

PLAN	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
NO. _____	ALIGNMENT CHECKED _____		
	RT. OF WAY CHECKED _____		

As-Built Plans by:
S.E. Anderson PE/LS
June 20, 1990

PROFILE	NOTE BOOK NO. _____	SURVEYED _____	BY _____	DATE _____
		PLOTTED _____		
		GRADES CHECKED _____		
		61. M.A. NOTED _____		
		STRUCTURE NOTATIONS CPMK _____		


 SCALE

 same as above

NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS 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 STARDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION. SHALL. ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

Alignment & Grade
shown on the Plan
& Profile

TYPICAL PIPELINE INSTALLATION BY BORING AND JACKING

APPROVED AS NOTED

By CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 5/4/90

Storm Sewers

Driveway Approaches

[illegible]

Water Mails

.....

145

140

135

130

125

A circular professional engineer seal for James M. Thompson. The outer ring contains the text "JAMES M. THOMPSON" at the top and "PROFESSIONAL ENGINEER" at the bottom. The inner circle contains the text "LICENSED" at the top, "6262" in the center, and "KANSAS" at the bottom.

POE & ASSOCIATES OF KANSAS INC.
CONSULTING ENGINEERS
434 N. Oliver, Suite 110 • Wichita, KS 67208 • 316/685-4114

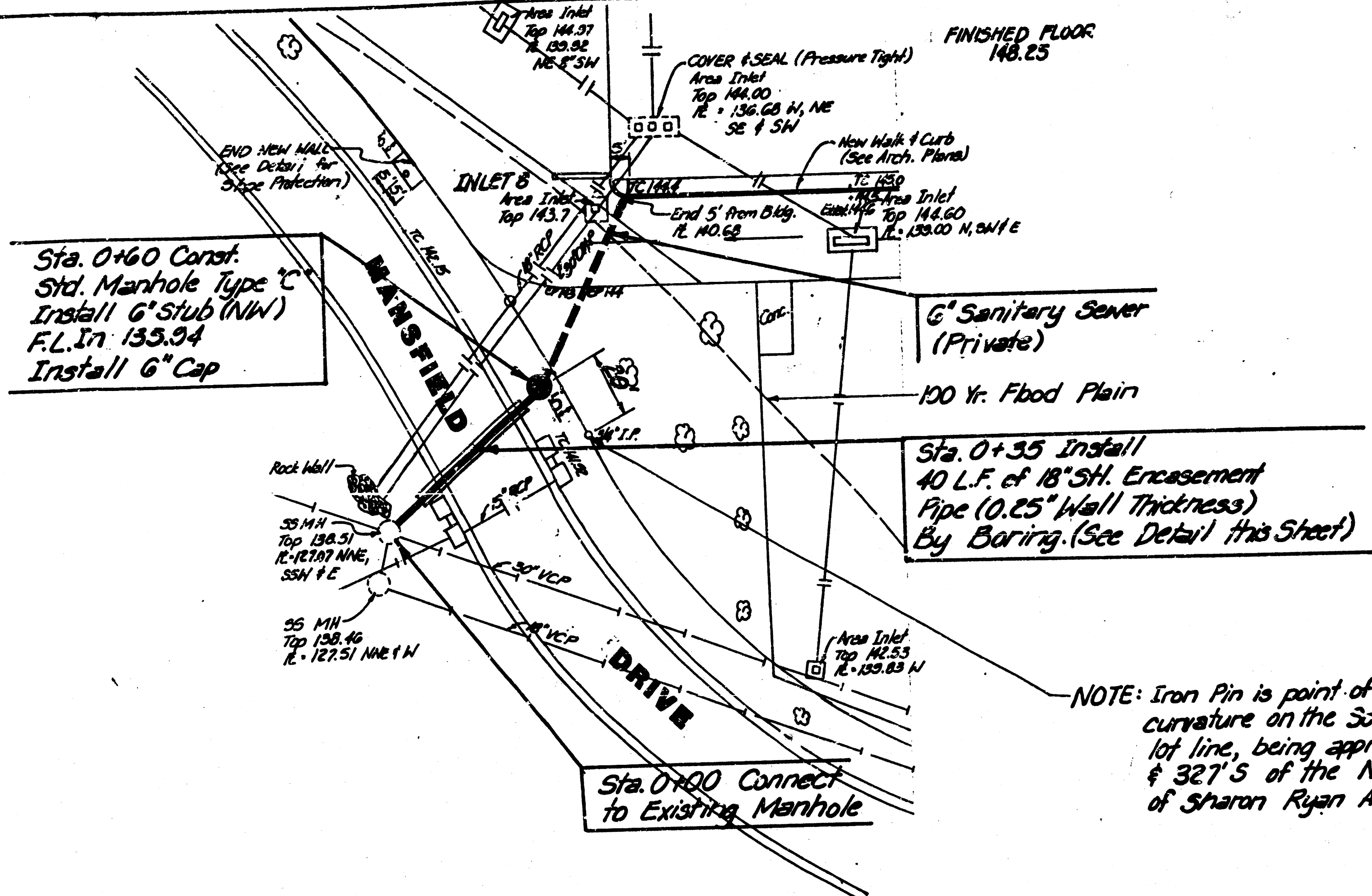
EASTGATE SHOPPING CENTER

SANTARY SEWER LINE NO. 2

PRIVATE PROJECT NO. 224 PPW 607853

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AVAILABLE COPY

NOTE: All Materials shall conform to City of Wichita Specifications. Manhole lid shall be water tight gasketed, install with self sealing replaceable O-ring rubber gasket. Provide (1) one spare gasket to Wichita Sewer Maintenance.

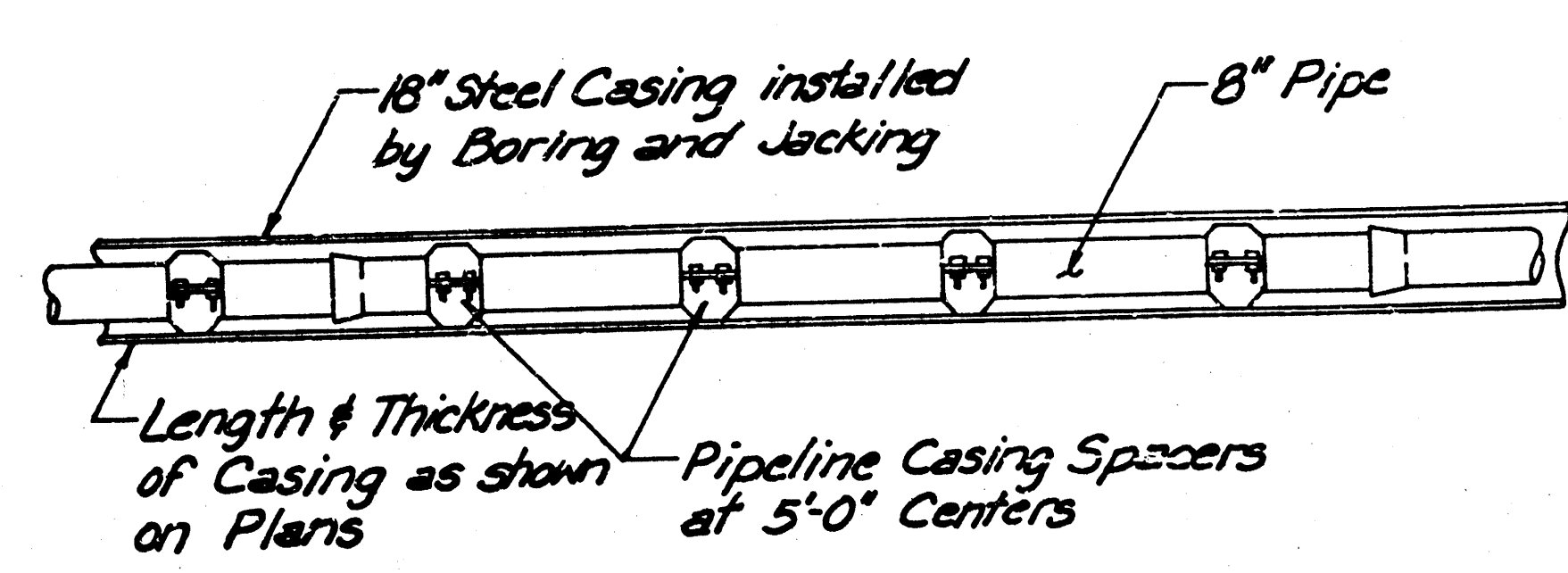


PLAN: Lat. & Long.
PROFILE: Horiz. same as above
Vert. same as above



STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

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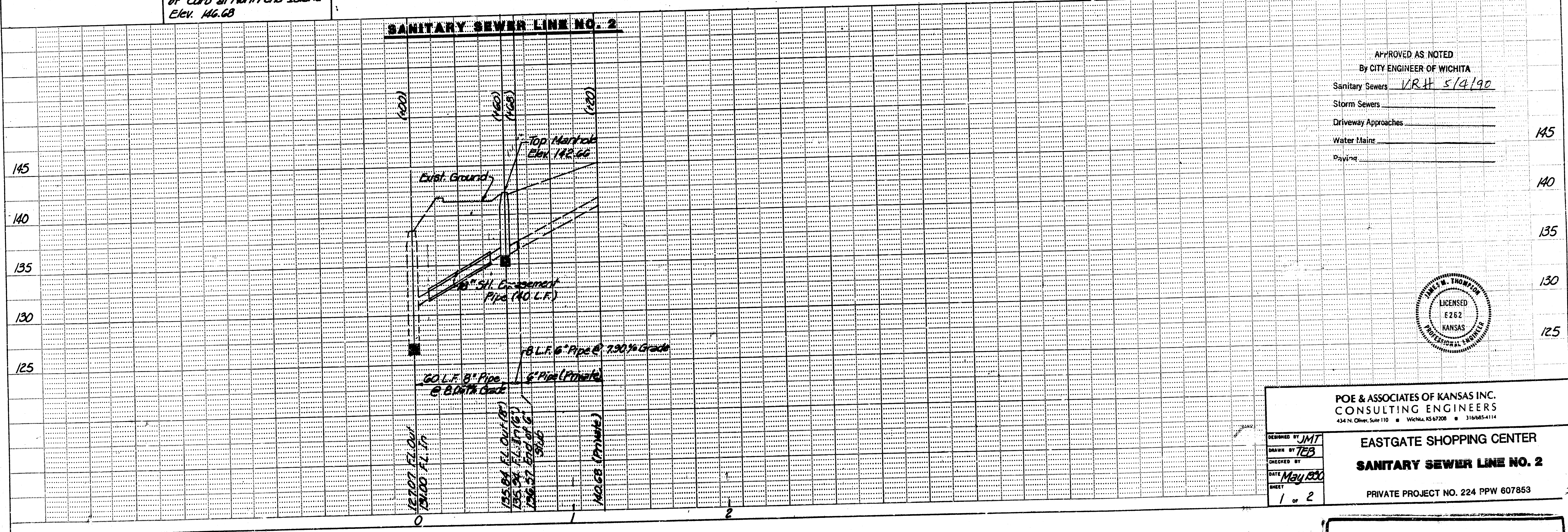


Alignment & Grade shown on the Plan & Profile

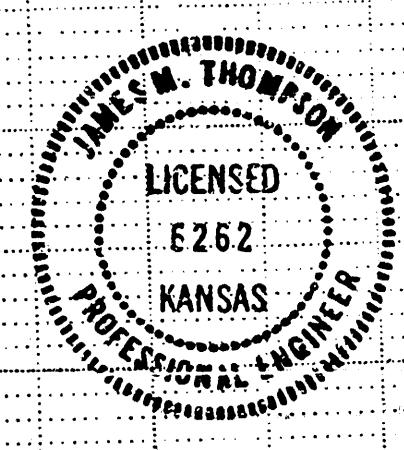
TYPICAL PIPELINE INSTALLATION BY BORING AND JACKING
NO SCALE

BENCH MARK
Chiseled Square top
of Curb at North end Island
Elev. 146.68

SANITARY SEWER LINE NO. 2



APPROVED AS NOTED
By CITY ENGINEER OF WICHITA
Sanitary Sewers VRH 5/4/90
Storm Sewers _____
Driveway Approaches _____
Water Mains _____
Drying _____



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EASTGATE SHOPPING CENTER
SANITARY SEWER LINE NO. 2

PRIVATE PROJECT NO. 224 PPW 607853

DESIGNED BY JMT
DRAWN BY TEB
CHECKED BY _____
DATE May 2000
SHEET 1 of 2

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City of Wichita, Kansas

Technical drawing of a manhole structure, showing various components and dimensions. The drawing is a cross-section view of a manhole, with a central vertical axis. The top of the manhole is labeled "RING AND LID AS SPECIFIED". The walls are labeled "8\" BRICK MASONRY" and "1\" COAT OF MORTAR". The base is labeled "MANHOLE WALL" and "CITY CONC. PAV'T MIX". The bottom of the manhole is labeled "FLOOR SHAPING SLOPE = 3\" TO 1\"". The drawing includes several dimensions: "8\" MIN. 18\" MAX. BRICK MASONRY COLLAR" for the top section, "30\" MIN. - 48\" MAX." for the main shaft height, "30\" 1/2\"" for the width of the main shaft, "8\"" for the width of the base, and "8\" MIN." for the width of the base. A note states: "NOTE: CROWN OF PIPE FLOWING IN SHALL NOT BE LOWER THAN CROWN OF PIPE FLOWING OUT". The drawing also shows a "MANHOLE BASE" and "CITY CONC. PAV'T MIX" at the bottom. The drawing is a technical drawing of a manhole structure, showing various components and dimensions. The drawing is a cross-section view of a manhole, with a central vertical axis. The top of the manhole is labeled "RING AND LID AS SPECIFIED". The walls are labeled "8\" BRICK MASONRY" and "1\" COAT OF MORTAR". The base is labeled "MANHOLE WALL" and "CITY CONC. PAV'T MIX". The bottom of the manhole is labeled "FLOOR SHAPING SLOPE = 3\" TO 1\"". The drawing includes several dimensions: "8\" MIN. 18\" MAX. BRICK MASONRY COLLAR" for the top section, "30\" MIN. - 48\" MAX." for the main shaft height, "30\" 1/2\"" for the width of the main shaft, "8\"" for the width of the base, and "8\" MIN." for the width of the base. A note states: "NOTE: CROWN OF PIPE FLOWING IN SHALL NOT BE LOWER THAN CROWN OF PIPE FLOWING OUT". The drawing also shows a "MANHOLE BASE" and "CITY CONC. PAV'T MIX" at the bottom.

SEE GEN. NOTES

8" BRICK MASONRY

1" COAT OF MORTAR

28"

30 1/2"

8" MIN. 18" MAX.

BRICK MASONRY COLLAR

30" MIN. - 48" MAX.

SEE GEN. NOTES

6"

NOTE: CROWN OF BOTTOM PIPE ON OUTSIDE DROP SHALL ALWAYS BE SET 0.1 FT. HIGHER THAN CROWN OF PIPE CARRYING FLOW OUT OF THE MANHOLE.

REVERSE "Y"

BACK SAND MIX

CONCRETE

SEGMENT OUTSIDE OF S OR TO THE LIMIT EXCAVATION WHEN THAN 6"

VARIABLE

MANHOLE WALL

CITY CONC PAV'T MIX

9" MIN.

MANHOLE BASE

CITY CONC PAV'T MIX

SEE GEN. NOTES

4" MIN.

5" MIN.

FLOOR SHAPING

SLOPE - 3" TO 1"

6" MIN.

4" MIN.

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAYMENT MIX WITHOUT AIR EXTRINSIC ADMIXTURE. MORTAR SHALL BE PLACED IN THE JOINTS OF THE MANHOLE WALLS. THE DRAWINGS AND MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 8" ABOVE THE BOTTOM OF THE MANHOLE BASES. COST OF REINFORCING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE CUT INTO THE WALL WITH A NON-SHARP EDGE. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
4. 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 MAKE THE BOTTOM MANHOLE FLOOR WITH A NON-SHARP EDGE. THE DRAWINGS AND PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY

THE DRAWING. 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 MANHOLE SHALL HAVE THE TOP HALF REMOVED TO MEET 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.

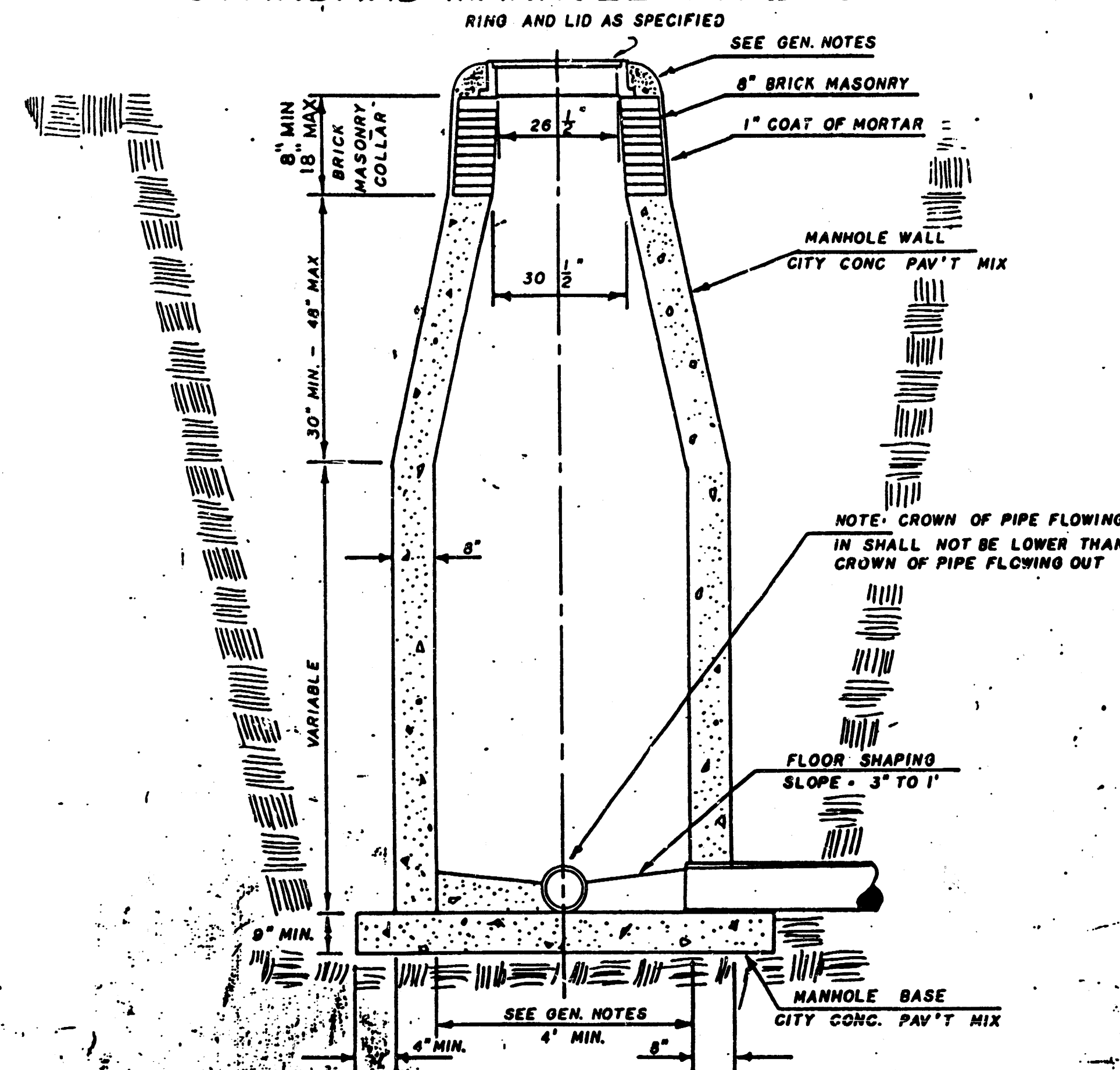
5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADEL WITH CONCRETE TO THE LIMITS THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADELS SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADELS SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADELS WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
6. 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 DRAWING.
7. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
8. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "C" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

SEWER APPURTENANCES DETAILS

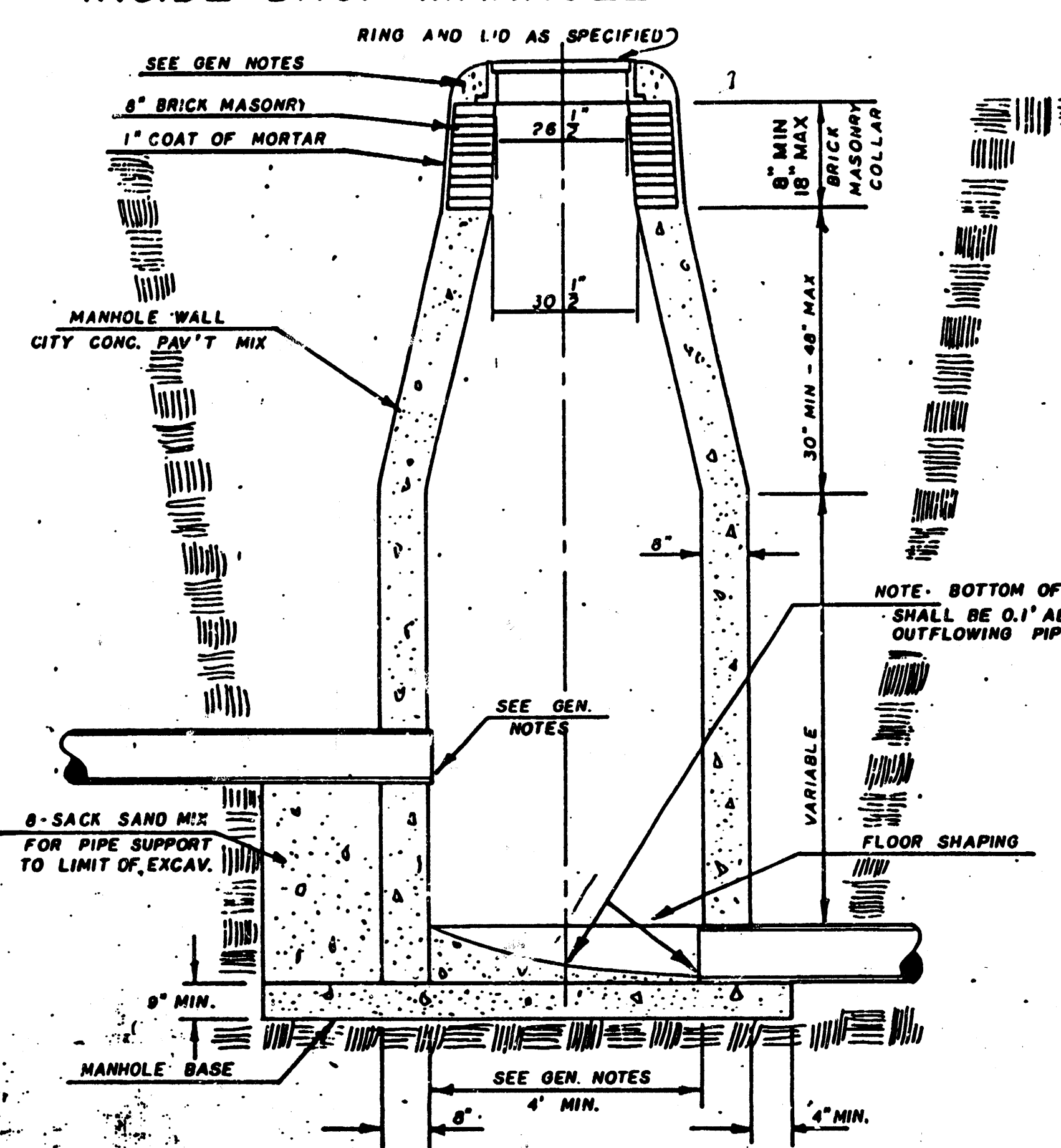
ADOPTED AS STANDARD DESIGN
BY

City of Wichita, Kansas

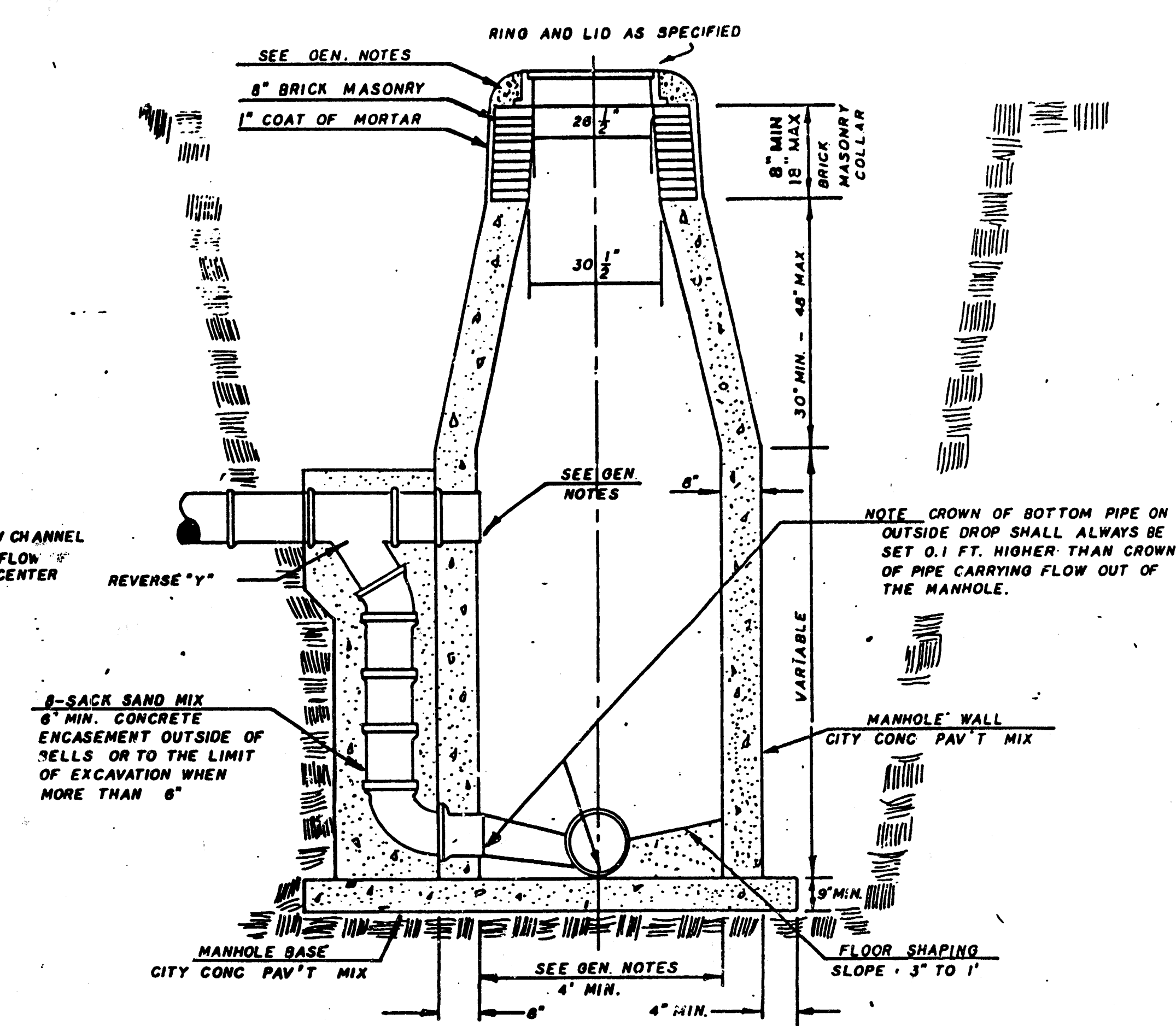
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT 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 "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
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- AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.
- 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 EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. 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 MANHOLE SHALL HAVE THE TOP HALF REMOVED TO HEAT 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.
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JNL JAN. 1982

Sheet 2 of 2
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