

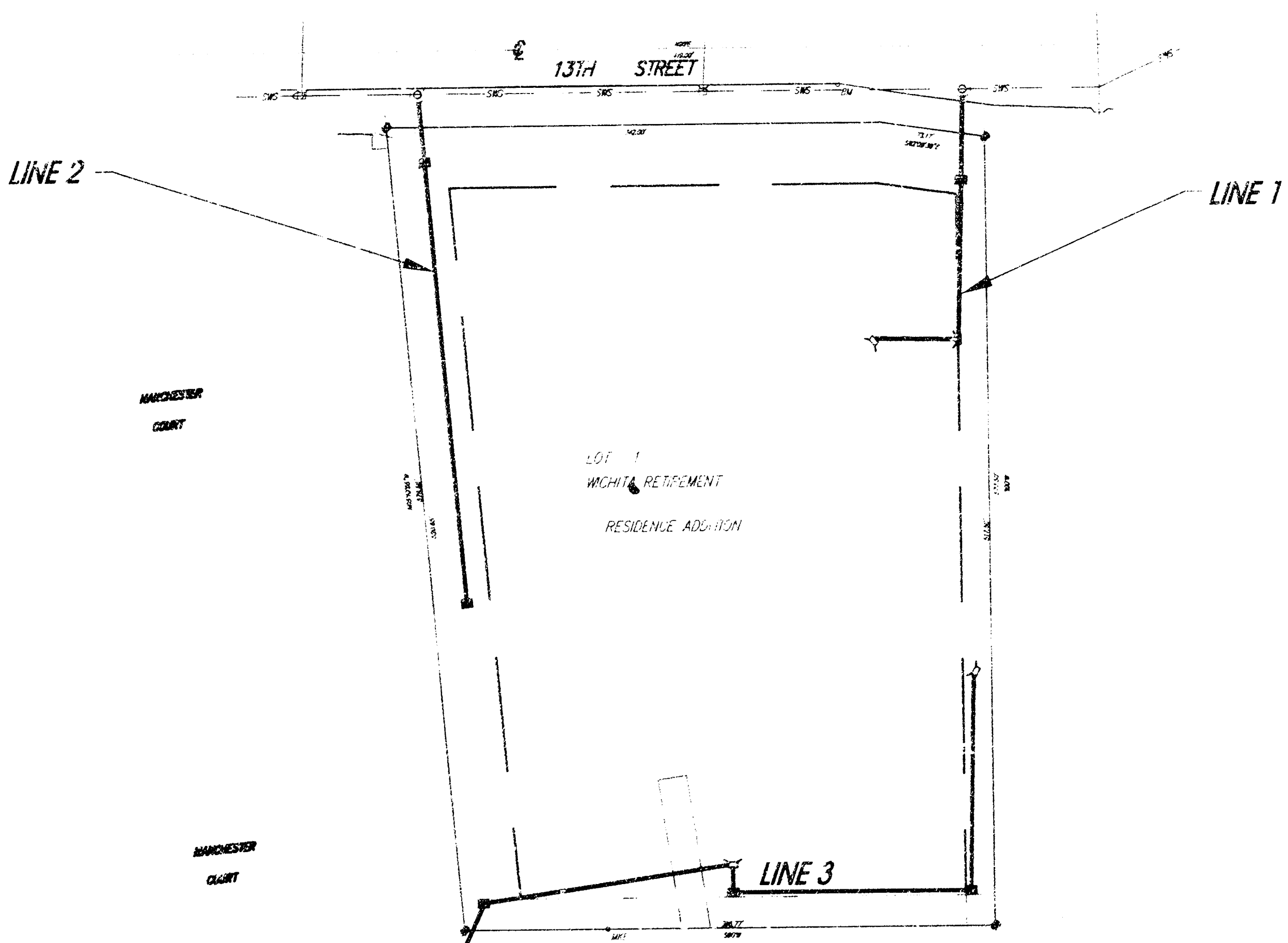
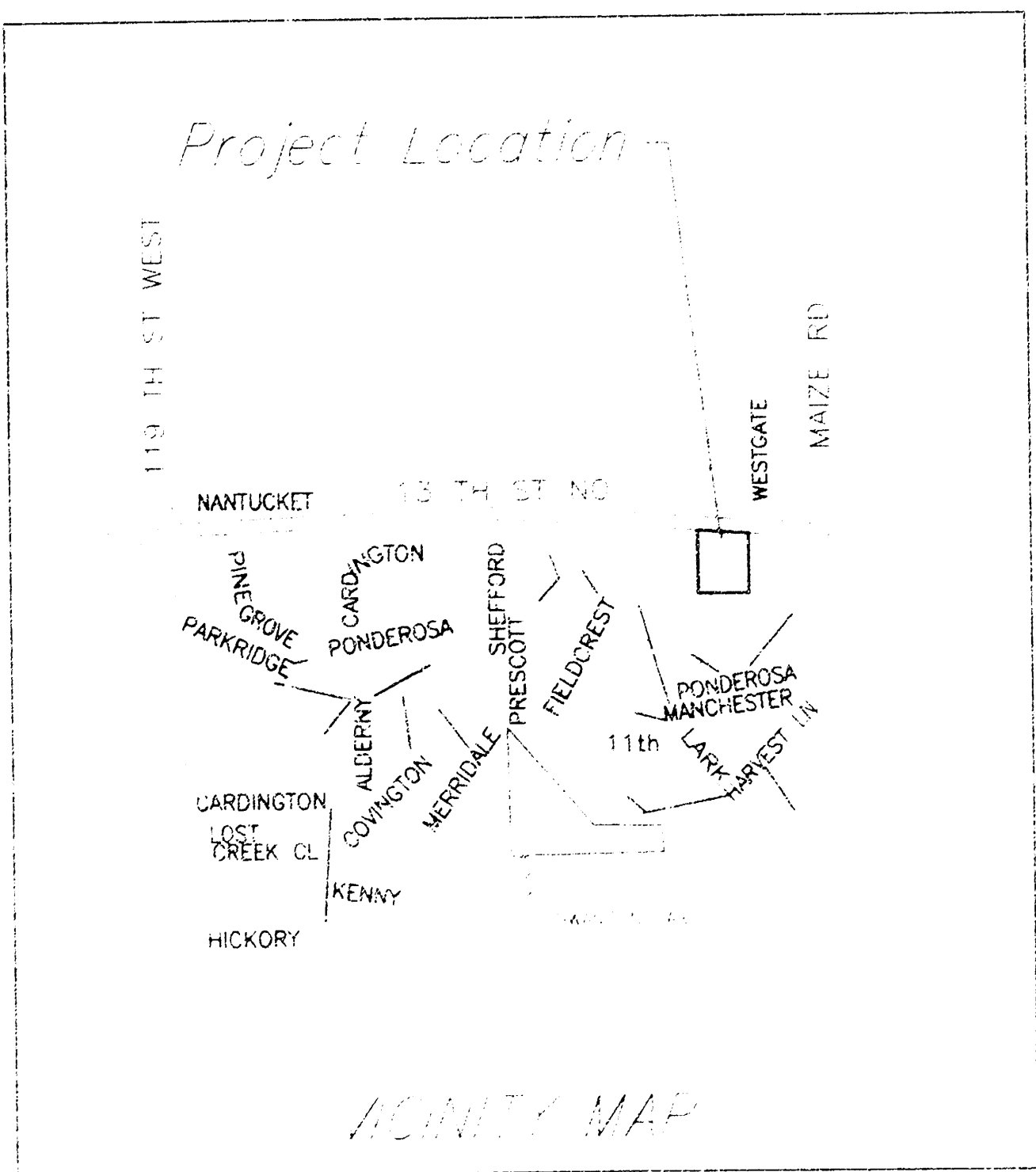
PRIVATE STORM WATER SEWER TO SERVE LOTS 1, WICHITA RETIREMENT RESIDENCE ADDITION PROJECT NO. : 951 PPS OCA NO.: 607861

GENERAL NOTES

- 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	687-2470
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- The Contractor must notify the following in case of an emergency:

Cablevision	262-4270 or 263-2061
Kansas Gas Service	383-8650
K.G.E. Electric	323-8600
Peoples Natural Gas Company	942-8350 or 263-8161
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4908
City of Wichita Sewer Maintenance	268-4071
- Two-way traffic on 13th Street North to remain open at all times.
- Existing utilities and their location, 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 Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- The Contractor shall give all property owners and/or tenants of developed property directly abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.
- 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.
- The Contractor shall obtain the necessary permits from the Office of Central Inspection prior to any roof drain hook-up to the storm water sewer system.
- All work on this project to be in accordance with City of Wichita Standard Specifications dated March 1998.



BENCH MARKS

BENCH MARK: CITY OF WICHITA STANDARD
DISC N.W. COR. OF INTERSECTION OF MAIZE
P. & 13TH ST. N. 109.5' N. & 71' W. OF
INTERSECTION OF CENTERLINE OF BOTH
ELEV.=1347.42 NGVD

ON SITE B.M. "O" CUT ON TOP OF CURB
101.4' N. & 25.4' N. OF N.E. COR. OF LOT 1,
WICHITA RETIREMENT RESIDENCE ADDITION.
ELEV.=1345.80 NGVD

INDEX OF SHEETS

- TITLE SHEET
- LINE 1 - PLAN & PROFILE
- LINE 2 - PLAN & PROFILE
- LINE 3 - PLAN & PROFILE
- STANDARD/SPECIAL SHALLOW MANHOLES
TYPE 'A' & 'B'
- SHALLOW MANHOLES - TYPE 'P' & 'C'
- STANDARD TYPE 1A CURB INLET

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Storm Sewers VRH 3/14/00

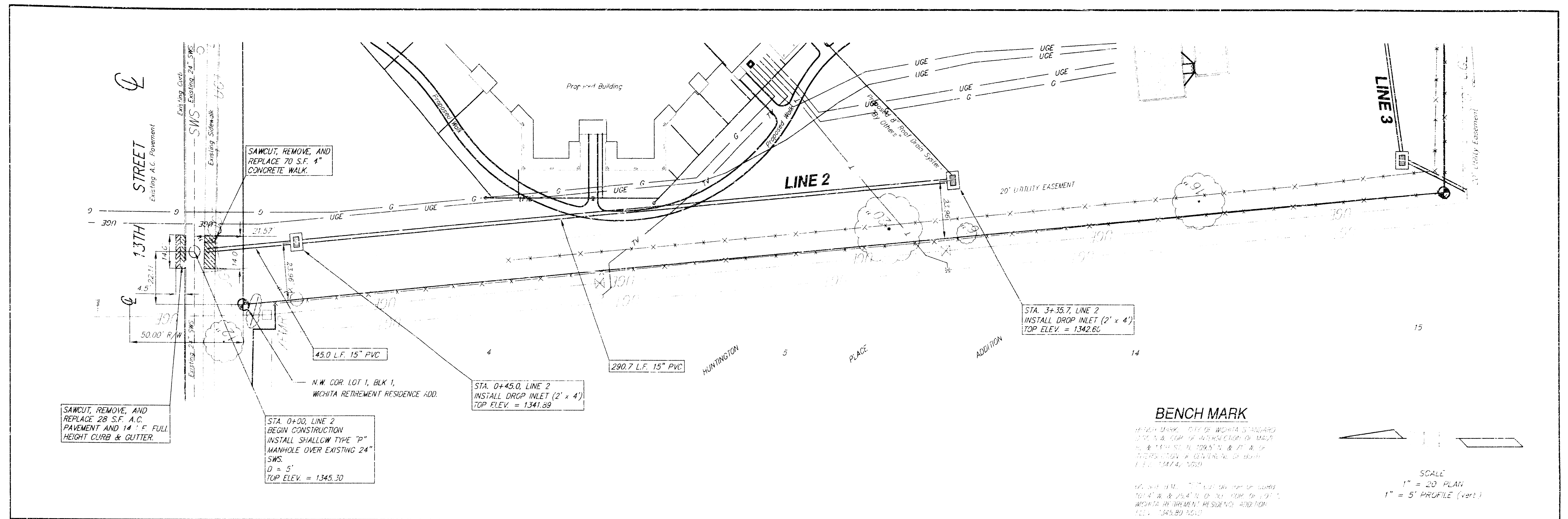
NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. 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 without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

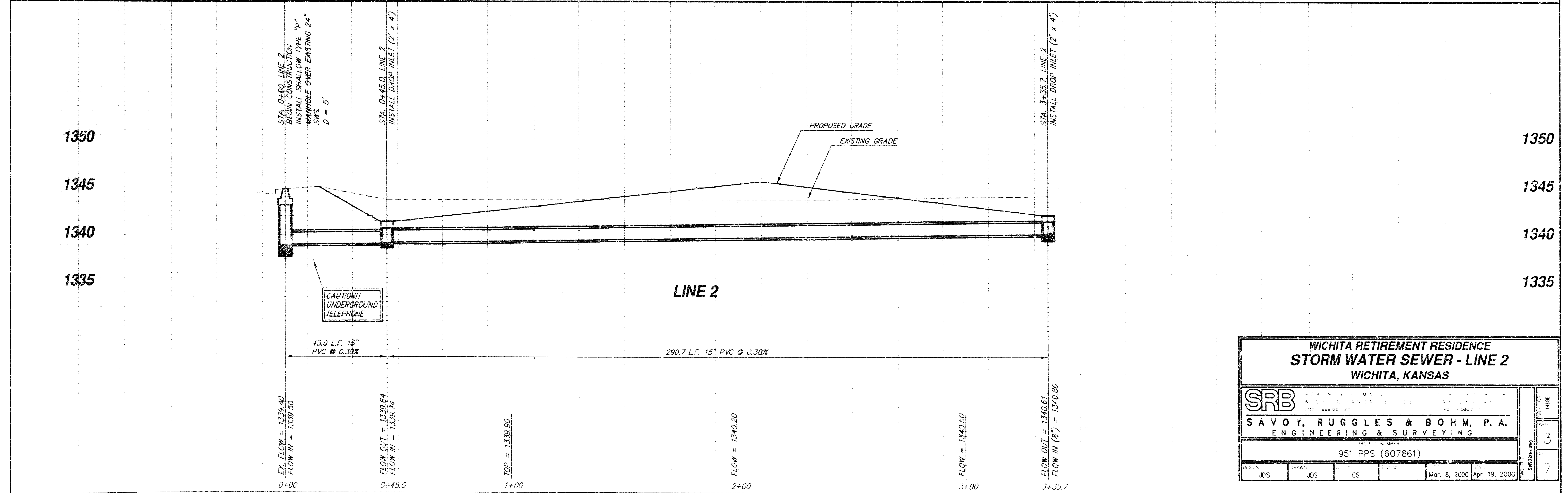
AS-BUILT: AUGUST 17, 2000

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER

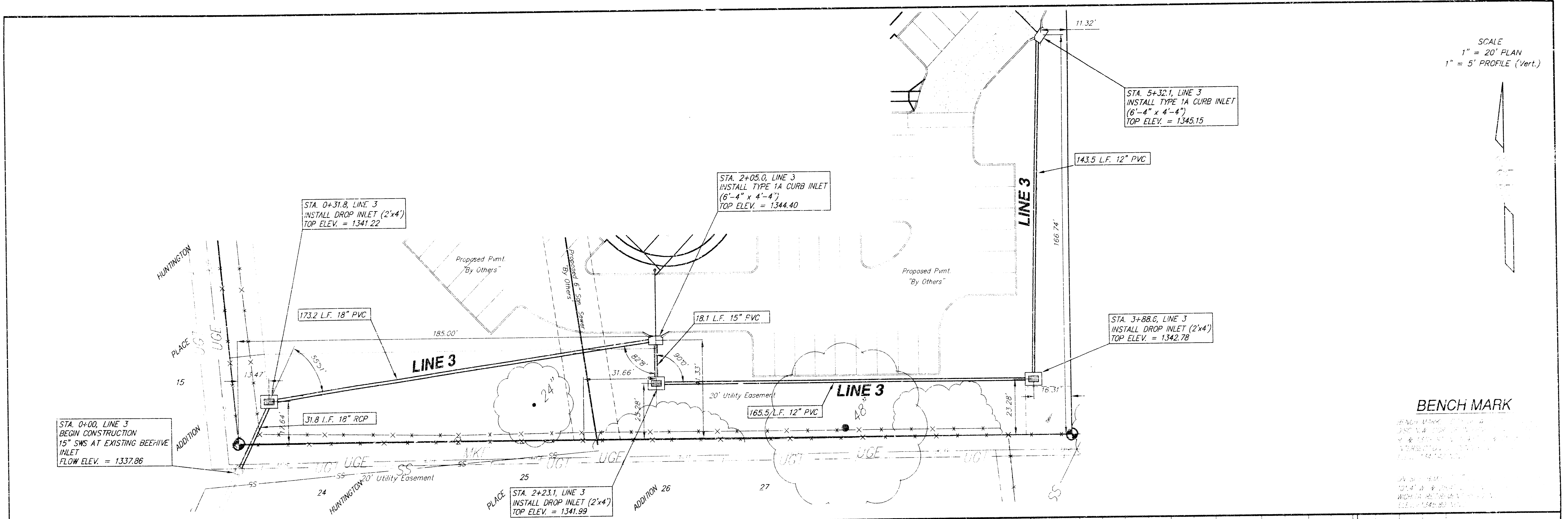
SRB
SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

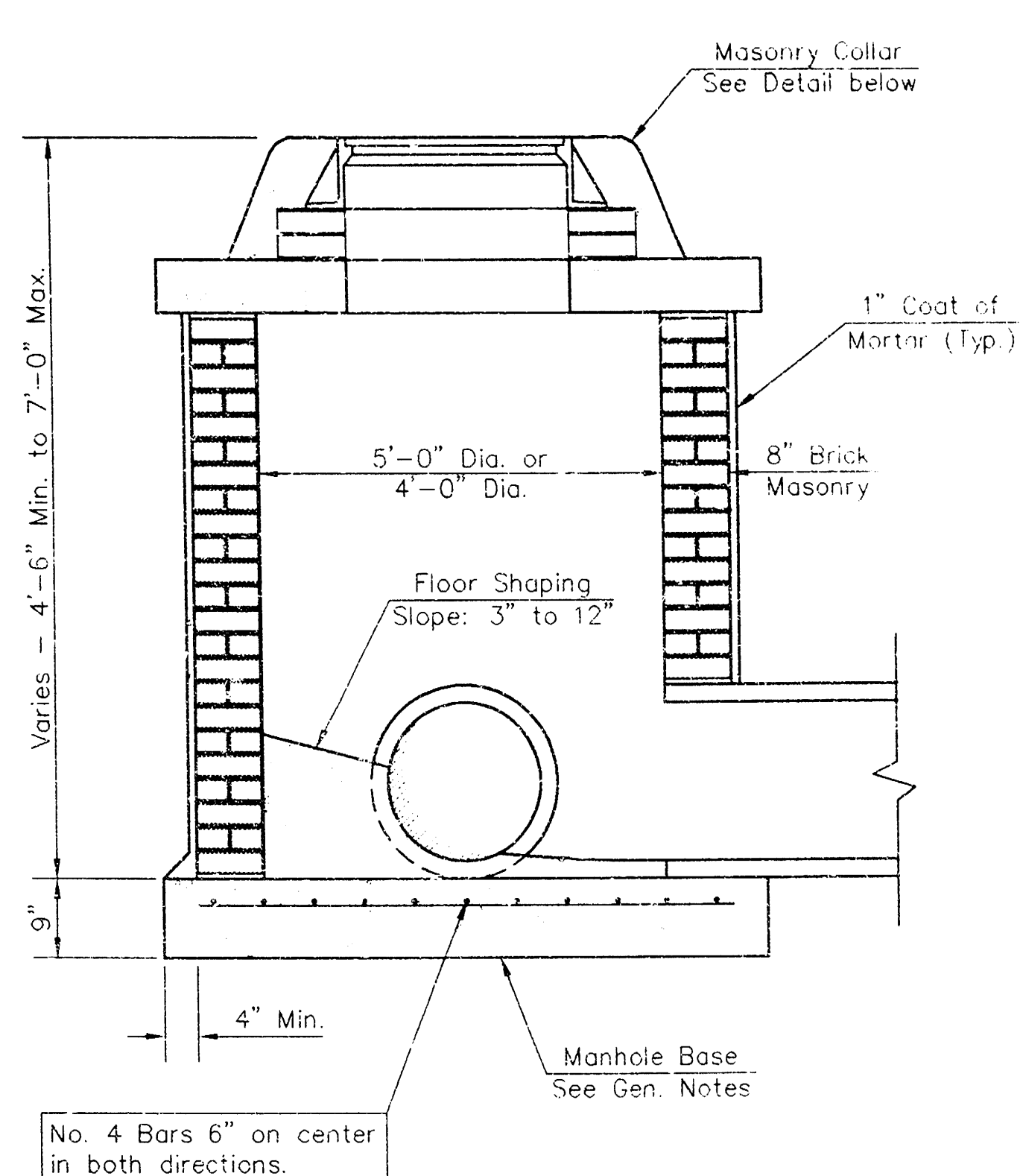


BENCH MARK
 BENCH MARK: CITY OF WICHITA STANDARD
 10' x 10' x 10' CONCRETE MARKER
 1" = 20' PLAN
 1" = 5' PROFILE (vert.)

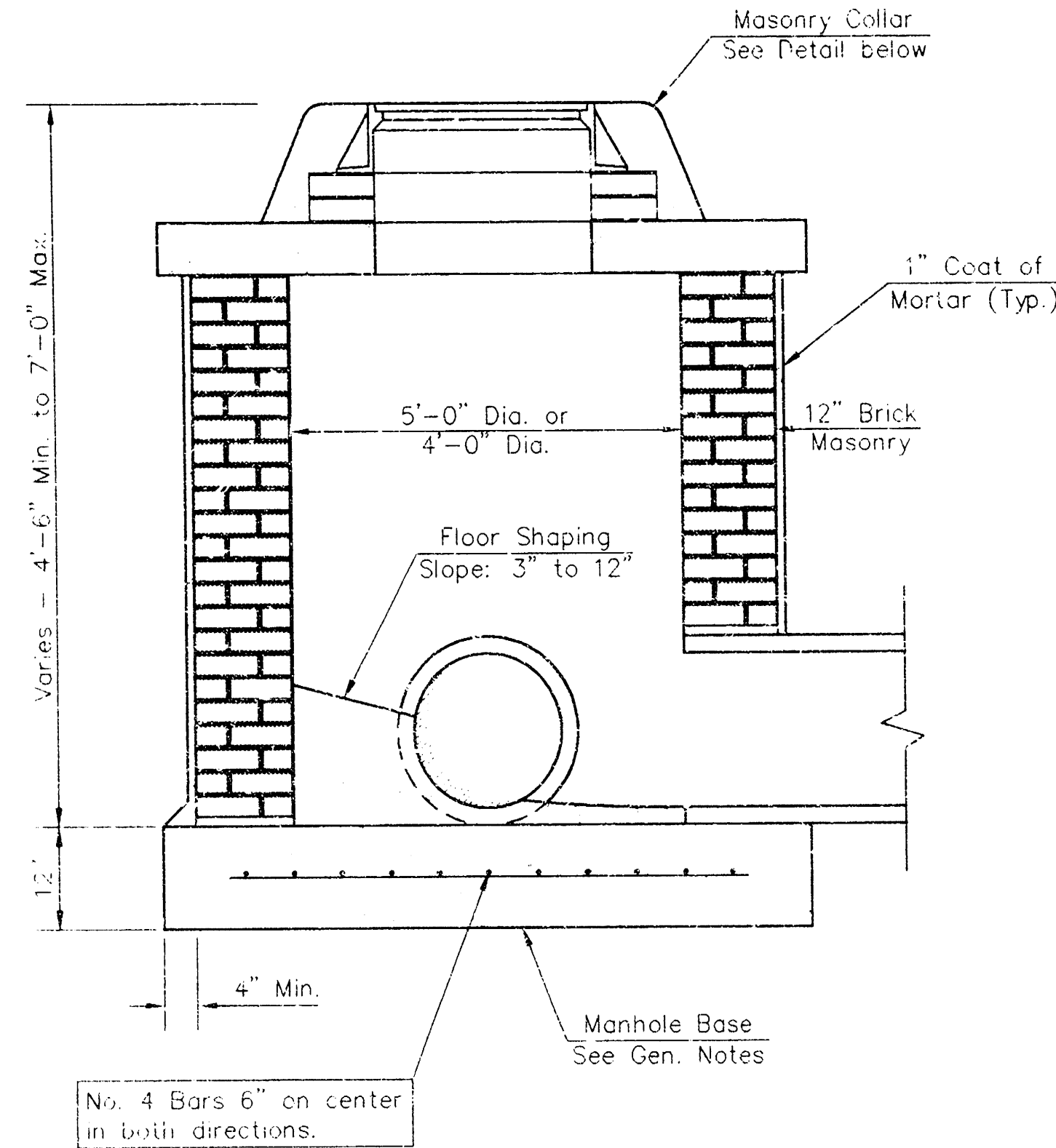


WICHITA RETIREMENT RESIDENCE			
STORM WATER SEWER - LINE 2			
WICHITA, KANSAS			
SRB		SAVOY, RUGGLES & BOHM, P. A.	
ENGINEERING & SURVEYING		PROJECT NUMBER	
951 PPS (607861)		DATE	
DESIGN	DRAWN	CHECKED	DATE
JOS	JOS	CS	Mar. 8, 2000
APPROVED		APR 19, 2000	
3		7	

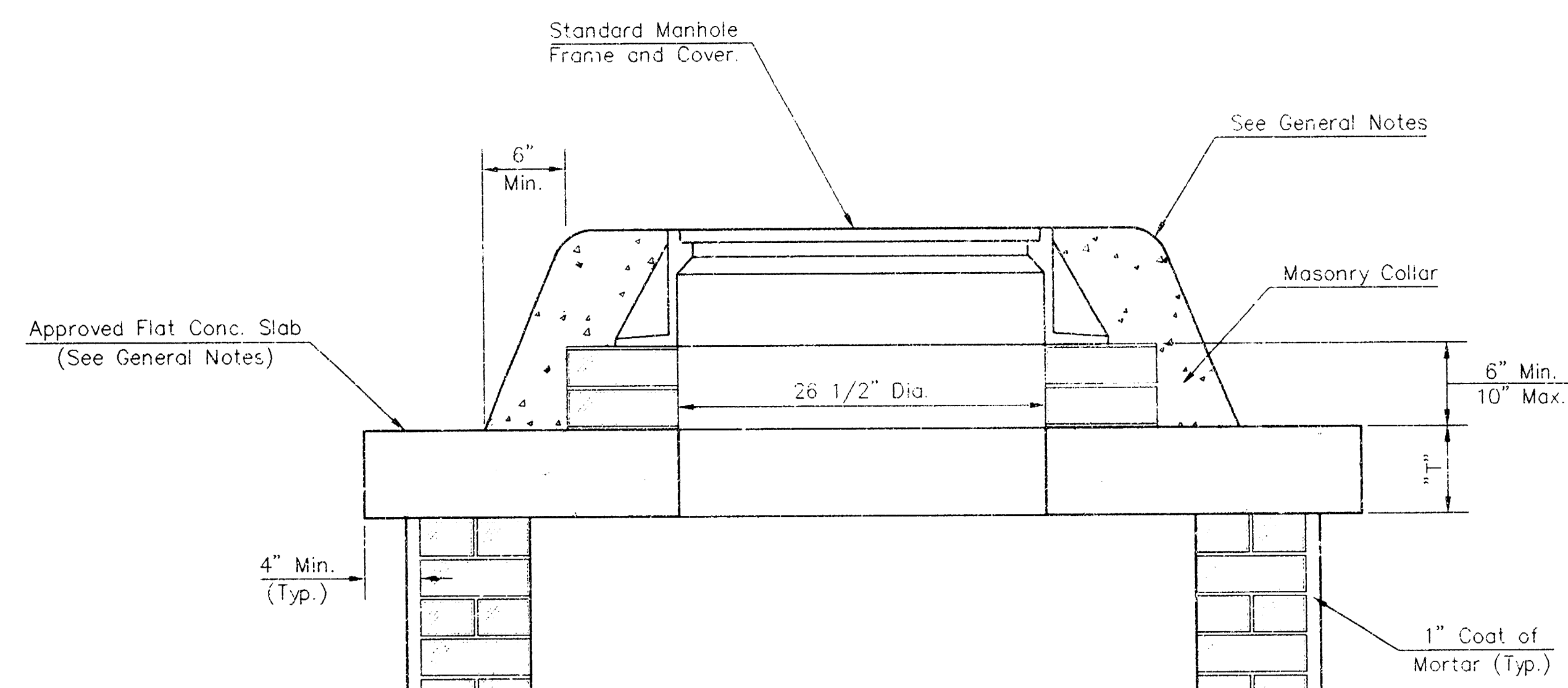




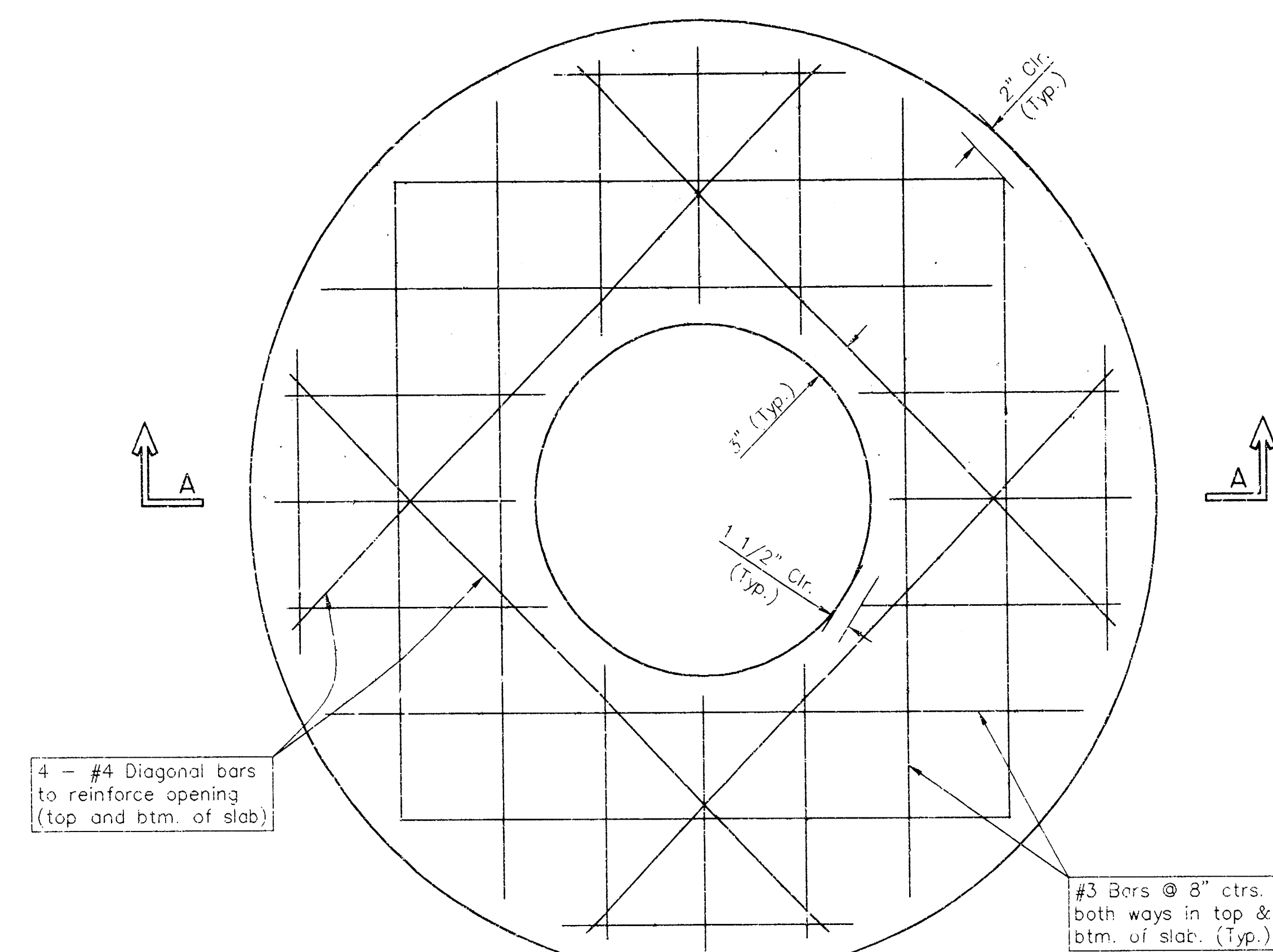
SHALLOW TYPE "A" MANHOLE



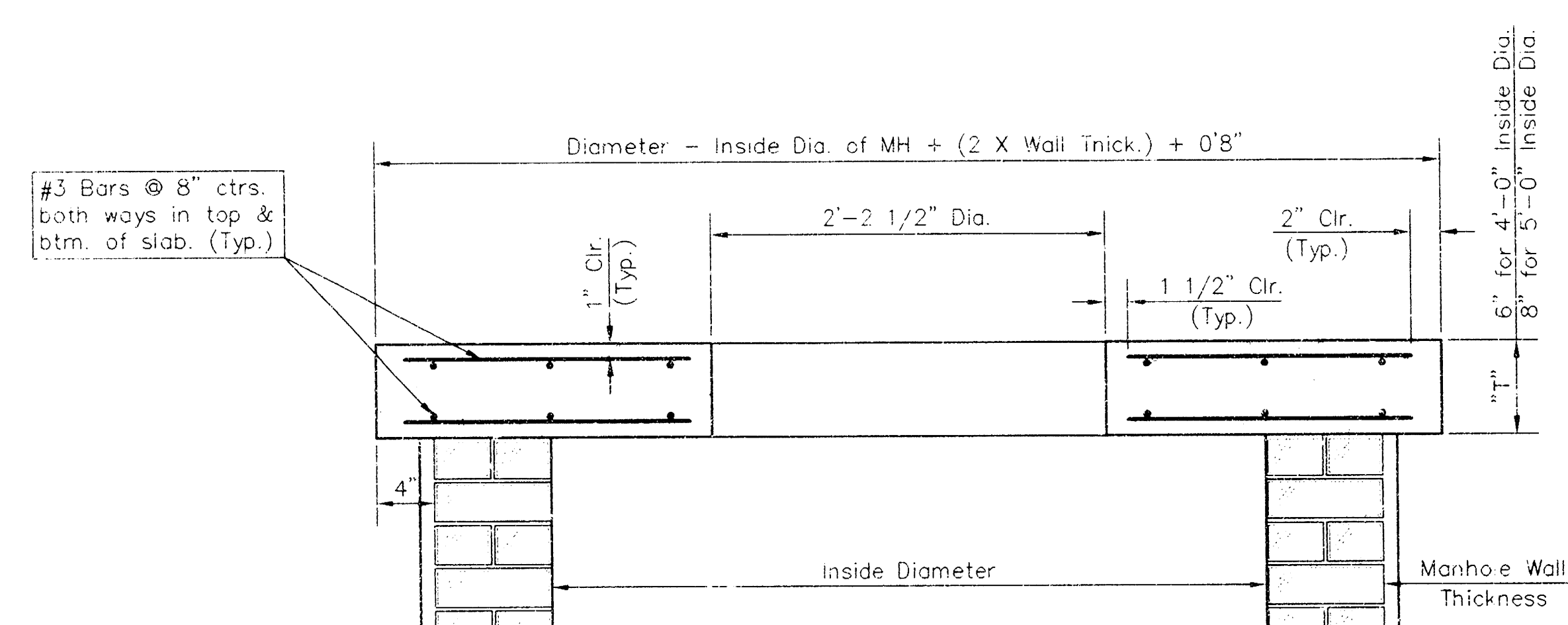
SHALLOW TYPE "B" MANHOLE



MASONRY COLLAR DETAIL

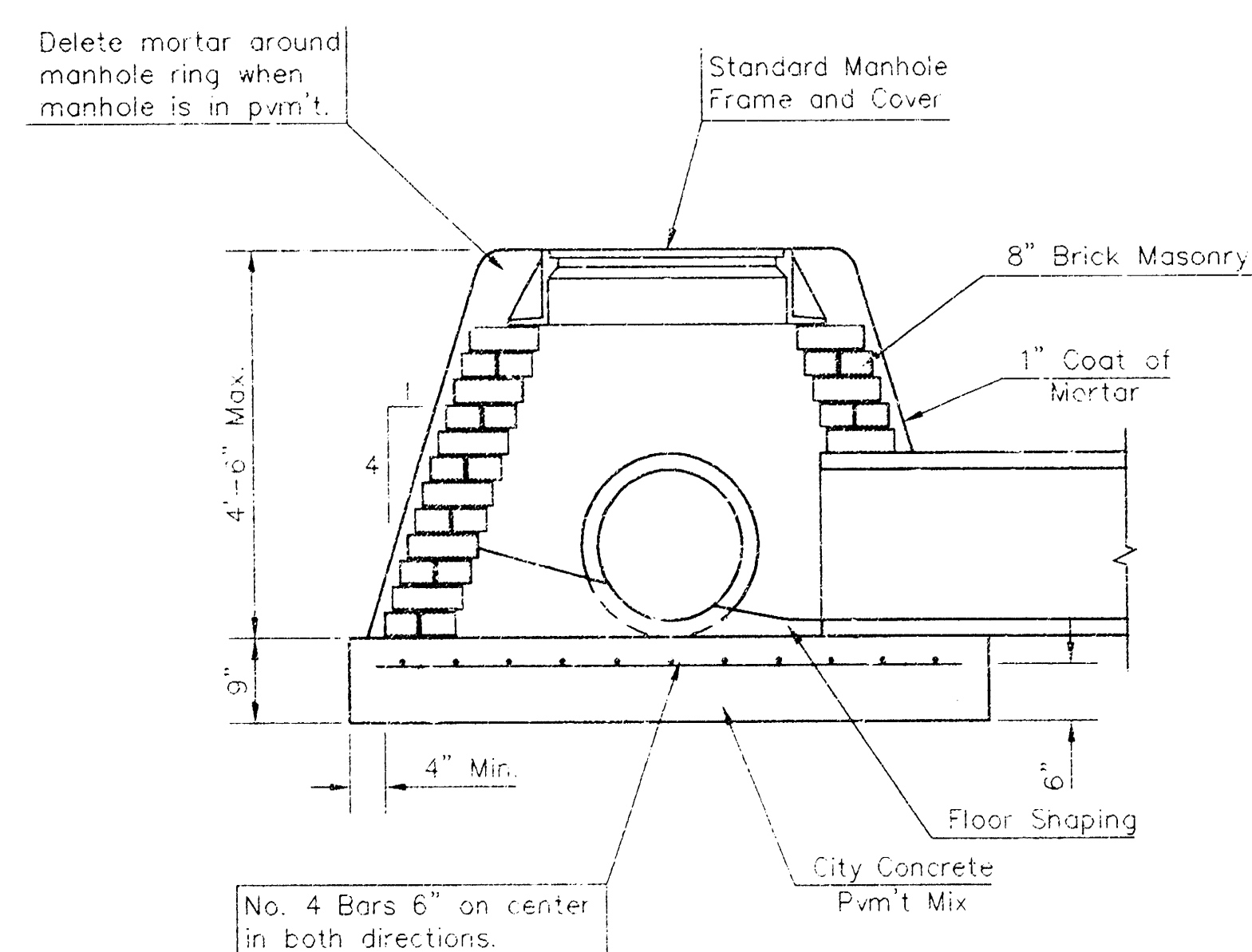


PLAN

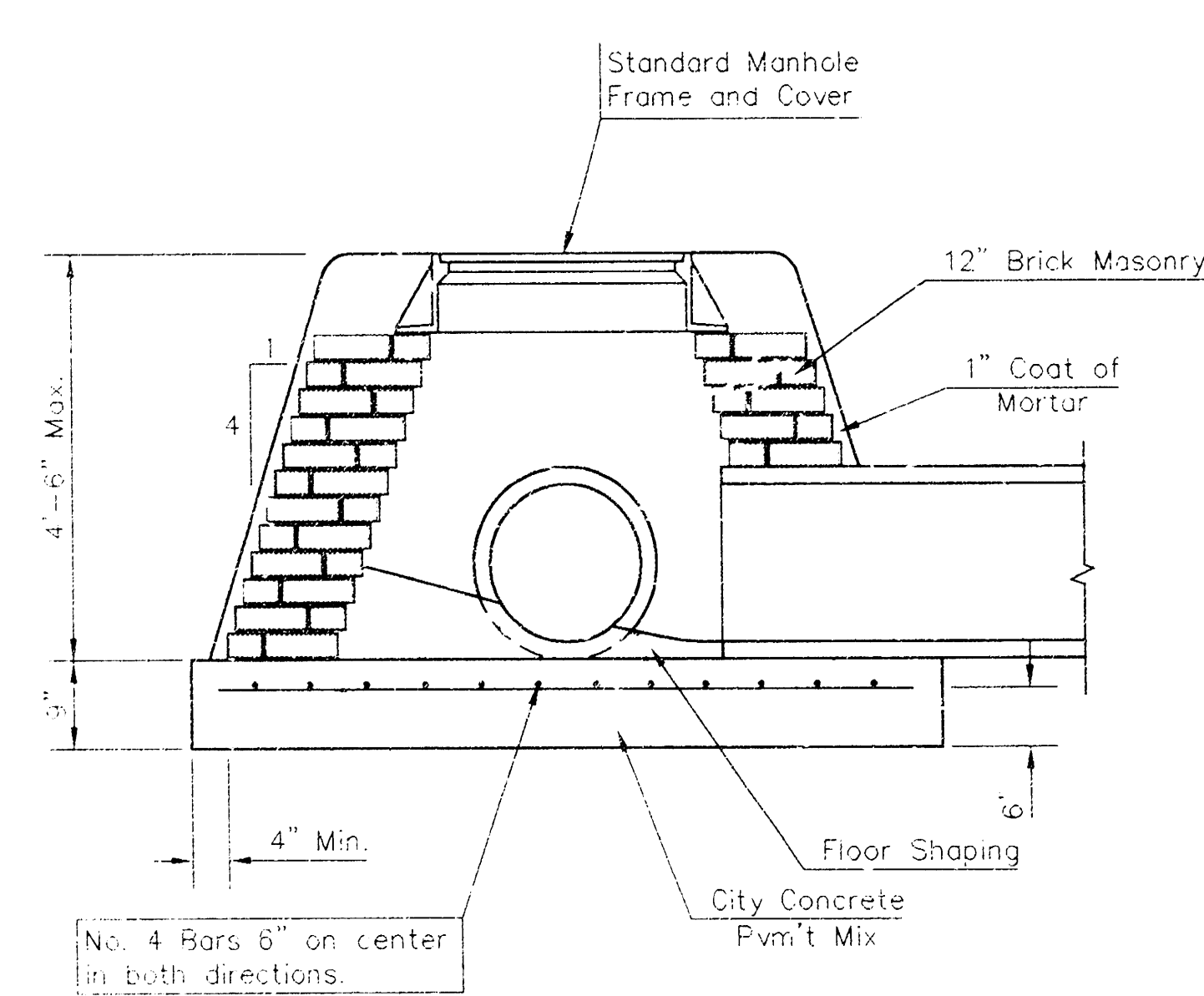


SECTION A-A

FLAT CONCRETE SLAB DETAILS



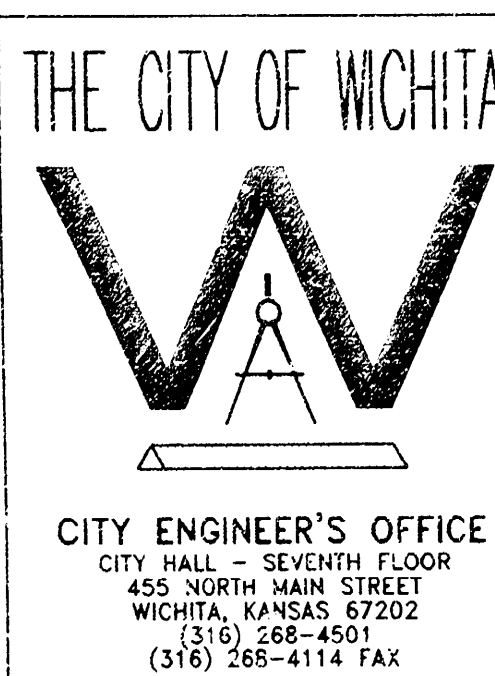
SPECIAL SHALLOW TYPE "A" MANHOLE

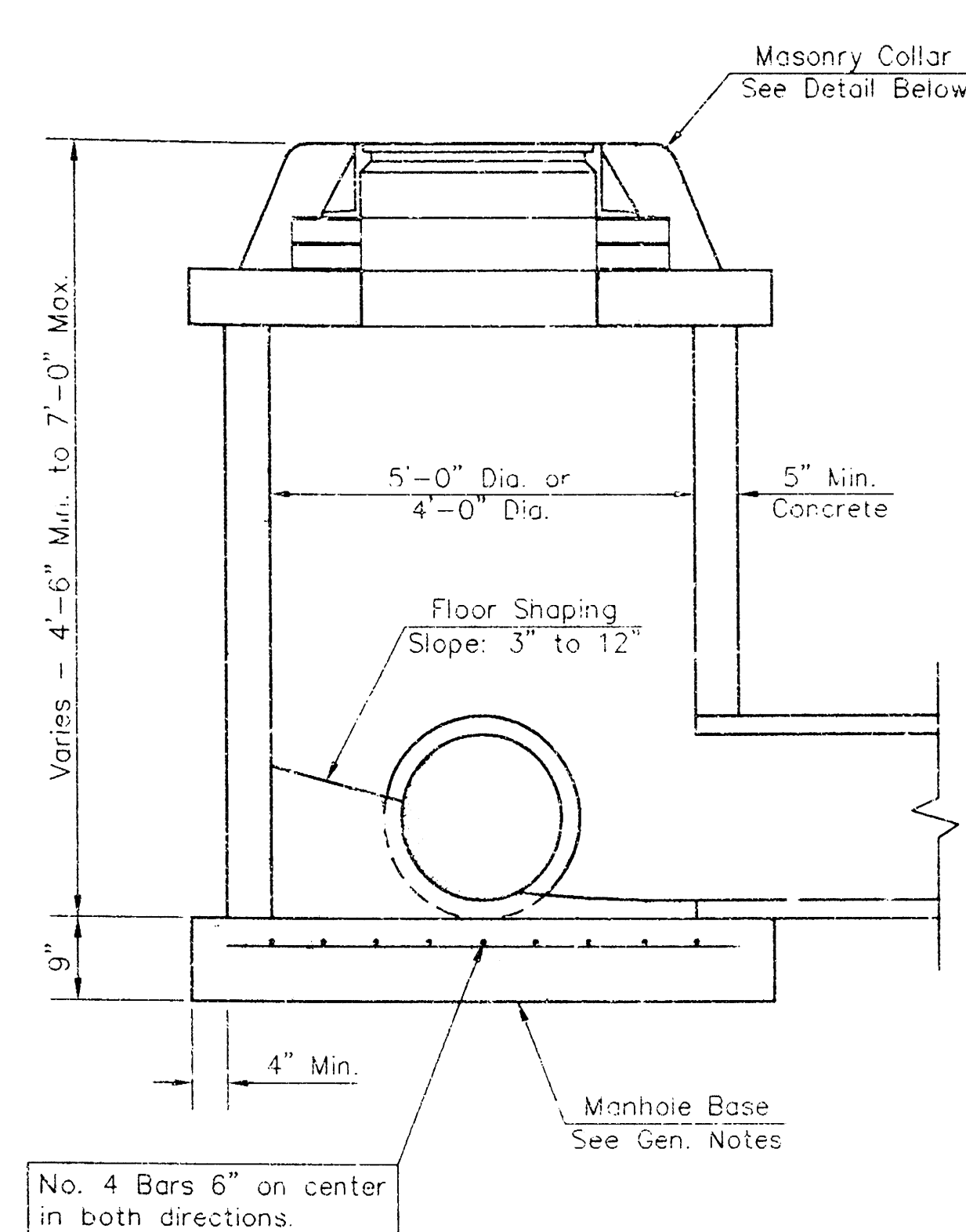


SPECIAL SHALLOW TYPE "B" MANHOLE

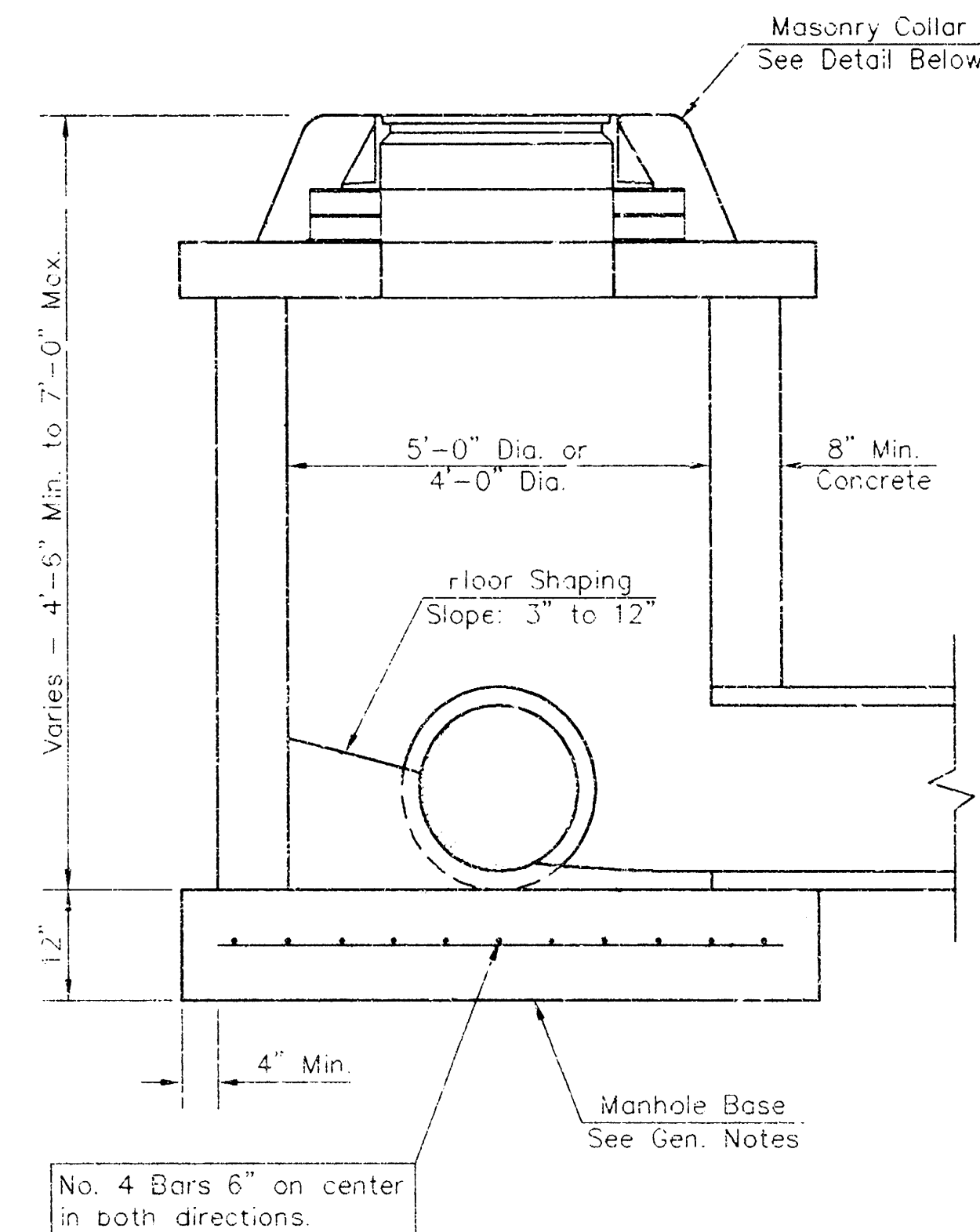
GENERAL NOTES

- 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 5" 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.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-B7.

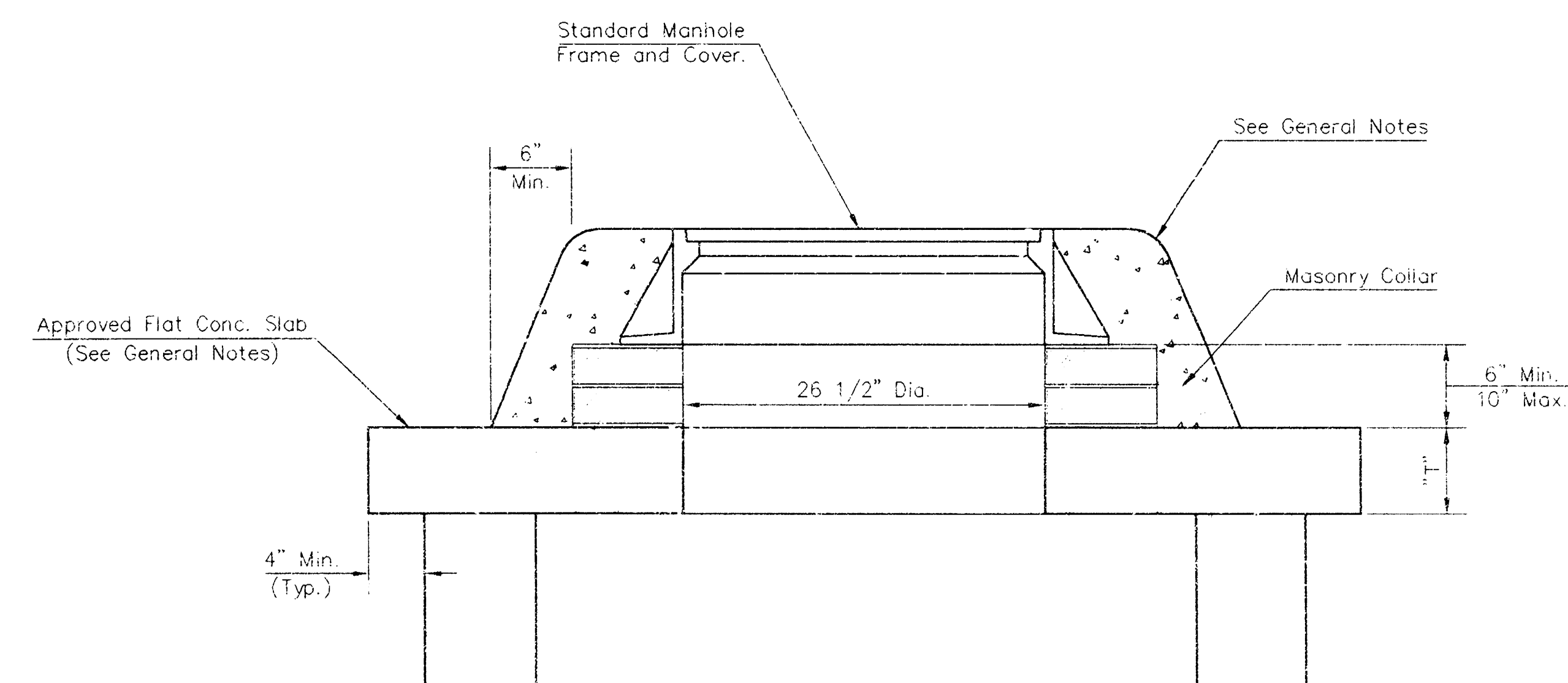
 THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4500 (316) 268-4114 FAX	STANDARD / SPECIAL SHALLOW MANHOLES TYPE 'A' AND 'B'	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 951-PPS	BOOK # 607861
	DATE MAR 96	SHEET 5 OF 7



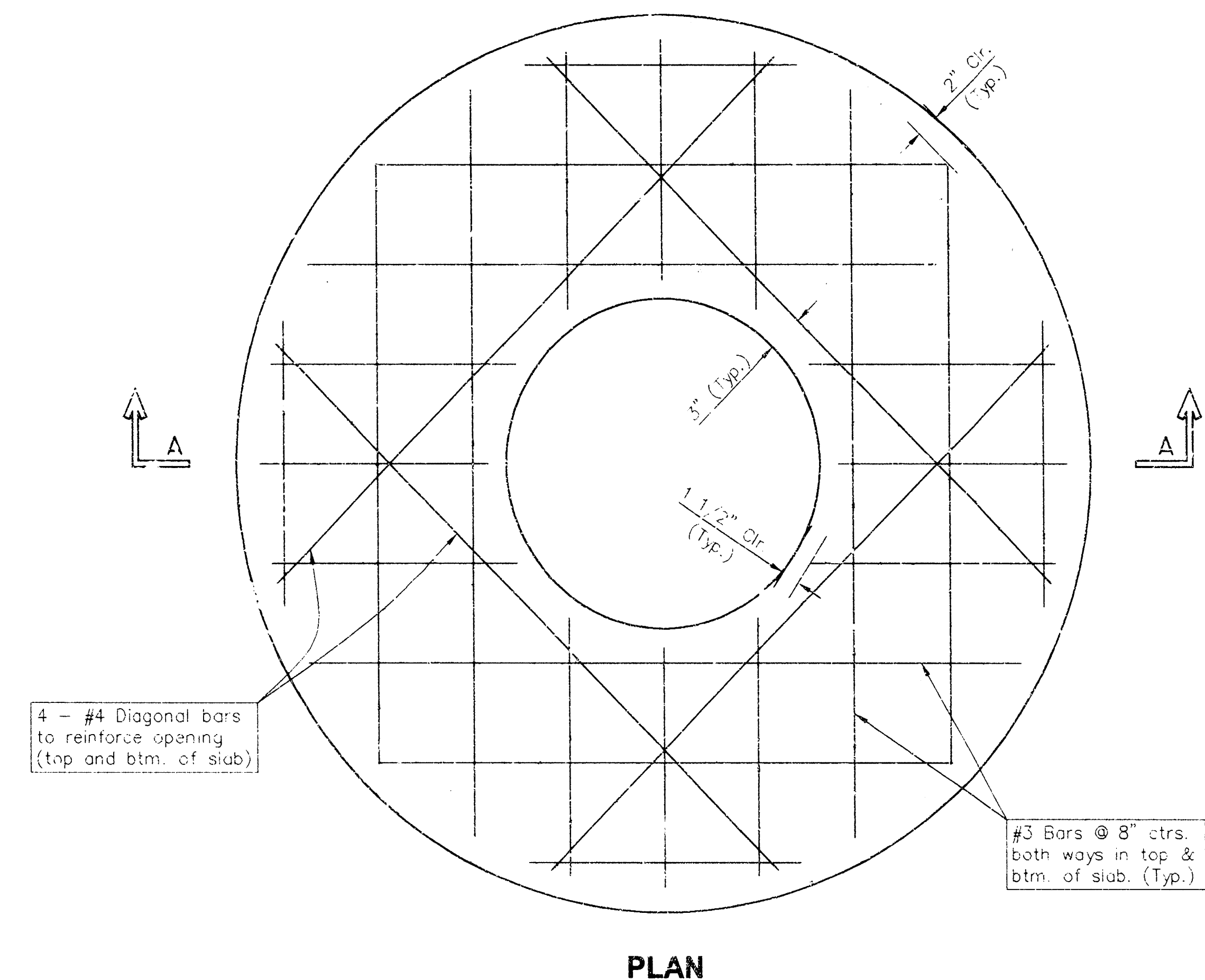
SHALLOW TYPE "P" MANHOLE



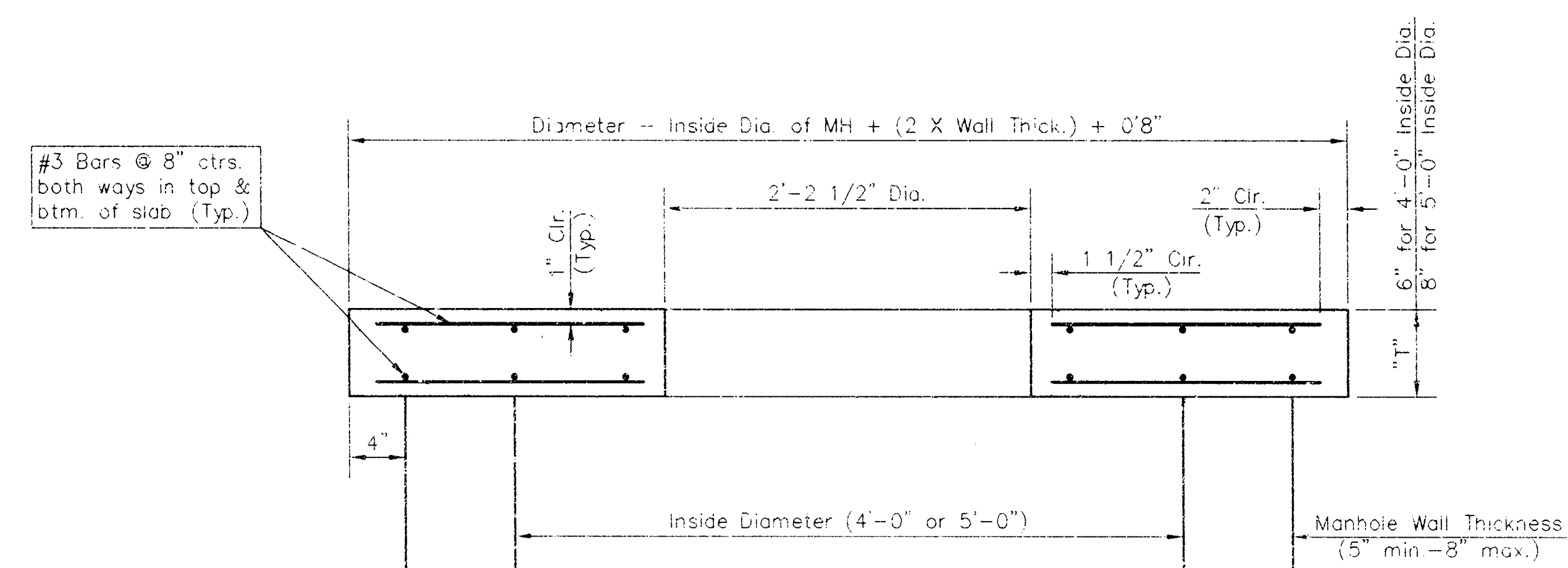
SHALLOW TYPE "C" MANHOLE



MASONRY COLLAR DETAIL



PLAN

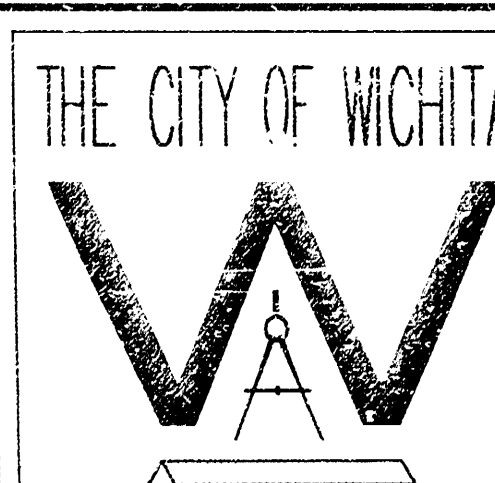


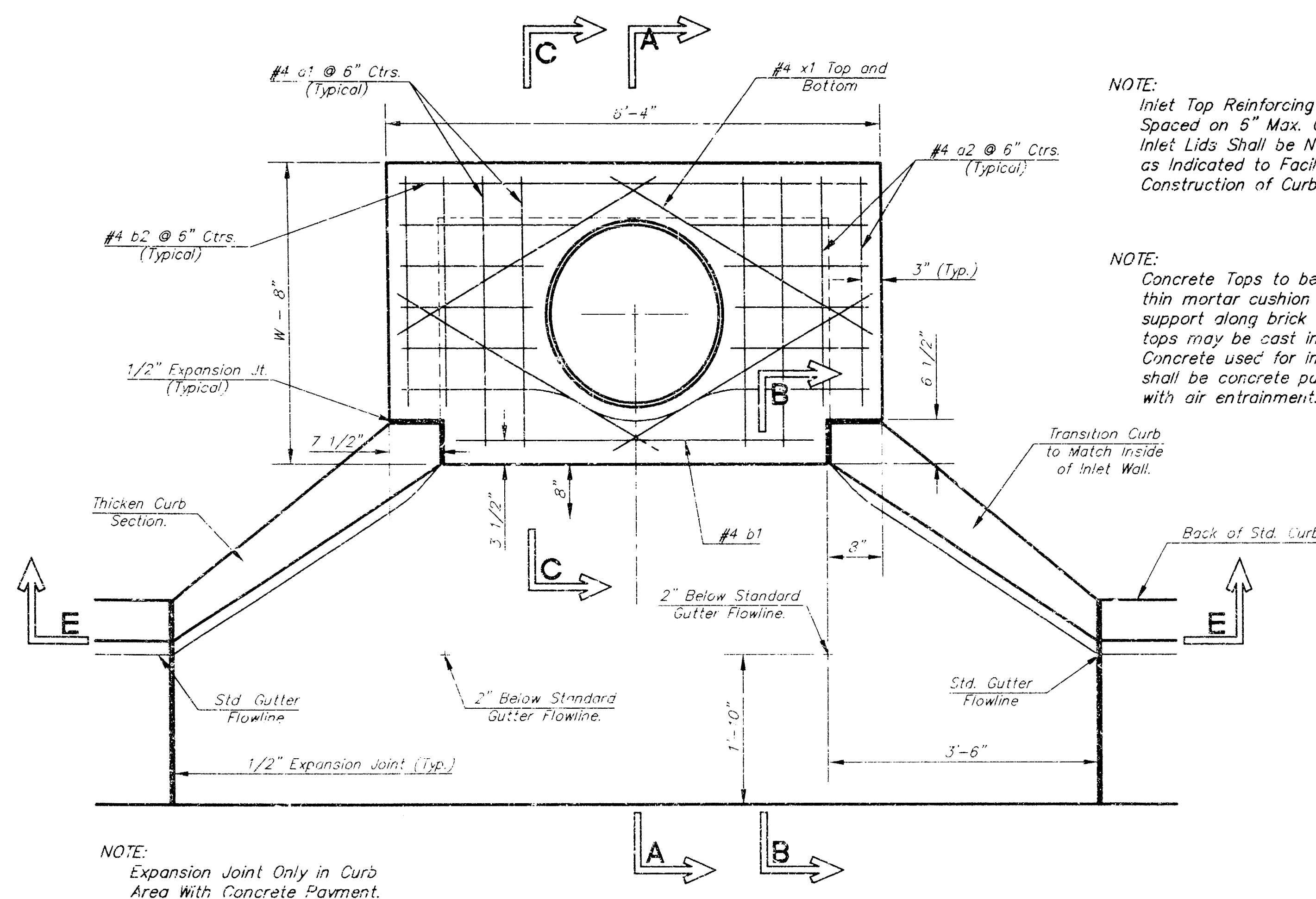
SECTION A-A

FLAT CONCRETE SLAB DETAILS

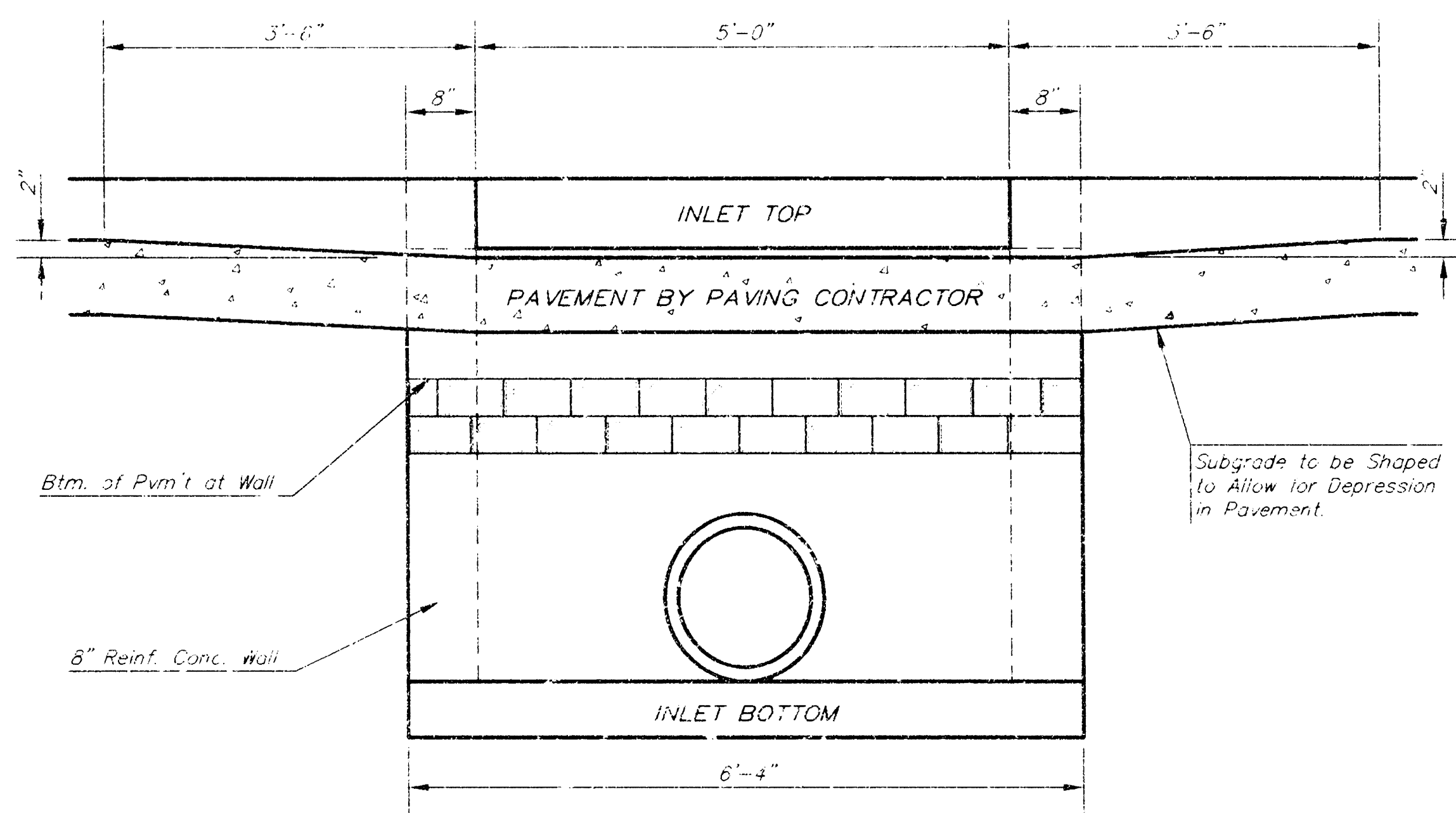
GENERAL NOTES

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- 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 "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.
- All brick used in manhole construction shall meet Grade SW of ASTM C652 or C82-87.

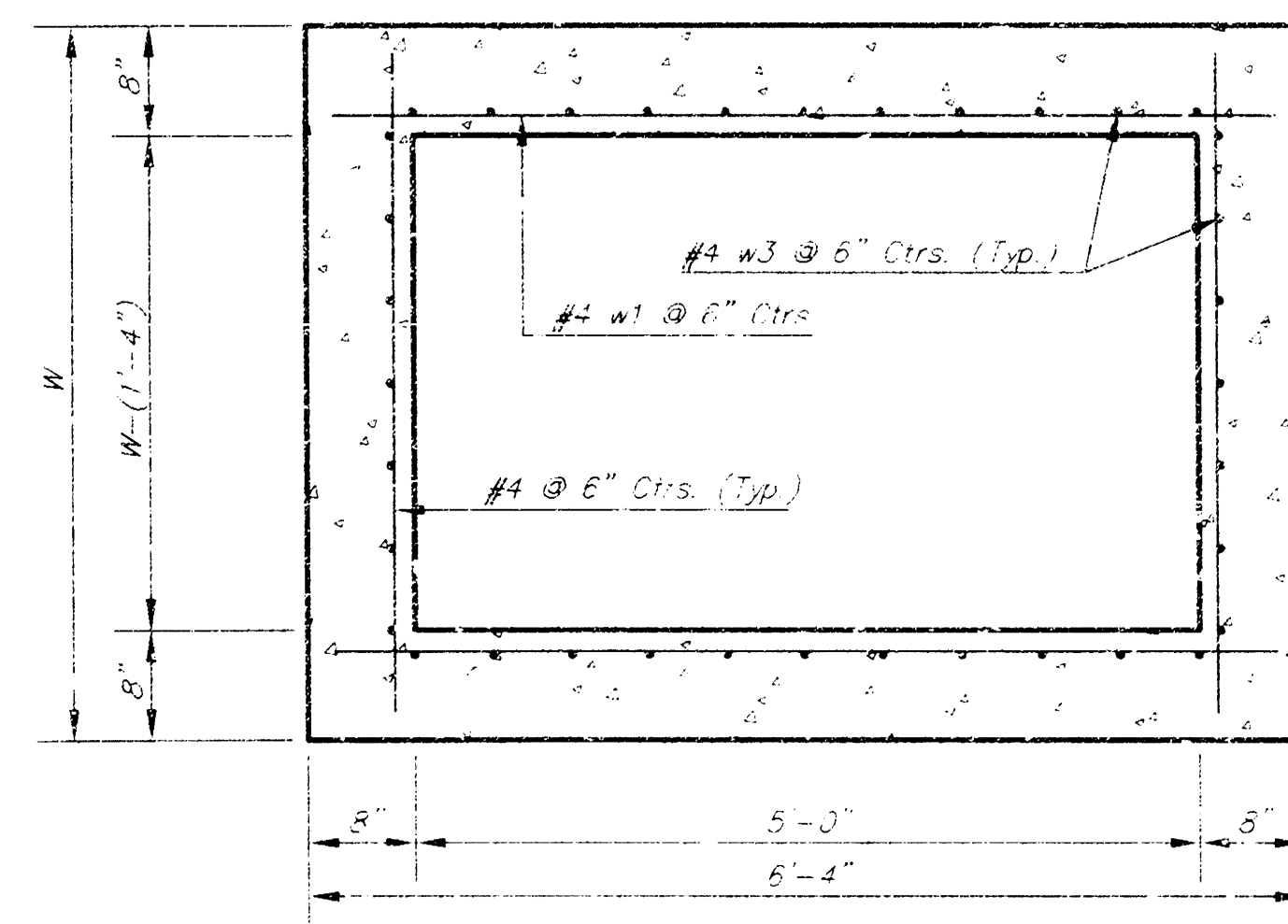
 THE CITY OF WICHITA		SHALLOW MANHOLES TYPE 'P' AND 'C'	
M. E. LINDEBAK P.E. — CITY ENGINEER			
PROJECT NUMBER		DATE	
951-PPS		607861	
DATE		SHEET 6 OF 7	
MAR 96			



PLAN



SECTION E-E



SECTION D-D

NOTE: Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=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.

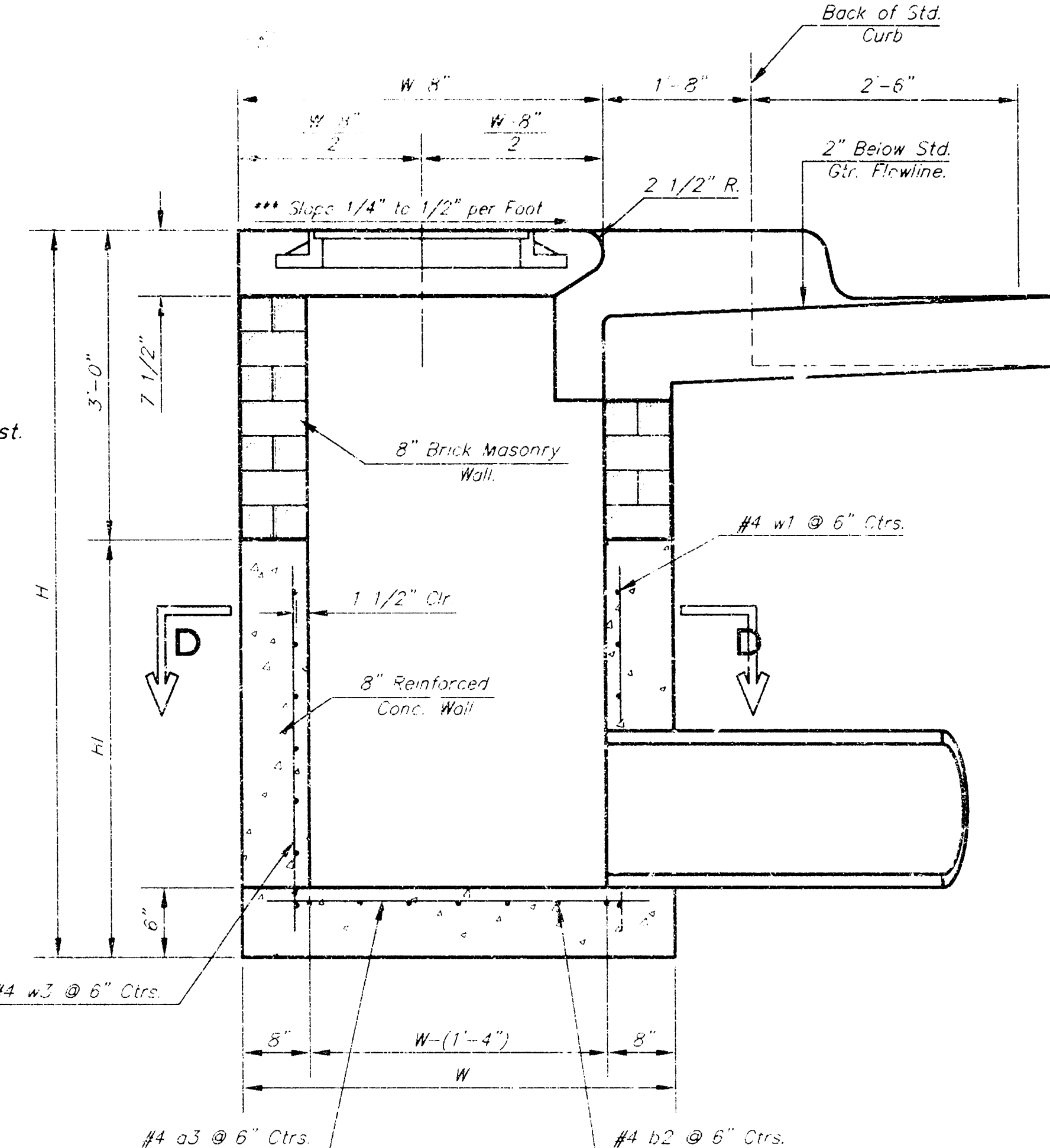
Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self-cleaning between all inlet and/or outlet pipes.

The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

NOTE: Inlet Top Reinforcing shall be Spaced on 5" Max. Centers. Inlet Lids Shall be Notched Out as Indicated to Facilitate Construction of Curb.

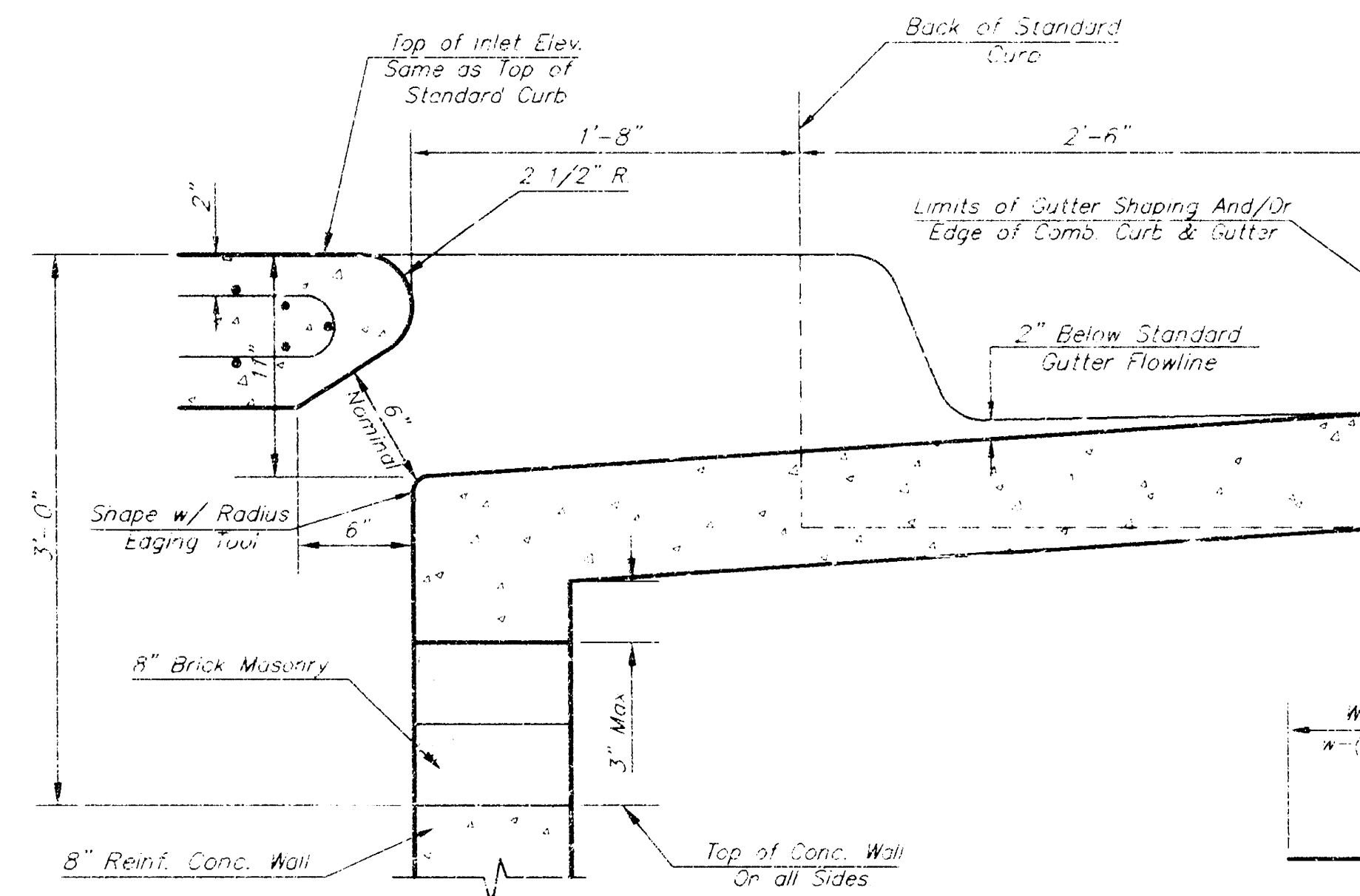
NOTE: Concrete Tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix with air entrainment.

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

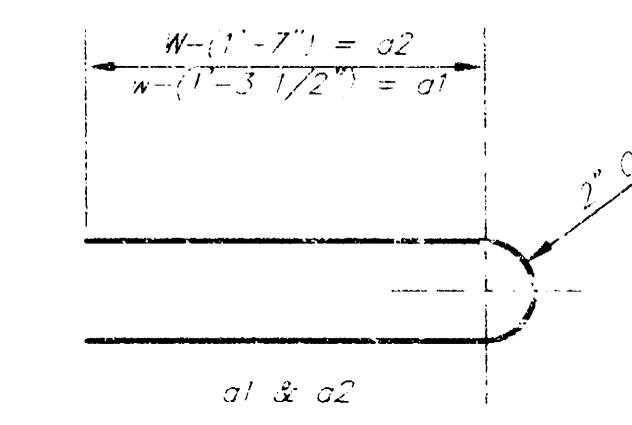


SECTION A-A

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



SECTION B-B



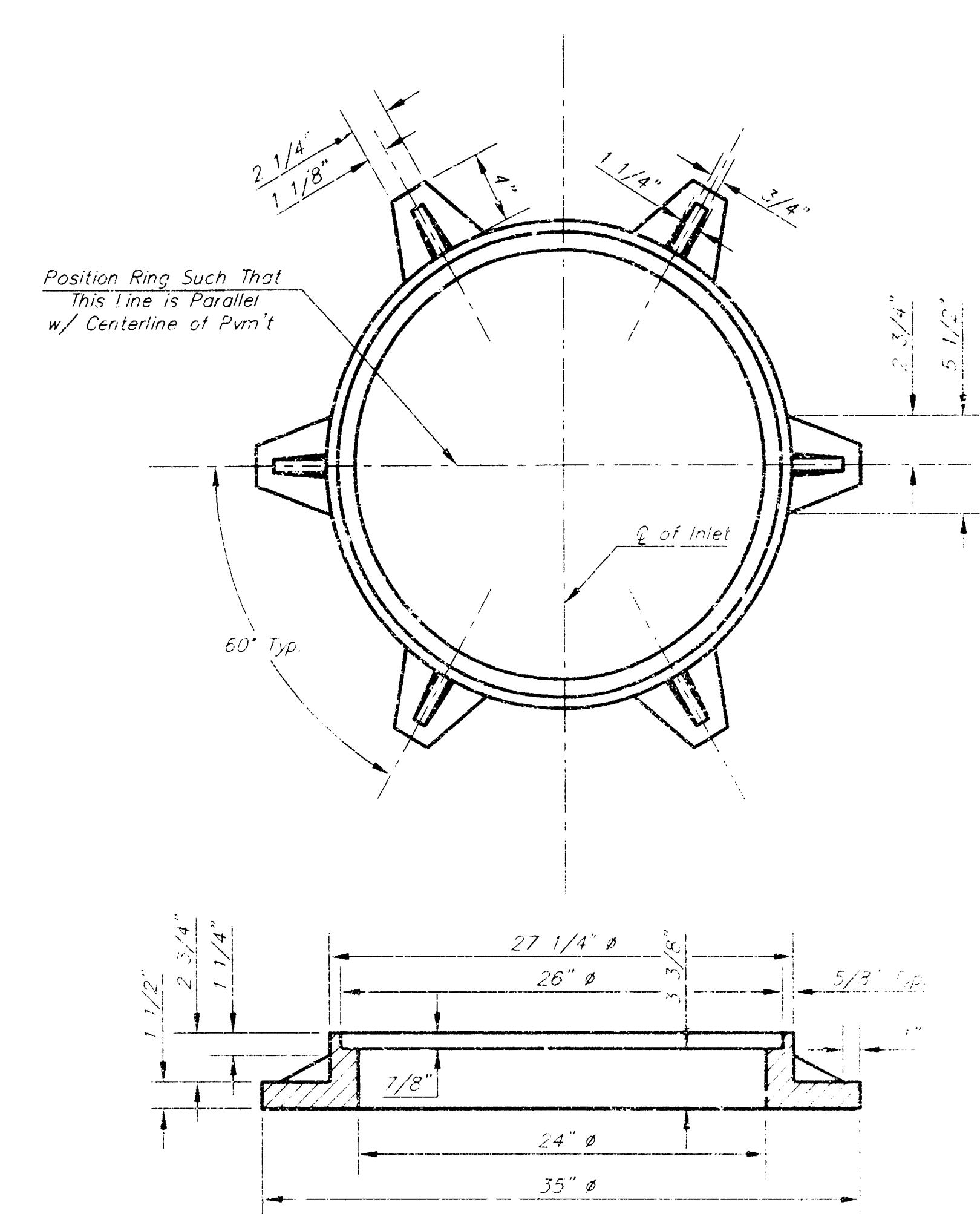
BENDING DIAGRAM

PRECAST SLAB AND FLOOR REINFORCING									
		W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"	
MARK	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
*01	#4	6	6'-7"	6	8'-7"	6	10'-7"	6	12'-7"
*02	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	14'-0"
*03	#4	13	4'-1"	13	5'-1"	13	6'-1"	13	8'-1"
*04	#4	7	4'-0"	7	4'-9"	7	4'-9"	7	4'-9"
*05	#4	23	6'-1"	23	6'-1"	23	6'-1"	23	6'-1"
*06	#4	8	3'-10"	8	4'-2"	8	4'-6"	8	4'-10"

* Field Bend or Cut Reinforcing as Required for Clearance.

① Ht = 12" (Ht = 21") Rounded down to nearest 0.5"

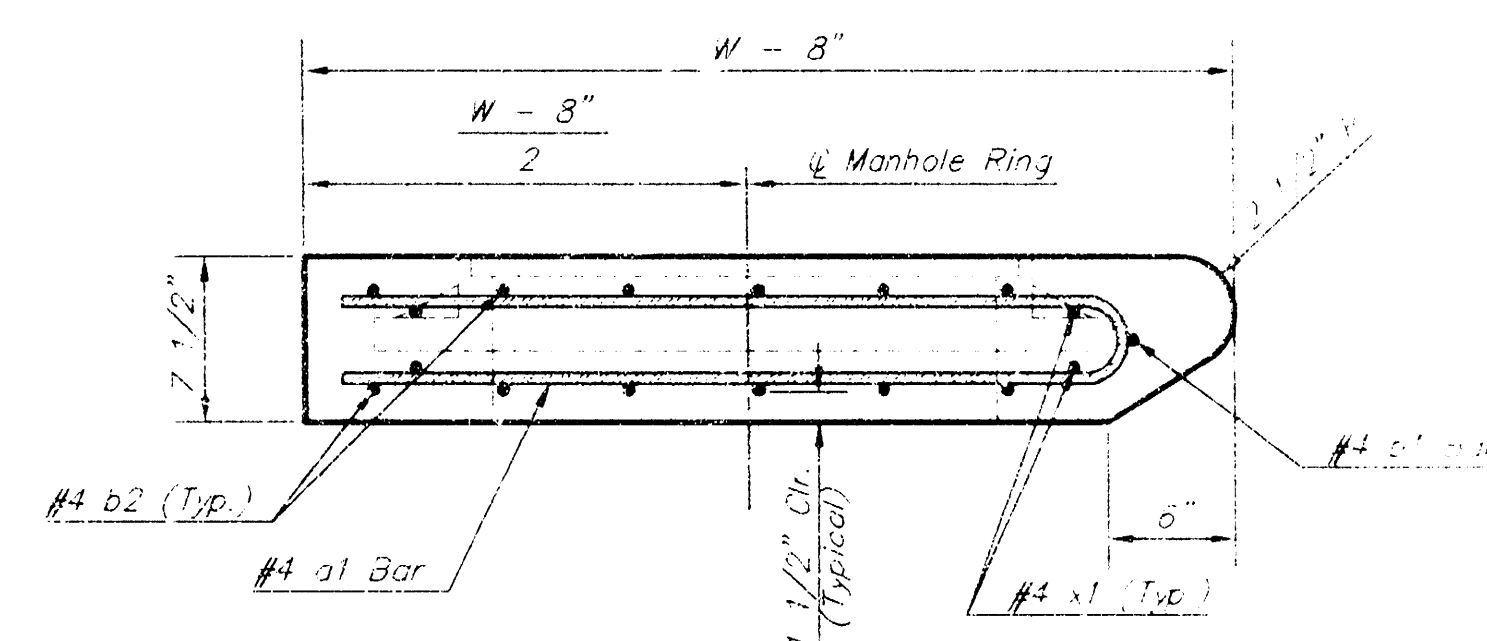
② Ht = 3"



MANHOLE RING AND COVER

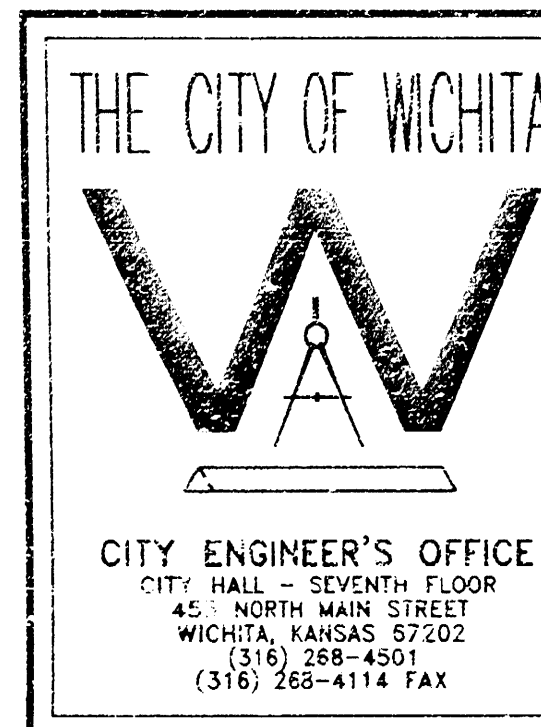
Weight = 180 Lbs.

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



SECTION A-A

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CURB INLET
4'-4"	3'-8" x 6'-4" x 7 1/2"	21" & SMALLER	0.33x
5'-4"	4'-8" x 6'-4" x 7 1/2"	24" & 30"	0.51x
6'-4"	5'-8" x 6'-4" x 7 1/2"	36" & 42"	0.84x
7'-4"	6'-8" x 6'-4" x 7 1/2"	48" & 54"	0.77x
8'-4"	7'-8" x 6'-4" x 7 1/2"	60" & 66"	0.81x



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

M. E. LINDBAK P.E. - CITY ENGINEER

PROJECT NUMBER: 951-PPS
SHEET 7 OF 7

DATE: MAR 96

SHEET 7 OF 7

TO SO 50 47