SANITARY SEWER IMPROVEMENTS

to serve

AIRPORT INDUSTRIAL ADDITION

CITY OF WICHITA, KANSAS

Michael E. Lindebak, P.E. City Engineer

Private Project Number

1007 PPS (607861)

June 2000

INDEX OF SHEETS

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2 MANHOLE DETAILS
3 RING & COVER DETAIL
4 COPY OF PLAT

BENCHMARK

"□" RR Spike south Face of Power Pole.
Elev. = 131.79 (City Datum)

GENERAL NOTES:

1. Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

   The Contractor must notify the following in case of an emergency:

Cox Communication	262-4270
Kansas Gas Service	383-8600
KG&E Company	383-8650
Peoples Gas Company	942-8351
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Dept.	268-4908
City of Wichita Traffic Engineering	268-4448

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design and shall be field verified.
   The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.

4. Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Any work done without inspection will be required to be uncovered for inspection.

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 Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

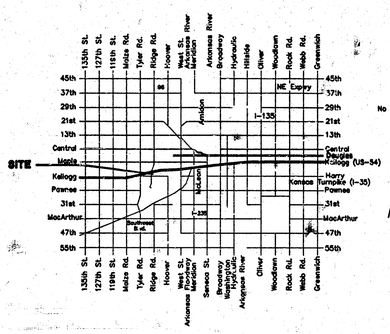
6. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractor's proposed method for maintaining sewage flow shall be approved by the Engineer. Cost of maintaining flow of sewage through construction will not be paid for directly and this cost shall be considered as subsidiary to the other pay items of work.

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 6/7/00

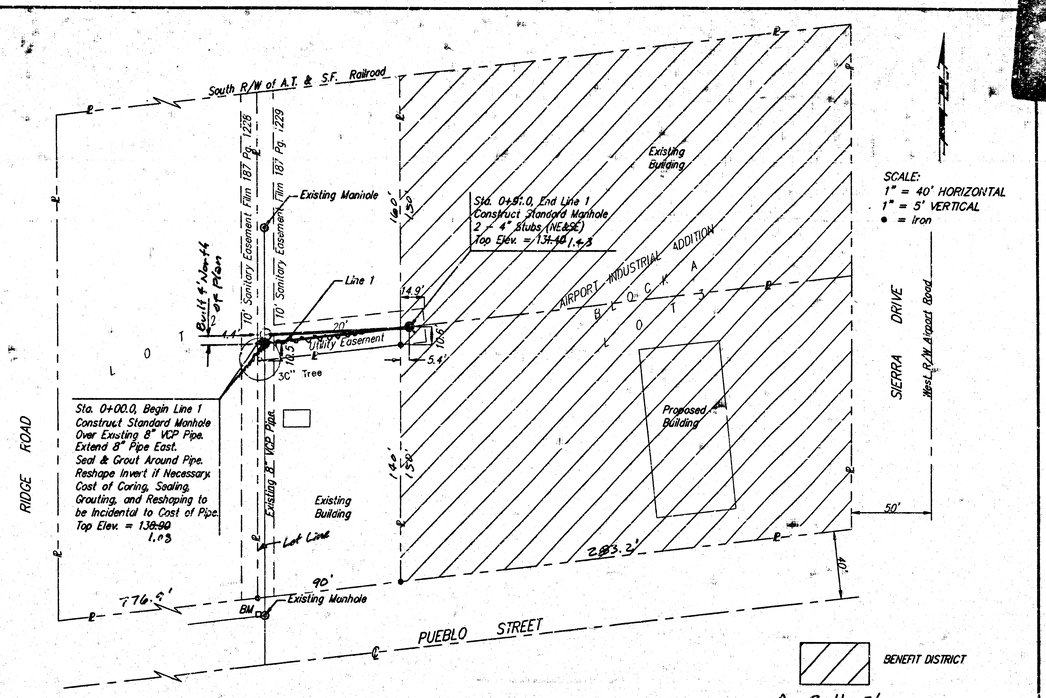
NOTE TO CONTRACTORS

Installation, 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 public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

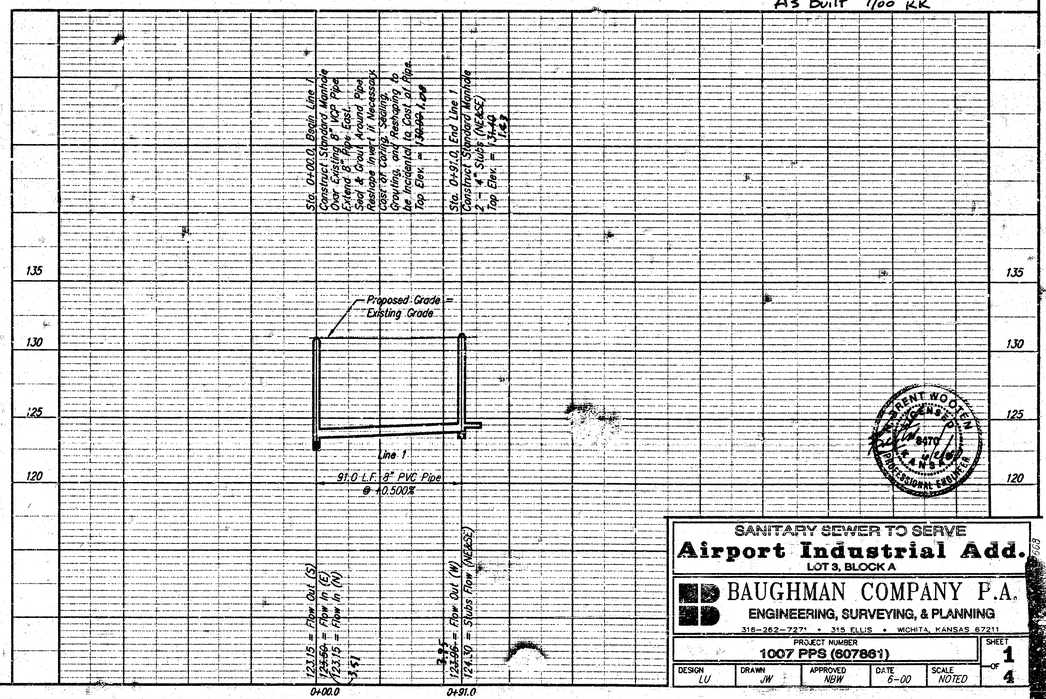


Vicinity Map

Booked
8-3-00
P-137
RDL



As Built 7/00 KK



CURRENT WORK
KANSAS
DATE 6/7/00
PROFESSIONAL ENGINEER

SANITARY SEWER TO SERVE
Airport Industrial Add.
LOT 3, BLOCK A

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1007 PPS (607861)	1 OF 4

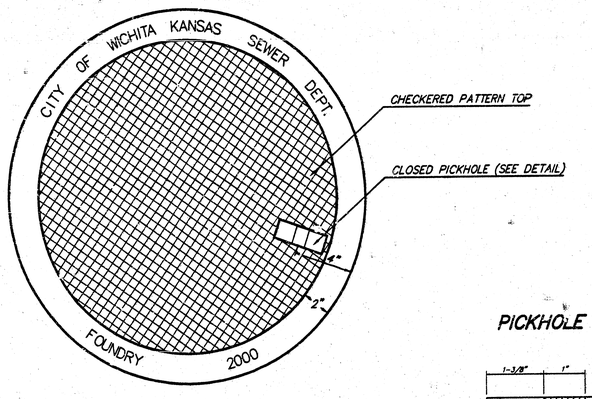
DESIGN	DRAWN	APPROVED	DATE	SCALE
LU	JW	NBW	6-00	NOTED

06/05/2000 08:27:31 MHFrng.dwg

MANHOLE FRAME AND COVER DETAIL

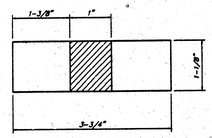
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

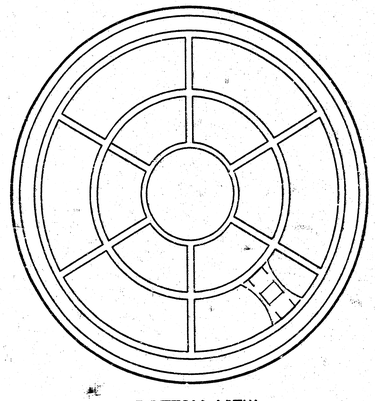


TOP VIEW

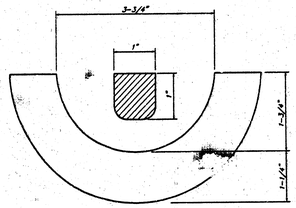
PICKHOLE DETAIL



TOP VIEW

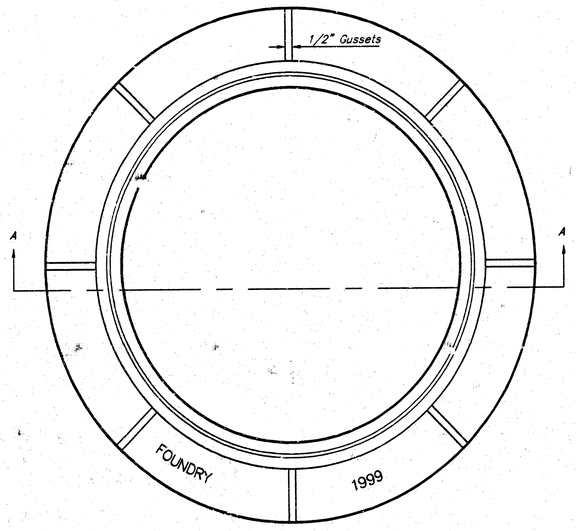


BOTTOM VIEW



SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW

GENERAL NOTES

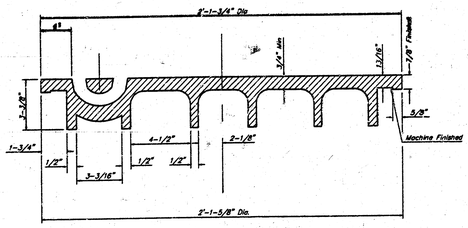
MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

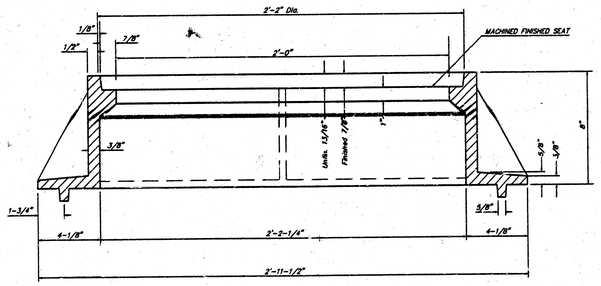
MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

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 AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

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 INCH 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.



SECTION VIEW



SECTION A-A

MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

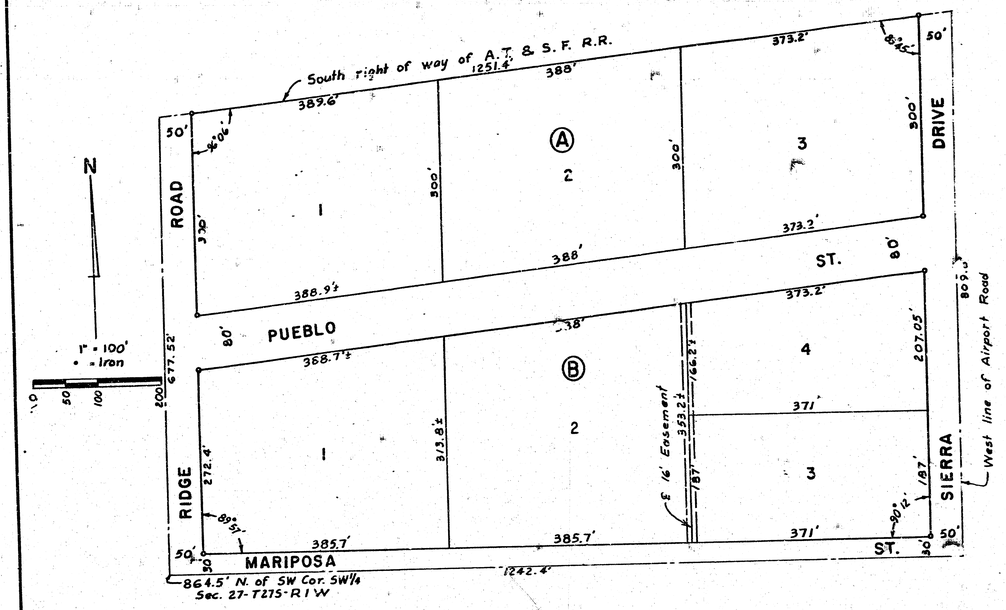
PROJECT NUMBER 1007 PPS (607681)

DESIGN	DRAWN	APPROVED	DATE	SCALE
STAFF	STAFF	NSW	6-00	NONE

SHEET 3 OF 4

AIRPORT INDUSTRIAL ADDITION

SEDGWICK COUNTY, KANSAS



State of Kansas }ss
County of Sedgwick }

I, Kenneth O. Taylor, civil engineer in said State and County do hereby certify that I have surveyed and platted "AIRPORT INDUSTRIAL ADDITION" Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of said survey described as follows: Beginning at a point 864.5 feet north of the southwest corner of the SW¼ of Section 27, T27S, R1W of the 6th P.M., Sedgwick County, Kansas, thence east parallel to the south line of said SW¼, 1242.4 feet to the west line of Airport Road, thence north along said west line of said Airport Road, 809.8' to the south right of way line of the A.T. & S.F. Railroad, thence westerly along said South right of way line of said Railroad a distance of 1251.4 feet to the west line of said SW¼, thence South along said west line of said SW¼, 677.52 feet to the point of beginning.

Kenneth O. Taylor — Civil Engineer

Know all men by these presents that we, Paul E. Heinemann and Elizabeth R. Heinemann, his wife and Donald B. Heinemann and Bertha L. Heinemann, his wife, have caused the land described in the Civil Engineer's certificate to be platted into lots, blocks and streets to be known as "AIRPORT INDUSTRIAL ADDITION," Sedgwick County, Kansas. Easements are hereby granted as indicated on the plat for the construction and maintenance of all public utilities. The streets are hereby dedicated to and for the use of the public. Direct vehicular access to Mariposa St. shall not be permitted from Lots 1, 2 and 3, Block B.

Paul E. Heinemann — Donald B. Heinemann
Elizabeth R. Heinemann — Bertha L. Heinemann

Entered on transfer record this 14th day of December 1960.

H O Williams — County Clerk

State of Kansas }ss
County of Sedgwick }

This is to certify that this instrument was filed for record in the Register of Deeds office on the 14th day of Dec 1960 at 2:21 P.M., and is duly recorded. #25260

Ruper E. Deering — Register of Deeds
Myrna Kirby — Deputy

State of Kansas }ss
County of Sedgwick }

Be it remembered that on this 21st day of October 1960, before me a notary public in and for said county and state came Paul E. Heinemann and Elizabeth R. Heinemann, his wife and Donald B. Heinemann and Bertha L. Heinemann, his wife, to me personally known to be the same persons who executed the foregoing instrument of writing and duly acknowledged the execution of same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

Colby B. Sandlian — Notary Public
Colby B. SANDLIAN
My commission expires November 29 1963

This plat of "AIRPORT INDUSTRIAL ADDITION", Sedgwick County, Kansas, has been submitted to and considered by the Wichita-Sedgwick County Metropolitan Area Planning Commission of the City of Wichita, Kansas, and is hereby transmitted to the Board of Commissioners of the City of Wichita, Kansas, with the recommendation that such plat be approved as proposed.
Dated this 10th day of October 1960
Wichita-Sedgwick County Metropolitan Area Planning Commission
By Charles W [illegible] Chairman
A L Fulle Secretary

We, Earl F. Butler, Carolyn Butler Champ, Bernadine Butler McKellar, Phyllis Butler Morgan by Earl F. Butler, Attorney-in-Fact, Betty Butler Nordyke by Earl F. Butler, Attorney-in-Fact and Norval I. Cox by Joseph H. Brown, Attorney-in-Fact, mortgagees of the property described in the civil engineer's certificate, do hereby consent to the platting of Airport Industrial Addition, Sedgwick County, Kansas.

Earl F. Butler — Carolyn Butler Champ
Earl F. Butler — Carolyn Butler Champ by Earl F. Butler
Bernadine Butler McKellar — Phyllis Butler Morgan by Earl F. Butler
Betty Butler Nordyke by Earl F. Butler, Attorney-in-Fact
Betty Butler Nordyke by Earl F. Butler, Attorney-in-Fact
Norval I. Cox by Joseph H. Brown, Attorney-in-Fact
Norval I. Cox by Joseph H. Brown
Attorney-in-Fact

State of Kansas }ss
County of Sedgwick }

Be it remembered that on this 26th day of October 1960 before me a notary public in and for said county and state came Earl F. Butler, Carolyn Butler Champ, Bernadine Butler Mc Keller, Phyllis Butler Morgan by Earl F. Butler, Attorney-in-Fact, Betty Butler Nordyke by Earl F. Butler, Attorney-in-Fact and Norval I. Cox by Joseph H. Brown, Attorney-in-Fact, to me personally known to be the same persons who executed the foregoing instrument of writing and duly acknowledged the execution of same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

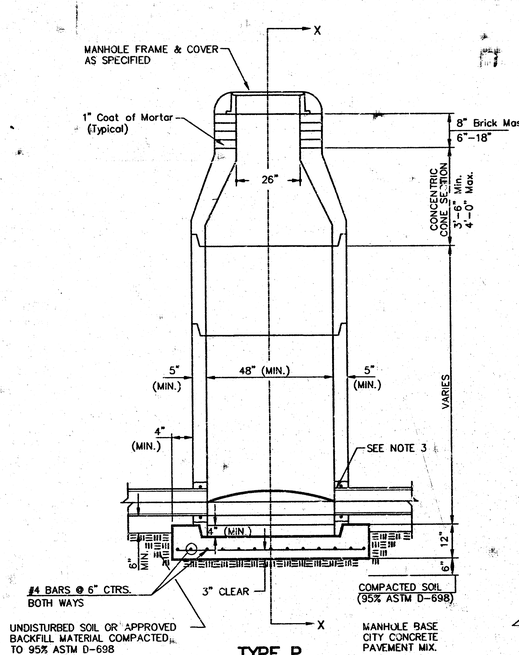
Colby B. Sandlian — Notary Public
Colby B. SANDLIAN
My commission expires November 29 1963.

Approved by the Board of City Commissioners this 6th day of December 1960
Jas. B. Joseph — Mayor
A H Pfuetze — City Clerk

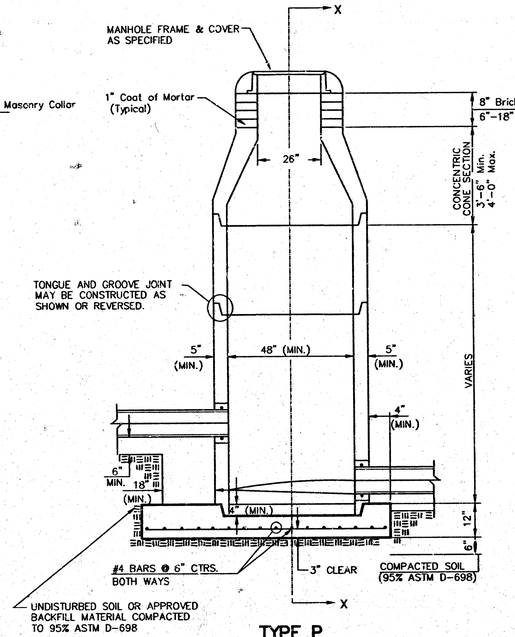
Approved by the Board of County Commissioners this 14th day of Dec 1960
H O Williams — County Clerk

A-59

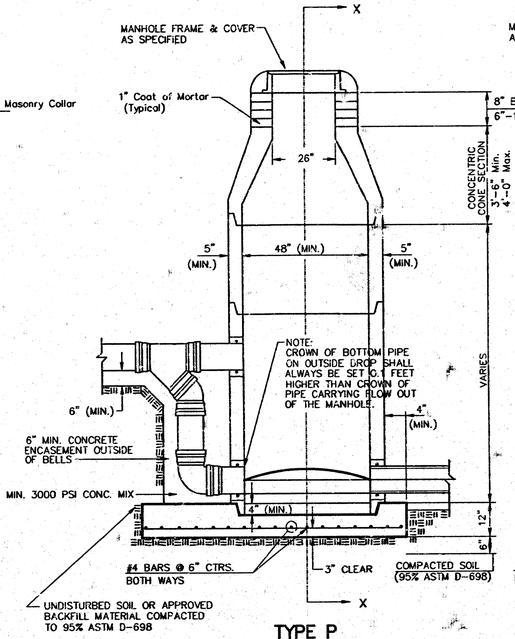
SEWER APPURTENANCES DETAILS



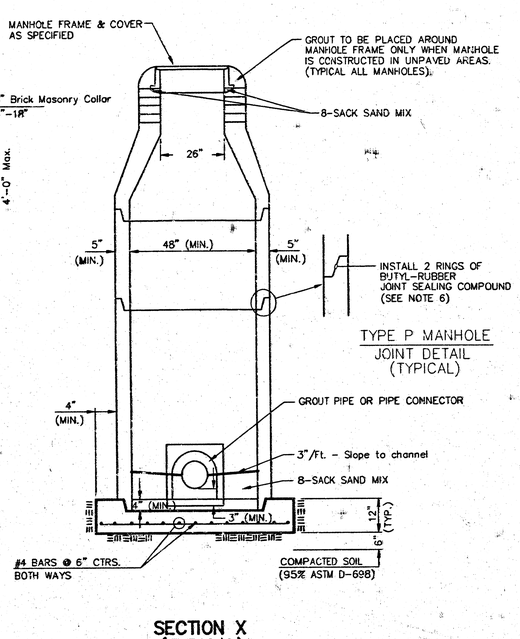
TYPE P STANDARD MANHOLE



TYPE P INSIDE DROP MANHOLE



TYPE P OUTSIDE DROP MANHOLE

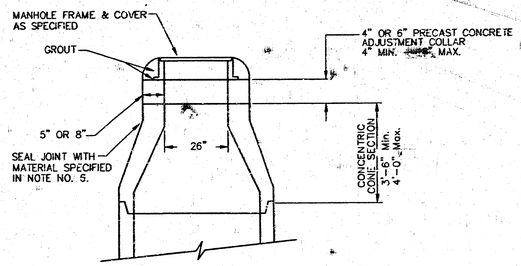


SECTION X (TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. 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.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. 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 WITHOUT AIR ENTRAINING ADMIXTURE. 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.
11. 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.
12. 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 NON-SHRINK 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.
13. 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 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.
14. 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.
15. 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.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' 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.
17. 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.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.



ALTERNATE CONSTRUCTION IN UNPAVED AREAS

CITY OF WICHITA

STD. MANHOLE DETAILS

SEWER APPURTENANCES

BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER					SHEET
1007 PPS (607881)					2 OF 4
DESIGN	DRAWN	APPROVED	DATE	SCALE	
STAFF	STAFF	NBW	6-00	NONE	

drawing/MH/MH-00