PLANS

SANITARY SEWER EXTENSIONS

PINAIRE MOBILE HOME PARK

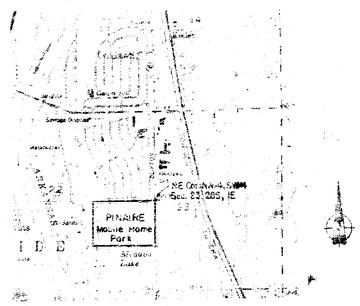
PHASE I

OAKLAWN IMPROVEMENT DISTRICT

SEDGWICK COUNTY, KANSAS

1982

FINAL MEAS. IN
BOOK PCD-203



VICINITY MAP
Scale: 1"= 200'

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.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PROPERTY RESULTING FROM HIS OPERATIONS. NO PAYMENT SHALL BE REQUIRED TO BE MADE BY ANY PROPERTY OWNER FOR ANY IMPROVEMENTS DAMAGED OR DESTROYED AS A RESULT OF THE CONSTRUCTION OF EASEMENTS SUCH RIGHTS SHALL BE ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.

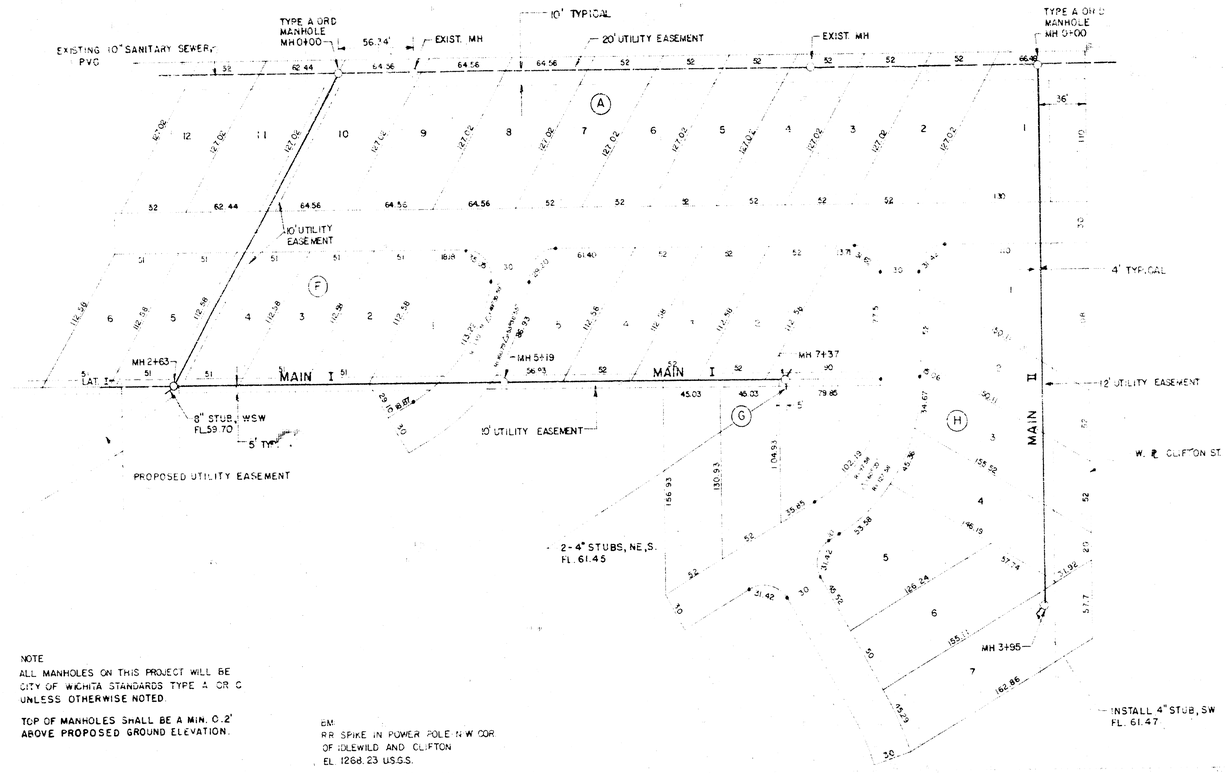
APPROVED AS NOTED
by CITY ENGINEER OF WICHITA
Courtesy Copy
Date Approved
Drawings Approved

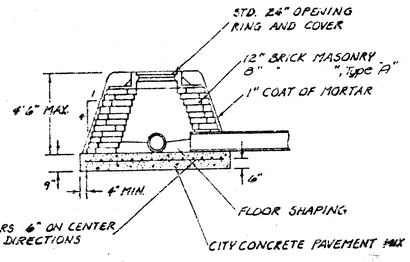
BEELS & GOODNESS ENGINEERS
1120 WEST 29TH STREET
WICHITA, KANSAS 67204
(316) 832-0180

REVISION	DRAWN BY	CHECKED BY	DESIGNED BY	PROJECT
	LSAR			

CUSTOMER

SCALE NONE
DATE 10-23-82





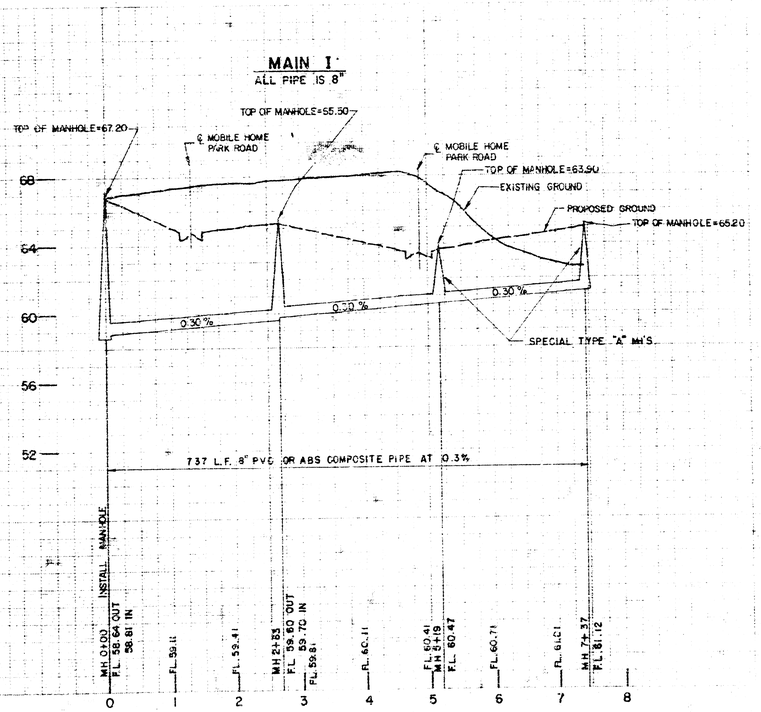
SPECIAL TYPE "A" MANHOLE DETAIL

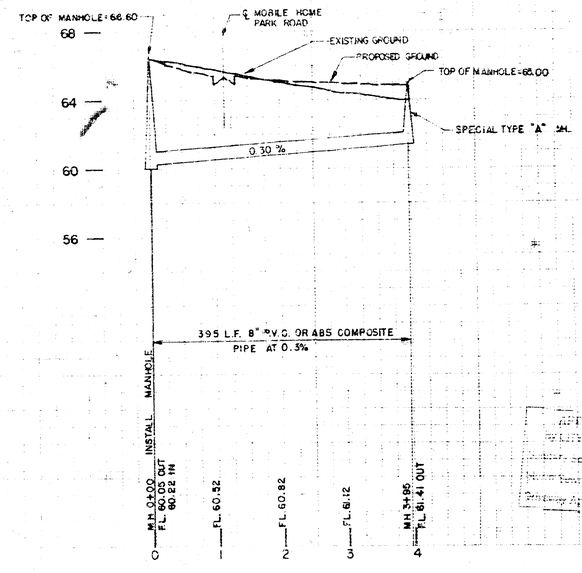
NOTE
ALL MANHOLES ON THIS PROJECT WILL BE CITY OF WICHITA STANDARDS TYPE A OR C UNLESS OTHERWISE NOTED.

TOP OF MANHOLES SHALL BE A MIN. 0.2' ABOVE PROPOSED GROUND ELEVATION.

BM:
RR SPIKE IN POWER POLE N W COR OF IDLEWILD AND CLIFTON
EL 1268.23 U.S.G.S.

SCALE
PLAN 1" = 50'
PROFILE
HORIZ 1" = 100'
VERT 1" = 4'





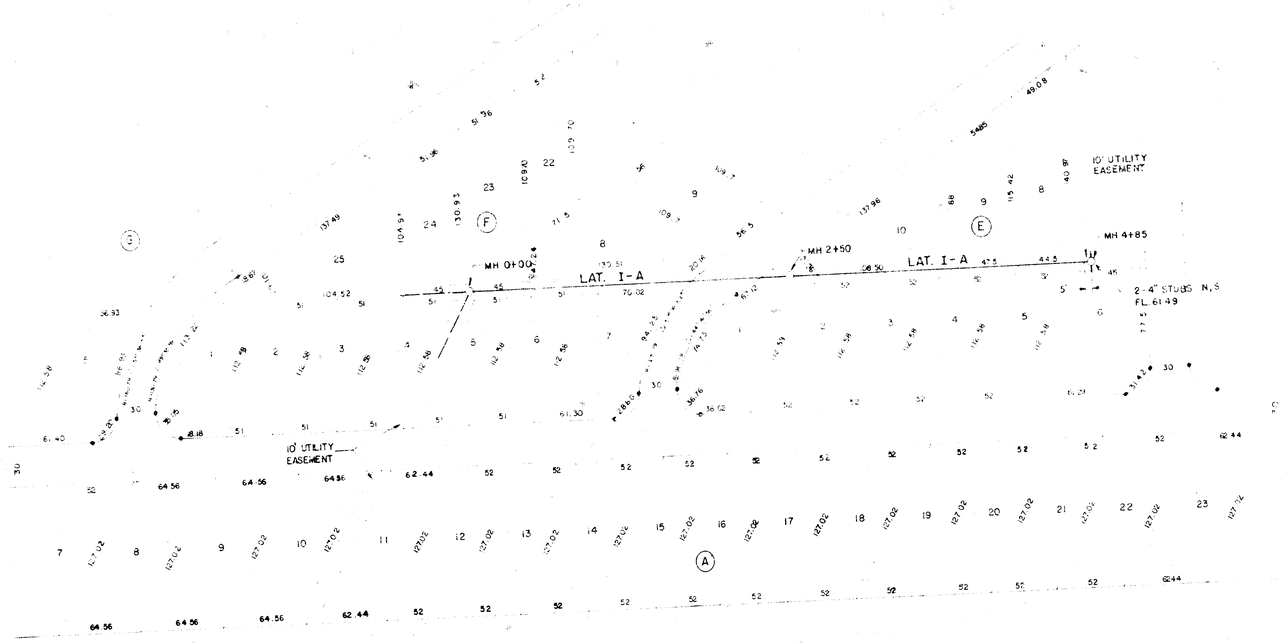
REVISION | DRAWN BY | CHECKED BY | DESIGNED BY | PROJECT

SANITARY SEWER EXTENSION

PINAIRE MOBILE HOME PARK

APPROVED AS NOTED
CITY OF WICHITA

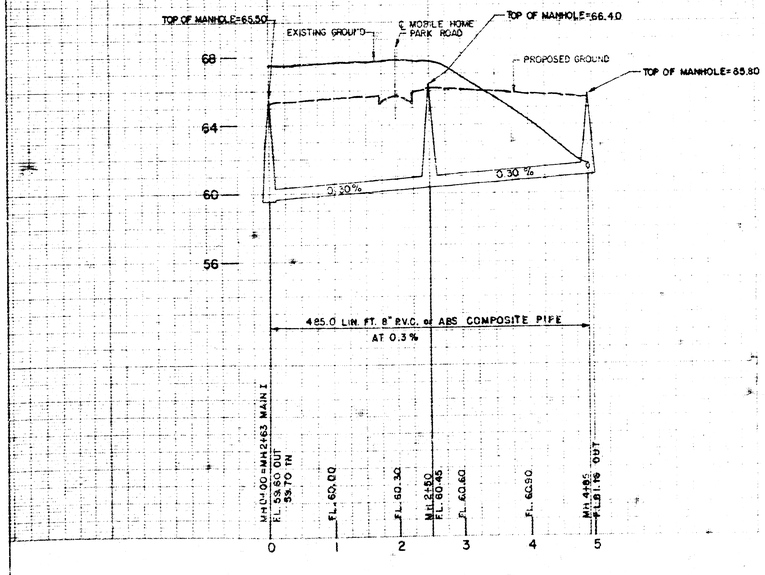
PROJECT NO. MS 388
SHEET 2 OF 8



NOTE:
ALL MANHOLES ON THIS PROJECT WILL BE CITY OF WICHITA STANDARDS TYPE A ORC UNLESS OTHER WISE NOTED.
TOP OF MANHOLE SHALL BE A MINIMUM OF 0.2' ABOVE PROPOSED GROUND ELEVATION.

LAT. I-A

ALL PIPE IS 8"



SCALE
PLAN 1" = 50'
PROFILE HOR. 1" = 100'
VERT. 1" = 4'

REISS & CLARK CONSULTING ENGINEERS
3300 WEST [illegible] STREET
WICHITA, KANSAS [illegible]
[illegible]

3/8

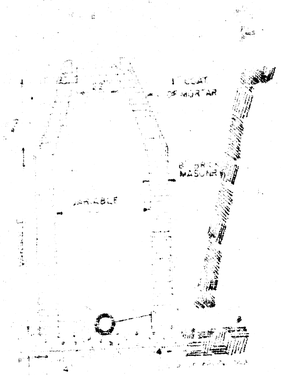
REVISION | DRAWN BY | CHECKED BY | DESIGNED BY | PROJECT

SANITARY SEWER EXTENSION

PINAIRE MOBILE HOME PARK

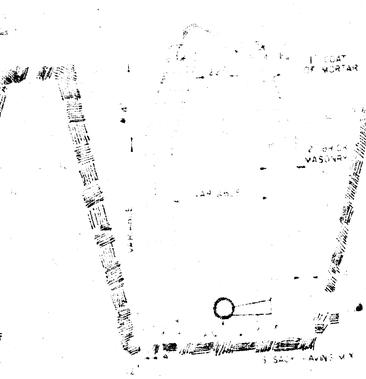
DATE NOTED | PROJECT NO. 65-31e
SHEET NO. 3 OF 4

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



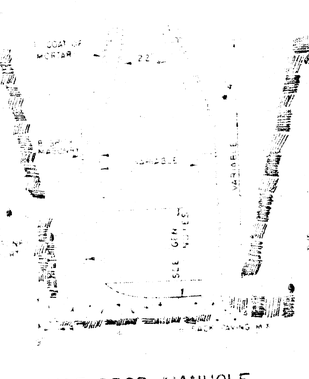
STANDARD MANHOLE TYPE "A"

* DRAW = 6' ON 5' DIA MH.



STANDARD MANHOLE TYPE "B"

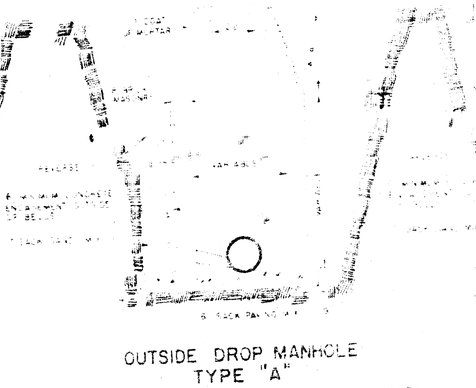
NOTE: REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES 6" ABOVE THE BOTTOM. REINFORCING STEEL SHALL CONSIST OF NO 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE COST OF REINFORCING STEEL IS TO BE INCLUDED IN THE PRICE BID FOR THE MANHOLE.



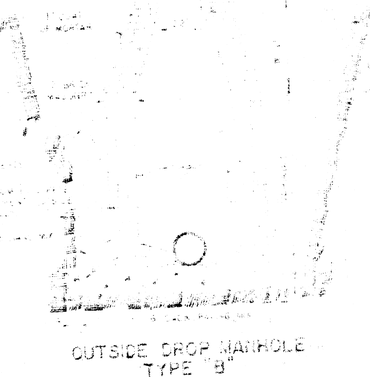
INSIDE DROP MANHOLE TYPE "A"



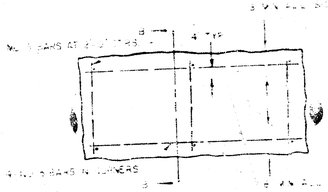
INSIDE DROP MANHOLE TYPE "B"



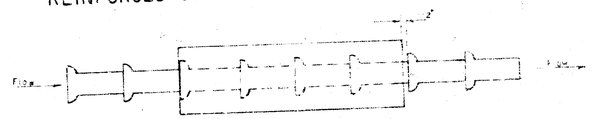
OUTSIDE DROP MANHOLE TYPE "A"



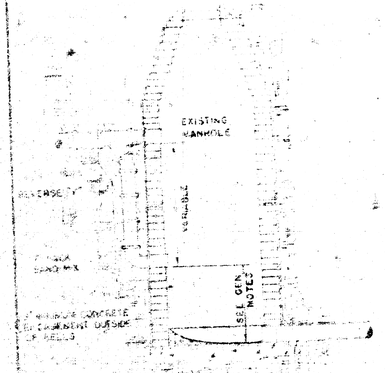
OUTSIDE DROP MANHOLE TYPE "B"



REINFORCED CONCRETE ENCASEMENT



DETAIL IN CONNECTION WITH THE TERMINATION OF CONCRETE ENCASEMENT OR CRADLE FOR CLAY PIPE



DETAIL OF OUTSIDE DROP STACK

CONSTRUCTED ON EXISTING MANHOLE (USE ONLY WHEN NO OTHER PIPE ARE FLOWING INTO MANHOLE)

GENERAL NOTES

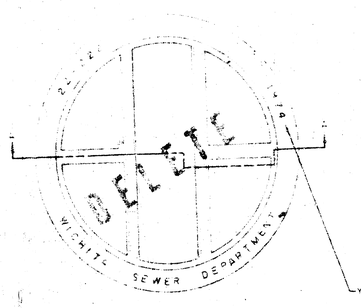
MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD.

STANDARD MANHOLES TYPE A OR TYPE B AND STANDARD INSIDE DROP MANHOLES TYPE A OR TYPE B 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.

MANHOLES WITH PIPE SIZES LARGER THAN 24" SHALL BE 5' DIAMETER.

THE FLOORS OF ALL MANHOLES SHALL BE SHAPED TO INSURE MAXIMUM EFFICIENCY USING 6 SACK SAND MIX CONCRETE.

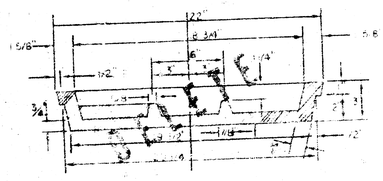
PIPES INSTALLED WITHIN THE MANHOLE EXCAVATION SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. COST OF CRADLE WITHIN MANHOLE EXCAVATION SHALL BE INCLUDED IN THE PRICE BID FOR THE MANHOLE. CRADLE SHALL EXTEND TO FIRST JOINT OUTSIDE OF MANHOLE WHEN CLAY PIPE IS USED.



TOP VIEW

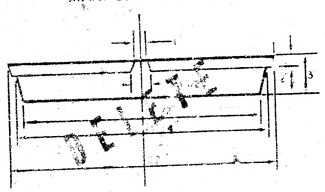
MANHOLE COVER

WEIGHT 70 LBS.



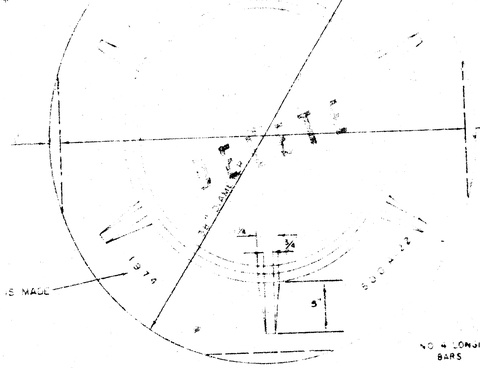
SECTION A-A

MANHOLE COVER



SIDE VIEW

MANHOLE COVER

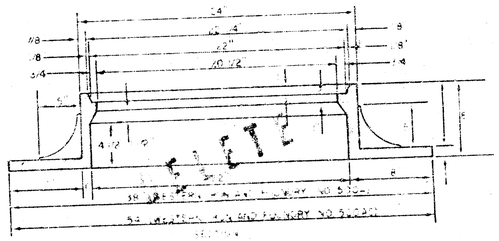


TOP VIEW

MANHOLE RING

WEIGHT 525 LBS. RING NO. 500A

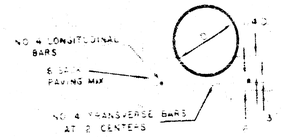
WEIGHT 800 LBS. RING NO. 500B



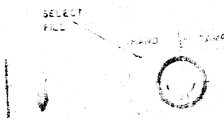
SECTION

MANHOLE RING

OUTSIDE CIRCUMFERENCE OF COVER AND THE INNER FACE AND SEAT OF RING TO BE MACHINE CUT



DETAIL OF CONCRETE CRADLE



ORDINARY BEDDING METHOD

STORM SEWER PIPE

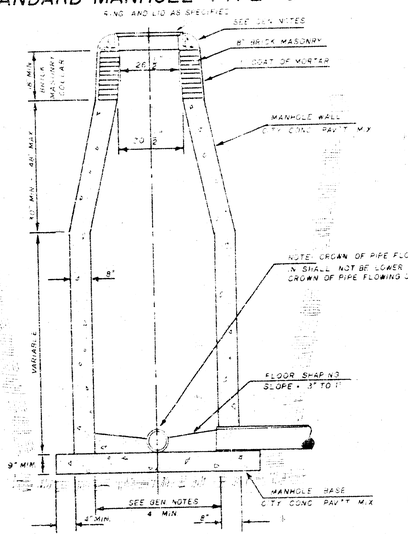
4/8

SEWER APPURTENANCES DETAILS

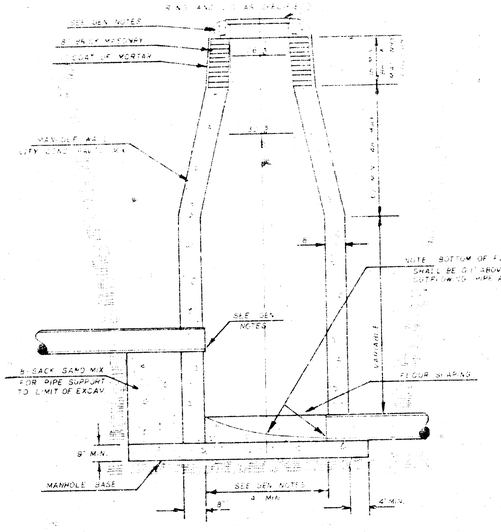
ADOPTED AS STANDARD DESIGN
BY

City of Wichita, Kansas

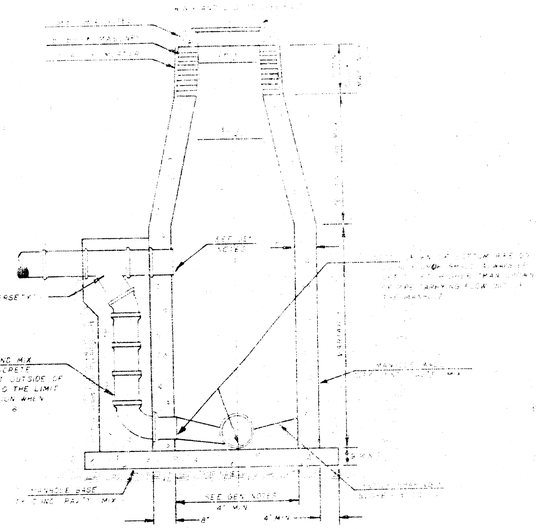
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

1. BOTTOM SECTION SHALL BE CONCRETE POURED AGAINST UNDISTURBED EARTH OR PRECAST CONCRETE SECTION. CONCRETE USED FOR MANHOLE WALLS AND BASES SHALL BE AS SPECIFIED FOR CONCRETE FOR STRUCTURES. CONCRETE FOR MANHOLE BASES SHALL BE PLACED IN THE FULL STANDING PAVING KEYWAY AND USING CITY STANDARD CONCRETE FORMS AS NEEDED AND EXCAVATING AS NEEDED. CONCRETE SHALL BE PLACED AROUND THE MANHOLE PIPING AS SHOWN ON THE DRAWINGS. WHERE PRECAST CONCRETE MANHOLE BASES ARE USED, THE CONCRETE SHALL BE PLACED AROUND THE BASE AS SHOWN ON THE DRAWINGS. TYPE "C" MANHOLES SHALL BE CONSTRUCTED WITH A CONCRETE BENCH AND SHALL BE SHAPED TO PROVIDE A SMOOTH FLOW CHANNEL. THE INSIDE DIAMETER OF THE MANHOLE SHALL BE 48". CONCRETE SHALL BE WITHOUT LUMPS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE ACCURATELY PLACED AS SHOWN ON THE DRAWINGS. REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60 OR BETTER. REINFORCING STEEL SHALL BE PLACED AT RIGHT ANGLES TO THE DIRECTION OF REINFORCING STEEL WHERE IT PASSES THROUGH THE CONCRETE WALLS OF THE MANHOLE BASE. COST OF FURNISHING 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 AND INVERT NOW OUTSIDE DROP CHAMBER. THE UPPER INLET PIPE SHALL BE INSERTED AND THE OPENING WITH NON-SHRINK MORTAR. THE EXTENSION OF THE CHAMBER AND CONNECTION SHALL BE SEALED WITH AN APPROVED WATERPROOF COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.

4. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE SEWAGES WILL BE SELF CLEANING AND FREE OF SOLIDS WHICH SHOULD NOT BE DEPOSITED TO CHANGE FLOW THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE SHAPED TO WIDEN THE OUTLET PIPES TO THE DIAMETER OF THE PIPE AND THE SIDES OF THE CHANNEL FOR THE INLET PIPES SHALL BE EQUAL FOR THESE MAIN CHANNELS. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED. THE INVERTS

5. [illegible] FLOW CHANNELS SHALL BE FORMED TO CONFORM TO THE SHAPE OF THE LOWER HALF OF THE LARGEST PIPE ENTERING THE MANHOLE. THE FLOOR OF THE MANHOLE OUTSIDE OF THE FLOW CHANNELS SHALL BE SHAPED TO A SMOOTH SURFACE SLOPING TOWARD THE FLOW CHANNEL AT A SLOPE OF 3" TO 1'. THE SIDES OF THE MANHOLE SHALL BE VERTICAL UP TO THE SPRING LINE OF THE LARGEST PIPE ENTERING THE MANHOLE. THE SIDES SHALL THEN BE SLOPED INWARD AT A SLOPE OF 1" TO 1' UNTIL THE DIAMETER OF THE MANHOLE IS REDUCED TO 24". THE MANHOLE SHALL THEN BE CONSTRUCTED VERTICALLY TO THE TOP OF THE CONE.

6. [illegible] THE ELEVATIONS OF THE FLOW CHANNELS AT THE POINTS WHERE THE PIPES ENTER THE MANHOLE SHALL BE SET SO THAT THE CROWN OF THE OUTLET PIPE IS NOT LOWER THAN THE CROWN OF ANY INLET PIPE. THE DROP ACROSS THE MANHOLE SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE DROP SHALL BE MEASURED FROM THE INVERT OF THE INLET PIPE TO THE INVERT OF THE OUTLET PIPE.

7. [illegible] MANHOLES SHALL BE PLACED AT ALL CHANGES IN GRADE, SIZE OR ALIGNMENT OF SEWERS, AT THE ENDS OF ALL LINES AND AT INTERMEDIATE POINTS ON STRAIGHT LINES NOT EXCEEDING 400 FEET APART FOR PIPES 15" OR LESS IN DIAMETER AND NOT EXCEEDING 500 FEET APART FOR PIPES 18" TO 30" IN DIAMETER. [illegible] MANHOLES SHALL BE PLACED AT THE POINTS OF CURVATURE AND TANGENCY OF THE CURVE.

8. [illegible] THE ELEVATIONS OF THE TOPS OF MANHOLES SHALL BE ADJUSTED TO CONFORM TO THE GRADE OF THE STREET OR FINISHED GROUND AT THE LOCATION OF THE MANHOLE. [illegible] THE TOPS OF MANHOLES SHALL BE SET FLUSH WITH THE PAVEMENT IN PAVED STREETS AND 0.2 FEET ABOVE THE GROUND IN UNPAVED STREETS. [illegible] THE TOPS OF MANHOLES SHALL BE SET FLUSH WITH THE GROUND IN UNPAVED STREETS.

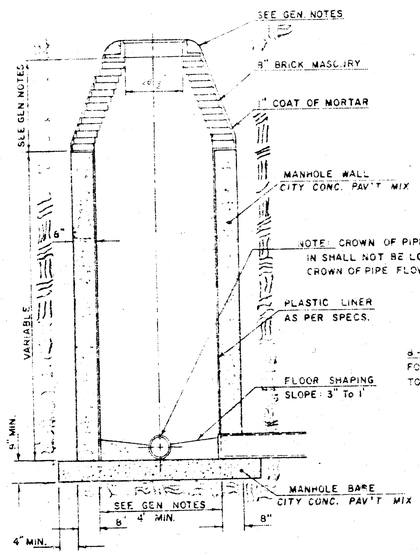
5/8

SEWER APPURTENANCES DETAILS

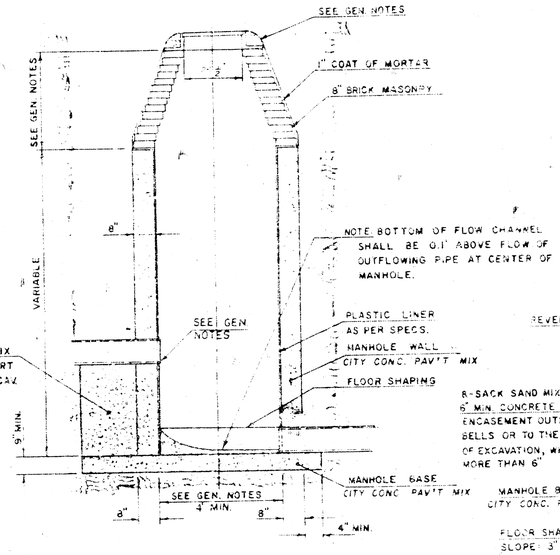
ADOPTED AS STANDARD DESIGN
BY

CITY OF WICHITA, KANSAS

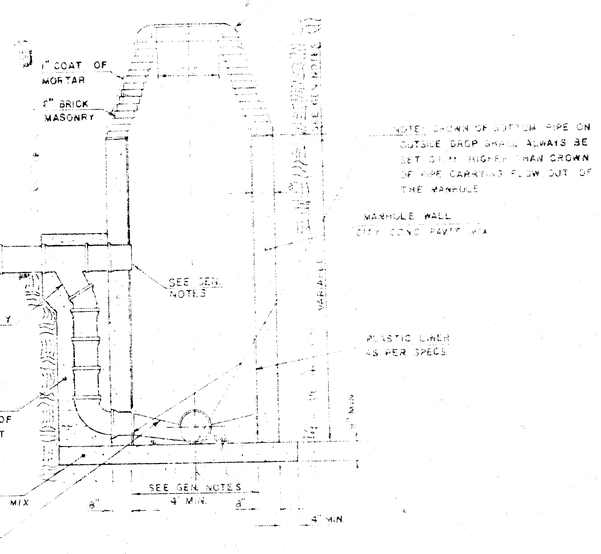
TYPE "D" MANHOLE



TYPE "D" INSIDE DROP MANHOLE



TYPE "D" OUTSIDE DROP MANHOLE



GENERAL NOTES

1. MORTAR USED IN MANHOLE CONSTRUCTION SHALL CONTAIN SAND, A NON-STAINING HYDRAULIC CEMENT AND WATER. CONCRETE USED IN MANHOLE WALLS AND BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR PORTLAND CEMENT CONCRETE PAVEMENT CONSTRUCTION IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND ALL MANHOLE RINGS AS SHOWN ON THE DRAWINGS AFTER MANHOLES ARE CONSTRUCTED IN THE ABOVE MANNER. PLASTIC LINING INSIDE THE MANHOLE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN THE STANDARD SPECIFICATIONS FOR PLASTIC LINING FOR REINFORCED CONCRETE PIPE FOR SANITARY SEWER CONSTRUCTION. ALL INSIDE SURFACES OF THE MANHOLE WALL WHICH WOULD BE EXPOSED TO SEWAGE SHALL BE PROTECTED BY THE PLASTIC LINING. TYPE "D" MANHOLES MAY BE USED ON PIPE SIZES 12" TO 20" WHEN THE MANHOLE DEPTH EXCEEDS FIVE FEET, SHALL HAVE AT LEAST 1' PLUS THE OUTSIDE DIAMETER OF THE LARGEST PIPE IN THE MANHOLE CHAMBER CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE A DIAMETER OF 4'. CHAMBERS CONSTRUCTED WHERE THE PIPE SIZES ARE 24" OR LARGER SHALL HAVE A DIAMETER OF 5'. THE HEIGHT OF THE CHAMBER ON A STANDARD MANHOLE SHALL BE 4' CHAMBERS MAY BE A DIAMETER OF 3' SHALL NOT EXCEED 5' IN HEIGHT. COMPLETED MANHOLE SHALL BE WATERTIGHT AND FREE FROM LEAKS.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES. REINFORCING STEEL SHALL CONSIST OF RODS OR BARS PLACED ON 6" CENTERS IN BOTH WAYS IN THE BOTTOM SLAB. ONE LAYER OF REINFORCING SHALL BE PLACED AT MIDDLE OF THE SLAB. REINFORCING STEEL SHALL BE EXTENDED INTO THE WALLS FOR A DISTANCE OF 2' AND SHALL BE ENCLOSED IN THE WALL WHEN CONSTRUCTED FROM THE MANHOLE.

3. AN OPENING SHALL BE LEFT IN THE MANHOLE WALL FOR EACH PIPE TO BE CONNECTED. THE OPENING SHALL BE SUFFICIENTLY LARGE SO THAT THE PIPE SHALL BE UNDISTURBED AND THERE SHALL BE A SPACE OF AT LEAST 1" BETWEEN THE OUTSIDE OF THE PIPE AND THE EDGE OF OPENING. THE OPENING SHALL BE FILLED WITH A CONCRETE MIXTURE AND SHALL BE TROWELED SMOOTH ON THE INSIDE OF THE MANHOLE. THE CONCRETE SHALL BE CURED AND PROTECTED AS SPECIFIED FOR CONCRETE IN THE CITY STANDARD PAVING SPECIFICATIONS.

4. [illegible] SHALL BE PLACED IN THE BOTTOM OF THE MANHOLE TO FORM CHANNELS AT LEAST AS WIDE AS THE INSIDE DIAMETER OF THE LARGEST PIPE ENTERING THE MANHOLE. THE CHANNEL SHALL BE SMOOTH AND SHALL FORM A CONTINUOUS SMOOTH FLOW BETWEEN THE PIPES. THE CHANNEL SHALL BE CONSTRUCTED BY CUTTING THE INVERT OF THE PIPE JOINT IN A MANNER WHICH WILL REMOVE THE TOP OF THE PIPE. [illegible] OF MANHOLE WHERE NO PIPE ENTERS OR LEAVES THE MANHOLE. [illegible] MANHOLE WHERE NO PIPE ENTERS OR LEAVES THE MANHOLE.

5. MANHOLE COVERS SHALL BE SET TO CONFORM TO THE GRADE OF THE STREET OR ALLEY IN WHICH THEY ARE LOCATED. [illegible]

6. [illegible] SHALL BE SET TO CONFORM TO THE GRADE OF THE STREET OR ALLEY IN WHICH THEY ARE LOCATED. [illegible]

JULY, 1959

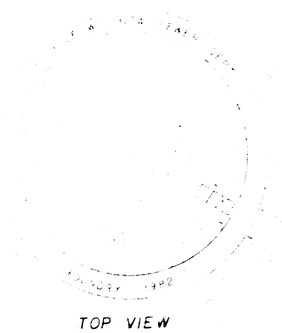
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN

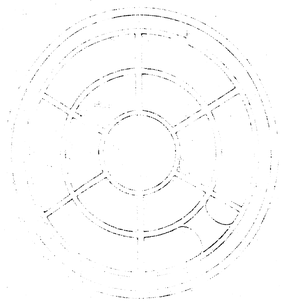
BY

City of Wichita, Kansas

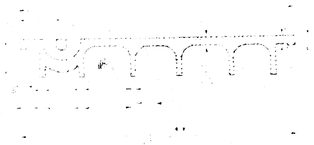
MANHOLE COVER



TOP VIEW

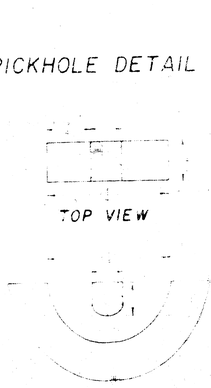


BOTTOM VIEW

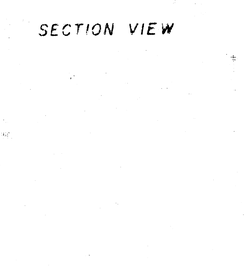


SECTION VIEW

PICKHOLE DETAIL

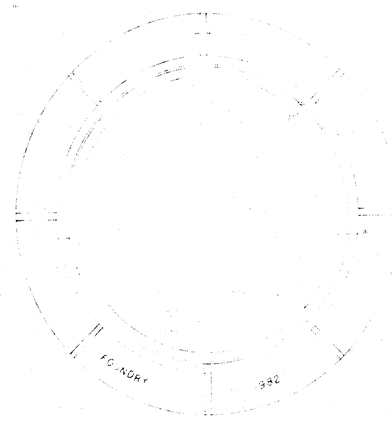


TOP VIEW

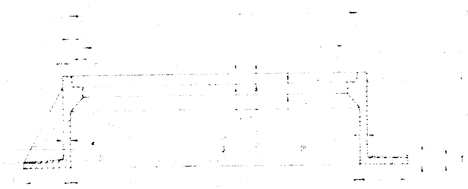


SECTION VIEW

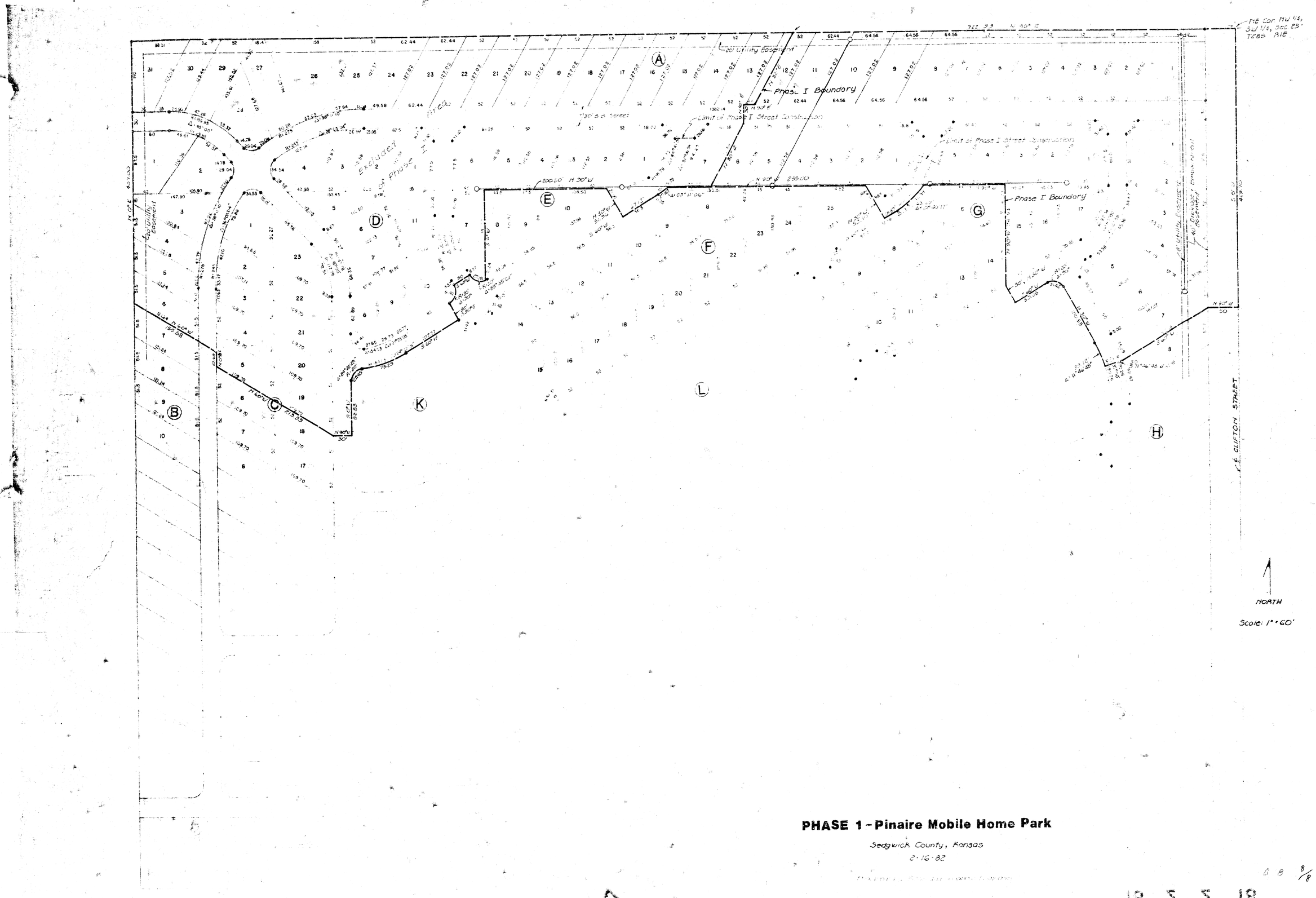
MANHOLE FRAME



TOP VIEW



SECTION A-A



PHASE 1 - Pinaire Mobile Home Park

Sedgwick County, Kansas

2-16-83

8 8 8/8

18 5 5 18