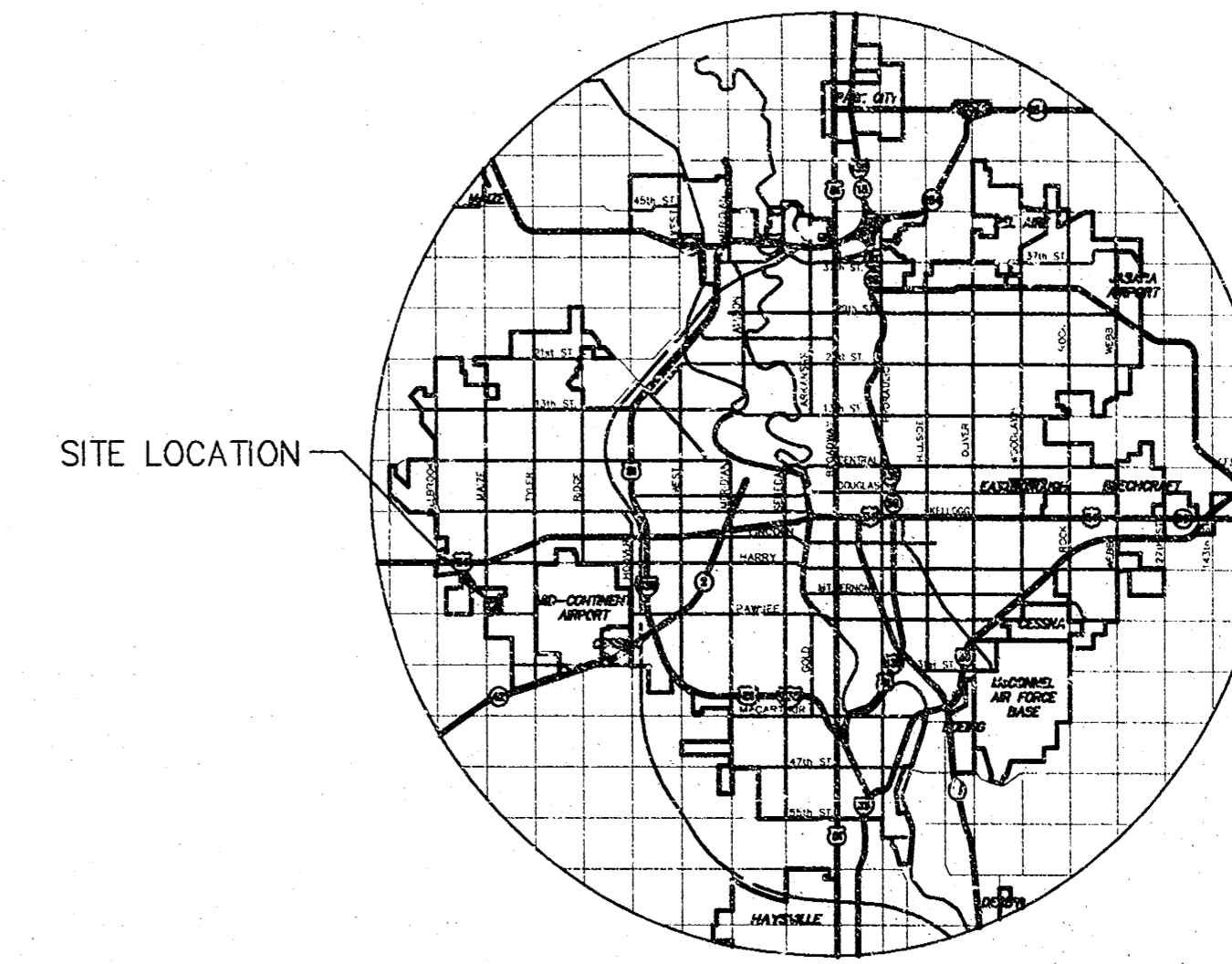


STORM WATER SEWER PHASE 2 PLANS FOR PRAIRIE WOODS ADDITION

SWS # 461
PROJECT NO. 468-82468
CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, CITY ENGINEER
INDEX CODE 751123



LOCATION MAP

INDEX TO DRAWINGS

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

BENCHMARKS

BM #1	COW BENCH MARK, SW CORNER OF INTERSECTION OF MAIZE AND PAWNEE. ELEV. = 135.12
BM #2	TOP OF STEEL "T" POST 5' FROM IP SW COR. HASKELL ROAD. ELEV. = 137.67
BM #3	"□" CUT ON WEST SIDE OF MAIZE ROAD ON SOUTH R.C.P. ELEV. = 138.93
BM #4	TOP OF STEEL "T" POST 5'S. & 5'W. OF SW COR. OF PRAIRIE WOODS & CRESTLINE. ELEV. = 125.69
BM #5	TOP OF STEEL "T" POST 5' N. OF PROP. COR., N. POINT OF HASKELL CT. (EAST). ELEV. = 125.69
BM #6	STEP SPIKE IN 6" HACKBERRY TREE 26' W. OF SE. COR OF PLAT. ELEV. = 128.22
BM #7	"□" CUT ON TOP CURB 15' S. & 4' W. OF FIRE HYD. SE. COR PAWNEE & YELLOWSTONE. ELEV. = 122.67
BM #8	"□" CUT ON TOP OF CURB @ N.W. COR. OF CRESTLINE & PAWNEE. ELEV. = 134.44

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

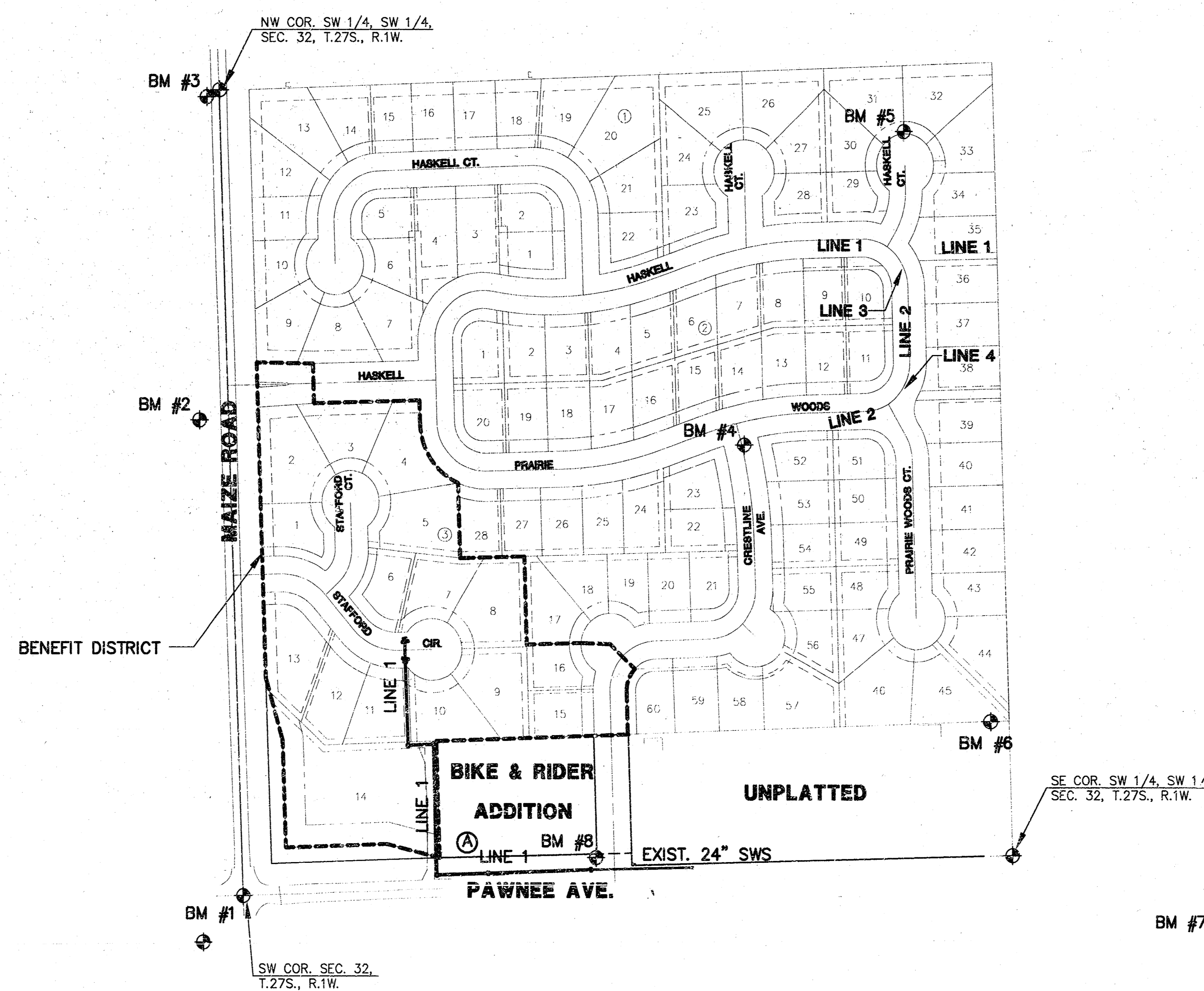
4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, 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 FLOOD PLAIN 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.

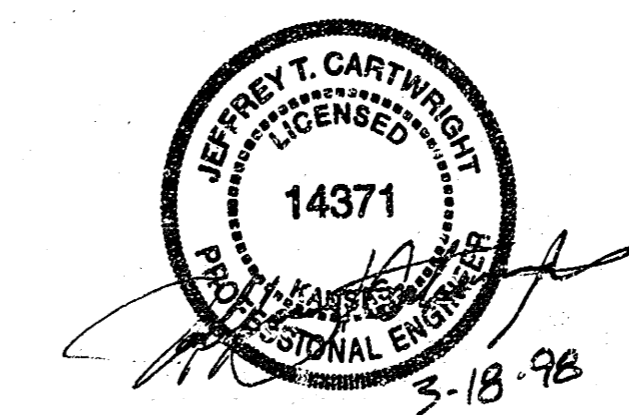
7. ALL DISTURBED AREAS TO BE SEEDED WITH RYE GRASS AT A RATE OF 200 LBS./ ACRE WITHIN 10 DAYS OF CONSTRUCTION. COST SHALL BE SUBSIDIARY TO PROJECT.

8. REVERSE INLET TOPS ON LINE 1 STATION 6+50.94, & 6+87.17. PAVEMENT IN THIS AREA WILL BE BUILT IN A FUTURE DEVELOPMENT PHASE. COST OF REVERSING INLET TOPS SHALL BE SUBSIDIARY TO THE INLET CONSTRUCTION.



SCALE 1" = 150'

BOOKED
7/8/98
MEG
D-392



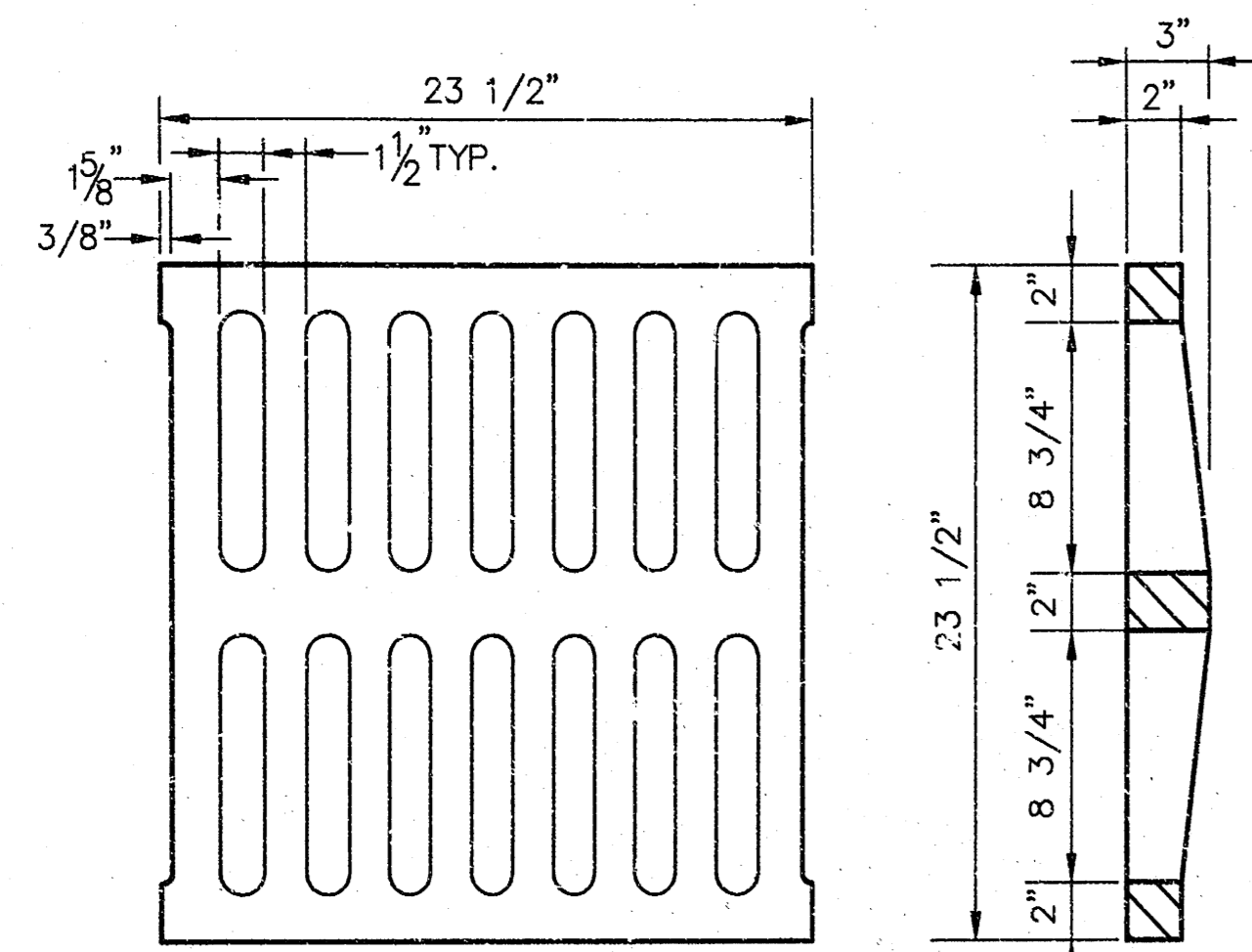
PRAIRIE WOODS ADDITION
PROJECT NAME

STORM WATER SEWER PLANS - PHASE 2
SHEET TITLE

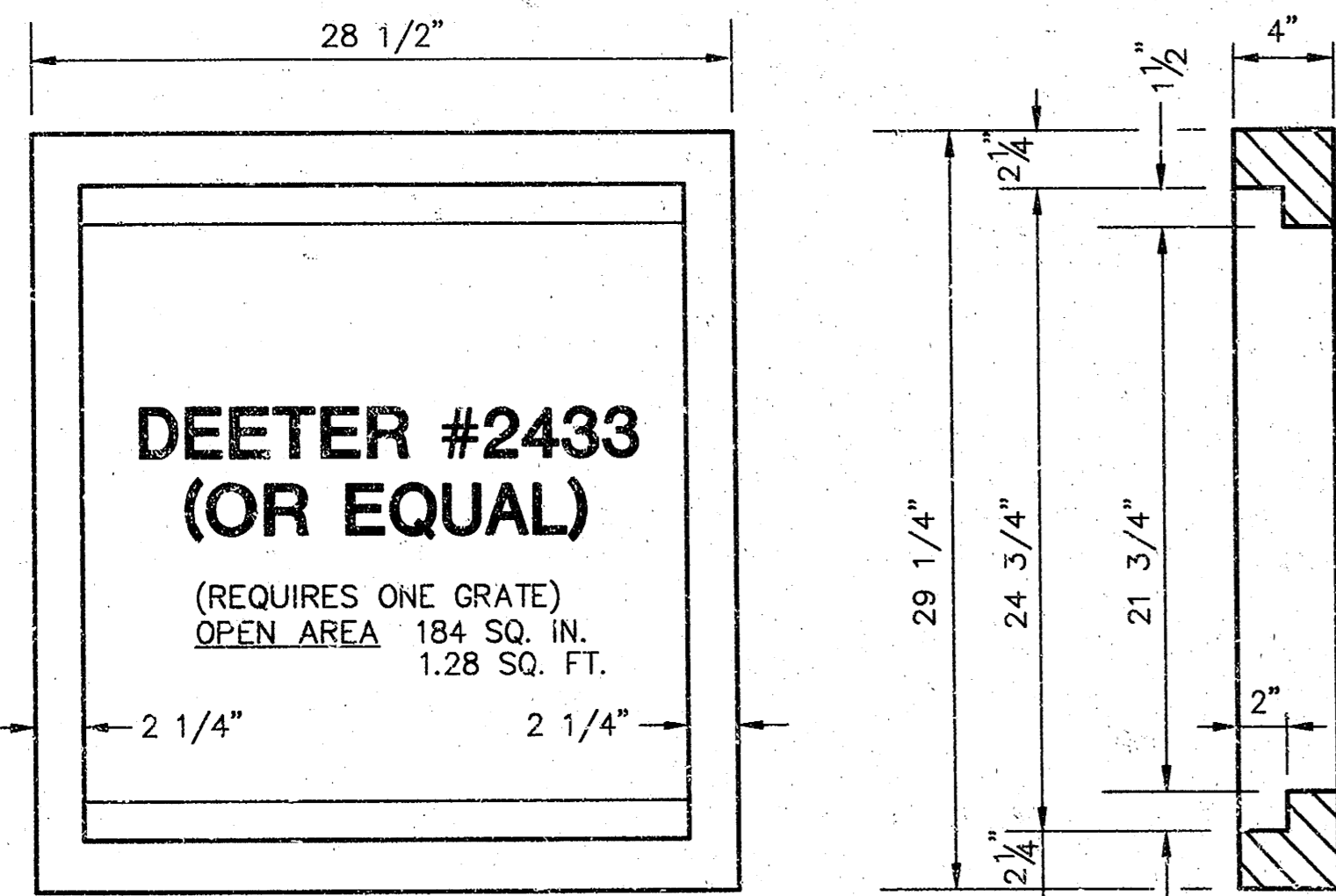
MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

G.J.A./P.A.F. DESIGN BY:	B.D.M. DRAWN BY:	G.J.A./D.D.S. CHECKED BY:
MARCH 1998 DATE	97172DT JOB NO.	1 / 7 SHEET/OF

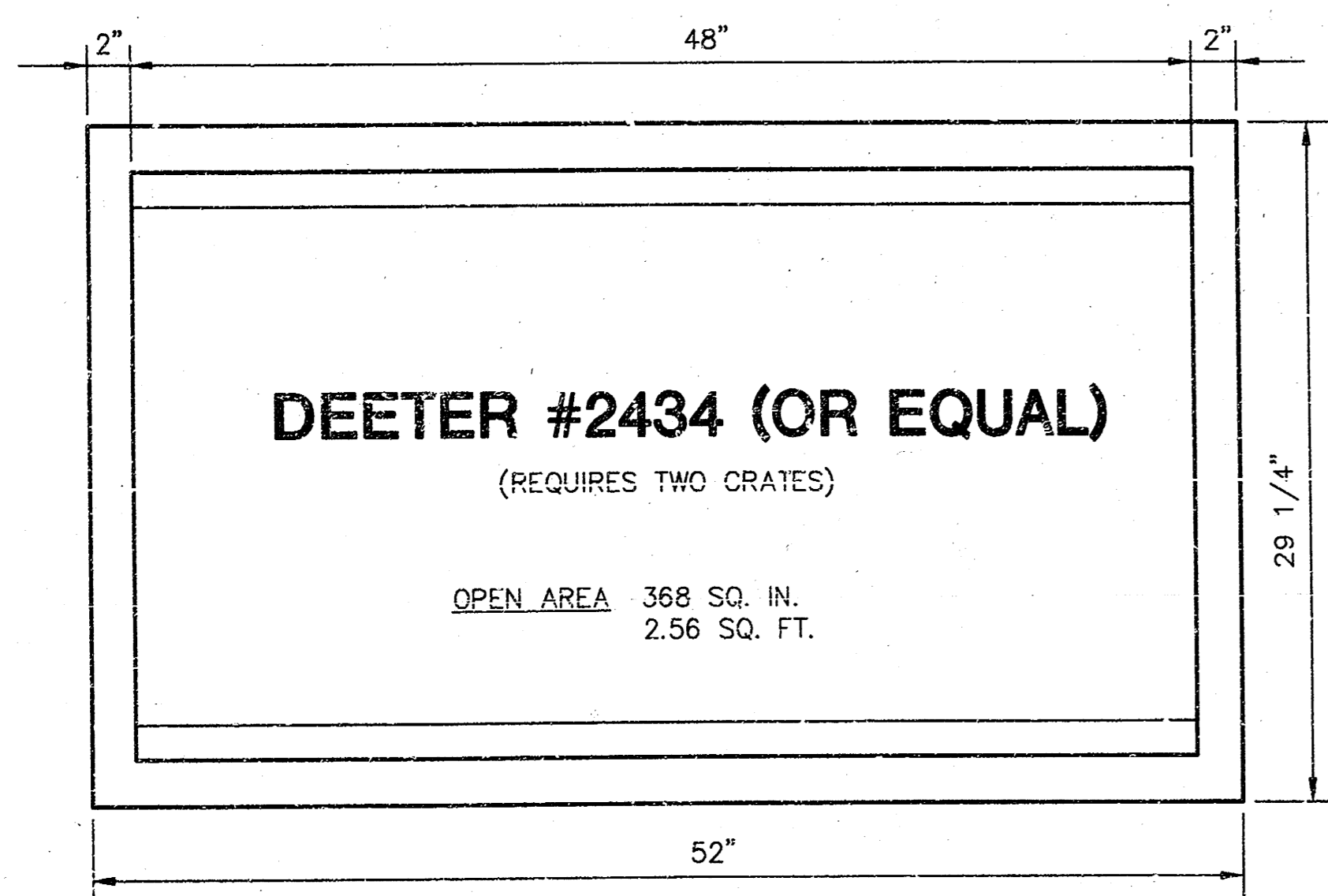
NOTE: GRATES SHALL BE IMPRINTED ON THE TOP SURFACE WITH "CITY OF WICHITA" USING LETTERS AT LEAST 1" IN HEIGHT. OTHER MARKING METHODS MAY BE USED ONLY IF APPROVED BY THE ENGINEER.



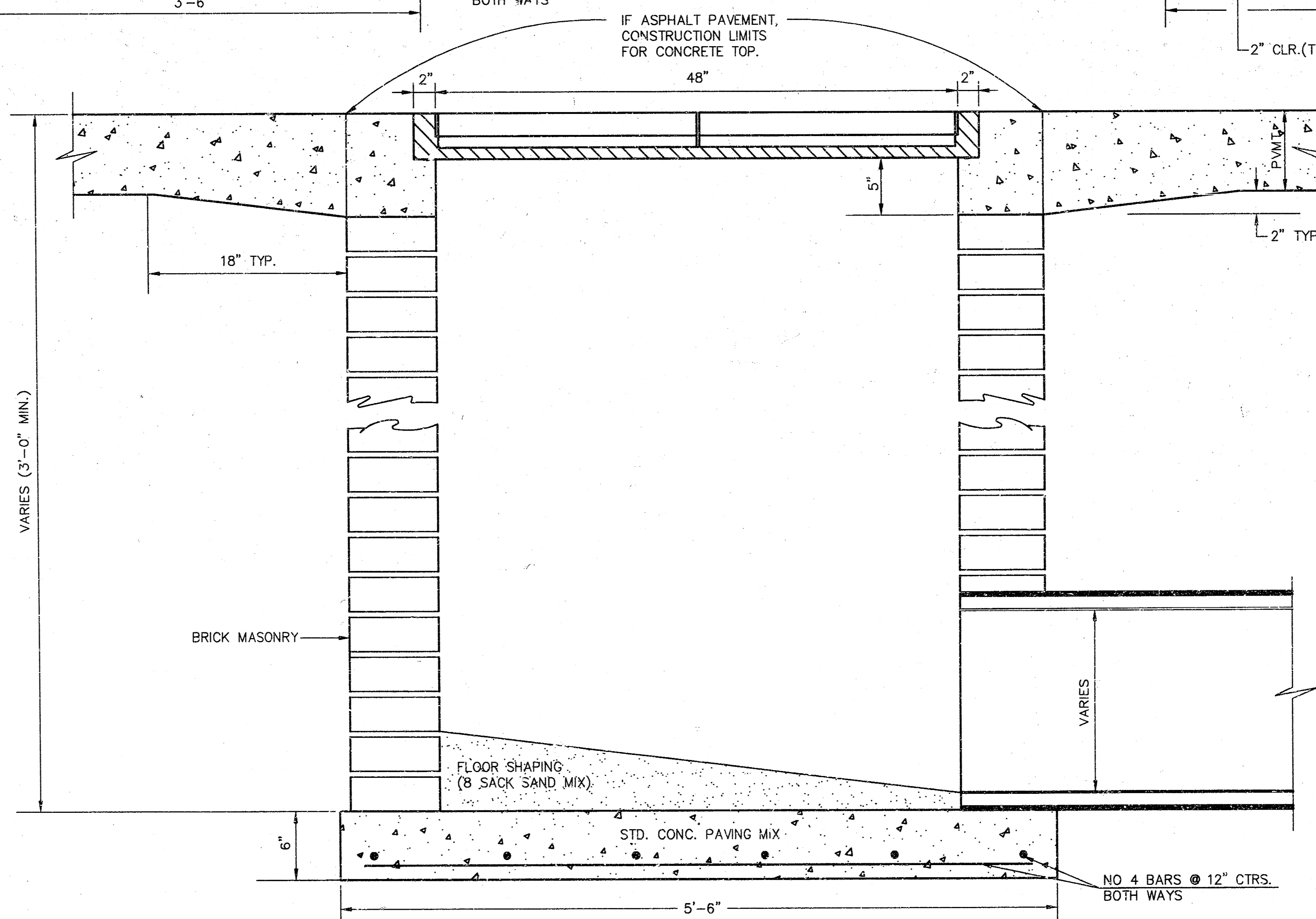
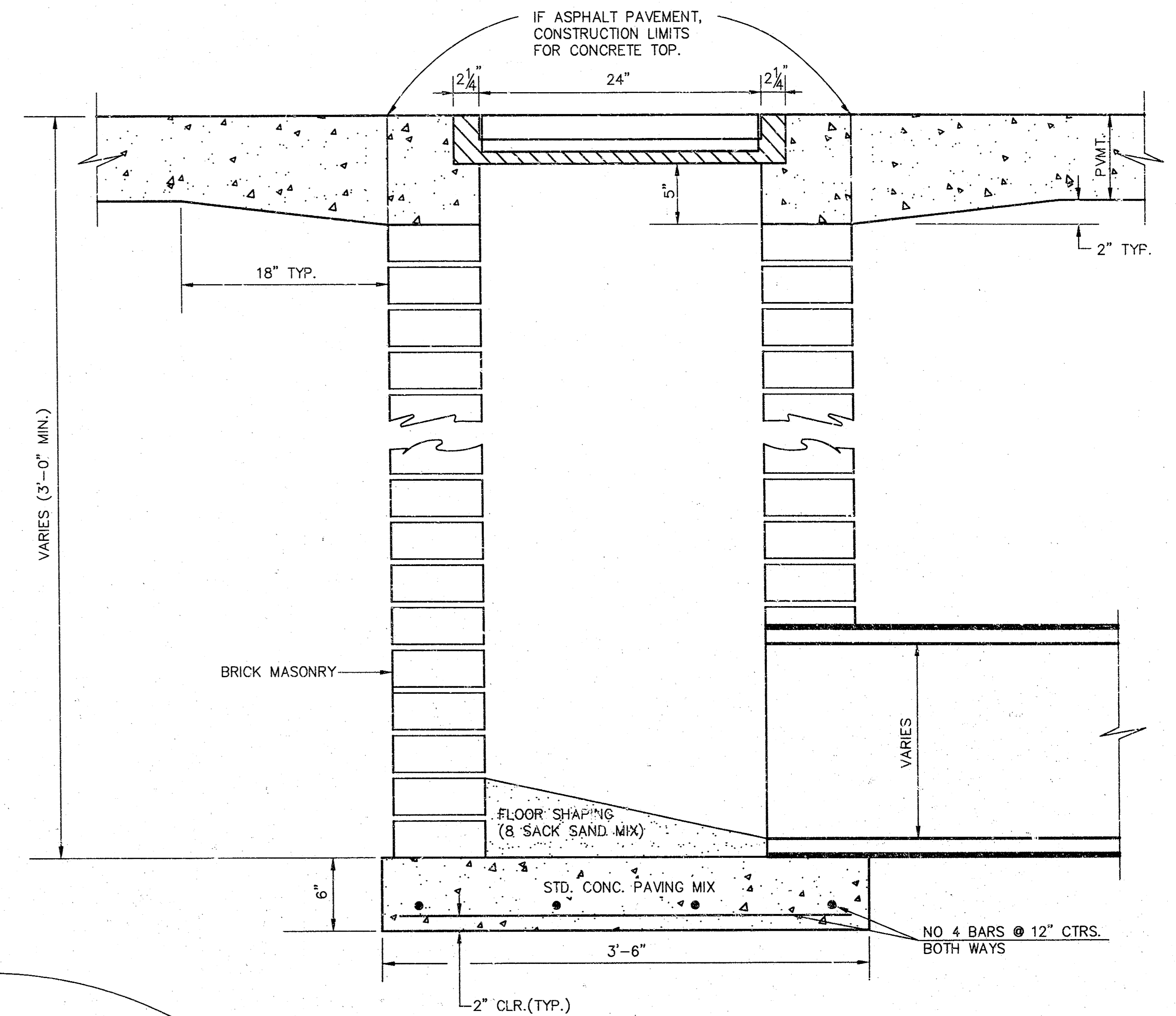
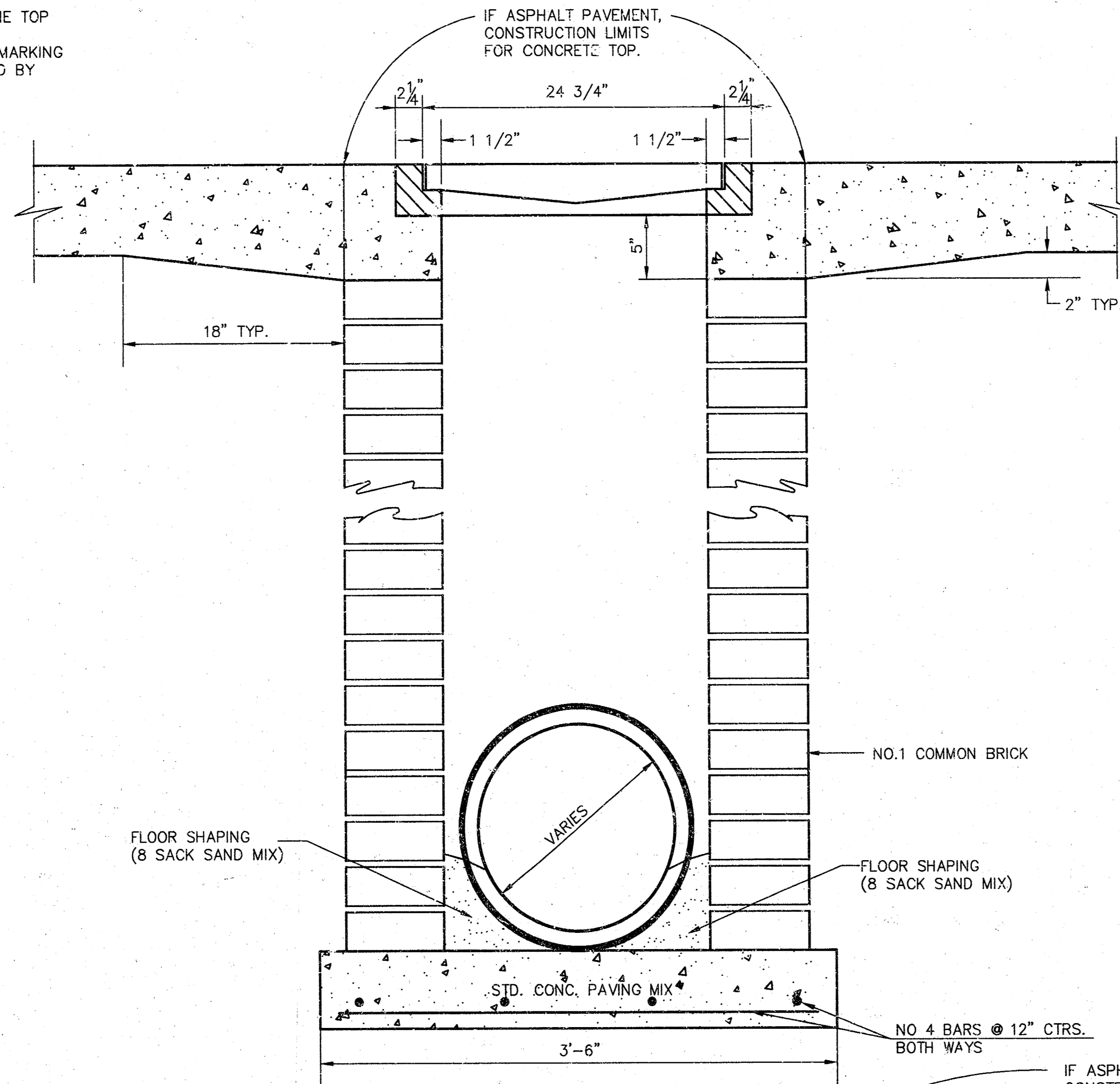
24"x24" GRATE DETAIL



SINGLE 24"x24" FRAME DETAIL



DOUBLE 24"x24" FRAME DETAIL



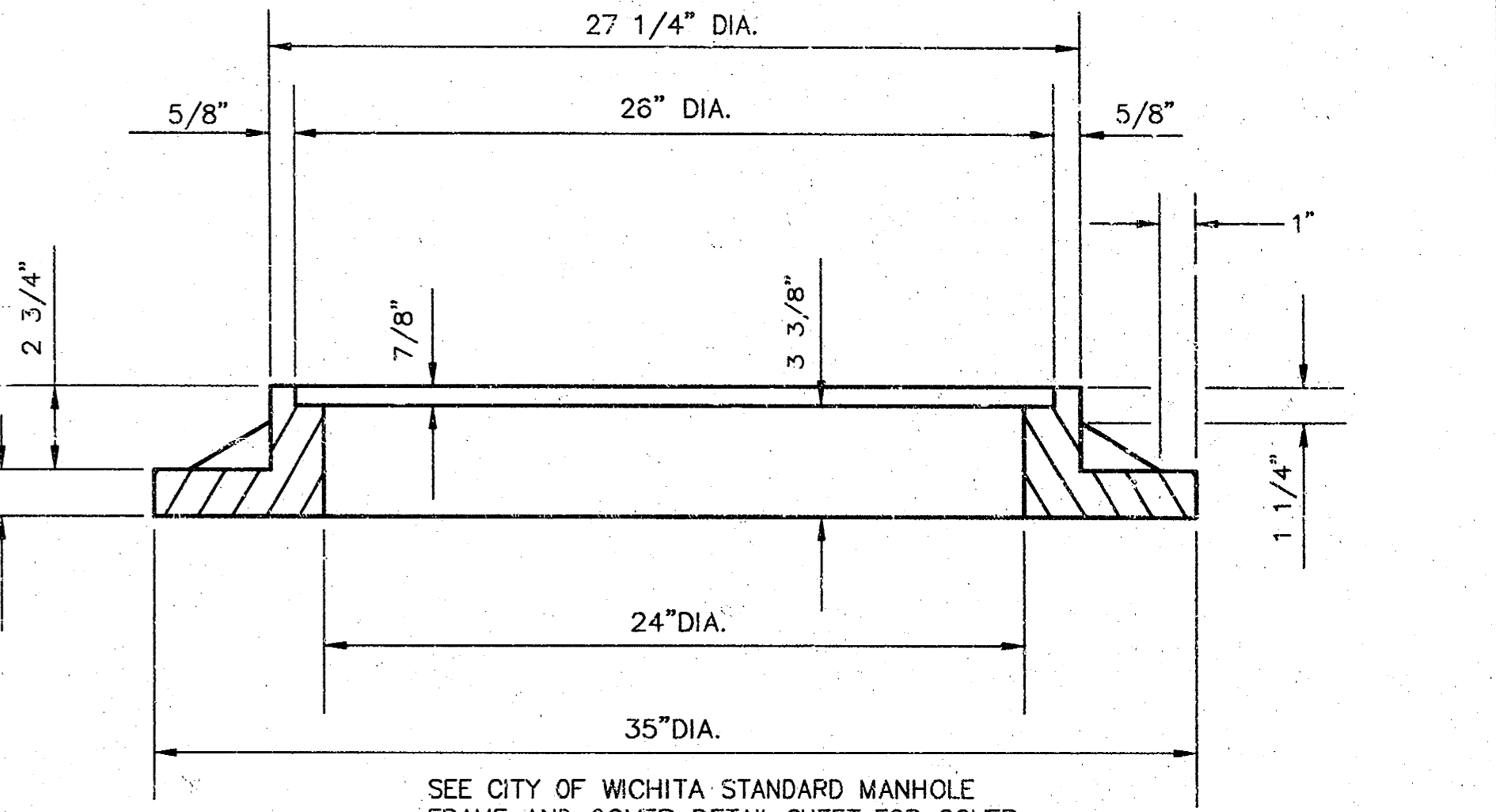
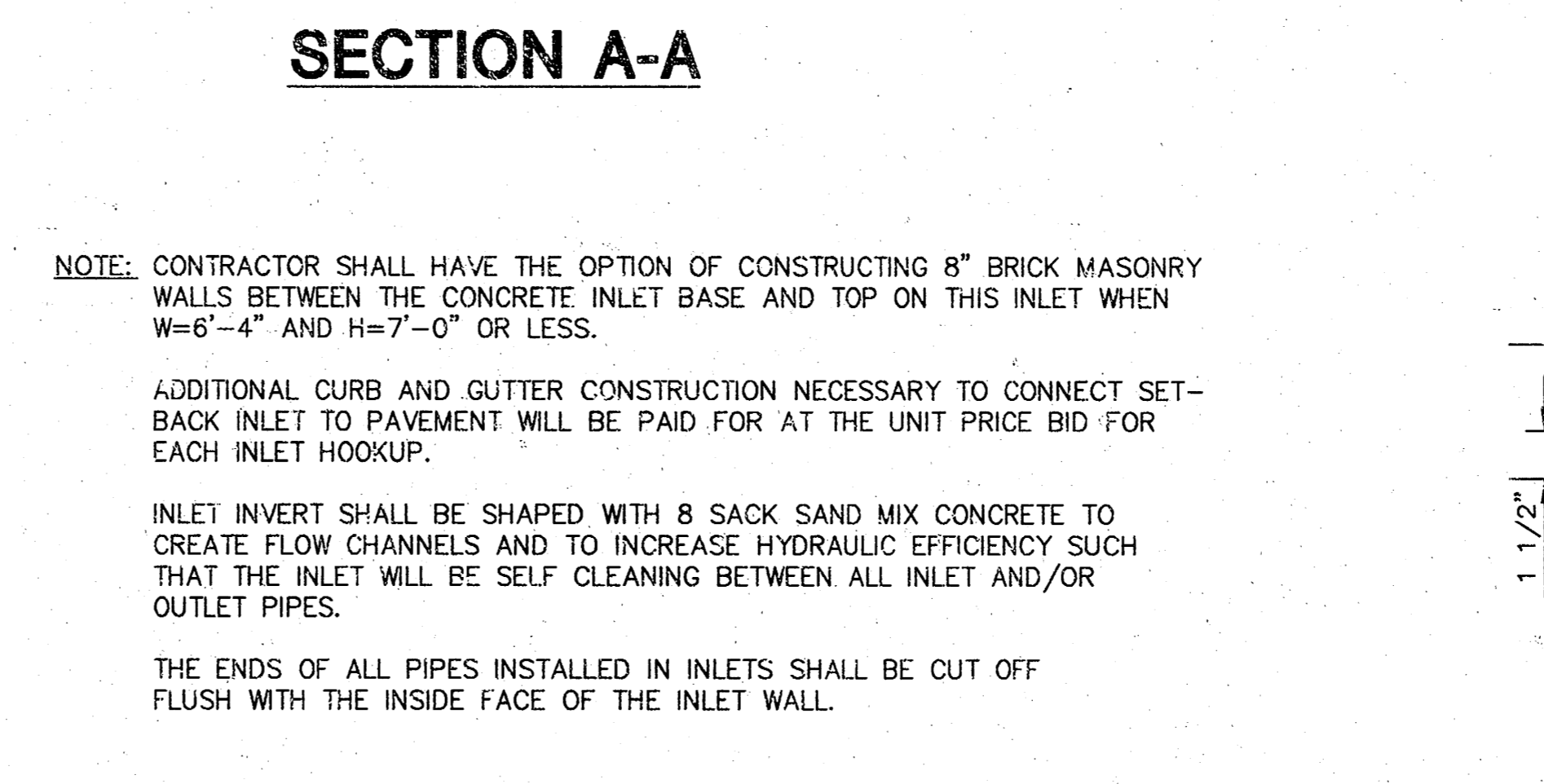
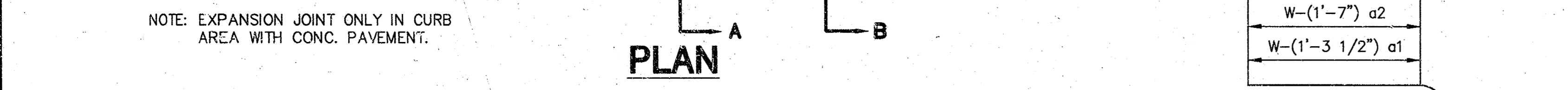
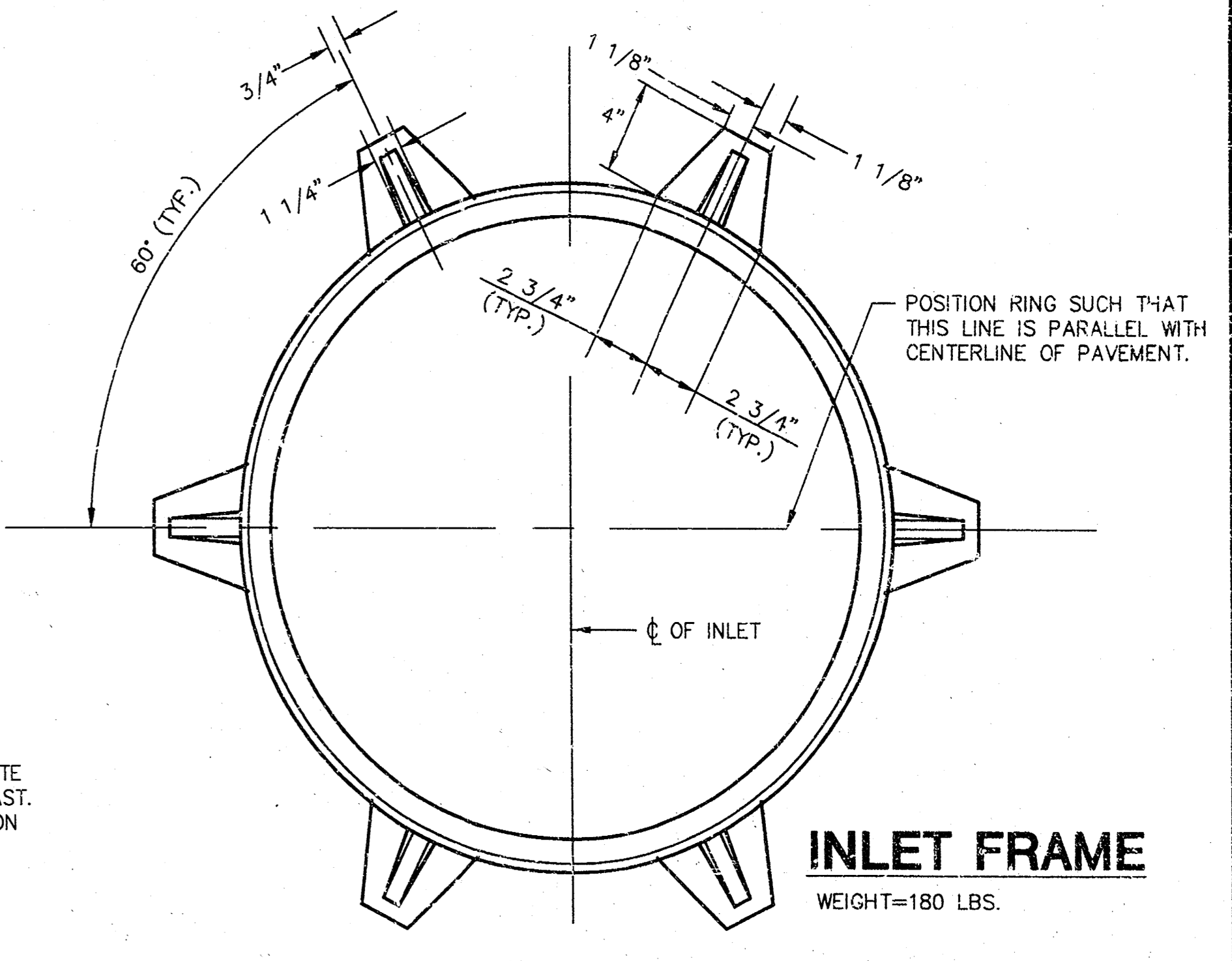
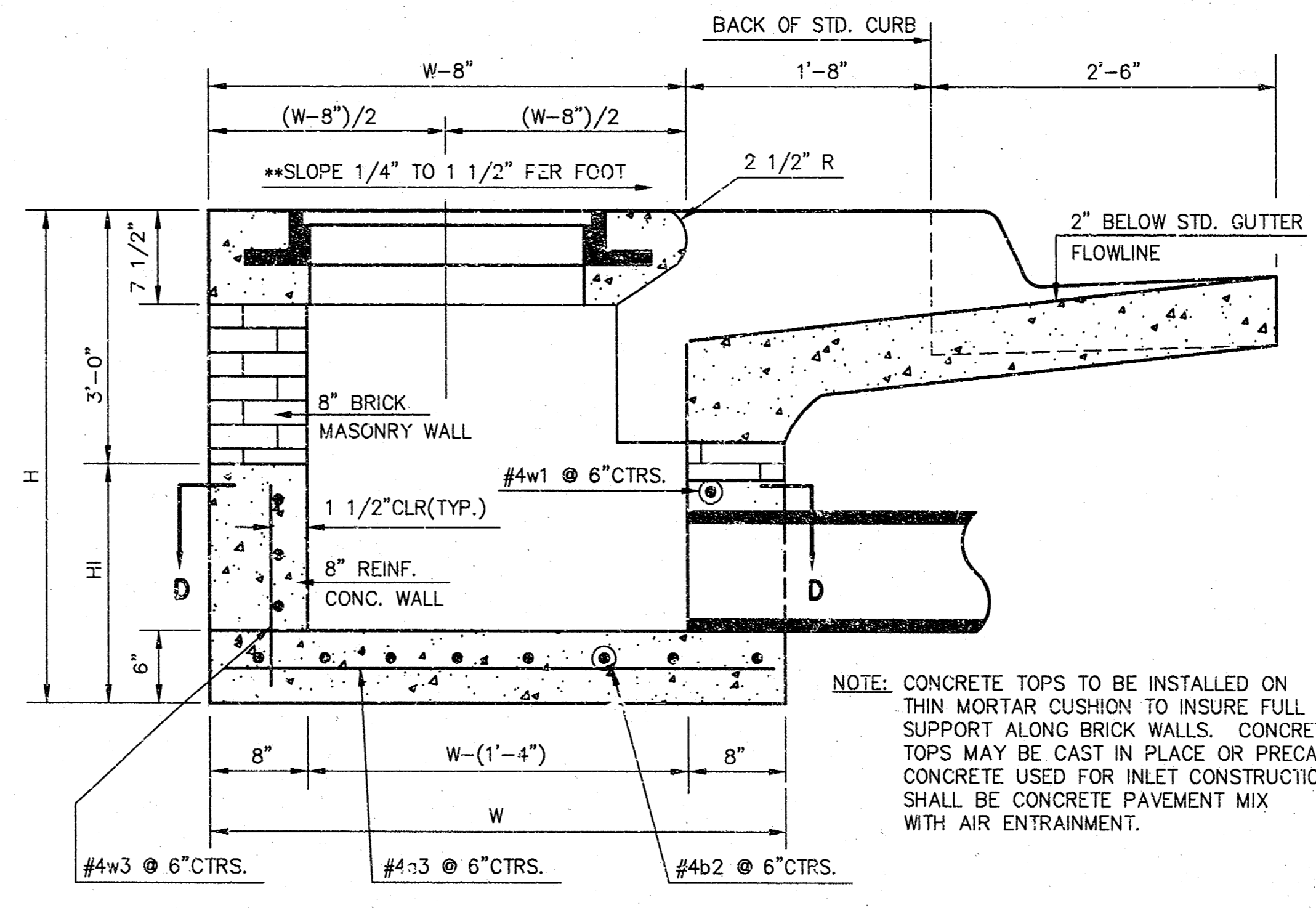
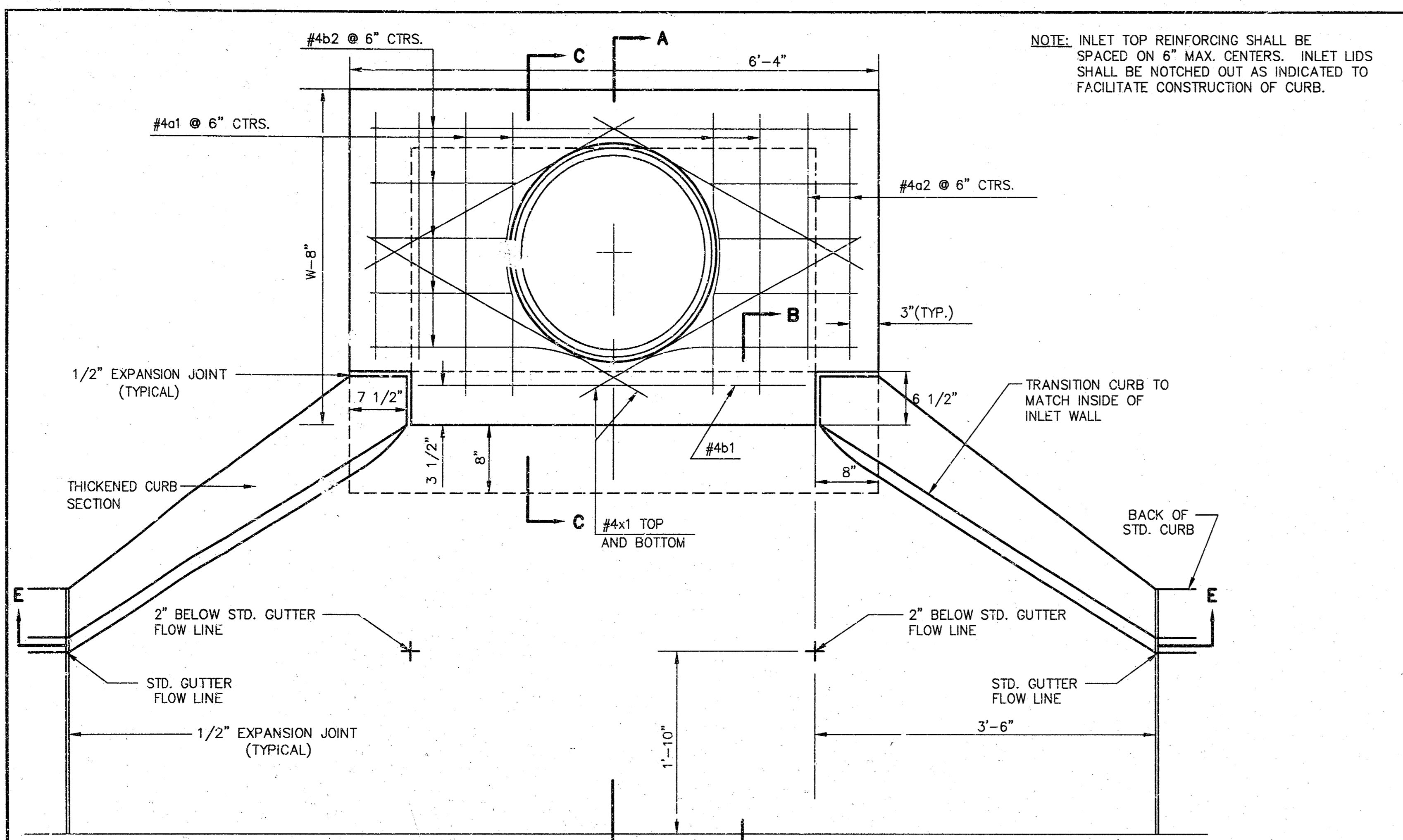
ORIFICE EQUATION		
$Q = C \cdot A \cdot \sqrt{2gh}$ C=0.60		
h (DEPTH)	#2433 (SINGLE)	#2434 (DOUBLE)
0.1	1.95 cfs	3.89 cfs
0.2	2.75 cfs	5.50 cfs
0.3	3.37 cfs	6.74 cfs
0.4	3.89 cfs	7.78 cfs
0.5	4.35 cfs	8.70 cfs
0.6	4.77 cfs	9.53 cfs
0.7	5.15 cfs	10.30 cfs
0.8	5.50 cfs	11.01 cfs
0.9	5.84 cfs	11.67 cfs
1.0	6.15 cfs	12.30 cfs

REVISED: 5-8-90 JN2

DROP INLET DETAILS

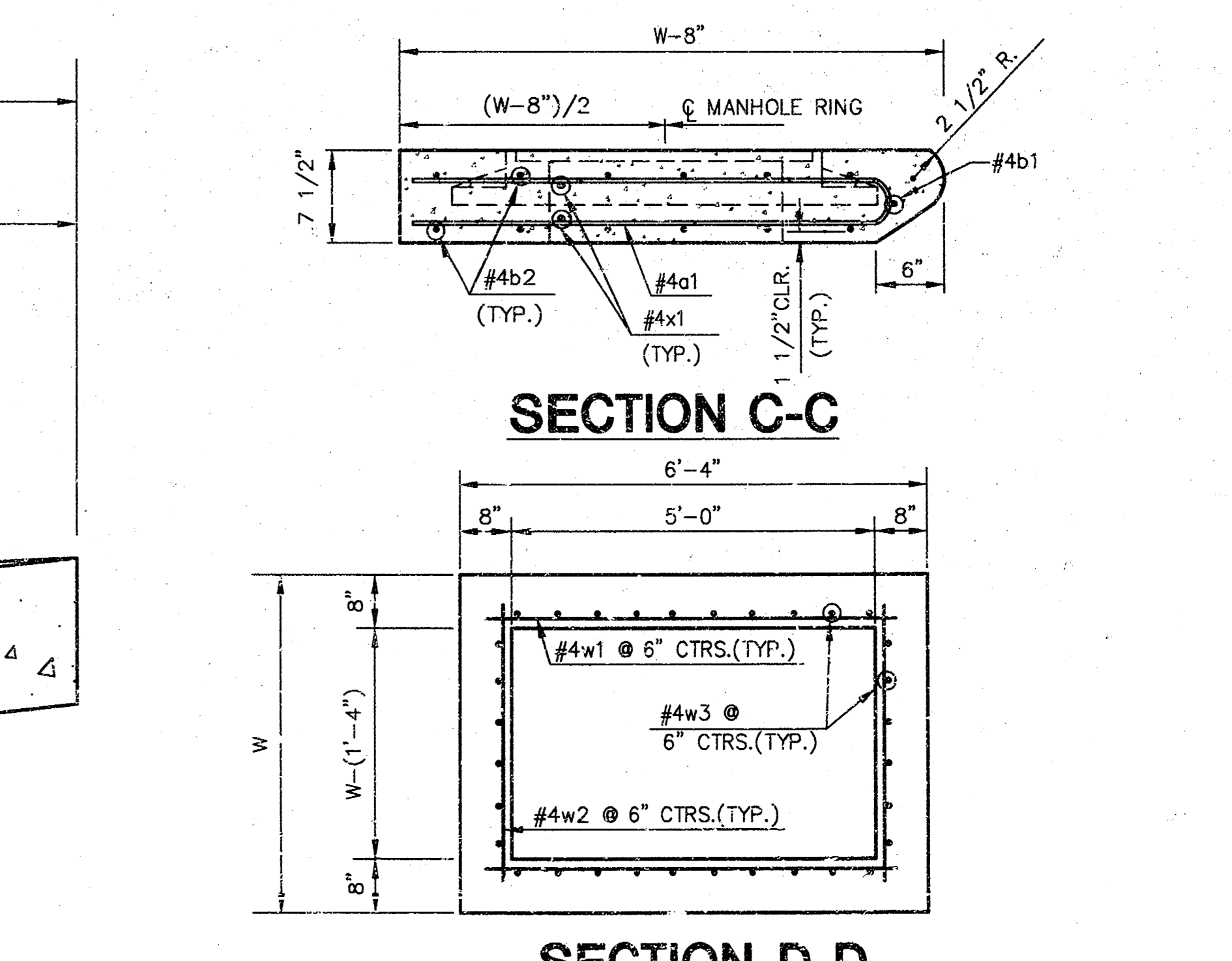
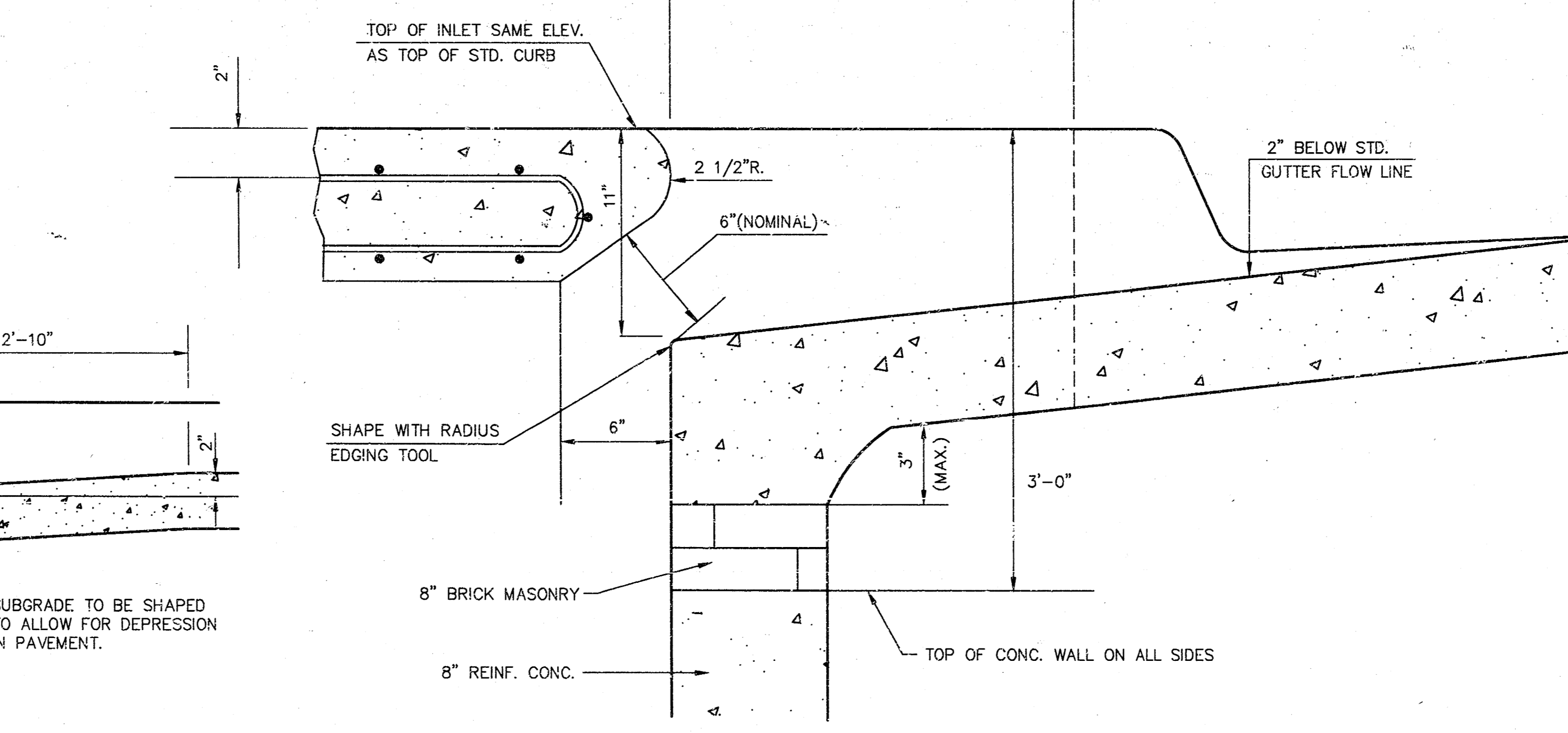
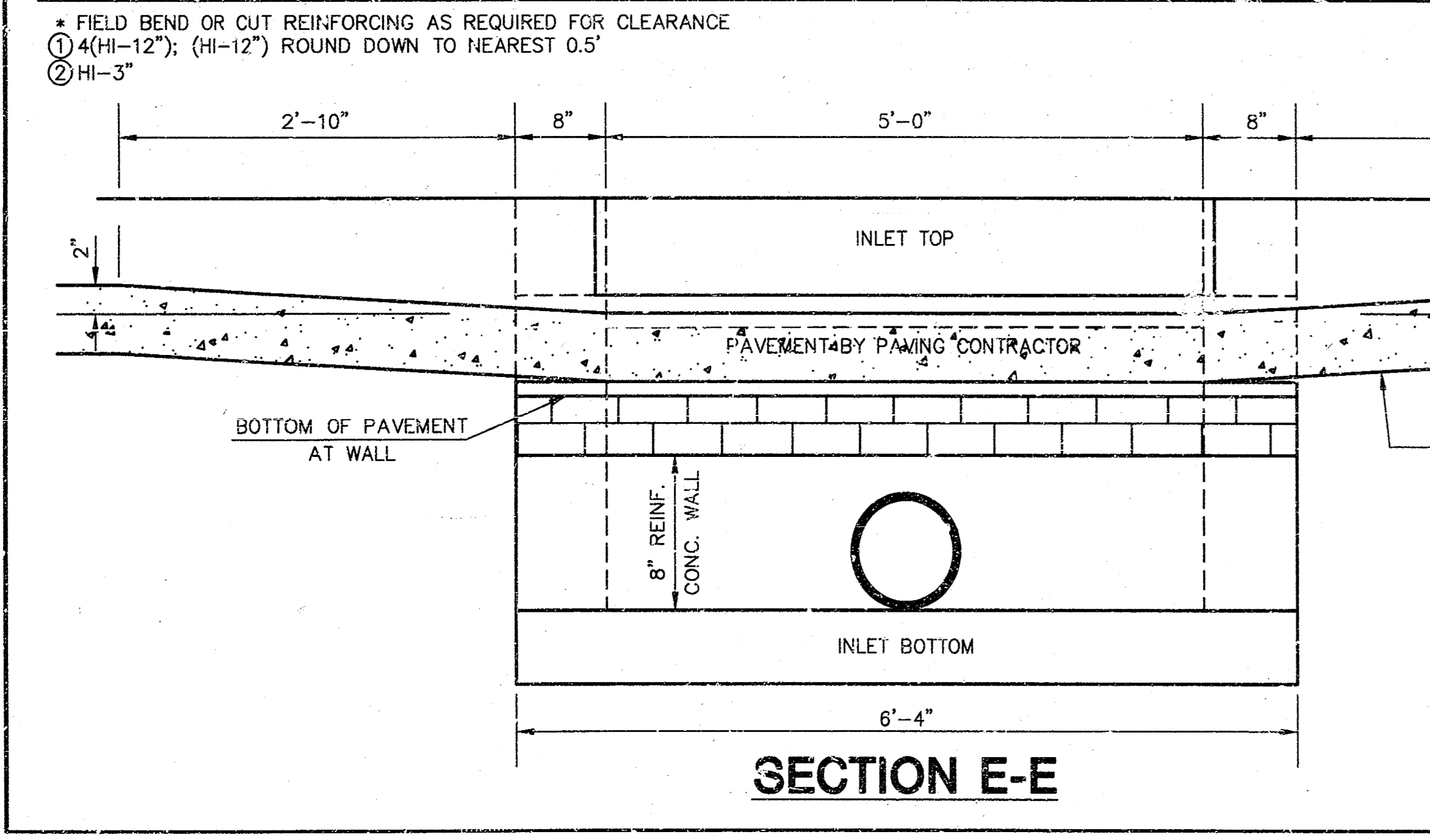
CITY OF WICHITA, KANSAS

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Drawn by	Date	Date	Job No. 970722D1	7



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"	6	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	5'-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"

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8"x6'-4"x7 1/2"	21" & SMALLER	.38±
5'-4"	4'-8"x6'-4"x7 1/2"	24" & 30"	.51±
6'-4"	5'-8"x6'-4"x7 1/2"	36" & 42"	.64±
7'-4"	6'-8"x6'-4"x7 1/2"	48" & 54"	.77±
8'-4"	7'-8"x6'-4"x7 1/2"	60" & 66"	.90±

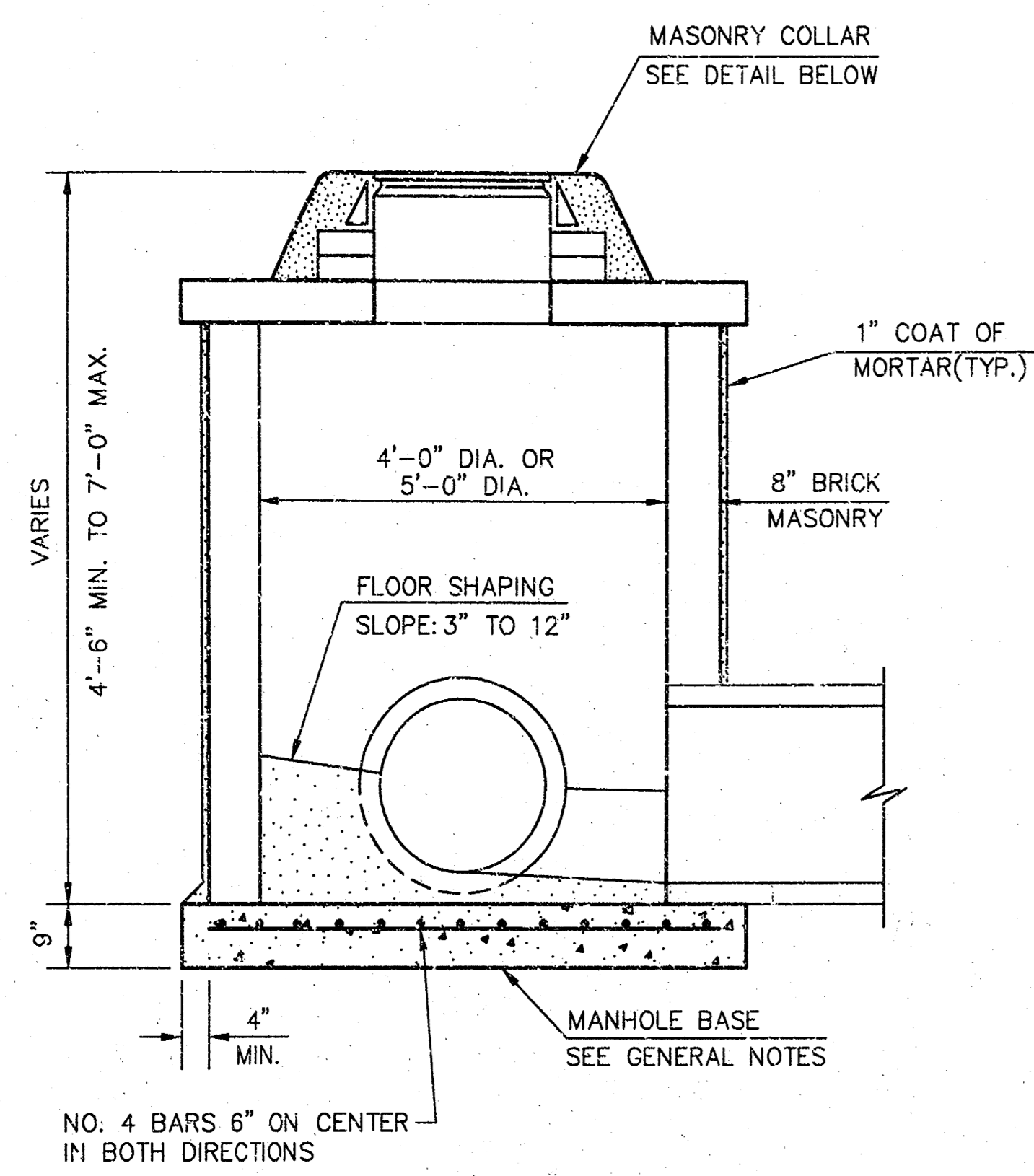


REVISID: 2-16-89 C.O.W.

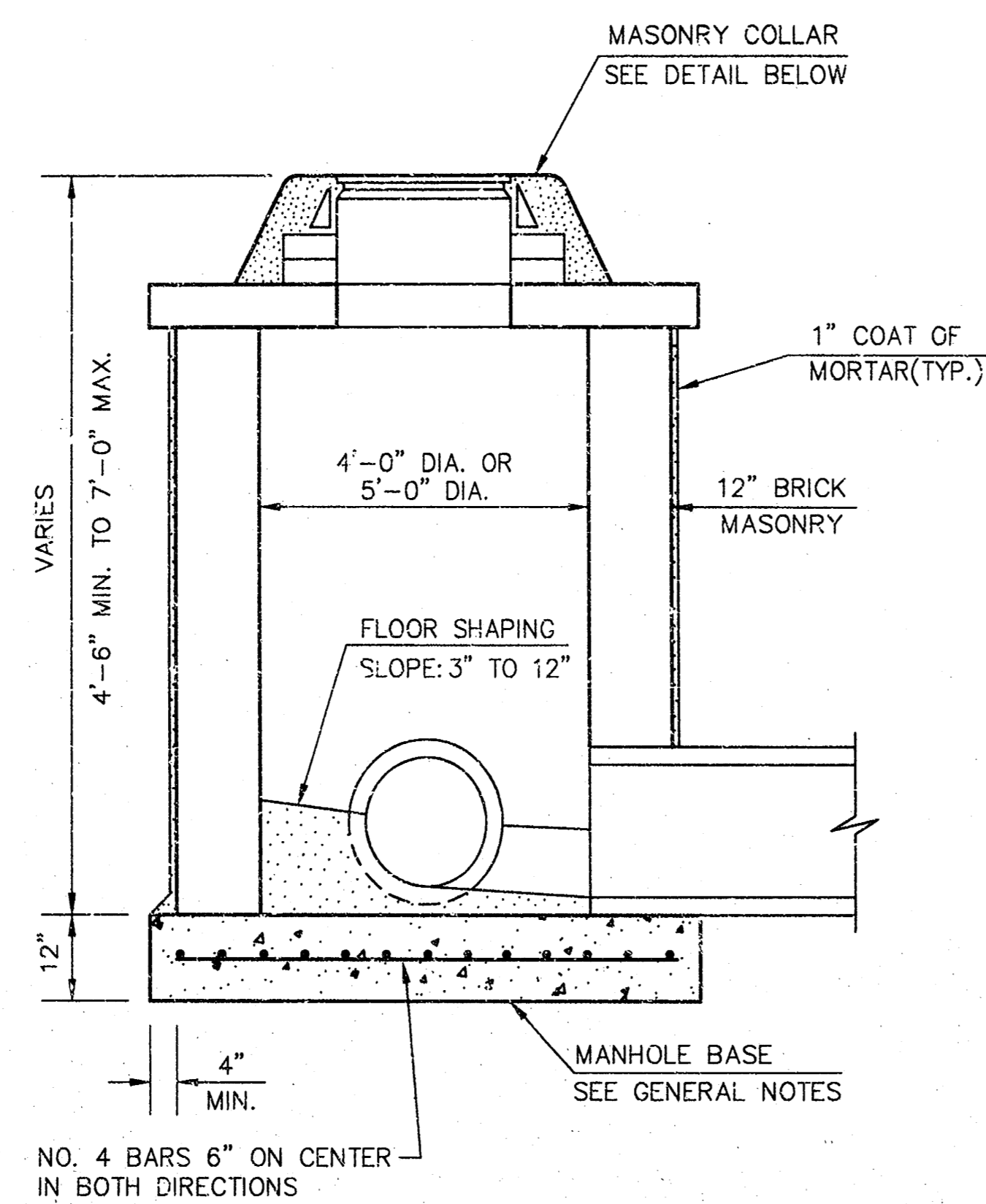
STANDARD TYPE 1A CURB INLET
INLET OPENING=6"x5'-0"

JUNE 1984
CITY OF WICHITA, KANSAS

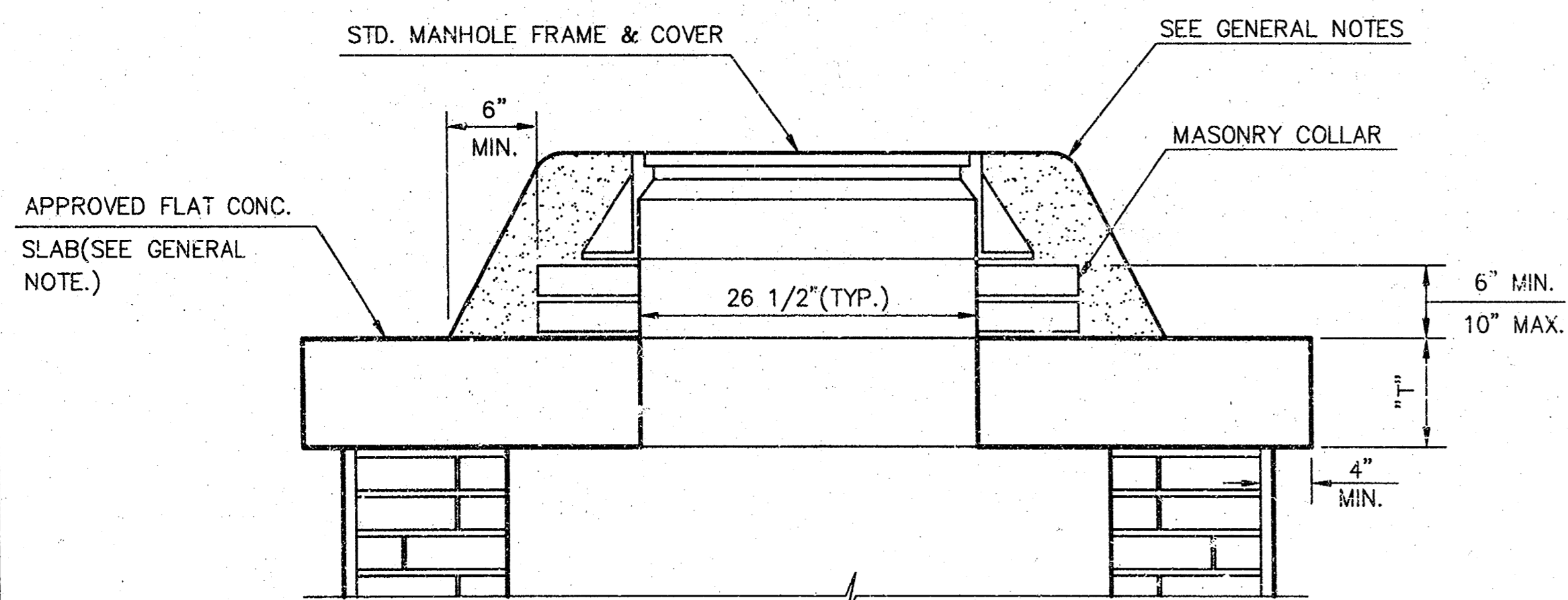
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Drawn by	Date	Date	
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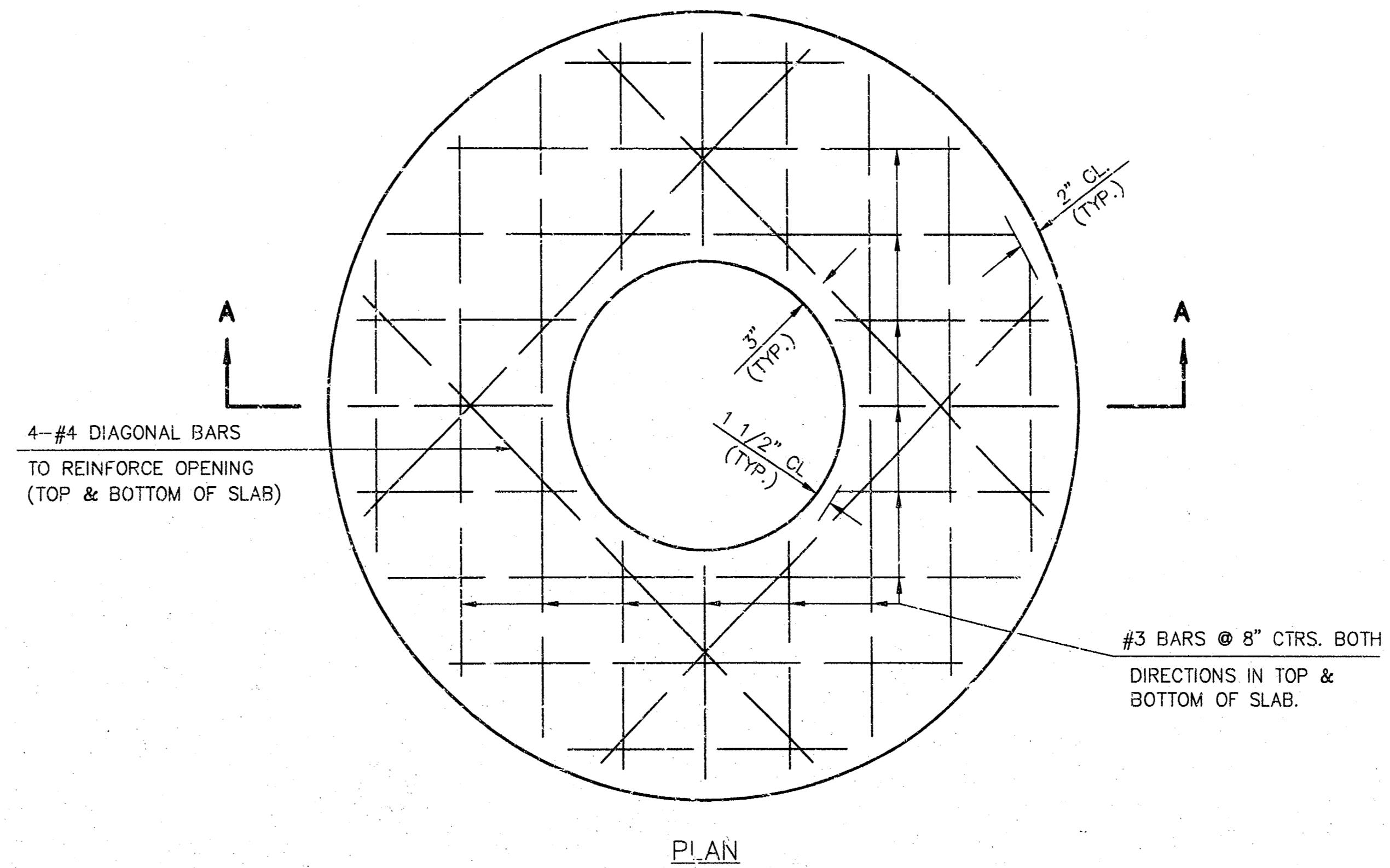
SHALLOW TYPE "A" MANHOLE



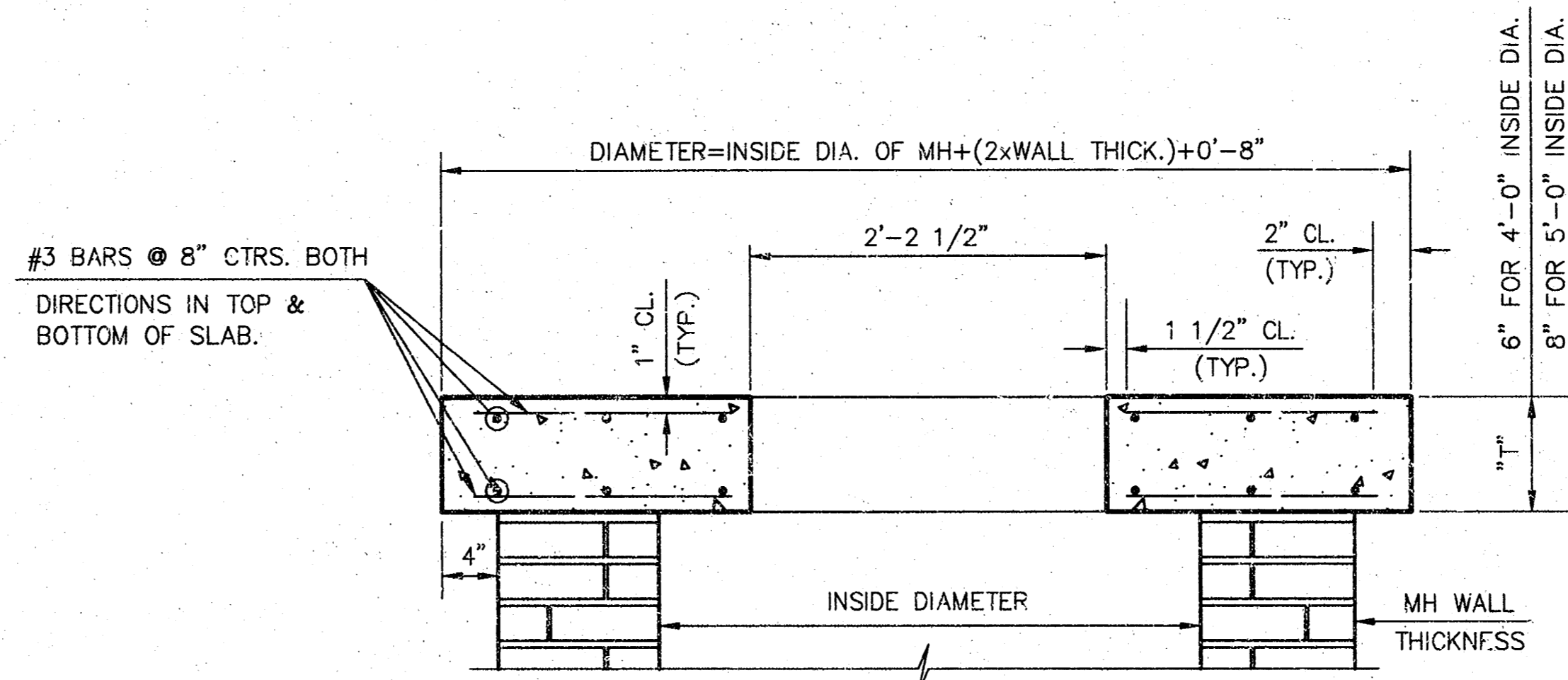
SHALLOW TYPE "B" MANHOLE



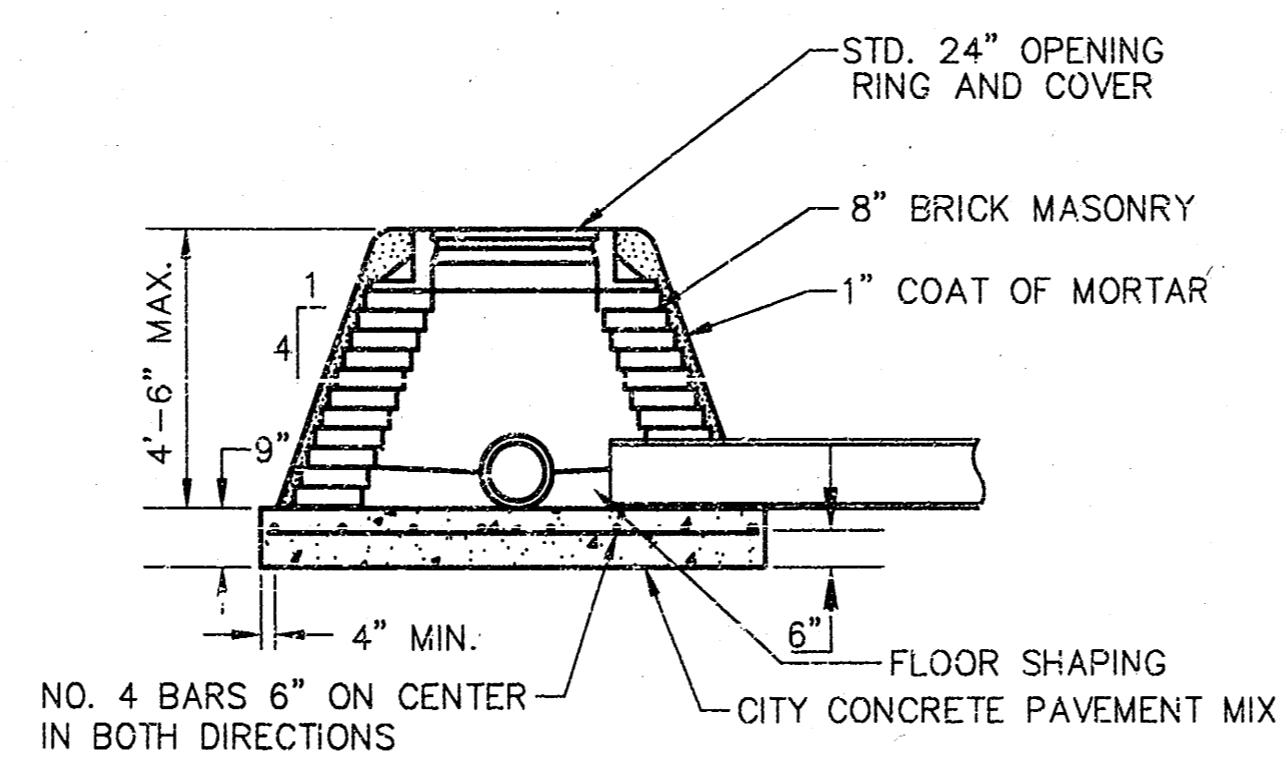
MASONRY COLLAR DETAIL



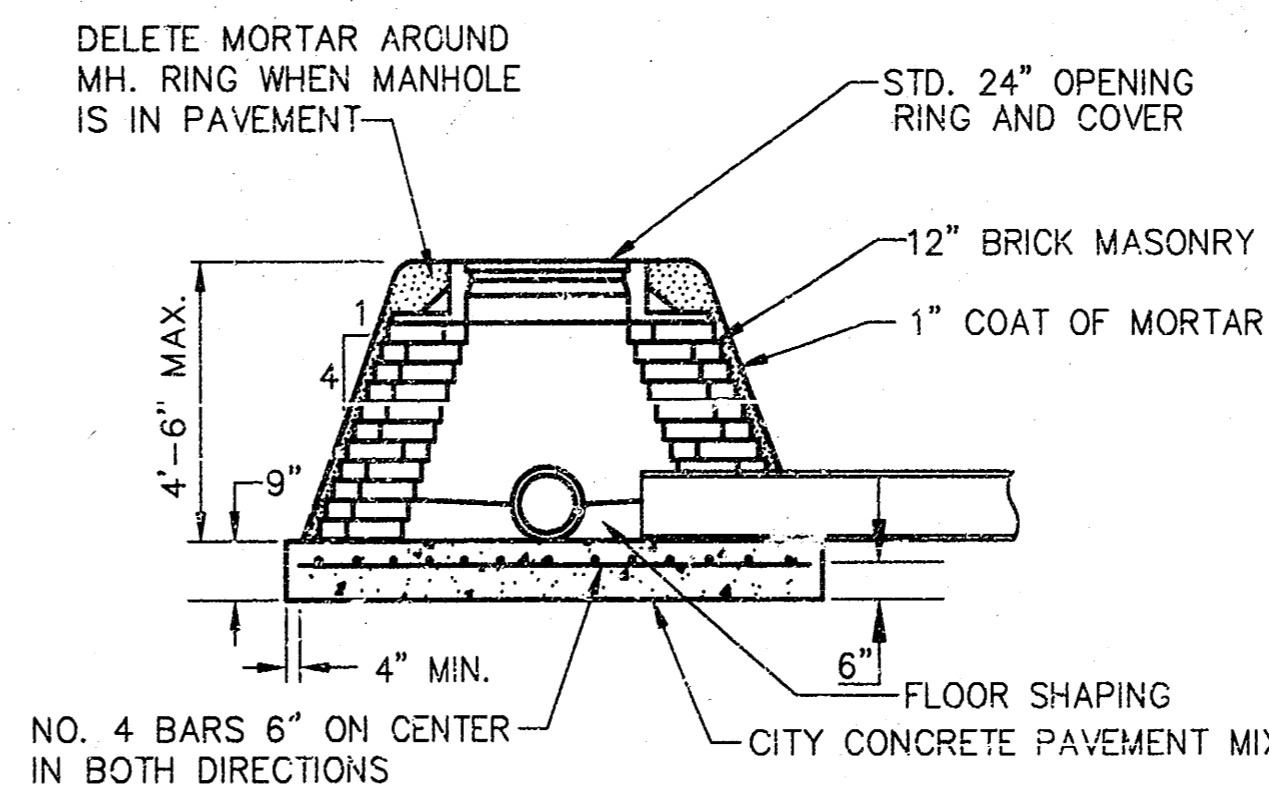
PLAN



FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

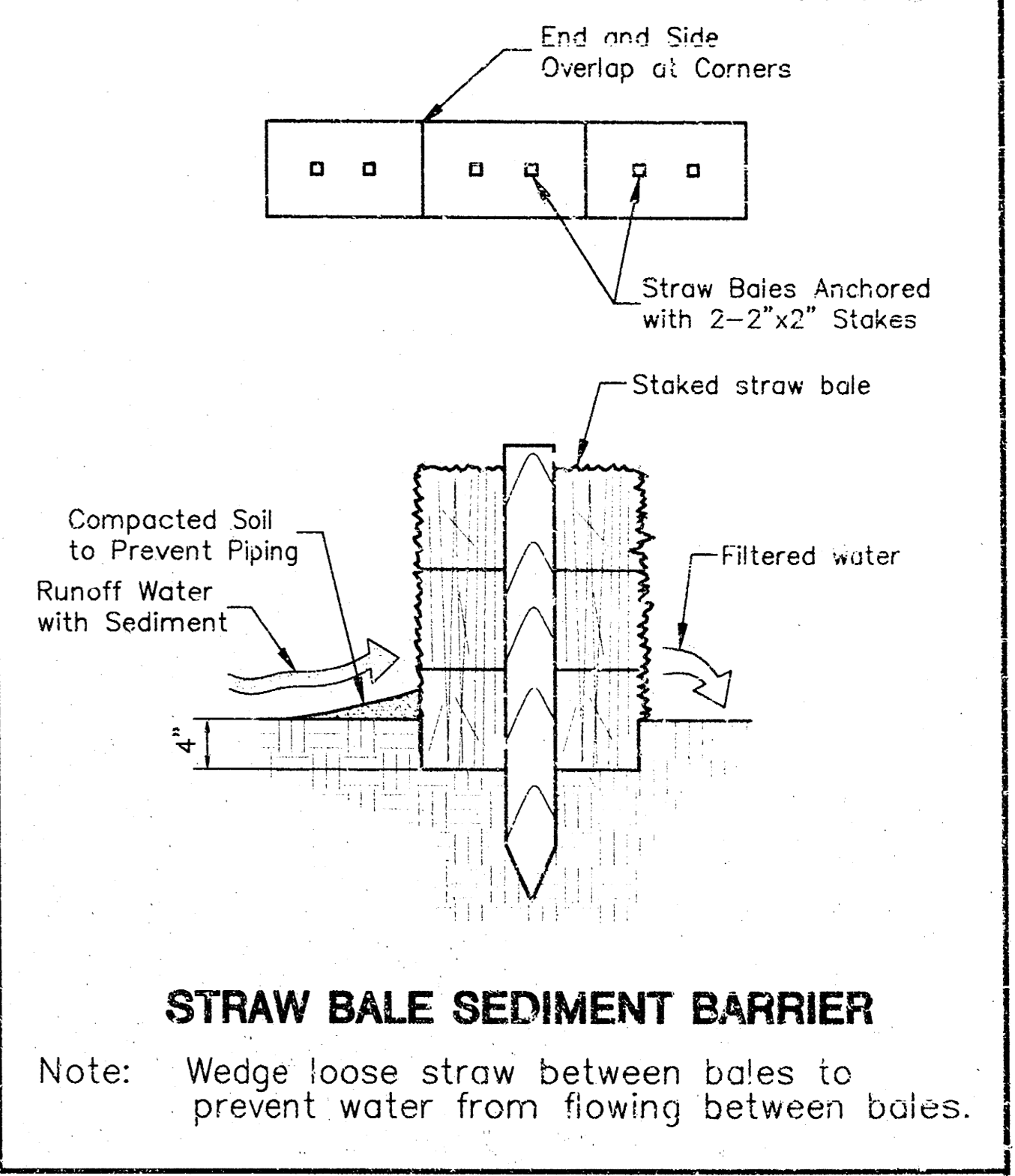
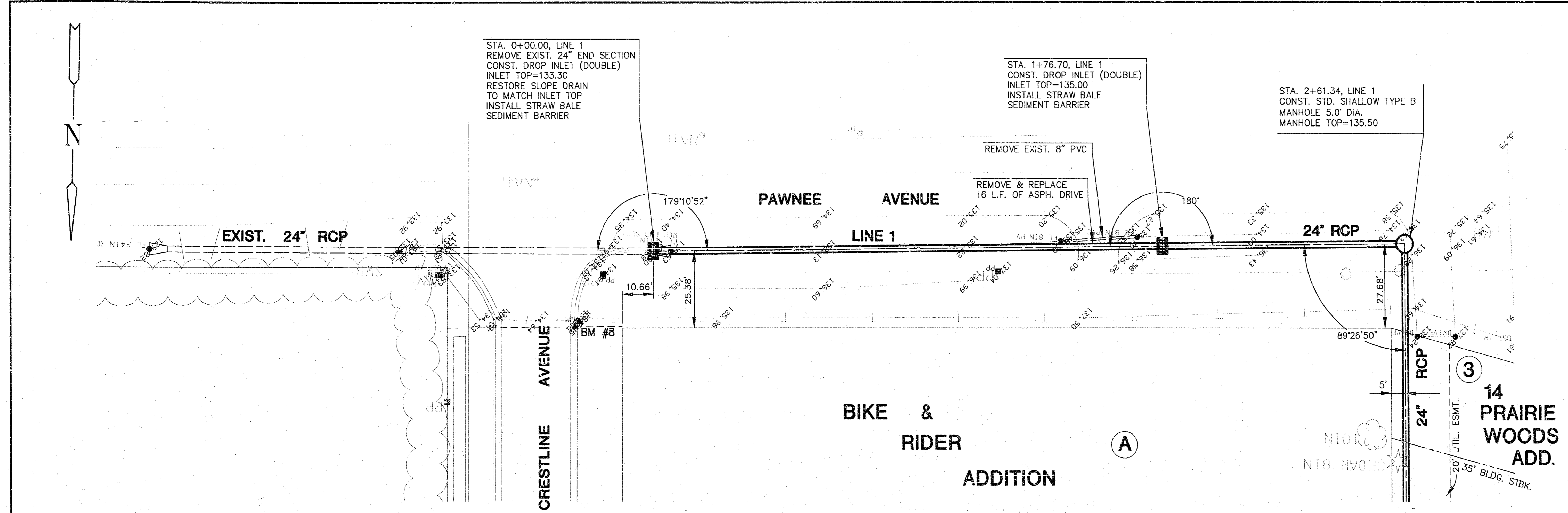
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE CEMENT MIX WITHOUT AIR ENTRAINING 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

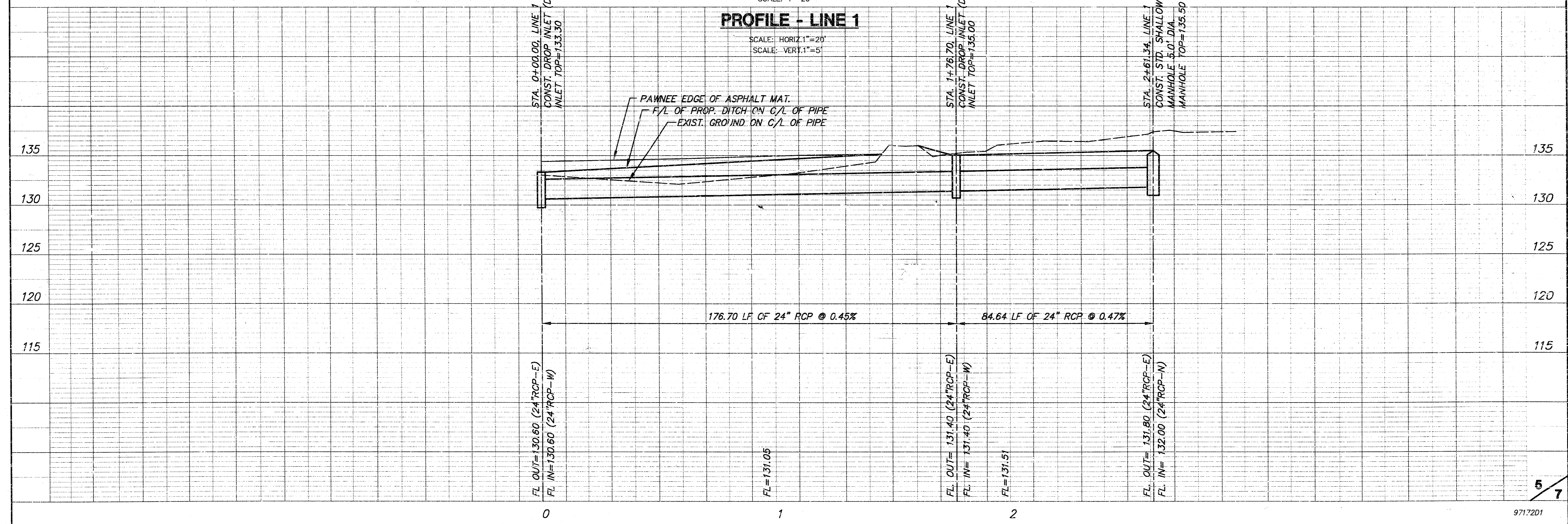
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Drawn by		Date	Date	Job No. 87172203 7

**PRAIRIE WOODS ADDITION
STORM WATER DRAINAGE
PHASE 2
PROJ. #468-82468**

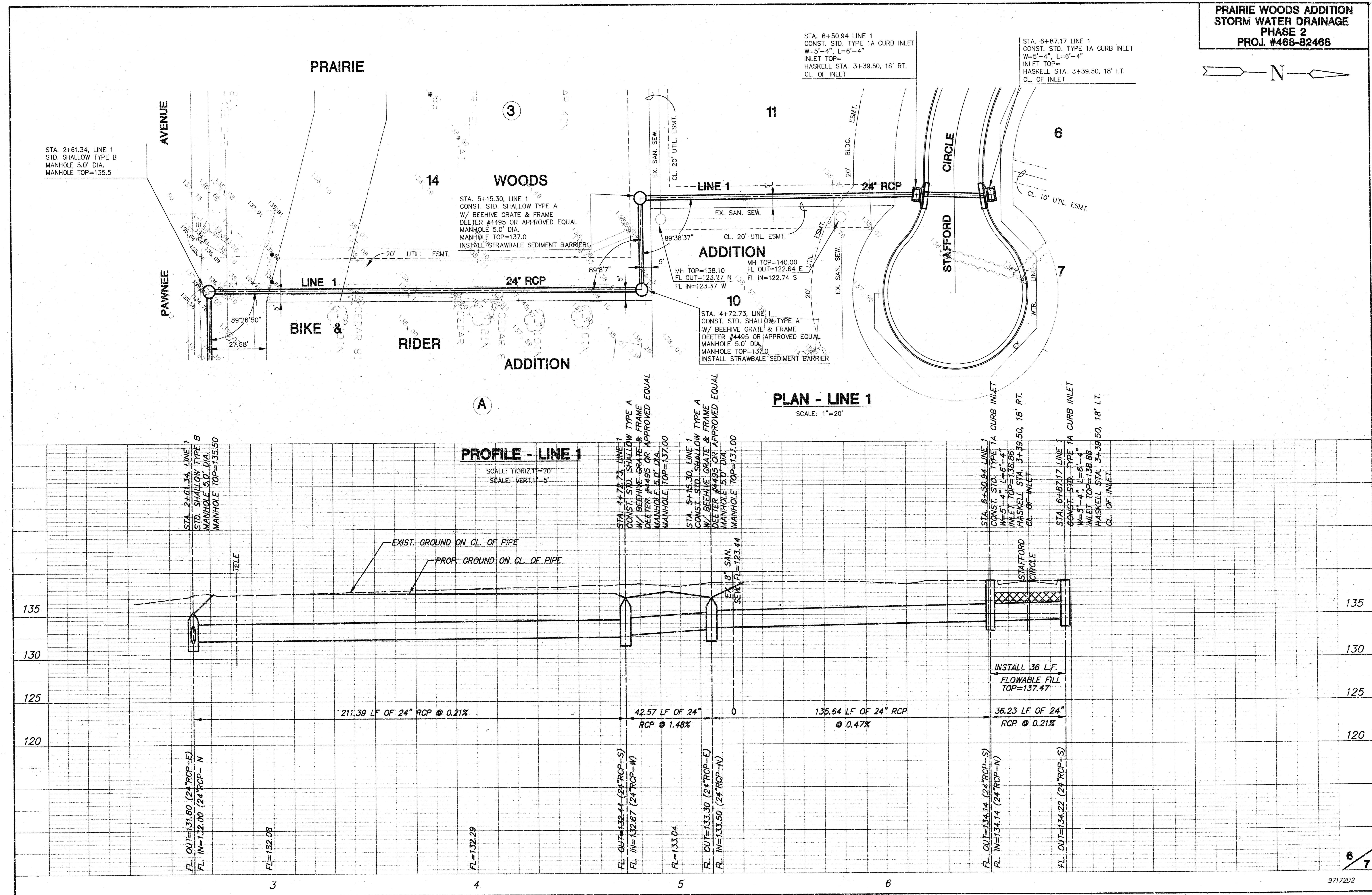


PLAN - LINE 1
SCALE: 1"=20'

PROFILE - LINE 1
SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



**PRAIRIE WOODS ADDITION
STORM WATER DRAINAGE
PHASE 2
PROJ. #468-82468**



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