PRIVATE SANITARY SEWER EXTENSION

TO SERVE

PART OF BLOCK 16, RAINBOW FIRST ADDITION
Wichita, Kansas

CITY OF WICHITA, KANSAS

M.E. LINDEBAK CITY ENGINEER

PRIVATE PROJECT NO. 262 PPS (607861)

DATE: AUGUST 1990

NOTES:

1. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF TWENTY-FOUR (24) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

   KANSAS ONE-CALL 687-2470

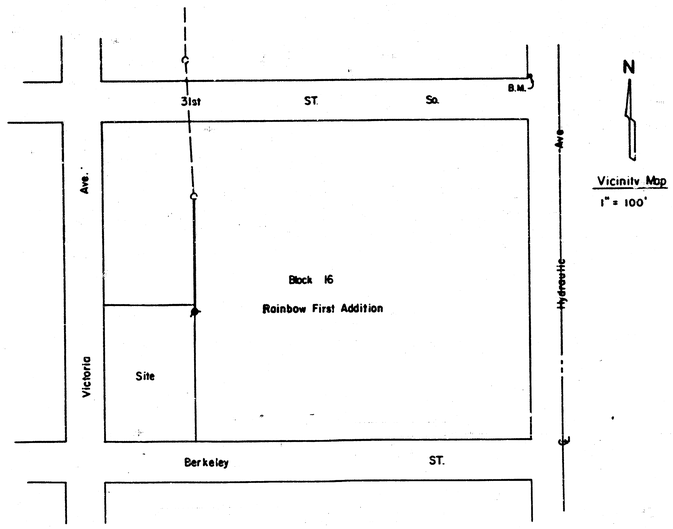
   THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

CABLEVISION	262-4270 OR 263-2061
K.P. & L. GAS SERVICE COMPANY	263-7511
KANSAS GAS & ELECTRIC	263-1141
ARKLA GAS COMPANY	942-8350 OR 263-8161
SOUTHWESTERN BELL TELEPHONE CO.	1-571-2611
CITY OF WICHITA WATER DEPT.	268-4908
CITY OF WICHITA SEWER MAINT.	268-4071

2. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF WICHITA, KANSAS, STANDARD SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION.
3. CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION MAY BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
4. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
5. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE OWNER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE OWNER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
7. TRAFFIC WILL NOT BE AFFECTED IN THIS AREA OF CONSTRUCTION.
8. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

INDEX OF SHEETS

Sheet No.	Description
1	Title Sheet
2	Plan & Profile
3-4	Standards



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 STANDARD 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 NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OF PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

APPROVED AS NOTED

BY CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 9/17/90

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

Paving _____

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS
WICHITA

DON C. MOEHRING LICENSED 3463 KANSAS PROFESSIONAL ENGINEER

Revised as built 11-8-90 TCR
Baughman Co., P.A.

1/6

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N

1"= 40' Horiz.
1"= 5' Vert.

HYDRAULIC

43.6

32.5

STA. 0+00-
CONNECT TO EXISTING M.H.

Remove & Replace Sidewalk As Necessary

BLOCK 16
Rainbow First Add'n.

STA. 1+68.5
CONSTRUCT STD. SHALLOW TYPE "A" M.H.

6" STUB (S.W.)
6" STUB (E)

Existing 8" San. Sewer

℄ 20' Sanitary Sewer Esmt. (By Separate Instrument)

200'

10'

Remove & Replace Fence As Necessary.

Fourplex

Fourplex

6' Steel Decorative Fence

Proposed Development Site

144'

144'

144'

Lot 16
Block 11
Garden Park Addn.

31ST. ST.

BERKELEY

60'

468'

200'

VICTORIA

ALTURAS

102'

102'

102'

102'

Benchmark

City Disc, 43.6' W. & 32.5' N. of Hydraulic & 31st Street South.
Elev. = 90.87 City Datum

PLAN
SURVEYED
PLOTTED
DRAWN
TRACED
CHECKED
SUBMITTED
APPROVED
NORTH BASIS
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
DRAWN
TRACED
CHECKED
SUBMITTED
APPROVED
NORTH BASIS
NO.
BY
DATE

Top = 89.12

Top = 90.87

Existing Ground Profile

95
90
85
80

168 L.F. 8" Pipe @ 0.40%
PVC

0.30%

F.L. = 84.40 Ex. Inv.
F.L. In = 84.74

F.L. = 84.60 Ex. Inv.

F.L. (N) = 84.77 85.20
F.L. 6" Stub (W) = 84.94 85.37
F.L. 6" Stub (E) = 84.94 85.37

0 1 +68.5 2

Revised as built 11-8-90.

PLATE 1 - PLAN - PROFILE - F.A.S.
NO. 1000 - 1
CLEARPRINT PAPER CO., EMERYVILLE, CA.

MOEHRING & ASSOCIATES — CONSULTING ENGINEERS

Sheet 2 of 4

2/6

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PRIVATE SANITARY SEWER EXTENSION

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CITY OF WICHITA, KANSAS

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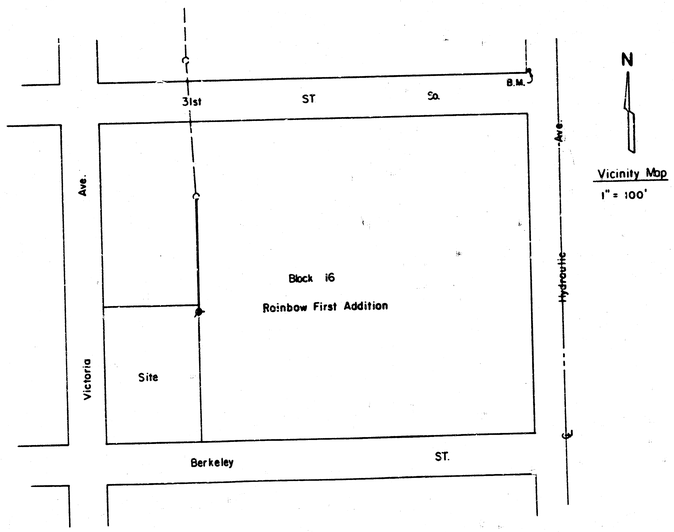
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INDEX OF SHEETS

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3-4	Standards



Vicinity Map
1" = 100'

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BY CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 9/17/90

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

Paving _____

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS
WICHITA

DON C. MOEHRING II LICENSED 3463 KANSAS PROFESSIONAL ENGINEER

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N

1"= 40' Horiz.
1"= 5' Vert.

HYDRAULIC

43.6

32.5

B.M. - City Disc

STA. 0+00 - CONNECT TO EXISTING M.H.

Remove & Replace Sidewalk As Necessary

BLOCK 16
Rainbow First Add'n.

STA. 1+68 - CONSTRUCT STD. SHALLOW TYPE "A" M.H.

6" STUB (S.W.)
6" STUB (E)

Existing 8" San. Sewer

℄ 20' Sanitary Sewer Esmt (By Separate Instrument)

200'

10'

Remove & Replace Fence As Necessary.

31 ST.

BERKELEY

Fourplex

Fourplex

6' Steel Decorative Fence

144'

144'

144'

Proposed Development Site

Lot 16
Block 11
Garden Park Addn.

Cont. Walk

60'

468'

200'

60'

VICTORIA

60'

60'

ALTURAS

102'

102'

102'

102'

PLAN

SURVEYED ——— DATE
PLOTTED ———
DRAWN ——— CHECKED ———
NOTE BOOK ——— ELEVATIONS ARE ON CITY DATUM
NO. ———

Benchmark

City Disc, 43.6' W & 32.5' N.
of Hydraulic & 31st Street South.
Elev. = 90.87 City Datum

PROFILE

SURVEYED ——— DATE
PLOTTED ———
DRAWN ——— CHECKED ———
H. & V. SCALES ———
NOTE BOOK ——— ELEVATIONS ARE ON CITY DATUM
NO. ———

95
90
85
80

Existing Ground Profile

Top = 89.1

Top = 90.2

168 L.F. 8" Pipe @ 0.40%

F.L. = 84.10

F.L. = 84.50

F.L. OUTLET = 84.77
F.L. E. STUB IN = 84.91
F.L. E. STUB OUT = 84.96

0

1

+68

2

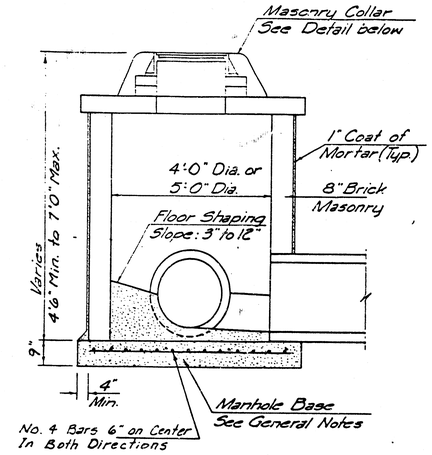
PLATE 1 - PLAN - PROFILE - F.A.S.
NO. 1200H
CLEARPRINT PAPER CO., EMERYVILLE, CA

MOEHRING & ASSOCIATES —— CONSULTING ENGINEERS

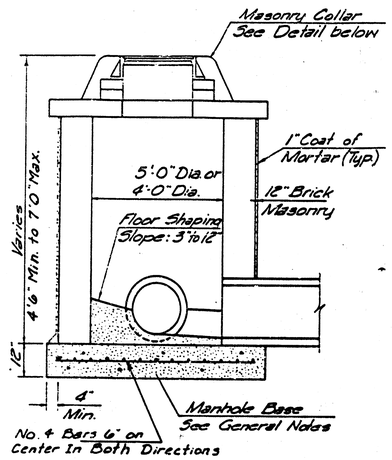
Sheet 2 of 4

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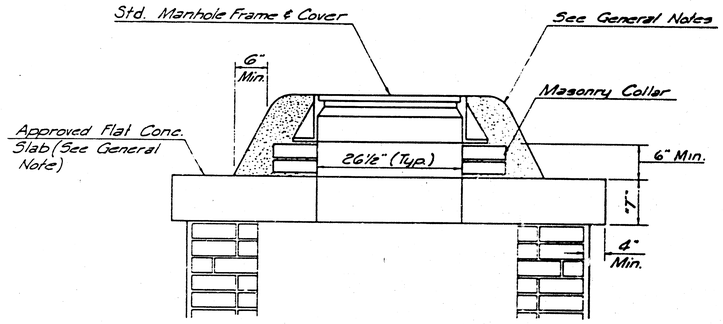
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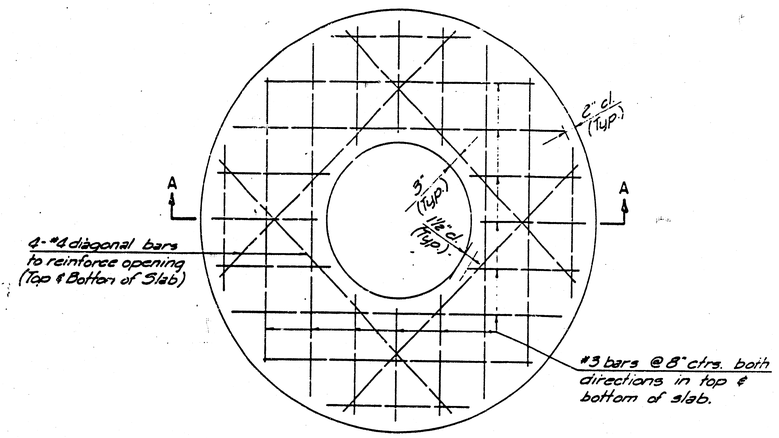
SHALLOW TYPE "A" MANHOLE



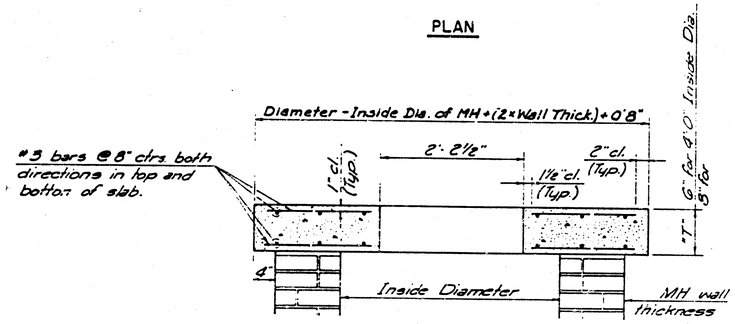
SHALLOW TYPE "B" MANHOLE



MASONRY COLLAR DETAIL

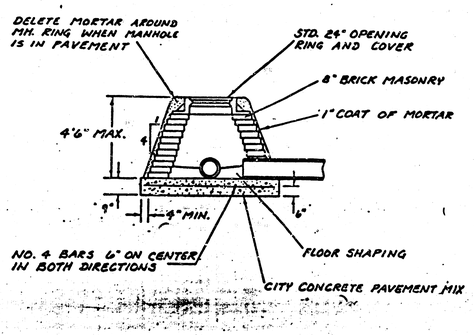


PLAN

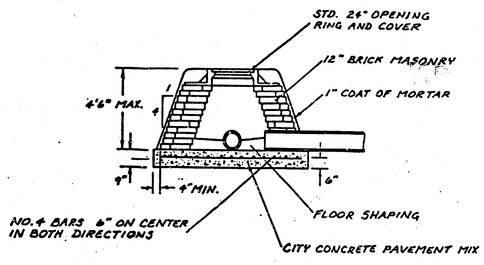


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE 'A' MANHOLE



SPECIAL SHALLOW TYPE 'B' MANHOLE

GENERAL NOTES

1. 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 THE 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 MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. 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 6" 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.

3. 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.

4. 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.

5. 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.

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

7. 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.

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

Designed by		Checked by	
Drawn by		Date	Job No.

Sheet 3 of 4

5/6

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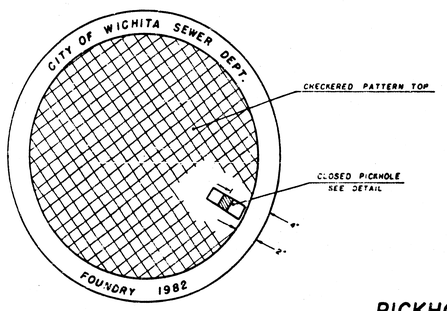
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY

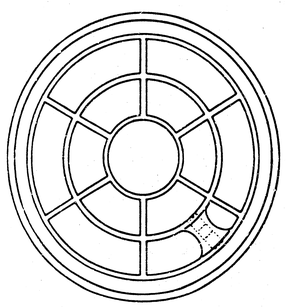
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

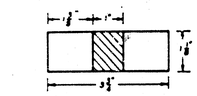


TOP VIEW

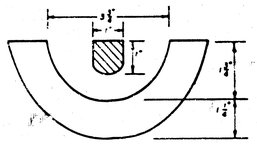


BOTTOM VIEW

PICKHOLE DETAIL



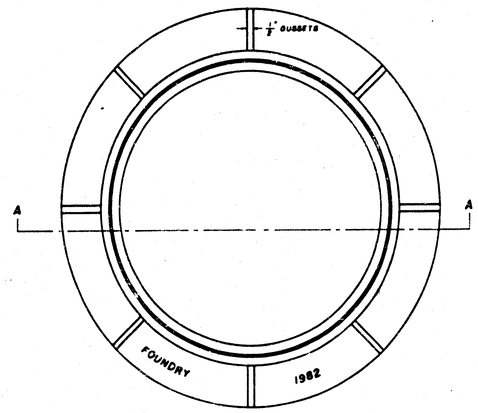
TOP VIEW



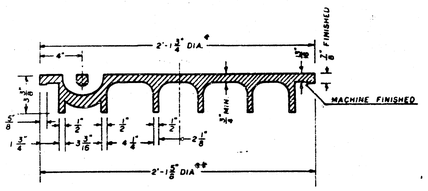
SECTION VIEW

MANHOLE FRAME

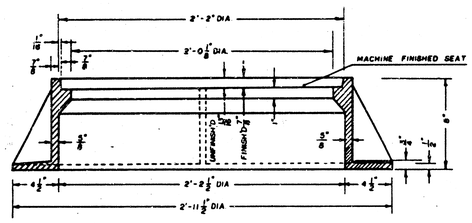
Weight: 240 Lbs.



TOP VIEW



SECTION VIEW



SECTION A-A

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

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.
3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL HAVE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

JNL DEC. 1981

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