

# CITY OF WICHITA, KANSAS

## MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

### STORM WATER SEWER NO. 321

#### AUTUMN RIDGE ADDITION

CITY OF WICHITA PROJECT NO. 468-76-245-81615-000-000-001

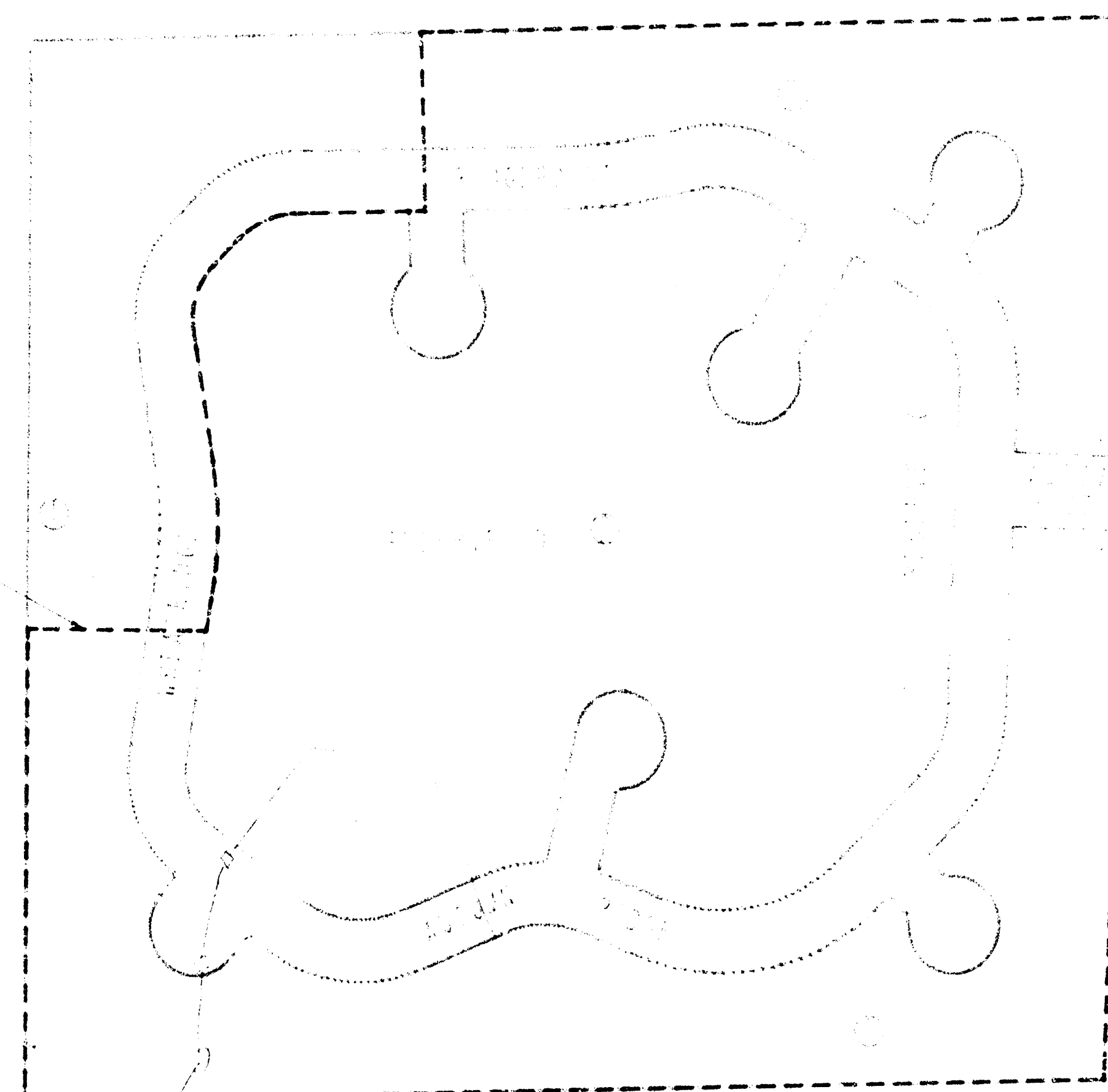
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#### PROJECT SURVEY CONTROL

|                  |                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VERTICAL DATUM   | CITY OF WICHITA DATUM                                                                                                                                                                                 |
| DATUM BENCH MARK | 117.10 BENCH MARK DISC 1/2" DIA. 1/2" HIG. EAST OF<br>17TH STREET AND 10TH STREET, ONE NORTH OF<br>THE 10TH STREET CORNER AND NORTH OF HILL POLE (ELEV.)<br>AND 40.0' NORTH OF CENTERLINE 17TH STREET |
| BENCH MARK       | 117.10 BENCH MARK DISC 1/2" DIA. 1/2" HIG. EAST OF<br>17TH STREET AND 10TH STREET, ONE NORTH OF<br>THE 10TH STREET CORNER AND NORTH OF HILL POLE (ELEV.)<br>AND 40.0' NORTH OF CENTERLINE 17TH STREET |
| BENCH MARK       | 117.10 BENCH MARK DISC 1/2" DIA. 1/2" HIG. EAST OF<br>17TH STREET AND 10TH STREET, ONE NORTH OF<br>THE 10TH STREET CORNER AND NORTH OF HILL POLE (ELEV.)<br>AND 40.0' NORTH OF CENTERLINE 17TH STREET |

BENEFIT DISTRICT



THE OWNER SHALL HAVE FIRST RIGHT TO EXCESS EXCAVATED MATERIAL FROM THIS PROJECT.

CONSTRUCTION

6. Excavation for the detention pond shall be included in the lump sum price for "Detention Pond Grading". Quantities shown on this sheet are approximate only. Contractor shall satisfy himself of all quantities prior to bid.
7. The contractor shall fertilize, seed and mulch all disturbed areas within reserves "C" and "D" as directed by the engineer. This work shall be included in the lump sum price for "Detention Pond Grading". Said price shall be considered full compensation for all materials, labor, tools, equipment, and incidentals necessary to complete the work in accordance with C.O.W. standard specifications. The approximate quantity for this work is 2.3 acre.

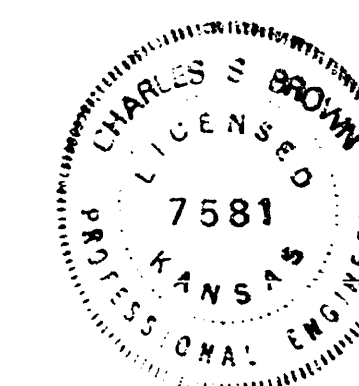
AS BUILT  
5/87  
GREENE

#### EARTHWORK (FOR INFORMATION ONLY)

|            |                 |
|------------|-----------------|
| EXCAVATION | 22,771 CU. YDS. |
| FILL       | 2,277 CU. YDS.  |
| TOTAL      | 25,048 CU. YDS. |

**JANUARY, 1987**

PLANS PREPARED BY  
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS



1/15

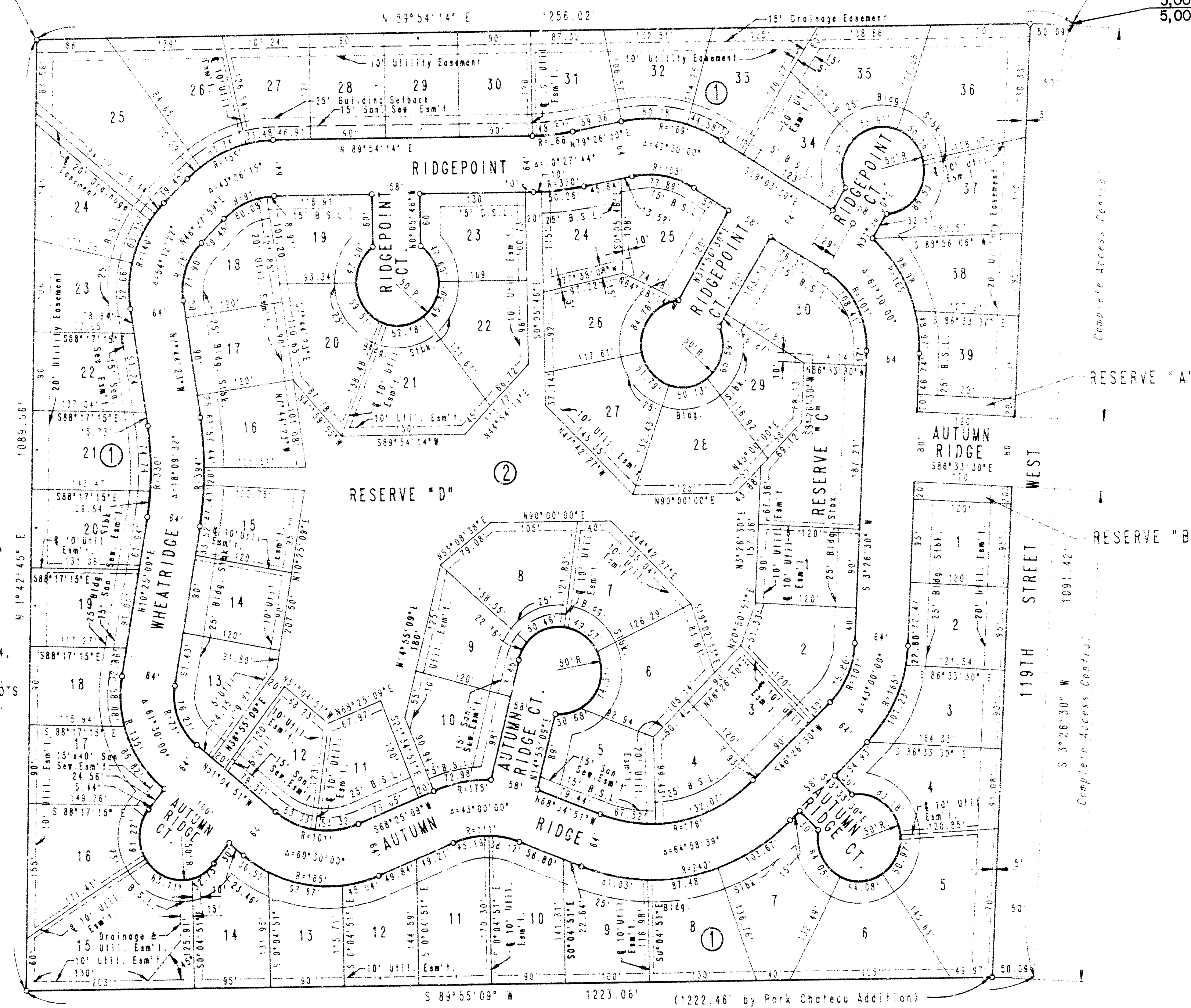
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# AUTUMN RIDGE TO WICHITA, SEDGWICK COUNTY, KANSAS

N.W. Cor. E 1/2 S.E. 1/4  
Sec. 12, T27S, R2W  
of the 5th P.M.

N.E. Cor. S.E. 1/4  
Sec. 12, T27S, R2W  
of the 5th P.M.  
5,000.000000 N  
5,000.000000 E

SCALE: 1" = 100'  
O = IRON SET  
B.M. - 1/2 EAST OF 119TH STREET WEST  
AND 12TH STREET, CITY OF WICHITA  
BENCH MARK DISC DUE NORTH OF  
7/4 SECTION CORNER, 8 FT. NORTH  
OF 1/4 POLE (EAST-WEST); AND  
40.6 FT. NORTH OF CENTERLINE OF  
12TH STREET.  
ELEV. 1348.13 W.S.L. =  
166.75 CITY DATUM.  
MINIMUM PAD ELEVATION FOR LOTS 24,  
25 AND 26 IN BLOCK 1 SHALL BE  
1340.4 W.S.L. (163.0 CITY DATUM).  
MINIMUM PAD ELEVATIONS FOR ALL LOTS  
IN BLOCK 2 SHALL BE 1348.9 W.S.L.  
(161.5 CITY DATUM).



PLAT

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

2/15

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IN CUT

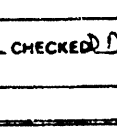
IN FILL



TYPICAL SECTION  
RESERVE GRADING

**TEST BORING LOG**

**ALLIED  
LABORATORY**



**AUTUMN RIDGE**

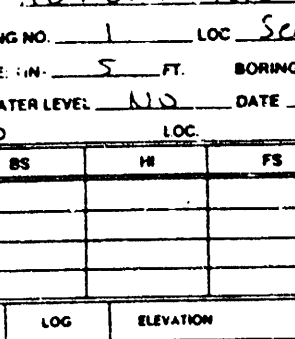
BORING NO. 1 LOC. 322 BORING LOCATION P/O  
 SCALE 1" = 10' BORING DATE 11-14-54 BRID LEVEL BY BE CHECKED

ECL WATER LEVEL 11.0 DATE        EL        DATE        EL       

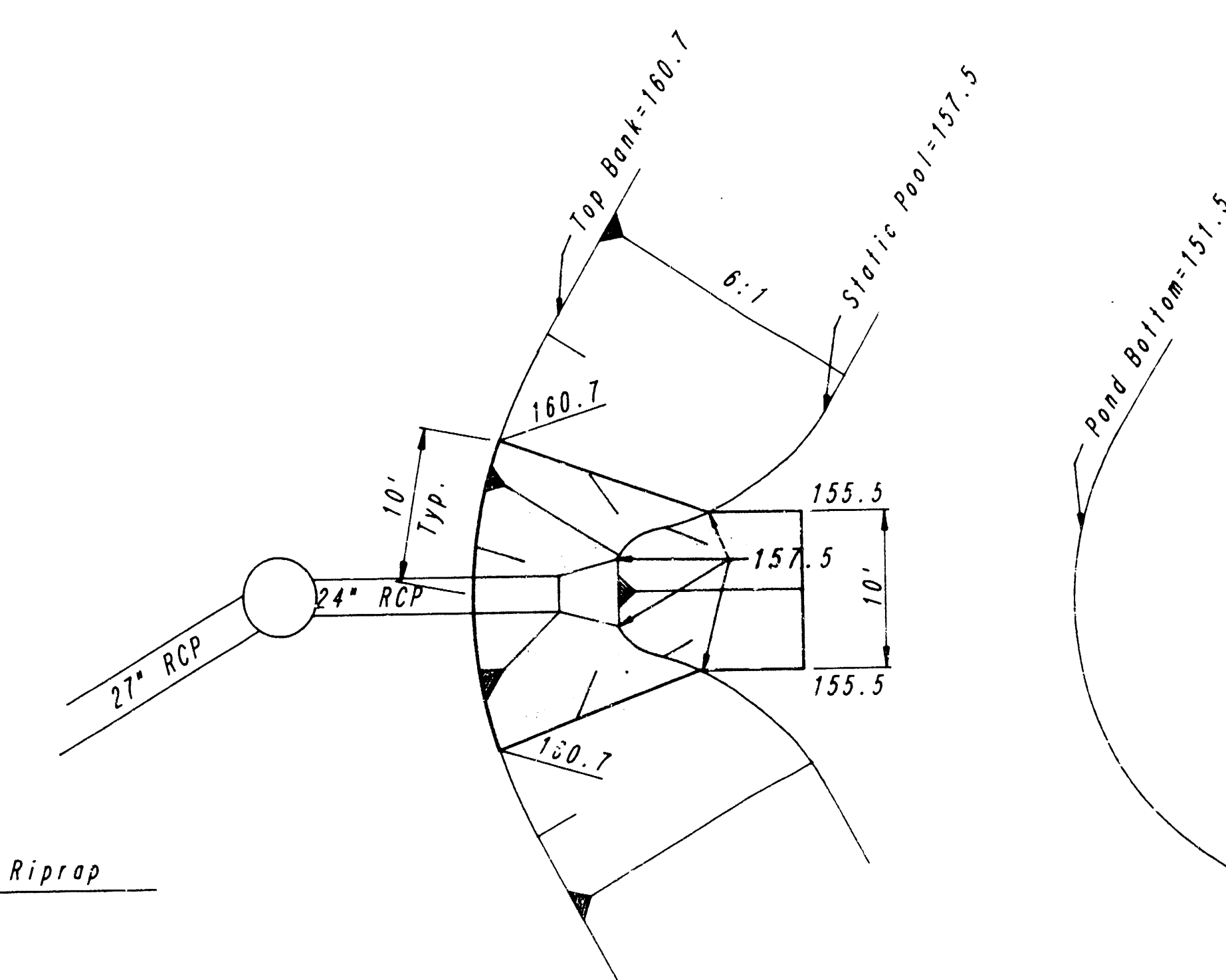
SW LOG        LOC        EL        REMARKS       

| PS | IN  | FS    | EL      | REMARKS                    |
|----|-----|-------|---------|----------------------------|
|    |     |       |         | <u>16.3</u> <u>TOP B-1</u> |
| PS | LOC | DEPTH | REMARKS | 3                          |
|    |     |       |         | TOOL BIT 2                 |
|    |     |       |         | 100'                       |

ALLUVIUM

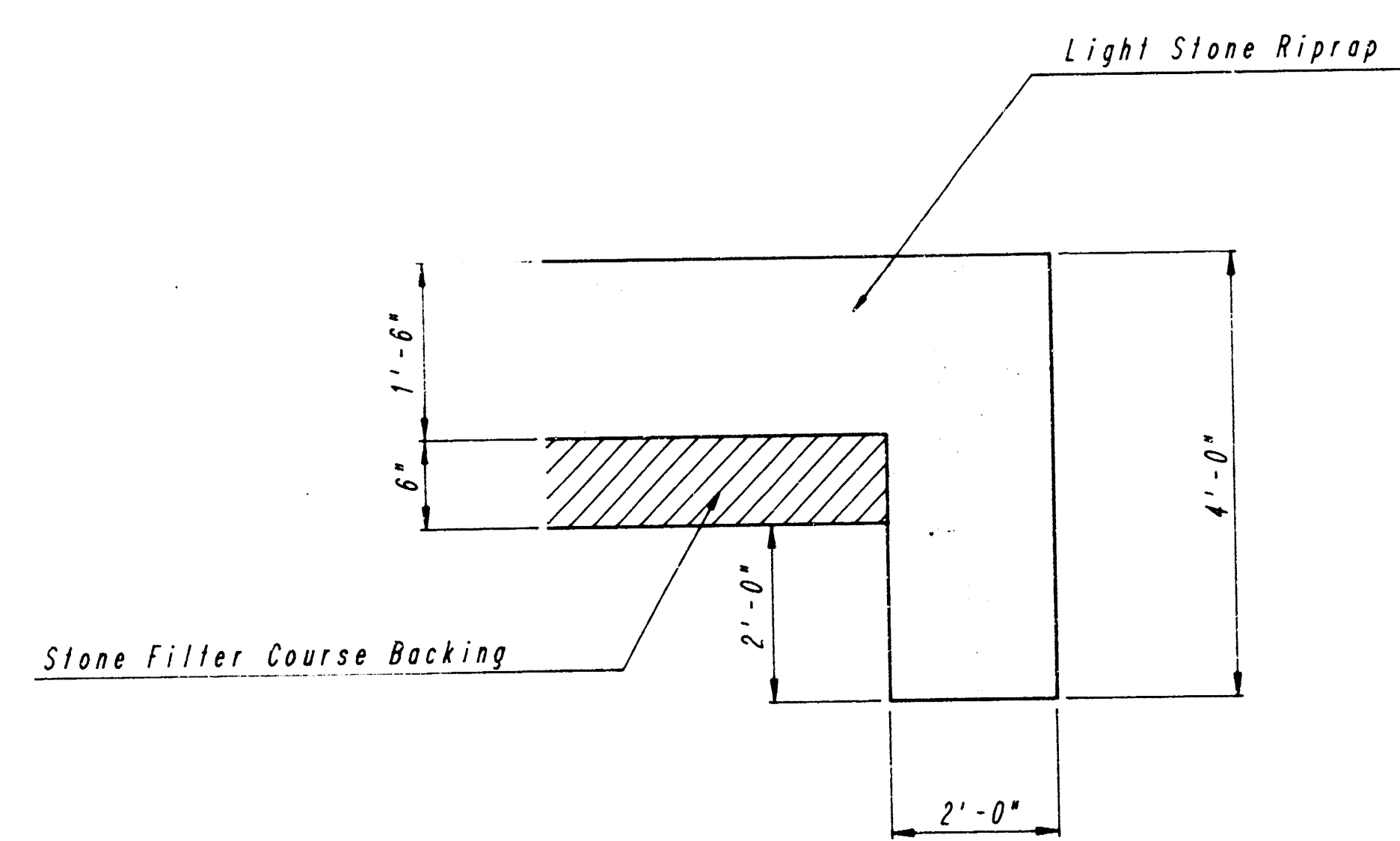


SOIL BORING LOGS  
See Sheet 4 for Locations



**RIPRAP DETAIL**  
Line No. 1  
 Scale: 1"=10'

**RIPRAP DETAIL**  
*Line No. 2*  
Scale: 1"=10'

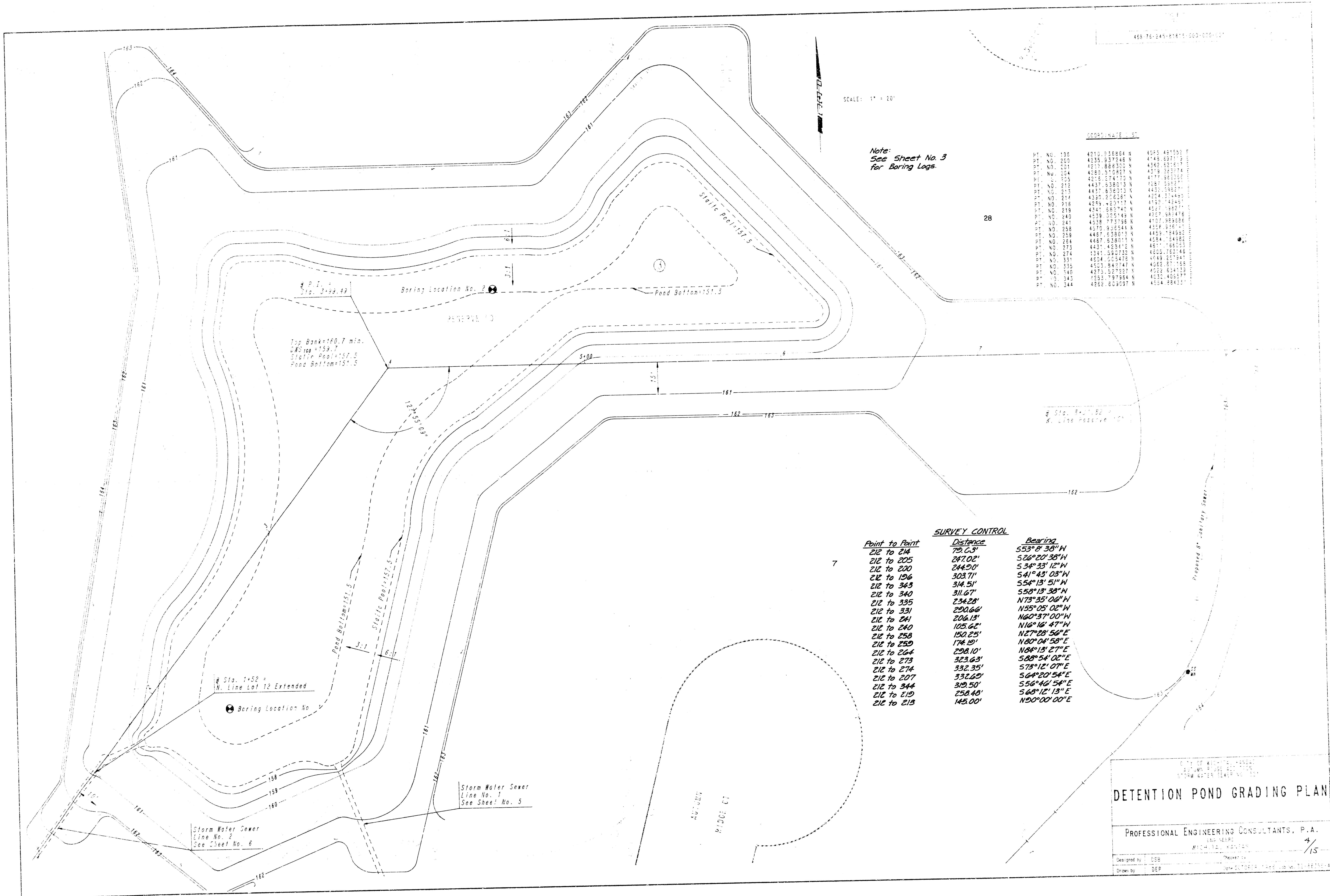


TYPICAL SECTION THRU TOEWALL

NOTE: Toewalls shall be installed along all edges of stone riprap.

|                                                                               |     |            |               |
|-------------------------------------------------------------------------------|-----|------------|---------------|
| CITY OF WICHITA, KANSAS<br>AUTUMN RIDGE ADDITION<br>STORM WATER SEWER NO. 321 |     |            |               |
| <h1 style="margin: 0;">TYPICAL SECTIONS AND<br/>MISCELLANEOUS DETAILS</h1>    |     |            |               |
| PROFESSIONAL ENGINEERING CONSULTANTS, P.A.<br>ENGINEERS<br>WICHITA, KANSAS    |     |            |               |
| Designed by                                                                   | CSB | Checked by |               |
| Drawn by                                                                      | DEP | Date       | OCTOBER, 1966 |
|                                                                               |     | Job No.    | 32-86356-4    |

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**SURVEY CONTROL**

| Point to Point | Distance | Bearing        |
|----------------|----------|----------------|
| 212 to 214     | 70.63'   | S53° 31' 38" W |
| 212 to 205     | 247.02'  | S26° 20' 38" W |
| 212 to 200     | 244.20'  | S34° 33' 12" W |
| 212 to 196     | 303.71'  | S41° 43' 03" W |
| 212 to 343     | 314.51'  | S54° 13' 51" W |
| 212 to 340     | 311.67'  | S58° 13' 38" W |
| 212 to 335     | 234.28'  | N73° 35' 06" W |
| 212 to 331     | 250.66'  | N55° 05' 02" W |
| 212 to 241     | 206.13'  | N60° 37' 00" W |
| 212 to 240     | 105.62'  | N16° 16' 47" W |
| 212 to 258     | 150.25'  | N27° 28' 56" E |
| 212 to 250     | 174.19'  | N80° 04' 58" E |
| 212 to 264     | 298.10'  | N84° 13' 27" E |
| 212 to 273     | 323.63'  | S88° 54' 02" E |
| 212 to 274     | 332.35'  | S73° 12' 07" E |
| 212 to 207     | 332.60'  | S64° 20' 54" E |
| 212 to 344     | 319.50'  | S56° 46' 54" E |
| 212 to 219     | 258.48'  | S68° 12' 13" E |
| 212 to 218     | 145.00'  | N50° 00' 00" E |

**COORDINATE LIST**

| PT. NO.     | Easting       | Northing     |
|-------------|---------------|--------------|
| PT. NO. 198 | 4210.35864 N  | 4525.49155 E |
| PT. NO. 200 | 4235.837248 N | 4546.23177 E |
| PT. NO. 201 | 4217.866375 N | 4562.02717 E |
| PT. NO. 204 | 4260.510827 N | 4539.22774 E |
| PT. NO. 205 | 4226.074770 N | 4577.82211 E |
| PT. NO. 212 | 4437.638013 N | 4433.38271 E |
| PT. NO. 213 | 4457.638353 N | 4433.38271 E |
| PT. NO. 214 | 4330.226381 N | 4204.37449 E |
| PT. NO. 216 | 4259.421117 N | 4130.14245 E |
| PT. NO. 218 | 4341.687442 N | 4257.98476 E |
| PT. NO. 240 | 4519.026143 N | 4207.98388 E |
| PT. NO. 241 | 4518.775796 N | 4207.98388 E |
| PT. NO. 258 | 4570.635441 N | 4358.91511 E |
| PT. NO. 259 | 4487.638013 N | 4455.74590 E |
| PT. NO. 264 | 4467.638013 N | 4594.54882 E |
| PT. NO. 273 | 4431.428112 N | 4611.66003 E |
| PT. NO. 274 | 4341.638013 N | 4622.63413 E |
| PT. NO. 331 | 4504.225475 N | 4549.22547 E |
| PT. NO. 335 | 4503.842747 N | 4662.07158 E |
| PT. NO. 340 | 4273.527227 N | 4622.63413 E |
| PT. NO. 343 | 4533.797584 N | 4632.40537 E |
| PT. NO. 344 | 4282.639587 N | 4634.89431 E |

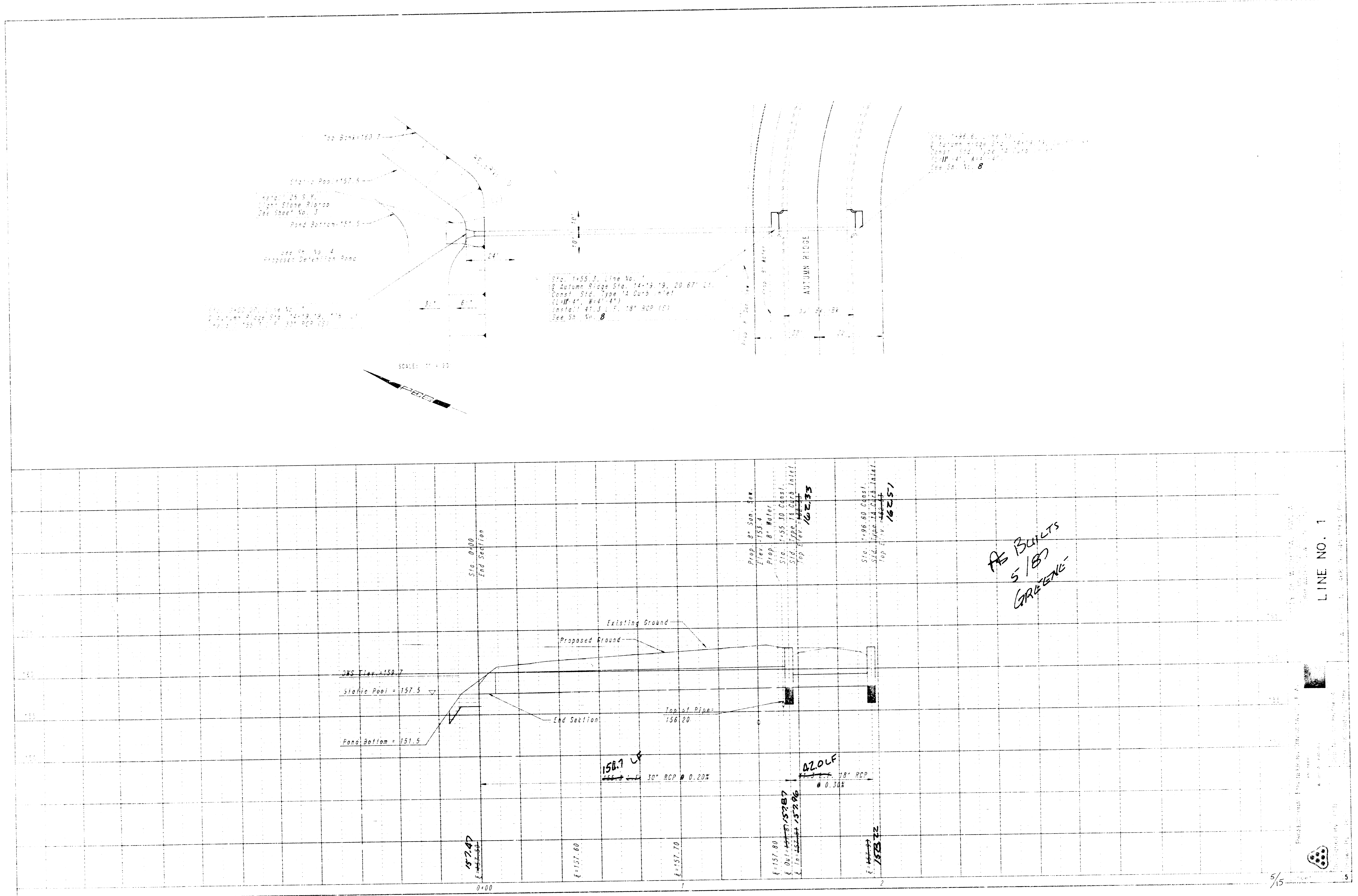
**DETENTION POND GRADING PLAN**

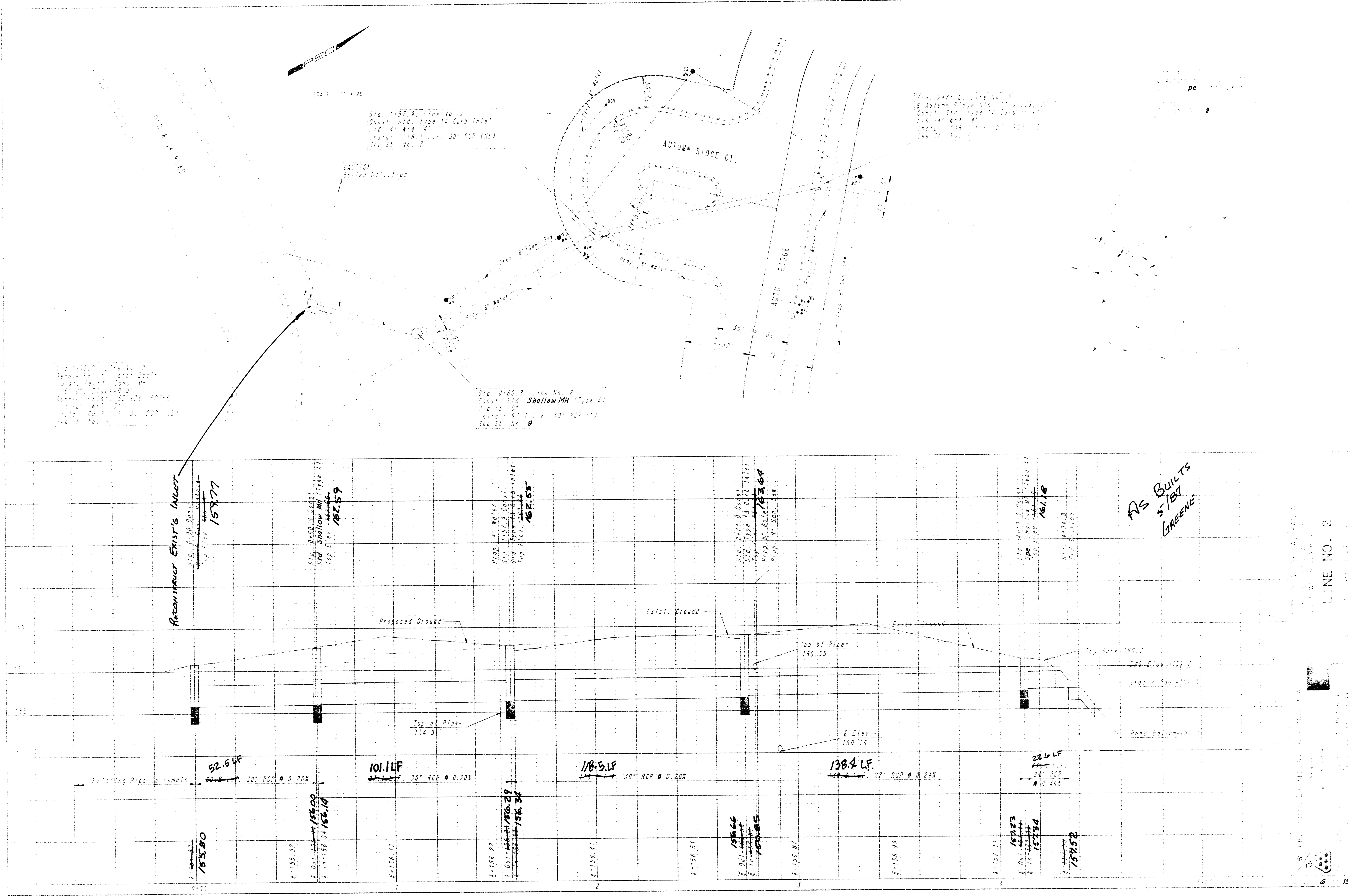
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

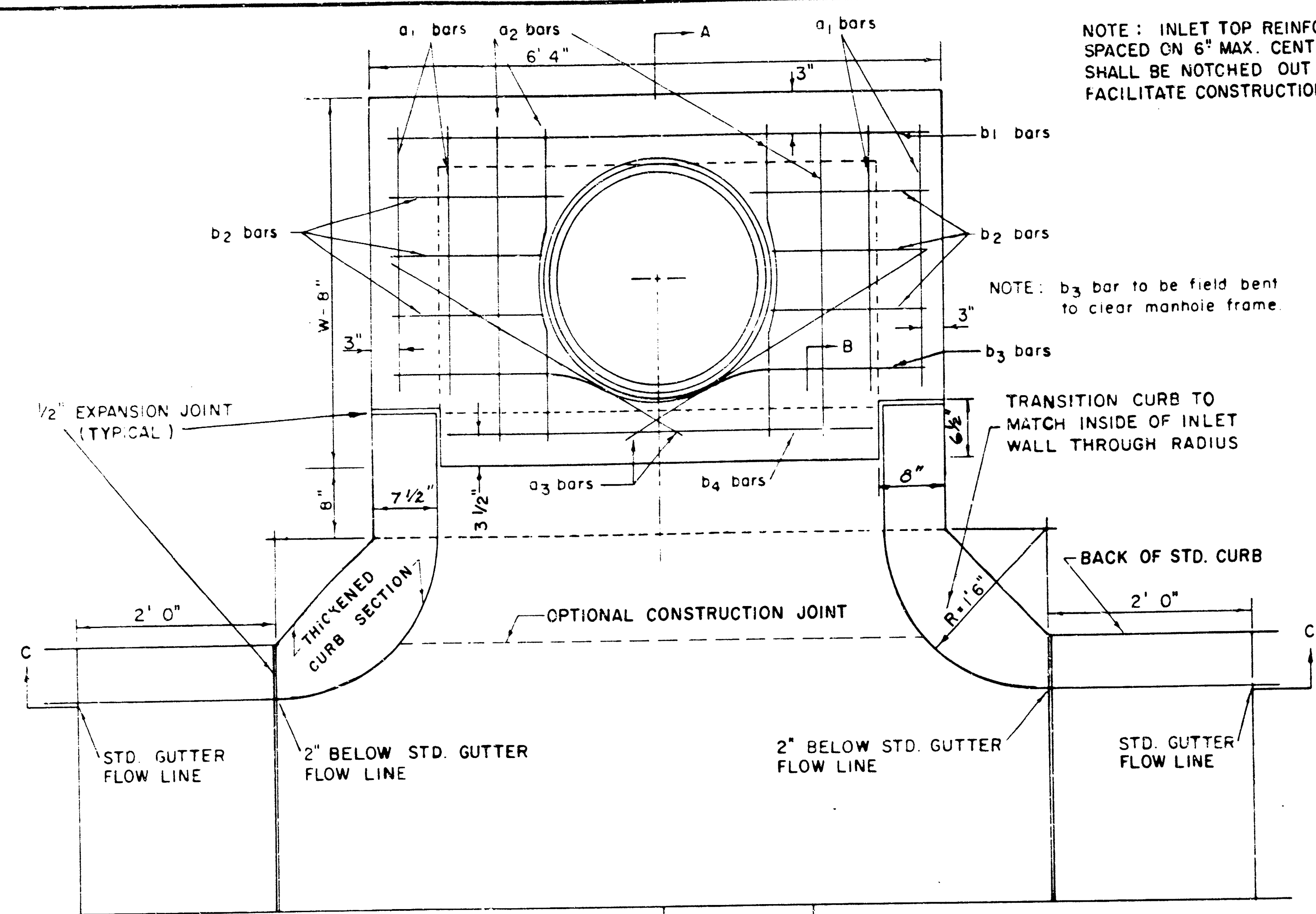
DESIGNED BY: OSB  
 DRAWN BY: DEP

4/15

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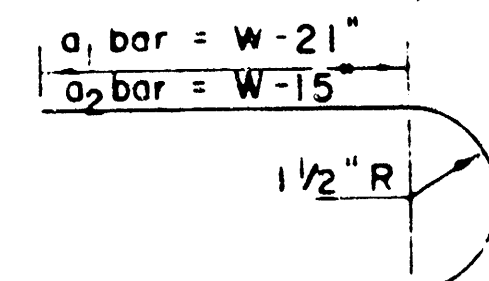
PLAN

STEEL SCHEDULE

| BAR    | a <sub>1</sub> | a <sub>2</sub> | a <sub>3</sub> | b <sub>1</sub> | b <sub>2</sub> | b <sub>3</sub> | b <sub>4</sub> | WT. LBS. |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| NUMBER | 4              | 4              | 2              | 1              | 3              | 5              | 7              | 9        |
| SIZE   | *4             | *4             | *4             | *4             | *4             | *4             | *4             | *6       |
| W=4'4" | 5'7"           | 6'7"           | 4'0"           | 6'1"           | -              | -              | -              | 1'9"     |
| W=5'4" | 7'7"           | 8'7"           | 5'0"           | 6'1"           | -              | -              | -              | 1'9"     |
| W=6'4" | 9'7"           | 10'7"          | 6'0"           | 6'1"           | -              | -              | -              | 1'9"     |
| W=7'4" | 11'7"          | 12'7"          | 7'0"           | 6'1"           | -              | -              | -              | 1'9"     |
| W=8'4" | 13'7"          | 14'7"          | 8'0"           | 6'1"           | -              | -              | -              | 1'9"     |

\* NOTE: a<sub>3</sub> BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

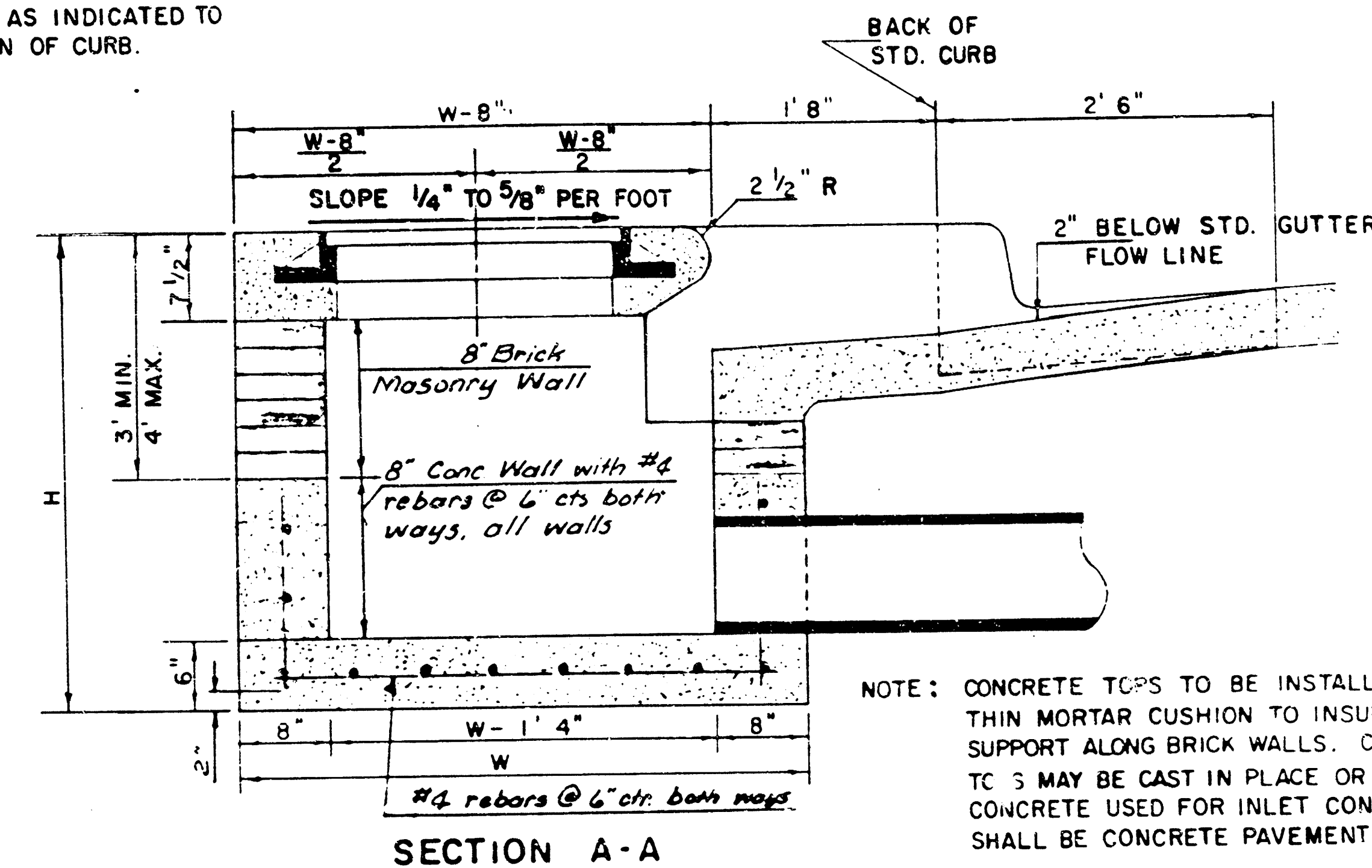
BENDING DIAGRAM



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: b<sub>3</sub> bar to be field bent to clear manhole frame

TRANSITION CURB TO MATCH INSIDE OF INLET WALL THROUGH RADIUS



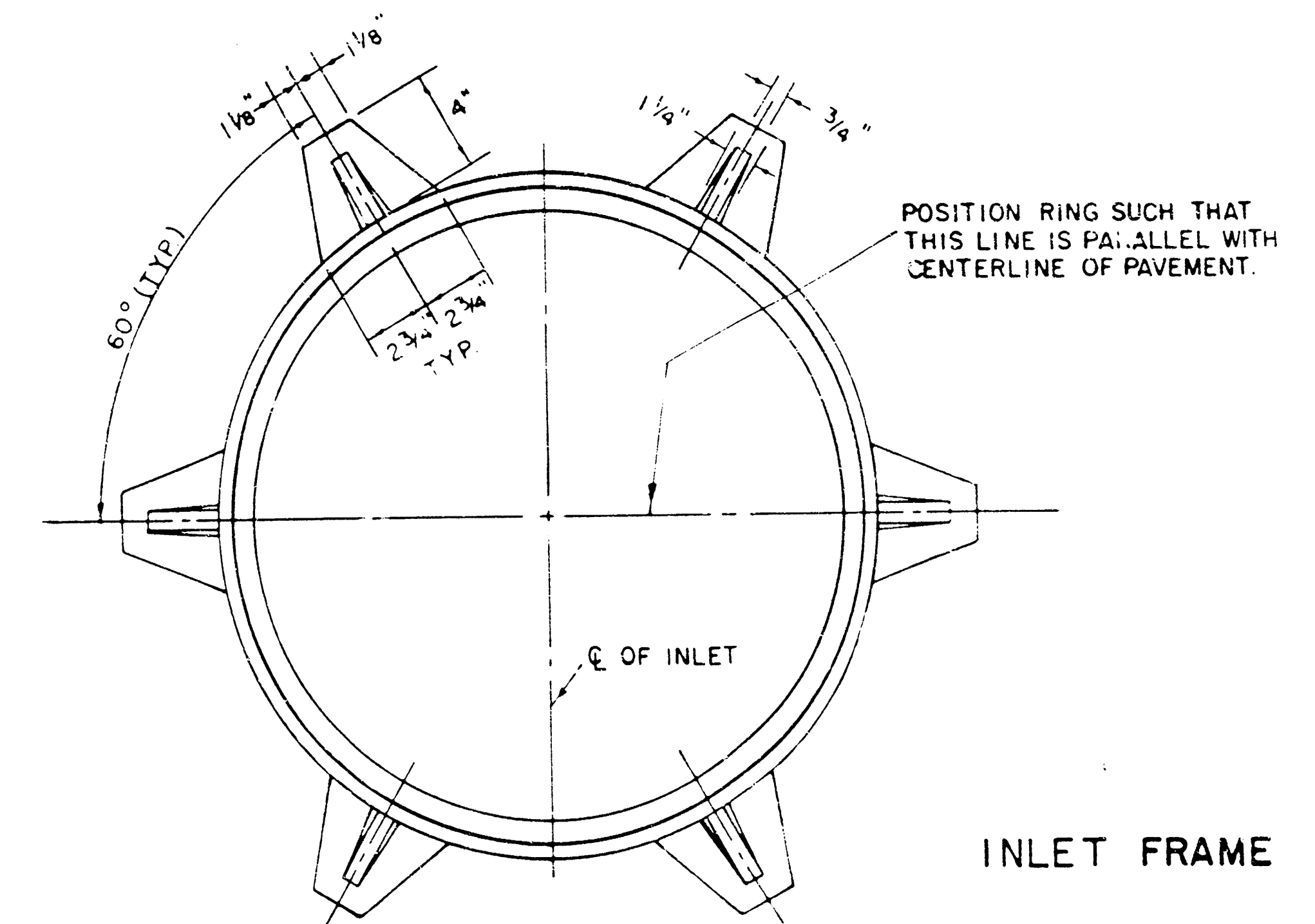
SECTION A-A

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.

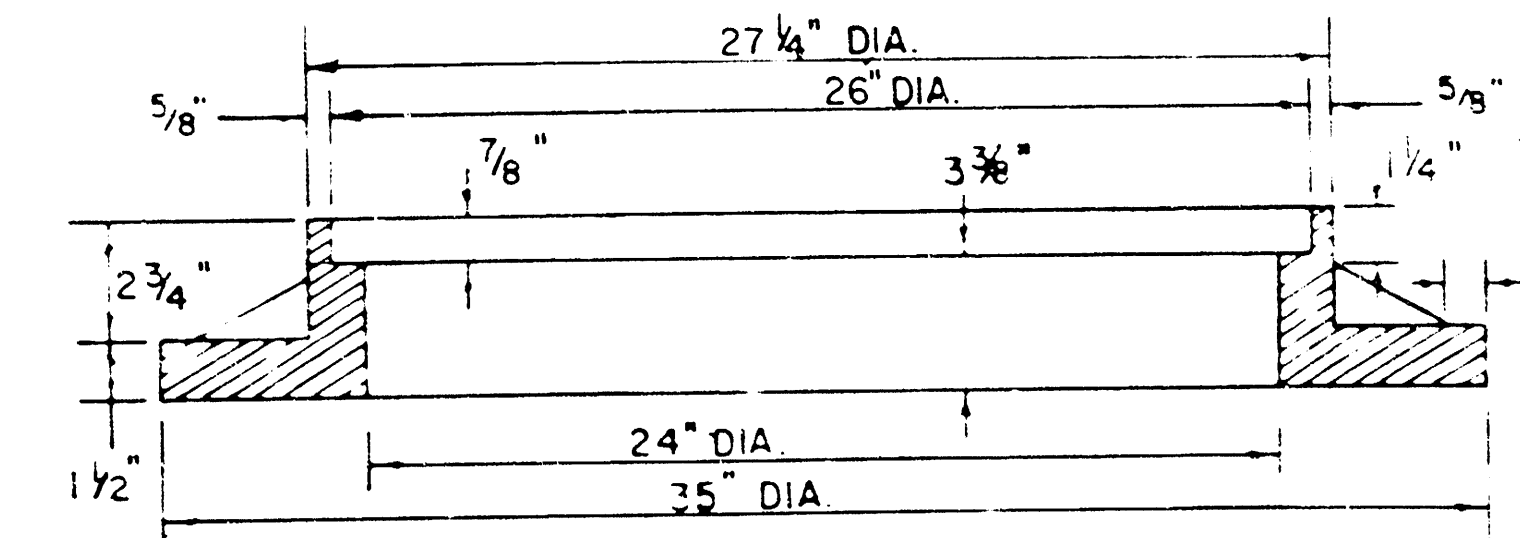
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAID MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF-CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

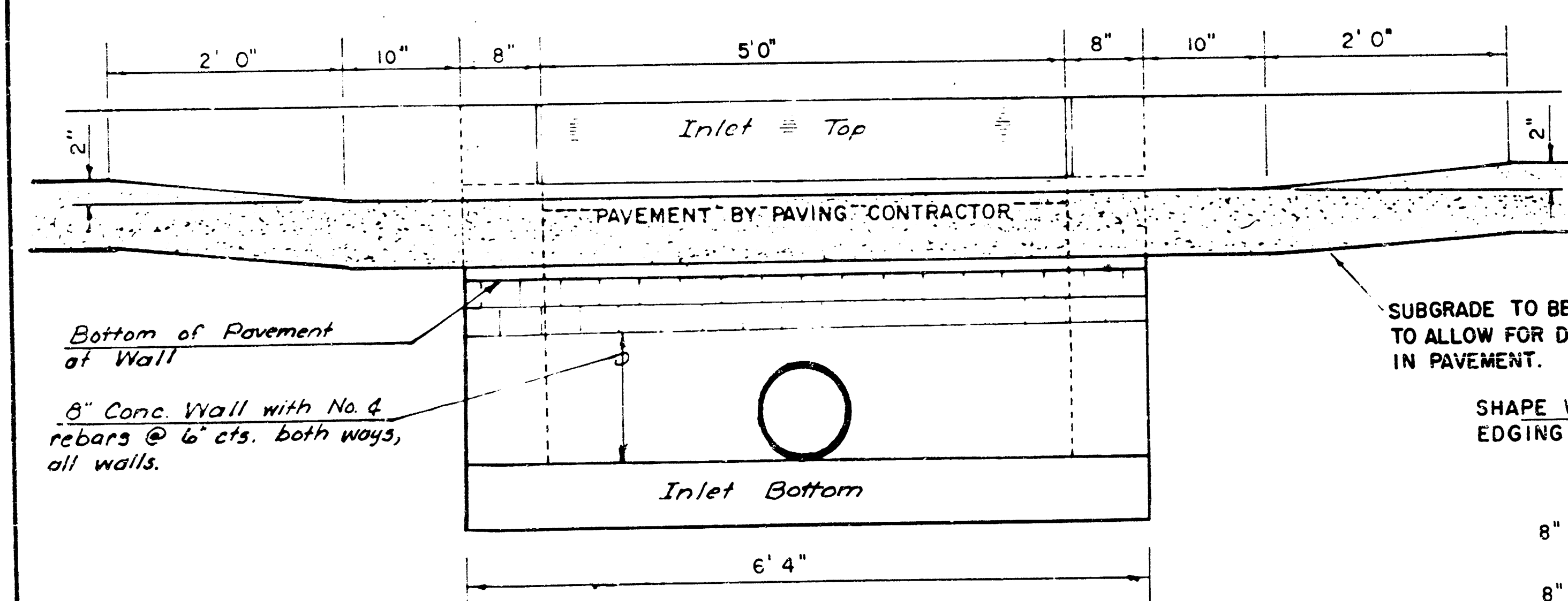


INLET FRAME

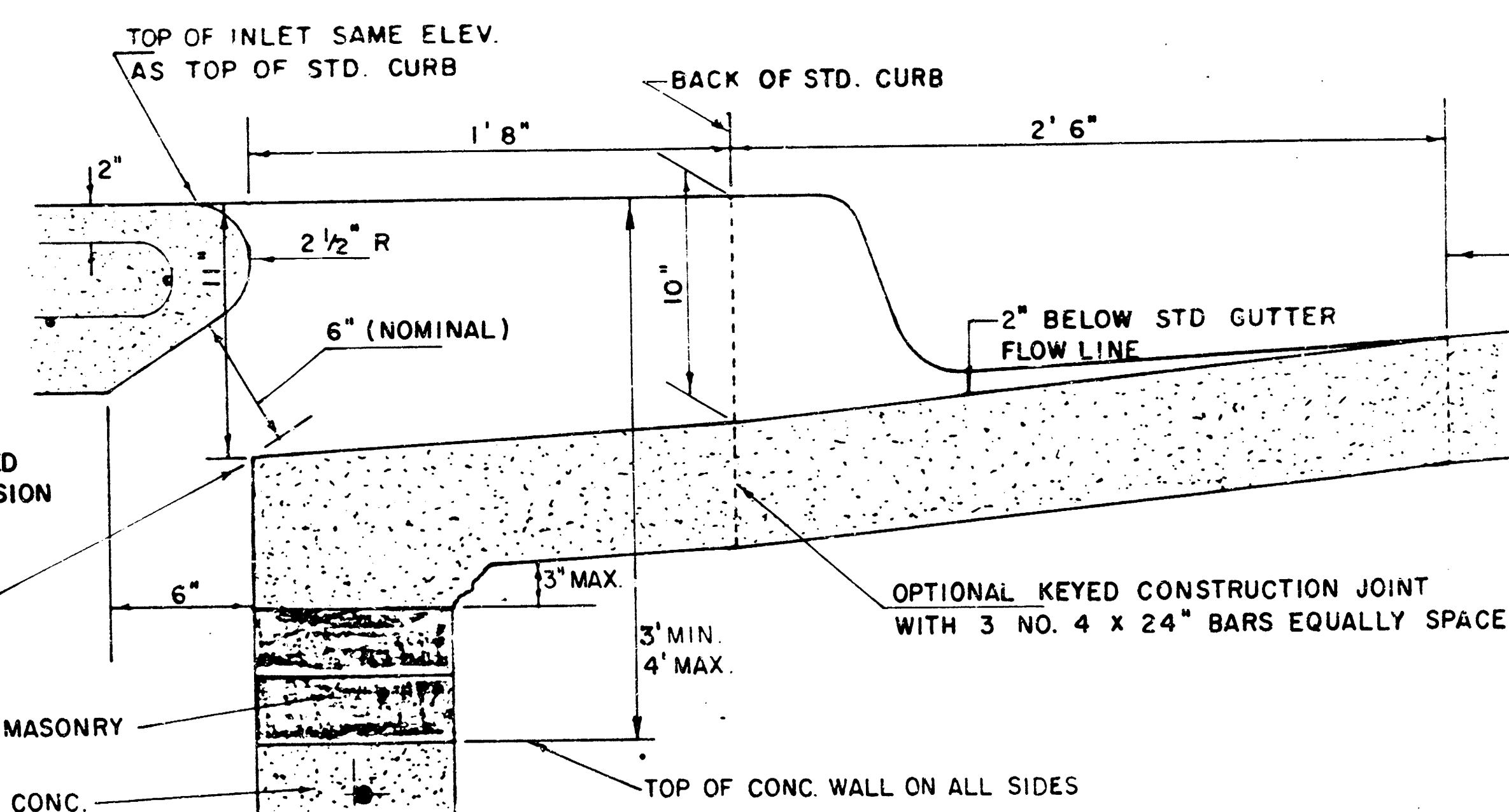
WEIGHT = 180 LBS.



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



SECTION C-C



SECTION B-B

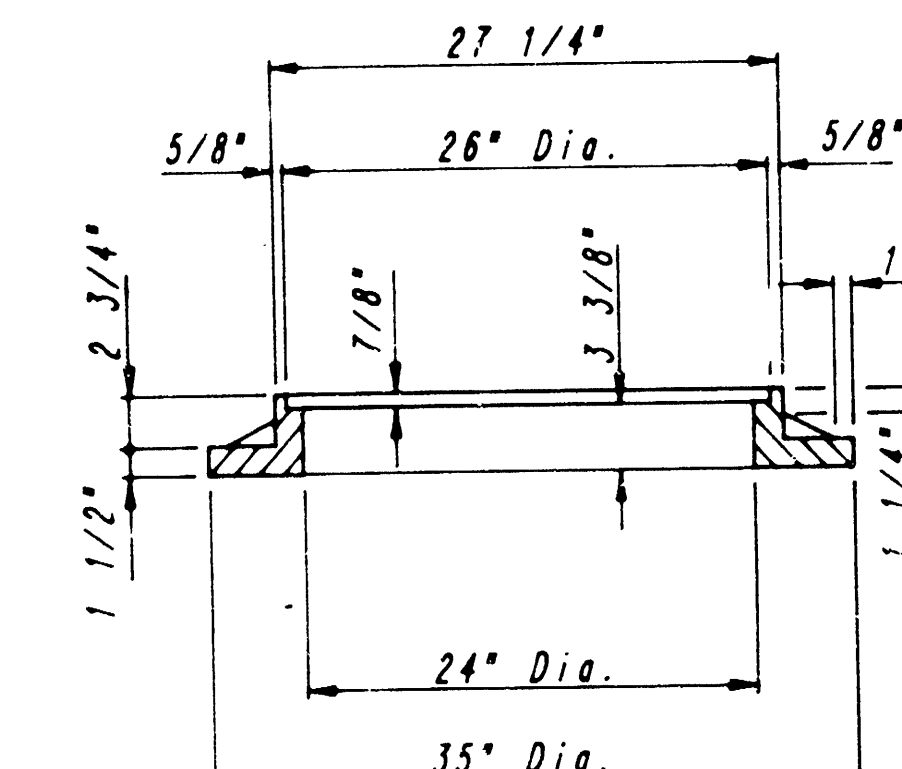
REVISED 12-21-1984

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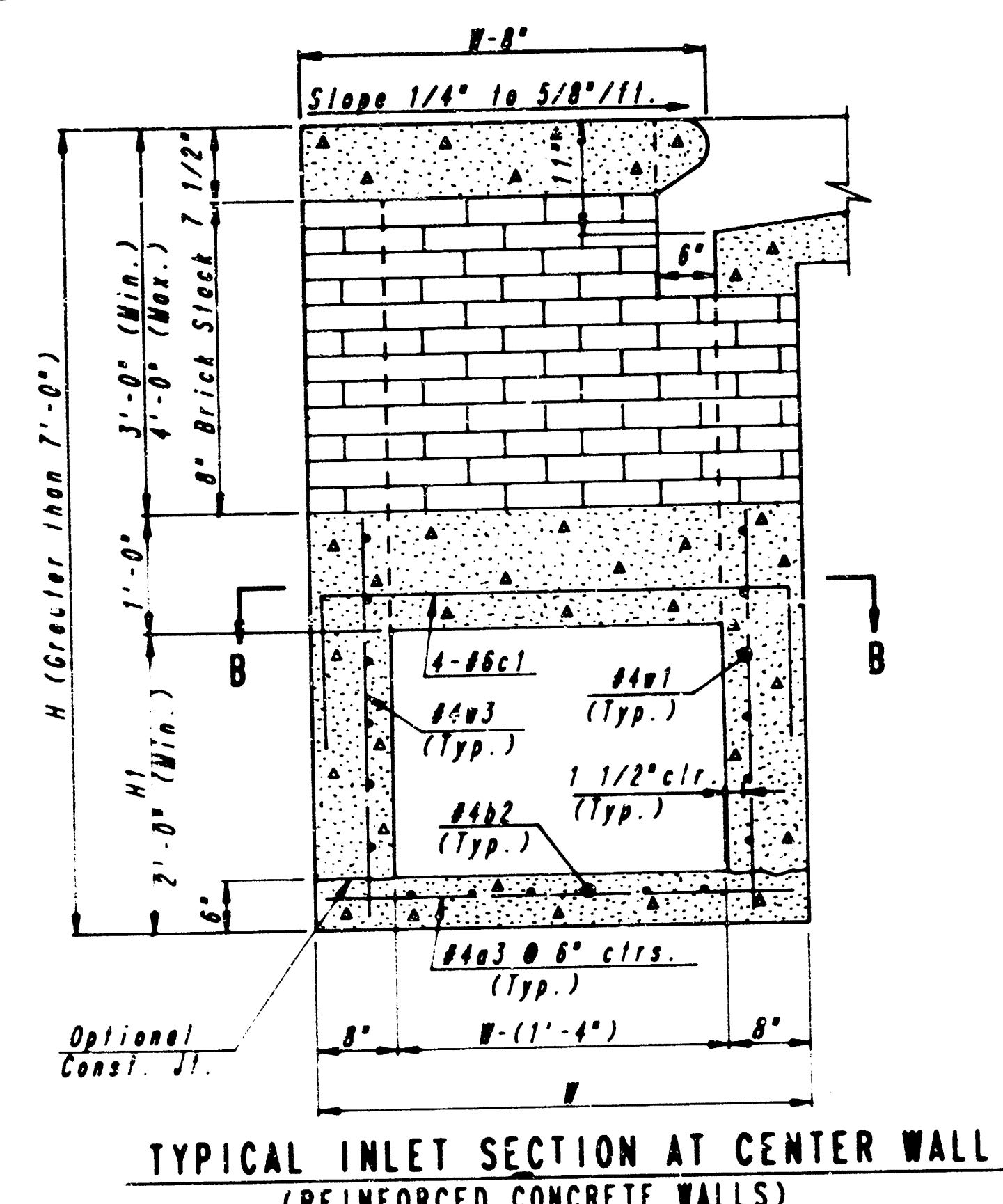
DETAIL STANDARD TYPE IA CURB INLET  
CITY OF WICHITA, KANSAS  
INLET OPENING = 6" x 5'0"

JUNE 1984 Sheet No. 7 of 15

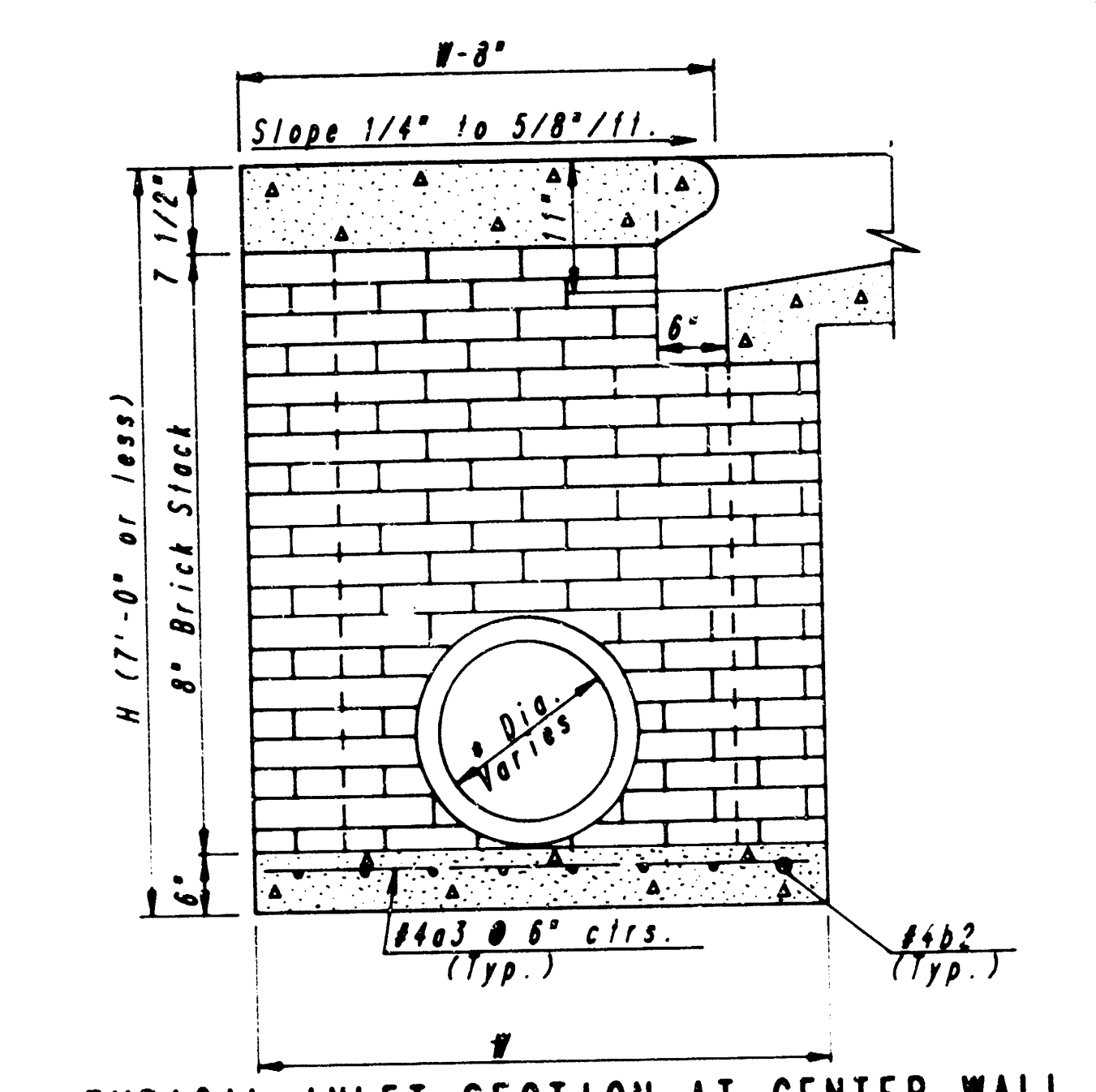
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See City of Wichita Standard Manhole  
Frame and Cover Detail Sheet for Cover  
Details to be used with Inlet Frame.

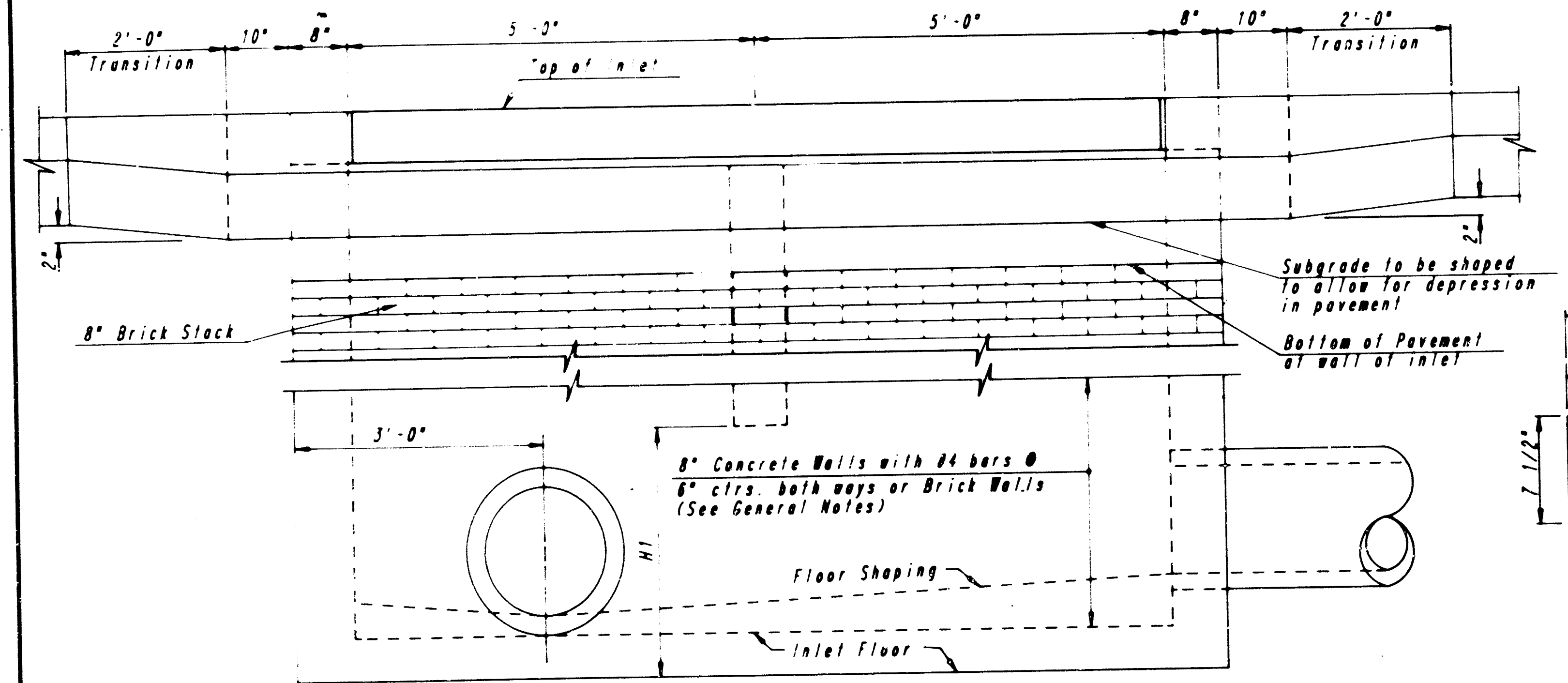


TYPICAL INLET SECTION AT CENTER WALL  
(REINFORCED CONCRETE WALLS)

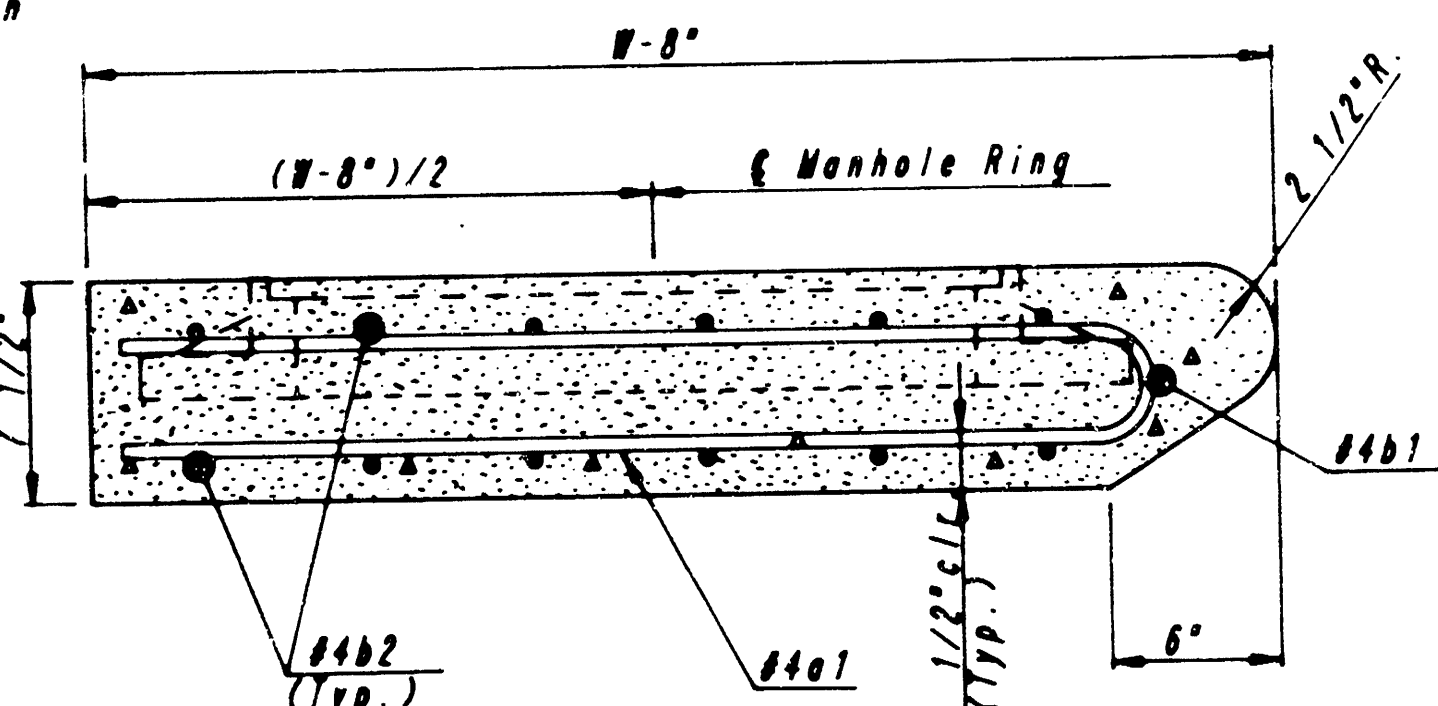


TYPICAL INLET SECTION AT CENTER WALL  
(MASONRY WALLS)

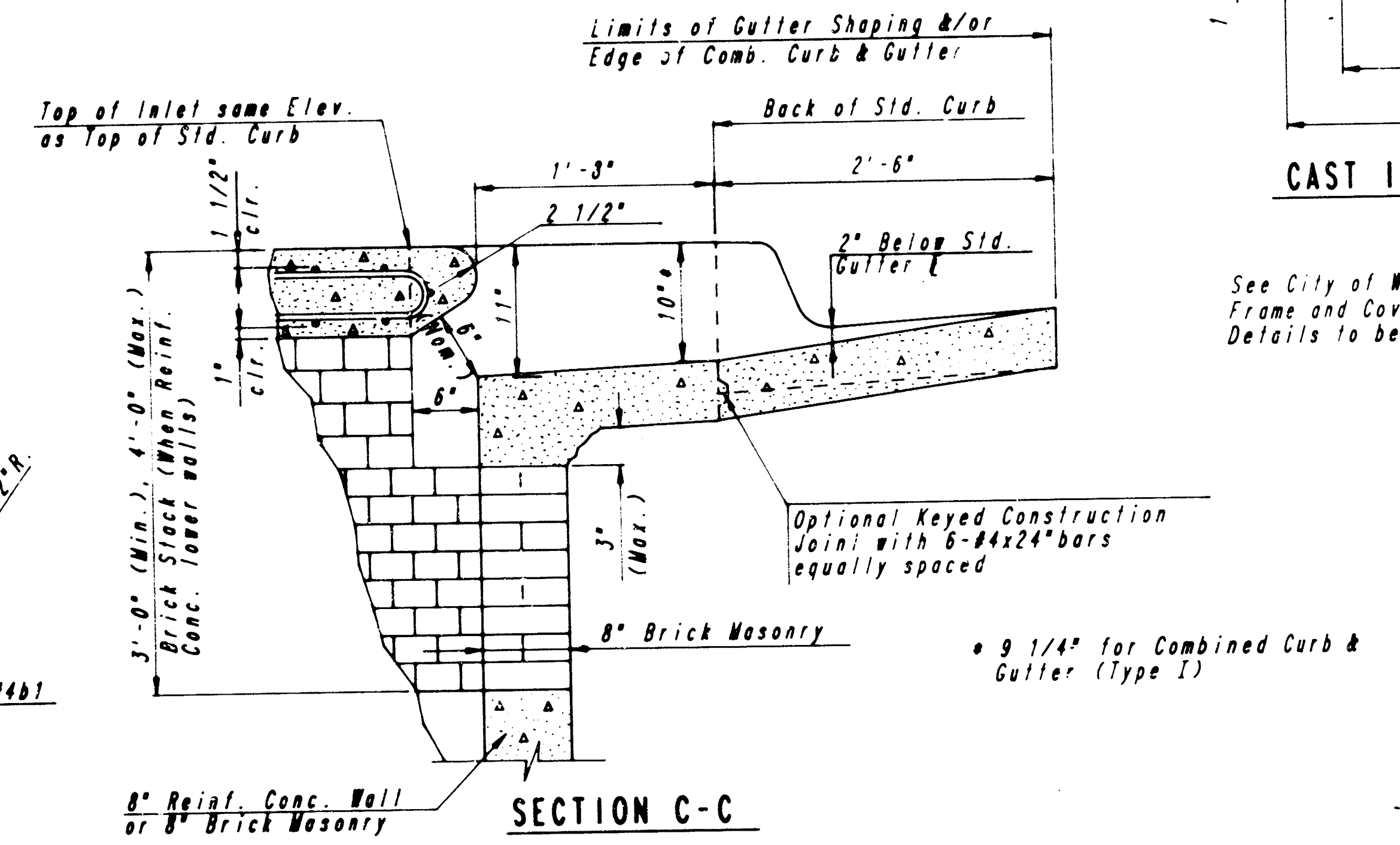
\* A center wall opening shall be provided by means of a section of reinforced concrete pipe. The minimum diameter used shall be that of the outlet pipe.



**ELEVATION**



**SECTION A-A**



SECTION C-C

### GENERAL NOTES

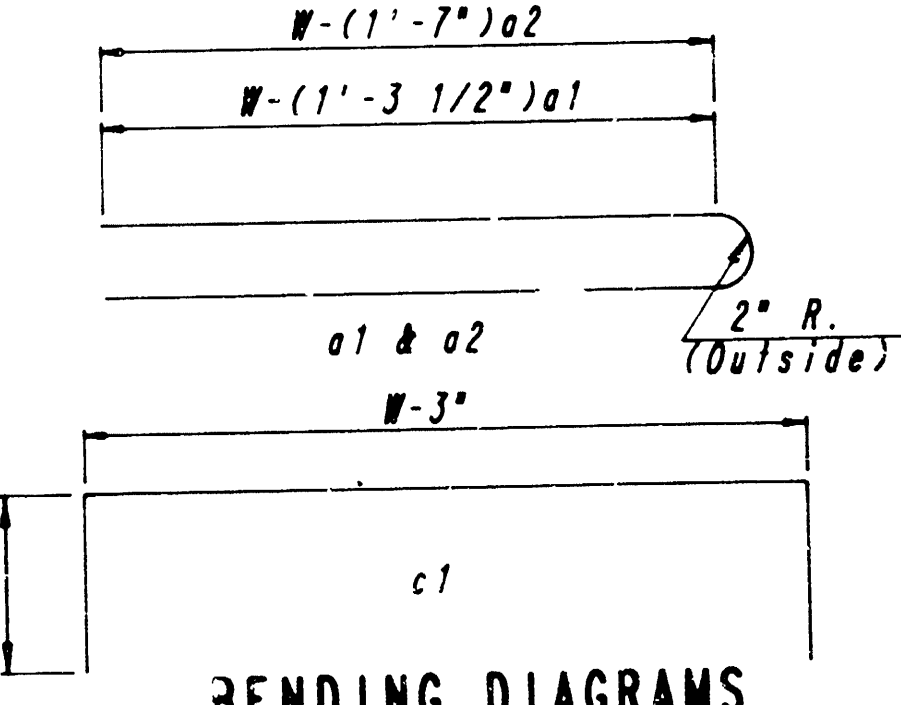
THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OR THIS INLET WHEN W=6'-4" OR LESS AND H=7'-0" OR LESS. WHEN W IS GREATER THAN 6'-4" AND H IS LESS THAN 7'-0", THE OUTSIDE WALLS BELOW THE BRICK STACK SHALL BE REINFORCED CONCRETE CONSTRUCTION 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 OPEN, CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

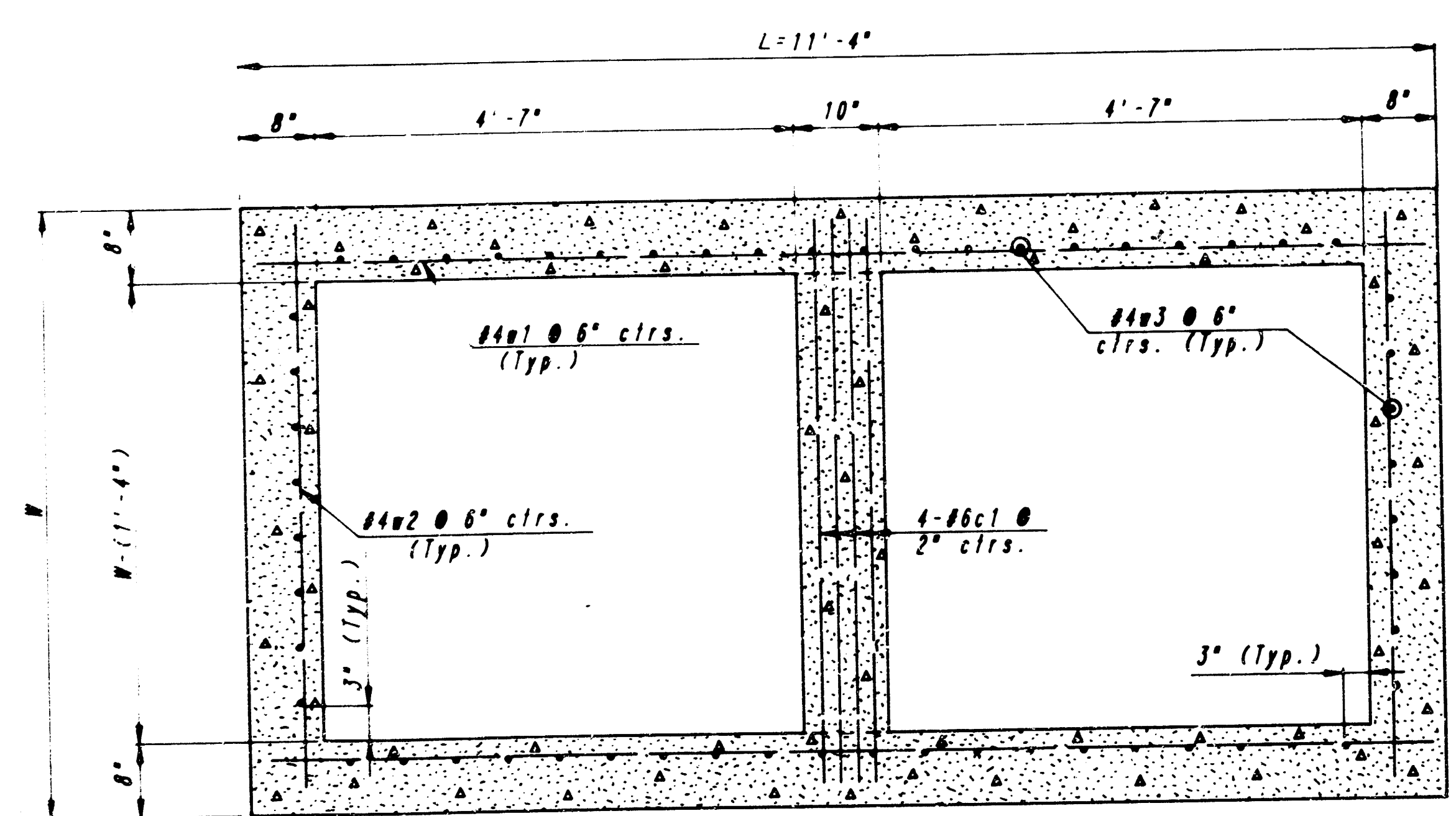
CONCRETE SHALL BE CITY OF WICHITA STANDARD PAVING MIX. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL. INLET TOPS ARE TO BE PLACED ON A 4" THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALOE BRICK WALLS. CONCRETE TOPS MAY BE PRECAST OR CAST IN PLACE. INLET TOPS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB. CENTERS AND SHALL HAVE A MINIMUM CLEARANCE OF 1-1/2". BARS SHALL BE FIELD BENT OR CUT TO CLEAR

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

ADDITIONAL CURB AND/OR CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR "INLET HOOKUP".



## BENDING DIAGRAMS



SECTION B-B

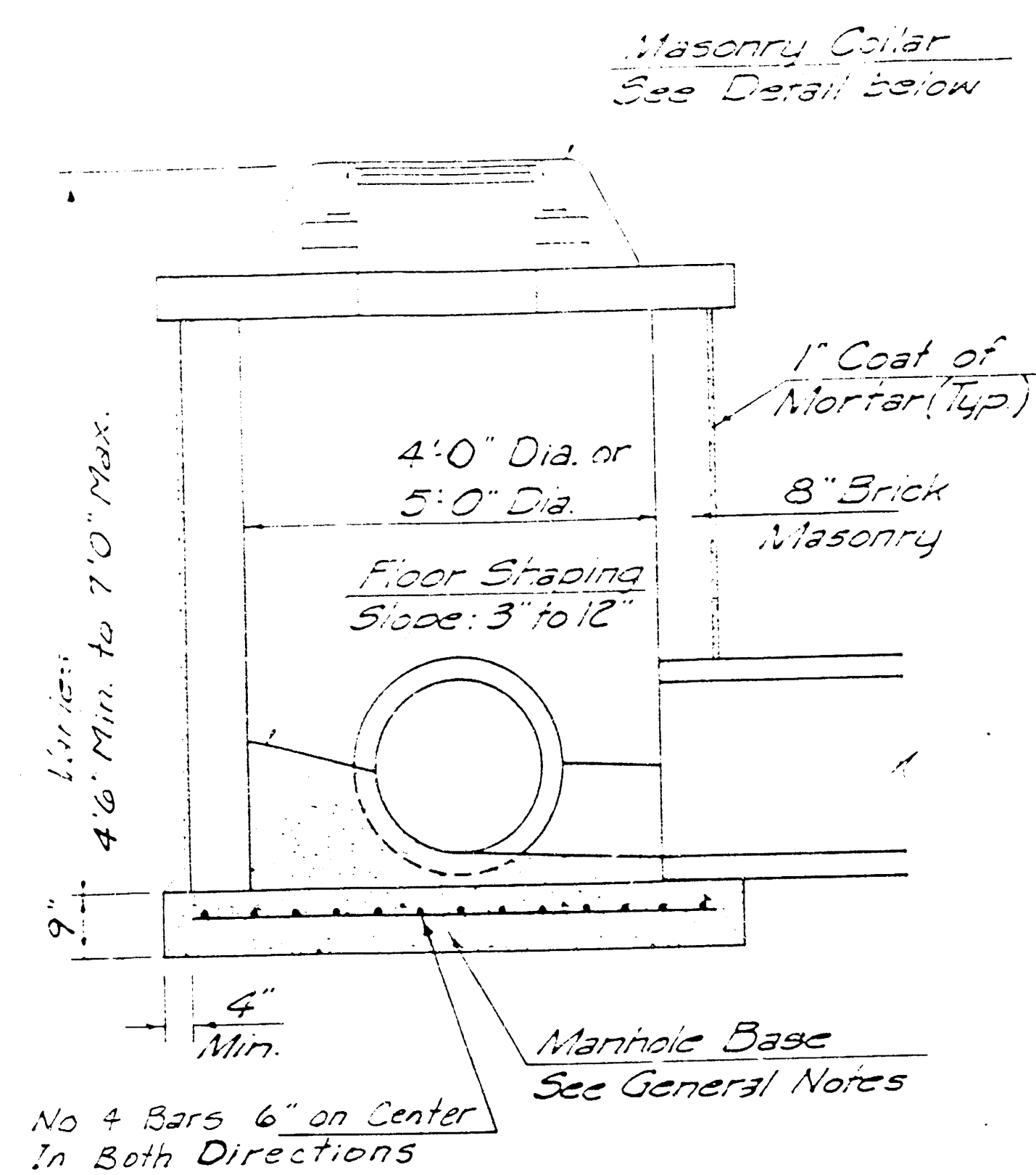
| SLAB AND FLOOR REINFORCING |      |     |           |         |           |     |            |         |            |     |            |         |        |     |        |         |  |  |  |
|----------------------------|------|-----|-----------|---------|-----------|-----|------------|---------|------------|-----|------------|---------|--------|-----|--------|---------|--|--|--|
| 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     | 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"      | 1       | 9'-8"  | 1   | 9'-8"  |         |  |  |  |
| b2                         | #4   | 18  | 11'-1"    | 24      | 11'-1"    | 30  | 11'-1"     | 36      | 11'-1"     | 42  | 11'-1"     |         |        |     |        |         |  |  |  |
|                            |      |     |           |         |           |     |            |         |            |     |            |         |        |     |        |         |  |  |  |

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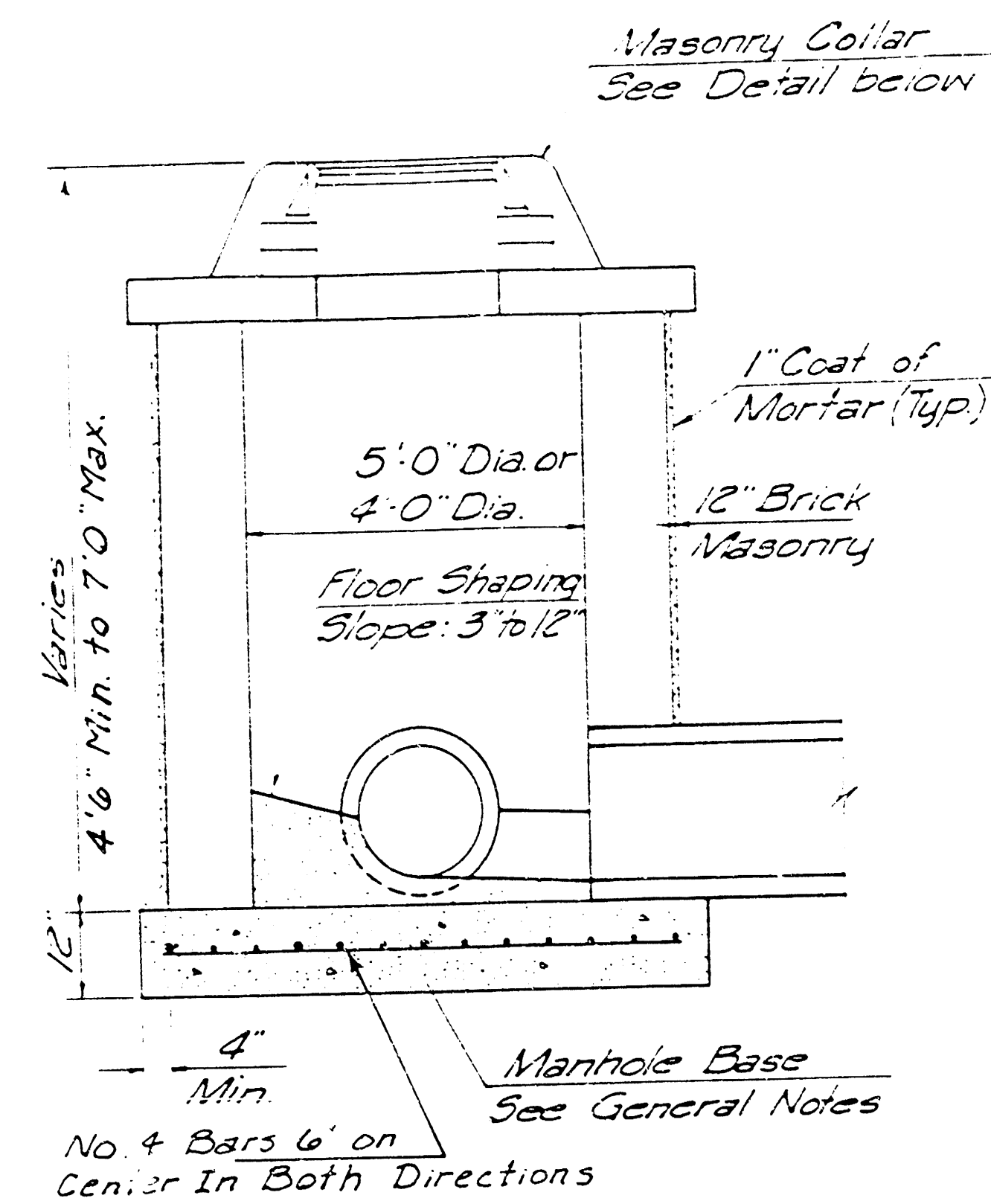
\* Field bend or cut Reinforcing as required for clearance  
 ①  $4(HI-6'') + 4(HI-6'')$  Rounded down to nearest 0.5'  
 ②  $40 + 4(W - 16'')$       ③  $4I + (9'')$

|                                                                                                                                |  |                        |                        |
|--------------------------------------------------------------------------------------------------------------------------------|--|------------------------|------------------------|
| CITY OF WICHITA, KANSAS                                                                                                        |  |                        |                        |
| <p align="center"><b>DETAIL STANDARD<br/>TYPE 1A CURB INLET</b></p> <p align="center">INLET OPENING = 6"X10'-0" (L=11'-4")</p> |  |                        |                        |
| <p align="center"><b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b></p> <p align="center">ENGINEERS<br/>WICHITA, KANSAS</p>    |  |                        |                        |
| Designed by                                                                                                                    |  | Checked by             |                        |
| Drawn by                                                                                                                       |  | Date <i>2/27, 1987</i> | Job No. <i>66356-4</i> |

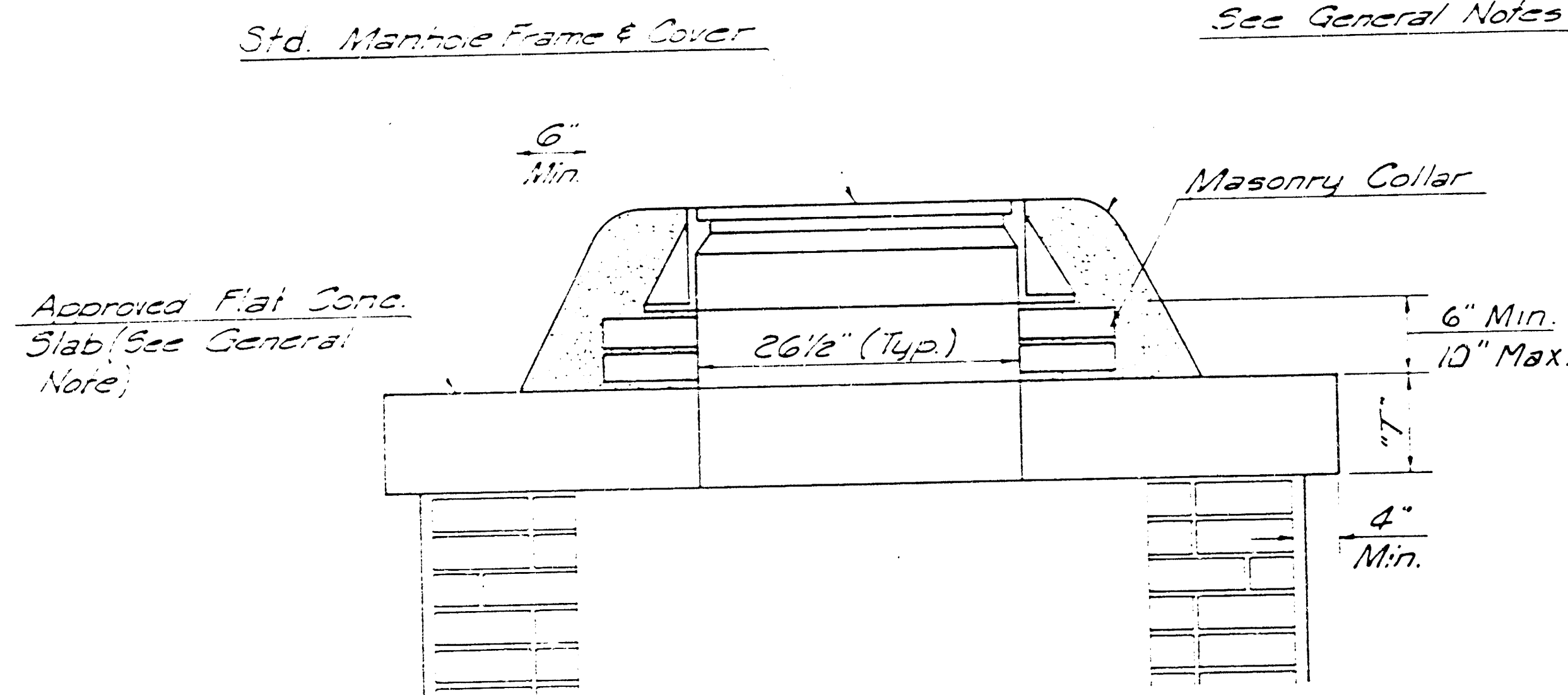
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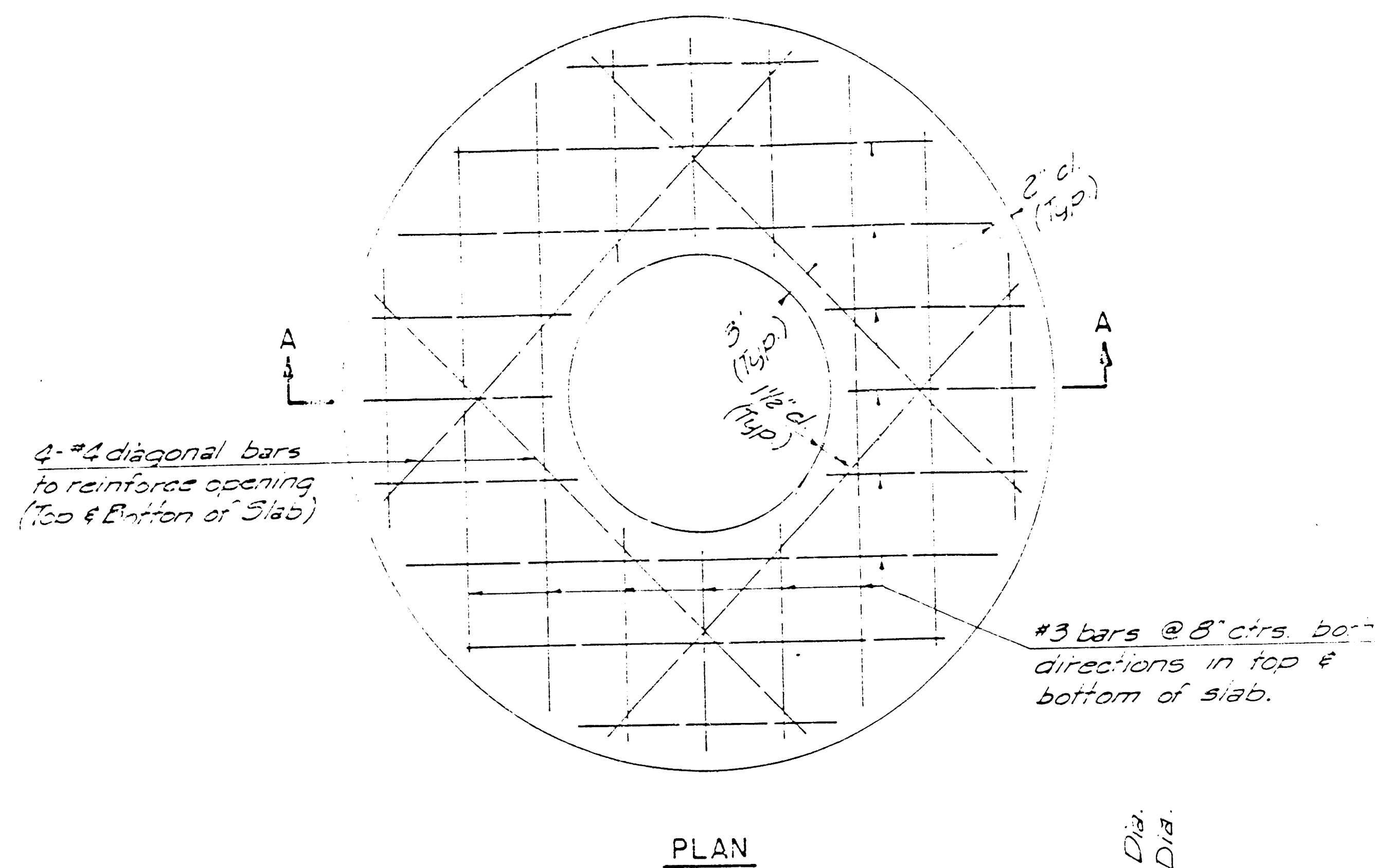
SHALLOW TYPE "A" MANHOLE



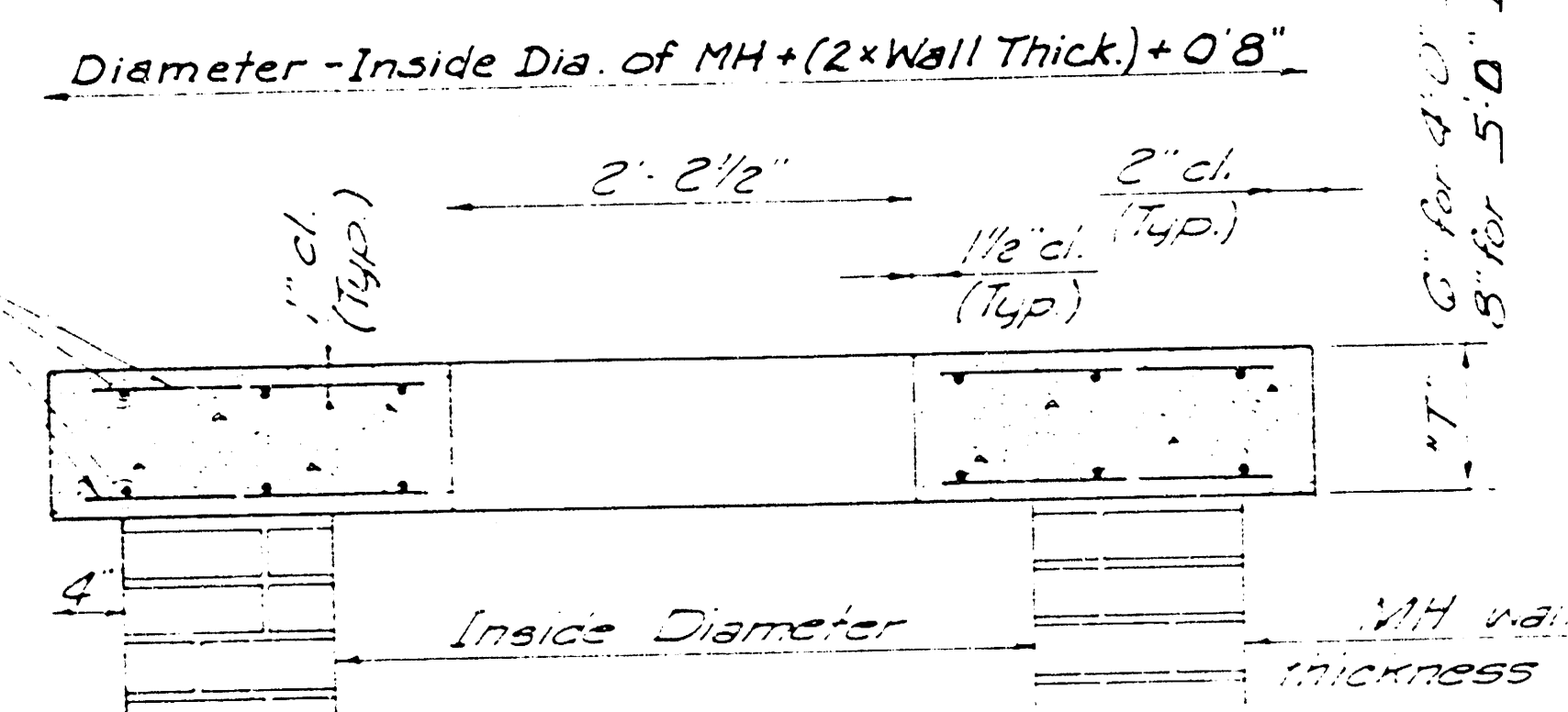
SHALLOW TYPE "B" MANHOLE



MASONRY COLLAR DETAIL

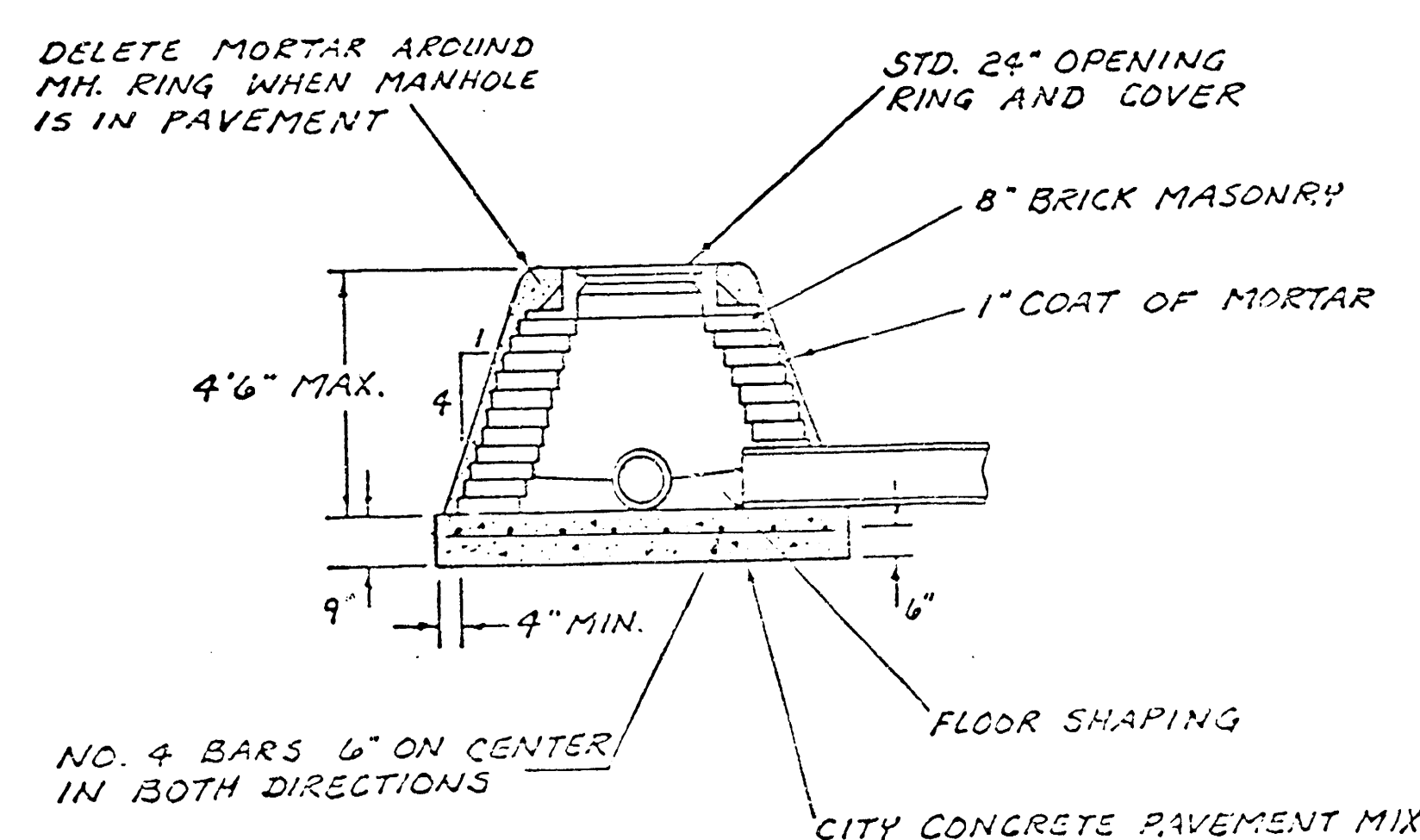


PLAN

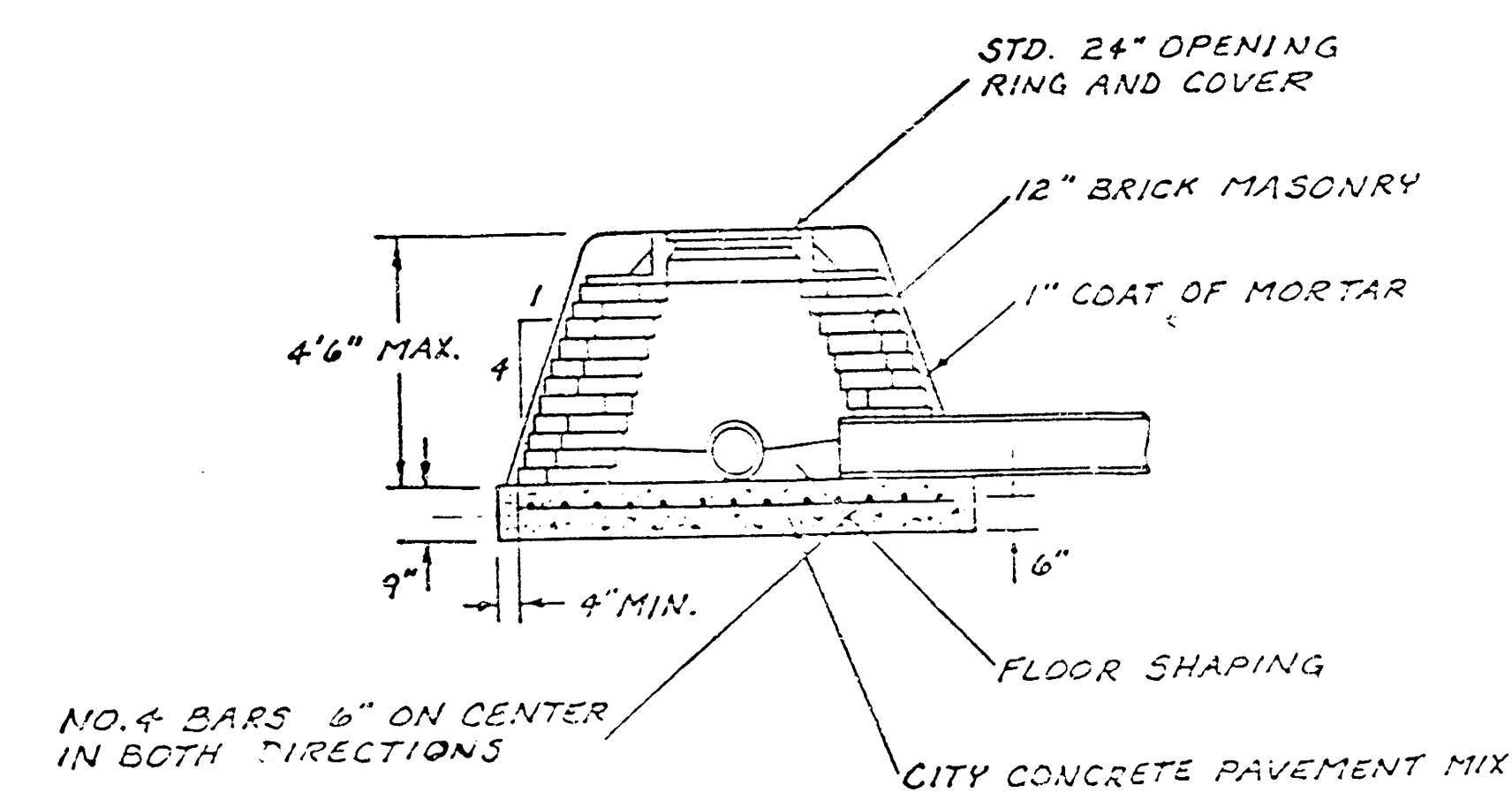


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

GENERAL NOTES

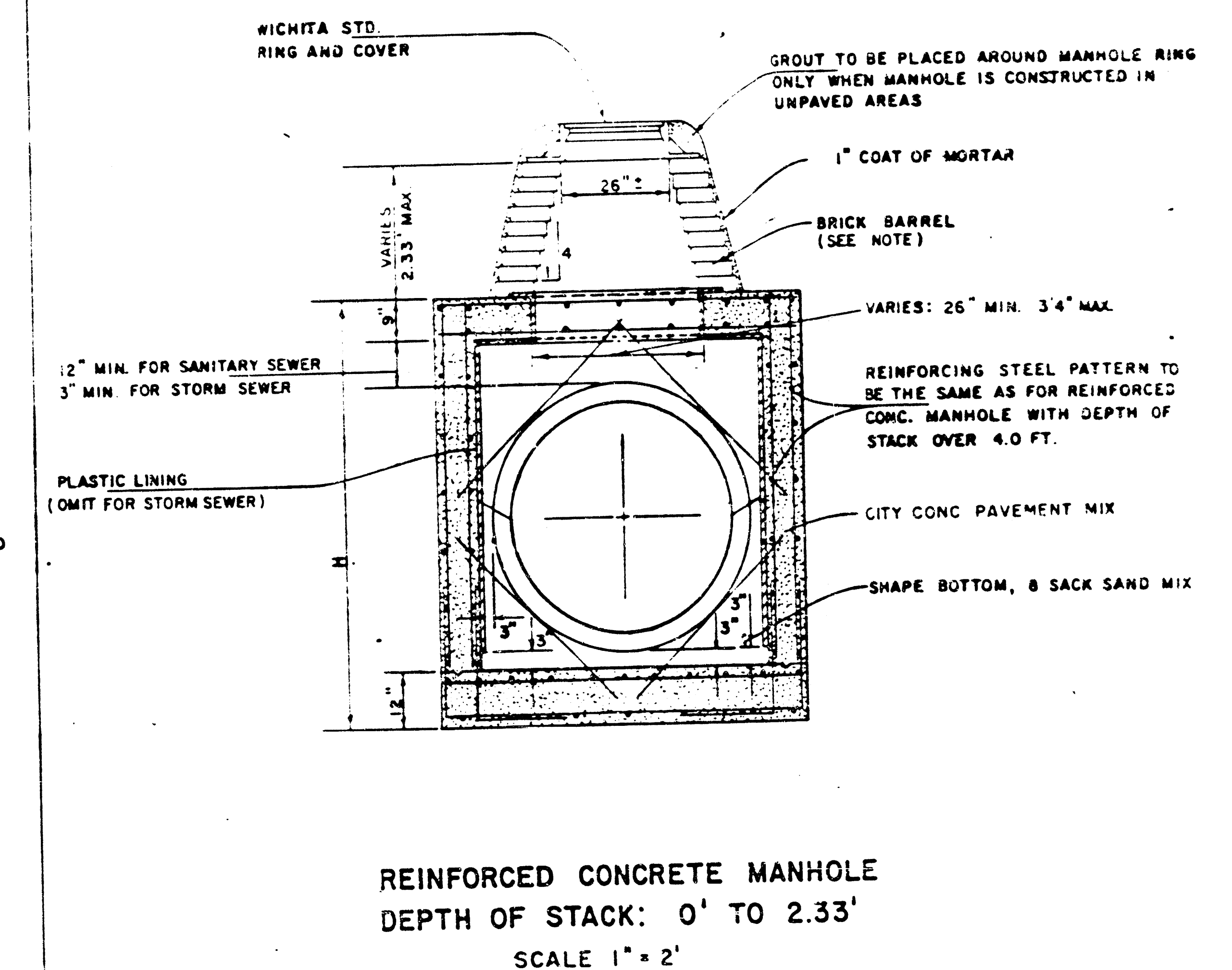
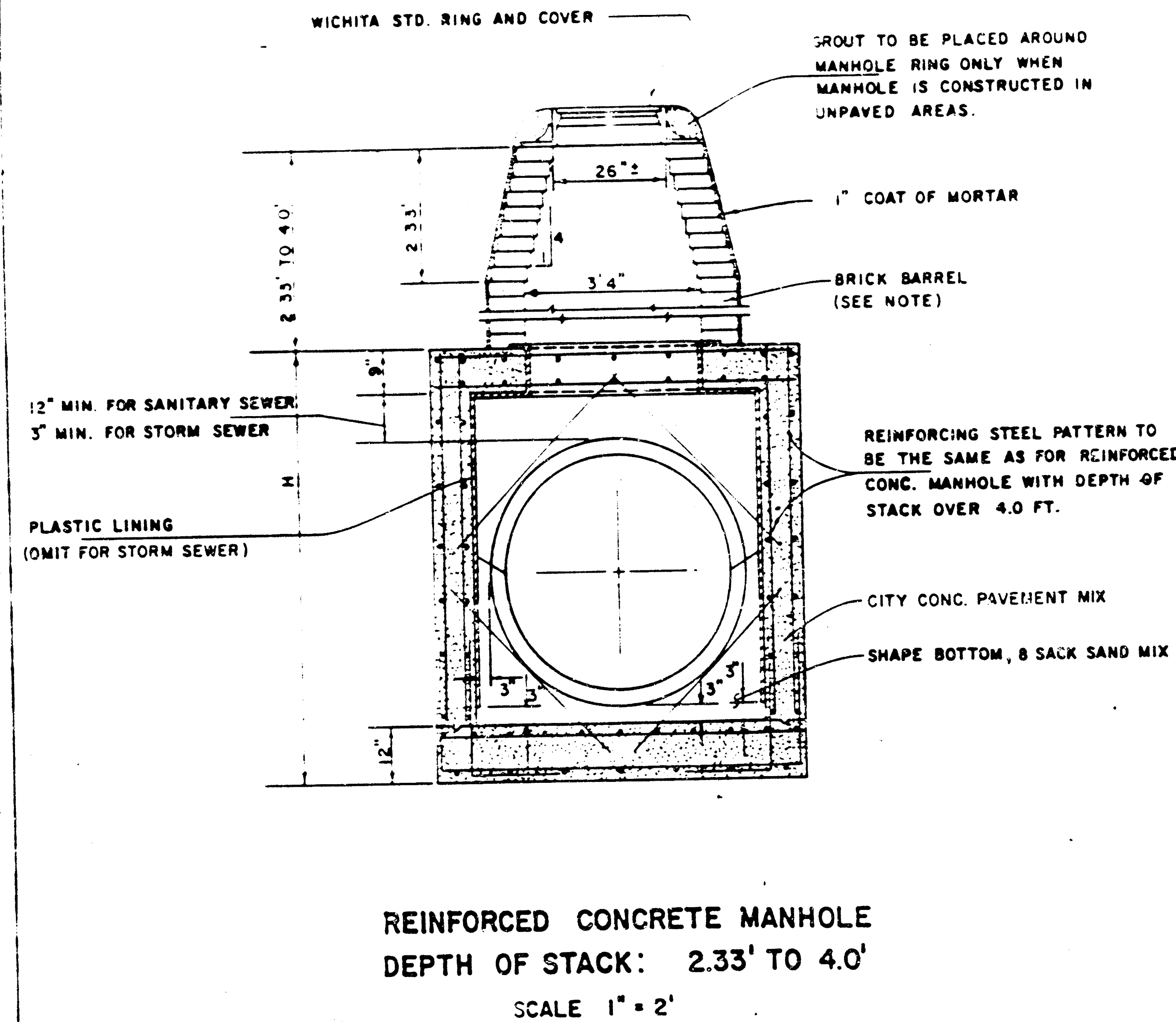
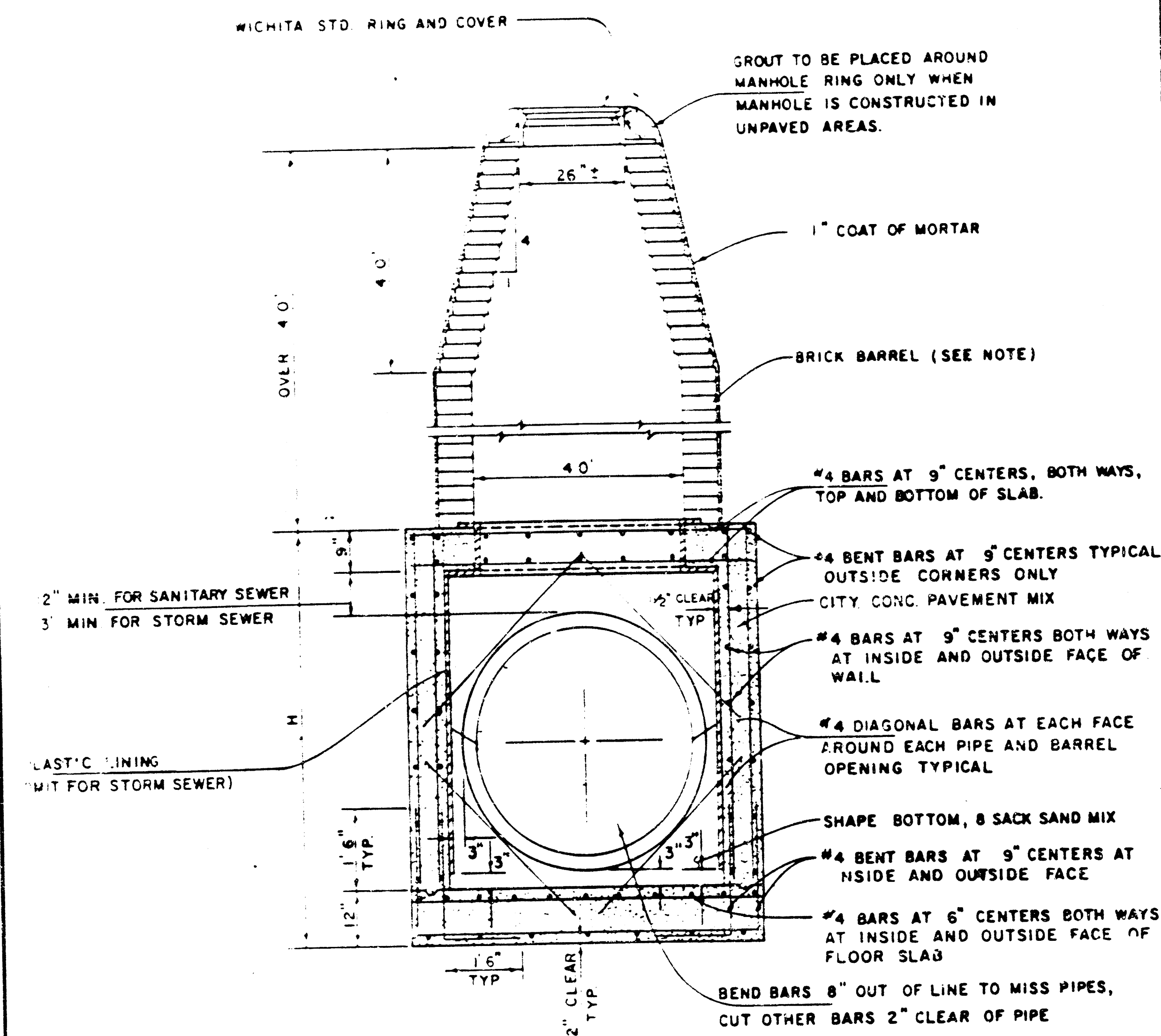
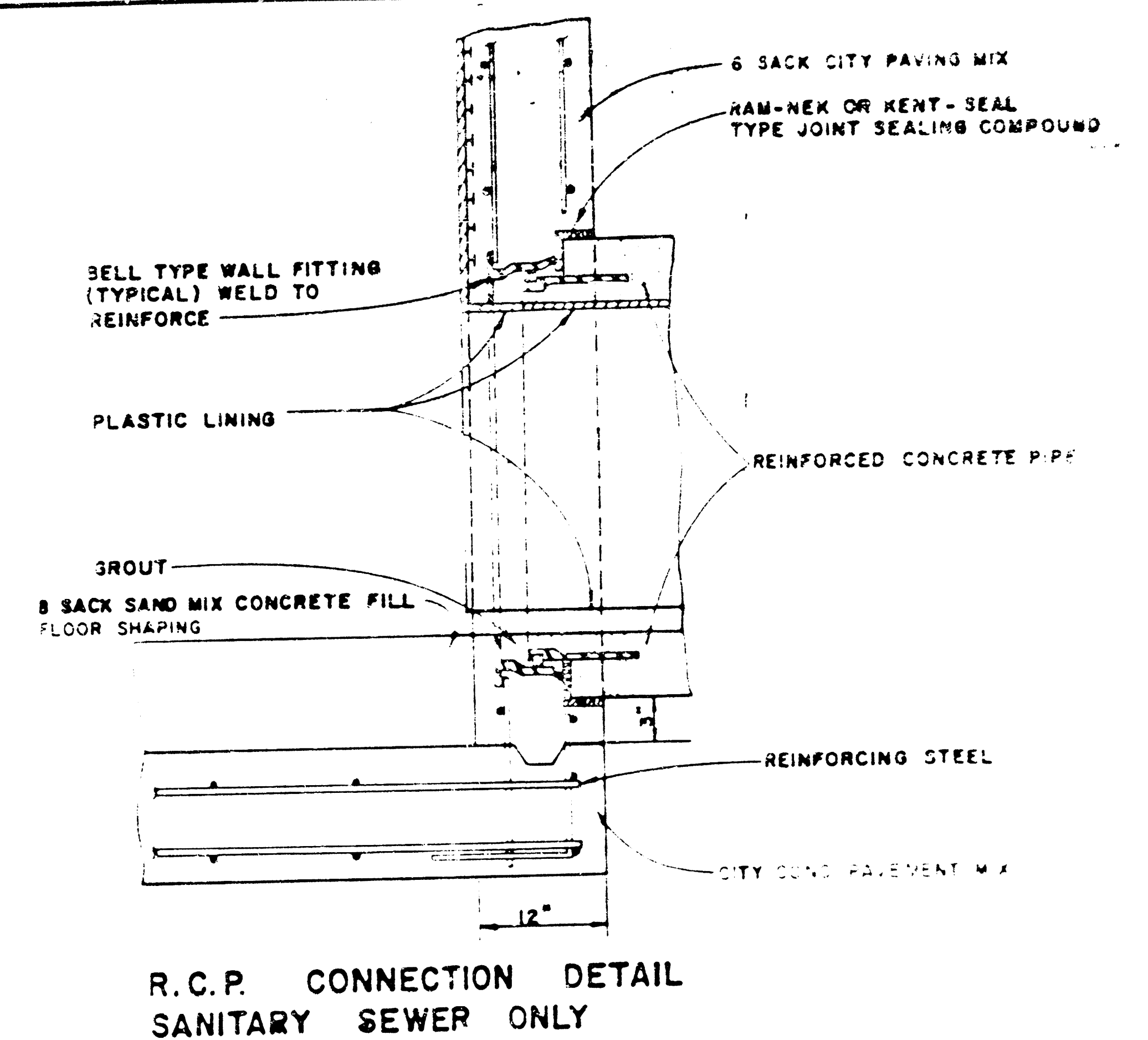
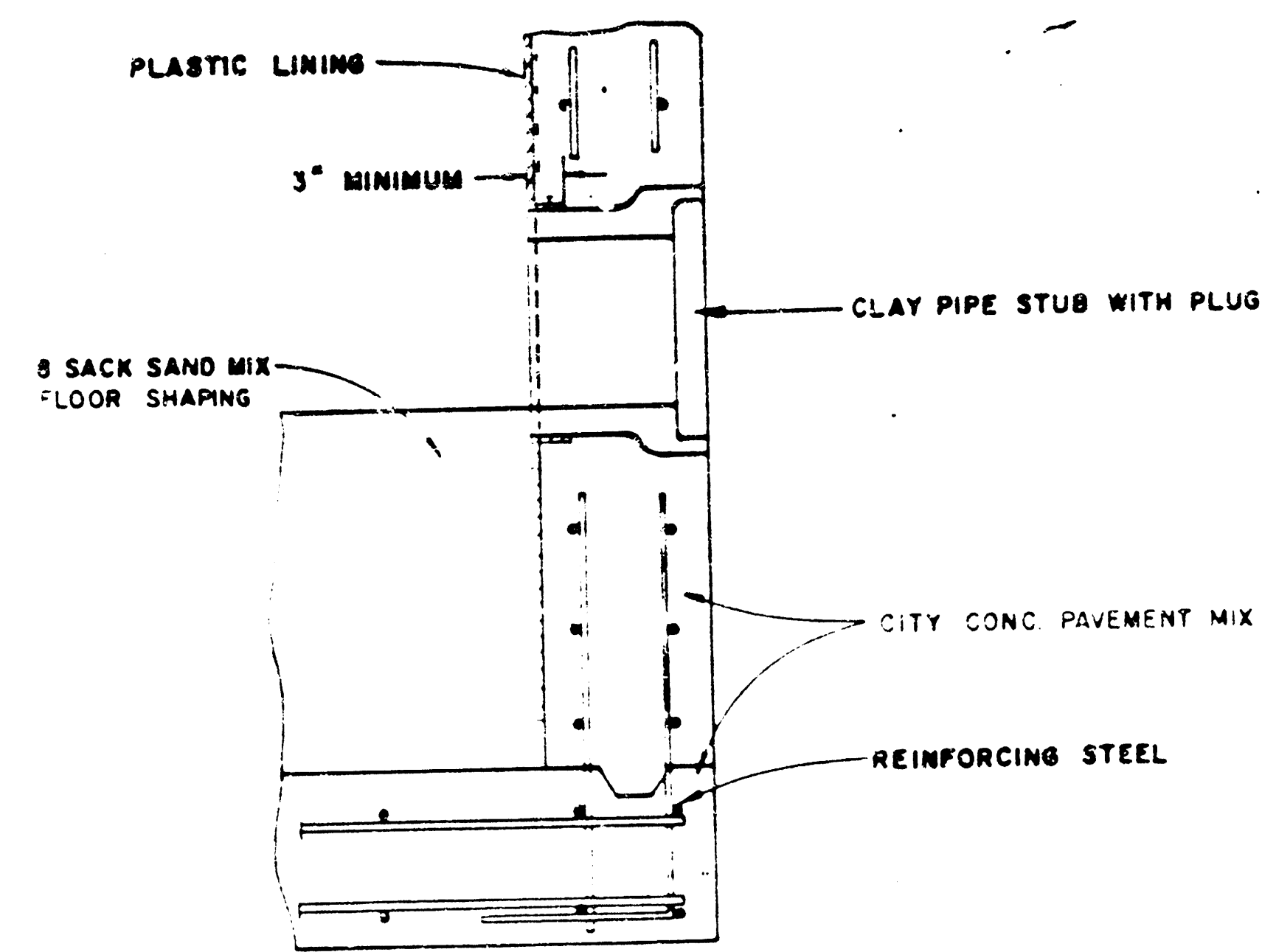
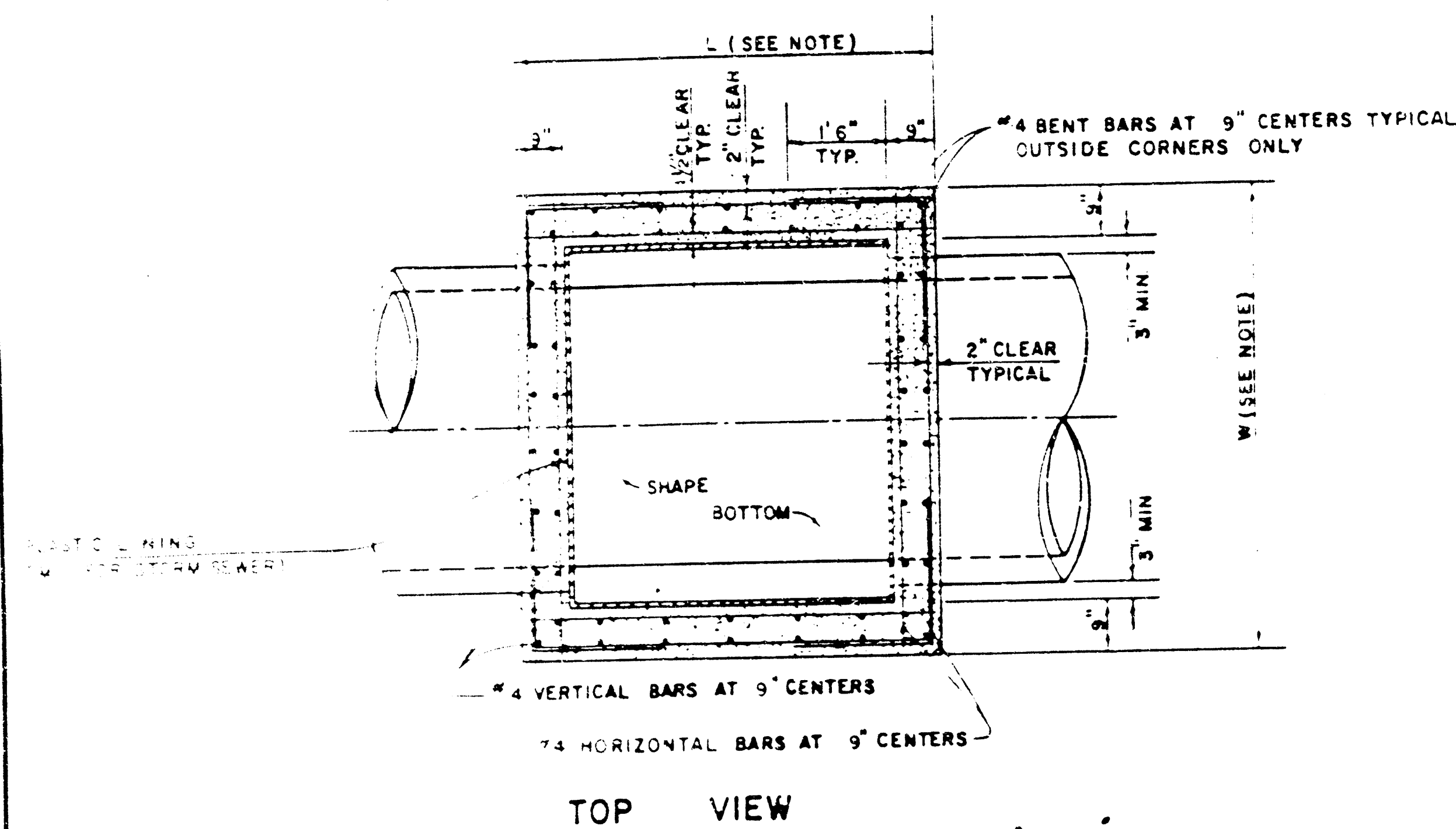
1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE DEPEND MIX WITHOUT AIR ENTRAINING 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.
2. 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.
3. 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 INFLUING PIPES AND THE OUTFLOWING PIPE AS SHOWN ON 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 NEXT 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.
4. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE GRADED 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.
5. 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.
6. THE CROWN OF INFLUING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
7. 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.

CITY OF WICHITA, KANSAS  
STANDARD SHALLOW MANHOLES  
TYPE 'A' AND TYPE 'B'

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Sheet No. 2 of 15

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NOTE:  
BRICK BARRELS LESS THAN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THAN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT.

STANDARD DETAILS  
REINFORCED CONCRETE MANHOLES  
CITY OF WICHITA  
FEBRUARY 1984 Sheet No. 10 of 15

10 1 1 15

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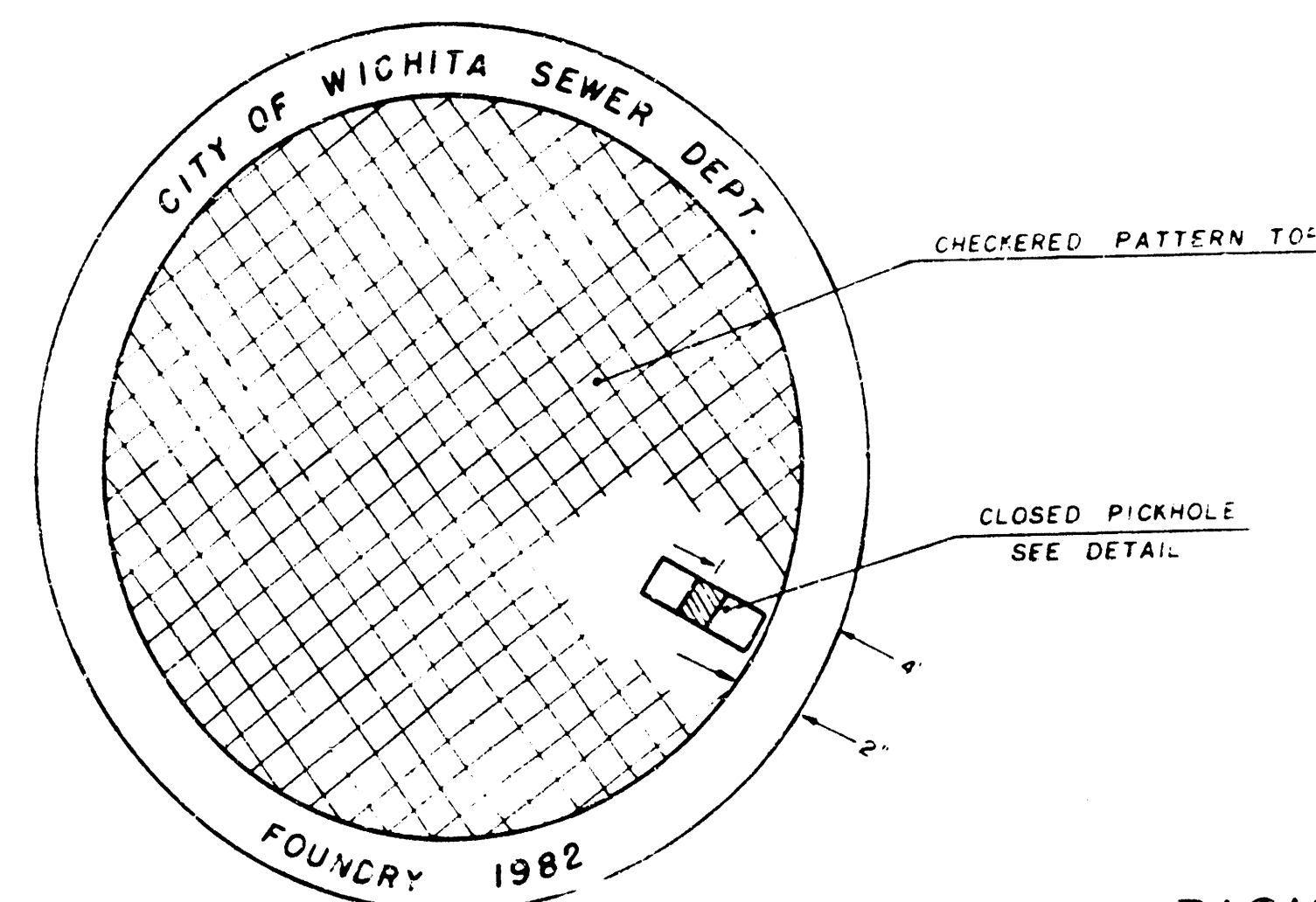
# MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN  
BY

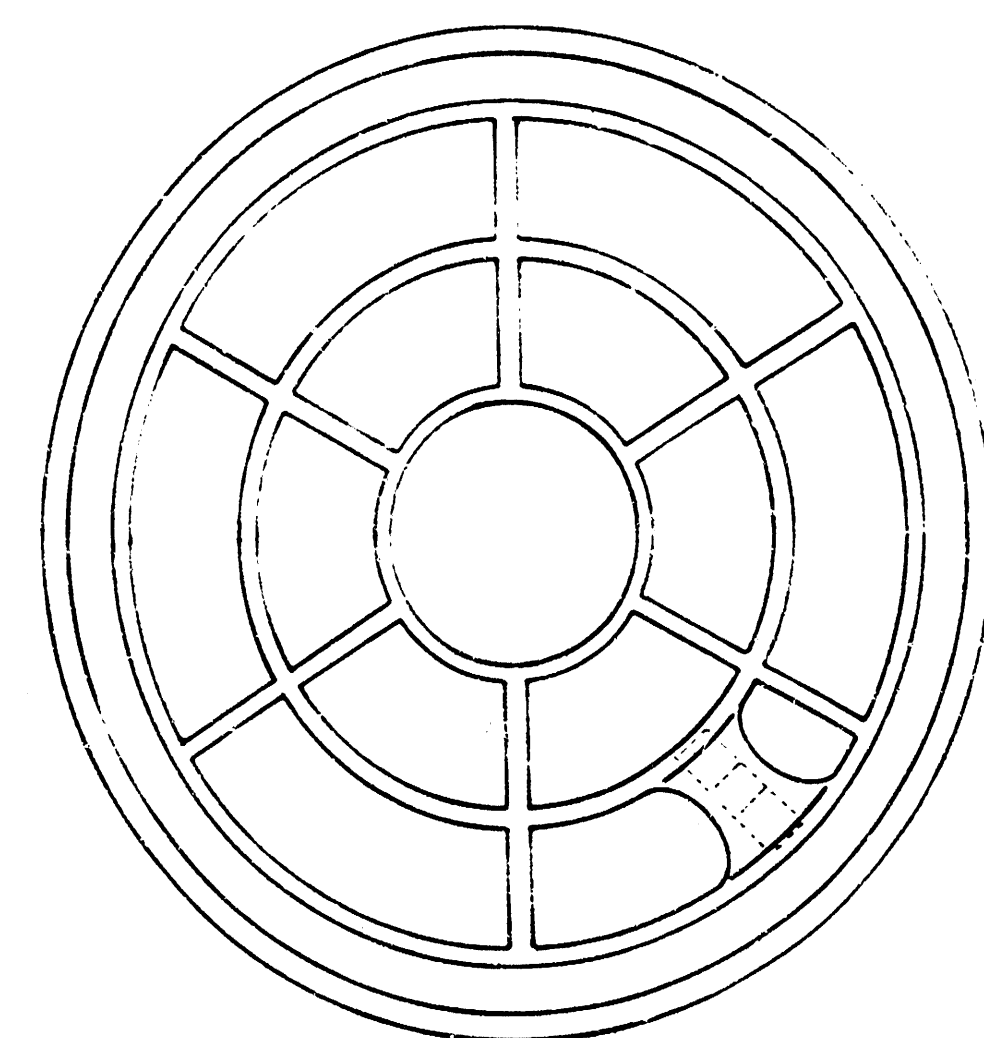
City of Wichita, Kansas

## MANHOLE COVER

Weight: 180 Lbs.

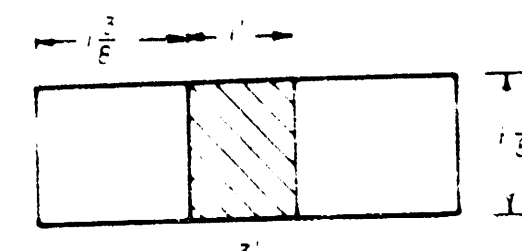


TOP VIEW

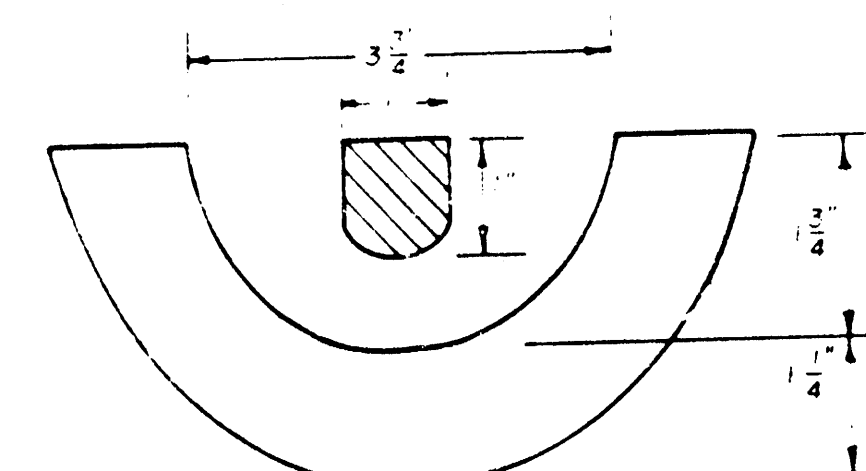


BOTTOM VIEW

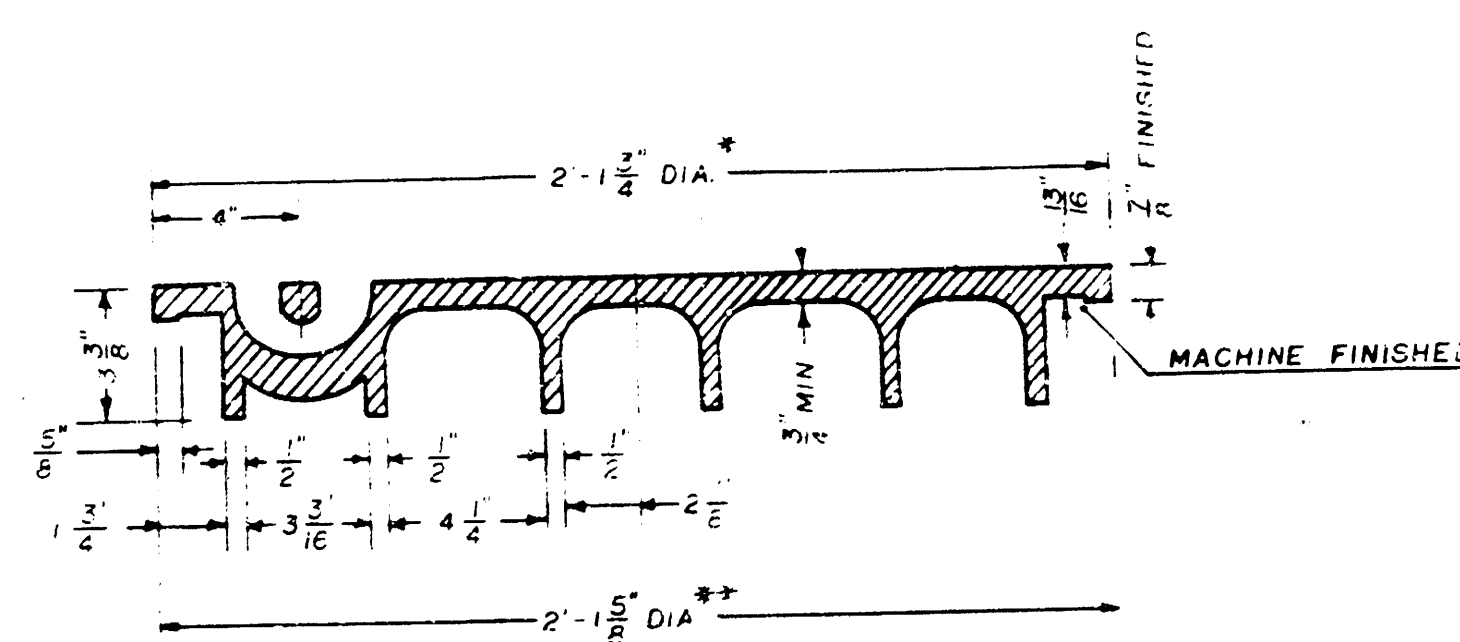
## PICKHOLE DETAIL



TOP VIEW



SECTION VIEW

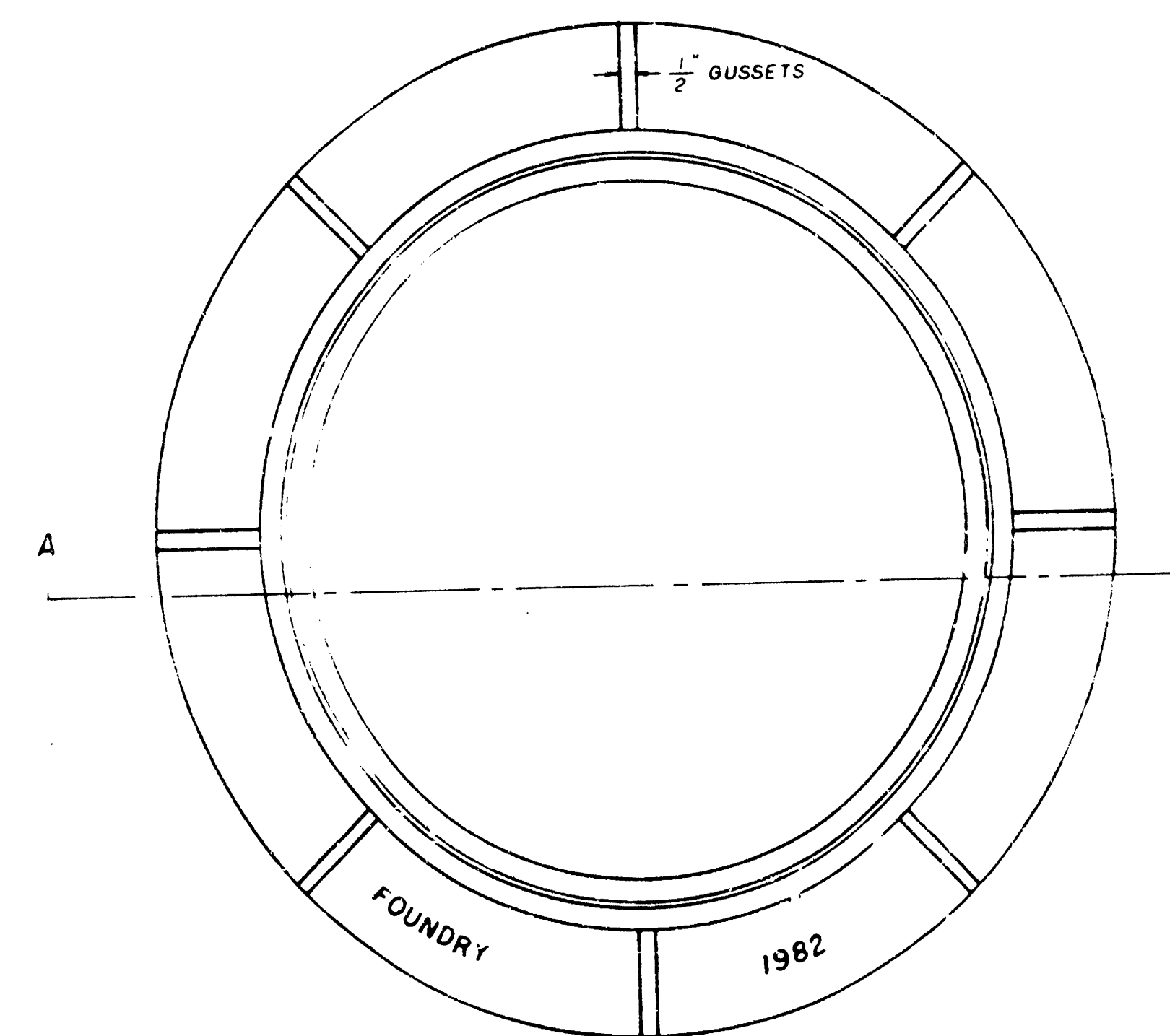


SECTION VIEW

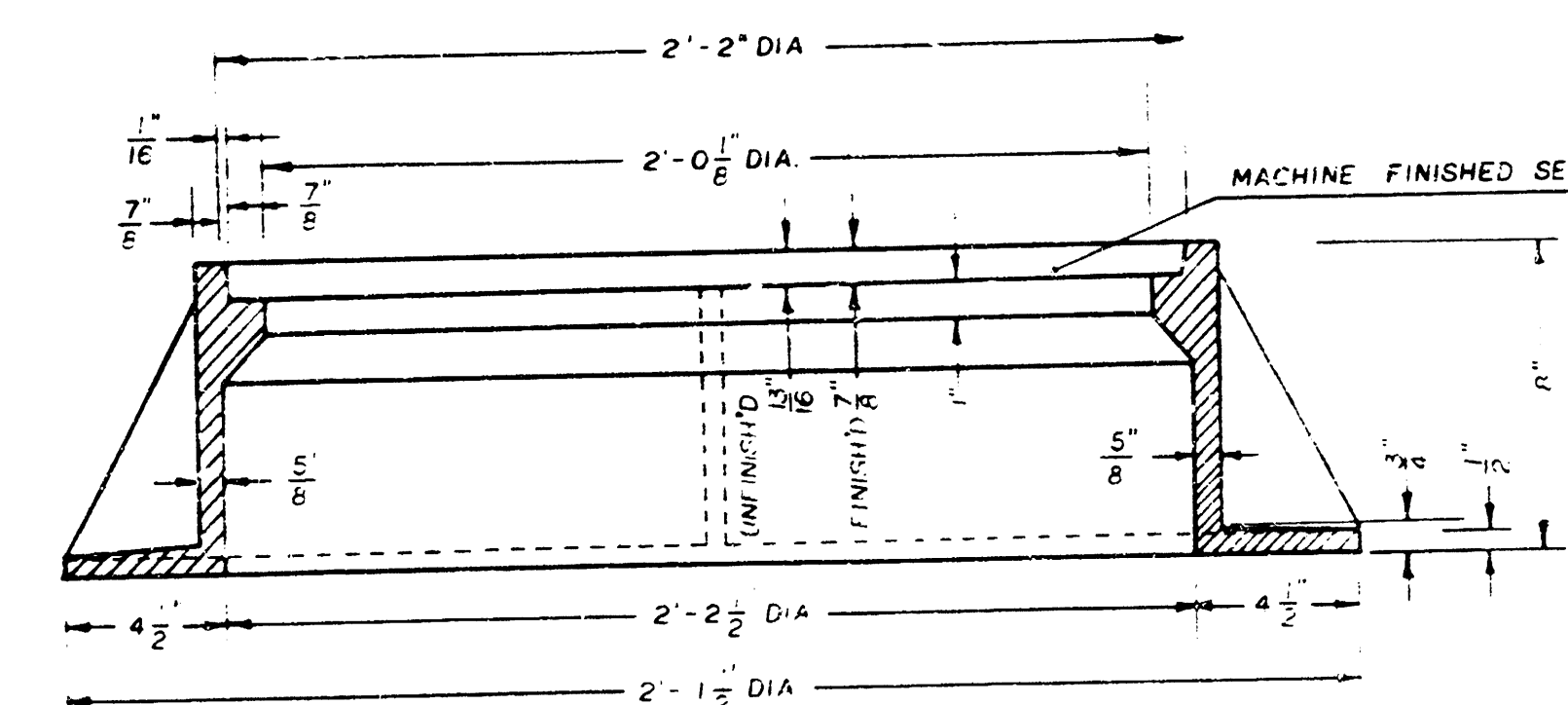
\* OUTSIDE DIA. TOP OF COVER  
\*\* OUTSIDE DIA. BOTTOM OF COVER

## MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW

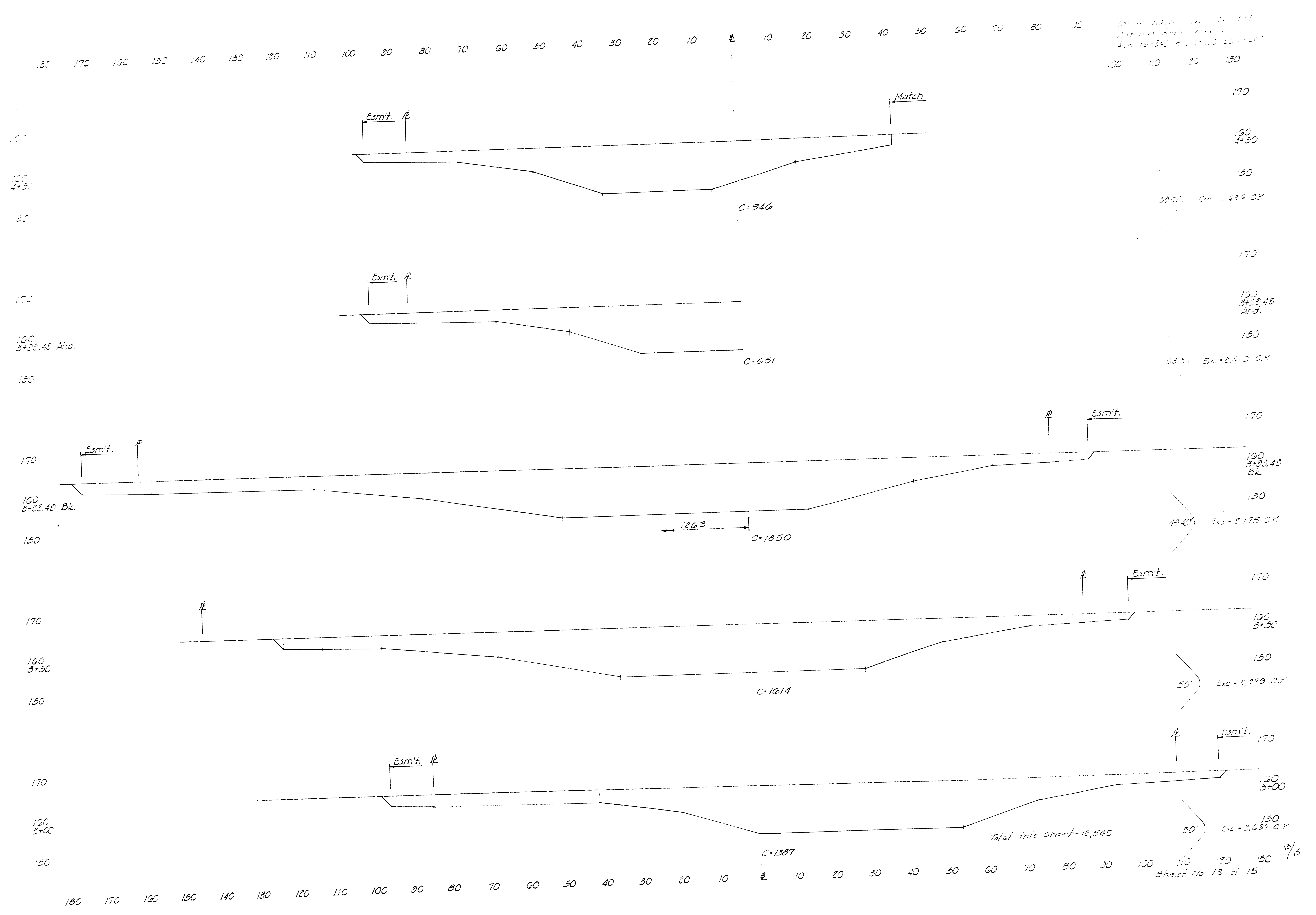


SECTION A-A

## GENERAL NOTE

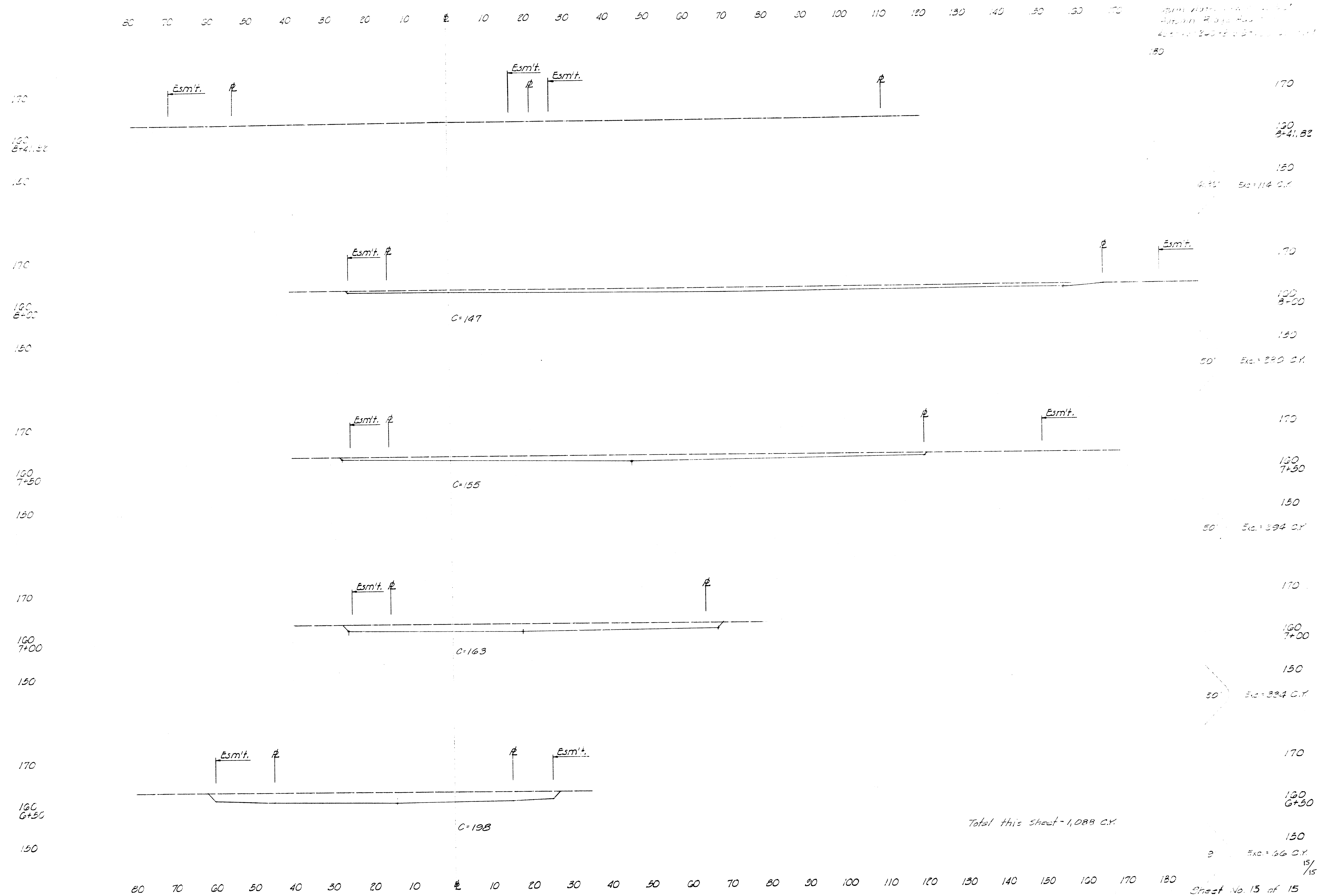
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION. DIMENSIONS AND WEIGHTS SHOWN ON THE DRAWING SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATION FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOTTING, POROSITY, HARD SPOTS, SHRINKAGE DISTORTION OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TIGHT AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.
3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCE SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.





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