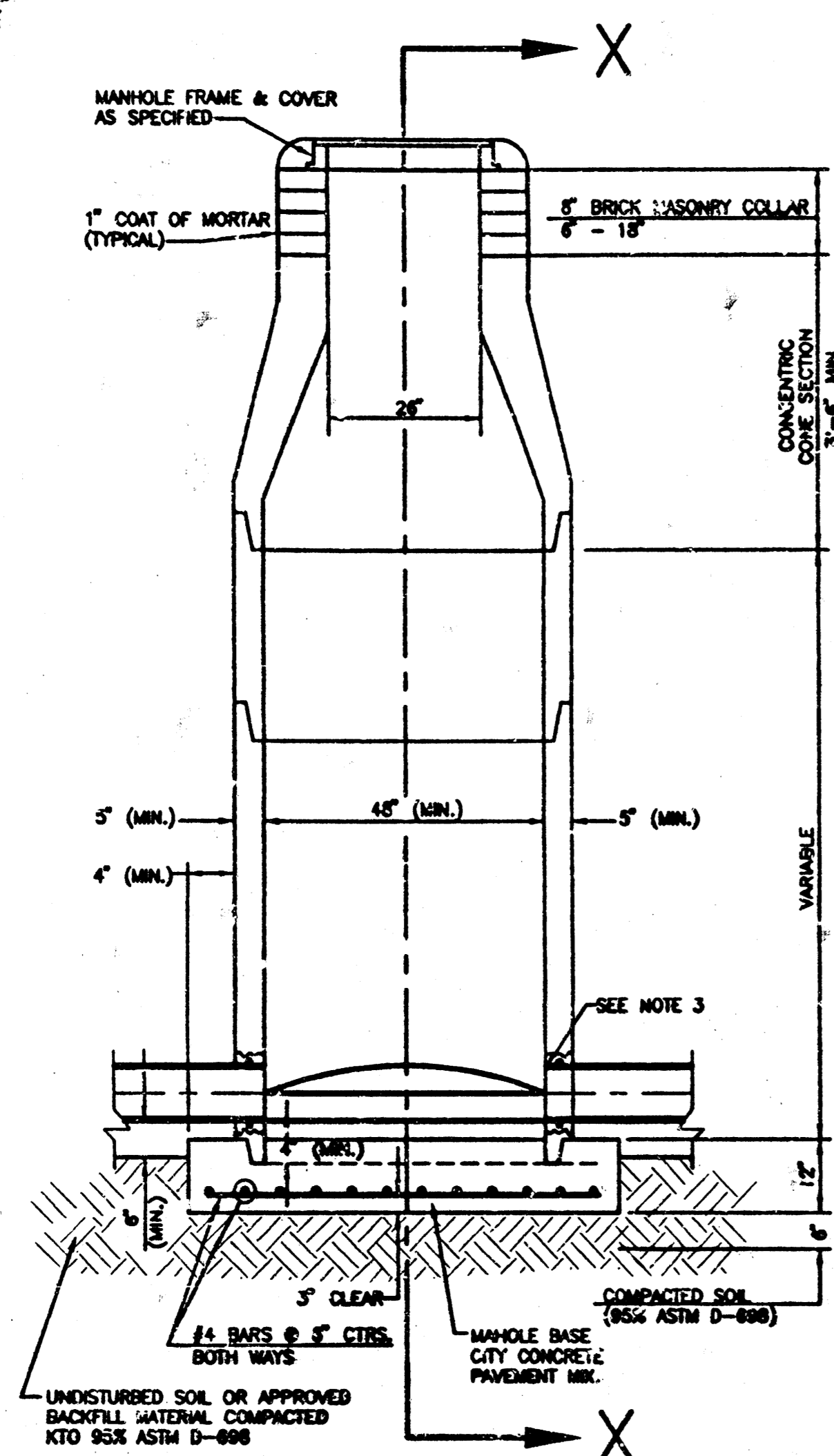


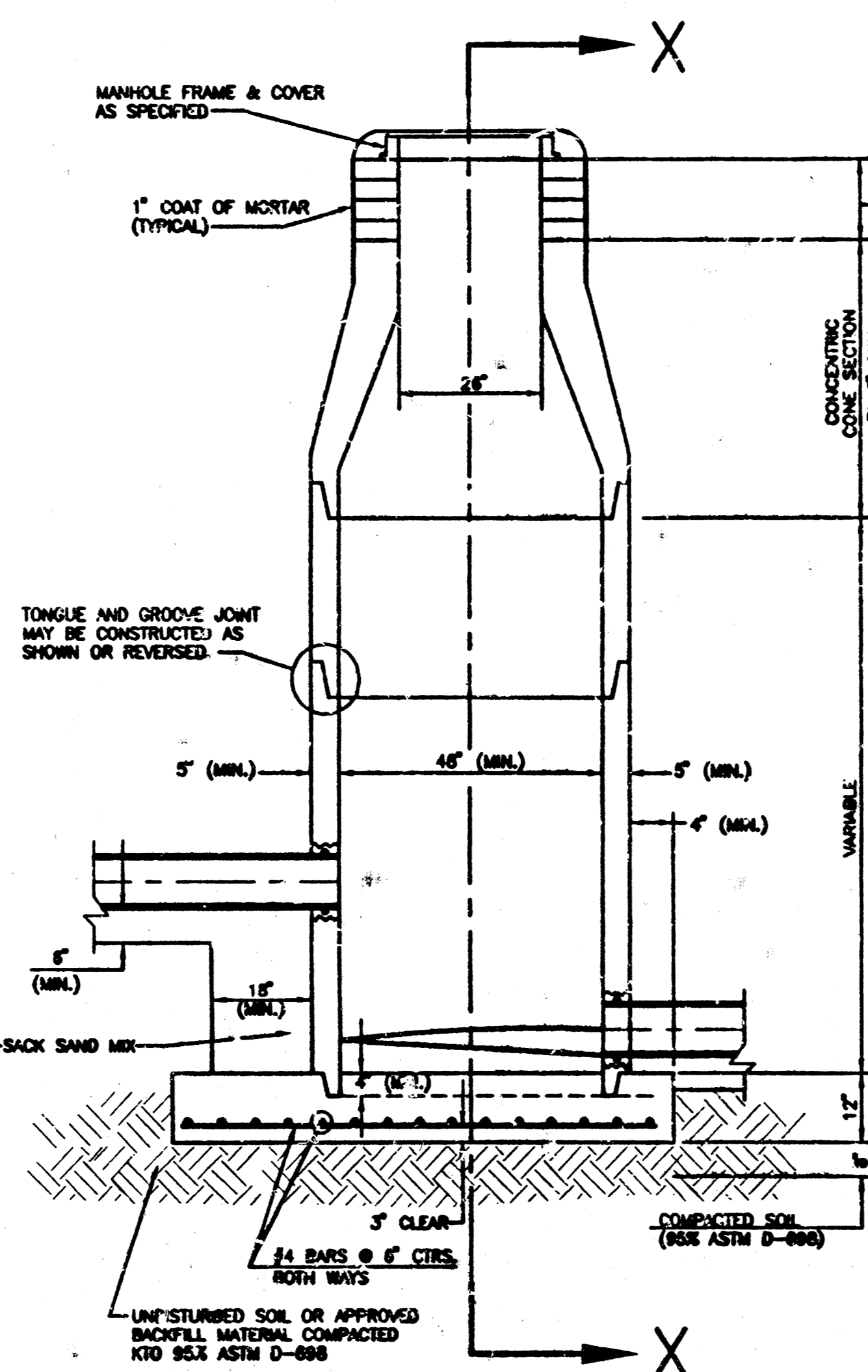


# SEWER APPURTENANCES DETAILS

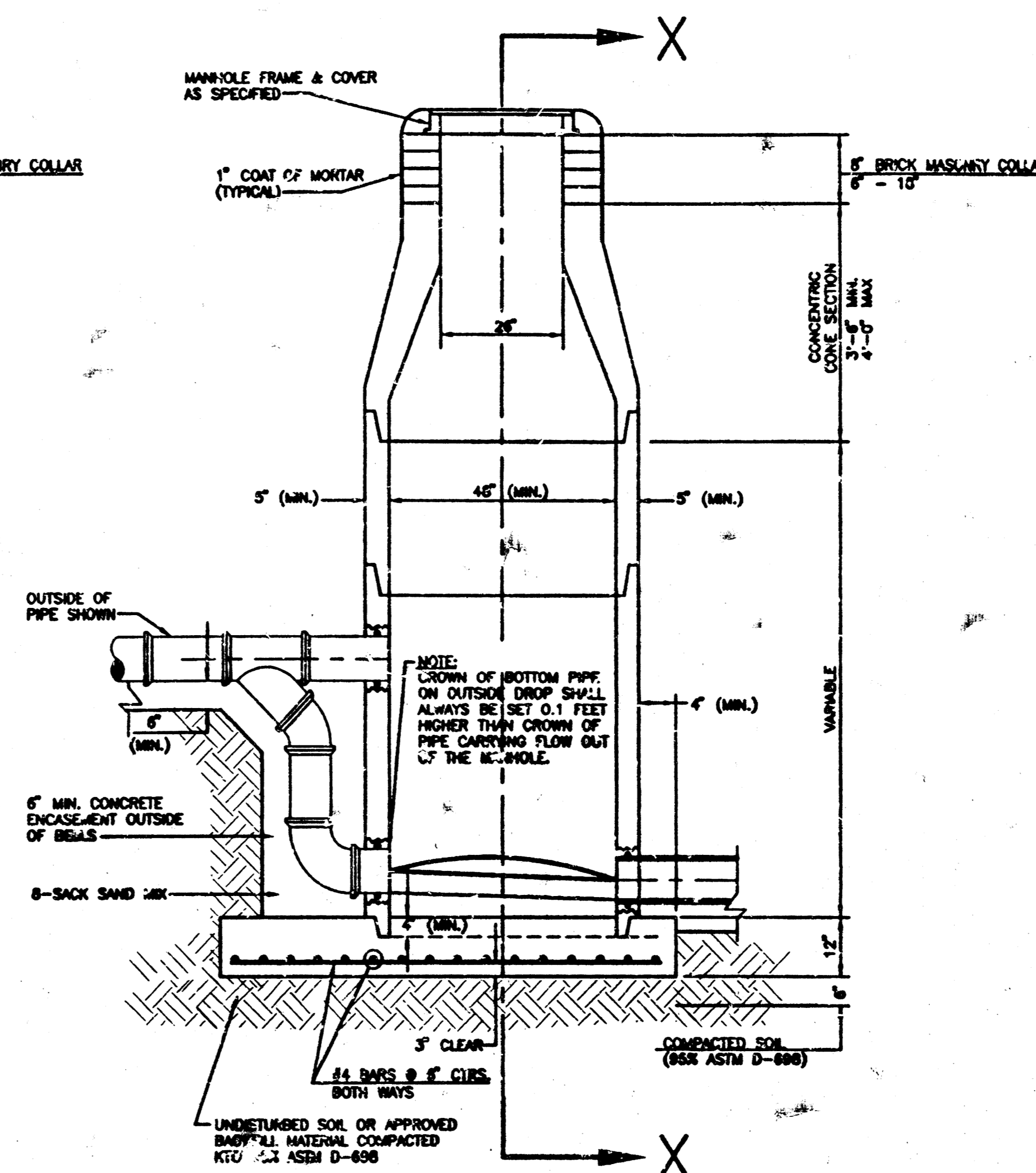
ADOPTED AS STANDARD DESIGN  
BY  
CITY OF WICHITA



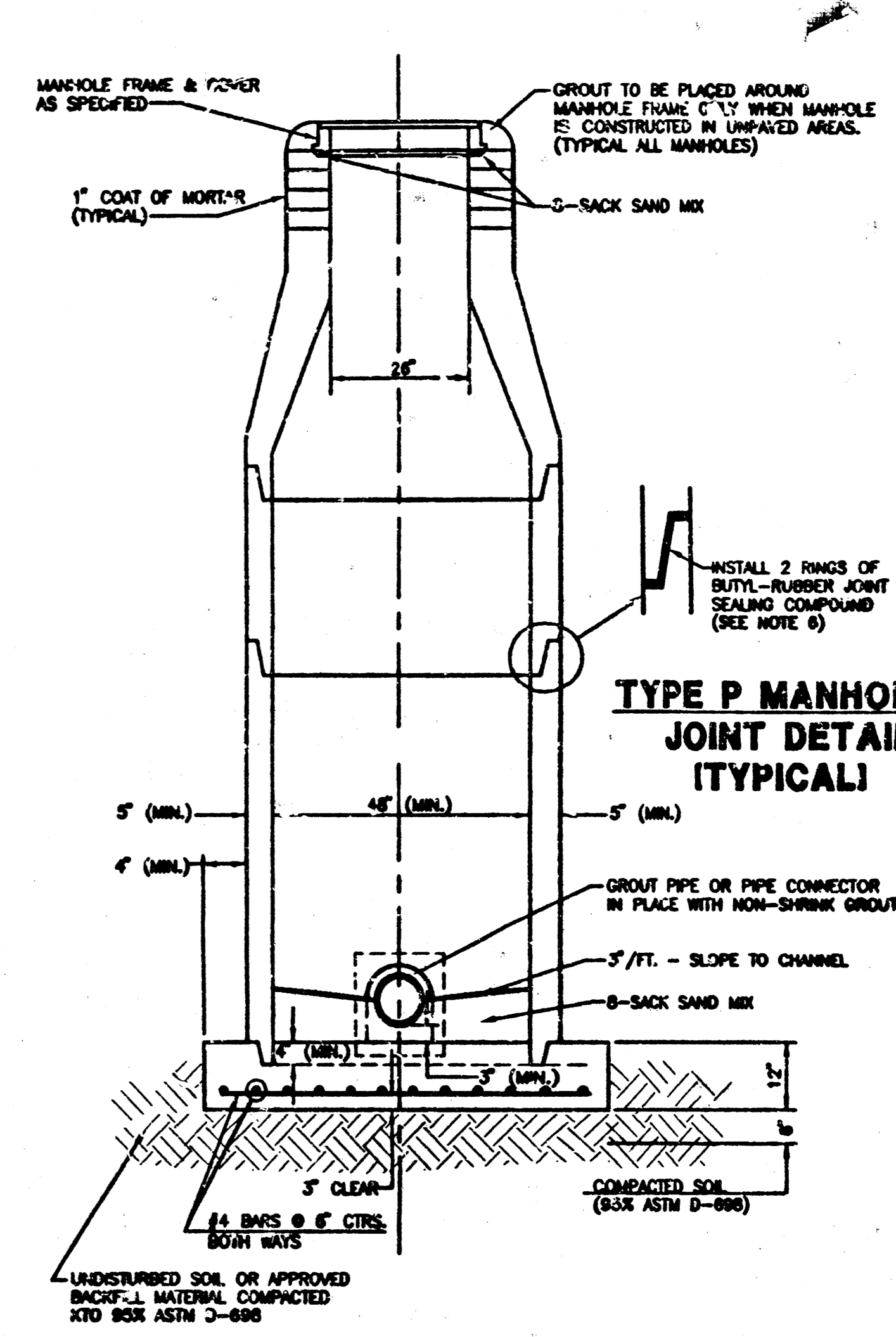
**TYPE P  
STANDARD MANHOLE**



**TYPE P  
INSIDE DROP MANHOLE**



**TYPE P  
OUTSIDE DROP MANHOLE**

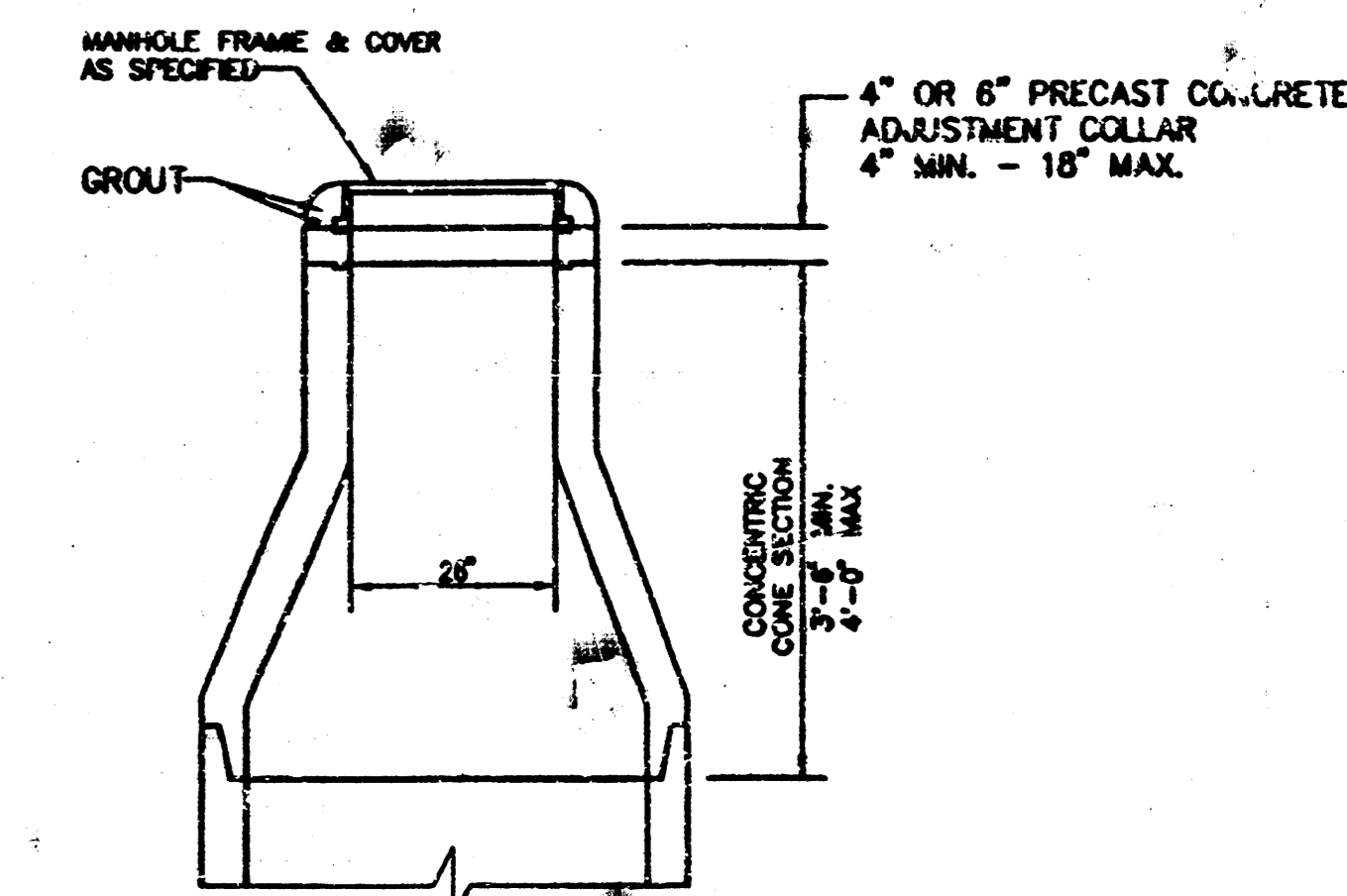


**SECTION X  
(TYPICAL)**

## GENERAL NOTES

## PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEPEC SERIES 66 HI-BUILD EPOXUNE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- 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 PAVEMENT MIX WITH JOINT ENTERING MIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. 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 AT LEAST 3" 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.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING 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 EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE SHAPED 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 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 DRAWING.
- 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.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE COLLAR. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 18" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR.

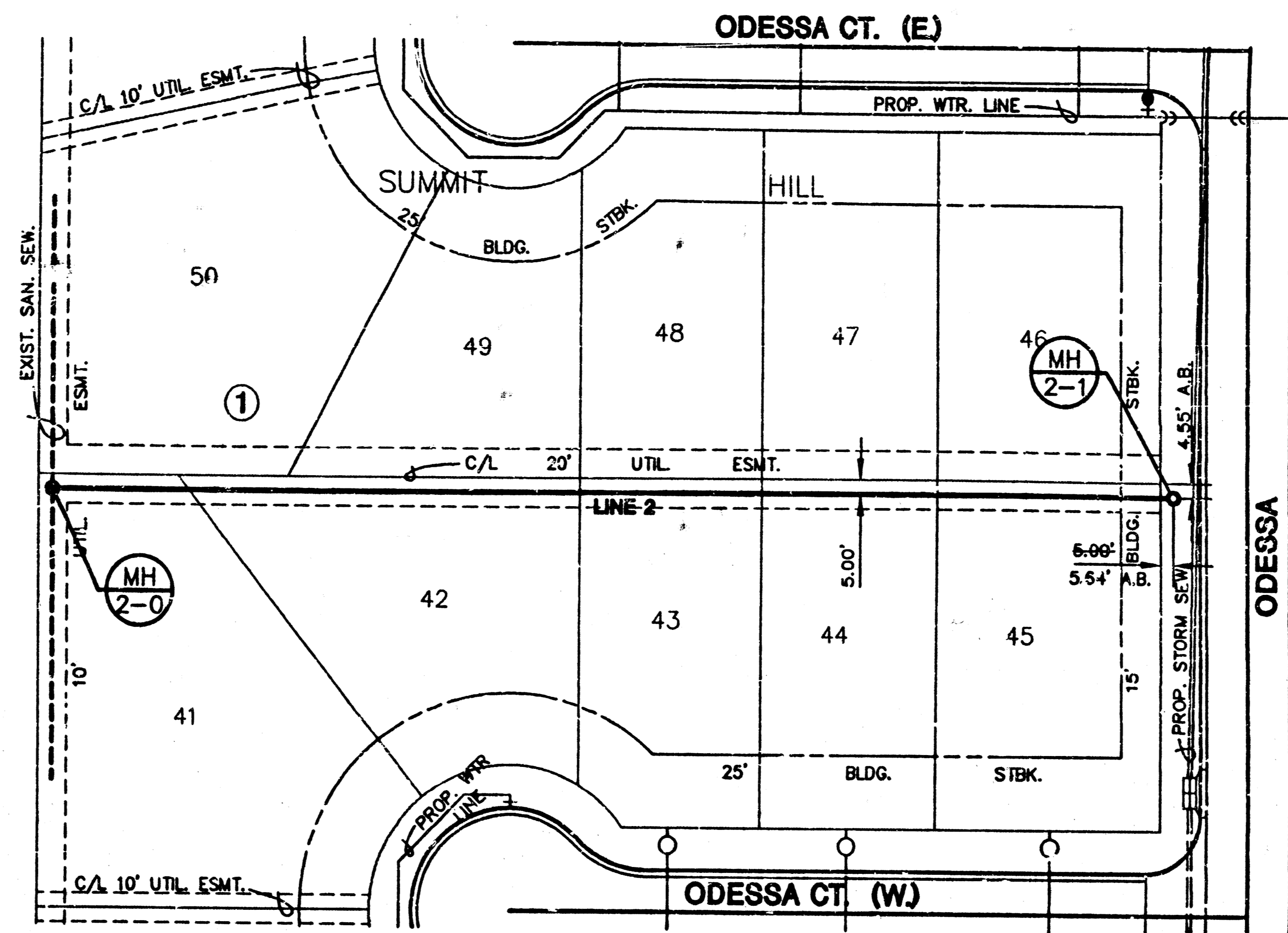


**ALTERNATE CONSTRUCTION  
IN UNPAVED AREAS**

	<b>SUMMIT HILL PHASE III</b>	AS BUILT 7-14-94 Drawn by WNU Checked by GA Date 1/94 Job No. MHD15
	<b>MANHOLE DETAILS</b>	2 5
MID-KANSAS ENGINEERING CONSULTANTS INC. 3500 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226		(316) 636-5566

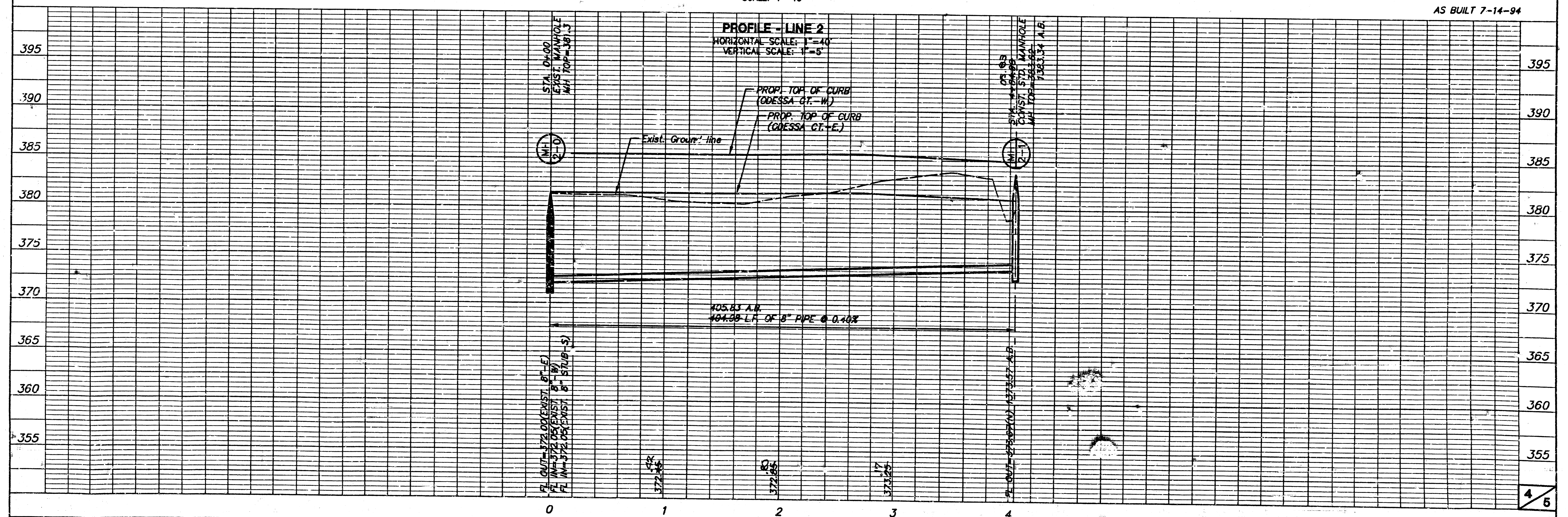


**SUMMIT HILL  
ADDITION PHASE III**



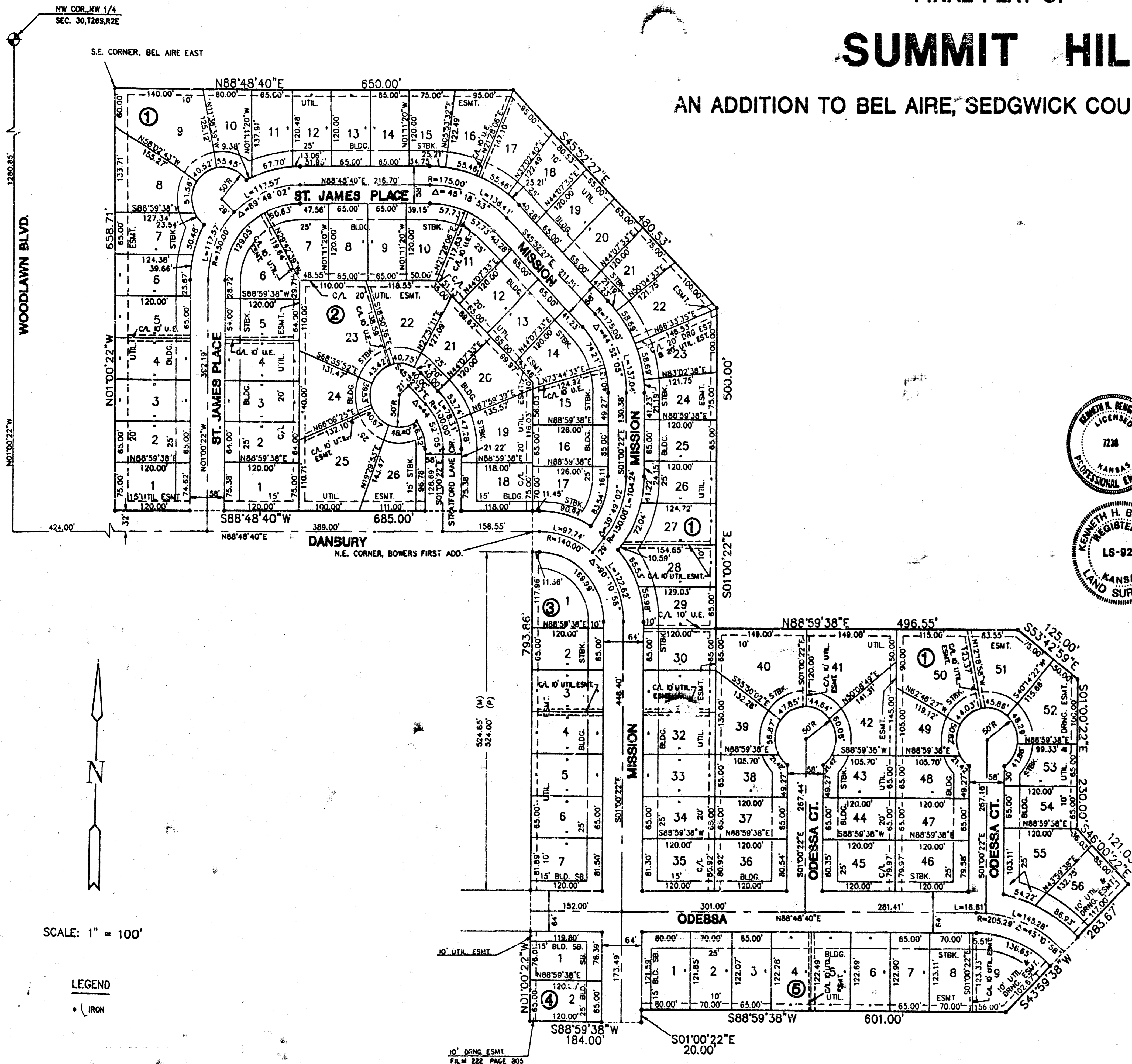
**PLAN - LINE 2**  
SCALE: 1"=40'

AS BUILT 7-14-94



FINAL PLAT OF  
**SUMMIT HILL**

AN ADDITION TO BEL AIRE, SEDGWICK COUNTY, KANSAS



SCALE: 1" = 100'

LEGEND

• IRON



I, Kenneth H. Bengtson, a Civil Engineer and Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "SUMMIT HILL", an addition to Bel Aire, Sedgwick County, Kansas, into lots, blocks, and streets the same being accurately set forth in the accompanying plat and described herein:

A tract of land lying in the Northwest Quarter, Section 30, Township 25 South, Range 2 East of the 6th P.M., Sedgwick County, Kansas, more particularly described as follows:

Commencing at a point on the East line and 1827.02' feet South of the Northeast corner of said Northwest Quarter; thence S 88° 59' 38" W, 538.57 feet to the point of beginning; thence S 43° 59' 38" W, 285.67 feet; thence S 88° 59' 38" W, 601.00 feet; thence S 01° 00' 22" E, 230.00 feet; thence S 88° 59' 38" W, 184.00 feet to a point on the East line of BOMERS FIRST ADDITION, an addition to Bel Aire, Sedgwick County, Kansas; thence N 01° 00' 22" W, 793.86 feet, as measured (324.00 feet, as platted) along said East line, said line being parallel with the West line of said Northwest Quarter, to a point lying 32.00 feet North of the Northeast corner of said addition; thence S 88° 48' 40" W, 685.00 feet along the North line of the Street Dedication as described in Film 218, Page 71; thence N 01° 00' 22" W, 658.71 feet to the Southeast corner of BEL AIRE EAST ADDITION, an addition to Bel Aire, Sedgwick County, Kansas; thence N 88° 48' 40" E, 630.00 feet; thence S 45° 52' 27" E, 482.53 feet; thence S 01° 00' 22" E, 500.00 feet; thence N 88° 59' 38" E, 496.55 feet; thence S 53° 42' 59" E, 125.00 feet; thence S 01° 00' 22" E, 230.00 feet; thence S 46° 00' 22" E, 121.03 feet to the point of beginning.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 18 day of May, 1992.

Kenneth H. Bengtson  
Kenneth H. Bengtson, P.E., R.L.S. #922  
Mid-Kansas Engineering Consultants, INC.  
3500 N. Rock Road, Building #800  
Wichita, KS

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Civil Engineer's and Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into lots, blocks, and streets the same to be known as "SUMMIT HILL", an addition to BEL AIRE, Sedgwick County, Kansas. The streets are hereby dedicated to and for the use of the public. Easements for the construction and maintenance of public utilities and drainage as indicated on the accompanying plat, are hereby granted.

SUMMIT HILL, INC.

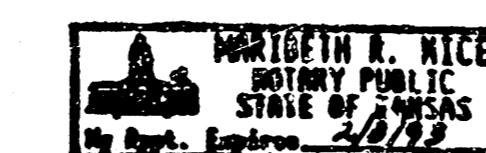
Philip M. Snodgrass  
By: Philip M. Snodgrass, President

STATE OF KANSAS)  
ss.  
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this 18th day of May, 1992, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Philip M. Snodgrass, President for Summit Hill, Inc., personally known to me to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Maribeth R. Nice #1213247  
Notary Public  
Maribeth R. Nice  
My appointment expires: 2/3/98



We, Prairie States Bank, of Augusta, Kansas, mortgagees on the above described property, do hereby consent to the plat of "SUMMIT HILL".

PRAIRIE STATES BANK

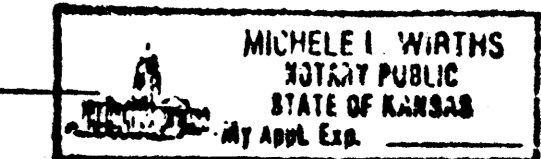
Steven R. Gumm  
BY: Steven R. Gumm

STATE OF KANSAS)  
ss.  
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this 17th day of May, 1992, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Steven R. Gumm, for Prairie States Bank of Augusta, personally known to me to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Michele L. Wirths  
Notary Public  
Michele L. Wirths  
My appointment expires: 8-12-95



This plat of SUMMIT HILL has been submitted to and approved by the Bel Aire Planning Commission, BEL AIRE, Kansas.

Dated this 10th day of February, 1992.

BEL AIRE PLANNING COMMISSION

Beverly K. Dunning CHAIRMAN  
Beverly K. Dunning

Betty L. Martine SECRETARY  
Betty L. Martine

This plat approved and all dedications shown hereon, if any, accepted by the City Commissioners of the City of Bel Aire, Kansas, this 11th day of May, 1992.

Harold Smith MAYOR  
Harold Smith

Sherryl L. Cutter CITY CLERK  
Sherryl L. Cutter

Enter on transfer record this 3rd day of June, 1992.

Don Wright COUNTY CLERK  
Don Wright

STATE OF KANSAS)  
ss.  
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this 3rd day of JUNE, 1992, at 10:30 AM.

Pat Kettler REGISTER OF DEEDS  
Pat Kettler

Phyllis Herndon DEPUTY  
Ed. Ross Phyllis Herndon