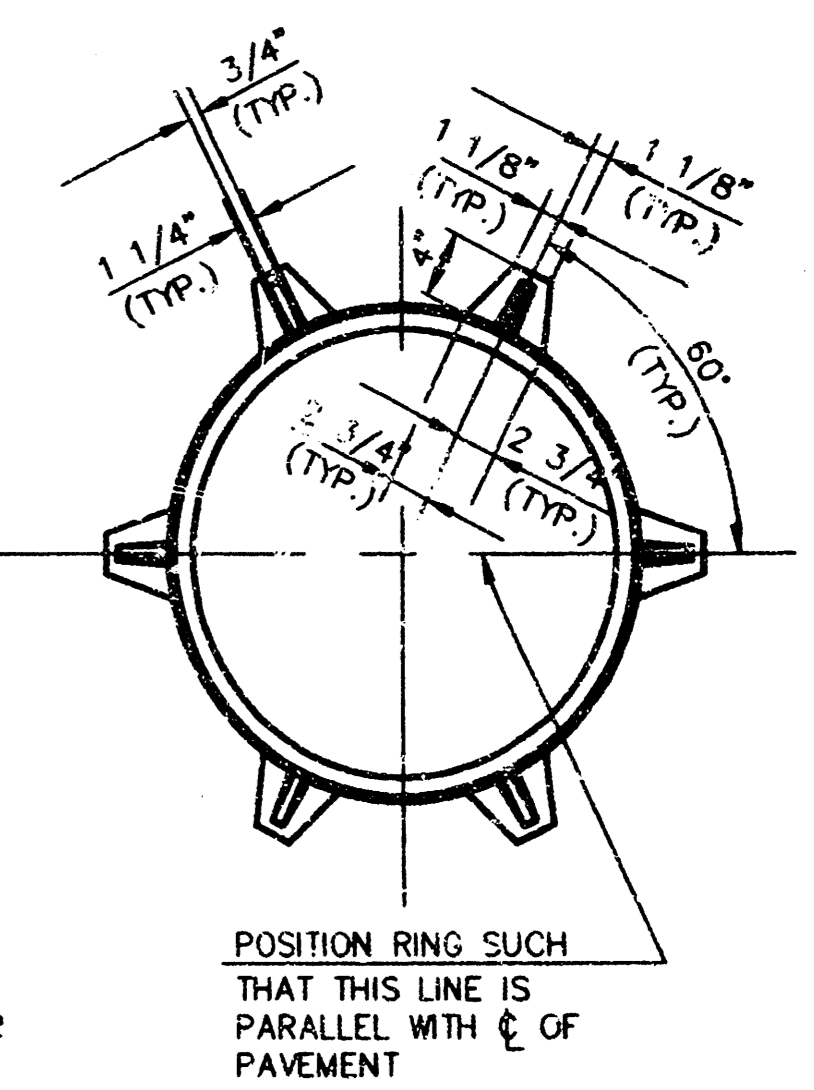


SECTION A-A



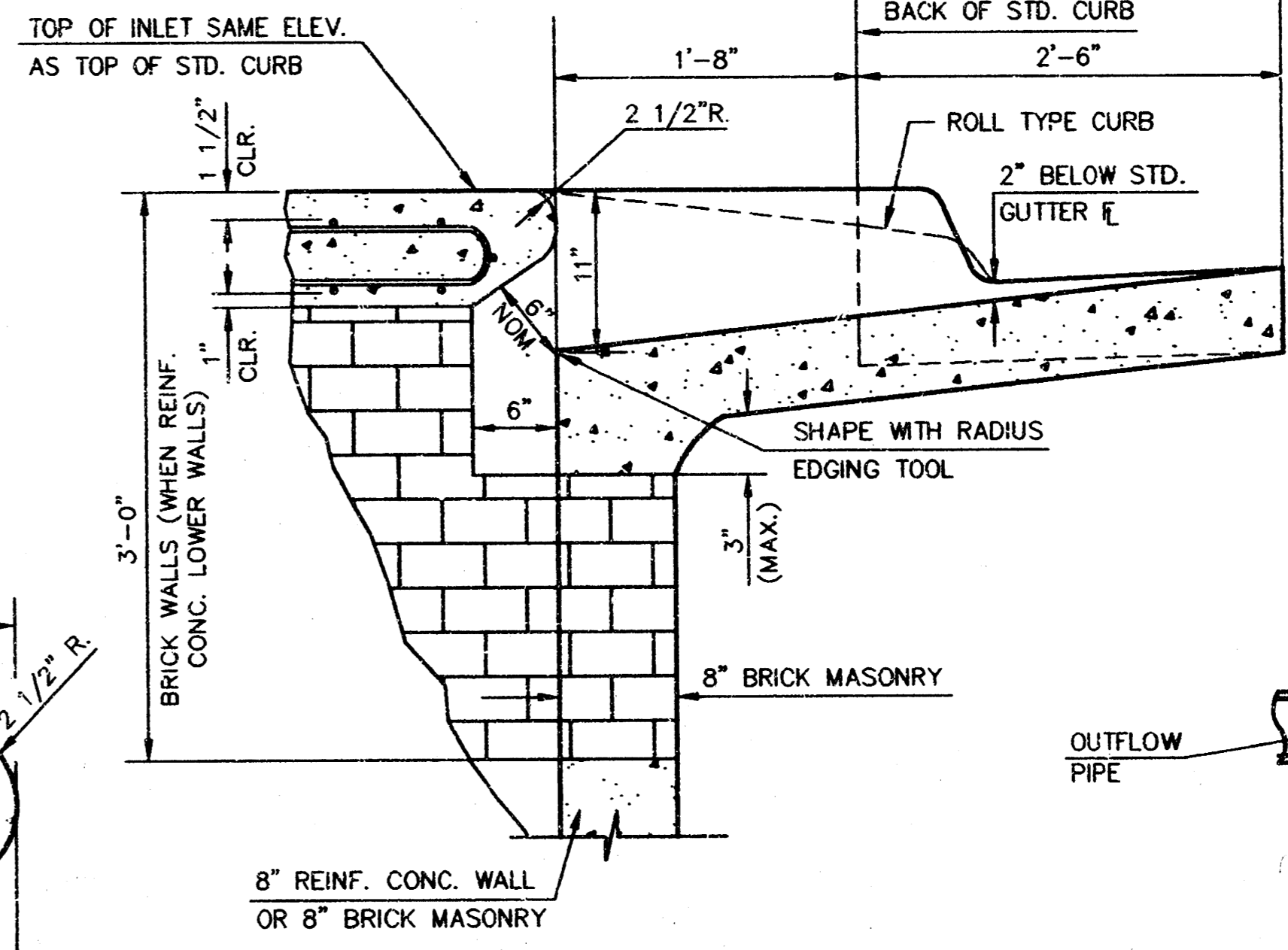
TYPICAL INLET SECTION AT CENTER WALL (MASONRY WALLS)

* 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

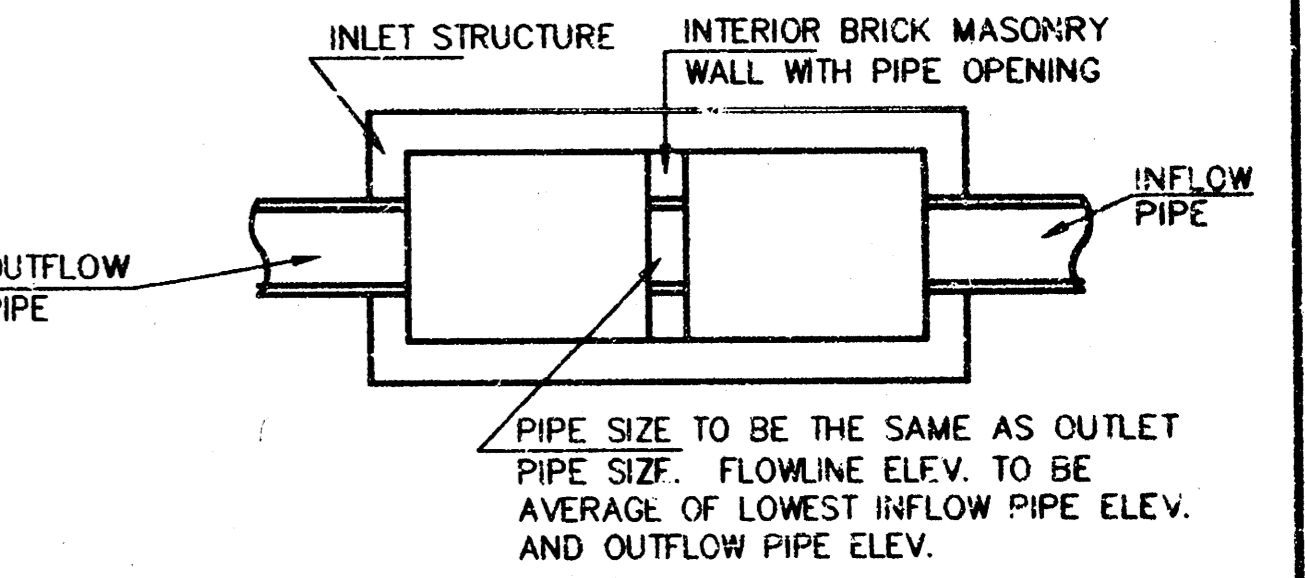
WT.=180 LBS. SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.



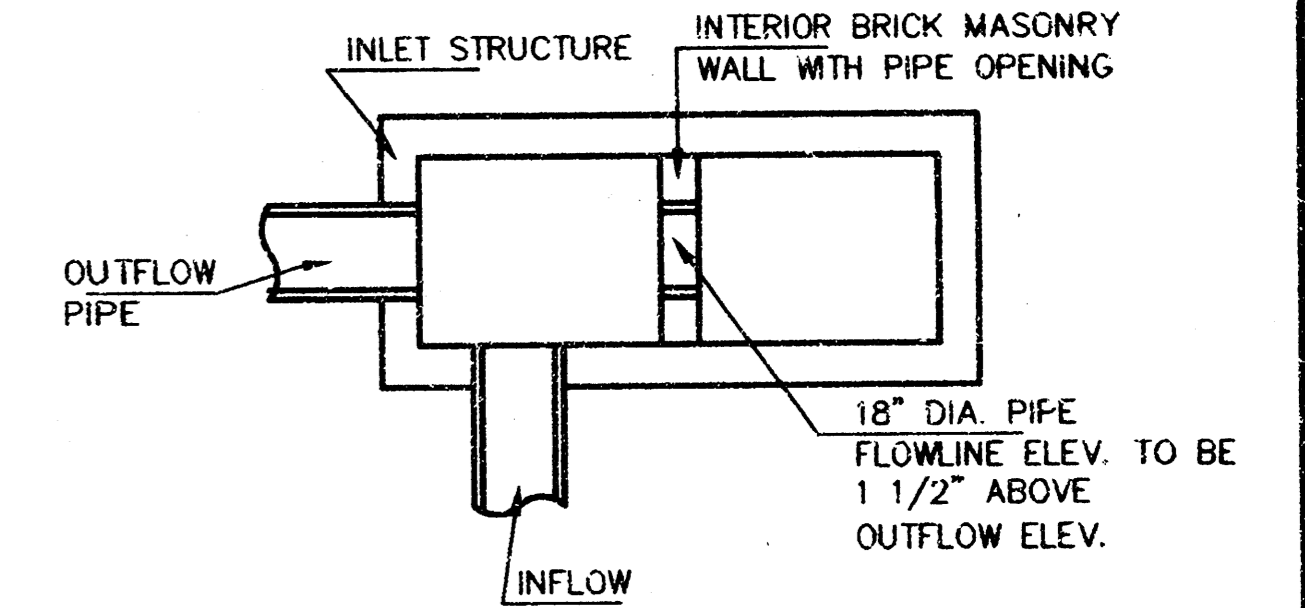
SECTION C-C

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=6'-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 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.
- 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											
		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"

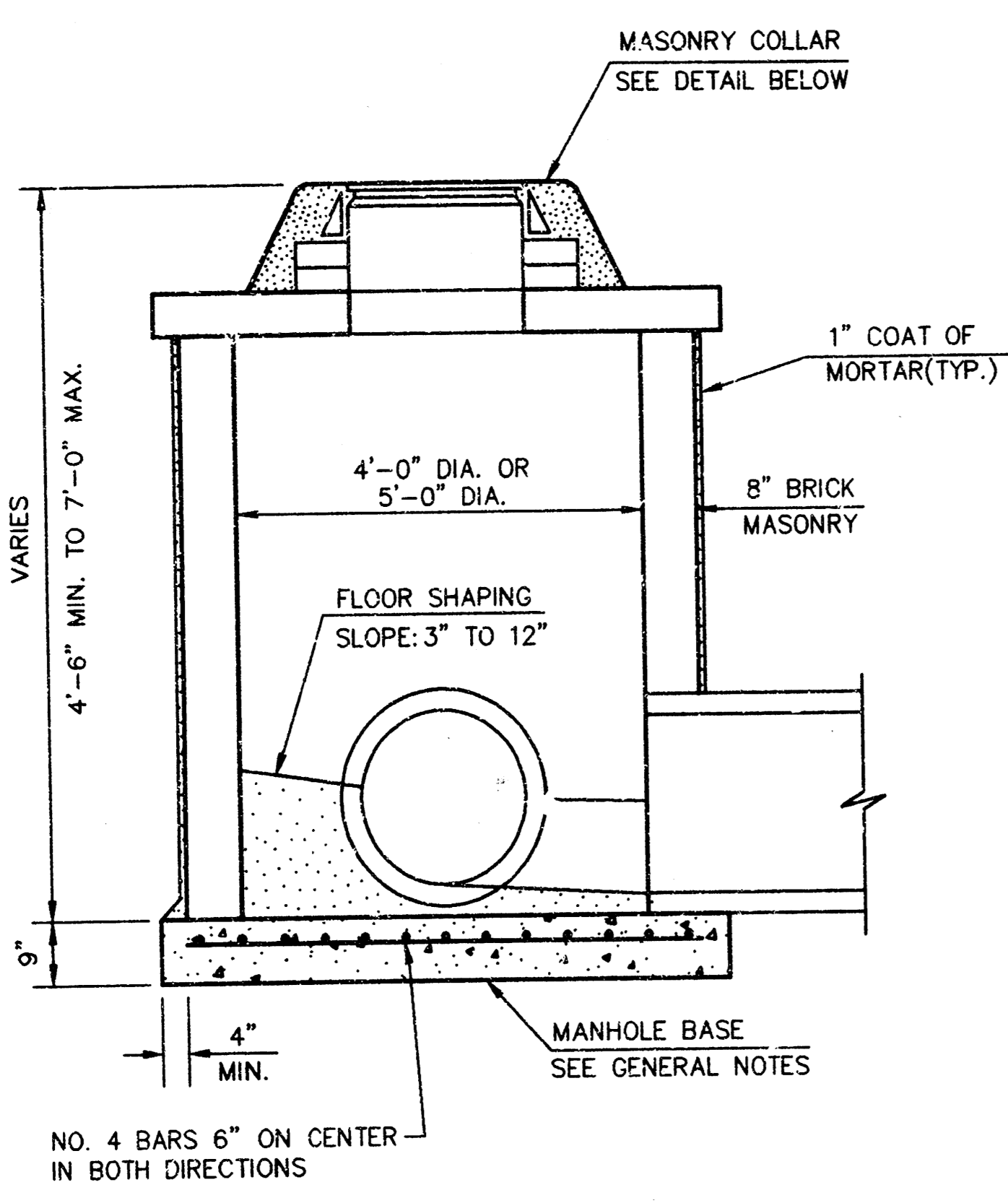
WALL REINFORCING											
		W=4'-4"		W=5'-4"		W=6'-4"		W=7'-4"		W=8'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
c1	#6	4	6'-1"	4	7'-1"	4	8'-1"	4	9'-1"	4	10'-1"
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	②	②	③	③	②	③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

* FIELD BEND OR CUT REINFORCING AS REQUIRED FOR CLEARANCE
 ① 4(HI-6")+4 (HI-6") ROUNDED DOWN TO NEAREST 0.5"
 ② 40+4(W-16")
 ③ HI+(9")

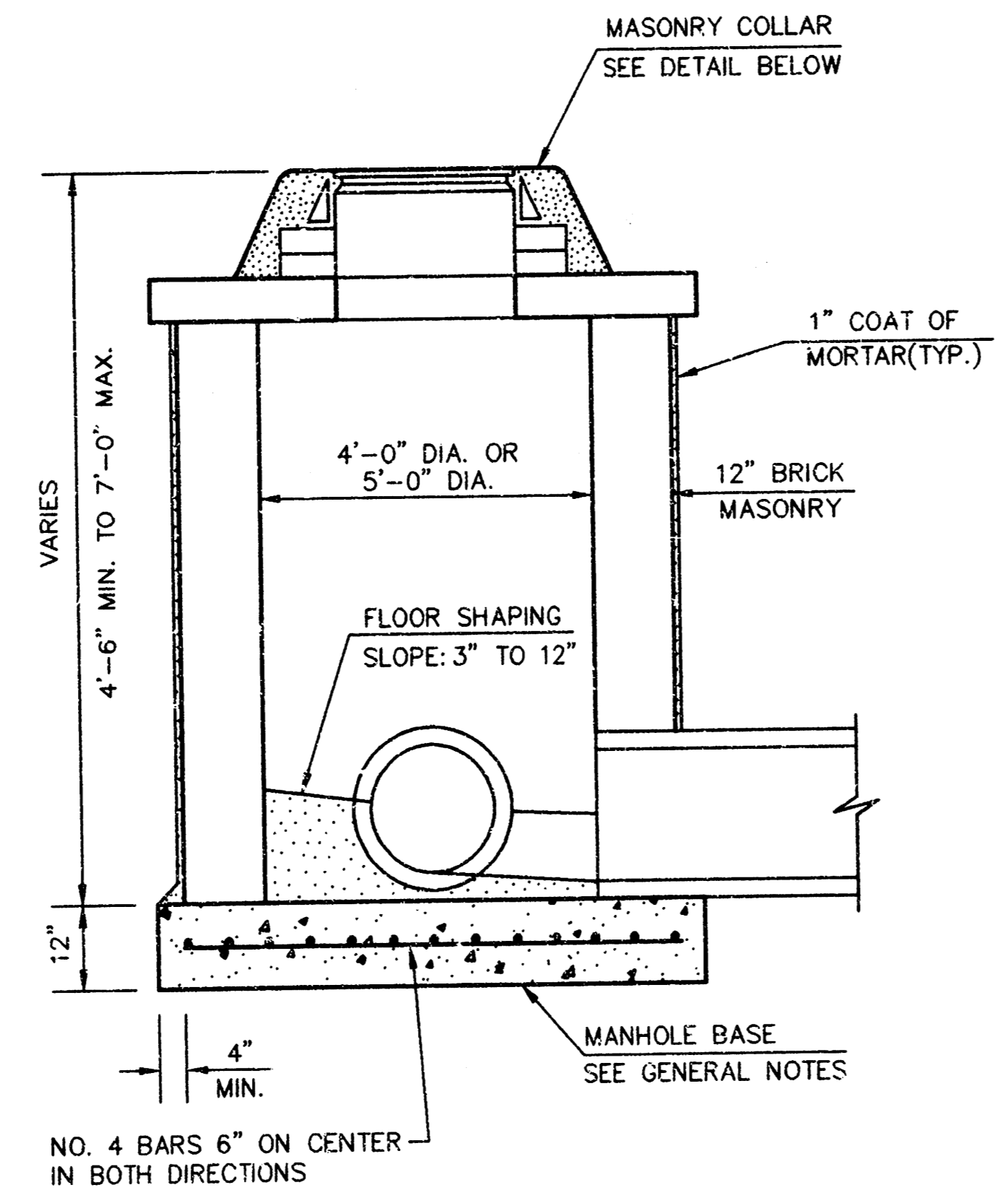
STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	SIDE OR INTERIOR WALL PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8"x11'-4"x7 1/2"	21" & SMALLER	0.83±
5'-4"	4'-8"x11'-4"x7 1/2"	24" & 30"	1.09±
6'-4"	5'-8"x11'-4"x7 1/2"	36" & 42"	1.35±
7'-4"	6'-8"x11'-4"x7 1/2"	48" & 54"	1.61±
8'-4"	7'-8"x11'-4"x7 1/2"	60" & 66"	1.87±

STANDARD TYPE 1A CURB INLET
 INLET OPENING=6"x10'-0"

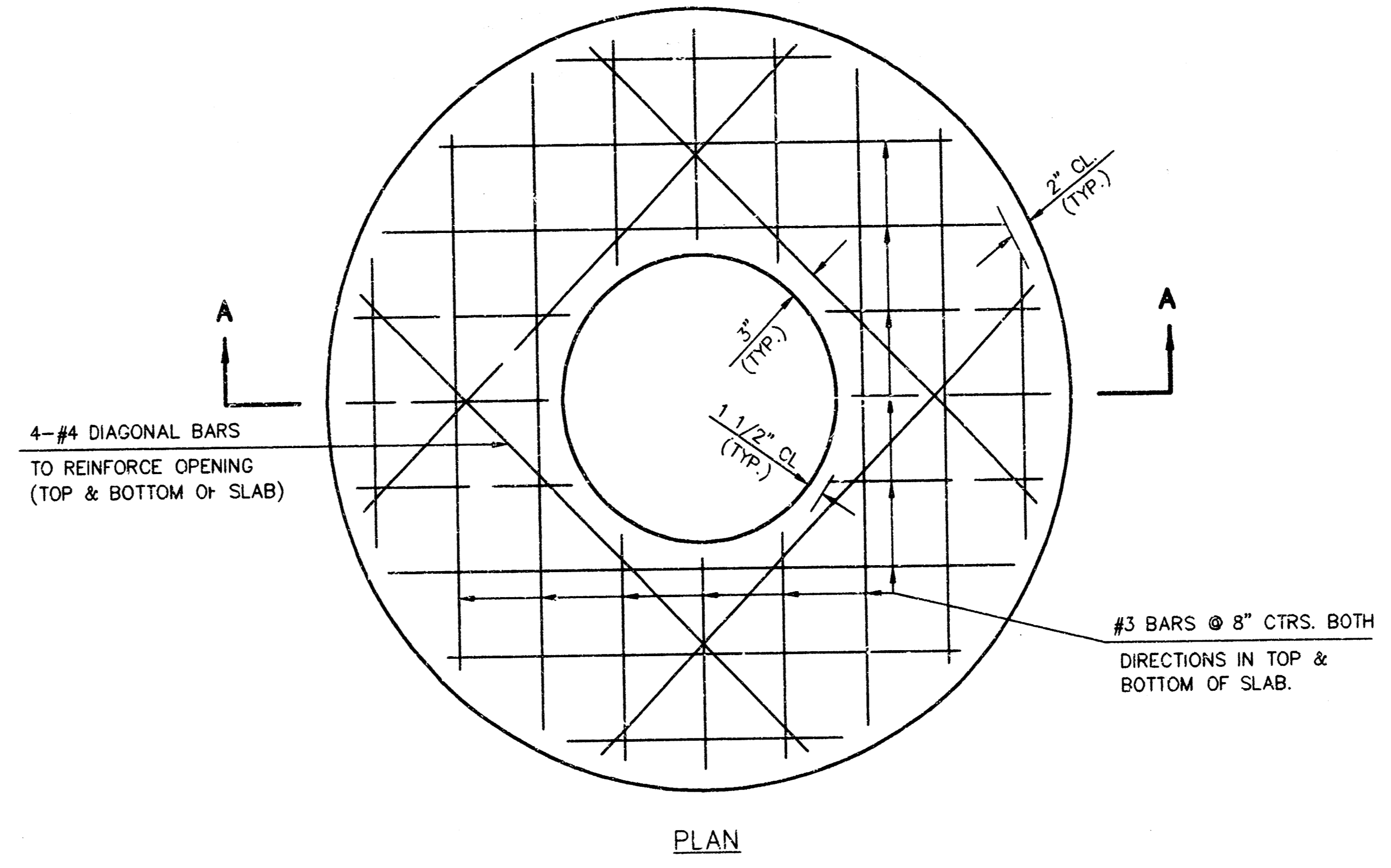
NOV. 1984
 CITY OF WICHITA, KANSAS
 Design: BER, Checked by: KES, MVB, Date: JULY 1995, Sheet 5 of 7, Job No. 95058DD2



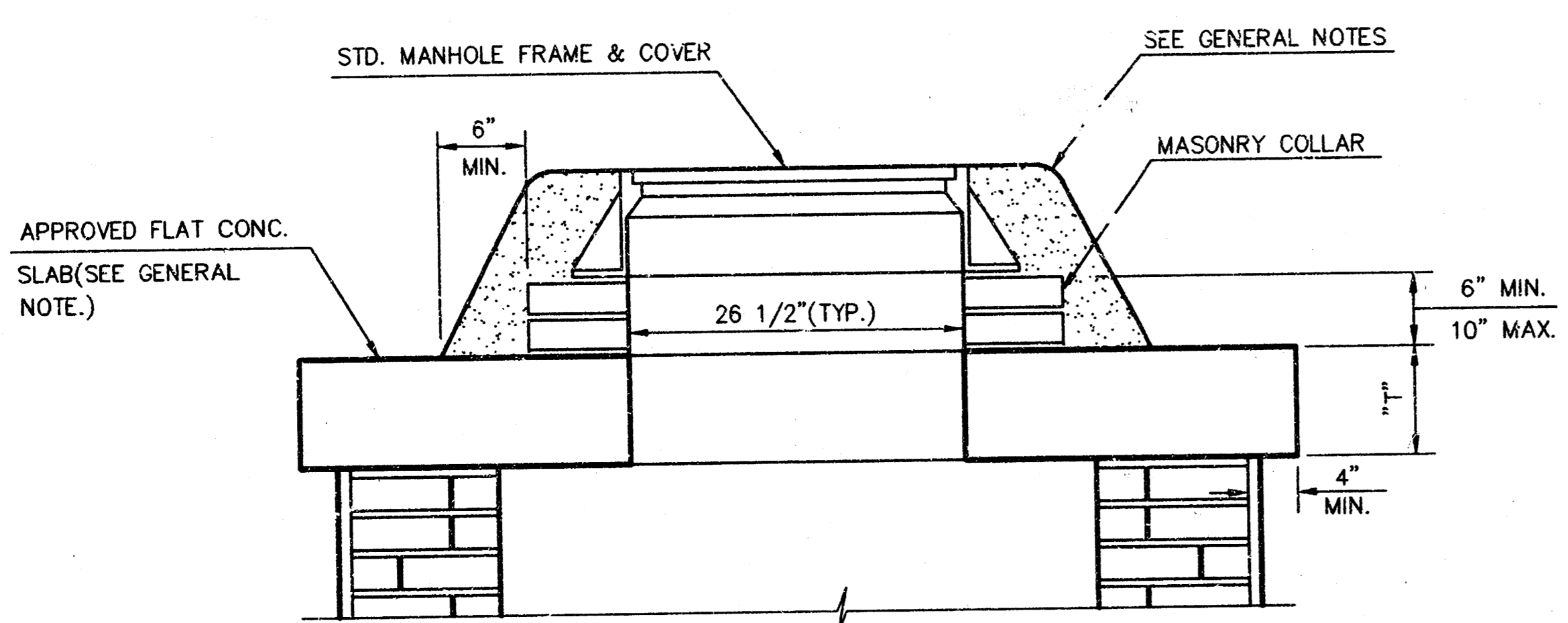
SHALLOW TYPE "A" MANHOLE



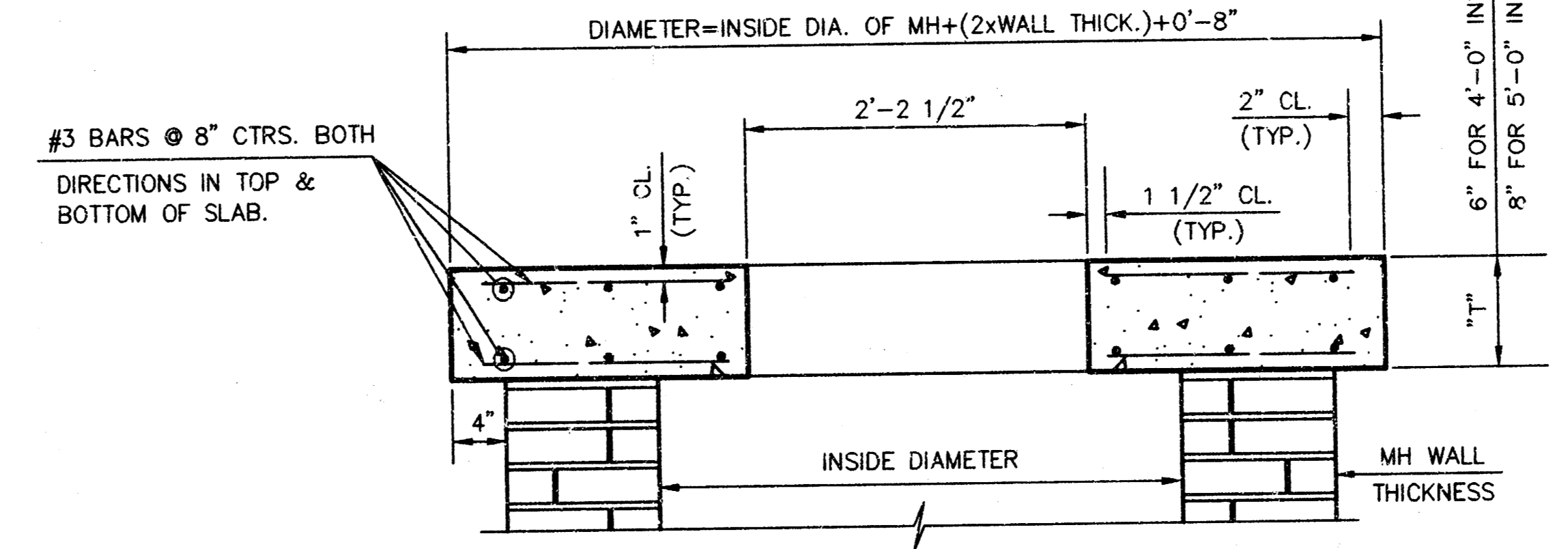
SHALLOW TYPE "B" MANHOLE



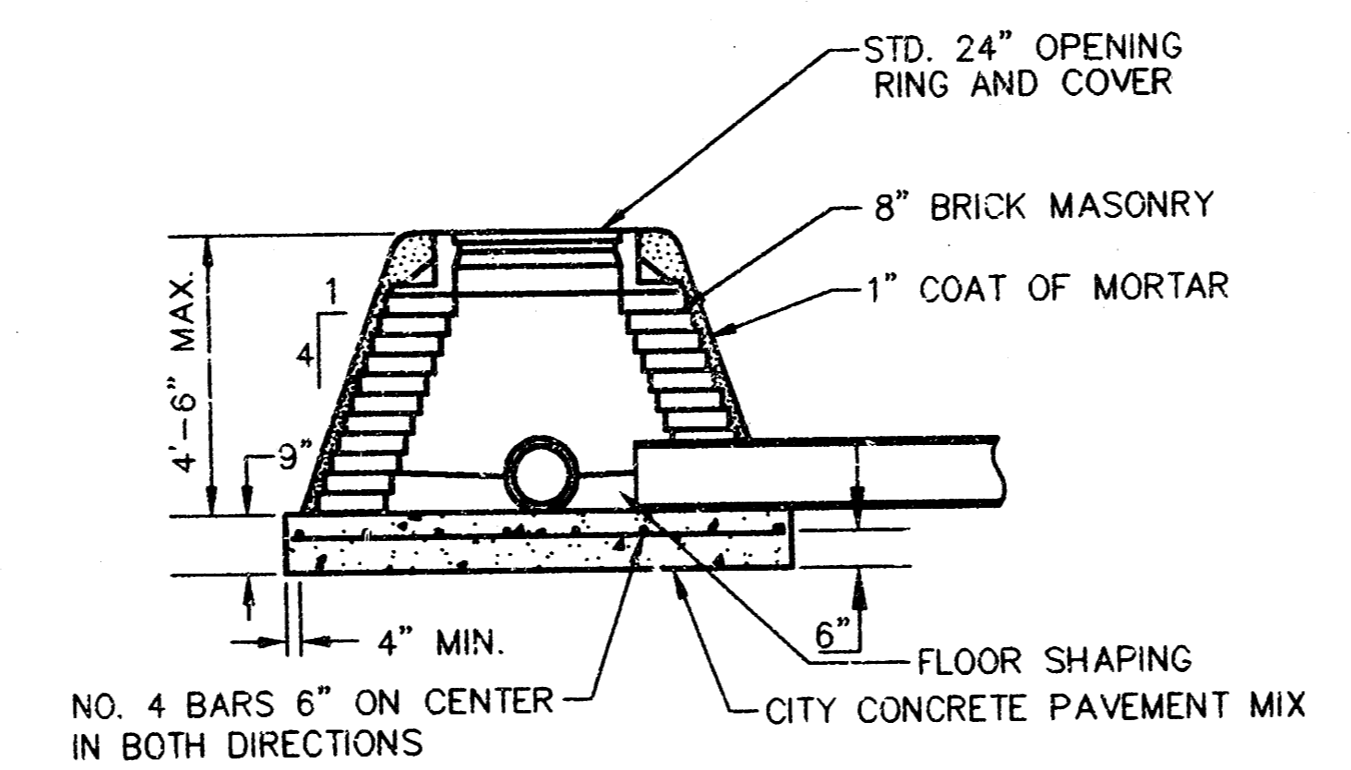
PLAN



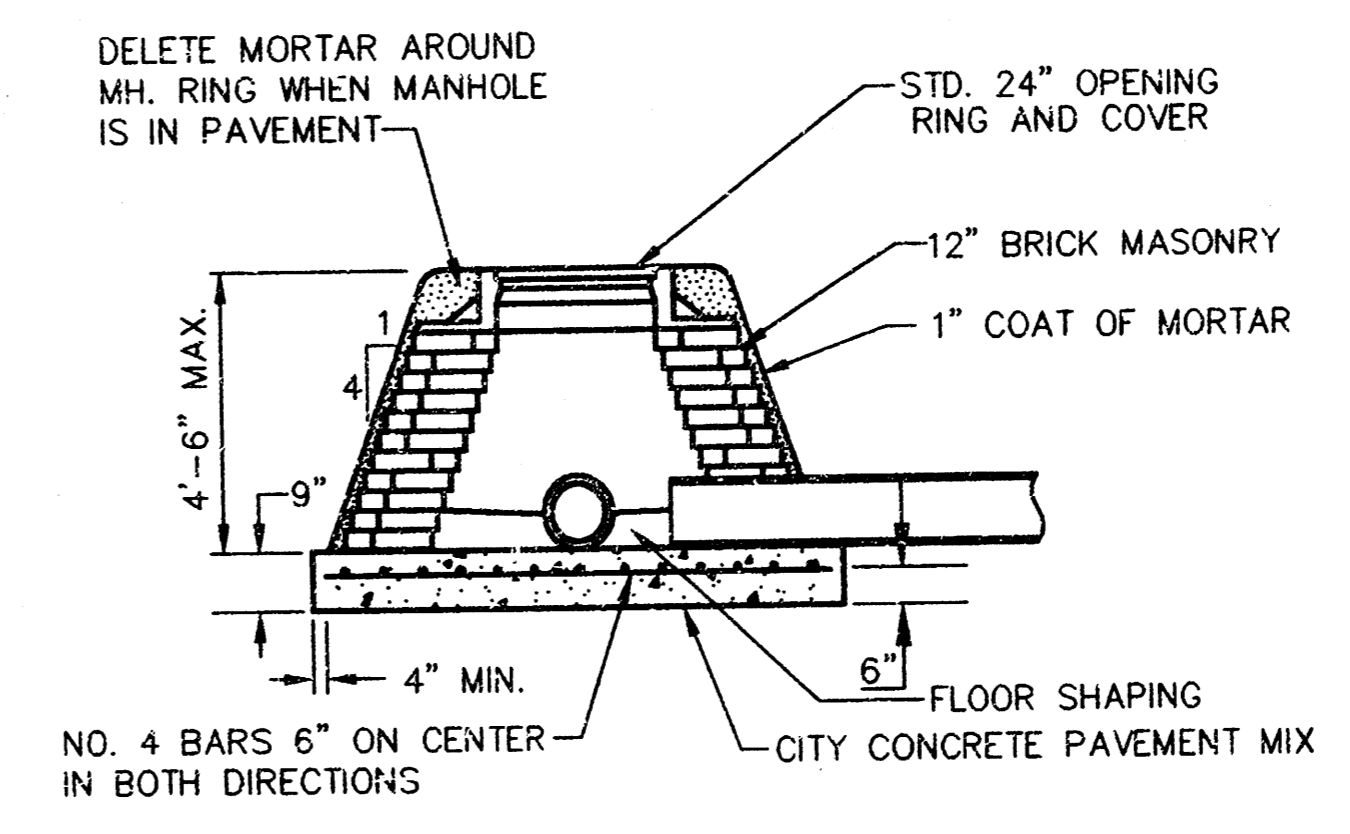
MASONRY COLLAR DETAIL



**SECTION A-A
FLAT CONCRETE SLAB DETAILS**



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "A" SHALLOW MANHOLES CAN BE USED ON SEWERS WHEN THE MANHOLE IS NOT LOCATED WITHIN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
- THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE AND DIAMETER INDICATED. STANDARD SPECIAL SHALLOW MANHOLES TYPE "A" AND "B" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR THE TYPE INDICATED. ALL STANDARD SHALLOW MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

**STANDARD SHALLOW
MANHOLES
TYPE "A" AND TYPE "B"**

CITY OF WICHITA, KANSAS

Design C.O.W.	Checked by	Checked by	Sheet 6 of 7
Drawn by	Date	Date MAR.1999	Job No. 97084dd4

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