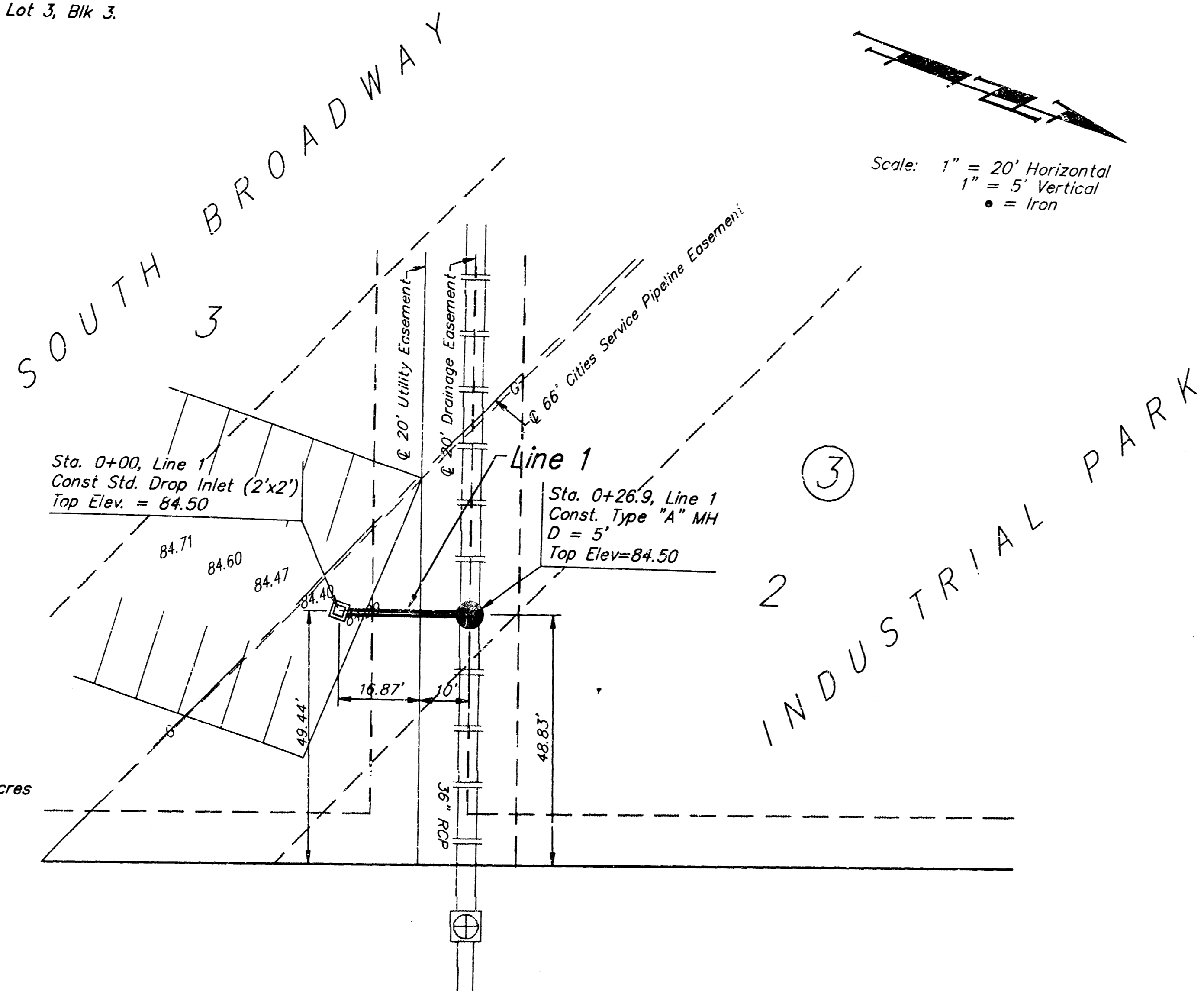
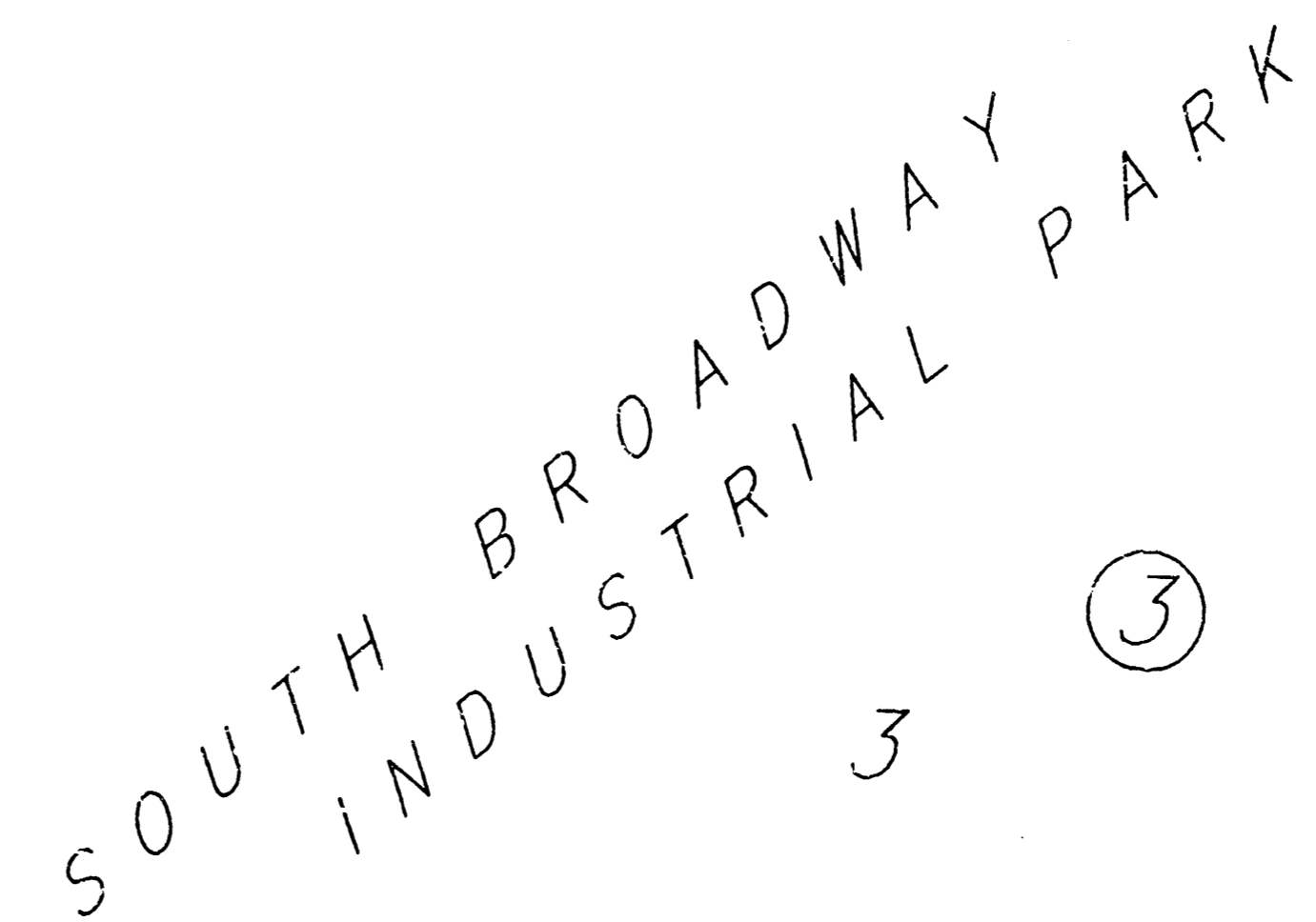


Bench Mark: R.R. spike in power pole located approximately 44'W & 5'S of the Southeasterly most point of Lot 3, Blk 3, South Broadway Industrial Park. Elevation = 85.53 (City Datum)



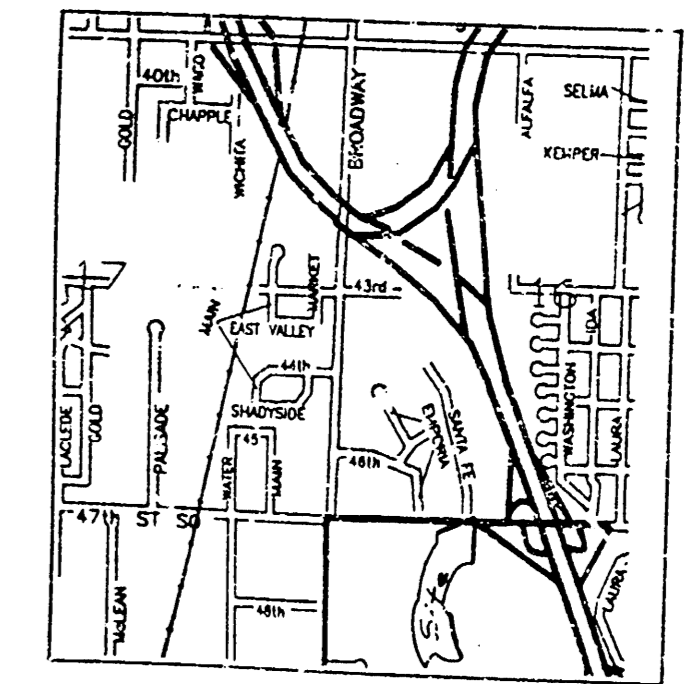
Note: Drainage Calculations include roof drainage.

Drainage Area = 0.44 acres
 $i_b = 4.56$ "/hr
 $i_{10} = 7.37$ "/hr
 $C = 1.0$
 $Q_b = 2.01$ cfs
 $Q_{10} = 3.24$ cfs



Scale: 1" = 20'
 • = Iron

Bench Mark: R.R. spike in power pole located approximately 44'W & 5'S of the Southeasterly most point of Lot 3, Blk 3, South Broadway Industrial Park. Elevation = 85.53 (City Datum)



Site Location

Const. Std. Drop Inlet (2'x2')
 Flo = 79.16
 Top = 84.25

Drainage Area = 0.37 acres

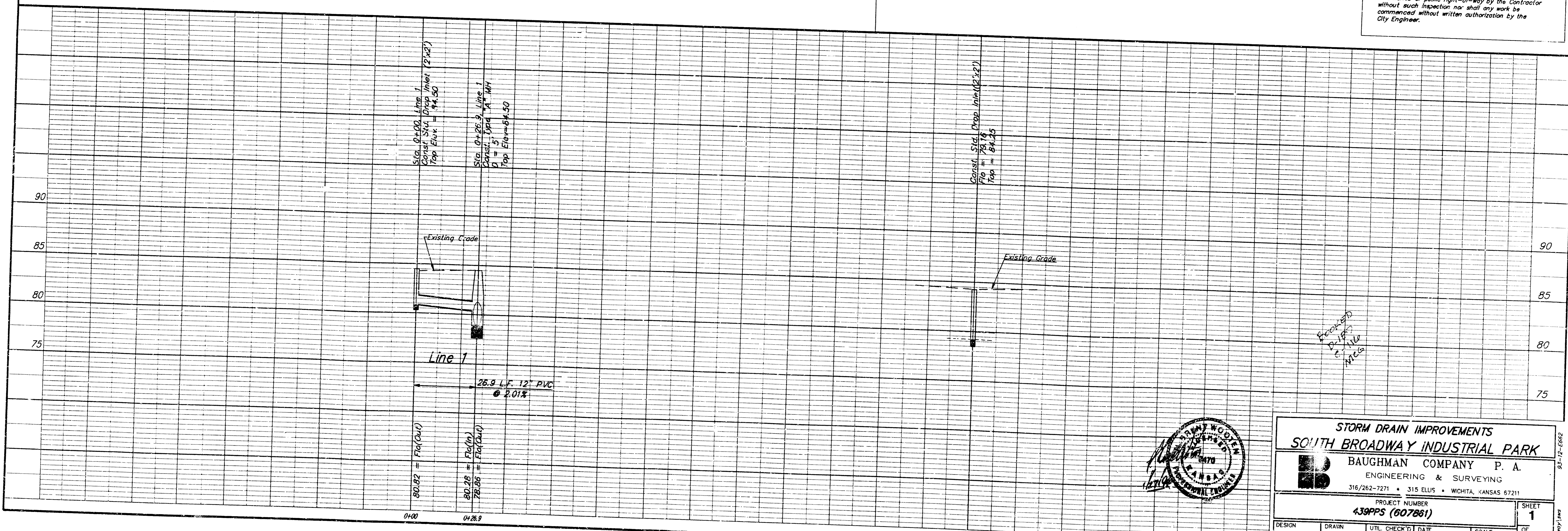
$i_b = 4.56$ "/hr
 $i_{10} = 7.37$ "/hr
 $C = 1.0$
 $Q_b = 1.69$ cfs
 $Q_{10} = 2.73$ cfs

47th Street South

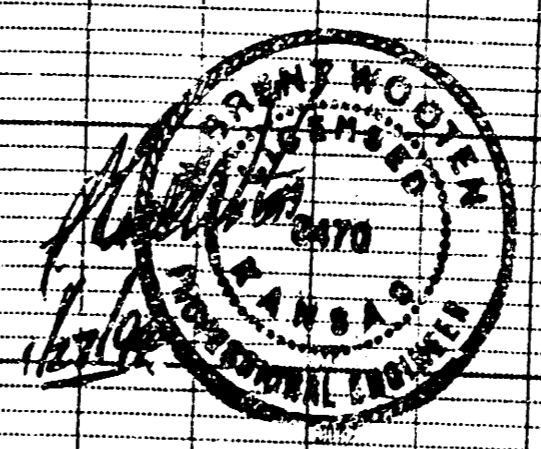
APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
 Storm Sewers 1-31-94 *[Signature]*
 Driveway Approaches _____
 Water Mains _____
 Paving _____

NOTE TO CONTRACTORS
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Revised
 1/19/94
 S. W. WOODEN

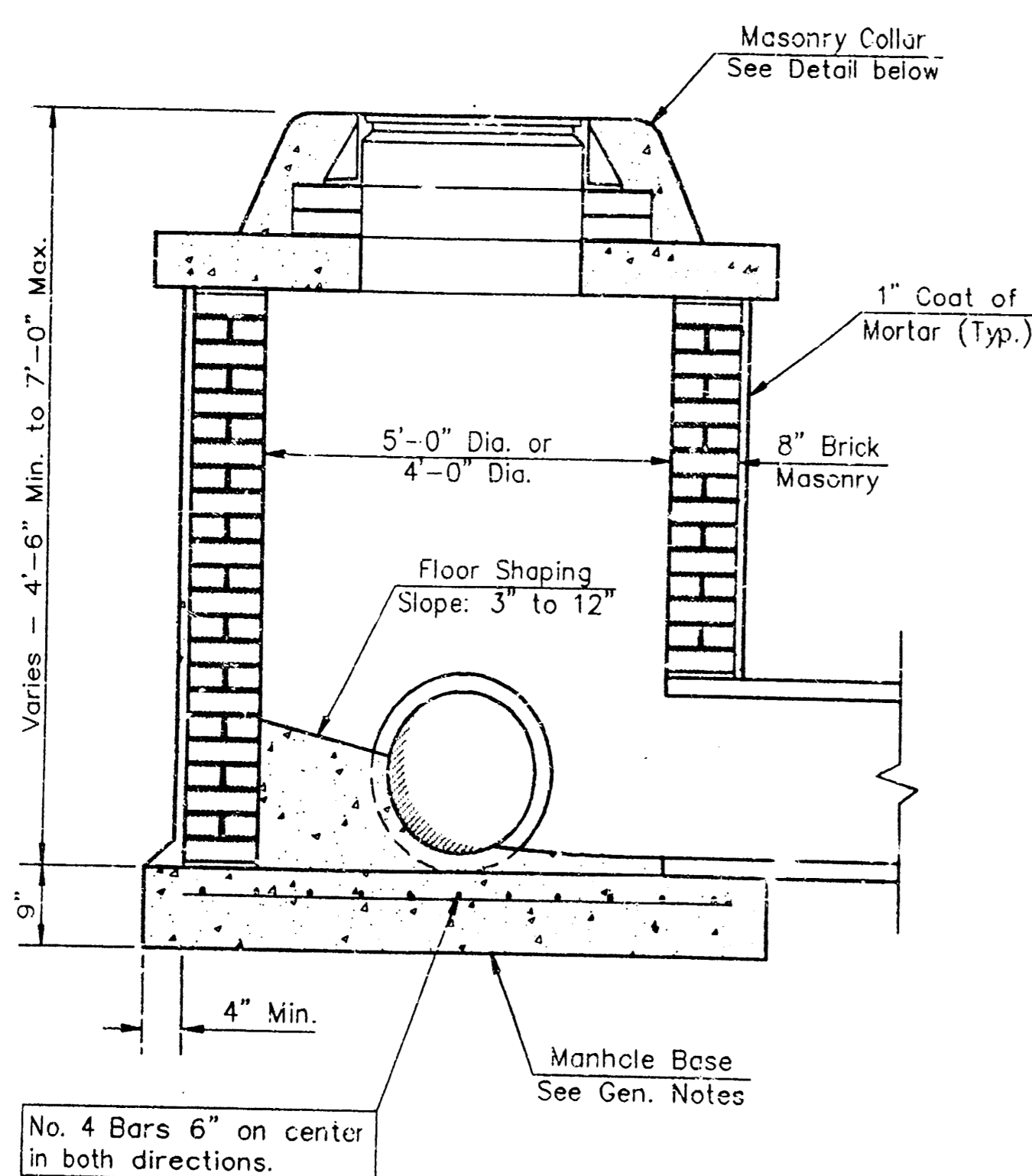


STORM DRAIN IMPROVEMENTS
SOUTH BROADWAY INDUSTRIAL PARK
BAUGHMAN COMPANY P. A.
 ENGINEERING & SURVEYING
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

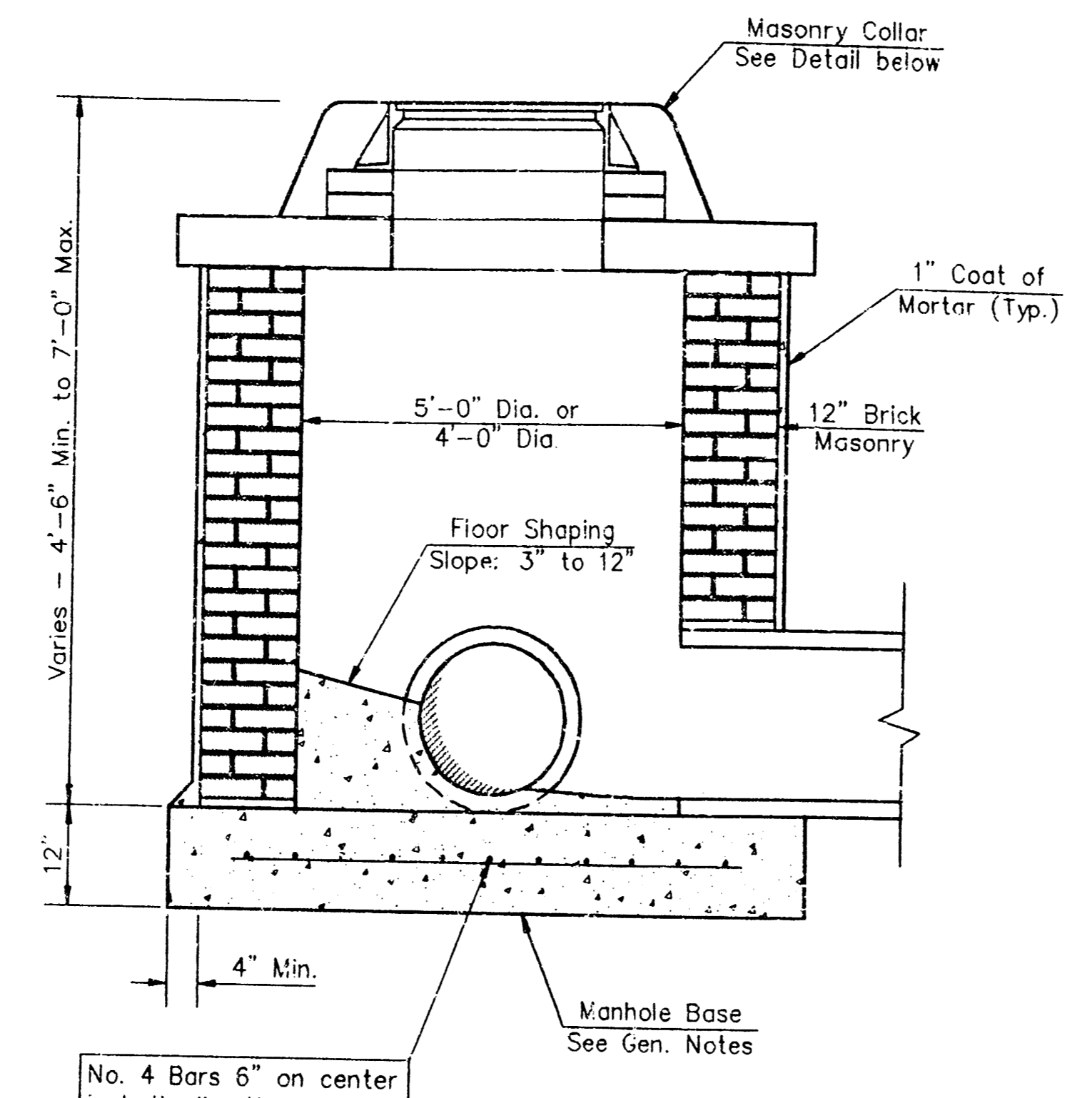
PROJECT NUMBER
439PPS (607861)

DESIGN: B.P. DRAWN: MSP UTIL. CHECK'D: DATE: Jan. 1994 SCALE: Noted

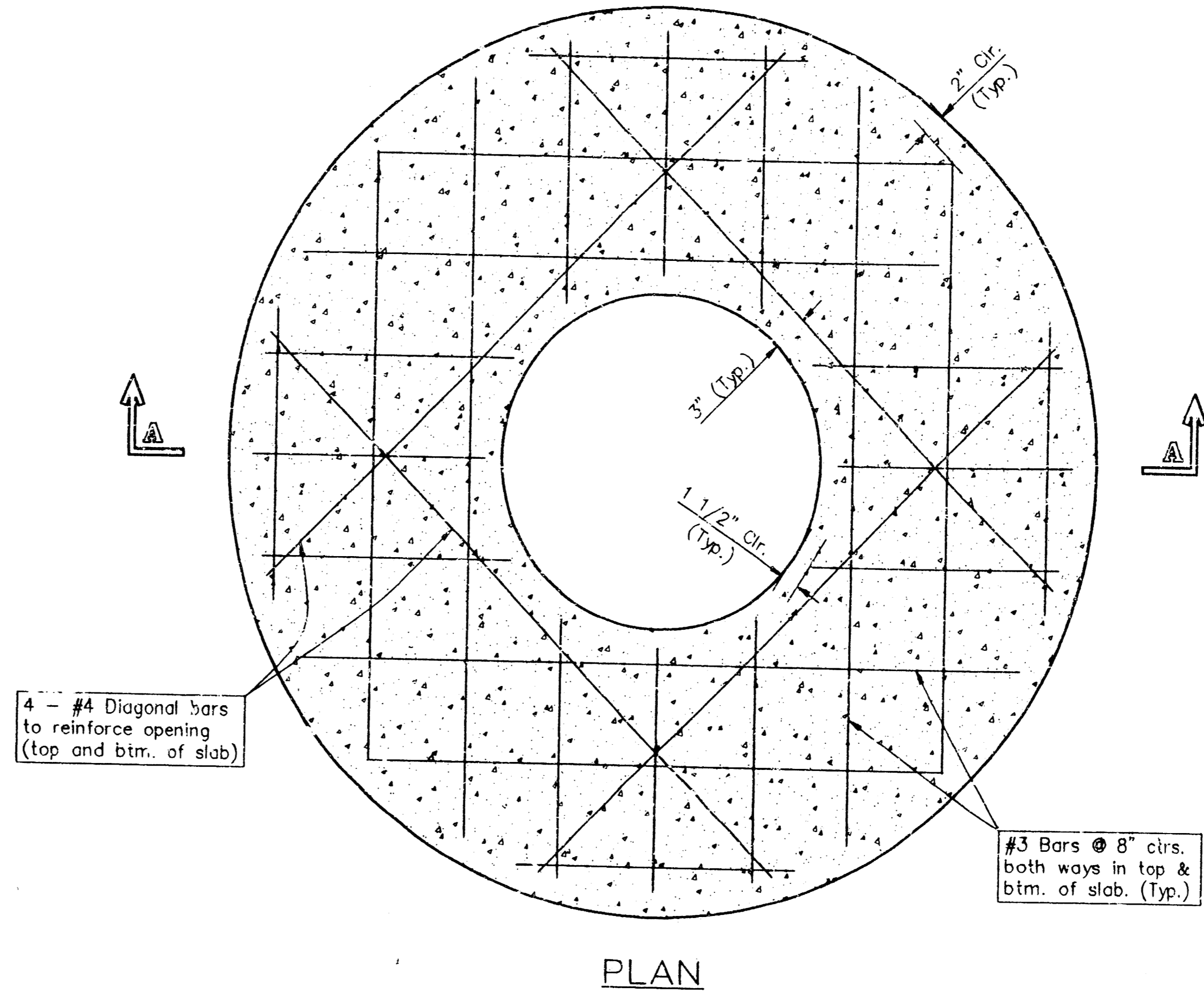
SHEET **1** OF **3**



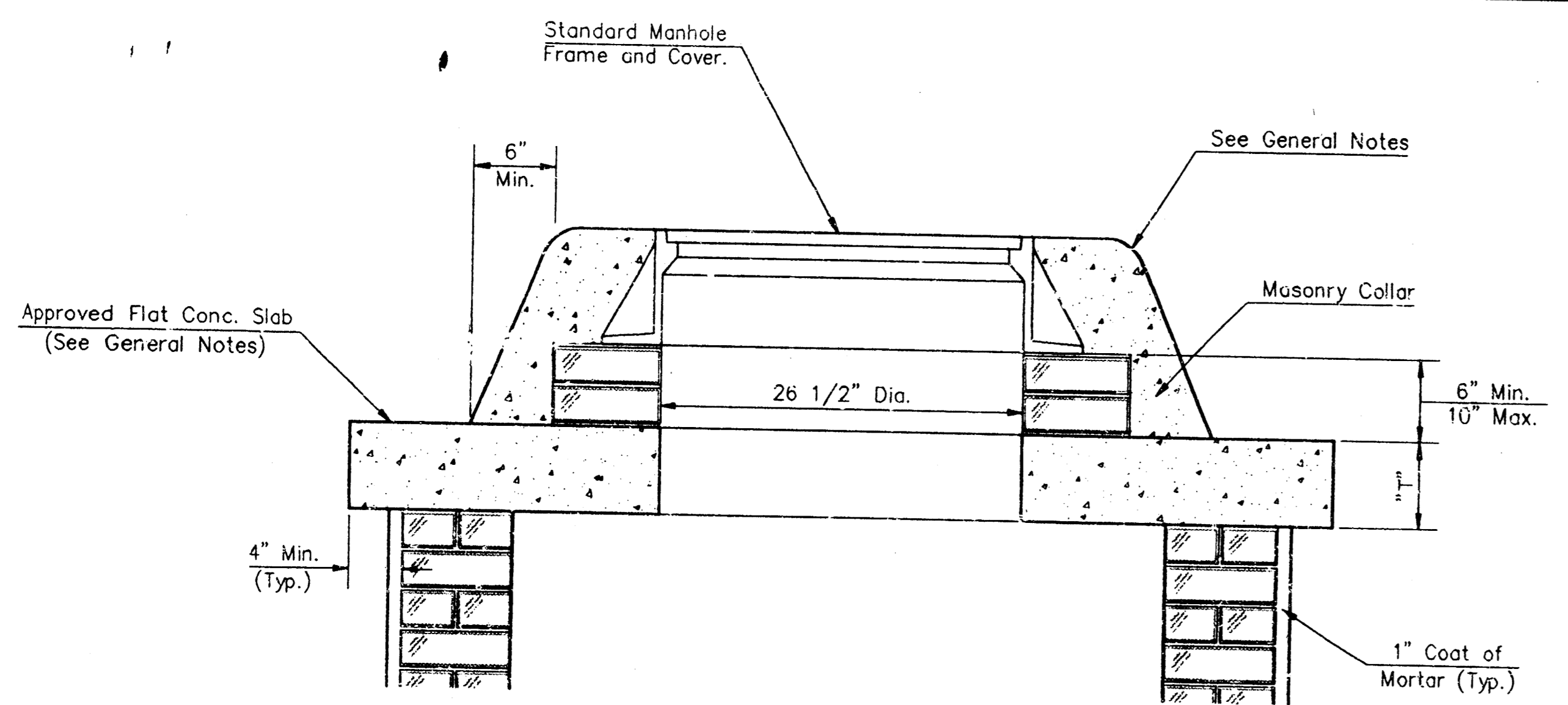
SHALLOW TYPE "A" MANHOLE



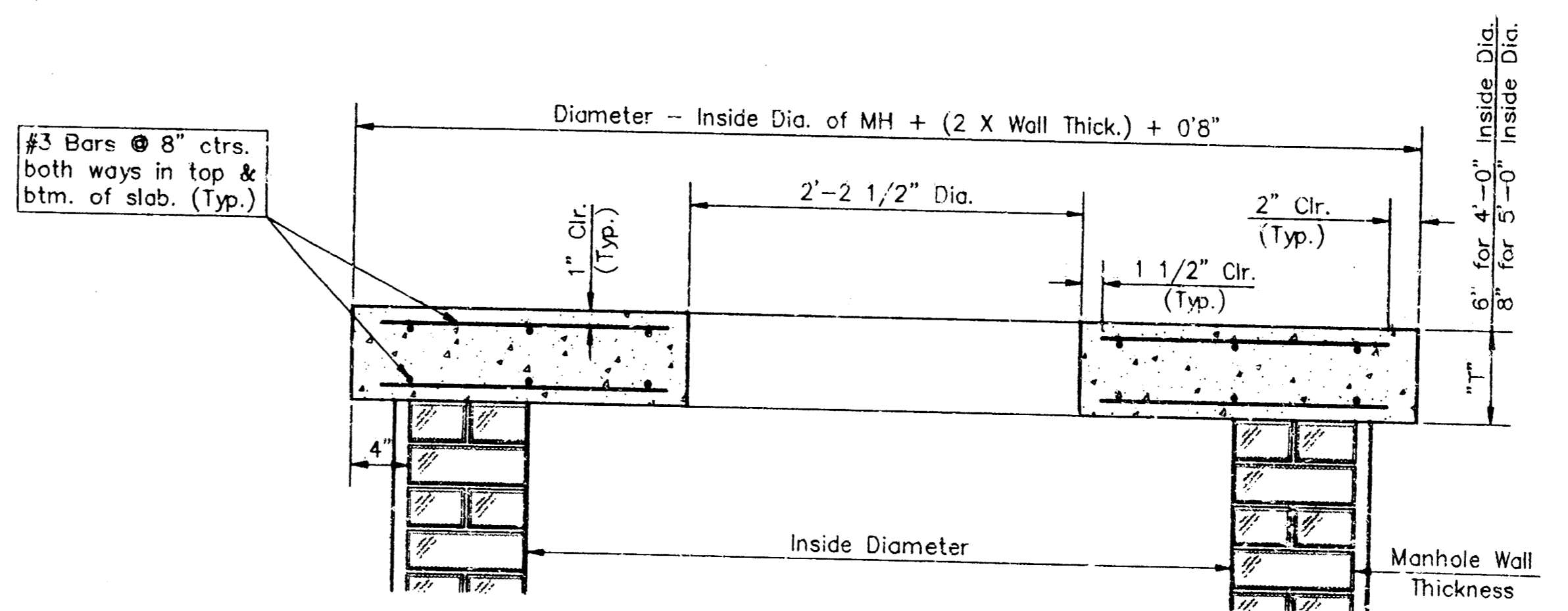
SHALLOW TYPE "B" MANHOLE



PLAN

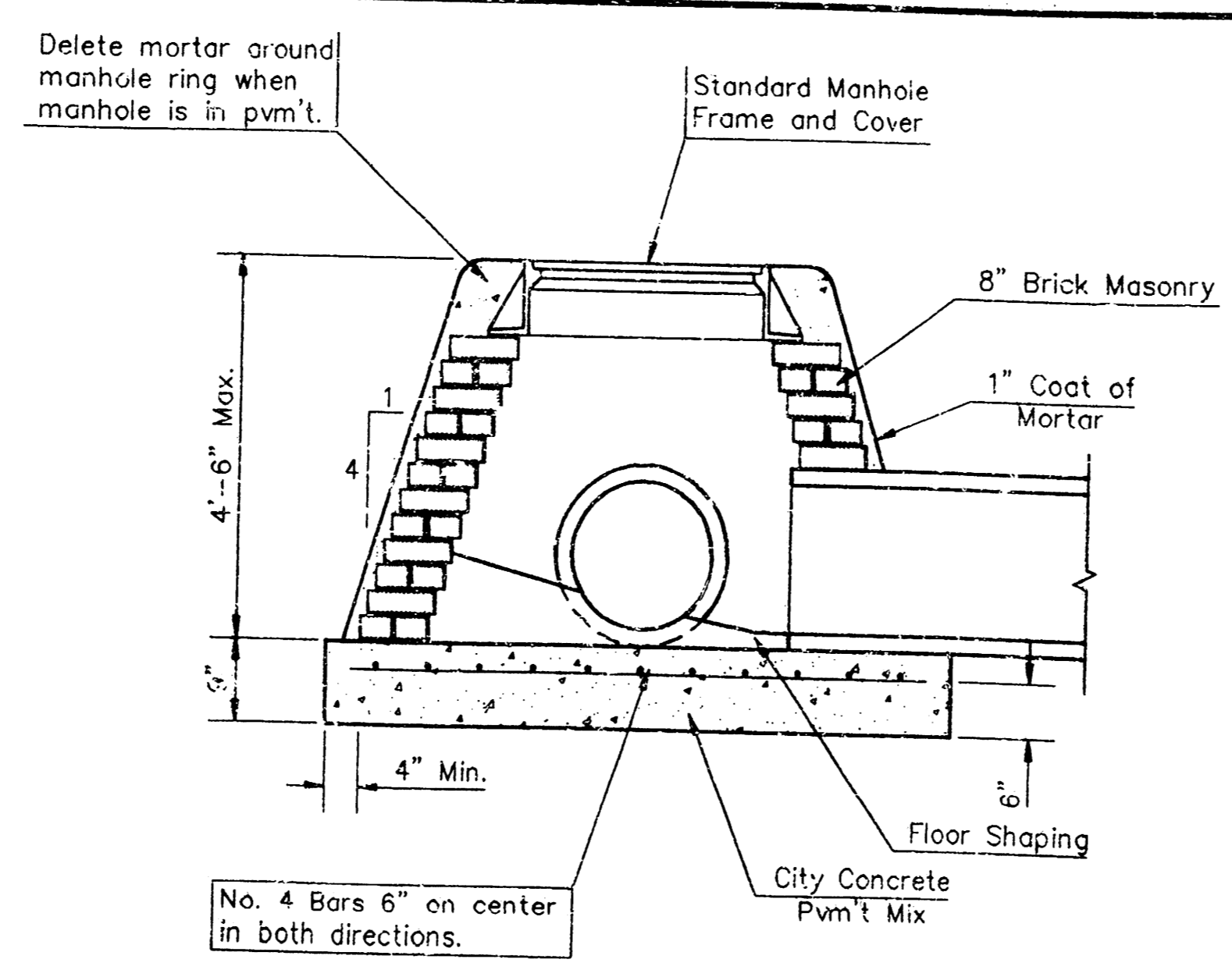


MASONRY COLLAR DETAIL

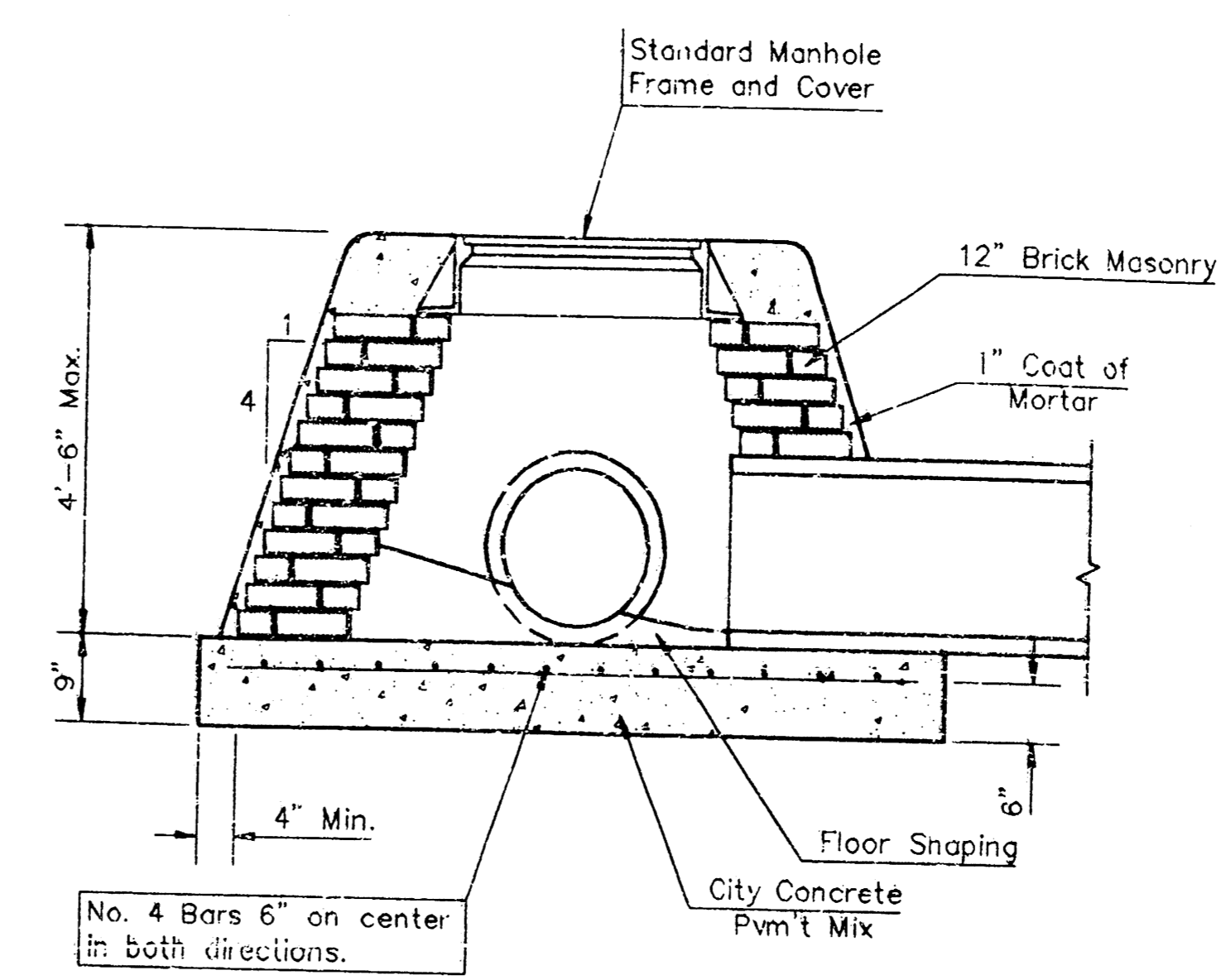


SECTION A-A

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 its 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 manholes 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 8" 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 C62-87.

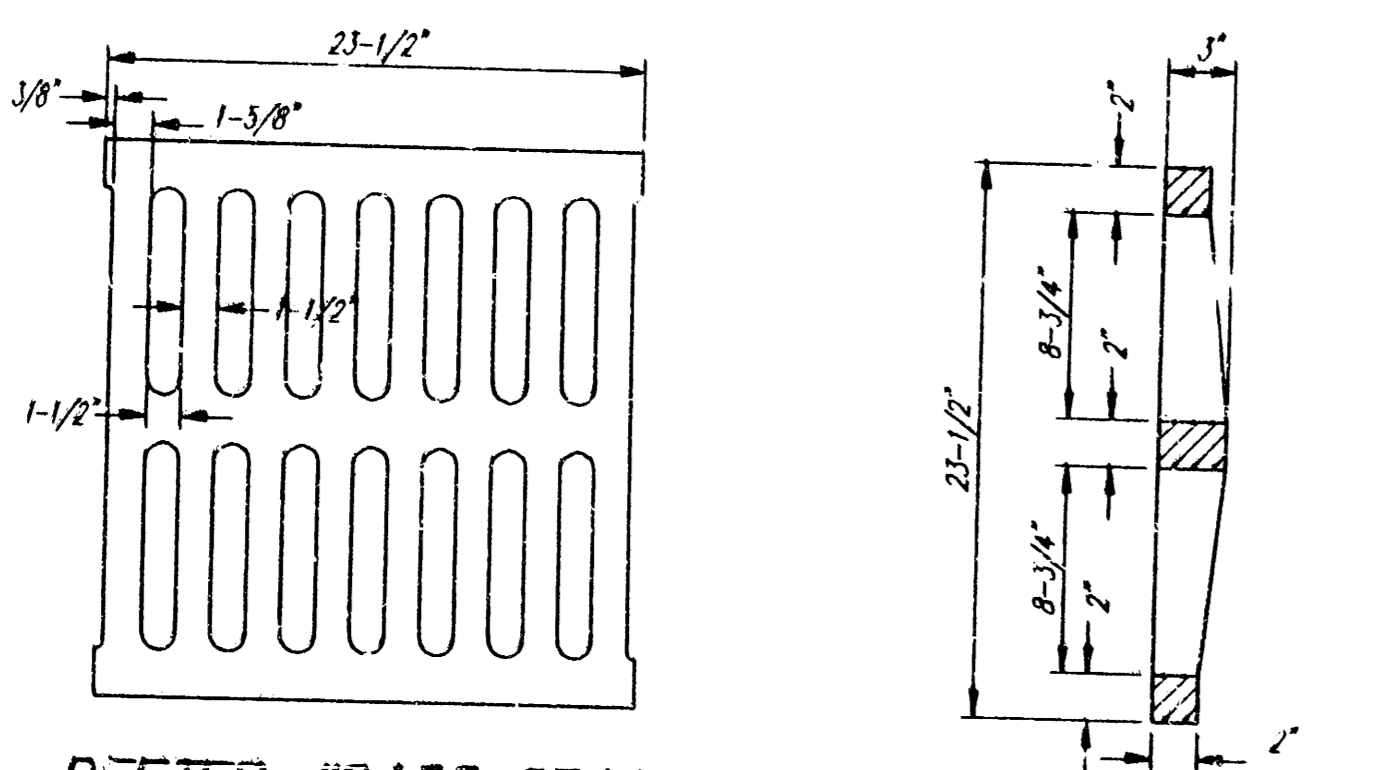
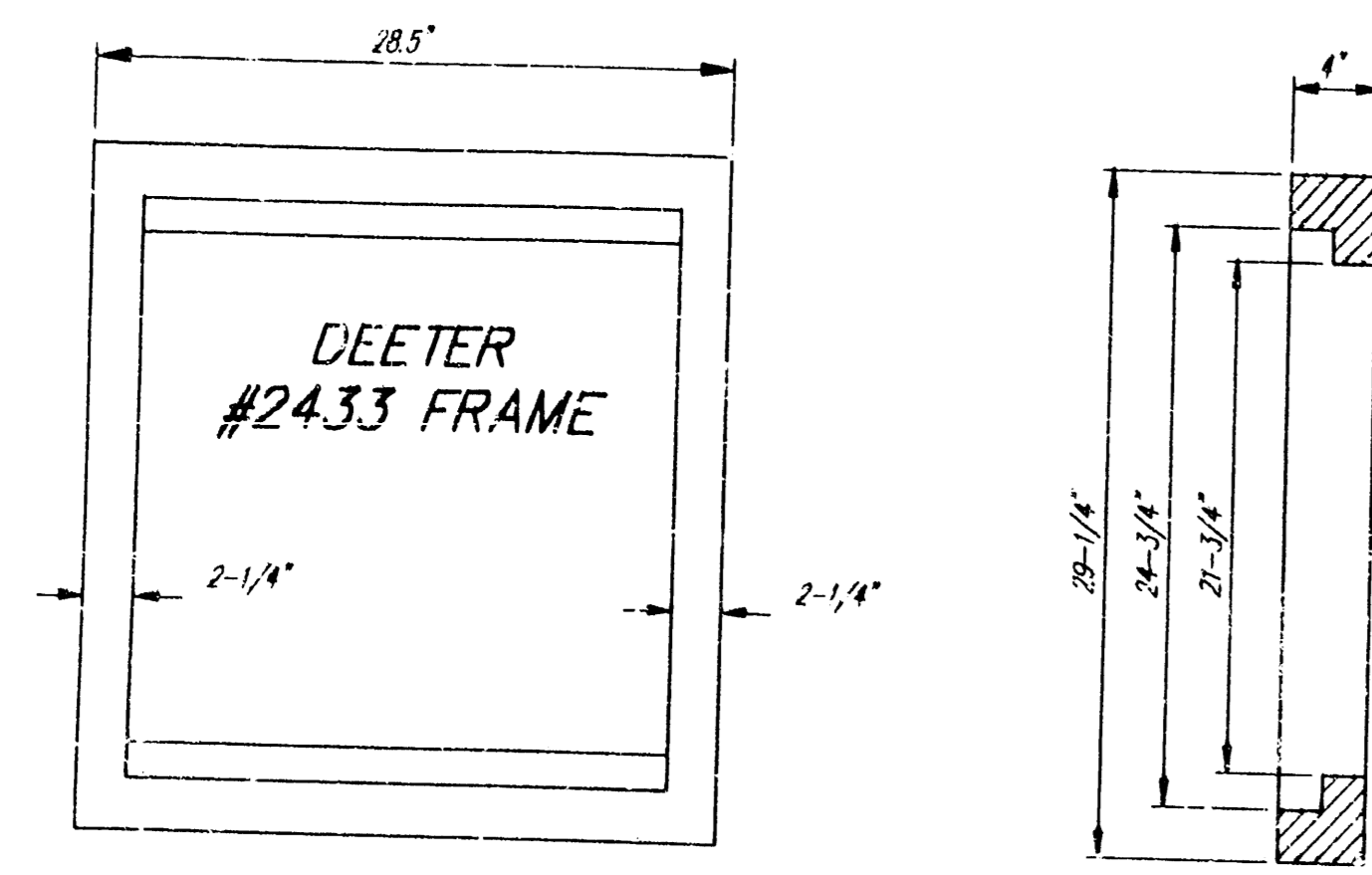
CITY OF WICHITA, KANSAS
STANDARD SHALLOW MANHOLES
 TYPE "A" AND TYPE "B"

PROJECT NUMBER
439 PPS (607861)

SHEET **2** OF **3**

BB BAUGHMAN COMPANY P. A.
 ENGINEERING & SURVEYING
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

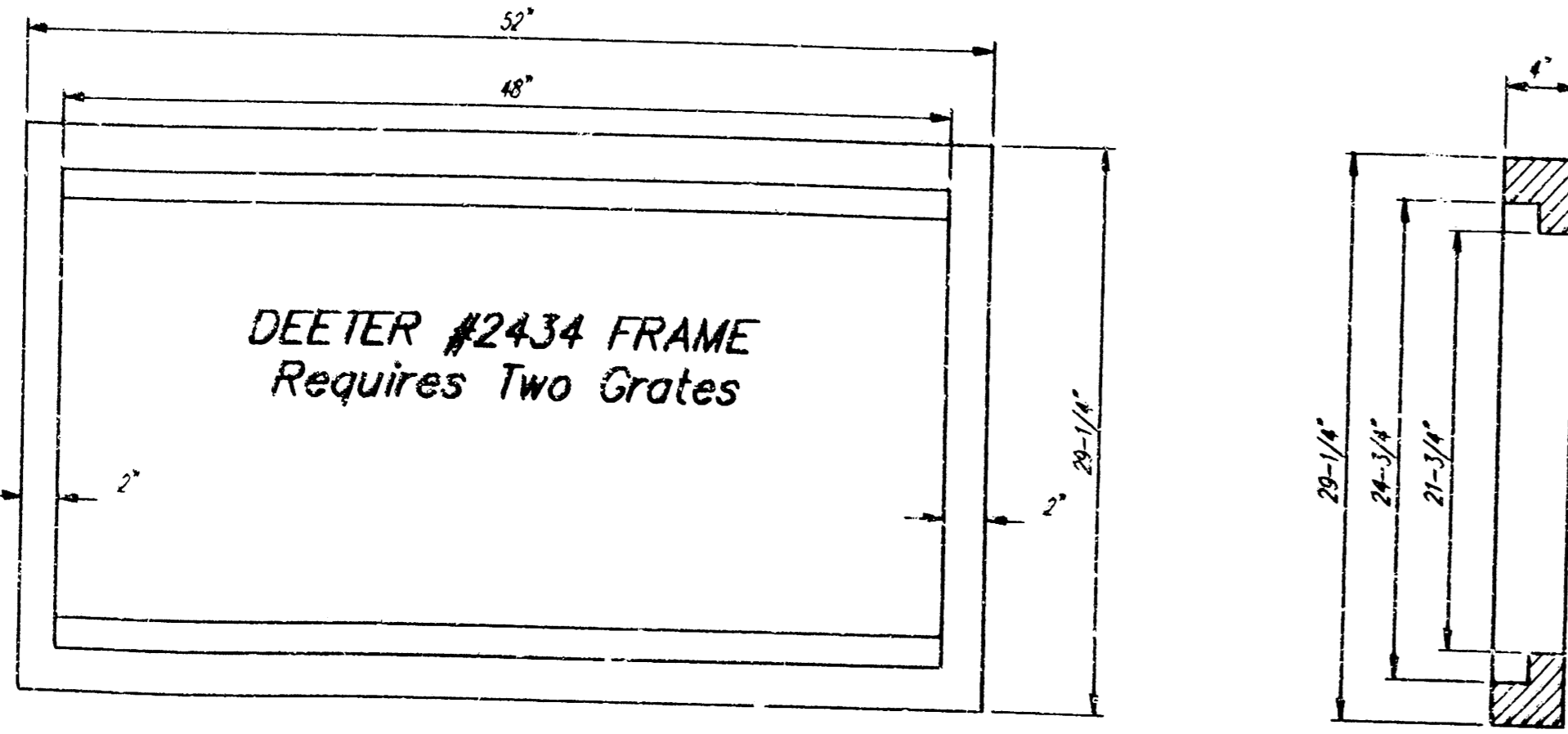
DETAIL\SHLWMA.DWG



DEETER #2433 GRATE

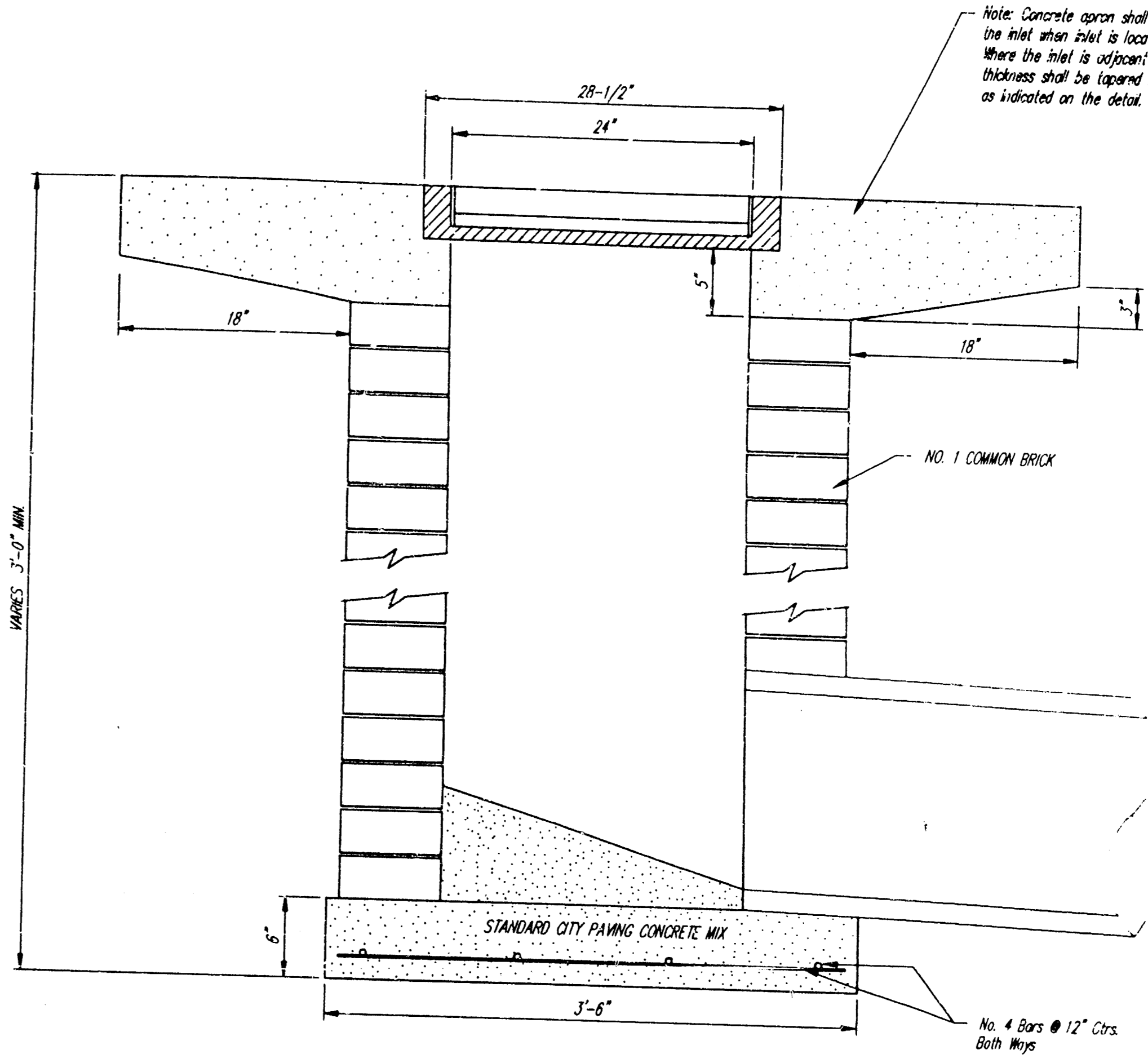
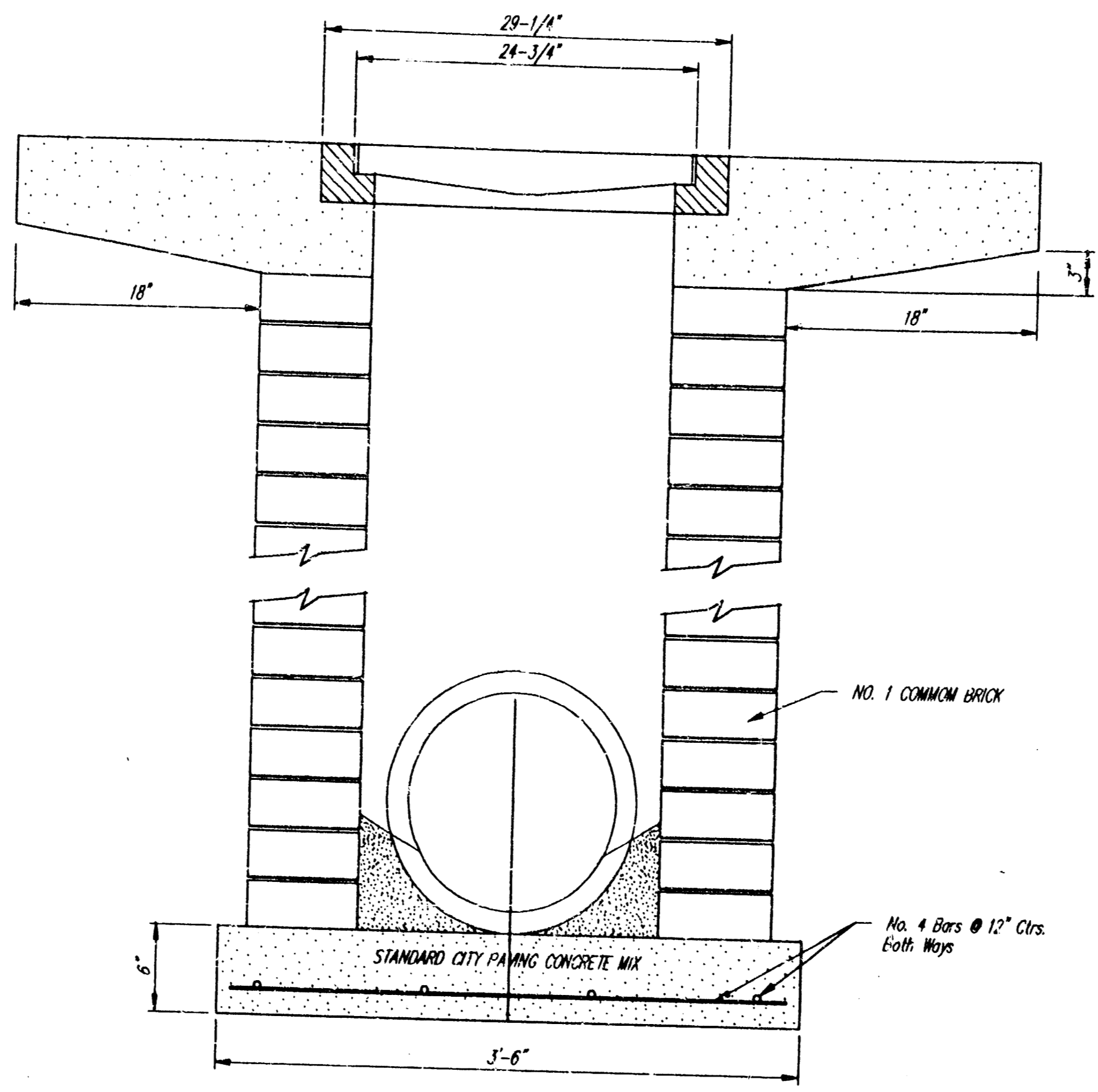
24" x 24" Frame and Grate Detail

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 approved by the engineer.

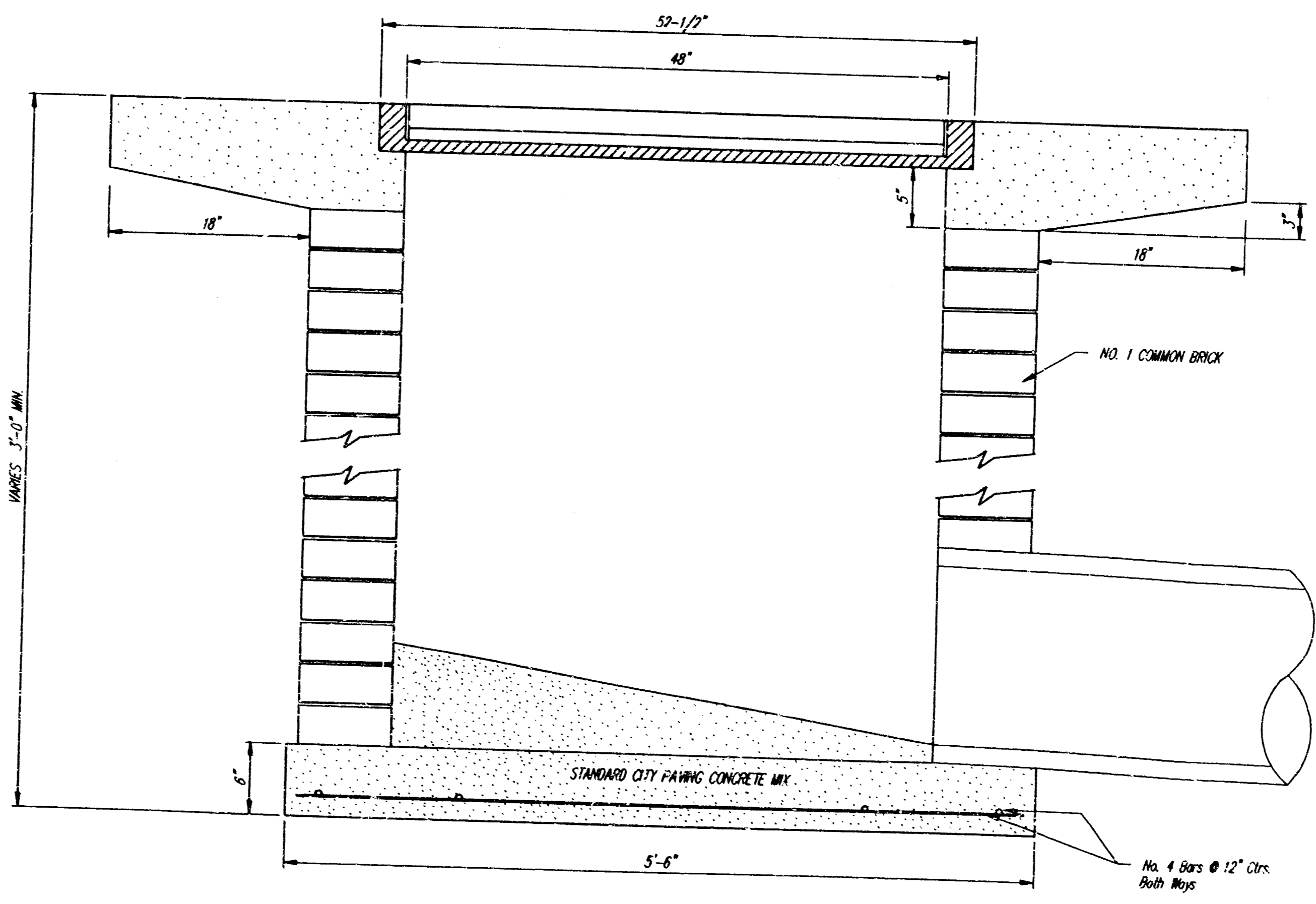


DEETER #2434 FRAME
Requires Two Grates

Double 24" x 24" Frame Detail



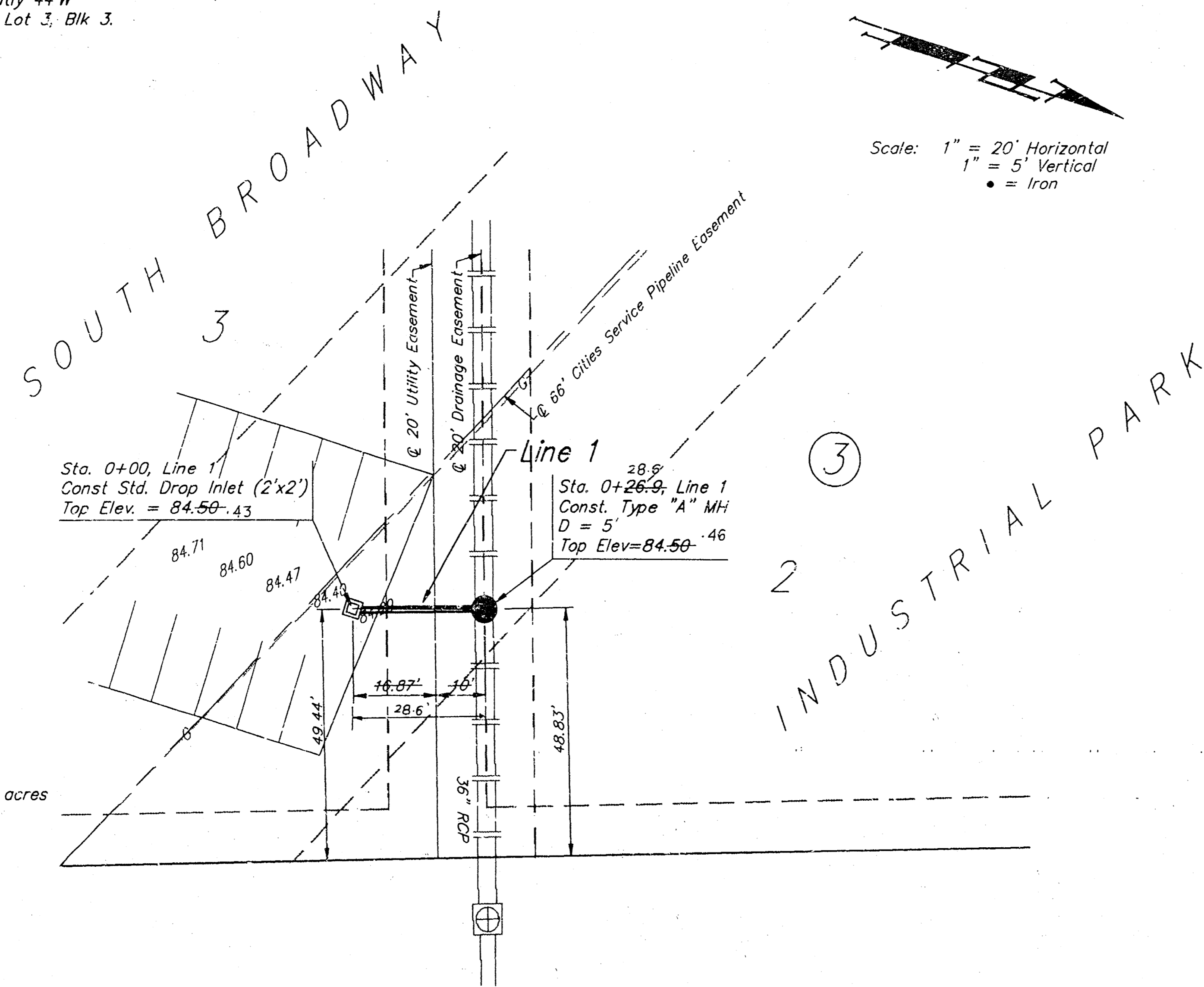
Note: Concrete apron shall be constructed around the inlet when inlet is located in an unimproved area. Where the inlet is adjacent to pavement, the pavement thickness shall be tapered to the inlet in 18 inches as indicated on the detail.



DROP INLET DETAILS
M.E. Lindebak, City Engineer
City of Wichita, Kansas

Project Number 3
439 PPS (607851) 3

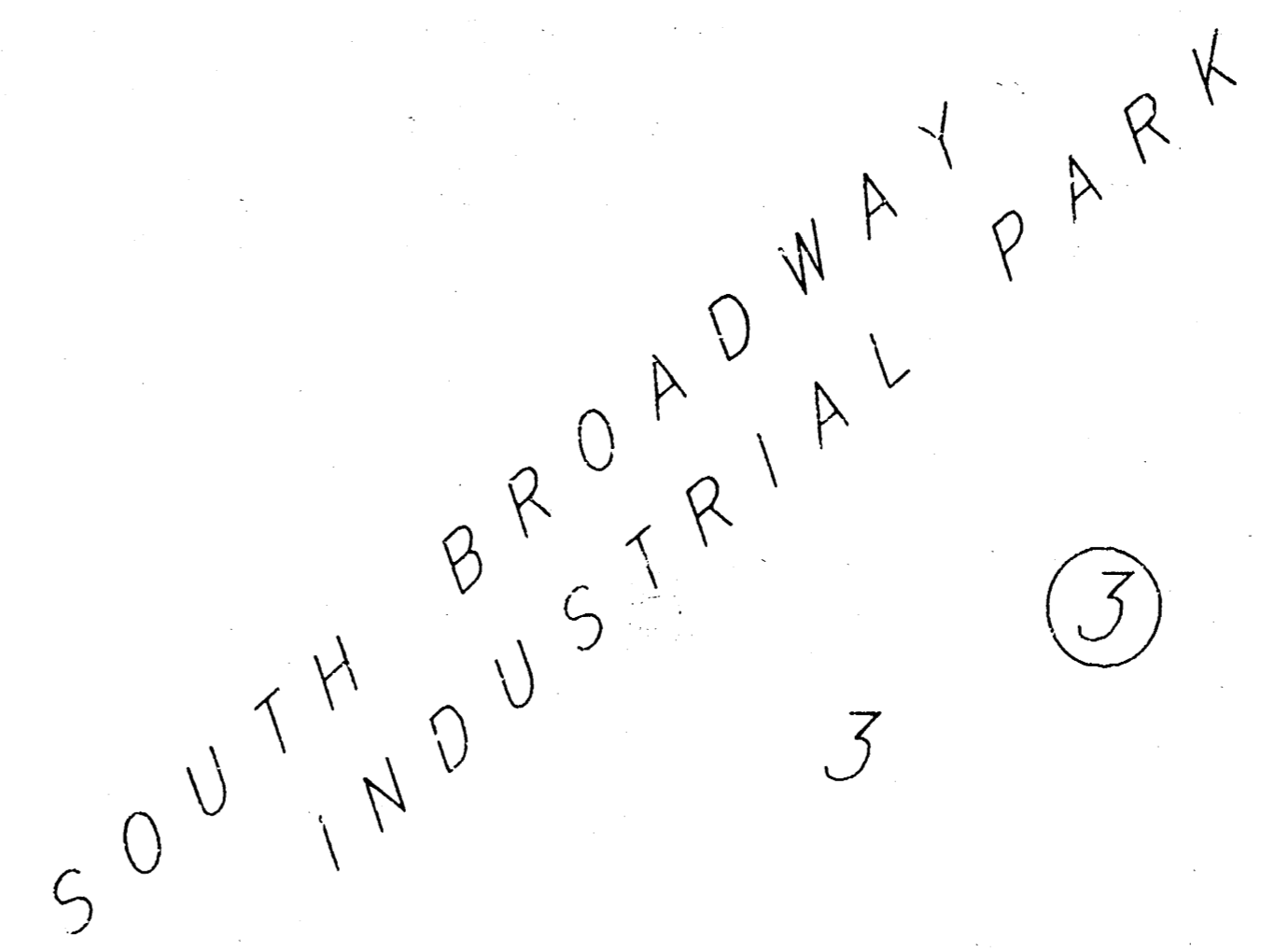
Bench Mark: R.R. spike in power pole located approximately 44'W & 5'S of the Southeastly most point of Lot 3, Blk 3, South Broadway Industrial Park. Elevation = 85.53 (City Datum)



Note: Drainage Calculations include roof drainage.

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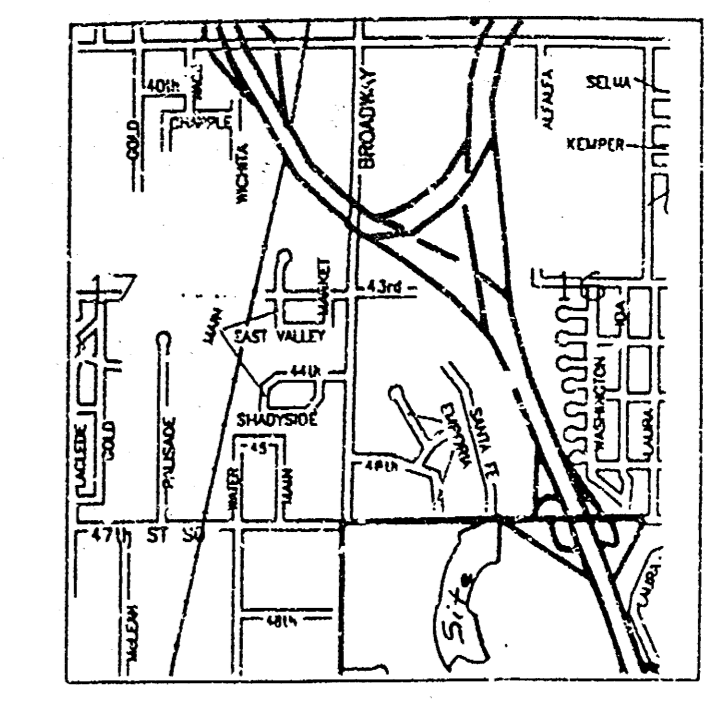
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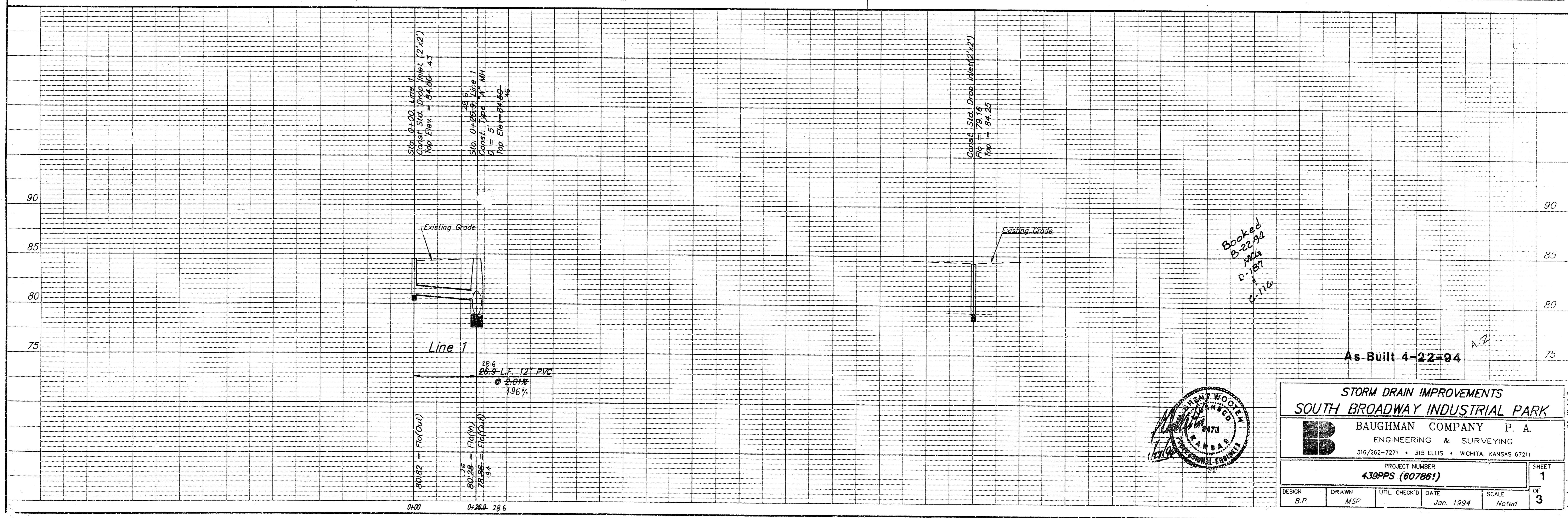


Site Location

APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
 Storm Sewers 1-31-94 D.E.D.
 Driveway Approaches _____
 Water Mains _____
 Paving _____

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Booked
 B-22-94
 1024
 D-189
 C-116

As Built 4-22-94



STORM DRAIN IMPROVEMENTS
SOUTH BROADWAY INDUSTRIAL PARK

B BAUGHMAN COMPANY P. A.
 ENGINEERING & SURVEYING
 316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
439PPS (60786')

DESIGN: B.P. DRAWN: MSP UTIL CHECK'D: DATE: Jan. 1994 SCALE: Noted

SHEET 1 OF 3