

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY ITEMS. THE CONTRACTOR SHALL BE OBLIGED TO RE-ESTABLISH ANY PROPERTY LOSS WHICH HAS BEEN DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH LOSS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.

NOTE TO CONTRACTOR

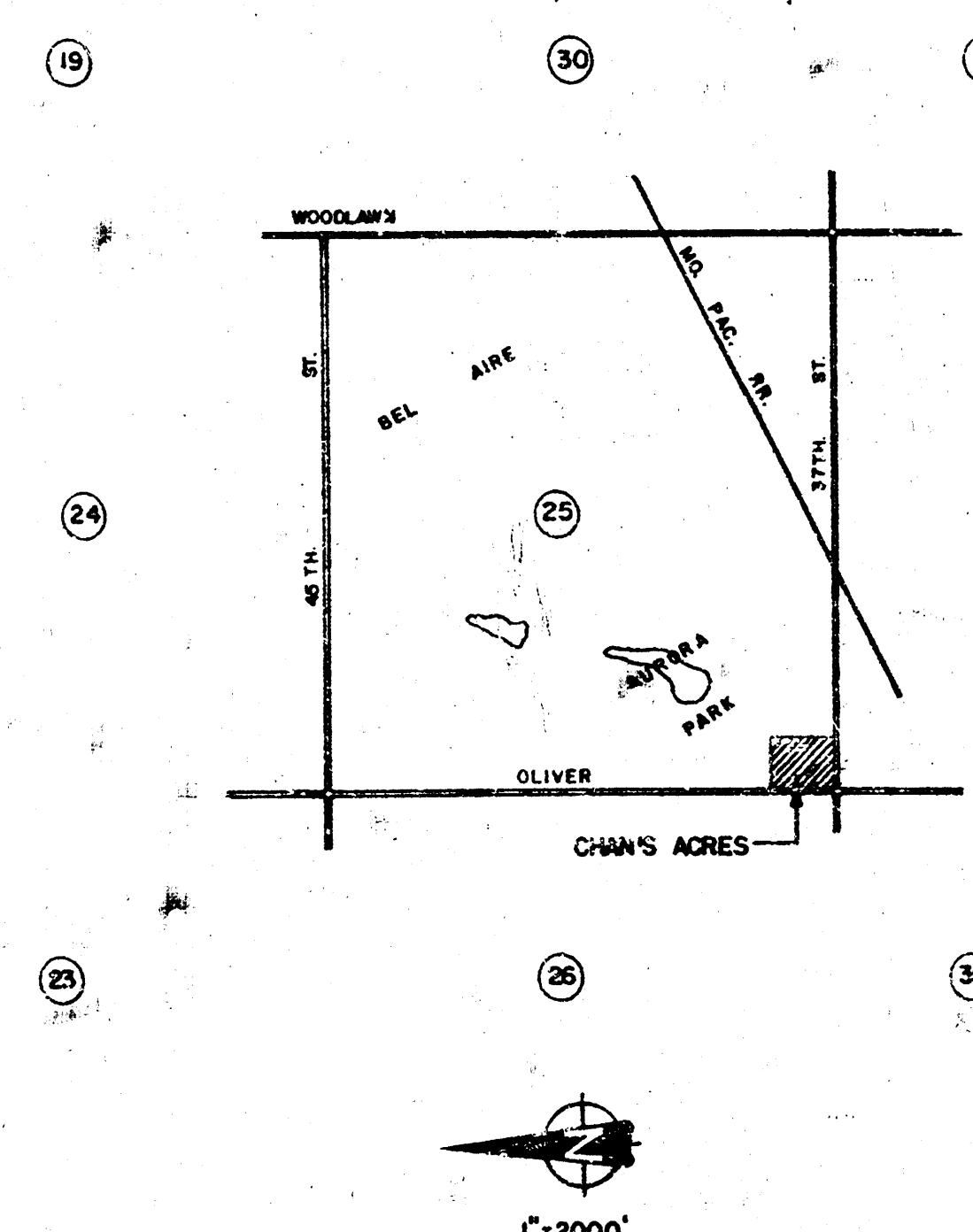
This project will be constructed under the supervision of the CITY ENGINEER and conforming to the SPECIFICATIONS of the CITY OF WICHITA. The CONTRACTOR will pay the City of Wichita for all costs of Inspection.

CITY OF WICHITA

APPROVAL: Approval does not relieve the signatory from any responsibility for errors or omissions from this contract requirement or for any incidents involving equipment, work, or materials.

Date: 11/16/82

Engineering Div. Y. Wilson



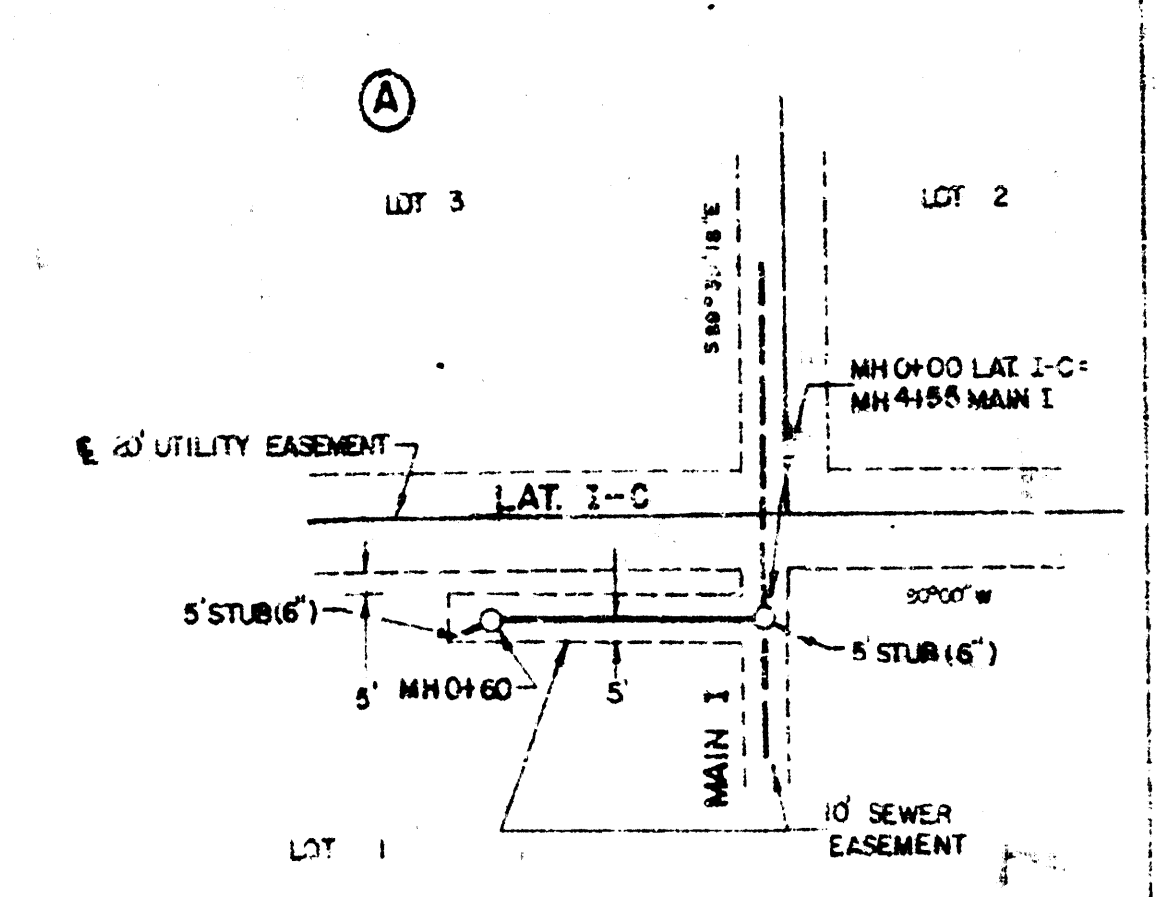
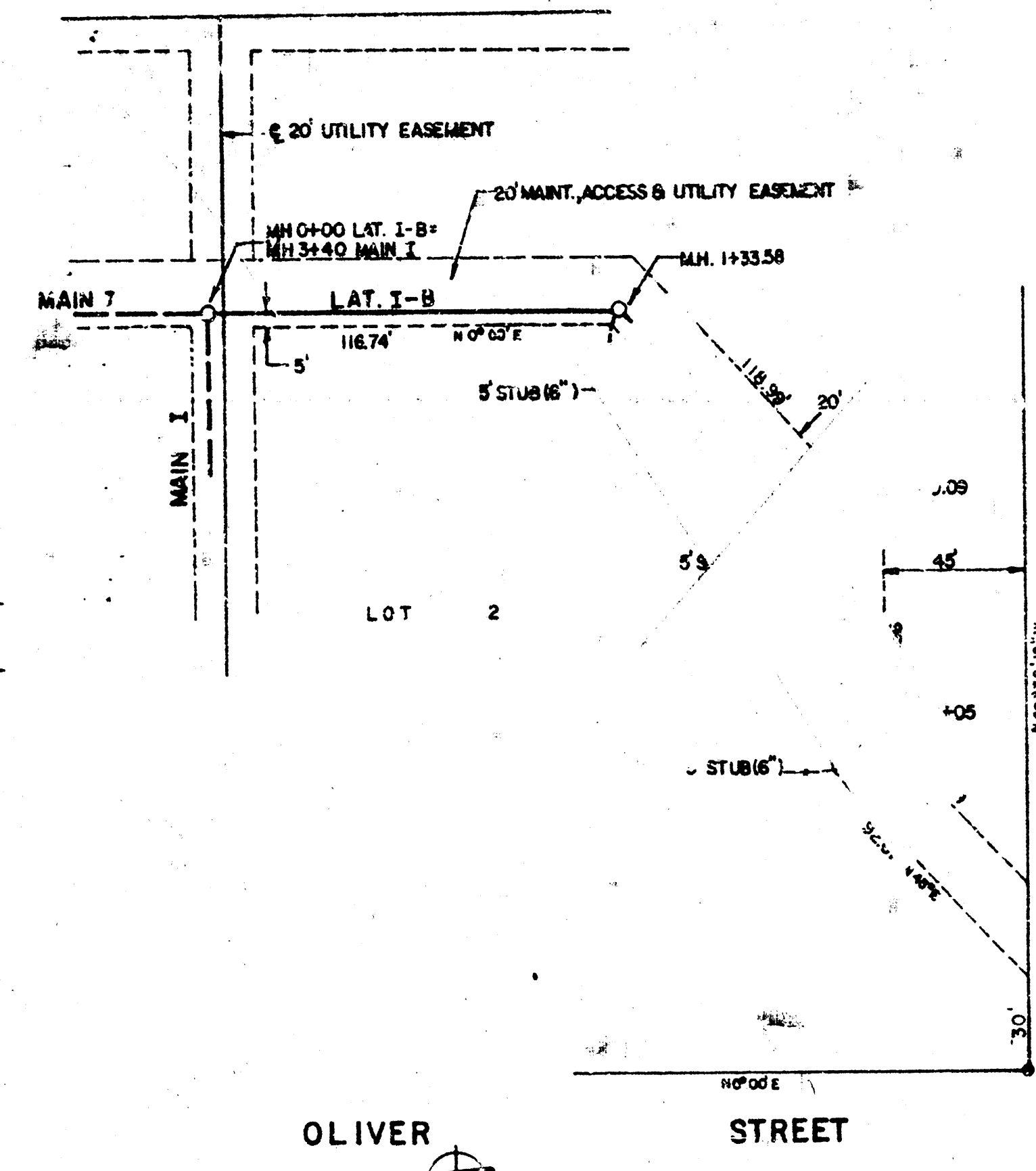
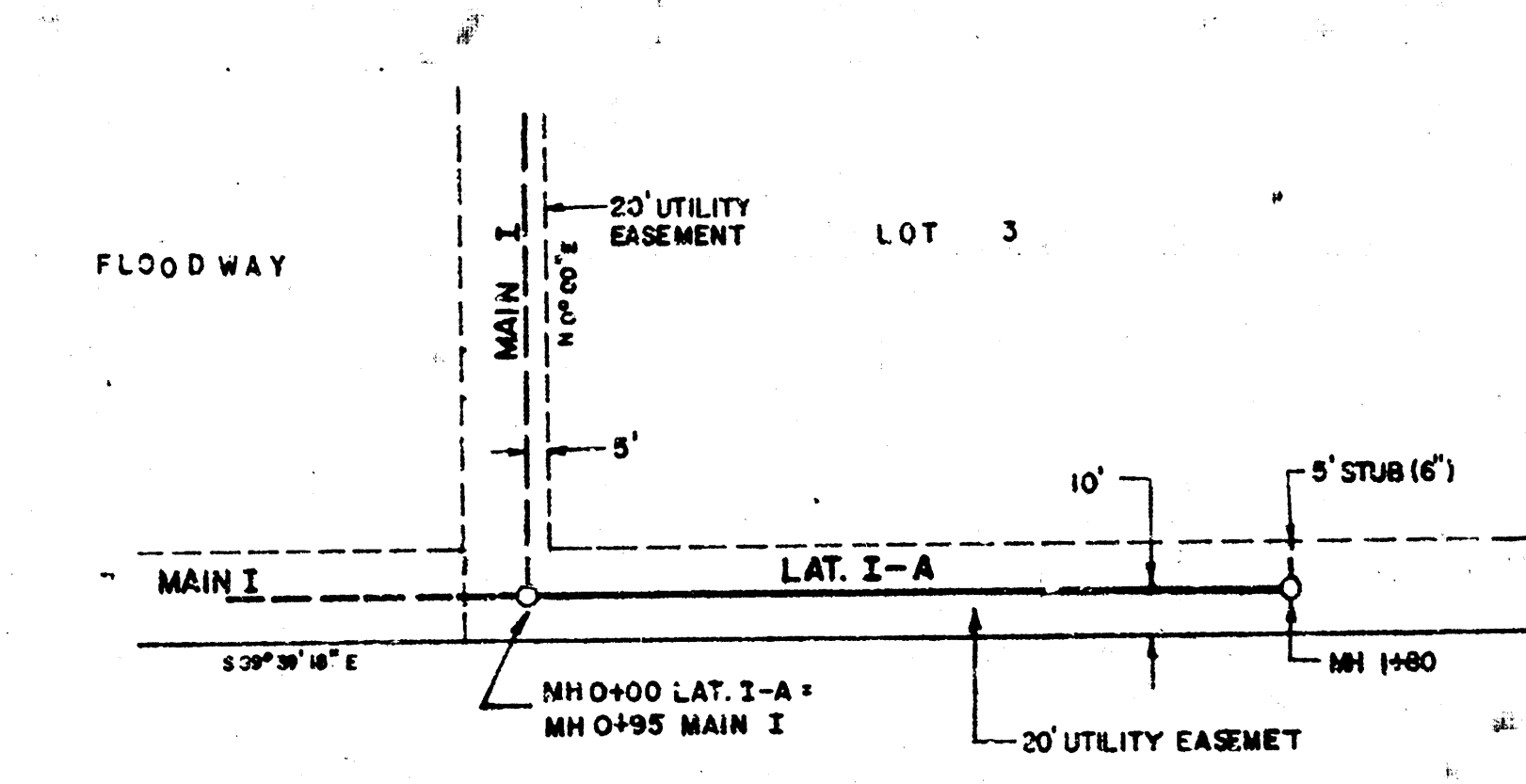
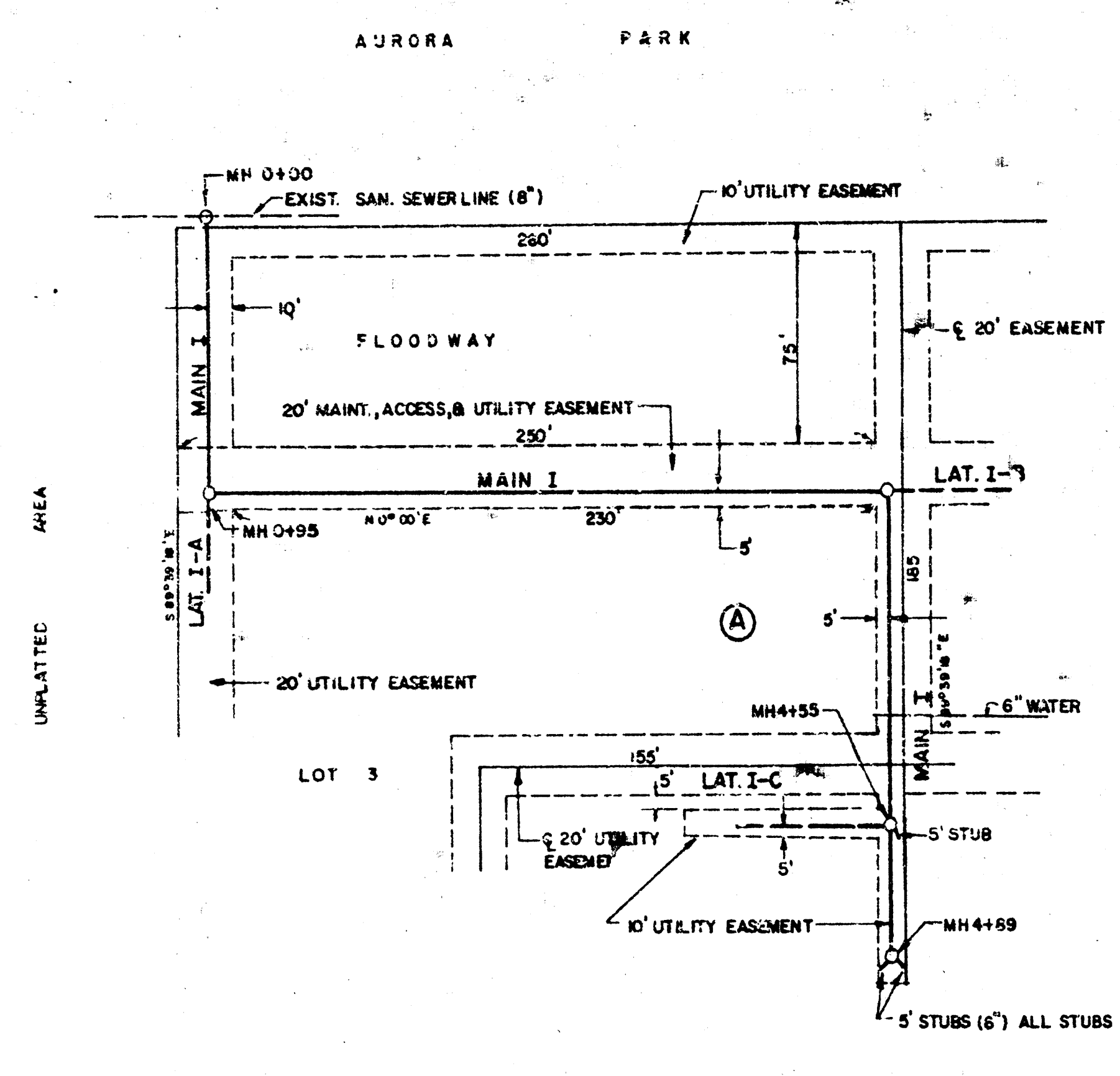
Charles M. Johnson

REISS & GOODNESS ENGINEERS
2100 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 832-0213

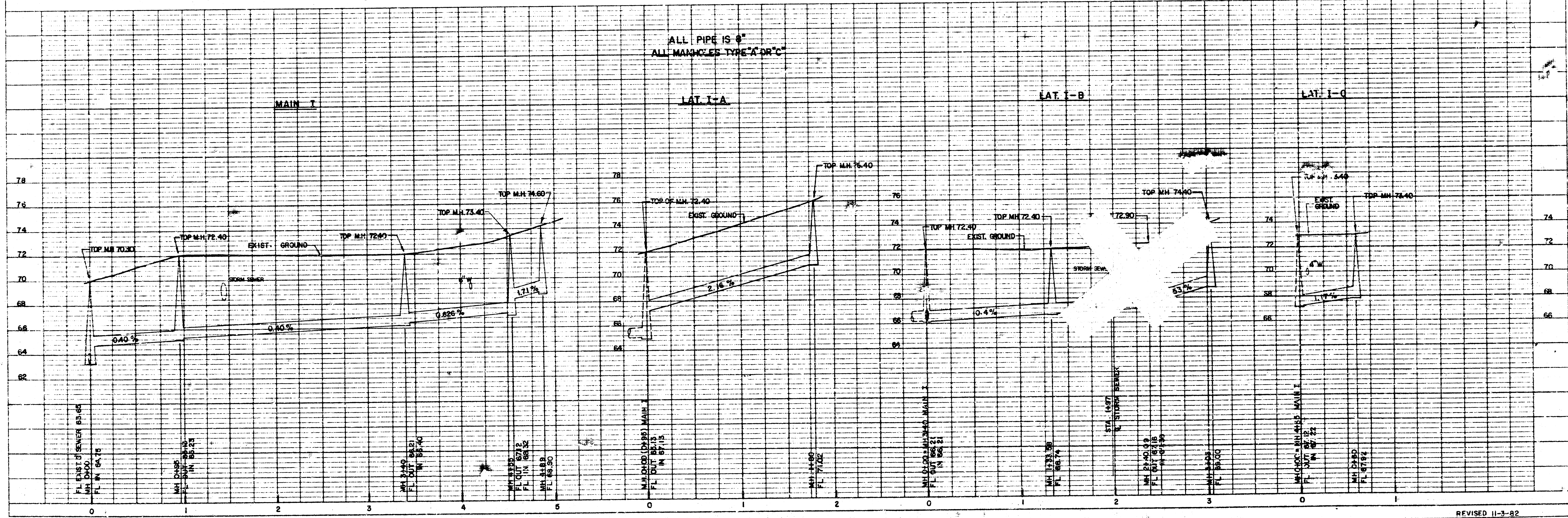
REVISED 11-3-82

SCALE GIVEN	PROJECT NO.
DATE 9-22-82	15-1582

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AVAILABLE COPY.....



BM
CITY STD. BRASS CAP IN SE HUB GUARD
OF R.C.B. ON SW COR. OLIVER & 37 TH. ST. NO.
EL. 1371.96
ADD 1300.00 TO ELEVATIONS SHOWN HEREON

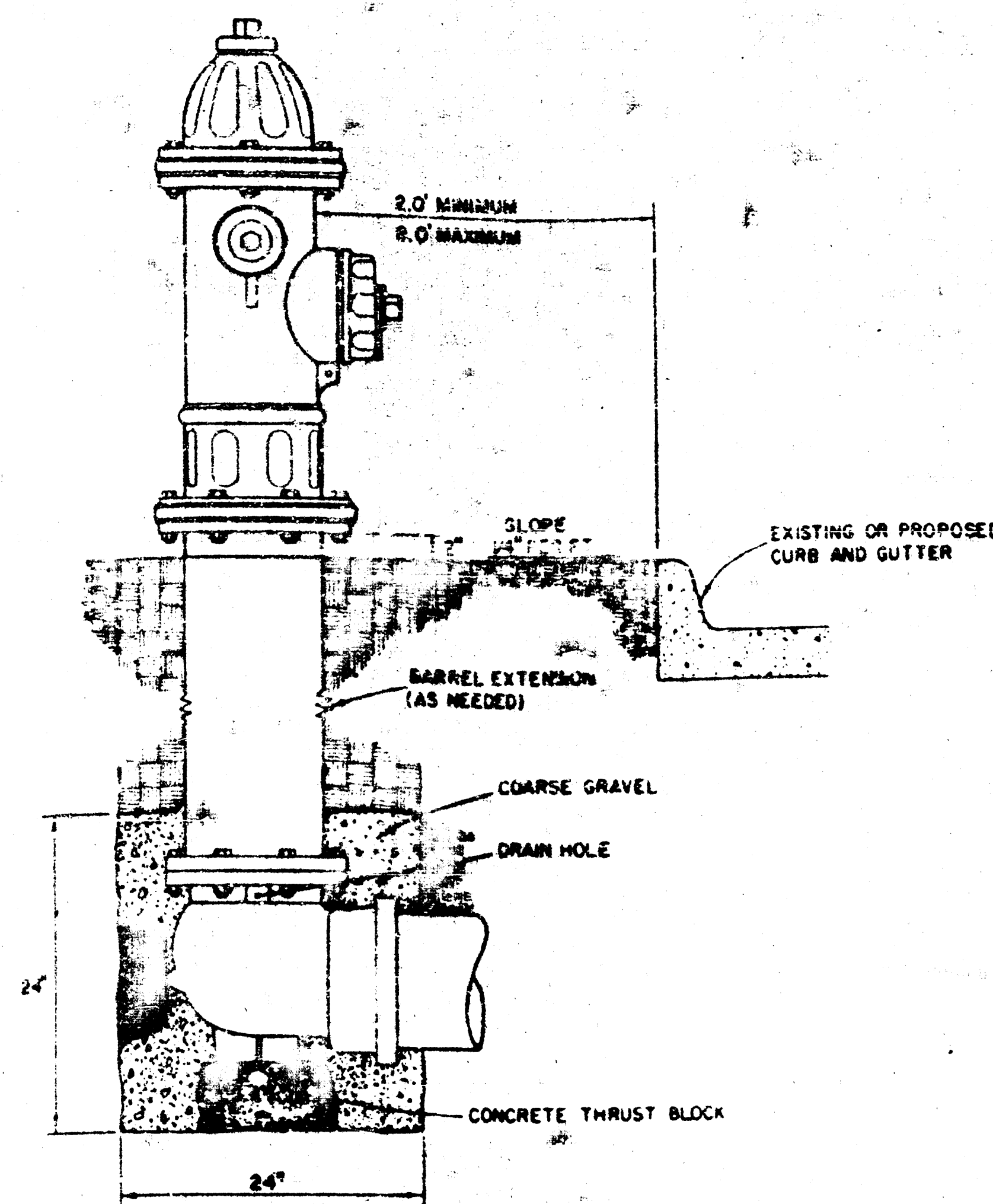


REVISION	DRAWN BY	CHECKED BY	DESIGNED BY	PROJECT	CUSTOMER	DATE	SHEET
				SANITARY SEWER EXTENSIONS	CHAN'S ACRES	9-22-82	3 OF 7

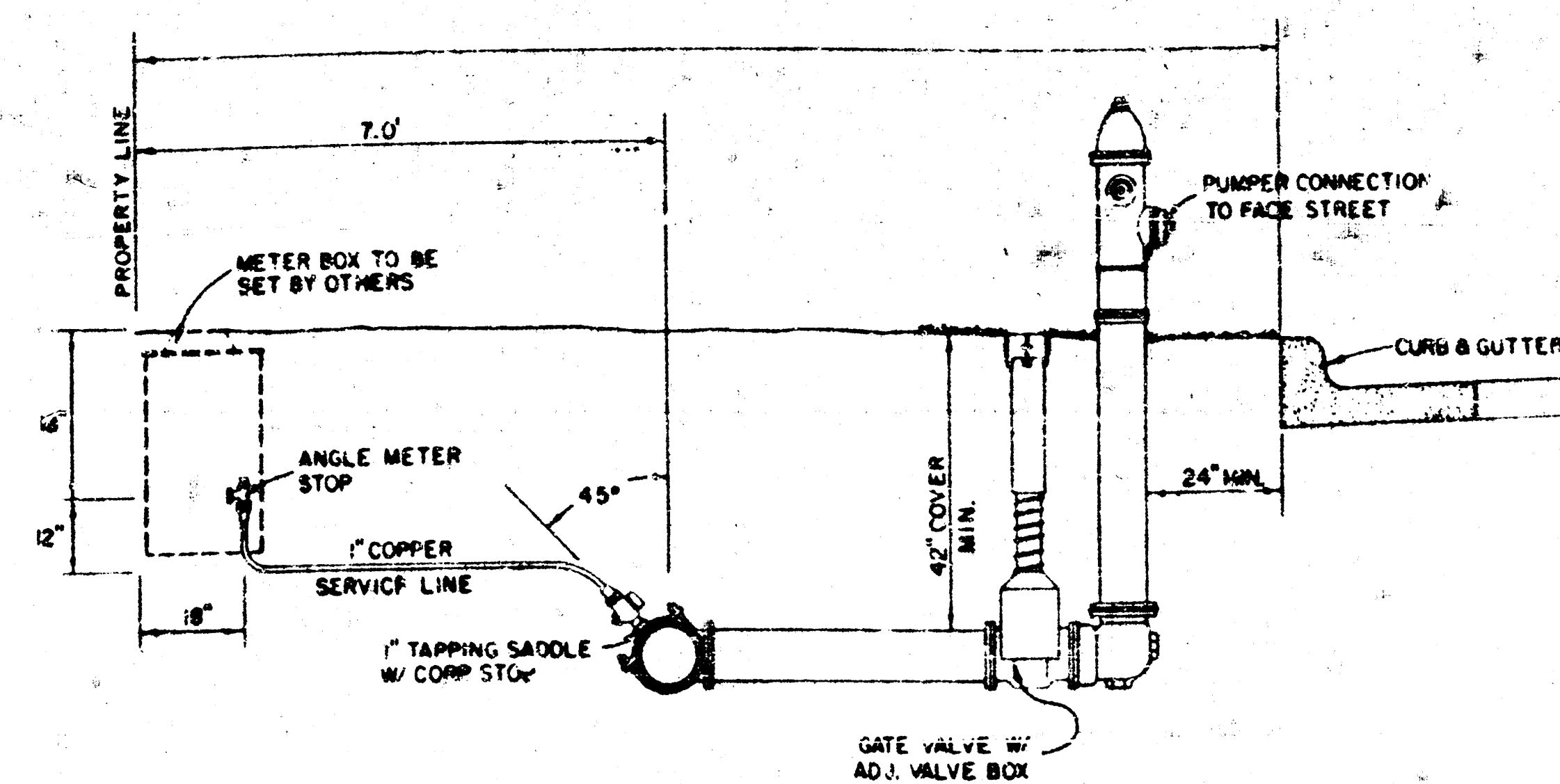
REVISED 11-3-82
DEISS & GOODNESS ENGINEERS
 2100 WEST 21ST STREET
 WICHITA, KANSAS 67203
 (316) 832-0283

WICHITA PROJ. NO. 468-75-245-80000-000-000-008

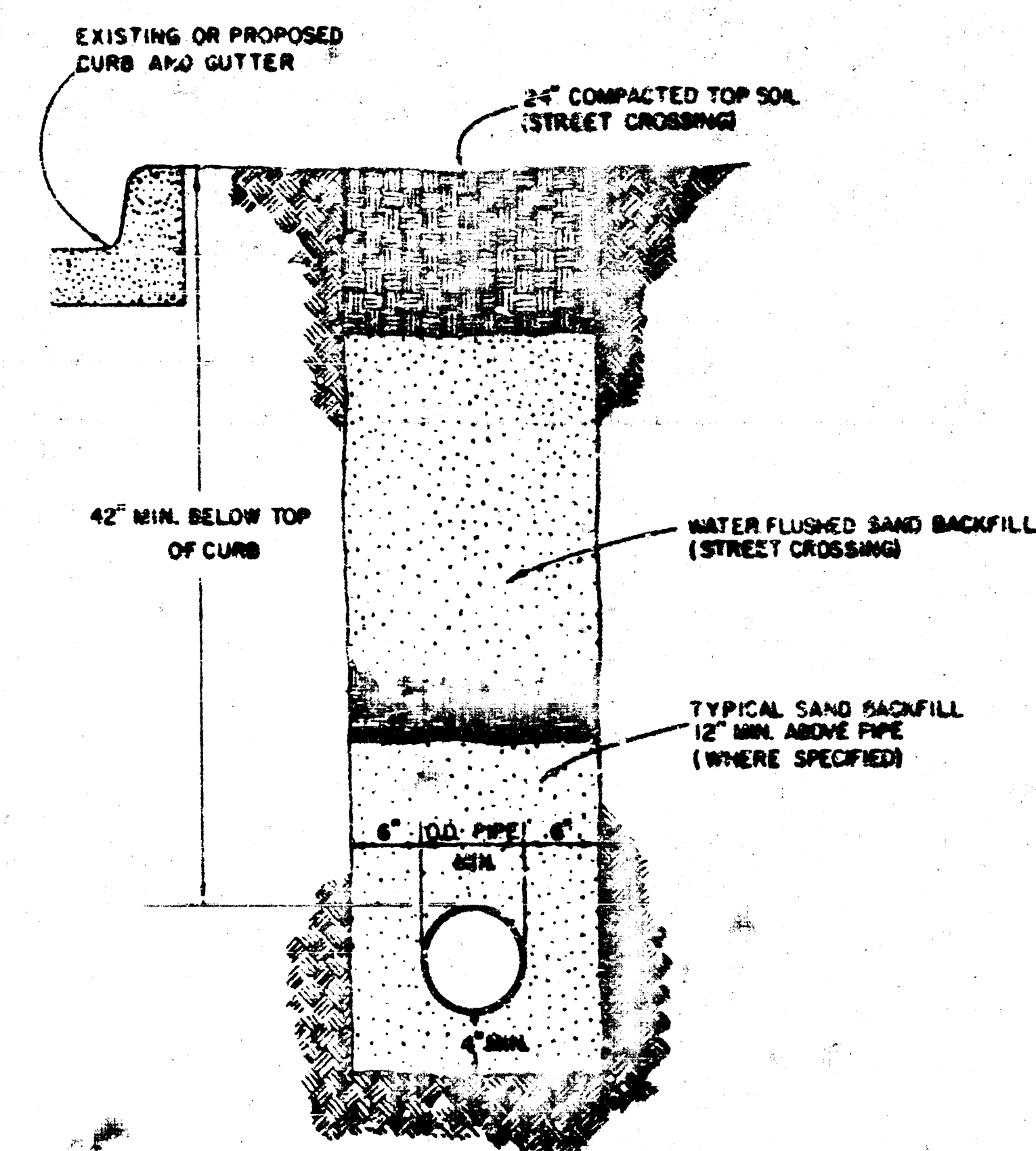
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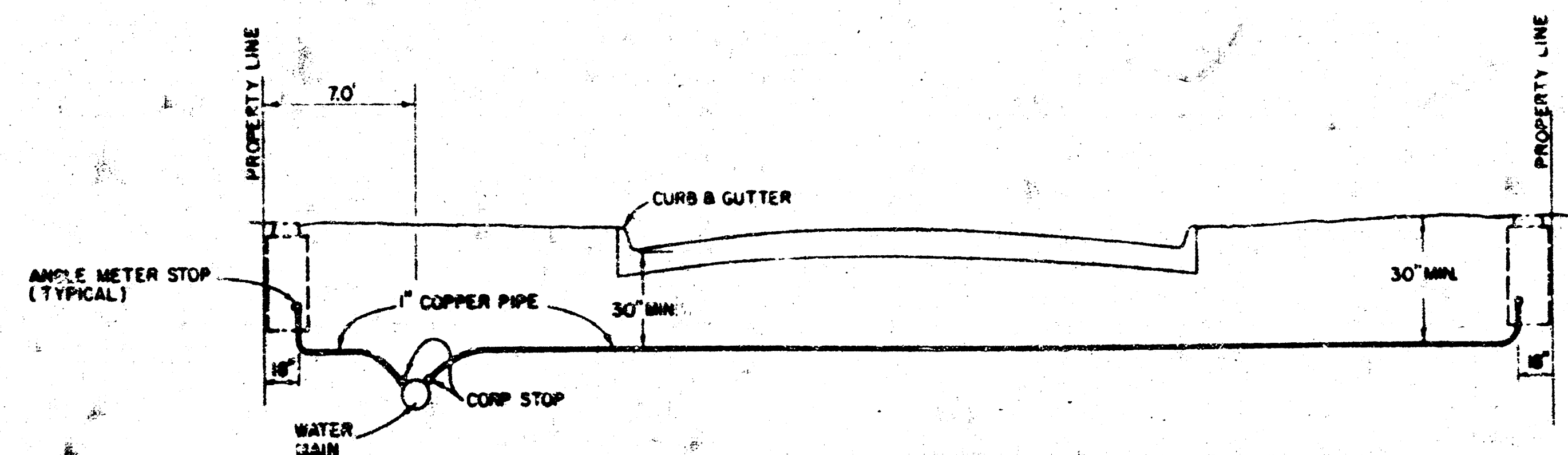
FIRE HYDRANT SETTING DETAIL



TYPICAL SERVICE & FIRE HYDRANT LOCATION

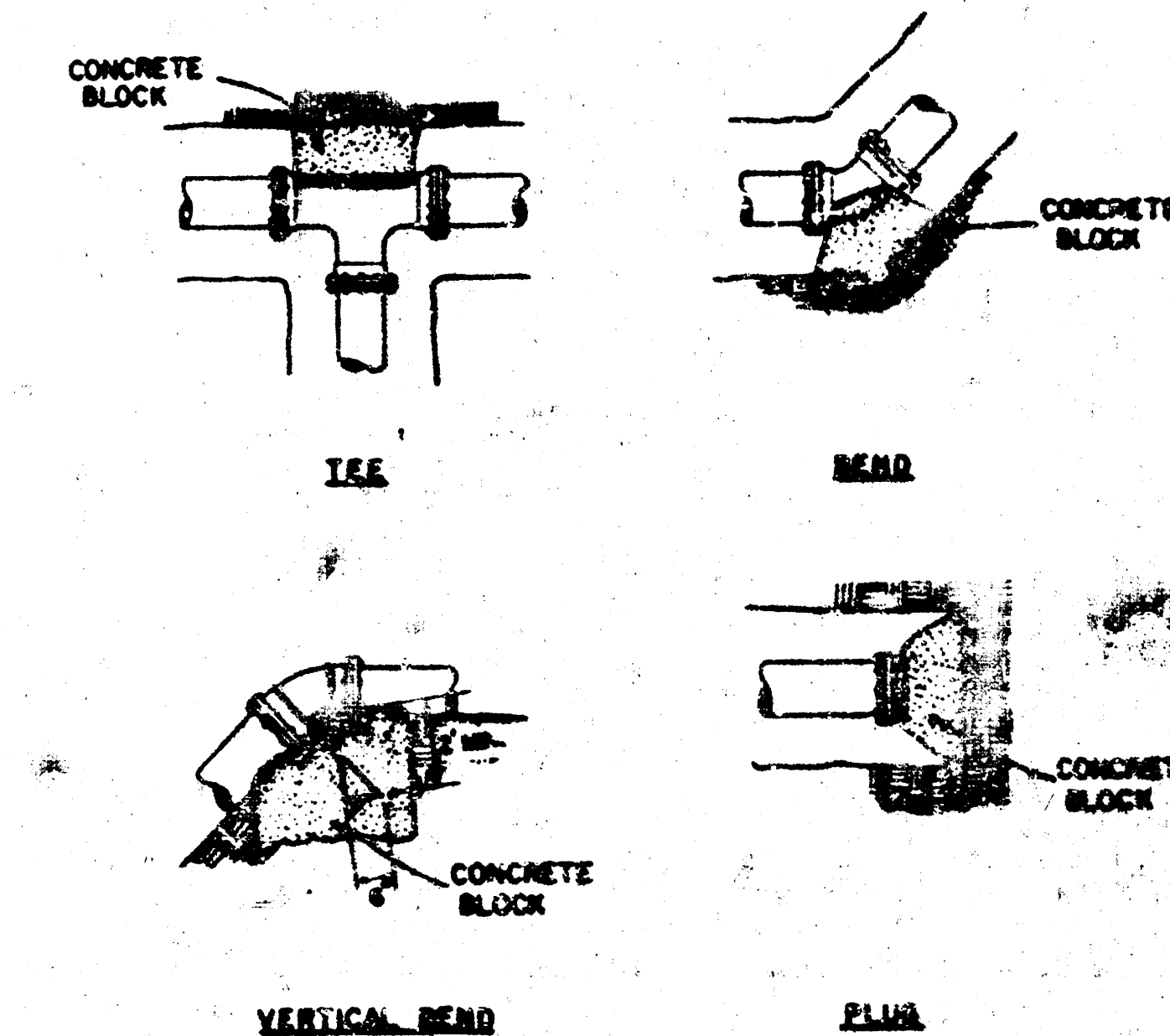


TRENCH DETAIL



TYPICAL SERVICE INSTALLATION

NOTE
TRENCH TO BE FILLED WITH FLUSHED AND VIBRATED SAND TO WITHIN 12" OF FINISHED GROUND ELEVATION OR TO PAVEMENT BASE UNDER PAVEMENT.



PIPE SIZE	THRUST AT FITTINGS IN TONS (AT 90° / 100' P.)					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.90	20.15
20"	31.15	44.0	23.85	12.15	6.1	31.15
24"	44.95	65.0	34.1	17.4	8.75	44.95

THRUST BLOCKS

DESS & GOODNESS ENGINEERS
2160 WEST 31ST STREET
MICHIGAN, KANSAS CITY, MO 64111
(816) 435-0025

DESIGNED BY: _____ CHECKED BY: _____ DRAWN BY: _____ PROJECT: _____

WATER SYSTEM IMPROVEMENTS

SCALE: _____ DATE: _____

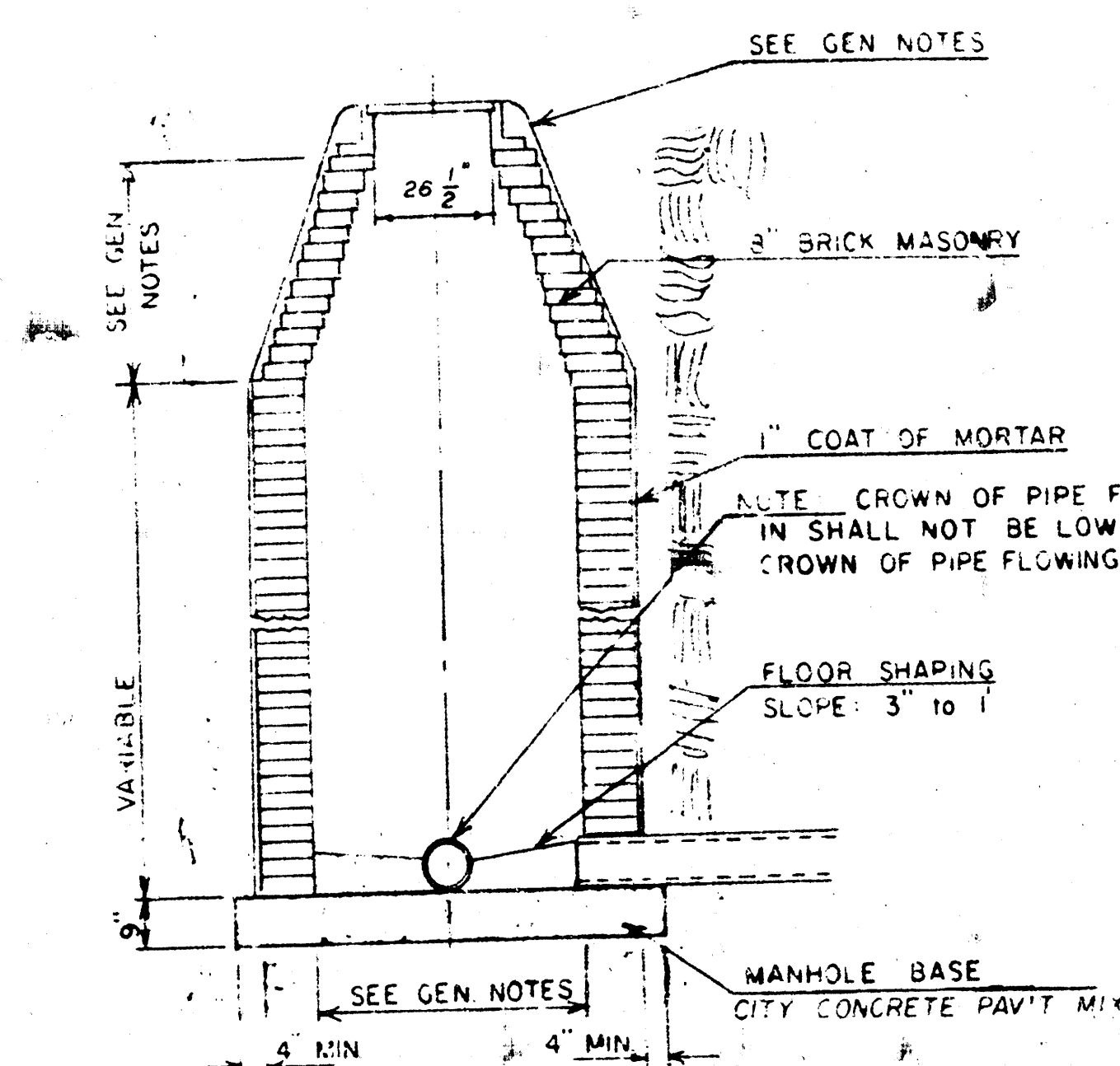
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SEWER APPURTENANCES DETAILS

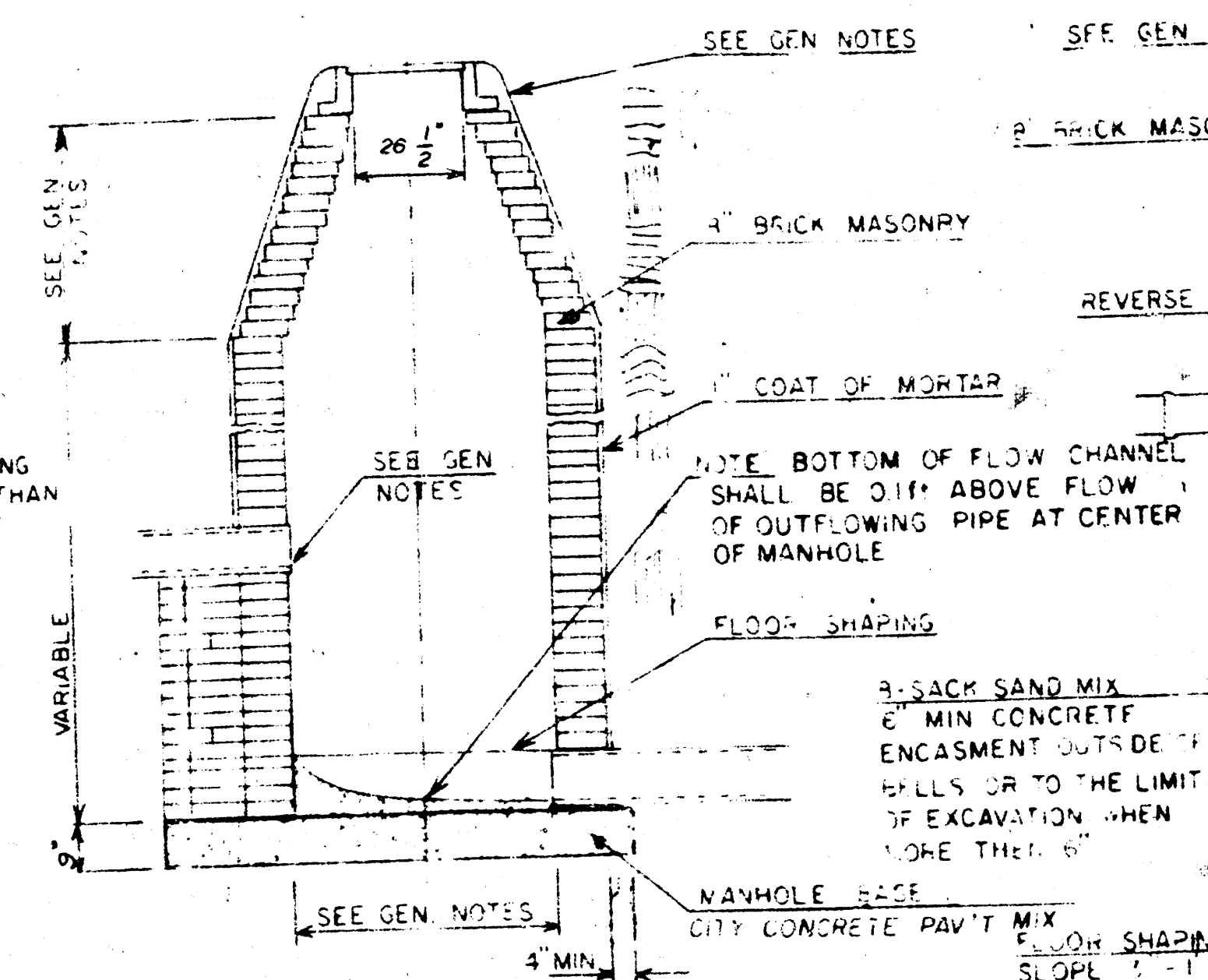
ADOPTED AS STANDARD DESIGN
BY

CITY of WICHITA, KANSAS

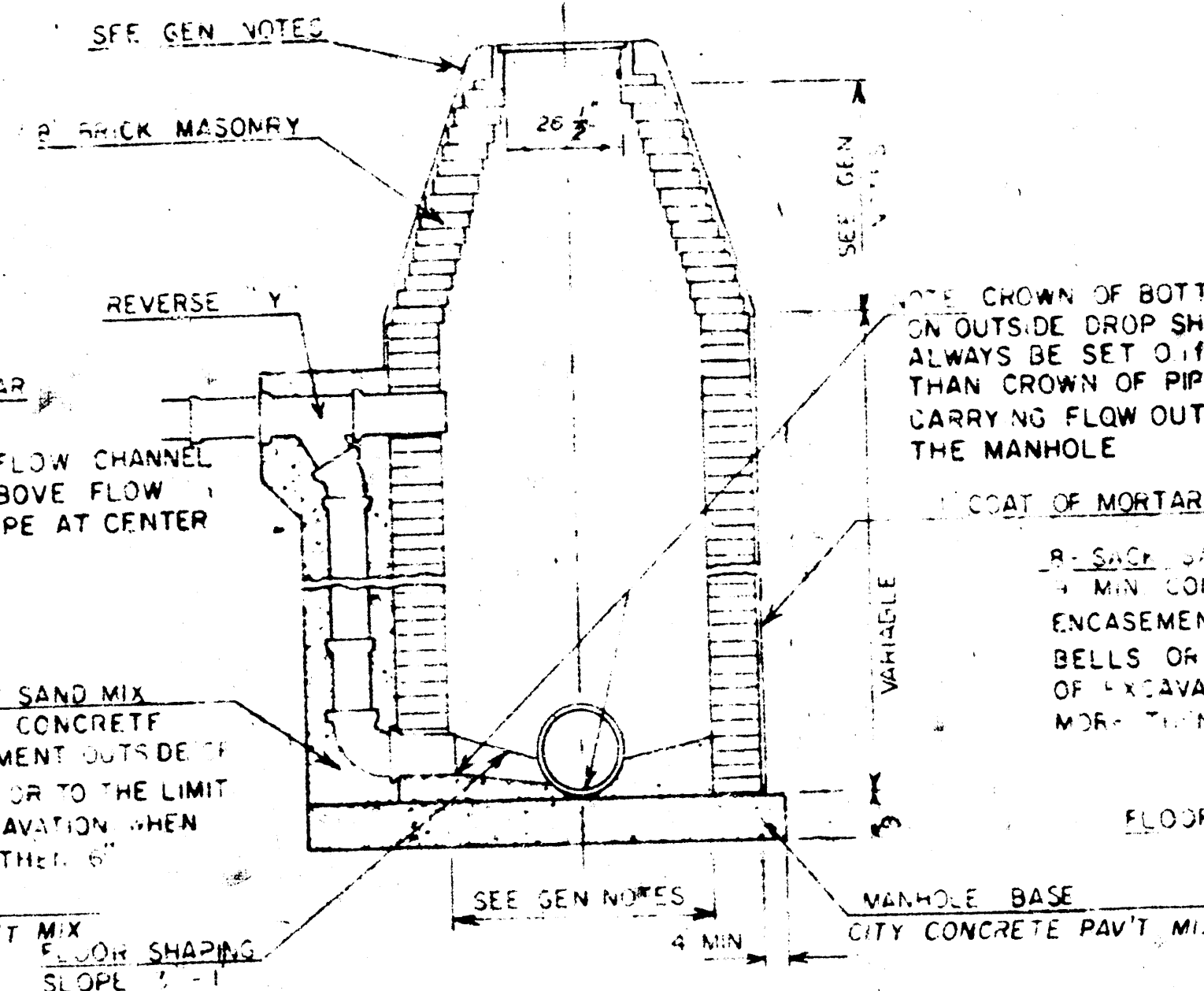
TYPE "A" MANHOLE



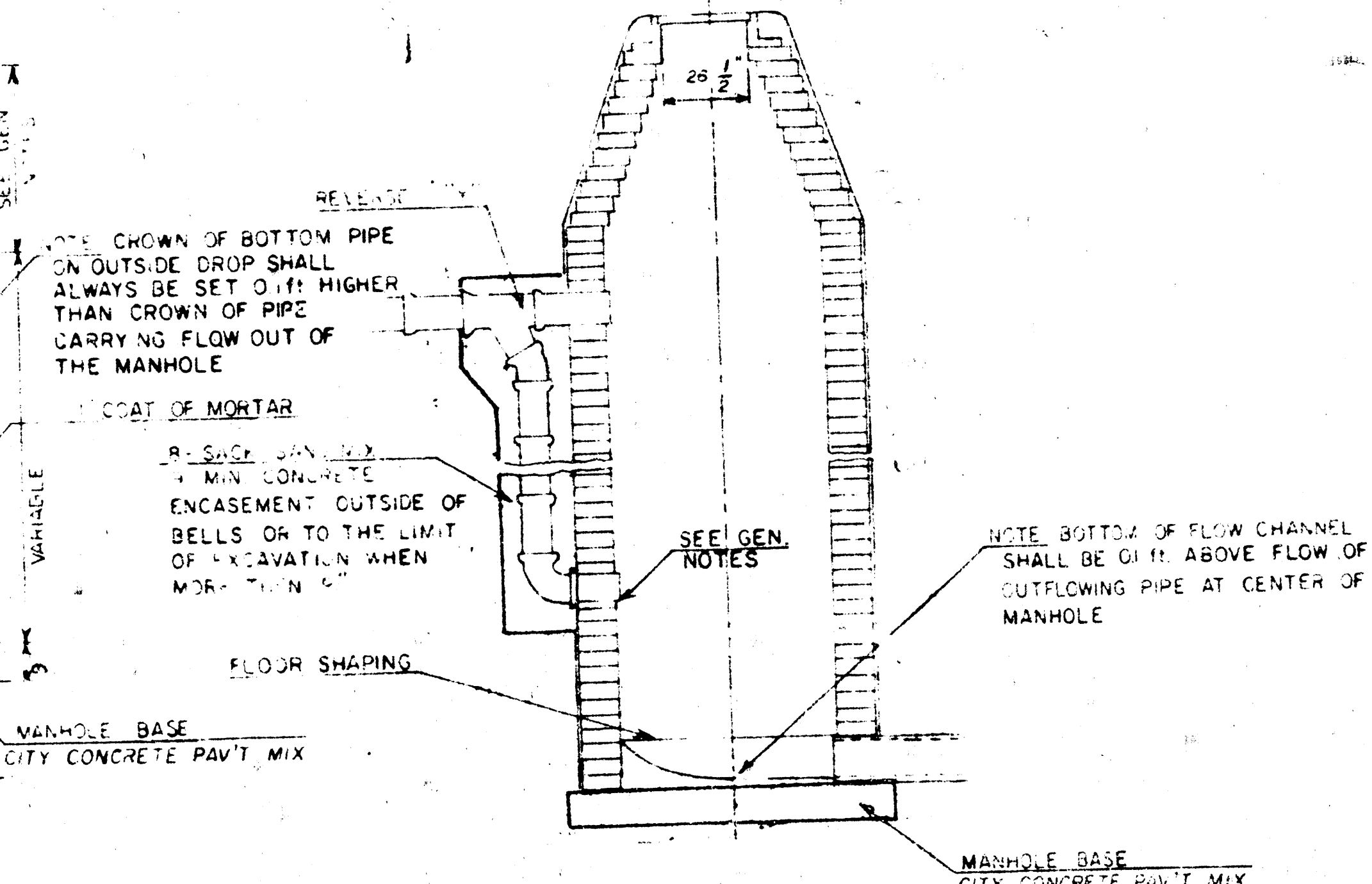
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP
CONSTRUCTED ON EXISTING MANHOLE



1. THESE DETAILS ARE FOR THE PURPOSE OF PROVIDING A STANDARD DESIGN FOR THE CITY OF WICHITA, KANSAS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF THESE DETAILS TO THE SPECIFIC PROJECT. THE DESIGNER SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF THESE DETAILS TO THE SPECIFIC PROJECT. THE DESIGNER SHALL BE RESPONSIBLE FOR THE PROPER APPLICATION OF THESE DETAILS TO THE SPECIFIC PROJECT.

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City of Wichita, Kansas

RING AND LID AS SPECIFIED
 SEE GEN. NOTES
 6" BRICK MASONRY
 1" COAT OF MORTAR
 MANHOLE WALL
 CITY CONC. PAVT. MIN.
 NOTE: CROWN OF IN SHALL NOT BE CROWN OF PIPE F
 FLOOR SHAPING
 SLOPE - 3" TO 1"
 MANHOLE BASE
 CITY CONC. PAVT. MIN.
 SEE GEN. NOTES
 4" MIN. 4" MIN. 8"
 5" MIN.
 VARIABLE
 30" MIN. - 48" MAX.
 15" MIN.
 BRICK MASONRY COLLAR

[illegible]

Technical drawing of a manhole structure, showing a cross-section and elevation view. The drawing includes various labels and dimensions:

- Labels:**
 - SEE GEN NOTES
 - 12" BRICK MASONRY
 - COAT OF MORTAR
 - 26" 1/2
 - 30" 1/2
 - 12" MIN. BRICK MASONRY COLLAR
 - 50" MIN. - 48" MAX.
 - 8"
 - REVERSE "Y"
 - BACK SAND MIX
 - 4" CONCRETE
 - CEMENT OUTSIDE OF S OR TO THE LIMIT EXCAVATION WHEN DEPTH IS MORE THAN 6'
 - MANHOLE WALL
 - CITY CONC PAV'T MIX
 - MANHOLE BASE
 - CITY CONC PAV'T MIX
 - SEE GEN NOTES
 - 4" MIN.
 - 6" MIN.
 - 19" MIN.
 - FLOOR SHAPING
 - SLOPE 1/4" TO 1"
- Dimensions:**
 - 26" 1/2
 - 30" 1/2
 - 12" MIN. BRICK MASONRY COLLAR
 - 50" MIN. - 48" MAX.
 - 8"
 - 19" MIN.
 - 4" MIN.
 - 6" MIN.
- Notes:**
 - 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.

[illegible]

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 RAMPED TO NEAR LIES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED ACCORDING TO THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

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 GRADE SHALL EXTEND TO THE FIRST JOINT OUTSIDE OF THE MANHOLE. THE GRADE SHALL BE TERMINATED AT THE CLAY JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF GRADE 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.

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 CROWN OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

7. STANDARD MANHOLES TYPE "C" AND STANDARD INSIDE DUMP MANHOLES TYPE "C" SHALL BE OLD AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. INSIDE DUMP MANHOLES TYPE "C" SHALL BE OLD AS STANDARD INSIDE DUMP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE MINIMUMS WILL BE 4' UNLESS INDICATED OTHERWISE.

MANHOLE FRAME AND COVER DETAIL

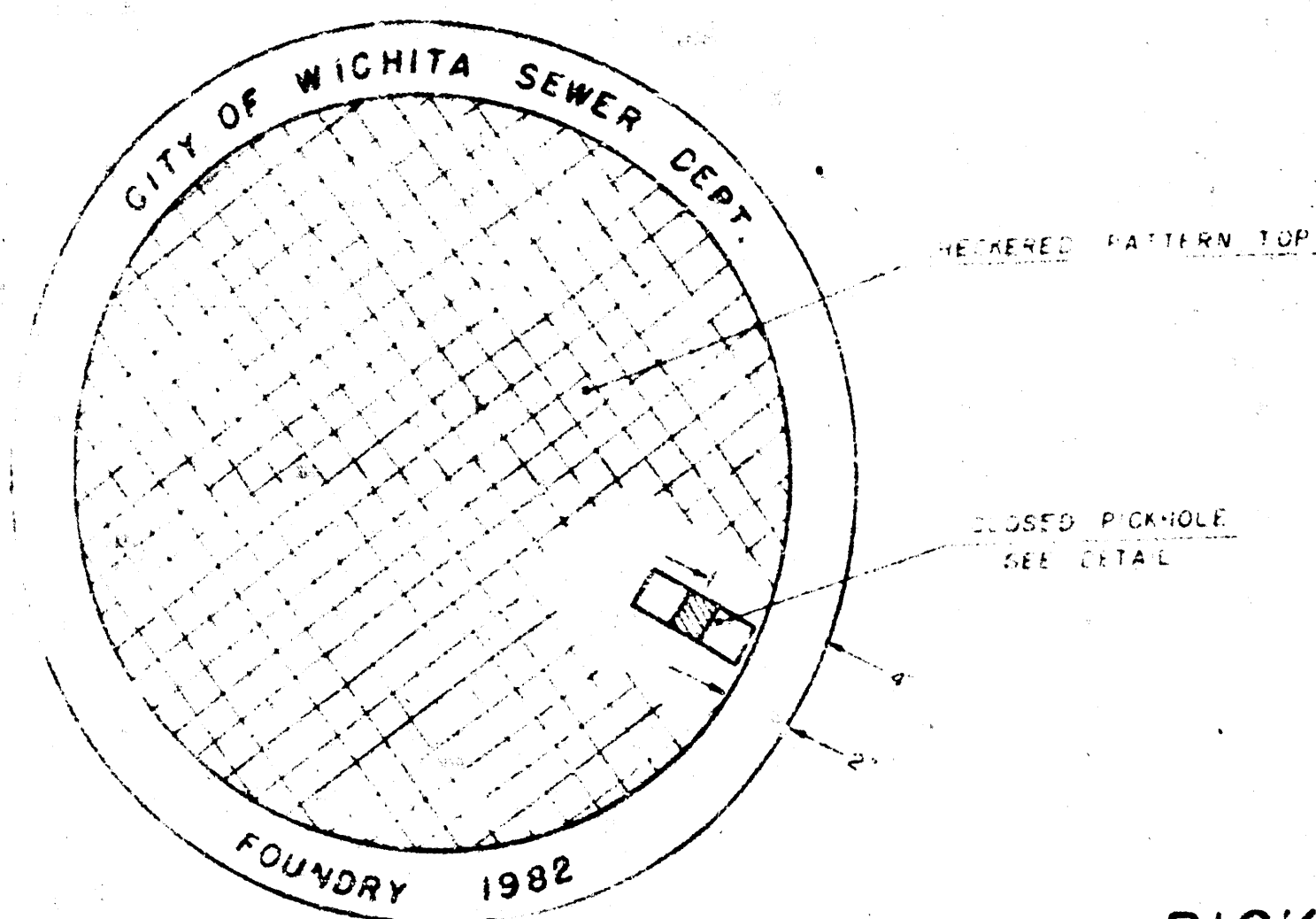
ADOPTED AS STANDARD DESIGN

BY

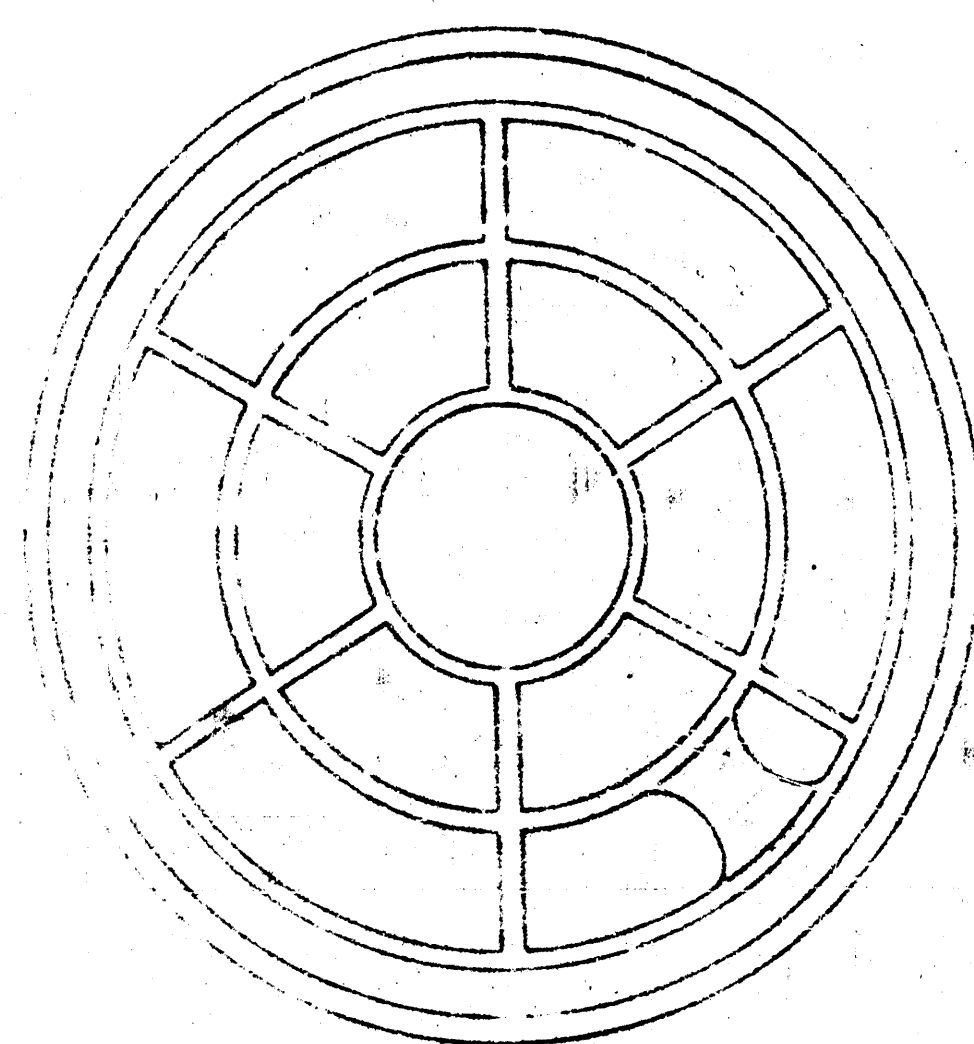
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

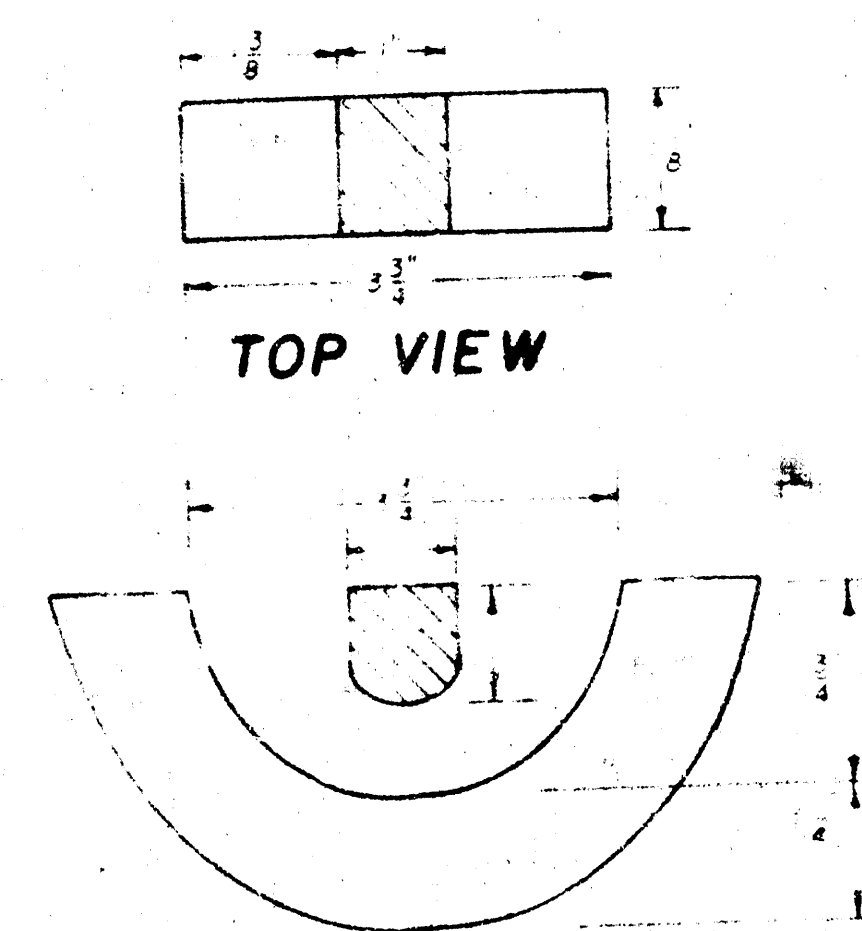


TOP VIEW



BOTTOM VIEW

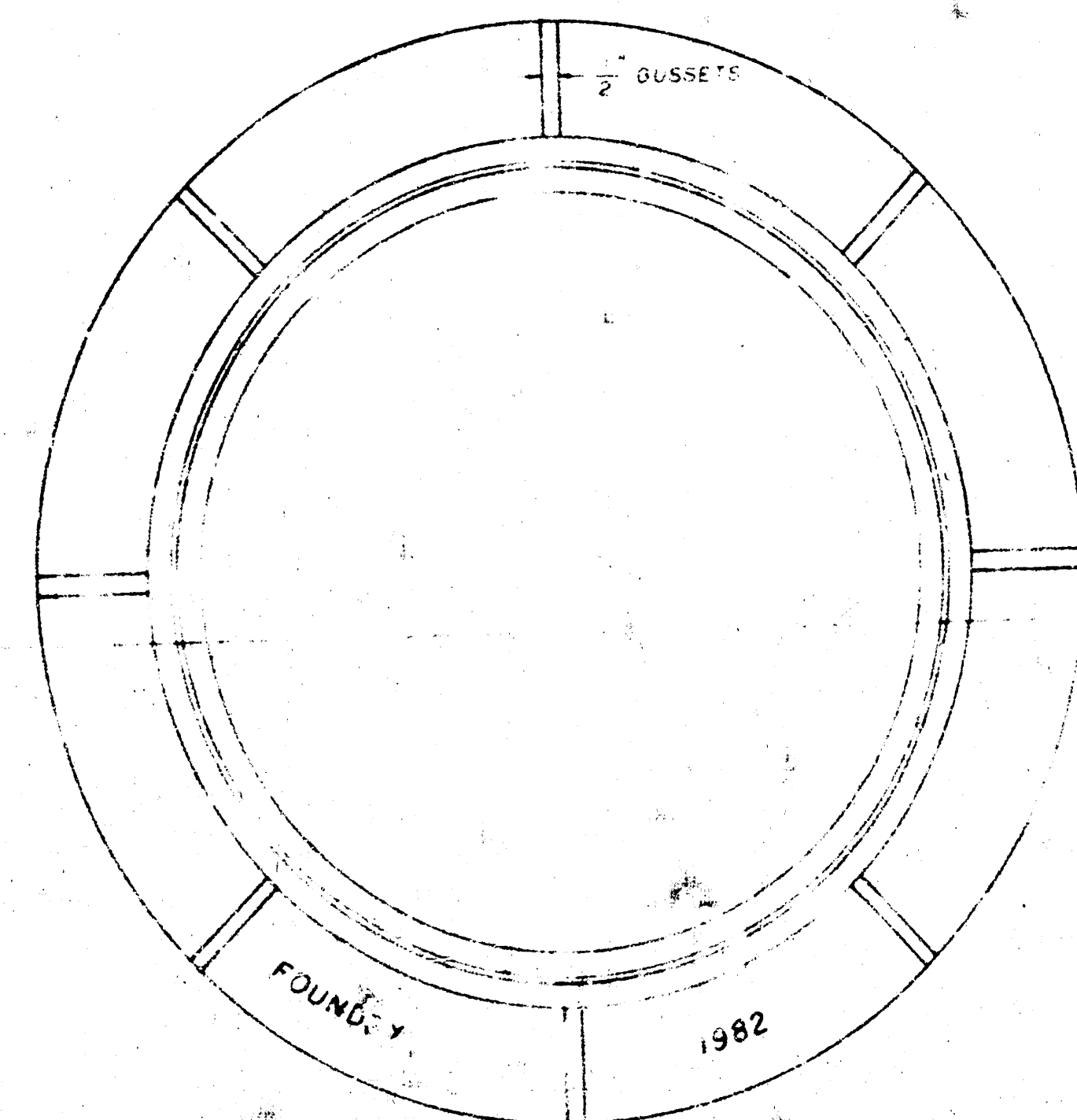
PICKHOLE DETAIL



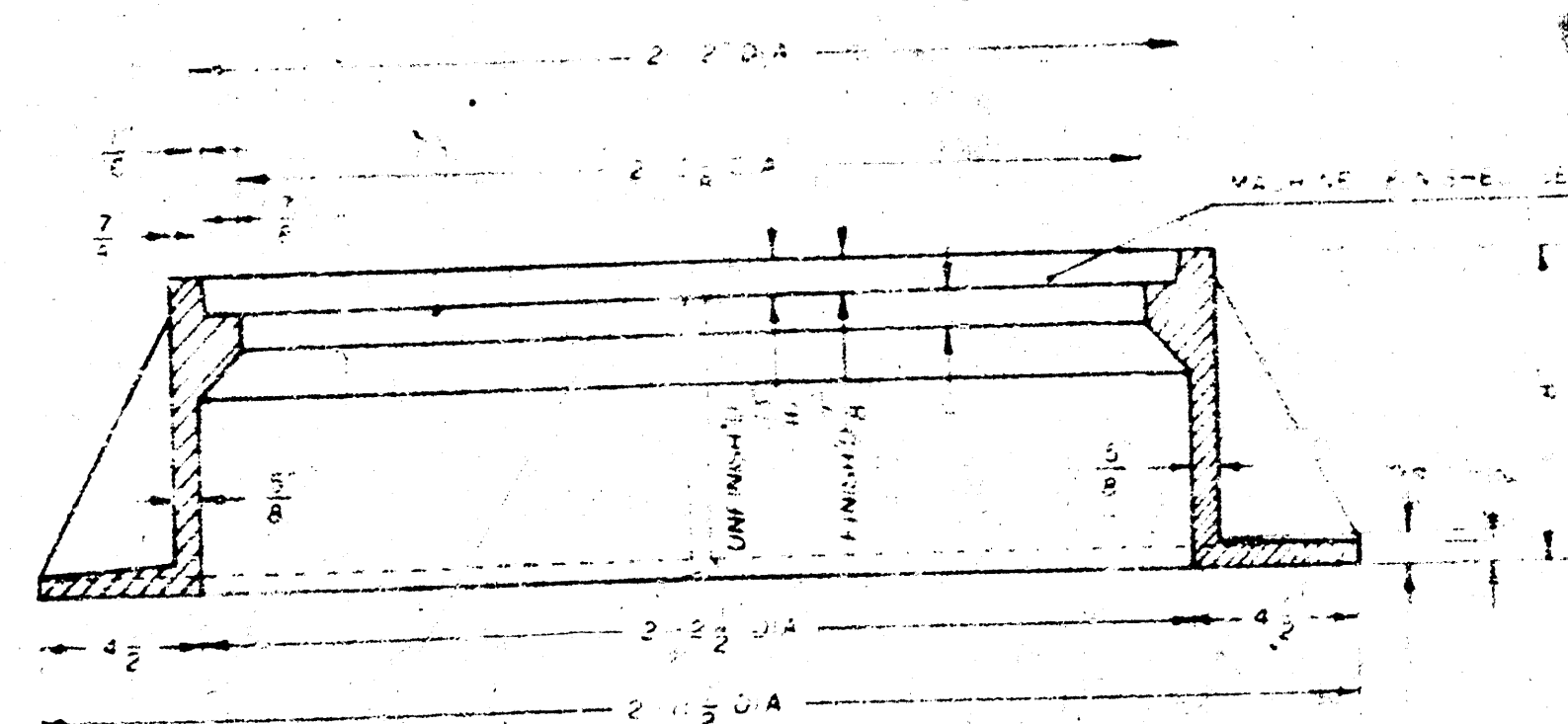
SECTION VIEW

MANHOLE FRAME

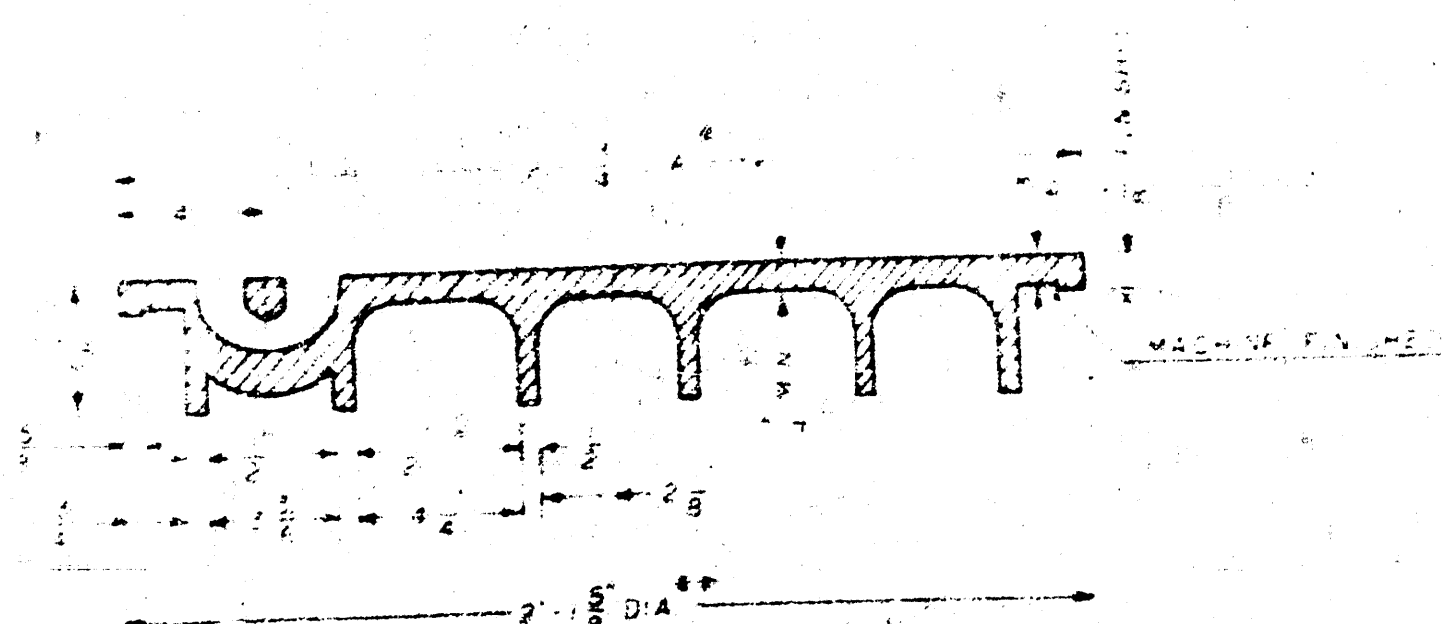
Weight: 240 Lbs.



TOP VIEW



SECTION A-A



SECTION VIEW

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

GENERAL NOTES

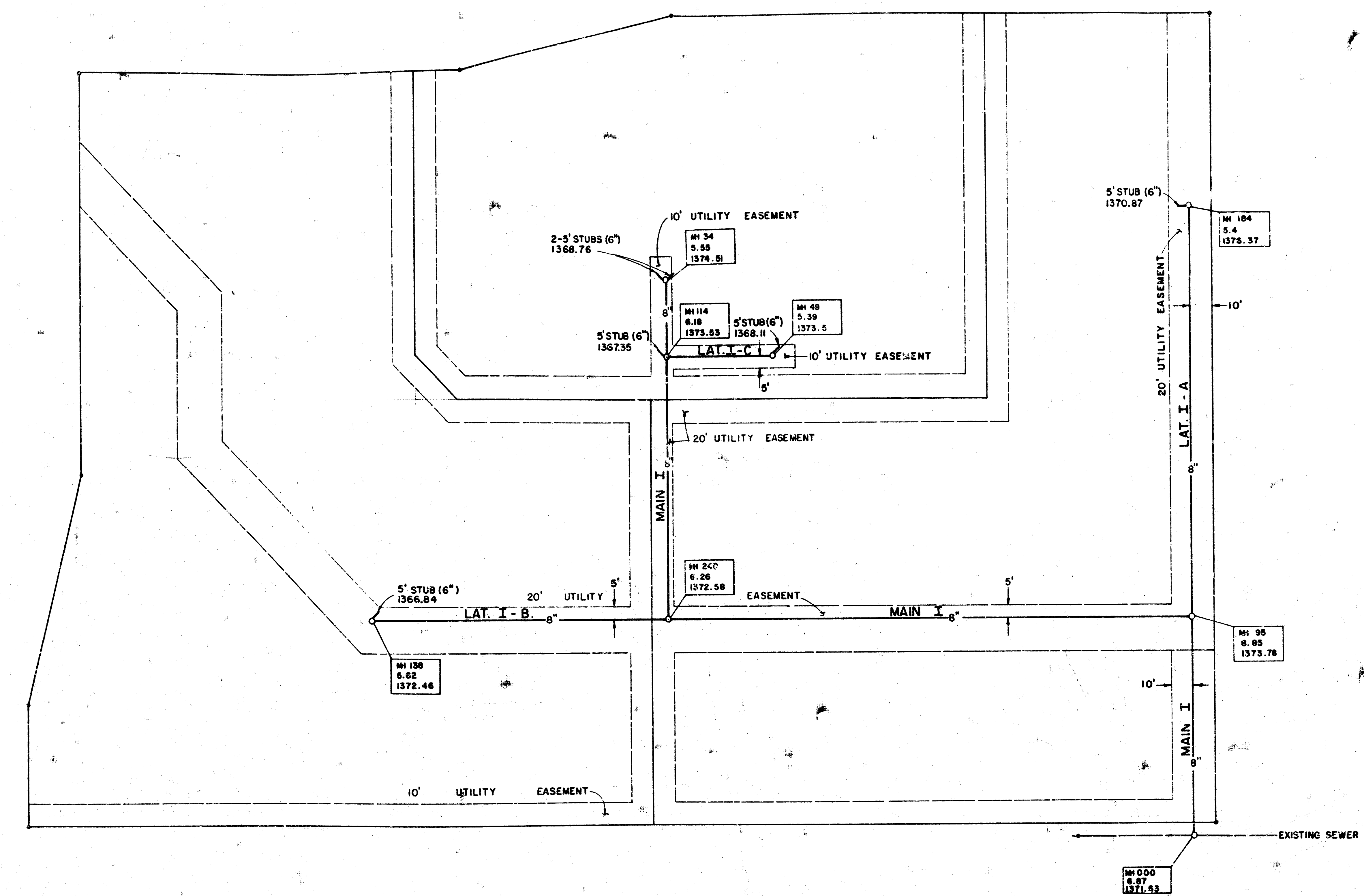
1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GRADE 48,000 PSI STEEL. DIMENSIONS AND WEIGHTS SHALL BE AS SHOWN. DIMENSIONS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS. DIMENSIONS SHALL BE THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPLIED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, LACES, CRACKS, OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESISTING IN A WEAR SURFACE AND TENSILE STRENGTH WHICH IS NOT BRITTLE OR TACKY.
3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY THE CITY OF WICHITA SEWER DEPARTMENT SHALL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER MANUFACTURER. THIS WILL REQUIRE SUFFICIENT CLEARANCES AND NON-RETURN REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TIGHTLY.
4. THE MATCHING SURFACES OF THE VERTICAL FACE OF THE COVER AND THE INNER CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME SHALL BE FINISHED TO THE CLEARANCES SHOWN. THE CLEARANCE BETWEEN THE COVER AND FRAME SHALL BE MAINTAINED AT ALL TIMES. THE CIRCUMFERENCE OF THE COVER, THE MATCHING SURFACES OF THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAINTAIN CONTACT AT ALL TIMES TO PREVENT THE COVER FROM MOVING IN THE FRAME.
5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERS INDICATING THE DATE OF THE SURFACE AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE DATE SHALL BE EITHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1/2 IN. HIGH. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD "MANUFACTURED" MAY BE IDENTIFIED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A RECESSED PATTERN DESIGN AS INDICATED ON THE DRAWING. RECESSED SURFACES SHALL BE FINISHED TO HIGHLIGHT THE TEXTURE ON THE COVER SURFACE. THE TOTAL AREA OF RECESSED SURFACES SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF RECESSED SURFACES AND LETTERING MAY VARY FROM THAT SHOWN ON THE DRAWING.

10 1 4 14

S.W. COR. SEC. 23
T26S, R1E

OLIVER STREET

37 TH ST. NORTH



LEGEND

MH 123
3.45
1456.78

DISTANCE TO DOWNSTREAM MANHOLE
MEASUREMENT (RING TO FL. OUT)
TOP OF MANHOLE RING (U.S.G.S. DATUM)

MANHOLE LINE
SEWER LINE

SCALE: 1" = 30'

REISS & GOODNESS ENGINEERS
2100 WEST 21ST STREET
WICHITA, KANSAS 67203
(316) 632-0213

REVISION	DRAWN BY	CHECKED BY	DESIGNED BY	PROJECT	CUSTOMER	SCALE	PROJECT NO.
				"AS BUILT" SEWER SYSTEM - CHAN'S ACRES	BEL AIRE, KANSAS	1" = 30'	1000
						DATE	SHEET 1 OF 1

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AVAILABLE COPY.....